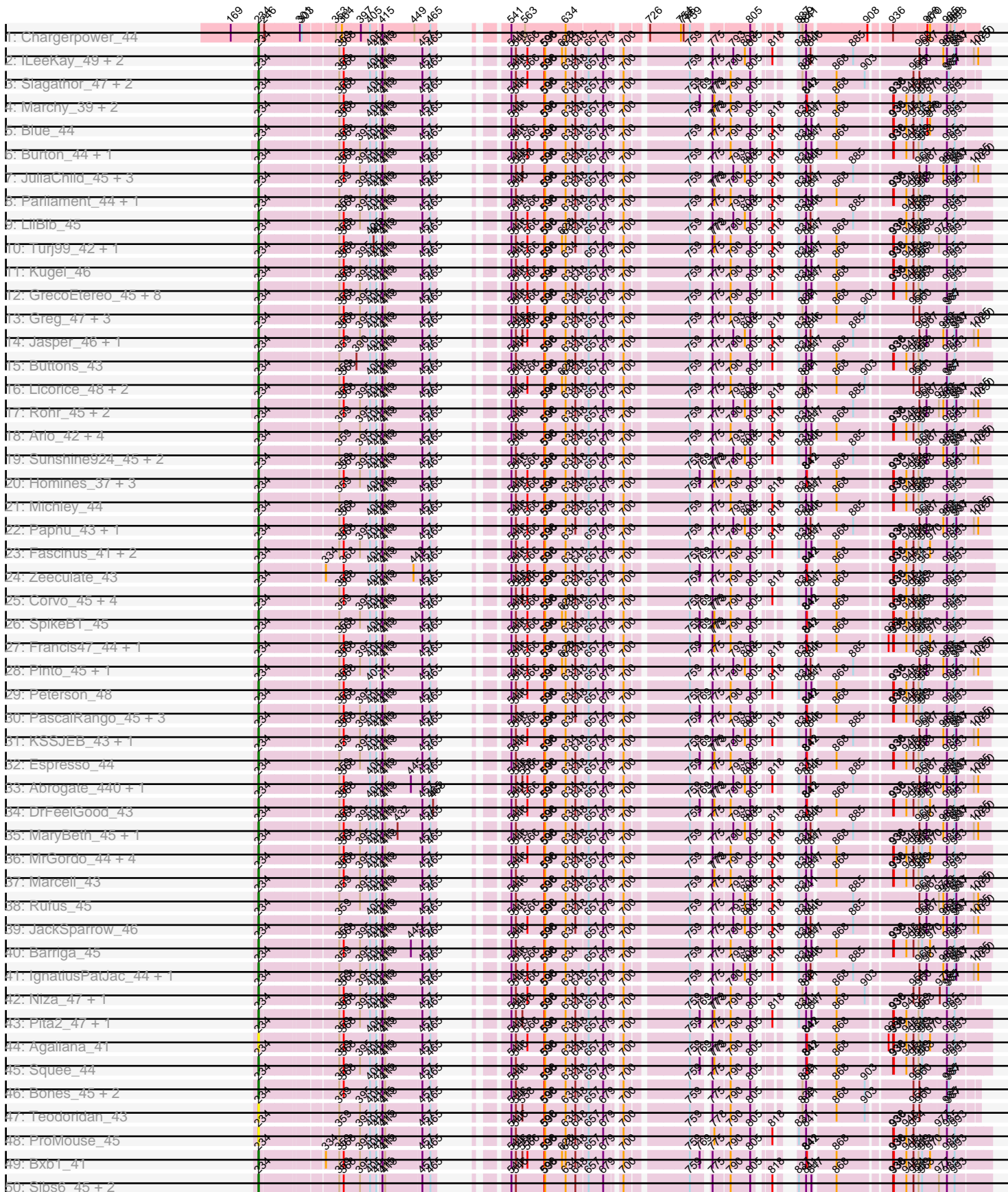


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52: Ajay_45	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
53: Inyanga_42	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
54: JC27_45 + 1	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
55: Sanya_43 + 4	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
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57: Trouble_46	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
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61: Pelly_44	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
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68: Atkinbua_46	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
69: Chanagan_42 + 1	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
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74: Dussy_46 + 3	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
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76: Aeneas_47	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
77: Mryolo_42 + 1	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
78: StewieG_44 + 3	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
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87: Watermelon_46	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
88: Cueyllys_46	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
89: Bob3_42	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
90: Snazzy_42	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
91: Sandaddy_44 + 1	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
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93: Zephyr_44	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
94: FrostyMug_44	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
95: Graduation_48	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
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98: Onno789_45	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
99: Lopton_45	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026
100: Acme_47 + 1	234	334	392	418	465	536	598	634	681	679	700	759	775	793	806	818	821	836	885	903	987	1025	1026











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251: Microwolf_48 + 10	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
252: Methusalem_45 + 12	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
253: Gni_48 + 1	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
254: Margo_44 + 13	179	234	301	352	390	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988
255: JF2_45 + 3	179	234	301	352	390	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988
256: Phantastic_46	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
257: PhishRPNFriends_46 + 14	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
258: BxZ2_44 + 1	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
259: BabyRay_45	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
260: TNguyen7_46 + 7	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
261: GingkoMaracino_48 + 1	179	234	301	352	390	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988
262: Chiqui_43 + 1	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
263: Zetzy_47	179	234	301	352	390	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988
264: Isca_44	179	234	301	352	390	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988
265: Marchesa_45 + 1	179	234	301	352	390	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988
266: HeiDan_45 + 4	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
267: Aglet_49	145	234	301	352	390	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988
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271: JeppiRivi_49	179	234	301	352	390	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988
272: Rockstar_45	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
273: Farber_48	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
274: Melvin_47 + 97	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988									
275: Cici_44 + 12	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
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277: Cinderadix_42	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
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281: Miramae_44	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
282: JetBlade_45	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
283: OKAnoi_45	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
284: ICleared_45	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
285: Mundrea_44	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
286: Thanksgivukkah_44 + 1	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
287: AvatarAnPeg_44	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
288: Sparxx_46	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
289: Cintron_44	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
290: Noelle_45	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
291: Pumbaa_45	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
292: Kremtemuon_45	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
293: Palestino_44	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
294: Snygu2_44	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
295: Stasia_44	301	352	390	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988		
296: George_38	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
297: MarysWell_37	203	234	301	352	390	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988
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299: Scorpio_40 + 1	234	392	410	424	448	465	516	541	589	619	634	667	7910	759	790	805	818	842	866	888	921	942	968	988			
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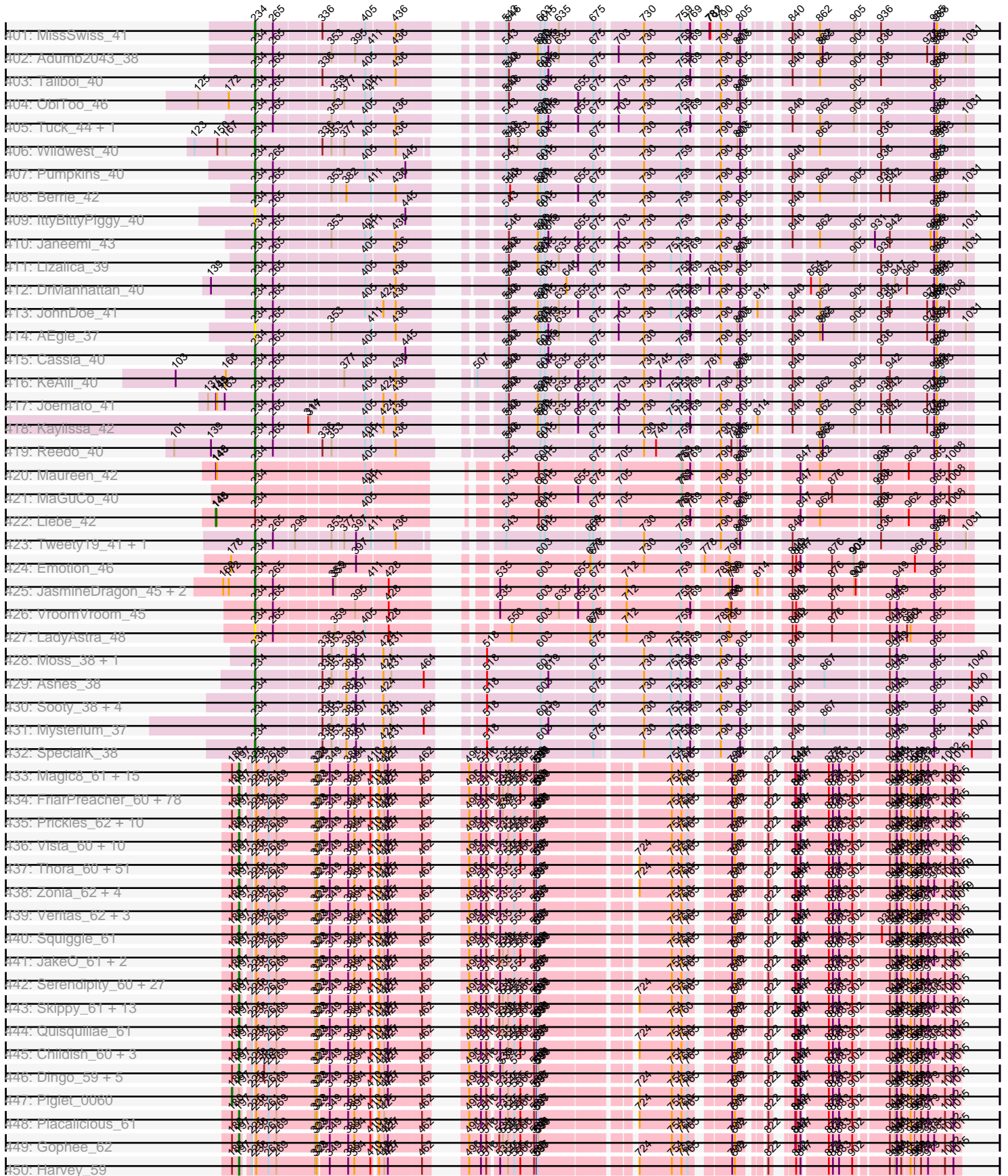








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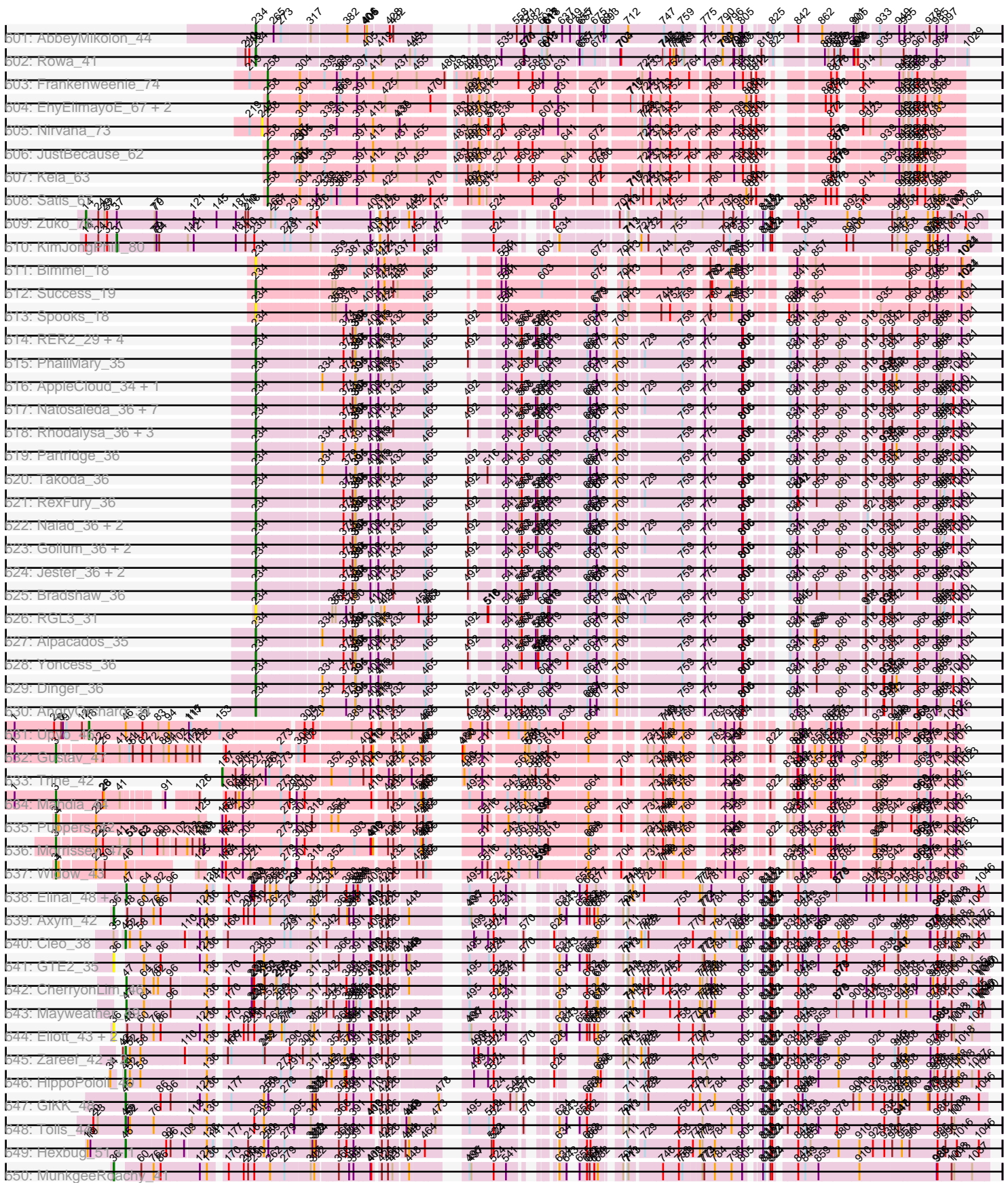
Pham 202523

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503:	Rosebush_56	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
504:	Boyle_57	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
505:	Glass_57	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
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523:	Jackstina_54	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
524:	Gadjet_59	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
525:	Pipefish_59	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
526:	Neos5_58	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
527:	Yinz_58	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
528:	Nanao_52 + 7	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
529:	Prince_53 + 2	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
530:	Apex_54	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
531:	QueenPie_51	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
532:	BobbyK_54	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
533:	Loialove_54	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
534:	Xincheng_54 + 1	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
535:	Stinger_54	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
536:	Cooper_54	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
537:	Milthri_53	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
538:	BrownCNA_55	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
539:	JAMaL_53	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
540:	Nigel_54	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
541:	RawrgerThat_54	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
542:	AlanGran_57 + 1	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
543:	ChrisnMich_53	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
544:	Frederck_54	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
545:	Hangman_53 + 1	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
546:	VioletZ_55	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
547:	Magpie_52	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
548:	Mudslide_53	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
549:	Austere_54	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900
550:	Fortunato_54	197	200	201	305	302	300	406	516	504	508	678	710	740	760	780	822	801	806	803	921	904	900	900	900





# Pham 202523

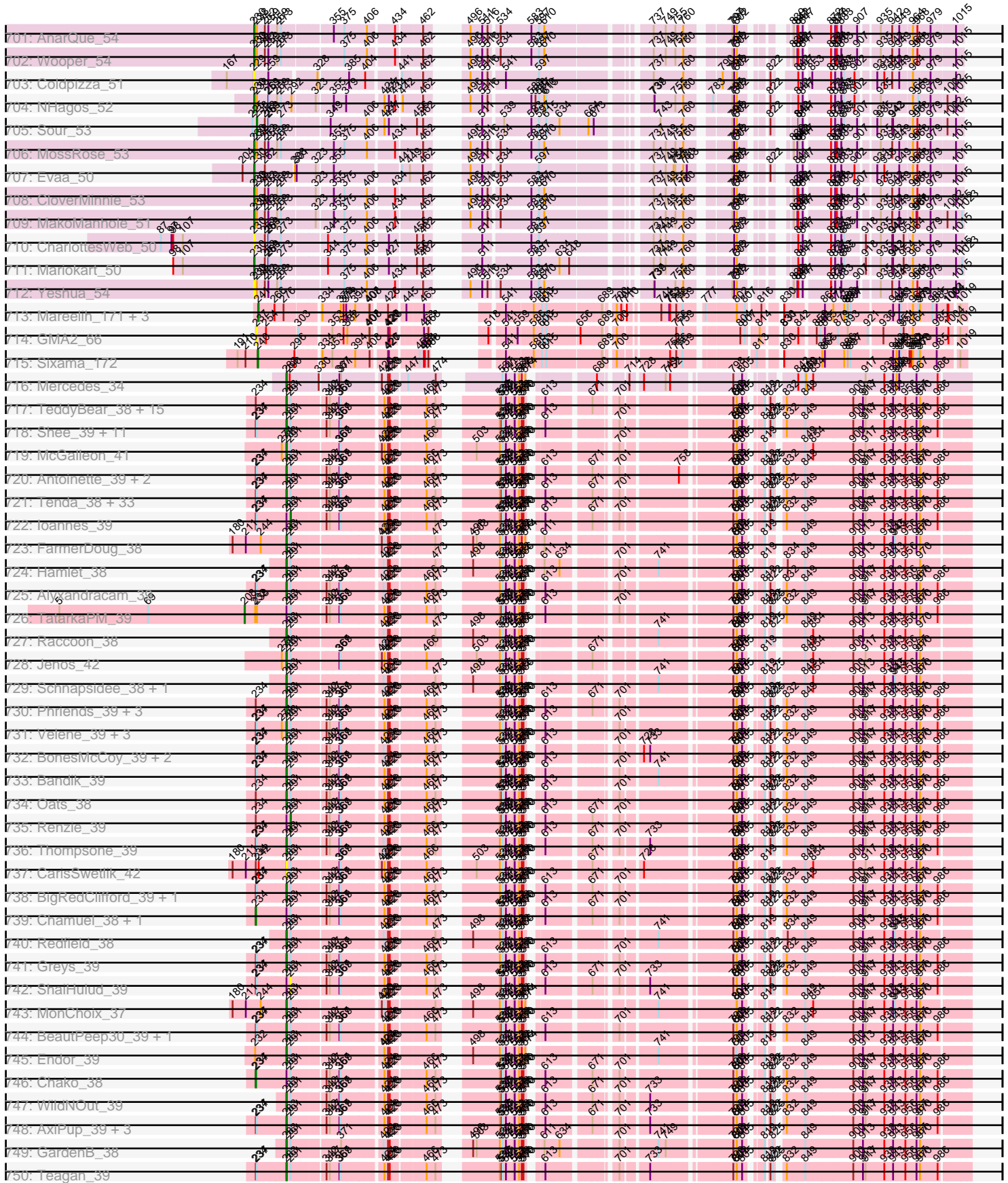


Pham 202523

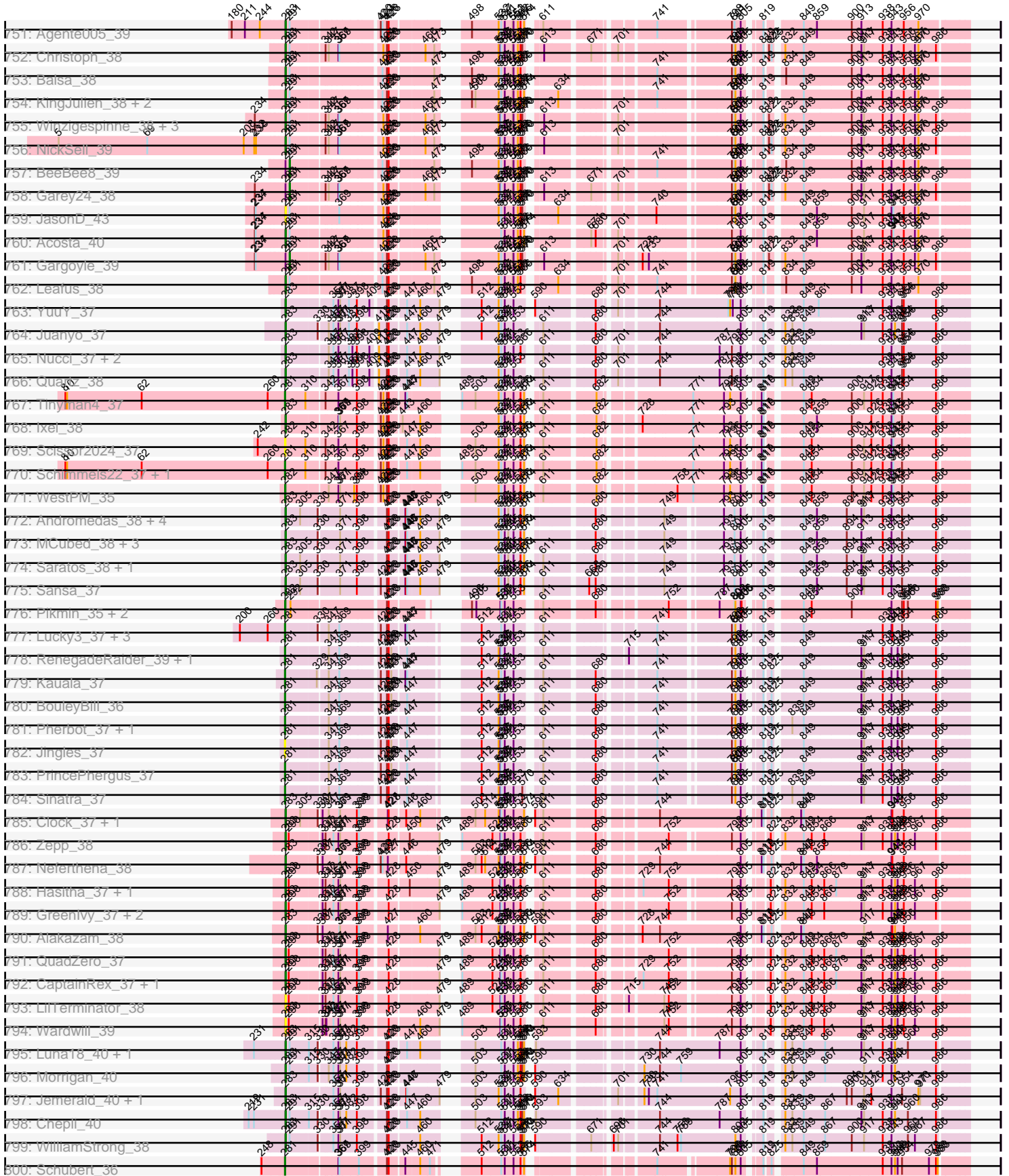
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552: Cozz_41 + 1	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
553: Lauer_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
554: Typhonoma_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
555: Carsonalex1_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
556: Bavliard_446	96	98	108	138	138	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
557: Yummy_43 + 1	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
558: BigC_Novis	76	108	138	138	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037	
559: Email_42	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
560: Troje_468	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
561: Amok_468	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
562: AikoGai_468	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
563: AndPeggy_416	96	98	108	138	138	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
564: Nodigi_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
565: Pons_46	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
566: SummitAcademy_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
567: Yakult_46	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
568: Buttnik_468	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
569: Yam_40	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
570: BmDoor_43	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
571: Button_46	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
572: Survivors_40	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
573: Flids_36	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
574: Canessauce_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
575: Mavan_40	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
576: Gibbous_46	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
577: Chicken160_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
578: MAnoi_46	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
579: Blondies_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
580: Starburst_46	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
581: Steamers_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
582: RanchFarm_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
583: Quasar_43	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
584: IMScam_47	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
585: Burnsey_43	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
586: RedBaron_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
587: Lucky_46	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
588: Margaret_49	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
589: SheckWes_41	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
590: PotPie_44	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
591: Jamzy_48	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
592: GodonK_188	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
593: Phendix_176	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
594: Fresco_51 + 1	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
595: CarB_34	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
596: BobRoss2024_51	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
597: LittleMunchkin_51	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
598: Shatter_51 + 1	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
599: Yago84_49 + 2	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037
700: BiggityBass_49	36	88	80	186	126	170	235	202	218	382	356	351	448	406	524	531	684	688	778	738	784	806	882	859	986	1008	1037



Pham 202523



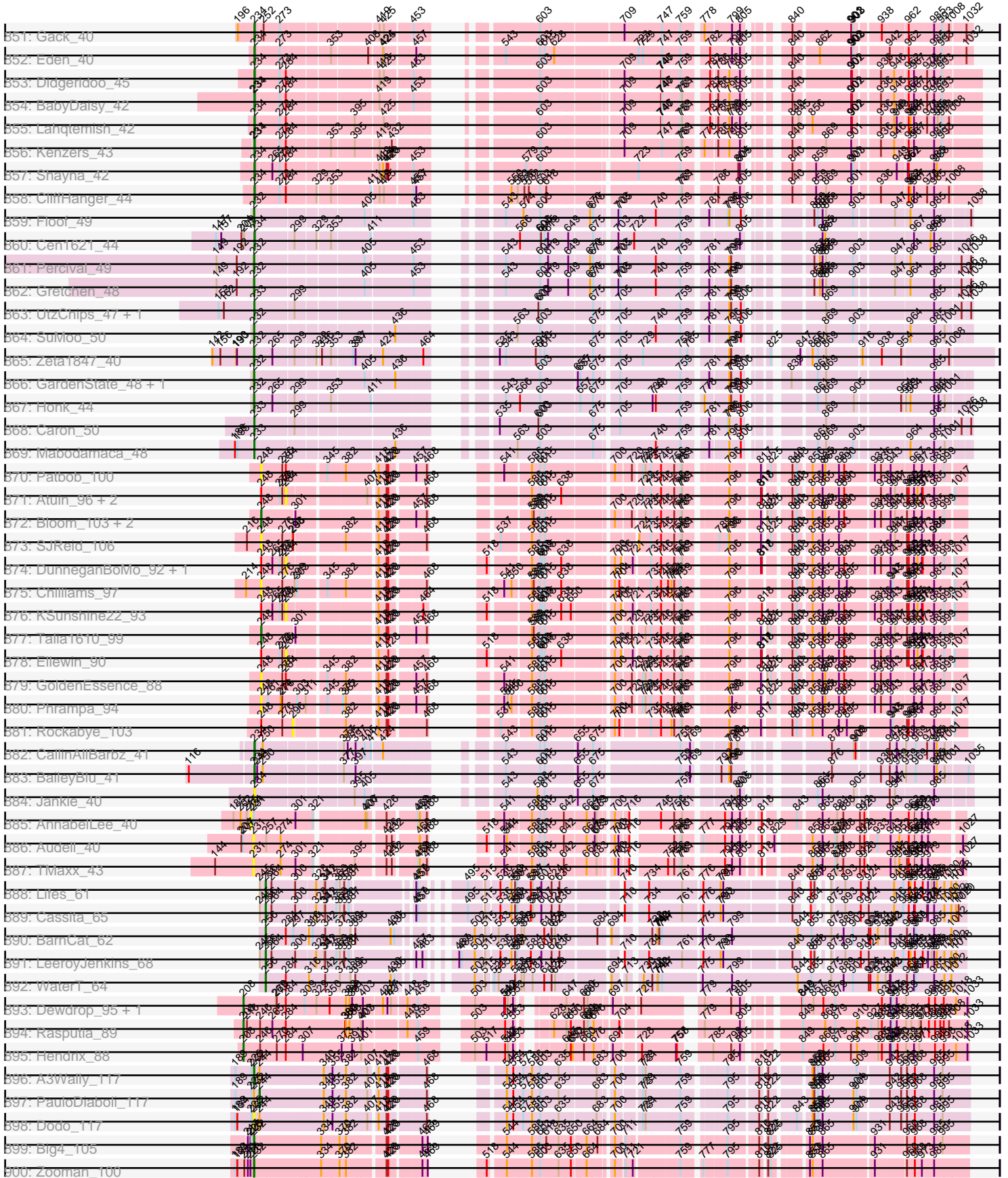
Pham 202523





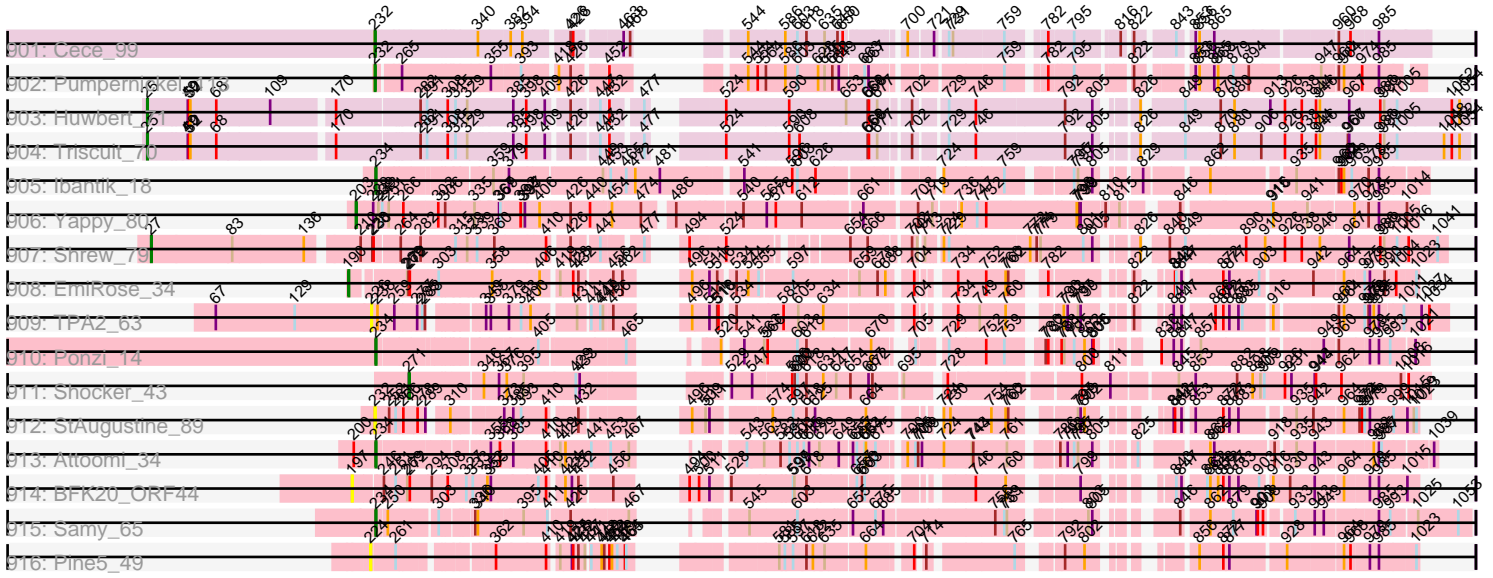


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

## Pham 202523 Report

This analysis was run 01/18/25 on database version 583.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 202523 has 1905 members, 222 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_44
- Track 2 : lLeeKay\_49, Fushigi\_43, Sumter\_42
- Track 3 : Slagathor\_47, Arcanine\_46, Ringer\_46
- Track 4 : Marchy\_39, Adahisdi\_44, Payneful\_44
- Track 5 : Blue\_44
- Track 6 : Burton\_44, Museum\_45
- Track 7 : JuliaChild\_45, Swole\_45, TwoPeat\_45, Tote\_40
- Track 8 : Parliament\_44, Manatee\_45
- Track 9 : LilBib\_45
- Track 10 : Turj99\_42, Magnito\_42
- Track 11 : Kugel\_46
- Track 12 : GrecoEtereo\_45, GMonster\_42, HanShotFirst\_43, Big3\_43, CactusRose\_42, Paraselene\_43, HarryOW\_43, Tripl3t\_45, Gwendoluna\_47
- Track 13 : Greg\_47, Pippin\_47, Fajezeel\_47, Ciao\_45
- Track 14 : Jasper\_46, Dreamboat\_46
- Track 15 : Buttons\_43
- Track 16 : Licorice\_48, BigPaolini\_45, TheloniousMonk\_46
- Track 17 : Rohr\_45, Jerm2\_45, HermioneGrange\_44
- Track 18 : Arlo\_42, Hope4ever\_46, Kanely\_45, Rubeus\_45, Altman\_46
- Track 19 : Sunshine924\_45, BPBiibs31\_45, Kenmech\_48
- Track 20 : Homines\_37, Makemake\_44, ShortQueendom\_39, Wheeler\_45
- Track 21 : Michley\_44
- Track 22 : Paphu\_43, Oogway\_42
- Track 23 : Fascinus\_41, Bigfoot\_41, Maroc7\_43
- Track 24 : Zeeculate\_43
- Track 25 : Corvo\_45, SwissCheese\_46, Forsytheast\_44, Bruns\_43, Moose\_44
- Track 26 : SpikeBT\_45
- Track 27 : Francis47\_44, PacerPaul\_45
- Track 28 : Pinto\_45, Petruchio\_45
- Track 29 : Peterson\_48
- Track 30 : PascalRango\_45, Jorgensen\_45, Norz\_45, Edtherson\_45
- Track 31 : KSSJEB\_43, Target\_45
- Track 32 : Espresso\_44



- Track 33 : Abrogate\_440, Perseus\_45
- Track 34 : DrFeelGood\_43
- Track 35 : MaryBeth\_45, MetalQZJ\_44
- Track 36 : MrGordo\_44, Gyzlar\_41, Anglerfish\_45, Dulcie\_45, Crispicous1\_43
- Track 37 : Marcell\_43
- Track 38 : Rufus\_45
- Track 39 : JackSparrow\_46
- Track 40 : Barriga\_45
- Track 41 : IgnatiusPatJac\_44, BluSpix\_42
- Track 42 : Niza\_47, Ruotula\_48
- Track 43 : Pita2\_47, PSullivan\_44
- Track 44 : Agaliana\_41
- Track 45 : Squee\_44
- Track 46 : Bones\_45, Eyeball\_46, Rajelicia\_46
- Track 47 : Teodoridan\_43
- Track 48 : ProMouse\_45
- Track 49 : Bxb1\_41
- Track 50 : Sibs6\_45, Wilkins\_44, Topgun\_44
- Track 51 : Alvin\_44
- Track 52 : Ajay\_45
- Track 53 : Inyanga\_42
- Track 54 : JC27\_45, Applejack\_40
- Track 55 : Sanya\_43, Bethlehem\_44, Switzer\_45, BeesKnees\_45, Dynamix\_45
- Track 56 : Raid\_45
- Track 57 : Trouble\_46
- Track 58 : Pari\_45
- Track 59 : Bexan\_43, StrongArm\_44
- Track 60 : Dexes\_45
- Track 61 : Pelly\_44
- Track 62 : KyMonks1A\_47, Ashballer\_46
- Track 63 : Lamina13\_45, Tasp14\_46
- Track 64 : Monet\_48
- Track 65 : Sagefire\_48
- Track 66 : Euphoria\_43
- Track 67 : Violet\_42
- Track 68 : Atkinbua\_46
- Track 69 : Chanagan\_42, Pepe\_42
- Track 70 : Carlyle\_44
- Track 71 : Petp2012\_45
- Track 72 : QTRlifeCrisis\_45, Rhynn\_44, Lesedi\_42, ConceptII\_46
- Track 73 : Smairt\_47
- Track 74 : Dussy\_46, Froghopper\_43, Killigrew\_44, Abbyshoes\_47
- Track 75 : DreamCatcher\_47
- Track 76 : Aeneas\_47
- Track 77 : Mryolo\_42, Nhonho\_45
- Track 78 : StewieG\_44, Solon\_44, Zeuska\_44, BillKnuckles\_45
- Track 79 : Lockley\_44, DD5\_44
- Track 80 : PherrisBueller\_44, Scowl\_45
- Track 81 : Doom\_45
- Track 82 : BigMau\_45
- Track 83 : BaconJack\_48
- Track 84 : Kykar\_45
- Track 85 : Hermia\_46

- Track 86 : Magnar\_44, Mkhusei\_44
- Track 87 : Watermelon\_46
- Track 88 : Cueylyss\_46
- Track 89 : Bob3\_42
- Track 90 : Snazzy\_42
- Track 91 : Sandaddy\_44, Sorpresa\_44
- Track 92 : Fenn\_46
- Track 93 : Zephyr\_44
- Track 94 : PhrostyMug\_44
- Track 95 : Graduation\_48
- Track 96 : Bircsak\_44, Gompeii16\_44
- Track 97 : SkiPole\_47, Seanderson\_47
- Track 98 : Ohno789\_45
- Track 99 : Lopton\_45
- Track 100 : Acme\_47, Hami1\_39
- Track 101 : NEHalo\_43, AFIS\_43
- Track 102 : Seabiscuit\_46
- Track 103 : SarFire\_43, Thor\_43
- Track 104 : Naira\_46
- Track 105 : Gandalf20\_46
- Track 106 : Beatrix\_44, STLscum\_46
- Track 107 : PinkPlastic\_43
- Track 108 : Rutherferd\_47
- Track 109 : Papez\_47
- Track 110 : PattyP\_45
- Track 111 : Nerujay\_46
- Track 112 : Molly\_45
- Track 113 : Ichabod\_46
- Track 114 : RidgeCB\_44
- Track 115 : U2\_43
- Track 116 : McGuire\_45
- Track 117 : Treddle\_46
- Track 118 : BK1\_41, A6\_41
- Track 119 : KBG\_46
- Track 120 : Traft412\_45
- Track 121 : MPlant7149\_43
- Track 122 : Marsha\_45
- Track 123 : Briton15\_46
- Track 124 : Mule\_42
- Track 125 : Marge\_45
- Track 126 : Alsfro\_48
- Track 127 : Smeagol\_46
- Track 128 : GageAP\_45
- Track 129 : OKCentral2016\_43
- Track 130 : Rebeuca\_44, Kristoff\_44
- Track 131 : Goose\_44, Chupacabra\_43
- Track 132 : Twister\_42, WalterMcMickey\_42, Topanga\_42
- Track 133 : Severus\_42, Drake94\_42, PeaceMeal1\_42, KittenMittens\_41, Trike\_42
- Track 134 : DustyMartin\_48, Shapes\_48, Rowdy\_48, RhynO\_45
- Track 135 : DontArgue\_43
- Track 136 : Poompha\_43
- Track 137 : Eaglepride\_45
- Track 138 : Edison31\_43



- Track 139 : Sham4\_44, Fibonacci\_44, MaCh\_45, Bachome\_46, Petersenfast\_43, Hutc2\_44
- Track 140 : Insomnia\_45, Lucivia\_45, Snape\_44, Orange\_44, Bowtie\_45, Mulciber\_44
- Track 141 : TinyTimmy\_45, Salz\_44, Mabel\_45, Timothy\_45, Ebony\_45
- Track 142 : Aneem\_45, Munch\_45, Gilberta\_45, Flaverint\_45, Joselito\_45
- Track 143 : Jabith\_45
- Track 144 : Et2Brutus\_44
- Track 145 : Bud\_44
- Track 146 : Refuge\_44
- Track 147 : Zimmer\_42
- Track 148 : DARTHPhader\_42
- Track 149 : Pharaoh\_39
- Track 150 : Steamy\_41
- Track 151 : Phlei\_33
- Track 152 : Gail\_49
- Track 153 : SororFago\_48
- Track 154 : Sunhee\_47
- Track 155 : Jeeves\_50
- Track 156 : Luchador\_50
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- Track 550 : Fortunato\_54
- Track 551 : Fanaw\_52
- Track 552 : Zemanar\_54
- Track 553 : SirJeffery\_57
- Track 554 : Mysterious\_58
- Track 555 : Reprobate\_57, Phelemich\_56
- Track 556 : EastView9101\_57
- Track 557 : Rich\_58
- Track 558 : Suigeneris\_59, Donny\_59
- Track 559 : DigitDog\_58
- Track 560 : Acadian\_58
- Track 561 : Serendipitous\_56
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- Track 563 : Nehemiah\_57
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- Track 568 : ForDig\_53
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- Track 571 : KayaCho\_51
- Track 572 : Hosp\_050
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- Track 574 : Thonko\_60
- Track 575 : PenguinLover67\_56
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- Track 577 : Quesadilla\_58
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- Track 579 : Rinkes\_56
- Track 580 : Funsized\_59
- Track 581 : Samora\_36
- Track 582 : phiBT1\_11
- Track 583 : TG1\_31
- Track 584 : Shawty\_33
- Track 585 : Euratis\_35
- Track 586 : Vash\_34
- Track 587 : Lilbooboo\_34
- Track 588 : Sebastisaurus\_36
- Track 589 : Heather\_37
- Track 590 : RemusLoopin\_36
- Track 591 : Xkcd426\_52
- Track 592 : YDN12\_50
- Track 593 : Abt2graduatex2\_49
- Track 594 : TP1604\_48, BabyGotBac\_49
- Track 595 : Mischief19\_57
- Track 596 : RainyPolka\_49
- Track 597 : Salete\_48, Maih\_47, Asis\_48, BayC\_48
- Track 598 : phiSASD1\_12
- Track 599 : Dubu\_35
- Track 600 : Nesbitt\_42
- Track 601 : AbbeyMikolon\_44
- Track 602 : Rowa\_41
- Track 603 : Frankenweenie\_74
- Track 604 : EhyElimayoE\_67, Quantum\_66, Kradal\_67
- Track 605 : Nirvana\_73
- Track 606 : JustBecause\_62
- Track 607 : Kela\_63
- Track 608 : Satis\_67
- Track 609 : Zuko\_78
- Track 610 : KimJongPhill\_80
- Track 611 : Bimmel\_18
- Track 612 : Success\_19
- Track 613 : Spooks\_18
- Track 614 : RER2\_29, Yogi\_36, BobbyDazzler\_36, Hiro\_36, Bonanza\_36
- Track 615 : PhailMary\_35
- Track 616 : AppleCloud\_34, Krishelle\_36
- Track 617 : Natosaleda\_36, Erik\_36, Rasputin\_36, Espica\_36, Nancinator\_36, Shuman\_36, Belenaria\_36, UhSalsa\_36
- Track 618 : Rhodalysa\_36, TWAMP\_36, Lillie\_36, CosmicSans\_36
- Track 619 : Partridge\_36
- Track 620 : Takoda\_36
- Track 621 : RexFury\_36
- Track 622 : Naiad\_36, StCroix\_36, Alatin\_36
- Track 623 : Gollum\_36, Swann\_36, Phrankenstein\_36
- Track 624 : Jester\_36, Harlequin\_36, Bryce\_36
- Track 625 : Bradshaw\_36
- Track 626 : RGL3\_31
- Track 627 : Alpacados\_35
- Track 628 : Yoncess\_36
- Track 629 : Dinger\_36
- Track 630 : AngryOrchard\_34



- Track 631 : Upyo\_46
- Track 632 : Gustav\_47
- Track 633 : Trine\_42
- Track 634 : Mahdia\_44
- Track 635 : Puppets\_42
- Track 636 : Morrissey\_47
- Track 637 : Widow\_43
- Track 638 : Elinal\_48, KayGee\_46
- Track 639 : Axym\_42
- Track 640 : Cleo\_38
- Track 641 : GTE2\_35
- Track 642 : CherryonLim\_46
- Track 643 : Mayweather\_49
- Track 644 : Elliott\_43, Sopespian\_41, PsychoKiller\_42
- Track 645 : Zareef\_42, Nibbles\_39, Azira\_40
- Track 646 : HippoPololi\_40
- Track 647 : GiKK\_48
- Track 648 : Tolls\_44
- Track 649 : Hexbug\_51, Orla\_51
- Track 650 : MunkgeeRoachy\_41
- Track 651 : GoldHunter\_44
- Track 652 : Cozz\_41, Nina\_42, Agatha\_43
- Track 653 : Lauer\_41
- Track 654 : Typhonmarchy\_43
- Track 655 : Carsonalex\_46
- Track 656 : Bavilard\_44
- Track 657 : Yummy\_45, SweatNTears\_44, SketchMex\_43, Horseradish\_45, Biskit\_45
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- Track 659 : Emalyn\_42
- Track 660 : Troje\_45
- Track 661 : Amok\_44
- Track 662 : AikoCarson\_44
- Track 663 : AndPeggy\_40
- Track 664 : Nodigi\_51
- Track 665 : Pons\_46
- Track 666 : SummitAcademy\_44, Vine\_47
- Track 667 : Yakult\_46
- Track 668 : Buttrmilkdreams\_45
- Track 669 : Yarn\_40
- Track 670 : BillDoor\_43
- Track 671 : Button\_46
- Track 672 : Survivors\_40
- Track 673 : Fribs8\_39
- Track 674 : CanesSauce\_42, ChocoMunchkin\_42
- Track 675 : MaVan\_40
- Track 676 : Gibbous\_38, Dre3\_38
- Track 677 : ChickenTender\_45
- Track 678 : MAnor\_46
- Track 679 : Blondies\_45
- Track 680 : Starburst\_43
- Track 681 : SteamedHams\_43
- Track 682 : RanchParmCat\_48

- Track 683 : Quasar\_43
- Track 684 : MScarn\_47
- Track 685 : Burnsey\_43
- Track 686 : RedBaron\_45
- Track 687 : Yucky\_48
- Track 688 : Margaret\_49
- Track 689 : SheckWes\_48
- Track 690 : PotPie\_44
- Track 691 : Jamzy\_48
- Track 692 : GodonK\_188
- Track 693 : Phendrix\_176
- Track 694 : Fresco\_51, Axumite\_51
- Track 695 : CaiB\_54
- Track 696 : BobRoss2024\_51
- Track 697 : LittleMunchkin\_52
- Track 698 : Shatter\_51, Ligma\_51
- Track 699 : Yago84\_49, AnClar\_50, Sisko\_49
- Track 700 : BiggityBass\_49
- Track 701 : AnarQue\_54
- Track 702 : Wooper\_54
- Track 703 : Coldpizza\_51
- Track 704 : NHagos\_52
- Track 705 : Sour\_53
- Track 706 : MossRose\_53
- Track 707 : Evaa\_50
- Track 708 : CloverMinnie\_53
- Track 709 : MakoManhole\_51
- Track 710 : CharlottesWeb\_50
- Track 711 : Mariokart\_50
- Track 712 : Yeshua\_54
- Track 713 : Mareelih\_171, Boopy\_173, Forza\_174, BlueNGold\_170
- Track 714 : GMA2\_66
- Track 715 : Sixama\_172
- Track 716 : Mercedes\_34
- Track 717 : TeddyBear\_38, Gelo\_38, Bonino\_38, Calix\_38, Ludgate\_39, Baines\_38, Nagem\_39, Erla\_38, Gershwin\_38, Raptor\_39, Etta\_38, Asta\_38, Superfresh\_39, SJay\_39, Pocket\_38, Klimt\_38
- Track 718 : Shee\_39, MillyPhilly\_39, Dothraki\_39, TinSulphur\_39, Stanktossa\_39, Kurt1\_39, Pherferi\_39, Byron23\_39, Martin\_40, PhredFlintston\_39, Inventa\_39, Phiderman\_39
- Track 719 : McGalleon\_41
- Track 720 : Antoinette\_39, Peep\_39, Dave\_39
- Track 721 : Tenda\_38, Exploradora\_39, Clancy\_38, Rog141\_38, ParleG\_39, Benjalauren\_39, JeriBeth\_39, Papafritta\_38, Espinosa\_38, Jerbirus\_39, Robinson\_39, Riyhil\_39, StirfryIV\_38, HanSolo\_38, Figueroism\_39, Duocatuli\_38, Rappheph\_39, Janus167\_38, Gubbabump\_38, HankSprout\_39, AranulaLuti\_38, HungryHenry\_38, MaeLinda\_39, Ilzat\_38, StingRay\_38, JasperRussell\_38, KannH\_38, Zada\_39, Symere\_39, ManRay\_38, Aubergine\_38, Sedgewig\_38, Thorongil\_39, MrWorldwide\_39
- Track 722 : Ioannes\_39
- Track 723 : FarmerDoug\_38
- Track 724 : Hamlet\_38
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- Track 726 : TatarkaPM\_39
- Track 727 : Raccoon\_38
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- Track 730 : Phriends\_39, Delphidian\_39, SoilGremlin\_39, OldNelly\_39
- Track 731 : Velene\_39, Den3\_39, Oxtober96\_39, Lovelyunicorn\_39
- Track 732 : BonesMcCoy\_39, Convict\_39, Knox\_39
- Track 733 : Bandik\_39
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- Track 735 : Renzie\_39
- Track 736 : Thompsone\_39
- Track 737 : CarisSwetlik\_42
- Track 738 : BigRedClifford\_39, Blage\_39
- Track 739 : Chamuel\_38, SonOfLevi\_38
- Track 740 : Redfield\_38
- Track 741 : Greys\_39
- Track 742 : ShaiHulud\_39
- Track 743 : MonChoix\_37
- Track 744 : BeautPeep30\_39, Phireproof\_39
- Track 745 : Endor\_39
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- Track 748 : AxiPup\_39, Vispistious\_39, PuppyEggo\_39, Strathdee\_39
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- Track 752 : Christoph\_38
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- Track 754 : KingJulien\_38, Stormbreaker8\_38, Etna\_38
- Track 755 : Winzigespinne\_38, AlexAdler\_39, Nattles\_38, Kale\_38
- Track 756 : NickSell\_39
- Track 757 : BeeBee8\_39
- Track 758 : Garey24\_38
- Track 759 : JasonD\_43
- Track 760 : Acosta\_40
- Track 761 : Gargoyle\_39
- Track 762 : Leafus\_38
- Track 763 : YuuY\_37
- Track 764 : Juanyo\_37
- Track 765 : Nucci\_37, Mandalorian\_37, Carostasia\_37
- Track 766 : Quartz\_38
- Track 767 : Tinyman4\_37
- Track 768 : Ixel\_38
- Track 769 : Scissor2024\_37
- Track 770 : Schimmels22\_37, HerculesXL\_37
- Track 771 : WestPM\_35
- Track 772 : Andromedas\_38, Glamour\_37, ChikPic\_38, ColaCorta\_38, Shamu\_38
- Track 773 : MCubed\_38, Finny\_38, Phanita\_37, Zenitsu\_38
- Track 774 : Saratos\_38, Eleri\_38
- Track 775 : Sansa\_37
- Track 776 : Pikmin\_35, Pajaza\_35, Casey\_35
- Track 777 : Lucky3\_37, Golden\_37, SirVictor\_37, Guetzie\_37
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- Track 779 : Kauala\_37
- Track 780 : BouleyBill\_36
- Track 781 : Pherbot\_37, Bustleton\_37
- Track 782 : Jingles\_37
- Track 783 : PrincePhergus\_37
- Track 784 : Sinatra\_37
- Track 785 : Clock\_37, Nebulous\_37
- Track 786 : Zepp\_38
- Track 787 : Neferthena\_38
- Track 788 : Hasitha\_37, Fulton\_37
- Track 789 : Greenlvy\_37, Zayuliv\_37, BaronJohn\_38
- Track 790 : Alakazam\_38
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- Track 792 : CaptainRex\_37, Librie\_37
- Track 793 : LilTerminator\_38
- Track 794 : Wardwill\_39
- Track 795 : Luna18\_40, KatChan\_40
- Track 796 : Morrigan\_40
- Track 797 : Jemerald\_40, Juicer\_40
- Track 798 : Chepli\_40
- Track 799 : WilliamStrong\_38
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- Track 802 : GaeCeo\_39, ChickenKing\_38
- Track 803 : ChiliPepper\_40, Dismas\_40, Sharkboy\_41, Rona\_40
- Track 804 : Cashington\_40
- Track 805 : Stromboli\_43
- Track 806 : Celaena\_40
- Track 807 : Bachaco\_40
- Track 808 : MsUbiquitous\_43, TukTuk\_43, Eula\_43, CupcakePrincess\_43, Jabb\_43
- Track 809 : Avocadoman\_41
- Track 810 : Elva\_44
- Track 811 : Teagster\_43
- Track 812 : SansAfet\_43, Bengal\_43, PhigPhack\_43, Arroyo\_43
- Track 813 : Swervy\_43, Phisb\_43
- Track 814 : Katzastrophic\_41
- Track 815 : Rollins\_40, Vitas\_40, Skylord\_40, Armstrong\_40, Bernstein\_40
- Track 816 : Doobus\_41, Johnathan\_41
- Track 817 : Kate33\_42
- Track 818 : LimaBean\_42, Abigail\_42
- Track 819 : SanaSana\_45
- Track 820 : BabyYoda\_43, Icarian\_45
- Track 821 : Franklin22\_41
- Track 822 : Nicky22\_43
- Track 823 : Quenya\_42
- Track 824 : Squircle\_39, Olliecat\_39
- Track 825 : BAjuniper\_43
- Track 826 : PastaFagioli\_43
- Track 827 : Kieran\_40
- Track 828 : Softsoap\_42
- Track 829 : Buldak\_39
- Track 830 : BubbaBear\_41
- Track 831 : Clayda5\_41

- Track 832 : Albedo\_43
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- Track 834 : DickRichards\_41
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- Track 836 : Jovita\_43
- Track 837 : CroZenni\_42
- Track 838 : Finalfrontier\_43
- Track 839 : WalkingDead\_44
- Track 840 : IndyLu\_42
- Track 841 : SarBear\_42, Slay\_43
- Track 842 : DirtyBubble\_42
- Track 843 : Burritobowl\_42
- Track 844 : Lynlen\_43
- Track 845 : QMacho\_45
- Track 846 : Albright\_40
- Track 847 : AnnaLie\_43, BelmontSKP\_43
- Track 848 : SunnyD\_42
- Track 849 : AvGardian\_44
- Track 850 : Stoor\_43
- Track 851 : Gack\_40
- Track 852 : Eden\_40
- Track 853 : Didgeridoo\_45
- Track 854 : BabyDaisy\_42
- Track 855 : Lahqtemish\_42
- Track 856 : Kenzers\_43
- Track 857 : Shayna\_42
- Track 858 : CliffHanger\_44
- Track 859 : Floof\_49
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- Track 861 : Percival\_49
- Track 862 : Gretchen\_48
- Track 863 : UtzChips\_47, Barnstormer\_47
- Track 864 : SuMoo\_50
- Track 865 : Zeta1847\_40
- Track 866 : GardenState\_48, IAmGroot\_48
- Track 867 : Honk\_44
- Track 868 : Caron\_50
- Track 869 : Mabodamaca\_48
- Track 870 : Patbob\_100
- Track 871 : Atuin\_96, LeoJr\_98, ReginaGlobina\_98
- Track 872 : Bloom\_103, Mimi\_105, Racecar\_100
- Track 873 : SJReid\_106
- Track 874 : DunneganBoMo\_92, WaddleDee\_92
- Track 875 : Chilliams\_97
- Track 876 : KSunshine22\_93
- Track 877 : Talia1610\_99
- Track 878 : Ellewin\_90
- Track 879 : GoldenEssence\_88
- Track 880 : Phrampa\_94
- Track 881 : Rockabye\_103
- Track 882 : CallinAllBarbz\_41
- Track 883 : BaileyBlu\_41
- Track 884 : Jankie\_40

- Track 885 : AnnabelLee\_40
- Track 886 : Audell\_40
- Track 887 : TMaxx\_43
- Track 888 : Lifes\_61
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- Track 890 : BarnCat\_62
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- Track 897 : PauloDiaboli\_117
- Track 898 : Dodo\_117
- Track 899 : Big4\_105
- Track 900 : Zooman\_100
- Track 901 : Cece\_99
- Track 902 : Pumpernickel\_113
- Track 903 : Huwbert\_71
- Track 904 : Triscuit\_70
- Track 905 : Ibantik\_18
- Track 906 : Yappy\_80
- Track 907 : Shrew\_79
- Track 908 : EmiRose\_34
- Track 909 : TPA2\_63
- Track 910 : Ponzi\_14
- Track 911 : Shocker\_43
- Track 912 : StAugustine\_89
- Track 913 : Attoomi\_34
- Track 914 : BFK20\_ORF44
- Track 915 : Samy\_65
- Track 916 : Pine5\_49

***Summary of Final Annotations (See graph section above for start numbers):***

The start number called the most often in the published annotations is 234, it was called in 938 of the 1683 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_45, A6\_41, ACFishhook\_47, AEgle\_37, AFIS\_43, AGrandiflora\_42, AN3\_45, AN9\_48, ANI8\_48, AbbeyMikolon\_44, AbbyPaige\_46, AbbysRanger\_44, Abbyshoes\_47, Abdiel\_45, Abigail\_42, Abrogate\_440, Achebe\_43, Acme\_47, Acolyte\_41, Adahisdi\_44, Adolin\_40, Adumb2043\_38, Adzzy\_46, Aeneas\_47, Agaliana\_41, Agape74\_46, AgentM\_37, Aglet\_49, AgronaGT15\_47, AinMach\_42, Airmid\_39, Ajay\_45, Alatin\_36, Albedo\_43, Albee\_45, Alberto7\_46, Albright\_40, Aliter\_45, Alma\_45, Alpacados\_35, Alsfro\_48, Altman\_46, Alvin\_44, Amyev\_40, Anaysia\_47, Aneem\_45, Anglerfish\_45, AngryOrchard\_34, AnnaL29\_46, AnnaLie\_43, Annyong\_45, Anon\_42, Anselm\_45, Anthony\_39, Anubis\_51, AppleCloud\_34, Applejack\_40, Aragog\_37, Arcanine\_46, ArcherNM\_42, Archetta\_38, Arissanae\_44, Arlo\_42, Arroyo\_43, Artemis2UCLA\_45, Arturo\_44, Asa16\_39,

Ascela\_41, Ashballer\_46, Ashes\_38, Astro\_42, Atkinbua\_46, Attoomi\_34, AugsMagnumOpus\_51, AvGardian\_44, AvatarAhPeg\_44, Avle17\_45, Avocadoman\_41, B1\_42, BABullseye\_43, BAjuniper\_43, BK1\_41, BPBiebs31\_45, Baby16\_45, BabyBack\_43, BabyDaisy\_42, BabyJohn\_43, BabyRay\_45, BabyYoda\_43, Bachaco\_40, Bachome\_46, Backyardigan\_43, BaconJack\_48, Bactobuster\_43, Badger\_43, Baehexic\_43, BaileyBlu\_41, BangNhom\_46, Barriga\_45, Bartimeaus\_45, Battleship\_48, Beatrix\_44, Beauxregard13\_48, Beemo\_45, BeesKnees\_45, Belenaria\_36, BellusTerra\_46, BelmontSKP\_43, Benedict\_39, Bengal\_43, BengiVuitton\_44, Benvolio\_41, Berrie\_42, Bethlehem\_44, Bexan\_43, BiancaTri92\_44, Big3\_43, BigMau\_45, BigPaolini\_45, Bigfoot\_41, BillKnuckles\_45, Bimmel\_18, Bircsak\_44, Blackmoor\_45, BlessJoy\_46, Blinn1\_48, BluSpix\_42, Blue7\_48, BlueBird\_47, Blue\_44, Bluefalcon\_37, Bob3\_42, BobSwaget\_44, BobbyDazzler\_36, BogosyJay\_44, Bombshell\_45, Bonamassa\_39, Bonanza\_36, Bones\_45, Boohoo\_47, Bowtie\_45, Bradshaw\_36, BreSam8\_48, Briton15\_46, Broseidon\_45, Bruiser\_44, Brunns\_43, Bryce\_36, BubbaBear\_41, BubbleTrouble\_44, Bud\_44, Bugatti\_46, Buggy\_46, Bumblebee11\_43, Burger\_43, Burritobowl\_42, Burton\_44, Buttons\_43, BuzzBuzz\_46, Bxb1\_41, Bxz2\_44, C3\_43, CRB1\_46, CactusRose\_42, Caelakin\_45, CallinAllBarbz\_41, Calvinny\_48, Camperdownii\_43, Candra\_45, Cappuccino\_38, Caraxes\_45, Carlyle\_44, Cashington\_40, Cassia\_40, Catalina\_46, Caviar\_44, Celaena\_40, Cen1621\_44, Centaur\_45, CentreCat\_45, Cerulean\_46, Chadwick\_40, Chako\_38, ChampagnePapi\_47, Chamuel\_38, Chanagan\_42, Changeling\_45, Chaph\_45, Chargerpower\_44, Charm\_42, Chartreuse\_45, Che12\_47, ChiliPepper\_40, ChipMunk\_47, Chiqui\_43, Chupacabra\_43, Ciao\_45, Cici\_44, Cindaradix\_42, Cintron\_44, Citius\_45, Clarenza\_44, Clayda5\_41, CliffHanger\_44, CloudWang3\_45, Cocoaberry\_45, Colbster\_48, Colin\_46, Commander\_45, Community\_43, Conceptll\_46, Connomayer\_45, Conquerage\_45, Conspiracy\_38, Coog\_38, Cookiedough\_45, Corvo\_45, CosmicSans\_36, Crewmate\_46, Crispicous1\_43, CroZenni\_42, Crucio\_44, Cuco\_38, Cueylyss\_46, Cullens\_48, CupcakePrincess\_43, Cyan\_41, D29\_44, D32\_47, DBQu4n\_47, DD5\_44, DaHudson\_48, DaVinci\_45, Daishi\_47, Dalmatian\_45, Danforth\_42, Darrell\_46, DarthPhader\_42, Datway\_44, Deano\_44, DekHockey33\_47, Deloris\_43, Dexes\_45, Dhanush\_45, DickRichards\_41, Didgeridoo\_45, Dieselweasel\_49, Dignity\_46, Dinger\_36, DirtyBubble\_42, DirtyDunning\_44, Discoknowium\_37, Dismas\_40, Dixon\_43, Donkey\_38, DontArgue\_43, Doobus\_41, Doom\_45, Dorothea\_45, DrFeelGood\_43, DrManhattan\_40, DrSierra\_39, Drake55\_46, Drake94\_42, DreamCatcher\_47, DreamTeam1\_42, Dreamboat\_46, DroogsArmy\_41, DropBear\_45, Druantia\_45, Dublin\_37, Dubu\_35, DudeLittle\_43, Dulcie\_45, Duplo\_47, Dussy\_46, DustyMartin\_48, Dynamix\_45, EagleEye\_46, Eagle\_45, Eaglepride\_45, Eapen\_45, Ebony\_45, Echild\_44, Eden\_40, Edison31\_43, EdogawaKiddo\_43, Edtherson\_45, Eidsmoe\_45, Elephantoon\_44, Elezi\_39, Elva\_44, Emotion\_46, EmyBug\_44, EpicPhail\_49, Epsocamisio\_46, Equemioh13\_45, Eraser\_39, EricB\_45, Erik\_36, Eris\_44, Eros\_45, Espica\_36, Espresso\_44, Et2Brutus\_44, Eula\_43, Euphoria\_43, Euratis\_35, Eurydice\_46, EvilGenius\_47, Exile\_36, Expelliarmus\_42, ExplosioNervosa\_45, Eyeball\_46, Fajezeel\_47, Fameo\_44, Farber\_48, Fascinus\_41, Fayely\_45, Fenn\_46, Fernando\_48, Fibonacci\_44, Finalfrontier\_43, FiringLine\_44, First\_0044, FlameThrower\_40, Flare16\_44, Flaverint\_45, Florean\_45, Flux\_45, FlyCatcher\_47, ForGetIt\_38, Forsytheast\_44, Francis47\_44, Franklin22\_41, Fred313\_45, Froghopper\_43, Funston\_44, Fushigi\_43, GMonster\_42, Gack\_40, Gadost\_45, GageAP\_45, Gail\_49, Gambol\_39, Gandalf20\_46, Garak\_47, GaugeLDP\_43, Gemma\_47, George\_38, Georgie2\_45, Ghoulyboy\_40, Gilberta\_45, GingkoMaracino\_48, Giroux\_46, Gladiator\_45, Gollum\_36, Gompeii16\_44, Goose\_44, Graduation\_48, GrecoEtereo\_45, GreedyLawyer\_45, Greg\_47, Grif\_48,



Groundhog\_41, Groupthink\_49, Grub\_48, Grum1\_48, Gruunaga\_45, GtownJaz\_48, Gwendoluna\_47, Gyzlar\_41, HINdeR\_41, Halsey\_38, HamSlice\_44, Hami1\_39, Hammer\_47, HanShotFirst\_43, Hanray\_43, Happiness\_44, Harlequin\_36, HarryHoudini\_45, HarryOW\_43, HashRod\_49, HaveUMetTed\_49, Heathen\_45, Heather\_37, Heffalump\_43, HelDan\_45, Heliosoles\_47, Helmet\_47, Herbertwm\_42, Hercules11\_48, Hermia\_46, HermioneGrange\_44, Hexamo\_45, Hiro\_36, Horex\_44, Holli\_44, Homines\_37, Hookmount\_44, Hoot\_45, Hope4ever\_46, HortumSL17\_45, Houdini22\_45, HuhtaEnerson15\_39, Hutc2\_44, Huxley\_45, ICleared\_45, ILeeKay\_49, Ibantik\_18, Icarian\_45, Iceman\_45, Ichabod\_46, Idleandcovert\_46, IgnatiusPatJac\_44, Indra\_48, IndyLu\_42, Insomnia\_45, Inyanga\_42, Iracema64\_46, IronMan\_44, Isca\_44, Isiphiwo\_43, Iter\_41, IttyBittyPiggy\_40, Iwokeuplikedis\_47, JC27\_45, JF2\_45, JF4\_45, JHC117\_48, JSwag\_46, Jaan\_45, Jabb\_43, Jabiru\_39, Jabith\_45, JackSparrow\_46, Janeemi\_43, Jankie\_40, JasmineDragon\_45, Jasper\_46, Jaykayelowell\_43, Jeeves\_50, JenCasNa\_49, JeppNRM\_49, Jerm2\_45, Jerm\_46, Jester\_36, JetBlade\_45, JewelBug\_47, Jiawan\_43, Jobu08\_47, Joemato\_41, JohnDoe\_41, Johnathan\_41, JoongJeon\_44, Jordennis\_45, Jorgensen\_45, Joselito\_45, JoshKayV\_46, Journey13\_40, Jovita\_43, Jovo\_38, Jstan\_41, JuliaChild\_45, KADY\_48, KBG\_46, KFPoly\_44, KSSJEB\_43, Kachowdy\_45, Kalb97\_49, Kalimba\_38, Kalnoky\_49, Kalpine\_44, Kampy\_45, Kanely\_45, Katalie136\_44, Kate33\_42, KatherineG\_48, Katzastrophic\_41, Kaylissa\_42, Kazan\_46, KeAlii\_40, Kenmech\_48, Kenzers\_43, Kerberos\_47, Kieran\_40, Killigrew\_44, Kimona\_43, KingCyrus\_47, Kingmustik0402\_45, Kinmap\_43, Kipper29\_45, KittenMittens\_41, Koan\_43, Koko\_47, Koreni\_44, Kratak\_45, Kremtemulon\_45, Krishelle\_36, Kristoff\_44, Kugel\_46, KyMonks1A\_47, Kyee\_45, Kykar\_45, LBerry\_49, LHTSCC\_47, LadyAstra\_48, LadyBird\_47, Lahqtemish\_42, Lambert1\_44, Lamina13\_45, Landor\_44, LappelDuVide\_45, Larenn\_44, LarryKay\_48, LastResort\_46, Lego\_41, Lemur\_45, LeoAvram\_45, Leogania\_44, Lesedi\_42, Lev2\_38, Leviathan\_46, Licorice\_48, LiBib\_45, LilTurb\_45, Lilbooboo\_34, Lilbunny\_44, Lilith\_49, Lilleskat\_43, Lillie\_36, LimaBean\_42, LittleB\_45, LittleCherry\_39, LittleGuy\_45, Lizaica\_39, LochMonster\_46, Lockley\_44, Lokk\_45, London\_39, LoneWolf\_45, Looper\_47, Lopton\_45, Lorenzo\_45, Loser\_46, Louie6\_47, Luchador\_50, Lucivia\_45, Lucyedi\_45, LugYA\_51, Lunsford\_46, Lynlen\_43, MA5\_45, MK4\_45, MPlant7149\_43, MaCh\_45, MaGuCo\_40, Mabel\_45, MadMarie\_48, Magnar\_44, Magnito\_42, Mainiac\_48, Makemake\_44, Malec\_45, Malinsilva\_50, Maminiaina\_44, Manatee\_45, Manu\_48, MarQuardt\_48, Marcell\_43, Marchesa\_45, Marchy\_39, Marge\_45, Margo\_44, Marie\_48, Marius\_49, Maroc7\_43, Marsha\_45, MaryBeth\_45, MarysWell\_37, Maureen\_42, Maverick\_45, Maxo\_46, Mazhar510\_45, McFly\_45, McGuire\_45, Medusa\_45, MeeZee\_45, Melvin\_47, MetalQZJ\_44, Methuselah\_45, Micasa\_40, Michley\_44, Microwolf\_48, MiculUcigas\_44, Midas2\_38, Miko\_43, Milcery\_39, Millski\_44, MinecraftSteve\_48, MiniMommy\_47, Miramae\_44, Misomonster\_49, MissSwiss\_41, MissWhite\_43, Mkhuseleli\_44, Molly\_45, Monet\_48, MoneyMay\_48, Moose\_44, Morpher26\_44, Morrow\_46, Moss\_38, MrGordo\_44, Mryolo\_42, MsUbiquitous\_43, MuchMore\_51, Mudpuppy\_38, Mulciber\_44, Mule\_42, Munch\_45, Mundrea\_44, Museum\_45, MyraDee\_40, Mysterium\_37, Myxus\_45, NEHalo\_43, NaSiaTalie\_44, Naiad\_36, Naira\_46, Naji\_47, Nancinator\_36, Natosaleda\_36, NearlyHeadless\_43, Nebs\_46, Nebulosus\_46, Nedarya\_43, Neeharika16\_45, Nemo27\_45, Nerujay\_46, Nesbitt\_42, Newrala\_45, Nhonho\_45, Nicky22\_43, NicoleTera\_45, Niobe\_39, Nitro\_40, Niza\_47, Noella\_44, Noelle\_45, Norbert\_43, NorthStar\_44, Norz\_45, NotAPhaseMom\_45, NothingSpecial\_43, Nyxis\_45, OKCentral2016\_43, OKaNui\_45, Obama12\_46, ObiToo\_46, Odin\_44, Ohfah\_46, Ohno789\_45, OlanP\_47, Ollie\_48, Onglai\_43, Oofda\_48, Oogway\_42, Orange\_44, P28Green\_49, PGHhamlin\_50, PP\_46, PSullivan\_44, PacerPaul\_45, PackMan\_44, PainterBoy\_45, Palestino\_44,

Panamaxus\_42, Papez\_47, Paphu\_43, Paraselene\_43, Pari\_45, Parliament\_44, Partridge\_36, PascalRango\_45, PattyP\_45, Pawn\_48, Payneful\_44, PeaceMeal1\_42, Peaches\_45, Pelly\_44, Pembroke\_48, Penny1\_49, Pepe\_42, Perplexer\_44, Perseus\_45, PeterPeter\_45, Petersenfast\_43, Peterson\_48, PetiteSangsue\_44, Petp2012\_45, Petruccio\_45, PetterN\_40, Ph8s\_46, Phacado\_45, Phaded\_46, Phaeder\_45, PhailMary\_35, Phantastic\_46, Pharaoh\_39, Felipe\_46, PherrisBueller\_44, PhigPhack\_43, Phighter1804\_45, Phillis\_44, Phisb\_43, PhishRPhriends\_46, Phives\_43, Phlei\_33, Phlorence\_37, Phoebe\_49, Phonnegut\_45, Phontbonne\_45, Phoxy\_48, Phrankenstein\_36, Phranny\_49, PhrostyMug\_44, PickleBack\_38, PinkPlastic\_43, Pinto\_45, Pioneer\_45, Pipcraft\_43, Pippin\_47, Piro94\_44, Pistachio\_47, Pita2\_47, Pixelle\_41, Pmask\_45, Pocahontas\_44, Polymorphads\_46, Pomar16\_47, Ponzi\_14, Poompha\_43, Popcicle\_44, PotatoSplit\_50, Power\_43, Powerpuff\_43, Priamo\_47, Priya\_45, ProMouse\_45, Pukovnik\_43, Pumbaa\_45, Pumpkins\_40, Puppy\_47, PurpleHaze\_48, QMacho\_45, QTRLifeCrisis\_45, Qobbit\_45, QueenB2\_44, QueenBeesly\_44, QuinnKiro\_43, RER2\_29, RGL3\_31, Rachaly\_45, Rahalelujah\_44, Raid\_45, Rajelicia\_46, Rasputin\_36, ReMo\_46, Reba\_48, Rebeuca\_44, RedRock\_46, Reedo\_40, Refuge\_44, Relief\_44, RemusLoopin\_36, Remus\_47, ResDef\_44, Retro23\_45, RexFury\_36, Rhodalysa\_36, RhynO\_45, Rhynn\_44, RidgeCB\_44, Rifter\_47, Ringer\_46, Roary\_43, Rockstar\_45, Rohr\_45, Roksolana\_46, Romney\_45, Rona\_40, Roosevelt\_44, Rosa24\_44, Rosalind\_46, Rowa\_41, Rowdy\_48, Rubeus\_45, Rufus\_45, Ruin\_45, Rummer\_47, Ruotula\_48, Rutherford\_47, RyeScarlet\_46, STLscum\_46, Sabertooth\_45, Sabia\_48, Sabinator\_47, Sachima\_42, Sagefire\_48, Saintus\_38, Salz\_44, Samora\_36, Samy\_65, SanaSana\_45, Sandaddy\_44, SansAfet\_43, Sanya\_43, SarBear\_42, SarFire\_43, SaturnRing\_46, Scamp\_45, Scherzo\_45, Scorpia\_40, Scout\_45, Scowl\_45, Seabiscuit\_46, Seanderson\_47, Sebastisaurus\_36, SemperFi\_45, SenorClean\_43, Serenity\_45, Severus\_42, Shaffner\_41, Shaka\_45, ShakeltOph\_47, Sham4\_44, Shapes\_48, Sharkboy\_41, Shawty\_33, ShayRa\_48, Shayna\_42, SheaKeira\_43, Sheen\_44, SheldonCooper\_47, ShortQueendom\_39, Shuman\_36, Shygu2\_44, Sibs6\_45, Simpson\_43, SkiPole\_47, Skipitt\_44, Sknot\_46, Slagathor\_47, Slay\_43, Smairt\_47, Smeadley\_43, Smeagan\_47, Smeagol\_46, SmellyB\_45, SnapTap\_44, Snape\_44, Snazzy\_42, Snek\_40, Snickers\_48, SoYo\_48, Softsoap\_42, SoilDragon\_48, Solon\_44, SonOfLevi\_38, Soondubu\_37, Sooty\_38, SororFago\_48, Sorpresa\_44, Soshari\_50, Soups\_47, Sparxx\_46, SpecialK\_38, Spike509\_48, SpikeBT\_45, Spino\_44, Spooks\_18, Spouty\_45, Squee\_44, StCroix\_36, Stagni\_48, StarStuff\_47, Stasia\_44, Steamy\_41, StepMih\_48, Stephig9\_43, StewieG\_44, Stink\_45, Stoor\_43, Stromboli\_43, StrongArm\_44, Strosahl\_47, Success\_19, Sue2\_42, Sumter\_42, Sunhee\_47, SunnyD\_42, Sunshine924\_45, SuperAwesome\_45, SuperCallie99\_45, Superchunk\_44, Swann\_36, SweetiePie\_44, Swervy\_43, SwirlSquare\_48, Swirley\_41, SwissCheese\_46, Switzer\_45, Switzerland\_47, Swole\_45, SydNat\_40, TG1\_31, TNguyen7\_46, TWAMP\_36, Takoda\_36, Tallboi\_40, Taquarus\_45, Target\_45, Tarynearal\_37, Tasp14\_46, Taurus\_49, Tbone\_40, Teagster\_43, Temprado\_47, Teodoridan\_43, Texage\_43, TforTroy\_42, Thanksgivukkah\_44, Theia\_36, TheloniousMonk\_46, Thor\_43, Tian\_39, Tiffany\_48, Tiger\_37, Timothy\_45, Timshel\_43, TinaFeyge\_45, TinyPebbles\_47, TinyTimmy\_45, Tinybot\_44, TipsytheTRex\_42, TiroTheta9\_45, Todacoro\_44, Tomathan\_47, ToneTone\_42, Topanga\_42, Topgun\_44, Toro\_45, Tote\_40, Traft412\_45, Travvers\_47, Treddle\_46, Trike\_42, Tripl3t\_45, Trixie\_44, Trouble\_46, TroyPia\_46, Tubs\_45, Tuck\_44, Tucker\_46, TukTuk\_43, Turab\_38, Turbido\_45, Turj99\_42, Tutumahutu\_42, Tweety19\_41, Twigg\_39, Twister\_42, TwoPeat\_45, TygerBlood\_45, U2\_43, Ugenie5\_42, UhSalsa\_36, Ulysses\_44, UnionJack\_39, Updawg\_45, VA6\_43, VC3\_48, VResidence\_41, Vanisoa\_44, Vash\_34, Veracruz\_43, Violet\_42, Vix\_48,

VohminGhazi\_45, VroomVroom\_45, Waits\_47, WalterMcMickey\_42, Wander\_45, Warda\_41, Warrior24\_49, Watermelon\_46, Watson\_48, WeiHuaDA\_48, Whabigail7\_45, Wheeler\_45, WideWale\_45, Wiks\_44, Wilbur\_45, Wildwest\_40, Wile\_44, Wilkins\_44, Wizard007\_45, Wooldri\_50, WunderPhul\_45, Xena\_43, XianYue\_44, Yecey3\_46, YesChef\_41, YoSam321\_45, Yogi\_36, Yokurt\_45, Yoncess\_36, Zaka\_45, Zeeculate\_43, Zephyr\_44, Zetzy\_47, Zeuska\_44, Zimmer\_42, Zolita\_39, Zulu\_46, phiBT1\_11, phiSASD1\_12,

Genes that have the "Most Annotated" start but do not call it:

- 40AC\_46, Acosta\_40, AlexAdler\_39, Alyxandracam\_39, Antoinette\_39, AranulaLuti\_38, Armstrong\_40, Asta\_38, Aubergine\_38, AxiPup\_39, Baines\_38, Bandik\_39, BeautPeep30\_39, Benjalauren\_39, Bernstein\_40, BigRedClifford\_39, Blage\_39, BonesMcCoy\_39, Bonino\_38, Brahms\_40, Byron23\_39, Calix\_38, CarisSwetlik\_42, Clancy\_38, Coltrane\_40, Convict\_39, Dave\_39, Delphidian\_39, Den3\_39, Dothraki\_39, Duocatuli\_38, EITiger69\_39, Erla\_38, Espinosa\_38, Etta\_38, Exploradora\_39, Figueroism\_39, Garey24\_38, Gargoyles\_39, Gelo\_38, Gershwin\_38, Greys\_39, Gubbabump\_38, HanSolo\_38, HankSprout\_39, HungryHenry\_38, Ilzat\_38, Inventa\_39, Ioannes\_39, Janus167\_38, JasonD\_43, JasperRussell\_38, Jeffabunny\_45, Jerbirus\_39, JeriBeth\_39, JuneStar\_42, Kale\_38, KannH\_38, Klimt\_38, Knox\_39, Kurt1\_39, Liebe\_42, Lovelyunicorn\_39, Ludgate\_39, MaeLinda\_39, ManRay\_38, Martin\_40, MillyPhilly\_39, MrWorldwide\_39, Naca\_39, Nagem\_39, Nattles\_38, Oats\_38, OldNelly\_39, Oxtober96\_39, PapaFritta\_38, ParleG\_39, Peep\_39, Pherferi\_39, Phiderman\_39, Phireproof\_39, PhredFlintston\_39, Phriends\_39, Pocket\_38, PuppyEggo\_39, Rapphep\_39, Raptor\_39, Renzie\_39, Riyhil\_39, Robinson\_39, Rog141\_38, Rollins\_40, SJay\_39, Sedgewig\_38, ShaiHulud\_39, Shee\_39, Skylord\_40, SoilGremlin\_39, Stanktossa\_39, StingRay\_38, StiryfryIV\_38, Strathdee\_39, Superfresh\_39, Symere\_39, Teagan\_39, TeddyBear\_38, Tenda\_38, Thompsone\_39, Thorongil\_39, TinSulphur\_39, Velene\_39, Vispistious\_39, Vitas\_40, Winzigespinne\_38, Yang\_41, Zada\_39,

Genes that do not have the "Most Annotated" start:

- 39HC\_051, 40BC\_051, 8UZZL\_44, A3Wally\_117, ABU\_61, Abinghost\_58, AbsoluteMadLad\_61, Abt2graduatex2\_49, Acadian\_58, Adriana\_62, Aelin\_60, Agatha\_43, Agente005\_39, Ahwei\_52, AikoCarson\_44, Akoma\_58, Alakazam\_38, AlanGrant\_57, Allegro\_57, AltPhacts\_60, Altwerkus\_58, Amavida\_56, Amigo\_55, Amok\_44, AnClar\_50, Anansi\_54, AnarQue\_54, AndPeggy\_40, Anderson\_61, Andre\_62, Andromedas\_38, AngelCake\_59, AnnabelLee\_40, Antihero\_52, Antonia\_60, Apex\_54, Apizium\_60, Arbiter\_56, Ares\_57, Ashraf\_62, Asis\_48, Athena\_60, Atuin\_96, Audell\_40, Audrey\_58, Austelle\_54, Axumite\_51, Axym\_42, Azira\_40, BFK20\_ORF44, BabyGotBac\_49, Badfish\_61, Bae\_59, Baloo\_58, Balsa\_38, Bananafish\_57, Banjo\_59, BarnCat\_62, Barnstormer\_47, BaronJohn\_38, Basato\_61, BatteryCK\_61, Bavailard\_44, BayC\_48, Beaglebox\_60, BeeBee8\_39, Ben11\_58, Bernardo\_59, Big4\_105, BigChungus\_44, BiggityBass\_49, BillDoor\_43, BirdsNest\_61, Bishoperium\_60, Biskit\_45, BlackStallion\_62, Blocker23\_57, Blondies\_45, Bloom\_103, BlueHusk\_62, BlueNGold\_170, Bluephacebaby\_60, BobRoss2024\_51, BobbyK\_54, Boehler\_60, Boersma\_57, Boopy\_173, BouleyBill\_36, Boyle\_57, Bradman\_44, Briakila\_57, Brilliant\_63, BrownCNA\_55, Brownie5\_57, Buckeye\_61, Buldak\_39, Burnsey\_43, Burr\_60, Bustleton\_37, Button\_46, Buttrmlkdreams\_45, CRB2\_57, CaiB\_54, Calamitous\_57, CamL\_60, CampRoach\_62, CanesSauce\_42, Cannibal\_60, CaptainRex\_37, Caron\_50, Carostasia\_37, Carsonalex\_46, Carthage\_59, Casbah\_58, Casey\_35, Caspiboi\_63, Cassita\_65, Cece\_99, ChaChing\_58, Chaelin\_61, Chah\_62, Chalmers\_57, Chandler\_58, Charles1\_61, CharlieGBrown\_61, CharlottesWeb\_50, CheetO\_60,

Cheeto1\_39, Chentzyk\_59, Chepli\_40, Cher\_60, CherryonLim\_46, ChickenKing\_38, ChickenTender\_45, ChikPic\_38, Childish\_60, Chilliams\_97, ChocoMunchkin\_42, Chorkpop\_60, ChrisnMich\_53, Christoph\_38, Chunky\_59, Chute\_62, Cleo\_38, Clock\_37, CloverMinnie\_53, Cobra\_62, Coffee\_57, ColaCorta\_38, Colbert\_59, Coldpizza\_51, Coletti\_63, Compostia\_58, Cooper\_54, Cornobble\_60, Corofin\_58, Cosmolli16\_61, Cozz\_41, Craff\_63, Crownjwl\_60, DaddyDaniels\_62, Daffy\_60, Daisy\_57, Daka\_63, Dati\_60, Deenasa\_58, DelRivs\_59, Derpp\_60, Devonte\_57, Dewdrop\_95, Dice\_59, DigitDog\_58, Dingo\_59, Dione\_58, DirtJuice\_61, Doddsville\_61, Dodo\_117, DoesntMatter\_58, DonSanchon\_58, Donny\_59, Dre3\_38, DuchessDung\_62, Duggie\_61, DunneganBoMo\_92, Durga\_63, EZMoney23\_43, Eaglehorse\_57, EastView9101\_57, EhyElimayoE\_67, Eleri\_38, Elinal\_48, Elliott\_43, Ellewin\_90, ElvisPhasley\_66, Emalyn\_42, EmiRose\_34, Emiris\_63, EmpTee\_60, Endor\_39, Epah\_52, Eremos\_60, Etaye\_62, Etna\_38, Eugenia\_60, Evaa\_50, FF47\_43, Fanaw\_52, Fang\_62, FarmerDoug\_38, Faze9\_56, Feastonyeet\_44, Finny\_38, Floof\_49, FluffyNinja\_62, ForDig\_53, Fortunato\_54, Forza\_174, Fozzie\_61, Frankenweenie\_74, Frankicide\_59, Frederick\_54, FrenchFry\_57, Fresco\_51, Freya\_58, FriarPreacher\_60, Fribs8\_39, Fringe\_64, FugateOSU\_61, Fulton\_37, Funsized\_59, GMA2\_66, GTE2\_35, Gadget\_59, GaeCeo\_39, GardenB\_38, GardenState\_48, Gareth\_60, GeneCoco\_61, Gervas\_59, GiKK\_48, Gibbous\_38, GinPorsche\_52, Giraffe\_61, Glamour\_37, Glass\_57, GlenHope\_59, Glubnar\_58, Godines\_58, GodonK\_188, GoldHunter\_44, GoldenEssence\_88, Golden\_37, Gophee\_62, Gorgeous\_54, Grand2040\_60, Greenlvy\_37, Gretchen\_48, Guetzie\_37, Gustav\_47, Gwennie1\_60, Gwilliam\_62, Gyarad\_0059, HSavage\_59, Haimas\_59, Haleema\_59, Halfpint\_57, Hally898\_52, Hamish\_59, Hamlet\_38, Hangman\_53, Hartsy\_61, HarveySr\_57, Harvey\_59, Hashim76\_61, Hasitha\_37, Heath\_52, Heathcliff\_58, Hedgerow\_57, Held\_60, Hendrix\_88, HenryJackson\_60, HerculesXL\_37, Hertubise\_60, Hetaeria\_60, Hexbug\_51, Heylee\_57, HighStump\_62, HippoPololi\_40, Hocus\_60, Holeinone\_57, Honk\_44, Horchata\_59, Horseradish\_45, Hosp\_050, Huwburt\_71, Hydro\_53, IAmGroot\_48, Ichor\_55, ImtiyazSitla\_62, Imvubu\_52, Inchworm\_62, Indlovu\_55, Inverness\_59, Iridessa\_62, Iridoclysis\_61, IsaacEli\_62, ItsyBitsy1\_57, Ixel\_38, JAMaL\_53, JDog\_59, JacAttac\_62, Jackstina\_54, JacoRen57\_40, Jaek\_55, JaguarMi\_55, JakeO\_61, Jamzy\_48, JangoPhett\_60, Jemerald\_40, Jenos\_42, Jesabah\_61, Jillium\_60, Jiminy\_61, Jingles\_37, Jiraiya\_64, Jolie1\_052, Jsquared\_43, Juanyo\_37, Juicer\_40, JustBecause\_62, KLucky39\_59, KSunshine22\_93, Kahve\_60, Kailash\_61, Kaleb\_57, Kamiyu\_58, KarasumaRum\_58, KatChan\_40, Katniss\_61, Kauala\_37, KayGee\_46, KayaCho\_51, Keitherie\_62, Kela\_63, Keziacharles14\_44, Khan1\_61, Kheth\_57, Kikipoo\_62, KimJongPhill\_80, Kimbrough\_61, KingJulien\_38, KingTut\_53, KingVeVeVe\_59, KlimbOn\_60, Kloppinator\_61, Knocker\_59, Koduck\_44, Koji\_37, Kolhan\_57, Kradal\_67, Kronus\_58, Kwadwo\_59, Kwksand96\_61, L5\_44, Labeouficaum\_61, Lambano\_52, Lars\_57, LasagnaCat\_62, Lasso\_61, Lauer\_41, Laurie\_57, Leaf\_95, Leafus\_38, LeeLot\_61, LeeroyJenkins\_68, Lego3393\_59, Legolas\_62, LeiMonet\_63, LemonSlice\_61, LeoJr\_98, Lephleur\_57, LestyG\_57, Librie\_37, Lifes\_61, Ligma\_51, LilMcDreamy\_55, LilSmirk\_57, LilTerminator\_38, LittleMunchkin\_52, LizLemon\_57, Lolalove\_54, Longacauda\_61, Lopsy\_59, LostAndPhound\_61, Lucky3\_37, LuckyMarjie\_58, Lulumae\_58, Lulwa\_58, Lumine\_61, Luna18\_40, MAnor\_46, MCubed\_38, MRabcd\_60, MScarn\_47, MaVan\_40, Mabodamaca\_48, Maco6\_42, Mag7\_61, Magic8\_61, Magpie\_52, Mahdia\_44, Maih\_47, MajorMajor\_44, MakoManhole\_51, Mana\_59, Manad\_60, Mandalorian\_37, Mareelih\_171, Margaret\_49, Mariokart\_50, Marley1013\_59, Maru\_60, Maskar\_62, MasterPo\_57, Matalotodo\_60, Mayweather\_49, McGalleon\_41, Mcshane\_59, Mecca\_60, Megamind20\_61, Megatron\_61, Melc17\_60, MelsMeow\_61, Mercedes\_34, Mesh1\_62, Mesmerelda\_62,



MichaelPhcott\_61, Mikota\_59, Mimi\_105, MiniBoss\_58, Mischief19\_57, MitKao\_60, Mithril\_53, MmasiCarm\_59, Molivia\_56, MonChoix\_37, Morgushi\_60, Morrigan\_40, Morrissey\_47, Mortcellus\_58, Morty007\_58, Morty\_61, Mosaic\_59, MossRose\_53, MrPhizzler\_61, Muddy\_44, Mudslide\_53, Mulan\_60, MunkgeeRoachy\_41, Murdoc\_59, Mutante\_60, Mysterious\_58, NHagos\_52, Nacho\_0062, Nanao\_52, Nangang\_58, Nathan\_61, Nebulous\_37, Neferthena\_38, Nehemiah\_57, Neos5\_58, Newman\_59, Nibbles\_39, NickSell\_39, Nicole21\_61, Nigel\_54, Nina\_42, Nirvana\_73, NoShow\_52, Nodigi\_51, Nozo\_58, Nucci\_37, Numberten\_60, Nyala\_59, OSmaximus\_62, Obutu\_59, Olak\_59, Oline\_61, Olive\_60, OliverWalter\_59, Olliecat\_39, Omniscient\_61, Oosterbaan\_60, Opia\_57, OrangeOswald\_58, Orfeu\_59, Orion\_62, Orla\_51, Orwigg\_61, PG1\_61, Pacifista\_59, Pajaza\_35, PastaFagioli\_43, Patbob\_100, PauloDiaboli\_117, PenguinLover67\_56, Peppino\_38, Percival\_49, Phaedrus\_54, Phamished\_62, Phanita\_37, Phantasmagoria\_57, Phareon\_59, PhatCats2014\_61, PhatLouie\_62, Phayeta\_60, Phelemich\_56, Phendrix\_176, PhenghisKhan\_61, Pherbot\_37, Pherdinand\_62, Phergie\_62, Philly\_57, Phipps\_60, Phleuron\_61, Phlyer\_58, Phrampa\_94, PhrankReynolds\_60, PhrodoBaggins\_61, Phunky\_59, Piglet\_0060, Pikmin\_35, Pine5\_49, PinheadLarry\_61, Pinkman\_60, Pipefish\_59, Pipsqueak\_59, Placalicious\_61, Plmatters\_59, Podrick\_59, Pons\_46, Pops\_60, Poster\_52, PotPie\_44, Potter\_59, Prickles\_62, PrincePhergus\_37, Prince\_53, ProfessorX\_60, PsychoKiller\_42, Puhltonio\_60, Pumpernickel\_113, Puppies\_42, QuadZero\_37, Quantum\_66, Quartz\_38, Quasar\_43, QueenBeane\_60, QueenPie\_51, Quenya\_42, Quesadilla\_58, Quisquilliae\_61, Quokka\_43, Qyrzula\_52, Raccoon\_38, Racecar\_100, RagingRooster\_57, RainyPolka\_49, RanchParmCat\_48, Rasputia\_89, RawrgerThat\_54, RedBaron\_45, RedMaple\_62, Redfield\_38, ReginaGlobina\_98, RenegadeRaider\_39, Reprobate\_57, Rhinoforte\_57, Rich\_58, Ricotta\_60, Riggan\_61, Rimu\_63, Rings\_55, Rinkes\_56, Rita130\_57, Rita1961\_59, Robyn\_60, Rockabye\_103, Roliet\_58, RomaT\_58, Roscoe\_61, Rosebush\_56, Roy17\_59, SDcharge11\_60, SJReid\_106, Sabella\_56, Saguaro\_58, Salete\_48, Samaymay\_60, Sansa\_37, Saratos\_38, SassyCat97\_59, Satis\_67, Schadenfreude\_60, Schimmels22\_37, Schnapsidee\_38, Schubert\_36, Schueller\_62, Scissor2024\_37, Scoot17C\_61, Scrick\_61, Selr12\_61, Serendipitous\_56, Serendipity\_60, Serpentine\_0060, Shamu\_38, Shatter\_51, SheckWes\_48, Sheila\_58, Shenyu\_58, ShiVal\_58, Shocker\_43, Shrew\_79, Sigman\_61, SilverBell\_61, Simielle\_60, Sinatra\_37, SirJeffery\_57, SirVictor\_37, Sisko\_49, Sixama\_172, SketchMex\_43, Skippy\_61, Slatt\_61, SlippinJimmy\_60, Soile\_61, Solosis\_59, Sopespian\_41, Sophia\_59, SorJuana\_54, Soto\_59, Sour\_53, Spartan300\_60, Squid\_60, Squiggle\_61, Squirrel\_39, StAugustine\_89, Starburst\_43, SteamedHams\_43, Stinger\_54, StinkyVeggy\_58, Stormbreaker8\_38, Struggle\_61, SuMoo\_50, Suffolk\_59, Suigeneris\_59, SummitAcademy\_44, Surely\_60, Survivors\_40, SwainyDoc\_59, SweatNTears\_44, Swiphy\_64, Swish\_62, SynergyX\_58, TA17A\_57, TMaxx\_43, TP1604\_48, TPA2\_63, Talia1610\_99, TallGrassMM\_60, TarsusIV\_42, TatarkaPM\_39, Telesworld\_58, Thonko\_60, Thora\_60, ThreeOh3D2\_62, Thunderbird\_60, Thunderclap\_54, Timmi\_59, Tinciduntolum\_58, TinyTerror\_59, Tinyman4\_37, Toaka\_44, Tolls\_44, TomBombadil\_60, Tomlarah\_61, Toni\_60, Tooj\_59, Tres\_57, Trine\_42, Triscuit\_70, Troje\_45, Trooper\_45, True\_59, Trypo\_63, Tydolla\_56, Typhonmarchy\_43, TyrionL\_61, UAch1\_60, UncleHowie\_59, Upyo\_46, Usavi\_60, UtzChips\_47, Vaishali24\_59, Valjean\_60, Vaticameos\_57, Veritas\_62, Vic9\_58, Vincenzo\_56, Vine\_47, VioletZ\_55, Virapocalypse\_61, Virgeve\_60, Vista\_60, Vivaldi\_62, Vortex\_60, WaddleDee\_92, Waleliano\_53, WalkingDead\_44, Wallhey\_61, Wardwill\_39, WaterT\_64, Waterdiva\_60, Weher20\_60, West99\_57, WestPM\_35, Widow\_43, WildNOut\_39, WilliamStrong\_38, Windsor\_60, Wooper\_54, Xavier\_59, Xincheng\_54, Xkcd426\_52, YDN12\_50, Yago84\_49, Yahalom\_57, Yakult\_46,

Yappy\_80, Yarn\_40, Yeezus\_55, Yeshua\_54, Yinz\_58, Yoshand\_62, YouGoGlencoco\_61, Yucky\_48, Yummy\_45, YuuY\_37, Zaider\_61, Zareef\_42, Zayuliv\_37, Zelda\_61, Zemanar\_54, Zenitsu\_38, Zenteno07\_62, Zepp\_38, Zeta1847\_40, Zonia\_62, Zooman\_100, Zuko\_78,

### Summary by start number:

#### Start 3:

- Found in 5 of 1905 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 5 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gustav\_47 (CD), Mahdia\_44 (CD), Morrissey\_47 (CD), Poppers\_42 (CD), Widow\_43 (CD),

#### Start 14:

- Found in 2 of 1905 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Zuko\_78 (BR),

#### Start 18:

- Found in 1 of 1905 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Upyo\_46 (CD),

#### Start 25:

- Found in 2 of 1905 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 2 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Huwbert\_71 (GG), Triscuit\_70 (GG),

#### Start 27:

- Found in 5 of 1905 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Shrew\_79 (singleton),

#### Start 36:

- Found in 27 of 1905 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 16 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agatha\_43 (CT), Axym\_42 (CT), BillDoor\_43 (CT), Biskit\_45 (CT), Blondies\_45 (CT), Burnsey\_43 (CT), Buttrmlkdreams\_45 (CT), Carsonalex\_46 (CT), ChickenTender\_45 (CT), Cozz\_41 (CT), Elliott\_43 (CT), GTE2\_35 (CT), GoldHunter\_44 (CT), Horseradish\_45 (CT), MScarn\_47 (CT), MunkgeeRoachy\_41 (CT), Nina\_42 (CT), PsychoKiller\_42 (CT), Quasar\_43 (CT), RedBaron\_45 (CT), SketchMex\_43 (CT), Sopespian\_41 (CT), Starburst\_43 (CT), SweatNTears\_44 (CT), Troje\_45 (CT), Typhonmarchy\_43 (CT), Yummy\_45 (CT),

#### Start 37:

- Found in 2 of 1905 ( 0.1% ) of genes in pham

- Manual Annotations of this start: 1 of 1683
- Called 50.0% of time when present
- Phage (with cluster) where this start called: KimJongPhill\_80 (BR),

#### Start 44:

- Found in 8 of 1905 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 25.0% of time when present
- Phage (with cluster) where this start called: FF47\_43 (AB), HippoPololi\_40 (CT),

#### Start 45:

- Found in 29 of 1905 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 24 of 1683
- Called 93.1% of time when present
- Phage (with cluster) where this start called: AikoCarson\_44 (CT), Amok\_44 (CT), AndPeggy\_40 (CT), Azira\_40 (CT), Button\_46 (CT), CanesSauce\_42 (CT), ChocoMunchkin\_42 (CT), Cleo\_38 (CT), Dre3\_38 (CT), Emalyn\_42 (CT), Fribs8\_39 (CT), GiKK\_48 (CT), Gibbous\_38 (CT), Hexbug\_51 (CT), Jamzy\_48 (CT), MaVan\_40 (CT), Margaret\_49 (CT), Nibbles\_39 (CT), Nodigi\_51 (CT), Orla\_51 (CT), RanchParmCat\_48 (CT), SteamedHams\_43 (CT), Survivors\_40 (CT), Tolls\_44 (CT), Yakult\_46 (CT), Yarn\_40 (CT), Zareef\_42 (CT),

#### Start 47:

- Found in 15 of 1905 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 13 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bavidard\_44 (CT), BigChungus\_44 (CT), CherryonLim\_46 (CT), Elinal\_48 (CT), Feastonyeet\_44 (CT), KayGee\_46 (CT), Lauer\_41 (CT), MAnor\_46 (CT), Mayweather\_49 (CT), Pons\_46 (CT), PotPie\_44 (CT), SheckWes\_48 (CT), SummitAcademy\_44 (CT), Vine\_47 (CT), Yucky\_48 (CT),

#### Start 55:

- Found in 3 of 1905 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 33.3% of time when present
- Phage (with cluster) where this start called: NoShow\_52 (AB),

#### Start 60:

- Found in 22 of 1905 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 4.5% of time when present
- Phage (with cluster) where this start called: JacoRen57\_40 (AB),

#### Start 65:

- Found in 6 of 1905 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 33.3% of time when present
- Phage (with cluster) where this start called: 8UZL\_44 (AB), Muddy\_44 (AB),

#### Start 79:

- Found in 8 of 1905 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 12.5% of time when present

- Phage (with cluster) where this start called: Maco6\_42 (AB),

Start 95:

- Found in 1 of 1905 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 40AC\_46 (A17),

Start 137:

- Found in 2 of 1905 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 50.0% of time when present
- Phage (with cluster) where this start called: JuneStar\_42 (AZ1),

Start 145:

- Found in 6 of 1905 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Liebe\_42 (AZ2),

Start 157:

- Found in 5 of 1905 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Trine\_42 (CD),

Start 169:

- Found in 3 of 1905 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 2 of 1683
- Called 66.7% of time when present
- Phage (with cluster) where this start called: JAMaL\_53 (B4), Nigel\_54 (B4),

Start 172:

- Found in 8 of 1905 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Yang\_41 (AZ1),

Start 175:

- Found in 32 of 1905 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 4 of 1683
- Called 12.5% of time when present
- Phage (with cluster) where this start called: BrownCNA\_55 (B4), ChrisnMich\_53 (B4), Fortunato\_54 (B4), Frederick\_54 (B4),

Start 180:

- Found in 288 of 1905 ( 15.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 0.3% of time when present
- Phage (with cluster) where this start called: Piglet\_0060 (B1),

Start 181:

- Found in 6 of 1905 ( 0.3% ) of genes in pham



- No Manual Annotations of this start.
- Called 83.3% of time when present
- Phage (with cluster) where this start called: DigitDog\_58 (B5), KarasumaRum\_58 (B5), Nangang\_58 (B5), Shenyu\_58 (B5), StinkyVeggy\_58 (B5),

#### Start 183:

- Found in 1 of 1905 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Stinger\_54 (B4),

#### Start 184:

- Found in 1 of 1905 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Imvubu\_52 (B10),

#### Start 189:

- Found in 50 of 1905 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 26 of 1683
- Called 82.0% of time when present
- Phage (with cluster) where this start called: Acadian\_58 (B5), Ahwei\_52 (B4), AlanGrant\_57 (B4), Antihero\_52 (B4), Apex\_54 (B4), Austelle\_54 (B4), Bae\_59 (B5), BobbyK\_54 (B4), Cooper\_54 (B4), Donny\_59 (B5), EastView9101\_57 (B5), Epah\_52 (B4), Fanaw\_52 (B4), GinPorsche\_52 (B4), Hally898\_52 (B4), Hangman\_53 (B4), Heath\_52 (B4), Hydro\_53 (B4), JaguarMi\_55 (B4), Lambano\_52 (B4), LilMcDreamy\_55 (B12), Lolalove\_54 (B4), Magpie\_52 (B4), Mithril\_53 (B4), Mudslide\_53 (B4), Mysterious\_58 (B5), Nanao\_52 (B4), Nehemiah\_57 (B5), Phelemich\_56 (B5), Poster\_52 (B4), Prince\_53 (B4), QueenPie\_51 (B4), RawrgerThat\_54 (B4), Reprobate\_57 (B5), Rich\_58 (B5), Rita130\_57 (B5), Suigeneris\_59 (B5), Vincenzo\_56 (B4), VioletZ\_55 (B4), Waleliano\_53 (B4), Xincheng\_54 (B4),

#### Start 190:

- Found in 3 of 1905 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 33.3% of time when present
- Phage (with cluster) where this start called: EmiRose\_34 (singleton),

#### Start 191:

- Found in 10 of 1905 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 1683
- Called 70.0% of time when present
- Phage (with cluster) where this start called: 39HC\_051 (B6), 40BC\_051 (B6), ForDig\_53 (B6), Hosp\_050 (B6), Indlovu\_55 (B11), Jolie1\_052 (B6), KayaCho\_51 (B6),

#### Start 193:

- Found in 3 of 1905 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Zemanar\_54 (B4),

Start 197:

- Found in 327 of 1905 ( 17.2% ) of genes in pham
- Manual Annotations of this start: 298 of 1683
- Called 99.4% of time when present
- Phage (with cluster) where this start called: ABU\_61 (B1), AbsoluteMadLad\_61 (B1), Adriana\_62 (B1), Aelin\_60 (B1), Allegro\_57 (B2), AltPhacts\_60 (B1), Altwerkus\_58 (B1), Anderson\_61 (B1), Andre\_62 (B1), AngelCake\_59 (B1), Antonia\_60 (B1), Apizium\_60 (B1), Arbiter\_56 (B2), Ares\_57 (B2), Ashraf\_62 (B1), BFK20\_ORF44 (singleton), Badfish\_61 (B1), Bananafish\_57 (B2), Banjo\_59 (B1), Basato\_61 (B1), BatteryCK\_61 (B1), Beaglebox\_60 (B1), Bishoperium\_60 (B1), BlackStallion\_62 (B1), Blocker23\_57 (B2), BlueHusk\_62 (B1), Bluephacebaby\_60 (B1), Boehler\_60 (B1), Boyle\_57 (B2), Brilliant\_63 (B1), Brownie5\_57 (B2), Buckeye\_61 (B1), Burr\_60 (B1), CRB2\_57 (B9), Calamitous\_57 (B2), CamL\_60 (B1), CampRoach\_62 (B1), Cannibal\_60 (B1), Carthage\_59 (B1), Caspiroi\_63 (B1), Chaelin\_61 (B1), Chah\_62 (B1), Charles1\_61 (B1), CharlieGBrown\_61 (B1), CheetO\_60 (B1), Cher\_60 (B1), Childish\_60 (B1), Chorkpop\_60 (B1), Chunky\_59 (B1), Chute\_62 (B1), Cobra\_62 (B1), Coffee\_57 (B2), Colbert\_59 (B1), Coletti\_63 (B1), Cornobble\_60 (B1), Cosmolli16\_61 (B1), Craff\_63 (B1), Crownjwl\_60 (B1), DaddyDaniels\_62 (B1), Daffy\_60 (B1), Daka\_63 (B1), Dati\_60 (B1), DelRivs\_59 (B1), Derpp\_60 (B1), Dice\_59 (B1), Dingo\_59 (B1), Dione\_58 (B1), DirtJuice\_61 (B1), Doddsville\_61 (B1), DoesntMatter\_58 (B1), DonSanchon\_58 (B1), DuchessDung\_62 (B1), Duggie\_61 (B1), Durga\_63 (B1), Eaglehorse\_57 (B2), ElvisPhasley\_66 (B1), Emiris\_63 (B1), EmpTee\_60 (B1), Eremos\_60 (B1), Etaye\_62 (B1), Eugenia\_60 (B1), Fang\_62 (B1), Faze9\_56 (B2), FluffyNinja\_62 (B1), Fozzie\_61 (B1), Frankicide\_59 (B1), FrenchFry\_57 (B2), Freya\_58 (B1), FriarPreacher\_60 (B1), Fringe\_64 (B1), FugateOSU\_61 (B1), Funsized\_59 (B9), Gareth\_60 (B1), GeneCoco\_61 (B1), Giraffe\_61 (B1), Glass\_57 (B2), Godines\_58 (B2), Gophee\_62 (B1), Grand2040\_60 (B1), Gwennie1\_60 (B1), Gwilliam\_62 (B1), Gyarad\_0059 (B1), HSavage\_59 (B1), Haimas\_59 (B1), Haleema\_59 (B1), Hamish\_59 (B1), Hartsy\_61 (B1), Harvey\_59 (B1), Hedgerow\_57 (B2), Held\_60 (B1), HenryJackson\_60 (B1), Hertubise\_60 (B1), Hetaeria\_60 (B1), HighStump\_62 (B1), Hocus\_60 (B1), Holeinone\_57 (B2), Horchata\_59 (B1), ImtiyazSitla\_62 (B1), Inchworm\_62 (B1), Inverness\_59 (B1), Iridessa\_62 (B1), Iridoclysis\_61 (B1), IsaacEli\_62 (B1), ItsyBitsy1\_57 (B2), JDog\_59 (B1), JacAttac\_62 (B1), JakeO\_61 (B1), JangoPhett\_60 (B1), Jesabah\_61 (B1), Jillium\_60 (B1), Jiminy\_61 (B1), Jiraiya\_64 (B1), KLucky39\_59 (B1), Kahve\_60 (B1), Kailash\_61 (B1), Kaleb\_57 (B2), Katniss\_61 (B1), Keitherie\_62 (B1), Khan1\_61 (B1), Kheth\_57 (B2), Kikipoo\_62 (B1), Kimbrough\_61 (B1), KingTut\_53 (B1), KingVeVeVe\_59 (B1), KlimbOn\_60 (B1), Kloppinator\_61 (B1), Knocker\_59 (B9), Kolhan\_57 (B2), Kwadwo\_59 (B1), Kwksand96\_61 (B1), Labeouficaum\_61 (B1), Lars\_57 (B2), LasagnaCat\_62 (B1), Lasso\_61 (B1), Laurie\_57 (B2), LeeLot\_61 (B1), Lego3393\_59 (B1), Legolas\_62 (B1), LeiMonet\_63 (B1), LemonSlice\_61 (B1), Lephleur\_57 (B2), LilSmirk\_57 (B2), LizLemon\_57 (B2), Longacauda\_61 (B1), Lopsy\_59 (B1), LostAndPhound\_61 (B1), LuckyMarjie\_58 (B1), Lulumae\_58 (B1), Lulwa\_58 (B1), Lumine\_61 (B1), MRabcd\_60 (B1), Mag7\_61 (B1), Magic8\_61 (B1), Mana\_59 (B1), Manad\_60 (B1), Maru\_60 (B1), Maskar\_62 (B1), MasterPo\_57 (B2), Matalotodo\_60 (B1), Mcshane\_59 (B1), Mecca\_60 (B1), Megamind20\_61 (B1), Megatron\_61 (B1), Melc17\_60 (B1), MelsMeow\_61 (B1), Mesh1\_62 (B1), Mesmereida\_62 (B1), MichaelPhcott\_61 (B1), Mikota\_59 (B1), MiniBoss\_58 (B1), MitKao\_60 (B1), Morgushi\_60 (B1), Morty\_61 (B1), Mosaic\_59 (B1), MrPhizzler\_61 (B1), Mulan\_60 (B1), Murdoc\_59 (B1), Mutante\_60 (B1), Nacho\_0062 (B1), Nathan\_61 (B1), Newman\_59 (B1), Nicole21\_61 (B1), Numberten\_60 (B1), Nyala\_59 (B1), OSmaximus\_62 (B1), Olak\_59 (B1), Oline\_61 (B1), Olive\_60 (B1), OliverWalter\_59 (B1), Omniscient\_61 (B1), Oosterbaan\_60 (B1), Opia\_57 (B2),

Orfeu\_59 (B1), Orion\_62 (B1), Orwigg\_61 (B1), PG1\_61 (B1), Pacifista\_59 (B1), Phamished\_62 (B1), Phantasmagoria\_57 (B2), Phareon\_59 (B1), PhatCats2014\_61 (B1), PhatLouie\_62 (B1), PhenghisKhan\_61 (B1), Pherdinand\_62 (B1), Phergie\_62 (B1), Phipps\_60 (B1), Phleuron\_61 (B1), PhrankReynolds\_60 (B1), PhrodoBaggins\_61 (B1), Phunky\_59 (B1), PinheadLarry\_61 (B1), Pinkman\_60 (B1), Pipsqueak\_59 (B1), Placalicious\_61 (B1), Plmatters\_59 (B1), Podrick\_59 (B1), Pops\_60 (B1), Potter\_59 (B1), Prickles\_62 (B1), ProfessorX\_60 (B1), Puhltonio\_60 (B1), QueenBeane\_60 (B1), Quesadilla\_58 (B9), Quisquilliae\_61 (B1), RedMaple\_62 (B1), Rhinoforte\_57 (B2), Ricotta\_60 (B1), Riggan\_61 (B1), Rimu\_63 (B1), Rinkes\_56 (B9), Robyn\_60 (B1), Roliet\_58 (B1), Roscoe\_61 (B1), Rosebush\_56 (B2), Roy17\_59 (B1), SDcharge11\_60 (B1), Sabella\_56 (B2), Samaymay\_60 (B1), SassyCat97\_59 (B1), Schadenfreude\_60 (B1), Schueller\_62 (B1), Scoot17C\_61 (B1), Scrick\_61 (B1), Selr12\_61 (B1), Serendipity\_60 (B1), Serpentine\_0060 (B1), Sheila\_58 (B1), ShiVal\_58 (B1), Sigman\_61 (B1), SilverBell\_61 (B1), Simielle\_60 (B1), Skippy\_61 (B1), Slatt\_61 (B1), Soile\_61 (B1), Solosis\_59 (B1), Sophia\_59 (B1), Soto\_59 (B1), Spartan300\_60 (B1), Squid\_60 (B1), Squiggle\_61 (B1), Struggle\_61 (B1), Suffolk\_59 (B1), Surely\_60 (B1), Swiphy\_64 (B1), Swish\_62 (B1), TA17A\_57 (B2), TallGrassMM\_60 (B1), Telesworld\_58 (B1), Thora\_60 (B1), ThreeOh3D2\_62 (B1), Thunderbird\_60 (B1), Timmi\_59 (B1), Tinciduntolum\_58 (B2), TomBombadil\_60 (B1), Tomlarah\_61 (B1), Toni\_60 (B1), Tooj\_59 (B1), Tres\_57 (B2), True\_59 (B1), Trypo\_63 (B1), TyrionL\_61 (B1), UAch1\_60 (B1), UncleHowie\_59 (B1), Usavi\_60 (B1), Vaishali24\_59 (B1), Valjean\_60 (B1), Vaticameos\_57 (B1), Veritas\_62 (B1), Vic9\_58 (B2), Virapocalypse\_61 (B1), Virgeve\_60 (B1), Vista\_60 (B1), Vivaldi\_62 (B1), Vortex\_60 (B1), Wallhey\_61 (B1), Waterdiva\_60 (B1), Weher20\_60 (B1), West99\_57 (B2), Windsor\_60 (B1), Xavier\_59 (B1), Yoshand\_62 (B1), YouGoGlencoco\_61 (B1), Zaider\_61 (B1), Zelda\_61 (B1), Zonia\_62 (B1),

#### Start 199:

- Found in 1 of 1905 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Saguaro\_58 (B7),

#### Start 201:

- Found in 2 of 1905 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 2 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PenguinLover67\_56 (B9), Serendipitous\_56 (B5),

#### Start 202:

- Found in 15 of 1905 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 13 of 1683
- Called 86.7% of time when present
- Phage (with cluster) where this start called: Amavida\_56 (AQ), Amigo\_55 (AQ), Anansi\_54 (AQ), Boersma\_57 (AQ), Gorgeous\_54 (AQ), Heylee\_57 (AQ), Ichor\_55 (AQ), Jaek\_55 (AQ), Molivia\_56 (AQ), Rings\_55 (AQ), SorJuana\_54 (AQ), Thunderclap\_54 (AQ), Yeezus\_55 (AQ),

#### Start 203:

- Found in 2 of 1905 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 50.0% of time when present

- Phage (with cluster) where this start called: Yappy\_80 (singleton),

Start 205:

- Found in 11 of 1905 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 1683
- Called 18.2% of time when present
- Phage (with cluster) where this start called: EITiger69\_39 (A5), Naca\_39 (A5),

Start 208:

- Found in 7 of 1905 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 5 of 1683
- Called 71.4% of time when present
- Phage (with cluster) where this start called: Dewdrop\_95 (GC), Hendrix\_88 (GC), Leaf\_95 (GC), Rasputia\_89 (GC), TatarkaPM\_39 (EA1),

Start 212:

- Found in 15 of 1905 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Jeffabunny\_45 (A6),

Start 220:

- Found in 3 of 1905 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 3 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BirdsNest\_61 (B13), Hashim76\_61 (B13), Zenteno07\_62 (B13),

Start 222:

- Found in 12 of 1905 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Thonko\_60 (B8),

Start 223:

- Found in 20 of 1905 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 3 of 1683
- Called 15.0% of time when present
- Phage (with cluster) where this start called: Buldak\_39 (EB), Olliecat\_39 (EB), Squirrel\_39 (EB),

Start 224:

- Found in 2 of 1905 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnnabelLee\_40 (FR), Pine5\_49 (singleton),

Start 225:

- Found in 294 of 1905 ( 15.4% ) of genes in pham
- Manual Annotations of this start: 5 of 1683
- Called 1.7% of time when present



- Phage (with cluster) where this start called: AnClar\_50 (DR), BiggityBass\_49 (DR), LittleMunchkin\_52 (DR), Sisko\_49 (DR), Yago84\_49 (DR),

#### Start 226:

- Found in 1 of 1905 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA2\_63 (singleton),

#### Start 229:

- Found in 2 of 1905 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Coldpizza\_51 (DR),

#### Start 230:

- Found in 71 of 1905 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 13 of 1683
- Called 23.9% of time when present
- Phage (with cluster) where this start called: AnarQue\_54 (DR), Axumite\_51 (DR), BobRoss2024\_51 (DR), CaiB\_54 (DR), CharlottesWeb\_50 (DR), CloverMinnie\_53 (DR), Evaa\_50 (DR), Fresco\_51 (DR), Ligma\_51 (DR), MakoManhole\_51 (DR), Mariokart\_50 (DR), MossRose\_53 (DR), NHagos\_52 (DR), Shatter\_51 (DR), WalkingDead\_44 (EB), Wooper\_54 (DR), Yeshua\_54 (DR),

#### Start 231:

- Found in 42 of 1905 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 7 of 1683
- Called 21.4% of time when present
- Phage (with cluster) where this start called: Armstrong\_40 (EB), Audell\_40 (FR), Bernstein\_40 (EB), Brahms\_40 (EB), Coltrane\_40 (EB), Rollins\_40 (EB), Skylord\_40 (EB), TMaxx\_43 (FR), Vitas\_40 (EB),

#### Start 232:

- Found in 26 of 1905 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 15 of 1683
- Called 76.9% of time when present
- Phage (with cluster) where this start called: A3Wally\_117 (GD1), Big4\_105 (GD2), Cece\_99 (GD3), Dodo\_117 (GD1), Floof\_49 (EH), GardenState\_48 (EH), Glubnar\_58 (B3), Gretchen\_48 (EH), HarveySr\_57 (B3), Honk\_44 (EH), IAmGroot\_48 (EH), Percival\_49 (EH), Pumpernickel\_113 (GD4), StAugustine\_89 (singleton), SuMoo\_50 (EH), SwainyDoc\_59 (B3), TinyTerror\_59 (B3), Yinz\_58 (B3), Zeta1847\_40 (EH), Zooman\_100 (GD2),

#### Start 233:

- Found in 15 of 1905 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 10 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnstormer\_47 (EH), Bradman\_44 (A2), Caron\_50 (EH), EZMoney23\_43 (A2), Jsquared\_43 (A2), Keziacharles14\_44 (A9), Koduck\_44 (A2), L5\_44 (A2), Mabodamaca\_48 (EH), MajorMajor\_44 (A2), Quokka\_43 (A2), TarsusIV\_42 (A2), Toaka\_44 (A9), Trooper\_45 (A2), UtzChips\_47 (EH),

Start 234:

- Found in 1145 of 1905 ( 60.1% ) of genes in pham
- Manual Annotations of this start: 938 of 1683
- Called 89.9% of time when present
- Phage (with cluster) where this start called: 20ES\_45 (A2), A6\_41 (A1), ACFishhook\_47 (A3), AEgle\_37 (AZ1), AFIS\_43 (A1), AGrandiflora\_42 (AZ1), AN3\_45 (A2), AN9\_48 (A2), ANI8\_48 (A2), AbbeyMikolon\_44 (BL), AbbyPaige\_46 (A2), AbbysRanger\_44 (A4), Abbysshoes\_47 (A1), Abdiel\_45 (A4), Abigail\_42 (EB), Abrogate\_440 (A1), Achebe\_43 (A4), Acme\_47 (A1), Acolyte\_41 (A2), Adahisdi\_44 (A1), Adolin\_40 (AZ1), Adumb2043\_38 (AZ1), Adzzy\_46 (A2), Aeneas\_47 (A1), Agaliana\_41 (A1), Agape74\_46 (A2), AgentM\_37 (A5), Aglet\_49 (A3), AgronaGT15\_47 (A3), AinMach\_42 (AZ), Airmid\_39 (A5), Ajay\_45 (A1), Alatin\_36 (CA), Albedo\_43 (EB), Albee\_45 (A4), Alberto7\_46 (A4), Albright\_40 (EB), Aliter\_45 (A9), Alma\_45 (A9), Alpacados\_35 (CA), Alsfro\_48 (A1), Altman\_46 (A1), Alvin\_44 (A1), Amyev\_40 (AZ1), Anaysia\_47 (A15), Aneem\_45 (A11), Anglerfish\_45 (A1), AngryOrchard\_34 (CA), AnnaL29\_46 (A2), AnnaLie\_43 (EB), Annyong\_45 (A4), Anon\_42 (A15), Anselm\_45 (A2), Anthony\_39 (A20), Anubis\_51 (A3), AppleCloud\_34 (CA), Applejack\_40 (A1), Aragog\_37 (A5), Arcanine\_46 (A1), ArcherNM\_42 (A2), Archetta\_38 (A5), Arissanae\_44 (A9), Arlo\_42 (A1), Arroyo\_43 (EB), Artemis2UCLA\_45 (A6), Arturo\_44 (A4), Asa16\_39 (AZ1), Ascela\_41 (AZ1), Ashballer\_46 (A1), Ashes\_38 (AZ5), Astro\_42 (A8), Atkinbua\_46 (A1), Attoomi\_34 (singleton), AugsMagnumOpus\_51 (A3), AvGardian\_44 (EB), AvatarAhPeg\_44 (A4), Avle17\_45 (A4), Avocadoman\_41 (EB), B1\_42 (A3), BABullseye\_43 (A6), BAjuniper\_43 (EB), BK1\_41 (A1), BPBiels31\_45 (A1), Baby16\_45 (A4), BabyBack\_43 (A2), BabyDaisy\_42 (EB), BabyJohn\_43 (A3), BabyRay\_45 (A3), BabyYoda\_43 (EB), Bachaco\_40 (EB), Bachome\_46 (A11), Backyardigan\_43 (A4), BaconJack\_48 (A1), Bactobuster\_43 (A2), Badger\_43 (A4), Baehexic\_43 (A2), BaileyBlu\_41 (FP), BangNhom\_46 (A4), Barriga\_45 (A1), Bartimeaus\_45 (A4), Battleship\_48 (A15), Beatrix\_44 (A1), Beauxregard13\_48 (A3), Beemo\_45 (A9), BeesKnees\_45 (A1), Belenaria\_36 (CA), BellusTerra\_46 (A4), BelmontSKP\_43 (EB), Benedict\_39 (A5), Bengal\_43 (EB), BengiVuitton\_44 (A2), Benvolio\_41 (A2), Berrie\_42 (AZ1), Bethlehem\_44 (A1), Bexan\_43 (A1), BiancaTri92\_44 (A2), Big3\_43 (A1), BigMau\_45 (A1), BigPaolini\_45 (A1), Bigfoot\_41 (A1), BillKnuckles\_45 (A1), Bimmel\_18 (BT), Bircsak\_44 (A1), Blackmoor\_45 (A4), BlessJoy\_46 (A6), Blinn1\_48 (A6), BluSpix\_42 (A1), Blue7\_48 (A6), BlueBird\_47 (A3), Blue\_44 (A1), Bluefalcon\_37 (A5), Bob3\_42 (A1), BobSwaget\_44 (A2), BobbyDazzler\_36 (CA), BogosyJay\_44 (A9), Bombshell\_45 (A4), Bonamassa\_39 (A5), Bonanza\_36 (CA), Bones\_45 (A1), Boohoo\_47 (A15), Bowtie\_45 (A11), Bradshaw\_36 (CA), BreSam8\_48 (A3), Briton15\_46 (A1), Broseidon\_45 (A4), Bruiser\_44 (A4), Bruns\_43 (A1), Bryce\_36 (CA), BubbaBear\_41 (EB), BubbleTrouble\_44 (A4), Bud\_44 (A11), Bugatti\_46 (A3), Buggy\_46 (A2), Bumblebee11\_43 (A4), Burger\_43 (A4), Burritobowl\_42 (EB), Burton\_44 (A1), Buttons\_43 (A1), BuzzBuzz\_46 (A3), Bxb1\_41 (A1), Bxz2\_44 (A3), C3\_43 (A2), CRB1\_46 (A2), CactusRose\_42 (A1), Caelakin\_45 (A4), CallinAllBarbz\_41 (FP), Calvinny\_48 (A3), Camperdownii\_43 (A4), Candra\_45 (A6), Cappuccino\_38 (AZ5), Caraxes\_45 (A2), Carlyle\_44 (A1), Cashington\_40 (EB), Cassia\_40 (AZ1), Catalina\_46 (A9), Caviar\_44 (A3), Celaena\_40 (EB), Cen1621\_44 (EH), Centaur\_45 (A2), CentreCat\_45 (A4), Cerulean\_46 (A4), Chadwick\_40 (A5), Chako\_38 (EA1), ChampagnePapi\_47 (A4), Chamuel\_38 (EA1), Chanagan\_42 (A1), Changeling\_45 (A2), Chaph\_45 (A4), Chargerpower\_44 (A), Charm\_42 (A9), Chartreuse\_45 (A6), Che12\_47 (A2), ChiliPepper\_40 (EB), ChipMunk\_47 (A2), Chiqui\_43 (A3), Chupacabra\_43 (A10), Ciao\_45 (A1), Cici\_44 (A4), Cindaradix\_42 (A4), Cintron\_44 (A4), Citius\_45 (A4), Clarenza\_44 (A4), Clayda5\_41 (EB),

CliffHanger\_44 (EB), CloudWang3\_45 (A6), Cocoaberry\_45 (A4), Colbster\_48 (A3), Colin\_46 (A2), Commander\_45 (A4), Community\_43 (AZ1), ConceptII\_46 (A1), Connomayer\_45 (A4), Conquerage\_45 (A9), Conspiracy\_38 (A5), Coog\_38 (A5), Cookiedough\_45 (A6), Corvo\_45 (A1), CosmicSans\_36 (CA), Crewmate\_46 (AZ1), Crispicious1\_43 (A1), CroZenni\_42 (EB), Crucio\_44 (A2), Cuco\_38 (A5), Cueyllyss\_46 (A1), Cullens\_48 (A3), CupcakePrincess\_43 (EB), Cyan\_41 (AZ1), D29\_44 (A2), D32\_47 (A2), DBQu4n\_47 (A2), DD5\_44 (A1), DaHudson\_48 (A3), DaVinci\_45 (A6), Daishi\_47 (A3), Dalmatian\_45 (A2), Danforth\_42 (A8), Darrell\_46 (A9), DarthPhader\_42 (A12), Datway\_44 (A4), Deano\_44 (A4), DekHockey33\_47 (A15), Deloris\_43 (A2), Dexes\_45 (A1), Dhanush\_45 (A4), DickRichards\_41 (EB), Didgeridoo\_45 (EB), Dieselweasel\_49 (A3), Dignity\_46 (A2), Dinger\_36 (CA), DirtyBubble\_42 (EB), DirtyDunning\_44 (A4), Discoknowium\_37 (A5), Dismas\_40 (EB), Dixon\_43 (A8), Donkey\_38 (AZ5), DontArgue\_43 (A10), Doobus\_41 (EB), Doom\_45 (A1), Dorothea\_45 (A6), DrFeelGood\_43 (A1), DrManhattan\_40 (AZ1), DrSierra\_39 (AZ1), Drake55\_46 (A2), Drake94\_42 (A10), DreamCatcher\_47 (A1), DreamTeam1\_42 (A9), Dreamboat\_46 (A1), DroogsArmy\_41 (A7), DropBear\_45 (A3), Druantia\_45 (A4), Dublin\_37 (A5), Dubu\_35 (BJ), DudeLittle\_43 (A2), Dulcie\_45 (A1), Duplo\_47 (A2), Dussy\_46 (A1), DustyMartin\_48 (A10), Dynamix\_45 (A1), EagleEye\_46 (A16), Eagle\_45 (A4), Eaglepride\_45 (A10), Eapen\_45 (A4), Ebony\_45 (A11), Echild\_44 (A2), Eden\_40 (EB), Edison31\_43 (A10), EdogawaKiddo\_43 (A9), Edtherson\_45 (A1), Eidsmoe\_45 (A9), Elephantoon\_44 (A9), Elezi\_39 (AZ1), Elva\_44 (EB), Emotion\_46 (AZ4), EmyBug\_44 (A9), EpicPhail\_49 (A3), Epsocamisio\_46 (A15), Equemioh13\_45 (A2), Eraser\_39 (AZ1), EricB\_45 (A6), Erik\_36 (CA), Eris\_44 (A4), Eros\_45 (A4), Espica\_36 (CA), Espresso\_44 (A1), Et2Brutus\_44 (A11), Eula\_43 (EB), Euphoria\_43 (A1), Euratis\_35 (BB1), Eurydice\_46 (A4), EvilGenius\_47 (A2), Exile\_36 (AZ), Expelliarmus\_42 (A8), ExplosioNervosa\_45 (A9), Eyeball\_46 (A1), Fajezeel\_47 (A1), Fameo\_44 (A2), Farber\_48 (A3), Fascinus\_41 (A1), Fayely\_45 (A9), Fenn\_46 (A1), Fernando\_48 (A3), Fibonacci\_44 (A11), Finalfrontier\_43 (EB), FiringLine\_44 (A2), First\_0044 (A2), FlameThrower\_40 (EB), Flare16\_44 (A2), Flaverint\_45 (A11), Florean\_45 (A4), Flux\_45 (A4), FlyCatcher\_47 (A7), ForGetIt\_38 (A5), Forsytheast\_44 (A1), Francis47\_44 (A1), Franklin22\_41 (EB), Fred313\_45 (A3), Froghopper\_43 (A1), Funston\_44 (A4), Fushigi\_43 (A1), GMonster\_42 (A1), Gack\_40 (EB), Gadost\_45 (A4), GageAP\_45 (A1), Gail\_49 (A14), Gambol\_39 (AZ5), Gandalf20\_46 (A1), Garak\_47 (A6), GaugeLDP\_43 (A2), Gemma\_47 (A3), George\_38 (A5), Georgie2\_45 (A2), Ghoulyboy\_40 (A5), Gilberta\_45 (A11), GingkoMaracino\_48 (A3), Giroux\_46 (A3), Gladiator\_45 (A6), Gollum\_36 (CA), Gompeii16\_44 (A1), Goose\_44 (A10), Graduation\_48 (A1), GrecoEtereo\_45 (A1), GreedyLawyer\_45 (A6), Greg\_47 (A1), Grif\_48 (A3), Groundhog\_41 (A8), Groupthink\_49 (A3), Grub\_48 (A3), Grum1\_48 (A3), Gruunaga\_45 (A6), GtownJaz\_48 (A3), Gwendoluna\_47 (A1), Gyzlar\_41 (A1), HINdeR\_41 (A7), Halsey\_38 (AZ5), HamSlice\_44 (A4), Hami1\_39 (A1), Hammer\_47 (A6), HanShotFirst\_43 (A1), Hanray\_43 (A9), Happiness\_44 (A4), Harlequin\_36 (CA), HarryHoudini\_45 (A2), HarryOW\_43 (A1), HashRod\_49 (A3), HaveUMetTed\_49 (A3), Heathen\_45 (A3), Heather\_37 (BB2), Heffalump\_43 (A2), HelDan\_45 (A3), Heliosoles\_47 (A3), Helmet\_47 (A6), Herbertwm\_42 (A2), Hercules11\_48 (A3), Hermia\_46 (A1), HermioneGrange\_44 (A1), Hexamo\_45 (A6), Hiro\_36 (CA), Horex\_44 (A9), Holli\_44 (A4), Homines\_37 (A1), Hookmount\_44 (A3), Hoot\_45 (A6), Hope4ever\_46 (A1), HortumSL17\_45 (A9), Houdini22\_45 (A4), HuhtaEnerson15\_39 (A5), Hutc2\_44 (A11), Huxley\_45 (A4), ICleared\_45 (A4), ILeeKay\_49 (A1), Ibantik\_18 (singleton), Icarian\_45 (EB), Iceman\_45 (A4), Ichabod\_46 (A1), Idleandcovert\_46 (A3), IgnatiusPatJac\_44 (A1), Indra\_48 (A6), IndyLu\_42 (EB), Insomnia\_45 (A11), Inyanga\_42 (A1), Iracema64\_46 (A4), IronMan\_44 (A2), Isca\_44 (A3), Isiphiwo\_43 (A6), Iter\_41 (AZ1), IttyBittyPiggy\_40 (AZ1), Iwokeuplikedis\_47

(A2), JC27\_45 (A1), JF2\_45 (A3), JF4\_45 (A3), JHC117\_48 (A3), JSwag\_46 (A15), Jaan\_45 (A2), Jabb\_43 (EB), Jabiru\_39 (A5), Jabith\_45 (A11), JackSparrow\_46 (A1), Janeemi\_43 (AZ1), Jankie\_40 (FP), JasmineDragon\_45 (AZ4), Jasper\_46 (A1), Jaykayelowell\_43 (A4), Jeeves\_50 (A14), JenCasNa\_49 (A3), JeppNRM\_49 (A3), Jerm2\_45 (A1), Jerm\_46 (A2), Jester\_36 (CA), JetBlade\_45 (A4), JewelBug\_47 (A6), Jiawan\_43 (A9), Jobu08\_47 (A3), Joemato\_41 (AZ1), JohnDoe\_41 (AZ1), Johnathan\_41 (EB), JoongJeon\_44 (A4), Jordennis\_45 (A6), Jorgensen\_45 (A1), Joselito\_45 (A11), JoshKayV\_46 (A2), Journey13\_40 (A2), Jovita\_43 (EB), Jovo\_38 (A5), Jstan\_41 (AZ1), JuliaChild\_45 (A1), KADY\_48 (A3), KBG\_46 (A1), KFPoly\_44 (A4), KSSJEB\_43 (A1), Kachowdy\_45 (A3), Kalb97\_49 (A3), Kalimba\_38 (AZ5), Kalnok\_49 (A3), Kalpine\_44 (A2), Kampy\_45 (A4), Kanely\_45 (A1), Katalie136\_44 (A4), Kate33\_42 (EB), KatherineG\_48 (A15), Katzastrophic\_41 (EB), Kaylissa\_42 (AZ1), Kazan\_46 (A6), KeAlii\_40 (AZ1), Kenmech\_48 (A1), Kenzers\_43 (EB), Kerberos\_47 (A2), Kieran\_40 (EB), Killigrew\_44 (A1), Kimona\_43 (A19), KingCyrus\_47 (A2), Kingmustik0402\_45 (A4), Kinmap\_43 (A21), Kipper29\_45 (A6), KittenMittens\_41 (A10), Koan\_43 (A4), Koko\_47 (A6), Koreni\_44 (A4), Kratak\_45 (A4), Kremtemulon\_45 (A4), Krishelle\_36 (CA), Kristoff\_44 (A10), Kugel\_46 (A1), KyMonks1A\_47 (A1), Kye\_45 (A4), Kykar\_45 (A1), LBerry\_49 (A3), LHTSCC\_47 (A4), LadyAstra\_48 (AZ4), LadyBird\_47 (A2), Lahqtemish\_42 (EB), Lambert1\_44 (A3), Lamina13\_45 (A1), Landor\_44 (A2), LappelDuVide\_45 (A4), Larenn\_44 (A2), LarryKay\_48 (A3), LastResort\_46 (A15), Lego\_41 (AZ1), Lemur\_45 (A4), LeoAvram\_45 (A4), Leogania\_44 (A2), Lesedi\_42 (A1), Lev2\_38 (A5), Leviathan\_46 (A2), Licorice\_48 (A1), LilBib\_45 (A1), LilTurb\_45 (A2), Lilbooboo\_34 (BB1), Lilbunny\_44 (A6), Lilith\_49 (A3), Lilleskat\_43 (A9), Lillie\_36 (CA), LimaBean\_42 (EB), LittleB\_45 (A4), LittleCherry\_39 (A5), LittleGuy\_45 (A4), Lizalica\_39 (AZ1), LochMonster\_46 (A4), Lockley\_44 (A1), Lokk\_45 (A2), London\_39 (AZ1), LoneWolf\_45 (A9), Looper\_47 (A15), Lopton\_45 (A1), Lorenzo\_45 (A4), Loser\_46 (A2), Louie6\_47 (A3), Luchador\_50 (A14), Lucivia\_45 (A11), Lucyedi\_45 (A16), LugYA\_51 (A3), Lunsford\_46 (A4), Lynlen\_43 (EB), MA5\_45 (A3), MK4\_45 (A3), MPlant7149\_43 (A1), MaCh\_45 (A11), MaGuCo\_40 (AZ2), Mabel\_45 (A11), MadMarie\_48 (A3), Magnar\_44 (A1), Magnito\_42 (A1), Mainiac\_48 (A3), Makemake\_44 (A1), Malec\_45 (A2), Malinsilva\_50 (A3), Maminaiina\_44 (A9), Manatee\_45 (A1), Manu\_48 (A3), MarQuardt\_48 (A3), Marcell\_43 (A1), Marchesa\_45 (A3), Marchy\_39 (A1), Marge\_45 (A1), Margo\_44 (A3), Marie\_48 (A3), Marius\_49 (A3), Maroc7\_43 (A1), Marsha\_45 (A1), MaryBeth\_45 (A1), MarysWell\_37 (A5), Maureen\_42 (AZ2), Maverick\_45 (A4), Maxo\_46 (A4), Mazhar510\_45 (A4), McFly\_45 (A6), McGuire\_45 (A1), Medusa\_45 (A4), MeeZee\_45 (A4), Melvin\_47 (A4), MetalQZJ\_44 (A1), Methuselah\_45 (A3), Micasa\_40 (A5), Michley\_44 (A1), Microwolf\_48 (A3), MiculUcigas\_44 (A2), Midas2\_38 (A5), Miko\_43 (A2), Milcery\_39 (A5), Millski\_44 (A4), MinecraftSteve\_48 (A15), MiniMommy\_47 (AZ4), Miramae\_44 (A4), Misomonster\_49 (A3), MissSwiss\_41 (AZ1), MissWhite\_43 (A2), Mkhuseleli\_44 (A1), Molly\_45 (A1), Monet\_48 (A1), MoneyMay\_48 (A3), Moose\_44 (A1), Morpher26\_44 (A4), Morrow\_46 (A4), Moss\_38 (AZ5), MrGordo\_44 (A1), Mryolo\_42 (A1), MsUbiquitous\_43 (EB), MuchMore\_51 (A3), Mudpuppy\_38 (AZ1), Mulciber\_44 (A11), Mule\_42 (A1), Munch\_45 (A11), Mundrea\_44 (A4), Museum\_45 (A1), MyraDee\_40 (A18), Mysterium\_37 (AZ5), Myxus\_45 (A9), NEHalo\_43 (A1), NaSiaTalie\_44 (A2), Naiad\_36 (CA), Naira\_46 (A1), Naji\_47 (A2), Nancinator\_36 (CA), Natosaleda\_36 (CA), NearlyHeadless\_43 (A8), Nebs\_46 (A4), Nebulosus\_46 (A15), Nedarya\_43 (A15), Neeharika16\_45 (A6), Nemo27\_45 (A4), Nerujay\_46 (A1), Nesbitt\_42 (BL), Newrala\_45 (A6), Nhonho\_45 (A1), Nicky22\_43 (EB), NicoleTera\_45 (A2), Niobe\_39 (AZ1), Nitro\_40 (AZ1), Niza\_47 (A1), Noella\_44 (A3), Noelle\_45 (A4), Norbert\_43 (A3), NorthStar\_44 (A4), Norz\_45 (A1), NotAPhaseMom\_45 (A4), NothingSpecial\_43 (A2), Nyxis\_45 (A4), OKCentral2016\_43 (A10), OKaNui\_45 (A4),

Obama12\_46 (A4), ObiToo\_46 (AZ1), Odin\_44 (A2), Ohfah\_46 (A4), Ohno789\_45 (A1), OlanP\_47 (A3), Ollie\_48 (A3), Onglai\_43 (A9), Oofda\_48 (A15), Oogway\_42 (A1), Orange\_44 (A11), P28Green\_49 (A3), PGHhamlin\_50 (A3), PP\_46 (A7), PSullivan\_44 (A1), PacerPaul\_45 (A1), PackMan\_44 (A9), PainterBoy\_45 (A16), Palestino\_44 (A4), Panamaxus\_42 (A3), Papez\_47 (A1), Paphu\_43 (A1), Paraselene\_43 (A1), Pari\_45 (A1), Parliament\_44 (A1), Partridge\_36 (CA), PascalRango\_45 (A1), PattyP\_45 (A1), Pawn\_48 (A3), Payneful\_44 (A1), PeaceMeal1\_42 (A10), Peaches\_45 (A4), Pelly\_44 (A1), Pembroke\_48 (A3), Penny1\_49 (A3), Pepe\_42 (A1), Perplexer\_44 (A4), Perseus\_45 (A1), PeterPeter\_45 (A4), Petersenfast\_43 (A11), Peterson\_48 (A1), PetiteSangsue\_44 (A4), Petp2012\_45 (A1), Petruchio\_45 (A1), PetterN\_40 (A5), Ph8s\_46 (A2), Phacado\_45 (A4), Phaded\_46 (A2), Phaeder\_45 (A9), PhailMary\_35 (CA), Phantastic\_46 (A3), Pharaoh\_39 (A12), Phelipe\_46 (A4), PherrisBueller\_44 (A1), PhigPhack\_43 (EB), Phighter1804\_45 (A4), Phillis\_44 (A8), Phisb\_43 (EB), PhishRPhriends\_46 (A3), Phives\_43 (AZ1), Phlei\_33 (A13), Phlorence\_37 (A5), Phoebe\_49 (A3), Phonnegut\_45 (A9), Phontbonne\_45 (A4), Phoxy\_48 (A3), Phrankenstein\_36 (CA), Phranny\_49 (A3), PhrostyMug\_44 (A1), PickleBack\_38 (A5), PinkPlastic\_43 (A1), Pinto\_45 (A1), Pioneer\_45 (A9), Pipcraft\_43 (A4), Pippin\_47 (A1), Piro94\_44 (A2), Pistachio\_47 (A3), Pita2\_47 (A1), Pixelle\_41 (AZ1), Pmask\_45 (A6), Pocahontas\_44 (A3), Polymorphads\_46 (A4), Pomar16\_47 (A2), Ponzi\_14 (singleton), Poompha\_43 (A10), Popcicle\_44 (A3), PotatoSplit\_50 (A3), Power\_43 (A2), Powerpuff\_43 (AZ1), Priamo\_47 (A6), Priya\_45 (A9), ProMouse\_45 (A1), Pukovnik\_43 (A2), Pumbaa\_45 (A4), Pumpkins\_40 (AZ1), Puppy\_47 (A3), PurpleHaze\_48 (A3), QMacho\_45 (EB), QTRLifeCrisis\_45 (A1), Qobbit\_45 (A9), QueenB2\_44 (A2), QueenBeesly\_44 (A2), QuinnKiro\_43 (A3), RER2\_29 (CA), RGL3\_31 (CA), Rachaly\_45 (A2), Rahalelujah\_44 (A9), Raid\_45 (A1), Rajelicia\_46 (A1), Rasputin\_36 (CA), ReMo\_46 (A15), Reba\_48 (A3), Rebeuca\_44 (A10), RedRock\_46 (A2), Reedo\_40 (AZ1), Refuge\_44 (A12), Relief\_44 (A4), RemusLoopin\_36 (BB2), Remus\_47 (A15), ResDef\_44 (A3), Retro23\_45 (A2), RexFury\_36 (CA), Rhodalysa\_36 (CA), RhynO\_45 (A10), Rhynn\_44 (A1), RidgeCB\_44 (A1), Rifter\_47 (A6), Ringer\_46 (A1), Roary\_43 (A8), Rockstar\_45 (A3), Rohr\_45 (A1), Roksolana\_46 (A6), Romney\_45 (A4), Rona\_40 (EB), Roosevelt\_44 (A4), Rosa24\_44 (A4), Rosalind\_46 (A15), Rowa\_41 (BL), Rowdy\_48 (A10), Rubeus\_45 (A1), Rufus\_45 (A1), Ruin\_45 (A4), Rummer\_47 (A3), Ruotula\_48 (A1), Rutherford\_47 (A1), RyeScarlet\_46 (A9), STLscum\_46 (A1), Sabertooth\_45 (A4), Sabia\_48 (A3), Sabinator\_47 (A3), Sachima\_42 (A9), Sagefire\_48 (A1), Saintus\_38 (A8), Salz\_44 (A11), Samora\_36 (BB1), Samy\_65 (singleton), SanaSana\_45 (EB), Sandaddy\_44 (A1), SansAfet\_43 (EB), Sanya\_43 (A1), SarBear\_42 (EB), SarFire\_43 (A1), SaturnRing\_46 (A3), Scamp\_45 (A4), Scherzo\_45 (A9), Scorpia\_40 (A5), Scout\_45 (A3), Scowl\_45 (A1), Seabiscuit\_46 (A1), Seanderson\_47 (A1), Sebastisaurus\_36 (BB2), SemperFi\_45 (A2), SenorClean\_43 (A4), Serenity\_45 (A2), Severus\_42 (A10), Shaffner\_41 (AZ1), Shaka\_45 (A4), ShakeltOph\_47 (AZ4), Sham4\_44 (A11), Shapes\_48 (A10), Sharkboy\_41 (EB), Shawty\_33 (BB1), ShayRa\_48 (A15), Shayna\_42 (EB), SheaKeira\_43 (A9), Sheen\_44 (A7), SheldonCooper\_47 (A4), ShortQueendom\_39 (A1), Shuman\_36 (CA), Shygu2\_44 (A4), Sibs6\_45 (A1), Simpson\_43 (AZ1), SkiPole\_47 (A1), Skipitt\_44 (A4), Sknot\_46 (A2), Slagathor\_47 (A1), Slay\_43 (EB), Smairt\_47 (A1), Smeadley\_43 (A8), Smeagan\_47 (A2), Smeagol\_46 (A1), SmellyB\_45 (A6), SnapTap\_44 (A2), Snape\_44 (A11), Snazzy\_42 (A1), Sneak\_40 (AZ3), Snickers\_48 (A3), SoYo\_48 (A3), Softsoap\_42 (EB), SoilDragon\_48 (A3), Solon\_44 (A1), SonOfLevi\_38 (EA1), Soondubu\_37 (AZ), Sooty\_38 (AZ5), SororFago\_48 (A14), Sorpresa\_44 (A1), Soshari\_50 (A3), Soups\_47 (A15), Sparxx\_46 (A4), SpecialK\_38 (AZ5), Spike509\_48 (A3), SpikeBT\_45 (A1), Spino\_44 (A4), Spooks\_18 (BT), Spouty\_45 (A9), Squee\_44 (A1), StCroix\_36 (CA), Stagni\_48



(A3), StarStuff\_47 (A2), Stasia\_44 (A4), Steamy\_41 (A12), StepMih\_48 (A3), StepHig9\_43 (A8), StewieG\_44 (A1), Stink\_45 (A4), Stoor\_43 (EB), Stromboli\_43 (EB), StrongArm\_44 (A1), Strosahl\_47 (A15), Success\_19 (BT), Sue2\_42 (AZ1), Sumter\_42 (A1), Sunhee\_47 (A14), SunnyD\_42 (EB), Sunshine924\_45 (A1), SuperAwesome\_45 (A6), SuperCallie99\_45 (A6), Superchunk\_44 (A2), Swann\_36 (CA), SweetiePie\_44 (A2), Swervy\_43 (EB), SwirlSquare\_48 (A2), Swirley\_41 (A5), SwissCheese\_46 (A1), Switzer\_45 (A1), Switzerland\_47 (A15), Swole\_45 (A1), SydNat\_40 (A5), TG1\_31 (BB1), TNguyen7\_46 (A3), TWAMP\_36 (CA), Takoda\_36 (CA), Tallboi\_40 (AZ1), Taquarus\_45 (A4), Target\_45 (A1), Tarynearal\_37 (A5), Tasp14\_46 (A1), Taurus\_49 (A3), Tbone\_40 (AZ1), Teagster\_43 (EB), Temprado\_47 (A6), Teodoridan\_43 (A1), Texage\_43 (A3), TforTroy\_42 (AZ1), Thanksgivukkah\_44 (A4), Theia\_36 (A5), TheloniousMonk\_46 (A1), Thor\_43 (A1), Tian\_39 (AZ1), Tiffany\_48 (A3), Tiger\_37 (A5), Timothy\_45 (A11), Timshel\_43 (A7), TinaFeyge\_45 (A4), TinyPebbles\_47 (A3), TinyTimmy\_45 (A11), Tinybot\_44 (A4), TipsytheTRex\_42 (A2), TiroTheta9\_45 (A4), Todacoro\_44 (A3), Tomathan\_47 (A2), ToneTone\_42 (A6), Topanga\_42 (A10), Topgun\_44 (A1), Toro\_45 (A7), Tote\_40 (A1), Traft412\_45 (A1), Travvers\_47 (A2), Treddle\_46 (A1), Trike\_42 (A10), Tripl3t\_45 (A1), Trixie\_44 (A2), Trouble\_46 (A1), TroyPia\_46 (A4), Tubs\_45 (A9), Tuck\_44 (AZ1), Tucker\_46 (A6), TukTuk\_43 (EB), Turab\_38 (AZ1), Turbido\_45 (A2), Turj99\_42 (A1), Tutumahutu\_42 (AZ1), Tweety19\_41 (AZ3), Twigg\_39 (A5), Twister\_42 (A10), TwoPeat\_45 (A1), TygerBlood\_45 (A4), U2\_43 (A1), Ugenie5\_42 (A9), UhSalsa\_36 (CA), Ulysses\_44 (A4), UnionJack\_39 (A5), Updawg\_45 (A2), VA6\_43 (A2), VC3\_48 (A2), VResidence\_41 (AZ1), Vanisoa\_44 (A9), Vash\_34 (BB1), Veracruz\_43 (A3), Violet\_42 (A1), Vix\_48 (A3), VohminGhazi\_45 (A6), VroomVroom\_45 (AZ4), Waits\_47 (A15), WalterMcMickey\_42 (A10), Wander\_45 (A4), Warda\_41 (AZ1), Warrior24\_49 (A15), Watermelon\_46 (A1), Watson\_48 (A3), WeiHuaDA\_48 (A2), Whabigail7\_45 (A2), Wheeler\_45 (A1), WideWale\_45 (A2), Wiks\_44 (A6), Wilbur\_45 (A4), Wildwest\_40 (AZ1), Wile\_44 (A4), Wilkins\_44 (A1), Wizard007\_45 (A4), Wooldri\_50 (A3), WunderPhul\_45 (A6), Xena\_43 (A4), XianYue\_44 (A2), Yecey3\_46 (A9), YesChef\_41 (AZ1), YoSam321\_45 (A4), Yogi\_36 (CA), Yokurt\_45 (A6), Yoncess\_36 (CA), Zaka\_45 (A6), Zeeculate\_43 (A1), Zephyr\_44 (A1), Zetzy\_47 (A3), Zeuska\_44 (A1), Zimmer\_42 (A12), Zolita\_39 (A5), Zulu\_46 (A6), phiBT1\_11 (BB1), phiSASD1\_12 (BJ),

#### Start 235:

- Found in 47 of 1905 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 43 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abinghost\_58 (B3), Akoma\_58 (B3), Athena\_60 (B3), Audrey\_58 (B3), Baloo\_58 (B3), Ben11\_58 (B3), Bernardo\_59 (B3), Briakila\_57 (B3), Casbah\_58 (B3), ChaChing\_58 (B3), Chalmers\_57 (B3), Chandler\_58 (B3), Chentzyk\_59 (B3), Compostia\_58 (B3), Corofin\_58 (B3), Daisy\_57 (B3), Deenasa\_58 (B3), Devonte\_57 (B3), Gadjet\_59 (B3), Gervas\_59 (B3), GlenHope\_59 (B3), Halfpint\_57 (B3), Heathcliff\_58 (B3), Jackstina\_54 (B3), Kamiyu\_58 (B3), Kronus\_58 (B3), LestyG\_57 (B3), Marley1013\_59 (B3), MmasiCarm\_59 (B3), Mortcellus\_58 (B3), Morty007\_58 (B3), Neos5\_58 (B3), Nozo\_58 (B3), Obutu\_59 (B3), OrangeOswald\_58 (B3), Phaedrus\_54 (B3), Phayeta\_60 (B3), Philly\_57 (B3), Phlyer\_58 (B3), Pipefish\_59 (B3), RagingRooster\_57 (B3), Rita1961\_59 (B3), RomaT\_58 (B3), SlippinJimmy\_60 (B3), SynergyX\_58 (B3), Tydolla\_56 (B3), Yahalom\_57 (B3),

#### Start 237:

- Found in 86 of 1905 ( 4.5% ) of genes in pham

- Manual Annotations of this start: 2 of 1683
- Called 3.5% of time when present
- Phage (with cluster) where this start called: GMA2\_66 (DS), GodonK\_188 (DK), Phendrix\_176 (DK),

#### Start 238:

- Found in 383 of 1905 ( 20.1% ) of genes in pham
- Manual Annotations of this start: 2 of 1683
- Called 0.8% of time when present
- Phage (with cluster) where this start called: Qyrzula\_52 (B2), SirJeffery\_57 (B5), Sour\_53 (DR),

#### Start 240:

- Found in 1 of 1905 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sixama\_172 (DS),

#### Start 241:

- Found in 5 of 1905 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 4 of 1683
- Called 80.0% of time when present
- Phage (with cluster) where this start called: BlueNGold\_170 (DS), Boopy\_173 (DS), Forza\_174 (DS), Mareelih\_171 (DS),

#### Start 242:

- Found in 3 of 1905 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Quenya\_42 (EB),

#### Start 244:

- Found in 6 of 1905 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 16.7% of time when present
- Phage (with cluster) where this start called: PauloDiaboli\_117 (GD1),

#### Start 247:

- Found in 1 of 1905 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nirvana\_73 (BM),

#### Start 248:

- Found in 18 of 1905 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 1683
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Bloom\_103 (FC), Chilliams\_97 (FC), GoldenEssence\_88 (FC), Mimi\_105 (FC), Patbob\_100 (FC), Phrampa\_94 (FC), Racecar\_100 (FC), SJReid\_106 (FC), Talia1610\_99 (FC),

#### Start 256:

- Found in 5 of 1905 ( 0.3% ) of genes in pham

- Manual Annotations of this start: 5 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BarnCat\_62 (GB), Cassita\_65 (GB), LeeroyJenkins\_68 (GB), Lifes\_61 (GB), WaterT\_64 (GB),

#### Start 258:

- Found in 8 of 1905 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 7 of 1683
- Called 87.5% of time when present
- Phage (with cluster) where this start called: EhyElimayoE\_67 (BM), Frankenweenie\_74 (BM), JustBecause\_62 (BM), Kela\_63 (BM), Kradal\_67 (BM), Quantum\_66 (BM), Satis\_67 (BM),

#### Start 261:

- Found in 405 of 1905 ( 21.3% ) of genes in pham
- Manual Annotations of this start: 10 of 1683
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Abt2graduatex2\_49 (BG), Asis\_48 (BG), BabyGotBac\_49 (BG), BayC\_48 (BG), Maih\_47 (BG), Mischief19\_57 (BG), RainyPolka\_49 (BG), Salete\_48 (BG), TP1604\_48 (BG), Xkcd426\_52 (BG), YDN12\_50 (BG),

#### Start 271:

- Found in 1 of 1905 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shocker\_43 (singleton),

#### Start 273:

- Found in 154 of 1905 ( 8.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.6% of time when present
- Phage (with cluster) where this start called: PastaFagioli\_43 (EB),

#### Start 281:

- Found in 20 of 1905 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 18 of 1683
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BouleyBill\_36 (EA4), Bustleton\_37 (EA4), Cheeto1\_39 (EA9), ChickenKing\_38 (EA9), GaeCeo\_39 (EA9), Golden\_37 (EA4), Guetzie\_37 (EA4), HerculesXL\_37 (EA11), Jingles\_37 (EA4), Kauala\_37 (EA4), Koji\_37 (EA4), Lucky3\_37 (EA4), Pherbot\_37 (EA4), PrincePhergus\_37 (EA4), RenegadeRaider\_39 (EA4), Schimmels22\_37 (EA11), Schubert\_36 (EA8), Sinatra\_37 (EA4), SirVictor\_37 (EA4), Tinyman4\_37 (EA11),

#### Start 282:

- Found in 8 of 1905 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 4 of 1683
- Called 62.5% of time when present
- Phage (with cluster) where this start called: Casey\_35 (EA3), Pajaza\_35 (EA3), Pikmin\_35 (EA3), Scissor2024\_37 (EA11), WestPM\_35 (EA11),

#### Start 283:

- Found in 169 of 1905 ( 8.9% ) of genes in pham
- Manual Annotations of this start: 147 of 1683
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Acosta\_40 (EA1), Agente005\_39 (EA1), Alakazam\_38 (EA5), AlexAdler\_39 (EA1), Alyxandracam\_39 (EA1), Andromedas\_38 (EA2), Antoinette\_39 (EA1), AranulaLuti\_38 (EA1), Asta\_38 (EA1), Aubergine\_38 (EA1), AxiPup\_39 (EA1), Baines\_38 (EA1), Balsa\_38 (EA1), Bandik\_39 (EA1), BaronJohn\_38 (EA5), BeautPeep30\_39 (EA1), Benjalauren\_39 (EA1), BigRedClifford\_39 (EA1), Blage\_39 (EA1), BonesMcCoy\_39 (EA1), Bonino\_38 (EA1), Byron23\_39 (EA1), Calix\_38 (EA1), CaptainRex\_37 (EA5), CarisSwetlik\_42 (EA1), Carostasia\_37 (EA10), Chepli\_40 (EA6), ChikPic\_38 (EA2), Christoph\_38 (EA1), Clancy\_38 (EA1), Clock\_37 (EA5), ColaCorta\_38 (EA2), Convict\_39 (EA1), Dave\_39 (EA1), Delphidian\_39 (EA1), Den3\_39 (EA1), Dothraki\_39 (EA1), Duocatuli\_38 (EA1), Eleri\_38 (EA2), Endor\_39 (EA1), Eria\_38 (EA1), Espinosa\_38 (EA1), Etna\_38 (EA1), Etta\_38 (EA1), Exploradora\_39 (UNK), FarmerDoug\_38 (EA1), Figueroism\_39 (EA1), Finny\_38 (EA2), Fulton\_37 (EA5), GardenB\_38 (EA1), Gelo\_38 (EA1), Gershwin\_38 (EA1), Glamour\_37 (EA2), Greenlvy\_37 (EA5), Greys\_39 (EA1), Gubbabump\_38 (EA1), Hamlet\_38 (EA1), HanSolo\_38 (EA1), HankSprout\_39 (EA1), Hasitha\_37 (EA5), HungryHenry\_38 (EA1), Ilzat\_38 (EA1), Inventa\_39 (EA1), Ixel\_38 (EA11), Janus167\_38 (EA1), JasonD\_43 (EA1), JasperRussell\_38 (EA1), Jemerald\_40 (EA6), Jenos\_42 (EA1), Jerbirus\_39 (EA1), JeriBeth\_39 (EA1), Juanyo\_37 (EA10), Juicer\_40 (EA6), Kale\_38 (EA1), KannH\_38 (EA1), KatChan\_40 (EA6), KingJulien\_38 (EA1), Klimt\_38 (EA1), Knox\_39 (EA1), Kurt1\_39 (EA1), Leafus\_38 (EA1), Librie\_37 (EA5), LilTerminator\_38 (EA5), Lovelyunicorn\_39 (EA1), Ludgate\_39 (EA1), Luna18\_40 (EA6), MCubed\_38 (EA2), MaeLinda\_39 (EA1), ManRay\_38 (EA1), Mandalorian\_37 (EA10), Martin\_40 (EA1), McGalleon\_41 (EA1), Mercedes\_34 (EA), MillyPhilly\_39 (EA1), MonChoix\_37 (EA1), Morrigan\_40 (EA6), MrWorldwide\_39 (EA1), Nagem\_39 (EA1), Nattles\_38 (EA1), Nebulous\_37 (EA5), Neferthena\_38 (EA5), NickSell\_39 (EA1), Nucci\_37 (EA10), Oats\_38 (EA1), OldNelly\_39 (EA1), Oxtober96\_39 (EA1), Papafritta\_38 (EA1), ParleG\_39 (EA1), Peep\_39 (EA1), Peppino\_38 (EA1), Phanita\_37 (EA2), Pherferi\_39 (EA1), Phiderman\_39 (EA1), Phireproof\_39 (EA1), PhredFlintston\_39 (EA1), Phriends\_39 (EA1), Pocket\_38 (EA1), PuppyEggo\_39 (EA1), QuadZero\_37 (EA5), Quartz\_38 (EA10), Raccoon\_38 (EA1), Rappheph\_39 (EA1), Raptor\_39 (EA1), Redfield\_38 (EA1), Riyhil\_39 (EA1), Robinson\_39 (EA1), Rog141\_38 (EA1), SJay\_39 (EA1), Sansa\_37 (EA2), Saratos\_38 (EA2), Schnapsidee\_38 (EA1), Sedgewig\_38 (EA1), Shamu\_38 (EA2), Shee\_39 (EA1), SoilGremlin\_39 (EA1), Stanktossa\_39 (EA1), StingRay\_38 (EA1), StiryfryIV\_38 (EA1), Stormbreaker8\_38 (EA1), Strathdee\_39 (EA1), Superfresh\_39 (EA1), Symere\_39 (EA1), Teagan\_39 (EA1), TeddyBear\_38 (EA1), Tenda\_38 (EA1), Thompsone\_39 (EA1), Thorongil\_39 (EA1), TinSulphur\_39 (EA1), Velene\_39 (EA1), Vispistious\_39 (EA1), Wardwill\_39 (EA5), WildNOut\_39 (EA1), WilliamStrong\_38 (EA6), Winzigespinne\_38 (EA1), YuuY\_37 (EA10), Zada\_39 (EA1), Zayuliv\_37 (EA5), Zenitsu\_38 (EA2), Zepp\_38 (EA5),

Start 284:

- Found in 72 of 1905 ( 3.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 9.7% of time when present
- Phage (with cluster) where this start called: Atuin\_96 (FC), DunneganBoMo\_92 (FC), Ellewin\_90 (FC), KSunshine22\_93 (FC), LeoJr\_98 (FC), ReginaGlobina\_98 (FC), WaddleDee\_92 (FC),

Start 291:

- Found in 155 of 1905 ( 8.1% ) of genes in pham
- Manual Annotations of this start: 5 of 1683
- Called 3.9% of time when present
- Phage (with cluster) where this start called: BeeBee8\_39 (EA1), Garey24\_38 (EA1), Gargoyle\_39 (EA1), Ioannes\_39 (EA1), Renzie\_39 (EA1), ShaiHulud\_39 (EA1),

Start 296:

- Found in 4 of 1905 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Rockabye\_103 (FC),

### Summary by clusters:

There are 82 clusters represented in this pham: FP, GD1, singleton, BG, GD4, DK, BL, BM, UNK, GD2, BJ, BT, FC, B12, B13, BR, B11, GD3, DR, DS, A15, A14, A17, A16, A11, A10, A13, A12, FR, A19, A18, A1, A3, A2, A5, A4, A7, A6, A9, A8, EA6, BB2, BB1, A, AB, EH, A21, CA, EA, CD, AQ, EA8, B10, GC, GB, EA1, EA3, EA2, EA5, EA4, EB, CT, A20, EA9, EA11, EA10, GG, B8, AZ, B9, B4, B5, B6, B7, B1, B2, B3, AZ1, AZ2, AZ3, AZ4, AZ5,

Info for manual annotations of cluster A:

- Start number 234 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A1:

- Start number 234 was manually annotated 209 times for cluster A1.

Info for manual annotations of cluster A10:

- Start number 234 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 234 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 234 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 234 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 234 was manually annotated 21 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 234 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 234 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 234 was manually annotated 1 time for cluster A19.



Info for manual annotations of cluster A2:

- Start number 233 was manually annotated 4 times for cluster A2.
- Start number 234 was manually annotated 98 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 234 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 234 was manually annotated 113 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 234 was manually annotated 137 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 205 was manually annotated 2 times for cluster A5.
- Start number 234 was manually annotated 36 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 212 was manually annotated 1 time for cluster A6.
- Start number 234 was manually annotated 41 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 234 was manually annotated 5 times for cluster A7.

Info for manual annotations of cluster A8:

- Start number 234 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 233 was manually annotated 2 times for cluster A9.
- Start number 234 was manually annotated 33 times for cluster A9.

Info for manual annotations of cluster AB:

- Start number 55 was manually annotated 1 time for cluster AB.
- Start number 60 was manually annotated 1 time for cluster AB.
- Start number 65 was manually annotated 1 time for cluster AB.
- Start number 79 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster AQ:

- Start number 202 was manually annotated 13 times for cluster AQ.

Info for manual annotations of cluster AZ:

- Start number 234 was manually annotated 1 time for cluster AZ.

Info for manual annotations of cluster AZ1:

- Start number 137 was manually annotated 1 time for cluster AZ1.
- Start number 172 was manually annotated 1 time for cluster AZ1.
- Start number 234 was manually annotated 42 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 145 was manually annotated 1 time for cluster AZ2.
- Start number 234 was manually annotated 2 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 234 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 234 was manually annotated 3 times for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 234 was manually annotated 10 times for cluster AZ5.

Info for manual annotations of cluster B1:

- Start number 180 was manually annotated 1 time for cluster B1.
- Start number 197 was manually annotated 262 times for cluster B1.

Info for manual annotations of cluster B10:

- Start number 184 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:

- Start number 191 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 189 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 220 was manually annotated 3 times for cluster B13.

Info for manual annotations of cluster B2:

- Start number 197 was manually annotated 31 times for cluster B2.
- Start number 238 was manually annotated 1 time for cluster B2.

Info for manual annotations of cluster B3:

- Start number 232 was manually annotated 2 times for cluster B3.
- Start number 235 was manually annotated 43 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 169 was manually annotated 2 times for cluster B4.
- Start number 175 was manually annotated 4 times for cluster B4.
- Start number 183 was manually annotated 1 time for cluster B4.
- Start number 189 was manually annotated 17 times for cluster B4.
- Start number 193 was manually annotated 1 time for cluster B4.

Info for manual annotations of cluster B5:

- Start number 189 was manually annotated 8 times for cluster B5.
- Start number 201 was manually annotated 1 time for cluster B5.

Info for manual annotations of cluster B6:

- Start number 191 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 199 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

- Start number 222 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

- Start number 197 was manually annotated 5 times for cluster B9.
- Start number 201 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster BB1:

- Start number 234 was manually annotated 6 times for cluster BB1.

Info for manual annotations of cluster BB2:

- Start number 234 was manually annotated 3 times for cluster BB2.

Info for manual annotations of cluster BG:

- Start number 261 was manually annotated 10 times for cluster BG.

Info for manual annotations of cluster BJ:

- Start number 234 was manually annotated 1 time for cluster BJ.

Info for manual annotations of cluster BL:

- Start number 234 was manually annotated 3 times for cluster BL.

Info for manual annotations of cluster BM:

- Start number 258 was manually annotated 7 times for cluster BM.

Info for manual annotations of cluster BR:

- Start number 14 was manually annotated 1 time for cluster BR.
- Start number 37 was manually annotated 1 time for cluster BR.

Info for manual annotations of cluster BT:

- Start number 234 was manually annotated 1 time for cluster BT.

Info for manual annotations of cluster CA:

- Start number 234 was manually annotated 36 times for cluster CA.

Info for manual annotations of cluster CD:

- Start number 3 was manually annotated 5 times for cluster CD.
- Start number 18 was manually annotated 1 time for cluster CD.
- Start number 157 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CT:

- Start number 36 was manually annotated 16 times for cluster CT.
- Start number 44 was manually annotated 1 time for cluster CT.
- Start number 45 was manually annotated 24 times for cluster CT.
- Start number 47 was manually annotated 13 times for cluster CT.

Info for manual annotations of cluster DK:

- Start number 237 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DR:

- Start number 225 was manually annotated 5 times for cluster DR.
- Start number 230 was manually annotated 13 times for cluster DR.
- Start number 238 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster DS:

- Start number 240 was manually annotated 1 time for cluster DS.

- Start number 241 was manually annotated 4 times for cluster DS.

Info for manual annotations of cluster EA:

- Start number 283 was manually annotated 1 time for cluster EA.

Info for manual annotations of cluster EA1:

- Start number 208 was manually annotated 1 time for cluster EA1.
- Start number 234 was manually annotated 3 times for cluster EA1.
- Start number 283 was manually annotated 109 times for cluster EA1.
- Start number 291 was manually annotated 5 times for cluster EA1.

Info for manual annotations of cluster EA10:

- Start number 283 was manually annotated 6 times for cluster EA10.

Info for manual annotations of cluster EA11:

- Start number 281 was manually annotated 3 times for cluster EA11.
- Start number 282 was manually annotated 1 time for cluster EA11.
- Start number 283 was manually annotated 1 time for cluster EA11.

Info for manual annotations of cluster EA2:

- Start number 283 was manually annotated 11 times for cluster EA2.

Info for manual annotations of cluster EA3:

- Start number 282 was manually annotated 3 times for cluster EA3.

Info for manual annotations of cluster EA4:

- Start number 281 was manually annotated 11 times for cluster EA4.

Info for manual annotations of cluster EA5:

- Start number 283 was manually annotated 12 times for cluster EA5.

Info for manual annotations of cluster EA6:

- Start number 283 was manually annotated 7 times for cluster EA6.

Info for manual annotations of cluster EA8:

- Start number 281 was manually annotated 1 time for cluster EA8.

Info for manual annotations of cluster EA9:

- Start number 281 was manually annotated 3 times for cluster EA9.

Info for manual annotations of cluster EB:

- Start number 223 was manually annotated 3 times for cluster EB.
- Start number 231 was manually annotated 7 times for cluster EB.
- Start number 234 was manually annotated 57 times for cluster EB.
- Start number 242 was manually annotated 1 time for cluster EB.

Info for manual annotations of cluster EH:

- Start number 232 was manually annotated 8 times for cluster EH.
- Start number 233 was manually annotated 4 times for cluster EH.
- Start number 234 was manually annotated 1 time for cluster EH.

Info for manual annotations of cluster FC:

- Start number 248 was manually annotated 2 times for cluster FC.

Info for manual annotations of cluster FP:

- Start number 234 was manually annotated 2 times for cluster FP.

Info for manual annotations of cluster GB:

- Start number 256 was manually annotated 5 times for cluster GB.

Info for manual annotations of cluster GC:

- Start number 208 was manually annotated 4 times for cluster GC.

Info for manual annotations of cluster GD1:

- Start number 232 was manually annotated 1 time for cluster GD1.
- Start number 244 was manually annotated 1 time for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 232 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 232 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 232 was manually annotated 1 time for cluster GD4.

Info for manual annotations of cluster GG:

- Start number 25 was manually annotated 2 times for cluster GG.

### ***Gene Information:***

Gene: 20ES\_45 Start: 31266, Stop: 29479, Start Num: 234

Candidate Starts for 20ES\_45:

(53, 31683), (Start: 234 @31266 has 938 MA's), (353, 31062), (355, 31059), (359, 31053), (368, 31038), (379, 31023), (395, 30990), (397, 30987), (405, 30960), (415, 30933), (424, 30912), (432, 30882), (465, 30780), (541, 30687), (544, 30678), (566, 30639), (571, 30630), (582, 30615), (619, 30549), (655, 30468), (675, 30420), (679, 30414), (710, 30351), (740, 30276), (759, 30195), (789, 30111), (790, 30108), (805, 30042), (818, 30003), (837, 29982), (859, 29907), (864, 29889), (868, 29877), (879, 29844), (888, 29817), (908, 29781), (921, 29763), (936, 29727), (942, 29703), (962, 29646), (968, 29625), (985, 29568), (989, 29556), (993, 29547),

Gene: 39HC\_051 Start: 52288, Stop: 50447, Start Num: 191

Candidate Starts for 39HC\_051:

(81, 52552), (88, 52537), (Start: 191 @52288 has 2 MA's), (252, 52231), (Start: 261 @52216 has 10 MA's), (355, 52042), (385, 51991), (387, 51988), (395, 51967), (410, 51916), (412, 51910), (424, 51892), (437, 51850), (441, 51847), (450, 51817), (496, 51724), (511, 51688), (516, 51676), (582, 51562), (595, 51538), (597, 51535), (704, 51304), (739, 51235), (743, 51217), (749, 51199), (760, 51142), (797, 51034), (799, 51028), (802, 51019), (822, 50956), (841, 50920), (842, 50917), (847, 50902), (872, 50824), (877, 50812), (883, 50791), (884, 50785), (902, 50752), (921, 50722), (931, 50707), (936, 50686), (942, 50662), (949, 50638), (964, 50599), (967, 50587), (968, 50584), (969, 50581), (972, 50569), (979, 50545), (1015, 50473),



Gene: 40AC\_46 Start: 33055, Stop: 30977, Start Num: 95

Candidate Starts for 40AC\_46:

(95, 33055), (132, 32941), (Start: 234 @32764 has 938 MA's), (353, 32560), (359, 32551), (379, 32521), (395, 32488), (397, 32485), (405, 32458), (415, 32431), (465, 32278), (541, 32185), (544, 32176), (571, 32128), (582, 32113), (619, 32047), (675, 31918), (679, 31912), (711, 31846), (759, 31693), (778, 31642), (790, 31606), (793, 31597), (805, 31540), (818, 31501), (837, 31480), (841, 31459), (879, 31342), (938, 31222), (962, 31144), (968, 31123), (985, 31066), (989, 31054), (993, 31045),

Gene: 40BC\_051 Start: 52288, Stop: 50447, Start Num: 191

Candidate Starts for 40BC\_051:

(81, 52552), (88, 52537), (Start: 191 @52288 has 2 MA's), (252, 52231), (Start: 261 @52216 has 10 MA's), (355, 52042), (385, 51991), (387, 51988), (395, 51967), (410, 51916), (412, 51910), (424, 51892), (437, 51850), (441, 51847), (450, 51817), (496, 51724), (511, 51688), (516, 51676), (582, 51562), (595, 51538), (597, 51535), (704, 51304), (739, 51235), (743, 51217), (749, 51199), (760, 51142), (797, 51034), (799, 51028), (802, 51019), (822, 50956), (841, 50920), (842, 50917), (847, 50902), (872, 50824), (877, 50812), (883, 50791), (884, 50785), (902, 50752), (921, 50722), (931, 50707), (936, 50686), (942, 50662), (949, 50638), (964, 50599), (967, 50587), (968, 50584), (969, 50581), (972, 50569), (979, 50545), (1015, 50473),

Gene: 8UZL\_44 Start: 34273, Stop: 31928, Start Num: 65

Candidate Starts for 8UZL\_44:

(Start: 44 @34339 has 1 MA's), (49, 34330), (Start: 60 @34285 has 1 MA's), (Start: 65 @34273 has 1 MA's), (Start: 79 @34234 has 1 MA's), (100, 34177), (136, 34075), (143, 34045), (170, 34015), (275, 33847), (342, 33727), (398, 33625), (426, 33544), (448, 33484), (472, 33418), (524, 33286), (543, 33238), (626, 33166), (634, 33157), (638, 33145), (682, 33076), (759, 32863), (772, 32809), (792, 32728), (798, 32695), (817, 32629), (819, 32623), (822, 32617), (824, 32611), (834, 32587), (842, 32554), (847, 32539), (849, 32530), (900, 32371), (906, 32359), (978, 32131), (986, 32104), (1018, 32035),

Gene: A3Wally\_117 Start: 81842, Stop: 79962, Start Num: 232

Candidate Starts for A3Wally\_117:

(Start: 189 @81905 has 26 MA's), (Start: 225 @81851 has 5 MA's), (Start: 232 @81842 has 15 MA's), (Start: 244 @81830 has 1 MA's), (340, 81632), (355, 81605), (382, 81566), (407, 81503), (418, 81485), (426, 81458), (428, 81452), (468, 81344), (544, 81266), (554, 81245), (573, 81212), (586, 81182), (603, 81155), (635, 81095), (683, 80990), (700, 80957), (729, 80888), (731, 80879), (759, 80768), (795, 80654), (816, 80570), (822, 80555), (856, 80444), (858, 80438), (861, 80426), (865, 80411), (909, 80300), (942, 80210), (954, 80171), (960, 80159), (968, 80132), (985, 80075), (995, 80051),

Gene: A6\_41 Start: 33551, Stop: 31725, Start Num: 234

Candidate Starts for A6\_41:

(Start: 234 @33551 has 938 MA's), (359, 33338), (368, 33323), (395, 33275), (405, 33245), (411, 33224), (415, 33218), (419, 33209), (445, 33125), (448, 33116), (457, 33092), (465, 33065), (541, 32972), (546, 32957), (558, 32936), (566, 32924), (596, 32873), (598, 32870), (628, 32816), (634, 32804), (648, 32774), (657, 32744), (679, 32699), (700, 32660), (759, 32480), (775, 32432), (790, 32393), (805, 32327), (818, 32288), (837, 32267), (841, 32246), (847, 32228), (868, 32162), (936, 32012), (938, 32009), (946, 31973), (954, 31949), (959, 31940), (963, 31928), (985, 31853), (993, 31832),

Gene: ABU\_61 Start: 54532, Stop: 52673, Start Num: 197

Candidate Starts for ABU\_61:

(Start: 180 @54556 has 1 MA's), (Start: 197 @54532 has 298 MA's), (Start: 225 @54508 has 5 MA's), (Start: 238 @54502 has 2 MA's), (Start: 261 @54460 has 10 MA's), (269, 54439), (323, 54325), (328,

54319), (349, 54289), (385, 54229), (394, 54208), (410, 54154), (418, 54142), (425, 54124), (427, 54112), (462, 54007), (496, 53950), (511, 53914), (516, 53902), (535, 53875), (545, 53848), (555, 53830), (566, 53812), (588, 53773), (595, 53764), (597, 53761), (724, 53503), (754, 53401), (760, 53368), (765, 53347), (799, 53254), (802, 53245), (822, 53182), (841, 53146), (842, 53143), (847, 53128), (872, 53050), (877, 53038), (883, 53017), (902, 52978), (942, 52888), (947, 52870), (949, 52864), (954, 52849), (964, 52825), (968, 52810), (969, 52807), (972, 52795), (979, 52771), (1002, 52723), (1015, 52699),

Gene: ACFishhook\_47 Start: 31825, Stop: 30011, Start Num: 234

Candidate Starts for ACFishhook\_47:

(Start: 234 @31825 has 938 MA's), (262, 31786), (266, 31774), (353, 31621), (362, 31606), (395, 31549), (415, 31492), (419, 31483), (432, 31441), (448, 31390), (465, 31339), (541, 31246), (566, 31198), (582, 31174), (603, 31135), (619, 31108), (634, 31078), (670, 30985), (679, 30973), (701, 30925), (710, 30910), (759, 30754), (778, 30703), (789, 30670), (790, 30667), (805, 30601), (818, 30562), (842, 30490), (856, 30451), (862, 30427), (868, 30409), (879, 30376), (921, 30295), (942, 30235), (947, 30217), (968, 30157), (970, 30148), (985, 30100), (989, 30088), (993, 30079),

Gene: AEgle\_37 Start: 28789, Stop: 30654, Start Num: 234

Candidate Starts for AEgle\_37:

(Start: 234 @28789 has 938 MA's), (265, 28837), (353, 28993), (411, 29107), (436, 29176), (543, 29383), (546, 29392), (598, 29482), (603, 29491), (615, 29506), (619, 29518), (635, 29551), (675, 29644), (703, 29701), (730, 29782), (759, 29902), (769, 29932), (790, 29989), (803, 30046), (805, 30055), (840, 30148), (862, 30220), (865, 30229), (905, 30328), (936, 30391), (978, 30526), (985, 30550), (988, 30559), (1031, 30637),

Gene: AFIS\_43 Start: 34331, Stop: 32502, Start Num: 234

Candidate Starts for AFIS\_43:

(Start: 234 @34331 has 938 MA's), (359, 34118), (395, 34055), (405, 34025), (411, 34004), (415, 33998), (419, 33989), (457, 33872), (465, 33845), (541, 33752), (546, 33737), (566, 33704), (596, 33653), (598, 33650), (628, 33596), (634, 33584), (648, 33554), (657, 33524), (679, 33479), (700, 33440), (759, 33260), (775, 33212), (793, 33164), (802, 33125), (805, 33107), (818, 33068), (837, 33047), (841, 33026), (846, 33011), (885, 32888), (903, 32855), (960, 32717), (967, 32693), (982, 32645), (985, 32633), (993, 32612), (997, 32606), (1025, 32558), (1030, 32543),

Gene: AGrandiflora\_42 Start: 30069, Stop: 31934, Start Num: 234

Candidate Starts for AGrandiflora\_42:

(Start: 234 @30069 has 938 MA's), (265, 30117), (314, 30207), (317, 30213), (405, 30366), (436, 30456), (543, 30663), (546, 30672), (598, 30762), (603, 30771), (615, 30786), (635, 30831), (655, 30876), (675, 30924), (703, 30981), (730, 31062), (753, 31149), (759, 31182), (769, 31212), (790, 31269), (805, 31335), (814, 31359), (840, 31428), (862, 31500), (865, 31509), (905, 31608), (936, 31671), (942, 31695), (978, 31806), (985, 31830), (988, 31839),

Gene: AN3\_45 Start: 31646, Stop: 29859, Start Num: 234

Candidate Starts for AN3\_45:

(Start: 234 @31646 has 938 MA's), (353, 31442), (355, 31439), (359, 31433), (368, 31418), (379, 31403), (395, 31370), (397, 31367), (405, 31340), (415, 31313), (424, 31292), (432, 31262), (465, 31160), (541, 31067), (544, 31058), (566, 31019), (571, 31010), (582, 30995), (619, 30929), (655, 30848), (675, 30800), (679, 30794), (740, 30656), (759, 30575), (778, 30524), (789, 30491), (790, 30488), (805, 30422), (818, 30383), (837, 30362), (859, 30287), (864, 30269), (879, 30224), (888, 30197), (908, 30161), (921, 30143), (936, 30107), (942, 30083), (962, 30026), (985, 29948), (989, 29936), (993, 29927),

Gene: AN9\_48 Start: 31569, Stop: 29770, Start Num: 234

Candidate Starts for AN9\_48:

(Start: 234 @31569 has 938 MA's), (353, 31365), (395, 31290), (397, 31287), (405, 31260), (409, 31245), (415, 31233), (432, 31182), (465, 31080), (541, 30987), (544, 30978), (566, 30939), (571, 30930), (619, 30849), (635, 30816), (648, 30789), (700, 30675), (710, 30651), (759, 30486), (775, 30438), (790, 30399), (798, 30363), (805, 30333), (818, 30294), (837, 30273), (868, 30168), (879, 30135), (908, 30072), (936, 30018), (942, 29994), (985, 29859), (989, 29847), (993, 29838),

Gene: ANI8\_48 Start: 31569, Stop: 29770, Start Num: 234

Candidate Starts for ANI8\_48:

(Start: 234 @31569 has 938 MA's), (353, 31365), (395, 31290), (397, 31287), (405, 31260), (409, 31245), (415, 31233), (432, 31182), (465, 31080), (541, 30987), (544, 30978), (566, 30939), (571, 30930), (619, 30849), (635, 30816), (648, 30789), (700, 30675), (710, 30651), (759, 30486), (775, 30438), (790, 30399), (798, 30363), (805, 30333), (818, 30294), (837, 30273), (868, 30168), (879, 30135), (908, 30072), (936, 30018), (942, 29994), (985, 29859), (989, 29847), (993, 29838),

Gene: AbbeyMikolon\_44 Start: 30256, Stop: 32121, Start Num: 234

Candidate Starts for AbbeyMikolon\_44:

(Start: 234 @30256 has 938 MA's), (265, 30304), (273, 30325), (317, 30400), (382, 30502), (404, 30559), (405, 30562), (406, 30565), (428, 30628), (432, 30640), (558, 30868), (571, 30889), (582, 30910), (603, 30949), (615, 30964), (617, 30967), (618, 30970), (637, 31015), (649, 31036), (655, 31054), (657, 31063), (675, 31102), (691, 31132), (693, 31144), (712, 31207), (747, 31324), (759, 31384), (775, 31432), (790, 31471), (796, 31501), (805, 31537), (825, 31591), (842, 31639), (862, 31702), (901, 31801), (905, 31810), (933, 31861), (949, 31921), (955, 31939), (978, 32008), (985, 32032), (997, 32059),

Gene: AbbyPaige\_46 Start: 31676, Stop: 29889, Start Num: 234

Candidate Starts for AbbyPaige\_46:

(160, 31763), (Start: 234 @31676 has 938 MA's), (355, 31469), (359, 31463), (368, 31448), (379, 31433), (397, 31397), (405, 31370), (415, 31343), (424, 31322), (465, 31190), (541, 31097), (566, 31049), (571, 31040), (582, 31025), (619, 30959), (655, 30878), (675, 30830), (679, 30824), (710, 30761), (759, 30605), (778, 30554), (789, 30521), (790, 30518), (805, 30452), (818, 30413), (837, 30392), (859, 30317), (862, 30305), (879, 30254), (908, 30191), (921, 30173), (936, 30137), (942, 30113), (968, 30035), (985, 29978), (989, 29966), (993, 29957),

Gene: AbbysRanger\_44 Start: 31536, Stop: 29707, Start Num: 234

Candidate Starts for AbbysRanger\_44:

(Start: 234 @31536 has 938 MA's), (266, 31485), (279, 31455), (379, 31293), (389, 31275), (395, 31260), (415, 31203), (419, 31194), (458, 31074), (465, 31050), (513, 31008), (541, 30957), (568, 30909), (582, 30888), (603, 30849), (628, 30804), (630, 30798), (663, 30717), (675, 30696), (700, 30651), (756, 30486), (759, 30465), (805, 30312), (818, 30273), (842, 30201), (847, 30186), (856, 30162), (861, 30144), (862, 30138), (864, 30132), (942, 29931), (985, 29796), (989, 29784), (993, 29775),

Gene: Abbysshoes\_47 Start: 34766, Stop: 32937, Start Num: 234

Candidate Starts for Abbysshoes\_47:

(Start: 234 @34766 has 938 MA's), (359, 34553), (368, 34538), (395, 34490), (405, 34460), (411, 34439), (415, 34433), (419, 34424), (457, 34307), (465, 34280), (541, 34187), (546, 34172), (596, 34088), (598, 34085), (634, 34019), (648, 33989), (657, 33959), (679, 33914), (700, 33875), (759, 33695), (775, 33647), (793, 33599), (802, 33560), (805, 33542), (818, 33503), (837, 33482), (841, 33461), (846, 33446), (885, 33323), (960, 33152), (967, 33128), (982, 33080), (985, 33068), (993, 33047), (997, 33041), (1025, 32993), (1030, 32978),

Gene: Abdiel\_45 Start: 31571, Stop: 29745, Start Num: 234

Candidate Starts for Abdiel\_45:

(Start: 234 @31571 has 938 MA's), (252, 31550), (266, 31520), (279, 31490), (379, 31328), (389, 31310), (415, 31238), (419, 31229), (458, 31109), (465, 31085), (541, 30992), (568, 30944), (582, 30923), (603, 30884), (663, 30752), (675, 30731), (700, 30686), (703, 30674), (756, 30521), (759, 30500), (798, 30377), (805, 30347), (818, 30308), (841, 30242), (842, 30239), (847, 30224), (856, 30200), (862, 30176), (942, 29969), (985, 29834), (989, 29822), (993, 29813),

Gene: Abigail\_42 Start: 29285, Stop: 31159, Start Num: 234

Candidate Starts for Abigail\_42:

(Start: 231 @29282 has 7 MA's), (Start: 234 @29285 has 938 MA's), (273, 29354), (284, 29375), (419, 29621), (432, 29663), (603, 29957), (709, 30191), (747, 30314), (759, 30374), (761, 30380), (778, 30425), (782, 30440), (786, 30455), (796, 30491), (805, 30527), (840, 30620), (869, 30713), (901, 30791), (936, 30863), (938, 30866), (946, 30902), (962, 30944), (967, 30962), (978, 30998), (985, 31022), (993, 31043),

Gene: Abinghost\_58 Start: 53637, Stop: 51820, Start Num: 235

Candidate Starts for Abinghost\_58:

(129, 53820), (Start: 235 @53637 has 43 MA's), (252, 53607), (359, 53427), (424, 53274), (426, 53262), (437, 53232), (442, 53226), (462, 53163), (464, 53157), (496, 53106), (511, 53070), (539, 53022), (597, 52917), (647, 52821), (664, 52770), (737, 52626), (749, 52587), (755, 52557), (760, 52530), (763, 52518), (797, 52422), (799, 52416), (802, 52407), (804, 52395), (834, 52323), (841, 52293), (847, 52275), (851, 52266), (872, 52197), (877, 52185), (883, 52164), (921, 52095), (931, 52080), (938, 52056), (942, 52035), (947, 52017), (949, 52011), (962, 51978), (964, 51972), (969, 51954), (972, 51942), (975, 51930), (979, 51918), (994, 51876), (1015, 51846),

Gene: Abrogate\_440 Start: 35018, Stop: 33189, Start Num: 234

Candidate Starts for Abrogate\_440:

(Start: 234 @35018 has 938 MA's), (359, 34805), (368, 34790), (405, 34712), (411, 34691), (415, 34685), (419, 34676), (445, 34592), (457, 34559), (465, 34532), (541, 34439), (546, 34424), (558, 34403), (566, 34391), (596, 34340), (598, 34337), (634, 34271), (648, 34241), (657, 34211), (679, 34166), (700, 34127), (759, 33947), (775, 33899), (793, 33851), (802, 33812), (805, 33794), (818, 33755), (837, 33734), (841, 33713), (846, 33698), (885, 33575), (960, 33404), (967, 33380), (982, 33332), (985, 33320), (993, 33299), (997, 33293), (1025, 33245), (1030, 33230),

Gene: AbsoluteMadLad\_61 Start: 54486, Stop: 52627, Start Num: 197

Candidate Starts for AbsoluteMadLad\_61:

(Start: 180 @54510 has 1 MA's), (Start: 197 @54486 has 298 MA's), (Start: 225 @54462 has 5 MA's), (Start: 238 @54456 has 2 MA's), (Start: 261 @54414 has 10 MA's), (269, 54393), (323, 54279), (328, 54273), (349, 54243), (385, 54183), (394, 54162), (410, 54108), (418, 54096), (425, 54078), (427, 54066), (462, 53961), (496, 53904), (511, 53868), (516, 53856), (534, 53832), (539, 53820), (545, 53802), (555, 53784), (566, 53766), (588, 53727), (595, 53718), (597, 53715), (599, 53712), (754, 53355), (760, 53322), (765, 53301), (799, 53208), (802, 53199), (822, 53136), (841, 53100), (842, 53097), (847, 53082), (872, 53004), (877, 52992), (883, 52971), (902, 52932), (942, 52842), (947, 52824), (949, 52818), (954, 52803), (964, 52779), (968, 52764), (969, 52761), (972, 52749), (979, 52725), (1002, 52677), (1015, 52653),

Gene: Abt2graduatex2\_49 Start: 39647, Stop: 37638, Start Num: 261

Candidate Starts for Abt2graduatex2\_49:

(Start: 203 @39737 has 1 MA's), (213, 39722), (Start: 261 @39647 has 10 MA's), (276, 39605), (361, 39446), (365, 39440), (369, 39434), (403, 39374), (413, 39347), (441, 39263), (482, 39122), (510, 39044), (568, 38930), (575, 38921), (584, 38906), (592, 38894), (601, 38882), (619, 38852), (636, 38813), (703, 38666), (744, 38561), (748, 38549), (749, 38546), (761, 38489), (767, 38468), (781, 38426), (792, 38396), (806, 38330), (810, 38309), (812, 38303), (814, 38291), (820, 38267), (827,

38237), (830, 38210), (856, 38126), (861, 38108), (862, 38102), (864, 38096), (869, 38081), (872, 38072), (924, 37940), (939, 37895), (942, 37871), (943, 37868), (963, 37814), (968, 37796), (978, 37763), (985, 37739), (993, 37718), (1009, 37691),

Gene: Acadian\_58 Start: 54470, Stop: 52644, Start Num: 189

Candidate Starts for Acadian\_58:

(Start: 189 @54470 has 26 MA's), (252, 54416), (287, 54356), (358, 54245), (385, 54197), (425, 54095), (441, 54053), (452, 54017), (462, 53987), (511, 53894), (516, 53882), (534, 53858), (539, 53846), (545, 53828), (583, 53765), (597, 53741), (650, 53636), (739, 53447), (743, 53429), (749, 53411), (755, 53381), (760, 53354), (797, 53246), (799, 53240), (802, 53231), (806, 53210), (834, 53147), (842, 53114), (847, 53099), (866, 53039), (872, 53021), (877, 53009), (883, 52988), (885, 52979), (887, 52976), (942, 52859), (949, 52835), (964, 52796), (968, 52781), (969, 52778), (975, 52754), (979, 52742), (980, 52739), (1004, 52691), (1015, 52670),

Gene: Achebe\_43 Start: 31519, Stop: 29690, Start Num: 234

Candidate Starts for Achebe\_43:

(Start: 234 @31519 has 938 MA's), (266, 31468), (279, 31438), (379, 31276), (389, 31258), (395, 31243), (415, 31186), (419, 31177), (458, 31057), (465, 31033), (513, 30991), (541, 30940), (568, 30892), (582, 30871), (603, 30832), (628, 30787), (630, 30781), (663, 30700), (675, 30679), (700, 30634), (756, 30469), (759, 30448), (805, 30295), (818, 30256), (842, 30184), (847, 30169), (856, 30145), (861, 30127), (862, 30121), (864, 30115), (942, 29914), (985, 29779), (989, 29767), (993, 29758),

Gene: Acme\_47 Start: 34868, Stop: 33042, Start Num: 234

Candidate Starts for Acme\_47:

(Start: 234 @34868 has 938 MA's), (359, 34655), (368, 34640), (395, 34592), (405, 34562), (411, 34541), (415, 34535), (419, 34526), (457, 34409), (465, 34382), (541, 34289), (546, 34274), (566, 34241), (596, 34190), (598, 34187), (634, 34121), (648, 34091), (657, 34061), (679, 34016), (700, 33977), (759, 33797), (769, 33767), (775, 33749), (790, 33710), (805, 33644), (841, 33563), (842, 33560), (868, 33479), (936, 33329), (938, 33326), (946, 33290), (954, 33266), (959, 33257), (963, 33245), (985, 33170), (993, 33149),

Gene: Acolyte\_41 Start: 30968, Stop: 29181, Start Num: 234

Candidate Starts for Acolyte\_41:

(Start: 234 @30968 has 938 MA's), (355, 30761), (359, 30755), (368, 30740), (379, 30725), (395, 30692), (397, 30689), (405, 30662), (415, 30635), (465, 30482), (541, 30389), (544, 30380), (566, 30341), (571, 30332), (582, 30317), (619, 30251), (639, 30206), (655, 30170), (675, 30122), (759, 29897), (769, 29867), (778, 29846), (805, 29744), (837, 29684), (841, 29663), (847, 29645), (921, 29465), (936, 29429), (942, 29405), (962, 29348), (985, 29270), (989, 29258), (993, 29249),

Gene: Acosta\_40 Start: 29335, Stop: 27470, Start Num: 283

Candidate Starts for Acosta\_40:

(Start: 234 @29422 has 938 MA's), (Start: 237 @29419 has 2 MA's), (Start: 283 @29335 has 147 MA's), (Start: 291 @29326 has 5 MA's), (424, 29059), (426, 29047), (428, 29041), (537, 28759), (541, 28747), (553, 28717), (562, 28702), (566, 28696), (574, 28684), (671, 28528), (680, 28513), (701, 28468), (798, 28153), (805, 28123), (819, 28081), (849, 27994), (859, 27949), (900, 27835), (917, 27796), (938, 27736), (943, 27712), (944, 27709), (945, 27706), (956, 27673), (967, 27640), (970, 27628),

Gene: Adahisdi\_44 Start: 34346, Stop: 32520, Start Num: 234

Candidate Starts for Adahisdi\_44:

(Start: 234 @34346 has 938 MA's), (359, 34133), (368, 34118), (405, 34040), (411, 34019), (415, 34013), (419, 34004), (457, 33887), (465, 33860), (541, 33767), (546, 33752), (596, 33668), (598,

33665), (634, 33599), (648, 33569), (657, 33539), (679, 33494), (700, 33455), (759, 33275), (769, 33245), (775, 33227), (778, 33224), (790, 33188), (805, 33122), (841, 33041), (842, 33038), (868, 32957), (936, 32807), (938, 32804), (946, 32768), (954, 32744), (959, 32735), (963, 32723), (970, 32696), (985, 32648), (993, 32627),

Gene: Adolin\_40 Start: 27791, Stop: 29701, Start Num: 234

Candidate Starts for Adolin\_40:

(Start: 234 @27791 has 938 MA's), (265, 27839), (405, 28088), (436, 28178), (543, 28430), (546, 28439), (603, 28538), (615, 28553), (646, 28622), (675, 28691), (730, 28829), (759, 28949), (769, 28979), (781, 29012), (790, 29036), (805, 29102), (854, 29237), (862, 29267), (936, 29438), (947, 29480), (960, 29513), (985, 29597), (988, 29606), (993, 29618),

Gene: Adriana\_62 Start: 55113, Stop: 53254, Start Num: 197

Candidate Starts for Adriana\_62:

(Start: 180 @55137 has 1 MA's), (Start: 197 @55113 has 298 MA's), (Start: 225 @55089 has 5 MA's), (Start: 238 @55083 has 2 MA's), (Start: 261 @55041 has 10 MA's), (269, 55020), (323, 54906), (328, 54900), (349, 54870), (385, 54810), (394, 54789), (410, 54735), (418, 54723), (425, 54705), (427, 54693), (462, 54588), (496, 54531), (511, 54495), (516, 54483), (535, 54456), (539, 54447), (555, 54411), (588, 54354), (595, 54345), (597, 54342), (599, 54339), (754, 53982), (760, 53949), (765, 53928), (799, 53835), (802, 53826), (822, 53763), (841, 53727), (842, 53724), (847, 53709), (872, 53631), (877, 53619), (883, 53598), (902, 53559), (942, 53469), (947, 53451), (949, 53445), (954, 53430), (964, 53406), (968, 53391), (969, 53388), (972, 53376), (979, 53352), (1002, 53304), (1015, 53280),

Gene: Adumb2043\_38 Start: 28808, Stop: 30673, Start Num: 234

Candidate Starts for Adumb2043\_38:

(Start: 234 @28808 has 938 MA's), (265, 28856), (353, 29012), (395, 29075), (411, 29126), (436, 29195), (543, 29402), (598, 29501), (603, 29510), (615, 29525), (619, 29537), (635, 29570), (675, 29663), (703, 29720), (730, 29801), (759, 29921), (769, 29951), (790, 30008), (803, 30065), (805, 30074), (840, 30167), (862, 30239), (865, 30248), (905, 30347), (936, 30410), (978, 30545), (985, 30569), (988, 30578), (1031, 30656),

Gene: Adzzy\_46 Start: 30091, Stop: 28304, Start Num: 234

Candidate Starts for Adzzy\_46:

(Start: 234 @30091 has 938 MA's), (353, 29887), (359, 29878), (395, 29815), (397, 29812), (405, 29785), (415, 29758), (424, 29737), (465, 29605), (541, 29512), (566, 29464), (619, 29374), (640, 29326), (759, 29020), (789, 28936), (790, 28933), (798, 28897), (805, 28867), (818, 28828), (837, 28807), (841, 28786), (879, 28669), (888, 28642), (908, 28606), (921, 28588), (936, 28552), (942, 28528), (985, 28393), (989, 28381), (993, 28372),

Gene: Aelin\_60 Start: 54050, Stop: 52191, Start Num: 197

Candidate Starts for Aelin\_60:

(Start: 180 @54074 has 1 MA's), (Start: 197 @54050 has 298 MA's), (Start: 225 @54026 has 5 MA's), (Start: 238 @54020 has 2 MA's), (Start: 261 @53978 has 10 MA's), (269, 53957), (323, 53843), (328, 53837), (349, 53807), (385, 53747), (394, 53726), (410, 53672), (418, 53660), (425, 53642), (427, 53630), (462, 53525), (496, 53468), (511, 53432), (516, 53420), (534, 53396), (539, 53384), (545, 53366), (555, 53348), (566, 53330), (588, 53291), (595, 53282), (597, 53279), (599, 53276), (754, 52919), (760, 52886), (765, 52865), (799, 52772), (802, 52763), (822, 52700), (841, 52664), (842, 52661), (847, 52646), (872, 52568), (877, 52556), (883, 52535), (902, 52496), (942, 52406), (947, 52388), (949, 52382), (954, 52367), (964, 52343), (968, 52328), (969, 52325), (972, 52313), (979, 52289), (1002, 52241), (1015, 52217),

Gene: Aeneas\_47 Start: 34971, Stop: 33184, Start Num: 234



Candidate Starts for Aeneas\_47:

(Start: 234 @34971 has 938 MA's), (359, 34758), (368, 34743), (405, 34665), (411, 34644), (415, 34638), (419, 34629), (445, 34545), (457, 34512), (465, 34485), (541, 34392), (546, 34377), (558, 34356), (566, 34344), (596, 34293), (598, 34290), (634, 34224), (648, 34194), (657, 34164), (679, 34119), (700, 34080), (759, 33900), (775, 33852), (790, 33813), (805, 33747), (839, 33675), (841, 33666), (868, 33582), (903, 33495), (954, 33369), (960, 33357), (978, 33297), (985, 33273), (987, 33267),

Gene: Agaliana\_41 Start: 31606, Stop: 29780, Start Num: 234

Candidate Starts for Agaliana\_41:

(Start: 234 @31606 has 938 MA's), (359, 31393), (368, 31378), (405, 31300), (411, 31279), (415, 31273), (419, 31264), (457, 31147), (465, 31120), (541, 31027), (546, 31012), (566, 30979), (596, 30928), (598, 30925), (634, 30859), (648, 30829), (657, 30799), (679, 30754), (700, 30715), (759, 30535), (775, 30487), (790, 30448), (805, 30382), (841, 30301), (842, 30298), (868, 30217), (932, 30082), (936, 30067), (938, 30064), (946, 30028), (954, 30004), (959, 29995), (963, 29983), (970, 29956), (985, 29908), (993, 29887),

Gene: Agape74\_46 Start: 31661, Stop: 29874, Start Num: 234

Candidate Starts for Agape74\_46:

(160, 31748), (Start: 234 @31661 has 938 MA's), (355, 31454), (359, 31448), (368, 31433), (379, 31418), (397, 31382), (405, 31355), (415, 31328), (424, 31307), (465, 31175), (541, 31082), (566, 31034), (571, 31025), (582, 31010), (619, 30944), (655, 30863), (675, 30815), (679, 30809), (710, 30746), (759, 30590), (778, 30539), (789, 30506), (790, 30503), (805, 30437), (818, 30398), (837, 30377), (859, 30302), (862, 30290), (879, 30239), (908, 30176), (921, 30158), (936, 30122), (942, 30098), (968, 30020), (985, 29963), (989, 29951), (993, 29942),

Gene: Agatha\_43 Start: 32554, Stop: 30161, Start Num: 36

Candidate Starts for Agatha\_43:

(Start: 36 @32554 has 16 MA's), (48, 32548), (Start: 60 @32500 has 1 MA's), (76, 32458), (86, 32434), (127, 32308), (136, 32284), (170, 32239), (206, 32188), (216, 32173), (Start: 230 @32152 has 13 MA's), (262, 32104), (274, 32071), (279, 32062), (317, 31987), (322, 31975), (366, 31906), (382, 31879), (385, 31873), (391, 31858), (409, 31804), (410, 31801), (420, 31783), (426, 31762), (448, 31702), (495, 31579), (497, 31573), (524, 31504), (541, 31462), (634, 31375), (643, 31351), (655, 31345), (662, 31321), (666, 31312), (674, 31297), (682, 31285), (707, 31243), (711, 31240), (713, 31237), (729, 31201), (758, 31090), (773, 31021), (774, 31015), (784, 30979), (796, 30922), (805, 30886), (817, 30850), (819, 30844), (822, 30838), (824, 30832), (842, 30775), (849, 30751), (859, 30706), (986, 30325), (1008, 30280), (1013, 30271), (1037, 30211), (1046, 30193),

Gene: AgentM\_37 Start: 30104, Stop: 28245, Start Num: 234

Candidate Starts for AgentM\_37:

(Start: 234 @30104 has 938 MA's), (266, 30053), (301, 29993), (336, 29930), (353, 29900), (355, 29897), (390, 29840), (395, 29828), (405, 29798), (415, 29771), (448, 29669), (453, 29654), (465, 29618), (520, 29558), (541, 29522), (566, 29474), (618, 29390), (619, 29384), (652, 29312), (663, 29279), (670, 29264), (679, 29252), (724, 29153), (759, 29018), (769, 28988), (775, 28970), (782, 28952), (790, 28931), (793, 28922), (805, 28865), (818, 28826), (841, 28784), (847, 28766), (862, 28718), (879, 28667), (903, 28613), (908, 28604), (921, 28586), (942, 28526), (947, 28508), (978, 28415), (985, 28391), (989, 28379), (1049, 28262), (1050, 28259),

Gene: Agente005\_39 Start: 29167, Stop: 27299, Start Num: 283

Candidate Starts for Agente005\_39:

(Start: 180 @29332 has 1 MA's), (211, 29287), (Start: 244 @29242 has 1 MA's), (Start: 283 @29167 has 147 MA's), (Start: 291 @29158 has 5 MA's), (420, 28900), (423, 28894), (426, 28879), (428, 28873), (498, 28687), (532, 28600), (537, 28591), (541, 28579), (551, 28552), (553, 28549), (562,

28534), (566, 28528), (574, 28516), (611, 28492), (741, 28198), (798, 27985), (801, 27976), (805, 27955), (819, 27913), (849, 27823), (859, 27778), (900, 27664), (913, 27634), (938, 27565), (943, 27541), (956, 27502), (970, 27457),

Gene: Aglet\_49 Start: 31854, Stop: 30040, Start Num: 234

Candidate Starts for Aglet\_49:

(Start: 234 @31854 has 938 MA's), (262, 31815), (266, 31803), (353, 31650), (362, 31635), (395, 31578), (415, 31521), (419, 31512), (432, 31470), (448, 31419), (465, 31368), (541, 31275), (566, 31227), (571, 31218), (582, 31203), (603, 31164), (619, 31137), (634, 31107), (670, 31014), (701, 30954), (710, 30939), (759, 30783), (790, 30696), (802, 30648), (805, 30630), (818, 30591), (842, 30519), (856, 30480), (862, 30456), (868, 30438), (879, 30405), (888, 30378), (921, 30324), (942, 30264), (968, 30186), (985, 30129), (989, 30117), (993, 30108),

Gene: AgronaGT15\_47 Start: 31705, Stop: 29891, Start Num: 234

Candidate Starts for AgronaGT15\_47:

(Start: 234 @31705 has 938 MA's), (262, 31666), (266, 31654), (353, 31501), (362, 31486), (395, 31429), (415, 31372), (419, 31363), (432, 31321), (448, 31270), (465, 31219), (518, 31165), (541, 31126), (566, 31078), (582, 31054), (603, 31015), (619, 30988), (634, 30958), (670, 30865), (679, 30853), (701, 30805), (710, 30790), (759, 30634), (778, 30583), (789, 30550), (790, 30547), (805, 30481), (818, 30442), (842, 30370), (856, 30331), (862, 30307), (868, 30289), (879, 30256), (942, 30115), (970, 30028), (985, 29980), (989, 29968), (993, 29959), (995, 29956),

Gene: Ahwei\_52 Start: 52985, Stop: 51162, Start Num: 189

Candidate Starts for Ahwei\_52:

(Start: 175 @53003 has 4 MA's), (Start: 189 @52985 has 26 MA's), (Start: 238 @52961 has 2 MA's), (252, 52934), (Start: 261 @52919 has 10 MA's), (269, 52898), (316, 52811), (382, 52706), (399, 52664), (425, 52598), (434, 52568), (437, 52559), (441, 52556), (442, 52553), (450, 52526), (496, 52433), (504, 52415), (511, 52397), (516, 52385), (528, 52370), (535, 52358), (595, 52247), (597, 52244), (618, 52214), (634, 52178), (737, 51953), (739, 51950), (749, 51914), (754, 51890), (760, 51857), (797, 51749), (799, 51743), (801, 51737), (802, 51734), (841, 51635), (842, 51632), (847, 51617), (872, 51539), (877, 51527), (883, 51506), (885, 51497), (902, 51467), (918, 51443), (935, 51410), (942, 51377), (947, 51359), (949, 51353), (964, 51314), (969, 51296), (972, 51284), (979, 51260), (994, 51218), (1002, 51212), (1015, 51188),

Gene: AikoCarson\_44 Start: 32796, Stop: 30409, Start Num: 45

Candidate Starts for AikoCarson\_44:

(11, 32943), (13, 32901), (20, 32868), (23, 32853), (Start: 45 @32796 has 24 MA's), (49, 32787), (52, 32781), (76, 32700), (108, 32604), (119, 32580), (127, 32553), (136, 32529), (Start: 230 @32397 has 13 MA's), (250, 32370), (259, 32355), (279, 32307), (295, 32277), (317, 32232), (322, 32220), (366, 32154), (391, 32106), (409, 32052), (420, 32031), (426, 32010), (431, 31995), (448, 31950), (495, 31827), (519, 31767), (524, 31752), (541, 31710), (634, 31623), (643, 31599), (655, 31593), (662, 31569), (666, 31560), (707, 31491), (711, 31488), (713, 31485), (746, 31389), (758, 31338), (773, 31269), (774, 31263), (805, 31134), (817, 31098), (819, 31092), (822, 31086), (824, 31080), (834, 31056), (842, 31023), (849, 30999), (859, 30954), (938, 30741), (942, 30720), (947, 30702), (948, 30699), (986, 30573), (1008, 30528), (1013, 30519),

Gene: AinMach\_42 Start: 30094, Stop: 31947, Start Num: 234

Candidate Starts for AinMach\_42:

(Start: 234 @30094 has 938 MA's), (303, 30211), (317, 30238), (336, 30268), (405, 30391), (411, 30412), (603, 30775), (615, 30790), (675, 30928), (705, 30991), (712, 31012), (759, 31186), (769, 31216), (778, 31237), (790, 31273), (796, 31303), (805, 31339), (840, 31432), (903, 31609), (921, 31639), (936, 31675), (942, 31699), (964, 31762), (985, 31834), (997, 31861), (1035, 31930),

Gene: Airmid\_39 Start: 30159, Stop: 28294, Start Num: 234

Candidate Starts for Airmid\_39:

(Start: 234 @30159 has 938 MA's), (301, 30048), (353, 29955), (355, 29952), (395, 29883), (405, 29853), (415, 29826), (419, 29817), (448, 29724), (453, 29709), (465, 29673), (520, 29613), (541, 29577), (563, 29532), (566, 29529), (582, 29505), (618, 29445), (652, 29367), (670, 29319), (679, 29307), (701, 29259), (724, 29208), (759, 29073), (769, 29043), (775, 29025), (790, 28986), (793, 28977), (799, 28947), (805, 28920), (806, 28917), (837, 28860), (841, 28839), (862, 28773), (879, 28722), (903, 28668), (908, 28659), (921, 28641), (947, 28563), (978, 28470), (985, 28446), (989, 28434), (1042, 28329),

Gene: Ajay\_45 Start: 34664, Stop: 32835, Start Num: 234

Candidate Starts for Ajay\_45:

(Start: 234 @34664 has 938 MA's), (359, 34451), (395, 34388), (405, 34358), (411, 34337), (415, 34331), (419, 34322), (457, 34205), (465, 34178), (541, 34085), (546, 34070), (566, 34037), (596, 33986), (598, 33983), (634, 33917), (648, 33887), (657, 33857), (679, 33812), (700, 33773), (759, 33593), (775, 33545), (793, 33497), (802, 33458), (805, 33440), (818, 33401), (837, 33380), (841, 33359), (846, 33344), (885, 33221), (960, 33050), (967, 33026), (982, 32978), (985, 32966), (993, 32945), (997, 32939), (1025, 32891), (1030, 32876),

Gene: Akoma\_58 Start: 53685, Stop: 51868, Start Num: 235

Candidate Starts for Akoma\_58:

(129, 53868), (Start: 235 @53685 has 43 MA's), (252, 53655), (359, 53475), (406, 53370), (424, 53322), (426, 53310), (437, 53280), (442, 53274), (462, 53211), (464, 53205), (496, 53154), (511, 53118), (539, 53070), (597, 52965), (647, 52869), (664, 52818), (737, 52674), (749, 52635), (755, 52605), (760, 52578), (763, 52566), (797, 52470), (799, 52464), (802, 52455), (804, 52443), (834, 52371), (841, 52341), (847, 52323), (851, 52314), (872, 52245), (877, 52233), (883, 52212), (921, 52143), (931, 52128), (938, 52104), (942, 52083), (947, 52065), (949, 52059), (962, 52026), (964, 52020), (969, 52002), (972, 51990), (975, 51978), (979, 51966), (994, 51924), (1015, 51894),

Gene: Alakazam\_38 Start: 28696, Stop: 26795, Start Num: 283

Candidate Starts for Alakazam\_38:

(Start: 283 @28696 has 147 MA's), (330, 28597), (337, 28591), (369, 28540), (371, 28537), (398, 28486), (399, 28483), (427, 28405), (460, 28312), (503, 28201), (512, 28180), (532, 28126), (535, 28120), (537, 28117), (541, 28105), (553, 28075), (566, 28054), (574, 28042), (590, 28039), (611, 28018), (680, 27871), (728, 27772), (744, 27715), (805, 27448), (817, 27412), (819, 27406), (825, 27391), (847, 27328), (849, 27319), (917, 27121), (943, 27037), (944, 27034), (946, 27025), (956, 26998),

Gene: AlanGrant\_57 Start: 55116, Stop: 53290, Start Num: 189

Candidate Starts for AlanGrant\_57:

(Start: 189 @55116 has 26 MA's), (Start: 222 @55098 has 1 MA's), (Start: 261 @55047 has 10 MA's), (269, 55026), (349, 54888), (382, 54834), (402, 54780), (425, 54726), (434, 54696), (441, 54684), (442, 54681), (496, 54561), (511, 54525), (516, 54513), (535, 54486), (588, 54384), (597, 54372), (619, 54336), (634, 54306), (648, 54273), (664, 54225), (755, 54012), (760, 53985), (797, 53877), (799, 53871), (802, 53862), (804, 53850), (822, 53799), (839, 53772), (841, 53763), (842, 53760), (843, 53757), (847, 53745), (872, 53667), (877, 53655), (883, 53634), (885, 53625), (890, 53616), (942, 53505), (947, 53487), (949, 53481), (964, 53442), (968, 53427), (972, 53412), (975, 53400), (979, 53388), (1002, 53340), (1015, 53316),

Gene: Alatin\_36 Start: 28180, Stop: 26396, Start Num: 234

Candidate Starts for Alatin\_36:

(Start: 234 @28180 has 938 MA's), (374, 27946), (390, 27916), (394, 27907), (395, 27904), (409, 27859), (415, 27847), (432, 27796), (465, 27694), (492, 27673), (541, 27601), (563, 27556), (566,

27553), (589, 27511), (594, 27505), (603, 27490), (619, 27463), (663, 27358), (667, 27349), (679, 27331), (681, 27328), (700, 27292), (759, 27112), (775, 27064), (805, 26959), (806, 26956), (837, 26899), (841, 26878), (881, 26755), (921, 26680), (936, 26644), (942, 26620), (968, 26542), (985, 26485), (989, 26473), (1010, 26434), (1021, 26416),

Gene: Albedo\_43 Start: 29891, Stop: 31765, Start Num: 234

Candidate Starts for Albedo\_43:

(Start: 231 @29888 has 7 MA's), (Start: 234 @29891 has 938 MA's), (273, 29960), (284, 29981), (419, 30227), (432, 30269), (556, 30482), (603, 30563), (709, 30797), (747, 30920), (759, 30980), (761, 30986), (778, 31031), (782, 31046), (786, 31061), (796, 31097), (805, 31133), (840, 31226), (869, 31319), (901, 31397), (936, 31469), (946, 31508), (962, 31550), (967, 31568), (985, 31628), (993, 31649),

Gene: Albee\_45 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Albee\_45:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Alberto7\_46 Start: 31907, Stop: 30081, Start Num: 234

Candidate Starts for Alberto7\_46:

(Start: 234 @31907 has 938 MA's), (252, 31886), (266, 31856), (279, 31826), (379, 31664), (389, 31646), (415, 31574), (419, 31565), (458, 31445), (465, 31421), (541, 31328), (568, 31280), (582, 31259), (603, 31220), (663, 31088), (675, 31067), (700, 31022), (703, 31010), (756, 30857), (759, 30836), (798, 30713), (805, 30683), (818, 30644), (841, 30578), (842, 30575), (847, 30560), (856, 30536), (862, 30512), (942, 30305), (985, 30170), (989, 30158), (993, 30149),

Gene: Albright\_40 Start: 28818, Stop: 30692, Start Num: 234

Candidate Starts for Albright\_40:

(Start: 231 @28815 has 7 MA's), (Start: 234 @28818 has 938 MA's), (273, 28887), (284, 28908), (419, 29154), (432, 29196), (556, 29409), (603, 29490), (709, 29724), (747, 29847), (759, 29907), (761, 29913), (778, 29958), (782, 29973), (786, 29988), (796, 30024), (805, 30060), (840, 30153), (869, 30246), (901, 30324), (936, 30396), (946, 30435), (962, 30477), (967, 30495), (985, 30555), (993, 30576),

Gene: AlexAdler\_39 Start: 28925, Stop: 27060, Start Num: 283

Candidate Starts for AlexAdler\_39:

(Start: 234 @29012 has 938 MA's), (Start: 283 @28925 has 147 MA's), (Start: 291 @28916 has 5 MA's), (342, 28811), (347, 28802), (367, 28772), (369, 28769), (424, 28649), (426, 28637), (428, 28631), (466, 28526), (473, 28499), (532, 28358), (535, 28352), (537, 28349), (541, 28337), (551, 28310), (553, 28307), (562, 28292), (566, 28286), (570, 28280), (613, 28247), (701, 28058), (798, 27743), (801, 27734), (802, 27731), (805, 27713), (819, 27671), (822, 27665), (832, 27641), (849, 27584), (900, 27425), (913, 27395), (917, 27386), (938, 27326), (943, 27302), (956, 27263), (967, 27230), (970, 27218), (986, 27158),

Gene: Aliter\_45 Start: 31411, Stop: 29618, Start Num: 234

Candidate Starts for Aliter\_45:

(Start: 234 @31411 has 938 MA's), (246, 31402), (266, 31360), (334, 31240), (336, 31237), (364, 31189), (397, 31129), (406, 31099), (409, 31087), (415, 31075), (465, 30922), (541, 30829), (619, 30691), (634, 30661), (703, 30502), (710, 30490), (726, 30463), (756, 30355), (759, 30334), (802, 30199), (805, 30181), (841, 30100), (856, 30058), (879, 29983), (918, 29908), (936, 29866), (968,

29764), (985, 29707), (989, 29695), (993, 29686),

Gene: Allegro\_57 Start: 52477, Stop: 50648, Start Num: 197

Candidate Starts for Allegro\_57:

(Start: 197 @52477 has 298 MA's), (Start: 238 @52450 has 2 MA's), (253, 52420), (Start: 261 @52408 has 10 MA's), (272, 52381), (273, 52378), (277, 52369), (301, 52351), (355, 52255), (385, 52204), (395, 52180), (402, 52156), (450, 52018), (459, 51994), (462, 51982), (496, 51925), (511, 51889), (516, 51877), (534, 51853), (580, 51769), (595, 51739), (597, 51736), (618, 51706), (678, 51562), (710, 51496), (733, 51457), (737, 51445), (743, 51424), (749, 51406), (760, 51349), (793, 51265), (799, 51235), (802, 51226), (822, 51160), (839, 51133), (841, 51124), (847, 51106), (856, 51082), (872, 51028), (877, 51016), (883, 50995), (921, 50926), (942, 50866), (947, 50848), (960, 50815), (964, 50803), (968, 50788), (969, 50785), (972, 50773), (979, 50749), (980, 50746), (1002, 50698), (1004, 50695), (1015, 50674), (1023, 50653),

Gene: Alma\_45 Start: 31495, Stop: 29702, Start Num: 234

Candidate Starts for Alma\_45:

(Start: 234 @31495 has 938 MA's), (246, 31486), (314, 31357), (336, 31321), (353, 31291), (359, 31282), (379, 31249), (395, 31216), (397, 31213), (406, 31183), (409, 31171), (415, 31159), (465, 31006), (541, 30913), (619, 30775), (634, 30745), (703, 30586), (710, 30574), (726, 30547), (756, 30439), (759, 30418), (802, 30283), (805, 30265), (841, 30184), (879, 30067), (885, 30046), (918, 29992), (936, 29950), (942, 29926), (968, 29848), (985, 29791), (989, 29779), (993, 29770),

Gene: Alpacados\_35 Start: 28085, Stop: 26301, Start Num: 234

Candidate Starts for Alpacados\_35:

(Start: 234 @28085 has 938 MA's), (334, 27914), (374, 27851), (390, 27821), (394, 27812), (395, 27809), (409, 27764), (415, 27752), (419, 27743), (432, 27701), (465, 27599), (492, 27578), (541, 27506), (563, 27461), (566, 27458), (589, 27416), (594, 27410), (603, 27395), (619, 27368), (663, 27263), (679, 27236), (700, 27197), (759, 27017), (775, 26969), (805, 26864), (806, 26861), (837, 26804), (841, 26783), (856, 26741), (858, 26735), (881, 26660), (918, 26591), (936, 26549), (942, 26525), (968, 26447), (985, 26390), (989, 26378), (1021, 26321),

Gene: Alsfro\_48 Start: 34937, Stop: 33111, Start Num: 234

Candidate Starts for Alsfro\_48:

(Start: 234 @34937 has 938 MA's), (359, 34724), (368, 34709), (405, 34631), (411, 34610), (415, 34604), (419, 34595), (457, 34478), (465, 34451), (541, 34358), (546, 34343), (566, 34310), (596, 34259), (598, 34256), (634, 34190), (657, 34130), (679, 34085), (700, 34046), (759, 33866), (775, 33818), (790, 33779), (805, 33713), (818, 33674), (837, 33653), (841, 33632), (847, 33614), (868, 33548), (936, 33398), (938, 33395), (946, 33359), (954, 33335), (959, 33326), (963, 33314), (985, 33239), (993, 33218),

Gene: AltPhacts\_60 Start: 53599, Stop: 51740, Start Num: 197

Candidate Starts for AltPhacts\_60:

(Start: 180 @53623 has 1 MA's), (Start: 197 @53599 has 298 MA's), (Start: 225 @53575 has 5 MA's), (Start: 238 @53569 has 2 MA's), (252, 53542), (Start: 261 @53527 has 10 MA's), (269, 53506), (323, 53392), (328, 53386), (349, 53356), (385, 53296), (394, 53275), (410, 53221), (418, 53209), (425, 53191), (427, 53179), (462, 53074), (496, 53017), (511, 52981), (516, 52969), (534, 52945), (539, 52933), (555, 52897), (588, 52840), (595, 52831), (597, 52828), (599, 52825), (754, 52468), (760, 52435), (765, 52414), (799, 52321), (802, 52312), (822, 52249), (841, 52213), (842, 52210), (847, 52195), (872, 52117), (877, 52105), (883, 52084), (902, 52045), (942, 51955), (947, 51937), (949, 51931), (954, 51916), (964, 51892), (968, 51877), (969, 51874), (972, 51862), (979, 51838), (1002, 51790), (1015, 51766),

Gene: Altman\_46 Start: 35175, Stop: 33349, Start Num: 234

Candidate Starts for Altman\_46:

(Start: 234 @35175 has 938 MA's), (359, 34962), (395, 34899), (405, 34869), (411, 34848), (415, 34842), (419, 34833), (457, 34716), (465, 34689), (541, 34596), (546, 34581), (596, 34497), (598, 34494), (634, 34428), (648, 34398), (657, 34368), (679, 34323), (700, 34284), (759, 34104), (775, 34056), (790, 34017), (805, 33951), (818, 33912), (837, 33891), (841, 33870), (847, 33852), (868, 33786), (936, 33636), (938, 33633), (946, 33597), (954, 33573), (959, 33564), (963, 33552), (985, 33477), (993, 33456),

Gene: Altwerkus\_58 Start: 53696, Stop: 51837, Start Num: 197

Candidate Starts for Altwerkus\_58:

(Start: 180 @53720 has 1 MA's), (Start: 197 @53696 has 298 MA's), (Start: 225 @53672 has 5 MA's), (Start: 238 @53666 has 2 MA's), (Start: 261 @53624 has 10 MA's), (269, 53603), (323, 53489), (328, 53483), (349, 53453), (385, 53393), (394, 53372), (410, 53318), (418, 53306), (425, 53288), (427, 53276), (462, 53171), (496, 53114), (511, 53078), (516, 53066), (535, 53039), (545, 53012), (555, 52994), (566, 52976), (588, 52937), (595, 52928), (597, 52925), (724, 52667), (754, 52565), (760, 52532), (765, 52511), (799, 52418), (802, 52409), (822, 52346), (841, 52310), (842, 52307), (847, 52292), (872, 52214), (877, 52202), (883, 52181), (902, 52142), (942, 52052), (947, 52034), (949, 52028), (954, 52013), (964, 51989), (968, 51974), (969, 51971), (972, 51959), (979, 51935), (1002, 51887), (1015, 51863),

Gene: Alvin\_44 Start: 35187, Stop: 33358, Start Num: 234

Candidate Starts for Alvin\_44:

(Start: 234 @35187 has 938 MA's), (334, 35016), (359, 34974), (368, 34959), (395, 34911), (405, 34881), (411, 34860), (415, 34854), (419, 34845), (457, 34728), (465, 34701), (541, 34608), (546, 34593), (596, 34509), (598, 34506), (634, 34440), (648, 34410), (657, 34380), (679, 34335), (700, 34296), (759, 34116), (775, 34068), (793, 34020), (802, 33981), (805, 33963), (818, 33924), (837, 33903), (841, 33882), (846, 33867), (885, 33744), (903, 33711), (960, 33573), (967, 33549), (982, 33501), (985, 33489), (993, 33468), (997, 33462), (1025, 33414), (1030, 33399),

Gene: Alyxandracam\_39 Start: 28935, Stop: 27070, Start Num: 283

Candidate Starts for Alyxandracam\_39:

(Start: 234 @29022 has 938 MA's), (Start: 237 @29019 has 2 MA's), (Start: 283 @28935 has 147 MA's), (Start: 291 @28926 has 5 MA's), (342, 28821), (347, 28812), (367, 28782), (369, 28779), (423, 28662), (426, 28647), (428, 28641), (466, 28536), (473, 28509), (532, 28368), (537, 28359), (541, 28347), (551, 28320), (553, 28317), (562, 28302), (566, 28296), (570, 28290), (613, 28257), (701, 28068), (798, 27753), (801, 27744), (802, 27741), (805, 27723), (819, 27681), (822, 27675), (832, 27651), (849, 27594), (900, 27435), (913, 27405), (917, 27396), (938, 27336), (943, 27312), (956, 27273), (967, 27240), (970, 27228), (986, 27168),

Gene: Amavida\_56 Start: 36664, Stop: 34496, Start Num: 202

Candidate Starts for Amavida\_56:

(200, 36667), (Start: 202 @36664 has 13 MA's), (239, 36610), (279, 36526), (356, 36373), (361, 36364), (388, 36319), (414, 36241), (415, 36232), (422, 36217), (426, 36202), (427, 36199), (445, 36142), (474, 36049), (484, 36007), (565, 35812), (572, 35800), (578, 35794), (587, 35770), (601, 35749), (616, 35728), (621, 35713), (623, 35707), (651, 35644), (672, 35593), (706, 35506), (727, 35446), (740, 35398), (766, 35296), (768, 35290), (780, 35263), (781, 35260), (789, 35239), (799, 35197), (801, 35191), (806, 35167), (814, 35125), (815, 35122), (823, 35095), (838, 35062), (840, 35050), (852, 35014), (859, 34990), (861, 34984), (862, 34978), (880, 34924), (899, 34876), (902, 34873), (925, 34813), (932, 34789), (941, 34759), (961, 34705), (964, 34696), (982, 34636), (985, 34624), (1006, 34585),

Gene: Amigo\_55 Start: 36879, Stop: 34711, Start Num: 202

Candidate Starts for Amigo\_55:



(200, 36882), (Start: 202 @36879 has 13 MA's), (239, 36825), (279, 36741), (356, 36588), (361, 36579), (388, 36534), (414, 36456), (415, 36447), (422, 36432), (426, 36417), (427, 36414), (445, 36357), (474, 36264), (484, 36222), (565, 36027), (572, 36015), (578, 36009), (587, 35985), (601, 35964), (616, 35943), (621, 35928), (623, 35922), (651, 35859), (672, 35808), (706, 35721), (727, 35661), (740, 35613), (766, 35511), (768, 35505), (780, 35478), (781, 35475), (789, 35454), (799, 35412), (801, 35406), (806, 35382), (814, 35340), (815, 35337), (823, 35310), (838, 35277), (840, 35265), (852, 35229), (859, 35205), (861, 35199), (862, 35193), (880, 35139), (899, 35091), (902, 35088), (925, 35028), (932, 35004), (941, 34974), (961, 34920), (982, 34851), (985, 34839), (1006, 34800),

Gene: Amok\_44 Start: 32820, Stop: 30433, Start Num: 45

Candidate Starts for Amok\_44:

(13, 32925), (20, 32892), (23, 32877), (Start: 45 @32820 has 24 MA's), (49, 32811), (52, 32805), (76, 32724), (108, 32628), (119, 32604), (127, 32577), (136, 32553), (Start: 230 @32421 has 13 MA's), (250, 32394), (259, 32379), (279, 32331), (295, 32301), (317, 32256), (322, 32244), (366, 32178), (391, 32130), (409, 32076), (420, 32055), (426, 32034), (431, 32019), (448, 31974), (495, 31851), (519, 31791), (524, 31776), (541, 31734), (634, 31647), (643, 31623), (655, 31617), (662, 31593), (666, 31584), (707, 31515), (711, 31512), (713, 31509), (746, 31413), (758, 31362), (773, 31293), (774, 31287), (805, 31158), (817, 31122), (819, 31116), (822, 31110), (824, 31104), (834, 31080), (842, 31047), (849, 31023), (859, 30978), (938, 30765), (942, 30744), (947, 30726), (948, 30723), (986, 30597), (1008, 30552), (1013, 30543),

Gene: Amyev\_40 Start: 30363, Stop: 32228, Start Num: 234

Candidate Starts for Amyev\_40:

(Start: 172 @30285 has 1 MA's), (Start: 234 @30363 has 938 MA's), (265, 30411), (336, 30537), (353, 30567), (377, 30594), (382, 30600), (405, 30660), (436, 30750), (543, 30957), (546, 30966), (603, 31065), (615, 31080), (675, 31218), (730, 31356), (753, 31443), (759, 31476), (781, 31539), (790, 31563), (803, 31620), (805, 31629), (840, 31722), (862, 31794), (905, 31902), (936, 31965), (942, 31989), (985, 32124), (988, 32133),

Gene: AnClar\_50 Start: 47971, Stop: 46157, Start Num: 225

Candidate Starts for AnClar\_50:

(165, 48061), (168, 48055), (Start: 225 @47971 has 5 MA's), (Start: 238 @47962 has 2 MA's), (Start: 261 @47920 has 10 MA's), (323, 47794), (355, 47752), (379, 47710), (406, 47641), (424, 47602), (426, 47590), (427, 47587), (456, 47512), (462, 47491), (511, 47398), (582, 47272), (588, 47257), (597, 47245), (643, 47155), (743, 46933), (760, 46858), (799, 46744), (802, 46735), (822, 46672), (842, 46633), (847, 46618), (872, 46540), (877, 46528), (878, 46522), (883, 46507), (885, 46498), (890, 46489), (935, 46411), (942, 46378), (943, 46375), (962, 46321), (964, 46315), (972, 46279), (979, 46255), (1015, 46183),

Gene: Anansi\_54 Start: 36486, Stop: 34318, Start Num: 202

Candidate Starts for Anansi\_54:

(200, 36489), (Start: 202 @36486 has 13 MA's), (239, 36432), (279, 36348), (356, 36195), (361, 36186), (388, 36141), (414, 36063), (415, 36054), (422, 36039), (426, 36024), (427, 36021), (445, 35964), (474, 35871), (484, 35829), (565, 35634), (572, 35622), (578, 35616), (587, 35592), (601, 35571), (616, 35550), (621, 35535), (623, 35529), (651, 35466), (672, 35415), (706, 35328), (727, 35268), (740, 35220), (766, 35118), (768, 35112), (780, 35085), (781, 35082), (789, 35061), (799, 35019), (801, 35013), (806, 34989), (814, 34947), (815, 34944), (823, 34917), (838, 34884), (840, 34872), (852, 34836), (859, 34812), (861, 34806), (862, 34800), (880, 34746), (899, 34698), (902, 34695), (925, 34635), (932, 34611), (941, 34581), (961, 34527), (982, 34458), (985, 34446), (1006, 34407),

Gene: AnarQue\_54 Start: 48016, Stop: 46199, Start Num: 230

Candidate Starts for AnarQue\_54:

(Start: 230 @48016 has 13 MA's), (Start: 238 @48007 has 2 MA's), (252, 47980), (259, 47968), (269, 47944), (273, 47935), (355, 47797), (375, 47761), (406, 47686), (434, 47611), (462, 47533), (496, 47476), (511, 47440), (516, 47428), (534, 47404), (583, 47311), (597, 47287), (610, 47269), (737, 46996), (749, 46957), (755, 46927), (760, 46900), (797, 46792), (799, 46786), (802, 46777), (839, 46687), (841, 46678), (842, 46675), (847, 46660), (872, 46582), (877, 46570), (878, 46564), (883, 46549), (907, 46501), (935, 46453), (942, 46420), (949, 46396), (964, 46357), (968, 46342), (979, 46297), (1015, 46225),

Gene: Anaysia\_47 Start: 29967, Stop: 28177, Start Num: 234

Candidate Starts for Anaysia\_47:

(Start: 234 @29967 has 938 MA's), (336, 29793), (395, 29688), (397, 29685), (405, 29658), (415, 29631), (432, 29580), (465, 29478), (541, 29385), (563, 29340), (566, 29337), (571, 29328), (655, 29166), (663, 29139), (675, 29118), (679, 29112), (730, 29013), (740, 28974), (754, 28923), (759, 28893), (778, 28842), (789, 28809), (796, 28776), (798, 28770), (805, 28740), (837, 28680), (841, 28659), (856, 28617), (863, 28590), (868, 28575), (903, 28488), (936, 28425), (938, 28422), (985, 28266), (989, 28254), (995, 28242),

Gene: AndPeggy\_40 Start: 32151, Stop: 29764, Start Num: 45

Candidate Starts for AndPeggy\_40:

(20, 32223), (23, 32208), (Start: 45 @32151 has 24 MA's), (49, 32142), (52, 32136), (76, 32055), (119, 31935), (136, 31884), (Start: 230 @31752 has 13 MA's), (250, 31725), (295, 31632), (317, 31587), (354, 31527), (366, 31509), (391, 31461), (409, 31407), (410, 31404), (420, 31386), (426, 31365), (445, 31314), (448, 31305), (449, 31302), (473, 31227), (495, 31182), (519, 31122), (524, 31107), (570, 31023), (634, 30978), (643, 30954), (655, 30948), (662, 30924), (707, 30846), (711, 30843), (713, 30840), (758, 30693), (773, 30624), (796, 30525), (805, 30489), (817, 30453), (819, 30447), (822, 30441), (824, 30435), (834, 30411), (842, 30378), (849, 30354), (859, 30309), (878, 30249), (938, 30096), (942, 30075), (947, 30057), (948, 30054), (986, 29928), (1008, 29883), (1013, 29874),

Gene: Anderson\_61 Start: 54268, Stop: 52409, Start Num: 197

Candidate Starts for Anderson\_61:

(Start: 180 @54292 has 1 MA's), (Start: 197 @54268 has 298 MA's), (Start: 225 @54244 has 5 MA's), (Start: 238 @54238 has 2 MA's), (Start: 261 @54196 has 10 MA's), (269, 54175), (323, 54061), (328, 54055), (349, 54025), (385, 53965), (394, 53944), (410, 53890), (418, 53878), (425, 53860), (427, 53848), (462, 53743), (496, 53686), (511, 53650), (516, 53638), (534, 53614), (539, 53602), (545, 53584), (555, 53566), (566, 53548), (588, 53509), (595, 53500), (597, 53497), (599, 53494), (724, 53239), (754, 53137), (760, 53104), (765, 53083), (799, 52990), (802, 52981), (822, 52918), (841, 52882), (842, 52879), (847, 52864), (872, 52786), (877, 52774), (883, 52753), (902, 52714), (942, 52624), (947, 52606), (949, 52600), (954, 52585), (964, 52561), (968, 52546), (969, 52543), (972, 52531), (979, 52507), (985, 52486), (1002, 52459), (1015, 52435),

Gene: Andre\_62 Start: 54444, Stop: 52585, Start Num: 197

Candidate Starts for Andre\_62:

(Start: 180 @54468 has 1 MA's), (Start: 197 @54444 has 298 MA's), (Start: 225 @54420 has 5 MA's), (Start: 238 @54414 has 2 MA's), (Start: 261 @54372 has 10 MA's), (269, 54351), (323, 54237), (328, 54231), (349, 54201), (385, 54141), (394, 54120), (410, 54066), (418, 54054), (425, 54036), (427, 54024), (462, 53919), (496, 53862), (511, 53826), (516, 53814), (535, 53787), (545, 53760), (555, 53742), (566, 53724), (588, 53685), (595, 53676), (597, 53673), (754, 53313), (760, 53280), (765, 53259), (799, 53166), (802, 53157), (822, 53094), (841, 53058), (842, 53055), (847, 53040), (872, 52962), (877, 52950), (883, 52929), (902, 52890), (942, 52800), (947, 52782), (949, 52776), (954, 52761), (964, 52737), (968, 52722), (969, 52719), (972, 52707), (979, 52683), (1002, 52635), (1015, 52611),

Gene: Andromedas\_38 Start: 28731, Stop: 26866, Start Num: 283

Candidate Starts for Andromedas\_38:

(Start: 283 @28731 has 147 MA's), (305, 28686), (330, 28632), (371, 28572), (398, 28521), (426, 28443), (428, 28437), (445, 28392), (446, 28389), (447, 28386), (460, 28347), (479, 28287), (532, 28164), (537, 28155), (541, 28143), (545, 28131), (553, 28113), (566, 28092), (574, 28080), (680, 27909), (749, 27741), (793, 27576), (801, 27540), (805, 27519), (819, 27477), (849, 27390), (859, 27345), (894, 27246), (913, 27201), (917, 27192), (938, 27132), (943, 27108), (954, 27075), (986, 26964),

Gene: Aneem\_45 Start: 30776, Stop: 28989, Start Num: 234

Candidate Starts for Aneem\_45:

(Start: 234 @30776 has 938 MA's), (353, 30572), (395, 30500), (405, 30470), (415, 30443), (543, 30191), (571, 30140), (619, 30059), (639, 30014), (703, 29873), (728, 29831), (740, 29786), (759, 29705), (778, 29654), (790, 29618), (805, 29552), (837, 29492), (839, 29480), (871, 29378), (879, 29354), (884, 29336), (921, 29273), (935, 29246), (936, 29237), (942, 29213), (985, 29078), (989, 29066), (993, 29057),

Gene: AngelCake\_59 Start: 54371, Stop: 52512, Start Num: 197

Candidate Starts for AngelCake\_59:

(Start: 180 @54395 has 1 MA's), (Start: 197 @54371 has 298 MA's), (Start: 225 @54347 has 5 MA's), (Start: 238 @54341 has 2 MA's), (Start: 261 @54299 has 10 MA's), (269, 54278), (323, 54164), (328, 54158), (349, 54128), (385, 54068), (394, 54047), (410, 53993), (418, 53981), (425, 53963), (427, 53951), (462, 53846), (496, 53789), (511, 53753), (516, 53741), (534, 53717), (539, 53705), (545, 53687), (555, 53669), (566, 53651), (588, 53612), (595, 53603), (597, 53600), (599, 53597), (754, 53240), (760, 53207), (765, 53186), (799, 53093), (802, 53084), (822, 53021), (841, 52985), (842, 52982), (847, 52967), (872, 52889), (877, 52877), (883, 52856), (902, 52817), (942, 52727), (947, 52709), (949, 52703), (954, 52688), (964, 52664), (968, 52649), (969, 52646), (972, 52634), (979, 52610), (1002, 52562), (1015, 52538),

Gene: Anglerfish\_45 Start: 34722, Stop: 32896, Start Num: 234

Candidate Starts for Anglerfish\_45:

(Start: 234 @34722 has 938 MA's), (359, 34509), (368, 34494), (395, 34446), (405, 34416), (411, 34395), (415, 34389), (419, 34380), (457, 34263), (465, 34236), (541, 34143), (546, 34128), (566, 34095), (596, 34044), (598, 34041), (634, 33975), (648, 33945), (657, 33915), (679, 33870), (700, 33831), (759, 33651), (775, 33603), (790, 33564), (805, 33498), (818, 33459), (837, 33438), (841, 33417), (847, 33399), (868, 33333), (936, 33183), (938, 33180), (946, 33144), (954, 33120), (959, 33111), (963, 33099), (970, 33072), (985, 33024), (993, 33003),

Gene: AngryOrchard\_34 Start: 28044, Stop: 26260, Start Num: 234

Candidate Starts for AngryOrchard\_34:

(Start: 234 @28044 has 938 MA's), (334, 27873), (379, 27801), (394, 27771), (395, 27768), (409, 27723), (415, 27711), (419, 27702), (432, 27660), (465, 27558), (492, 27537), (516, 27507), (541, 27465), (566, 27417), (603, 27354), (619, 27327), (663, 27222), (667, 27213), (679, 27195), (700, 27156), (759, 26976), (775, 26928), (805, 26823), (806, 26820), (837, 26763), (841, 26742), (881, 26619), (918, 26550), (936, 26508), (938, 26505), (942, 26484), (968, 26406), (985, 26349), (989, 26337), (1010, 26298), (1021, 26280),

Gene: AnnaL29\_46 Start: 32316, Stop: 30529, Start Num: 234

Candidate Starts for AnnaL29\_46:

(Start: 234 @32316 has 938 MA's), (353, 32112), (355, 32109), (368, 32088), (379, 32073), (395, 32040), (405, 32010), (415, 31983), (424, 31962), (432, 31932), (465, 31830), (541, 31737), (566, 31689), (571, 31680), (582, 31665), (619, 31599), (655, 31518), (675, 31470), (711, 31398), (740, 31326), (759, 31245), (778, 31194), (789, 31161), (790, 31158), (805, 31092), (818, 31053), (837,

31032), (859, 30957), (888, 30867), (908, 30831), (921, 30813), (936, 30777), (942, 30753), (962, 30696), (968, 30675), (985, 30618), (989, 30606), (993, 30597),

Gene: AnnaLie\_43 Start: 29896, Stop: 31770, Start Num: 234

Candidate Starts for AnnaLie\_43:

(Start: 231 @29893 has 7 MA's), (Start: 234 @29896 has 938 MA's), (273, 29965), (284, 29986), (419, 30232), (432, 30274), (556, 30487), (603, 30568), (709, 30802), (747, 30925), (759, 30985), (761, 30991), (778, 31036), (782, 31051), (786, 31066), (796, 31102), (805, 31138), (840, 31231), (869, 31324), (901, 31402), (936, 31474), (946, 31513), (962, 31555), (967, 31573), (978, 31609), (985, 31633), (993, 31654),

Gene: AnnabelLee\_40 Start: 28657, Stop: 26867, Start Num: 224

Candidate Starts for AnnabelLee\_40:

(185, 28717), (Start: 202 @28693 has 13 MA's), (215, 28672), (224, 28657), (Start: 231 @28648 has 7 MA's), (301, 28525), (321, 28477), (406, 28339), (407, 28333), (426, 28285), (459, 28204), (460, 28198), (468, 28174), (541, 28105), (586, 28024), (603, 27997), (615, 27982), (642, 27919), (664, 27862), (679, 27838), (683, 27832), (700, 27796), (716, 27760), (746, 27688), (756, 27646), (761, 27619), (794, 27523), (799, 27499), (805, 27472), (818, 27433), (843, 27358), (865, 27289), (881, 27241), (888, 27220), (912, 27166), (920, 27151), (943, 27085), (962, 27028), (968, 27007), (969, 27004), (973, 26986), (979, 26971),

Gene: Annyong\_45 Start: 31615, Stop: 29789, Start Num: 234

Candidate Starts for Annyong\_45:

(Start: 234 @31615 has 938 MA's), (252, 31594), (266, 31564), (279, 31534), (379, 31372), (389, 31354), (395, 31339), (415, 31282), (419, 31273), (458, 31153), (465, 31129), (541, 31036), (568, 30988), (582, 30967), (603, 30928), (663, 30796), (675, 30775), (700, 30730), (703, 30718), (756, 30565), (759, 30544), (798, 30421), (805, 30391), (818, 30352), (841, 30286), (842, 30283), (847, 30268), (856, 30244), (862, 30220), (942, 30013), (985, 29878), (989, 29866), (993, 29857),

Gene: Anon\_42 Start: 29008, Stop: 27218, Start Num: 234

Candidate Starts for Anon\_42:

(Start: 234 @29008 has 938 MA's), (395, 28729), (397, 28726), (415, 28672), (432, 28621), (465, 28519), (541, 28426), (563, 28381), (566, 28378), (571, 28369), (628, 28270), (655, 28207), (663, 28180), (700, 28114), (740, 28015), (756, 27955), (759, 27934), (778, 27883), (782, 27868), (790, 27847), (793, 27838), (802, 27799), (805, 27781), (841, 27700), (847, 27682), (921, 27502), (935, 27475), (968, 27364), (985, 27307), (989, 27295), (995, 27283),

Gene: Anselm\_45 Start: 31702, Stop: 29915, Start Num: 234

Candidate Starts for Anselm\_45:

(Start: 234 @31702 has 938 MA's), (353, 31498), (355, 31495), (368, 31474), (379, 31459), (390, 31438), (395, 31426), (397, 31423), (405, 31396), (415, 31369), (424, 31348), (465, 31216), (541, 31123), (566, 31075), (571, 31066), (582, 31051), (619, 30985), (655, 30904), (675, 30856), (710, 30787), (740, 30712), (759, 30631), (778, 30580), (790, 30544), (805, 30478), (818, 30439), (837, 30418), (859, 30343), (868, 30313), (879, 30280), (888, 30253), (908, 30217), (918, 30205), (921, 30199), (936, 30163), (942, 30139), (968, 30061), (985, 30004), (989, 29992), (993, 29983),

Gene: Anthony\_39 Start: 28917, Stop: 27130, Start Num: 234

Candidate Starts for Anthony\_39:

(Start: 234 @28917 has 938 MA's), (379, 28671), (409, 28593), (415, 28581), (419, 28572), (465, 28428), (541, 28335), (559, 28296), (563, 28290), (566, 28287), (582, 28263), (634, 28167), (645, 28143), (663, 28092), (670, 28077), (679, 28065), (744, 27915), (756, 27867), (759, 27846), (775, 27798), (789, 27762), (805, 27693), (879, 27495), (881, 27489), (903, 27441), (921, 27414), (935, 27387), (968, 27276), (985, 27219), (989, 27207), (993, 27198),

Gene: Antihero\_52 Start: 52983, Stop: 51160, Start Num: 189

Candidate Starts for Antihero\_52:

(Start: 175 @53001 has 4 MA's), (Start: 189 @52983 has 26 MA's), (Start: 238 @52959 has 2 MA's), (252, 52932), (Start: 261 @52917 has 10 MA's), (269, 52896), (316, 52809), (382, 52704), (399, 52662), (425, 52596), (434, 52566), (437, 52557), (441, 52554), (442, 52551), (450, 52524), (496, 52431), (504, 52413), (511, 52395), (516, 52383), (528, 52368), (535, 52356), (595, 52245), (597, 52242), (618, 52212), (634, 52176), (737, 51951), (739, 51948), (749, 51912), (754, 51888), (760, 51855), (797, 51747), (799, 51741), (801, 51735), (802, 51732), (841, 51633), (842, 51630), (847, 51615), (872, 51537), (877, 51525), (883, 51504), (885, 51495), (902, 51465), (918, 51441), (935, 51408), (942, 51375), (947, 51357), (949, 51351), (964, 51312), (969, 51294), (972, 51282), (979, 51258), (994, 51216), (1002, 51210), (1015, 51186),

Gene: Antoinette\_39 Start: 28922, Stop: 27057, Start Num: 283

Candidate Starts for Antoinette\_39:

(Start: 234 @29009 has 938 MA's), (Start: 237 @29006 has 2 MA's), (Start: 283 @28922 has 147 MA's), (Start: 291 @28913 has 5 MA's), (342, 28808), (347, 28799), (367, 28769), (369, 28766), (424, 28646), (426, 28634), (428, 28628), (466, 28523), (473, 28496), (532, 28355), (535, 28349), (537, 28346), (541, 28334), (551, 28307), (553, 28304), (562, 28289), (566, 28283), (570, 28277), (613, 28244), (671, 28115), (701, 28055), (758, 27890), (798, 27740), (801, 27731), (802, 27728), (805, 27710), (819, 27668), (822, 27662), (825, 27653), (832, 27638), (849, 27581), (900, 27422), (913, 27392), (917, 27383), (938, 27323), (943, 27299), (956, 27260), (967, 27227), (970, 27215), (986, 27155),

Gene: Antonia\_60 Start: 54050, Stop: 52191, Start Num: 197

Candidate Starts for Antonia\_60:

(Start: 180 @54074 has 1 MA's), (Start: 197 @54050 has 298 MA's), (Start: 225 @54026 has 5 MA's), (Start: 238 @54020 has 2 MA's), (Start: 261 @53978 has 10 MA's), (269, 53957), (323, 53843), (328, 53837), (349, 53807), (385, 53747), (394, 53726), (410, 53672), (418, 53660), (425, 53642), (427, 53630), (462, 53525), (496, 53468), (511, 53432), (516, 53420), (534, 53396), (539, 53384), (545, 53366), (555, 53348), (566, 53330), (588, 53291), (595, 53282), (597, 53279), (599, 53276), (754, 52919), (760, 52886), (765, 52865), (799, 52772), (802, 52763), (822, 52700), (841, 52664), (842, 52661), (847, 52646), (872, 52568), (877, 52556), (883, 52535), (902, 52496), (942, 52406), (947, 52388), (949, 52382), (954, 52367), (964, 52343), (968, 52328), (969, 52325), (972, 52313), (979, 52289), (1002, 52241), (1015, 52217),

Gene: Anubis\_51 Start: 31739, Stop: 29925, Start Num: 234

Candidate Starts for Anubis\_51:

(Start: 234 @31739 has 938 MA's), (262, 31700), (266, 31688), (353, 31535), (362, 31520), (395, 31463), (415, 31406), (419, 31397), (432, 31355), (448, 31304), (465, 31253), (541, 31160), (566, 31112), (571, 31103), (582, 31088), (603, 31049), (619, 31022), (634, 30992), (670, 30899), (701, 30839), (710, 30824), (759, 30668), (790, 30581), (805, 30515), (818, 30476), (842, 30404), (856, 30365), (862, 30341), (868, 30323), (879, 30290), (888, 30263), (921, 30209), (942, 30149), (968, 30071), (985, 30014), (989, 30002), (993, 29993),

Gene: Apex\_54 Start: 54199, Stop: 52376, Start Num: 189

Candidate Starts for Apex\_54:

(Start: 175 @54217 has 4 MA's), (Start: 189 @54199 has 26 MA's), (Start: 238 @54175 has 2 MA's), (252, 54148), (Start: 261 @54133 has 10 MA's), (269, 54112), (316, 54025), (382, 53920), (399, 53878), (425, 53812), (434, 53782), (437, 53773), (441, 53770), (442, 53767), (450, 53740), (496, 53647), (504, 53629), (511, 53611), (516, 53599), (528, 53584), (535, 53572), (566, 53509), (588, 53470), (595, 53461), (597, 53458), (618, 53428), (634, 53392), (737, 53167), (739, 53164), (749, 53128), (754, 53104), (760, 53071), (797, 52963), (799, 52957), (802, 52948), (841, 52849), (842,

52846), (847, 52831), (872, 52753), (877, 52741), (883, 52720), (885, 52711), (902, 52681), (935, 52624), (942, 52591), (949, 52567), (964, 52528), (969, 52510), (972, 52498), (979, 52474), (994, 52432), (1002, 52426), (1015, 52402),

Gene: Apizium\_60 Start: 53711, Stop: 51852, Start Num: 197

Candidate Starts for Apizium\_60:

(Start: 180 @53735 has 1 MA's), (Start: 197 @53711 has 298 MA's), (Start: 225 @53687 has 5 MA's), (Start: 238 @53681 has 2 MA's), (Start: 261 @53639 has 10 MA's), (269, 53618), (323, 53504), (328, 53498), (349, 53468), (385, 53408), (394, 53387), (410, 53333), (418, 53321), (425, 53303), (427, 53291), (462, 53186), (496, 53129), (511, 53093), (516, 53081), (535, 53054), (539, 53045), (555, 53009), (588, 52952), (595, 52943), (597, 52940), (599, 52937), (724, 52682), (754, 52580), (760, 52547), (765, 52526), (799, 52433), (802, 52424), (822, 52361), (841, 52325), (842, 52322), (847, 52307), (872, 52229), (877, 52217), (883, 52196), (902, 52157), (942, 52067), (947, 52049), (949, 52043), (954, 52028), (964, 52004), (968, 51989), (969, 51986), (972, 51974), (979, 51950), (985, 51929), (1002, 51902), (1015, 51878),

Gene: AppleCloud\_34 Start: 28055, Stop: 26271, Start Num: 234

Candidate Starts for AppleCloud\_34:

(Start: 234 @28055 has 938 MA's), (334, 27884), (374, 27821), (394, 27782), (395, 27779), (409, 27734), (415, 27722), (419, 27713), (431, 27674), (465, 27569), (541, 27476), (566, 27428), (603, 27365), (619, 27338), (663, 27233), (679, 27206), (700, 27167), (759, 26987), (775, 26939), (805, 26834), (806, 26831), (837, 26774), (841, 26753), (858, 26705), (881, 26630), (918, 26561), (936, 26519), (938, 26516), (942, 26495), (946, 26480), (968, 26417), (985, 26360), (989, 26348), (1010, 26309), (1021, 26291),

Gene: Applejack\_40 Start: 31240, Stop: 29414, Start Num: 234

Candidate Starts for Applejack\_40:

(Start: 234 @31240 has 938 MA's), (359, 31027), (405, 30934), (411, 30913), (415, 30907), (419, 30898), (457, 30781), (465, 30754), (541, 30661), (546, 30646), (566, 30613), (596, 30562), (598, 30559), (634, 30493), (648, 30463), (657, 30433), (679, 30388), (700, 30349), (759, 30169), (775, 30121), (790, 30082), (805, 30016), (818, 29977), (837, 29956), (841, 29935), (847, 29917), (868, 29851), (936, 29701), (938, 29698), (946, 29662), (954, 29638), (959, 29629), (963, 29617), (970, 29590), (985, 29542), (993, 29521),

Gene: Aragog\_37 Start: 30134, Stop: 28275, Start Num: 234

Candidate Starts for Aragog\_37:

(Start: 234 @30134 has 938 MA's), (266, 30083), (301, 30023), (336, 29960), (353, 29930), (355, 29927), (390, 29870), (395, 29858), (405, 29828), (415, 29801), (465, 29648), (541, 29552), (566, 29504), (581, 29483), (618, 29420), (619, 29414), (652, 29342), (663, 29309), (670, 29294), (679, 29282), (724, 29183), (759, 29048), (769, 29018), (775, 29000), (782, 28982), (790, 28961), (793, 28952), (805, 28895), (818, 28856), (841, 28814), (847, 28796), (862, 28748), (879, 28697), (903, 28643), (908, 28634), (921, 28616), (942, 28556), (947, 28538), (978, 28445), (985, 28421), (989, 28409), (1049, 28292), (1050, 28289),

Gene: AranulaLuti\_38 Start: 28619, Stop: 26754, Start Num: 283

Candidate Starts for AranulaLuti\_38:

(Start: 234 @28706 has 938 MA's), (Start: 237 @28703 has 2 MA's), (Start: 283 @28619 has 147 MA's), (Start: 291 @28610 has 5 MA's), (342, 28505), (347, 28496), (367, 28466), (369, 28463), (424, 28343), (426, 28331), (428, 28325), (466, 28220), (473, 28193), (532, 28052), (535, 28046), (537, 28043), (541, 28031), (551, 28004), (553, 28001), (562, 27986), (566, 27980), (570, 27974), (613, 27941), (671, 27812), (701, 27752), (798, 27437), (801, 27428), (802, 27425), (805, 27407), (819, 27365), (822, 27359), (825, 27350), (832, 27335), (849, 27278), (900, 27119), (913, 27089), (917, 27080), (938, 27020), (943, 26996), (956, 26957), (967, 26924), (970, 26912), (986, 26852),

Gene: Arbitrator\_56 Start: 52589, Stop: 50760, Start Num: 197

Candidate Starts for Arbitrator\_56:

(Start: 197 @52589 has 298 MA's), (Start: 238 @52562 has 2 MA's), (253, 52532), (Start: 261 @52520 has 10 MA's), (272, 52493), (273, 52490), (277, 52481), (301, 52463), (355, 52367), (385, 52316), (395, 52292), (450, 52130), (459, 52106), (462, 52094), (496, 52037), (511, 52001), (516, 51989), (534, 51965), (580, 51881), (595, 51851), (597, 51848), (618, 51818), (678, 51674), (710, 51608), (737, 51557), (743, 51536), (749, 51518), (760, 51461), (783, 51404), (793, 51377), (799, 51347), (802, 51338), (822, 51272), (839, 51245), (841, 51236), (847, 51218), (856, 51194), (872, 51140), (877, 51128), (883, 51107), (921, 51038), (942, 50978), (947, 50960), (960, 50927), (964, 50915), (968, 50900), (969, 50897), (972, 50885), (979, 50861), (980, 50858), (1002, 50810), (1004, 50807), (1015, 50786), (1023, 50765),

Gene: Arcanine\_46 Start: 34538, Stop: 32751, Start Num: 234

Candidate Starts for Arcanine\_46:

(Start: 234 @34538 has 938 MA's), (359, 34325), (368, 34310), (405, 34232), (411, 34211), (415, 34205), (419, 34196), (457, 34079), (465, 34052), (541, 33959), (546, 33944), (566, 33911), (596, 33860), (598, 33857), (634, 33791), (648, 33761), (657, 33731), (679, 33686), (700, 33647), (759, 33467), (775, 33419), (790, 33380), (805, 33314), (839, 33242), (841, 33233), (868, 33149), (903, 33062), (954, 32936), (960, 32924), (985, 32840), (987, 32834),

Gene: ArcherNM\_42 Start: 31769, Stop: 29982, Start Num: 234

Candidate Starts for ArcherNM\_42:

(Start: 234 @31769 has 938 MA's), (353, 31565), (355, 31562), (359, 31556), (368, 31541), (379, 31526), (395, 31493), (397, 31490), (405, 31463), (415, 31436), (424, 31415), (432, 31385), (465, 31283), (541, 31190), (566, 31142), (571, 31133), (582, 31118), (619, 31052), (655, 30971), (675, 30923), (679, 30917), (740, 30779), (759, 30698), (778, 30647), (789, 30614), (790, 30611), (805, 30545), (818, 30506), (837, 30485), (859, 30410), (879, 30347), (888, 30320), (908, 30284), (921, 30266), (936, 30230), (942, 30206), (962, 30149), (968, 30128), (985, 30071), (989, 30059), (993, 30050),

Gene: Archetta\_38 Start: 30664, Stop: 28820, Start Num: 234

Candidate Starts for Archetta\_38:

(Start: 234 @30664 has 938 MA's), (266, 30613), (301, 30553), (336, 30490), (353, 30460), (355, 30457), (390, 30400), (395, 30388), (405, 30358), (415, 30331), (448, 30229), (453, 30214), (465, 30178), (520, 30118), (541, 30082), (566, 30034), (618, 29950), (619, 29944), (652, 29872), (663, 29839), (670, 29824), (679, 29812), (724, 29713), (759, 29578), (769, 29548), (775, 29530), (778, 29527), (790, 29491), (793, 29482), (796, 29461), (799, 29452), (805, 29425), (806, 29422), (837, 29365), (841, 29344), (879, 29227), (903, 29173), (908, 29164), (921, 29146), (947, 29068), (967, 29011), (978, 28975), (985, 28951), (989, 28939),

Gene: Ares\_57 Start: 52561, Stop: 50732, Start Num: 197

Candidate Starts for Ares\_57:

(Start: 197 @52561 has 298 MA's), (Start: 238 @52534 has 2 MA's), (253, 52504), (Start: 261 @52492 has 10 MA's), (272, 52465), (273, 52462), (277, 52453), (301, 52435), (355, 52339), (385, 52288), (395, 52264), (402, 52240), (450, 52102), (459, 52078), (462, 52066), (496, 52009), (511, 51973), (516, 51961), (534, 51937), (580, 51853), (595, 51823), (597, 51820), (618, 51790), (678, 51646), (710, 51580), (733, 51541), (737, 51529), (743, 51508), (749, 51490), (760, 51433), (783, 51376), (793, 51349), (799, 51319), (802, 51310), (822, 51244), (839, 51217), (841, 51208), (847, 51190), (856, 51166), (872, 51112), (877, 51100), (883, 51079), (921, 51010), (942, 50950), (947, 50932), (960, 50899), (964, 50887), (968, 50872), (969, 50869), (972, 50857), (979, 50833), (980, 50830), (1002, 50782), (1004, 50779), (1015, 50758), (1023, 50737),



Gene: Arissanae\_44 Start: 32041, Stop: 30248, Start Num: 234

Candidate Starts for Arissanae\_44:

(Start: 234 @32041 has 938 MA's), (246, 32032), (314, 31903), (353, 31837), (364, 31819), (379, 31795), (397, 31759), (405, 31732), (409, 31717), (415, 31705), (432, 31654), (464, 31555), (465, 31552), (541, 31459), (550, 31435), (634, 31291), (672, 31195), (703, 31132), (726, 31093), (729, 31087), (759, 30964), (798, 30841), (805, 30811), (818, 30772), (839, 30739), (841, 30730), (847, 30712), (879, 30613), (908, 30550), (918, 30538), (935, 30505), (936, 30496), (968, 30394), (985, 30337), (989, 30325), (993, 30316),

Gene: Arlo\_42 Start: 34069, Stop: 32243, Start Num: 234

Candidate Starts for Arlo\_42:

(Start: 234 @34069 has 938 MA's), (359, 33856), (395, 33793), (405, 33763), (411, 33742), (415, 33736), (419, 33727), (457, 33610), (465, 33583), (541, 33490), (546, 33475), (596, 33391), (598, 33388), (634, 33322), (648, 33292), (657, 33262), (679, 33217), (700, 33178), (759, 32998), (775, 32950), (790, 32911), (805, 32845), (818, 32806), (837, 32785), (841, 32764), (847, 32746), (868, 32680), (936, 32530), (938, 32527), (946, 32491), (954, 32467), (959, 32458), (963, 32446), (985, 32371), (993, 32350),

Gene: Armstrong\_40 Start: 27439, Stop: 29307, Start Num: 231

Candidate Starts for Armstrong\_40:

(Start: 231 @27439 has 7 MA's), (Start: 234 @27442 has 938 MA's), (Start: 237 @27445 has 2 MA's), (273, 27514), (425, 27796), (432, 27823), (453, 27877), (559, 28042), (603, 28117), (618, 28138), (747, 28492), (759, 28552), (778, 28603), (796, 28669), (805, 28705), (840, 28798), (901, 28969), (936, 29041), (962, 29122), (984, 29197), (985, 29200), (993, 29221), (1032, 29290),

Gene: Arroyo\_43 Start: 30004, Stop: 31878, Start Num: 234

Candidate Starts for Arroyo\_43:

(Start: 234 @30004 has 938 MA's), (273, 30073), (284, 30094), (419, 30340), (425, 30355), (432, 30382), (603, 30676), (663, 30811), (709, 30910), (747, 31033), (759, 31093), (761, 31099), (778, 31144), (782, 31159), (786, 31174), (796, 31210), (805, 31246), (840, 31339), (869, 31432), (901, 31510), (936, 31582), (946, 31621), (962, 31663), (967, 31681), (978, 31717), (985, 31741), (993, 31762),

Gene: Artemis2UCLA\_45 Start: 29324, Stop: 27483, Start Num: 234

Candidate Starts for Artemis2UCLA\_45:

(Start: 212 @29354 has 1 MA's), (Start: 234 @29324 has 938 MA's), (353, 29120), (395, 29045), (397, 29042), (405, 29015), (409, 29000), (415, 28988), (432, 28937), (461, 28847), (465, 28835), (541, 28742), (559, 28703), (571, 28685), (582, 28670), (619, 28604), (635, 28571), (636, 28568), (681, 28466), (710, 28406), (740, 28322), (759, 28241), (789, 28157), (790, 28154), (793, 28145), (798, 28118), (805, 28088), (837, 28028), (847, 27989), (936, 27773), (938, 27770), (942, 27749), (985, 27614), (989, 27602), (993, 27593), (995, 27590), (1042, 27497),

Gene: Arturo\_44 Start: 31826, Stop: 30000, Start Num: 234

Candidate Starts for Arturo\_44:

(Start: 234 @31826 has 938 MA's), (252, 31805), (266, 31775), (279, 31745), (379, 31583), (389, 31565), (415, 31493), (419, 31484), (458, 31364), (465, 31340), (541, 31247), (568, 31199), (603, 31139), (663, 31007), (675, 30986), (700, 30941), (703, 30929), (756, 30776), (759, 30755), (798, 30632), (805, 30602), (818, 30563), (841, 30497), (842, 30494), (847, 30479), (856, 30455), (862, 30431), (942, 30224), (985, 30089), (989, 30077), (993, 30068),

Gene: Asa16\_39 Start: 30354, Stop: 32219, Start Num: 234

Candidate Starts for Asa16\_39:

(Start: 234 @30354 has 938 MA's), (265, 30402), (377, 30585), (382, 30591), (405, 30651), (411, 30672), (436, 30741), (546, 30957), (598, 31047), (603, 31056), (615, 31071), (635, 31116), (675, 31209), (730, 31347), (759, 31467), (769, 31497), (790, 31554), (803, 31611), (805, 31620), (814, 31644), (840, 31713), (862, 31785), (865, 31794), (905, 31893), (936, 31956), (985, 32115), (988, 32124),

Gene: Ascela\_41 Start: 29607, Stop: 31472, Start Num: 234

Candidate Starts for Ascela\_41:

(Start: 234 @29607 has 938 MA's), (265, 29655), (359, 29820), (405, 29904), (436, 29994), (543, 30201), (546, 30210), (598, 30300), (603, 30309), (615, 30324), (675, 30462), (730, 30600), (759, 30720), (769, 30750), (790, 30807), (805, 30873), (840, 30966), (862, 31038), (985, 31368), (988, 31377),

Gene: Ashballer\_46 Start: 35324, Stop: 33498, Start Num: 234

Candidate Starts for Ashballer\_46:

(Start: 234 @35324 has 938 MA's), (359, 35111), (368, 35096), (405, 35018), (411, 34997), (415, 34991), (419, 34982), (457, 34865), (465, 34838), (541, 34745), (546, 34730), (566, 34697), (596, 34646), (598, 34643), (634, 34577), (648, 34547), (657, 34517), (679, 34472), (700, 34433), (759, 34253), (775, 34205), (790, 34166), (805, 34100), (818, 34061), (837, 34040), (841, 34019), (847, 34001), (868, 33935), (936, 33785), (938, 33782), (946, 33746), (954, 33722), (959, 33713), (963, 33701), (970, 33674), (985, 33626), (993, 33605),

Gene: Ashes\_38 Start: 27734, Stop: 29716, Start Num: 234

Candidate Starts for Ashes\_38:

(Start: 234 @27734 has 938 MA's), (336, 27908), (353, 27938), (382, 27971), (397, 28004), (424, 28079), (431, 28106), (464, 28208), (518, 28307), (603, 28481), (619, 28508), (675, 28637), (730, 28775), (753, 28862), (759, 28895), (769, 28925), (790, 28982), (805, 29048), (840, 29141), (867, 29228), (942, 29408), (949, 29432), (985, 29543), (1040, 29651),

Gene: Ashraf\_62 Start: 54257, Stop: 52398, Start Num: 197

Candidate Starts for Ashraf\_62:

(Start: 180 @54281 has 1 MA's), (Start: 197 @54257 has 298 MA's), (Start: 225 @54233 has 5 MA's), (Start: 238 @54227 has 2 MA's), (Start: 261 @54185 has 10 MA's), (269, 54164), (323, 54050), (328, 54044), (349, 54014), (385, 53954), (394, 53933), (410, 53879), (418, 53867), (425, 53849), (427, 53837), (462, 53732), (496, 53675), (511, 53639), (516, 53627), (534, 53603), (539, 53591), (545, 53573), (555, 53555), (566, 53537), (588, 53498), (595, 53489), (597, 53486), (599, 53483), (724, 53228), (754, 53126), (760, 53093), (765, 53072), (799, 52979), (802, 52970), (822, 52907), (841, 52871), (842, 52868), (847, 52853), (872, 52775), (877, 52763), (883, 52742), (902, 52703), (942, 52613), (947, 52595), (949, 52589), (954, 52574), (964, 52550), (968, 52535), (969, 52532), (972, 52520), (979, 52496), (985, 52475), (1002, 52448), (1015, 52424),

Gene: Asis\_48 Start: 39369, Stop: 37369, Start Num: 261

Candidate Starts for Asis\_48:

(Start: 261 @39369 has 10 MA's), (297, 39300), (361, 39168), (365, 39162), (369, 39156), (400, 39108), (403, 39096), (405, 39090), (413, 39069), (417, 39054), (441, 38985), (485, 38844), (525, 38748), (568, 38661), (584, 38637), (592, 38625), (601, 38613), (636, 38544), (703, 38397), (744, 38292), (749, 38277), (761, 38220), (767, 38199), (781, 38157), (792, 38127), (798, 38094), (810, 38040), (817, 38010), (830, 37941), (837, 37920), (856, 37857), (861, 37839), (864, 37827), (872, 37803), (942, 37602), (943, 37599), (949, 37578), (963, 37545), (968, 37527), (978, 37494), (985, 37470), (1009, 37422),

Gene: Asta\_38 Start: 28632, Stop: 26767, Start Num: 283

Candidate Starts for Asta\_38:

(Start: 234 @28719 has 938 MA's), (Start: 283 @28632 has 147 MA's), (Start: 291 @28623 has 5 MA's), (342, 28518), (347, 28509), (367, 28479), (369, 28476), (424, 28356), (426, 28344), (428, 28338), (466, 28233), (473, 28206), (532, 28065), (535, 28059), (537, 28056), (541, 28044), (551, 28017), (553, 28014), (562, 27999), (566, 27993), (570, 27987), (613, 27954), (671, 27825), (701, 27765), (798, 27450), (801, 27441), (802, 27438), (805, 27420), (819, 27378), (822, 27372), (832, 27348), (849, 27291), (900, 27132), (913, 27102), (917, 27093), (938, 27033), (943, 27009), (956, 26970), (967, 26937), (970, 26925), (986, 26865),

Gene: Astro\_42 Start: 30542, Stop: 28698, Start Num: 234

Candidate Starts for Astro\_42:

(135, 30707), (Start: 234 @30542 has 938 MA's), (266, 30491), (336, 30368), (353, 30338), (379, 30299), (395, 30266), (405, 30236), (411, 30215), (415, 30209), (419, 30200), (432, 30158), (448, 30107), (464, 30059), (465, 30056), (541, 29960), (552, 29933), (563, 29915), (566, 29912), (571, 29903), (603, 29849), (619, 29822), (640, 29774), (663, 29717), (679, 29690), (703, 29639), (711, 29624), (756, 29477), (759, 29456), (769, 29426), (775, 29408), (778, 29405), (782, 29390), (790, 29369), (793, 29360), (798, 29333), (802, 29321), (805, 29303), (841, 29222), (845, 29210), (862, 29156), (874, 29120), (885, 29084), (903, 29051), (918, 29030), (921, 29024), (938, 28985), (942, 28964), (947, 28946), (985, 28829), (989, 28817),

Gene: Athena\_60 Start: 54420, Stop: 52603, Start Num: 235

Candidate Starts for Athena\_60:

(129, 54603), (Start: 235 @54420 has 43 MA's), (252, 54390), (359, 54210), (424, 54057), (426, 54045), (437, 54015), (442, 54009), (462, 53946), (464, 53940), (496, 53889), (511, 53853), (539, 53805), (597, 53700), (647, 53604), (664, 53553), (737, 53409), (749, 53370), (755, 53340), (760, 53313), (763, 53301), (797, 53205), (799, 53199), (802, 53190), (804, 53178), (834, 53106), (841, 53076), (847, 53058), (851, 53049), (872, 52980), (877, 52968), (883, 52947), (921, 52878), (931, 52863), (938, 52839), (942, 52818), (949, 52794), (964, 52755), (969, 52737), (972, 52725), (975, 52713), (979, 52701), (994, 52659), (1015, 52629),

Gene: Atkinbua\_46 Start: 34825, Stop: 32999, Start Num: 234

Candidate Starts for Atkinbua\_46:

(Start: 234 @34825 has 938 MA's), (359, 34612), (405, 34519), (411, 34498), (415, 34492), (419, 34483), (457, 34366), (465, 34339), (541, 34246), (546, 34231), (596, 34147), (598, 34144), (634, 34078), (648, 34048), (657, 34018), (679, 33973), (700, 33934), (759, 33754), (775, 33706), (790, 33667), (805, 33601), (818, 33562), (837, 33541), (841, 33520), (847, 33502), (868, 33436), (936, 33286), (938, 33283), (946, 33247), (959, 33214), (963, 33202), (985, 33127), (993, 33106),

Gene: Attoomi\_34 Start: 26889, Stop: 28748, Start Num: 234

Candidate Starts for Attoomi\_34:

(200, 26838), (Start: 234 @26889 has 938 MA's), (355, 27099), (368, 27120), (385, 27144), (410, 27216), (419, 27234), (424, 27246), (441, 27306), (453, 27342), (467, 27384), (543, 27474), (563, 27513), (582, 27546), (591, 27567), (603, 27585), (615, 27600), (619, 27612), (629, 27633), (649, 27672), (655, 27690), (657, 27699), (663, 27717), (664, 27720), (675, 27738), (700, 27783), (705, 27801), (708, 27807), (709, 27816), (724, 27861), (743, 27924), (744, 27927), (761, 28002), (786, 28077), (793, 28092), (795, 28107), (797, 28116), (805, 28149), (825, 28203), (862, 28314), (865, 28323), (918, 28443), (935, 28476), (943, 28512), (982, 28632), (985, 28644), (987, 28650), (1039, 28740),

Gene: Atuin\_96 Start: 78424, Stop: 80142, Start Num: 284

Candidate Starts for Atuin\_96:

(Start: 248 @78349 has 2 MA's), (273, 78403), (276, 78412), (284, 78424), (407, 78643), (418, 78661), (426, 78688), (428, 78694), (468, 78799), (586, 78946), (603, 78973), (615, 78988), (638, 79042), (729, 79243), (735, 79270), (746, 79303), (756, 79342), (759, 79363), (761, 79369), (796, 79486),

(817, 79570), (818, 79573), (840, 79636), (843, 79648), (856, 79684), (865, 79717), (883, 79771), (890, 79789), (936, 79894), (943, 79921), (947, 79936), (960, 79969), (962, 79975), (967, 79993), (970, 80005), (973, 80017), (974, 80020), (985, 80053), (1017, 80104),

Gene: Aubergine\_38 Start: 28632, Stop: 26767, Start Num: 283

Candidate Starts for Aubergine\_38:

(Start: 234 @28719 has 938 MA's), (Start: 237 @28716 has 2 MA's), (Start: 283 @28632 has 147 MA's), (Start: 291 @28623 has 5 MA's), (342, 28518), (347, 28509), (367, 28479), (369, 28476), (424, 28356), (426, 28344), (428, 28338), (466, 28233), (473, 28206), (532, 28065), (535, 28059), (537, 28056), (541, 28044), (551, 28017), (553, 28014), (562, 27999), (566, 27993), (570, 27987), (613, 27954), (671, 27825), (701, 27765), (798, 27450), (801, 27441), (802, 27438), (805, 27420), (819, 27378), (822, 27372), (825, 27363), (832, 27348), (849, 27291), (900, 27132), (913, 27102), (917, 27093), (938, 27033), (943, 27009), (956, 26970), (967, 26937), (970, 26925), (986, 26865),

Gene: Audell\_40 Start: 31335, Stop: 29554, Start Num: 231

Candidate Starts for Audell\_40:

(204, 31377), (207, 31371), (Start: 231 @31335 has 7 MA's), (257, 31296), (274, 31254), (426, 30972), (432, 30954), (460, 30885), (468, 30861), (518, 30831), (541, 30792), (544, 30783), (586, 30711), (603, 30684), (615, 30669), (642, 30606), (664, 30549), (679, 30525), (683, 30519), (700, 30483), (703, 30471), (716, 30447), (756, 30333), (759, 30312), (761, 30306), (777, 30261), (794, 30210), (799, 30186), (805, 30159), (818, 30120), (829, 30093), (856, 30009), (865, 29976), (879, 29934), (881, 29928), (888, 29907), (912, 29853), (920, 29838), (933, 29811), (943, 29772), (952, 29742), (962, 29715), (968, 29694), (969, 29691), (973, 29673), (979, 29658), (1027, 29565),

Gene: Audrey\_58 Start: 53676, Stop: 51859, Start Num: 235

Candidate Starts for Audrey\_58:

(129, 53859), (Start: 235 @53676 has 43 MA's), (252, 53646), (359, 53466), (424, 53313), (426, 53301), (437, 53271), (442, 53265), (462, 53202), (464, 53196), (496, 53145), (511, 53109), (539, 53061), (597, 52956), (647, 52860), (664, 52809), (737, 52665), (749, 52626), (755, 52596), (760, 52569), (763, 52557), (797, 52461), (799, 52455), (802, 52446), (804, 52434), (834, 52362), (841, 52332), (847, 52314), (851, 52305), (872, 52236), (877, 52224), (883, 52203), (921, 52134), (931, 52119), (938, 52095), (942, 52074), (949, 52050), (964, 52011), (969, 51993), (972, 51981), (975, 51969), (979, 51957), (994, 51915), (1015, 51885),

Gene: AugsMagnumOpus\_51 Start: 31845, Stop: 30031, Start Num: 234

Candidate Starts for AugsMagnumOpus\_51:

(Start: 234 @31845 has 938 MA's), (262, 31806), (266, 31794), (353, 31641), (362, 31626), (395, 31569), (415, 31512), (419, 31503), (432, 31461), (448, 31410), (465, 31359), (541, 31266), (566, 31218), (571, 31209), (582, 31194), (603, 31155), (619, 31128), (634, 31098), (670, 31005), (679, 30993), (701, 30945), (710, 30930), (759, 30774), (790, 30687), (805, 30621), (818, 30582), (842, 30510), (856, 30471), (862, 30447), (868, 30429), (879, 30396), (888, 30369), (921, 30315), (942, 30255), (968, 30177), (985, 30120), (989, 30108), (993, 30099),

Gene: Austelle\_54 Start: 54652, Stop: 52829, Start Num: 189

Candidate Starts for Austelle\_54:

(Start: 175 @54670 has 4 MA's), (Start: 189 @54652 has 26 MA's), (Start: 238 @54628 has 2 MA's), (252, 54601), (Start: 261 @54586 has 10 MA's), (269, 54565), (316, 54478), (382, 54373), (399, 54331), (425, 54265), (434, 54235), (437, 54226), (441, 54223), (442, 54220), (450, 54193), (496, 54100), (504, 54082), (511, 54064), (516, 54052), (528, 54037), (535, 54025), (566, 53962), (588, 53923), (595, 53914), (597, 53911), (618, 53881), (634, 53845), (737, 53620), (739, 53617), (749, 53581), (754, 53557), (760, 53524), (797, 53416), (799, 53410), (802, 53401), (841, 53302), (842, 53299), (847, 53284), (872, 53206), (877, 53194), (883, 53173), (885, 53164), (902, 53134), (921, 53104), (935, 53077), (942, 53044), (949, 53020), (964, 52981), (969, 52963), (972, 52951), (979,

52927), (994, 52885), (1002, 52879), (1015, 52855),

Gene: AvGardian\_44 Start: 29897, Stop: 31789, Start Num: 234

Candidate Starts for AvGardian\_44:

(Start: 234 @29897 has 938 MA's), (273, 29966), (284, 29987), (408, 30209), (419, 30233), (424, 30245), (425, 30248), (566, 30503), (603, 30569), (709, 30821), (747, 30944), (754, 30974), (759, 31004), (761, 31010), (778, 31055), (786, 31085), (796, 31121), (799, 31130), (805, 31157), (840, 31250), (869, 31343), (901, 31421), (902, 31424), (936, 31493), (942, 31517), (946, 31532), (962, 31574), (985, 31652), (993, 31673), (995, 31676), (1008, 31697),

Gene: AvatarAhPeg\_44 Start: 32048, Stop: 30219, Start Num: 234

Candidate Starts for AvatarAhPeg\_44:

(Start: 234 @32048 has 938 MA's), (266, 31997), (379, 31805), (389, 31787), (415, 31715), (419, 31706), (458, 31586), (465, 31562), (541, 31469), (568, 31421), (582, 31400), (603, 31361), (628, 31316), (630, 31310), (663, 31229), (667, 31220), (675, 31208), (700, 31163), (703, 31151), (759, 30977), (793, 30881), (798, 30854), (799, 30851), (805, 30824), (818, 30785), (841, 30716), (842, 30713), (847, 30698), (856, 30674), (862, 30650), (864, 30644), (942, 30443), (985, 30308), (989, 30296), (993, 30287),

Gene: Avle17\_45 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for Avle17\_45:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Avocadoman\_41 Start: 29025, Stop: 30899, Start Num: 234

Candidate Starts for Avocadoman\_41:

(Start: 234 @29025 has 938 MA's), (284, 29115), (419, 29361), (425, 29376), (432, 29403), (603, 29697), (663, 29832), (709, 29931), (747, 30054), (759, 30114), (761, 30120), (778, 30165), (782, 30180), (786, 30195), (796, 30231), (805, 30267), (840, 30360), (869, 30453), (901, 30531), (936, 30603), (946, 30642), (962, 30684), (967, 30702), (978, 30738), (985, 30762), (993, 30783),

Gene: AxiPup\_39 Start: 28904, Stop: 27039, Start Num: 283

Candidate Starts for AxiPup\_39:

(Start: 234 @28991 has 938 MA's), (Start: 237 @28988 has 2 MA's), (Start: 283 @28904 has 147 MA's), (Start: 291 @28895 has 5 MA's), (342, 28790), (347, 28781), (367, 28751), (369, 28748), (424, 28628), (426, 28616), (428, 28610), (466, 28505), (473, 28478), (532, 28337), (535, 28331), (537, 28328), (541, 28316), (551, 28289), (553, 28286), (562, 28271), (566, 28265), (570, 28259), (613, 28226), (671, 28097), (701, 28037), (733, 27962), (798, 27722), (801, 27713), (802, 27710), (805, 27692), (819, 27650), (822, 27644), (825, 27635), (832, 27620), (849, 27563), (900, 27404), (913, 27374), (917, 27365), (938, 27305), (943, 27281), (956, 27242), (967, 27209), (970, 27197), (986, 27137),

Gene: Axumite\_51 Start: 45981, Stop: 44164, Start Num: 230

Candidate Starts for Axumite\_51:

(73, 46302), (84, 46278), (Start: 230 @45981 has 13 MA's), (252, 45945), (Start: 261 @45930 has 10 MA's), (273, 45900), (344, 45774), (406, 45651), (410, 45636), (427, 45594), (462, 45498), (511, 45405), (583, 45276), (597, 45252), (743, 44940), (749, 44922), (760, 44865), (799, 44751), (802, 44742), (822, 44679), (842, 44640), (847, 44625), (872, 44547), (877, 44535), (883, 44514), (885, 44505), (935, 44418), (943, 44382), (946, 44370), (961, 44331), (964, 44322), (968, 44307), (979, 44262), (1002, 44214), (1015, 44190),

Gene: Axym\_42 Start: 32451, Stop: 30058, Start Num: 36

Candidate Starts for Axym\_42:

(Start: 36 @32451 has 16 MA's), (48, 32445), (Start: 60 @32397 has 1 MA's), (76, 32355), (86, 32331), (127, 32205), (136, 32181), (170, 32136), (206, 32085), (216, 32070), (Start: 230 @32049 has 13 MA's), (262, 32001), (279, 31959), (317, 31884), (322, 31872), (366, 31803), (382, 31776), (385, 31770), (391, 31755), (409, 31701), (410, 31698), (420, 31680), (426, 31659), (448, 31599), (495, 31476), (497, 31470), (524, 31401), (541, 31359), (634, 31272), (643, 31248), (655, 31242), (662, 31218), (666, 31209), (674, 31194), (682, 31182), (707, 31140), (711, 31137), (713, 31134), (758, 30987), (773, 30918), (774, 30912), (784, 30876), (805, 30783), (817, 30747), (819, 30741), (822, 30735), (824, 30729), (842, 30672), (849, 30648), (859, 30603), (985, 30225), (986, 30222), (1008, 30177), (1013, 30168), (1037, 30108),

Gene: Azira\_40 Start: 32021, Stop: 29664, Start Num: 45

Candidate Starts for Azira\_40:

(42, 32030), (Start: 45 @32021 has 24 MA's), (52, 32006), (58, 31970), (110, 31835), (136, 31772), (168, 31730), (177, 31718), (249, 31616), (252, 31613), (290, 31538), (306, 31499), (317, 31478), (352, 31427), (376, 31385), (391, 31355), (409, 31301), (420, 31280), (426, 31259), (449, 31196), (499, 31061), (506, 31046), (517, 31019), (524, 31001), (570, 30917), (626, 30881), (682, 30788), (707, 30746), (711, 30743), (713, 30740), (724, 30716), (729, 30704), (732, 30692), (770, 30551), (773, 30524), (805, 30389), (817, 30353), (819, 30347), (822, 30341), (824, 30335), (834, 30311), (842, 30278), (849, 30254), (859, 30209), (861, 30203), (880, 30143), (926, 30035), (945, 29966), (948, 29954), (958, 29930), (979, 29852), (986, 29828), (1018, 29759),

Gene: B1\_42 Start: 30729, Stop: 28891, Start Num: 234

Candidate Starts for B1\_42:

(179, 30801), (Start: 234 @30729 has 938 MA's), (266, 30678), (353, 30525), (379, 30486), (395, 30453), (415, 30396), (419, 30387), (424, 30375), (458, 30267), (465, 30243), (541, 30147), (568, 30099), (603, 30039), (663, 29907), (675, 29886), (710, 29817), (729, 29772), (740, 29730), (759, 29649), (790, 29562), (798, 29526), (805, 29496), (842, 29385), (856, 29346), (862, 29322), (868, 29304), (918, 29181), (921, 29175), (942, 29115), (984, 28983), (985, 28980), (989, 28968), (993, 28959),

Gene: BABullseye\_43 Start: 29170, Stop: 27329, Start Num: 234

Candidate Starts for BABullseye\_43:

(Start: 234 @29170 has 938 MA's), (353, 28966), (395, 28891), (397, 28888), (405, 28861), (409, 28846), (415, 28834), (432, 28783), (461, 28693), (465, 28681), (541, 28588), (559, 28549), (571, 28531), (582, 28516), (619, 28450), (635, 28417), (636, 28414), (681, 28312), (710, 28252), (740, 28168), (759, 28087), (789, 28003), (790, 28000), (793, 27991), (798, 27964), (805, 27934), (837, 27874), (847, 27835), (936, 27619), (938, 27616), (942, 27595), (985, 27460), (989, 27448), (993, 27439), (995, 27436), (1042, 27343),

Gene: BAjuniper\_43 Start: 30818, Stop: 32689, Start Num: 234

Candidate Starts for BAjuniper\_43:

(Start: 234 @30818 has 938 MA's), (284, 30908), (336, 30995), (353, 31025), (419, 31154), (580, 31445), (603, 31490), (615, 31505), (655, 31598), (747, 31844), (759, 31904), (778, 31955), (782, 31970), (796, 32021), (799, 32030), (805, 32057), (840, 32150), (862, 32222), (869, 32243), (901, 32321), (902, 32324), (936, 32393), (962, 32474), (964, 32480), (978, 32528), (985, 32552), (993, 32573), (1008, 32597),

Gene: BFK20\_ORF44 Start: 37992, Stop: 36088, Start Num: 197

Candidate Starts for BFK20\_ORF44:

(Start: 197 @37992 has 298 MA's), (246, 37932), (Start: 261 @37905 has 10 MA's), (269, 37881), (272, 37875), (294, 37833), (308, 37800), (327, 37758), (333, 37743), (352, 37710), (355, 37704), (405, 37599), (410, 37581), (424, 37557), (427, 37542), (432, 37530), (456, 37461), (494, 37392), (500, 37374), (511, 37350), (528, 37323), (597, 37194), (599, 37191), (618, 37164), (657, 37068), (660, 37056), (663, 37050), (746, 36873), (760, 36807), (799, 36690), (843, 36576), (847, 36564), (861, 36522), (862, 36516), (868, 36498), (872, 36486), (877, 36474), (883, 36453), (903, 36411), (916, 36393), (930, 36357), (943, 36306), (964, 36246), (979, 36192), (985, 36171), (1015, 36114),

Gene: BK1\_41 Start: 33551, Stop: 31725, Start Num: 234

Candidate Starts for BK1\_41:

(Start: 234 @33551 has 938 MA's), (359, 33338), (368, 33323), (395, 33275), (405, 33245), (411, 33224), (415, 33218), (419, 33209), (445, 33125), (448, 33116), (457, 33092), (465, 33065), (541, 32972), (546, 32957), (558, 32936), (566, 32924), (596, 32873), (598, 32870), (628, 32816), (634, 32804), (648, 32774), (657, 32744), (679, 32699), (700, 32660), (759, 32480), (775, 32432), (790, 32393), (805, 32327), (818, 32288), (837, 32267), (841, 32246), (847, 32228), (868, 32162), (936, 32012), (938, 32009), (946, 31973), (954, 31949), (959, 31940), (963, 31928), (985, 31853), (993, 31832),

Gene: BPBiebs31\_45 Start: 34673, Stop: 32844, Start Num: 234

Candidate Starts for BPBiebs31\_45:

(Start: 234 @34673 has 938 MA's), (359, 34460), (395, 34397), (405, 34367), (411, 34346), (415, 34340), (419, 34331), (457, 34214), (465, 34187), (541, 34094), (546, 34079), (596, 33995), (598, 33992), (634, 33926), (648, 33896), (657, 33866), (679, 33821), (700, 33782), (759, 33602), (775, 33554), (793, 33506), (802, 33467), (805, 33449), (818, 33410), (837, 33389), (841, 33368), (846, 33353), (885, 33230), (960, 33059), (967, 33035), (982, 32987), (985, 32975), (993, 32954), (997, 32948), (1025, 32900), (1030, 32885),

Gene: Baby16\_45 Start: 31581, Stop: 29755, Start Num: 234

Candidate Starts for Baby16\_45:

(Start: 234 @31581 has 938 MA's), (252, 31560), (266, 31530), (279, 31500), (379, 31338), (389, 31320), (415, 31248), (419, 31239), (458, 31119), (465, 31095), (541, 31002), (568, 30954), (582, 30933), (603, 30894), (663, 30762), (675, 30741), (700, 30696), (703, 30684), (756, 30531), (759, 30510), (798, 30387), (805, 30357), (818, 30318), (841, 30252), (842, 30249), (847, 30234), (856, 30210), (862, 30186), (942, 29979), (985, 29844), (989, 29832), (993, 29823),

Gene: BabyBack\_43 Start: 31842, Stop: 30049, Start Num: 234

Candidate Starts for BabyBack\_43:

(122, 32046), (Start: 234 @31842 has 938 MA's), (395, 31563), (397, 31560), (405, 31533), (409, 31518), (415, 31506), (419, 31497), (461, 31365), (465, 31353), (541, 31260), (566, 31212), (571, 31203), (582, 31188), (619, 31122), (639, 31077), (655, 31041), (759, 30765), (789, 30681), (798, 30642), (805, 30612), (818, 30573), (839, 30540), (841, 30531), (936, 30297), (968, 30195), (985, 30138), (989, 30126), (993, 30117),

Gene: BabyDaisy\_42 Start: 29859, Stop: 31733, Start Num: 234

Candidate Starts for BabyDaisy\_42:

(Start: 231 @29856 has 7 MA's), (Start: 234 @29859 has 938 MA's), (273, 29928), (284, 29949), (419, 30195), (453, 30291), (603, 30531), (709, 30765), (746, 30885), (747, 30888), (759, 30948), (761, 30954), (782, 31014), (786, 31029), (796, 31065), (805, 31101), (840, 31194), (901, 31365), (902, 31368), (936, 31437), (946, 31476), (962, 31518), (967, 31536), (978, 31572), (985, 31596), (993, 31617),

Gene: BabyGotBac\_49 Start: 39369, Stop: 37369, Start Num: 261

Candidate Starts for BabyGotBac\_49:



(Start: 261 @39369 has 10 MA's), (297, 39300), (361, 39168), (365, 39162), (369, 39156), (400, 39108), (403, 39096), (405, 39090), (413, 39069), (417, 39054), (441, 38985), (485, 38844), (525, 38748), (568, 38661), (584, 38637), (592, 38625), (601, 38613), (636, 38544), (703, 38397), (744, 38292), (749, 38277), (761, 38220), (767, 38199), (781, 38157), (792, 38127), (798, 38094), (810, 38040), (817, 38010), (830, 37941), (837, 37920), (856, 37857), (861, 37839), (864, 37827), (872, 37803), (942, 37602), (943, 37599), (963, 37545), (968, 37527), (978, 37494), (985, 37470), (1009, 37422),

Gene: BabyJohn\_43 Start: 31521, Stop: 29683, Start Num: 234

Candidate Starts for BabyJohn\_43:

(179, 31593), (Start: 234 @31521 has 938 MA's), (266, 31470), (353, 31317), (379, 31278), (395, 31245), (415, 31188), (419, 31179), (424, 31167), (458, 31059), (465, 31035), (468, 31026), (541, 30939), (568, 30891), (603, 30831), (636, 30768), (675, 30678), (729, 30564), (759, 30441), (790, 30354), (798, 30318), (805, 30288), (842, 30177), (856, 30138), (862, 30114), (868, 30096), (869, 30093), (918, 29973), (921, 29967), (942, 29907), (984, 29775), (985, 29772), (989, 29760), (993, 29751),

Gene: BabyRay\_45 Start: 31465, Stop: 29627, Start Num: 234

Candidate Starts for BabyRay\_45:

(Start: 234 @31465 has 938 MA's), (266, 31414), (353, 31261), (359, 31252), (390, 31201), (395, 31189), (415, 31132), (419, 31123), (458, 31003), (461, 30991), (465, 30979), (541, 30883), (568, 30835), (603, 30775), (636, 30712), (663, 30643), (675, 30622), (710, 30553), (713, 30547), (729, 30508), (759, 30385), (790, 30298), (798, 30262), (805, 30232), (816, 30202), (842, 30121), (856, 30082), (862, 30058), (868, 30040), (921, 29911), (942, 29851), (985, 29716), (989, 29704), (993, 29695),

Gene: BabyYoda\_43 Start: 30631, Stop: 32505, Start Num: 234

Candidate Starts for BabyYoda\_43:

(Start: 234 @30631 has 938 MA's), (273, 30700), (284, 30721), (395, 30901), (419, 30967), (425, 30982), (432, 31009), (603, 31303), (709, 31537), (746, 31657), (747, 31660), (759, 31720), (761, 31726), (778, 31771), (782, 31786), (786, 31801), (796, 31837), (805, 31873), (840, 31966), (869, 32059), (901, 32137), (902, 32140), (936, 32209), (942, 32233), (946, 32248), (962, 32290), (967, 32308), (985, 32368), (993, 32389),

Gene: Bachaco\_40 Start: 30596, Stop: 32467, Start Num: 234

Candidate Starts for Bachaco\_40:

(Start: 234 @30596 has 938 MA's), (273, 30665), (340, 30779), (419, 30932), (453, 31028), (556, 31187), (580, 31223), (603, 31268), (615, 31283), (655, 31376), (700, 31466), (759, 31682), (778, 31733), (782, 31748), (796, 31799), (799, 31808), (805, 31835), (840, 31928), (862, 32000), (901, 32099), (936, 32171), (942, 32195), (962, 32252), (978, 32306), (985, 32330), (993, 32351),

Gene: Bachome\_46 Start: 30764, Stop: 28977, Start Num: 234

Candidate Starts for Bachome\_46:

(Start: 234 @30764 has 938 MA's), (353, 30560), (395, 30488), (405, 30458), (415, 30431), (543, 30179), (571, 30128), (619, 30047), (639, 30002), (640, 29999), (675, 29918), (703, 29861), (728, 29819), (740, 29774), (759, 29693), (778, 29642), (790, 29606), (805, 29540), (837, 29480), (839, 29468), (871, 29366), (879, 29342), (884, 29324), (921, 29261), (935, 29234), (936, 29225), (942, 29201), (985, 29066), (989, 29054), (993, 29045),

Gene: Backyardigan\_43 Start: 31552, Stop: 29723, Start Num: 234

Candidate Starts for Backyardigan\_43:

(Start: 234 @31552 has 938 MA's), (266, 31501), (279, 31471), (379, 31309), (389, 31291), (395, 31276), (415, 31219), (419, 31210), (458, 31090), (465, 31066), (513, 31024), (541, 30973), (568,

30925), (582, 30904), (603, 30865), (628, 30820), (630, 30814), (663, 30733), (675, 30712), (700, 30667), (756, 30502), (759, 30481), (805, 30328), (818, 30289), (842, 30217), (847, 30202), (856, 30178), (861, 30160), (862, 30154), (864, 30148), (942, 29947), (985, 29812), (989, 29800), (993, 29791),

Gene: BaconJack\_48 Start: 35612, Stop: 33786, Start Num: 234

Candidate Starts for BaconJack\_48:

(Start: 234 @35612 has 938 MA's), (359, 35399), (368, 35384), (395, 35336), (405, 35306), (411, 35285), (415, 35279), (419, 35270), (457, 35153), (465, 35126), (541, 35033), (546, 35018), (596, 34934), (598, 34931), (634, 34865), (657, 34805), (679, 34760), (700, 34721), (759, 34541), (769, 34511), (775, 34493), (778, 34490), (790, 34454), (805, 34388), (839, 34316), (841, 34307), (842, 34304), (868, 34223), (936, 34073), (938, 34070), (946, 34034), (954, 34010), (959, 34001), (963, 33989), (968, 33971), (985, 33914), (993, 33893),

Gene: Bactobuster\_43 Start: 32277, Stop: 30487, Start Num: 234

Candidate Starts for Bactobuster\_43:

(Start: 234 @32277 has 938 MA's), (353, 32073), (359, 32064), (397, 31995), (405, 31968), (415, 31941), (465, 31788), (541, 31695), (566, 31647), (571, 31638), (582, 31623), (619, 31557), (635, 31524), (667, 31440), (710, 31359), (728, 31329), (759, 31203), (769, 31173), (778, 31152), (798, 31080), (805, 31050), (818, 31011), (837, 30990), (841, 30969), (908, 30789), (918, 30777), (936, 30735), (942, 30711), (962, 30654), (968, 30633), (985, 30576), (989, 30564), (993, 30555),

Gene: Badfish\_61 Start: 54554, Stop: 52695, Start Num: 197

Candidate Starts for Badfish\_61:

(Start: 180 @54578 has 1 MA's), (Start: 197 @54554 has 298 MA's), (Start: 225 @54530 has 5 MA's), (Start: 238 @54524 has 2 MA's), (Start: 261 @54482 has 10 MA's), (269, 54461), (323, 54347), (328, 54341), (349, 54311), (385, 54251), (394, 54230), (410, 54176), (418, 54164), (425, 54146), (427, 54134), (462, 54029), (496, 53972), (511, 53936), (516, 53924), (535, 53897), (545, 53870), (555, 53852), (566, 53834), (588, 53795), (595, 53786), (597, 53783), (724, 53525), (754, 53423), (760, 53390), (765, 53369), (799, 53276), (802, 53267), (822, 53204), (841, 53168), (842, 53165), (847, 53150), (872, 53072), (877, 53060), (883, 53039), (902, 53000), (942, 52910), (947, 52892), (949, 52886), (954, 52871), (964, 52847), (968, 52832), (969, 52829), (972, 52817), (979, 52793), (1002, 52745), (1015, 52721),

Gene: Badger\_43 Start: 31520, Stop: 29691, Start Num: 234

Candidate Starts for Badger\_43:

(Start: 234 @31520 has 938 MA's), (266, 31469), (279, 31439), (379, 31277), (389, 31259), (395, 31244), (415, 31187), (419, 31178), (458, 31058), (465, 31034), (513, 30992), (541, 30941), (568, 30893), (582, 30872), (603, 30833), (628, 30788), (630, 30782), (663, 30701), (675, 30680), (700, 30635), (756, 30470), (759, 30449), (805, 30296), (818, 30257), (842, 30185), (847, 30170), (856, 30146), (861, 30128), (862, 30122), (864, 30116), (942, 29915), (985, 29780), (989, 29768), (993, 29759),

Gene: Bae\_59 Start: 55561, Stop: 53708, Start Num: 189

Candidate Starts for Bae\_59:

(114, 55720), (140, 55639), (Start: 189 @55561 has 26 MA's), (Start: 222 @55516 has 1 MA's), (252, 55480), (287, 55420), (425, 55159), (441, 55117), (452, 55081), (462, 55051), (511, 54958), (516, 54946), (534, 54922), (539, 54910), (545, 54892), (583, 54829), (597, 54805), (650, 54700), (739, 54511), (743, 54493), (755, 54445), (760, 54418), (765, 54397), (797, 54310), (799, 54304), (802, 54295), (806, 54274), (834, 54211), (842, 54178), (847, 54163), (866, 54103), (872, 54085), (877, 54073), (883, 54052), (885, 54043), (887, 54040), (942, 53923), (949, 53899), (964, 53860), (968, 53845), (969, 53842), (979, 53806), (980, 53803), (1015, 53734),

Gene: Baehexic\_43 Start: 31482, Stop: 29695, Start Num: 234

Candidate Starts for Baehexic\_43:

(Start: 234 @31482 has 938 MA's), (353, 31278), (355, 31275), (359, 31269), (379, 31239), (395, 31206), (397, 31203), (405, 31176), (415, 31149), (432, 31098), (465, 30996), (541, 30903), (566, 30855), (571, 30846), (582, 30831), (619, 30765), (655, 30684), (675, 30636), (740, 30492), (759, 30411), (778, 30360), (789, 30327), (805, 30258), (818, 30219), (837, 30198), (841, 30177), (845, 30165), (918, 29985), (921, 29979), (936, 29943), (942, 29919), (968, 29841), (985, 29784), (989, 29772),

Gene: BaileyBlu\_41 Start: 29217, Stop: 31091, Start Num: 234

Candidate Starts for BaileyBlu\_41:

(116, 29007), (Start: 234 @29217 has 938 MA's), (Start: 241 @29223 has 4 MA's), (250, 29235), (377, 29448), (397, 29487), (543, 29811), (603, 29919), (615, 29934), (655, 30024), (675, 30072), (759, 30330), (769, 30360), (792, 30420), (796, 30447), (798, 30453), (876, 30687), (936, 30819), (942, 30843), (949, 30867), (959, 30891), (969, 30924), (985, 30978), (988, 30987), (1001, 31008), (1035, 31074),

Gene: Baines\_38 Start: 28622, Stop: 26757, Start Num: 283

Candidate Starts for Baines\_38:

(Start: 234 @28709 has 938 MA's), (Start: 283 @28622 has 147 MA's), (Start: 291 @28613 has 5 MA's), (342, 28508), (347, 28499), (367, 28469), (369, 28466), (424, 28346), (426, 28334), (428, 28328), (466, 28223), (473, 28196), (532, 28055), (535, 28049), (537, 28046), (541, 28034), (551, 28007), (553, 28004), (562, 27989), (566, 27983), (570, 27977), (613, 27944), (671, 27815), (701, 27755), (798, 27440), (801, 27431), (802, 27428), (805, 27410), (819, 27368), (822, 27362), (832, 27338), (849, 27281), (900, 27122), (913, 27092), (917, 27083), (938, 27023), (943, 26999), (956, 26960), (967, 26927), (970, 26915), (986, 26855),

Gene: Baloo\_58 Start: 53679, Stop: 51862, Start Num: 235

Candidate Starts for Baloo\_58:

(61, 54063), (129, 53862), (Start: 235 @53679 has 43 MA's), (252, 53649), (359, 53469), (424, 53316), (426, 53304), (437, 53274), (442, 53268), (462, 53205), (464, 53199), (496, 53148), (511, 53112), (539, 53064), (597, 52959), (647, 52863), (664, 52812), (737, 52668), (749, 52629), (755, 52599), (760, 52572), (763, 52560), (797, 52464), (799, 52458), (802, 52449), (804, 52437), (834, 52365), (841, 52335), (847, 52317), (851, 52308), (872, 52239), (877, 52227), (883, 52206), (921, 52137), (931, 52122), (938, 52098), (942, 52077), (949, 52053), (964, 52014), (969, 51996), (972, 51984), (975, 51972), (979, 51960), (994, 51918), (1015, 51888),

Gene: Balsa\_38 Start: 29055, Stop: 27190, Start Num: 283

Candidate Starts for Balsa\_38:

(Start: 283 @29055 has 147 MA's), (Start: 291 @29046 has 5 MA's), (423, 28782), (426, 28767), (428, 28761), (473, 28629), (498, 28575), (532, 28488), (537, 28479), (541, 28467), (551, 28440), (553, 28437), (562, 28422), (566, 28416), (741, 28086), (798, 27873), (801, 27864), (802, 27861), (805, 27843), (819, 27801), (834, 27771), (849, 27714), (900, 27555), (913, 27525), (938, 27456), (943, 27432), (956, 27393), (967, 27360), (970, 27348),

Gene: Bananafish\_57 Start: 52489, Stop: 50660, Start Num: 197

Candidate Starts for Bananafish\_57:

(Start: 197 @52489 has 298 MA's), (Start: 238 @52462 has 2 MA's), (253, 52432), (Start: 261 @52420 has 10 MA's), (272, 52393), (273, 52390), (277, 52381), (301, 52363), (355, 52267), (385, 52216), (395, 52192), (450, 52030), (459, 52006), (462, 51994), (496, 51937), (511, 51901), (516, 51889), (534, 51865), (580, 51781), (595, 51751), (597, 51748), (618, 51718), (678, 51574), (710, 51508), (733, 51469), (737, 51457), (743, 51436), (749, 51418), (760, 51361), (793, 51277), (799, 51247), (802, 51238), (822, 51172), (839, 51145), (841, 51136), (847, 51118), (856, 51094), (872, 51040),

(877, 51028), (883, 51007), (921, 50938), (942, 50878), (947, 50860), (960, 50827), (964, 50815), (968, 50800), (969, 50797), (972, 50785), (979, 50761), (980, 50758), (1002, 50710), (1004, 50707), (1015, 50686), (1023, 50665),

Gene: Bandik\_39 Start: 28930, Stop: 27065, Start Num: 283

Candidate Starts for Bandik\_39:

(Start: 234 @29017 has 938 MA's), (Start: 237 @29014 has 2 MA's), (Start: 283 @28930 has 147 MA's), (Start: 291 @28921 has 5 MA's), (342, 28816), (347, 28807), (367, 28777), (369, 28774), (424, 28654), (426, 28642), (428, 28636), (466, 28531), (473, 28504), (532, 28363), (535, 28357), (537, 28354), (541, 28342), (551, 28315), (553, 28312), (562, 28297), (566, 28291), (570, 28285), (613, 28252), (701, 28063), (741, 27961), (798, 27748), (801, 27739), (802, 27736), (805, 27718), (819, 27676), (822, 27670), (832, 27646), (849, 27589), (900, 27430), (913, 27400), (917, 27391), (938, 27331), (943, 27307), (956, 27268), (967, 27235), (970, 27223), (986, 27163),

Gene: BangNhom\_46 Start: 31992, Stop: 30166, Start Num: 234

Candidate Starts for BangNhom\_46:

(Start: 234 @31992 has 938 MA's), (265, 31944), (353, 31788), (395, 31716), (415, 31659), (419, 31650), (458, 31530), (465, 31506), (541, 31413), (568, 31365), (582, 31344), (603, 31305), (628, 31260), (663, 31173), (667, 31164), (675, 31152), (700, 31107), (703, 31095), (756, 30942), (759, 30921), (798, 30798), (805, 30768), (818, 30729), (841, 30663), (842, 30660), (856, 30621), (862, 30597), (942, 30390), (985, 30255), (989, 30243), (993, 30234),

Gene: Banjo\_59 Start: 54043, Stop: 52184, Start Num: 197

Candidate Starts for Banjo\_59:

(Start: 180 @54067 has 1 MA's), (Start: 197 @54043 has 298 MA's), (Start: 225 @54019 has 5 MA's), (Start: 238 @54013 has 2 MA's), (Start: 261 @53971 has 10 MA's), (269, 53950), (323, 53836), (328, 53830), (349, 53800), (385, 53740), (394, 53719), (410, 53665), (418, 53653), (425, 53635), (427, 53623), (462, 53518), (496, 53461), (511, 53425), (516, 53413), (535, 53386), (545, 53359), (555, 53341), (566, 53323), (588, 53284), (595, 53275), (597, 53272), (599, 53269), (754, 52912), (760, 52879), (765, 52858), (799, 52765), (802, 52756), (822, 52693), (841, 52657), (842, 52654), (847, 52639), (872, 52561), (877, 52549), (883, 52528), (902, 52489), (942, 52399), (947, 52381), (949, 52375), (954, 52360), (964, 52336), (968, 52321), (969, 52318), (972, 52306), (979, 52282), (1002, 52234), (1015, 52210),

Gene: BarnCat\_62 Start: 37491, Stop: 35530, Start Num: 256

Candidate Starts for BarnCat\_62:

(Start: 256 @37491 has 5 MA's), (284, 37431), (297, 37413), (316, 37371), (321, 37359), (342, 37317), (371, 37272), (389, 37248), (396, 37242), (430, 37134), (435, 37122), (502, 36969), (515, 36948), (533, 36915), (558, 36864), (569, 36843), (575, 36834), (614, 36777), (624, 36753), (629, 36741), (684, 36633), (694, 36603), (738, 36516), (742, 36498), (743, 36495), (744, 36492), (747, 36483), (775, 36375), (799, 36291), (844, 36072), (855, 36027), (875, 35961), (889, 35919), (903, 35889), (924, 35838), (926, 35832), (934, 35808), (941, 35781), (942, 35769), (943, 35766), (960, 35712), (967, 35688), (969, 35682), (985, 35628), (1012, 35574),

Gene: Barnstormer\_47 Start: 31148, Stop: 33013, Start Num: 233

Candidate Starts for Barnstormer\_47:

(153, 31028), (162, 31046), (Start: 233 @31148 has 10 MA's), (299, 31256), (600, 31844), (603, 31850), (675, 32003), (705, 32066), (759, 32261), (781, 32324), (796, 32378), (798, 32384), (806, 32417), (869, 32600), (985, 32909), (1026, 32987), (1038, 33008),

Gene: BaronJohn\_38 Start: 27578, Stop: 25713, Start Num: 283

Candidate Starts for BaronJohn\_38:

(Start: 283 @27578 has 147 MA's), (290, 27572), (337, 27473), (342, 27464), (357, 27440), (367, 27425), (371, 27419), (398, 27368), (399, 27365), (428, 27284), (479, 27134), (489, 27131), (524, 27032), (535, 27005), (537, 27002), (541, 26990), (553, 26960), (566, 26939), (611, 26903), (680, 26756), (752, 26576), (798, 26396), (805, 26366), (824, 26312), (832, 26294), (849, 26237), (854, 26210), (866, 26168), (913, 26048), (917, 26039), (938, 25979), (943, 25955), (946, 25943), (949, 25934), (956, 25916), (967, 25883), (986, 25811),

Gene: Barriga\_45 Start: 34327, Stop: 32501, Start Num: 234

Candidate Starts for Barriga\_45:

(Start: 234 @34327 has 938 MA's), (359, 34114), (368, 34099), (395, 34051), (405, 34021), (411, 34000), (415, 33994), (419, 33985), (445, 33901), (457, 33868), (465, 33841), (541, 33748), (546, 33733), (596, 33649), (598, 33646), (634, 33580), (657, 33520), (679, 33475), (700, 33436), (759, 33256), (775, 33208), (790, 33169), (805, 33103), (818, 33064), (837, 33043), (841, 33022), (847, 33004), (868, 32938), (936, 32788), (938, 32785), (946, 32749), (954, 32725), (959, 32716), (963, 32704), (970, 32677), (985, 32629), (993, 32608),

Gene: Bartimeaus\_45 Start: 31572, Stop: 29746, Start Num: 234

Candidate Starts for Bartimeaus\_45:

(Start: 234 @31572 has 938 MA's), (252, 31551), (266, 31521), (279, 31491), (379, 31329), (389, 31311), (415, 31239), (419, 31230), (458, 31110), (465, 31086), (541, 30993), (568, 30945), (582, 30924), (603, 30885), (663, 30753), (675, 30732), (700, 30687), (703, 30675), (756, 30522), (759, 30501), (798, 30378), (805, 30348), (818, 30309), (841, 30243), (842, 30240), (847, 30225), (856, 30201), (862, 30177), (942, 29970), (985, 29835), (989, 29823), (993, 29814),

Gene: Basato\_61 Start: 54317, Stop: 52458, Start Num: 197

Candidate Starts for Basato\_61:

(Start: 180 @54341 has 1 MA's), (Start: 197 @54317 has 298 MA's), (Start: 225 @54293 has 5 MA's), (Start: 238 @54287 has 2 MA's), (Start: 261 @54245 has 10 MA's), (269, 54224), (323, 54110), (328, 54104), (349, 54074), (385, 54014), (394, 53993), (410, 53939), (418, 53927), (425, 53909), (427, 53897), (462, 53792), (496, 53735), (511, 53699), (516, 53687), (535, 53660), (539, 53651), (555, 53615), (588, 53558), (595, 53549), (597, 53546), (599, 53543), (754, 53186), (760, 53153), (765, 53132), (799, 53039), (802, 53030), (822, 52967), (841, 52931), (842, 52928), (847, 52913), (872, 52835), (877, 52823), (883, 52802), (902, 52763), (942, 52673), (947, 52655), (949, 52649), (954, 52634), (964, 52610), (968, 52595), (969, 52592), (972, 52580), (979, 52556), (1002, 52508), (1015, 52484),

Gene: BatteryCK\_61 Start: 54193, Stop: 52334, Start Num: 197

Candidate Starts for BatteryCK\_61:

(Start: 180 @54217 has 1 MA's), (Start: 197 @54193 has 298 MA's), (Start: 225 @54169 has 5 MA's), (Start: 238 @54163 has 2 MA's), (Start: 261 @54121 has 10 MA's), (269, 54100), (323, 53986), (328, 53980), (349, 53950), (385, 53890), (394, 53869), (410, 53815), (418, 53803), (425, 53785), (427, 53773), (462, 53668), (496, 53611), (511, 53575), (516, 53563), (534, 53539), (539, 53527), (545, 53509), (555, 53491), (566, 53473), (588, 53434), (595, 53425), (597, 53422), (599, 53419), (754, 53062), (760, 53029), (765, 53008), (799, 52915), (802, 52906), (822, 52843), (841, 52807), (842, 52804), (847, 52789), (872, 52711), (877, 52699), (883, 52678), (902, 52639), (942, 52549), (947, 52531), (949, 52525), (954, 52510), (964, 52486), (968, 52471), (969, 52468), (972, 52456), (979, 52432), (1002, 52384), (1015, 52360),

Gene: Battleship\_48 Start: 29936, Stop: 28146, Start Num: 234

Candidate Starts for Battleship\_48:

(Start: 234 @29936 has 938 MA's), (336, 29762), (395, 29657), (397, 29654), (405, 29627), (415, 29600), (432, 29549), (465, 29447), (541, 29354), (563, 29309), (566, 29306), (571, 29297), (655, 29135), (663, 29108), (675, 29087), (679, 29081), (730, 28982), (740, 28943), (754, 28892), (759,

28862), (778, 28811), (789, 28778), (796, 28745), (798, 28739), (805, 28709), (837, 28649), (841, 28628), (856, 28586), (863, 28559), (868, 28544), (903, 28457), (936, 28394), (938, 28391), (985, 28235), (989, 28223), (995, 28211),

Gene: Bavilard\_44 Start: 33694, Stop: 31319, Start Num: 47

Candidate Starts for Bavilard\_44:

(Start: 47 @33694 has 13 MA's), (64, 33634), (82, 33592), (96, 33553), (136, 33433), (141, 33412), (170, 33388), (Start: 223 @33310 has 3 MA's), (228, 33304), (Start: 230 @33301 has 13 MA's), (252, 33271), (262, 33253), (268, 33235), (290, 33196), (Start: 291 @33193 has 5 MA's), (317, 33136), (329, 33112), (342, 33097), (380, 33034), (391, 33010), (395, 33001), (398, 32995), (399, 32989), (409, 32956), (420, 32935), (426, 32914), (495, 32731), (497, 32725), (524, 32656), (541, 32614), (634, 32527), (655, 32503), (662, 32479), (677, 32449), (711, 32398), (713, 32395), (718, 32380), (728, 32359), (772, 32185), (773, 32176), (781, 32146), (784, 32134), (805, 32041), (817, 32005), (819, 31999), (822, 31993), (824, 31987), (842, 31930), (849, 31906), (878, 31801), (879, 31798), (919, 31705), (926, 31687), (938, 31648), (942, 31627), (948, 31606), (958, 31582), (979, 31504), (986, 31480), (1046, 31348),

Gene: BayC\_48 Start: 39366, Stop: 37366, Start Num: 261

Candidate Starts for BayC\_48:

(Start: 261 @39366 has 10 MA's), (297, 39297), (361, 39165), (365, 39159), (369, 39153), (400, 39105), (403, 39093), (405, 39087), (413, 39066), (417, 39051), (441, 38982), (485, 38841), (525, 38745), (568, 38658), (584, 38634), (592, 38622), (601, 38610), (636, 38541), (703, 38394), (744, 38289), (749, 38274), (761, 38217), (767, 38196), (781, 38154), (792, 38124), (798, 38091), (810, 38037), (817, 38007), (830, 37938), (837, 37917), (856, 37854), (861, 37836), (864, 37824), (872, 37800), (942, 37599), (943, 37596), (949, 37575), (963, 37542), (968, 37524), (978, 37491), (985, 37467), (1009, 37419),

Gene: Beaglebox\_60 Start: 54107, Stop: 52248, Start Num: 197

Candidate Starts for Beaglebox\_60:

(Start: 180 @54131 has 1 MA's), (Start: 197 @54107 has 298 MA's), (Start: 225 @54083 has 5 MA's), (Start: 238 @54077 has 2 MA's), (Start: 261 @54035 has 10 MA's), (269, 54014), (323, 53900), (328, 53894), (349, 53864), (385, 53804), (394, 53783), (410, 53729), (418, 53717), (425, 53699), (427, 53687), (462, 53582), (496, 53525), (511, 53489), (516, 53477), (534, 53453), (539, 53441), (545, 53423), (555, 53405), (566, 53387), (588, 53348), (595, 53339), (597, 53336), (724, 53078), (754, 52976), (760, 52943), (765, 52922), (799, 52829), (802, 52820), (822, 52757), (841, 52721), (842, 52718), (847, 52703), (872, 52625), (877, 52613), (883, 52592), (902, 52553), (942, 52463), (947, 52445), (949, 52439), (954, 52424), (964, 52400), (968, 52385), (969, 52382), (972, 52370), (979, 52346), (1002, 52298), (1015, 52274),

Gene: Beatrix\_44 Start: 35941, Stop: 34154, Start Num: 234

Candidate Starts for Beatrix\_44:

(Start: 234 @35941 has 938 MA's), (359, 35728), (395, 35665), (405, 35635), (411, 35614), (415, 35608), (419, 35599), (457, 35482), (465, 35455), (541, 35362), (546, 35347), (596, 35263), (598, 35260), (634, 35194), (648, 35164), (657, 35134), (679, 35089), (700, 35050), (759, 34870), (775, 34822), (790, 34783), (805, 34717), (839, 34645), (841, 34636), (868, 34552), (903, 34465), (954, 34339), (960, 34327), (978, 34267), (985, 34243), (987, 34237),

Gene: BeautPeep30\_39 Start: 28936, Stop: 27071, Start Num: 283

Candidate Starts for BeautPeep30\_39:

(Start: 234 @29023 has 938 MA's), (Start: 237 @29020 has 2 MA's), (Start: 283 @28936 has 147 MA's), (Start: 291 @28927 has 5 MA's), (342, 28822), (347, 28813), (367, 28783), (369, 28780), (424, 28660), (426, 28648), (428, 28642), (466, 28537), (473, 28510), (532, 28369), (535, 28363), (537, 28360), (541, 28348), (551, 28321), (553, 28318), (562, 28303), (566, 28297), (570, 28291), (613,

28258), (701, 28069), (798, 27754), (801, 27745), (802, 27742), (805, 27724), (819, 27682), (822, 27676), (832, 27652), (849, 27595), (900, 27436), (913, 27406), (917, 27397), (938, 27337), (943, 27313), (956, 27274), (967, 27241), (970, 27229), (986, 27169),

Gene: Beauxregard13\_48 Start: 31856, Stop: 30042, Start Num: 234

Candidate Starts for Beauxregard13\_48:

(Start: 234 @31856 has 938 MA's), (262, 31817), (266, 31805), (353, 31652), (362, 31637), (395, 31580), (415, 31523), (419, 31514), (432, 31472), (448, 31421), (465, 31370), (541, 31277), (566, 31229), (571, 31220), (582, 31205), (603, 31166), (619, 31139), (634, 31109), (670, 31016), (701, 30956), (710, 30941), (759, 30785), (790, 30698), (805, 30632), (818, 30593), (842, 30521), (856, 30482), (862, 30458), (868, 30440), (879, 30407), (888, 30380), (921, 30326), (942, 30266), (968, 30188), (985, 30131), (989, 30119), (993, 30110),

Gene: BeeBee8\_39 Start: 29216, Stop: 27360, Start Num: 291

Candidate Starts for BeeBee8\_39:

(Start: 283 @29225 has 147 MA's), (Start: 291 @29216 has 5 MA's), (423, 28952), (426, 28937), (428, 28931), (473, 28799), (498, 28745), (532, 28658), (537, 28649), (541, 28637), (551, 28610), (553, 28607), (562, 28592), (566, 28586), (741, 28256), (798, 28043), (801, 28034), (802, 28031), (805, 28013), (819, 27971), (834, 27941), (849, 27884), (900, 27725), (913, 27695), (938, 27626), (943, 27602), (956, 27563), (967, 27530), (970, 27518),

Gene: Beemo\_45 Start: 31539, Stop: 29746, Start Num: 234

Candidate Starts for Beemo\_45:

(Start: 234 @31539 has 938 MA's), (246, 31530), (266, 31488), (334, 31368), (336, 31365), (364, 31317), (397, 31257), (406, 31227), (409, 31215), (415, 31203), (465, 31050), (541, 30957), (619, 30819), (634, 30789), (703, 30630), (710, 30618), (726, 30591), (756, 30483), (759, 30462), (802, 30327), (805, 30309), (841, 30228), (856, 30186), (879, 30111), (918, 30036), (936, 29994), (968, 29892), (985, 29835), (989, 29823), (993, 29814),

Gene: BeesKnees\_45 Start: 34407, Stop: 32581, Start Num: 234

Candidate Starts for BeesKnees\_45:

(Start: 234 @34407 has 938 MA's), (359, 34194), (395, 34131), (405, 34101), (411, 34080), (415, 34074), (419, 34065), (457, 33948), (465, 33921), (541, 33828), (546, 33813), (596, 33729), (598, 33726), (634, 33660), (648, 33630), (657, 33600), (679, 33555), (700, 33516), (759, 33336), (775, 33288), (790, 33249), (805, 33183), (818, 33144), (837, 33123), (841, 33102), (847, 33084), (868, 33018), (936, 32868), (938, 32865), (946, 32829), (959, 32796), (963, 32784), (970, 32757), (985, 32709), (993, 32688),

Gene: Belenaria\_36 Start: 28114, Stop: 26330, Start Num: 234

Candidate Starts for Belenaria\_36:

(Start: 234 @28114 has 938 MA's), (374, 27880), (390, 27850), (394, 27841), (395, 27838), (409, 27793), (415, 27781), (432, 27730), (465, 27628), (492, 27607), (541, 27535), (563, 27490), (566, 27487), (589, 27445), (594, 27439), (603, 27424), (619, 27397), (663, 27292), (667, 27283), (679, 27265), (700, 27226), (729, 27169), (759, 27046), (775, 26998), (805, 26893), (806, 26890), (837, 26833), (841, 26812), (858, 26764), (881, 26689), (918, 26620), (936, 26578), (942, 26554), (968, 26476), (985, 26419), (989, 26407), (993, 26398), (1010, 26368), (1021, 26350),

Gene: BellusTerra\_46 Start: 31571, Stop: 29745, Start Num: 234

Candidate Starts for BellusTerra\_46:

(Start: 234 @31571 has 938 MA's), (252, 31550), (266, 31520), (279, 31490), (379, 31328), (389, 31310), (415, 31238), (419, 31229), (458, 31109), (465, 31085), (541, 30992), (568, 30944), (582, 30923), (603, 30884), (663, 30752), (675, 30731), (700, 30686), (703, 30674), (756, 30521), (759, 30500), (798, 30377), (805, 30347), (818, 30308), (841, 30242), (842, 30239), (847, 30224), (856,



30200), (862, 30176), (942, 29969), (985, 29834), (989, 29822), (993, 29813),

Gene: BelmontSKP\_43 Start: 29896, Stop: 31770, Start Num: 234

Candidate Starts for BelmontSKP\_43:

(Start: 231 @29893 has 7 MA's), (Start: 234 @29896 has 938 MA's), (273, 29965), (284, 29986), (419, 30232), (432, 30274), (556, 30487), (603, 30568), (709, 30802), (747, 30925), (759, 30985), (761, 30991), (778, 31036), (782, 31051), (786, 31066), (796, 31102), (805, 31138), (840, 31231), (869, 31324), (901, 31402), (936, 31474), (946, 31513), (962, 31555), (967, 31573), (978, 31609), (985, 31633), (993, 31654),

Gene: Ben11\_58 Start: 53891, Stop: 52074, Start Num: 235

Candidate Starts for Ben11\_58:

(129, 54074), (Start: 235 @53891 has 43 MA's), (252, 53861), (359, 53681), (424, 53528), (426, 53516), (437, 53486), (442, 53480), (462, 53417), (464, 53411), (496, 53360), (509, 53333), (511, 53324), (539, 53276), (597, 53171), (647, 53075), (664, 53024), (737, 52880), (749, 52841), (755, 52811), (760, 52784), (763, 52772), (797, 52676), (799, 52670), (802, 52661), (804, 52649), (834, 52577), (841, 52547), (847, 52529), (851, 52520), (872, 52451), (877, 52439), (883, 52418), (921, 52349), (931, 52334), (938, 52310), (942, 52289), (947, 52271), (949, 52265), (962, 52232), (964, 52226), (969, 52208), (972, 52196), (975, 52184), (979, 52172), (994, 52130), (1015, 52100),

Gene: Benedict\_39 Start: 30154, Stop: 28289, Start Num: 234

Candidate Starts for Benedict\_39:

(Start: 205 @30187 has 2 MA's), (Start: 234 @30154 has 938 MA's), (301, 30043), (353, 29950), (355, 29947), (395, 29878), (397, 29875), (405, 29848), (415, 29821), (419, 29812), (445, 29728), (448, 29719), (453, 29704), (465, 29668), (520, 29608), (541, 29572), (563, 29527), (566, 29524), (581, 29503), (582, 29500), (618, 29440), (652, 29362), (670, 29314), (679, 29302), (701, 29254), (724, 29203), (759, 29068), (775, 29020), (782, 29002), (790, 28981), (793, 28972), (799, 28942), (805, 28915), (806, 28912), (841, 28834), (862, 28768), (879, 28717), (903, 28663), (908, 28654), (921, 28636), (947, 28558), (978, 28465), (985, 28441), (989, 28429), (1042, 28324),

Gene: Bengal\_43 Start: 29549, Stop: 31423, Start Num: 234

Candidate Starts for Bengal\_43:

(Start: 234 @29549 has 938 MA's), (273, 29618), (284, 29639), (419, 29885), (425, 29900), (432, 29927), (603, 30221), (663, 30356), (709, 30455), (747, 30578), (759, 30638), (761, 30644), (778, 30689), (782, 30704), (786, 30719), (796, 30755), (805, 30791), (840, 30884), (869, 30977), (901, 31055), (936, 31127), (946, 31166), (962, 31208), (967, 31226), (978, 31262), (985, 31286), (993, 31307),

Gene: BengiVuitton\_44 Start: 31228, Stop: 29441, Start Num: 234

Candidate Starts for BengiVuitton\_44:

(Start: 234 @31228 has 938 MA's), (353, 31024), (355, 31021), (359, 31015), (368, 31000), (379, 30985), (395, 30952), (397, 30949), (405, 30922), (415, 30895), (424, 30874), (432, 30844), (465, 30742), (541, 30649), (544, 30640), (566, 30601), (571, 30592), (582, 30577), (619, 30511), (655, 30430), (675, 30382), (679, 30376), (740, 30238), (759, 30157), (778, 30106), (789, 30073), (790, 30070), (805, 30004), (818, 29965), (837, 29944), (859, 29869), (864, 29851), (879, 29806), (888, 29779), (908, 29743), (921, 29725), (936, 29689), (942, 29665), (962, 29608), (968, 29587), (985, 29530), (989, 29518),

Gene: Benjalauren\_39 Start: 28635, Stop: 26770, Start Num: 283

Candidate Starts for Benjalauren\_39:

(Start: 234 @28722 has 938 MA's), (Start: 237 @28719 has 2 MA's), (Start: 283 @28635 has 147 MA's), (Start: 291 @28626 has 5 MA's), (342, 28521), (347, 28512), (367, 28482), (369, 28479), (424, 28359), (426, 28347), (428, 28341), (466, 28236), (473, 28209), (532, 28068), (535, 28062), (537,

28059), (541, 28047), (551, 28020), (553, 28017), (562, 28002), (566, 27996), (570, 27990), (613, 27957), (671, 27828), (701, 27768), (798, 27453), (801, 27444), (802, 27441), (805, 27423), (819, 27381), (822, 27375), (825, 27366), (832, 27351), (849, 27294), (900, 27135), (913, 27105), (917, 27096), (938, 27036), (943, 27012), (956, 26973), (967, 26940), (970, 26928), (986, 26868),

Gene: Benvolio\_41 Start: 30754, Stop: 28967, Start Num: 234

Candidate Starts for Benvolio\_41:

(Start: 234 @30754 has 938 MA's), (355, 30547), (359, 30541), (379, 30511), (395, 30478), (397, 30475), (405, 30448), (415, 30421), (424, 30400), (465, 30268), (541, 30175), (566, 30127), (571, 30118), (582, 30103), (619, 30037), (655, 29956), (675, 29908), (679, 29902), (710, 29839), (740, 29764), (759, 29683), (778, 29632), (789, 29599), (790, 29596), (805, 29530), (818, 29491), (837, 29470), (859, 29395), (864, 29377), (868, 29365), (879, 29332), (888, 29305), (908, 29269), (936, 29215), (942, 29191), (962, 29134), (968, 29113), (985, 29056), (989, 29044), (993, 29035),

Gene: Bernardo\_59 Start: 54028, Stop: 52211, Start Num: 235

Candidate Starts for Bernardo\_59:

(129, 54211), (Start: 235 @54028 has 43 MA's), (252, 53998), (359, 53818), (424, 53665), (426, 53653), (437, 53623), (442, 53617), (462, 53554), (464, 53548), (496, 53497), (511, 53461), (539, 53413), (597, 53308), (647, 53212), (664, 53161), (737, 53017), (749, 52978), (755, 52948), (760, 52921), (763, 52909), (797, 52813), (799, 52807), (802, 52798), (804, 52786), (834, 52714), (841, 52684), (847, 52666), (851, 52657), (872, 52588), (877, 52576), (883, 52555), (921, 52486), (931, 52471), (938, 52447), (942, 52426), (949, 52402), (964, 52363), (969, 52345), (972, 52333), (975, 52321), (979, 52309), (994, 52267), (1015, 52237),

Gene: Bernstein\_40 Start: 27521, Stop: 29389, Start Num: 231

Candidate Starts for Bernstein\_40:

(Start: 231 @27521 has 7 MA's), (Start: 234 @27524 has 938 MA's), (Start: 237 @27527 has 2 MA's), (273, 27596), (425, 27878), (432, 27905), (453, 27959), (559, 28124), (603, 28199), (618, 28220), (747, 28574), (759, 28634), (778, 28685), (796, 28751), (805, 28787), (840, 28880), (901, 29051), (936, 29123), (962, 29204), (984, 29279), (985, 29282), (993, 29303), (1032, 29372),

Gene: Berrie\_42 Start: 30512, Stop: 32377, Start Num: 234

Candidate Starts for Berrie\_42:

(Start: 234 @30512 has 938 MA's), (265, 30560), (353, 30716), (382, 30749), (411, 30830), (436, 30899), (543, 31106), (548, 31118), (598, 31205), (603, 31214), (615, 31229), (655, 31319), (675, 31367), (730, 31505), (759, 31625), (790, 31712), (805, 31778), (840, 31871), (862, 31943), (905, 32051), (936, 32114), (942, 32138), (985, 32273), (988, 32282), (1031, 32360),

Gene: Bethlehem\_44 Start: 35080, Stop: 33254, Start Num: 234

Candidate Starts for Bethlehem\_44:

(Start: 234 @35080 has 938 MA's), (359, 34867), (395, 34804), (405, 34774), (411, 34753), (415, 34747), (419, 34738), (457, 34621), (465, 34594), (541, 34501), (546, 34486), (596, 34402), (598, 34399), (634, 34333), (648, 34303), (657, 34273), (679, 34228), (700, 34189), (759, 34009), (775, 33961), (790, 33922), (805, 33856), (818, 33817), (837, 33796), (841, 33775), (847, 33757), (868, 33691), (936, 33541), (938, 33538), (946, 33502), (959, 33469), (963, 33457), (970, 33430), (985, 33382), (993, 33361),

Gene: Bexan\_43 Start: 35619, Stop: 33832, Start Num: 234

Candidate Starts for Bexan\_43:

(Start: 234 @35619 has 938 MA's), (359, 35406), (395, 35343), (405, 35313), (411, 35292), (415, 35286), (419, 35277), (457, 35160), (465, 35133), (541, 35040), (546, 35025), (566, 34992), (596, 34941), (598, 34938), (634, 34872), (648, 34842), (657, 34812), (679, 34767), (700, 34728), (759, 34548), (775, 34500), (790, 34461), (805, 34395), (839, 34323), (841, 34314), (868, 34230), (903,

34143), (954, 34017), (960, 34005), (978, 33945), (985, 33921), (987, 33915),

Gene: BiancaTri92\_44 Start: 32044, Stop: 30257, Start Num: 234

Candidate Starts for BiancaTri92\_44:

(Start: 234 @32044 has 938 MA's), (355, 31837), (359, 31831), (368, 31816), (379, 31801), (405, 31738), (415, 31711), (424, 31690), (465, 31558), (541, 31465), (571, 31408), (582, 31393), (619, 31327), (655, 31246), (675, 31198), (679, 31192), (740, 31054), (759, 30973), (778, 30922), (789, 30889), (790, 30886), (793, 30877), (798, 30850), (805, 30820), (818, 30781), (837, 30760), (841, 30739), (921, 30541), (936, 30505), (942, 30481), (962, 30424), (968, 30403), (985, 30346), (989, 30334), (993, 30325),

Gene: Big3\_43 Start: 34644, Stop: 32818, Start Num: 234

Candidate Starts for Big3\_43:

(Start: 234 @34644 has 938 MA's), (359, 34431), (368, 34416), (395, 34368), (405, 34338), (411, 34317), (415, 34311), (419, 34302), (457, 34185), (465, 34158), (541, 34065), (546, 34050), (566, 34017), (596, 33966), (598, 33963), (634, 33897), (648, 33867), (657, 33837), (679, 33792), (700, 33753), (759, 33573), (775, 33525), (790, 33486), (805, 33420), (818, 33381), (837, 33360), (841, 33339), (847, 33321), (868, 33255), (936, 33105), (938, 33102), (946, 33066), (954, 33042), (959, 33033), (963, 33021), (985, 32946), (993, 32925),

Gene: Big4\_105 Start: 80746, Stop: 78878, Start Num: 232

Candidate Starts for Big4\_105:

(217, 80767), (Start: 223 @80758 has 3 MA's), (Start: 225 @80755 has 5 MA's), (Start: 232 @80746 has 15 MA's), (334, 80548), (370, 80488), (382, 80473), (426, 80365), (428, 80359), (463, 80266), (469, 80248), (544, 80173), (586, 80089), (603, 80062), (618, 80041), (635, 80002), (650, 79969), (664, 79927), (684, 79894), (700, 79864), (711, 79837), (759, 79675), (795, 79561), (816, 79477), (822, 79462), (825, 79453), (853, 79366), (856, 79357), (865, 79324), (931, 79168), (960, 79072), (968, 79045), (985, 78988), (995, 78964),

Gene: BigChungus\_44 Start: 33868, Stop: 31490, Start Num: 47

Candidate Starts for BigChungus\_44:

(Start: 47 @33868 has 13 MA's), (64, 33808), (82, 33766), (96, 33727), (124, 33637), (136, 33607), (141, 33586), (170, 33562), (Start: 223 @33484 has 3 MA's), (228, 33478), (Start: 230 @33475 has 13 MA's), (252, 33445), (262, 33427), (268, 33409), (290, 33370), (Start: 291 @33367 has 5 MA's), (317, 33310), (329, 33286), (342, 33271), (380, 33208), (391, 33184), (395, 33175), (398, 33169), (399, 33163), (409, 33130), (420, 33109), (426, 33088), (495, 32905), (524, 32830), (541, 32788), (634, 32701), (655, 32677), (662, 32653), (666, 32644), (677, 32623), (711, 32572), (713, 32569), (718, 32554), (728, 32533), (759, 32407), (772, 32359), (773, 32350), (784, 32308), (805, 32215), (817, 32179), (819, 32173), (822, 32167), (824, 32161), (842, 32104), (849, 32080), (878, 31975), (879, 31972), (919, 31879), (926, 31861), (938, 31822), (948, 31780), (958, 31756), (967, 31726), (979, 31678), (986, 31654), (996, 31630), (1008, 31609), (1046, 31522), (1050, 31510),

Gene: BigMau\_45 Start: 34189, Stop: 32360, Start Num: 234

Candidate Starts for BigMau\_45:

(Start: 234 @34189 has 938 MA's), (359, 33976), (368, 33961), (395, 33913), (405, 33883), (411, 33862), (415, 33856), (419, 33847), (457, 33730), (465, 33703), (541, 33610), (546, 33595), (558, 33574), (596, 33511), (598, 33508), (628, 33454), (634, 33442), (648, 33412), (657, 33382), (679, 33337), (700, 33298), (759, 33118), (775, 33070), (793, 33022), (802, 32983), (805, 32965), (818, 32926), (837, 32905), (841, 32884), (885, 32746), (960, 32575), (967, 32551), (977, 32518), (982, 32503), (985, 32491), (993, 32470), (997, 32464), (1025, 32416), (1030, 32401),

Gene: BigPaolini\_45 Start: 33608, Stop: 31821, Start Num: 234

Candidate Starts for BigPaolini\_45:

(Start: 234 @33608 has 938 MA's), (359, 33395), (368, 33380), (405, 33302), (411, 33281), (415, 33275), (419, 33266), (457, 33149), (465, 33122), (541, 33029), (546, 33014), (566, 32981), (596, 32930), (598, 32927), (628, 32873), (634, 32861), (648, 32831), (657, 32801), (679, 32756), (700, 32717), (759, 32537), (775, 32489), (790, 32450), (805, 32384), (839, 32312), (841, 32303), (868, 32219), (903, 32132), (954, 32006), (960, 31994), (985, 31910), (987, 31904),

Gene: BigRedClifford\_39 Start: 28934, Stop: 27069, Start Num: 283

Candidate Starts for BigRedClifford\_39:

(Start: 234 @29021 has 938 MA's), (Start: 237 @29018 has 2 MA's), (Start: 283 @28934 has 147 MA's), (Start: 291 @28925 has 5 MA's), (342, 28820), (347, 28811), (367, 28781), (369, 28778), (424, 28658), (426, 28646), (428, 28640), (466, 28535), (473, 28508), (532, 28367), (537, 28358), (541, 28346), (551, 28319), (553, 28316), (562, 28301), (566, 28295), (570, 28289), (613, 28256), (671, 28127), (701, 28067), (798, 27752), (801, 27743), (802, 27740), (805, 27722), (819, 27680), (822, 27674), (825, 27665), (832, 27650), (849, 27593), (900, 27434), (913, 27404), (917, 27395), (938, 27335), (943, 27311), (956, 27272), (967, 27239), (970, 27227), (986, 27167),

Gene: Bigfoot\_41 Start: 33829, Stop: 32003, Start Num: 234

Candidate Starts for Bigfoot\_41:

(Start: 234 @33829 has 938 MA's), (359, 33616), (368, 33601), (395, 33553), (405, 33523), (411, 33502), (415, 33496), (419, 33487), (457, 33370), (465, 33343), (541, 33250), (546, 33235), (566, 33202), (596, 33151), (598, 33148), (634, 33082), (657, 33022), (679, 32977), (700, 32938), (759, 32758), (775, 32710), (790, 32671), (805, 32605), (818, 32566), (837, 32545), (841, 32524), (847, 32506), (868, 32440), (936, 32290), (938, 32287), (946, 32251), (954, 32227), (959, 32218), (963, 32206), (970, 32179), (985, 32131), (993, 32110),

Gene: BiggityBass\_49 Start: 47333, Stop: 45519, Start Num: 225

Candidate Starts for BiggityBass\_49:

(165, 47423), (Start: 225 @47333 has 5 MA's), (Start: 238 @47324 has 2 MA's), (Start: 261 @47282 has 10 MA's), (355, 47114), (379, 47072), (406, 47003), (424, 46964), (427, 46949), (456, 46874), (462, 46853), (511, 46760), (582, 46634), (583, 46631), (595, 46610), (597, 46607), (643, 46517), (703, 46379), (743, 46295), (749, 46277), (760, 46220), (797, 46112), (799, 46106), (802, 46097), (822, 46034), (842, 45995), (847, 45980), (872, 45902), (877, 45890), (878, 45884), (883, 45869), (885, 45860), (935, 45773), (942, 45740), (943, 45737), (961, 45686), (964, 45677), (979, 45617), (1015, 45545),

Gene: BillDoor\_43 Start: 31825, Stop: 29438, Start Num: 36

Candidate Starts for BillDoor\_43:

(Start: 36 @31825 has 16 MA's), (64, 31762), (86, 31705), (127, 31582), (136, 31558), (Start: 230 @31426 has 13 MA's), (250, 31399), (295, 31306), (317, 31261), (354, 31201), (366, 31183), (391, 31135), (409, 31081), (410, 31078), (420, 31060), (426, 31039), (445, 30988), (448, 30979), (449, 30976), (495, 30856), (519, 30796), (524, 30781), (570, 30697), (634, 30652), (643, 30628), (655, 30622), (662, 30598), (707, 30520), (711, 30517), (713, 30514), (724, 30490), (758, 30367), (773, 30298), (774, 30292), (796, 30199), (805, 30163), (817, 30127), (819, 30121), (822, 30115), (824, 30109), (834, 30085), (842, 30052), (849, 30028), (859, 29983), (878, 29923), (938, 29770), (947, 29731), (948, 29728), (986, 29602), (1008, 29557), (1013, 29548), (1037, 29488),

Gene: BillKnuckles\_45 Start: 35369, Stop: 33540, Start Num: 234

Candidate Starts for BillKnuckles\_45:

(Start: 234 @35369 has 938 MA's), (359, 35156), (368, 35141), (395, 35093), (405, 35063), (411, 35042), (415, 35036), (419, 35027), (457, 34910), (465, 34883), (541, 34790), (546, 34775), (566, 34742), (596, 34691), (598, 34688), (634, 34622), (648, 34592), (657, 34562), (679, 34517), (700, 34478), (759, 34298), (775, 34250), (793, 34202), (802, 34163), (805, 34145), (818, 34106), (837, 34085), (841, 34064), (846, 34049), (885, 33926), (960, 33755), (967, 33731), (982, 33683), (985,

33671), (993, 33650), (997, 33644), (1025, 33596), (1030, 33581),

Gene: Bimmel\_18 Start: 11968, Stop: 10178, Start Num: 234

Candidate Starts for Bimmel\_18:

(Start: 234 @11968 has 938 MA's), (359, 11758), (387, 11716), (405, 11665), (415, 11638), (424, 11617), (437, 11572), (465, 11485), (535, 11407), (541, 11392), (603, 11275), (675, 11122), (705, 11077), (713, 11062), (744, 10975), (759, 10906), (780, 10843), (795, 10792), (796, 10786), (805, 10750), (841, 10669), (857, 10624), (960, 10360), (978, 10300), (985, 10276), (1021, 10207), (1024, 10204),

Gene: Bircsak\_44 Start: 35182, Stop: 33353, Start Num: 234

Candidate Starts for Bircsak\_44:

(Start: 234 @35182 has 938 MA's), (359, 34969), (368, 34954), (395, 34906), (405, 34876), (408, 34864), (411, 34855), (415, 34849), (419, 34840), (457, 34723), (465, 34696), (541, 34603), (546, 34588), (558, 34567), (566, 34555), (596, 34504), (598, 34501), (634, 34435), (648, 34405), (657, 34375), (679, 34330), (700, 34291), (759, 34111), (775, 34063), (793, 34015), (802, 33976), (805, 33958), (818, 33919), (837, 33898), (841, 33877), (846, 33862), (885, 33739), (960, 33568), (967, 33544), (982, 33496), (985, 33484), (993, 33463), (997, 33457), (1025, 33409), (1030, 33394),

Gene: BirdsNest\_61 Start: 54182, Stop: 52338, Start Num: 220

Candidate Starts for BirdsNest\_61:

(Start: 220 @54182 has 3 MA's), (Start: 261 @54125 has 10 MA's), (272, 54098), (328, 53996), (385, 53909), (404, 53855), (410, 53834), (424, 53810), (427, 53795), (462, 53690), (511, 53597), (516, 53585), (539, 53549), (597, 53444), (664, 53297), (704, 53213), (706, 53207), (737, 53147), (739, 53144), (749, 53108), (760, 53051), (797, 52943), (799, 52937), (802, 52928), (841, 52814), (847, 52796), (872, 52718), (877, 52706), (883, 52685), (921, 52616), (931, 52601), (942, 52556), (949, 52532), (964, 52493), (968, 52478), (972, 52463), (979, 52439), (994, 52394), (1002, 52388), (1015, 52364),

Gene: Bishoperium\_60 Start: 54582, Stop: 52723, Start Num: 197

Candidate Starts for Bishoperium\_60:

(Start: 180 @54606 has 1 MA's), (Start: 197 @54582 has 298 MA's), (Start: 225 @54558 has 5 MA's), (Start: 238 @54552 has 2 MA's), (Start: 261 @54510 has 10 MA's), (269, 54489), (323, 54375), (328, 54369), (349, 54339), (385, 54279), (394, 54258), (410, 54204), (418, 54192), (425, 54174), (427, 54162), (462, 54057), (496, 54000), (511, 53964), (516, 53952), (535, 53925), (545, 53898), (555, 53880), (566, 53862), (588, 53823), (595, 53814), (597, 53811), (599, 53808), (754, 53451), (760, 53418), (765, 53397), (799, 53304), (802, 53295), (822, 53232), (841, 53196), (842, 53193), (847, 53178), (872, 53100), (877, 53088), (883, 53067), (902, 53028), (942, 52938), (947, 52920), (949, 52914), (954, 52899), (964, 52875), (968, 52860), (969, 52857), (972, 52845), (979, 52821), (1002, 52773), (1015, 52749),

Gene: Biskit\_45 Start: 32515, Stop: 30125, Start Num: 36

Candidate Starts for Biskit\_45:

(Start: 36 @32515 has 16 MA's), (64, 32452), (71, 32434), (76, 32419), (96, 32365), (100, 32353), (105, 32332), (119, 32299), (127, 32272), (136, 32248), (159, 32221), (Start: 230 @32116 has 13 MA's), (262, 32068), (317, 31951), (366, 31870), (382, 31843), (391, 31822), (409, 31768), (410, 31765), (420, 31747), (426, 31726), (448, 31666), (524, 31468), (541, 31426), (634, 31339), (643, 31315), (655, 31309), (677, 31255), (682, 31249), (707, 31207), (711, 31204), (713, 31201), (758, 31054), (770, 31012), (773, 30985), (784, 30943), (805, 30850), (817, 30814), (819, 30808), (822, 30802), (824, 30796), (834, 30772), (842, 30739), (849, 30715), (859, 30670), (878, 30610), (938, 30457), (986, 30289), (1008, 30244), (1013, 30235), (1016, 30226),

Gene: BlackStallion\_62 Start: 54311, Stop: 52452, Start Num: 197

Candidate Starts for BlackStallion\_62:

(Start: 180 @54335 has 1 MA's), (Start: 197 @54311 has 298 MA's), (Start: 225 @54287 has 5 MA's), (Start: 238 @54281 has 2 MA's), (Start: 261 @54239 has 10 MA's), (269, 54218), (323, 54104), (328, 54098), (349, 54068), (385, 54008), (394, 53987), (410, 53933), (418, 53921), (425, 53903), (427, 53891), (462, 53786), (496, 53729), (511, 53693), (516, 53681), (534, 53657), (539, 53645), (545, 53627), (555, 53609), (566, 53591), (588, 53552), (595, 53543), (597, 53540), (599, 53537), (754, 53180), (760, 53147), (765, 53126), (799, 53033), (802, 53024), (822, 52961), (841, 52925), (842, 52922), (847, 52907), (872, 52829), (877, 52817), (883, 52796), (902, 52757), (942, 52667), (947, 52649), (949, 52643), (954, 52628), (964, 52604), (968, 52589), (969, 52586), (972, 52574), (979, 52550), (1002, 52502), (1015, 52478),

Gene: Blackmoor\_45 Start: 31572, Stop: 29746, Start Num: 234

Candidate Starts for Blackmoor\_45:

(Start: 234 @31572 has 938 MA's), (252, 31551), (266, 31521), (279, 31491), (379, 31329), (389, 31311), (415, 31239), (419, 31230), (458, 31110), (465, 31086), (541, 30993), (568, 30945), (582, 30924), (603, 30885), (663, 30753), (675, 30732), (700, 30687), (703, 30675), (756, 30522), (759, 30501), (798, 30378), (805, 30348), (818, 30309), (841, 30243), (842, 30240), (847, 30225), (856, 30201), (862, 30177), (942, 29970), (985, 29835), (989, 29823), (993, 29814),

Gene: Blage\_39 Start: 28934, Stop: 27069, Start Num: 283

Candidate Starts for Blage\_39:

(Start: 234 @29021 has 938 MA's), (Start: 237 @29018 has 2 MA's), (Start: 283 @28934 has 147 MA's), (Start: 291 @28925 has 5 MA's), (342, 28820), (347, 28811), (367, 28781), (369, 28778), (424, 28658), (426, 28646), (428, 28640), (466, 28535), (473, 28508), (532, 28367), (537, 28358), (541, 28346), (551, 28319), (553, 28316), (562, 28301), (566, 28295), (570, 28289), (613, 28256), (671, 28127), (701, 28067), (798, 27752), (801, 27743), (802, 27740), (805, 27722), (819, 27680), (822, 27674), (825, 27665), (832, 27650), (849, 27593), (900, 27434), (913, 27404), (917, 27395), (938, 27335), (943, 27311), (956, 27272), (967, 27239), (970, 27227), (986, 27167),

Gene: BlessJoy\_46 Start: 29785, Stop: 27944, Start Num: 234

Candidate Starts for BlessJoy\_46:

(Start: 212 @29815 has 1 MA's), (Start: 234 @29785 has 938 MA's), (353, 29581), (395, 29506), (397, 29503), (405, 29476), (409, 29461), (415, 29449), (432, 29398), (461, 29308), (465, 29296), (541, 29203), (559, 29164), (571, 29146), (582, 29131), (619, 29065), (635, 29032), (636, 29029), (681, 28927), (710, 28867), (740, 28783), (759, 28702), (789, 28618), (790, 28615), (793, 28606), (798, 28579), (805, 28549), (837, 28489), (847, 28450), (936, 28234), (938, 28231), (942, 28210), (985, 28075), (989, 28063), (993, 28054), (995, 28051), (1042, 27958),

Gene: Blinn1\_48 Start: 30144, Stop: 28303, Start Num: 234

Candidate Starts for Blinn1\_48:

(Start: 234 @30144 has 938 MA's), (353, 29940), (395, 29865), (397, 29862), (409, 29820), (415, 29808), (432, 29757), (465, 29655), (541, 29562), (559, 29523), (571, 29505), (582, 29490), (619, 29424), (635, 29391), (636, 29388), (681, 29286), (710, 29226), (740, 29142), (759, 29061), (789, 28977), (790, 28974), (793, 28965), (798, 28938), (802, 28926), (805, 28908), (837, 28848), (847, 28809), (856, 28785), (936, 28593), (938, 28590), (942, 28569), (985, 28434), (989, 28422), (993, 28413), (995, 28410), (1042, 28317),

Gene: Blocker23\_57 Start: 52599, Stop: 50770, Start Num: 197

Candidate Starts for Blocker23\_57:

(Start: 197 @52599 has 298 MA's), (Start: 238 @52572 has 2 MA's), (253, 52542), (Start: 261 @52530 has 10 MA's), (272, 52503), (273, 52500), (277, 52491), (301, 52473), (355, 52377), (385, 52326), (395, 52302), (402, 52278), (450, 52140), (459, 52116), (462, 52104), (496, 52047), (511, 52011), (516, 51999), (534, 51975), (580, 51891), (595, 51861), (597, 51858), (618, 51828), (678, 51684),

(710, 51618), (733, 51579), (737, 51567), (743, 51546), (749, 51528), (760, 51471), (793, 51387), (799, 51357), (802, 51348), (822, 51282), (839, 51255), (841, 51246), (847, 51228), (856, 51204), (872, 51150), (877, 51138), (883, 51117), (921, 51048), (942, 50988), (947, 50970), (960, 50937), (964, 50925), (968, 50910), (969, 50907), (972, 50895), (979, 50871), (980, 50868), (1002, 50820), (1004, 50817), (1015, 50796), (1023, 50775),

Gene: Blondies\_45 Start: 32832, Stop: 30442, Start Num: 36

Candidate Starts for Blondies\_45:

(Start: 36 @32832 has 16 MA's), (64, 32769), (76, 32736), (96, 32682), (100, 32670), (105, 32649), (119, 32616), (127, 32589), (136, 32565), (159, 32538), (Start: 230 @32433 has 13 MA's), (262, 32385), (317, 32268), (366, 32187), (382, 32160), (391, 32139), (409, 32085), (410, 32082), (420, 32064), (426, 32043), (448, 31983), (524, 31785), (541, 31743), (634, 31656), (643, 31632), (655, 31626), (677, 31572), (682, 31566), (707, 31524), (711, 31521), (713, 31518), (758, 31371), (770, 31329), (773, 31302), (784, 31260), (805, 31167), (817, 31131), (819, 31125), (822, 31119), (824, 31113), (834, 31089), (842, 31056), (849, 31032), (859, 30987), (938, 30774), (986, 30606), (1008, 30561), (1013, 30552), (1016, 30543),

Gene: Bloom\_103 Start: 78450, Stop: 80246, Start Num: 248

Candidate Starts for Bloom\_103:

(Start: 248 @78450 has 2 MA's), (301, 78546), (418, 78762), (426, 78789), (428, 78795), (457, 78864), (468, 78900), (586, 79047), (588, 79053), (603, 79074), (615, 79089), (700, 79278), (720, 79323), (731, 79356), (735, 79374), (746, 79407), (756, 79446), (759, 79467), (761, 79473), (796, 79587), (817, 79671), (821, 79677), (825, 79689), (840, 79737), (843, 79749), (856, 79785), (865, 79818), (868, 79827), (883, 79872), (890, 79890), (931, 79974), (936, 79995), (943, 80022), (947, 80037), (960, 80070), (967, 80094), (973, 80118), (985, 80154), (999, 80181),

Gene: BluSpix\_42 Start: 30791, Stop: 28962, Start Num: 234

Candidate Starts for BluSpix\_42:

(Start: 234 @30791 has 938 MA's), (359, 30578), (395, 30515), (405, 30485), (411, 30464), (415, 30458), (419, 30449), (457, 30332), (465, 30305), (541, 30212), (546, 30197), (566, 30164), (596, 30113), (598, 30110), (634, 30044), (657, 29984), (679, 29939), (700, 29900), (759, 29720), (775, 29672), (793, 29624), (802, 29585), (805, 29567), (818, 29528), (837, 29507), (841, 29486), (846, 29471), (885, 29348), (960, 29177), (967, 29153), (982, 29105), (985, 29093), (993, 29072), (997, 29066), (1025, 29018), (1030, 29003),

Gene: Blue\_44 Start: 34966, Stop: 33140, Start Num: 234

Candidate Starts for Blue\_44:

(Start: 234 @34966 has 938 MA's), (359, 34753), (368, 34738), (405, 34660), (411, 34639), (415, 34633), (419, 34624), (457, 34507), (465, 34480), (541, 34387), (546, 34372), (596, 34288), (598, 34285), (634, 34219), (648, 34189), (657, 34159), (679, 34114), (700, 34075), (759, 33895), (775, 33847), (778, 33844), (790, 33808), (805, 33742), (818, 33703), (837, 33682), (841, 33661), (847, 33643), (868, 33577), (936, 33427), (938, 33424), (946, 33388), (954, 33364), (963, 33343), (968, 33325), (970, 33316), (985, 33268), (993, 33247),

Gene: Blue7\_48 Start: 29980, Stop: 28181, Start Num: 234

Candidate Starts for Blue7\_48:

(Start: 234 @29980 has 938 MA's), (353, 29776), (359, 29767), (395, 29701), (397, 29698), (405, 29671), (409, 29656), (415, 29644), (432, 29593), (461, 29503), (465, 29491), (541, 29398), (566, 29350), (571, 29341), (660, 29158), (733, 29008), (759, 28903), (778, 28846), (790, 28810), (793, 28801), (798, 28774), (805, 28744), (818, 28705), (837, 28684), (845, 28651), (847, 28645), (879, 28546), (908, 28483), (936, 28429), (942, 28405), (962, 28348), (985, 28270), (989, 28258), (993, 28249), (995, 28246),



Gene: BlueBird\_47 Start: 31555, Stop: 29717, Start Num: 234

Candidate Starts for BlueBird\_47:

(Start: 234 @31555 has 938 MA's), (266, 31504), (303, 31438), (353, 31351), (390, 31291), (395, 31279), (415, 31222), (419, 31213), (458, 31093), (465, 31069), (541, 30973), (568, 30925), (603, 30865), (636, 30802), (663, 30733), (675, 30712), (711, 30640), (729, 30598), (740, 30556), (759, 30475), (775, 30427), (798, 30352), (805, 30322), (816, 30292), (842, 30211), (856, 30172), (862, 30148), (868, 30130), (921, 30001), (942, 29941), (985, 29806), (989, 29794), (993, 29785),

Gene: BlueHusk\_62 Start: 54066, Stop: 52207, Start Num: 197

Candidate Starts for BlueHusk\_62:

(Start: 180 @54090 has 1 MA's), (Start: 197 @54066 has 298 MA's), (Start: 225 @54042 has 5 MA's), (Start: 238 @54036 has 2 MA's), (252, 54009), (Start: 261 @53994 has 10 MA's), (269, 53973), (323, 53859), (328, 53853), (349, 53823), (385, 53763), (394, 53742), (410, 53688), (418, 53676), (425, 53658), (427, 53646), (462, 53541), (496, 53484), (511, 53448), (516, 53436), (535, 53409), (539, 53400), (555, 53364), (588, 53307), (595, 53298), (597, 53295), (599, 53292), (754, 52935), (760, 52902), (765, 52881), (799, 52788), (802, 52779), (822, 52716), (841, 52680), (842, 52677), (847, 52662), (872, 52584), (877, 52572), (883, 52551), (902, 52512), (942, 52422), (947, 52404), (949, 52398), (954, 52383), (964, 52359), (968, 52344), (969, 52341), (972, 52329), (979, 52305), (1002, 52257), (1015, 52233),

Gene: BlueNGold\_170 Start: 99709, Stop: 97928, Start Num: 241

Candidate Starts for BlueNGold\_170:

(Start: 241 @99709 has 4 MA's), (266, 99664), (276, 99637), (334, 99544), (370, 99484), (374, 99481), (379, 99472), (394, 99448), (407, 99406), (408, 99403), (426, 99358), (445, 99316), (463, 99262), (541, 99178), (586, 99094), (603, 99067), (615, 99052), (689, 98893), (700, 98869), (704, 98854), (710, 98845), (744, 98758), (751, 98731), (752, 98728), (756, 98707), (759, 98686), (777, 98635), (802, 98551), (807, 98524), (816, 98491), (830, 98449), (865, 98338), (874, 98311), (886, 98275), (891, 98266), (893, 98263), (897, 98254), (943, 98134), (949, 98113), (951, 98107), (964, 98074), (969, 98056), (970, 98050), (981, 98017), (985, 98002), (1002, 97978), (1004, 97975), (1019, 97951),

Gene: Bluefalcon\_37 Start: 30628, Stop: 28769, Start Num: 234

Candidate Starts for Bluefalcon\_37:

(Start: 234 @30628 has 938 MA's), (266, 30577), (301, 30517), (336, 30454), (353, 30424), (355, 30421), (390, 30364), (405, 30322), (415, 30295), (465, 30142), (541, 30046), (556, 30013), (566, 29998), (618, 29914), (619, 29908), (635, 29875), (670, 29788), (679, 29776), (700, 29737), (724, 29677), (759, 29542), (769, 29512), (775, 29494), (789, 29458), (790, 29455), (805, 29389), (818, 29350), (841, 29308), (847, 29290), (862, 29242), (864, 29236), (879, 29191), (903, 29137), (908, 29128), (921, 29110), (947, 29032), (967, 28975), (978, 28939), (985, 28915), (989, 28903), (1047, 28786), (1049, 28783),

Gene: Bluephacebaby\_60 Start: 54585, Stop: 52726, Start Num: 197

Candidate Starts for Bluephacebaby\_60:

(Start: 180 @54609 has 1 MA's), (Start: 197 @54585 has 298 MA's), (Start: 225 @54561 has 5 MA's), (Start: 238 @54555 has 2 MA's), (Start: 261 @54513 has 10 MA's), (269, 54492), (323, 54378), (328, 54372), (349, 54342), (385, 54282), (394, 54261), (410, 54207), (418, 54195), (425, 54177), (427, 54165), (462, 54060), (496, 54003), (511, 53967), (516, 53955), (535, 53928), (555, 53883), (588, 53826), (595, 53817), (597, 53814), (754, 53454), (760, 53421), (765, 53400), (799, 53307), (802, 53298), (822, 53235), (841, 53199), (842, 53196), (847, 53181), (872, 53103), (877, 53091), (883, 53070), (902, 53031), (942, 52941), (947, 52923), (949, 52917), (954, 52902), (964, 52878), (968, 52863), (969, 52860), (972, 52848), (979, 52824), (1002, 52776), (1015, 52752),

Gene: Bob3\_42 Start: 33539, Stop: 31710, Start Num: 234

Candidate Starts for Bob3\_42:

(Start: 234 @33539 has 938 MA's), (359, 33326), (368, 33311), (395, 33263), (405, 33233), (411, 33212), (415, 33206), (419, 33197), (457, 33080), (465, 33053), (541, 32960), (546, 32945), (558, 32924), (596, 32861), (598, 32858), (634, 32792), (648, 32762), (657, 32732), (679, 32687), (700, 32648), (759, 32468), (775, 32420), (793, 32372), (802, 32333), (805, 32315), (818, 32276), (837, 32255), (841, 32234), (885, 32096), (960, 31925), (967, 31901), (977, 31868), (982, 31853), (985, 31841), (993, 31820), (997, 31814), (1025, 31766), (1030, 31751),

Gene: BobRoss2024\_51 Start: 46234, Stop: 44420, Start Num: 230

Candidate Starts for BobRoss2024\_51:

(Start: 230 @46234 has 13 MA's), (252, 46198), (273, 46153), (323, 46057), (349, 46024), (352, 46021), (355, 46015), (379, 45973), (426, 45853), (462, 45754), (496, 45697), (583, 45532), (597, 45508), (737, 45217), (749, 45178), (755, 45148), (760, 45121), (799, 45007), (802, 44998), (841, 44899), (842, 44896), (847, 44881), (872, 44803), (877, 44791), (883, 44770), (935, 44674), (943, 44638), (949, 44617), (964, 44578), (968, 44563), (972, 44542), (979, 44518), (1002, 44470), (1015, 44446), (1023, 44425),

Gene: BobSwaget\_44 Start: 31390, Stop: 29603, Start Num: 234

Candidate Starts for BobSwaget\_44:

(Start: 234 @31390 has 938 MA's), (355, 31183), (359, 31177), (379, 31147), (395, 31114), (397, 31111), (409, 31069), (415, 31057), (465, 30904), (541, 30811), (566, 30763), (571, 30754), (582, 30739), (619, 30673), (675, 30544), (740, 30400), (759, 30319), (778, 30268), (789, 30235), (790, 30232), (805, 30166), (818, 30127), (837, 30106), (859, 30031), (862, 30019), (888, 29941), (908, 29905), (921, 29887), (936, 29851), (942, 29827), (968, 29749), (985, 29692), (989, 29680), (993, 29671),

Gene: BobbyDazzler\_36 Start: 28159, Stop: 26375, Start Num: 234

Candidate Starts for BobbyDazzler\_36:

(Start: 234 @28159 has 938 MA's), (374, 27925), (390, 27895), (394, 27886), (395, 27883), (409, 27838), (415, 27826), (419, 27817), (432, 27775), (465, 27673), (492, 27652), (541, 27580), (563, 27535), (566, 27532), (589, 27490), (594, 27484), (603, 27469), (619, 27442), (663, 27337), (679, 27310), (700, 27271), (759, 27091), (775, 27043), (805, 26938), (806, 26935), (837, 26878), (841, 26857), (858, 26809), (881, 26734), (918, 26665), (936, 26623), (942, 26599), (968, 26521), (985, 26464), (989, 26452), (1021, 26395),

Gene: BobbyK\_54 Start: 53968, Stop: 52145, Start Num: 189

Candidate Starts for BobbyK\_54:

(Start: 175 @53986 has 4 MA's), (Start: 189 @53968 has 26 MA's), (Start: 238 @53944 has 2 MA's), (252, 53917), (Start: 261 @53902 has 10 MA's), (269, 53881), (316, 53794), (382, 53689), (399, 53647), (425, 53581), (434, 53551), (437, 53542), (441, 53539), (442, 53536), (450, 53509), (496, 53416), (504, 53398), (511, 53380), (516, 53368), (535, 53341), (566, 53278), (588, 53239), (595, 53230), (597, 53227), (618, 53197), (634, 53161), (737, 52936), (739, 52933), (749, 52897), (754, 52873), (760, 52840), (797, 52732), (799, 52726), (802, 52717), (841, 52618), (842, 52615), (847, 52600), (872, 52522), (877, 52510), (883, 52489), (885, 52480), (902, 52450), (921, 52420), (935, 52393), (942, 52360), (949, 52336), (964, 52297), (969, 52279), (972, 52267), (979, 52243), (994, 52201), (1002, 52195), (1015, 52171),

Gene: Boehler\_60 Start: 54229, Stop: 52370, Start Num: 197

Candidate Starts for Boehler\_60:

(Start: 180 @54253 has 1 MA's), (Start: 197 @54229 has 298 MA's), (Start: 225 @54205 has 5 MA's), (Start: 238 @54199 has 2 MA's), (Start: 261 @54157 has 10 MA's), (269, 54136), (323, 54022), (328, 54016), (349, 53986), (385, 53926), (394, 53905), (410, 53851), (418, 53839), (425, 53821), (427, 53809), (462, 53704), (496, 53647), (511, 53611), (516, 53599), (534, 53575), (539, 53563), (545, 53545), (555, 53527), (566, 53509), (588, 53470), (595, 53461), (597, 53458), (599, 53455), (754,

53098), (760, 53065), (765, 53044), (799, 52951), (802, 52942), (822, 52879), (841, 52843), (842, 52840), (847, 52825), (872, 52747), (877, 52735), (883, 52714), (902, 52675), (942, 52585), (947, 52567), (949, 52561), (954, 52546), (964, 52522), (968, 52507), (969, 52504), (972, 52492), (979, 52468), (1002, 52420), (1015, 52396),

Gene: Boersma\_57 Start: 36879, Stop: 34711, Start Num: 202

Candidate Starts for Boersma\_57:

(200, 36882), (Start: 202 @36879 has 13 MA's), (239, 36825), (279, 36741), (356, 36588), (361, 36579), (388, 36534), (414, 36456), (415, 36447), (422, 36432), (426, 36417), (427, 36414), (445, 36357), (474, 36264), (484, 36222), (565, 36027), (572, 36015), (578, 36009), (587, 35985), (601, 35964), (616, 35943), (621, 35928), (623, 35922), (651, 35859), (672, 35808), (706, 35721), (727, 35661), (740, 35613), (766, 35511), (768, 35505), (780, 35478), (781, 35475), (789, 35454), (799, 35412), (801, 35406), (806, 35382), (814, 35340), (815, 35337), (823, 35310), (838, 35277), (840, 35265), (852, 35229), (859, 35205), (861, 35199), (862, 35193), (880, 35139), (899, 35091), (902, 35088), (925, 35028), (932, 35004), (941, 34974), (961, 34920), (982, 34851), (985, 34839), (1006, 34800),

Gene: BogosyJay\_44 Start: 31342, Stop: 29549, Start Num: 234

Candidate Starts for BogosyJay\_44:

(Start: 234 @31342 has 938 MA's), (246, 31333), (301, 31231), (334, 31171), (336, 31168), (353, 31138), (359, 31129), (379, 31096), (395, 31063), (397, 31060), (405, 31033), (409, 31018), (415, 31006), (465, 30853), (541, 30760), (619, 30622), (634, 30592), (710, 30421), (726, 30394), (729, 30388), (759, 30265), (802, 30130), (805, 30112), (841, 30031), (879, 29914), (936, 29797), (942, 29773), (968, 29695), (985, 29638), (989, 29626), (993, 29617),

Gene: Bombshell\_45 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for Bombshell\_45:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Bonamassa\_39 Start: 30653, Stop: 28809, Start Num: 234

Candidate Starts for Bonamassa\_39:

(Start: 234 @30653 has 938 MA's), (266, 30602), (301, 30542), (336, 30479), (353, 30449), (355, 30446), (390, 30389), (395, 30377), (405, 30347), (415, 30320), (465, 30167), (541, 30071), (566, 30023), (618, 29939), (619, 29933), (652, 29861), (663, 29828), (670, 29813), (679, 29801), (724, 29702), (759, 29567), (769, 29537), (775, 29519), (778, 29516), (790, 29480), (793, 29471), (796, 29450), (799, 29441), (805, 29414), (806, 29411), (837, 29354), (841, 29333), (879, 29216), (903, 29162), (908, 29153), (921, 29135), (942, 29075), (947, 29057), (967, 29000), (978, 28964), (985, 28940), (989, 28928),

Gene: Bonanza\_36 Start: 28087, Stop: 26303, Start Num: 234

Candidate Starts for Bonanza\_36:

(Start: 234 @28087 has 938 MA's), (374, 27853), (390, 27823), (394, 27814), (395, 27811), (409, 27766), (415, 27754), (419, 27745), (432, 27703), (465, 27601), (492, 27580), (541, 27508), (563, 27463), (566, 27460), (589, 27418), (594, 27412), (603, 27397), (619, 27370), (663, 27265), (679, 27238), (700, 27199), (759, 27019), (775, 26971), (805, 26866), (806, 26863), (837, 26806), (841, 26785), (858, 26737), (881, 26662), (918, 26593), (936, 26551), (942, 26527), (968, 26449), (985, 26392), (989, 26380), (1021, 26323),

Gene: Bones\_45 Start: 35104, Stop: 33317, Start Num: 234

Candidate Starts for Bones\_45:

(Start: 234 @35104 has 938 MA's), (359, 34891), (368, 34876), (405, 34798), (411, 34777), (415, 34771), (419, 34762), (457, 34645), (465, 34618), (541, 34525), (546, 34510), (596, 34426), (598, 34423), (634, 34357), (648, 34327), (657, 34297), (679, 34252), (700, 34213), (759, 34033), (775, 33985), (790, 33946), (805, 33880), (839, 33808), (841, 33799), (868, 33715), (903, 33628), (954, 33502), (960, 33490), (985, 33406), (987, 33400),

Gene: BonesMcCoy\_39 Start: 28934, Stop: 27069, Start Num: 283

Candidate Starts for BonesMcCoy\_39:

(Start: 234 @29021 has 938 MA's), (Start: 237 @29018 has 2 MA's), (Start: 283 @28934 has 147 MA's), (Start: 291 @28925 has 5 MA's), (342, 28820), (347, 28811), (367, 28781), (369, 28778), (423, 28661), (426, 28646), (428, 28640), (466, 28535), (473, 28508), (532, 28367), (537, 28358), (541, 28346), (551, 28319), (553, 28316), (562, 28301), (566, 28295), (570, 28289), (613, 28256), (701, 28067), (728, 28013), (733, 27992), (798, 27752), (801, 27743), (802, 27740), (805, 27722), (819, 27680), (822, 27674), (832, 27650), (849, 27593), (900, 27434), (913, 27404), (917, 27395), (938, 27335), (943, 27311), (956, 27272), (967, 27239), (970, 27227), (986, 27167),

Gene: Bonino\_38 Start: 28608, Stop: 26743, Start Num: 283

Candidate Starts for Bonino\_38:

(Start: 234 @28695 has 938 MA's), (Start: 283 @28608 has 147 MA's), (Start: 291 @28599 has 5 MA's), (342, 28494), (347, 28485), (367, 28455), (369, 28452), (424, 28332), (426, 28320), (428, 28314), (466, 28209), (473, 28182), (532, 28041), (535, 28035), (537, 28032), (541, 28020), (551, 27993), (553, 27990), (562, 27975), (566, 27969), (570, 27963), (613, 27930), (671, 27801), (701, 27741), (798, 27426), (801, 27417), (802, 27414), (805, 27396), (819, 27354), (822, 27348), (832, 27324), (849, 27267), (900, 27108), (913, 27078), (917, 27069), (938, 27009), (943, 26985), (956, 26946), (967, 26913), (970, 26901), (986, 26841),

Gene: Boohoo\_47 Start: 29967, Stop: 28177, Start Num: 234

Candidate Starts for Boohoo\_47:

(Start: 234 @29967 has 938 MA's), (336, 29793), (395, 29688), (397, 29685), (405, 29658), (415, 29631), (432, 29580), (465, 29478), (541, 29385), (563, 29340), (566, 29337), (571, 29328), (655, 29166), (663, 29139), (675, 29118), (679, 29112), (730, 29013), (740, 28974), (754, 28923), (759, 28893), (778, 28842), (789, 28809), (796, 28776), (798, 28770), (805, 28740), (837, 28680), (841, 28659), (856, 28617), (863, 28590), (868, 28575), (903, 28488), (936, 28425), (938, 28422), (985, 28266), (989, 28254), (995, 28242),

Gene: Boopy\_173 Start: 99720, Stop: 97939, Start Num: 241

Candidate Starts for Boopy\_173:

(Start: 241 @99720 has 4 MA's), (266, 99675), (276, 99648), (334, 99555), (370, 99495), (374, 99492), (379, 99483), (394, 99459), (407, 99417), (408, 99414), (426, 99369), (445, 99327), (463, 99273), (541, 99189), (586, 99105), (603, 99078), (615, 99063), (689, 98904), (700, 98880), (704, 98865), (710, 98856), (744, 98769), (751, 98742), (752, 98739), (756, 98718), (759, 98697), (777, 98646), (802, 98562), (807, 98535), (816, 98502), (830, 98460), (865, 98349), (874, 98322), (886, 98286), (891, 98277), (893, 98274), (897, 98265), (943, 98145), (949, 98124), (951, 98118), (964, 98085), (969, 98067), (970, 98061), (981, 98028), (985, 98013), (1002, 97989), (1004, 97986), (1019, 97962),

Gene: BouleyBill\_36 Start: 28490, Stop: 26640, Start Num: 281

Candidate Starts for BouleyBill\_36:

(Start: 281 @28490 has 18 MA's), (347, 28367), (369, 28334), (420, 28223), (426, 28202), (428, 28196), (431, 28187), (447, 28145), (512, 27989), (532, 27935), (535, 27929), (537, 27926), (541, 27914), (553, 27884), (611, 27827), (680, 27680), (741, 27533), (798, 27323), (802, 27311), (805, 27293), (819, 27251), (825, 27236), (849, 27164), (913, 26975), (917, 26966), (938, 26906), (943, 26882), (954, 26849), (986, 26738),

Gene: Bowtie\_45 Start: 30783, Stop: 28996, Start Num: 234

Candidate Starts for Bowtie\_45:

(Start: 234 @30783 has 938 MA's), (353, 30579), (395, 30507), (405, 30477), (415, 30450), (543, 30198), (571, 30147), (619, 30066), (639, 30021), (675, 29937), (703, 29880), (728, 29838), (740, 29793), (759, 29712), (778, 29661), (790, 29625), (805, 29559), (837, 29499), (839, 29487), (871, 29385), (879, 29361), (884, 29343), (921, 29280), (935, 29253), (936, 29244), (942, 29220), (985, 29085), (989, 29073), (993, 29064),

Gene: Boyle\_57 Start: 52628, Stop: 50799, Start Num: 197

Candidate Starts for Boyle\_57:

(Start: 197 @52628 has 298 MA's), (Start: 238 @52601 has 2 MA's), (253, 52571), (Start: 261 @52559 has 10 MA's), (272, 52532), (273, 52529), (277, 52520), (301, 52502), (355, 52406), (385, 52355), (395, 52331), (402, 52307), (450, 52169), (459, 52145), (462, 52133), (496, 52076), (511, 52040), (516, 52028), (534, 52004), (580, 51920), (595, 51890), (597, 51887), (618, 51857), (678, 51713), (710, 51647), (733, 51608), (737, 51596), (743, 51575), (749, 51557), (760, 51500), (793, 51416), (799, 51386), (802, 51377), (822, 51311), (839, 51284), (841, 51275), (847, 51257), (856, 51233), (872, 51179), (877, 51167), (883, 51146), (921, 51077), (942, 51017), (947, 50999), (960, 50966), (964, 50954), (968, 50939), (969, 50936), (972, 50924), (979, 50900), (980, 50897), (1002, 50849), (1004, 50846), (1015, 50825), (1023, 50804),

Gene: Bradman\_44 Start: 30374, Stop: 28545, Start Num: 233

Candidate Starts for Bradman\_44:

(Start: 233 @30374 has 10 MA's), (353, 30170), (355, 30167), (359, 30161), (368, 30146), (379, 30131), (394, 30101), (395, 30098), (405, 30068), (415, 30041), (424, 30020), (432, 29990), (465, 29888), (541, 29795), (566, 29747), (571, 29738), (582, 29723), (619, 29657), (655, 29576), (675, 29528), (700, 29483), (759, 29303), (775, 29255), (778, 29252), (790, 29216), (805, 29150), (818, 29111), (837, 29090), (859, 29015), (864, 28997), (879, 28952), (888, 28925), (908, 28889), (921, 28871), (936, 28835), (942, 28811), (968, 28733), (985, 28676), (989, 28664), (993, 28655), (1021, 28607), (1037, 28577), (1043, 28559), (1045, 28556),

Gene: Bradshaw\_36 Start: 28113, Stop: 26329, Start Num: 234

Candidate Starts for Bradshaw\_36:

(Start: 234 @28113 has 938 MA's), (374, 27879), (390, 27849), (394, 27840), (395, 27837), (409, 27792), (415, 27780), (432, 27729), (465, 27627), (492, 27606), (541, 27534), (563, 27489), (566, 27486), (589, 27444), (594, 27438), (603, 27423), (619, 27396), (663, 27291), (667, 27282), (679, 27264), (681, 27261), (700, 27225), (759, 27045), (775, 26997), (805, 26892), (806, 26889), (837, 26832), (841, 26811), (858, 26763), (881, 26688), (918, 26619), (936, 26577), (942, 26553), (968, 26475), (985, 26418), (989, 26406), (1010, 26367), (1021, 26349),

Gene: Brahms\_40 Start: 27441, Stop: 29309, Start Num: 231

Candidate Starts for Brahms\_40:

(Start: 231 @27441 has 7 MA's), (Start: 234 @27444 has 938 MA's), (Start: 237 @27447 has 2 MA's), (273, 27516), (432, 27825), (453, 27879), (559, 28044), (603, 28119), (618, 28140), (747, 28494), (759, 28554), (778, 28605), (796, 28671), (805, 28707), (840, 28800), (901, 28971), (936, 29043), (962, 29124), (984, 29199), (985, 29202), (993, 29223), (1032, 29292),

Gene: BreSam8\_48 Start: 31846, Stop: 30032, Start Num: 234

Candidate Starts for BreSam8\_48:

(Start: 234 @31846 has 938 MA's), (262, 31807), (266, 31795), (353, 31642), (362, 31627), (395, 31570), (415, 31513), (419, 31504), (432, 31462), (448, 31411), (465, 31360), (541, 31267), (566, 31219), (571, 31210), (582, 31195), (603, 31156), (619, 31129), (634, 31099), (670, 31006), (701, 30946), (710, 30931), (759, 30775), (790, 30688), (805, 30622), (818, 30583), (842, 30511), (856,

30472), (862, 30448), (868, 30430), (879, 30397), (888, 30370), (921, 30316), (942, 30256), (968, 30178), (985, 30121), (989, 30109), (993, 30100),

Gene: Briakila\_57 Start: 53649, Stop: 51832, Start Num: 235

Candidate Starts for Briakila\_57:

(129, 53832), (Start: 235 @53649 has 43 MA's), (252, 53619), (359, 53439), (424, 53286), (426, 53274), (437, 53244), (442, 53238), (462, 53175), (464, 53169), (496, 53118), (509, 53091), (511, 53082), (539, 53034), (597, 52929), (647, 52833), (664, 52782), (737, 52638), (749, 52599), (755, 52569), (760, 52542), (763, 52530), (797, 52434), (799, 52428), (802, 52419), (804, 52407), (834, 52335), (841, 52305), (847, 52287), (851, 52278), (872, 52209), (877, 52197), (883, 52176), (921, 52107), (931, 52092), (938, 52068), (942, 52047), (947, 52029), (949, 52023), (962, 51990), (964, 51984), (969, 51966), (972, 51954), (975, 51942), (979, 51930), (994, 51888), (1015, 51858),

Gene: Brilliant\_63 Start: 54544, Stop: 52685, Start Num: 197

Candidate Starts for Brilliant\_63:

(Start: 180 @54568 has 1 MA's), (Start: 197 @54544 has 298 MA's), (Start: 225 @54520 has 5 MA's), (Start: 238 @54514 has 2 MA's), (Start: 261 @54472 has 10 MA's), (269, 54451), (323, 54337), (328, 54331), (349, 54301), (385, 54241), (394, 54220), (410, 54166), (418, 54154), (425, 54136), (427, 54124), (462, 54019), (496, 53962), (511, 53926), (516, 53914), (534, 53890), (539, 53878), (545, 53860), (555, 53842), (566, 53824), (588, 53785), (595, 53776), (597, 53773), (599, 53770), (754, 53413), (760, 53380), (765, 53359), (799, 53266), (802, 53257), (822, 53194), (841, 53158), (842, 53155), (847, 53140), (872, 53062), (877, 53050), (883, 53029), (902, 52990), (942, 52900), (947, 52882), (949, 52876), (954, 52861), (964, 52837), (968, 52822), (969, 52819), (972, 52807), (979, 52783), (1002, 52735), (1015, 52711),

Gene: Briton15\_46 Start: 34660, Stop: 32834, Start Num: 234

Candidate Starts for Briton15\_46:

(Start: 234 @34660 has 938 MA's), (359, 34447), (368, 34432), (395, 34384), (405, 34354), (411, 34333), (415, 34327), (419, 34318), (457, 34201), (465, 34174), (541, 34081), (546, 34066), (566, 34033), (596, 33982), (598, 33979), (634, 33913), (648, 33883), (657, 33853), (679, 33808), (700, 33769), (759, 33589), (769, 33559), (775, 33541), (790, 33502), (805, 33436), (818, 33397), (837, 33376), (841, 33355), (847, 33337), (868, 33271), (936, 33121), (938, 33118), (946, 33082), (954, 33058), (959, 33049), (963, 33037), (985, 32962), (993, 32941),

Gene: Broseidon\_45 Start: 31572, Stop: 29746, Start Num: 234

Candidate Starts for Broseidon\_45:

(Start: 234 @31572 has 938 MA's), (252, 31551), (266, 31521), (279, 31491), (379, 31329), (389, 31311), (415, 31239), (419, 31230), (458, 31110), (465, 31086), (541, 30993), (568, 30945), (582, 30924), (603, 30885), (663, 30753), (675, 30732), (700, 30687), (703, 30675), (756, 30522), (759, 30501), (798, 30378), (805, 30348), (818, 30309), (841, 30243), (842, 30240), (847, 30225), (856, 30201), (862, 30177), (942, 29970), (985, 29835), (989, 29823), (993, 29814),

Gene: BrownCNA\_55 Start: 54328, Stop: 52487, Start Num: 175

Candidate Starts for BrownCNA\_55:

(Start: 175 @54328 has 4 MA's), (Start: 189 @54310 has 26 MA's), (Start: 238 @54286 has 2 MA's), (252, 54259), (Start: 261 @54244 has 10 MA's), (269, 54223), (316, 54136), (382, 54031), (394, 54004), (399, 53989), (425, 53923), (434, 53893), (437, 53884), (441, 53881), (442, 53878), (450, 53851), (496, 53758), (504, 53740), (511, 53722), (516, 53710), (535, 53683), (566, 53620), (588, 53581), (595, 53572), (597, 53569), (618, 53539), (634, 53503), (737, 53278), (739, 53275), (749, 53239), (754, 53215), (760, 53182), (797, 53074), (799, 53068), (802, 53059), (841, 52960), (842, 52957), (847, 52942), (872, 52864), (877, 52852), (883, 52831), (885, 52822), (902, 52792), (935, 52735), (942, 52702), (949, 52678), (964, 52639), (969, 52621), (972, 52609), (979, 52585), (994, 52543), (1002, 52537), (1015, 52513),

Gene: Brownie5\_57 Start: 52641, Stop: 50812, Start Num: 197

Candidate Starts for Brownie5\_57:

(Start: 197 @52641 has 298 MA's), (Start: 238 @52614 has 2 MA's), (253, 52584), (Start: 261 @52572 has 10 MA's), (272, 52545), (273, 52542), (277, 52533), (301, 52515), (355, 52419), (385, 52368), (395, 52344), (450, 52182), (456, 52167), (459, 52158), (462, 52146), (496, 52089), (511, 52053), (516, 52041), (534, 52017), (580, 51933), (595, 51903), (597, 51900), (618, 51870), (678, 51726), (710, 51660), (733, 51621), (737, 51609), (743, 51588), (749, 51570), (760, 51513), (783, 51456), (793, 51429), (799, 51399), (802, 51390), (822, 51324), (839, 51297), (841, 51288), (847, 51270), (856, 51246), (872, 51192), (877, 51180), (883, 51159), (921, 51090), (942, 51030), (947, 51012), (960, 50979), (964, 50967), (968, 50952), (969, 50949), (972, 50937), (979, 50913), (980, 50910), (1002, 50862), (1004, 50859), (1015, 50838), (1023, 50817),

Gene: Bruiser\_44 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Bruiser\_44:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Bruns\_43 Start: 34261, Stop: 32435, Start Num: 234

Candidate Starts for Bruns\_43:

(Start: 234 @34261 has 938 MA's), (359, 34048), (368, 34033), (405, 33955), (411, 33934), (415, 33928), (419, 33919), (457, 33802), (465, 33775), (541, 33682), (546, 33667), (558, 33646), (566, 33634), (596, 33583), (598, 33580), (634, 33514), (648, 33484), (657, 33454), (679, 33409), (700, 33370), (759, 33190), (775, 33142), (790, 33103), (805, 33037), (818, 32998), (837, 32977), (841, 32956), (847, 32938), (868, 32872), (936, 32722), (938, 32719), (946, 32683), (954, 32659), (959, 32650), (963, 32638), (985, 32563), (993, 32542),

Gene: Bryce\_36 Start: 28088, Stop: 26304, Start Num: 234

Candidate Starts for Bryce\_36:

(Start: 234 @28088 has 938 MA's), (374, 27854), (390, 27824), (394, 27815), (395, 27812), (409, 27767), (415, 27755), (432, 27704), (465, 27602), (492, 27581), (541, 27509), (566, 27461), (603, 27398), (619, 27371), (663, 27266), (679, 27239), (700, 27200), (759, 27020), (775, 26972), (805, 26867), (806, 26864), (837, 26807), (841, 26786), (881, 26663), (918, 26594), (936, 26552), (942, 26528), (968, 26450), (985, 26393), (989, 26381), (1021, 26324),

Gene: BubbaBear\_41 Start: 29478, Stop: 31352, Start Num: 234

Candidate Starts for BubbaBear\_41:

(Start: 234 @29478 has 938 MA's), (273, 29547), (284, 29568), (419, 29814), (425, 29829), (432, 29856), (603, 30150), (709, 30384), (747, 30507), (759, 30567), (761, 30573), (778, 30618), (782, 30633), (786, 30648), (796, 30684), (805, 30720), (840, 30813), (869, 30906), (901, 30984), (936, 31056), (946, 31095), (962, 31137), (967, 31155), (985, 31215), (993, 31236),

Gene: BubbleTrouble\_44 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for BubbleTrouble\_44:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Buckeye\_61 Start: 54843, Stop: 52984, Start Num: 197

Candidate Starts for Buckeye\_61:

(Start: 180 @54867 has 1 MA's), (Start: 197 @54843 has 298 MA's), (Start: 225 @54819 has 5 MA's), (Start: 238 @54813 has 2 MA's), (Start: 261 @54771 has 10 MA's), (269, 54750), (323, 54636), (328, 54630), (349, 54600), (385, 54540), (394, 54519), (410, 54465), (418, 54453), (425, 54435), (427, 54423), (462, 54318), (496, 54261), (511, 54225), (516, 54213), (535, 54186), (545, 54159), (555, 54141), (566, 54123), (588, 54084), (595, 54075), (597, 54072), (724, 53814), (754, 53712), (760, 53679), (765, 53658), (799, 53565), (802, 53556), (822, 53493), (841, 53457), (842, 53454), (847, 53439), (872, 53361), (877, 53349), (883, 53328), (902, 53289), (942, 53199), (947, 53181), (949, 53175), (954, 53160), (964, 53136), (968, 53121), (969, 53118), (972, 53106), (979, 53082), (1002, 53034), (1015, 53010),

Gene: Bud\_44 Start: 30338, Stop: 28551, Start Num: 234

Candidate Starts for Bud\_44:

(Start: 234 @30338 has 938 MA's), (353, 30134), (395, 30062), (405, 30032), (415, 30005), (543, 29753), (571, 29702), (619, 29621), (639, 29576), (675, 29492), (703, 29435), (728, 29393), (740, 29348), (759, 29267), (778, 29216), (790, 29180), (805, 29114), (837, 29054), (871, 28940), (879, 28916), (884, 28898), (921, 28835), (935, 28808), (936, 28799), (942, 28775), (985, 28640), (989, 28628), (993, 28619),

Gene: Bugatti\_46 Start: 31555, Stop: 29717, Start Num: 234

Candidate Starts for Bugatti\_46:

(Start: 234 @31555 has 938 MA's), (266, 31504), (303, 31438), (353, 31351), (390, 31291), (395, 31279), (415, 31222), (419, 31213), (458, 31093), (465, 31069), (541, 30973), (568, 30925), (603, 30865), (636, 30802), (663, 30733), (675, 30712), (711, 30640), (729, 30598), (740, 30556), (759, 30475), (775, 30427), (798, 30352), (805, 30322), (816, 30292), (842, 30211), (856, 30172), (862, 30148), (868, 30130), (921, 30001), (942, 29941), (985, 29806), (989, 29794), (993, 29785),

Gene: Buggy\_46 Start: 31852, Stop: 30065, Start Num: 234

Candidate Starts for Buggy\_46:

(Start: 234 @31852 has 938 MA's), (353, 31648), (355, 31645), (359, 31639), (379, 31609), (395, 31576), (397, 31573), (405, 31546), (415, 31519), (432, 31468), (465, 31366), (541, 31273), (566, 31225), (571, 31216), (582, 31201), (619, 31135), (655, 31054), (675, 31006), (740, 30862), (759, 30781), (778, 30730), (789, 30697), (805, 30628), (818, 30589), (837, 30568), (841, 30547), (845, 30535), (918, 30355), (921, 30349), (936, 30313), (942, 30289), (968, 30211), (985, 30154), (989, 30142),

Gene: Buldak\_39 Start: 28039, Stop: 29922, Start Num: 223

Candidate Starts for Buldak\_39:

(134, 27883), (Start: 223 @28039 has 3 MA's), (250, 28057), (273, 28108), (284, 28129), (303, 28159), (353, 28246), (395, 28309), (405, 28339), (411, 28360), (419, 28375), (424, 28387), (577, 28669), (603, 28720), (618, 28741), (759, 29137), (761, 29143), (790, 29224), (796, 29254), (799, 29263), (805, 29290), (840, 29383), (868, 29473), (901, 29554), (903, 29560), (931, 29605), (942, 29650), (949, 29674), (962, 29707), (964, 29713), (967, 29725), (968, 29728), (985, 29785), (991, 29800), (993, 29806), (1008, 29830),

Gene: Bumblebee11\_43 Start: 31522, Stop: 29693, Start Num: 234

Candidate Starts for Bumblebee11\_43:

(Start: 234 @31522 has 938 MA's), (266, 31471), (279, 31441), (379, 31279), (389, 31261), (395, 31246), (415, 31189), (419, 31180), (458, 31060), (465, 31036), (513, 30994), (541, 30943), (568, 30895), (582, 30874), (603, 30835), (628, 30790), (630, 30784), (663, 30703), (675, 30682), (700, 30637), (756, 30472), (759, 30451), (805, 30298), (818, 30259), (842, 30187), (847, 30172), (856, 30148), (861, 30130), (862, 30124), (864, 30118), (942, 29917), (985, 29782), (989, 29770), (993,



29761),

Gene: Burger\_43 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Burger\_43:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Burnsey\_43 Start: 32545, Stop: 30152, Start Num: 36

Candidate Starts for Burnsey\_43:

(Start: 36 @32545 has 16 MA's), (48, 32539), (Start: 60 @32491 has 1 MA's), (76, 32449), (86, 32425), (127, 32299), (136, 32275), (170, 32230), (206, 32179), (216, 32164), (Start: 230 @32143 has 13 MA's), (262, 32095), (279, 32053), (317, 31978), (322, 31966), (366, 31897), (385, 31864), (391, 31849), (409, 31795), (410, 31792), (420, 31774), (426, 31753), (448, 31693), (495, 31570), (497, 31564), (524, 31495), (541, 31453), (634, 31366), (643, 31342), (655, 31336), (662, 31312), (666, 31303), (674, 31288), (682, 31276), (707, 31234), (711, 31231), (713, 31228), (758, 31081), (773, 31012), (774, 31006), (784, 30970), (805, 30877), (817, 30841), (819, 30835), (822, 30829), (824, 30823), (842, 30766), (849, 30742), (859, 30697), (986, 30316), (1008, 30271), (1013, 30262), (1037, 30202),

Gene: Burr\_60 Start: 54018, Stop: 52159, Start Num: 197

Candidate Starts for Burr\_60:

(Start: 180 @54042 has 1 MA's), (Start: 197 @54018 has 298 MA's), (Start: 225 @53994 has 5 MA's), (Start: 238 @53988 has 2 MA's), (Start: 261 @53946 has 10 MA's), (269, 53925), (323, 53811), (328, 53805), (349, 53775), (385, 53715), (394, 53694), (410, 53640), (418, 53628), (425, 53610), (427, 53598), (462, 53493), (496, 53436), (511, 53400), (516, 53388), (535, 53361), (555, 53316), (566, 53298), (588, 53259), (595, 53250), (597, 53247), (754, 52887), (760, 52854), (765, 52833), (799, 52740), (802, 52731), (822, 52668), (841, 52632), (842, 52629), (847, 52614), (872, 52536), (877, 52524), (883, 52503), (902, 52464), (942, 52374), (947, 52356), (949, 52350), (954, 52335), (964, 52311), (968, 52296), (969, 52293), (972, 52281), (979, 52257), (1002, 52209), (1015, 52185),

Gene: Burritobowl\_42 Start: 29479, Stop: 31353, Start Num: 234

Candidate Starts for Burritobowl\_42:

(Start: 234 @29479 has 938 MA's), (273, 29548), (284, 29569), (419, 29815), (425, 29830), (432, 29857), (603, 30151), (663, 30286), (709, 30385), (747, 30508), (759, 30568), (761, 30574), (778, 30619), (782, 30634), (786, 30649), (796, 30685), (805, 30721), (840, 30814), (901, 30985), (936, 31057), (946, 31096), (962, 31138), (967, 31156), (978, 31192), (985, 31216), (993, 31237),

Gene: Burton\_44 Start: 34084, Stop: 32258, Start Num: 234

Candidate Starts for Burton\_44:

(Start: 234 @34084 has 938 MA's), (359, 33871), (368, 33856), (395, 33808), (405, 33778), (411, 33757), (415, 33751), (419, 33742), (457, 33625), (465, 33598), (541, 33505), (546, 33490), (566, 33457), (596, 33406), (598, 33403), (634, 33337), (648, 33307), (657, 33277), (679, 33232), (700, 33193), (759, 33013), (775, 32965), (790, 32926), (805, 32860), (818, 32821), (837, 32800), (841, 32779), (847, 32761), (868, 32695), (936, 32545), (938, 32542), (946, 32506), (954, 32482), (959, 32473), (963, 32461), (985, 32386), (993, 32365),

Gene: Bustleton\_37 Start: 28493, Stop: 26643, Start Num: 281

Candidate Starts for Bustleton\_37:

(Start: 281 @28493 has 18 MA's), (347, 28370), (369, 28337), (420, 28226), (426, 28205), (428, 28199), (447, 28148), (512, 27992), (532, 27938), (535, 27932), (537, 27929), (541, 27917), (553,

27887), (611, 27830), (680, 27683), (741, 27536), (798, 27326), (802, 27314), (805, 27296), (819, 27254), (825, 27239), (839, 27203), (849, 27167), (913, 26978), (917, 26969), (938, 26909), (943, 26885), (949, 26864), (954, 26852), (986, 26741),

Gene: Button\_46 Start: 32802, Stop: 30418, Start Num: 45

Candidate Starts for Button\_46:

(Start: 45 @32802 has 24 MA's), (86, 32688), (96, 32658), (136, 32550), (141, 32529), (250, 32391), (259, 32376), (279, 32328), (317, 32253), (319, 32247), (322, 32241), (324, 32235), (366, 32166), (380, 32142), (390, 32121), (391, 32118), (395, 32109), (420, 32043), (426, 32022), (478, 31875), (524, 31761), (543, 31713), (546, 31704), (557, 31683), (570, 31677), (662, 31584), (668, 31572), (711, 31500), (729, 31458), (732, 31446), (770, 31305), (772, 31281), (774, 31266), (784, 31230), (805, 31137), (817, 31101), (819, 31095), (822, 31089), (824, 31083), (842, 31026), (847, 31011), (849, 31002), (900, 30843), (910, 30822), (926, 30783), (938, 30744), (942, 30723), (948, 30702), (952, 30690), (960, 30672), (976, 30609), (978, 30603), (986, 30576), (996, 30552), (1008, 30531), (1046, 30444),

Gene: Buttons\_43 Start: 33067, Stop: 31241, Start Num: 234

Candidate Starts for Buttons\_43:

(Start: 234 @33067 has 938 MA's), (359, 32854), (390, 32803), (405, 32761), (411, 32740), (415, 32734), (419, 32725), (457, 32608), (465, 32581), (541, 32488), (546, 32473), (596, 32389), (598, 32386), (634, 32320), (648, 32290), (657, 32260), (679, 32215), (700, 32176), (759, 31996), (775, 31948), (790, 31909), (805, 31843), (818, 31804), (837, 31783), (841, 31762), (847, 31744), (868, 31678), (936, 31528), (938, 31525), (946, 31489), (954, 31465), (959, 31456), (963, 31444), (985, 31369), (993, 31348),

Gene: Buttrmlkdreams\_45 Start: 32962, Stop: 30572, Start Num: 36

Candidate Starts for Buttrmlkdreams\_45:

(Start: 36 @32962 has 16 MA's), (64, 32899), (71, 32881), (76, 32866), (96, 32812), (100, 32800), (105, 32779), (119, 32746), (127, 32719), (136, 32695), (159, 32668), (Start: 230 @32563 has 13 MA's), (262, 32515), (317, 32398), (366, 32317), (382, 32290), (391, 32269), (410, 32212), (420, 32194), (426, 32173), (448, 32113), (495, 31990), (497, 31984), (524, 31915), (541, 31873), (634, 31786), (643, 31762), (655, 31756), (662, 31732), (666, 31723), (674, 31708), (682, 31696), (707, 31654), (711, 31651), (713, 31648), (758, 31501), (773, 31432), (774, 31426), (784, 31390), (805, 31297), (817, 31261), (819, 31255), (822, 31249), (824, 31243), (842, 31186), (849, 31162), (859, 31117), (986, 30736), (1008, 30691), (1013, 30682), (1037, 30622),

Gene: BuzzBuzz\_46 Start: 31884, Stop: 30070, Start Num: 234

Candidate Starts for BuzzBuzz\_46:

(Start: 234 @31884 has 938 MA's), (262, 31845), (266, 31833), (353, 31680), (362, 31665), (395, 31608), (415, 31551), (419, 31542), (432, 31500), (448, 31449), (465, 31398), (518, 31344), (541, 31305), (566, 31257), (582, 31233), (603, 31194), (619, 31167), (634, 31137), (670, 31044), (679, 31032), (701, 30984), (710, 30969), (759, 30813), (778, 30762), (789, 30729), (790, 30726), (805, 30660), (818, 30621), (842, 30549), (856, 30510), (862, 30486), (868, 30468), (879, 30435), (921, 30354), (942, 30294), (970, 30207), (985, 30159), (989, 30147), (993, 30138), (995, 30135),

Gene: Bxb1\_41 Start: 34132, Stop: 32306, Start Num: 234

Candidate Starts for Bxb1\_41:

(Start: 234 @34132 has 938 MA's), (334, 33961), (359, 33919), (368, 33904), (395, 33856), (405, 33826), (411, 33805), (415, 33799), (419, 33790), (457, 33673), (465, 33646), (541, 33553), (546, 33538), (558, 33517), (566, 33505), (596, 33454), (598, 33451), (628, 33397), (634, 33385), (648, 33355), (657, 33325), (679, 33280), (700, 33241), (759, 33061), (769, 33031), (775, 33013), (790, 32974), (805, 32908), (841, 32827), (842, 32824), (868, 32743), (936, 32593), (938, 32590), (946, 32554), (954, 32530), (959, 32521), (963, 32509), (970, 32482), (985, 32434), (993, 32413),

Gene: Bxz2\_44 Start: 31891, Stop: 30077, Start Num: 234

Candidate Starts for Bxz2\_44:

(Start: 234 @31891 has 938 MA's), (262, 31852), (266, 31840), (353, 31687), (362, 31672), (395, 31615), (415, 31558), (419, 31549), (432, 31507), (448, 31456), (465, 31405), (518, 31351), (541, 31312), (566, 31264), (582, 31240), (603, 31201), (619, 31174), (634, 31144), (670, 31051), (679, 31039), (701, 30991), (710, 30976), (759, 30820), (778, 30769), (789, 30736), (790, 30733), (805, 30667), (818, 30628), (842, 30556), (856, 30517), (862, 30493), (868, 30475), (879, 30442), (942, 30301), (970, 30214), (985, 30166), (989, 30154), (993, 30145), (995, 30142),

Gene: Byron23\_39 Start: 28933, Stop: 27068, Start Num: 283

Candidate Starts for Byron23\_39:

(Start: 234 @29020 has 938 MA's), (Start: 237 @29017 has 2 MA's), (Start: 283 @28933 has 147 MA's), (Start: 291 @28924 has 5 MA's), (342, 28819), (347, 28810), (367, 28780), (369, 28777), (424, 28657), (426, 28645), (428, 28639), (466, 28534), (473, 28507), (532, 28366), (535, 28360), (537, 28357), (541, 28345), (551, 28318), (553, 28315), (562, 28300), (566, 28294), (570, 28288), (613, 28255), (701, 28066), (798, 27751), (801, 27742), (802, 27739), (805, 27721), (819, 27679), (822, 27673), (825, 27664), (832, 27649), (849, 27592), (900, 27433), (913, 27403), (917, 27394), (938, 27334), (943, 27310), (956, 27271), (967, 27238), (970, 27226), (986, 27166),

Gene: C3\_43 Start: 31569, Stop: 29770, Start Num: 234

Candidate Starts for C3\_43:

(Start: 234 @31569 has 938 MA's), (353, 31365), (395, 31290), (397, 31287), (405, 31260), (409, 31245), (415, 31233), (432, 31182), (465, 31080), (541, 30987), (544, 30978), (566, 30939), (571, 30930), (619, 30849), (635, 30816), (648, 30789), (700, 30675), (710, 30651), (759, 30486), (775, 30438), (790, 30399), (798, 30363), (805, 30333), (818, 30294), (837, 30273), (868, 30168), (879, 30135), (908, 30072), (936, 30018), (942, 29994), (985, 29859), (989, 29847), (993, 29838),

Gene: CRB1\_46 Start: 31778, Stop: 29991, Start Num: 234

Candidate Starts for CRB1\_46:

(Start: 234 @31778 has 938 MA's), (353, 31574), (355, 31571), (359, 31565), (368, 31550), (379, 31535), (395, 31502), (397, 31499), (405, 31472), (415, 31445), (424, 31424), (432, 31394), (465, 31292), (541, 31199), (566, 31151), (571, 31142), (582, 31127), (619, 31061), (635, 31028), (655, 30980), (675, 30932), (679, 30926), (710, 30863), (740, 30788), (759, 30707), (789, 30623), (790, 30620), (805, 30554), (818, 30515), (837, 30494), (859, 30419), (864, 30401), (868, 30389), (879, 30356), (908, 30293), (921, 30275), (936, 30239), (942, 30215), (962, 30158), (985, 30080), (989, 30068), (993, 30059),

Gene: CRB2\_57 Start: 55662, Stop: 53833, Start Num: 197

Candidate Starts for CRB2\_57:

(Start: 197 @55662 has 298 MA's), (Start: 238 @55635 has 2 MA's), (252, 55608), (273, 55563), (286, 55554), (301, 55536), (349, 55452), (355, 55443), (402, 55344), (418, 55305), (426, 55281), (462, 55173), (496, 55116), (511, 55080), (516, 55068), (534, 55044), (535, 55041), (539, 55032), (595, 54924), (597, 54921), (599, 54918), (610, 54903), (618, 54891), (634, 54855), (704, 54690), (737, 54624), (739, 54621), (743, 54603), (749, 54585), (754, 54561), (755, 54555), (760, 54528), (797, 54420), (799, 54414), (802, 54405), (841, 54306), (842, 54303), (847, 54288), (872, 54210), (877, 54198), (883, 54177), (890, 54159), (907, 54129), (931, 54093), (942, 54048), (947, 54030), (949, 54024), (964, 53985), (967, 53973), (968, 53970), (979, 53931), (986, 53907), (1002, 53883), (1015, 53859),

Gene: CactusRose\_42 Start: 33957, Stop: 32131, Start Num: 234

Candidate Starts for CactusRose\_42:

(Start: 234 @33957 has 938 MA's), (359, 33744), (368, 33729), (395, 33681), (405, 33651), (411, 33630), (415, 33624), (419, 33615), (457, 33498), (465, 33471), (541, 33378), (546, 33363), (566, 33330), (596, 33279), (598, 33276), (634, 33210), (648, 33180), (657, 33150), (679, 33105), (700, 33066), (759, 32886), (775, 32838), (790, 32799), (805, 32733), (818, 32694), (837, 32673), (841, 32652), (847, 32634), (868, 32568), (936, 32418), (938, 32415), (946, 32379), (954, 32355), (959, 32346), (963, 32334), (985, 32259), (993, 32238),

Gene: Caelakin\_45 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Caelakin\_45:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: CaiB\_54 Start: 48539, Stop: 46722, Start Num: 230

Candidate Starts for CaiB\_54:

(165, 48632), (179, 48611), (Start: 230 @48539 has 13 MA's), (Start: 238 @48530 has 2 MA's), (252, 48503), (Start: 261 @48488 has 10 MA's), (269, 48467), (273, 48458), (355, 48320), (375, 48284), (462, 48056), (496, 47999), (511, 47963), (516, 47951), (526, 47939), (534, 47927), (583, 47834), (588, 47822), (597, 47810), (610, 47792), (678, 47636), (737, 47519), (755, 47450), (760, 47423), (797, 47315), (799, 47309), (802, 47300), (839, 47210), (841, 47201), (842, 47198), (847, 47183), (872, 47105), (877, 47093), (878, 47087), (883, 47072), (907, 47024), (942, 46943), (949, 46919), (964, 46880), (968, 46865), (979, 46820), (1015, 46748),

Gene: Calamitous\_57 Start: 52488, Stop: 50659, Start Num: 197

Candidate Starts for Calamitous\_57:

(Start: 197 @52488 has 298 MA's), (Start: 238 @52461 has 2 MA's), (253, 52431), (Start: 261 @52419 has 10 MA's), (272, 52392), (273, 52389), (277, 52380), (301, 52362), (355, 52266), (385, 52215), (395, 52191), (450, 52029), (456, 52014), (459, 52005), (462, 51993), (496, 51936), (511, 51900), (516, 51888), (534, 51864), (580, 51780), (595, 51750), (597, 51747), (618, 51717), (678, 51573), (710, 51507), (737, 51456), (743, 51435), (749, 51417), (760, 51360), (783, 51303), (793, 51276), (799, 51246), (802, 51237), (822, 51171), (839, 51144), (841, 51135), (847, 51117), (856, 51093), (872, 51039), (877, 51027), (883, 51006), (921, 50937), (942, 50877), (947, 50859), (960, 50826), (964, 50814), (968, 50799), (969, 50796), (972, 50784), (979, 50760), (980, 50757), (1002, 50709), (1004, 50706), (1015, 50685), (1023, 50664),

Gene: Calix\_38 Start: 28615, Stop: 26750, Start Num: 283

Candidate Starts for Calix\_38:

(Start: 234 @28702 has 938 MA's), (Start: 283 @28615 has 147 MA's), (Start: 291 @28606 has 5 MA's), (342, 28501), (347, 28492), (367, 28462), (369, 28459), (424, 28339), (426, 28327), (428, 28321), (466, 28216), (473, 28189), (532, 28048), (535, 28042), (537, 28039), (541, 28027), (551, 28000), (553, 27997), (562, 27982), (566, 27976), (570, 27970), (613, 27937), (671, 27808), (701, 27748), (798, 27433), (801, 27424), (802, 27421), (805, 27403), (819, 27361), (822, 27355), (832, 27331), (849, 27274), (900, 27115), (913, 27085), (917, 27076), (938, 27016), (943, 26992), (956, 26953), (967, 26920), (970, 26908), (986, 26848),

Gene: CallinAllBarbz\_41 Start: 29407, Stop: 31281, Start Num: 234

Candidate Starts for CallinAllBarbz\_41:

(Start: 234 @29407 has 938 MA's), (250, 29425), (377, 29638), (385, 29650), (397, 29677), (405, 29704), (411, 29725), (424, 29752), (543, 30001), (603, 30109), (615, 30124), (655, 30214), (675, 30262), (759, 30520), (769, 30550), (796, 30637), (798, 30643), (803, 30664), (876, 30877), (905, 30946), (908, 30952), (942, 31033), (949, 31057), (959, 31081), (969, 31114), (978, 31144), (985,

31168), (988, 31177), (1001, 31198),

Gene: Calvinny\_48 Start: 31753, Stop: 29939, Start Num: 234

Candidate Starts for Calvinny\_48:

(Start: 234 @31753 has 938 MA's), (262, 31714), (266, 31702), (353, 31549), (362, 31534), (395, 31477), (415, 31420), (419, 31411), (432, 31369), (448, 31318), (465, 31267), (541, 31174), (566, 31126), (582, 31102), (603, 31063), (619, 31036), (634, 31006), (670, 30913), (679, 30901), (701, 30853), (710, 30838), (759, 30682), (778, 30631), (789, 30598), (790, 30595), (805, 30529), (818, 30490), (842, 30418), (856, 30379), (862, 30355), (868, 30337), (879, 30304), (921, 30223), (942, 30163), (947, 30145), (968, 30085), (970, 30076), (985, 30028), (989, 30016), (993, 30007),

Gene: CamL\_60 Start: 54350, Stop: 52491, Start Num: 197

Candidate Starts for CamL\_60:

(Start: 180 @54374 has 1 MA's), (Start: 197 @54350 has 298 MA's), (Start: 225 @54326 has 5 MA's), (Start: 238 @54320 has 2 MA's), (Start: 261 @54278 has 10 MA's), (269, 54257), (323, 54143), (328, 54137), (349, 54107), (385, 54047), (394, 54026), (410, 53972), (418, 53960), (425, 53942), (427, 53930), (462, 53825), (496, 53768), (511, 53732), (516, 53720), (535, 53693), (555, 53648), (588, 53591), (595, 53582), (597, 53579), (754, 53219), (760, 53186), (765, 53165), (799, 53072), (802, 53063), (822, 53000), (841, 52964), (842, 52961), (847, 52946), (872, 52868), (877, 52856), (883, 52835), (902, 52796), (942, 52706), (947, 52688), (949, 52682), (954, 52667), (964, 52643), (968, 52628), (969, 52625), (972, 52613), (979, 52589), (1002, 52541), (1015, 52517),

Gene: CampRoach\_62 Start: 54448, Stop: 52589, Start Num: 197

Candidate Starts for CampRoach\_62:

(Start: 180 @54472 has 1 MA's), (Start: 197 @54448 has 298 MA's), (Start: 225 @54424 has 5 MA's), (Start: 238 @54418 has 2 MA's), (Start: 261 @54376 has 10 MA's), (269, 54355), (323, 54241), (328, 54235), (349, 54205), (385, 54145), (394, 54124), (410, 54070), (418, 54058), (425, 54040), (427, 54028), (462, 53923), (496, 53866), (511, 53830), (516, 53818), (535, 53791), (545, 53764), (555, 53746), (566, 53728), (588, 53689), (595, 53680), (597, 53677), (599, 53674), (754, 53317), (760, 53284), (765, 53263), (799, 53170), (802, 53161), (822, 53098), (841, 53062), (842, 53059), (847, 53044), (872, 52966), (877, 52954), (883, 52933), (902, 52894), (942, 52804), (947, 52786), (949, 52780), (954, 52765), (964, 52741), (968, 52726), (969, 52723), (972, 52711), (979, 52687), (1002, 52639), (1015, 52615),

Gene: Camperdownii\_43 Start: 31243, Stop: 29417, Start Num: 234

Candidate Starts for Camperdownii\_43:

(Start: 234 @31243 has 938 MA's), (252, 31222), (266, 31192), (279, 31162), (379, 31000), (389, 30982), (415, 30910), (419, 30901), (458, 30781), (465, 30757), (541, 30664), (568, 30616), (582, 30595), (603, 30556), (663, 30424), (675, 30403), (700, 30358), (703, 30346), (756, 30193), (759, 30172), (798, 30049), (805, 30019), (818, 29980), (841, 29914), (842, 29911), (847, 29896), (856, 29872), (862, 29848), (942, 29641), (985, 29506), (989, 29494), (993, 29485),

Gene: Candra\_45 Start: 29663, Stop: 27822, Start Num: 234

Candidate Starts for Candra\_45:

(Start: 234 @29663 has 938 MA's), (353, 29459), (395, 29384), (397, 29381), (405, 29354), (409, 29339), (415, 29327), (432, 29276), (461, 29186), (465, 29174), (541, 29081), (559, 29042), (571, 29024), (582, 29009), (619, 28943), (635, 28910), (636, 28907), (681, 28805), (710, 28745), (740, 28661), (759, 28580), (789, 28496), (790, 28493), (793, 28484), (798, 28457), (805, 28427), (837, 28367), (847, 28328), (936, 28112), (938, 28109), (942, 28088), (985, 27953), (989, 27941), (993, 27932), (995, 27929), (1042, 27836),

Gene: CanesSauce\_42 Start: 32324, Stop: 29937, Start Num: 45

Candidate Starts for CanesSauce\_42:

(20, 32396), (23, 32381), (Start: 45 @32324 has 24 MA's), (49, 32315), (52, 32309), (76, 32228), (119, 32108), (136, 32057), (Start: 230 @31925 has 13 MA's), (250, 31898), (259, 31883), (279, 31835), (295, 31805), (317, 31760), (354, 31700), (366, 31682), (391, 31634), (409, 31580), (410, 31577), (420, 31559), (426, 31538), (445, 31487), (448, 31478), (449, 31475), (473, 31400), (495, 31355), (519, 31295), (524, 31280), (570, 31196), (634, 31151), (643, 31127), (655, 31121), (662, 31097), (707, 31019), (711, 31016), (713, 31013), (758, 30866), (773, 30797), (796, 30698), (805, 30662), (817, 30626), (819, 30620), (822, 30614), (824, 30608), (834, 30584), (842, 30551), (849, 30527), (859, 30482), (878, 30422), (938, 30269), (947, 30230), (948, 30227), (986, 30101), (1008, 30056), (1013, 30047),

Gene: Cannibal\_60 Start: 54292, Stop: 52433, Start Num: 197

Candidate Starts for Cannibal\_60:

(Start: 180 @54316 has 1 MA's), (Start: 197 @54292 has 298 MA's), (Start: 225 @54268 has 5 MA's), (Start: 238 @54262 has 2 MA's), (Start: 261 @54220 has 10 MA's), (269, 54199), (323, 54085), (328, 54079), (349, 54049), (385, 53989), (394, 53968), (410, 53914), (418, 53902), (425, 53884), (427, 53872), (462, 53767), (496, 53710), (511, 53674), (516, 53662), (535, 53635), (555, 53590), (588, 53533), (595, 53524), (597, 53521), (754, 53161), (760, 53128), (765, 53107), (799, 53014), (802, 53005), (822, 52942), (841, 52906), (842, 52903), (847, 52888), (872, 52810), (877, 52798), (883, 52777), (902, 52738), (942, 52648), (947, 52630), (949, 52624), (954, 52609), (964, 52585), (968, 52570), (969, 52567), (972, 52555), (979, 52531), (1002, 52483), (1015, 52459),

Gene: Cappuccino\_38 Start: 27602, Stop: 29584, Start Num: 234

Candidate Starts for Cappuccino\_38:

(Start: 234 @27602 has 938 MA's), (336, 27776), (382, 27839), (397, 27872), (424, 27947), (518, 28175), (603, 28349), (675, 28505), (730, 28643), (753, 28730), (759, 28763), (769, 28793), (790, 28850), (805, 28916), (840, 29009), (942, 29276), (949, 29300), (985, 29411), (1040, 29519),

Gene: CaptainRex\_37 Start: 26990, Stop: 25125, Start Num: 283

Candidate Starts for CaptainRex\_37:

(Start: 283 @26990 has 147 MA's), (290, 26984), (337, 26885), (342, 26876), (357, 26852), (367, 26837), (371, 26831), (398, 26780), (399, 26777), (428, 26696), (479, 26546), (489, 26543), (524, 26444), (535, 26417), (537, 26414), (541, 26402), (553, 26372), (566, 26351), (611, 26315), (680, 26168), (729, 26066), (752, 25988), (798, 25808), (805, 25778), (824, 25724), (832, 25706), (849, 25649), (854, 25622), (866, 25580), (879, 25541), (913, 25460), (917, 25451), (938, 25391), (943, 25367), (946, 25355), (949, 25346), (956, 25328), (967, 25295), (986, 25223),

Gene: Caraxes\_45 Start: 30012, Stop: 28183, Start Num: 234

Candidate Starts for Caraxes\_45:

(Start: 234 @30012 has 938 MA's), (353, 29808), (359, 29799), (379, 29769), (395, 29736), (397, 29733), (405, 29706), (415, 29679), (424, 29658), (465, 29526), (541, 29433), (566, 29385), (619, 29295), (640, 29247), (675, 29166), (759, 28941), (790, 28854), (798, 28818), (805, 28788), (818, 28749), (837, 28728), (841, 28707), (847, 28689), (879, 28590), (888, 28563), (908, 28527), (921, 28509), (936, 28473), (985, 28314), (989, 28302), (993, 28293), (1021, 28245), (1036, 28215),

Gene: CarisSwetlik\_42 Start: 29837, Stop: 27969, Start Num: 283

Candidate Starts for CarisSwetlik\_42:

(Start: 180 @30002 has 1 MA's), (211, 29957), (Start: 234 @29924 has 938 MA's), (Start: 242 @29915 has 1 MA's), (Start: 283 @29837 has 147 MA's), (Start: 291 @29828 has 5 MA's), (367, 29684), (369, 29681), (420, 29570), (424, 29561), (426, 29549), (428, 29543), (466, 29438), (503, 29345), (532, 29270), (537, 29261), (541, 29249), (551, 29222), (553, 29219), (562, 29204), (566, 29198), (570, 29192), (671, 29030), (728, 28916), (798, 28655), (801, 28646), (802, 28643), (805, 28625), (819, 28583), (849, 28493), (854, 28466), (900, 28334), (917, 28295), (938, 28235), (943, 28211), (956, 28172), (967, 28139), (970, 28127),

Gene: Carlyle\_44 Start: 32803, Stop: 30974, Start Num: 234

Candidate Starts for Carlyle\_44:

(Start: 234 @32803 has 938 MA's), (359, 32590), (368, 32575), (405, 32497), (411, 32476), (415, 32470), (419, 32461), (448, 32368), (457, 32344), (465, 32317), (541, 32224), (546, 32209), (566, 32176), (596, 32125), (598, 32122), (634, 32056), (648, 32026), (657, 31996), (679, 31951), (700, 31912), (759, 31732), (775, 31684), (793, 31636), (802, 31597), (805, 31579), (818, 31540), (837, 31519), (841, 31498), (846, 31483), (885, 31360), (960, 31189), (967, 31165), (982, 31117), (985, 31105), (993, 31084), (997, 31078), (1025, 31030), (1030, 31015),

Gene: Caron\_50 Start: 32142, Stop: 34007, Start Num: 233

Candidate Starts for Caron\_50:

(Start: 233 @32142 has 10 MA's), (299, 32250), (535, 32715), (600, 32838), (603, 32844), (675, 32997), (705, 33060), (759, 33255), (781, 33318), (795, 33366), (796, 33372), (806, 33411), (869, 33594), (985, 33903), (1026, 33981), (1038, 34002),

Gene: Carostasia\_37 Start: 28508, Stop: 26607, Start Num: 283

Candidate Starts for Carostasia\_37:

(Start: 283 @28508 has 147 MA's), (347, 28385), (357, 28370), (367, 28355), (387, 28322), (391, 28313), (398, 28298), (409, 28262), (418, 28247), (426, 28220), (428, 28214), (447, 28163), (460, 28124), (479, 28064), (532, 27938), (537, 27929), (541, 27917), (553, 27887), (566, 27866), (611, 27830), (680, 27683), (701, 27638), (744, 27527), (787, 27332), (798, 27290), (805, 27260), (819, 27218), (832, 27188), (839, 27167), (849, 27131), (938, 26873), (943, 26849), (954, 26816), (956, 26810), (986, 26705),

Gene: Carsonalex\_46 Start: 32513, Stop: 30120, Start Num: 36

Candidate Starts for Carsonalex\_46:

(Start: 36 @32513 has 16 MA's), (48, 32507), (Start: 60 @32459 has 1 MA's), (76, 32417), (86, 32393), (127, 32267), (136, 32243), (170, 32198), (206, 32147), (216, 32132), (Start: 230 @32111 has 13 MA's), (262, 32063), (274, 32030), (279, 32021), (317, 31946), (322, 31934), (366, 31865), (382, 31838), (385, 31832), (391, 31817), (409, 31763), (410, 31760), (420, 31742), (426, 31721), (448, 31661), (495, 31538), (497, 31532), (524, 31463), (541, 31421), (634, 31334), (643, 31310), (655, 31304), (662, 31280), (666, 31271), (674, 31256), (682, 31244), (707, 31202), (711, 31199), (713, 31196), (729, 31160), (758, 31049), (773, 30980), (774, 30974), (784, 30938), (805, 30845), (817, 30809), (819, 30803), (822, 30797), (824, 30791), (842, 30734), (847, 30719), (849, 30710), (859, 30665), (890, 30572), (986, 30284), (1008, 30239), (1013, 30230), (1037, 30170),

Gene: Carthage\_59 Start: 53529, Stop: 51670, Start Num: 197

Candidate Starts for Carthage\_59:

(43, 53925), (70, 53838), (75, 53823), (78, 53817), (85, 53802), (90, 53784), (Start: 180 @53553 has 1 MA's), (Start: 197 @53529 has 298 MA's), (Start: 225 @53505 has 5 MA's), (Start: 238 @53499 has 2 MA's), (Start: 261 @53457 has 10 MA's), (269, 53436), (323, 53322), (328, 53316), (349, 53286), (385, 53226), (394, 53205), (410, 53151), (418, 53139), (427, 53109), (462, 53004), (496, 52947), (511, 52911), (516, 52899), (535, 52872), (539, 52863), (555, 52827), (566, 52809), (588, 52770), (595, 52761), (597, 52758), (754, 52398), (760, 52365), (765, 52344), (799, 52251), (802, 52242), (822, 52179), (841, 52143), (842, 52140), (847, 52125), (872, 52047), (877, 52035), (883, 52014), (902, 51975), (942, 51885), (947, 51867), (949, 51861), (954, 51846), (964, 51822), (968, 51807), (969, 51804), (972, 51792), (979, 51768), (1002, 51720), (1015, 51696),

Gene: Casbah\_58 Start: 53994, Stop: 52177, Start Num: 235

Candidate Starts for Casbah\_58:

(129, 54177), (Start: 235 @53994 has 43 MA's), (252, 53964), (359, 53784), (424, 53631), (426, 53619), (437, 53589), (442, 53583), (462, 53520), (464, 53514), (496, 53463), (511, 53427), (539,

53379), (597, 53274), (647, 53178), (664, 53127), (737, 52983), (749, 52944), (755, 52914), (760, 52887), (763, 52875), (797, 52779), (799, 52773), (802, 52764), (804, 52752), (834, 52680), (841, 52650), (847, 52632), (851, 52623), (872, 52554), (877, 52542), (883, 52521), (921, 52452), (931, 52437), (938, 52413), (942, 52392), (947, 52374), (949, 52368), (962, 52335), (964, 52329), (969, 52311), (972, 52299), (975, 52287), (979, 52275), (994, 52233), (1015, 52203),

Gene: Casey\_35 Start: 27722, Stop: 25905, Start Num: 282

Candidate Starts for Casey\_35:

(Start: 282 @27722 has 4 MA's), (292, 27707), (426, 27431), (428, 27425), (498, 27290), (505, 27275), (535, 27197), (537, 27194), (541, 27182), (553, 27152), (611, 27095), (680, 26948), (752, 26768), (787, 26630), (801, 26579), (802, 26576), (805, 26558), (806, 26555), (819, 26516), (849, 26429), (854, 26402), (900, 26270), (943, 26147), (954, 26114), (956, 26108), (960, 26099), (986, 26003), (988, 25997),

Gene: Cashington\_40 Start: 28858, Stop: 30732, Start Num: 234

Candidate Starts for Cashington\_40:

(Start: 231 @28855 has 7 MA's), (Start: 234 @28858 has 938 MA's), (273, 28927), (284, 28948), (353, 29065), (395, 29128), (419, 29194), (432, 29236), (603, 29530), (709, 29764), (747, 29887), (759, 29947), (761, 29953), (778, 29998), (782, 30013), (786, 30028), (796, 30064), (805, 30100), (840, 30193), (869, 30286), (901, 30364), (936, 30436), (946, 30475), (962, 30517), (967, 30535), (985, 30595), (993, 30616),

Gene: Caspiboi\_63 Start: 54270, Stop: 52411, Start Num: 197

Candidate Starts for Caspiboi\_63:

(Start: 180 @54294 has 1 MA's), (Start: 197 @54270 has 298 MA's), (Start: 225 @54246 has 5 MA's), (Start: 238 @54240 has 2 MA's), (Start: 261 @54198 has 10 MA's), (269, 54177), (323, 54063), (328, 54057), (349, 54027), (385, 53967), (394, 53946), (410, 53892), (418, 53880), (425, 53862), (427, 53850), (462, 53745), (496, 53688), (511, 53652), (516, 53640), (535, 53613), (555, 53568), (588, 53511), (595, 53502), (597, 53499), (724, 53241), (754, 53139), (760, 53106), (765, 53085), (799, 52992), (802, 52983), (822, 52920), (841, 52884), (842, 52881), (847, 52866), (872, 52788), (877, 52776), (883, 52755), (902, 52716), (942, 52626), (947, 52608), (949, 52602), (954, 52587), (964, 52563), (968, 52548), (969, 52545), (972, 52533), (979, 52509), (985, 52488), (1002, 52461), (1015, 52437), (1019, 52422),

Gene: Cassia\_40 Start: 29351, Stop: 31216, Start Num: 234

Candidate Starts for Cassia\_40:

(Start: 234 @29351 has 938 MA's), (265, 29399), (405, 29648), (445, 29768), (543, 29945), (546, 29954), (603, 30053), (615, 30068), (619, 30080), (675, 30206), (730, 30344), (759, 30464), (790, 30551), (805, 30617), (840, 30710), (936, 30953), (985, 31112), (988, 31121),

Gene: Cassita\_65 Start: 38135, Stop: 36300, Start Num: 256

Candidate Starts for Cassita\_65:

(245, 38150), (Start: 256 @38135 has 5 MA's), (264, 38120), (300, 38051), (328, 37991), (341, 37964), (342, 37961), (363, 37928), (371, 37916), (378, 37907), (387, 37898), (457, 37733), (459, 37727), (495, 37634), (515, 37595), (536, 37556), (550, 37523), (558, 37511), (561, 37505), (584, 37469), (587, 37463), (607, 37436), (624, 37403), (636, 37376), (710, 37229), (734, 37172), (761, 37067), (776, 37019), (790, 36980), (793, 36971), (840, 36776), (854, 36749), (875, 36725), (893, 36686), (914, 36638), (924, 36614), (946, 36530), (957, 36500), (962, 36482), (967, 36464), (968, 36461), (978, 36428), (979, 36425), (985, 36404), (1000, 36374), (1012, 36350), (1018, 36335), (1020, 36326),

Gene: Catalina\_46 Start: 31484, Stop: 29691, Start Num: 234

Candidate Starts for Catalina\_46:



(Start: 234 @31484 has 938 MA's), (246, 31475), (266, 31433), (334, 31313), (336, 31310), (364, 31262), (397, 31202), (406, 31172), (409, 31160), (415, 31148), (465, 30995), (541, 30902), (619, 30764), (634, 30734), (703, 30575), (710, 30563), (726, 30536), (756, 30428), (759, 30407), (802, 30272), (805, 30254), (841, 30173), (856, 30131), (879, 30056), (918, 29981), (936, 29939), (968, 29837), (985, 29780), (989, 29768), (993, 29759),

Gene: Caviar\_44 Start: 31597, Stop: 29759, Start Num: 234

Candidate Starts for Caviar\_44:

(Start: 234 @31597 has 938 MA's), (266, 31546), (353, 31393), (395, 31321), (405, 31291), (415, 31264), (419, 31255), (465, 31111), (541, 31015), (568, 30967), (603, 30907), (648, 30820), (663, 30775), (675, 30754), (711, 30682), (729, 30640), (740, 30598), (759, 30517), (775, 30469), (790, 30430), (798, 30394), (805, 30364), (816, 30334), (842, 30253), (856, 30214), (862, 30190), (868, 30172), (869, 30169), (921, 30043), (942, 29983), (970, 29896), (985, 29848), (989, 29836), (993, 29827),

Gene: Cece\_99 Start: 83690, Stop: 81819, Start Num: 232

Candidate Starts for Cece\_99:

(Start: 232 @83690 has 15 MA's), (340, 83480), (382, 83414), (394, 83393), (426, 83306), (428, 83300), (463, 83207), (468, 83192), (544, 83114), (586, 83030), (603, 83003), (618, 82982), (635, 82943), (648, 82916), (650, 82910), (700, 82805), (721, 82757), (729, 82736), (731, 82727), (759, 82616), (782, 82550), (795, 82502), (816, 82418), (822, 82403), (843, 82334), (853, 82307), (856, 82298), (865, 82265), (960, 82013), (968, 81986), (985, 81929),

Gene: Celaena\_40 Start: 30338, Stop: 32209, Start Num: 234

Candidate Starts for Celaena\_40:

(Start: 234 @30338 has 938 MA's), (273, 30407), (353, 30545), (419, 30674), (453, 30770), (603, 31010), (615, 31025), (655, 31118), (700, 31208), (759, 31424), (778, 31475), (782, 31490), (796, 31541), (799, 31550), (805, 31577), (840, 31670), (862, 31742), (901, 31841), (936, 31913), (942, 31937), (962, 31994), (978, 32048), (985, 32072), (993, 32093),

Gene: Cen1621\_44 Start: 29694, Stop: 31556, Start Num: 234

Candidate Starts for Cen1621\_44:

(147, 29562), (Start: 157 @29580 has 1 MA's), (204, 29649), (209, 29658), (Start: 234 @29694 has 938 MA's), (299, 29802), (329, 29859), (353, 29898), (411, 30012), (566, 30330), (603, 30396), (606, 30399), (615, 30411), (619, 30423), (649, 30483), (675, 30549), (703, 30606), (722, 30657), (759, 30807), (805, 30960), (865, 31134), (868, 31143), (967, 31395), (982, 31443), (985, 31455),

Gene: Centaur\_45 Start: 31699, Stop: 29912, Start Num: 234

Candidate Starts for Centaur\_45:

(Start: 234 @31699 has 938 MA's), (353, 31495), (355, 31492), (359, 31486), (379, 31456), (395, 31423), (397, 31420), (405, 31393), (415, 31366), (432, 31315), (465, 31213), (541, 31120), (566, 31072), (571, 31063), (582, 31048), (619, 30982), (655, 30901), (675, 30853), (740, 30709), (759, 30628), (778, 30577), (789, 30544), (805, 30475), (818, 30436), (837, 30415), (839, 30403), (841, 30394), (845, 30382), (918, 30202), (921, 30196), (936, 30160), (942, 30136), (968, 30058), (985, 30001), (989, 29989),

Gene: CentreCat\_45 Start: 31573, Stop: 29747, Start Num: 234

Candidate Starts for CentreCat\_45:

(Start: 234 @31573 has 938 MA's), (252, 31552), (266, 31522), (279, 31492), (379, 31330), (389, 31312), (415, 31240), (419, 31231), (458, 31111), (465, 31087), (541, 30994), (568, 30946), (582, 30925), (603, 30886), (663, 30754), (675, 30733), (700, 30688), (703, 30676), (756, 30523), (759, 30502), (798, 30379), (805, 30349), (818, 30310), (841, 30244), (842, 30241), (847, 30226), (856, 30202), (862, 30178), (942, 29971), (985, 29836), (989, 29824), (993, 29815),

Gene: Cerulean\_46 Start: 31993, Stop: 30167, Start Num: 234

Candidate Starts for Cerulean\_46:

(Start: 234 @31993 has 938 MA's), (265, 31945), (353, 31789), (395, 31717), (415, 31660), (419, 31651), (458, 31531), (465, 31507), (541, 31414), (568, 31366), (582, 31345), (603, 31306), (628, 31261), (663, 31174), (667, 31165), (675, 31153), (700, 31108), (703, 31096), (756, 30943), (759, 30922), (798, 30799), (805, 30769), (818, 30730), (841, 30664), (842, 30661), (856, 30622), (862, 30598), (942, 30391), (985, 30256), (989, 30244), (993, 30235),

Gene: ChaChing\_58 Start: 53696, Stop: 51879, Start Num: 235

Candidate Starts for ChaChing\_58:

(129, 53879), (Start: 235 @53696 has 43 MA's), (252, 53666), (359, 53486), (424, 53333), (426, 53321), (437, 53291), (442, 53285), (462, 53222), (464, 53216), (496, 53165), (511, 53129), (539, 53081), (597, 52976), (647, 52880), (664, 52829), (737, 52685), (749, 52646), (755, 52616), (760, 52589), (763, 52577), (797, 52481), (799, 52475), (802, 52466), (804, 52454), (834, 52382), (841, 52352), (847, 52334), (851, 52325), (872, 52256), (877, 52244), (883, 52223), (921, 52154), (931, 52139), (938, 52115), (942, 52094), (949, 52070), (964, 52031), (969, 52013), (972, 52001), (975, 51989), (979, 51977), (994, 51935), (1015, 51905),

Gene: Chadwick\_40 Start: 30056, Stop: 28191, Start Num: 234

Candidate Starts for Chadwick\_40:

(Start: 205 @30089 has 2 MA's), (Start: 234 @30056 has 938 MA's), (301, 29945), (355, 29849), (395, 29780), (397, 29777), (405, 29750), (415, 29723), (419, 29714), (445, 29630), (448, 29621), (453, 29606), (465, 29570), (520, 29510), (541, 29474), (566, 29426), (581, 29405), (582, 29402), (618, 29342), (652, 29264), (670, 29216), (679, 29204), (701, 29156), (724, 29105), (759, 28970), (775, 28922), (782, 28904), (790, 28883), (793, 28874), (799, 28844), (805, 28817), (806, 28814), (841, 28736), (847, 28718), (862, 28670), (879, 28619), (903, 28565), (908, 28556), (921, 28538), (947, 28460), (985, 28343), (989, 28331), (1042, 28226),

Gene: Chaelin\_61 Start: 54580, Stop: 52721, Start Num: 197

Candidate Starts for Chaelin\_61:

(Start: 180 @54604 has 1 MA's), (Start: 197 @54580 has 298 MA's), (Start: 225 @54556 has 5 MA's), (Start: 238 @54550 has 2 MA's), (Start: 261 @54508 has 10 MA's), (269, 54487), (323, 54373), (328, 54367), (349, 54337), (385, 54277), (394, 54256), (410, 54202), (418, 54190), (425, 54172), (427, 54160), (462, 54055), (496, 53998), (511, 53962), (516, 53950), (534, 53926), (539, 53914), (545, 53896), (555, 53878), (566, 53860), (588, 53821), (595, 53812), (597, 53809), (599, 53806), (754, 53449), (760, 53416), (765, 53395), (799, 53302), (802, 53293), (822, 53230), (841, 53194), (842, 53191), (847, 53176), (872, 53098), (877, 53086), (883, 53065), (902, 53026), (942, 52936), (947, 52918), (949, 52912), (954, 52897), (964, 52873), (968, 52858), (969, 52855), (972, 52843), (979, 52819), (1002, 52771), (1015, 52747),

Gene: Chah\_62 Start: 53995, Stop: 52136, Start Num: 197

Candidate Starts for Chah\_62:

(Start: 180 @54019 has 1 MA's), (Start: 197 @53995 has 298 MA's), (Start: 225 @53971 has 5 MA's), (Start: 238 @53965 has 2 MA's), (Start: 261 @53923 has 10 MA's), (269, 53902), (323, 53788), (328, 53782), (349, 53752), (385, 53692), (394, 53671), (410, 53617), (418, 53605), (425, 53587), (427, 53575), (462, 53470), (496, 53413), (511, 53377), (516, 53365), (535, 53338), (545, 53311), (555, 53293), (566, 53275), (588, 53236), (595, 53227), (597, 53224), (724, 52966), (754, 52864), (760, 52831), (765, 52810), (799, 52717), (802, 52708), (822, 52645), (841, 52609), (842, 52606), (847, 52591), (872, 52513), (877, 52501), (883, 52480), (902, 52441), (942, 52351), (947, 52333), (949, 52327), (954, 52312), (964, 52288), (968, 52273), (969, 52270), (972, 52258), (979, 52234), (1002, 52186), (1015, 52162),

Gene: Chako\_38 Start: 28706, Stop: 26754, Start Num: 234

Candidate Starts for Chako\_38:

(Start: 234 @28706 has 938 MA's), (Start: 237 @28703 has 2 MA's), (Start: 283 @28619 has 147 MA's), (Start: 291 @28610 has 5 MA's), (342, 28505), (347, 28496), (367, 28466), (369, 28463), (424, 28343), (426, 28331), (428, 28325), (466, 28220), (473, 28193), (532, 28052), (535, 28046), (537, 28043), (541, 28031), (551, 28004), (553, 28001), (562, 27986), (566, 27980), (570, 27974), (613, 27941), (671, 27812), (701, 27752), (798, 27437), (801, 27428), (802, 27425), (805, 27407), (819, 27365), (822, 27359), (825, 27350), (832, 27335), (849, 27278), (900, 27119), (913, 27089), (917, 27080), (938, 27020), (943, 26996), (956, 26957), (967, 26924), (970, 26912), (986, 26852),

Gene: Chalmers\_57 Start: 54135, Stop: 52318, Start Num: 235

Candidate Starts for Chalmers\_57:

(129, 54318), (Start: 235 @54135 has 43 MA's), (252, 54105), (359, 53925), (424, 53772), (426, 53760), (437, 53730), (442, 53724), (462, 53661), (464, 53655), (496, 53604), (509, 53577), (511, 53568), (539, 53520), (597, 53415), (647, 53319), (664, 53268), (737, 53124), (749, 53085), (755, 53055), (760, 53028), (763, 53016), (797, 52920), (799, 52914), (802, 52905), (804, 52893), (834, 52821), (841, 52791), (847, 52773), (851, 52764), (872, 52695), (877, 52683), (883, 52662), (921, 52593), (931, 52578), (938, 52554), (942, 52533), (947, 52515), (949, 52509), (962, 52476), (964, 52470), (969, 52452), (972, 52440), (975, 52428), (979, 52416), (994, 52374), (1015, 52344),

Gene: ChampagnePapi\_47 Start: 31992, Stop: 30166, Start Num: 234

Candidate Starts for ChampagnePapi\_47:

(Start: 234 @31992 has 938 MA's), (265, 31944), (353, 31788), (395, 31716), (415, 31659), (419, 31650), (458, 31530), (465, 31506), (541, 31413), (568, 31365), (582, 31344), (603, 31305), (628, 31260), (663, 31173), (667, 31164), (675, 31152), (700, 31107), (703, 31095), (756, 30942), (759, 30921), (798, 30798), (805, 30768), (818, 30729), (841, 30663), (842, 30660), (856, 30621), (862, 30597), (942, 30390), (985, 30255), (989, 30243), (993, 30234),

Gene: Chamuel\_38 Start: 28695, Stop: 26743, Start Num: 234

Candidate Starts for Chamuel\_38:

(Start: 234 @28695 has 938 MA's), (Start: 283 @28608 has 147 MA's), (Start: 291 @28599 has 5 MA's), (342, 28494), (347, 28485), (367, 28455), (369, 28452), (424, 28332), (426, 28320), (428, 28314), (466, 28209), (473, 28182), (532, 28041), (535, 28035), (537, 28032), (541, 28020), (551, 27993), (553, 27990), (562, 27975), (566, 27969), (570, 27963), (613, 27930), (671, 27801), (701, 27741), (798, 27426), (801, 27417), (802, 27414), (805, 27396), (819, 27354), (822, 27348), (832, 27324), (849, 27267), (900, 27108), (913, 27078), (917, 27069), (938, 27009), (943, 26985), (956, 26946), (967, 26913), (970, 26901), (986, 26841),

Gene: Chanagan\_42 Start: 33624, Stop: 31837, Start Num: 234

Candidate Starts for Chanagan\_42:

(Start: 234 @33624 has 938 MA's), (359, 33411), (368, 33396), (395, 33348), (405, 33318), (411, 33297), (415, 33291), (419, 33282), (457, 33165), (465, 33138), (541, 33045), (546, 33030), (596, 32946), (598, 32943), (634, 32877), (648, 32847), (657, 32817), (679, 32772), (700, 32733), (759, 32553), (775, 32505), (790, 32466), (805, 32400), (839, 32328), (841, 32319), (868, 32235), (903, 32148), (954, 32022), (960, 32010), (978, 31950), (985, 31926), (987, 31920),

Gene: Chandler\_58 Start: 54464, Stop: 52647, Start Num: 235

Candidate Starts for Chandler\_58:

(129, 54647), (Start: 235 @54464 has 43 MA's), (252, 54434), (359, 54254), (406, 54149), (424, 54101), (426, 54089), (437, 54059), (442, 54053), (462, 53990), (464, 53984), (496, 53933), (511, 53897), (539, 53849), (597, 53744), (647, 53648), (664, 53597), (737, 53453), (749, 53414), (755, 53384), (760, 53357), (763, 53345), (797, 53249), (799, 53243), (802, 53234), (804, 53222), (834, 53150), (841, 53120), (847, 53102), (851, 53093), (872, 53024), (877, 53012), (883, 52991), (921,

52922), (931, 52907), (938, 52883), (942, 52862), (947, 52844), (949, 52838), (962, 52805), (964, 52799), (969, 52781), (972, 52769), (975, 52757), (979, 52745), (994, 52703), (1015, 52673),

Gene: Changeling\_45 Start: 32303, Stop: 30516, Start Num: 234

Candidate Starts for Changeling\_45:

(Start: 234 @32303 has 938 MA's), (353, 32099), (355, 32096), (359, 32090), (368, 32075), (379, 32060), (397, 32024), (405, 31997), (415, 31970), (424, 31949), (465, 31817), (541, 31724), (566, 31676), (571, 31667), (582, 31652), (619, 31586), (655, 31505), (675, 31457), (740, 31313), (759, 31232), (778, 31181), (789, 31148), (790, 31145), (798, 31109), (805, 31079), (818, 31040), (837, 31019), (859, 30944), (862, 30932), (879, 30881), (888, 30854), (908, 30818), (921, 30800), (936, 30764), (942, 30740), (962, 30683), (968, 30662), (985, 30605), (989, 30593), (993, 30584),

Gene: Chaph\_45 Start: 31581, Stop: 29755, Start Num: 234

Candidate Starts for Chaph\_45:

(Start: 234 @31581 has 938 MA's), (252, 31560), (266, 31530), (279, 31500), (379, 31338), (389, 31320), (415, 31248), (419, 31239), (458, 31119), (465, 31095), (541, 31002), (568, 30954), (582, 30933), (603, 30894), (663, 30762), (675, 30741), (700, 30696), (703, 30684), (756, 30531), (759, 30510), (798, 30387), (805, 30357), (818, 30318), (841, 30252), (842, 30249), (847, 30234), (856, 30210), (862, 30186), (942, 29979), (985, 29844), (989, 29832), (993, 29823),

Gene: Chargerpower\_44 Start: 30403, Stop: 28610, Start Num: 234

Candidate Starts for Chargerpower\_44:

(Start: 169 @30496 has 2 MA's), (Start: 234 @30403 has 938 MA's), (246, 30394), (301, 30292), (303, 30286), (353, 30199), (364, 30181), (397, 30121), (405, 30094), (415, 30067), (449, 29962), (465, 29914), (541, 29821), (563, 29776), (634, 29653), (726, 29455), (754, 29356), (756, 29347), (759, 29326), (805, 29173), (837, 29113), (839, 29101), (841, 29092), (908, 28912), (936, 28858), (968, 28756), (970, 28747), (985, 28699), (989, 28687), (993, 28678),

Gene: Charles1\_61 Start: 54304, Stop: 52445, Start Num: 197

Candidate Starts for Charles1\_61:

(Start: 180 @54328 has 1 MA's), (Start: 197 @54304 has 298 MA's), (Start: 225 @54280 has 5 MA's), (Start: 238 @54274 has 2 MA's), (Start: 261 @54232 has 10 MA's), (269, 54211), (323, 54097), (328, 54091), (349, 54061), (385, 54001), (394, 53980), (410, 53926), (418, 53914), (425, 53896), (427, 53884), (462, 53779), (496, 53722), (511, 53686), (516, 53674), (535, 53647), (545, 53620), (555, 53602), (566, 53584), (588, 53545), (595, 53536), (597, 53533), (754, 53173), (760, 53140), (765, 53119), (799, 53026), (802, 53017), (822, 52954), (841, 52918), (842, 52915), (847, 52900), (872, 52822), (877, 52810), (883, 52789), (902, 52750), (942, 52660), (947, 52642), (949, 52636), (954, 52621), (964, 52597), (968, 52582), (969, 52579), (972, 52567), (979, 52543), (1002, 52495), (1015, 52471),

Gene: CharlieGBrown\_61 Start: 54143, Stop: 52284, Start Num: 197

Candidate Starts for CharlieGBrown\_61:

(Start: 180 @54167 has 1 MA's), (Start: 197 @54143 has 298 MA's), (Start: 225 @54119 has 5 MA's), (Start: 238 @54113 has 2 MA's), (Start: 261 @54071 has 10 MA's), (269, 54050), (323, 53936), (328, 53930), (349, 53900), (385, 53840), (394, 53819), (410, 53765), (418, 53753), (425, 53735), (427, 53723), (462, 53618), (496, 53561), (511, 53525), (516, 53513), (534, 53489), (539, 53477), (545, 53459), (555, 53441), (566, 53423), (588, 53384), (595, 53375), (597, 53372), (599, 53369), (724, 53114), (754, 53012), (760, 52979), (765, 52958), (799, 52865), (802, 52856), (822, 52793), (841, 52757), (842, 52754), (847, 52739), (872, 52661), (877, 52649), (883, 52628), (902, 52589), (942, 52499), (947, 52481), (949, 52475), (954, 52460), (964, 52436), (968, 52421), (969, 52418), (972, 52406), (979, 52382), (985, 52361), (1002, 52334), (1015, 52310), (1019, 52295),

Gene: CharlottesWeb\_50 Start: 45347, Stop: 43530, Start Num: 230

Candidate Starts for CharlottesWeb\_50:

(87, 45662), (97, 45626), (98, 45620), (107, 45587), (Start: 230 @45347 has 13 MA's), (252, 45311), (259, 45299), (Start: 261 @45296 has 10 MA's), (273, 45266), (344, 45140), (375, 45092), (406, 45017), (427, 44960), (456, 44885), (462, 44864), (511, 44771), (583, 44642), (597, 44618), (737, 44327), (743, 44306), (749, 44288), (760, 44231), (799, 44117), (802, 44108), (842, 44006), (847, 43991), (872, 43913), (877, 43901), (883, 43880), (885, 43871), (918, 43817), (935, 43784), (942, 43751), (943, 43748), (954, 43712), (964, 43688), (979, 43628), (1015, 43556),

Gene: Charm\_42 Start: 30834, Stop: 29041, Start Num: 234

Candidate Starts for Charm\_42:

(Start: 234 @30834 has 938 MA's), (246, 30825), (301, 30723), (334, 30663), (336, 30660), (353, 30630), (382, 30585), (397, 30552), (405, 30525), (409, 30510), (415, 30498), (419, 30489), (432, 30447), (465, 30345), (541, 30252), (550, 30228), (563, 30207), (634, 30084), (703, 29925), (704, 29922), (726, 29886), (729, 29880), (759, 29757), (782, 29691), (802, 29622), (805, 29604), (837, 29544), (841, 29523), (856, 29481), (879, 29406), (918, 29331), (936, 29289), (968, 29187), (985, 29130), (989, 29118), (993, 29109),

Gene: Chartreuse\_45 Start: 29574, Stop: 27733, Start Num: 234

Candidate Starts for Chartreuse\_45:

(Start: 234 @29574 has 938 MA's), (353, 29370), (395, 29295), (397, 29292), (405, 29265), (409, 29250), (415, 29238), (432, 29187), (461, 29097), (465, 29085), (541, 28992), (559, 28953), (571, 28935), (582, 28920), (619, 28854), (635, 28821), (636, 28818), (681, 28716), (710, 28656), (740, 28572), (759, 28491), (789, 28407), (790, 28404), (793, 28395), (798, 28368), (805, 28338), (837, 28278), (847, 28239), (936, 28023), (938, 28020), (942, 27999), (985, 27864), (989, 27852), (993, 27843), (995, 27840), (1042, 27747),

Gene: Che12\_47 Start: 30450, Stop: 28663, Start Num: 234

Candidate Starts for Che12\_47:

(Start: 234 @30450 has 938 MA's), (353, 30246), (359, 30237), (395, 30174), (397, 30171), (405, 30144), (415, 30117), (424, 30096), (431, 30069), (465, 29964), (541, 29871), (566, 29823), (628, 29715), (640, 29685), (675, 29604), (759, 29379), (789, 29295), (790, 29292), (798, 29256), (805, 29226), (818, 29187), (837, 29166), (841, 29145), (847, 29127), (879, 29028), (888, 29001), (908, 28965), (921, 28947), (936, 28911), (942, 28887), (984, 28755), (985, 28752), (989, 28740), (993, 28731),

Gene: CheetO\_60 Start: 54266, Stop: 52407, Start Num: 197

Candidate Starts for CheetO\_60:

(Start: 180 @54290 has 1 MA's), (Start: 197 @54266 has 298 MA's), (Start: 225 @54242 has 5 MA's), (Start: 238 @54236 has 2 MA's), (Start: 261 @54194 has 10 MA's), (269, 54173), (323, 54059), (328, 54053), (349, 54023), (385, 53963), (394, 53942), (410, 53888), (418, 53876), (425, 53858), (427, 53846), (462, 53741), (496, 53684), (511, 53648), (516, 53636), (534, 53612), (539, 53600), (545, 53582), (555, 53564), (566, 53546), (588, 53507), (595, 53498), (597, 53495), (599, 53492), (754, 53135), (760, 53102), (765, 53081), (799, 52988), (802, 52979), (822, 52916), (841, 52880), (842, 52877), (847, 52862), (872, 52784), (877, 52772), (883, 52751), (902, 52712), (942, 52622), (947, 52604), (949, 52598), (954, 52583), (964, 52559), (968, 52544), (969, 52541), (972, 52529), (979, 52505), (1002, 52457), (1015, 52433),

Gene: Cheeto1\_39 Start: 29061, Stop: 27196, Start Num: 281

Candidate Starts for Cheeto1\_39:

(Start: 281 @29061 has 18 MA's), (298, 29037), (369, 28905), (399, 28848), (420, 28794), (426, 28773), (428, 28767), (503, 28566), (537, 28482), (541, 28470), (553, 28440), (566, 28419), (574, 28407), (611, 28383), (634, 28338), (655, 28293), (671, 28251), (698, 28206), (701, 28191), (730, 28131), (741, 28089), (793, 27906), (802, 27867), (805, 27849), (819, 27807), (849, 27720), (938,

27462), (943, 27438), (954, 27405), (986, 27294),

Gene: Chentzyk\_59 Start: 54416, Stop: 52599, Start Num: 235

Candidate Starts for Chentzyk\_59:

(129, 54599), (Start: 235 @54416 has 43 MA's), (252, 54386), (359, 54206), (424, 54053), (426, 54041), (437, 54011), (442, 54005), (462, 53942), (464, 53936), (496, 53885), (509, 53858), (511, 53849), (539, 53801), (597, 53696), (647, 53600), (664, 53549), (737, 53405), (749, 53366), (755, 53336), (760, 53309), (763, 53297), (797, 53201), (799, 53195), (802, 53186), (804, 53174), (834, 53102), (841, 53072), (847, 53054), (851, 53045), (872, 52976), (877, 52964), (883, 52943), (921, 52874), (931, 52859), (938, 52835), (942, 52814), (947, 52796), (949, 52790), (962, 52757), (964, 52751), (969, 52733), (972, 52721), (975, 52709), (979, 52697), (994, 52655), (1015, 52625),

Gene: Chepli\_40 Start: 28352, Stop: 26460, Start Num: 283

Candidate Starts for Chepli\_40:

(219, 28460), (Start: 231 @28442 has 7 MA's), (Start: 283 @28352 has 147 MA's), (Start: 291 @28343 has 5 MA's), (315, 28286), (330, 28256), (357, 28217), (367, 28202), (371, 28196), (382, 28178), (398, 28145), (426, 28067), (428, 28061), (447, 28010), (460, 27971), (503, 27860), (537, 27776), (541, 27764), (553, 27734), (562, 27719), (566, 27713), (570, 27707), (574, 27701), (593, 27695), (744, 27380), (787, 27185), (805, 27113), (819, 27071), (832, 27041), (839, 27020), (849, 26984), (867, 26912), (913, 26795), (917, 26786), (938, 26726), (943, 26702), (946, 26690), (960, 26654), (986, 26558),

Gene: Cher\_60 Start: 54560, Stop: 52701, Start Num: 197

Candidate Starts for Cher\_60:

(Start: 180 @54584 has 1 MA's), (Start: 197 @54560 has 298 MA's), (Start: 225 @54536 has 5 MA's), (Start: 238 @54530 has 2 MA's), (Start: 261 @54488 has 10 MA's), (269, 54467), (323, 54353), (328, 54347), (349, 54317), (385, 54257), (394, 54236), (410, 54182), (418, 54170), (425, 54152), (427, 54140), (462, 54035), (496, 53978), (511, 53942), (516, 53930), (535, 53903), (555, 53858), (588, 53801), (595, 53792), (597, 53789), (754, 53429), (760, 53396), (765, 53375), (799, 53282), (802, 53273), (822, 53210), (841, 53174), (842, 53171), (847, 53156), (872, 53078), (877, 53066), (883, 53045), (902, 53006), (942, 52916), (947, 52898), (949, 52892), (954, 52877), (964, 52853), (968, 52838), (969, 52835), (972, 52823), (979, 52799), (1002, 52751), (1015, 52727),

Gene: CherryonLim\_46 Start: 35452, Stop: 33086, Start Num: 47

Candidate Starts for CherryonLim\_46:

(Start: 47 @35452 has 13 MA's), (64, 35392), (76, 35365), (82, 35350), (96, 35311), (136, 35206), (170, 35161), (Start: 223 @35083 has 3 MA's), (228, 35077), (Start: 230 @35074 has 13 MA's), (250, 35047), (252, 35044), (268, 35008), (269, 35005), (273, 34996), (290, 34969), (Start: 291 @34966 has 5 MA's), (317, 34909), (342, 34870), (380, 34807), (391, 34783), (399, 34762), (409, 34729), (410, 34726), (420, 34708), (426, 34687), (448, 34627), (495, 34504), (524, 34429), (532, 34408), (541, 34387), (634, 34300), (662, 34252), (677, 34222), (682, 34216), (711, 34171), (713, 34168), (718, 34153), (728, 34132), (732, 34117), (746, 34069), (752, 34048), (772, 33958), (773, 33949), (779, 33934), (781, 33919), (784, 33907), (805, 33814), (817, 33778), (819, 33772), (822, 33766), (824, 33760), (842, 33703), (849, 33679), (878, 33574), (879, 33571), (919, 33478), (926, 33460), (948, 33379), (958, 33355), (967, 33325), (979, 33277), (982, 33268), (986, 33253), (996, 33229), (1008, 33208), (1035, 33142), (1046, 33121), (1047, 33115), (1050, 33109),

Gene: ChickenKing\_38 Start: 28974, Stop: 27109, Start Num: 281

Candidate Starts for ChickenKing\_38:

(Start: 281 @28974 has 18 MA's), (298, 28950), (369, 28818), (399, 28761), (420, 28707), (426, 28686), (428, 28680), (503, 28479), (537, 28395), (541, 28383), (553, 28353), (566, 28332), (574, 28320), (611, 28296), (634, 28251), (671, 28164), (698, 28119), (701, 28104), (741, 28002), (793, 27819), (802, 27780), (805, 27762), (819, 27720), (825, 27705), (849, 27633), (938, 27375), (943,

27351), (954, 27318), (986, 27207),

Gene: ChickenTender\_45 Start: 32093, Stop: 29700, Start Num: 36

Candidate Starts for ChickenTender\_45:

(31, 32120), (Start: 36 @32093 has 16 MA's), (Start: 60 @32039 has 1 MA's), (86, 31973), (136, 31823), (170, 31778), (216, 31712), (Start: 230 @31691 has 13 MA's), (259, 31649), (279, 31601), (317, 31526), (322, 31514), (366, 31445), (385, 31412), (391, 31397), (409, 31343), (410, 31340), (420, 31322), (426, 31301), (448, 31241), (449, 31238), (495, 31118), (517, 31061), (519, 31058), (524, 31043), (557, 30965), (634, 30914), (643, 30890), (655, 30884), (662, 30860), (666, 30851), (682, 30824), (707, 30782), (711, 30779), (713, 30776), (758, 30629), (773, 30560), (774, 30554), (784, 30518), (805, 30425), (817, 30389), (819, 30383), (822, 30377), (824, 30371), (834, 30347), (842, 30314), (849, 30290), (859, 30245), (986, 29864), (1008, 29819), (1013, 29810), (1037, 29750),

Gene: ChikPic\_38 Start: 28741, Stop: 26876, Start Num: 283

Candidate Starts for ChikPic\_38:

(Start: 283 @28741 has 147 MA's), (305, 28696), (330, 28642), (371, 28582), (398, 28531), (426, 28453), (428, 28447), (445, 28402), (446, 28399), (447, 28396), (460, 28357), (479, 28297), (532, 28174), (537, 28165), (541, 28153), (545, 28141), (553, 28123), (566, 28102), (574, 28090), (680, 27919), (749, 27751), (793, 27586), (801, 27550), (805, 27529), (819, 27487), (849, 27400), (859, 27355), (894, 27256), (913, 27211), (917, 27202), (938, 27142), (943, 27118), (954, 27085), (986, 26974),

Gene: Childish\_60 Start: 54571, Stop: 52712, Start Num: 197

Candidate Starts for Childish\_60:

(Start: 180 @54595 has 1 MA's), (Start: 197 @54571 has 298 MA's), (Start: 225 @54547 has 5 MA's), (Start: 238 @54541 has 2 MA's), (Start: 261 @54499 has 10 MA's), (269, 54478), (323, 54364), (328, 54358), (349, 54328), (385, 54268), (394, 54247), (410, 54193), (418, 54181), (425, 54163), (427, 54151), (462, 54046), (496, 53989), (511, 53953), (516, 53941), (535, 53914), (545, 53887), (555, 53869), (566, 53851), (588, 53812), (595, 53803), (597, 53800), (724, 53542), (754, 53440), (760, 53407), (765, 53386), (799, 53293), (802, 53284), (822, 53221), (841, 53185), (842, 53182), (847, 53167), (872, 53089), (877, 53077), (883, 53056), (902, 53017), (942, 52927), (947, 52909), (949, 52903), (954, 52888), (964, 52864), (968, 52849), (969, 52846), (972, 52834), (979, 52810), (985, 52789), (1002, 52762), (1015, 52738),

Gene: ChiliPepper\_40 Start: 29968, Stop: 31839, Start Num: 234

Candidate Starts for ChiliPepper\_40:

(Start: 234 @29968 has 938 MA's), (340, 30151), (362, 30190), (382, 30208), (408, 30280), (419, 30304), (424, 30316), (425, 30319), (453, 30400), (579, 30592), (603, 30640), (649, 30730), (709, 30871), (747, 30994), (759, 31054), (782, 31120), (786, 31135), (796, 31171), (799, 31180), (805, 31207), (840, 31300), (869, 31393), (901, 31471), (936, 31543), (946, 31582), (962, 31624), (978, 31678), (985, 31702), (993, 31723), (1008, 31747),

Gene: Chilliams\_97 Start: 71240, Stop: 73045, Start Num: 248

Candidate Starts for Chilliams\_97:

(214, 71195), (Start: 248 @71240 has 2 MA's), (276, 71303), (299, 71342), (303, 71351), (345, 71426), (382, 71480), (418, 71561), (426, 71588), (428, 71594), (468, 71699), (541, 71768), (550, 71792), (586, 71846), (588, 71852), (603, 71873), (615, 71888), (638, 71942), (700, 72077), (704, 72092), (735, 72173), (746, 72206), (752, 72224), (754, 72236), (756, 72245), (759, 72266), (796, 72389), (840, 72539), (843, 72551), (856, 72587), (865, 72620), (883, 72674), (895, 72701), (943, 72824), (945, 72830), (960, 72872), (962, 72878), (967, 72896), (985, 72956), (1017, 73007),

Gene: ChipMunk\_47 Start: 33204, Stop: 31417, Start Num: 234

Candidate Starts for ChipMunk\_47:

(Start: 234 @33204 has 938 MA's), (355, 32997), (359, 32991), (368, 32976), (379, 32961), (397, 32925), (405, 32898), (415, 32871), (424, 32850), (448, 32769), (465, 32718), (541, 32625), (566, 32577), (571, 32568), (582, 32553), (619, 32487), (675, 32358), (679, 32352), (759, 32133), (778, 32082), (789, 32049), (790, 32046), (805, 31980), (818, 31941), (837, 31920), (859, 31845), (862, 31833), (879, 31782), (908, 31719), (921, 31701), (936, 31665), (942, 31641), (968, 31563), (985, 31506), (989, 31494), (993, 31485),

Gene: Chiqui\_43 Start: 31530, Stop: 29692, Start Num: 234

Candidate Starts for Chiqui\_43:

(179, 31602), (Start: 234 @31530 has 938 MA's), (266, 31479), (353, 31326), (379, 31287), (395, 31254), (415, 31197), (419, 31188), (424, 31176), (458, 31068), (465, 31044), (468, 31035), (541, 30948), (568, 30900), (603, 30840), (636, 30777), (675, 30687), (729, 30573), (759, 30450), (790, 30363), (798, 30327), (805, 30297), (842, 30186), (856, 30147), (862, 30123), (868, 30105), (869, 30102), (918, 29982), (921, 29976), (942, 29916), (984, 29784), (985, 29781), (989, 29769), (993, 29760),

Gene: ChocoMunchkin\_42 Start: 32324, Stop: 29937, Start Num: 45

Candidate Starts for ChocoMunchkin\_42:

(20, 32396), (23, 32381), (Start: 45 @32324 has 24 MA's), (49, 32315), (52, 32309), (76, 32228), (119, 32108), (136, 32057), (Start: 230 @31925 has 13 MA's), (250, 31898), (259, 31883), (279, 31835), (295, 31805), (317, 31760), (354, 31700), (366, 31682), (391, 31634), (409, 31580), (410, 31577), (420, 31559), (426, 31538), (445, 31487), (448, 31478), (449, 31475), (473, 31400), (495, 31355), (519, 31295), (524, 31280), (570, 31196), (634, 31151), (643, 31127), (655, 31121), (662, 31097), (707, 31019), (711, 31016), (713, 31013), (758, 30866), (773, 30797), (796, 30698), (805, 30662), (817, 30626), (819, 30620), (822, 30614), (824, 30608), (834, 30584), (842, 30551), (849, 30527), (859, 30482), (878, 30422), (938, 30269), (947, 30230), (948, 30227), (986, 30101), (1008, 30056), (1013, 30047),

Gene: Chorkpop\_60 Start: 54047, Stop: 52188, Start Num: 197

Candidate Starts for Chorkpop\_60:

(Start: 180 @54071 has 1 MA's), (Start: 197 @54047 has 298 MA's), (Start: 225 @54023 has 5 MA's), (Start: 238 @54017 has 2 MA's), (Start: 261 @53975 has 10 MA's), (269, 53954), (323, 53840), (328, 53834), (349, 53804), (385, 53744), (394, 53723), (410, 53669), (418, 53657), (425, 53639), (427, 53627), (462, 53522), (496, 53465), (511, 53429), (516, 53417), (535, 53390), (545, 53363), (555, 53345), (566, 53327), (588, 53288), (595, 53279), (597, 53276), (724, 53018), (754, 52916), (760, 52883), (765, 52862), (799, 52769), (802, 52760), (822, 52697), (841, 52661), (842, 52658), (847, 52643), (872, 52565), (877, 52553), (883, 52532), (902, 52493), (942, 52403), (947, 52385), (949, 52379), (954, 52364), (964, 52340), (968, 52325), (969, 52322), (972, 52310), (979, 52286), (1002, 52238), (1015, 52214),

Gene: ChrisnMich\_53 Start: 52982, Stop: 51141, Start Num: 175

Candidate Starts for ChrisnMich\_53:

(Start: 175 @52982 has 4 MA's), (Start: 189 @52964 has 26 MA's), (Start: 238 @52940 has 2 MA's), (252, 52913), (Start: 261 @52898 has 10 MA's), (269, 52877), (316, 52790), (382, 52685), (399, 52643), (425, 52577), (434, 52547), (437, 52538), (441, 52535), (442, 52532), (496, 52412), (504, 52394), (511, 52376), (516, 52364), (528, 52349), (535, 52337), (595, 52226), (597, 52223), (618, 52193), (634, 52157), (737, 51932), (739, 51929), (749, 51893), (754, 51869), (760, 51836), (797, 51728), (799, 51722), (802, 51713), (841, 51614), (842, 51611), (847, 51596), (872, 51518), (877, 51506), (883, 51485), (885, 51476), (902, 51446), (935, 51389), (942, 51356), (947, 51338), (949, 51332), (964, 51293), (969, 51275), (972, 51263), (979, 51239), (994, 51197), (1002, 51191), (1015, 51167),

Gene: Christoph\_38 Start: 28630, Stop: 26765, Start Num: 283



Candidate Starts for Christoph\_38:

(Start: 283 @28630 has 147 MA's), (Start: 291 @28621 has 5 MA's), (342, 28516), (347, 28507), (367, 28477), (369, 28474), (424, 28354), (426, 28342), (428, 28336), (466, 28231), (473, 28204), (532, 28063), (535, 28057), (537, 28054), (541, 28042), (551, 28015), (553, 28012), (562, 27997), (566, 27991), (570, 27985), (613, 27952), (671, 27823), (701, 27763), (798, 27448), (801, 27439), (802, 27436), (805, 27418), (819, 27376), (822, 27370), (825, 27361), (832, 27346), (849, 27289), (900, 27130), (913, 27100), (917, 27091), (938, 27031), (943, 27007), (956, 26968), (967, 26935), (970, 26923), (986, 26863),

Gene: Chunky\_59 Start: 53596, Stop: 51737, Start Num: 197

Candidate Starts for Chunky\_59:

(Start: 180 @53620 has 1 MA's), (Start: 197 @53596 has 298 MA's), (Start: 225 @53572 has 5 MA's), (Start: 238 @53566 has 2 MA's), (Start: 261 @53524 has 10 MA's), (269, 53503), (323, 53389), (328, 53383), (349, 53353), (385, 53293), (394, 53272), (410, 53218), (418, 53206), (425, 53188), (427, 53176), (462, 53071), (496, 53014), (511, 52978), (516, 52966), (535, 52939), (539, 52930), (555, 52894), (588, 52837), (595, 52828), (597, 52825), (599, 52822), (754, 52465), (760, 52432), (765, 52411), (799, 52318), (802, 52309), (822, 52246), (841, 52210), (842, 52207), (847, 52192), (872, 52114), (877, 52102), (883, 52081), (902, 52042), (942, 51952), (947, 51934), (949, 51928), (954, 51913), (964, 51889), (968, 51874), (969, 51871), (972, 51859), (979, 51835), (1002, 51787), (1015, 51763),

Gene: Chupacabra\_43 Start: 31120, Stop: 29285, Start Num: 234

Candidate Starts for Chupacabra\_43:

(Start: 234 @31120 has 938 MA's), (266, 31069), (353, 30916), (368, 30892), (390, 30856), (395, 30844), (411, 30793), (415, 30787), (419, 30778), (445, 30694), (458, 30658), (461, 30646), (464, 30637), (465, 30634), (541, 30541), (568, 30493), (603, 30433), (619, 30406), (630, 30382), (661, 30304), (663, 30301), (675, 30280), (679, 30274), (711, 30208), (729, 30166), (759, 30043), (775, 29995), (798, 29920), (805, 29890), (818, 29851), (842, 29779), (856, 29740), (862, 29716), (864, 29710), (868, 29698), (911, 29590), (942, 29509), (949, 29485), (970, 29422), (985, 29374), (989, 29362), (993, 29353),

Gene: Chute\_62 Start: 54608, Stop: 52749, Start Num: 197

Candidate Starts for Chute\_62:

(Start: 180 @54632 has 1 MA's), (Start: 197 @54608 has 298 MA's), (Start: 225 @54584 has 5 MA's), (Start: 238 @54578 has 2 MA's), (Start: 261 @54536 has 10 MA's), (269, 54515), (323, 54401), (328, 54395), (349, 54365), (385, 54305), (394, 54284), (410, 54230), (418, 54218), (425, 54200), (427, 54188), (462, 54083), (496, 54026), (511, 53990), (516, 53978), (534, 53954), (539, 53942), (545, 53924), (555, 53906), (566, 53888), (588, 53849), (595, 53840), (597, 53837), (599, 53834), (754, 53477), (760, 53444), (765, 53423), (799, 53330), (802, 53321), (822, 53258), (841, 53222), (842, 53219), (847, 53204), (872, 53126), (877, 53114), (883, 53093), (902, 53054), (942, 52964), (947, 52946), (949, 52940), (954, 52925), (964, 52901), (968, 52886), (969, 52883), (972, 52871), (979, 52847), (1002, 52799), (1015, 52775),

Gene: Ciao\_45 Start: 34751, Stop: 32964, Start Num: 234

Candidate Starts for Ciao\_45:

(Start: 234 @34751 has 938 MA's), (359, 34538), (368, 34523), (395, 34475), (405, 34445), (411, 34424), (415, 34418), (419, 34409), (457, 34292), (465, 34265), (541, 34172), (546, 34157), (566, 34124), (596, 34073), (598, 34070), (634, 34004), (648, 33974), (657, 33944), (679, 33899), (700, 33860), (759, 33680), (775, 33632), (790, 33593), (805, 33527), (839, 33455), (841, 33446), (868, 33362), (903, 33275), (954, 33149), (960, 33137), (985, 33053), (987, 33047),

Gene: Cici\_44 Start: 31537, Stop: 29708, Start Num: 234

Candidate Starts for Cici\_44:

(Start: 234 @31537 has 938 MA's), (266, 31486), (279, 31456), (379, 31294), (389, 31276), (395, 31261), (415, 31204), (419, 31195), (458, 31075), (465, 31051), (513, 31009), (541, 30958), (568, 30910), (582, 30889), (603, 30850), (628, 30805), (630, 30799), (663, 30718), (675, 30697), (700, 30652), (756, 30487), (759, 30466), (805, 30313), (818, 30274), (842, 30202), (847, 30187), (856, 30163), (861, 30145), (862, 30139), (864, 30133), (942, 29932), (985, 29797), (989, 29785), (993, 29776),

Gene: Cindaradix\_42 Start: 31162, Stop: 29333, Start Num: 234

Candidate Starts for Cindaradix\_42:

(Start: 234 @31162 has 938 MA's), (265, 31114), (353, 30958), (395, 30886), (415, 30829), (419, 30820), (458, 30700), (465, 30676), (541, 30583), (568, 30535), (582, 30514), (603, 30475), (628, 30430), (663, 30343), (667, 30334), (675, 30322), (700, 30277), (703, 30265), (759, 30091), (793, 29995), (798, 29968), (799, 29965), (805, 29938), (818, 29899), (841, 29830), (842, 29827), (847, 29812), (856, 29788), (862, 29764), (864, 29758), (942, 29557), (985, 29422), (989, 29410), (993, 29401),

Gene: Cintron\_44 Start: 31550, Stop: 29724, Start Num: 234

Candidate Starts for Cintron\_44:

(Start: 234 @31550 has 938 MA's), (265, 31502), (353, 31346), (395, 31274), (415, 31217), (419, 31208), (458, 31088), (465, 31064), (518, 31010), (541, 30971), (568, 30923), (582, 30902), (603, 30863), (628, 30818), (663, 30731), (667, 30722), (675, 30710), (700, 30665), (703, 30653), (756, 30500), (759, 30479), (798, 30356), (805, 30326), (818, 30287), (841, 30221), (842, 30218), (847, 30203), (856, 30179), (862, 30155), (942, 29948), (985, 29813), (989, 29801), (993, 29792),

Gene: Citius\_45 Start: 31591, Stop: 29765, Start Num: 234

Candidate Starts for Citius\_45:

(Start: 234 @31591 has 938 MA's), (252, 31570), (266, 31540), (279, 31510), (379, 31348), (389, 31330), (415, 31258), (419, 31249), (458, 31129), (465, 31105), (541, 31012), (568, 30964), (582, 30943), (603, 30904), (663, 30772), (675, 30751), (700, 30706), (703, 30694), (756, 30541), (759, 30520), (798, 30397), (805, 30367), (818, 30328), (841, 30262), (842, 30259), (847, 30244), (856, 30220), (862, 30196), (942, 29989), (985, 29854), (989, 29842), (993, 29833),

Gene: Clancy\_38 Start: 28664, Stop: 26799, Start Num: 283

Candidate Starts for Clancy\_38:

(Start: 234 @28751 has 938 MA's), (Start: 237 @28748 has 2 MA's), (Start: 283 @28664 has 147 MA's), (Start: 291 @28655 has 5 MA's), (342, 28550), (347, 28541), (367, 28511), (369, 28508), (424, 28388), (426, 28376), (428, 28370), (466, 28265), (473, 28238), (532, 28097), (535, 28091), (537, 28088), (541, 28076), (551, 28049), (553, 28046), (562, 28031), (566, 28025), (570, 28019), (613, 27986), (671, 27857), (701, 27797), (798, 27482), (801, 27473), (802, 27470), (805, 27452), (819, 27410), (822, 27404), (825, 27395), (832, 27380), (849, 27323), (900, 27164), (913, 27134), (917, 27125), (938, 27065), (943, 27041), (956, 27002), (967, 26969), (970, 26957), (986, 26897),

Gene: Clarenza\_44 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for Clarenza\_44:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Clayda5\_41 Start: 27431, Stop: 29296, Start Num: 234

Candidate Starts for Clayda5\_41:

(Start: 231 @27428 has 7 MA's), (Start: 234 @27431 has 938 MA's), (Start: 237 @27434 has 2 MA's), (273, 27503), (425, 27785), (432, 27812), (453, 27866), (559, 28031), (603, 28106), (618, 28127), (747, 28481), (759, 28541), (778, 28592), (796, 28658), (805, 28694), (840, 28787), (901, 28958), (936, 29030), (962, 29111), (984, 29186), (985, 29189), (993, 29210), (1032, 29279),

Gene: Cleo\_38 Start: 31604, Stop: 29244, Start Num: 45

Candidate Starts for Cleo\_38:

(35, 31628), (Start: 45 @31604 has 24 MA's), (52, 31589), (58, 31553), (110, 31421), (127, 31382), (136, 31358), (168, 31316), (279, 31139), (Start: 291 @31121 has 5 MA's), (317, 31064), (342, 31025), (391, 30938), (409, 30884), (420, 30863), (426, 30842), (499, 30644), (517, 30602), (524, 30584), (570, 30500), (626, 30464), (682, 30371), (711, 30326), (724, 30299), (729, 30287), (732, 30275), (770, 30134), (784, 30065), (795, 30014), (802, 29990), (805, 29972), (817, 29936), (819, 29930), (822, 29924), (824, 29918), (834, 29894), (842, 29861), (849, 29837), (859, 29792), (860, 29789), (880, 29726), (890, 29699), (926, 29618), (945, 29549), (948, 29537), (958, 29513), (978, 29438), (979, 29435), (986, 29411), (996, 29387), (1008, 29366), (1018, 29342), (1037, 29297), (1046, 29279),

Gene: CliffHanger\_44 Start: 28741, Stop: 30612, Start Num: 234

Candidate Starts for CliffHanger\_44:

(Start: 234 @28741 has 938 MA's), (273, 28810), (284, 28831), (329, 28909), (353, 28948), (411, 29062), (419, 29077), (425, 29092), (453, 29173), (457, 29182), (550, 29323), (563, 29344), (576, 29359), (582, 29374), (603, 29413), (618, 29434), (759, 29830), (761, 29836), (786, 29911), (805, 29983), (840, 30076), (859, 30136), (869, 30169), (901, 30247), (936, 30319), (962, 30400), (964, 30406), (967, 30418), (978, 30454), (985, 30478), (1008, 30523),

Gene: Clock\_37 Start: 29844, Stop: 27952, Start Num: 283

Candidate Starts for Clock\_37:

(Start: 283 @29844 has 147 MA's), (305, 29799), (330, 29745), (337, 29739), (347, 29721), (369, 29688), (371, 29685), (398, 29634), (399, 29631), (427, 29553), (428, 29550), (446, 29502), (460, 29460), (503, 29358), (514, 29325), (532, 29283), (535, 29277), (537, 29274), (541, 29262), (553, 29232), (574, 29199), (590, 29196), (611, 29175), (680, 29028), (744, 28872), (805, 28605), (817, 28569), (819, 28563), (825, 28548), (847, 28485), (849, 28476), (943, 28194), (944, 28191), (956, 28155), (986, 28050),

Gene: CloudWang3\_45 Start: 29424, Stop: 27583, Start Num: 234

Candidate Starts for CloudWang3\_45:

(Start: 212 @29454 has 1 MA's), (Start: 234 @29424 has 938 MA's), (353, 29220), (395, 29145), (397, 29142), (405, 29115), (409, 29100), (415, 29088), (432, 29037), (461, 28947), (465, 28935), (541, 28842), (559, 28803), (571, 28785), (582, 28770), (619, 28704), (635, 28671), (636, 28668), (681, 28566), (710, 28506), (740, 28422), (759, 28341), (789, 28257), (790, 28254), (793, 28245), (798, 28218), (805, 28188), (837, 28128), (847, 28089), (936, 27873), (938, 27870), (942, 27849), (985, 27714), (989, 27702), (993, 27693), (995, 27690), (1042, 27597),

Gene: CloverMinnie\_53 Start: 47593, Stop: 45776, Start Num: 230

Candidate Starts for CloverMinnie\_53:

(Start: 230 @47593 has 13 MA's), (Start: 238 @47584 has 2 MA's), (252, 47557), (259, 47545), (269, 47521), (273, 47512), (323, 47416), (355, 47374), (375, 47338), (406, 47263), (434, 47188), (462, 47110), (496, 47053), (511, 47017), (516, 47005), (534, 46981), (583, 46888), (597, 46864), (610, 46846), (737, 46573), (749, 46534), (755, 46504), (760, 46477), (797, 46369), (799, 46363), (802, 46354), (839, 46264), (841, 46255), (842, 46252), (847, 46237), (872, 46159), (877, 46147), (878, 46141), (883, 46126), (907, 46078), (935, 46030), (942, 45997), (949, 45973), (964, 45934), (968, 45919), (979, 45874), (1015, 45802),

Gene: Cobra\_62 Start: 54586, Stop: 52727, Start Num: 197

Candidate Starts for Cobra\_62:

(Start: 180 @54610 has 1 MA's), (Start: 197 @54586 has 298 MA's), (Start: 225 @54562 has 5 MA's), (Start: 238 @54556 has 2 MA's), (Start: 261 @54514 has 10 MA's), (269, 54493), (323, 54379), (328, 54373), (349, 54343), (385, 54283), (394, 54262), (410, 54208), (418, 54196), (425, 54178), (427, 54166), (462, 54061), (496, 54004), (511, 53968), (534, 53932), (539, 53920), (545, 53902), (555, 53884), (566, 53866), (588, 53827), (595, 53818), (597, 53815), (599, 53812), (724, 53557), (754, 53455), (760, 53422), (765, 53401), (799, 53308), (802, 53299), (822, 53236), (841, 53200), (842, 53197), (847, 53182), (872, 53104), (877, 53092), (883, 53071), (902, 53032), (942, 52942), (947, 52924), (949, 52918), (954, 52903), (964, 52879), (968, 52864), (969, 52861), (972, 52849), (979, 52825), (1002, 52777), (1015, 52753),

Gene: Cocoaberry\_45 Start: 31574, Stop: 29748, Start Num: 234

Candidate Starts for Cocoaberry\_45:

(Start: 234 @31574 has 938 MA's), (252, 31553), (266, 31523), (279, 31493), (379, 31331), (389, 31313), (415, 31241), (419, 31232), (458, 31112), (465, 31088), (541, 30995), (568, 30947), (582, 30926), (603, 30887), (663, 30755), (675, 30734), (700, 30689), (703, 30677), (756, 30524), (759, 30503), (798, 30380), (805, 30350), (818, 30311), (841, 30245), (842, 30242), (847, 30227), (856, 30203), (862, 30179), (942, 29972), (985, 29837), (989, 29825), (993, 29816),

Gene: Coffee\_57 Start: 52600, Stop: 50771, Start Num: 197

Candidate Starts for Coffee\_57:

(Start: 197 @52600 has 298 MA's), (Start: 238 @52573 has 2 MA's), (253, 52543), (Start: 261 @52531 has 10 MA's), (272, 52504), (273, 52501), (277, 52492), (301, 52474), (355, 52378), (385, 52327), (395, 52303), (402, 52279), (450, 52141), (459, 52117), (462, 52105), (496, 52048), (511, 52012), (516, 52000), (534, 51976), (580, 51892), (595, 51862), (597, 51859), (618, 51829), (678, 51685), (710, 51619), (733, 51580), (737, 51568), (743, 51547), (749, 51529), (760, 51472), (783, 51415), (793, 51388), (799, 51358), (802, 51349), (822, 51283), (839, 51256), (841, 51247), (847, 51229), (856, 51205), (872, 51151), (877, 51139), (883, 51118), (921, 51049), (942, 50989), (947, 50971), (960, 50938), (964, 50926), (968, 50911), (969, 50908), (972, 50896), (979, 50872), (980, 50869), (1002, 50821), (1004, 50818), (1015, 50797), (1023, 50776),

Gene: ColaCorta\_38 Start: 28731, Stop: 26866, Start Num: 283

Candidate Starts for ColaCorta\_38:

(Start: 283 @28731 has 147 MA's), (305, 28686), (330, 28632), (371, 28572), (398, 28521), (426, 28443), (428, 28437), (445, 28392), (446, 28389), (447, 28386), (460, 28347), (479, 28287), (532, 28164), (537, 28155), (541, 28143), (545, 28131), (553, 28113), (566, 28092), (574, 28080), (680, 27909), (749, 27741), (793, 27576), (801, 27540), (805, 27519), (819, 27477), (849, 27390), (859, 27345), (894, 27246), (913, 27201), (917, 27192), (938, 27132), (943, 27108), (954, 27075), (986, 26964),

Gene: Colbert\_59 Start: 53606, Stop: 51747, Start Num: 197

Candidate Starts for Colbert\_59:

(Start: 180 @53630 has 1 MA's), (Start: 197 @53606 has 298 MA's), (Start: 225 @53582 has 5 MA's), (Start: 238 @53576 has 2 MA's), (Start: 261 @53534 has 10 MA's), (269, 53513), (323, 53399), (328, 53393), (349, 53363), (385, 53303), (394, 53282), (410, 53228), (418, 53216), (425, 53198), (427, 53186), (462, 53081), (496, 53024), (511, 52988), (516, 52976), (535, 52949), (545, 52922), (555, 52904), (566, 52886), (588, 52847), (595, 52838), (597, 52835), (599, 52832), (754, 52475), (760, 52442), (765, 52421), (799, 52328), (802, 52319), (822, 52256), (841, 52220), (842, 52217), (847, 52202), (872, 52124), (877, 52112), (883, 52091), (902, 52052), (942, 51962), (947, 51944), (949, 51938), (954, 51923), (964, 51899), (968, 51884), (969, 51881), (972, 51869), (979, 51845), (1002, 51797), (1015, 51773),

Gene: Colbster\_48 Start: 31856, Stop: 30042, Start Num: 234

Candidate Starts for Colbster\_48:

(Start: 234 @31856 has 938 MA's), (262, 31817), (266, 31805), (353, 31652), (362, 31637), (395, 31580), (415, 31523), (419, 31514), (432, 31472), (448, 31421), (465, 31370), (541, 31277), (566, 31229), (571, 31220), (582, 31205), (603, 31166), (619, 31139), (634, 31109), (670, 31016), (701, 30956), (710, 30941), (759, 30785), (790, 30698), (805, 30632), (818, 30593), (842, 30521), (856, 30482), (862, 30458), (868, 30440), (879, 30407), (888, 30380), (921, 30326), (942, 30266), (968, 30188), (985, 30131), (989, 30119), (993, 30110),

Gene: Coldpizza\_51 Start: 48550, Stop: 46769, Start Num: 229

Candidate Starts for Coldpizza\_51:

(167, 48637), (229, 48550), (259, 48505), (328, 48388), (385, 48304), (404, 48250), (441, 48160), (462, 48094), (496, 48037), (511, 48001), (516, 47989), (541, 47947), (597, 47848), (737, 47557), (760, 47461), (790, 47389), (797, 47356), (799, 47350), (802, 47341), (822, 47278), (842, 47239), (847, 47224), (853, 47209), (872, 47146), (877, 47134), (883, 47113), (885, 47104), (902, 47074), (931, 47029), (938, 47005), (942, 46984), (949, 46960), (964, 46921), (979, 46867), (1015, 46795),

Gene: Coletti\_63 Start: 55108, Stop: 53249, Start Num: 197

Candidate Starts for Coletti\_63:

(Start: 180 @55132 has 1 MA's), (Start: 197 @55108 has 298 MA's), (Start: 225 @55084 has 5 MA's), (Start: 238 @55078 has 2 MA's), (Start: 261 @55036 has 10 MA's), (269, 55015), (323, 54901), (328, 54895), (349, 54865), (385, 54805), (394, 54784), (410, 54730), (418, 54718), (425, 54700), (427, 54688), (462, 54583), (496, 54526), (511, 54490), (516, 54478), (534, 54454), (539, 54442), (545, 54424), (555, 54406), (566, 54388), (588, 54349), (595, 54340), (597, 54337), (599, 54334), (754, 53977), (760, 53944), (765, 53923), (799, 53830), (802, 53821), (822, 53758), (841, 53722), (842, 53719), (847, 53704), (872, 53626), (877, 53614), (883, 53593), (902, 53554), (942, 53464), (947, 53446), (949, 53440), (954, 53425), (964, 53401), (968, 53386), (969, 53383), (972, 53371), (979, 53347), (1002, 53299), (1015, 53275),

Gene: Colin\_46 Start: 32075, Stop: 30288, Start Num: 234

Candidate Starts for Colin\_46:

(Start: 234 @32075 has 938 MA's), (355, 31868), (359, 31862), (379, 31832), (397, 31796), (405, 31769), (415, 31742), (424, 31721), (465, 31589), (541, 31496), (566, 31448), (571, 31439), (582, 31424), (619, 31358), (655, 31277), (675, 31229), (759, 31004), (778, 30953), (789, 30920), (790, 30917), (805, 30851), (818, 30812), (837, 30791), (859, 30716), (862, 30704), (908, 30590), (935, 30545), (936, 30536), (942, 30512), (962, 30455), (968, 30434), (985, 30377), (989, 30365),

Gene: Coltrane\_40 Start: 27441, Stop: 29309, Start Num: 231

Candidate Starts for Coltrane\_40:

(Start: 231 @27441 has 7 MA's), (Start: 234 @27444 has 938 MA's), (Start: 237 @27447 has 2 MA's), (273, 27516), (432, 27825), (453, 27879), (559, 28044), (603, 28119), (618, 28140), (747, 28494), (759, 28554), (778, 28605), (796, 28671), (805, 28707), (840, 28800), (901, 28971), (936, 29043), (962, 29124), (984, 29199), (985, 29202), (993, 29223), (1032, 29292),

Gene: Commander\_45 Start: 31569, Stop: 29743, Start Num: 234

Candidate Starts for Commander\_45:

(Start: 234 @31569 has 938 MA's), (252, 31548), (266, 31518), (279, 31488), (379, 31326), (389, 31308), (415, 31236), (419, 31227), (458, 31107), (465, 31083), (541, 30990), (568, 30942), (582, 30921), (603, 30882), (663, 30750), (675, 30729), (700, 30684), (703, 30672), (756, 30519), (759, 30498), (798, 30375), (805, 30345), (818, 30306), (841, 30240), (842, 30237), (847, 30222), (856, 30198), (862, 30174), (942, 29967), (985, 29832), (989, 29820), (993, 29811),

Gene: Community\_43 Start: 31334, Stop: 33199, Start Num: 234

Candidate Starts for Community\_43:

(Start: 234 @31334 has 938 MA's), (265, 31382), (382, 31571), (405, 31631), (436, 31721), (543, 31928), (598, 32027), (603, 32036), (615, 32051), (619, 32063), (655, 32141), (675, 32189), (703, 32246), (730, 32327), (759, 32447), (769, 32477), (790, 32534), (805, 32600), (840, 32693), (862, 32765), (905, 32873), (936, 32936), (985, 33095), (988, 33104), (1031, 33182),

Gene: Compostia\_58 Start: 54083, Stop: 52266, Start Num: 235

Candidate Starts for Compostia\_58:

(129, 54266), (Start: 235 @54083 has 43 MA's), (252, 54053), (359, 53873), (424, 53720), (426, 53708), (437, 53678), (442, 53672), (462, 53609), (464, 53603), (496, 53552), (509, 53525), (511, 53516), (539, 53468), (597, 53363), (647, 53267), (664, 53216), (737, 53072), (749, 53033), (755, 53003), (760, 52976), (763, 52964), (797, 52868), (799, 52862), (802, 52853), (804, 52841), (834, 52769), (841, 52739), (847, 52721), (851, 52712), (872, 52643), (877, 52631), (883, 52610), (921, 52541), (931, 52526), (938, 52502), (942, 52481), (947, 52463), (949, 52457), (962, 52424), (964, 52418), (969, 52400), (972, 52388), (975, 52376), (979, 52364), (994, 52322), (1015, 52292),

Gene: Conceptll\_46 Start: 35338, Stop: 33512, Start Num: 234

Candidate Starts for Conceptll\_46:

(Start: 234 @35338 has 938 MA's), (359, 35125), (395, 35062), (405, 35032), (411, 35011), (415, 35005), (419, 34996), (457, 34879), (465, 34852), (541, 34759), (546, 34744), (566, 34711), (596, 34660), (598, 34657), (634, 34591), (648, 34561), (657, 34531), (679, 34486), (700, 34447), (759, 34267), (775, 34219), (790, 34180), (805, 34114), (818, 34075), (837, 34054), (841, 34033), (847, 34015), (868, 33949), (936, 33799), (938, 33796), (946, 33760), (954, 33736), (959, 33727), (963, 33715), (985, 33640), (993, 33619),

Gene: Connomayer\_45 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Connomayer\_45:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Conquerage\_45 Start: 31513, Stop: 29720, Start Num: 234

Candidate Starts for Conquerage\_45:

(Start: 234 @31513 has 938 MA's), (246, 31504), (266, 31462), (334, 31342), (336, 31339), (364, 31291), (397, 31231), (406, 31201), (409, 31189), (415, 31177), (465, 31024), (541, 30931), (619, 30793), (634, 30763), (703, 30604), (710, 30592), (726, 30565), (756, 30457), (759, 30436), (802, 30301), (805, 30283), (841, 30202), (856, 30160), (879, 30085), (885, 30064), (918, 30010), (936, 29968), (968, 29866), (985, 29809), (989, 29797), (993, 29788),

Gene: Conspiracy\_38 Start: 30346, Stop: 28502, Start Num: 234

Candidate Starts for Conspiracy\_38:

(Start: 234 @30346 has 938 MA's), (266, 30295), (301, 30235), (336, 30172), (353, 30142), (355, 30139), (390, 30082), (395, 30070), (405, 30040), (415, 30013), (448, 29911), (453, 29896), (465, 29860), (520, 29800), (541, 29764), (566, 29716), (618, 29632), (619, 29626), (652, 29554), (663, 29521), (670, 29506), (679, 29494), (724, 29395), (759, 29260), (769, 29230), (775, 29212), (778, 29209), (790, 29173), (793, 29164), (796, 29143), (799, 29134), (805, 29107), (806, 29104), (837, 29047), (841, 29026), (879, 28909), (903, 28855), (908, 28846), (921, 28828), (947, 28750), (967, 28693), (978, 28657), (985, 28633), (989, 28621),

Gene: Convict\_39 Start: 28934, Stop: 27069, Start Num: 283

Candidate Starts for Convict\_39:

(Start: 234 @29021 has 938 MA's), (Start: 237 @29018 has 2 MA's), (Start: 283 @28934 has 147 MA's), (Start: 291 @28925 has 5 MA's), (342, 28820), (347, 28811), (367, 28781), (369, 28778), (423, 28661), (426, 28646), (428, 28640), (466, 28535), (473, 28508), (532, 28367), (537, 28358), (541, 28346), (551, 28319), (553, 28316), (562, 28301), (566, 28295), (570, 28289), (613, 28256), (701, 28067), (728, 28013), (733, 27992), (798, 27752), (801, 27743), (802, 27740), (805, 27722), (819, 27680), (822, 27674), (832, 27650), (849, 27593), (900, 27434), (913, 27404), (917, 27395), (938, 27335), (943, 27311), (956, 27272), (967, 27239), (970, 27227), (986, 27167),

Gene: Coog\_38 Start: 30444, Stop: 28579, Start Num: 234

Candidate Starts for Coog\_38:

(Start: 234 @30444 has 938 MA's), (266, 30393), (301, 30333), (336, 30270), (353, 30240), (355, 30237), (390, 30180), (395, 30168), (405, 30138), (415, 30111), (465, 29958), (541, 29862), (566, 29814), (618, 29730), (619, 29724), (635, 29691), (652, 29652), (663, 29619), (670, 29604), (679, 29592), (724, 29493), (759, 29358), (769, 29328), (775, 29310), (778, 29307), (790, 29271), (793, 29262), (798, 29235), (805, 29205), (818, 29166), (841, 29124), (847, 29106), (862, 29058), (879, 29007), (903, 28953), (908, 28944), (921, 28926), (942, 28866), (947, 28848), (978, 28755), (985, 28731), (989, 28719), (1042, 28614),

Gene: Cookiedough\_45 Start: 29639, Stop: 27798, Start Num: 234

Candidate Starts for Cookiedough\_45:

(Start: 234 @29639 has 938 MA's), (353, 29435), (395, 29360), (397, 29357), (405, 29330), (409, 29315), (415, 29303), (432, 29252), (461, 29162), (465, 29150), (541, 29057), (559, 29018), (571, 29000), (582, 28985), (619, 28919), (635, 28886), (636, 28883), (681, 28781), (710, 28721), (740, 28637), (759, 28556), (789, 28472), (790, 28469), (793, 28460), (798, 28433), (805, 28403), (837, 28343), (847, 28304), (936, 28088), (938, 28085), (942, 28064), (985, 27929), (989, 27917), (993, 27908), (995, 27905), (1042, 27812),

Gene: Cooper\_54 Start: 53229, Stop: 51376, Start Num: 189

Candidate Starts for Cooper\_54:

(57, 53559), (99, 53439), (Start: 175 @53247 has 4 MA's), (Start: 189 @53229 has 26 MA's), (Start: 222 @53184 has 1 MA's), (Start: 238 @53175 has 2 MA's), (252, 53148), (Start: 261 @53133 has 10 MA's), (269, 53112), (316, 53025), (323, 53007), (382, 52920), (394, 52893), (399, 52878), (425, 52812), (434, 52782), (437, 52773), (441, 52770), (442, 52767), (450, 52740), (496, 52647), (504, 52629), (511, 52611), (516, 52599), (535, 52572), (588, 52470), (595, 52461), (597, 52458), (618, 52428), (737, 52167), (739, 52164), (749, 52128), (754, 52104), (760, 52071), (797, 51963), (799, 51957), (802, 51948), (841, 51849), (847, 51831), (872, 51753), (877, 51741), (883, 51720), (885, 51711), (921, 51651), (935, 51624), (942, 51591), (947, 51573), (949, 51567), (964, 51528), (968, 51513), (969, 51510), (972, 51498), (979, 51474), (994, 51432), (1002, 51426), (1015, 51402), (1023, 51381),

Gene: Cornobble\_60 Start: 54040, Stop: 52181, Start Num: 197

Candidate Starts for Cornobble\_60:

(Start: 180 @54064 has 1 MA's), (Start: 197 @54040 has 298 MA's), (Start: 225 @54016 has 5 MA's), (Start: 238 @54010 has 2 MA's), (Start: 261 @53968 has 10 MA's), (269, 53947), (323, 53833), (328, 53827), (349, 53797), (385, 53737), (394, 53716), (410, 53662), (418, 53650), (425, 53632), (427, 53620), (462, 53515), (496, 53458), (511, 53422), (516, 53410), (534, 53386), (539, 53374), (545, 53356), (555, 53338), (566, 53320), (588, 53281), (595, 53272), (597, 53269), (599, 53266), (754, 52909), (760, 52876), (765, 52855), (799, 52762), (802, 52753), (822, 52690), (841, 52654), (842, 52651), (847, 52636), (872, 52558), (877, 52546), (883, 52525), (902, 52486), (942, 52396), (947, 52378), (949, 52372), (954, 52357), (964, 52333), (968, 52318), (969, 52315), (972, 52303), (979, 52279), (1002, 52231), (1015, 52207),

Gene: Corofin\_58 Start: 53707, Stop: 51890, Start Num: 235

Candidate Starts for Corofin\_58:

(129, 53890), (Start: 235 @53707 has 43 MA's), (252, 53677), (359, 53497), (424, 53344), (426, 53332), (437, 53302), (442, 53296), (462, 53233), (464, 53227), (496, 53176), (511, 53140), (539, 53092), (597, 52987), (647, 52891), (664, 52840), (737, 52696), (749, 52657), (755, 52627), (760, 52600), (763, 52588), (797, 52492), (799, 52486), (802, 52477), (804, 52465), (834, 52393), (841, 52363), (847, 52345), (851, 52336), (872, 52267), (877, 52255), (883, 52234), (921, 52165), (931, 52150), (938, 52126), (942, 52105), (947, 52087), (949, 52081), (962, 52048), (964, 52042), (969, 52024), (972, 52012), (975, 52000), (979, 51988), (994, 51946), (1015, 51916),

Gene: Corvo\_45 Start: 35201, Stop: 33375, Start Num: 234

Candidate Starts for Corvo\_45:

(Start: 234 @35201 has 938 MA's), (359, 34988), (368, 34973), (405, 34895), (411, 34874), (415, 34868), (419, 34859), (457, 34742), (465, 34715), (541, 34622), (546, 34607), (558, 34586), (566, 34574), (596, 34523), (598, 34520), (634, 34454), (648, 34424), (657, 34394), (679, 34349), (700, 34310), (759, 34130), (775, 34082), (790, 34043), (805, 33977), (818, 33938), (837, 33917), (841, 33896), (847, 33878), (868, 33812), (936, 33662), (938, 33659), (946, 33623), (954, 33599), (959, 33590), (963, 33578), (985, 33503), (993, 33482),

Gene: CosmicSans\_36 Start: 28113, Stop: 26329, Start Num: 234

Candidate Starts for CosmicSans\_36:

(Start: 234 @28113 has 938 MA's), (374, 27879), (390, 27849), (394, 27840), (395, 27837), (409, 27792), (415, 27780), (432, 27729), (465, 27627), (492, 27606), (541, 27534), (563, 27489), (566, 27486), (589, 27444), (594, 27438), (603, 27423), (619, 27396), (663, 27291), (667, 27282), (679, 27264), (681, 27261), (700, 27225), (759, 27045), (775, 26997), (805, 26892), (806, 26889), (837, 26832), (841, 26811), (858, 26763), (881, 26688), (918, 26619), (936, 26577), (942, 26553), (968, 26475), (985, 26418), (989, 26406), (993, 26397), (1010, 26367), (1021, 26349),

Gene: Cosmolli16\_61 Start: 54750, Stop: 52891, Start Num: 197

Candidate Starts for Cosmolli16\_61:

(Start: 180 @54774 has 1 MA's), (Start: 197 @54750 has 298 MA's), (Start: 225 @54726 has 5 MA's), (Start: 238 @54720 has 2 MA's), (Start: 261 @54678 has 10 MA's), (269, 54657), (323, 54543), (328, 54537), (349, 54507), (385, 54447), (394, 54426), (410, 54372), (418, 54360), (425, 54342), (427, 54330), (462, 54225), (496, 54168), (511, 54132), (516, 54120), (535, 54093), (555, 54048), (566, 54030), (588, 53991), (595, 53982), (597, 53979), (599, 53976), (754, 53619), (760, 53586), (765, 53565), (799, 53472), (802, 53463), (822, 53400), (841, 53364), (842, 53361), (847, 53346), (872, 53268), (877, 53256), (883, 53235), (902, 53196), (942, 53106), (947, 53088), (949, 53082), (954, 53067), (964, 53043), (968, 53028), (969, 53025), (972, 53013), (979, 52989), (1002, 52941), (1015, 52917),

Gene: Cozz\_41 Start: 32142, Stop: 29749, Start Num: 36

Candidate Starts for Cozz\_41:

(Start: 36 @32142 has 16 MA's), (48, 32136), (Start: 60 @32088 has 1 MA's), (76, 32046), (86, 32022), (127, 31896), (136, 31872), (170, 31827), (206, 31776), (216, 31761), (Start: 230 @31740 has 13 MA's), (262, 31692), (274, 31659), (279, 31650), (317, 31575), (322, 31563), (366, 31494), (382, 31467), (385, 31461), (391, 31446), (409, 31392), (410, 31389), (420, 31371), (426, 31350), (448, 31290), (495, 31167), (497, 31161), (524, 31092), (541, 31050), (634, 30963), (643, 30939), (655, 30933), (662, 30909), (666, 30900), (674, 30885), (682, 30873), (707, 30831), (711, 30828), (713, 30825), (729, 30789), (758, 30678), (773, 30609), (774, 30603), (784, 30567), (796, 30510), (805, 30474), (817, 30438), (819, 30432), (822, 30426), (824, 30420), (842, 30363), (849, 30339), (859, 30294), (986, 29913), (1008, 29868), (1013, 29859), (1037, 29799), (1046, 29781),

Gene: Craff\_63 Start: 54995, Stop: 53136, Start Num: 197

Candidate Starts for Craff\_63:



(Start: 180 @55019 has 1 MA's), (Start: 197 @54995 has 298 MA's), (Start: 225 @54971 has 5 MA's), (Start: 238 @54965 has 2 MA's), (Start: 261 @54923 has 10 MA's), (269, 54902), (323, 54788), (328, 54782), (349, 54752), (385, 54692), (394, 54671), (410, 54617), (418, 54605), (425, 54587), (427, 54575), (462, 54470), (496, 54413), (511, 54377), (516, 54365), (535, 54338), (545, 54311), (555, 54293), (566, 54275), (588, 54236), (595, 54227), (597, 54224), (754, 53864), (760, 53831), (765, 53810), (799, 53717), (802, 53708), (822, 53645), (842, 53606), (847, 53591), (872, 53513), (877, 53501), (883, 53480), (902, 53441), (938, 53372), (942, 53351), (947, 53333), (949, 53327), (954, 53312), (964, 53288), (968, 53273), (969, 53270), (972, 53258), (979, 53234), (1002, 53186), (1015, 53162),

Gene: Crewmate\_46 Start: 30025, Stop: 31890, Start Num: 234

Candidate Starts for Crewmate\_46:

(Start: 234 @30025 has 938 MA's), (265, 30073), (359, 30238), (377, 30256), (405, 30322), (411, 30343), (546, 30628), (603, 30727), (615, 30742), (619, 30754), (655, 30832), (675, 30880), (703, 30937), (730, 31018), (759, 31138), (790, 31225), (803, 31282), (805, 31291), (905, 31564), (985, 31786),

Gene: Crispicous1\_43 Start: 33950, Stop: 32124, Start Num: 234

Candidate Starts for Crispicous1\_43:

(Start: 234 @33950 has 938 MA's), (359, 33737), (368, 33722), (395, 33674), (405, 33644), (411, 33623), (415, 33617), (419, 33608), (457, 33491), (465, 33464), (541, 33371), (546, 33356), (566, 33323), (596, 33272), (598, 33269), (634, 33203), (648, 33173), (657, 33143), (679, 33098), (700, 33059), (759, 32879), (775, 32831), (790, 32792), (805, 32726), (818, 32687), (837, 32666), (841, 32645), (847, 32627), (868, 32561), (936, 32411), (938, 32408), (946, 32372), (954, 32348), (959, 32339), (963, 32327), (970, 32300), (985, 32252), (993, 32231),

Gene: CroZenni\_42 Start: 29399, Stop: 31273, Start Num: 234

Candidate Starts for CroZenni\_42:

(Start: 234 @29399 has 938 MA's), (273, 29468), (284, 29489), (362, 29621), (419, 29735), (425, 29750), (432, 29777), (603, 30071), (709, 30305), (747, 30428), (759, 30488), (761, 30494), (778, 30539), (782, 30554), (786, 30569), (796, 30605), (805, 30641), (840, 30734), (869, 30827), (901, 30905), (936, 30977), (946, 31016), (962, 31058), (967, 31076), (978, 31112), (985, 31136), (993, 31157),

Gene: Crownjwl\_60 Start: 54069, Stop: 52210, Start Num: 197

Candidate Starts for Crownjwl\_60:

(Start: 180 @54093 has 1 MA's), (Start: 197 @54069 has 298 MA's), (Start: 225 @54045 has 5 MA's), (Start: 238 @54039 has 2 MA's), (Start: 261 @53997 has 10 MA's), (269, 53976), (323, 53862), (328, 53856), (349, 53826), (385, 53766), (394, 53745), (410, 53691), (418, 53679), (425, 53661), (427, 53649), (462, 53544), (496, 53487), (511, 53451), (516, 53439), (534, 53415), (539, 53403), (545, 53385), (555, 53367), (588, 53310), (595, 53301), (597, 53298), (599, 53295), (724, 53040), (754, 52938), (760, 52905), (765, 52884), (799, 52791), (802, 52782), (822, 52719), (841, 52683), (842, 52680), (847, 52665), (872, 52587), (877, 52575), (883, 52554), (902, 52515), (942, 52425), (947, 52407), (949, 52401), (954, 52386), (964, 52362), (968, 52347), (969, 52344), (972, 52332), (979, 52308), (1002, 52260), (1015, 52236),

Gene: Crucio\_44 Start: 31285, Stop: 29498, Start Num: 234

Candidate Starts for Crucio\_44:

(104, 31540), (Start: 234 @31285 has 938 MA's), (353, 31081), (355, 31078), (359, 31072), (368, 31057), (379, 31042), (395, 31009), (397, 31006), (405, 30979), (415, 30952), (424, 30931), (432, 30901), (465, 30799), (541, 30706), (566, 30658), (571, 30649), (582, 30634), (619, 30568), (655, 30487), (675, 30439), (679, 30433), (710, 30370), (740, 30295), (759, 30214), (778, 30163), (789, 30130), (790, 30127), (805, 30061), (818, 30022), (837, 30001), (859, 29926), (864, 29908), (879,

29863), (888, 29836), (908, 29800), (918, 29788), (921, 29782), (936, 29746), (942, 29722), (968, 29644), (985, 29587), (989, 29575), (993, 29566),

Gene: Cuco\_38 Start: 30397, Stop: 28532, Start Num: 234

Candidate Starts for Cuco\_38:

(Start: 234 @30397 has 938 MA's), (266, 30346), (301, 30286), (336, 30223), (353, 30193), (355, 30190), (390, 30133), (395, 30121), (405, 30091), (415, 30064), (465, 29911), (541, 29815), (566, 29767), (618, 29683), (619, 29677), (635, 29644), (652, 29605), (670, 29557), (679, 29545), (724, 29446), (759, 29311), (769, 29281), (775, 29263), (782, 29245), (790, 29224), (793, 29215), (798, 29188), (805, 29158), (818, 29119), (841, 29077), (847, 29059), (862, 29011), (879, 28960), (903, 28906), (908, 28897), (921, 28879), (942, 28819), (947, 28801), (978, 28708), (985, 28684), (989, 28672), (1042, 28567),

Gene: Cueyllyss\_46 Start: 36237, Stop: 34411, Start Num: 234

Candidate Starts for Cueyllyss\_46:

(Start: 234 @36237 has 938 MA's), (359, 36024), (368, 36009), (405, 35931), (411, 35910), (415, 35904), (419, 35895), (457, 35778), (465, 35751), (541, 35658), (546, 35643), (596, 35559), (598, 35556), (634, 35490), (648, 35460), (657, 35430), (679, 35385), (700, 35346), (759, 35166), (769, 35136), (775, 35118), (778, 35115), (790, 35079), (805, 35013), (841, 34932), (842, 34929), (868, 34848), (936, 34698), (938, 34695), (946, 34659), (954, 34635), (959, 34626), (963, 34614), (968, 34596), (970, 34587), (985, 34539), (993, 34518),

Gene: Cullens\_48 Start: 31852, Stop: 30038, Start Num: 234

Candidate Starts for Cullens\_48:

(Start: 234 @31852 has 938 MA's), (262, 31813), (266, 31801), (353, 31648), (362, 31633), (395, 31576), (415, 31519), (419, 31510), (432, 31468), (448, 31417), (465, 31366), (541, 31273), (566, 31225), (571, 31216), (582, 31201), (603, 31162), (619, 31135), (634, 31105), (670, 31012), (701, 30952), (710, 30937), (759, 30781), (790, 30694), (805, 30628), (818, 30589), (842, 30517), (856, 30478), (862, 30454), (868, 30436), (879, 30403), (888, 30376), (921, 30322), (942, 30262), (968, 30184), (985, 30127), (989, 30115), (993, 30106),

Gene: CupcakePrincess\_43 Start: 29585, Stop: 31459, Start Num: 234

Candidate Starts for CupcakePrincess\_43:

(Start: 231 @29582 has 7 MA's), (Start: 234 @29585 has 938 MA's), (273, 29654), (284, 29675), (395, 29855), (419, 29921), (432, 29963), (603, 30257), (663, 30392), (709, 30491), (747, 30614), (759, 30674), (761, 30680), (778, 30725), (786, 30755), (796, 30791), (805, 30827), (840, 30920), (869, 31013), (901, 31091), (936, 31163), (946, 31202), (962, 31244), (967, 31262), (985, 31322), (993, 31343),

Gene: Cyan\_41 Start: 29677, Stop: 31542, Start Num: 234

Candidate Starts for Cyan\_41:

(Start: 234 @29677 has 938 MA's), (265, 29725), (405, 29974), (436, 30064), (543, 30271), (546, 30280), (598, 30370), (603, 30379), (615, 30394), (635, 30439), (655, 30484), (675, 30532), (703, 30589), (730, 30670), (753, 30757), (759, 30790), (769, 30820), (790, 30877), (805, 30943), (840, 31036), (862, 31108), (905, 31216), (936, 31279), (942, 31303), (978, 31414), (985, 31438), (988, 31447),

Gene: D29\_44 Start: 31153, Stop: 29330, Start Num: 234

Candidate Starts for D29\_44:

(Start: 234 @31153 has 938 MA's), (353, 30949), (368, 30925), (379, 30907), (389, 30889), (395, 30874), (397, 30871), (405, 30844), (415, 30817), (432, 30766), (465, 30664), (541, 30571), (566, 30523), (571, 30514), (581, 30502), (582, 30499), (619, 30433), (648, 30373), (700, 30259), (710, 30235), (728, 30196), (759, 30070), (778, 30019), (790, 29983), (805, 29917), (818, 29878), (842,

29809), (856, 29770), (869, 29725), (879, 29695), (908, 29632), (921, 29614), (942, 29554), (985, 29419), (989, 29407), (993, 29398),

Gene: D32\_47 Start: 31153, Stop: 29330, Start Num: 234

Candidate Starts for D32\_47:

(Start: 234 @31153 has 938 MA's), (353, 30949), (368, 30925), (379, 30907), (389, 30889), (395, 30874), (397, 30871), (405, 30844), (415, 30817), (432, 30766), (465, 30664), (541, 30571), (566, 30523), (571, 30514), (581, 30502), (582, 30499), (619, 30433), (648, 30373), (700, 30259), (710, 30235), (728, 30196), (759, 30070), (778, 30019), (790, 29983), (805, 29917), (818, 29878), (842, 29809), (856, 29770), (869, 29725), (879, 29695), (908, 29632), (921, 29614), (942, 29554), (985, 29419), (989, 29407), (993, 29398),

Gene: DBQu4n\_47 Start: 31153, Stop: 29330, Start Num: 234

Candidate Starts for DBQu4n\_47:

(Start: 234 @31153 has 938 MA's), (353, 30949), (368, 30925), (379, 30907), (389, 30889), (395, 30874), (397, 30871), (405, 30844), (415, 30817), (432, 30766), (465, 30664), (541, 30571), (566, 30523), (571, 30514), (581, 30502), (582, 30499), (619, 30433), (648, 30373), (700, 30259), (710, 30235), (728, 30196), (759, 30070), (778, 30019), (790, 29983), (805, 29917), (818, 29878), (842, 29809), (856, 29770), (869, 29725), (879, 29695), (908, 29632), (918, 29620), (921, 29614), (942, 29554), (985, 29419), (989, 29407), (993, 29398),

Gene: DD5\_44 Start: 35207, Stop: 33381, Start Num: 234

Candidate Starts for DD5\_44:

(Start: 234 @35207 has 938 MA's), (359, 34994), (395, 34931), (405, 34901), (415, 34874), (419, 34865), (457, 34748), (465, 34721), (541, 34628), (546, 34613), (596, 34529), (598, 34526), (634, 34460), (648, 34430), (657, 34400), (679, 34355), (700, 34316), (759, 34136), (775, 34088), (790, 34049), (805, 33983), (818, 33944), (837, 33923), (841, 33902), (847, 33884), (868, 33818), (936, 33668), (938, 33665), (946, 33629), (959, 33596), (963, 33584), (985, 33509), (993, 33488),

Gene: DaHudson\_48 Start: 31845, Stop: 30031, Start Num: 234

Candidate Starts for DaHudson\_48:

(Start: 145 @31971 has 1 MA's), (Start: 234 @31845 has 938 MA's), (262, 31806), (266, 31794), (353, 31641), (362, 31626), (395, 31569), (415, 31512), (419, 31503), (432, 31461), (448, 31410), (465, 31359), (541, 31266), (566, 31218), (571, 31209), (582, 31194), (603, 31155), (619, 31128), (634, 31098), (670, 31005), (679, 30993), (701, 30945), (710, 30930), (759, 30774), (790, 30687), (805, 30621), (818, 30582), (842, 30510), (856, 30471), (862, 30447), (868, 30429), (879, 30396), (888, 30369), (921, 30315), (942, 30255), (968, 30177), (985, 30120), (989, 30108), (993, 30099),

Gene: DaVinci\_45 Start: 29628, Stop: 27787, Start Num: 234

Candidate Starts for DaVinci\_45:

(Start: 234 @29628 has 938 MA's), (353, 29424), (395, 29349), (397, 29346), (405, 29319), (409, 29304), (415, 29292), (432, 29241), (461, 29151), (465, 29139), (541, 29046), (559, 29007), (571, 28989), (582, 28974), (619, 28908), (635, 28875), (636, 28872), (681, 28770), (710, 28710), (740, 28626), (759, 28545), (789, 28461), (790, 28458), (793, 28449), (798, 28422), (805, 28392), (837, 28332), (847, 28293), (936, 28077), (938, 28074), (942, 28053), (985, 27918), (989, 27906), (993, 27897), (995, 27894), (1042, 27801),

Gene: DaddyDaniels\_62 Start: 54528, Stop: 52669, Start Num: 197

Candidate Starts for DaddyDaniels\_62:

(Start: 180 @54552 has 1 MA's), (Start: 197 @54528 has 298 MA's), (Start: 225 @54504 has 5 MA's), (Start: 238 @54498 has 2 MA's), (Start: 261 @54456 has 10 MA's), (269, 54435), (323, 54321), (328, 54315), (349, 54285), (385, 54225), (394, 54204), (410, 54150), (418, 54138), (425, 54120), (427, 54108), (462, 54003), (496, 53946), (511, 53910), (516, 53898), (535, 53871), (545, 53844), (555,

53826), (566, 53808), (588, 53769), (595, 53760), (597, 53757), (724, 53499), (754, 53397), (760, 53364), (765, 53343), (799, 53250), (802, 53241), (822, 53178), (841, 53142), (842, 53139), (847, 53124), (872, 53046), (877, 53034), (883, 53013), (902, 52974), (942, 52884), (947, 52866), (949, 52860), (954, 52845), (964, 52821), (968, 52806), (969, 52803), (972, 52791), (979, 52767), (1002, 52719), (1015, 52695),

Gene: Daffy\_60 Start: 54033, Stop: 52174, Start Num: 197

Candidate Starts for Daffy\_60:

(Start: 180 @54057 has 1 MA's), (Start: 197 @54033 has 298 MA's), (Start: 225 @54009 has 5 MA's), (Start: 238 @54003 has 2 MA's), (Start: 261 @53961 has 10 MA's), (269, 53940), (323, 53826), (328, 53820), (349, 53790), (385, 53730), (394, 53709), (410, 53655), (418, 53643), (425, 53625), (427, 53613), (462, 53508), (496, 53451), (511, 53415), (516, 53403), (535, 53376), (555, 53331), (588, 53274), (595, 53265), (597, 53262), (754, 52902), (760, 52869), (765, 52848), (799, 52755), (802, 52746), (822, 52683), (841, 52647), (842, 52644), (847, 52629), (872, 52551), (877, 52539), (883, 52518), (902, 52479), (942, 52389), (947, 52371), (949, 52365), (954, 52350), (964, 52326), (968, 52311), (969, 52308), (972, 52296), (979, 52272), (1002, 52224), (1015, 52200),

Gene: Daishi\_47 Start: 30725, Stop: 28911, Start Num: 234

Candidate Starts for Daishi\_47:

(Start: 234 @30725 has 938 MA's), (262, 30686), (266, 30674), (353, 30521), (362, 30506), (395, 30449), (415, 30392), (419, 30383), (432, 30341), (448, 30290), (465, 30239), (518, 30185), (541, 30146), (566, 30098), (582, 30074), (603, 30035), (619, 30008), (634, 29978), (670, 29885), (679, 29873), (701, 29825), (710, 29810), (759, 29654), (778, 29603), (789, 29570), (790, 29567), (805, 29501), (818, 29462), (842, 29390), (856, 29351), (862, 29327), (868, 29309), (879, 29276), (921, 29195), (942, 29135), (970, 29048), (985, 29000), (989, 28988), (993, 28979), (995, 28976),

Gene: Daisy\_57 Start: 53240, Stop: 51423, Start Num: 235

Candidate Starts for Daisy\_57:

(129, 53423), (Start: 235 @53240 has 43 MA's), (252, 53210), (359, 53030), (424, 52877), (426, 52865), (437, 52835), (442, 52829), (462, 52766), (464, 52760), (496, 52709), (509, 52682), (511, 52673), (539, 52625), (597, 52520), (647, 52424), (664, 52373), (737, 52229), (749, 52190), (755, 52160), (760, 52133), (763, 52121), (797, 52025), (799, 52019), (802, 52010), (804, 51998), (834, 51926), (841, 51896), (847, 51878), (851, 51869), (872, 51800), (877, 51788), (883, 51767), (921, 51698), (931, 51683), (938, 51659), (942, 51638), (949, 51614), (962, 51581), (964, 51575), (969, 51557), (972, 51545), (975, 51533), (979, 51521), (994, 51479), (1015, 51449),

Gene: Daka\_63 Start: 54549, Stop: 52690, Start Num: 197

Candidate Starts for Daka\_63:

(Start: 180 @54573 has 1 MA's), (Start: 197 @54549 has 298 MA's), (Start: 225 @54525 has 5 MA's), (Start: 238 @54519 has 2 MA's), (Start: 261 @54477 has 10 MA's), (269, 54456), (323, 54342), (328, 54336), (349, 54306), (385, 54246), (394, 54225), (410, 54171), (418, 54159), (425, 54141), (427, 54129), (462, 54024), (496, 53967), (511, 53931), (516, 53919), (535, 53892), (555, 53847), (588, 53790), (595, 53781), (597, 53778), (599, 53775), (754, 53418), (760, 53385), (765, 53364), (799, 53271), (802, 53262), (822, 53199), (841, 53163), (842, 53160), (847, 53145), (872, 53067), (877, 53055), (883, 53034), (902, 52995), (942, 52905), (947, 52887), (949, 52881), (954, 52866), (964, 52842), (968, 52827), (969, 52824), (972, 52812), (979, 52788), (985, 52767), (1002, 52740), (1015, 52716), (1019, 52701),

Gene: Dalmatian\_45 Start: 31678, Stop: 29891, Start Num: 234

Candidate Starts for Dalmatian\_45:

(Start: 234 @31678 has 938 MA's), (353, 31474), (355, 31471), (359, 31465), (368, 31450), (379, 31435), (395, 31402), (397, 31399), (405, 31372), (415, 31345), (424, 31324), (465, 31192), (541, 31099), (558, 31063), (566, 31051), (571, 31042), (582, 31027), (619, 30961), (655, 30880), (675,

30832), (679, 30826), (710, 30763), (759, 30607), (778, 30556), (789, 30523), (790, 30520), (805, 30454), (818, 30415), (837, 30394), (859, 30319), (862, 30307), (908, 30193), (921, 30175), (936, 30139), (942, 30115), (968, 30037), (985, 29980), (989, 29968), (993, 29959),

Gene: Danforth\_42 Start: 30571, Stop: 28727, Start Num: 234

Candidate Starts for Danforth\_42:

(135, 30736), (Start: 234 @30571 has 938 MA's), (266, 30520), (336, 30397), (353, 30367), (379, 30328), (395, 30295), (405, 30265), (411, 30244), (415, 30238), (419, 30229), (448, 30136), (458, 30109), (465, 30085), (541, 29989), (545, 29977), (552, 29962), (566, 29941), (571, 29932), (603, 29878), (619, 29851), (640, 29803), (663, 29746), (679, 29719), (703, 29668), (711, 29653), (756, 29506), (759, 29485), (769, 29455), (775, 29437), (778, 29434), (782, 29419), (790, 29398), (793, 29389), (798, 29362), (802, 29350), (805, 29332), (841, 29251), (845, 29239), (862, 29185), (874, 29149), (903, 29080), (918, 29059), (921, 29053), (938, 29014), (942, 28993), (947, 28975), (985, 28858), (989, 28846),

Gene: Darrell\_46 Start: 31850, Stop: 30057, Start Num: 234

Candidate Starts for Darrell\_46:

(Start: 234 @31850 has 938 MA's), (246, 31841), (266, 31799), (301, 31739), (314, 31712), (334, 31679), (336, 31676), (353, 31646), (359, 31637), (365, 31628), (397, 31568), (406, 31538), (409, 31526), (415, 31514), (432, 31463), (465, 31361), (541, 31268), (618, 31136), (634, 31100), (710, 30929), (726, 30902), (729, 30896), (759, 30773), (793, 30677), (798, 30650), (805, 30620), (818, 30581), (839, 30548), (841, 30539), (856, 30497), (879, 30422), (885, 30401), (936, 30305), (962, 30224), (985, 30146), (989, 30134), (993, 30125),

Gene: DARTHPhader\_42 Start: 32266, Stop: 30422, Start Num: 234

Candidate Starts for DARTHPhader\_42:

(139, 32410), (152, 32383), (Start: 234 @32266 has 938 MA's), (301, 32155), (336, 32092), (353, 32062), (359, 32053), (379, 32020), (395, 31987), (405, 31957), (415, 31930), (424, 31909), (465, 31777), (541, 31684), (571, 31627), (582, 31612), (619, 31546), (640, 31498), (667, 31429), (710, 31348), (728, 31306), (740, 31261), (746, 31243), (759, 31180), (778, 31129), (790, 31093), (805, 31027), (818, 30988), (837, 30967), (841, 30946), (908, 30766), (936, 30712), (938, 30709), (942, 30688), (962, 30631), (968, 30610), (985, 30553), (989, 30541), (1021, 30484),

Gene: Dati\_60 Start: 54564, Stop: 52705, Start Num: 197

Candidate Starts for Dati\_60:

(Start: 180 @54588 has 1 MA's), (Start: 197 @54564 has 298 MA's), (Start: 225 @54540 has 5 MA's), (Start: 238 @54534 has 2 MA's), (Start: 261 @54492 has 10 MA's), (269, 54471), (323, 54357), (328, 54351), (349, 54321), (385, 54261), (394, 54240), (410, 54186), (418, 54174), (425, 54156), (427, 54144), (462, 54039), (496, 53982), (511, 53946), (516, 53934), (534, 53910), (539, 53898), (545, 53880), (555, 53862), (566, 53844), (588, 53805), (595, 53796), (597, 53793), (599, 53790), (754, 53433), (760, 53400), (765, 53379), (799, 53286), (802, 53277), (822, 53214), (841, 53178), (842, 53175), (847, 53160), (872, 53082), (877, 53070), (883, 53049), (902, 53010), (942, 52920), (947, 52902), (949, 52896), (954, 52881), (964, 52857), (968, 52842), (969, 52839), (972, 52827), (979, 52803), (1002, 52755), (1015, 52731),

Gene: Datway\_44 Start: 31508, Stop: 29679, Start Num: 234

Candidate Starts for Datway\_44:

(Start: 234 @31508 has 938 MA's), (266, 31457), (279, 31427), (379, 31265), (389, 31247), (395, 31232), (415, 31175), (419, 31166), (458, 31046), (465, 31022), (513, 30980), (541, 30929), (568, 30881), (582, 30860), (603, 30821), (628, 30776), (630, 30770), (663, 30689), (675, 30668), (700, 30623), (756, 30458), (759, 30437), (805, 30284), (818, 30245), (842, 30173), (847, 30158), (856, 30134), (861, 30116), (862, 30110), (864, 30104), (942, 29903), (985, 29768), (989, 29756), (993, 29747),

Gene: Dave\_39 Start: 28922, Stop: 27057, Start Num: 283

Candidate Starts for Dave\_39:

(Start: 234 @29009 has 938 MA's), (Start: 237 @29006 has 2 MA's), (Start: 283 @28922 has 147 MA's), (Start: 291 @28913 has 5 MA's), (342, 28808), (347, 28799), (367, 28769), (369, 28766), (424, 28646), (426, 28634), (428, 28628), (466, 28523), (473, 28496), (532, 28355), (535, 28349), (537, 28346), (541, 28334), (551, 28307), (553, 28304), (562, 28289), (566, 28283), (570, 28277), (613, 28244), (671, 28115), (701, 28055), (758, 27890), (798, 27740), (801, 27731), (802, 27728), (805, 27710), (819, 27668), (822, 27662), (825, 27653), (832, 27638), (849, 27581), (900, 27422), (913, 27392), (917, 27383), (938, 27323), (943, 27299), (956, 27260), (967, 27227), (970, 27215), (986, 27155),

Gene: Deano\_44 Start: 31578, Stop: 29752, Start Num: 234

Candidate Starts for Deano\_44:

(Start: 234 @31578 has 938 MA's), (252, 31557), (266, 31527), (279, 31497), (379, 31335), (389, 31317), (415, 31245), (419, 31236), (458, 31116), (465, 31092), (541, 30999), (568, 30951), (582, 30930), (603, 30891), (663, 30759), (675, 30738), (700, 30693), (703, 30681), (756, 30528), (759, 30507), (798, 30384), (805, 30354), (818, 30315), (841, 30249), (842, 30246), (847, 30231), (856, 30207), (862, 30183), (942, 29976), (985, 29841), (989, 29829), (993, 29820),

Gene: Deenasa\_58 Start: 54545, Stop: 52728, Start Num: 235

Candidate Starts for Deenasa\_58:

(129, 54728), (Start: 235 @54545 has 43 MA's), (252, 54515), (359, 54335), (424, 54182), (426, 54170), (437, 54140), (442, 54134), (462, 54071), (464, 54065), (496, 54014), (509, 53987), (511, 53978), (539, 53930), (597, 53825), (647, 53729), (664, 53678), (737, 53534), (749, 53495), (755, 53465), (760, 53438), (763, 53426), (797, 53330), (799, 53324), (802, 53315), (804, 53303), (834, 53231), (841, 53201), (847, 53183), (851, 53174), (872, 53105), (877, 53093), (883, 53072), (921, 53003), (931, 52988), (938, 52964), (947, 52925), (949, 52919), (964, 52880), (969, 52862), (972, 52850), (979, 52826), (1015, 52754),

Gene: DekHockey33\_47 Start: 30182, Stop: 28392, Start Num: 234

Candidate Starts for DekHockey33\_47:

(Start: 234 @30182 has 938 MA's), (336, 30008), (395, 29903), (397, 29900), (405, 29873), (415, 29846), (432, 29795), (465, 29693), (541, 29600), (563, 29555), (566, 29552), (571, 29543), (655, 29381), (663, 29354), (675, 29333), (679, 29327), (730, 29228), (740, 29189), (754, 29138), (759, 29108), (778, 29057), (789, 29024), (796, 28991), (798, 28985), (805, 28955), (837, 28895), (841, 28874), (856, 28832), (863, 28805), (868, 28790), (903, 28703), (936, 28640), (938, 28637), (985, 28481), (989, 28469), (995, 28457),

Gene: DelRivs\_59 Start: 54011, Stop: 52152, Start Num: 197

Candidate Starts for DelRivs\_59:

(Start: 180 @54035 has 1 MA's), (Start: 197 @54011 has 298 MA's), (Start: 225 @53987 has 5 MA's), (Start: 238 @53981 has 2 MA's), (Start: 261 @53939 has 10 MA's), (269, 53918), (323, 53804), (328, 53798), (349, 53768), (385, 53708), (394, 53687), (410, 53633), (418, 53621), (425, 53603), (427, 53591), (462, 53486), (496, 53429), (511, 53393), (516, 53381), (534, 53357), (539, 53345), (545, 53327), (555, 53309), (566, 53291), (588, 53252), (595, 53243), (597, 53240), (599, 53237), (754, 52880), (760, 52847), (765, 52826), (799, 52733), (802, 52724), (822, 52661), (841, 52625), (842, 52622), (847, 52607), (872, 52529), (877, 52517), (883, 52496), (902, 52457), (942, 52367), (947, 52349), (949, 52343), (954, 52328), (964, 52304), (968, 52289), (969, 52286), (972, 52274), (979, 52250), (1002, 52202), (1015, 52178),

Gene: Deloris\_43 Start: 30897, Stop: 29110, Start Num: 234

Candidate Starts for Deloris\_43:

(Start: 234 @30897 has 938 MA's), (353, 30693), (355, 30690), (359, 30684), (368, 30669), (379, 30654), (395, 30621), (397, 30618), (405, 30591), (415, 30564), (424, 30543), (432, 30513), (465, 30411), (541, 30318), (544, 30309), (566, 30270), (571, 30261), (582, 30246), (619, 30180), (655, 30099), (675, 30051), (679, 30045), (740, 29907), (759, 29826), (778, 29775), (789, 29742), (790, 29739), (805, 29673), (818, 29634), (837, 29613), (859, 29538), (864, 29520), (879, 29475), (888, 29448), (908, 29412), (921, 29394), (936, 29358), (942, 29334), (962, 29277), (985, 29199), (989, 29187),

Gene: Delphidian\_39 Start: 28933, Stop: 27068, Start Num: 283

Candidate Starts for Delphidian\_39:

(Start: 234 @29020 has 938 MA's), (Start: 283 @28933 has 147 MA's), (Start: 291 @28924 has 5 MA's), (342, 28819), (347, 28810), (367, 28780), (369, 28777), (424, 28657), (426, 28645), (428, 28639), (466, 28534), (473, 28507), (532, 28366), (535, 28360), (537, 28357), (541, 28345), (551, 28318), (553, 28315), (562, 28300), (566, 28294), (570, 28288), (613, 28255), (671, 28126), (701, 28066), (798, 27751), (801, 27742), (802, 27739), (805, 27721), (819, 27679), (822, 27673), (825, 27664), (832, 27649), (849, 27592), (900, 27433), (913, 27403), (917, 27394), (938, 27334), (943, 27310), (956, 27271), (967, 27238), (970, 27226), (986, 27166),

Gene: Den3\_39 Start: 28939, Stop: 27074, Start Num: 283

Candidate Starts for Den3\_39:

(Start: 234 @29026 has 938 MA's), (Start: 237 @29023 has 2 MA's), (274, 28954), (Start: 283 @28939 has 147 MA's), (Start: 291 @28930 has 5 MA's), (342, 28825), (347, 28816), (367, 28786), (369, 28783), (424, 28663), (426, 28651), (428, 28645), (466, 28540), (473, 28513), (532, 28372), (537, 28363), (541, 28351), (551, 28324), (553, 28321), (562, 28306), (566, 28300), (570, 28294), (613, 28261), (701, 28072), (798, 27757), (801, 27748), (802, 27745), (805, 27727), (819, 27685), (822, 27679), (832, 27655), (849, 27598), (900, 27439), (913, 27409), (917, 27400), (938, 27340), (943, 27316), (956, 27277), (967, 27244), (970, 27232), (986, 27172),

Gene: Derpp\_60 Start: 54131, Stop: 52272, Start Num: 197

Candidate Starts for Derpp\_60:

(Start: 180 @54155 has 1 MA's), (Start: 197 @54131 has 298 MA's), (Start: 225 @54107 has 5 MA's), (Start: 238 @54101 has 2 MA's), (Start: 261 @54059 has 10 MA's), (269, 54038), (323, 53924), (328, 53918), (349, 53888), (385, 53828), (394, 53807), (410, 53753), (418, 53741), (425, 53723), (427, 53711), (462, 53606), (496, 53549), (511, 53513), (516, 53501), (534, 53477), (539, 53465), (545, 53447), (555, 53429), (566, 53411), (588, 53372), (595, 53363), (597, 53360), (599, 53357), (724, 53102), (754, 53000), (760, 52967), (765, 52946), (799, 52853), (802, 52844), (822, 52781), (841, 52745), (842, 52742), (847, 52727), (872, 52649), (877, 52637), (883, 52616), (902, 52577), (942, 52487), (947, 52469), (949, 52463), (954, 52448), (964, 52424), (968, 52409), (969, 52406), (972, 52394), (979, 52370), (985, 52349), (1002, 52322), (1015, 52298), (1019, 52283),

Gene: Devonte\_57 Start: 53319, Stop: 51502, Start Num: 235

Candidate Starts for Devonte\_57:

(129, 53502), (Start: 235 @53319 has 43 MA's), (252, 53289), (359, 53109), (424, 52956), (426, 52944), (437, 52914), (442, 52908), (462, 52845), (464, 52839), (496, 52788), (509, 52761), (511, 52752), (539, 52704), (597, 52599), (647, 52503), (664, 52452), (737, 52308), (749, 52269), (755, 52239), (760, 52212), (763, 52200), (797, 52104), (799, 52098), (802, 52089), (804, 52077), (834, 52005), (841, 51975), (847, 51957), (851, 51948), (872, 51879), (877, 51867), (883, 51846), (921, 51777), (931, 51762), (938, 51738), (942, 51717), (947, 51699), (949, 51693), (962, 51660), (964, 51654), (969, 51636), (972, 51624), (975, 51612), (979, 51600), (994, 51558), (1015, 51528),

Gene: Dewdrop\_95 Start: 58518, Stop: 60557, Start Num: 208

Candidate Starts for Dewdrop\_95:

(Start: 208 @58518 has 5 MA's), (269, 58629), (270, 58632), (284, 58659), (309, 58716), (329, 58752), (350, 58791), (382, 58845), (388, 58857), (391, 58866), (403, 58902), (424, 58962), (427, 58977), (431, 58989), (448, 59034), (459, 59064), (503, 59178), (541, 59271), (542, 59274), (545, 59283), (553, 59301), (647, 59409), (660, 59463), (665, 59475), (697, 59541), (726, 59610), (779, 59763), (798, 59847), (805, 59877), (848, 60009), (849, 60012), (857, 60048), (866, 60081), (879, 60120), (938, 60270), (943, 60294), (945, 60300), (949, 60315), (959, 60345), (980, 60423), (986, 60444), (998, 60474), (1018, 60516), (1033, 60552),

Gene: Dexes\_45 Start: 35367, Stop: 33580, Start Num: 234

Candidate Starts for Dexes\_45:

(Start: 234 @35367 has 938 MA's), (359, 35154), (368, 35139), (395, 35091), (405, 35061), (411, 35040), (415, 35034), (419, 35025), (457, 34908), (465, 34881), (541, 34788), (546, 34773), (566, 34740), (596, 34689), (598, 34686), (634, 34620), (648, 34590), (657, 34560), (679, 34515), (700, 34476), (759, 34296), (775, 34248), (778, 34245), (790, 34209), (805, 34143), (839, 34071), (841, 34062), (868, 33978), (903, 33891), (954, 33765), (960, 33753), (985, 33669), (987, 33663),

Gene: Dhanush\_45 Start: 31573, Stop: 29747, Start Num: 234

Candidate Starts for Dhanush\_45:

(Start: 234 @31573 has 938 MA's), (252, 31552), (266, 31522), (279, 31492), (379, 31330), (389, 31312), (415, 31240), (419, 31231), (458, 31111), (465, 31087), (541, 30994), (568, 30946), (582, 30925), (603, 30886), (663, 30754), (675, 30733), (700, 30688), (703, 30676), (756, 30523), (759, 30502), (798, 30379), (805, 30349), (818, 30310), (841, 30244), (842, 30241), (847, 30226), (856, 30202), (862, 30178), (942, 29971), (985, 29836), (989, 29824), (993, 29815),

Gene: Dice\_59 Start: 54016, Stop: 52157, Start Num: 197

Candidate Starts for Dice\_59:

(Start: 180 @54040 has 1 MA's), (Start: 197 @54016 has 298 MA's), (Start: 225 @53992 has 5 MA's), (Start: 238 @53986 has 2 MA's), (Start: 261 @53944 has 10 MA's), (269, 53923), (323, 53809), (328, 53803), (349, 53773), (385, 53713), (394, 53692), (410, 53638), (418, 53626), (425, 53608), (427, 53596), (462, 53491), (496, 53434), (511, 53398), (516, 53386), (535, 53359), (545, 53332), (555, 53314), (566, 53296), (588, 53257), (595, 53248), (597, 53245), (754, 52885), (760, 52852), (765, 52831), (799, 52738), (802, 52729), (822, 52666), (841, 52630), (842, 52627), (847, 52612), (872, 52534), (877, 52522), (883, 52501), (902, 52462), (942, 52372), (947, 52354), (949, 52348), (954, 52333), (964, 52309), (968, 52294), (969, 52291), (972, 52279), (979, 52255), (1002, 52207), (1015, 52183),

Gene: DickRichards\_41 Start: 29838, Stop: 31712, Start Num: 234

Candidate Starts for DickRichards\_41:

(Start: 234 @29838 has 938 MA's), (273, 29907), (284, 29928), (419, 30174), (425, 30189), (432, 30216), (603, 30510), (663, 30645), (709, 30744), (747, 30867), (759, 30927), (761, 30933), (778, 30978), (782, 30993), (786, 31008), (796, 31044), (805, 31080), (840, 31173), (869, 31266), (901, 31344), (936, 31416), (946, 31455), (962, 31497), (967, 31515), (978, 31551), (985, 31575), (993, 31596),

Gene: Didgeridoo\_45 Start: 30205, Stop: 32079, Start Num: 234

Candidate Starts for Didgeridoo\_45:

(Start: 234 @30205 has 938 MA's), (273, 30274), (284, 30295), (419, 30541), (425, 30556), (453, 30637), (603, 30877), (709, 31111), (746, 31231), (747, 31234), (759, 31294), (782, 31360), (786, 31375), (796, 31411), (805, 31447), (840, 31540), (901, 31711), (902, 31714), (936, 31783), (946, 31822), (962, 31864), (967, 31882), (978, 31918), (985, 31942), (993, 31963),

Gene: Dieselweasel\_49 Start: 31855, Stop: 30041, Start Num: 234

Candidate Starts for Dieselweasel\_49:



(Start: 234 @31855 has 938 MA's), (262, 31816), (266, 31804), (353, 31651), (362, 31636), (395, 31579), (415, 31522), (419, 31513), (432, 31471), (448, 31420), (465, 31369), (541, 31276), (566, 31228), (571, 31219), (582, 31204), (603, 31165), (619, 31138), (634, 31108), (670, 31015), (701, 30955), (710, 30940), (759, 30784), (790, 30697), (805, 30631), (818, 30592), (842, 30520), (856, 30481), (862, 30457), (868, 30439), (879, 30406), (888, 30379), (921, 30325), (942, 30265), (968, 30187), (985, 30130), (989, 30118), (993, 30109),

Gene: DigitDog\_58 Start: 54425, Stop: 52578, Start Num: 181

Candidate Starts for DigitDog\_58:

(15, 54914), (17, 54908), (Start: 27 @54857 has 1 MA's), (33, 54839), (70, 54701), (140, 54491), (181, 54425), (236, 54377), (252, 54350), (276, 54299), (358, 54179), (385, 54131), (425, 54029), (441, 53987), (452, 53951), (462, 53921), (511, 53828), (534, 53792), (539, 53780), (545, 53762), (597, 53675), (650, 53570), (703, 53447), (739, 53381), (743, 53363), (755, 53315), (760, 53288), (797, 53180), (799, 53174), (802, 53165), (806, 53144), (834, 53081), (842, 53048), (847, 53033), (866, 52973), (872, 52955), (877, 52943), (883, 52922), (885, 52913), (887, 52910), (894, 52898), (942, 52793), (947, 52775), (949, 52769), (964, 52730), (968, 52715), (969, 52712), (975, 52688), (979, 52676), (980, 52673), (1015, 52604),

Gene: Dignity\_46 Start: 31741, Stop: 29954, Start Num: 234

Candidate Starts for Dignity\_46:

(Start: 234 @31741 has 938 MA's), (355, 31534), (359, 31528), (368, 31513), (379, 31498), (397, 31462), (405, 31435), (415, 31408), (424, 31387), (465, 31255), (541, 31162), (566, 31114), (571, 31105), (582, 31090), (619, 31024), (655, 30943), (675, 30895), (679, 30889), (759, 30670), (778, 30619), (789, 30586), (790, 30583), (805, 30517), (818, 30478), (837, 30457), (859, 30382), (862, 30370), (879, 30319), (908, 30256), (921, 30238), (936, 30202), (942, 30178), (968, 30100), (985, 30043), (989, 30031), (993, 30022),

Gene: Dinger\_36 Start: 28097, Stop: 26313, Start Num: 234

Candidate Starts for Dinger\_36:

(Start: 234 @28097 has 938 MA's), (334, 27926), (374, 27863), (394, 27824), (395, 27821), (409, 27776), (415, 27764), (419, 27755), (465, 27611), (541, 27518), (603, 27407), (619, 27380), (663, 27275), (679, 27248), (700, 27209), (759, 27029), (775, 26981), (805, 26876), (806, 26873), (837, 26816), (841, 26795), (858, 26747), (881, 26672), (918, 26603), (936, 26561), (938, 26558), (942, 26537), (946, 26522), (968, 26459), (985, 26402), (989, 26390), (1010, 26351), (1021, 26333),

Gene: Dingo\_59 Start: 53575, Stop: 51716, Start Num: 197

Candidate Starts for Dingo\_59:

(Start: 180 @53599 has 1 MA's), (Start: 197 @53575 has 298 MA's), (Start: 225 @53551 has 5 MA's), (Start: 238 @53545 has 2 MA's), (252, 53518), (Start: 261 @53503 has 10 MA's), (269, 53482), (323, 53368), (328, 53362), (349, 53332), (385, 53272), (394, 53251), (410, 53197), (418, 53185), (425, 53167), (427, 53155), (462, 53050), (496, 52993), (511, 52957), (516, 52945), (535, 52918), (539, 52909), (555, 52873), (588, 52816), (595, 52807), (597, 52804), (599, 52801), (754, 52444), (760, 52411), (765, 52390), (799, 52297), (802, 52288), (822, 52225), (841, 52189), (842, 52186), (847, 52171), (872, 52093), (877, 52081), (883, 52060), (902, 52021), (942, 51931), (947, 51913), (949, 51907), (954, 51892), (964, 51868), (968, 51853), (969, 51850), (972, 51838), (979, 51814), (1002, 51766), (1015, 51742),

Gene: Dione\_58 Start: 53747, Stop: 51888, Start Num: 197

Candidate Starts for Dione\_58:

(Start: 180 @53771 has 1 MA's), (Start: 197 @53747 has 298 MA's), (Start: 225 @53723 has 5 MA's), (Start: 238 @53717 has 2 MA's), (Start: 261 @53675 has 10 MA's), (269, 53654), (323, 53540), (328, 53534), (349, 53504), (385, 53444), (394, 53423), (410, 53369), (418, 53357), (425, 53339), (427, 53327), (462, 53222), (496, 53165), (511, 53129), (516, 53117), (534, 53093), (539, 53081), (545,

53063), (555, 53045), (566, 53027), (588, 52988), (595, 52979), (597, 52976), (599, 52973), (754, 52616), (760, 52583), (765, 52562), (799, 52469), (802, 52460), (822, 52397), (841, 52361), (842, 52358), (847, 52343), (872, 52265), (877, 52253), (883, 52232), (902, 52193), (942, 52103), (947, 52085), (949, 52079), (954, 52064), (964, 52040), (968, 52025), (969, 52022), (972, 52010), (979, 51986), (1002, 51938), (1015, 51914),

Gene: DirtJuice\_61 Start: 54337, Stop: 52478, Start Num: 197

Candidate Starts for DirtJuice\_61:

(Start: 180 @54361 has 1 MA's), (Start: 197 @54337 has 298 MA's), (Start: 225 @54313 has 5 MA's), (Start: 238 @54307 has 2 MA's), (Start: 261 @54265 has 10 MA's), (269, 54244), (323, 54130), (328, 54124), (349, 54094), (385, 54034), (394, 54013), (410, 53959), (418, 53947), (425, 53929), (427, 53917), (462, 53812), (496, 53755), (511, 53719), (516, 53707), (534, 53683), (539, 53671), (545, 53653), (555, 53635), (566, 53617), (588, 53578), (595, 53569), (597, 53566), (599, 53563), (724, 53308), (754, 53206), (760, 53173), (765, 53152), (799, 53059), (802, 53050), (822, 52987), (842, 52948), (847, 52933), (872, 52855), (877, 52843), (883, 52822), (902, 52783), (942, 52693), (947, 52675), (949, 52669), (954, 52654), (964, 52630), (968, 52615), (969, 52612), (972, 52600), (979, 52576), (1002, 52528), (1015, 52504),

Gene: DirtyBubble\_42 Start: 30299, Stop: 32173, Start Num: 234

Candidate Starts for DirtyBubble\_42:

(Start: 234 @30299 has 938 MA's), (273, 30368), (284, 30389), (419, 30635), (425, 30650), (432, 30677), (556, 30890), (566, 30905), (603, 30971), (709, 31205), (746, 31325), (747, 31328), (759, 31388), (761, 31394), (778, 31439), (786, 31469), (796, 31505), (805, 31541), (840, 31634), (869, 31727), (901, 31805), (902, 31808), (936, 31877), (942, 31901), (946, 31916), (962, 31958), (967, 31976), (985, 32036), (993, 32057),

Gene: DirtyDunning\_44 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for DirtyDunning\_44:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Discoknowium\_37 Start: 30143, Stop: 28284, Start Num: 234

Candidate Starts for Discoknowium\_37:

(Start: 234 @30143 has 938 MA's), (266, 30092), (301, 30032), (336, 29969), (353, 29939), (355, 29936), (390, 29879), (395, 29867), (405, 29837), (415, 29810), (465, 29657), (541, 29561), (566, 29513), (581, 29492), (618, 29429), (619, 29423), (652, 29351), (663, 29318), (670, 29303), (679, 29291), (724, 29192), (759, 29057), (769, 29027), (775, 29009), (782, 28991), (790, 28970), (793, 28961), (805, 28904), (818, 28865), (841, 28823), (847, 28805), (862, 28757), (879, 28706), (903, 28652), (908, 28643), (921, 28625), (942, 28565), (947, 28547), (978, 28454), (985, 28430), (989, 28418), (1049, 28301), (1050, 28298),

Gene: Dismas\_40 Start: 29921, Stop: 31792, Start Num: 234

Candidate Starts for Dismas\_40:

(Start: 234 @29921 has 938 MA's), (340, 30104), (362, 30143), (382, 30161), (408, 30233), (419, 30257), (424, 30269), (425, 30272), (453, 30353), (579, 30545), (603, 30593), (649, 30683), (709, 30824), (747, 30947), (759, 31007), (782, 31073), (786, 31088), (796, 31124), (799, 31133), (805, 31160), (840, 31253), (869, 31346), (901, 31424), (936, 31496), (946, 31535), (962, 31577), (978, 31631), (985, 31655), (993, 31676), (1008, 31700),

Gene: Dixon\_43 Start: 30751, Stop: 28907, Start Num: 234

Candidate Starts for Dixon\_43:

(Start: 234 @30751 has 938 MA's), (266, 30700), (353, 30547), (379, 30508), (395, 30475), (405, 30445), (411, 30424), (415, 30418), (419, 30409), (448, 30316), (465, 30265), (541, 30169), (552, 30142), (563, 30124), (566, 30121), (571, 30112), (603, 30058), (619, 30031), (640, 29983), (663, 29926), (679, 29899), (703, 29848), (711, 29833), (756, 29686), (759, 29665), (769, 29635), (775, 29617), (778, 29614), (782, 29599), (790, 29578), (793, 29569), (798, 29542), (802, 29530), (805, 29512), (841, 29431), (845, 29419), (862, 29365), (874, 29329), (903, 29260), (918, 29239), (921, 29233), (938, 29194), (942, 29173), (947, 29155), (985, 29038), (989, 29026),

Gene: Doddsville\_61 Start: 54283, Stop: 52424, Start Num: 197

Candidate Starts for Doddsville\_61:

(Start: 180 @54307 has 1 MA's), (Start: 197 @54283 has 298 MA's), (Start: 225 @54259 has 5 MA's), (Start: 238 @54253 has 2 MA's), (Start: 261 @54211 has 10 MA's), (269, 54190), (323, 54076), (328, 54070), (349, 54040), (385, 53980), (394, 53959), (410, 53905), (418, 53893), (425, 53875), (427, 53863), (462, 53758), (496, 53701), (511, 53665), (516, 53653), (534, 53629), (539, 53617), (545, 53599), (555, 53581), (566, 53563), (588, 53524), (595, 53515), (597, 53512), (599, 53509), (754, 53152), (760, 53119), (765, 53098), (799, 53005), (802, 52996), (822, 52933), (841, 52897), (842, 52894), (847, 52879), (872, 52801), (877, 52789), (883, 52768), (902, 52729), (942, 52639), (947, 52621), (949, 52615), (954, 52600), (964, 52576), (968, 52561), (969, 52558), (972, 52546), (979, 52522), (1002, 52474), (1015, 52450),

Gene: Dodo\_117 Start: 82152, Stop: 80272, Start Num: 232

Candidate Starts for Dodo\_117:

(Start: 189 @82215 has 26 MA's), (194, 82209), (Start: 225 @82161 has 5 MA's), (Start: 232 @82152 has 15 MA's), (Start: 244 @82140 has 1 MA's), (340, 81942), (355, 81915), (382, 81876), (407, 81813), (418, 81795), (426, 81768), (428, 81762), (468, 81654), (544, 81576), (554, 81555), (573, 81522), (586, 81492), (603, 81465), (635, 81405), (683, 81300), (700, 81267), (729, 81198), (731, 81189), (759, 81078), (795, 80964), (816, 80880), (822, 80865), (843, 80790), (856, 80754), (858, 80748), (861, 80736), (865, 80721), (904, 80619), (909, 80610), (942, 80520), (954, 80481), (960, 80469), (968, 80442), (985, 80385), (995, 80361),

Gene: DoesntMatter\_58 Start: 54040, Stop: 52181, Start Num: 197

Candidate Starts for DoesntMatter\_58:

(Start: 180 @54064 has 1 MA's), (Start: 197 @54040 has 298 MA's), (Start: 225 @54016 has 5 MA's), (Start: 238 @54010 has 2 MA's), (Start: 261 @53968 has 10 MA's), (269, 53947), (323, 53833), (328, 53827), (349, 53797), (385, 53737), (394, 53716), (410, 53662), (418, 53650), (425, 53632), (427, 53620), (462, 53515), (496, 53458), (511, 53422), (516, 53410), (535, 53383), (545, 53356), (555, 53338), (566, 53320), (588, 53281), (595, 53272), (597, 53269), (599, 53266), (754, 52909), (760, 52876), (765, 52855), (799, 52762), (802, 52753), (822, 52690), (841, 52654), (842, 52651), (847, 52636), (872, 52558), (877, 52546), (883, 52525), (902, 52486), (942, 52396), (947, 52378), (949, 52372), (954, 52357), (964, 52333), (968, 52318), (969, 52315), (972, 52303), (979, 52279), (1002, 52231), (1015, 52207),

Gene: DonSanchon\_58 Start: 53730, Stop: 51871, Start Num: 197

Candidate Starts for DonSanchon\_58:

(Start: 180 @53754 has 1 MA's), (Start: 197 @53730 has 298 MA's), (Start: 225 @53706 has 5 MA's), (Start: 238 @53700 has 2 MA's), (Start: 261 @53658 has 10 MA's), (269, 53637), (323, 53523), (328, 53517), (349, 53487), (385, 53427), (394, 53406), (410, 53352), (418, 53340), (425, 53322), (427, 53310), (462, 53205), (496, 53148), (511, 53112), (516, 53100), (535, 53073), (555, 53028), (588, 52971), (595, 52962), (597, 52959), (754, 52599), (760, 52566), (765, 52545), (799, 52452), (802, 52443), (822, 52380), (841, 52344), (842, 52341), (847, 52326), (872, 52248), (877, 52236), (883, 52215), (902, 52176), (942, 52086), (947, 52068), (949, 52062), (954, 52047), (964, 52023), (968, 52008), (969, 52005), (972, 51993), (979, 51969), (1002, 51921), (1015, 51897),

Gene: Donkey\_38 Start: 27592, Stop: 29574, Start Num: 234

Candidate Starts for Donkey\_38:

(Start: 234 @27592 has 938 MA's), (336, 27766), (382, 27829), (397, 27862), (424, 27937), (518, 28165), (603, 28339), (675, 28495), (730, 28633), (753, 28720), (759, 28753), (769, 28783), (790, 28840), (805, 28906), (840, 28999), (942, 29266), (949, 29290), (985, 29401), (1040, 29509),

Gene: Donny\_59 Start: 54516, Stop: 52690, Start Num: 189

Candidate Starts for Donny\_59:

(Start: 189 @54516 has 26 MA's), (252, 54462), (287, 54402), (358, 54291), (385, 54243), (425, 54141), (434, 54111), (441, 54099), (452, 54063), (462, 54033), (511, 53940), (516, 53928), (534, 53904), (539, 53892), (545, 53874), (583, 53811), (597, 53787), (599, 53784), (650, 53682), (739, 53493), (743, 53475), (749, 53457), (755, 53427), (760, 53400), (797, 53292), (799, 53286), (802, 53277), (806, 53256), (834, 53193), (842, 53160), (847, 53145), (866, 53085), (872, 53067), (877, 53055), (883, 53034), (885, 53025), (887, 53022), (942, 52905), (949, 52881), (964, 52842), (968, 52827), (969, 52824), (975, 52800), (979, 52788), (980, 52785), (985, 52767), (1004, 52737), (1015, 52716), (1023, 52695),

Gene: DontArgue\_43 Start: 30359, Stop: 28536, Start Num: 234

Candidate Starts for DontArgue\_43:

(Start: 234 @30359 has 938 MA's), (266, 30308), (390, 30095), (415, 30026), (419, 30017), (441, 29945), (448, 29924), (458, 29897), (465, 29873), (541, 29780), (559, 29741), (603, 29672), (619, 29645), (669, 29528), (700, 29474), (729, 29417), (759, 29294), (782, 29228), (798, 29171), (805, 29141), (818, 29102), (842, 29030), (847, 29015), (856, 28991), (863, 28964), (868, 28949), (879, 28916), (942, 28760), (949, 28736), (985, 28625), (989, 28613), (993, 28604),

Gene: Doobus\_41 Start: 29222, Stop: 31096, Start Num: 234

Candidate Starts for Doobus\_41:

(Start: 231 @29219 has 7 MA's), (Start: 234 @29222 has 938 MA's), (273, 29291), (284, 29312), (419, 29558), (432, 29600), (556, 29813), (603, 29894), (709, 30128), (747, 30251), (759, 30311), (761, 30317), (778, 30362), (782, 30377), (786, 30392), (796, 30428), (805, 30464), (840, 30557), (869, 30650), (901, 30728), (936, 30800), (946, 30839), (962, 30881), (967, 30899), (978, 30935), (985, 30959), (993, 30980),

Gene: Doom\_45 Start: 35111, Stop: 33285, Start Num: 234

Candidate Starts for Doom\_45:

(Start: 234 @35111 has 938 MA's), (359, 34898), (405, 34805), (411, 34784), (415, 34778), (419, 34769), (457, 34652), (465, 34625), (541, 34532), (546, 34517), (596, 34433), (598, 34430), (634, 34364), (648, 34334), (657, 34304), (679, 34259), (700, 34220), (759, 34040), (769, 34010), (775, 33992), (778, 33989), (790, 33953), (805, 33887), (841, 33806), (842, 33803), (868, 33722), (936, 33572), (938, 33569), (946, 33533), (954, 33509), (959, 33500), (963, 33488), (970, 33461), (985, 33413), (993, 33392),

Gene: Dorothea\_45 Start: 29646, Stop: 27805, Start Num: 234

Candidate Starts for Dorothea\_45:

(Start: 234 @29646 has 938 MA's), (353, 29442), (395, 29367), (397, 29364), (405, 29337), (409, 29322), (415, 29310), (432, 29259), (461, 29169), (465, 29157), (541, 29064), (559, 29025), (571, 29007), (582, 28992), (619, 28926), (635, 28893), (636, 28890), (681, 28788), (710, 28728), (740, 28644), (759, 28563), (789, 28479), (790, 28476), (793, 28467), (798, 28440), (805, 28410), (837, 28350), (847, 28311), (936, 28095), (938, 28092), (942, 28071), (985, 27936), (989, 27924), (993, 27915), (995, 27912), (1042, 27819),

Gene: Dothraki\_39 Start: 28930, Stop: 27065, Start Num: 283

Candidate Starts for Dothraki\_39:

(Start: 234 @29017 has 938 MA's), (Start: 237 @29014 has 2 MA's), (Start: 283 @28930 has 147 MA's), (Start: 291 @28921 has 5 MA's), (342, 28816), (347, 28807), (367, 28777), (369, 28774), (424, 28654), (426, 28642), (428, 28636), (466, 28531), (473, 28504), (532, 28363), (535, 28357), (537, 28354), (541, 28342), (551, 28315), (553, 28312), (562, 28297), (566, 28291), (570, 28285), (613, 28252), (701, 28063), (798, 27748), (801, 27739), (802, 27736), (805, 27718), (819, 27676), (822, 27670), (825, 27661), (832, 27646), (849, 27589), (900, 27430), (913, 27400), (917, 27391), (938, 27331), (943, 27307), (956, 27268), (967, 27235), (970, 27223), (986, 27163),

Gene: DrFeelGood\_43 Start: 34795, Stop: 32969, Start Num: 234

Candidate Starts for DrFeelGood\_43:

(Start: 234 @34795 has 938 MA's), (359, 34582), (368, 34567), (405, 34489), (411, 34468), (415, 34462), (419, 34453), (457, 34336), (465, 34309), (468, 34300), (541, 34216), (546, 34201), (566, 34168), (596, 34117), (598, 34114), (634, 34048), (648, 34018), (657, 33988), (679, 33943), (700, 33904), (759, 33724), (769, 33694), (775, 33676), (778, 33673), (790, 33637), (805, 33571), (841, 33490), (842, 33487), (868, 33406), (936, 33256), (938, 33253), (946, 33217), (954, 33193), (959, 33184), (963, 33172), (970, 33145), (985, 33097), (993, 33076),

Gene: DrManhattan\_40 Start: 27782, Stop: 29692, Start Num: 234

Candidate Starts for DrManhattan\_40:

(139, 27644), (Start: 234 @27782 has 938 MA's), (265, 27830), (405, 28079), (436, 28169), (543, 28421), (546, 28430), (603, 28529), (615, 28544), (646, 28613), (675, 28682), (730, 28820), (759, 28940), (769, 28970), (781, 29003), (790, 29027), (805, 29093), (854, 29228), (862, 29258), (936, 29429), (947, 29471), (960, 29504), (985, 29588), (988, 29597), (993, 29609),

Gene: DrSierra\_39 Start: 27819, Stop: 29663, Start Num: 234

Candidate Starts for DrSierra\_39:

(Start: 234 @27819 has 938 MA's), (353, 28023), (377, 28050), (405, 28116), (436, 28206), (543, 28392), (546, 28401), (563, 28431), (603, 28500), (615, 28515), (675, 28653), (730, 28791), (759, 28911), (769, 28941), (790, 28998), (805, 29064), (862, 29229), (936, 29400), (985, 29559), (988, 29568), (1031, 29646),

Gene: Drake55\_46 Start: 31661, Stop: 29874, Start Num: 234

Candidate Starts for Drake55\_46:

(Start: 234 @31661 has 938 MA's), (353, 31457), (355, 31454), (359, 31448), (379, 31418), (395, 31385), (397, 31382), (405, 31355), (415, 31328), (432, 31277), (465, 31175), (541, 31082), (566, 31034), (571, 31025), (582, 31010), (619, 30944), (655, 30863), (675, 30815), (740, 30671), (759, 30590), (778, 30539), (789, 30506), (805, 30437), (818, 30398), (837, 30377), (841, 30356), (845, 30344), (918, 30164), (921, 30158), (936, 30122), (942, 30098), (968, 30020), (985, 29963), (989, 29951),

Gene: Drake94\_42 Start: 30378, Stop: 28546, Start Num: 234

Candidate Starts for Drake94\_42:

(Start: 234 @30378 has 938 MA's), (266, 30327), (303, 30261), (353, 30174), (359, 30165), (390, 30114), (395, 30102), (415, 30045), (441, 29964), (445, 29952), (448, 29943), (458, 29916), (465, 29892), (541, 29799), (559, 29760), (603, 29691), (619, 29664), (679, 29532), (759, 29304), (782, 29238), (798, 29181), (805, 29151), (818, 29112), (842, 29040), (847, 29025), (856, 29001), (868, 28959), (879, 28926), (942, 28770), (949, 28746), (970, 28683), (985, 28635), (989, 28623), (993, 28614),

Gene: Dre3\_38 Start: 31347, Stop: 28987, Start Num: 45

Candidate Starts for Dre3\_38:

(35, 31371), (Start: 45 @31347 has 24 MA's), (52, 31332), (58, 31296), (127, 31125), (136, 31101), (Start: 291 @30864 has 5 MA's), (317, 30807), (342, 30768), (354, 30747), (391, 30681), (409, 30627), (420, 30606), (426, 30585), (499, 30387), (517, 30345), (524, 30327), (530, 30309), (549, 30264), (568, 30246), (570, 30243), (626, 30207), (682, 30114), (711, 30069), (724, 30042), (729, 30030), (732, 30018), (770, 29877), (784, 29808), (795, 29757), (802, 29733), (805, 29715), (807, 29706), (817, 29679), (819, 29673), (822, 29667), (824, 29661), (842, 29604), (849, 29580), (859, 29535), (860, 29532), (880, 29469), (926, 29361), (945, 29292), (948, 29280), (958, 29256), (978, 29181), (979, 29178), (986, 29154), (996, 29130), (1008, 29109), (1018, 29085), (1037, 29040), (1046, 29022),

Gene: DreamCatcher\_47 Start: 35708, Stop: 33882, Start Num: 234

Candidate Starts for DreamCatcher\_47:

(Start: 234 @35708 has 938 MA's), (359, 35495), (368, 35480), (395, 35432), (405, 35402), (411, 35381), (415, 35375), (419, 35366), (432, 35324), (457, 35249), (465, 35222), (541, 35129), (546, 35114), (566, 35081), (596, 35030), (598, 35027), (634, 34961), (648, 34931), (657, 34901), (679, 34856), (700, 34817), (759, 34637), (769, 34607), (775, 34589), (790, 34550), (805, 34484), (818, 34445), (837, 34424), (841, 34403), (847, 34385), (868, 34319), (936, 34169), (938, 34166), (946, 34130), (954, 34106), (959, 34097), (963, 34085), (985, 34010), (993, 33989),

Gene: DreamTeam1\_42 Start: 30708, Stop: 28915, Start Num: 234

Candidate Starts for DreamTeam1\_42:

(Start: 234 @30708 has 938 MA's), (246, 30699), (334, 30537), (336, 30534), (353, 30504), (382, 30459), (397, 30426), (405, 30399), (409, 30384), (415, 30372), (419, 30363), (432, 30321), (458, 30243), (465, 30219), (541, 30126), (550, 30102), (563, 30081), (634, 29958), (703, 29799), (704, 29796), (726, 29760), (729, 29754), (759, 29631), (782, 29565), (802, 29496), (805, 29478), (837, 29418), (841, 29397), (879, 29280), (918, 29205), (936, 29163), (968, 29061), (985, 29004), (989, 28992), (993, 28983),

Gene: Dreamboat\_46 Start: 34398, Stop: 32569, Start Num: 234

Candidate Starts for Dreamboat\_46:

(Start: 234 @34398 has 938 MA's), (359, 34185), (368, 34170), (395, 34122), (405, 34092), (411, 34071), (415, 34065), (419, 34056), (457, 33939), (465, 33912), (541, 33819), (546, 33804), (558, 33783), (566, 33771), (596, 33720), (598, 33717), (634, 33651), (648, 33621), (657, 33591), (679, 33546), (700, 33507), (759, 33327), (775, 33279), (793, 33231), (802, 33192), (805, 33174), (818, 33135), (837, 33114), (841, 33093), (846, 33078), (885, 32955), (960, 32784), (967, 32760), (982, 32712), (985, 32700), (993, 32679), (997, 32673), (1025, 32625), (1030, 32610),

Gene: DroogsArmy\_41 Start: 33073, Stop: 31238, Start Num: 234

Candidate Starts for DroogsArmy\_41:

(Start: 234 @33073 has 938 MA's), (301, 32962), (359, 32860), (394, 32800), (411, 32746), (415, 32740), (424, 32719), (448, 32638), (465, 32587), (535, 32506), (541, 32491), (552, 32464), (563, 32446), (568, 32443), (582, 32422), (603, 32383), (636, 32320), (661, 32254), (663, 32251), (675, 32230), (720, 32140), (729, 32119), (740, 32077), (759, 31996), (775, 31948), (793, 31900), (798, 31873), (805, 31843), (818, 31804), (841, 31735), (842, 31732), (847, 31717), (856, 31693), (868, 31651), (921, 31522), (935, 31495), (942, 31462), (947, 31444), (960, 31411), (985, 31327), (989, 31315), (993, 31306),

Gene: DropBear\_45 Start: 31442, Stop: 29604, Start Num: 234

Candidate Starts for DropBear\_45:

(179, 31514), (Start: 234 @31442 has 938 MA's), (266, 31391), (353, 31238), (390, 31178), (395, 31166), (415, 31109), (419, 31100), (424, 31088), (458, 30980), (465, 30956), (541, 30860), (568, 30812), (603, 30752), (636, 30689), (663, 30620), (675, 30599), (710, 30530), (713, 30524), (729, 30485), (759, 30362), (790, 30275), (798, 30239), (805, 30209), (816, 30179), (842, 30098), (856, 30059), (862, 30035), (868, 30017), (921, 29888), (942, 29828), (985, 29693), (989, 29681), (993,

29672),

Gene: Druantia\_45 Start: 31573, Stop: 29747, Start Num: 234

Candidate Starts for Druantia\_45:

(Start: 234 @31573 has 938 MA's), (252, 31552), (266, 31522), (279, 31492), (379, 31330), (389, 31312), (415, 31240), (419, 31231), (458, 31111), (465, 31087), (541, 30994), (568, 30946), (582, 30925), (603, 30886), (663, 30754), (675, 30733), (700, 30688), (703, 30676), (756, 30523), (759, 30502), (798, 30379), (805, 30349), (818, 30310), (841, 30244), (842, 30241), (847, 30226), (856, 30202), (862, 30178), (942, 29971), (985, 29836), (989, 29824), (993, 29815),

Gene: Dublin\_37 Start: 30165, Stop: 28306, Start Num: 234

Candidate Starts for Dublin\_37:

(Start: 234 @30165 has 938 MA's), (266, 30114), (301, 30054), (336, 29991), (353, 29961), (355, 29958), (390, 29901), (405, 29859), (415, 29832), (465, 29679), (541, 29583), (566, 29535), (618, 29451), (619, 29445), (652, 29373), (663, 29340), (670, 29325), (679, 29313), (724, 29214), (759, 29079), (769, 29049), (775, 29031), (778, 29028), (790, 28992), (793, 28983), (796, 28962), (799, 28953), (805, 28926), (806, 28923), (837, 28866), (841, 28845), (879, 28728), (903, 28674), (908, 28665), (921, 28647), (947, 28569), (978, 28476), (985, 28452), (989, 28440), (1049, 28323), (1050, 28320),

Gene: Dubu\_35 Start: 27275, Stop: 29131, Start Num: 234

Candidate Starts for Dubu\_35:

(Start: 234 @27275 has 938 MA's), (265, 27323), (301, 27395), (405, 27596), (438, 27692), (464, 27773), (526, 27833), (589, 27962), (603, 27983), (615, 27998), (655, 28088), (657, 28097), (675, 28136), (700, 28181), (705, 28199), (756, 28373), (759, 28394), (761, 28400), (775, 28442), (790, 28481), (792, 28484), (795, 28505), (803, 28538), (805, 28547), (825, 28601), (856, 28688), (869, 28733), (876, 28751), (879, 28763), (901, 28811), (902, 28814), (949, 28931), (970, 28994), (985, 29042), (991, 29057), (1008, 29087),

Gene: DuchessDung\_62 Start: 53800, Stop: 51941, Start Num: 197

Candidate Starts for DuchessDung\_62:

(Start: 180 @53824 has 1 MA's), (Start: 197 @53800 has 298 MA's), (Start: 225 @53776 has 5 MA's), (Start: 238 @53770 has 2 MA's), (Start: 261 @53728 has 10 MA's), (269, 53707), (323, 53593), (328, 53587), (349, 53557), (385, 53497), (394, 53476), (410, 53422), (418, 53410), (425, 53392), (427, 53380), (462, 53275), (496, 53218), (511, 53182), (516, 53170), (535, 53143), (555, 53098), (588, 53041), (595, 53032), (597, 53029), (754, 52669), (760, 52636), (765, 52615), (799, 52522), (802, 52513), (822, 52450), (841, 52414), (842, 52411), (847, 52396), (872, 52318), (877, 52306), (883, 52285), (902, 52246), (942, 52156), (947, 52138), (949, 52132), (954, 52117), (964, 52093), (968, 52078), (969, 52075), (972, 52063), (979, 52039), (1002, 51991), (1015, 51967),

Gene: DudeLittle\_43 Start: 31344, Stop: 29557, Start Num: 234

Candidate Starts for DudeLittle\_43:

(Start: 234 @31344 has 938 MA's), (353, 31140), (355, 31137), (368, 31116), (379, 31101), (395, 31068), (397, 31065), (405, 31038), (415, 31011), (424, 30990), (465, 30858), (541, 30765), (558, 30729), (566, 30717), (571, 30708), (582, 30693), (619, 30627), (655, 30546), (675, 30498), (679, 30492), (710, 30429), (759, 30273), (778, 30222), (789, 30189), (790, 30186), (805, 30120), (818, 30081), (837, 30060), (859, 29985), (862, 29973), (908, 29859), (921, 29841), (936, 29805), (942, 29781), (968, 29703), (985, 29646), (989, 29634), (993, 29625),

Gene: Duggie\_61 Start: 54284, Stop: 52425, Start Num: 197

Candidate Starts for Duggie\_61:

(Start: 180 @54308 has 1 MA's), (Start: 197 @54284 has 298 MA's), (Start: 225 @54260 has 5 MA's), (Start: 238 @54254 has 2 MA's), (Start: 261 @54212 has 10 MA's), (269, 54191), (323, 54077), (328,

54071), (349, 54041), (385, 53981), (394, 53960), (410, 53906), (418, 53894), (425, 53876), (427, 53864), (462, 53759), (496, 53702), (511, 53666), (516, 53654), (534, 53630), (539, 53618), (545, 53600), (555, 53582), (566, 53564), (588, 53525), (595, 53516), (597, 53513), (599, 53510), (754, 53153), (760, 53120), (765, 53099), (799, 53006), (802, 52997), (822, 52934), (841, 52898), (842, 52895), (847, 52880), (872, 52802), (877, 52790), (883, 52769), (902, 52730), (942, 52640), (947, 52622), (949, 52616), (954, 52601), (964, 52577), (968, 52562), (969, 52559), (972, 52547), (979, 52523), (985, 52502), (1002, 52475), (1015, 52451), (1019, 52436),

Gene: Dulcie\_45 Start: 34631, Stop: 32805, Start Num: 234

Candidate Starts for Dulcie\_45:

(Start: 234 @34631 has 938 MA's), (359, 34418), (368, 34403), (395, 34355), (405, 34325), (411, 34304), (415, 34298), (419, 34289), (457, 34172), (465, 34145), (541, 34052), (546, 34037), (566, 34004), (596, 33953), (598, 33950), (634, 33884), (648, 33854), (657, 33824), (679, 33779), (700, 33740), (759, 33560), (775, 33512), (790, 33473), (805, 33407), (818, 33368), (837, 33347), (841, 33326), (847, 33308), (868, 33242), (936, 33092), (938, 33089), (946, 33053), (954, 33029), (959, 33020), (963, 33008), (970, 32981), (985, 32933), (993, 32912),

Gene: DunneganBoMo\_92 Start: 74359, Stop: 76077, Start Num: 284

Candidate Starts for DunneganBoMo\_92:

(Start: 248 @74284 has 2 MA's), (265, 74317), (273, 74338), (276, 74347), (284, 74359), (418, 74596), (426, 74623), (428, 74629), (518, 74764), (586, 74881), (603, 74908), (609, 74914), (615, 74923), (638, 74977), (700, 75109), (706, 75130), (721, 75157), (735, 75205), (746, 75238), (756, 75277), (759, 75298), (761, 75304), (796, 75421), (817, 75505), (818, 75508), (840, 75571), (843, 75583), (856, 75619), (865, 75652), (883, 75706), (890, 75724), (931, 75808), (936, 75829), (943, 75856), (960, 75904), (962, 75910), (967, 75928), (970, 75940), (973, 75952), (974, 75955), (985, 75988), (999, 76015), (1017, 76039),

Gene: Duocatuli\_38 Start: 28619, Stop: 26754, Start Num: 283

Candidate Starts for Duocatuli\_38:

(Start: 234 @28706 has 938 MA's), (Start: 237 @28703 has 2 MA's), (Start: 283 @28619 has 147 MA's), (Start: 291 @28610 has 5 MA's), (342, 28505), (347, 28496), (367, 28466), (369, 28463), (424, 28343), (426, 28331), (428, 28325), (466, 28220), (473, 28193), (532, 28052), (535, 28046), (537, 28043), (541, 28031), (551, 28004), (553, 28001), (562, 27986), (566, 27980), (570, 27974), (613, 27941), (671, 27812), (701, 27752), (798, 27437), (801, 27428), (802, 27425), (805, 27407), (819, 27365), (822, 27359), (825, 27350), (832, 27335), (849, 27278), (900, 27119), (913, 27089), (917, 27080), (938, 27020), (943, 26996), (956, 26957), (967, 26924), (970, 26912), (986, 26852),

Gene: Duplo\_47 Start: 31191, Stop: 29368, Start Num: 234

Candidate Starts for Duplo\_47:

(Start: 234 @31191 has 938 MA's), (353, 30987), (368, 30963), (379, 30945), (389, 30927), (395, 30912), (397, 30909), (405, 30882), (415, 30855), (432, 30804), (465, 30702), (541, 30609), (566, 30561), (571, 30552), (581, 30540), (582, 30537), (619, 30471), (648, 30411), (700, 30297), (710, 30273), (728, 30234), (759, 30108), (778, 30057), (790, 30021), (805, 29955), (818, 29916), (842, 29847), (856, 29808), (869, 29763), (879, 29733), (908, 29670), (918, 29658), (921, 29652), (942, 29592), (985, 29457), (989, 29445), (993, 29436),

Gene: Durga\_63 Start: 54780, Stop: 52921, Start Num: 197

Candidate Starts for Durga\_63:

(Start: 180 @54804 has 1 MA's), (Start: 197 @54780 has 298 MA's), (Start: 225 @54756 has 5 MA's), (Start: 238 @54750 has 2 MA's), (Start: 261 @54708 has 10 MA's), (269, 54687), (323, 54573), (328, 54567), (349, 54537), (385, 54477), (394, 54456), (410, 54402), (418, 54390), (425, 54372), (427, 54360), (462, 54255), (496, 54198), (511, 54162), (516, 54150), (534, 54126), (539, 54114), (545, 54096), (555, 54078), (566, 54060), (588, 54021), (595, 54012), (597, 54009), (599, 54006), (724,



53751), (754, 53649), (760, 53616), (765, 53595), (799, 53502), (802, 53493), (822, 53430), (841, 53394), (842, 53391), (847, 53376), (872, 53298), (877, 53286), (883, 53265), (902, 53226), (942, 53136), (947, 53118), (949, 53112), (954, 53097), (964, 53073), (968, 53058), (969, 53055), (972, 53043), (979, 53019), (985, 52998), (1002, 52971), (1015, 52947),

Gene: Dussy\_46 Start: 34786, Stop: 32957, Start Num: 234

Candidate Starts for Dussy\_46:

(Start: 234 @34786 has 938 MA's), (359, 34573), (368, 34558), (395, 34510), (405, 34480), (411, 34459), (415, 34453), (419, 34444), (457, 34327), (465, 34300), (541, 34207), (546, 34192), (596, 34108), (598, 34105), (634, 34039), (648, 34009), (657, 33979), (679, 33934), (700, 33895), (759, 33715), (775, 33667), (793, 33619), (802, 33580), (805, 33562), (818, 33523), (837, 33502), (841, 33481), (846, 33466), (885, 33343), (960, 33172), (967, 33148), (982, 33100), (985, 33088), (993, 33067), (997, 33061), (1025, 33013), (1030, 32998),

Gene: DustyMartin\_48 Start: 31200, Stop: 29365, Start Num: 234

Candidate Starts for DustyMartin\_48:

(Start: 234 @31200 has 938 MA's), (266, 31149), (303, 31083), (353, 30996), (368, 30972), (390, 30936), (395, 30924), (415, 30867), (419, 30858), (445, 30774), (458, 30738), (461, 30726), (465, 30714), (541, 30621), (568, 30573), (603, 30513), (661, 30384), (663, 30381), (675, 30360), (679, 30354), (729, 30246), (759, 30123), (775, 30075), (798, 30000), (805, 29970), (818, 29931), (841, 29862), (842, 29859), (856, 29820), (862, 29796), (864, 29790), (868, 29778), (911, 29670), (942, 29589), (949, 29565), (970, 29502), (985, 29454), (989, 29442), (993, 29433),

Gene: Dynamix\_45 Start: 34393, Stop: 32567, Start Num: 234

Candidate Starts for Dynamix\_45:

(Start: 234 @34393 has 938 MA's), (359, 34180), (395, 34117), (405, 34087), (411, 34066), (415, 34060), (419, 34051), (457, 33934), (465, 33907), (541, 33814), (546, 33799), (596, 33715), (598, 33712), (634, 33646), (648, 33616), (657, 33586), (679, 33541), (700, 33502), (759, 33322), (775, 33274), (790, 33235), (805, 33169), (818, 33130), (837, 33109), (841, 33088), (847, 33070), (868, 33004), (936, 32854), (938, 32851), (946, 32815), (959, 32782), (963, 32770), (970, 32743), (985, 32695), (993, 32674),

Gene: EZMoney23\_43 Start: 31302, Stop: 29515, Start Num: 233

Candidate Starts for EZMoney23\_43:

(Start: 233 @31302 has 10 MA's), (353, 31098), (355, 31095), (359, 31089), (368, 31074), (379, 31059), (395, 31026), (397, 31023), (405, 30996), (415, 30969), (424, 30948), (432, 30918), (465, 30816), (541, 30723), (566, 30675), (571, 30666), (582, 30651), (619, 30585), (655, 30504), (675, 30456), (679, 30450), (740, 30312), (759, 30231), (778, 30180), (789, 30147), (790, 30144), (805, 30078), (818, 30039), (837, 30018), (859, 29943), (879, 29880), (888, 29853), (908, 29817), (921, 29799), (936, 29763), (942, 29739), (962, 29682), (968, 29661), (985, 29604), (989, 29592), (993, 29583),

Gene: Eagle\_45 Start: 31595, Stop: 29769, Start Num: 234

Candidate Starts for Eagle\_45:

(Start: 234 @31595 has 938 MA's), (252, 31574), (266, 31544), (279, 31514), (379, 31352), (389, 31334), (415, 31262), (419, 31253), (458, 31133), (465, 31109), (541, 31016), (568, 30968), (582, 30947), (603, 30908), (663, 30776), (675, 30755), (700, 30710), (703, 30698), (756, 30545), (759, 30524), (798, 30401), (805, 30371), (818, 30332), (841, 30266), (842, 30263), (847, 30248), (856, 30224), (862, 30200), (942, 29993), (985, 29858), (989, 29846), (993, 29837),

Gene: EagleEye\_46 Start: 30777, Stop: 28945, Start Num: 234

Candidate Starts for EagleEye\_46:

(Start: 234 @30777 has 938 MA's), (353, 30573), (355, 30570), (395, 30501), (397, 30498), (405, 30471), (411, 30450), (415, 30444), (419, 30435), (432, 30393), (458, 30315), (465, 30291), (541, 30198), (634, 30030), (726, 29832), (759, 29703), (793, 29607), (802, 29568), (805, 29550), (839, 29478), (841, 29469), (885, 29331), (935, 29244), (936, 29235), (968, 29133), (985, 29076), (989, 29064), (1042, 28959),

Gene: Eaglehorse\_57 Start: 52538, Stop: 50709, Start Num: 197

Candidate Starts for Eaglehorse\_57:

(Start: 197 @52538 has 298 MA's), (Start: 238 @52511 has 2 MA's), (253, 52481), (Start: 261 @52469 has 10 MA's), (272, 52442), (273, 52439), (277, 52430), (301, 52412), (355, 52316), (385, 52265), (395, 52241), (450, 52079), (459, 52055), (462, 52043), (496, 51986), (511, 51950), (516, 51938), (534, 51914), (580, 51830), (595, 51800), (597, 51797), (618, 51767), (678, 51623), (710, 51557), (733, 51518), (737, 51506), (743, 51485), (749, 51467), (760, 51410), (793, 51326), (799, 51296), (802, 51287), (822, 51221), (839, 51194), (841, 51185), (847, 51167), (856, 51143), (872, 51089), (877, 51077), (883, 51056), (921, 50987), (942, 50927), (947, 50909), (960, 50876), (964, 50864), (968, 50849), (969, 50846), (972, 50834), (979, 50810), (980, 50807), (1002, 50759), (1004, 50756), (1015, 50735), (1023, 50714),

Gene: Eaglepride\_45 Start: 31205, Stop: 29382, Start Num: 234

Candidate Starts for Eaglepride\_45:

(Start: 234 @31205 has 938 MA's), (266, 31154), (279, 31124), (379, 30962), (389, 30944), (395, 30929), (415, 30872), (419, 30863), (441, 30791), (448, 30770), (458, 30743), (465, 30719), (541, 30626), (559, 30587), (568, 30578), (603, 30518), (619, 30491), (657, 30404), (679, 30359), (700, 30320), (729, 30263), (740, 30221), (759, 30140), (782, 30074), (798, 30017), (802, 30005), (805, 29987), (818, 29948), (842, 29876), (847, 29861), (856, 29837), (868, 29795), (921, 29666), (942, 29606), (946, 29591), (949, 29582), (985, 29471), (989, 29459), (993, 29450),

Gene: Eapen\_45 Start: 31565, Stop: 29739, Start Num: 234

Candidate Starts for Eapen\_45:

(Start: 234 @31565 has 938 MA's), (252, 31544), (266, 31514), (279, 31484), (379, 31322), (389, 31304), (415, 31232), (419, 31223), (458, 31103), (465, 31079), (541, 30986), (568, 30938), (582, 30917), (603, 30878), (663, 30746), (675, 30725), (700, 30680), (703, 30668), (756, 30515), (759, 30494), (798, 30371), (805, 30341), (818, 30302), (841, 30236), (842, 30233), (847, 30218), (856, 30194), (862, 30170), (942, 29963), (985, 29828), (989, 29816), (993, 29807),

Gene: EastView9101\_57 Start: 54337, Stop: 52511, Start Num: 189

Candidate Starts for EastView9101\_57:

(114, 54496), (140, 54415), (Start: 189 @54337 has 26 MA's), (252, 54283), (287, 54223), (358, 54112), (385, 54064), (425, 53962), (441, 53920), (452, 53884), (462, 53854), (511, 53761), (516, 53749), (534, 53725), (539, 53713), (545, 53695), (583, 53632), (597, 53608), (650, 53503), (739, 53314), (743, 53296), (755, 53248), (760, 53221), (797, 53113), (799, 53107), (802, 53098), (806, 53077), (834, 53014), (842, 52981), (847, 52966), (866, 52906), (872, 52888), (877, 52876), (883, 52855), (885, 52846), (887, 52843), (942, 52726), (949, 52702), (964, 52663), (968, 52648), (969, 52645), (975, 52621), (979, 52609), (980, 52606), (1004, 52558), (1015, 52537), (1023, 52516),

Gene: Ebony\_45 Start: 30738, Stop: 28951, Start Num: 234

Candidate Starts for Ebony\_45:

(Start: 234 @30738 has 938 MA's), (353, 30534), (395, 30462), (405, 30432), (415, 30405), (543, 30153), (571, 30102), (619, 30021), (639, 29976), (675, 29892), (703, 29835), (728, 29793), (740, 29748), (759, 29667), (778, 29616), (790, 29580), (805, 29514), (837, 29454), (839, 29442), (871, 29340), (879, 29316), (884, 29298), (921, 29235), (935, 29208), (936, 29199), (942, 29175), (985, 29040), (989, 29028), (993, 29019),

Gene: Echild\_44 Start: 30778, Stop: 28991, Start Num: 234

Candidate Starts for Echild\_44:

(Start: 234 @30778 has 938 MA's), (355, 30571), (359, 30565), (379, 30535), (395, 30502), (397, 30499), (405, 30472), (415, 30445), (424, 30424), (465, 30292), (541, 30199), (566, 30151), (571, 30142), (582, 30127), (619, 30061), (655, 29980), (675, 29932), (679, 29926), (710, 29863), (740, 29788), (759, 29707), (778, 29656), (789, 29623), (790, 29620), (805, 29554), (818, 29515), (837, 29494), (859, 29419), (864, 29401), (868, 29389), (879, 29356), (888, 29329), (908, 29293), (936, 29239), (942, 29215), (962, 29158), (968, 29137), (985, 29080), (989, 29068), (993, 29059),

Gene: Eden\_40 Start: 28150, Stop: 30027, Start Num: 234

Candidate Starts for Eden\_40:

(Start: 234 @28150 has 938 MA's), (273, 28219), (353, 28357), (408, 28462), (424, 28498), (425, 28501), (457, 28591), (543, 28714), (603, 28822), (615, 28837), (628, 28867), (723, 29131), (729, 29146), (747, 29209), (759, 29269), (782, 29335), (799, 29398), (805, 29425), (840, 29518), (862, 29590), (901, 29689), (902, 29692), (903, 29695), (942, 29785), (962, 29842), (985, 29920), (993, 29941), (1032, 30010),

Gene: Edison31\_43 Start: 31140, Stop: 29305, Start Num: 234

Candidate Starts for Edison31\_43:

(Start: 234 @31140 has 938 MA's), (266, 31089), (303, 31023), (353, 30936), (368, 30912), (379, 30897), (390, 30876), (395, 30864), (415, 30807), (419, 30798), (445, 30714), (458, 30678), (461, 30666), (465, 30654), (541, 30561), (568, 30513), (603, 30453), (619, 30426), (661, 30324), (663, 30321), (675, 30300), (679, 30294), (729, 30186), (759, 30063), (775, 30015), (798, 29940), (805, 29910), (818, 29871), (841, 29802), (842, 29799), (856, 29760), (862, 29736), (864, 29730), (868, 29718), (942, 29529), (949, 29505), (970, 29442), (985, 29394), (989, 29382), (993, 29373),

Gene: EdogawaKiddo\_43 Start: 31490, Stop: 29697, Start Num: 234

Candidate Starts for EdogawaKiddo\_43:

(Start: 234 @31490 has 938 MA's), (246, 31481), (266, 31439), (334, 31319), (336, 31316), (364, 31268), (397, 31208), (406, 31178), (409, 31166), (415, 31154), (465, 31001), (541, 30908), (619, 30770), (634, 30740), (703, 30581), (710, 30569), (726, 30542), (756, 30434), (759, 30413), (802, 30278), (805, 30260), (841, 30179), (856, 30137), (879, 30062), (918, 29987), (936, 29945), (968, 29843), (985, 29786), (989, 29774), (993, 29765),

Gene: Edtherson\_45 Start: 35275, Stop: 33449, Start Num: 234

Candidate Starts for Edtherson\_45:

(Start: 234 @35275 has 938 MA's), (359, 35062), (368, 35047), (395, 34999), (405, 34969), (411, 34948), (415, 34942), (419, 34933), (457, 34816), (465, 34789), (541, 34696), (546, 34681), (596, 34597), (598, 34594), (634, 34528), (648, 34498), (657, 34468), (679, 34423), (700, 34384), (759, 34204), (769, 34174), (775, 34156), (790, 34117), (805, 34051), (841, 33970), (842, 33967), (868, 33886), (936, 33736), (938, 33733), (946, 33697), (954, 33673), (959, 33664), (963, 33652), (985, 33577), (993, 33556),

Gene: EhyElimayoE\_67 Start: 46750, Stop: 44786, Start Num: 258

Candidate Starts for EhyElimayoE\_67:

(Start: 258 @46750 has 7 MA's), (304, 46654), (361, 46546), (369, 46534), (397, 46480), (425, 46396), (470, 46261), (492, 46162), (497, 46150), (508, 46123), (515, 46108), (584, 45970), (631, 45883), (672, 45787), (716, 45679), (717, 45676), (726, 45649), (734, 45622), (743, 45592), (752, 45562), (780, 45457), (808, 45349), (810, 45340), (812, 45334), (866, 45190), (872, 45172), (878, 45154), (914, 45100), (949, 44983), (953, 44971), (959, 44962), (963, 44950), (968, 44932), (974, 44908), (983, 44884), (988, 44866),

Gene: Eidsmoe\_45 Start: 31547, Stop: 29754, Start Num: 234

Candidate Starts for Eidsmoe\_45:

(Start: 234 @31547 has 938 MA's), (246, 31538), (266, 31496), (334, 31376), (336, 31373), (364, 31325), (397, 31265), (406, 31235), (409, 31223), (415, 31211), (465, 31058), (541, 30965), (619, 30827), (634, 30797), (703, 30638), (710, 30626), (726, 30599), (756, 30491), (759, 30470), (802, 30335), (805, 30317), (841, 30236), (856, 30194), (879, 30119), (918, 30044), (936, 30002), (968, 29900), (985, 29843), (989, 29831), (993, 29822),

Gene: EITiger69\_39 Start: 30184, Stop: 28286, Start Num: 205

Candidate Starts for EITiger69\_39:

(Start: 205 @30184 has 2 MA's), (Start: 234 @30151 has 938 MA's), (301, 30040), (353, 29947), (355, 29944), (395, 29875), (397, 29872), (405, 29845), (415, 29818), (419, 29809), (445, 29725), (453, 29701), (465, 29665), (520, 29605), (541, 29569), (563, 29524), (566, 29521), (581, 29500), (582, 29497), (618, 29437), (652, 29359), (670, 29311), (679, 29299), (701, 29251), (724, 29200), (759, 29065), (775, 29017), (782, 28999), (790, 28978), (793, 28969), (799, 28939), (805, 28912), (806, 28909), (841, 28831), (847, 28813), (862, 28765), (879, 28714), (903, 28660), (908, 28651), (921, 28633), (947, 28555), (949, 28549), (978, 28462), (985, 28438), (989, 28426), (1042, 28321),

Gene: Elephantoon\_44 Start: 30830, Stop: 29037, Start Num: 234

Candidate Starts for Elephantoon\_44:

(Start: 234 @30830 has 938 MA's), (246, 30821), (266, 30779), (314, 30692), (334, 30659), (336, 30656), (353, 30626), (364, 30608), (397, 30548), (405, 30521), (409, 30506), (415, 30494), (464, 30344), (465, 30341), (468, 30332), (535, 30263), (541, 30248), (634, 30080), (703, 29921), (710, 29909), (726, 29882), (756, 29774), (759, 29753), (798, 29630), (805, 29600), (818, 29561), (839, 29528), (841, 29519), (879, 29402), (885, 29381), (918, 29327), (936, 29285), (942, 29261), (968, 29183), (985, 29126), (989, 29114), (993, 29105),

Gene: Eleri\_38 Start: 28732, Stop: 26867, Start Num: 283

Candidate Starts for Eleri\_38:

(Start: 283 @28732 has 147 MA's), (305, 28687), (330, 28633), (371, 28573), (398, 28522), (426, 28444), (428, 28438), (445, 28393), (446, 28390), (447, 28387), (460, 28348), (479, 28288), (532, 28165), (537, 28156), (541, 28144), (545, 28132), (553, 28114), (566, 28093), (574, 28081), (611, 28057), (680, 27910), (749, 27742), (793, 27577), (801, 27541), (805, 27520), (819, 27478), (849, 27391), (859, 27346), (894, 27247), (913, 27202), (917, 27193), (938, 27133), (943, 27109), (954, 27076), (986, 26965),

Gene: Elezi\_39 Start: 30351, Stop: 32216, Start Num: 234

Candidate Starts for Elezi\_39:

(Start: 234 @30351 has 938 MA's), (265, 30399), (377, 30582), (382, 30588), (405, 30648), (411, 30669), (436, 30738), (546, 30954), (598, 31044), (603, 31053), (615, 31068), (635, 31113), (675, 31206), (730, 31344), (759, 31464), (769, 31494), (790, 31551), (803, 31608), (805, 31617), (814, 31641), (840, 31710), (862, 31782), (865, 31791), (905, 31890), (936, 31953), (985, 32112), (988, 32121),

Gene: Elinal\_48 Start: 34208, Stop: 31833, Start Num: 47

Candidate Starts for Elinal\_48:

(Start: 47 @34208 has 13 MA's), (64, 34148), (82, 34106), (96, 34067), (136, 33947), (141, 33926), (170, 33902), (Start: 223 @33824 has 3 MA's), (228, 33818), (Start: 230 @33815 has 13 MA's), (252, 33785), (262, 33767), (268, 33749), (290, 33710), (Start: 291 @33707 has 5 MA's), (317, 33650), (329, 33626), (342, 33611), (380, 33548), (391, 33524), (395, 33515), (398, 33509), (399, 33503), (409, 33470), (420, 33449), (426, 33428), (495, 33245), (524, 33170), (541, 33128), (655, 33017), (662, 32993), (677, 32963), (711, 32912), (713, 32909), (718, 32894), (728, 32873), (772, 32699), (773, 32690), (781, 32660), (805, 32555), (817, 32519), (819, 32513), (822, 32507), (824, 32501), (842, 32444), (849, 32420), (878, 32315), (879, 32312), (919, 32219), (926, 32201), (938, 32162), (948,

32120), (958, 32096), (967, 32066), (979, 32018), (986, 31994), (1008, 31949), (1046, 31862),

Gene: Elliott\_43 Start: 32440, Stop: 30047, Start Num: 36

Candidate Starts for Elliott\_43:

(Start: 36 @32440 has 16 MA's), (48, 32434), (Start: 60 @32386 has 1 MA's), (76, 32344), (86, 32320), (127, 32194), (136, 32170), (170, 32125), (206, 32074), (216, 32059), (Start: 230 @32038 has 13 MA's), (262, 31990), (274, 31957), (279, 31948), (317, 31873), (322, 31861), (366, 31792), (382, 31765), (385, 31759), (391, 31744), (409, 31690), (410, 31687), (420, 31669), (426, 31648), (448, 31588), (495, 31465), (497, 31459), (524, 31390), (541, 31348), (634, 31261), (643, 31237), (655, 31231), (662, 31207), (666, 31198), (674, 31183), (682, 31171), (707, 31129), (711, 31126), (713, 31123), (758, 30976), (770, 30934), (773, 30907), (774, 30901), (805, 30772), (817, 30736), (819, 30730), (822, 30724), (824, 30718), (842, 30661), (849, 30637), (859, 30592), (985, 30214), (986, 30211), (1008, 30166), (1013, 30157), (1037, 30097),

Gene: Ellewin\_90 Start: 73770, Stop: 75488, Start Num: 284

Candidate Starts for Ellewin\_90:

(Start: 248 @73695 has 2 MA's), (273, 73749), (276, 73758), (284, 73770), (418, 74007), (428, 74040), (518, 74175), (586, 74292), (603, 74319), (609, 74325), (615, 74334), (638, 74388), (700, 74520), (706, 74541), (721, 74568), (735, 74616), (746, 74649), (756, 74688), (759, 74709), (761, 74715), (796, 74832), (817, 74916), (818, 74919), (840, 74982), (843, 74994), (856, 75030), (865, 75063), (883, 75117), (890, 75135), (931, 75219), (936, 75240), (943, 75267), (960, 75315), (962, 75321), (967, 75339), (970, 75351), (973, 75363), (974, 75366), (985, 75399), (999, 75426), (1017, 75450),

Gene: Elva\_44 Start: 30530, Stop: 32404, Start Num: 234

Candidate Starts for Elva\_44:

(Start: 231 @30527 has 7 MA's), (Start: 234 @30530 has 938 MA's), (273, 30599), (284, 30620), (395, 30800), (419, 30866), (432, 30908), (554, 31118), (566, 31136), (603, 31202), (648, 31289), (709, 31436), (746, 31556), (747, 31559), (759, 31619), (761, 31625), (778, 31670), (782, 31685), (786, 31700), (796, 31736), (805, 31772), (840, 31865), (869, 31958), (901, 32036), (902, 32039), (918, 32066), (936, 32108), (946, 32147), (948, 32153), (962, 32189), (967, 32207), (978, 32243), (985, 32267), (993, 32288),

Gene: ElvisPhasley\_66 Start: 54776, Stop: 52917, Start Num: 197

Candidate Starts for ElvisPhasley\_66:

(Start: 180 @54800 has 1 MA's), (Start: 197 @54776 has 298 MA's), (Start: 225 @54752 has 5 MA's), (Start: 238 @54746 has 2 MA's), (Start: 261 @54704 has 10 MA's), (269, 54683), (323, 54569), (328, 54563), (349, 54533), (385, 54473), (394, 54452), (410, 54398), (418, 54386), (425, 54368), (427, 54356), (462, 54251), (496, 54194), (511, 54158), (516, 54146), (534, 54122), (539, 54110), (545, 54092), (555, 54074), (566, 54056), (588, 54017), (595, 54008), (597, 54005), (599, 54002), (754, 53645), (760, 53612), (765, 53591), (799, 53498), (802, 53489), (822, 53426), (841, 53390), (842, 53387), (847, 53372), (872, 53294), (877, 53282), (883, 53261), (902, 53222), (942, 53132), (947, 53114), (949, 53108), (954, 53093), (964, 53069), (968, 53054), (969, 53051), (972, 53039), (979, 53015), (1002, 52967), (1015, 52943),

Gene: Emalyn\_42 Start: 31612, Stop: 29225, Start Num: 45

Candidate Starts for Emalyn\_42:

(11, 31759), (13, 31717), (20, 31684), (23, 31669), (Start: 45 @31612 has 24 MA's), (49, 31603), (52, 31597), (76, 31516), (108, 31420), (119, 31396), (127, 31369), (136, 31345), (Start: 230 @31213 has 13 MA's), (250, 31186), (259, 31171), (279, 31123), (295, 31093), (317, 31048), (322, 31036), (366, 30970), (391, 30922), (409, 30868), (420, 30847), (426, 30826), (431, 30811), (448, 30766), (495, 30643), (519, 30583), (524, 30568), (541, 30526), (634, 30439), (643, 30415), (655, 30409), (662, 30385), (666, 30376), (707, 30307), (711, 30304), (713, 30301), (746, 30205), (758, 30154), (773, 30085), (774, 30079), (805, 29950), (817, 29914), (819, 29908), (822, 29902), (824, 29896), (842,

29839), (849, 29815), (859, 29770), (878, 29710), (938, 29557), (947, 29518), (948, 29515), (986, 29389), (1008, 29344), (1013, 29335),

Gene: EmiRose\_34 Start: 30392, Stop: 28503, Start Num: 190

Candidate Starts for EmiRose\_34:

(Start: 190 @30392 has 1 MA's), (269, 30284), (270, 30281), (272, 30278), (303, 30221), (358, 30110), (406, 30005), (419, 29975), (428, 29948), (432, 29939), (456, 29870), (462, 29849), (496, 29792), (511, 29756), (516, 29744), (534, 29720), (544, 29693), (555, 29669), (597, 29612), (659, 29477), (678, 29435), (688, 29417), (704, 29378), (734, 29324), (752, 29264), (760, 29219), (762, 29213), (782, 29162), (822, 29027), (842, 28988), (843, 28985), (847, 28973), (872, 28895), (877, 28883), (903, 28820), (942, 28718), (964, 28655), (975, 28613), (979, 28601), (990, 28571), (1004, 28550), (1023, 28508),

Gene: Emiris\_63 Start: 54747, Stop: 52888, Start Num: 197

Candidate Starts for Emiris\_63:

(Start: 180 @54771 has 1 MA's), (Start: 197 @54747 has 298 MA's), (Start: 225 @54723 has 5 MA's), (Start: 238 @54717 has 2 MA's), (Start: 261 @54675 has 10 MA's), (269, 54654), (323, 54540), (328, 54534), (349, 54504), (385, 54444), (394, 54423), (410, 54369), (418, 54357), (425, 54339), (427, 54327), (462, 54222), (496, 54165), (511, 54129), (516, 54117), (535, 54090), (545, 54063), (555, 54045), (566, 54027), (588, 53988), (595, 53979), (597, 53976), (724, 53718), (754, 53616), (760, 53583), (765, 53562), (799, 53469), (802, 53460), (822, 53397), (841, 53361), (842, 53358), (847, 53343), (872, 53265), (877, 53253), (883, 53232), (902, 53193), (942, 53103), (947, 53085), (949, 53079), (954, 53064), (964, 53040), (968, 53025), (969, 53022), (972, 53010), (979, 52986), (1002, 52938), (1015, 52914),

Gene: Emotion\_46 Start: 31321, Stop: 33183, Start Num: 234

Candidate Starts for Emotion\_46:

(178, 31249), (Start: 234 @31321 has 938 MA's), (397, 31591), (603, 32020), (670, 32167), (675, 32173), (730, 32311), (759, 32431), (778, 32482), (796, 32548), (840, 32677), (842, 32686), (847, 32701), (876, 32788), (903, 32854), (905, 32857), (968, 33022), (985, 33079),

Gene: EmpTee\_60 Start: 54256, Stop: 52397, Start Num: 197

Candidate Starts for EmpTee\_60:

(Start: 180 @54280 has 1 MA's), (Start: 197 @54256 has 298 MA's), (Start: 225 @54232 has 5 MA's), (Start: 238 @54226 has 2 MA's), (Start: 261 @54184 has 10 MA's), (269, 54163), (323, 54049), (328, 54043), (349, 54013), (385, 53953), (394, 53932), (410, 53878), (418, 53866), (425, 53848), (427, 53836), (462, 53731), (496, 53674), (511, 53638), (516, 53626), (534, 53602), (539, 53590), (545, 53572), (555, 53554), (566, 53536), (588, 53497), (595, 53488), (597, 53485), (599, 53482), (754, 53125), (760, 53092), (765, 53071), (799, 52978), (802, 52969), (822, 52906), (841, 52870), (842, 52867), (847, 52852), (872, 52774), (877, 52762), (883, 52741), (902, 52702), (942, 52612), (947, 52594), (949, 52588), (954, 52573), (964, 52549), (968, 52534), (969, 52531), (972, 52519), (979, 52495), (1002, 52447), (1015, 52423),

Gene: EmyBug\_44 Start: 31549, Stop: 29756, Start Num: 234

Candidate Starts for EmyBug\_44:

(Start: 234 @31549 has 938 MA's), (246, 31540), (266, 31498), (334, 31378), (336, 31375), (364, 31327), (397, 31267), (406, 31237), (409, 31225), (415, 31213), (465, 31060), (541, 30967), (619, 30829), (634, 30799), (703, 30640), (710, 30628), (726, 30601), (756, 30493), (759, 30472), (802, 30337), (805, 30319), (841, 30238), (856, 30196), (879, 30121), (918, 30046), (936, 30004), (968, 29902), (985, 29845), (989, 29833), (993, 29824),

Gene: Endor\_39 Start: 29287, Stop: 27419, Start Num: 283

Candidate Starts for Endor\_39:

(Start: 232 @29374 has 15 MA's), (Start: 283 @29287 has 147 MA's), (Start: 291 @29278 has 5 MA's), (423, 29014), (424, 29011), (426, 28999), (428, 28993), (498, 28807), (532, 28720), (537, 28711), (541, 28699), (551, 28672), (553, 28669), (562, 28654), (566, 28648), (574, 28636), (741, 28318), (798, 28105), (801, 28096), (805, 28075), (819, 28033), (849, 27943), (900, 27784), (913, 27754), (938, 27685), (943, 27661), (956, 27622), (967, 27589), (970, 27577),

Gene: Epah\_52 Start: 52983, Stop: 51160, Start Num: 189

Candidate Starts for Epah\_52:

(Start: 175 @53001 has 4 MA's), (Start: 189 @52983 has 26 MA's), (Start: 238 @52959 has 2 MA's), (252, 52932), (Start: 261 @52917 has 10 MA's), (269, 52896), (316, 52809), (382, 52704), (399, 52662), (425, 52596), (434, 52566), (437, 52557), (441, 52554), (442, 52551), (450, 52524), (496, 52431), (504, 52413), (511, 52395), (516, 52383), (528, 52368), (535, 52356), (595, 52245), (597, 52242), (618, 52212), (634, 52176), (737, 51951), (739, 51948), (749, 51912), (754, 51888), (760, 51855), (797, 51747), (799, 51741), (801, 51735), (802, 51732), (841, 51633), (842, 51630), (847, 51615), (872, 51537), (877, 51525), (883, 51504), (885, 51495), (902, 51465), (918, 51441), (935, 51408), (942, 51375), (947, 51357), (949, 51351), (964, 51312), (969, 51294), (972, 51282), (979, 51258), (994, 51216), (1002, 51210), (1015, 51186),

Gene: EpicPhail\_49 Start: 31856, Stop: 30042, Start Num: 234

Candidate Starts for EpicPhail\_49:

(Start: 234 @31856 has 938 MA's), (262, 31817), (266, 31805), (353, 31652), (362, 31637), (395, 31580), (415, 31523), (419, 31514), (432, 31472), (448, 31421), (465, 31370), (541, 31277), (566, 31229), (571, 31220), (582, 31205), (603, 31166), (619, 31139), (634, 31109), (670, 31016), (701, 30956), (710, 30941), (759, 30785), (790, 30698), (805, 30632), (818, 30593), (842, 30521), (856, 30482), (862, 30458), (868, 30440), (879, 30407), (888, 30380), (921, 30326), (942, 30266), (968, 30188), (985, 30131), (989, 30119), (993, 30110),

Gene: Epsocamisio\_46 Start: 29741, Stop: 27951, Start Num: 234

Candidate Starts for Epsocamisio\_46:

(Start: 234 @29741 has 938 MA's), (336, 29567), (395, 29462), (397, 29459), (405, 29432), (415, 29405), (432, 29354), (465, 29252), (541, 29159), (563, 29114), (566, 29111), (571, 29102), (655, 28940), (663, 28913), (675, 28892), (679, 28886), (730, 28787), (740, 28748), (754, 28697), (759, 28667), (778, 28616), (789, 28583), (796, 28550), (798, 28544), (805, 28514), (837, 28454), (841, 28433), (856, 28391), (863, 28364), (868, 28349), (903, 28262), (936, 28199), (938, 28196), (985, 28040), (989, 28028), (995, 28016),

Gene: Equemioh13\_45 Start: 31601, Stop: 29814, Start Num: 234

Candidate Starts for Equemioh13\_45:

(Start: 234 @31601 has 938 MA's), (353, 31397), (355, 31394), (359, 31388), (379, 31358), (395, 31325), (397, 31322), (405, 31295), (415, 31268), (432, 31217), (465, 31115), (541, 31022), (566, 30974), (571, 30965), (582, 30950), (619, 30884), (655, 30803), (675, 30755), (740, 30611), (759, 30530), (778, 30479), (789, 30446), (805, 30377), (818, 30338), (837, 30317), (841, 30296), (845, 30284), (918, 30104), (921, 30098), (936, 30062), (942, 30038), (968, 29960), (985, 29903), (989, 29891),

Gene: Eraser\_39 Start: 30361, Stop: 32226, Start Num: 234

Candidate Starts for Eraser\_39:

(Start: 234 @30361 has 938 MA's), (265, 30409), (377, 30592), (382, 30598), (405, 30658), (411, 30679), (436, 30748), (546, 30964), (598, 31054), (603, 31063), (615, 31078), (635, 31123), (675, 31216), (730, 31354), (759, 31474), (769, 31504), (790, 31561), (803, 31618), (805, 31627), (814, 31651), (840, 31720), (862, 31792), (865, 31801), (905, 31900), (936, 31963), (985, 32122), (988, 32131),

Gene: Eremos\_60 Start: 54246, Stop: 52387, Start Num: 197

Candidate Starts for Eremos\_60:

(Start: 180 @54270 has 1 MA's), (Start: 197 @54246 has 298 MA's), (Start: 225 @54222 has 5 MA's), (Start: 238 @54216 has 2 MA's), (Start: 261 @54174 has 10 MA's), (269, 54153), (323, 54039), (328, 54033), (349, 54003), (385, 53943), (394, 53922), (410, 53868), (418, 53856), (425, 53838), (427, 53826), (462, 53721), (496, 53664), (511, 53628), (516, 53616), (534, 53592), (539, 53580), (545, 53562), (555, 53544), (566, 53526), (588, 53487), (595, 53478), (597, 53475), (599, 53472), (754, 53115), (760, 53082), (765, 53061), (799, 52968), (802, 52959), (822, 52896), (841, 52860), (842, 52857), (847, 52842), (872, 52764), (877, 52752), (883, 52731), (902, 52692), (942, 52602), (947, 52584), (949, 52578), (954, 52563), (964, 52539), (968, 52524), (969, 52521), (972, 52509), (979, 52485), (1002, 52437), (1015, 52413),

Gene: EricB\_45 Start: 29620, Stop: 27779, Start Num: 234

Candidate Starts for EricB\_45:

(Start: 234 @29620 has 938 MA's), (353, 29416), (395, 29341), (397, 29338), (405, 29311), (409, 29296), (415, 29284), (432, 29233), (461, 29143), (465, 29131), (541, 29038), (559, 28999), (571, 28981), (582, 28966), (619, 28900), (635, 28867), (636, 28864), (681, 28762), (710, 28702), (740, 28618), (759, 28537), (789, 28453), (790, 28450), (793, 28441), (798, 28414), (805, 28384), (837, 28324), (847, 28285), (936, 28069), (938, 28066), (942, 28045), (985, 27910), (989, 27898), (993, 27889), (995, 27886), (1042, 27793),

Gene: Erik\_36 Start: 28111, Stop: 26327, Start Num: 234

Candidate Starts for Erik\_36:

(Start: 234 @28111 has 938 MA's), (374, 27877), (390, 27847), (394, 27838), (395, 27835), (409, 27790), (415, 27778), (432, 27727), (465, 27625), (492, 27604), (541, 27532), (563, 27487), (566, 27484), (589, 27442), (594, 27436), (603, 27421), (619, 27394), (663, 27289), (667, 27280), (679, 27262), (700, 27223), (729, 27166), (759, 27043), (775, 26995), (805, 26890), (806, 26887), (837, 26830), (841, 26809), (858, 26761), (881, 26686), (918, 26617), (936, 26575), (942, 26551), (968, 26473), (985, 26416), (989, 26404), (993, 26395), (1010, 26365), (1021, 26347),

Gene: Eris\_44 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Eris\_44:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (628, 30838), (630, 30832), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Erla\_38 Start: 28612, Stop: 26747, Start Num: 283

Candidate Starts for Erla\_38:

(Start: 234 @28699 has 938 MA's), (Start: 283 @28612 has 147 MA's), (Start: 291 @28603 has 5 MA's), (342, 28498), (347, 28489), (367, 28459), (369, 28456), (424, 28336), (426, 28324), (428, 28318), (466, 28213), (473, 28186), (532, 28045), (535, 28039), (537, 28036), (541, 28024), (551, 27997), (553, 27994), (562, 27979), (566, 27973), (570, 27967), (613, 27934), (671, 27805), (701, 27745), (798, 27430), (801, 27421), (802, 27418), (805, 27400), (819, 27358), (822, 27352), (832, 27328), (849, 27271), (900, 27112), (913, 27082), (917, 27073), (938, 27013), (943, 26989), (956, 26950), (967, 26917), (970, 26905), (986, 26845),

Gene: Eros\_45 Start: 31572, Stop: 29746, Start Num: 234

Candidate Starts for Eros\_45:

(Start: 234 @31572 has 938 MA's), (252, 31551), (266, 31521), (279, 31491), (379, 31329), (389, 31311), (415, 31239), (419, 31230), (458, 31110), (465, 31086), (541, 30993), (568, 30945), (582,



30924), (603, 30885), (663, 30753), (675, 30732), (700, 30687), (703, 30675), (756, 30522), (759, 30501), (798, 30378), (805, 30348), (818, 30309), (841, 30243), (842, 30240), (847, 30225), (856, 30201), (862, 30177), (942, 29970), (985, 29835), (989, 29823), (993, 29814),

Gene: Espica\_36 Start: 28114, Stop: 26330, Start Num: 234

Candidate Starts for Espica\_36:

(Start: 234 @28114 has 938 MA's), (374, 27880), (390, 27850), (394, 27841), (395, 27838), (409, 27793), (415, 27781), (432, 27730), (465, 27628), (492, 27607), (541, 27535), (563, 27490), (566, 27487), (589, 27445), (594, 27439), (603, 27424), (619, 27397), (663, 27292), (667, 27283), (679, 27265), (700, 27226), (729, 27169), (759, 27046), (775, 26998), (805, 26893), (806, 26890), (837, 26833), (841, 26812), (858, 26764), (881, 26689), (918, 26620), (936, 26578), (942, 26554), (968, 26476), (985, 26419), (989, 26407), (993, 26398), (1010, 26368), (1021, 26350),

Gene: Espinosa\_38 Start: 28630, Stop: 26765, Start Num: 283

Candidate Starts for Espinosa\_38:

(Start: 234 @28717 has 938 MA's), (Start: 237 @28714 has 2 MA's), (Start: 283 @28630 has 147 MA's), (Start: 291 @28621 has 5 MA's), (342, 28516), (347, 28507), (367, 28477), (369, 28474), (424, 28354), (426, 28342), (428, 28336), (466, 28231), (473, 28204), (532, 28063), (535, 28057), (537, 28054), (541, 28042), (551, 28015), (553, 28012), (562, 27997), (566, 27991), (570, 27985), (613, 27952), (671, 27823), (701, 27763), (798, 27448), (801, 27439), (802, 27436), (805, 27418), (819, 27376), (822, 27370), (825, 27361), (832, 27346), (849, 27289), (900, 27130), (913, 27100), (917, 27091), (938, 27031), (943, 27007), (956, 26968), (967, 26935), (970, 26923), (986, 26863),

Gene: Espresso\_44 Start: 34640, Stop: 32814, Start Num: 234

Candidate Starts for Espresso\_44:

(Start: 234 @34640 has 938 MA's), (359, 34427), (395, 34364), (405, 34334), (411, 34313), (415, 34307), (419, 34298), (457, 34181), (465, 34154), (541, 34061), (546, 34046), (596, 33962), (598, 33959), (634, 33893), (648, 33863), (657, 33833), (679, 33788), (700, 33749), (759, 33569), (769, 33539), (775, 33521), (778, 33518), (790, 33482), (805, 33416), (841, 33335), (842, 33332), (868, 33251), (936, 33101), (938, 33098), (946, 33062), (954, 33038), (959, 33029), (963, 33017), (985, 32942), (993, 32921),

Gene: Et2Brutus\_44 Start: 30698, Stop: 28911, Start Num: 234

Candidate Starts for Et2Brutus\_44:

(Start: 234 @30698 has 938 MA's), (353, 30494), (395, 30422), (405, 30392), (415, 30365), (543, 30113), (571, 30062), (619, 29981), (639, 29936), (640, 29933), (675, 29852), (703, 29795), (728, 29753), (740, 29708), (759, 29627), (778, 29576), (790, 29540), (805, 29474), (837, 29414), (839, 29402), (871, 29300), (879, 29276), (884, 29258), (921, 29195), (935, 29168), (936, 29159), (942, 29135), (985, 29000), (989, 28988), (993, 28979),

Gene: Etaye\_62 Start: 55077, Stop: 53218, Start Num: 197

Candidate Starts for Etaye\_62:

(Start: 180 @55101 has 1 MA's), (Start: 197 @55077 has 298 MA's), (Start: 225 @55053 has 5 MA's), (Start: 238 @55047 has 2 MA's), (Start: 261 @55005 has 10 MA's), (269, 54984), (323, 54870), (328, 54864), (349, 54834), (385, 54774), (394, 54753), (410, 54699), (418, 54687), (425, 54669), (427, 54657), (462, 54552), (496, 54495), (511, 54459), (516, 54447), (534, 54423), (539, 54411), (545, 54393), (555, 54375), (566, 54357), (588, 54318), (595, 54309), (597, 54306), (599, 54303), (754, 53946), (760, 53913), (765, 53892), (799, 53799), (802, 53790), (822, 53727), (841, 53691), (842, 53688), (847, 53673), (872, 53595), (877, 53583), (883, 53562), (902, 53523), (942, 53433), (947, 53415), (949, 53409), (954, 53394), (964, 53370), (968, 53355), (969, 53352), (972, 53340), (979, 53316), (1002, 53268), (1015, 53244),

Gene: Etna\_38 Start: 29066, Stop: 27201, Start Num: 283

Candidate Starts for Etna\_38:

(Start: 283 @29066 has 147 MA's), (Start: 291 @29057 has 5 MA's), (423, 28793), (426, 28778), (428, 28772), (473, 28640), (498, 28586), (503, 28574), (532, 28499), (537, 28490), (541, 28478), (551, 28451), (553, 28448), (562, 28433), (566, 28427), (574, 28415), (634, 28346), (741, 28097), (798, 27884), (801, 27875), (802, 27872), (805, 27854), (819, 27812), (849, 27725), (900, 27566), (913, 27536), (938, 27467), (943, 27443), (956, 27404), (967, 27371), (970, 27359),

Gene: Etta\_38 Start: 28616, Stop: 26751, Start Num: 283

Candidate Starts for Etta\_38:

(Start: 234 @28703 has 938 MA's), (Start: 283 @28616 has 147 MA's), (Start: 291 @28607 has 5 MA's), (342, 28502), (347, 28493), (367, 28463), (369, 28460), (424, 28340), (426, 28328), (428, 28322), (466, 28217), (473, 28190), (532, 28049), (535, 28043), (537, 28040), (541, 28028), (551, 28001), (553, 27998), (562, 27983), (566, 27977), (570, 27971), (613, 27938), (671, 27809), (701, 27749), (798, 27434), (801, 27425), (802, 27422), (805, 27404), (819, 27362), (822, 27356), (832, 27332), (849, 27275), (900, 27116), (913, 27086), (917, 27077), (938, 27017), (943, 26993), (956, 26954), (967, 26921), (970, 26909), (986, 26849),

Gene: Eugenia\_60 Start: 54399, Stop: 52540, Start Num: 197

Candidate Starts for Eugenia\_60:

(Start: 180 @54423 has 1 MA's), (Start: 197 @54399 has 298 MA's), (Start: 225 @54375 has 5 MA's), (Start: 238 @54369 has 2 MA's), (Start: 261 @54327 has 10 MA's), (269, 54306), (323, 54192), (328, 54186), (349, 54156), (385, 54096), (394, 54075), (410, 54021), (418, 54009), (425, 53991), (427, 53979), (462, 53874), (496, 53817), (511, 53781), (516, 53769), (535, 53742), (545, 53715), (555, 53697), (566, 53679), (588, 53640), (595, 53631), (597, 53628), (754, 53268), (760, 53235), (765, 53214), (799, 53121), (802, 53112), (822, 53049), (841, 53013), (842, 53010), (847, 52995), (872, 52917), (877, 52905), (883, 52884), (902, 52845), (942, 52755), (947, 52737), (949, 52731), (954, 52716), (964, 52692), (968, 52677), (969, 52674), (972, 52662), (979, 52638), (1002, 52590), (1015, 52566),

Gene: Eula\_43 Start: 29571, Stop: 31445, Start Num: 234

Candidate Starts for Eula\_43:

(Start: 231 @29568 has 7 MA's), (Start: 234 @29571 has 938 MA's), (273, 29640), (284, 29661), (395, 29841), (419, 29907), (432, 29949), (603, 30243), (663, 30378), (709, 30477), (747, 30600), (759, 30660), (761, 30666), (778, 30711), (786, 30741), (796, 30777), (805, 30813), (840, 30906), (869, 30999), (901, 31077), (936, 31149), (946, 31188), (962, 31230), (967, 31248), (985, 31308), (993, 31329),

Gene: Euphoria\_43 Start: 34128, Stop: 32302, Start Num: 234

Candidate Starts for Euphoria\_43:

(Start: 234 @34128 has 938 MA's), (359, 33915), (368, 33900), (395, 33852), (405, 33822), (411, 33801), (415, 33795), (419, 33786), (457, 33669), (465, 33642), (541, 33549), (546, 33534), (566, 33501), (596, 33450), (598, 33447), (634, 33381), (648, 33351), (657, 33321), (679, 33276), (700, 33237), (759, 33057), (769, 33027), (775, 33009), (778, 33006), (790, 32970), (805, 32904), (841, 32823), (842, 32820), (868, 32739), (936, 32589), (938, 32586), (946, 32550), (954, 32526), (959, 32517), (963, 32505), (968, 32487), (970, 32478), (985, 32430), (993, 32409),

Gene: Euratis\_35 Start: 26897, Stop: 28750, Start Num: 234

Candidate Starts for Euratis\_35:

(Start: 234 @26897 has 938 MA's), (252, 26918), (279, 26978), (303, 27011), (353, 27098), (385, 27146), (405, 27200), (406, 27203), (411, 27221), (415, 27227), (431, 27275), (453, 27344), (464, 27377), (543, 27476), (576, 27533), (582, 27548), (596, 27575), (603, 27587), (617, 27605), (632, 27641), (652, 27683), (655, 27692), (670, 27734), (675, 27740), (704, 27800), (708, 27809), (747, 27938), (759, 27998), (775, 28049), (781, 28064), (796, 28121), (798, 28127), (799, 28130), (802,

28139), (805, 28157), (809, 28172), (817, 28202), (839, 28256), (869, 28352), (905, 28439), (931, 28481), (942, 28526), (946, 28541), (949, 28550), (960, 28577), (968, 28604), (985, 28661), (987, 28667), (993, 28682), (1001, 28691),

Gene: Eurydice\_46 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for Eurydice\_46:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Evaa\_50 Start: 46072, Stop: 44267, Start Num: 230

Candidate Starts for Evaa\_50:

(204, 46111), (Start: 230 @46072 has 13 MA's), (252, 46036), (298, 45955), (301, 45949), (323, 45895), (355, 45853), (441, 45658), (449, 45631), (462, 45592), (496, 45535), (511, 45499), (534, 45463), (597, 45346), (737, 45055), (749, 45016), (754, 44992), (755, 44986), (760, 44959), (763, 44947), (797, 44854), (799, 44848), (802, 44839), (822, 44776), (841, 44740), (847, 44722), (872, 44644), (877, 44632), (883, 44611), (902, 44572), (931, 44527), (938, 44503), (949, 44458), (964, 44419), (968, 44404), (979, 44365), (1015, 44293),

Gene: EvilGenius\_47 Start: 33208, Stop: 31421, Start Num: 234

Candidate Starts for EvilGenius\_47:

(Start: 234 @33208 has 938 MA's), (355, 33001), (359, 32995), (368, 32980), (379, 32965), (397, 32929), (405, 32902), (415, 32875), (424, 32854), (448, 32773), (465, 32722), (541, 32629), (566, 32581), (571, 32572), (582, 32557), (619, 32491), (675, 32362), (679, 32356), (759, 32137), (778, 32086), (789, 32053), (790, 32050), (805, 31984), (818, 31945), (837, 31924), (859, 31849), (862, 31837), (879, 31786), (908, 31723), (921, 31705), (936, 31669), (942, 31645), (968, 31567), (985, 31510), (989, 31498), (993, 31489),

Gene: Exile\_36 Start: 30877, Stop: 32721, Start Num: 234

Candidate Starts for Exile\_36:

(Start: 234 @30877 has 938 MA's), (387, 31123), (581, 31516), (603, 31558), (615, 31573), (619, 31585), (655, 31663), (663, 31690), (669, 31702), (675, 31711), (730, 31849), (759, 31969), (769, 31999), (805, 32122), (816, 32152), (840, 32215), (842, 32224), (942, 32482), (960, 32533), (962, 32539), (967, 32557), (985, 32617),

Gene: Expelliarmus\_42 Start: 30600, Stop: 28756, Start Num: 234

Candidate Starts for Expelliarmus\_42:

(135, 30765), (Start: 234 @30600 has 938 MA's), (266, 30549), (336, 30426), (353, 30396), (379, 30357), (395, 30324), (405, 30294), (411, 30273), (415, 30267), (419, 30258), (448, 30165), (465, 30114), (541, 30018), (552, 29991), (563, 29973), (566, 29970), (571, 29961), (603, 29907), (619, 29880), (640, 29832), (663, 29775), (679, 29748), (703, 29697), (711, 29682), (756, 29535), (759, 29514), (769, 29484), (775, 29466), (778, 29463), (782, 29448), (790, 29427), (793, 29418), (798, 29391), (802, 29379), (805, 29361), (841, 29280), (845, 29268), (862, 29214), (874, 29178), (885, 29142), (903, 29109), (918, 29088), (921, 29082), (938, 29043), (942, 29022), (947, 29004), (985, 28887), (989, 28875),

Gene: Exploradora\_39 Start: 28619, Stop: 26754, Start Num: 283

Candidate Starts for Exploradora\_39:

(Start: 234 @28706 has 938 MA's), (Start: 237 @28703 has 2 MA's), (Start: 283 @28619 has 147 MA's), (Start: 291 @28610 has 5 MA's), (342, 28505), (347, 28496), (367, 28466), (369, 28463), (424, 28343), (426, 28331), (428, 28325), (466, 28220), (473, 28193), (532, 28052), (535, 28046), (537,

28043), (541, 28031), (551, 28004), (553, 28001), (562, 27986), (566, 27980), (570, 27974), (613, 27941), (671, 27812), (701, 27752), (798, 27437), (801, 27428), (802, 27425), (805, 27407), (819, 27365), (822, 27359), (825, 27350), (832, 27335), (849, 27278), (900, 27119), (913, 27089), (917, 27080), (938, 27020), (943, 26996), (956, 26957), (967, 26924), (970, 26912), (986, 26852),

Gene: ExplosioNervosa\_45 Start: 31573, Stop: 29780, Start Num: 234

Candidate Starts for ExplosioNervosa\_45:

(Start: 234 @31573 has 938 MA's), (246, 31564), (266, 31522), (334, 31402), (336, 31399), (364, 31351), (397, 31291), (406, 31261), (409, 31249), (415, 31237), (465, 31084), (541, 30991), (619, 30853), (634, 30823), (703, 30664), (710, 30652), (726, 30625), (756, 30517), (759, 30496), (802, 30361), (805, 30343), (841, 30262), (856, 30220), (879, 30145), (918, 30070), (936, 30028), (968, 29926), (985, 29869), (989, 29857), (993, 29848),

Gene: Eyeball\_46 Start: 35014, Stop: 33227, Start Num: 234

Candidate Starts for Eyeball\_46:

(Start: 234 @35014 has 938 MA's), (359, 34801), (368, 34786), (405, 34708), (411, 34687), (415, 34681), (419, 34672), (457, 34555), (465, 34528), (541, 34435), (546, 34420), (596, 34336), (598, 34333), (634, 34267), (648, 34237), (657, 34207), (679, 34162), (700, 34123), (759, 33943), (775, 33895), (790, 33856), (805, 33790), (839, 33718), (841, 33709), (868, 33625), (903, 33538), (954, 33412), (960, 33400), (985, 33316), (987, 33310),

Gene: FF47\_43 Start: 34250, Stop: 31839, Start Num: 44

Candidate Starts for FF47\_43:

(Start: 44 @34250 has 1 MA's), (49, 34241), (Start: 60 @34196 has 1 MA's), (Start: 65 @34184 has 1 MA's), (Start: 79 @34145 has 1 MA's), (136, 33986), (143, 33956), (170, 33926), (275, 33758), (342, 33638), (398, 33536), (426, 33455), (448, 33395), (472, 33329), (524, 33197), (543, 33149), (626, 33077), (634, 33068), (638, 33056), (682, 32987), (759, 32774), (772, 32720), (792, 32639), (798, 32606), (817, 32540), (819, 32534), (822, 32528), (824, 32522), (834, 32498), (842, 32465), (847, 32450), (849, 32441), (900, 32282), (906, 32270), (978, 32042), (986, 32015), (1018, 31946),

Gene: Fajezeel\_47 Start: 35124, Stop: 33337, Start Num: 234

Candidate Starts for Fajezeel\_47:

(Start: 234 @35124 has 938 MA's), (359, 34911), (368, 34896), (395, 34848), (405, 34818), (411, 34797), (415, 34791), (419, 34782), (457, 34665), (465, 34638), (541, 34545), (546, 34530), (566, 34497), (596, 34446), (598, 34443), (634, 34377), (648, 34347), (657, 34317), (679, 34272), (700, 34233), (759, 34053), (775, 34005), (790, 33966), (805, 33900), (839, 33828), (841, 33819), (868, 33735), (903, 33648), (954, 33522), (960, 33510), (985, 33426), (987, 33420),

Gene: Fameo\_44 Start: 31472, Stop: 29685, Start Num: 234

Candidate Starts for Fameo\_44:

(56, 31850), (120, 31661), (133, 31622), (Start: 234 @31472 has 938 MA's), (353, 31268), (355, 31265), (359, 31259), (368, 31244), (379, 31229), (395, 31196), (397, 31193), (405, 31166), (415, 31139), (424, 31118), (465, 30986), (541, 30893), (558, 30857), (566, 30845), (571, 30836), (582, 30821), (619, 30755), (655, 30674), (675, 30626), (679, 30620), (710, 30557), (759, 30401), (778, 30350), (789, 30317), (790, 30314), (805, 30248), (818, 30209), (837, 30188), (859, 30113), (862, 30101), (908, 29987), (921, 29969), (935, 29942), (936, 29933), (942, 29909), (968, 29831), (985, 29774), (989, 29762), (993, 29753),

Gene: Fanaw\_52 Start: 53739, Stop: 51916, Start Num: 189

Candidate Starts for Fanaw\_52:

(Start: 175 @53757 has 4 MA's), (Start: 189 @53739 has 26 MA's), (Start: 238 @53715 has 2 MA's), (Start: 261 @53673 has 10 MA's), (269, 53652), (316, 53565), (382, 53460), (394, 53433), (399, 53418), (425, 53352), (434, 53322), (437, 53313), (441, 53310), (442, 53307), (496, 53187), (504,

53169), (511, 53151), (516, 53139), (535, 53112), (566, 53049), (588, 53010), (595, 53001), (597, 52998), (618, 52968), (634, 52932), (737, 52707), (739, 52704), (749, 52668), (754, 52644), (760, 52611), (797, 52503), (799, 52497), (802, 52488), (841, 52389), (842, 52386), (847, 52371), (856, 52347), (872, 52293), (877, 52281), (883, 52260), (885, 52251), (902, 52221), (921, 52191), (935, 52164), (942, 52131), (949, 52107), (964, 52068), (969, 52050), (972, 52038), (979, 52014), (994, 51972), (1002, 51966), (1015, 51942),

Gene: Fang\_62 Start: 54292, Stop: 52433, Start Num: 197

Candidate Starts for Fang\_62:

(Start: 180 @54316 has 1 MA's), (Start: 197 @54292 has 298 MA's), (Start: 225 @54268 has 5 MA's), (Start: 238 @54262 has 2 MA's), (Start: 261 @54220 has 10 MA's), (269, 54199), (323, 54085), (328, 54079), (349, 54049), (385, 53989), (394, 53968), (410, 53914), (418, 53902), (425, 53884), (427, 53872), (462, 53767), (496, 53710), (511, 53674), (516, 53662), (535, 53635), (545, 53608), (555, 53590), (566, 53572), (588, 53533), (595, 53524), (597, 53521), (724, 53263), (754, 53161), (760, 53128), (765, 53107), (799, 53014), (802, 53005), (822, 52942), (841, 52906), (842, 52903), (847, 52888), (872, 52810), (877, 52798), (883, 52777), (902, 52738), (942, 52648), (947, 52630), (949, 52624), (954, 52609), (964, 52585), (968, 52570), (969, 52567), (972, 52555), (979, 52531), (1002, 52483), (1015, 52459),

Gene: Farber\_48 Start: 31846, Stop: 30032, Start Num: 234

Candidate Starts for Farber\_48:

(Start: 234 @31846 has 938 MA's), (262, 31807), (266, 31795), (353, 31642), (362, 31627), (395, 31570), (415, 31513), (419, 31504), (432, 31462), (448, 31411), (465, 31360), (518, 31306), (541, 31267), (566, 31219), (582, 31195), (603, 31156), (619, 31129), (634, 31099), (670, 31006), (679, 30994), (701, 30946), (710, 30931), (759, 30775), (778, 30724), (789, 30691), (790, 30688), (805, 30622), (818, 30583), (842, 30511), (856, 30472), (862, 30448), (868, 30430), (879, 30397), (888, 30370), (921, 30316), (942, 30256), (968, 30178), (985, 30121), (989, 30109), (993, 30100),

Gene: FarmerDoug\_38 Start: 28918, Stop: 27050, Start Num: 283

Candidate Starts for FarmerDoug\_38:

(Start: 180 @29086 has 1 MA's), (211, 29041), (Start: 244 @28996 has 1 MA's), (Start: 283 @28918 has 147 MA's), (Start: 291 @28909 has 5 MA's), (420, 28651), (423, 28645), (426, 28630), (428, 28624), (473, 28492), (498, 28438), (503, 28426), (532, 28351), (537, 28342), (541, 28330), (551, 28303), (553, 28300), (562, 28285), (566, 28279), (574, 28267), (611, 28243), (798, 27736), (801, 27727), (802, 27724), (805, 27706), (819, 27664), (849, 27574), (900, 27415), (913, 27385), (938, 27316), (943, 27292), (945, 27286), (956, 27253), (967, 27220), (970, 27208),

Gene: Fascinus\_41 Start: 33978, Stop: 32152, Start Num: 234

Candidate Starts for Fascinus\_41:

(Start: 234 @33978 has 938 MA's), (359, 33765), (368, 33750), (395, 33702), (405, 33672), (411, 33651), (415, 33645), (419, 33636), (457, 33519), (465, 33492), (541, 33399), (546, 33384), (566, 33351), (596, 33300), (598, 33297), (634, 33231), (657, 33171), (679, 33126), (700, 33087), (759, 32907), (775, 32859), (790, 32820), (805, 32754), (818, 32715), (837, 32694), (841, 32673), (847, 32655), (868, 32589), (936, 32439), (938, 32436), (946, 32400), (954, 32376), (959, 32367), (963, 32355), (970, 32328), (985, 32280), (993, 32259),

Gene: Fayely\_45 Start: 31516, Stop: 29723, Start Num: 234

Candidate Starts for Fayely\_45:

(Start: 234 @31516 has 938 MA's), (246, 31507), (266, 31465), (334, 31345), (336, 31342), (364, 31294), (397, 31234), (406, 31204), (409, 31192), (415, 31180), (465, 31027), (541, 30934), (619, 30796), (634, 30766), (703, 30607), (710, 30595), (726, 30568), (756, 30460), (759, 30439), (802, 30304), (805, 30286), (841, 30205), (856, 30163), (879, 30088), (918, 30013), (936, 29971), (968, 29869), (985, 29812), (989, 29800), (993, 29791),

Gene: Faze9\_56 Start: 52623, Stop: 50794, Start Num: 197

Candidate Starts for Faze9\_56:

(Start: 197 @52623 has 298 MA's), (Start: 238 @52596 has 2 MA's), (253, 52566), (Start: 261 @52554 has 10 MA's), (272, 52527), (273, 52524), (277, 52515), (301, 52497), (355, 52401), (385, 52350), (395, 52326), (402, 52302), (450, 52164), (456, 52149), (459, 52140), (462, 52128), (496, 52071), (511, 52035), (516, 52023), (534, 51999), (580, 51915), (595, 51885), (597, 51882), (618, 51852), (678, 51708), (710, 51642), (737, 51591), (743, 51570), (749, 51552), (760, 51495), (783, 51438), (793, 51411), (799, 51381), (802, 51372), (822, 51306), (839, 51279), (841, 51270), (847, 51252), (856, 51228), (872, 51174), (877, 51162), (883, 51141), (921, 51072), (942, 51012), (947, 50994), (960, 50961), (964, 50949), (968, 50934), (969, 50931), (972, 50919), (979, 50895), (980, 50892), (1002, 50844), (1004, 50841), (1015, 50820), (1023, 50799),

Gene: Feastonyeet\_44 Start: 33868, Stop: 31490, Start Num: 47

Candidate Starts for Feastonyeet\_44:

(Start: 47 @33868 has 13 MA's), (64, 33808), (82, 33766), (96, 33727), (124, 33637), (136, 33607), (141, 33586), (170, 33562), (Start: 223 @33484 has 3 MA's), (228, 33478), (Start: 230 @33475 has 13 MA's), (252, 33445), (262, 33427), (268, 33409), (290, 33370), (Start: 291 @33367 has 5 MA's), (317, 33310), (329, 33286), (342, 33271), (380, 33208), (391, 33184), (395, 33175), (398, 33169), (399, 33163), (409, 33130), (420, 33109), (426, 33088), (495, 32905), (524, 32830), (541, 32788), (634, 32701), (655, 32677), (662, 32653), (666, 32644), (677, 32623), (711, 32572), (713, 32569), (718, 32554), (728, 32533), (759, 32407), (772, 32359), (773, 32350), (784, 32308), (805, 32215), (817, 32179), (819, 32173), (822, 32167), (824, 32161), (842, 32104), (849, 32080), (878, 31975), (879, 31972), (919, 31879), (926, 31861), (938, 31822), (948, 31780), (958, 31756), (967, 31726), (979, 31678), (986, 31654), (996, 31630), (1008, 31609), (1046, 31522), (1050, 31510),

Gene: Fenn\_46 Start: 36445, Stop: 34658, Start Num: 234

Candidate Starts for Fenn\_46:

(Start: 234 @36445 has 938 MA's), (359, 36232), (368, 36217), (395, 36169), (405, 36139), (415, 36112), (419, 36103), (457, 35986), (465, 35959), (541, 35866), (546, 35851), (566, 35818), (596, 35767), (598, 35764), (634, 35698), (657, 35638), (679, 35593), (700, 35554), (759, 35374), (775, 35326), (790, 35287), (805, 35221), (839, 35149), (841, 35140), (868, 35056), (903, 34969), (954, 34843), (960, 34831), (985, 34747), (987, 34741),

Gene: Fernando\_48 Start: 31852, Stop: 30038, Start Num: 234

Candidate Starts for Fernando\_48:

(Start: 234 @31852 has 938 MA's), (262, 31813), (266, 31801), (353, 31648), (362, 31633), (395, 31576), (415, 31519), (419, 31510), (432, 31468), (448, 31417), (465, 31366), (541, 31273), (566, 31225), (571, 31216), (582, 31201), (603, 31162), (619, 31135), (634, 31105), (670, 31012), (701, 30952), (710, 30937), (759, 30781), (790, 30694), (805, 30628), (818, 30589), (842, 30517), (856, 30478), (862, 30454), (868, 30436), (879, 30403), (888, 30376), (921, 30322), (942, 30262), (968, 30184), (985, 30127), (989, 30115), (993, 30106),

Gene: Fibonacci\_44 Start: 30330, Stop: 28543, Start Num: 234

Candidate Starts for Fibonacci\_44:

(Start: 234 @30330 has 938 MA's), (353, 30126), (395, 30054), (405, 30024), (415, 29997), (543, 29745), (571, 29694), (619, 29613), (639, 29568), (640, 29565), (675, 29484), (703, 29427), (728, 29385), (740, 29340), (759, 29259), (778, 29208), (790, 29172), (805, 29106), (837, 29046), (839, 29034), (871, 28932), (879, 28908), (884, 28890), (921, 28827), (935, 28800), (936, 28791), (942, 28767), (985, 28632), (989, 28620), (993, 28611),

Gene: Figueroism\_39 Start: 28924, Stop: 27059, Start Num: 283

Candidate Starts for Figueroism\_39:

(Start: 234 @29011 has 938 MA's), (Start: 237 @29008 has 2 MA's), (Start: 283 @28924 has 147 MA's), (Start: 291 @28915 has 5 MA's), (342, 28810), (347, 28801), (367, 28771), (369, 28768), (424, 28648), (426, 28636), (428, 28630), (466, 28525), (473, 28498), (532, 28357), (535, 28351), (537, 28348), (541, 28336), (551, 28309), (553, 28306), (562, 28291), (566, 28285), (570, 28279), (613, 28246), (671, 28117), (701, 28057), (798, 27742), (801, 27733), (802, 27730), (805, 27712), (819, 27670), (822, 27664), (825, 27655), (832, 27640), (849, 27583), (900, 27424), (913, 27394), (917, 27385), (938, 27325), (943, 27301), (956, 27262), (967, 27229), (970, 27217), (986, 27157),

Gene: Finalfrontier\_43 Start: 30430, Stop: 32304, Start Num: 234

Candidate Starts for Finalfrontier\_43:

(Start: 231 @30427 has 7 MA's), (Start: 234 @30430 has 938 MA's), (273, 30499), (284, 30520), (395, 30700), (419, 30766), (432, 30808), (603, 31102), (663, 31237), (709, 31336), (747, 31459), (759, 31519), (761, 31525), (778, 31570), (782, 31585), (786, 31600), (796, 31636), (805, 31672), (840, 31765), (869, 31858), (901, 31936), (936, 32008), (946, 32047), (962, 32089), (967, 32107), (985, 32167), (993, 32188),

Gene: Finny\_38 Start: 28772, Stop: 26907, Start Num: 283

Candidate Starts for Finny\_38:

(Start: 283 @28772 has 147 MA's), (330, 28673), (371, 28613), (398, 28562), (426, 28484), (428, 28478), (445, 28433), (446, 28430), (447, 28427), (460, 28388), (479, 28328), (532, 28205), (537, 28196), (541, 28184), (545, 28172), (553, 28154), (566, 28133), (574, 28121), (680, 27950), (749, 27782), (793, 27617), (801, 27581), (805, 27560), (819, 27518), (849, 27431), (859, 27386), (894, 27287), (913, 27242), (938, 27173), (943, 27149), (954, 27116), (986, 27005),

Gene: FiringLine\_44 Start: 31266, Stop: 29479, Start Num: 234

Candidate Starts for FiringLine\_44:

(104, 31521), (Start: 234 @31266 has 938 MA's), (353, 31062), (355, 31059), (359, 31053), (368, 31038), (379, 31023), (395, 30990), (397, 30987), (405, 30960), (415, 30933), (424, 30912), (432, 30882), (465, 30780), (541, 30687), (566, 30639), (571, 30630), (582, 30615), (619, 30549), (655, 30468), (675, 30420), (679, 30414), (710, 30351), (740, 30276), (759, 30195), (778, 30144), (789, 30111), (790, 30108), (805, 30042), (818, 30003), (837, 29982), (859, 29907), (864, 29889), (879, 29844), (888, 29817), (908, 29781), (918, 29769), (921, 29763), (936, 29727), (942, 29703), (968, 29625), (985, 29568), (989, 29556), (993, 29547),

Gene: First\_0044 Start: 31142, Stop: 29355, Start Num: 234

Candidate Starts for First\_0044:

(53, 31559), (Start: 234 @31142 has 938 MA's), (353, 30938), (355, 30935), (359, 30929), (368, 30914), (379, 30899), (395, 30866), (397, 30863), (405, 30836), (415, 30809), (424, 30788), (432, 30758), (465, 30656), (541, 30563), (544, 30554), (566, 30515), (571, 30506), (582, 30491), (619, 30425), (655, 30344), (675, 30296), (679, 30290), (710, 30227), (740, 30152), (759, 30071), (789, 29987), (790, 29984), (805, 29918), (818, 29879), (837, 29858), (859, 29783), (864, 29765), (868, 29753), (879, 29720), (888, 29693), (908, 29657), (921, 29639), (936, 29603), (942, 29579), (962, 29522), (968, 29501), (985, 29444), (989, 29432), (993, 29423),

Gene: FlameThrower\_40 Start: 29788, Stop: 31659, Start Num: 234

Candidate Starts for FlameThrower\_40:

(Start: 234 @29788 has 938 MA's), (273, 29857), (334, 29962), (340, 29971), (419, 30124), (453, 30220), (457, 30229), (493, 30274), (556, 30379), (580, 30415), (603, 30460), (615, 30475), (655, 30568), (759, 30874), (778, 30925), (782, 30940), (796, 30991), (805, 31027), (840, 31120), (862, 31192), (901, 31291), (936, 31363), (942, 31387), (962, 31444), (978, 31498), (985, 31522), (993, 31543),

Gene: Flare16\_44 Start: 31360, Stop: 29573, Start Num: 234

Candidate Starts for Flare16\_44:

(Start: 234 @31360 has 938 MA's), (353, 31156), (355, 31153), (359, 31147), (379, 31117), (395, 31084), (397, 31081), (405, 31054), (415, 31027), (432, 30976), (465, 30874), (541, 30781), (566, 30733), (571, 30724), (582, 30709), (619, 30643), (655, 30562), (675, 30514), (740, 30370), (759, 30289), (778, 30238), (789, 30205), (805, 30136), (818, 30097), (837, 30076), (841, 30055), (845, 30043), (918, 29863), (921, 29857), (936, 29821), (942, 29797), (968, 29719), (985, 29662), (989, 29650),

Gene: Flaverint\_45 Start: 30777, Stop: 28990, Start Num: 234

Candidate Starts for Flaverint\_45:

(Start: 234 @30777 has 938 MA's), (353, 30573), (395, 30501), (405, 30471), (415, 30444), (543, 30192), (571, 30141), (619, 30060), (639, 30015), (703, 29874), (728, 29832), (740, 29787), (759, 29706), (778, 29655), (790, 29619), (805, 29553), (837, 29493), (839, 29481), (871, 29379), (879, 29355), (884, 29337), (921, 29274), (935, 29247), (936, 29238), (942, 29214), (985, 29079), (989, 29067), (993, 29058),

Gene: Floof\_49 Start: 32023, Stop: 33888, Start Num: 232

Candidate Starts for Floof\_49:

(Start: 232 @32023 has 15 MA's), (405, 32320), (453, 32464), (543, 32617), (574, 32668), (603, 32725), (670, 32872), (675, 32878), (703, 32935), (705, 32941), (740, 33055), (759, 33136), (781, 33199), (795, 33247), (796, 33253), (806, 33292), (858, 33436), (861, 33448), (865, 33463), (869, 33475), (903, 33559), (947, 33667), (964, 33712), (985, 33784), (1038, 33883),

Gene: Florean\_45 Start: 31569, Stop: 29743, Start Num: 234

Candidate Starts for Florean\_45:

(Start: 234 @31569 has 938 MA's), (252, 31548), (266, 31518), (279, 31488), (379, 31326), (389, 31308), (415, 31236), (419, 31227), (458, 31107), (465, 31083), (541, 30990), (568, 30942), (582, 30921), (603, 30882), (663, 30750), (675, 30729), (700, 30684), (703, 30672), (756, 30519), (759, 30498), (798, 30375), (805, 30345), (818, 30306), (841, 30240), (842, 30237), (847, 30222), (856, 30198), (862, 30174), (942, 29967), (985, 29832), (989, 29820), (993, 29811),

Gene: FluffyNinja\_62 Start: 54312, Stop: 52453, Start Num: 197

Candidate Starts for FluffyNinja\_62:

(Start: 180 @54336 has 1 MA's), (Start: 197 @54312 has 298 MA's), (Start: 225 @54288 has 5 MA's), (Start: 238 @54282 has 2 MA's), (Start: 261 @54240 has 10 MA's), (269, 54219), (323, 54105), (328, 54099), (349, 54069), (385, 54009), (394, 53988), (410, 53934), (418, 53922), (425, 53904), (427, 53892), (462, 53787), (496, 53730), (511, 53694), (516, 53682), (534, 53658), (539, 53646), (545, 53628), (555, 53610), (566, 53592), (588, 53553), (595, 53544), (597, 53541), (599, 53538), (754, 53181), (760, 53148), (765, 53127), (799, 53034), (802, 53025), (822, 52962), (841, 52926), (842, 52923), (847, 52908), (872, 52830), (877, 52818), (883, 52797), (902, 52758), (942, 52668), (947, 52650), (949, 52644), (954, 52629), (964, 52605), (968, 52590), (969, 52587), (972, 52575), (979, 52551), (1002, 52503), (1015, 52479),

Gene: Flux\_45 Start: 31569, Stop: 29743, Start Num: 234

Candidate Starts for Flux\_45:

(Start: 234 @31569 has 938 MA's), (252, 31548), (266, 31518), (279, 31488), (379, 31326), (389, 31308), (415, 31236), (419, 31227), (458, 31107), (465, 31083), (541, 30990), (568, 30942), (582, 30921), (603, 30882), (663, 30750), (675, 30729), (700, 30684), (703, 30672), (756, 30519), (759, 30498), (798, 30375), (805, 30345), (818, 30306), (841, 30240), (842, 30237), (847, 30222), (856, 30198), (862, 30174), (942, 29967), (985, 29832), (989, 29820), (993, 29811),

Gene: FlyCatcher\_47 Start: 33412, Stop: 31577, Start Num: 234

Candidate Starts for FlyCatcher\_47:



(Start: 234 @33412 has 938 MA's), (252, 33391), (301, 33301), (383, 33163), (411, 33085), (415, 33079), (465, 32926), (537, 32842), (541, 32830), (563, 32785), (568, 32782), (603, 32722), (630, 32671), (636, 32659), (675, 32569), (700, 32524), (729, 32455), (740, 32413), (756, 32353), (759, 32332), (775, 32284), (793, 32236), (798, 32209), (799, 32206), (805, 32179), (818, 32140), (842, 32071), (856, 32032), (868, 31990), (869, 31987), (879, 31957), (921, 31861), (935, 31834), (946, 31786), (947, 31783), (985, 31666), (989, 31654), (993, 31645),

Gene: ForDig\_53 Start: 52484, Stop: 50643, Start Num: 191

Candidate Starts for ForDig\_53:

(Start: 191 @52484 has 2 MA's), (252, 52427), (Start: 261 @52412 has 10 MA's), (298, 52346), (355, 52238), (385, 52187), (387, 52184), (395, 52163), (410, 52112), (412, 52106), (424, 52088), (437, 52046), (441, 52043), (450, 52013), (496, 51920), (511, 51884), (516, 51872), (545, 51818), (582, 51758), (595, 51734), (597, 51731), (634, 51665), (739, 51431), (743, 51413), (749, 51395), (760, 51338), (797, 51230), (799, 51224), (802, 51215), (822, 51152), (841, 51116), (842, 51113), (847, 51098), (872, 51020), (877, 51008), (883, 50987), (884, 50981), (902, 50948), (921, 50918), (931, 50903), (936, 50882), (942, 50858), (949, 50834), (964, 50795), (967, 50783), (968, 50780), (969, 50777), (972, 50765), (979, 50741), (1015, 50669), (1023, 50648),

Gene: ForGetIt\_38 Start: 30371, Stop: 28527, Start Num: 234

Candidate Starts for ForGetIt\_38:

(Start: 234 @30371 has 938 MA's), (266, 30320), (301, 30260), (336, 30197), (353, 30167), (355, 30164), (390, 30107), (395, 30095), (405, 30065), (415, 30038), (448, 29936), (453, 29921), (465, 29885), (520, 29825), (541, 29789), (566, 29741), (618, 29657), (619, 29651), (652, 29579), (663, 29546), (670, 29531), (679, 29519), (724, 29420), (759, 29285), (769, 29255), (775, 29237), (778, 29234), (790, 29198), (793, 29189), (796, 29168), (799, 29159), (805, 29132), (806, 29129), (837, 29072), (841, 29051), (879, 28934), (903, 28880), (908, 28871), (921, 28853), (947, 28775), (967, 28718), (978, 28682), (985, 28658), (989, 28646),

Gene: Forsytheast\_44 Start: 34479, Stop: 32653, Start Num: 234

Candidate Starts for Forsytheast\_44:

(Start: 234 @34479 has 938 MA's), (359, 34266), (368, 34251), (405, 34173), (411, 34152), (415, 34146), (419, 34137), (457, 34020), (465, 33993), (541, 33900), (546, 33885), (558, 33864), (566, 33852), (596, 33801), (598, 33798), (634, 33732), (648, 33702), (657, 33672), (679, 33627), (700, 33588), (759, 33408), (775, 33360), (790, 33321), (805, 33255), (818, 33216), (837, 33195), (841, 33174), (847, 33156), (868, 33090), (936, 32940), (938, 32937), (946, 32901), (954, 32877), (959, 32868), (963, 32856), (985, 32781), (993, 32760),

Gene: Fortunato\_54 Start: 54011, Stop: 52170, Start Num: 175

Candidate Starts for Fortunato\_54:

(Start: 175 @54011 has 4 MA's), (Start: 189 @53993 has 26 MA's), (Start: 238 @53969 has 2 MA's), (252, 53942), (Start: 261 @53927 has 10 MA's), (269, 53906), (316, 53819), (382, 53714), (394, 53687), (399, 53672), (425, 53606), (434, 53576), (437, 53567), (441, 53564), (442, 53561), (496, 53441), (504, 53423), (511, 53405), (516, 53393), (535, 53366), (566, 53303), (588, 53264), (595, 53255), (597, 53252), (618, 53222), (634, 53186), (737, 52961), (739, 52958), (749, 52922), (760, 52865), (797, 52757), (799, 52751), (802, 52742), (841, 52643), (842, 52640), (847, 52625), (872, 52547), (877, 52535), (883, 52514), (885, 52505), (902, 52475), (921, 52445), (935, 52418), (942, 52385), (949, 52361), (964, 52322), (969, 52304), (972, 52292), (979, 52268), (994, 52226), (1002, 52220), (1015, 52196),

Gene: Forza\_174 Start: 99637, Stop: 97856, Start Num: 241

Candidate Starts for Forza\_174:

(Start: 241 @99637 has 4 MA's), (266, 99592), (276, 99565), (334, 99472), (370, 99412), (374, 99409), (379, 99400), (394, 99376), (407, 99334), (408, 99331), (426, 99286), (445, 99244), (463, 99190),

(541, 99106), (586, 99022), (603, 98995), (615, 98980), (689, 98821), (700, 98797), (704, 98782), (710, 98773), (744, 98686), (751, 98659), (752, 98656), (756, 98635), (759, 98614), (777, 98563), (802, 98479), (807, 98452), (816, 98419), (830, 98377), (865, 98266), (874, 98239), (886, 98203), (891, 98194), (893, 98191), (897, 98182), (943, 98062), (949, 98041), (951, 98035), (964, 98002), (969, 97984), (970, 97978), (981, 97945), (985, 97930), (1002, 97906), (1004, 97903), (1019, 97879),

Gene: Fozzie\_61 Start: 54537, Stop: 52678, Start Num: 197

Candidate Starts for Fozzie\_61:

(Start: 180 @54561 has 1 MA's), (Start: 197 @54537 has 298 MA's), (Start: 225 @54513 has 5 MA's), (Start: 238 @54507 has 2 MA's), (Start: 261 @54465 has 10 MA's), (269, 54444), (323, 54330), (328, 54324), (349, 54294), (385, 54234), (394, 54213), (410, 54159), (418, 54147), (425, 54129), (427, 54117), (462, 54012), (496, 53955), (511, 53919), (516, 53907), (534, 53883), (539, 53871), (545, 53853), (555, 53835), (566, 53817), (588, 53778), (595, 53769), (597, 53766), (599, 53763), (754, 53406), (760, 53373), (765, 53352), (799, 53259), (802, 53250), (822, 53187), (841, 53151), (842, 53148), (847, 53133), (872, 53055), (877, 53043), (883, 53022), (902, 52983), (942, 52893), (947, 52875), (949, 52869), (954, 52854), (964, 52830), (968, 52815), (969, 52812), (972, 52800), (979, 52776), (1002, 52728), (1015, 52704),

Gene: Francis47\_44 Start: 35450, Stop: 33624, Start Num: 234

Candidate Starts for Francis47\_44:

(Start: 234 @35450 has 938 MA's), (359, 35237), (368, 35222), (405, 35144), (411, 35123), (415, 35117), (419, 35108), (457, 34991), (465, 34964), (541, 34871), (546, 34856), (566, 34823), (596, 34772), (598, 34769), (634, 34703), (648, 34673), (657, 34643), (679, 34598), (700, 34559), (759, 34379), (769, 34349), (775, 34331), (778, 34328), (790, 34292), (805, 34226), (841, 34145), (842, 34142), (868, 34061), (932, 33926), (936, 33911), (938, 33908), (946, 33872), (954, 33848), (959, 33839), (963, 33827), (970, 33800), (985, 33752), (993, 33731),

Gene: Frankenweenie\_74 Start: 49485, Stop: 47518, Start Num: 258

Candidate Starts for Frankenweenie\_74:

(219, 49545), (Start: 258 @49485 has 7 MA's), (304, 49389), (339, 49317), (361, 49281), (369, 49269), (397, 49215), (412, 49167), (437, 49089), (455, 49041), (480, 48948), (483, 48936), (491, 48900), (497, 48885), (508, 48858), (521, 48831), (560, 48750), (584, 48705), (607, 48669), (631, 48618), (725, 48384), (733, 48357), (752, 48294), (764, 48234), (780, 48189), (799, 48123), (806, 48093), (810, 48072), (812, 48066), (872, 47904), (878, 47886), (914, 47832), (949, 47715), (953, 47703), (959, 47694), (963, 47682), (968, 47664), (983, 47616),

Gene: Frankicide\_59 Start: 54077, Stop: 52218, Start Num: 197

Candidate Starts for Frankicide\_59:

(Start: 180 @54101 has 1 MA's), (Start: 197 @54077 has 298 MA's), (Start: 225 @54053 has 5 MA's), (Start: 238 @54047 has 2 MA's), (Start: 261 @54005 has 10 MA's), (269, 53984), (323, 53870), (328, 53864), (349, 53834), (385, 53774), (394, 53753), (410, 53699), (418, 53687), (425, 53669), (427, 53657), (462, 53552), (496, 53495), (511, 53459), (516, 53447), (535, 53420), (539, 53411), (555, 53375), (588, 53318), (595, 53309), (597, 53306), (599, 53303), (754, 52946), (760, 52913), (765, 52892), (799, 52799), (802, 52790), (822, 52727), (841, 52691), (842, 52688), (847, 52673), (872, 52595), (877, 52583), (883, 52562), (902, 52523), (942, 52433), (947, 52415), (949, 52409), (954, 52394), (964, 52370), (968, 52355), (969, 52352), (972, 52340), (979, 52316), (1002, 52268), (1015, 52244),

Gene: Franklin22\_41 Start: 28031, Stop: 29905, Start Num: 234

Candidate Starts for Franklin22\_41:

(Start: 231 @28028 has 7 MA's), (Start: 234 @28031 has 938 MA's), (273, 28100), (353, 28238), (419, 28367), (425, 28382), (453, 28463), (603, 28703), (615, 28718), (628, 28748), (663, 28838), (723, 29012), (747, 29090), (759, 29150), (799, 29276), (805, 29303), (840, 29396), (862, 29468), (901,

29567), (902, 29570), (903, 29573), (962, 29720), (967, 29738), (985, 29798), (993, 29819), (1008, 29843), (1032, 29888),

Gene: Fred313\_45 Start: 31127, Stop: 29289, Start Num: 234

Candidate Starts for Fred313\_45:

(179, 31199), (Start: 234 @31127 has 938 MA's), (266, 31076), (353, 30923), (390, 30863), (395, 30851), (415, 30794), (419, 30785), (424, 30773), (458, 30665), (465, 30641), (541, 30545), (568, 30497), (603, 30437), (636, 30374), (663, 30305), (675, 30284), (710, 30215), (713, 30209), (729, 30170), (759, 30047), (790, 29960), (798, 29924), (805, 29894), (816, 29864), (842, 29783), (856, 29744), (862, 29720), (868, 29702), (921, 29573), (942, 29513), (985, 29378), (989, 29366), (993, 29357),

Gene: Frederick\_54 Start: 53929, Stop: 52085, Start Num: 175

Candidate Starts for Frederick\_54:

(Start: 175 @53929 has 4 MA's), (Start: 189 @53911 has 26 MA's), (Start: 238 @53884 has 2 MA's), (252, 53857), (Start: 261 @53842 has 10 MA's), (269, 53821), (316, 53734), (382, 53629), (394, 53602), (399, 53587), (425, 53521), (434, 53491), (437, 53482), (441, 53479), (442, 53476), (450, 53449), (462, 53413), (496, 53356), (504, 53338), (511, 53320), (516, 53308), (535, 53281), (566, 53218), (588, 53179), (595, 53170), (597, 53167), (618, 53137), (634, 53101), (737, 52876), (739, 52873), (749, 52837), (760, 52780), (797, 52672), (799, 52666), (802, 52657), (841, 52558), (842, 52555), (847, 52540), (872, 52462), (877, 52450), (883, 52429), (885, 52420), (902, 52390), (921, 52360), (935, 52333), (942, 52300), (949, 52276), (964, 52237), (969, 52219), (972, 52207), (979, 52183), (994, 52141), (1002, 52135), (1015, 52111),

Gene: FrenchFry\_57 Start: 52599, Stop: 50770, Start Num: 197

Candidate Starts for FrenchFry\_57:

(Start: 197 @52599 has 298 MA's), (Start: 238 @52572 has 2 MA's), (253, 52542), (Start: 261 @52530 has 10 MA's), (272, 52503), (273, 52500), (277, 52491), (301, 52473), (355, 52377), (385, 52326), (395, 52302), (402, 52278), (450, 52140), (459, 52116), (462, 52104), (496, 52047), (511, 52011), (516, 51999), (534, 51975), (580, 51891), (595, 51861), (597, 51858), (618, 51828), (678, 51684), (710, 51618), (733, 51579), (737, 51567), (743, 51546), (749, 51528), (760, 51471), (793, 51387), (799, 51357), (802, 51348), (822, 51282), (839, 51255), (841, 51246), (847, 51228), (856, 51204), (872, 51150), (877, 51138), (883, 51117), (921, 51048), (942, 50988), (947, 50970), (960, 50937), (964, 50925), (968, 50910), (969, 50907), (972, 50895), (979, 50871), (980, 50868), (1002, 50820), (1004, 50817), (1015, 50796), (1023, 50775),

Gene: Fresco\_51 Start: 45981, Stop: 44164, Start Num: 230

Candidate Starts for Fresco\_51:

(73, 46302), (84, 46278), (Start: 230 @45981 has 13 MA's), (252, 45945), (Start: 261 @45930 has 10 MA's), (273, 45900), (344, 45774), (406, 45651), (410, 45636), (427, 45594), (462, 45498), (511, 45405), (583, 45276), (597, 45252), (743, 44940), (749, 44922), (760, 44865), (799, 44751), (802, 44742), (822, 44679), (842, 44640), (847, 44625), (872, 44547), (877, 44535), (883, 44514), (885, 44505), (935, 44418), (943, 44382), (946, 44370), (961, 44331), (964, 44322), (968, 44307), (979, 44262), (1002, 44214), (1015, 44190),

Gene: Freya\_58 Start: 53738, Stop: 51879, Start Num: 197

Candidate Starts for Freya\_58:

(Start: 180 @53762 has 1 MA's), (Start: 197 @53738 has 298 MA's), (Start: 225 @53714 has 5 MA's), (Start: 238 @53708 has 2 MA's), (Start: 261 @53666 has 10 MA's), (269, 53645), (323, 53531), (328, 53525), (349, 53495), (385, 53435), (394, 53414), (410, 53360), (418, 53348), (425, 53330), (427, 53318), (462, 53213), (496, 53156), (511, 53120), (516, 53108), (535, 53081), (545, 53054), (555, 53036), (566, 53018), (588, 52979), (595, 52970), (597, 52967), (724, 52709), (754, 52607), (760, 52574), (765, 52553), (799, 52460), (802, 52451), (822, 52388), (841, 52352), (842, 52349), (847,

52334), (872, 52256), (877, 52244), (883, 52223), (902, 52184), (942, 52094), (947, 52076), (949, 52070), (954, 52055), (964, 52031), (968, 52016), (969, 52013), (972, 52001), (979, 51977), (1002, 51929), (1015, 51905),

Gene: FriarPreacher\_60 Start: 54124, Stop: 52265, Start Num: 197

Candidate Starts for FriarPreacher\_60:

(Start: 180 @54148 has 1 MA's), (Start: 197 @54124 has 298 MA's), (Start: 225 @54100 has 5 MA's), (Start: 238 @54094 has 2 MA's), (Start: 261 @54052 has 10 MA's), (269, 54031), (323, 53917), (328, 53911), (349, 53881), (385, 53821), (394, 53800), (410, 53746), (418, 53734), (425, 53716), (427, 53704), (462, 53599), (496, 53542), (511, 53506), (516, 53494), (534, 53470), (539, 53458), (545, 53440), (555, 53422), (566, 53404), (588, 53365), (595, 53356), (597, 53353), (599, 53350), (754, 52993), (760, 52960), (765, 52939), (799, 52846), (802, 52837), (822, 52774), (841, 52738), (842, 52735), (847, 52720), (872, 52642), (877, 52630), (883, 52609), (902, 52570), (942, 52480), (947, 52462), (949, 52456), (954, 52441), (964, 52417), (968, 52402), (969, 52399), (972, 52387), (979, 52363), (1002, 52315), (1015, 52291),

Gene: Fribs8\_39 Start: 31749, Stop: 29392, Start Num: 45

Candidate Starts for Fribs8\_39:

(Start: 45 @31749 has 24 MA's), (52, 31734), (58, 31698), (110, 31563), (136, 31500), (168, 31458), (177, 31446), (249, 31344), (290, 31266), (317, 31206), (376, 31113), (391, 31083), (409, 31029), (426, 30987), (449, 30924), (499, 30789), (524, 30729), (530, 30711), (570, 30645), (626, 30609), (682, 30516), (711, 30471), (724, 30444), (729, 30432), (732, 30420), (770, 30279), (795, 30159), (802, 30135), (805, 30117), (807, 30108), (817, 30081), (819, 30075), (822, 30069), (824, 30063), (834, 30039), (842, 30006), (849, 29982), (859, 29937), (880, 29871), (926, 29763), (945, 29694), (958, 29658), (978, 29583), (979, 29580), (986, 29556), (1018, 29487), (1046, 29424),

Gene: Fringe\_64 Start: 54914, Stop: 53055, Start Num: 197

Candidate Starts for Fringe\_64:

(Start: 180 @54938 has 1 MA's), (Start: 197 @54914 has 298 MA's), (Start: 225 @54890 has 5 MA's), (Start: 238 @54884 has 2 MA's), (Start: 261 @54842 has 10 MA's), (269, 54821), (323, 54707), (328, 54701), (349, 54671), (385, 54611), (394, 54590), (410, 54536), (418, 54524), (425, 54506), (427, 54494), (462, 54389), (496, 54332), (511, 54296), (516, 54284), (534, 54260), (539, 54248), (545, 54230), (555, 54212), (566, 54194), (588, 54155), (595, 54146), (597, 54143), (599, 54140), (754, 53783), (760, 53750), (765, 53729), (799, 53636), (802, 53627), (822, 53564), (841, 53528), (842, 53525), (847, 53510), (872, 53432), (877, 53420), (883, 53399), (902, 53360), (942, 53270), (947, 53252), (949, 53246), (954, 53231), (964, 53207), (968, 53192), (969, 53189), (972, 53177), (979, 53153), (1002, 53105), (1015, 53081),

Gene: FrogHopper\_43 Start: 34120, Stop: 32291, Start Num: 234

Candidate Starts for FrogHopper\_43:

(Start: 234 @34120 has 938 MA's), (359, 33907), (368, 33892), (395, 33844), (405, 33814), (411, 33793), (415, 33787), (419, 33778), (457, 33661), (465, 33634), (541, 33541), (546, 33526), (596, 33442), (598, 33439), (634, 33373), (648, 33343), (657, 33313), (679, 33268), (700, 33229), (759, 33049), (775, 33001), (793, 32953), (802, 32914), (805, 32896), (818, 32857), (837, 32836), (841, 32815), (846, 32800), (885, 32677), (960, 32506), (967, 32482), (982, 32434), (985, 32422), (993, 32401), (997, 32395), (1025, 32347), (1030, 32332),

Gene: FugateOSU\_61 Start: 55083, Stop: 53224, Start Num: 197

Candidate Starts for FugateOSU\_61:

(Start: 180 @55107 has 1 MA's), (Start: 197 @55083 has 298 MA's), (Start: 225 @55059 has 5 MA's), (Start: 238 @55053 has 2 MA's), (Start: 261 @55011 has 10 MA's), (269, 54990), (323, 54876), (328, 54870), (349, 54840), (385, 54780), (394, 54759), (410, 54705), (418, 54693), (425, 54675), (427, 54663), (462, 54558), (496, 54501), (511, 54465), (516, 54453), (535, 54426), (545, 54399), (555,

54381), (566, 54363), (588, 54324), (595, 54315), (597, 54312), (724, 54054), (754, 53952), (760, 53919), (765, 53898), (799, 53805), (802, 53796), (822, 53733), (841, 53697), (842, 53694), (847, 53679), (872, 53601), (877, 53589), (883, 53568), (902, 53529), (942, 53439), (947, 53421), (949, 53415), (954, 53400), (964, 53376), (968, 53361), (969, 53358), (972, 53346), (979, 53322), (1002, 53274), (1015, 53250),

Gene: Fulton\_37 Start: 26991, Stop: 25126, Start Num: 283

Candidate Starts for Fulton\_37:

(Start: 283 @26991 has 147 MA's), (290, 26985), (337, 26886), (342, 26877), (357, 26853), (367, 26838), (371, 26832), (398, 26781), (399, 26778), (428, 26697), (450, 26637), (479, 26547), (489, 26544), (524, 26445), (535, 26418), (537, 26415), (541, 26403), (553, 26373), (566, 26352), (611, 26316), (680, 26169), (729, 26067), (752, 25989), (798, 25809), (805, 25779), (824, 25725), (832, 25707), (849, 25650), (854, 25623), (866, 25581), (879, 25542), (913, 25461), (917, 25452), (938, 25392), (943, 25368), (946, 25356), (949, 25347), (956, 25329), (967, 25296), (986, 25224),

Gene: Funsized\_59 Start: 56200, Stop: 54350, Start Num: 197

Candidate Starts for Funsized\_59:

(21, 56692), (39, 56611), (59, 56536), (74, 56497), (75, 56494), (182, 56221), (Start: 197 @56200 has 298 MA's), (216, 56191), (252, 56143), (259, 56131), (355, 55960), (395, 55885), (402, 55861), (425, 55807), (426, 55798), (427, 55795), (432, 55783), (434, 55777), (462, 55690), (496, 55633), (500, 55621), (511, 55597), (516, 55585), (520, 55576), (534, 55561), (535, 55558), (539, 55549), (583, 55462), (588, 55450), (597, 55438), (615, 55414), (618, 55408), (654, 55324), (698, 55228), (737, 55141), (739, 55138), (749, 55102), (755, 55072), (760, 55045), (765, 55024), (780, 54994), (797, 54937), (799, 54931), (802, 54922), (822, 54859), (841, 54823), (842, 54820), (847, 54805), (868, 54739), (872, 54727), (877, 54715), (883, 54694), (885, 54685), (890, 54676), (921, 54625), (942, 54565), (949, 54541), (954, 54526), (964, 54502), (967, 54490), (968, 54487), (969, 54484), (972, 54472), (979, 54448), (986, 54424), (987, 54421), (994, 54406), (1002, 54400), (1015, 54376),

Gene: Funston\_44 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Funston\_44:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Fushigi\_43 Start: 32768, Stop: 30939, Start Num: 234

Candidate Starts for Fushigi\_43:

(Start: 234 @32768 has 938 MA's), (359, 32555), (368, 32540), (405, 32462), (411, 32441), (415, 32435), (419, 32426), (457, 32309), (465, 32282), (541, 32189), (546, 32174), (566, 32141), (596, 32090), (598, 32087), (628, 32033), (634, 32021), (648, 31991), (657, 31961), (679, 31916), (700, 31877), (759, 31697), (775, 31649), (793, 31601), (802, 31562), (805, 31544), (818, 31505), (837, 31484), (841, 31463), (846, 31448), (885, 31325), (960, 31154), (967, 31130), (982, 31082), (985, 31070), (993, 31049), (997, 31043), (1025, 30995), (1030, 30980),

Gene: GMA2\_66 Start: 70128, Stop: 68344, Start Num: 237

Candidate Starts for GMA2\_66:

(Start: 237 @70128 has 2 MA's), (254, 70104), (303, 70014), (353, 69927), (374, 69897), (382, 69885), (407, 69822), (408, 69819), (426, 69774), (427, 69771), (428, 69768), (463, 69678), (468, 69663), (518, 69633), (541, 69594), (559, 69558), (586, 69510), (603, 69483), (615, 69468), (656, 69375), (689, 69309), (700, 69285), (756, 69126), (759, 69105), (804, 68958), (807, 68943), (814, 68913), (830, 68865), (831, 68862), (842, 68826), (858, 68781), (861, 68769), (865, 68754), (879, 68712), (893, 68679), (921, 68613), (936, 68577), (951, 68523), (954, 68514), (964, 68490), (985, 68418),

(1004, 68391), (1019, 68367),

Gene: GMonster\_42 Start: 33424, Stop: 31598, Start Num: 234

Candidate Starts for GMonster\_42:

(Start: 234 @33424 has 938 MA's), (359, 33211), (368, 33196), (395, 33148), (405, 33118), (411, 33097), (415, 33091), (419, 33082), (457, 32965), (465, 32938), (541, 32845), (546, 32830), (566, 32797), (596, 32746), (598, 32743), (634, 32677), (648, 32647), (657, 32617), (679, 32572), (700, 32533), (759, 32353), (775, 32305), (790, 32266), (805, 32200), (818, 32161), (837, 32140), (841, 32119), (847, 32101), (868, 32035), (936, 31885), (938, 31882), (946, 31846), (954, 31822), (959, 31813), (963, 31801), (985, 31726), (993, 31705),

Gene: GTE2\_35 Start: 32210, Stop: 29823, Start Num: 36

Candidate Starts for GTE2\_35:

(Start: 36 @32210 has 16 MA's), (64, 32147), (86, 32090), (127, 31967), (136, 31943), (Start: 230 @31811 has 13 MA's), (250, 31784), (317, 31646), (366, 31568), (391, 31520), (409, 31466), (410, 31463), (420, 31445), (426, 31424), (431, 31409), (445, 31373), (448, 31364), (449, 31361), (495, 31241), (519, 31181), (524, 31166), (570, 31082), (634, 31037), (643, 31013), (655, 31007), (662, 30983), (666, 30974), (707, 30905), (711, 30902), (713, 30899), (758, 30752), (773, 30683), (774, 30677), (784, 30641), (805, 30548), (807, 30539), (817, 30512), (819, 30506), (822, 30500), (824, 30494), (834, 30470), (842, 30437), (847, 30422), (849, 30413), (859, 30368), (878, 30308), (890, 30275), (938, 30155), (947, 30116), (948, 30113), (986, 29987), (1008, 29942), (1013, 29933), (1037, 29873),

Gene: Gack\_40 Start: 28093, Stop: 29955, Start Num: 234

Candidate Starts for Gack\_40:

(196, 28039), (Start: 234 @28093 has 938 MA's), (252, 28114), (273, 28162), (419, 28429), (425, 28444), (453, 28525), (603, 28765), (709, 29017), (747, 29140), (759, 29200), (778, 29251), (799, 29326), (805, 29353), (840, 29446), (901, 29617), (902, 29620), (903, 29623), (938, 29692), (962, 29770), (985, 29848), (993, 29869), (1008, 29893), (1032, 29938),

Gene: Gadjet\_59 Start: 54012, Stop: 52195, Start Num: 235

Candidate Starts for Gadjet\_59:

(129, 54195), (Start: 235 @54012 has 43 MA's), (252, 53982), (359, 53802), (406, 53697), (424, 53649), (426, 53637), (437, 53607), (442, 53601), (462, 53538), (496, 53481), (511, 53445), (539, 53397), (597, 53292), (647, 53196), (664, 53145), (737, 53001), (749, 52962), (755, 52932), (760, 52905), (763, 52893), (797, 52797), (799, 52791), (802, 52782), (804, 52770), (834, 52698), (841, 52668), (847, 52650), (851, 52641), (872, 52572), (877, 52560), (883, 52539), (921, 52470), (931, 52455), (938, 52431), (942, 52410), (949, 52386), (964, 52347), (969, 52329), (972, 52317), (975, 52305), (979, 52293), (1015, 52221),

Gene: Gadost\_45 Start: 31574, Stop: 29748, Start Num: 234

Candidate Starts for Gadost\_45:

(Start: 234 @31574 has 938 MA's), (252, 31553), (266, 31523), (279, 31493), (379, 31331), (389, 31313), (415, 31241), (419, 31232), (458, 31112), (465, 31088), (541, 30995), (568, 30947), (582, 30926), (603, 30887), (663, 30755), (675, 30734), (700, 30689), (703, 30677), (756, 30524), (759, 30503), (798, 30380), (805, 30350), (818, 30311), (841, 30245), (842, 30242), (847, 30227), (856, 30203), (862, 30179), (942, 29972), (985, 29837), (989, 29825), (993, 29816),

Gene: GaeCeo\_39 Start: 29207, Stop: 27342, Start Num: 281

Candidate Starts for GaeCeo\_39:

(Start: 281 @29207 has 18 MA's), (298, 29183), (369, 29051), (399, 28994), (420, 28940), (426, 28919), (428, 28913), (503, 28712), (537, 28628), (541, 28616), (553, 28586), (566, 28565), (574, 28553), (611, 28529), (634, 28484), (671, 28397), (698, 28352), (701, 28337), (741, 28235), (793,

28052), (802, 28013), (805, 27995), (819, 27953), (825, 27938), (849, 27866), (938, 27608), (943, 27584), (954, 27551), (986, 27440),

Gene: GageAP\_45 Start: 34414, Stop: 32588, Start Num: 234

Candidate Starts for GageAP\_45:

(Start: 234 @34414 has 938 MA's), (265, 34366), (359, 34201), (368, 34186), (405, 34108), (411, 34087), (415, 34081), (419, 34072), (457, 33955), (465, 33928), (541, 33835), (546, 33820), (596, 33736), (598, 33733), (634, 33667), (648, 33637), (657, 33607), (679, 33562), (700, 33523), (759, 33343), (769, 33313), (775, 33295), (778, 33292), (790, 33256), (805, 33190), (841, 33109), (842, 33106), (868, 33025), (936, 32875), (938, 32872), (946, 32836), (954, 32812), (959, 32803), (963, 32791), (985, 32716), (993, 32695),

Gene: Gail\_49 Start: 33012, Stop: 31219, Start Num: 234

Candidate Starts for Gail\_49:

(158, 33114), (Start: 234 @33012 has 938 MA's), (246, 33003), (263, 32970), (301, 32901), (353, 32808), (395, 32733), (397, 32730), (405, 32703), (415, 32676), (432, 32625), (458, 32547), (465, 32523), (541, 32430), (563, 32385), (619, 32292), (634, 32262), (700, 32115), (726, 32064), (740, 32016), (759, 31935), (782, 31869), (798, 31812), (805, 31782), (841, 31701), (879, 31584), (888, 31557), (936, 31467), (962, 31386), (968, 31365), (970, 31356), (985, 31308), (989, 31296), (993, 31287), (995, 31284),

Gene: Gambol\_39 Start: 27611, Stop: 29593, Start Num: 234

Candidate Starts for Gambol\_39:

(Start: 234 @27611 has 938 MA's), (336, 27785), (382, 27848), (397, 27881), (424, 27956), (518, 28184), (603, 28358), (675, 28514), (730, 28652), (753, 28739), (759, 28772), (769, 28802), (790, 28859), (805, 28925), (840, 29018), (942, 29285), (949, 29309), (985, 29420), (1040, 29528),

Gene: Gandalf20\_46 Start: 35478, Stop: 33652, Start Num: 234

Candidate Starts for Gandalf20\_46:

(Start: 234 @35478 has 938 MA's), (359, 35265), (395, 35202), (405, 35172), (411, 35151), (415, 35145), (419, 35136), (457, 35019), (465, 34992), (541, 34899), (546, 34884), (558, 34863), (566, 34851), (596, 34800), (598, 34797), (634, 34731), (648, 34701), (657, 34671), (679, 34626), (700, 34587), (759, 34407), (775, 34359), (790, 34320), (805, 34254), (818, 34215), (837, 34194), (841, 34173), (847, 34155), (868, 34089), (936, 33939), (938, 33936), (946, 33900), (954, 33876), (959, 33867), (963, 33855), (970, 33828), (985, 33780), (993, 33759),

Gene: Garak\_47 Start: 29791, Stop: 27950, Start Num: 234

Candidate Starts for Garak\_47:

(Start: 234 @29791 has 938 MA's), (353, 29587), (395, 29512), (397, 29509), (405, 29482), (409, 29467), (415, 29455), (432, 29404), (461, 29314), (465, 29302), (541, 29209), (559, 29170), (571, 29152), (582, 29137), (619, 29071), (635, 29038), (636, 29035), (681, 28933), (710, 28873), (740, 28789), (759, 28708), (789, 28624), (790, 28621), (793, 28612), (798, 28585), (805, 28555), (837, 28495), (847, 28456), (936, 28240), (938, 28237), (942, 28216), (985, 28081), (989, 28069), (993, 28060), (995, 28057), (1042, 27964),

Gene: GardenB\_38 Start: 29033, Stop: 27168, Start Num: 283

Candidate Starts for GardenB\_38:

(Start: 283 @29033 has 147 MA's), (Start: 291 @29024 has 5 MA's), (371, 28874), (423, 28760), (426, 28745), (428, 28739), (498, 28553), (503, 28541), (532, 28466), (537, 28457), (541, 28445), (551, 28418), (553, 28415), (562, 28400), (566, 28394), (570, 28388), (611, 28358), (634, 28313), (701, 28166), (741, 28064), (749, 28043), (798, 27851), (801, 27842), (802, 27839), (805, 27821), (819, 27779), (825, 27764), (849, 27692), (900, 27533), (913, 27503), (938, 27434), (943, 27410), (956, 27371), (967, 27338), (970, 27326),

Gene: GardenState\_48 Start: 31425, Stop: 33290, Start Num: 232

Candidate Starts for GardenState\_48:

(Start: 232 @31425 has 15 MA's), (405, 31722), (436, 31812), (603, 32127), (655, 32232), (657, 32241), (675, 32280), (705, 32343), (759, 32538), (781, 32601), (796, 32655), (798, 32661), (806, 32694), (839, 32781), (861, 32850), (869, 32877), (985, 33186),

Gene: Gareth\_60 Start: 54536, Stop: 52677, Start Num: 197

Candidate Starts for Gareth\_60:

(Start: 180 @54560 has 1 MA's), (Start: 197 @54536 has 298 MA's), (Start: 225 @54512 has 5 MA's), (Start: 238 @54506 has 2 MA's), (Start: 261 @54464 has 10 MA's), (269, 54443), (323, 54329), (328, 54323), (349, 54293), (385, 54233), (394, 54212), (410, 54158), (418, 54146), (425, 54128), (427, 54116), (462, 54011), (496, 53954), (511, 53918), (516, 53906), (535, 53879), (545, 53852), (555, 53834), (566, 53816), (588, 53777), (595, 53768), (597, 53765), (724, 53507), (754, 53405), (760, 53372), (765, 53351), (799, 53258), (802, 53249), (822, 53186), (841, 53150), (842, 53147), (847, 53132), (872, 53054), (877, 53042), (883, 53021), (902, 52982), (942, 52892), (947, 52874), (949, 52868), (954, 52853), (964, 52829), (968, 52814), (969, 52811), (972, 52799), (979, 52775), (1002, 52727), (1015, 52703),

Gene: Garey24\_38 Start: 28589, Stop: 26733, Start Num: 291

Candidate Starts for Garey24\_38:

(Start: 234 @28685 has 938 MA's), (Start: 283 @28598 has 147 MA's), (Start: 291 @28589 has 5 MA's), (342, 28484), (347, 28475), (367, 28445), (369, 28442), (424, 28322), (426, 28310), (428, 28304), (466, 28199), (473, 28172), (532, 28031), (535, 28025), (537, 28022), (541, 28010), (551, 27983), (553, 27980), (562, 27965), (566, 27959), (570, 27953), (613, 27920), (671, 27791), (701, 27731), (798, 27416), (801, 27407), (802, 27404), (805, 27386), (819, 27344), (822, 27338), (825, 27329), (832, 27314), (849, 27257), (900, 27098), (913, 27068), (917, 27059), (938, 26999), (943, 26975), (956, 26936), (967, 26903), (970, 26891), (986, 26831),

Gene: Gargoyle\_39 Start: 28930, Stop: 27074, Start Num: 291

Candidate Starts for Gargoyle\_39:

(Start: 234 @29026 has 938 MA's), (Start: 237 @29023 has 2 MA's), (Start: 283 @28939 has 147 MA's), (Start: 291 @28930 has 5 MA's), (342, 28825), (347, 28816), (367, 28786), (369, 28783), (423, 28666), (426, 28651), (428, 28645), (466, 28540), (473, 28513), (532, 28372), (537, 28363), (541, 28351), (551, 28324), (553, 28321), (562, 28306), (566, 28300), (570, 28294), (613, 28261), (701, 28072), (728, 28018), (733, 27997), (798, 27757), (801, 27748), (802, 27745), (805, 27727), (819, 27685), (822, 27679), (832, 27655), (849, 27598), (900, 27439), (913, 27409), (917, 27400), (938, 27340), (943, 27316), (956, 27277), (967, 27244), (970, 27232), (986, 27172),

Gene: GaugeLDP\_43 Start: 31738, Stop: 29948, Start Num: 234

Candidate Starts for GaugeLDP\_43:

(Start: 234 @31738 has 938 MA's), (353, 31534), (395, 31459), (397, 31456), (405, 31429), (409, 31414), (415, 31402), (461, 31261), (465, 31249), (541, 31156), (543, 31150), (566, 31108), (571, 31099), (582, 31084), (619, 31018), (655, 30937), (663, 30910), (675, 30889), (700, 30844), (729, 30787), (759, 30664), (789, 30580), (798, 30541), (805, 30511), (818, 30472), (841, 30430), (936, 30196), (968, 30094), (985, 30037), (989, 30025), (993, 30016),

Gene: Gelo\_38 Start: 28622, Stop: 26757, Start Num: 283

Candidate Starts for Gelo\_38:

(Start: 234 @28709 has 938 MA's), (Start: 283 @28622 has 147 MA's), (Start: 291 @28613 has 5 MA's), (342, 28508), (347, 28499), (367, 28469), (369, 28466), (424, 28346), (426, 28334), (428, 28328), (466, 28223), (473, 28196), (532, 28055), (535, 28049), (537, 28046), (541, 28034), (551, 28007), (553, 28004), (562, 27989), (566, 27983), (570, 27977), (613, 27944), (671, 27815), (701,



27755), (798, 27440), (801, 27431), (802, 27428), (805, 27410), (819, 27368), (822, 27362), (832, 27338), (849, 27281), (900, 27122), (913, 27092), (917, 27083), (938, 27023), (943, 26999), (956, 26960), (967, 26927), (970, 26915), (986, 26855),

Gene: Gemma\_47 Start: 31749, Stop: 29935, Start Num: 234

Candidate Starts for Gemma\_47:

(Start: 234 @31749 has 938 MA's), (262, 31710), (266, 31698), (353, 31545), (362, 31530), (395, 31473), (415, 31416), (419, 31407), (432, 31365), (448, 31314), (465, 31263), (541, 31170), (566, 31122), (582, 31098), (603, 31059), (619, 31032), (634, 31002), (670, 30909), (679, 30897), (701, 30849), (710, 30834), (759, 30678), (778, 30627), (789, 30594), (790, 30591), (805, 30525), (818, 30486), (842, 30414), (856, 30375), (862, 30351), (868, 30333), (879, 30300), (921, 30219), (942, 30159), (947, 30141), (968, 30081), (970, 30072), (985, 30024), (989, 30012), (993, 30003),

Gene: GeneCoco\_61 Start: 54579, Stop: 52720, Start Num: 197

Candidate Starts for GeneCoco\_61:

(Start: 180 @54603 has 1 MA's), (Start: 197 @54579 has 298 MA's), (Start: 225 @54555 has 5 MA's), (Start: 238 @54549 has 2 MA's), (Start: 261 @54507 has 10 MA's), (269, 54486), (323, 54372), (328, 54366), (349, 54336), (385, 54276), (394, 54255), (410, 54201), (418, 54189), (425, 54171), (427, 54159), (462, 54054), (496, 53997), (511, 53961), (516, 53949), (534, 53925), (539, 53913), (545, 53895), (555, 53877), (566, 53859), (588, 53820), (595, 53811), (597, 53808), (599, 53805), (724, 53550), (754, 53448), (760, 53415), (765, 53394), (799, 53301), (802, 53292), (822, 53229), (841, 53193), (842, 53190), (847, 53175), (872, 53097), (877, 53085), (883, 53064), (902, 53025), (942, 52935), (947, 52917), (949, 52911), (954, 52896), (964, 52872), (968, 52857), (969, 52854), (972, 52842), (979, 52818), (985, 52797), (1002, 52770), (1015, 52746), (1019, 52731),

Gene: George\_38 Start: 30595, Stop: 28730, Start Num: 234

Candidate Starts for George\_38:

(Start: 234 @30595 has 938 MA's), (266, 30544), (301, 30484), (336, 30421), (353, 30391), (355, 30388), (390, 30331), (395, 30319), (405, 30289), (415, 30262), (465, 30109), (541, 30013), (566, 29965), (618, 29881), (619, 29875), (652, 29803), (663, 29770), (670, 29755), (679, 29743), (724, 29644), (759, 29509), (769, 29479), (775, 29461), (782, 29443), (790, 29422), (793, 29413), (805, 29356), (818, 29317), (837, 29296), (841, 29275), (862, 29209), (879, 29158), (903, 29104), (908, 29095), (921, 29077), (942, 29017), (947, 28999), (978, 28906), (985, 28882), (989, 28870), (1042, 28765),

Gene: Georgie2\_45 Start: 31311, Stop: 29524, Start Num: 234

Candidate Starts for Georgie2\_45:

(104, 31566), (Start: 234 @31311 has 938 MA's), (353, 31107), (355, 31104), (359, 31098), (368, 31083), (379, 31068), (395, 31035), (397, 31032), (405, 31005), (415, 30978), (424, 30957), (432, 30927), (465, 30825), (541, 30732), (566, 30684), (571, 30675), (582, 30660), (619, 30594), (655, 30513), (675, 30465), (679, 30459), (710, 30396), (740, 30321), (759, 30240), (778, 30189), (789, 30156), (790, 30153), (805, 30087), (818, 30048), (837, 30027), (859, 29952), (864, 29934), (879, 29889), (888, 29862), (908, 29826), (918, 29814), (921, 29808), (936, 29772), (942, 29748), (968, 29670), (985, 29613), (989, 29601), (993, 29592),

Gene: Gershwin\_38 Start: 28632, Stop: 26767, Start Num: 283

Candidate Starts for Gershwin\_38:

(Start: 234 @28719 has 938 MA's), (Start: 283 @28632 has 147 MA's), (Start: 291 @28623 has 5 MA's), (342, 28518), (347, 28509), (367, 28479), (369, 28476), (424, 28356), (426, 28344), (428, 28338), (466, 28233), (473, 28206), (532, 28065), (535, 28059), (537, 28056), (541, 28044), (551, 28017), (553, 28014), (562, 27999), (566, 27993), (570, 27987), (613, 27954), (671, 27825), (701, 27765), (798, 27450), (801, 27441), (802, 27438), (805, 27420), (819, 27378), (822, 27372), (832, 27348), (849, 27291), (900, 27132), (913, 27102), (917, 27093), (938, 27033), (943, 27009), (956,

26970), (967, 26937), (970, 26925), (986, 26865),

Gene: Gervas\_59 Start: 54101, Stop: 52284, Start Num: 235

Candidate Starts for Gervas\_59:

(129, 54284), (Start: 235 @54101 has 43 MA's), (252, 54071), (359, 53891), (424, 53738), (426, 53726), (437, 53696), (442, 53690), (462, 53627), (464, 53621), (496, 53570), (511, 53534), (539, 53486), (597, 53381), (647, 53285), (664, 53234), (737, 53090), (749, 53051), (755, 53021), (760, 52994), (763, 52982), (797, 52886), (799, 52880), (802, 52871), (804, 52859), (834, 52787), (841, 52757), (847, 52739), (851, 52730), (872, 52661), (877, 52649), (883, 52628), (921, 52559), (931, 52544), (938, 52520), (942, 52499), (949, 52475), (964, 52436), (969, 52418), (972, 52406), (975, 52394), (979, 52382), (994, 52340), (1015, 52310),

Gene: Ghoulboy\_40 Start: 31108, Stop: 29243, Start Num: 234

Candidate Starts for Ghoulboy\_40:

(Start: 234 @31108 has 938 MA's), (266, 31057), (301, 30997), (336, 30934), (353, 30904), (355, 30901), (390, 30844), (405, 30802), (415, 30775), (465, 30622), (541, 30526), (556, 30493), (566, 30478), (618, 30394), (619, 30388), (635, 30355), (670, 30268), (679, 30256), (700, 30217), (724, 30157), (759, 30022), (769, 29992), (775, 29974), (789, 29938), (790, 29935), (805, 29869), (818, 29830), (841, 29788), (847, 29770), (862, 29722), (864, 29716), (879, 29671), (903, 29617), (908, 29608), (921, 29590), (947, 29512), (967, 29455), (978, 29419), (985, 29395), (989, 29383), (1051, 29251),

Gene: GiKK\_48 Start: 33132, Stop: 30748, Start Num: 45

Candidate Starts for GiKK\_48:

(Start: 45 @33132 has 24 MA's), (86, 33018), (96, 32988), (127, 32904), (136, 32880), (177, 32826), (250, 32721), (259, 32706), (279, 32658), (317, 32583), (319, 32577), (322, 32571), (324, 32565), (366, 32496), (380, 32472), (391, 32448), (410, 32391), (420, 32373), (426, 32352), (478, 32205), (524, 32091), (546, 32034), (557, 32013), (570, 32007), (662, 31914), (668, 31902), (711, 31830), (729, 31788), (732, 31776), (770, 31635), (772, 31611), (784, 31560), (805, 31467), (817, 31431), (819, 31425), (822, 31419), (824, 31413), (842, 31356), (847, 31341), (849, 31332), (900, 31173), (910, 31152), (926, 31113), (938, 31074), (942, 31053), (948, 31032), (952, 31020), (960, 31002), (976, 30939), (978, 30933), (986, 30906), (996, 30882), (1008, 30861), (1046, 30774),

Gene: Gibbous\_38 Start: 31347, Stop: 28987, Start Num: 45

Candidate Starts for Gibbous\_38:

(35, 31371), (Start: 45 @31347 has 24 MA's), (52, 31332), (58, 31296), (127, 31125), (136, 31101), (Start: 291 @30864 has 5 MA's), (317, 30807), (342, 30768), (354, 30747), (391, 30681), (409, 30627), (420, 30606), (426, 30585), (499, 30387), (517, 30345), (524, 30327), (530, 30309), (549, 30264), (568, 30246), (570, 30243), (626, 30207), (682, 30114), (711, 30069), (724, 30042), (729, 30030), (732, 30018), (770, 29877), (784, 29808), (795, 29757), (802, 29733), (805, 29715), (807, 29706), (817, 29679), (819, 29673), (822, 29667), (824, 29661), (842, 29604), (849, 29580), (859, 29535), (860, 29532), (880, 29469), (926, 29361), (945, 29292), (948, 29280), (958, 29256), (978, 29181), (979, 29178), (986, 29154), (996, 29130), (1008, 29109), (1018, 29085), (1037, 29040), (1046, 29022),

Gene: Gilberta\_45 Start: 30767, Stop: 28980, Start Num: 234

Candidate Starts for Gilberta\_45:

(Start: 234 @30767 has 938 MA's), (353, 30563), (395, 30491), (405, 30461), (415, 30434), (543, 30182), (571, 30131), (619, 30050), (639, 30005), (703, 29864), (728, 29822), (740, 29777), (759, 29696), (778, 29645), (790, 29609), (805, 29543), (837, 29483), (839, 29471), (871, 29369), (879, 29345), (884, 29327), (921, 29264), (935, 29237), (936, 29228), (942, 29204), (985, 29069), (989, 29057), (993, 29048),

Gene: GinPorsche\_52 Start: 52983, Stop: 51160, Start Num: 189

Candidate Starts for GinPorsche\_52:

(Start: 175 @53001 has 4 MA's), (Start: 189 @52983 has 26 MA's), (Start: 238 @52959 has 2 MA's), (252, 52932), (Start: 261 @52917 has 10 MA's), (269, 52896), (316, 52809), (382, 52704), (399, 52662), (425, 52596), (434, 52566), (437, 52557), (441, 52554), (442, 52551), (450, 52524), (496, 52431), (504, 52413), (511, 52395), (516, 52383), (528, 52368), (535, 52356), (595, 52245), (597, 52242), (618, 52212), (634, 52176), (737, 51951), (739, 51948), (749, 51912), (754, 51888), (760, 51855), (797, 51747), (799, 51741), (801, 51735), (802, 51732), (841, 51633), (842, 51630), (847, 51615), (872, 51537), (877, 51525), (883, 51504), (885, 51495), (902, 51465), (918, 51441), (935, 51408), (942, 51375), (947, 51357), (949, 51351), (964, 51312), (969, 51294), (972, 51282), (979, 51258), (994, 51216), (1002, 51210), (1015, 51186),

Gene: GingkoMaracino\_48 Start: 31739, Stop: 29925, Start Num: 234

Candidate Starts for GingkoMaracino\_48:

(Start: 234 @31739 has 938 MA's), (262, 31700), (266, 31688), (353, 31535), (362, 31520), (395, 31463), (415, 31406), (419, 31397), (432, 31355), (448, 31304), (465, 31253), (541, 31160), (566, 31112), (571, 31103), (582, 31088), (603, 31049), (619, 31022), (634, 30992), (670, 30899), (679, 30887), (701, 30839), (710, 30824), (759, 30668), (775, 30620), (790, 30581), (805, 30515), (818, 30476), (842, 30404), (856, 30365), (862, 30341), (868, 30323), (879, 30290), (888, 30263), (921, 30209), (942, 30149), (968, 30071), (985, 30014), (989, 30002), (993, 29993),

Gene: Giraffe\_61 Start: 54531, Stop: 52672, Start Num: 197

Candidate Starts for Giraffe\_61:

(Start: 180 @54555 has 1 MA's), (Start: 197 @54531 has 298 MA's), (Start: 225 @54507 has 5 MA's), (Start: 238 @54501 has 2 MA's), (Start: 261 @54459 has 10 MA's), (269, 54438), (323, 54324), (328, 54318), (349, 54288), (385, 54228), (394, 54207), (410, 54153), (418, 54141), (425, 54123), (427, 54111), (462, 54006), (496, 53949), (511, 53913), (516, 53901), (535, 53874), (545, 53847), (555, 53829), (566, 53811), (588, 53772), (595, 53763), (597, 53760), (724, 53502), (754, 53400), (760, 53367), (765, 53346), (799, 53253), (802, 53244), (822, 53181), (841, 53145), (842, 53142), (847, 53127), (872, 53049), (877, 53037), (883, 53016), (902, 52977), (942, 52887), (947, 52869), (949, 52863), (954, 52848), (964, 52824), (968, 52809), (969, 52806), (972, 52794), (979, 52770), (1002, 52722), (1015, 52698),

Gene: Giroux\_46 Start: 31554, Stop: 29716, Start Num: 234

Candidate Starts for Giroux\_46:

(Start: 234 @31554 has 938 MA's), (266, 31503), (303, 31437), (353, 31350), (390, 31290), (395, 31278), (415, 31221), (419, 31212), (458, 31092), (465, 31068), (541, 30972), (568, 30924), (603, 30864), (636, 30801), (663, 30732), (675, 30711), (711, 30639), (729, 30597), (740, 30555), (759, 30474), (775, 30426), (798, 30351), (805, 30321), (816, 30291), (842, 30210), (856, 30171), (862, 30147), (868, 30129), (921, 30000), (942, 29940), (985, 29805), (989, 29793), (993, 29784),

Gene: Gladiator\_45 Start: 29628, Stop: 27787, Start Num: 234

Candidate Starts for Gladiator\_45:

(Start: 234 @29628 has 938 MA's), (353, 29424), (395, 29349), (397, 29346), (405, 29319), (409, 29304), (415, 29292), (432, 29241), (461, 29151), (465, 29139), (541, 29046), (559, 29007), (571, 28989), (582, 28974), (619, 28908), (635, 28875), (636, 28872), (681, 28770), (710, 28710), (740, 28626), (759, 28545), (789, 28461), (790, 28458), (793, 28449), (798, 28422), (802, 28410), (805, 28392), (837, 28332), (847, 28293), (936, 28077), (938, 28074), (942, 28053), (985, 27918), (989, 27906), (993, 27897), (995, 27894), (1042, 27801),

Gene: Glamour\_37 Start: 28723, Stop: 26858, Start Num: 283

Candidate Starts for Glamour\_37:

(Start: 283 @28723 has 147 MA's), (305, 28678), (330, 28624), (371, 28564), (398, 28513), (426, 28435), (428, 28429), (445, 28384), (446, 28381), (447, 28378), (460, 28339), (479, 28279), (532,

28156), (537, 28147), (541, 28135), (545, 28123), (553, 28105), (566, 28084), (574, 28072), (680, 27901), (749, 27733), (793, 27568), (801, 27532), (805, 27511), (819, 27469), (849, 27382), (859, 27337), (894, 27238), (913, 27193), (917, 27184), (938, 27124), (943, 27100), (954, 27067), (986, 26956),

Gene: Glass\_57 Start: 52601, Stop: 50772, Start Num: 197

Candidate Starts for Glass\_57:

(Start: 197 @52601 has 298 MA's), (Start: 238 @52574 has 2 MA's), (253, 52544), (Start: 261 @52532 has 10 MA's), (272, 52505), (273, 52502), (277, 52493), (301, 52475), (355, 52379), (385, 52328), (395, 52304), (450, 52142), (459, 52118), (462, 52106), (496, 52049), (511, 52013), (516, 52001), (534, 51977), (580, 51893), (595, 51863), (597, 51860), (618, 51830), (678, 51686), (710, 51620), (733, 51581), (737, 51569), (743, 51548), (749, 51530), (760, 51473), (783, 51416), (793, 51389), (799, 51359), (802, 51350), (822, 51284), (839, 51257), (841, 51248), (847, 51230), (856, 51206), (872, 51152), (877, 51140), (883, 51119), (921, 51050), (942, 50990), (947, 50972), (960, 50939), (964, 50927), (968, 50912), (969, 50909), (972, 50897), (979, 50873), (980, 50870), (1002, 50822), (1004, 50819), (1015, 50798), (1023, 50777),

Gene: GlenHope\_59 Start: 53675, Stop: 51858, Start Num: 235

Candidate Starts for GlenHope\_59:

(Start: 235 @53675 has 43 MA's), (252, 53645), (359, 53465), (424, 53312), (426, 53300), (437, 53270), (442, 53264), (462, 53201), (464, 53195), (496, 53144), (509, 53117), (511, 53108), (539, 53060), (597, 52955), (647, 52859), (664, 52808), (737, 52664), (749, 52625), (755, 52595), (760, 52568), (763, 52556), (797, 52460), (799, 52454), (802, 52445), (804, 52433), (834, 52361), (841, 52331), (847, 52313), (851, 52304), (872, 52235), (877, 52223), (883, 52202), (921, 52133), (931, 52118), (938, 52094), (942, 52073), (947, 52055), (949, 52049), (962, 52016), (964, 52010), (969, 51992), (972, 51980), (975, 51968), (979, 51956), (994, 51914), (1015, 51884),

Gene: Glubnar\_58 Start: 53584, Stop: 51764, Start Num: 232

Candidate Starts for Glubnar\_58:

(129, 53764), (Start: 232 @53584 has 15 MA's), (252, 53551), (359, 53371), (424, 53218), (426, 53206), (437, 53176), (442, 53170), (462, 53107), (464, 53101), (496, 53050), (511, 53014), (539, 52966), (597, 52861), (647, 52765), (664, 52714), (737, 52570), (749, 52531), (755, 52501), (760, 52474), (763, 52462), (797, 52366), (799, 52360), (802, 52351), (804, 52339), (834, 52267), (841, 52237), (847, 52219), (851, 52210), (872, 52141), (877, 52129), (883, 52108), (921, 52039), (931, 52024), (938, 52000), (942, 51979), (947, 51961), (949, 51955), (962, 51922), (964, 51916), (969, 51898), (972, 51886), (975, 51874), (979, 51862), (994, 51820), (1015, 51790),

Gene: Godines\_58 Start: 52884, Stop: 51055, Start Num: 197

Candidate Starts for Godines\_58:

(Start: 197 @52884 has 298 MA's), (Start: 238 @52857 has 2 MA's), (Start: 261 @52815 has 10 MA's), (272, 52788), (273, 52785), (277, 52776), (301, 52758), (355, 52662), (385, 52611), (395, 52587), (402, 52563), (450, 52425), (459, 52401), (462, 52389), (496, 52332), (511, 52296), (516, 52284), (534, 52260), (580, 52176), (595, 52146), (597, 52143), (618, 52113), (678, 51969), (710, 51903), (733, 51864), (737, 51852), (743, 51831), (749, 51813), (760, 51756), (783, 51699), (793, 51672), (799, 51642), (802, 51633), (822, 51567), (839, 51540), (841, 51531), (847, 51513), (856, 51489), (872, 51435), (877, 51423), (883, 51402), (921, 51333), (942, 51273), (947, 51255), (960, 51222), (964, 51210), (968, 51195), (969, 51192), (972, 51180), (979, 51156), (980, 51153), (1002, 51105), (1004, 51102), (1015, 51081), (1023, 51060),

Gene: GodonK\_188 Start: 97693, Stop: 95903, Start Num: 237

Candidate Starts for GodonK\_188:

(Start: 237 @97693 has 2 MA's), (279, 97615), (293, 97588), (296, 97585), (344, 97507), (374, 97462), (379, 97453), (406, 97393), (407, 97387), (409, 97381), (426, 97339), (448, 97288), (463, 97243),

(520, 97192), (543, 97153), (559, 97123), (567, 97114), (586, 97075), (603, 97048), (615, 97033), (644, 96967), (700, 96850), (730, 96790), (737, 96763), (740, 96751), (752, 96709), (759, 96667), (769, 96637), (789, 96580), (790, 96577), (830, 96427), (831, 96424), (840, 96397), (865, 96316), (886, 96253), (893, 96241), (897, 96232), (943, 96112), (951, 96085), (960, 96064), (964, 96052), (985, 95977), (999, 95956), (1019, 95926),

Gene: GoldHunter\_44 Start: 32554, Stop: 30161, Start Num: 36

Candidate Starts for GoldHunter\_44:

(Start: 36 @32554 has 16 MA's), (48, 32548), (Start: 60 @32500 has 1 MA's), (76, 32458), (86, 32434), (127, 32308), (136, 32284), (170, 32239), (206, 32188), (216, 32173), (Start: 230 @32152 has 13 MA's), (262, 32104), (274, 32071), (279, 32062), (317, 31987), (322, 31975), (366, 31906), (385, 31873), (391, 31858), (409, 31804), (410, 31801), (420, 31783), (426, 31762), (448, 31702), (495, 31579), (497, 31573), (524, 31504), (541, 31462), (634, 31375), (643, 31351), (655, 31345), (662, 31321), (666, 31312), (674, 31297), (682, 31285), (707, 31243), (711, 31240), (713, 31237), (758, 31090), (773, 31021), (774, 31015), (784, 30979), (805, 30886), (817, 30850), (819, 30844), (822, 30838), (824, 30832), (842, 30775), (849, 30751), (859, 30706), (986, 30325), (1008, 30280), (1037, 30211),

Gene: Golden\_37 Start: 28582, Stop: 26732, Start Num: 281

Candidate Starts for Golden\_37:

(200, 28723), (260, 28633), (Start: 281 @28582 has 18 MA's), (330, 28483), (347, 28459), (369, 28426), (420, 28315), (426, 28294), (428, 28288), (445, 28243), (447, 28237), (512, 28081), (537, 28018), (541, 28006), (553, 27976), (611, 27919), (741, 27625), (798, 27415), (801, 27406), (802, 27403), (805, 27385), (819, 27343), (849, 27256), (938, 26998), (943, 26974), (944, 26971), (954, 26941), (986, 26830),

Gene: GoldenEssence\_88 Start: 72236, Stop: 74038, Start Num: 248

Candidate Starts for GoldenEssence\_88:

(Start: 248 @72236 has 2 MA's), (276, 72299), (284, 72311), (345, 72422), (382, 72476), (418, 72557), (426, 72584), (428, 72590), (457, 72659), (468, 72695), (541, 72764), (586, 72842), (603, 72869), (615, 72884), (700, 73073), (720, 73118), (729, 73142), (731, 73151), (735, 73169), (746, 73202), (756, 73241), (759, 73262), (761, 73268), (796, 73382), (817, 73466), (821, 73472), (825, 73484), (840, 73532), (843, 73544), (856, 73580), (865, 73613), (868, 73622), (883, 73667), (890, 73685), (931, 73769), (936, 73790), (943, 73817), (967, 73889), (973, 73913), (985, 73949), (999, 73976),

Gene: Gollum\_36 Start: 28113, Stop: 26329, Start Num: 234

Candidate Starts for Gollum\_36:

(Start: 234 @28113 has 938 MA's), (374, 27879), (390, 27849), (394, 27840), (395, 27837), (409, 27792), (415, 27780), (432, 27729), (465, 27627), (492, 27606), (541, 27534), (563, 27489), (566, 27486), (589, 27444), (594, 27438), (603, 27423), (619, 27396), (663, 27291), (667, 27282), (679, 27264), (681, 27261), (700, 27225), (729, 27168), (759, 27045), (775, 26997), (805, 26892), (806, 26889), (837, 26832), (841, 26811), (858, 26763), (881, 26688), (918, 26619), (936, 26577), (942, 26553), (968, 26475), (985, 26418), (989, 26406), (993, 26397), (1010, 26367), (1021, 26349),

Gene: Gompeii16\_44 Start: 35183, Stop: 33354, Start Num: 234

Candidate Starts for Gompeii16\_44:

(Start: 234 @35183 has 938 MA's), (359, 34970), (368, 34955), (395, 34907), (405, 34877), (408, 34865), (411, 34856), (415, 34850), (419, 34841), (457, 34724), (465, 34697), (541, 34604), (546, 34589), (558, 34568), (566, 34556), (596, 34505), (598, 34502), (634, 34436), (648, 34406), (657, 34376), (679, 34331), (700, 34292), (759, 34112), (775, 34064), (793, 34016), (802, 33977), (805, 33959), (818, 33920), (837, 33899), (841, 33878), (846, 33863), (885, 33740), (960, 33569), (967, 33545), (982, 33497), (985, 33485), (993, 33464), (997, 33458), (1025, 33410), (1030, 33395),

Gene: Goose\_44 Start: 30924, Stop: 29089, Start Num: 234

Candidate Starts for Goose\_44:

(Start: 234 @30924 has 938 MA's), (266, 30873), (353, 30720), (368, 30696), (390, 30660), (395, 30648), (411, 30597), (415, 30591), (419, 30582), (445, 30498), (458, 30462), (461, 30450), (464, 30441), (465, 30438), (541, 30345), (568, 30297), (603, 30237), (619, 30210), (630, 30186), (661, 30108), (663, 30105), (675, 30084), (679, 30078), (711, 30012), (729, 29970), (759, 29847), (775, 29799), (798, 29724), (805, 29694), (818, 29655), (842, 29583), (856, 29544), (862, 29520), (864, 29514), (868, 29502), (911, 29394), (942, 29313), (949, 29289), (970, 29226), (985, 29178), (989, 29166), (993, 29157),

Gene: Gophee\_62 Start: 54522, Stop: 52663, Start Num: 197

Candidate Starts for Gophee\_62:

(Start: 180 @54546 has 1 MA's), (Start: 197 @54522 has 298 MA's), (Start: 225 @54498 has 5 MA's), (Start: 238 @54492 has 2 MA's), (Start: 261 @54450 has 10 MA's), (269, 54429), (323, 54315), (328, 54309), (349, 54279), (385, 54219), (394, 54198), (410, 54144), (418, 54132), (425, 54114), (427, 54102), (462, 53997), (496, 53940), (511, 53904), (516, 53892), (534, 53868), (539, 53856), (545, 53838), (555, 53820), (566, 53802), (588, 53763), (595, 53754), (597, 53751), (599, 53748), (754, 53391), (760, 53358), (765, 53337), (799, 53244), (802, 53235), (822, 53172), (841, 53136), (842, 53133), (847, 53118), (872, 53040), (877, 53028), (883, 53007), (902, 52968), (942, 52878), (947, 52860), (949, 52854), (954, 52839), (964, 52815), (968, 52800), (969, 52797), (972, 52785), (979, 52761), (985, 52740), (1002, 52713), (1015, 52689),

Gene: Gorgeous\_54 Start: 36486, Stop: 34318, Start Num: 202

Candidate Starts for Gorgeous\_54:

(200, 36489), (Start: 202 @36486 has 13 MA's), (239, 36432), (279, 36348), (356, 36195), (361, 36186), (388, 36141), (414, 36063), (415, 36054), (422, 36039), (426, 36024), (427, 36021), (445, 35964), (474, 35871), (484, 35829), (565, 35634), (572, 35622), (578, 35616), (587, 35592), (601, 35571), (616, 35550), (621, 35535), (623, 35529), (651, 35466), (672, 35415), (706, 35328), (727, 35268), (740, 35220), (766, 35118), (768, 35112), (780, 35085), (781, 35082), (789, 35061), (799, 35019), (801, 35013), (806, 34989), (814, 34947), (815, 34944), (823, 34917), (838, 34884), (840, 34872), (852, 34836), (859, 34812), (861, 34806), (862, 34800), (880, 34746), (899, 34698), (902, 34695), (925, 34635), (932, 34611), (941, 34581), (961, 34527), (982, 34458), (985, 34446), (1006, 34407),

Gene: Graduation\_48 Start: 36333, Stop: 34516, Start Num: 234

Candidate Starts for Graduation\_48:

(Start: 234 @36333 has 938 MA's), (359, 36120), (368, 36105), (405, 36027), (411, 36006), (415, 36000), (419, 35991), (457, 35874), (465, 35847), (541, 35754), (546, 35739), (566, 35706), (596, 35655), (598, 35652), (634, 35586), (648, 35556), (657, 35526), (679, 35481), (700, 35442), (759, 35262), (775, 35214), (790, 35175), (805, 35109), (818, 35070), (837, 35049), (841, 35028), (847, 35010), (868, 34944), (936, 34794), (938, 34791), (946, 34755), (954, 34731), (959, 34722), (963, 34710), (985, 34635), (993, 34614),

Gene: Grand2040\_60 Start: 54525, Stop: 52666, Start Num: 197

Candidate Starts for Grand2040\_60:

(Start: 180 @54549 has 1 MA's), (Start: 197 @54525 has 298 MA's), (Start: 225 @54501 has 5 MA's), (Start: 238 @54495 has 2 MA's), (Start: 261 @54453 has 10 MA's), (269, 54432), (323, 54318), (328, 54312), (349, 54282), (385, 54222), (394, 54201), (410, 54147), (418, 54135), (425, 54117), (427, 54105), (462, 54000), (496, 53943), (511, 53907), (516, 53895), (534, 53871), (539, 53859), (545, 53841), (555, 53823), (566, 53805), (588, 53766), (595, 53757), (597, 53754), (599, 53751), (724, 53496), (754, 53394), (760, 53361), (765, 53340), (799, 53247), (802, 53238), (822, 53175), (841, 53139), (842, 53136), (847, 53121), (872, 53043), (877, 53031), (883, 53010), (902, 52971), (942, 52881), (947, 52863), (949, 52857), (954, 52842), (964, 52818), (968, 52803), (969, 52800), (972,

52788), (979, 52764), (985, 52743), (1002, 52716), (1015, 52692),

Gene: GrecoEtereo\_45 Start: 34806, Stop: 32980, Start Num: 234

Candidate Starts for GrecoEtereo\_45:

(Start: 234 @34806 has 938 MA's), (359, 34593), (368, 34578), (395, 34530), (405, 34500), (411, 34479), (415, 34473), (419, 34464), (457, 34347), (465, 34320), (541, 34227), (546, 34212), (566, 34179), (596, 34128), (598, 34125), (634, 34059), (648, 34029), (657, 33999), (679, 33954), (700, 33915), (759, 33735), (775, 33687), (790, 33648), (805, 33582), (818, 33543), (837, 33522), (841, 33501), (847, 33483), (868, 33417), (936, 33267), (938, 33264), (946, 33228), (954, 33204), (959, 33195), (963, 33183), (985, 33108), (993, 33087),

Gene: GreedyLawyer\_45 Start: 29627, Stop: 27786, Start Num: 234

Candidate Starts for GreedyLawyer\_45:

(Start: 234 @29627 has 938 MA's), (353, 29423), (395, 29348), (397, 29345), (405, 29318), (409, 29303), (415, 29291), (432, 29240), (461, 29150), (465, 29138), (541, 29045), (559, 29006), (571, 28988), (582, 28973), (619, 28907), (635, 28874), (636, 28871), (681, 28769), (710, 28709), (740, 28625), (759, 28544), (789, 28460), (790, 28457), (793, 28448), (798, 28421), (805, 28391), (837, 28331), (847, 28292), (936, 28076), (938, 28073), (942, 28052), (985, 27917), (989, 27905), (993, 27896), (995, 27893), (1042, 27800),

Gene: Greenlvy\_37 Start: 27580, Stop: 25715, Start Num: 283

Candidate Starts for Greenlvy\_37:

(Start: 283 @27580 has 147 MA's), (290, 27574), (337, 27475), (342, 27466), (357, 27442), (367, 27427), (371, 27421), (398, 27370), (399, 27367), (428, 27286), (479, 27136), (489, 27133), (524, 27034), (535, 27007), (537, 27004), (541, 26992), (553, 26962), (566, 26941), (611, 26905), (680, 26758), (752, 26578), (798, 26398), (805, 26368), (824, 26314), (832, 26296), (849, 26239), (854, 26212), (866, 26170), (913, 26050), (917, 26041), (938, 25981), (943, 25957), (946, 25945), (949, 25936), (956, 25918), (967, 25885), (986, 25813),

Gene: Greg\_47 Start: 35124, Stop: 33337, Start Num: 234

Candidate Starts for Greg\_47:

(Start: 234 @35124 has 938 MA's), (359, 34911), (368, 34896), (395, 34848), (405, 34818), (411, 34797), (415, 34791), (419, 34782), (457, 34665), (465, 34638), (541, 34545), (546, 34530), (566, 34497), (596, 34446), (598, 34443), (634, 34377), (648, 34347), (657, 34317), (679, 34272), (700, 34233), (759, 34053), (775, 34005), (790, 33966), (805, 33900), (839, 33828), (841, 33819), (868, 33735), (903, 33648), (954, 33522), (960, 33510), (985, 33426), (987, 33420),

Gene: Gretchen\_48 Start: 32640, Stop: 34505, Start Num: 232

Candidate Starts for Gretchen\_48:

(149, 32514), (192, 32583), (Start: 232 @32640 has 15 MA's), (405, 32937), (453, 33081), (543, 33234), (603, 33342), (619, 33369), (649, 33429), (670, 33489), (675, 33495), (703, 33552), (705, 33558), (740, 33672), (759, 33753), (781, 33816), (796, 33870), (798, 33876), (858, 34053), (862, 34071), (865, 34080), (869, 34092), (903, 34176), (947, 34284), (964, 34329), (985, 34401), (1026, 34479), (1038, 34500),

Gene: Greys\_39 Start: 28932, Stop: 27067, Start Num: 283

Candidate Starts for Greys\_39:

(Start: 234 @29019 has 938 MA's), (Start: 237 @29016 has 2 MA's), (Start: 283 @28932 has 147 MA's), (Start: 291 @28923 has 5 MA's), (342, 28818), (347, 28809), (367, 28779), (369, 28776), (424, 28656), (426, 28644), (428, 28638), (466, 28533), (473, 28506), (532, 28365), (537, 28356), (541, 28344), (551, 28317), (553, 28314), (562, 28299), (566, 28293), (570, 28287), (613, 28254), (701, 28065), (798, 27750), (801, 27741), (802, 27738), (805, 27720), (819, 27678), (822, 27672), (832, 27648), (849, 27591), (900, 27432), (913, 27402), (917, 27393), (938, 27333), (943, 27309), (956,

27270), (967, 27237), (970, 27225), (986, 27165),

Gene: Grif\_48 Start: 31927, Stop: 30113, Start Num: 234

Candidate Starts for Grif\_48:

(Start: 234 @31927 has 938 MA's), (262, 31888), (266, 31876), (353, 31723), (362, 31708), (395, 31651), (415, 31594), (419, 31585), (432, 31543), (448, 31492), (465, 31441), (541, 31348), (566, 31300), (571, 31291), (582, 31276), (603, 31237), (619, 31210), (634, 31180), (670, 31087), (679, 31075), (701, 31027), (710, 31012), (759, 30856), (790, 30769), (802, 30721), (805, 30703), (818, 30664), (842, 30592), (856, 30553), (862, 30529), (868, 30511), (879, 30478), (888, 30451), (921, 30397), (942, 30337), (968, 30259), (985, 30202), (989, 30190), (993, 30181),

Gene: Groundhog\_41 Start: 30507, Stop: 28663, Start Num: 234

Candidate Starts for Groundhog\_41:

(135, 30672), (Start: 234 @30507 has 938 MA's), (266, 30456), (336, 30333), (353, 30303), (379, 30264), (395, 30231), (405, 30201), (411, 30180), (415, 30174), (419, 30165), (432, 30123), (448, 30072), (464, 30024), (465, 30021), (541, 29925), (552, 29898), (563, 29880), (566, 29877), (571, 29868), (603, 29814), (619, 29787), (640, 29739), (663, 29682), (679, 29655), (703, 29604), (711, 29589), (756, 29442), (759, 29421), (769, 29391), (775, 29373), (778, 29370), (782, 29355), (790, 29334), (793, 29325), (798, 29298), (802, 29286), (805, 29268), (841, 29187), (845, 29175), (862, 29121), (874, 29085), (903, 29016), (918, 28995), (921, 28989), (938, 28950), (942, 28929), (947, 28911), (985, 28794), (989, 28782),

Gene: Groupthink\_49 Start: 31753, Stop: 29939, Start Num: 234

Candidate Starts for Groupthink\_49:

(Start: 234 @31753 has 938 MA's), (262, 31714), (266, 31702), (353, 31549), (362, 31534), (395, 31477), (415, 31420), (419, 31411), (432, 31369), (448, 31318), (465, 31267), (541, 31174), (566, 31126), (582, 31102), (603, 31063), (619, 31036), (634, 31006), (670, 30913), (679, 30901), (701, 30853), (710, 30838), (759, 30682), (778, 30631), (789, 30598), (790, 30595), (805, 30529), (818, 30490), (842, 30418), (856, 30379), (862, 30355), (868, 30337), (879, 30304), (921, 30223), (942, 30163), (947, 30145), (968, 30085), (970, 30076), (985, 30028), (989, 30016), (993, 30007),

Gene: Grub\_48 Start: 31845, Stop: 30031, Start Num: 234

Candidate Starts for Grub\_48:

(Start: 234 @31845 has 938 MA's), (262, 31806), (266, 31794), (353, 31641), (362, 31626), (395, 31569), (415, 31512), (419, 31503), (432, 31461), (448, 31410), (465, 31359), (541, 31266), (566, 31218), (571, 31209), (582, 31194), (603, 31155), (619, 31128), (634, 31098), (670, 31005), (679, 30993), (701, 30945), (710, 30930), (759, 30774), (790, 30687), (805, 30621), (818, 30582), (842, 30510), (856, 30471), (862, 30447), (868, 30429), (879, 30396), (888, 30369), (921, 30315), (942, 30255), (968, 30177), (985, 30120), (989, 30108), (993, 30099),

Gene: Grum1\_48 Start: 31852, Stop: 30038, Start Num: 234

Candidate Starts for Grum1\_48:

(Start: 234 @31852 has 938 MA's), (262, 31813), (266, 31801), (353, 31648), (362, 31633), (395, 31576), (415, 31519), (419, 31510), (432, 31468), (448, 31417), (465, 31366), (541, 31273), (566, 31225), (571, 31216), (582, 31201), (603, 31162), (619, 31135), (634, 31105), (670, 31012), (710, 30937), (759, 30781), (790, 30694), (805, 30628), (818, 30589), (842, 30517), (856, 30478), (862, 30454), (868, 30436), (879, 30403), (888, 30376), (921, 30322), (942, 30262), (968, 30184), (985, 30127), (989, 30115), (993, 30106),

Gene: Gruunaga\_45 Start: 29627, Stop: 27786, Start Num: 234

Candidate Starts for Gruunaga\_45:

(Start: 212 @29657 has 1 MA's), (Start: 234 @29627 has 938 MA's), (353, 29423), (395, 29348), (397, 29345), (405, 29318), (409, 29303), (415, 29291), (432, 29240), (461, 29150), (465, 29138), (541,



29045), (559, 29006), (571, 28988), (582, 28973), (619, 28907), (635, 28874), (636, 28871), (681, 28769), (710, 28709), (740, 28625), (759, 28544), (789, 28460), (790, 28457), (793, 28448), (798, 28421), (802, 28409), (805, 28391), (837, 28331), (847, 28292), (936, 28076), (938, 28073), (942, 28052), (985, 27917), (989, 27905), (993, 27896), (995, 27893), (1042, 27800),

Gene: GtownJaz\_48 Start: 31854, Stop: 30040, Start Num: 234

Candidate Starts for GtownJaz\_48:

(Start: 234 @31854 has 938 MA's), (262, 31815), (266, 31803), (353, 31650), (362, 31635), (395, 31578), (415, 31521), (419, 31512), (432, 31470), (448, 31419), (465, 31368), (541, 31275), (566, 31227), (571, 31218), (582, 31203), (603, 31164), (619, 31137), (634, 31107), (670, 31014), (679, 31002), (701, 30954), (710, 30939), (759, 30783), (790, 30696), (802, 30648), (805, 30630), (818, 30591), (842, 30519), (856, 30480), (862, 30456), (868, 30438), (879, 30405), (888, 30378), (921, 30324), (942, 30264), (968, 30186), (985, 30129), (989, 30117), (993, 30108),

Gene: Gubbabump\_38 Start: 28612, Stop: 26747, Start Num: 283

Candidate Starts for Gubbabump\_38:

(Start: 234 @28699 has 938 MA's), (Start: 237 @28696 has 2 MA's), (Start: 283 @28612 has 147 MA's), (Start: 291 @28603 has 5 MA's), (342, 28498), (347, 28489), (367, 28459), (369, 28456), (424, 28336), (426, 28324), (428, 28318), (466, 28213), (473, 28186), (532, 28045), (535, 28039), (537, 28036), (541, 28024), (551, 27997), (553, 27994), (562, 27979), (566, 27973), (570, 27967), (613, 27934), (671, 27805), (701, 27745), (798, 27430), (801, 27421), (802, 27418), (805, 27400), (819, 27358), (822, 27352), (825, 27343), (832, 27328), (849, 27271), (900, 27112), (913, 27082), (917, 27073), (938, 27013), (943, 26989), (956, 26950), (967, 26917), (970, 26905), (986, 26845),

Gene: Guetzie\_37 Start: 28567, Stop: 26717, Start Num: 281

Candidate Starts for Guetzie\_37:

(200, 28708), (260, 28618), (Start: 281 @28567 has 18 MA's), (330, 28468), (347, 28444), (369, 28411), (420, 28300), (426, 28279), (428, 28273), (445, 28228), (447, 28222), (512, 28066), (537, 28003), (541, 27991), (553, 27961), (611, 27904), (741, 27610), (798, 27400), (801, 27391), (802, 27388), (805, 27370), (819, 27328), (849, 27241), (938, 26983), (943, 26959), (944, 26956), (954, 26926), (986, 26815),

Gene: Gustav\_47 Start: 36228, Stop: 33886, Start Num: 3

Candidate Starts for Gustav\_47:

(1, 36366), (Start: 3 @36228 has 5 MA's), (22, 36123), (26, 36099), (41, 36045), (51, 36018), (54, 36006), (62, 35973), (72, 35946), (89, 35904), (94, 35886), (102, 35862), (112, 35823), (120, 35808), (126, 35784), (164, 35772), (273, 35610), (303, 35577), (308, 35562), (402, 35388), (410, 35361), (412, 35355), (432, 35310), (442, 35289), (460, 35232), (462, 35226), (465, 35217), (488, 35199), (490, 35193), (511, 35136), (574, 35022), (580, 35016), (581, 35013), (597, 34983), (618, 34953), (664, 34833), (731, 34707), (737, 34689), (746, 34659), (749, 34650), (760, 34593), (783, 34536), (793, 34512), (797, 34488), (799, 34482), (822, 34410), (839, 34383), (841, 34374), (842, 34371), (847, 34356), (856, 34332), (862, 34308), (872, 34278), (877, 34266), (883, 34245), (916, 34185), (930, 34152), (935, 34137), (949, 34080), (968, 34026), (969, 34023), (975, 33999), (979, 33987), (1002, 33936), (1015, 33912),

Gene: Gwendoluna\_47 Start: 36544, Stop: 34718, Start Num: 234

Candidate Starts for Gwendoluna\_47:

(Start: 234 @36544 has 938 MA's), (359, 36331), (368, 36316), (395, 36268), (405, 36238), (411, 36217), (415, 36211), (419, 36202), (457, 36085), (465, 36058), (541, 35965), (546, 35950), (566, 35917), (596, 35866), (598, 35863), (634, 35797), (648, 35767), (657, 35737), (679, 35692), (700, 35653), (759, 35473), (775, 35425), (790, 35386), (805, 35320), (818, 35281), (837, 35260), (841, 35239), (847, 35221), (868, 35155), (936, 35005), (938, 35002), (946, 34966), (954, 34942), (959, 34933), (963, 34921), (985, 34846), (993, 34825),

Gene: Gwennie1\_60 Start: 54324, Stop: 52465, Start Num: 197

Candidate Starts for Gwennie1\_60:

(Start: 180 @54348 has 1 MA's), (Start: 197 @54324 has 298 MA's), (Start: 225 @54300 has 5 MA's), (Start: 238 @54294 has 2 MA's), (Start: 261 @54252 has 10 MA's), (269, 54231), (323, 54117), (328, 54111), (349, 54081), (385, 54021), (394, 54000), (410, 53946), (418, 53934), (425, 53916), (427, 53904), (462, 53799), (496, 53742), (511, 53706), (516, 53694), (535, 53667), (555, 53622), (588, 53565), (595, 53556), (597, 53553), (754, 53193), (760, 53160), (765, 53139), (799, 53046), (802, 53037), (822, 52974), (841, 52938), (842, 52935), (847, 52920), (872, 52842), (877, 52830), (883, 52809), (902, 52770), (942, 52680), (947, 52662), (949, 52656), (954, 52641), (964, 52617), (968, 52602), (969, 52599), (972, 52587), (979, 52563), (1002, 52515), (1015, 52491),

Gene: Gwilliam\_62 Start: 54930, Stop: 53071, Start Num: 197

Candidate Starts for Gwilliam\_62:

(Start: 180 @54954 has 1 MA's), (Start: 197 @54930 has 298 MA's), (Start: 225 @54906 has 5 MA's), (Start: 238 @54900 has 2 MA's), (Start: 261 @54858 has 10 MA's), (269, 54837), (323, 54723), (328, 54717), (349, 54687), (385, 54627), (394, 54606), (410, 54552), (418, 54540), (425, 54522), (427, 54510), (462, 54405), (496, 54348), (511, 54312), (516, 54300), (535, 54273), (545, 54246), (555, 54228), (566, 54210), (588, 54171), (595, 54162), (597, 54159), (754, 53799), (760, 53766), (765, 53745), (799, 53652), (802, 53643), (822, 53580), (841, 53544), (842, 53541), (847, 53526), (872, 53448), (877, 53436), (883, 53415), (902, 53376), (942, 53286), (947, 53268), (949, 53262), (954, 53247), (964, 53223), (968, 53208), (969, 53205), (972, 53193), (979, 53169), (1002, 53121), (1015, 53097),

Gene: Gyarad\_0059 Start: 53612, Stop: 51753, Start Num: 197

Candidate Starts for Gyarad\_0059:

(Start: 180 @53636 has 1 MA's), (Start: 197 @53612 has 298 MA's), (Start: 225 @53588 has 5 MA's), (Start: 238 @53582 has 2 MA's), (Start: 261 @53540 has 10 MA's), (269, 53519), (323, 53405), (328, 53399), (349, 53369), (385, 53309), (394, 53288), (410, 53234), (418, 53222), (425, 53204), (427, 53192), (462, 53087), (496, 53030), (511, 52994), (516, 52982), (535, 52955), (539, 52946), (555, 52910), (588, 52853), (595, 52844), (597, 52841), (599, 52838), (754, 52481), (760, 52448), (765, 52427), (799, 52334), (802, 52325), (822, 52262), (841, 52226), (842, 52223), (847, 52208), (872, 52130), (877, 52118), (883, 52097), (902, 52058), (942, 51968), (947, 51950), (949, 51944), (954, 51929), (964, 51905), (968, 51890), (969, 51887), (972, 51875), (979, 51851), (1002, 51803), (1015, 51779),

Gene: Gyzlar\_41 Start: 32798, Stop: 30972, Start Num: 234

Candidate Starts for Gyzlar\_41:

(Start: 234 @32798 has 938 MA's), (359, 32585), (368, 32570), (395, 32522), (405, 32492), (411, 32471), (415, 32465), (419, 32456), (457, 32339), (465, 32312), (541, 32219), (546, 32204), (566, 32171), (596, 32120), (598, 32117), (634, 32051), (648, 32021), (657, 31991), (679, 31946), (700, 31907), (759, 31727), (775, 31679), (790, 31640), (805, 31574), (818, 31535), (837, 31514), (841, 31493), (847, 31475), (868, 31409), (936, 31259), (938, 31256), (946, 31220), (954, 31196), (959, 31187), (963, 31175), (970, 31148), (985, 31100), (993, 31079),

Gene: HINdeR\_41 Start: 32902, Stop: 31064, Start Num: 234

Candidate Starts for HINdeR\_41:

(Start: 234 @32902 has 938 MA's), (252, 32881), (301, 32791), (336, 32728), (359, 32689), (383, 32653), (415, 32569), (424, 32548), (448, 32467), (461, 32428), (465, 32416), (537, 32332), (541, 32320), (552, 32293), (563, 32275), (568, 32272), (582, 32251), (603, 32212), (650, 32119), (661, 32083), (663, 32080), (675, 32059), (711, 31987), (721, 31966), (759, 31822), (775, 31774), (782, 31756), (793, 31726), (802, 31687), (805, 31669), (818, 31630), (841, 31561), (842, 31558), (856, 31519), (868, 31477), (869, 31474), (879, 31444), (918, 31354), (921, 31348), (942, 31288), (947,

31270), (960, 31237), (968, 31210), (985, 31153), (989, 31141), (993, 31132),

Gene: HSavage\_59 Start: 54056, Stop: 52197, Start Num: 197

Candidate Starts for HSavage\_59:

(Start: 180 @54080 has 1 MA's), (Start: 197 @54056 has 298 MA's), (Start: 225 @54032 has 5 MA's), (Start: 238 @54026 has 2 MA's), (Start: 261 @53984 has 10 MA's), (269, 53963), (323, 53849), (328, 53843), (349, 53813), (385, 53753), (394, 53732), (410, 53678), (418, 53666), (425, 53648), (427, 53636), (462, 53531), (496, 53474), (511, 53438), (516, 53426), (535, 53399), (555, 53354), (588, 53297), (595, 53288), (597, 53285), (599, 53282), (724, 53027), (754, 52925), (760, 52892), (765, 52871), (799, 52778), (802, 52769), (822, 52706), (841, 52670), (842, 52667), (847, 52652), (872, 52574), (877, 52562), (883, 52541), (902, 52502), (942, 52412), (947, 52394), (949, 52388), (954, 52373), (964, 52349), (968, 52334), (969, 52331), (972, 52319), (979, 52295), (1002, 52247), (1015, 52223),

Gene: Haimas\_59 Start: 53973, Stop: 52114, Start Num: 197

Candidate Starts for Haimas\_59:

(Start: 180 @53997 has 1 MA's), (Start: 197 @53973 has 298 MA's), (Start: 225 @53949 has 5 MA's), (Start: 238 @53943 has 2 MA's), (Start: 261 @53901 has 10 MA's), (269, 53880), (323, 53766), (328, 53760), (349, 53730), (385, 53670), (394, 53649), (410, 53595), (418, 53583), (425, 53565), (427, 53553), (462, 53448), (496, 53391), (511, 53355), (516, 53343), (535, 53316), (545, 53289), (555, 53271), (566, 53253), (588, 53214), (595, 53205), (597, 53202), (599, 53199), (724, 52944), (754, 52842), (760, 52809), (765, 52788), (799, 52695), (802, 52686), (822, 52623), (841, 52587), (842, 52584), (847, 52569), (872, 52491), (877, 52479), (883, 52458), (902, 52419), (942, 52329), (947, 52311), (949, 52305), (954, 52290), (964, 52266), (968, 52251), (969, 52248), (972, 52236), (979, 52212), (1002, 52164), (1015, 52140),

Gene: Haleema\_59 Start: 54071, Stop: 52212, Start Num: 197

Candidate Starts for Haleema\_59:

(Start: 180 @54095 has 1 MA's), (Start: 197 @54071 has 298 MA's), (Start: 225 @54047 has 5 MA's), (Start: 238 @54041 has 2 MA's), (Start: 261 @53999 has 10 MA's), (269, 53978), (323, 53864), (328, 53858), (349, 53828), (385, 53768), (394, 53747), (410, 53693), (418, 53681), (425, 53663), (427, 53651), (462, 53546), (496, 53489), (511, 53453), (516, 53441), (534, 53417), (539, 53405), (545, 53387), (555, 53369), (566, 53351), (588, 53312), (595, 53303), (597, 53300), (599, 53297), (754, 52940), (760, 52907), (765, 52886), (799, 52793), (802, 52784), (822, 52721), (841, 52685), (842, 52682), (847, 52667), (872, 52589), (877, 52577), (883, 52556), (902, 52517), (942, 52427), (947, 52409), (949, 52403), (954, 52388), (964, 52364), (968, 52349), (969, 52346), (972, 52334), (979, 52310), (1002, 52262), (1015, 52238),

Gene: Halfpint\_57 Start: 53415, Stop: 51598, Start Num: 235

Candidate Starts for Halfpint\_57:

(129, 53598), (Start: 235 @53415 has 43 MA's), (252, 53385), (359, 53205), (424, 53052), (426, 53040), (437, 53010), (442, 53004), (462, 52941), (464, 52935), (496, 52884), (511, 52848), (539, 52800), (597, 52695), (647, 52599), (664, 52548), (737, 52404), (749, 52365), (755, 52335), (760, 52308), (763, 52296), (797, 52200), (799, 52194), (802, 52185), (804, 52173), (834, 52101), (841, 52071), (847, 52053), (851, 52044), (872, 51975), (877, 51963), (883, 51942), (921, 51873), (931, 51858), (938, 51834), (942, 51813), (947, 51795), (949, 51789), (964, 51750), (969, 51732), (972, 51720), (979, 51696), (994, 51654), (1015, 51624),

Gene: Hally898\_52 Start: 52998, Stop: 51175, Start Num: 189

Candidate Starts for Hally898\_52:

(Start: 175 @53016 has 4 MA's), (Start: 189 @52998 has 26 MA's), (Start: 238 @52974 has 2 MA's), (252, 52947), (Start: 261 @52932 has 10 MA's), (269, 52911), (316, 52824), (382, 52719), (399, 52677), (425, 52611), (434, 52581), (437, 52572), (441, 52569), (442, 52566), (450, 52539), (496,

52446), (504, 52428), (511, 52410), (516, 52398), (528, 52383), (535, 52371), (595, 52260), (597, 52257), (618, 52227), (634, 52191), (737, 51966), (739, 51963), (749, 51927), (754, 51903), (760, 51870), (797, 51762), (799, 51756), (801, 51750), (802, 51747), (841, 51648), (842, 51645), (847, 51630), (872, 51552), (877, 51540), (883, 51519), (885, 51510), (902, 51480), (918, 51456), (935, 51423), (942, 51390), (947, 51372), (949, 51366), (964, 51327), (969, 51309), (972, 51297), (979, 51273), (994, 51231), (1002, 51225), (1015, 51201),

Gene: Halsey\_38 Start: 27738, Stop: 29720, Start Num: 234

Candidate Starts for Halsey\_38:

(Start: 234 @27738 has 938 MA's), (336, 27912), (353, 27942), (382, 27975), (397, 28008), (424, 28083), (431, 28110), (518, 28311), (603, 28485), (675, 28641), (730, 28779), (753, 28866), (759, 28899), (769, 28929), (790, 28986), (805, 29052), (840, 29145), (942, 29412), (949, 29436), (985, 29547),

Gene: HamSlice\_44 Start: 31568, Stop: 29742, Start Num: 234

Candidate Starts for HamSlice\_44:

(Start: 234 @31568 has 938 MA's), (252, 31547), (266, 31517), (279, 31487), (379, 31325), (389, 31307), (415, 31235), (419, 31226), (458, 31106), (465, 31082), (541, 30989), (568, 30941), (582, 30920), (603, 30881), (663, 30749), (675, 30728), (700, 30683), (703, 30671), (756, 30518), (759, 30497), (798, 30374), (805, 30344), (818, 30305), (841, 30239), (842, 30236), (847, 30221), (856, 30197), (862, 30173), (942, 29966), (985, 29831), (989, 29819), (993, 29810),

Gene: Hami1\_39 Start: 29239, Stop: 27413, Start Num: 234

Candidate Starts for Hami1\_39:

(Start: 234 @29239 has 938 MA's), (359, 29026), (368, 29011), (395, 28963), (405, 28933), (411, 28912), (415, 28906), (419, 28897), (457, 28780), (465, 28753), (541, 28660), (546, 28645), (566, 28612), (596, 28561), (598, 28558), (634, 28492), (648, 28462), (657, 28432), (679, 28387), (700, 28348), (759, 28168), (769, 28138), (775, 28120), (790, 28081), (805, 28015), (841, 27934), (842, 27931), (868, 27850), (936, 27700), (938, 27697), (946, 27661), (954, 27637), (959, 27628), (963, 27616), (985, 27541), (993, 27520),

Gene: Hamish\_59 Start: 53967, Stop: 52108, Start Num: 197

Candidate Starts for Hamish\_59:

(Start: 180 @53991 has 1 MA's), (Start: 197 @53967 has 298 MA's), (Start: 225 @53943 has 5 MA's), (Start: 238 @53937 has 2 MA's), (Start: 261 @53895 has 10 MA's), (269, 53874), (323, 53760), (328, 53754), (349, 53724), (385, 53664), (394, 53643), (410, 53589), (418, 53577), (425, 53559), (427, 53547), (462, 53442), (496, 53385), (511, 53349), (516, 53337), (535, 53310), (545, 53283), (555, 53265), (566, 53247), (588, 53208), (595, 53199), (597, 53196), (599, 53193), (724, 52938), (754, 52836), (760, 52803), (765, 52782), (799, 52689), (802, 52680), (822, 52617), (841, 52581), (842, 52578), (847, 52563), (872, 52485), (877, 52473), (883, 52452), (902, 52413), (942, 52323), (947, 52305), (949, 52299), (954, 52284), (964, 52260), (968, 52245), (969, 52242), (972, 52230), (979, 52206), (1002, 52158), (1015, 52134),

Gene: Hamlet\_38 Start: 29064, Stop: 27199, Start Num: 283

Candidate Starts for Hamlet\_38:

(Start: 283 @29064 has 147 MA's), (Start: 291 @29055 has 5 MA's), (423, 28791), (426, 28776), (428, 28770), (473, 28638), (498, 28584), (532, 28497), (537, 28488), (541, 28476), (551, 28449), (553, 28446), (562, 28431), (566, 28425), (611, 28389), (634, 28344), (701, 28197), (741, 28095), (798, 27882), (802, 27870), (805, 27852), (819, 27810), (834, 27780), (849, 27723), (900, 27564), (913, 27534), (938, 27465), (943, 27441), (956, 27402), (970, 27357),

Gene: Hammer\_47 Start: 29790, Stop: 27991, Start Num: 234

Candidate Starts for Hammer\_47:

(Start: 234 @29790 has 938 MA's), (353, 29586), (359, 29577), (395, 29511), (397, 29508), (405, 29481), (409, 29466), (415, 29454), (432, 29403), (461, 29313), (465, 29301), (541, 29208), (566, 29160), (571, 29151), (660, 28968), (733, 28818), (759, 28713), (778, 28656), (790, 28620), (793, 28611), (798, 28584), (805, 28554), (818, 28515), (837, 28494), (845, 28461), (847, 28455), (879, 28356), (908, 28293), (936, 28239), (942, 28215), (962, 28158), (985, 28080), (989, 28068), (993, 28059), (995, 28056),

Gene: HanShotFirst\_43 Start: 33831, Stop: 32005, Start Num: 234

Candidate Starts for HanShotFirst\_43:

(Start: 234 @33831 has 938 MA's), (359, 33618), (368, 33603), (395, 33555), (405, 33525), (411, 33504), (415, 33498), (419, 33489), (457, 33372), (465, 33345), (541, 33252), (546, 33237), (566, 33204), (596, 33153), (598, 33150), (634, 33084), (648, 33054), (657, 33024), (679, 32979), (700, 32940), (759, 32760), (775, 32712), (790, 32673), (805, 32607), (818, 32568), (837, 32547), (841, 32526), (847, 32508), (868, 32442), (936, 32292), (938, 32289), (946, 32253), (954, 32229), (959, 32220), (963, 32208), (985, 32133), (993, 32112),

Gene: HanSolo\_38 Start: 28619, Stop: 26754, Start Num: 283

Candidate Starts for HanSolo\_38:

(Start: 234 @28706 has 938 MA's), (Start: 237 @28703 has 2 MA's), (Start: 283 @28619 has 147 MA's), (Start: 291 @28610 has 5 MA's), (342, 28505), (347, 28496), (367, 28466), (369, 28463), (424, 28343), (426, 28331), (428, 28325), (466, 28220), (473, 28193), (532, 28052), (535, 28046), (537, 28043), (541, 28031), (551, 28004), (553, 28001), (562, 27986), (566, 27980), (570, 27974), (613, 27941), (671, 27812), (701, 27752), (798, 27437), (801, 27428), (802, 27425), (805, 27407), (819, 27365), (822, 27359), (825, 27350), (832, 27335), (849, 27278), (900, 27119), (913, 27089), (917, 27080), (938, 27020), (943, 26996), (956, 26957), (967, 26924), (970, 26912), (986, 26852),

Gene: Hangman\_53 Start: 54053, Stop: 52230, Start Num: 189

Candidate Starts for Hangman\_53:

(Start: 175 @54071 has 4 MA's), (Start: 189 @54053 has 26 MA's), (Start: 238 @54029 has 2 MA's), (252, 54002), (Start: 261 @53987 has 10 MA's), (269, 53966), (316, 53879), (382, 53774), (394, 53747), (399, 53732), (425, 53666), (434, 53636), (437, 53627), (441, 53624), (442, 53621), (450, 53594), (496, 53501), (504, 53483), (511, 53465), (516, 53453), (535, 53426), (566, 53363), (588, 53324), (595, 53315), (597, 53312), (618, 53282), (634, 53246), (737, 53021), (739, 53018), (749, 52982), (754, 52958), (760, 52925), (797, 52817), (799, 52811), (802, 52802), (841, 52703), (842, 52700), (847, 52685), (872, 52607), (877, 52595), (883, 52574), (885, 52565), (902, 52535), (935, 52478), (942, 52445), (949, 52421), (964, 52382), (969, 52364), (972, 52352), (979, 52328), (994, 52286), (1002, 52280), (1015, 52256),

Gene: HankSprout\_39 Start: 28499, Stop: 26634, Start Num: 283

Candidate Starts for HankSprout\_39:

(Start: 234 @28586 has 938 MA's), (Start: 237 @28583 has 2 MA's), (Start: 283 @28499 has 147 MA's), (Start: 291 @28490 has 5 MA's), (342, 28385), (347, 28376), (367, 28346), (369, 28343), (424, 28223), (426, 28211), (428, 28205), (466, 28100), (473, 28073), (532, 27932), (535, 27926), (537, 27923), (541, 27911), (551, 27884), (553, 27881), (562, 27866), (566, 27860), (570, 27854), (613, 27821), (671, 27692), (701, 27632), (798, 27317), (801, 27308), (802, 27305), (805, 27287), (819, 27245), (822, 27239), (825, 27230), (832, 27215), (849, 27158), (900, 26999), (913, 26969), (917, 26960), (938, 26900), (943, 26876), (956, 26837), (967, 26804), (970, 26792), (986, 26732),

Gene: Hanray\_43 Start: 31494, Stop: 29701, Start Num: 234

Candidate Starts for Hanray\_43:

(Start: 234 @31494 has 938 MA's), (246, 31485), (266, 31443), (334, 31323), (336, 31320), (364, 31272), (397, 31212), (406, 31182), (409, 31170), (415, 31158), (465, 31005), (541, 30912), (619, 30774), (634, 30744), (703, 30585), (710, 30573), (726, 30546), (756, 30438), (759, 30417), (802,

30282), (805, 30264), (841, 30183), (856, 30141), (879, 30066), (918, 29991), (936, 29949), (968, 29847), (985, 29790), (989, 29778), (993, 29769),

Gene: Happiness\_44 Start: 31575, Stop: 29749, Start Num: 234

Candidate Starts for Happiness\_44:

(Start: 234 @31575 has 938 MA's), (252, 31554), (266, 31524), (279, 31494), (379, 31332), (389, 31314), (415, 31242), (419, 31233), (458, 31113), (465, 31089), (541, 30996), (568, 30948), (582, 30927), (603, 30888), (663, 30756), (675, 30735), (700, 30690), (703, 30678), (756, 30525), (759, 30504), (798, 30381), (805, 30351), (818, 30312), (841, 30246), (842, 30243), (847, 30228), (856, 30204), (862, 30180), (942, 29973), (985, 29838), (989, 29826), (993, 29817),

Gene: Harlequin\_36 Start: 28118, Stop: 26334, Start Num: 234

Candidate Starts for Harlequin\_36:

(Start: 234 @28118 has 938 MA's), (374, 27884), (390, 27854), (394, 27845), (395, 27842), (409, 27797), (415, 27785), (432, 27734), (465, 27632), (492, 27611), (541, 27539), (566, 27491), (603, 27428), (619, 27401), (663, 27296), (679, 27269), (700, 27230), (759, 27050), (775, 27002), (805, 26897), (806, 26894), (837, 26837), (841, 26816), (881, 26693), (918, 26624), (936, 26582), (942, 26558), (968, 26480), (985, 26423), (989, 26411), (1021, 26354),

Gene: HarryHoudini\_45 Start: 31805, Stop: 30018, Start Num: 234

Candidate Starts for HarryHoudini\_45:

(Start: 234 @31805 has 938 MA's), (353, 31601), (355, 31598), (359, 31592), (379, 31562), (395, 31529), (397, 31526), (405, 31499), (415, 31472), (424, 31451), (432, 31421), (465, 31319), (541, 31226), (566, 31178), (571, 31169), (582, 31154), (619, 31088), (655, 31007), (675, 30959), (740, 30815), (759, 30734), (778, 30683), (789, 30650), (805, 30581), (818, 30542), (837, 30521), (841, 30500), (845, 30488), (918, 30308), (921, 30302), (936, 30266), (942, 30242), (968, 30164), (985, 30107), (989, 30095),

Gene: HarryOW\_43 Start: 33978, Stop: 32152, Start Num: 234

Candidate Starts for HarryOW\_43:

(Start: 234 @33978 has 938 MA's), (359, 33765), (368, 33750), (395, 33702), (405, 33672), (411, 33651), (415, 33645), (419, 33636), (457, 33519), (465, 33492), (541, 33399), (546, 33384), (566, 33351), (596, 33300), (598, 33297), (634, 33231), (648, 33201), (657, 33171), (679, 33126), (700, 33087), (759, 32907), (775, 32859), (790, 32820), (805, 32754), (818, 32715), (837, 32694), (841, 32673), (847, 32655), (868, 32589), (936, 32439), (938, 32436), (946, 32400), (954, 32376), (959, 32367), (963, 32355), (985, 32280), (993, 32259),

Gene: Hartsy\_61 Start: 54405, Stop: 52546, Start Num: 197

Candidate Starts for Hartsy\_61:

(Start: 180 @54429 has 1 MA's), (Start: 197 @54405 has 298 MA's), (Start: 225 @54381 has 5 MA's), (Start: 238 @54375 has 2 MA's), (Start: 261 @54333 has 10 MA's), (269, 54312), (323, 54198), (328, 54192), (349, 54162), (385, 54102), (394, 54081), (410, 54027), (418, 54015), (425, 53997), (427, 53985), (462, 53880), (496, 53823), (511, 53787), (516, 53775), (534, 53751), (539, 53739), (545, 53721), (555, 53703), (566, 53685), (588, 53646), (595, 53637), (597, 53634), (599, 53631), (754, 53274), (760, 53241), (765, 53220), (799, 53127), (802, 53118), (822, 53055), (841, 53019), (842, 53016), (847, 53001), (872, 52923), (877, 52911), (883, 52890), (902, 52851), (942, 52761), (947, 52743), (949, 52737), (954, 52722), (964, 52698), (968, 52683), (969, 52680), (972, 52668), (979, 52644), (1002, 52596), (1015, 52572),

Gene: Harvey\_59 Start: 54060, Stop: 52201, Start Num: 197

Candidate Starts for Harvey\_59:

(Start: 180 @54084 has 1 MA's), (Start: 197 @54060 has 298 MA's), (Start: 225 @54036 has 5 MA's), (Start: 238 @54030 has 2 MA's), (Start: 261 @53988 has 10 MA's), (269, 53967), (323, 53853), (328,

53847), (349, 53817), (385, 53757), (394, 53736), (410, 53682), (418, 53670), (425, 53652), (427, 53640), (462, 53535), (496, 53478), (511, 53442), (516, 53430), (535, 53403), (545, 53376), (555, 53358), (566, 53340), (588, 53301), (595, 53292), (597, 53289), (724, 53031), (754, 52929), (760, 52896), (765, 52875), (799, 52782), (802, 52773), (822, 52710), (842, 52671), (847, 52656), (872, 52578), (877, 52566), (883, 52545), (902, 52506), (942, 52416), (947, 52398), (949, 52392), (954, 52377), (964, 52353), (968, 52338), (969, 52335), (972, 52323), (979, 52299), (1002, 52251), (1015, 52227),

Gene: HarveySr\_57 Start: 53268, Stop: 51448, Start Num: 232

Candidate Starts for HarveySr\_57:

(129, 53448), (Start: 232 @53268 has 15 MA's), (252, 53235), (359, 53055), (406, 52950), (424, 52902), (426, 52890), (437, 52860), (442, 52854), (462, 52791), (464, 52785), (496, 52734), (509, 52707), (511, 52698), (539, 52650), (597, 52545), (647, 52449), (664, 52398), (737, 52254), (749, 52215), (755, 52185), (760, 52158), (763, 52146), (797, 52050), (799, 52044), (802, 52035), (804, 52023), (834, 51951), (841, 51921), (847, 51903), (851, 51894), (872, 51825), (877, 51813), (883, 51792), (921, 51723), (931, 51708), (938, 51684), (947, 51645), (949, 51639), (962, 51606), (964, 51600), (969, 51582), (972, 51570), (975, 51558), (979, 51546), (1015, 51474),

Gene: HashRod\_49 Start: 31884, Stop: 30070, Start Num: 234

Candidate Starts for HashRod\_49:

(Start: 234 @31884 has 938 MA's), (262, 31845), (266, 31833), (353, 31680), (362, 31665), (395, 31608), (415, 31551), (419, 31542), (432, 31500), (448, 31449), (465, 31398), (518, 31344), (541, 31305), (566, 31257), (582, 31233), (603, 31194), (619, 31167), (634, 31137), (670, 31044), (679, 31032), (701, 30984), (710, 30969), (759, 30813), (778, 30762), (789, 30729), (790, 30726), (805, 30660), (818, 30621), (842, 30549), (856, 30510), (862, 30486), (868, 30468), (879, 30435), (921, 30354), (942, 30294), (970, 30207), (985, 30159), (989, 30147), (993, 30138), (995, 30135),

Gene: Hashim76\_61 Start: 54527, Stop: 52683, Start Num: 220

Candidate Starts for Hashim76\_61:

(Start: 220 @54527 has 3 MA's), (Start: 261 @54470 has 10 MA's), (272, 54443), (328, 54341), (385, 54254), (395, 54230), (404, 54200), (410, 54179), (424, 54155), (427, 54140), (434, 54122), (462, 54035), (511, 53942), (516, 53930), (539, 53894), (597, 53789), (664, 53642), (704, 53558), (706, 53552), (737, 53492), (739, 53489), (749, 53453), (754, 53429), (760, 53396), (797, 53288), (799, 53282), (802, 53273), (841, 53159), (847, 53141), (872, 53063), (877, 53051), (883, 53030), (921, 52961), (931, 52946), (942, 52901), (949, 52877), (964, 52838), (968, 52823), (972, 52808), (979, 52784), (994, 52739), (1015, 52709),

Gene: Hasitha\_37 Start: 27003, Stop: 25138, Start Num: 283

Candidate Starts for Hasitha\_37:

(Start: 283 @27003 has 147 MA's), (290, 26997), (337, 26898), (342, 26889), (357, 26865), (367, 26850), (371, 26844), (398, 26793), (399, 26790), (428, 26709), (450, 26649), (479, 26559), (489, 26556), (524, 26457), (535, 26430), (537, 26427), (541, 26415), (553, 26385), (566, 26364), (611, 26328), (680, 26181), (729, 26079), (752, 26001), (798, 25821), (805, 25791), (824, 25737), (832, 25719), (849, 25662), (854, 25635), (866, 25593), (879, 25554), (913, 25473), (917, 25464), (938, 25404), (943, 25380), (946, 25368), (949, 25359), (956, 25341), (967, 25308), (986, 25236),

Gene: HaveUMetTed\_49 Start: 31735, Stop: 29921, Start Num: 234

Candidate Starts for HaveUMetTed\_49:

(Start: 234 @31735 has 938 MA's), (262, 31696), (266, 31684), (353, 31531), (362, 31516), (395, 31459), (415, 31402), (419, 31393), (432, 31351), (448, 31300), (465, 31249), (541, 31156), (566, 31108), (582, 31084), (603, 31045), (619, 31018), (634, 30988), (670, 30895), (679, 30883), (701, 30835), (710, 30820), (759, 30664), (778, 30613), (789, 30580), (790, 30577), (805, 30511), (818, 30472), (842, 30400), (856, 30361), (862, 30337), (868, 30319), (879, 30286), (921, 30205), (942,

30145), (947, 30127), (968, 30067), (970, 30058), (985, 30010), (989, 29998), (993, 29989),

Gene: Heath\_52 Start: 53664, Stop: 51841, Start Num: 189

Candidate Starts for Heath\_52:

(Start: 175 @53682 has 4 MA's), (Start: 189 @53664 has 26 MA's), (Start: 238 @53640 has 2 MA's), (252, 53613), (Start: 261 @53598 has 10 MA's), (269, 53577), (316, 53490), (382, 53385), (399, 53343), (425, 53277), (434, 53247), (437, 53238), (441, 53235), (442, 53232), (496, 53112), (504, 53094), (511, 53076), (516, 53064), (528, 53049), (535, 53037), (595, 52926), (597, 52923), (618, 52893), (634, 52857), (737, 52632), (739, 52629), (749, 52593), (754, 52569), (760, 52536), (797, 52428), (799, 52422), (802, 52413), (841, 52314), (842, 52311), (847, 52296), (872, 52218), (877, 52206), (883, 52185), (885, 52176), (902, 52146), (935, 52089), (942, 52056), (947, 52038), (949, 52032), (964, 51993), (969, 51975), (972, 51963), (979, 51939), (994, 51897), (1002, 51891), (1015, 51867),

Gene: Heathcliff\_58 Start: 53642, Stop: 51825, Start Num: 235

Candidate Starts for Heathcliff\_58:

(129, 53825), (Start: 235 @53642 has 43 MA's), (252, 53612), (359, 53432), (424, 53279), (426, 53267), (437, 53237), (442, 53231), (462, 53168), (464, 53162), (496, 53111), (511, 53075), (539, 53027), (597, 52922), (647, 52826), (664, 52775), (737, 52631), (749, 52592), (755, 52562), (760, 52535), (763, 52523), (797, 52427), (799, 52421), (802, 52412), (804, 52400), (834, 52328), (841, 52298), (847, 52280), (851, 52271), (872, 52202), (877, 52190), (883, 52169), (921, 52100), (931, 52085), (938, 52061), (942, 52040), (949, 52016), (964, 51977), (969, 51959), (972, 51947), (975, 51935), (979, 51923), (994, 51881), (1015, 51851),

Gene: Heathen\_45 Start: 31183, Stop: 29345, Start Num: 234

Candidate Starts for Heathen\_45:

(179, 31255), (Start: 234 @31183 has 938 MA's), (266, 31132), (353, 30979), (390, 30919), (395, 30907), (415, 30850), (419, 30841), (424, 30829), (458, 30721), (465, 30697), (541, 30601), (568, 30553), (603, 30493), (636, 30430), (663, 30361), (675, 30340), (710, 30271), (713, 30265), (729, 30226), (759, 30103), (790, 30016), (798, 29980), (805, 29950), (816, 29920), (842, 29839), (856, 29800), (862, 29776), (868, 29758), (921, 29629), (942, 29569), (985, 29434), (989, 29422), (993, 29413),

Gene: Heather\_37 Start: 27927, Stop: 29858, Start Num: 234

Candidate Starts for Heather\_37:

(Start: 234 @27927 has 938 MA's), (252, 27948), (279, 28008), (353, 28137), (385, 28185), (389, 28194), (405, 28239), (526, 28476), (537, 28497), (543, 28515), (576, 28572), (582, 28587), (596, 28614), (603, 28626), (606, 28629), (617, 28644), (675, 28779), (700, 28824), (747, 28977), (759, 29037), (775, 29085), (781, 29100), (790, 29124), (796, 29154), (803, 29181), (805, 29190), (816, 29220), (825, 29244), (865, 29364), (905, 29463), (935, 29517), (942, 29550), (943, 29553), (946, 29565), (947, 29568), (949, 29574), (960, 29601), (985, 29685), (989, 29697), (1025, 29760),

Gene: Hedgerow\_57 Start: 52616, Stop: 50787, Start Num: 197

Candidate Starts for Hedgerow\_57:

(Start: 197 @52616 has 298 MA's), (Start: 238 @52589 has 2 MA's), (253, 52559), (Start: 261 @52547 has 10 MA's), (272, 52520), (273, 52517), (277, 52508), (301, 52490), (355, 52394), (385, 52343), (395, 52319), (450, 52157), (459, 52133), (462, 52121), (496, 52064), (511, 52028), (516, 52016), (534, 51992), (580, 51908), (595, 51878), (597, 51875), (618, 51845), (678, 51701), (710, 51635), (733, 51596), (737, 51584), (743, 51563), (749, 51545), (760, 51488), (783, 51431), (793, 51404), (799, 51374), (802, 51365), (822, 51299), (839, 51272), (841, 51263), (847, 51245), (856, 51221), (872, 51167), (877, 51155), (883, 51134), (921, 51065), (942, 51005), (947, 50987), (960, 50954), (964, 50942), (968, 50927), (969, 50924), (972, 50912), (979, 50888), (980, 50885), (1002, 50837), (1004, 50834), (1015, 50813), (1023, 50792),



Gene: Heffalump\_43 Start: 31940, Stop: 30153, Start Num: 234

Candidate Starts for Heffalump\_43:

(56, 32318), (120, 32129), (133, 32090), (Start: 234 @31940 has 938 MA's), (353, 31736), (355, 31733), (359, 31727), (368, 31712), (379, 31697), (395, 31664), (397, 31661), (405, 31634), (415, 31607), (424, 31586), (465, 31454), (541, 31361), (558, 31325), (566, 31313), (571, 31304), (582, 31289), (619, 31223), (655, 31142), (675, 31094), (679, 31088), (710, 31025), (759, 30869), (778, 30818), (789, 30785), (790, 30782), (805, 30716), (818, 30677), (837, 30656), (859, 30581), (862, 30569), (908, 30455), (921, 30437), (935, 30410), (936, 30401), (942, 30377), (968, 30299), (985, 30242), (989, 30230), (993, 30221),

Gene: HelDan\_45 Start: 31435, Stop: 29597, Start Num: 234

Candidate Starts for HelDan\_45:

(179, 31507), (Start: 234 @31435 has 938 MA's), (266, 31384), (353, 31231), (390, 31171), (395, 31159), (415, 31102), (419, 31093), (424, 31081), (458, 30973), (465, 30949), (541, 30853), (568, 30805), (603, 30745), (636, 30682), (663, 30613), (675, 30592), (710, 30523), (713, 30517), (729, 30478), (759, 30355), (790, 30268), (798, 30232), (805, 30202), (816, 30172), (842, 30091), (856, 30052), (862, 30028), (868, 30010), (921, 29881), (942, 29821), (985, 29686), (989, 29674), (993, 29665),

Gene: Held\_60 Start: 54034, Stop: 52175, Start Num: 197

Candidate Starts for Held\_60:

(Start: 180 @54058 has 1 MA's), (Start: 197 @54034 has 298 MA's), (Start: 225 @54010 has 5 MA's), (Start: 238 @54004 has 2 MA's), (Start: 261 @53962 has 10 MA's), (269, 53941), (323, 53827), (328, 53821), (349, 53791), (385, 53731), (394, 53710), (410, 53656), (418, 53644), (425, 53626), (427, 53614), (462, 53509), (496, 53452), (511, 53416), (516, 53404), (535, 53377), (555, 53332), (588, 53275), (595, 53266), (597, 53263), (754, 52903), (760, 52870), (765, 52849), (799, 52756), (802, 52747), (822, 52684), (841, 52648), (842, 52645), (847, 52630), (872, 52552), (877, 52540), (883, 52519), (902, 52480), (942, 52390), (947, 52372), (949, 52366), (954, 52351), (964, 52327), (968, 52312), (969, 52309), (972, 52297), (979, 52273), (1002, 52225), (1015, 52201),

Gene: Heliosoles\_47 Start: 31756, Stop: 29942, Start Num: 234

Candidate Starts for Heliosoles\_47:

(Start: 234 @31756 has 938 MA's), (262, 31717), (266, 31705), (353, 31552), (362, 31537), (395, 31480), (415, 31423), (419, 31414), (432, 31372), (448, 31321), (465, 31270), (541, 31177), (566, 31129), (582, 31105), (603, 31066), (619, 31039), (634, 31009), (670, 30916), (679, 30904), (701, 30856), (710, 30841), (759, 30685), (778, 30634), (789, 30601), (790, 30598), (805, 30532), (818, 30493), (842, 30421), (856, 30382), (862, 30358), (868, 30340), (879, 30307), (921, 30226), (942, 30166), (947, 30148), (968, 30088), (970, 30079), (985, 30031), (989, 30019), (993, 30010),

Gene: Helmet\_47 Start: 29791, Stop: 27950, Start Num: 234

Candidate Starts for Helmet\_47:

(Start: 234 @29791 has 938 MA's), (353, 29587), (395, 29512), (397, 29509), (405, 29482), (409, 29467), (415, 29455), (432, 29404), (461, 29314), (465, 29302), (541, 29209), (559, 29170), (571, 29152), (582, 29137), (619, 29071), (635, 29038), (636, 29035), (681, 28933), (710, 28873), (740, 28789), (759, 28708), (789, 28624), (790, 28621), (793, 28612), (798, 28585), (805, 28555), (837, 28495), (847, 28456), (936, 28240), (938, 28237), (942, 28216), (985, 28081), (989, 28069), (993, 28060), (995, 28057), (1042, 27964),

Gene: Hendrix\_88 Start: 57216, Stop: 59255, Start Num: 208

Candidate Starts for Hendrix\_88:

(Start: 208 @57216 has 5 MA's), (246, 57273), (270, 57330), (284, 57357), (307, 57408), (373, 57528), (391, 57564), (401, 57594), (459, 57762), (503, 57876), (517, 57915), (542, 57972), (545, 57981),

(553, 57999), (647, 58107), (650, 58122), (652, 58128), (660, 58161), (676, 58194), (697, 58239), (728, 58311), (757, 58416), (758, 58419), (785, 58488), (798, 58545), (805, 58575), (849, 58710), (866, 58779), (879, 58818), (900, 58869), (910, 58890), (935, 58956), (938, 58968), (942, 58989), (943, 58992), (945, 58998), (950, 59016), (959, 59043), (967, 59070), (971, 59088), (986, 59142), (998, 59172), (1018, 59214), (1033, 59250),

Gene: HenryJackson\_60 Start: 54560, Stop: 52701, Start Num: 197

Candidate Starts for HenryJackson\_60:

(Start: 180 @54584 has 1 MA's), (Start: 197 @54560 has 298 MA's), (Start: 225 @54536 has 5 MA's), (Start: 238 @54530 has 2 MA's), (Start: 261 @54488 has 10 MA's), (269, 54467), (323, 54353), (328, 54347), (349, 54317), (385, 54257), (394, 54236), (410, 54182), (418, 54170), (425, 54152), (427, 54140), (462, 54035), (496, 53978), (511, 53942), (516, 53930), (535, 53903), (545, 53876), (555, 53858), (566, 53840), (588, 53801), (595, 53792), (597, 53789), (724, 53531), (754, 53429), (760, 53396), (765, 53375), (799, 53282), (802, 53273), (822, 53210), (841, 53174), (842, 53171), (847, 53156), (872, 53078), (877, 53066), (883, 53045), (902, 53006), (942, 52916), (947, 52898), (949, 52892), (954, 52877), (964, 52853), (968, 52838), (969, 52835), (972, 52823), (979, 52799), (985, 52778), (1002, 52751), (1015, 52727),

Gene: Herbertwm\_42 Start: 30692, Stop: 28857, Start Num: 234

Candidate Starts for Herbertwm\_42:

(Start: 234 @30692 has 938 MA's), (353, 30488), (355, 30485), (397, 30410), (405, 30383), (409, 30368), (415, 30356), (424, 30335), (465, 30203), (541, 30110), (571, 30053), (658, 29882), (740, 29693), (759, 29612), (778, 29561), (790, 29525), (798, 29489), (805, 29459), (818, 29420), (837, 29399), (841, 29378), (879, 29261), (888, 29234), (908, 29198), (921, 29180), (936, 29144), (938, 29141), (942, 29120), (968, 29042), (985, 28985), (993, 28964), (1044, 28865),

Gene: Hercules11\_48 Start: 31861, Stop: 30047, Start Num: 234

Candidate Starts for Hercules11\_48:

(Start: 234 @31861 has 938 MA's), (262, 31822), (266, 31810), (353, 31657), (362, 31642), (395, 31585), (415, 31528), (419, 31519), (432, 31477), (448, 31426), (465, 31375), (541, 31282), (566, 31234), (571, 31225), (582, 31210), (603, 31171), (619, 31144), (634, 31114), (670, 31021), (701, 30961), (710, 30946), (759, 30790), (790, 30703), (805, 30637), (818, 30598), (842, 30526), (856, 30487), (862, 30463), (868, 30445), (879, 30412), (888, 30385), (921, 30331), (942, 30271), (968, 30193), (985, 30136), (989, 30124), (993, 30115),

Gene: HerculesXL\_37 Start: 27313, Stop: 25415, Start Num: 281

Candidate Starts for HerculesXL\_37:

(8, 28051), (10, 28045), (62, 27790), (260, 27364), (Start: 281 @27313 has 18 MA's), (310, 27250), (342, 27199), (367, 27160), (398, 27103), (420, 27046), (424, 27037), (426, 27025), (428, 27019), (447, 26968), (460, 26929), (489, 26866), (503, 26821), (532, 26746), (537, 26737), (541, 26725), (553, 26695), (566, 26674), (574, 26662), (611, 26638), (682, 26488), (771, 26227), (793, 26125), (796, 26104), (805, 26068), (817, 26032), (819, 26026), (849, 25939), (854, 25912), (900, 25780), (917, 25741), (926, 25720), (938, 25681), (943, 25657), (945, 25651), (954, 25624), (986, 25513),

Gene: Hermia\_46 Start: 35549, Stop: 33723, Start Num: 234

Candidate Starts for Hermia\_46:

(Start: 234 @35549 has 938 MA's), (359, 35336), (368, 35321), (405, 35243), (411, 35222), (415, 35216), (419, 35207), (457, 35090), (465, 35063), (541, 34970), (546, 34955), (596, 34871), (598, 34868), (634, 34802), (657, 34742), (679, 34697), (700, 34658), (759, 34478), (775, 34430), (790, 34391), (805, 34325), (818, 34286), (837, 34265), (841, 34244), (847, 34226), (868, 34160), (935, 34019), (936, 34010), (938, 34007), (946, 33971), (954, 33947), (959, 33938), (963, 33926), (985, 33851), (993, 33830),

Gene: HermioneGrange\_44 Start: 34683, Stop: 32854, Start Num: 234

Candidate Starts for HermioneGrange\_44:

(Start: 234 @34683 has 938 MA's), (359, 34470), (368, 34455), (395, 34407), (405, 34377), (411, 34356), (415, 34350), (419, 34341), (457, 34224), (465, 34197), (541, 34104), (546, 34089), (596, 34005), (598, 34002), (634, 33936), (648, 33906), (657, 33876), (679, 33831), (700, 33792), (759, 33612), (775, 33564), (793, 33516), (802, 33477), (805, 33459), (818, 33420), (837, 33399), (841, 33378), (885, 33240), (960, 33069), (967, 33045), (977, 33012), (982, 32997), (985, 32985), (993, 32964), (997, 32958), (1025, 32910), (1030, 32895),

Gene: Hertubise\_60 Start: 54326, Stop: 52467, Start Num: 197

Candidate Starts for Hertubise\_60:

(Start: 180 @54350 has 1 MA's), (Start: 197 @54326 has 298 MA's), (Start: 225 @54302 has 5 MA's), (Start: 238 @54296 has 2 MA's), (Start: 261 @54254 has 10 MA's), (269, 54233), (323, 54119), (328, 54113), (349, 54083), (385, 54023), (394, 54002), (410, 53948), (418, 53936), (425, 53918), (427, 53906), (462, 53801), (496, 53744), (511, 53708), (516, 53696), (535, 53669), (545, 53642), (555, 53624), (566, 53606), (588, 53567), (595, 53558), (597, 53555), (724, 53297), (754, 53195), (760, 53162), (765, 53141), (799, 53048), (802, 53039), (822, 52976), (841, 52940), (842, 52937), (847, 52922), (872, 52844), (877, 52832), (883, 52811), (902, 52772), (942, 52682), (947, 52664), (949, 52658), (954, 52643), (964, 52619), (968, 52604), (969, 52601), (972, 52589), (979, 52565), (1002, 52517), (1015, 52493),

Gene: Hetaeria\_60 Start: 54265, Stop: 52406, Start Num: 197

Candidate Starts for Hetaeria\_60:

(Start: 180 @54289 has 1 MA's), (Start: 197 @54265 has 298 MA's), (Start: 225 @54241 has 5 MA's), (Start: 238 @54235 has 2 MA's), (Start: 261 @54193 has 10 MA's), (269, 54172), (323, 54058), (328, 54052), (349, 54022), (385, 53962), (394, 53941), (410, 53887), (418, 53875), (425, 53857), (427, 53845), (462, 53740), (496, 53683), (511, 53647), (516, 53635), (534, 53611), (539, 53599), (545, 53581), (555, 53563), (566, 53545), (588, 53506), (595, 53497), (597, 53494), (599, 53491), (754, 53134), (760, 53101), (765, 53080), (799, 52987), (802, 52978), (822, 52915), (841, 52879), (842, 52876), (847, 52861), (872, 52783), (877, 52771), (883, 52750), (902, 52711), (942, 52621), (947, 52603), (949, 52597), (954, 52582), (964, 52558), (968, 52543), (969, 52540), (972, 52528), (979, 52504), (1002, 52456), (1015, 52432),

Gene: Hexamo\_45 Start: 29412, Stop: 27571, Start Num: 234

Candidate Starts for Hexamo\_45:

(Start: 212 @29442 has 1 MA's), (Start: 234 @29412 has 938 MA's), (353, 29208), (395, 29133), (397, 29130), (405, 29103), (409, 29088), (415, 29076), (432, 29025), (461, 28935), (465, 28923), (541, 28830), (559, 28791), (571, 28773), (582, 28758), (619, 28692), (635, 28659), (636, 28656), (681, 28554), (710, 28494), (740, 28410), (759, 28329), (789, 28245), (790, 28242), (793, 28233), (798, 28206), (805, 28176), (837, 28116), (847, 28077), (936, 27861), (938, 27858), (942, 27837), (985, 27702), (989, 27690), (993, 27681), (995, 27678), (1042, 27585),

Gene: Hexbug\_51 Start: 35224, Stop: 32828, Start Num: 45

Candidate Starts for Hexbug\_51:

(16, 35353), (19, 35344), (Start: 45 @35224 has 24 MA's), (92, 35092), (96, 35080), (109, 35035), (136, 34972), (141, 34951), (177, 34918), (216, 34861), (250, 34813), (259, 34798), (279, 34750), (317, 34675), (319, 34669), (322, 34663), (324, 34657), (366, 34588), (380, 34564), (391, 34540), (420, 34465), (426, 34444), (444, 34396), (448, 34384), (464, 34339), (522, 34183), (524, 34177), (634, 34048), (662, 34000), (668, 33988), (711, 33916), (729, 33874), (758, 33763), (770, 33721), (772, 33697), (773, 33688), (784, 33646), (805, 33553), (817, 33517), (819, 33511), (822, 33505), (824, 33499), (842, 33442), (849, 33418), (851, 33400), (880, 33307), (910, 33238), (926, 33199), (938, 33160), (942, 33139), (952, 33106), (960, 33088), (986, 32992), (996, 32968), (1016, 32929), (1046, 32860),

Gene: Heylee\_57 Start: 36664, Stop: 34496, Start Num: 202

Candidate Starts for Heylee\_57:

(200, 36667), (Start: 202 @36664 has 13 MA's), (239, 36610), (279, 36526), (356, 36373), (361, 36364), (388, 36319), (414, 36241), (415, 36232), (422, 36217), (426, 36202), (427, 36199), (445, 36142), (474, 36049), (484, 36007), (565, 35812), (572, 35800), (578, 35794), (587, 35770), (601, 35749), (616, 35728), (621, 35713), (623, 35707), (651, 35644), (672, 35593), (706, 35506), (727, 35446), (740, 35398), (766, 35296), (768, 35290), (780, 35263), (781, 35260), (789, 35239), (799, 35197), (801, 35191), (806, 35167), (814, 35125), (815, 35122), (823, 35095), (838, 35062), (840, 35050), (852, 35014), (859, 34990), (861, 34984), (862, 34978), (880, 34924), (899, 34876), (902, 34873), (925, 34813), (932, 34789), (941, 34759), (961, 34705), (964, 34696), (982, 34636), (985, 34624), (1006, 34585),

Gene: HighStump\_62 Start: 54537, Stop: 52678, Start Num: 197

Candidate Starts for HighStump\_62:

(Start: 180 @54561 has 1 MA's), (Start: 197 @54537 has 298 MA's), (Start: 225 @54513 has 5 MA's), (Start: 238 @54507 has 2 MA's), (Start: 261 @54465 has 10 MA's), (269, 54444), (323, 54330), (328, 54324), (349, 54294), (385, 54234), (394, 54213), (410, 54159), (418, 54147), (425, 54129), (462, 54012), (496, 53955), (511, 53919), (516, 53907), (535, 53880), (545, 53853), (555, 53835), (566, 53817), (588, 53778), (595, 53769), (597, 53766), (754, 53406), (760, 53373), (765, 53352), (799, 53259), (802, 53250), (822, 53187), (842, 53148), (847, 53133), (872, 53055), (877, 53043), (883, 53022), (902, 52983), (938, 52914), (942, 52893), (947, 52875), (949, 52869), (954, 52854), (964, 52830), (968, 52815), (969, 52812), (972, 52800), (979, 52776), (1002, 52728), (1015, 52704),

Gene: HippoPololi\_40 Start: 31759, Stop: 29405, Start Num: 44

Candidate Starts for HippoPololi\_40:

(34, 31786), (Start: 44 @31759 has 1 MA's), (52, 31744), (58, 31708), (136, 31513), (273, 31306), (Start: 291 @31276 has 5 MA's), (317, 31219), (342, 31183), (352, 31168), (376, 31126), (380, 31120), (391, 31096), (409, 31042), (426, 31000), (499, 30802), (517, 30760), (524, 30742), (626, 30622), (682, 30529), (686, 30520), (711, 30484), (729, 30445), (732, 30433), (770, 30292), (779, 30250), (805, 30130), (817, 30094), (819, 30088), (822, 30082), (824, 30076), (834, 30052), (842, 30019), (849, 29995), (859, 29950), (880, 29884), (926, 29776), (945, 29707), (948, 29695), (958, 29671), (979, 29593), (983, 29581), (986, 29569), (996, 29545), (1008, 29524), (1018, 29500), (1037, 29455), (1046, 29437),

Gene: Hiro\_36 Start: 28373, Stop: 26589, Start Num: 234

Candidate Starts for Hiro\_36:

(Start: 234 @28373 has 938 MA's), (374, 28139), (390, 28109), (394, 28100), (395, 28097), (409, 28052), (415, 28040), (419, 28031), (432, 27989), (465, 27887), (492, 27866), (541, 27794), (563, 27749), (566, 27746), (589, 27704), (594, 27698), (603, 27683), (619, 27656), (663, 27551), (679, 27524), (700, 27485), (759, 27305), (775, 27257), (805, 27152), (806, 27149), (837, 27092), (841, 27071), (858, 27023), (881, 26948), (918, 26879), (936, 26837), (942, 26813), (968, 26735), (985, 26678), (989, 26666), (1021, 26609),

Gene: Hocus\_60 Start: 54021, Stop: 52162, Start Num: 197

Candidate Starts for Hocus\_60:

(Start: 180 @54045 has 1 MA's), (Start: 197 @54021 has 298 MA's), (Start: 225 @53997 has 5 MA's), (Start: 238 @53991 has 2 MA's), (Start: 261 @53949 has 10 MA's), (269, 53928), (323, 53814), (328, 53808), (349, 53778), (385, 53718), (394, 53697), (410, 53643), (418, 53631), (425, 53613), (427, 53601), (462, 53496), (496, 53439), (511, 53403), (516, 53391), (535, 53364), (555, 53319), (588, 53262), (595, 53253), (597, 53250), (754, 52890), (760, 52857), (765, 52836), (799, 52743), (802, 52734), (822, 52671), (841, 52635), (842, 52632), (847, 52617), (872, 52539), (877, 52527), (883, 52506), (902, 52467), (942, 52377), (947, 52359), (949, 52353), (954, 52338), (964, 52314), (968,

52299), (969, 52296), (972, 52284), (979, 52260), (1002, 52212), (1015, 52188),

Gene: Holeinone\_57 Start: 52455, Stop: 50626, Start Num: 197

Candidate Starts for Holeinone\_57:

(Start: 197 @52455 has 298 MA's), (Start: 238 @52428 has 2 MA's), (253, 52398), (Start: 261 @52386 has 10 MA's), (272, 52359), (273, 52356), (277, 52347), (301, 52329), (355, 52233), (385, 52182), (395, 52158), (450, 51996), (456, 51981), (459, 51972), (462, 51960), (496, 51903), (511, 51867), (516, 51855), (534, 51831), (580, 51747), (595, 51717), (597, 51714), (618, 51684), (678, 51540), (710, 51474), (737, 51423), (743, 51402), (749, 51384), (760, 51327), (793, 51243), (799, 51213), (802, 51204), (822, 51138), (839, 51111), (841, 51102), (847, 51084), (856, 51060), (872, 51006), (877, 50994), (883, 50973), (921, 50904), (942, 50844), (947, 50826), (960, 50793), (964, 50781), (968, 50766), (969, 50763), (972, 50751), (979, 50727), (980, 50724), (1002, 50676), (1004, 50673), (1015, 50652), (1023, 50631),

Gene: Horex\_44 Start: 31507, Stop: 29714, Start Num: 234

Candidate Starts for Horex\_44:

(Start: 234 @31507 has 938 MA's), (246, 31498), (266, 31456), (334, 31336), (336, 31333), (364, 31285), (397, 31225), (406, 31195), (409, 31183), (415, 31171), (465, 31018), (541, 30925), (619, 30787), (634, 30757), (703, 30598), (710, 30586), (726, 30559), (756, 30451), (759, 30430), (802, 30295), (805, 30277), (841, 30196), (856, 30154), (879, 30079), (918, 30004), (936, 29962), (968, 29860), (985, 29803), (989, 29791), (993, 29782),

Gene: Holli\_44 Start: 31360, Stop: 29534, Start Num: 234

Candidate Starts for Holli\_44:

(Start: 234 @31360 has 938 MA's), (252, 31339), (266, 31309), (279, 31279), (379, 31117), (389, 31099), (415, 31027), (419, 31018), (458, 30898), (465, 30874), (541, 30781), (568, 30733), (582, 30712), (603, 30673), (663, 30541), (675, 30520), (700, 30475), (703, 30463), (756, 30310), (759, 30289), (798, 30166), (805, 30136), (818, 30097), (841, 30031), (842, 30028), (847, 30013), (856, 29989), (862, 29965), (942, 29758), (985, 29623), (989, 29611), (993, 29602),

Gene: Homines\_37 Start: 30760, Stop: 28934, Start Num: 234

Candidate Starts for Homines\_37:

(Start: 234 @30760 has 938 MA's), (359, 30547), (368, 30532), (395, 30484), (405, 30454), (411, 30433), (415, 30427), (419, 30418), (457, 30301), (465, 30274), (541, 30181), (546, 30166), (566, 30133), (596, 30082), (598, 30079), (634, 30013), (648, 29983), (657, 29953), (679, 29908), (700, 29869), (759, 29689), (769, 29659), (775, 29641), (778, 29638), (790, 29602), (805, 29536), (841, 29455), (842, 29452), (868, 29371), (936, 29221), (938, 29218), (946, 29182), (954, 29158), (959, 29149), (963, 29137), (985, 29062), (993, 29041),

Gene: Honk\_44 Start: 28246, Stop: 30111, Start Num: 232

Candidate Starts for Honk\_44:

(Start: 232 @28246 has 15 MA's), (265, 28294), (299, 28354), (353, 28450), (411, 28567), (543, 28840), (566, 28882), (603, 28948), (657, 29062), (675, 29101), (705, 29164), (739, 29269), (740, 29278), (759, 29359), (778, 29410), (796, 29476), (798, 29482), (806, 29515), (861, 29671), (869, 29698), (905, 29785), (954, 29911), (959, 29920), (964, 29935), (985, 30007), (991, 30022), (1001, 30037),

Gene: Hookmount\_44 Start: 31598, Stop: 29760, Start Num: 234

Candidate Starts for Hookmount\_44:

(Start: 234 @31598 has 938 MA's), (266, 31547), (353, 31394), (395, 31322), (405, 31292), (415, 31265), (419, 31256), (465, 31112), (541, 31016), (568, 30968), (603, 30908), (648, 30821), (663, 30776), (675, 30755), (711, 30683), (729, 30641), (740, 30599), (759, 30518), (775, 30470), (790, 30431), (798, 30395), (805, 30365), (816, 30335), (842, 30254), (856, 30215), (862, 30191), (868,

30173), (869, 30170), (921, 30044), (942, 29984), (970, 29897), (985, 29849), (989, 29837), (993, 29828),

Gene: Hoot\_45 Start: 29605, Stop: 27764, Start Num: 234

Candidate Starts for Hoot\_45:

(Start: 234 @29605 has 938 MA's), (353, 29401), (395, 29326), (397, 29323), (405, 29296), (409, 29281), (415, 29269), (432, 29218), (461, 29128), (465, 29116), (541, 29023), (559, 28984), (571, 28966), (582, 28951), (619, 28885), (635, 28852), (636, 28849), (681, 28747), (710, 28687), (740, 28603), (759, 28522), (789, 28438), (790, 28435), (793, 28426), (798, 28399), (805, 28369), (837, 28309), (847, 28270), (936, 28054), (938, 28051), (942, 28030), (985, 27895), (989, 27883), (993, 27874), (995, 27871), (1042, 27778),

Gene: Hope4ever\_46 Start: 35139, Stop: 33313, Start Num: 234

Candidate Starts for Hope4ever\_46:

(Start: 234 @35139 has 938 MA's), (359, 34926), (395, 34863), (405, 34833), (411, 34812), (415, 34806), (419, 34797), (457, 34680), (465, 34653), (541, 34560), (546, 34545), (596, 34461), (598, 34458), (634, 34392), (648, 34362), (657, 34332), (679, 34287), (700, 34248), (759, 34068), (775, 34020), (790, 33981), (805, 33915), (818, 33876), (837, 33855), (841, 33834), (847, 33816), (868, 33750), (936, 33600), (938, 33597), (946, 33561), (954, 33537), (959, 33528), (963, 33516), (985, 33441), (993, 33420),

Gene: Horchata\_59 Start: 54056, Stop: 52197, Start Num: 197

Candidate Starts for Horchata\_59:

(Start: 180 @54080 has 1 MA's), (Start: 197 @54056 has 298 MA's), (Start: 225 @54032 has 5 MA's), (Start: 238 @54026 has 2 MA's), (Start: 261 @53984 has 10 MA's), (269, 53963), (323, 53849), (328, 53843), (349, 53813), (385, 53753), (394, 53732), (410, 53678), (418, 53666), (425, 53648), (427, 53636), (462, 53531), (496, 53474), (511, 53438), (516, 53426), (535, 53399), (539, 53390), (555, 53354), (588, 53297), (595, 53288), (597, 53285), (599, 53282), (754, 52925), (760, 52892), (765, 52871), (799, 52778), (802, 52769), (822, 52706), (841, 52670), (842, 52667), (847, 52652), (872, 52574), (877, 52562), (883, 52541), (902, 52502), (942, 52412), (947, 52394), (949, 52388), (954, 52373), (964, 52349), (968, 52334), (969, 52331), (972, 52319), (979, 52295), (1002, 52247), (1015, 52223),

Gene: Horseradish\_45 Start: 32448, Stop: 30058, Start Num: 36

Candidate Starts for Horseradish\_45:

(Start: 36 @32448 has 16 MA's), (64, 32385), (71, 32367), (76, 32352), (96, 32298), (100, 32286), (105, 32265), (119, 32232), (127, 32205), (136, 32181), (159, 32154), (Start: 230 @32049 has 13 MA's), (262, 32001), (317, 31884), (366, 31803), (382, 31776), (391, 31755), (409, 31701), (410, 31698), (420, 31680), (426, 31659), (448, 31599), (524, 31401), (541, 31359), (634, 31272), (643, 31248), (655, 31242), (677, 31188), (682, 31182), (707, 31140), (711, 31137), (713, 31134), (758, 30987), (770, 30945), (773, 30918), (784, 30876), (805, 30783), (817, 30747), (819, 30741), (822, 30735), (824, 30729), (834, 30705), (842, 30672), (849, 30648), (859, 30603), (878, 30543), (938, 30390), (986, 30222), (1008, 30177), (1013, 30168), (1016, 30159),

Gene: HortumSL17\_45 Start: 31483, Stop: 29690, Start Num: 234

Candidate Starts for HortumSL17\_45:

(Start: 234 @31483 has 938 MA's), (246, 31474), (266, 31432), (334, 31312), (336, 31309), (364, 31261), (397, 31201), (406, 31171), (409, 31159), (415, 31147), (465, 30994), (541, 30901), (619, 30763), (634, 30733), (703, 30574), (710, 30562), (726, 30535), (756, 30427), (759, 30406), (802, 30271), (805, 30253), (841, 30172), (856, 30130), (879, 30055), (918, 29980), (936, 29938), (968, 29836), (985, 29779), (989, 29767), (993, 29758),

Gene: Hosp\_050 Start: 50681, Stop: 48840, Start Num: 191

Candidate Starts for Hosp\_050:

(81, 50945), (88, 50930), (Start: 191 @50681 has 2 MA's), (252, 50624), (Start: 261 @50609 has 10 MA's), (355, 50435), (385, 50384), (387, 50381), (395, 50360), (410, 50309), (412, 50303), (424, 50285), (437, 50243), (441, 50240), (450, 50210), (496, 50117), (511, 50081), (516, 50069), (582, 49955), (595, 49931), (597, 49928), (704, 49697), (739, 49628), (743, 49610), (749, 49592), (760, 49535), (797, 49427), (799, 49421), (802, 49412), (822, 49349), (841, 49313), (842, 49310), (847, 49295), (872, 49217), (877, 49205), (883, 49184), (884, 49178), (902, 49145), (921, 49115), (931, 49100), (936, 49079), (942, 49055), (949, 49031), (964, 48992), (967, 48980), (968, 48977), (969, 48974), (972, 48962), (979, 48938), (1015, 48866), (1023, 48845),

Gene: Houdini22\_45 Start: 31574, Stop: 29748, Start Num: 234

Candidate Starts for Houdini22\_45:

(Start: 234 @31574 has 938 MA's), (252, 31553), (266, 31523), (279, 31493), (379, 31331), (389, 31313), (415, 31241), (419, 31232), (458, 31112), (465, 31088), (541, 30995), (568, 30947), (582, 30926), (603, 30887), (663, 30755), (675, 30734), (700, 30689), (703, 30677), (756, 30524), (759, 30503), (798, 30380), (805, 30350), (818, 30311), (841, 30245), (842, 30242), (847, 30227), (856, 30203), (862, 30179), (942, 29972), (985, 29837), (989, 29825), (993, 29816),

Gene: HuhtaEnerson15\_39 Start: 30586, Stop: 28721, Start Num: 234

Candidate Starts for HuhtaEnerson15\_39:

(Start: 234 @30586 has 938 MA's), (266, 30535), (301, 30475), (336, 30412), (353, 30382), (355, 30379), (390, 30322), (395, 30310), (405, 30280), (415, 30253), (465, 30100), (541, 30004), (566, 29956), (618, 29872), (619, 29866), (652, 29794), (663, 29761), (670, 29746), (679, 29734), (724, 29635), (759, 29500), (769, 29470), (775, 29452), (782, 29434), (790, 29413), (793, 29404), (805, 29347), (818, 29308), (841, 29266), (847, 29248), (862, 29200), (879, 29149), (903, 29095), (908, 29086), (921, 29068), (942, 29008), (947, 28990), (978, 28897), (985, 28873), (989, 28861), (1042, 28756),

Gene: HungryHenry\_38 Start: 28624, Stop: 26759, Start Num: 283

Candidate Starts for HungryHenry\_38:

(Start: 234 @28711 has 938 MA's), (Start: 237 @28708 has 2 MA's), (Start: 283 @28624 has 147 MA's), (Start: 291 @28615 has 5 MA's), (342, 28510), (347, 28501), (367, 28471), (369, 28468), (424, 28348), (426, 28336), (428, 28330), (466, 28225), (473, 28198), (532, 28057), (535, 28051), (537, 28048), (541, 28036), (551, 28009), (553, 28006), (562, 27991), (566, 27985), (570, 27979), (613, 27946), (671, 27817), (701, 27757), (798, 27442), (801, 27433), (802, 27430), (805, 27412), (819, 27370), (822, 27364), (825, 27355), (832, 27340), (849, 27283), (900, 27124), (913, 27094), (917, 27085), (938, 27025), (943, 27001), (956, 26962), (967, 26929), (970, 26917), (986, 26857),

Gene: Hutc2\_44 Start: 30330, Stop: 28543, Start Num: 234

Candidate Starts for Hutc2\_44:

(Start: 234 @30330 has 938 MA's), (353, 30126), (395, 30054), (405, 30024), (415, 29997), (543, 29745), (571, 29694), (619, 29613), (639, 29568), (640, 29565), (675, 29484), (703, 29427), (728, 29385), (740, 29340), (759, 29259), (778, 29208), (790, 29172), (805, 29106), (837, 29046), (839, 29034), (871, 28932), (879, 28908), (884, 28890), (921, 28827), (935, 28800), (936, 28791), (942, 28767), (985, 28632), (989, 28620), (993, 28611),

Gene: Huwbert\_71 Start: 43958, Stop: 46630, Start Num: 25

Candidate Starts for Huwbert\_71:

(Start: 25 @43958 has 2 MA's), (49, 44048), (50, 44051), (52, 44054), (68, 44114), (109, 44231), (170, 44360), (Start: 282 @44537 has 4 MA's), (Start: 291 @44549 has 5 MA's), (308, 44594), (315, 44609), (329, 44636), (385, 44735), (398, 44765), (409, 44804), (426, 44846), (447, 44903), (452, 44918), (477, 44972), (524, 45083), (590, 45224), (653, 45353), (666, 45398), (668, 45401), (677, 45419), (702, 45476), (729, 45536), (746, 45596), (792, 45791), (805, 45854), (826, 45917), (849, 45992),

(870, 46073), (880, 46103), (913, 46181), (926, 46211), (938, 46250), (944, 46277), (946, 46286), (967, 46352), (986, 46424), (989, 46433), (1005, 46463), (1052, 46589), (1054, 46607),

Gene: Huxley\_45 Start: 31631, Stop: 29805, Start Num: 234

Candidate Starts for Huxley\_45:

(Start: 234 @31631 has 938 MA's), (252, 31610), (266, 31580), (279, 31550), (379, 31388), (389, 31370), (415, 31298), (419, 31289), (458, 31169), (465, 31145), (541, 31052), (568, 31004), (582, 30983), (603, 30944), (663, 30812), (675, 30791), (700, 30746), (703, 30734), (756, 30581), (759, 30560), (798, 30437), (805, 30407), (818, 30368), (841, 30302), (842, 30299), (847, 30284), (856, 30260), (862, 30236), (942, 30029), (985, 29894), (989, 29882), (993, 29873),

Gene: Hydro\_53 Start: 54045, Stop: 52222, Start Num: 189

Candidate Starts for Hydro\_53:

(Start: 175 @54063 has 4 MA's), (Start: 189 @54045 has 26 MA's), (Start: 238 @54021 has 2 MA's), (252, 53994), (Start: 261 @53979 has 10 MA's), (269, 53958), (316, 53871), (382, 53766), (399, 53724), (425, 53658), (434, 53628), (437, 53619), (441, 53616), (442, 53613), (496, 53493), (504, 53475), (511, 53457), (516, 53445), (528, 53430), (535, 53418), (595, 53307), (597, 53304), (618, 53274), (634, 53238), (737, 53013), (739, 53010), (749, 52974), (754, 52950), (760, 52917), (797, 52809), (799, 52803), (802, 52794), (841, 52695), (842, 52692), (847, 52677), (872, 52599), (877, 52587), (883, 52566), (885, 52557), (902, 52527), (935, 52470), (942, 52437), (947, 52419), (949, 52413), (964, 52374), (969, 52356), (972, 52344), (979, 52320), (994, 52278), (1002, 52272), (1015, 52248),

Gene: IAmGroot\_48 Start: 31892, Stop: 33757, Start Num: 232

Candidate Starts for IAmGroot\_48:

(Start: 232 @31892 has 15 MA's), (405, 32189), (436, 32279), (603, 32594), (655, 32699), (657, 32708), (675, 32747), (705, 32810), (759, 33005), (781, 33068), (796, 33122), (798, 33128), (806, 33161), (839, 33248), (861, 33317), (869, 33344), (985, 33653),

Gene: ICleared\_45 Start: 31599, Stop: 29773, Start Num: 234

Candidate Starts for ICleared\_45:

(Start: 234 @31599 has 938 MA's), (252, 31578), (266, 31548), (279, 31518), (379, 31356), (389, 31338), (415, 31266), (419, 31257), (458, 31137), (465, 31113), (541, 31020), (568, 30972), (582, 30951), (603, 30912), (663, 30780), (675, 30759), (700, 30714), (703, 30702), (756, 30549), (759, 30528), (798, 30405), (805, 30375), (818, 30336), (841, 30270), (842, 30267), (856, 30228), (862, 30204), (942, 29997), (985, 29862), (989, 29850), (993, 29841),

Gene: ILeeKay\_49 Start: 35713, Stop: 33884, Start Num: 234

Candidate Starts for ILeeKay\_49:

(Start: 234 @35713 has 938 MA's), (359, 35500), (368, 35485), (405, 35407), (411, 35386), (415, 35380), (419, 35371), (457, 35254), (465, 35227), (541, 35134), (546, 35119), (566, 35086), (596, 35035), (598, 35032), (628, 34978), (634, 34966), (648, 34936), (657, 34906), (679, 34861), (700, 34822), (759, 34642), (775, 34594), (793, 34546), (802, 34507), (805, 34489), (818, 34450), (837, 34429), (841, 34408), (846, 34393), (885, 34270), (960, 34099), (967, 34075), (982, 34027), (985, 34015), (993, 33994), (997, 33988), (1025, 33940), (1030, 33925),

Gene: Ibantik\_18 Start: 8692, Stop: 6680, Start Num: 234

Candidate Starts for Ibantik\_18:

(Start: 234 @8692 has 938 MA's), (359, 8473), (379, 8443), (449, 8248), (453, 8236), (465, 8200), (472, 8179), (481, 8122), (541, 7954), (596, 7849), (603, 7837), (626, 7795), (724, 7585), (759, 7450), (795, 7336), (797, 7327), (805, 7294), (829, 7228), (862, 7105), (935, 6946), (960, 6862), (962, 6856), (964, 6850), (969, 6832), (978, 6802), (985, 6778),



Gene: Icarian\_45 Start: 30940, Stop: 32814, Start Num: 234

Candidate Starts for Icarian\_45:

(Start: 234 @30940 has 938 MA's), (273, 31009), (284, 31030), (395, 31210), (419, 31276), (425, 31291), (432, 31318), (603, 31612), (709, 31846), (746, 31966), (747, 31969), (759, 32029), (761, 32035), (778, 32080), (782, 32095), (786, 32110), (796, 32146), (805, 32182), (840, 32275), (869, 32368), (901, 32446), (902, 32449), (936, 32518), (942, 32542), (946, 32557), (962, 32599), (967, 32617), (985, 32677), (993, 32698),

Gene: Iceman\_45 Start: 31856, Stop: 30030, Start Num: 234

Candidate Starts for Iceman\_45:

(Start: 234 @31856 has 938 MA's), (252, 31835), (266, 31805), (279, 31775), (379, 31613), (389, 31595), (415, 31523), (419, 31514), (458, 31394), (465, 31370), (541, 31277), (568, 31229), (582, 31208), (603, 31169), (663, 31037), (675, 31016), (700, 30971), (703, 30959), (756, 30806), (759, 30785), (798, 30662), (805, 30632), (818, 30593), (841, 30527), (842, 30524), (847, 30509), (856, 30485), (862, 30461), (942, 30254), (985, 30119), (989, 30107), (993, 30098),

Gene: Ichabod\_46 Start: 34837, Stop: 33011, Start Num: 234

Candidate Starts for Ichabod\_46:

(Start: 234 @34837 has 938 MA's), (359, 34624), (395, 34561), (405, 34531), (411, 34510), (415, 34504), (419, 34495), (457, 34378), (465, 34351), (541, 34258), (546, 34243), (566, 34210), (596, 34159), (598, 34156), (634, 34090), (648, 34060), (657, 34030), (679, 33985), (700, 33946), (759, 33766), (775, 33718), (790, 33679), (805, 33613), (818, 33574), (837, 33553), (841, 33532), (847, 33514), (868, 33448), (936, 33298), (938, 33295), (954, 33235), (959, 33226), (963, 33214), (985, 33139), (993, 33118),

Gene: Ichor\_55 Start: 36879, Stop: 34711, Start Num: 202

Candidate Starts for Ichor\_55:

(200, 36882), (Start: 202 @36879 has 13 MA's), (239, 36825), (279, 36741), (356, 36588), (361, 36579), (388, 36534), (414, 36456), (415, 36447), (422, 36432), (426, 36417), (427, 36414), (445, 36357), (474, 36264), (484, 36222), (565, 36027), (572, 36015), (578, 36009), (587, 35985), (601, 35964), (616, 35943), (621, 35928), (623, 35922), (651, 35859), (672, 35808), (706, 35721), (727, 35661), (740, 35613), (766, 35511), (768, 35505), (780, 35478), (781, 35475), (789, 35454), (799, 35412), (801, 35406), (806, 35382), (814, 35340), (815, 35337), (823, 35310), (838, 35277), (840, 35265), (852, 35229), (859, 35205), (861, 35199), (862, 35193), (880, 35139), (899, 35091), (902, 35088), (925, 35028), (932, 35004), (941, 34974), (961, 34920), (982, 34851), (985, 34839), (1006, 34800),

Gene: Idleandcovert\_46 Start: 31555, Stop: 29717, Start Num: 234

Candidate Starts for Idleandcovert\_46:

(Start: 234 @31555 has 938 MA's), (266, 31504), (303, 31438), (353, 31351), (390, 31291), (395, 31279), (415, 31222), (419, 31213), (458, 31093), (465, 31069), (541, 30973), (568, 30925), (603, 30865), (636, 30802), (663, 30733), (675, 30712), (711, 30640), (729, 30598), (740, 30556), (759, 30475), (775, 30427), (798, 30352), (805, 30322), (816, 30292), (842, 30211), (856, 30172), (862, 30148), (868, 30130), (921, 30001), (942, 29941), (985, 29806), (989, 29794), (993, 29785),

Gene: IgnatiusPatJac\_44 Start: 34736, Stop: 32907, Start Num: 234

Candidate Starts for IgnatiusPatJac\_44:

(Start: 234 @34736 has 938 MA's), (359, 34523), (395, 34460), (405, 34430), (411, 34409), (415, 34403), (419, 34394), (457, 34277), (465, 34250), (541, 34157), (546, 34142), (566, 34109), (596, 34058), (598, 34055), (634, 33989), (657, 33929), (679, 33884), (700, 33845), (759, 33665), (775, 33617), (793, 33569), (802, 33530), (805, 33512), (818, 33473), (837, 33452), (841, 33431), (846, 33416), (885, 33293), (960, 33122), (967, 33098), (982, 33050), (985, 33038), (993, 33017), (997, 33011), (1025, 32963), (1030, 32948),

Gene: Ilzat\_38 Start: 28635, Stop: 26770, Start Num: 283

Candidate Starts for Ilzat\_38:

(Start: 234 @28722 has 938 MA's), (Start: 237 @28719 has 2 MA's), (Start: 283 @28635 has 147 MA's), (Start: 291 @28626 has 5 MA's), (342, 28521), (347, 28512), (367, 28482), (369, 28479), (424, 28359), (426, 28347), (428, 28341), (466, 28236), (473, 28209), (532, 28068), (535, 28062), (537, 28059), (541, 28047), (551, 28020), (553, 28017), (562, 28002), (566, 27996), (570, 27990), (613, 27957), (671, 27828), (701, 27768), (798, 27453), (801, 27444), (802, 27441), (805, 27423), (819, 27381), (822, 27375), (825, 27366), (832, 27351), (849, 27294), (900, 27135), (913, 27105), (917, 27096), (938, 27036), (943, 27012), (956, 26973), (967, 26940), (970, 26928), (986, 26868),

Gene: ImtiyazSitla\_62 Start: 54257, Stop: 52398, Start Num: 197

Candidate Starts for ImtiyazSitla\_62:

(Start: 180 @54281 has 1 MA's), (Start: 197 @54257 has 298 MA's), (Start: 225 @54233 has 5 MA's), (Start: 238 @54227 has 2 MA's), (Start: 261 @54185 has 10 MA's), (269, 54164), (323, 54050), (328, 54044), (349, 54014), (385, 53954), (394, 53933), (410, 53879), (418, 53867), (425, 53849), (427, 53837), (462, 53732), (496, 53675), (511, 53639), (516, 53627), (534, 53603), (539, 53591), (545, 53573), (555, 53555), (566, 53537), (588, 53498), (595, 53489), (597, 53486), (599, 53483), (724, 53228), (754, 53126), (760, 53093), (765, 53072), (799, 52979), (802, 52970), (822, 52907), (841, 52871), (842, 52868), (847, 52853), (872, 52775), (877, 52763), (883, 52742), (902, 52703), (942, 52613), (947, 52595), (949, 52589), (954, 52574), (964, 52550), (968, 52535), (969, 52532), (972, 52520), (979, 52496), (985, 52475), (1002, 52448), (1015, 52424),

Gene: Imvubu\_52 Start: 51848, Stop: 49983, Start Num: 184

Candidate Starts for Imvubu\_52:

(106, 52028), (171, 51866), (173, 51863), (Start: 184 @51848 has 1 MA's), (Start: 238 @51803 has 2 MA's), (252, 51776), (273, 51731), (395, 51518), (426, 51431), (462, 51323), (496, 51266), (511, 51230), (516, 51218), (534, 51194), (535, 51191), (539, 51182), (541, 51176), (597, 51071), (618, 51041), (634, 51005), (636, 50999), (739, 50771), (760, 50678), (799, 50564), (802, 50555), (822, 50492), (841, 50456), (842, 50453), (847, 50438), (872, 50360), (877, 50348), (883, 50327), (885, 50318), (895, 50300), (921, 50258), (931, 50243), (942, 50198), (949, 50174), (954, 50159), (964, 50135), (967, 50123), (968, 50120), (969, 50117), (972, 50105), (975, 50093), (979, 50081), (986, 50057), (1015, 50009),

Gene: Inchworm\_62 Start: 54408, Stop: 52549, Start Num: 197

Candidate Starts for Inchworm\_62:

(Start: 180 @54432 has 1 MA's), (Start: 197 @54408 has 298 MA's), (Start: 225 @54384 has 5 MA's), (Start: 238 @54378 has 2 MA's), (Start: 261 @54336 has 10 MA's), (269, 54315), (323, 54201), (328, 54195), (349, 54165), (385, 54105), (394, 54084), (410, 54030), (418, 54018), (425, 54000), (427, 53988), (462, 53883), (496, 53826), (511, 53790), (516, 53778), (535, 53751), (545, 53724), (555, 53706), (566, 53688), (588, 53649), (595, 53640), (597, 53637), (599, 53634), (754, 53277), (760, 53244), (765, 53223), (799, 53130), (802, 53121), (822, 53058), (841, 53022), (842, 53019), (847, 53004), (872, 52926), (877, 52914), (883, 52893), (902, 52854), (942, 52764), (947, 52746), (949, 52740), (954, 52725), (964, 52701), (968, 52686), (969, 52683), (972, 52671), (979, 52647), (1002, 52599), (1015, 52575),

Gene: Indlovu\_55 Start: 54200, Stop: 52356, Start Num: 191

Candidate Starts for Indlovu\_55:

(Start: 191 @54200 has 2 MA's), (269, 54098), (349, 53960), (395, 53876), (437, 53759), (441, 53756), (462, 53690), (496, 53633), (511, 53597), (516, 53585), (534, 53561), (595, 53447), (597, 53444), (599, 53441), (634, 53378), (704, 53213), (710, 53204), (749, 53108), (760, 53051), (780, 53000), (799, 52937), (802, 52928), (822, 52865), (847, 52811), (856, 52787), (872, 52733), (877, 52721), (883, 52700), (885, 52691), (890, 52682), (918, 52637), (921, 52631), (931, 52616), (942, 52571),

(947, 52553), (949, 52547), (964, 52508), (967, 52496), (968, 52493), (969, 52490), (975, 52466), (979, 52454), (1015, 52382),

Gene: Indra\_48 Start: 29792, Stop: 27951, Start Num: 234

Candidate Starts for Indra\_48:

(Start: 234 @29792 has 938 MA's), (353, 29588), (395, 29513), (397, 29510), (405, 29483), (409, 29468), (415, 29456), (432, 29405), (461, 29315), (465, 29303), (541, 29210), (559, 29171), (571, 29153), (582, 29138), (619, 29072), (635, 29039), (636, 29036), (681, 28934), (710, 28874), (740, 28790), (759, 28709), (789, 28625), (790, 28622), (793, 28613), (798, 28586), (805, 28556), (837, 28496), (847, 28457), (936, 28241), (938, 28238), (942, 28217), (985, 28082), (989, 28070), (993, 28061), (995, 28058), (1042, 27965),

Gene: IndyLu\_42 Start: 29805, Stop: 31679, Start Num: 234

Candidate Starts for IndyLu\_42:

(Start: 234 @29805 has 938 MA's), (273, 29874), (284, 29895), (419, 30141), (425, 30156), (453, 30237), (603, 30477), (709, 30711), (746, 30831), (747, 30834), (759, 30894), (782, 30960), (786, 30975), (796, 31011), (805, 31047), (840, 31140), (901, 31311), (902, 31314), (936, 31383), (946, 31422), (962, 31464), (967, 31482), (985, 31542), (993, 31563),

Gene: Insomnia\_45 Start: 30835, Stop: 29048, Start Num: 234

Candidate Starts for Insomnia\_45:

(Start: 234 @30835 has 938 MA's), (353, 30631), (395, 30559), (405, 30529), (415, 30502), (543, 30250), (571, 30199), (619, 30118), (639, 30073), (675, 29989), (703, 29932), (728, 29890), (740, 29845), (759, 29764), (778, 29713), (790, 29677), (805, 29611), (837, 29551), (839, 29539), (871, 29437), (879, 29413), (884, 29395), (921, 29332), (935, 29305), (936, 29296), (942, 29272), (985, 29137), (989, 29125), (993, 29116),

Gene: Inventa\_39 Start: 28930, Stop: 27065, Start Num: 283

Candidate Starts for Inventa\_39:

(Start: 234 @29017 has 938 MA's), (Start: 237 @29014 has 2 MA's), (Start: 283 @28930 has 147 MA's), (Start: 291 @28921 has 5 MA's), (342, 28816), (347, 28807), (367, 28777), (369, 28774), (424, 28654), (426, 28642), (428, 28636), (466, 28531), (473, 28504), (532, 28363), (535, 28357), (537, 28354), (541, 28342), (551, 28315), (553, 28312), (562, 28297), (566, 28291), (570, 28285), (613, 28252), (701, 28063), (798, 27748), (801, 27739), (802, 27736), (805, 27718), (819, 27676), (822, 27670), (825, 27661), (832, 27646), (849, 27589), (900, 27430), (913, 27400), (917, 27391), (938, 27331), (943, 27307), (956, 27268), (967, 27235), (970, 27223), (986, 27163),

Gene: Inverness\_59 Start: 54064, Stop: 52205, Start Num: 197

Candidate Starts for Inverness\_59:

(Start: 180 @54088 has 1 MA's), (Start: 197 @54064 has 298 MA's), (Start: 225 @54040 has 5 MA's), (Start: 238 @54034 has 2 MA's), (Start: 261 @53992 has 10 MA's), (269, 53971), (323, 53857), (328, 53851), (349, 53821), (385, 53761), (394, 53740), (410, 53686), (418, 53674), (425, 53656), (427, 53644), (462, 53539), (496, 53482), (511, 53446), (516, 53434), (534, 53410), (539, 53398), (545, 53380), (555, 53362), (566, 53344), (588, 53305), (595, 53296), (597, 53293), (599, 53290), (754, 52933), (760, 52900), (765, 52879), (799, 52786), (802, 52777), (822, 52714), (842, 52675), (847, 52660), (872, 52582), (877, 52570), (883, 52549), (902, 52510), (942, 52420), (947, 52402), (949, 52396), (954, 52381), (964, 52357), (968, 52342), (969, 52339), (972, 52327), (979, 52303), (1002, 52255), (1015, 52231),

Gene: Inyanga\_42 Start: 33573, Stop: 31747, Start Num: 234

Candidate Starts for Inyanga\_42:

(Start: 234 @33573 has 938 MA's), (359, 33360), (368, 33345), (395, 33297), (405, 33267), (411, 33246), (415, 33240), (419, 33231), (457, 33114), (465, 33087), (541, 32994), (546, 32979), (596,

32895), (598, 32892), (634, 32826), (648, 32796), (657, 32766), (679, 32721), (700, 32682), (759, 32502), (769, 32472), (775, 32454), (790, 32415), (805, 32349), (841, 32268), (842, 32265), (868, 32184), (936, 32034), (938, 32031), (946, 31995), (954, 31971), (963, 31950), (985, 31875), (993, 31854),

Gene: loannes\_39 Start: 28925, Stop: 27069, Start Num: 291

Candidate Starts for loannes\_39:

(Start: 234 @29021 has 938 MA's), (Start: 237 @29018 has 2 MA's), (Start: 283 @28934 has 147 MA's), (Start: 291 @28925 has 5 MA's), (342, 28820), (347, 28811), (367, 28781), (369, 28778), (424, 28658), (426, 28646), (428, 28640), (466, 28535), (473, 28508), (532, 28367), (535, 28361), (537, 28358), (541, 28346), (551, 28319), (553, 28316), (562, 28301), (566, 28295), (570, 28289), (613, 28256), (671, 28127), (701, 28067), (798, 27752), (801, 27743), (802, 27740), (805, 27722), (819, 27680), (822, 27674), (825, 27665), (832, 27650), (849, 27593), (900, 27434), (913, 27404), (917, 27395), (938, 27335), (943, 27311), (956, 27272), (967, 27239), (970, 27227), (986, 27167),

Gene: Iracema64\_46 Start: 31834, Stop: 30008, Start Num: 234

Candidate Starts for Iracema64\_46:

(Start: 234 @31834 has 938 MA's), (252, 31813), (266, 31783), (279, 31753), (379, 31591), (389, 31573), (415, 31501), (419, 31492), (458, 31372), (465, 31348), (541, 31255), (568, 31207), (582, 31186), (603, 31147), (663, 31015), (675, 30994), (700, 30949), (703, 30937), (756, 30784), (759, 30763), (798, 30640), (805, 30610), (818, 30571), (841, 30505), (842, 30502), (847, 30487), (856, 30463), (862, 30439), (942, 30232), (985, 30097), (989, 30085), (993, 30076),

Gene: Iridessa\_62 Start: 53981, Stop: 52122, Start Num: 197

Candidate Starts for Iridessa\_62:

(Start: 180 @54005 has 1 MA's), (Start: 197 @53981 has 298 MA's), (Start: 225 @53957 has 5 MA's), (Start: 238 @53951 has 2 MA's), (Start: 261 @53909 has 10 MA's), (269, 53888), (323, 53774), (328, 53768), (349, 53738), (385, 53678), (394, 53657), (410, 53603), (418, 53591), (425, 53573), (427, 53561), (462, 53456), (496, 53399), (511, 53363), (516, 53351), (534, 53327), (539, 53315), (545, 53297), (555, 53279), (566, 53261), (588, 53222), (595, 53213), (597, 53210), (599, 53207), (754, 52850), (760, 52817), (765, 52796), (799, 52703), (802, 52694), (822, 52631), (841, 52595), (842, 52592), (847, 52577), (872, 52499), (877, 52487), (883, 52466), (902, 52427), (942, 52337), (947, 52319), (949, 52313), (954, 52298), (964, 52274), (968, 52259), (969, 52256), (972, 52244), (979, 52220), (1002, 52172), (1015, 52148),

Gene: Iridoclysis\_61 Start: 54348, Stop: 52489, Start Num: 197

Candidate Starts for Iridoclysis\_61:

(Start: 180 @54372 has 1 MA's), (Start: 197 @54348 has 298 MA's), (Start: 225 @54324 has 5 MA's), (Start: 238 @54318 has 2 MA's), (Start: 261 @54276 has 10 MA's), (269, 54255), (323, 54141), (328, 54135), (349, 54105), (385, 54045), (394, 54024), (410, 53970), (418, 53958), (425, 53940), (427, 53928), (462, 53823), (496, 53766), (511, 53730), (516, 53718), (535, 53691), (545, 53664), (555, 53646), (566, 53628), (588, 53589), (595, 53580), (597, 53577), (724, 53319), (754, 53217), (760, 53184), (765, 53163), (799, 53070), (802, 53061), (822, 52998), (841, 52962), (842, 52959), (847, 52944), (872, 52866), (877, 52854), (883, 52833), (902, 52794), (942, 52704), (947, 52686), (949, 52680), (954, 52665), (964, 52641), (968, 52626), (969, 52623), (972, 52611), (979, 52587), (1002, 52539), (1015, 52515),

Gene: IronMan\_44 Start: 32460, Stop: 30670, Start Num: 234

Candidate Starts for IronMan\_44:

(Start: 234 @32460 has 938 MA's), (353, 32256), (359, 32247), (397, 32178), (405, 32151), (415, 32124), (465, 31971), (541, 31878), (566, 31830), (571, 31821), (582, 31806), (619, 31740), (635, 31707), (667, 31623), (710, 31542), (728, 31512), (759, 31386), (769, 31356), (778, 31335), (798, 31263), (802, 31251), (805, 31233), (818, 31194), (837, 31173), (841, 31152), (845, 31140), (908,

30972), (936, 30918), (942, 30894), (962, 30837), (968, 30816), (985, 30759), (989, 30747), (993, 30738),

Gene: IsaacEli\_62 Start: 54547, Stop: 52688, Start Num: 197

Candidate Starts for IsaacEli\_62:

(Start: 180 @54571 has 1 MA's), (Start: 197 @54547 has 298 MA's), (Start: 225 @54523 has 5 MA's), (Start: 238 @54517 has 2 MA's), (Start: 261 @54475 has 10 MA's), (269, 54454), (323, 54340), (328, 54334), (349, 54304), (385, 54244), (394, 54223), (410, 54169), (418, 54157), (425, 54139), (427, 54127), (462, 54022), (496, 53965), (511, 53929), (516, 53917), (520, 53908), (535, 53890), (545, 53863), (555, 53845), (566, 53827), (588, 53788), (595, 53779), (597, 53776), (599, 53773), (724, 53518), (754, 53416), (760, 53383), (765, 53362), (799, 53269), (802, 53260), (822, 53197), (841, 53161), (842, 53158), (847, 53143), (872, 53065), (877, 53053), (883, 53032), (902, 52993), (942, 52903), (947, 52885), (949, 52879), (954, 52864), (964, 52840), (968, 52825), (969, 52822), (972, 52810), (979, 52786), (1002, 52738), (1015, 52714),

Gene: Isca\_44 Start: 30978, Stop: 29140, Start Num: 234

Candidate Starts for Isca\_44:

(179, 31050), (Start: 234 @30978 has 938 MA's), (266, 30927), (353, 30774), (379, 30735), (395, 30702), (415, 30645), (419, 30636), (424, 30624), (458, 30516), (465, 30492), (541, 30396), (568, 30348), (603, 30288), (663, 30156), (675, 30135), (713, 30060), (729, 30021), (740, 29979), (759, 29898), (790, 29811), (798, 29775), (805, 29745), (842, 29634), (856, 29595), (862, 29571), (868, 29553), (869, 29550), (918, 29430), (921, 29424), (942, 29364), (985, 29229), (989, 29217), (993, 29208),

Gene: Isiphiwo\_43 Start: 29164, Stop: 27323, Start Num: 234

Candidate Starts for Isiphiwo\_43:

(Start: 234 @29164 has 938 MA's), (353, 28960), (395, 28885), (397, 28882), (405, 28855), (409, 28840), (415, 28828), (432, 28777), (461, 28687), (465, 28675), (541, 28582), (559, 28543), (571, 28525), (582, 28510), (619, 28444), (635, 28411), (636, 28408), (681, 28306), (710, 28246), (740, 28162), (759, 28081), (789, 27997), (790, 27994), (793, 27985), (798, 27958), (805, 27928), (837, 27868), (847, 27829), (856, 27805), (936, 27613), (938, 27610), (942, 27589), (985, 27454), (989, 27442), (993, 27433), (995, 27430), (1042, 27337),

Gene: Iter\_41 Start: 29603, Stop: 31468, Start Num: 234

Candidate Starts for Iter\_41:

(Start: 234 @29603 has 938 MA's), (265, 29651), (359, 29816), (405, 29900), (436, 29990), (543, 30197), (546, 30206), (598, 30296), (603, 30305), (615, 30320), (675, 30458), (730, 30596), (759, 30716), (769, 30746), (790, 30803), (805, 30869), (840, 30962), (862, 31034), (985, 31364), (988, 31373),

Gene: ItsyBitsy1\_57 Start: 52478, Stop: 50649, Start Num: 197

Candidate Starts for ItsyBitsy1\_57:

(Start: 197 @52478 has 298 MA's), (Start: 238 @52451 has 2 MA's), (253, 52421), (Start: 261 @52409 has 10 MA's), (272, 52382), (273, 52379), (277, 52370), (301, 52352), (355, 52256), (385, 52205), (395, 52181), (402, 52157), (450, 52019), (459, 51995), (462, 51983), (496, 51926), (511, 51890), (516, 51878), (534, 51854), (580, 51770), (595, 51740), (597, 51737), (618, 51707), (678, 51563), (710, 51497), (737, 51446), (743, 51425), (749, 51407), (760, 51350), (793, 51266), (802, 51227), (822, 51161), (839, 51134), (841, 51125), (847, 51107), (856, 51083), (872, 51029), (877, 51017), (883, 50996), (921, 50927), (942, 50867), (947, 50849), (960, 50816), (964, 50804), (968, 50789), (969, 50786), (972, 50774), (979, 50750), (980, 50747), (1002, 50699), (1004, 50696), (1015, 50675), (1023, 50654),

Gene: IttyBittyPiggy\_40 Start: 29144, Stop: 31009, Start Num: 234

Candidate Starts for IttyBittyPiggy\_40:

(Start: 234 @29144 has 938 MA's), (265, 29192), (445, 29561), (543, 29738), (603, 29846), (615, 29861), (675, 29999), (730, 30137), (759, 30257), (790, 30344), (805, 30410), (840, 30503), (985, 30905), (988, 30914),

Gene: Iwokeuplikedis\_47 Start: 31404, Stop: 29578, Start Num: 234

Candidate Starts for Iwokeuplikedis\_47:

(Start: 234 @31404 has 938 MA's), (353, 31200), (359, 31191), (368, 31176), (379, 31161), (397, 31125), (405, 31098), (415, 31071), (424, 31050), (465, 30918), (541, 30825), (571, 30768), (582, 30753), (619, 30687), (655, 30606), (675, 30558), (679, 30552), (711, 30486), (740, 30414), (759, 30333), (778, 30282), (789, 30249), (790, 30246), (805, 30180), (818, 30141), (837, 30120), (859, 30045), (864, 30027), (879, 29982), (888, 29955), (908, 29919), (936, 29865), (942, 29841), (962, 29784), (968, 29763), (985, 29706), (989, 29694), (995, 29682), (1043, 29589),

Gene: Ixel\_38 Start: 27481, Stop: 25580, Start Num: 283

Candidate Starts for Ixel\_38:

(Start: 283 @27481 has 147 MA's), (367, 27328), (369, 27325), (371, 27322), (398, 27271), (420, 27214), (424, 27205), (426, 27193), (428, 27187), (443, 27151), (460, 27097), (532, 26911), (537, 26902), (541, 26890), (553, 26860), (566, 26839), (574, 26827), (611, 26803), (682, 26653), (728, 26557), (771, 26392), (793, 26290), (805, 26233), (817, 26197), (819, 26191), (849, 26104), (859, 26059), (900, 25945), (926, 25885), (938, 25846), (943, 25822), (945, 25816), (954, 25789), (986, 25678),

Gene: JAMaL\_53 Start: 54192, Stop: 52339, Start Num: 169

Candidate Starts for JAMaL\_53:

(158, 54210), (Start: 169 @54192 has 2 MA's), (Start: 238 @54138 has 2 MA's), (252, 54111), (Start: 261 @54096 has 10 MA's), (301, 54024), (303, 54018), (338, 53955), (349, 53937), (355, 53928), (379, 53886), (384, 53877), (386, 53874), (395, 53853), (419, 53787), (434, 53745), (437, 53736), (441, 53733), (450, 53703), (496, 53610), (504, 53592), (511, 53574), (516, 53562), (534, 53538), (535, 53535), (595, 53424), (597, 53421), (599, 53418), (618, 53391), (634, 53355), (737, 53130), (739, 53127), (749, 53091), (755, 53061), (756, 53058), (760, 53034), (797, 52926), (799, 52920), (802, 52911), (841, 52812), (842, 52809), (847, 52794), (872, 52716), (877, 52704), (883, 52683), (885, 52674), (902, 52644), (921, 52614), (935, 52587), (942, 52554), (949, 52530), (964, 52491), (968, 52476), (969, 52473), (972, 52461), (979, 52437), (994, 52395), (1002, 52389), (1015, 52365),

Gene: JC27\_45 Start: 34894, Stop: 33068, Start Num: 234

Candidate Starts for JC27\_45:

(Start: 234 @34894 has 938 MA's), (359, 34681), (405, 34588), (411, 34567), (415, 34561), (419, 34552), (457, 34435), (465, 34408), (541, 34315), (546, 34300), (566, 34267), (596, 34216), (598, 34213), (634, 34147), (648, 34117), (657, 34087), (679, 34042), (700, 34003), (759, 33823), (775, 33775), (790, 33736), (805, 33670), (818, 33631), (837, 33610), (841, 33589), (847, 33571), (868, 33505), (936, 33355), (938, 33352), (946, 33316), (954, 33292), (959, 33283), (963, 33271), (970, 33244), (985, 33196), (993, 33175),

Gene: JDog\_59 Start: 54563, Stop: 52704, Start Num: 197

Candidate Starts for JDog\_59:

(Start: 180 @54587 has 1 MA's), (Start: 197 @54563 has 298 MA's), (Start: 225 @54539 has 5 MA's), (Start: 238 @54533 has 2 MA's), (Start: 261 @54491 has 10 MA's), (269, 54470), (323, 54356), (328, 54350), (349, 54320), (385, 54260), (394, 54239), (410, 54185), (418, 54173), (425, 54155), (427, 54143), (462, 54038), (496, 53981), (511, 53945), (516, 53933), (534, 53909), (539, 53897), (545, 53879), (555, 53861), (566, 53843), (588, 53804), (595, 53795), (597, 53792), (724, 53534), (754, 53432), (760, 53399), (765, 53378), (799, 53285), (802, 53276), (822, 53213), (841, 53177), (842, 53174), (847, 53159), (872, 53081), (877, 53069), (883, 53048), (902, 53009), (942, 52919), (947,

52901), (949, 52895), (954, 52880), (964, 52856), (968, 52841), (969, 52838), (972, 52826), (979, 52802), (1002, 52754), (1015, 52730),

Gene: JF2\_45 Start: 30729, Stop: 28891, Start Num: 234

Candidate Starts for JF2\_45:

(179, 30801), (Start: 234 @30729 has 938 MA's), (266, 30678), (353, 30525), (379, 30486), (395, 30453), (415, 30396), (419, 30387), (424, 30375), (458, 30267), (465, 30243), (541, 30147), (568, 30099), (603, 30039), (663, 29907), (675, 29886), (710, 29817), (729, 29772), (740, 29730), (759, 29649), (790, 29562), (798, 29526), (805, 29496), (842, 29385), (856, 29346), (862, 29322), (868, 29304), (918, 29181), (921, 29175), (942, 29115), (984, 28983), (985, 28980), (989, 28968), (993, 28959),

Gene: JF4\_45 Start: 30729, Stop: 28891, Start Num: 234

Candidate Starts for JF4\_45:

(179, 30801), (Start: 234 @30729 has 938 MA's), (266, 30678), (353, 30525), (379, 30486), (395, 30453), (415, 30396), (419, 30387), (424, 30375), (458, 30267), (465, 30243), (541, 30147), (568, 30099), (603, 30039), (663, 29907), (675, 29886), (710, 29817), (729, 29772), (740, 29730), (759, 29649), (790, 29562), (798, 29526), (805, 29496), (842, 29385), (856, 29346), (862, 29322), (868, 29304), (918, 29181), (921, 29175), (942, 29115), (984, 28983), (985, 28980), (989, 28968), (993, 28959),

Gene: JHC117\_48 Start: 31851, Stop: 30037, Start Num: 234

Candidate Starts for JHC117\_48:

(Start: 234 @31851 has 938 MA's), (262, 31812), (266, 31800), (353, 31647), (362, 31632), (395, 31575), (415, 31518), (419, 31509), (432, 31467), (448, 31416), (465, 31365), (541, 31272), (566, 31224), (571, 31215), (582, 31200), (603, 31161), (619, 31134), (634, 31104), (670, 31011), (701, 30951), (710, 30936), (759, 30780), (790, 30693), (805, 30627), (818, 30588), (842, 30516), (856, 30477), (862, 30453), (868, 30435), (879, 30402), (888, 30375), (921, 30321), (942, 30261), (968, 30183), (985, 30126), (989, 30114), (993, 30105),

Gene: JSwag\_46 Start: 29679, Stop: 27889, Start Num: 234

Candidate Starts for JSwag\_46:

(Start: 234 @29679 has 938 MA's), (336, 29505), (395, 29400), (397, 29397), (405, 29370), (415, 29343), (432, 29292), (465, 29190), (541, 29097), (563, 29052), (566, 29049), (571, 29040), (655, 28878), (663, 28851), (675, 28830), (679, 28824), (730, 28725), (740, 28686), (754, 28635), (759, 28605), (778, 28554), (789, 28521), (796, 28488), (798, 28482), (805, 28452), (837, 28392), (841, 28371), (856, 28329), (863, 28302), (868, 28287), (903, 28200), (936, 28137), (938, 28134), (985, 27978), (989, 27966), (995, 27954),

Gene: Jaan\_45 Start: 32749, Stop: 30959, Start Num: 234

Candidate Starts for Jaan\_45:

(Start: 234 @32749 has 938 MA's), (353, 32545), (359, 32536), (397, 32467), (405, 32440), (415, 32413), (465, 32260), (541, 32167), (566, 32119), (571, 32110), (582, 32095), (619, 32029), (635, 31996), (667, 31912), (710, 31831), (728, 31801), (759, 31675), (778, 31624), (798, 31552), (805, 31522), (818, 31483), (837, 31462), (841, 31441), (845, 31429), (908, 31261), (936, 31207), (942, 31183), (962, 31126), (968, 31105), (985, 31048), (989, 31036), (993, 31027),

Gene: Jabb\_43 Start: 29585, Stop: 31459, Start Num: 234

Candidate Starts for Jabb\_43:

(Start: 231 @29582 has 7 MA's), (Start: 234 @29585 has 938 MA's), (273, 29654), (284, 29675), (395, 29855), (419, 29921), (432, 29963), (603, 30257), (663, 30392), (709, 30491), (747, 30614), (759, 30674), (761, 30680), (778, 30725), (786, 30755), (796, 30791), (805, 30827), (840, 30920), (869, 31013), (901, 31091), (936, 31163), (946, 31202), (962, 31244), (967, 31262), (985, 31322), (993,

31343),

Gene: Jabiru\_39 Start: 30201, Stop: 28336, Start Num: 234

Candidate Starts for Jabiru\_39:

(Start: 234 @30201 has 938 MA's), (301, 30090), (353, 29997), (355, 29994), (395, 29925), (405, 29895), (415, 29868), (419, 29859), (448, 29766), (453, 29751), (465, 29715), (520, 29655), (541, 29619), (566, 29571), (581, 29550), (582, 29547), (618, 29487), (652, 29409), (670, 29361), (679, 29349), (701, 29301), (724, 29250), (759, 29115), (775, 29067), (782, 29049), (790, 29028), (793, 29019), (799, 28989), (805, 28962), (806, 28959), (841, 28881), (847, 28863), (862, 28815), (879, 28764), (903, 28710), (908, 28701), (921, 28683), (947, 28605), (985, 28488), (989, 28476), (1042, 28371),

Gene: Jabith\_45 Start: 30836, Stop: 29049, Start Num: 234

Candidate Starts for Jabith\_45:

(Start: 234 @30836 has 938 MA's), (353, 30632), (395, 30560), (405, 30530), (415, 30503), (543, 30251), (571, 30200), (619, 30119), (639, 30074), (640, 30071), (675, 29990), (703, 29933), (728, 29891), (740, 29846), (759, 29765), (778, 29714), (790, 29678), (805, 29612), (837, 29552), (871, 29438), (879, 29414), (884, 29396), (921, 29333), (935, 29306), (936, 29297), (942, 29273), (985, 29138), (989, 29126), (993, 29117),

Gene: JacAttac\_62 Start: 54010, Stop: 52151, Start Num: 197

Candidate Starts for JacAttac\_62:

(Start: 180 @54034 has 1 MA's), (Start: 197 @54010 has 298 MA's), (Start: 225 @53986 has 5 MA's), (Start: 238 @53980 has 2 MA's), (Start: 261 @53938 has 10 MA's), (269, 53917), (323, 53803), (328, 53797), (349, 53767), (385, 53707), (394, 53686), (410, 53632), (418, 53620), (425, 53602), (427, 53590), (462, 53485), (496, 53428), (511, 53392), (516, 53380), (534, 53356), (539, 53344), (545, 53326), (555, 53308), (566, 53290), (588, 53251), (595, 53242), (597, 53239), (599, 53236), (754, 52879), (760, 52846), (765, 52825), (799, 52732), (802, 52723), (822, 52660), (841, 52624), (842, 52621), (847, 52606), (872, 52528), (877, 52516), (883, 52495), (902, 52456), (942, 52366), (947, 52348), (949, 52342), (954, 52327), (964, 52303), (968, 52288), (969, 52285), (972, 52273), (979, 52249), (1002, 52201), (1015, 52177),

Gene: JackSparrow\_46 Start: 35167, Stop: 33338, Start Num: 234

Candidate Starts for JackSparrow\_46:

(Start: 234 @35167 has 938 MA's), (359, 34954), (405, 34861), (411, 34840), (415, 34834), (419, 34825), (457, 34708), (465, 34681), (541, 34588), (546, 34573), (566, 34540), (596, 34489), (598, 34486), (634, 34420), (648, 34390), (657, 34360), (679, 34315), (700, 34276), (759, 34096), (775, 34048), (793, 34000), (802, 33961), (805, 33943), (818, 33904), (837, 33883), (841, 33862), (846, 33847), (885, 33724), (960, 33553), (967, 33529), (982, 33481), (985, 33469), (993, 33448), (997, 33442), (1025, 33394), (1030, 33379),

Gene: Jackstina\_54 Start: 53566, Stop: 51749, Start Num: 235

Candidate Starts for Jackstina\_54:

(Start: 235 @53566 has 43 MA's), (252, 53536), (359, 53356), (424, 53203), (426, 53191), (437, 53161), (442, 53155), (462, 53092), (464, 53086), (496, 53035), (511, 52999), (539, 52951), (597, 52846), (647, 52750), (664, 52699), (737, 52555), (749, 52516), (755, 52486), (760, 52459), (763, 52447), (797, 52351), (799, 52345), (802, 52336), (804, 52324), (834, 52252), (841, 52222), (847, 52204), (851, 52195), (872, 52126), (877, 52114), (883, 52093), (921, 52024), (931, 52009), (938, 51985), (942, 51964), (949, 51940), (964, 51901), (969, 51883), (972, 51871), (975, 51859), (979, 51847), (994, 51805), (1015, 51775),

Gene: JacoRen57\_40 Start: 35060, Stop: 32673, Start Num: 60

Candidate Starts for JacoRen57\_40:



(38, 35138), (Start: 45 @35114 has 24 MA's), (Start: 55 @35084 has 1 MA's), (Start: 60 @35060 has 1 MA's), (Start: 79 @35009 has 1 MA's), (83, 35003), (121, 34895), (124, 34880), (136, 34850), (143, 34823), (170, 34793), (Start: 208 @34739 has 5 MA's), (216, 34727), (Start: 222 @34718 has 1 MA's), (306, 34562), (395, 34406), (443, 34277), (448, 34259), (490, 34154), (495, 34136), (499, 34121), (524, 34061), (618, 33944), (634, 33932), (638, 33920), (686, 33842), (724, 33773), (759, 33638), (792, 33503), (796, 33476), (798, 33470), (807, 33431), (817, 33404), (819, 33398), (822, 33392), (824, 33386), (842, 33329), (849, 33305), (927, 33083), (976, 32912), (986, 32879), (1008, 32834), (1018, 32810), (1055, 32684),

Gene: Jaek\_55 Start: 36879, Stop: 34711, Start Num: 202

Candidate Starts for Jaek\_55:

(200, 36882), (Start: 202 @36879 has 13 MA's), (239, 36825), (279, 36741), (356, 36588), (361, 36579), (388, 36534), (414, 36456), (415, 36447), (422, 36432), (426, 36417), (427, 36414), (445, 36357), (474, 36264), (484, 36222), (565, 36027), (572, 36015), (578, 36009), (587, 35985), (601, 35964), (616, 35943), (621, 35928), (623, 35922), (651, 35859), (672, 35808), (706, 35721), (727, 35661), (740, 35613), (766, 35511), (768, 35505), (780, 35478), (781, 35475), (789, 35454), (799, 35412), (801, 35406), (806, 35382), (814, 35340), (815, 35337), (823, 35310), (838, 35277), (840, 35265), (852, 35229), (859, 35205), (861, 35199), (862, 35193), (880, 35139), (899, 35091), (902, 35088), (925, 35028), (932, 35004), (941, 34974), (961, 34920), (982, 34851), (985, 34839), (1006, 34800),

Gene: JaguarMi\_55 Start: 55103, Stop: 53277, Start Num: 189

Candidate Starts for JaguarMi\_55:

(Start: 175 @55121 has 4 MA's), (Start: 189 @55103 has 26 MA's), (Start: 238 @55076 has 2 MA's), (252, 55049), (Start: 261 @55034 has 10 MA's), (269, 55013), (316, 54926), (323, 54908), (382, 54821), (394, 54794), (399, 54779), (425, 54713), (434, 54683), (437, 54674), (441, 54671), (442, 54668), (450, 54641), (496, 54548), (504, 54530), (511, 54512), (516, 54500), (535, 54473), (566, 54410), (588, 54371), (595, 54362), (597, 54359), (618, 54329), (634, 54293), (737, 54068), (739, 54065), (749, 54029), (754, 54005), (760, 53972), (797, 53864), (799, 53858), (802, 53849), (841, 53750), (842, 53747), (847, 53732), (872, 53654), (877, 53642), (883, 53621), (885, 53612), (902, 53582), (921, 53552), (935, 53525), (942, 53492), (947, 53474), (949, 53468), (964, 53429), (969, 53411), (972, 53399), (979, 53375), (994, 53333), (1002, 53327), (1015, 53303),

Gene: JakeO\_61 Start: 54286, Stop: 52427, Start Num: 197

Candidate Starts for JakeO\_61:

(Start: 180 @54310 has 1 MA's), (Start: 197 @54286 has 298 MA's), (Start: 225 @54262 has 5 MA's), (Start: 238 @54256 has 2 MA's), (Start: 261 @54214 has 10 MA's), (269, 54193), (323, 54079), (328, 54073), (349, 54043), (385, 53983), (394, 53962), (410, 53908), (418, 53896), (425, 53878), (427, 53866), (462, 53761), (496, 53704), (511, 53668), (516, 53656), (534, 53632), (539, 53620), (545, 53602), (555, 53584), (566, 53566), (588, 53527), (595, 53518), (597, 53515), (599, 53512), (754, 53155), (760, 53122), (765, 53101), (799, 53008), (802, 52999), (822, 52936), (841, 52900), (842, 52897), (847, 52882), (872, 52804), (877, 52792), (883, 52771), (902, 52732), (942, 52642), (947, 52624), (949, 52618), (954, 52603), (964, 52579), (968, 52564), (969, 52561), (972, 52549), (979, 52525), (985, 52504), (1002, 52477), (1015, 52453), (1019, 52438),

Gene: Jamzy\_48 Start: 33115, Stop: 30731, Start Num: 45

Candidate Starts for Jamzy\_48:

(Start: 45 @33115 has 24 MA's), (86, 33001), (96, 32971), (127, 32887), (136, 32863), (177, 32809), (250, 32704), (259, 32689), (279, 32641), (317, 32566), (319, 32560), (322, 32554), (324, 32548), (366, 32479), (380, 32455), (391, 32431), (410, 32374), (420, 32356), (426, 32335), (478, 32188), (524, 32074), (546, 32017), (557, 31996), (570, 31990), (662, 31897), (668, 31885), (711, 31813), (732, 31759), (770, 31618), (772, 31594), (784, 31543), (805, 31450), (817, 31414), (819, 31408), (822, 31402), (824, 31396), (842, 31339), (849, 31315), (900, 31156), (910, 31135), (926, 31096),

(938, 31057), (942, 31036), (948, 31015), (952, 31003), (960, 30985), (976, 30922), (978, 30916), (986, 30889), (996, 30865), (1008, 30844), (1046, 30757),

Gene: Janeemi\_43 Start: 31325, Stop: 33190, Start Num: 234

Candidate Starts for Janeemi\_43:

(Start: 234 @31325 has 938 MA's), (265, 31373), (353, 31529), (405, 31622), (411, 31643), (436, 31712), (546, 31928), (598, 32018), (603, 32027), (615, 32042), (619, 32054), (655, 32132), (675, 32180), (703, 32237), (730, 32318), (759, 32438), (790, 32525), (805, 32591), (840, 32684), (862, 32756), (905, 32864), (931, 32906), (942, 32951), (982, 33074), (985, 33086), (988, 33095), (1031, 33173),

Gene: JangoPhett\_60 Start: 54351, Stop: 52492, Start Num: 197

Candidate Starts for JangoPhett\_60:

(Start: 180 @54375 has 1 MA's), (Start: 197 @54351 has 298 MA's), (Start: 225 @54327 has 5 MA's), (Start: 238 @54321 has 2 MA's), (Start: 261 @54279 has 10 MA's), (269, 54258), (323, 54144), (328, 54138), (349, 54108), (385, 54048), (394, 54027), (410, 53973), (418, 53961), (425, 53943), (427, 53931), (462, 53826), (496, 53769), (511, 53733), (516, 53721), (534, 53697), (539, 53685), (545, 53667), (555, 53649), (566, 53631), (588, 53592), (595, 53583), (597, 53580), (599, 53577), (754, 53220), (760, 53187), (765, 53166), (799, 53073), (802, 53064), (822, 53001), (841, 52965), (842, 52962), (847, 52947), (872, 52869), (877, 52857), (883, 52836), (902, 52797), (942, 52707), (947, 52689), (949, 52683), (954, 52668), (964, 52644), (968, 52629), (969, 52626), (972, 52614), (979, 52590), (1002, 52542), (1015, 52518),

Gene: Jankie\_40 Start: 28206, Stop: 30071, Start Num: 234

Candidate Starts for Jankie\_40:

(Start: 234 @28206 has 938 MA's), (395, 28473), (405, 28503), (543, 28800), (598, 28899), (615, 28923), (655, 29013), (675, 29061), (759, 29319), (803, 29463), (805, 29472), (861, 29631), (865, 29646), (905, 29745), (942, 29832), (947, 29850), (985, 29967),

Gene: Janus167\_38 Start: 28619, Stop: 26754, Start Num: 283

Candidate Starts for Janus167\_38:

(Start: 234 @28706 has 938 MA's), (Start: 237 @28703 has 2 MA's), (Start: 283 @28619 has 147 MA's), (Start: 291 @28610 has 5 MA's), (342, 28505), (347, 28496), (367, 28466), (369, 28463), (424, 28343), (426, 28331), (428, 28325), (466, 28220), (473, 28193), (532, 28052), (535, 28046), (537, 28043), (541, 28031), (551, 28004), (553, 28001), (562, 27986), (566, 27980), (570, 27974), (613, 27941), (671, 27812), (701, 27752), (798, 27437), (801, 27428), (802, 27425), (805, 27407), (819, 27365), (822, 27359), (825, 27350), (832, 27335), (849, 27278), (900, 27119), (913, 27089), (917, 27080), (938, 27020), (943, 26996), (956, 26957), (967, 26924), (970, 26912), (986, 26852),

Gene: JasmineDragon\_45 Start: 30557, Stop: 32419, Start Num: 234

Candidate Starts for JasmineDragon\_45:

(160, 30458), (Start: 172 @30476 has 1 MA's), (Start: 234 @30557 has 938 MA's), (265, 30605), (355, 30764), (359, 30770), (411, 30875), (428, 30920), (535, 31127), (603, 31256), (655, 31361), (675, 31409), (712, 31493), (759, 31667), (789, 31751), (796, 31784), (799, 31793), (814, 31844), (840, 31913), (876, 32024), (905, 32093), (908, 32099), (949, 32204), (985, 32315),

Gene: JasonD\_43 Start: 29488, Stop: 27620, Start Num: 283

Candidate Starts for JasonD\_43:

(Start: 234 @29575 has 938 MA's), (Start: 237 @29572 has 2 MA's), (Start: 283 @29488 has 147 MA's), (Start: 291 @29479 has 5 MA's), (369, 29332), (424, 29212), (426, 29200), (428, 29194), (532, 28921), (537, 28912), (541, 28900), (553, 28870), (562, 28855), (566, 28849), (570, 28843), (634, 28768), (740, 28522), (798, 28306), (801, 28297), (802, 28294), (805, 28276), (819, 28234), (849, 28144), (859, 28099), (900, 27985), (917, 27946), (938, 27886), (943, 27862), (945, 27856), (956,

27823), (967, 27790), (970, 27778),

Gene: Jasper\_46 Start: 34284, Stop: 32455, Start Num: 234

Candidate Starts for Jasper\_46:

(Start: 234 @34284 has 938 MA's), (359, 34071), (368, 34056), (395, 34008), (405, 33978), (411, 33957), (415, 33951), (419, 33942), (457, 33825), (465, 33798), (541, 33705), (546, 33690), (558, 33669), (566, 33657), (596, 33606), (598, 33603), (634, 33537), (648, 33507), (657, 33477), (679, 33432), (700, 33393), (759, 33213), (775, 33165), (793, 33117), (802, 33078), (805, 33060), (818, 33021), (837, 33000), (841, 32979), (846, 32964), (885, 32841), (960, 32670), (967, 32646), (982, 32598), (985, 32586), (993, 32565), (997, 32559), (1025, 32511), (1030, 32496),

Gene: JasperRussell\_38 Start: 28619, Stop: 26754, Start Num: 283

Candidate Starts for JasperRussell\_38:

(Start: 234 @28706 has 938 MA's), (Start: 237 @28703 has 2 MA's), (Start: 283 @28619 has 147 MA's), (Start: 291 @28610 has 5 MA's), (342, 28505), (347, 28496), (367, 28466), (369, 28463), (424, 28343), (426, 28331), (428, 28325), (466, 28220), (473, 28193), (532, 28052), (535, 28046), (537, 28043), (541, 28031), (551, 28004), (553, 28001), (562, 27986), (566, 27980), (570, 27974), (613, 27941), (671, 27812), (701, 27752), (798, 27437), (801, 27428), (802, 27425), (805, 27407), (819, 27365), (822, 27359), (825, 27350), (832, 27335), (849, 27278), (900, 27119), (913, 27089), (917, 27080), (938, 27020), (943, 26996), (956, 26957), (967, 26924), (970, 26912), (986, 26852),

Gene: Jaykayelowell\_43 Start: 31563, Stop: 29737, Start Num: 234

Candidate Starts for Jaykayelowell\_43:

(Start: 234 @31563 has 938 MA's), (252, 31542), (266, 31512), (279, 31482), (379, 31320), (389, 31302), (415, 31230), (419, 31221), (458, 31101), (465, 31077), (541, 30984), (568, 30936), (582, 30915), (603, 30876), (663, 30744), (675, 30723), (700, 30678), (703, 30666), (756, 30513), (759, 30492), (798, 30369), (805, 30339), (818, 30300), (841, 30234), (842, 30231), (847, 30216), (856, 30192), (862, 30168), (942, 29961), (985, 29826), (989, 29814), (993, 29805),

Gene: Jeeves\_50 Start: 31954, Stop: 30161, Start Num: 234

Candidate Starts for Jeeves\_50:

(Start: 234 @31954 has 938 MA's), (246, 31945), (301, 31843), (353, 31750), (395, 31675), (397, 31672), (415, 31618), (458, 31489), (465, 31465), (541, 31372), (563, 31327), (619, 31234), (634, 31204), (700, 31057), (726, 31006), (740, 30958), (759, 30877), (782, 30811), (798, 30754), (805, 30724), (837, 30664), (841, 30643), (879, 30526), (888, 30499), (935, 30418), (936, 30409), (962, 30328), (968, 30307), (970, 30298), (985, 30250), (989, 30238), (993, 30229), (995, 30226),

Gene: Jeffabunny\_45 Start: 29478, Stop: 27607, Start Num: 212

Candidate Starts for Jeffabunny\_45:

(Start: 212 @29478 has 1 MA's), (Start: 234 @29448 has 938 MA's), (353, 29244), (395, 29169), (397, 29166), (405, 29139), (409, 29124), (415, 29112), (432, 29061), (461, 28971), (465, 28959), (541, 28866), (559, 28827), (571, 28809), (582, 28794), (619, 28728), (635, 28695), (636, 28692), (681, 28590), (710, 28530), (740, 28446), (759, 28365), (789, 28281), (790, 28278), (793, 28269), (798, 28242), (805, 28212), (837, 28152), (847, 28113), (936, 27897), (938, 27894), (942, 27873), (985, 27738), (989, 27726), (993, 27717), (995, 27714), (1042, 27621),

Gene: Jemerald\_40 Start: 29369, Stop: 27471, Start Num: 283

Candidate Starts for Jemerald\_40:

(Start: 283 @29369 has 147 MA's), (357, 29231), (367, 29216), (371, 29210), (398, 29159), (420, 29102), (426, 29081), (428, 29075), (446, 29027), (447, 29024), (479, 28925), (503, 28877), (532, 28802), (537, 28793), (541, 28781), (553, 28751), (566, 28730), (590, 28715), (634, 28649), (701, 28502), (730, 28442), (733, 28427), (741, 28400), (796, 28160), (805, 28124), (819, 28082), (832, 28052), (849, 27995), (894, 27851), (900, 27836), (917, 27797), (926, 27776), (943, 27713), (954,

27680), (970, 27629), (971, 27623), (986, 27569),

Gene: JenCasNa\_49 Start: 31852, Stop: 30038, Start Num: 234

Candidate Starts for JenCasNa\_49:

(Start: 234 @31852 has 938 MA's), (262, 31813), (266, 31801), (353, 31648), (362, 31633), (395, 31576), (415, 31519), (419, 31510), (432, 31468), (448, 31417), (465, 31366), (541, 31273), (566, 31225), (571, 31216), (582, 31201), (603, 31162), (619, 31135), (634, 31105), (670, 31012), (701, 30952), (710, 30937), (759, 30781), (790, 30694), (805, 30628), (818, 30589), (842, 30517), (856, 30478), (862, 30454), (868, 30436), (879, 30403), (888, 30376), (921, 30322), (942, 30262), (968, 30184), (985, 30127), (989, 30115), (993, 30106),

Gene: Jenos\_42 Start: 30134, Stop: 28266, Start Num: 283

Candidate Starts for Jenos\_42:

(274, 30149), (Start: 283 @30134 has 147 MA's), (Start: 291 @30125 has 5 MA's), (367, 29981), (369, 29978), (420, 29867), (424, 29858), (426, 29846), (428, 29840), (466, 29735), (503, 29642), (532, 29567), (537, 29558), (541, 29546), (551, 29519), (553, 29516), (562, 29501), (566, 29495), (570, 29489), (671, 29327), (798, 28952), (801, 28943), (802, 28940), (805, 28922), (819, 28880), (849, 28790), (854, 28763), (900, 28631), (917, 28592), (938, 28532), (943, 28508), (956, 28469), (967, 28436), (970, 28424),

Gene: JeppNRM\_49 Start: 31754, Stop: 29940, Start Num: 234

Candidate Starts for JeppNRM\_49:

(Start: 234 @31754 has 938 MA's), (262, 31715), (266, 31703), (353, 31550), (362, 31535), (395, 31478), (415, 31421), (419, 31412), (432, 31370), (448, 31319), (465, 31268), (541, 31175), (566, 31127), (582, 31103), (603, 31064), (619, 31037), (634, 31007), (669, 30917), (670, 30914), (679, 30902), (701, 30854), (710, 30839), (759, 30683), (778, 30632), (789, 30599), (790, 30596), (805, 30530), (818, 30491), (842, 30419), (856, 30380), (862, 30356), (868, 30338), (879, 30305), (921, 30224), (942, 30164), (947, 30146), (968, 30086), (970, 30077), (985, 30029), (989, 30017), (993, 30008),

Gene: Jerbirus\_39 Start: 28619, Stop: 26754, Start Num: 283

Candidate Starts for Jerbirus\_39:

(Start: 234 @28706 has 938 MA's), (Start: 237 @28703 has 2 MA's), (Start: 283 @28619 has 147 MA's), (Start: 291 @28610 has 5 MA's), (342, 28505), (347, 28496), (367, 28466), (369, 28463), (424, 28343), (426, 28331), (428, 28325), (466, 28220), (473, 28193), (532, 28052), (535, 28046), (537, 28043), (541, 28031), (551, 28004), (553, 28001), (562, 27986), (566, 27980), (570, 27974), (613, 27941), (671, 27812), (701, 27752), (798, 27437), (801, 27428), (802, 27425), (805, 27407), (819, 27365), (822, 27359), (825, 27350), (832, 27335), (849, 27278), (900, 27119), (913, 27089), (917, 27080), (938, 27020), (943, 26996), (956, 26957), (967, 26924), (970, 26912), (986, 26852),

Gene: JeriBeth\_39 Start: 28482, Stop: 26617, Start Num: 283

Candidate Starts for JeriBeth\_39:

(Start: 234 @28569 has 938 MA's), (Start: 237 @28566 has 2 MA's), (Start: 283 @28482 has 147 MA's), (Start: 291 @28473 has 5 MA's), (342, 28368), (347, 28359), (367, 28329), (369, 28326), (424, 28206), (426, 28194), (428, 28188), (466, 28083), (473, 28056), (532, 27915), (535, 27909), (537, 27906), (541, 27894), (551, 27867), (553, 27864), (562, 27849), (566, 27843), (570, 27837), (613, 27804), (671, 27675), (701, 27615), (798, 27300), (801, 27291), (802, 27288), (805, 27270), (819, 27228), (822, 27222), (825, 27213), (832, 27198), (849, 27141), (900, 26982), (913, 26952), (917, 26943), (938, 26883), (943, 26859), (956, 26820), (967, 26787), (970, 26775), (986, 26715),

Gene: Jerm\_46 Start: 31734, Stop: 29947, Start Num: 234

Candidate Starts for Jerm\_46:

(160, 31821), (Start: 234 @31734 has 938 MA's), (355, 31527), (359, 31521), (368, 31506), (379, 31491), (397, 31455), (405, 31428), (415, 31401), (424, 31380), (465, 31248), (541, 31155), (566, 31107), (571, 31098), (582, 31083), (619, 31017), (655, 30936), (675, 30888), (679, 30882), (710, 30819), (759, 30663), (778, 30612), (789, 30579), (790, 30576), (805, 30510), (818, 30471), (837, 30450), (859, 30375), (862, 30363), (879, 30312), (908, 30249), (921, 30231), (936, 30195), (942, 30171), (968, 30093), (985, 30036), (989, 30024), (993, 30015),

Gene: Jerm2\_45 Start: 34938, Stop: 33109, Start Num: 234

Candidate Starts for Jerm2\_45:

(Start: 234 @34938 has 938 MA's), (359, 34725), (368, 34710), (395, 34662), (405, 34632), (411, 34611), (415, 34605), (419, 34596), (457, 34479), (465, 34452), (541, 34359), (546, 34344), (596, 34260), (598, 34257), (634, 34191), (648, 34161), (657, 34131), (679, 34086), (700, 34047), (759, 33867), (775, 33819), (793, 33771), (802, 33732), (805, 33714), (818, 33675), (837, 33654), (841, 33633), (885, 33495), (960, 33324), (967, 33300), (977, 33267), (982, 33252), (985, 33240), (993, 33219), (997, 33213), (1025, 33165), (1030, 33150),

Gene: Jesabah\_61 Start: 55148, Stop: 53289, Start Num: 197

Candidate Starts for Jesabah\_61:

(Start: 180 @55172 has 1 MA's), (Start: 197 @55148 has 298 MA's), (Start: 225 @55124 has 5 MA's), (Start: 238 @55118 has 2 MA's), (Start: 261 @55076 has 10 MA's), (269, 55055), (323, 54941), (328, 54935), (349, 54905), (385, 54845), (394, 54824), (410, 54770), (418, 54758), (425, 54740), (427, 54728), (462, 54623), (496, 54566), (511, 54530), (516, 54518), (535, 54491), (545, 54464), (555, 54446), (566, 54428), (588, 54389), (595, 54380), (597, 54377), (724, 54119), (754, 54017), (760, 53984), (765, 53963), (799, 53870), (802, 53861), (822, 53798), (841, 53762), (842, 53759), (847, 53744), (872, 53666), (877, 53654), (883, 53633), (902, 53594), (942, 53504), (947, 53486), (949, 53480), (954, 53465), (964, 53441), (968, 53426), (969, 53423), (972, 53411), (979, 53387), (1002, 53339), (1015, 53315),

Gene: Jester\_36 Start: 28049, Stop: 26265, Start Num: 234

Candidate Starts for Jester\_36:

(Start: 234 @28049 has 938 MA's), (374, 27815), (390, 27785), (394, 27776), (395, 27773), (409, 27728), (415, 27716), (432, 27665), (465, 27563), (492, 27542), (541, 27470), (566, 27422), (603, 27359), (619, 27332), (663, 27227), (679, 27200), (700, 27161), (759, 26981), (775, 26933), (805, 26828), (806, 26825), (837, 26768), (841, 26747), (881, 26624), (918, 26555), (936, 26513), (942, 26489), (968, 26411), (985, 26354), (989, 26342), (1021, 26285),

Gene: JetBlade\_45 Start: 31564, Stop: 29738, Start Num: 234

Candidate Starts for JetBlade\_45:

(Start: 234 @31564 has 938 MA's), (252, 31543), (266, 31513), (279, 31483), (379, 31321), (389, 31303), (415, 31231), (419, 31222), (458, 31102), (465, 31078), (541, 30985), (568, 30937), (582, 30916), (603, 30877), (663, 30745), (675, 30724), (700, 30679), (703, 30667), (756, 30514), (759, 30493), (798, 30370), (805, 30340), (818, 30301), (841, 30235), (842, 30232), (847, 30217), (856, 30193), (862, 30169), (942, 29962), (947, 29944), (985, 29827), (989, 29815), (993, 29806),

Gene: JewelBug\_47 Start: 29796, Stop: 27955, Start Num: 234

Candidate Starts for JewelBug\_47:

(Start: 234 @29796 has 938 MA's), (353, 29592), (395, 29517), (397, 29514), (405, 29487), (409, 29472), (415, 29460), (432, 29409), (461, 29319), (465, 29307), (541, 29214), (559, 29175), (571, 29157), (582, 29142), (619, 29076), (635, 29043), (636, 29040), (681, 28938), (710, 28878), (740, 28794), (759, 28713), (789, 28629), (790, 28626), (793, 28617), (798, 28590), (805, 28560), (837, 28500), (847, 28461), (936, 28245), (938, 28242), (942, 28221), (985, 28086), (989, 28074), (993, 28065), (995, 28062), (1042, 27969),

Gene: Jiawan\_43 Start: 31526, Stop: 29733, Start Num: 234

Candidate Starts for Jiawan\_43:

(Start: 234 @31526 has 938 MA's), (246, 31517), (266, 31475), (334, 31355), (336, 31352), (364, 31304), (397, 31244), (406, 31214), (409, 31202), (415, 31190), (465, 31037), (541, 30944), (619, 30806), (634, 30776), (703, 30617), (710, 30605), (726, 30578), (756, 30470), (759, 30449), (802, 30314), (805, 30296), (841, 30215), (856, 30173), (879, 30098), (918, 30023), (936, 29981), (968, 29879), (985, 29822), (989, 29810), (993, 29801),

Gene: Jillium\_60 Start: 54555, Stop: 52696, Start Num: 197

Candidate Starts for Jillium\_60:

(Start: 180 @54579 has 1 MA's), (Start: 197 @54555 has 298 MA's), (Start: 225 @54531 has 5 MA's), (Start: 238 @54525 has 2 MA's), (Start: 261 @54483 has 10 MA's), (269, 54462), (323, 54348), (328, 54342), (349, 54312), (385, 54252), (394, 54231), (410, 54177), (418, 54165), (425, 54147), (427, 54135), (462, 54030), (496, 53973), (511, 53937), (516, 53925), (534, 53901), (539, 53889), (545, 53871), (555, 53853), (566, 53835), (588, 53796), (595, 53787), (597, 53784), (599, 53781), (754, 53424), (760, 53391), (765, 53370), (799, 53277), (802, 53268), (822, 53205), (841, 53169), (842, 53166), (847, 53151), (872, 53073), (877, 53061), (883, 53040), (902, 53001), (942, 52911), (947, 52893), (949, 52887), (954, 52872), (964, 52848), (968, 52833), (969, 52830), (972, 52818), (979, 52794), (1002, 52746), (1015, 52722),

Gene: Jiminy\_61 Start: 54122, Stop: 52263, Start Num: 197

Candidate Starts for Jiminy\_61:

(Start: 180 @54146 has 1 MA's), (Start: 197 @54122 has 298 MA's), (Start: 225 @54098 has 5 MA's), (Start: 238 @54092 has 2 MA's), (Start: 261 @54050 has 10 MA's), (269, 54029), (323, 53915), (328, 53909), (349, 53879), (385, 53819), (394, 53798), (410, 53744), (418, 53732), (425, 53714), (427, 53702), (462, 53597), (496, 53540), (511, 53504), (516, 53492), (534, 53468), (539, 53456), (545, 53438), (555, 53420), (566, 53402), (588, 53363), (595, 53354), (597, 53351), (599, 53348), (724, 53093), (754, 52991), (760, 52958), (765, 52937), (799, 52844), (802, 52835), (822, 52772), (841, 52736), (842, 52733), (847, 52718), (872, 52640), (877, 52628), (883, 52607), (902, 52568), (942, 52478), (947, 52460), (949, 52454), (954, 52439), (964, 52415), (968, 52400), (969, 52397), (972, 52385), (979, 52361), (985, 52340), (1002, 52313), (1015, 52289), (1019, 52274),

Gene: Jingles\_37 Start: 28487, Stop: 26637, Start Num: 281

Candidate Starts for Jingles\_37:

(Start: 281 @28487 has 18 MA's), (347, 28364), (369, 28331), (420, 28220), (426, 28199), (428, 28193), (431, 28184), (447, 28142), (512, 27986), (532, 27932), (535, 27926), (537, 27923), (541, 27911), (553, 27881), (611, 27824), (680, 27677), (741, 27530), (798, 27320), (802, 27308), (805, 27290), (819, 27248), (825, 27233), (849, 27161), (913, 26972), (917, 26963), (938, 26903), (943, 26879), (949, 26858), (954, 26846), (986, 26735),

Gene: Jiraiya\_64 Start: 54320, Stop: 52461, Start Num: 197

Candidate Starts for Jiraiya\_64:

(Start: 180 @54344 has 1 MA's), (Start: 197 @54320 has 298 MA's), (Start: 225 @54296 has 5 MA's), (Start: 238 @54290 has 2 MA's), (Start: 261 @54248 has 10 MA's), (269, 54227), (323, 54113), (328, 54107), (349, 54077), (385, 54017), (394, 53996), (410, 53942), (418, 53930), (425, 53912), (427, 53900), (462, 53795), (496, 53738), (511, 53702), (516, 53690), (535, 53663), (555, 53618), (588, 53561), (595, 53552), (597, 53549), (754, 53189), (760, 53156), (765, 53135), (799, 53042), (802, 53033), (822, 52970), (841, 52934), (842, 52931), (847, 52916), (872, 52838), (877, 52826), (883, 52805), (902, 52766), (942, 52676), (947, 52658), (949, 52652), (954, 52637), (964, 52613), (968, 52598), (969, 52595), (972, 52583), (979, 52559), (1002, 52511), (1015, 52487), (1019, 52472),

Gene: Jobu08\_47 Start: 31685, Stop: 29871, Start Num: 234

Candidate Starts for Jobu08\_47:

(Start: 234 @31685 has 938 MA's), (262, 31646), (266, 31634), (353, 31481), (362, 31466), (395, 31409), (415, 31352), (419, 31343), (432, 31301), (448, 31250), (465, 31199), (541, 31106), (566, 31058), (571, 31049), (582, 31034), (603, 30995), (619, 30968), (634, 30938), (670, 30845), (679, 30833), (701, 30785), (710, 30770), (759, 30614), (790, 30527), (805, 30461), (818, 30422), (842, 30350), (856, 30311), (862, 30287), (868, 30269), (879, 30236), (888, 30209), (921, 30155), (942, 30095), (968, 30017), (985, 29960), (989, 29948), (993, 29939),

Gene: Joemato\_41 Start: 29704, Stop: 31569, Start Num: 234

Candidate Starts for Joemato\_41:

(Start: 137 @29560 has 1 MA's), (Start: 145 @29587 has 1 MA's), (148, 29590), (163, 29617), (Start: 234 @29704 has 938 MA's), (265, 29752), (405, 30001), (424, 30049), (436, 30091), (543, 30298), (546, 30307), (598, 30397), (603, 30406), (615, 30421), (635, 30466), (655, 30511), (675, 30559), (703, 30616), (730, 30697), (753, 30784), (759, 30817), (769, 30847), (790, 30904), (805, 30970), (840, 31063), (862, 31135), (905, 31243), (936, 31306), (942, 31330), (978, 31441), (985, 31465), (988, 31474),

Gene: JohnDoe\_41 Start: 29700, Stop: 31565, Start Num: 234

Candidate Starts for JohnDoe\_41:

(Start: 234 @29700 has 938 MA's), (265, 29748), (405, 29997), (424, 30045), (436, 30087), (543, 30294), (546, 30303), (598, 30393), (603, 30402), (615, 30417), (635, 30462), (655, 30507), (675, 30555), (703, 30612), (730, 30693), (753, 30780), (759, 30813), (769, 30843), (790, 30900), (805, 30966), (814, 30990), (840, 31059), (862, 31131), (905, 31239), (936, 31302), (942, 31326), (978, 31437), (984, 31458), (985, 31461), (988, 31470), (1008, 31506),

Gene: Johnathan\_41 Start: 28861, Stop: 30735, Start Num: 234

Candidate Starts for Johnathan\_41:

(Start: 231 @28858 has 7 MA's), (Start: 234 @28861 has 938 MA's), (273, 28930), (284, 28951), (419, 29197), (432, 29239), (556, 29452), (603, 29533), (709, 29767), (747, 29890), (759, 29950), (761, 29956), (778, 30001), (782, 30016), (786, 30031), (796, 30067), (805, 30103), (840, 30196), (869, 30289), (901, 30367), (936, 30439), (946, 30478), (962, 30520), (967, 30538), (978, 30574), (985, 30598), (993, 30619),

Gene: Jolie1\_052 Start: 52581, Stop: 50743, Start Num: 191

Candidate Starts for Jolie1\_052:

(66, 52887), (81, 52845), (88, 52830), (Start: 191 @52581 has 2 MA's), (252, 52524), (Start: 261 @52509 has 10 MA's), (298, 52443), (299, 52440), (385, 52287), (387, 52284), (395, 52263), (410, 52212), (412, 52206), (424, 52188), (437, 52146), (441, 52143), (450, 52113), (496, 52020), (511, 51984), (516, 51972), (545, 51918), (582, 51858), (595, 51834), (597, 51831), (634, 51765), (739, 51531), (743, 51513), (749, 51495), (760, 51438), (797, 51330), (799, 51324), (802, 51315), (822, 51252), (841, 51216), (842, 51213), (847, 51198), (872, 51120), (877, 51108), (883, 51087), (884, 51081), (902, 51048), (921, 51018), (931, 51003), (936, 50982), (942, 50958), (949, 50934), (964, 50895), (967, 50883), (968, 50880), (969, 50877), (972, 50865), (979, 50841), (1015, 50769), (1023, 50748),

Gene: JoongJeon\_44 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for JoongJeon\_44:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Jordennis\_45 Start: 29635, Stop: 27794, Start Num: 234

Candidate Starts for Jordennis\_45:

(Start: 234 @29635 has 938 MA's), (353, 29431), (395, 29356), (397, 29353), (405, 29326), (409, 29311), (415, 29299), (432, 29248), (461, 29158), (465, 29146), (541, 29053), (559, 29014), (571, 28996), (582, 28981), (619, 28915), (635, 28882), (636, 28879), (681, 28777), (710, 28717), (740, 28633), (759, 28552), (789, 28468), (790, 28465), (793, 28456), (798, 28429), (802, 28417), (805, 28399), (837, 28339), (847, 28300), (936, 28084), (938, 28081), (942, 28060), (985, 27925), (989, 27913), (993, 27904), (995, 27901), (1042, 27808),

Gene: Jorgensen\_45 Start: 34588, Stop: 32762, Start Num: 234

Candidate Starts for Jorgensen\_45:

(Start: 234 @34588 has 938 MA's), (359, 34375), (368, 34360), (395, 34312), (405, 34282), (411, 34261), (415, 34255), (419, 34246), (457, 34129), (465, 34102), (541, 34009), (546, 33994), (596, 33910), (598, 33907), (634, 33841), (648, 33811), (657, 33781), (679, 33736), (700, 33697), (759, 33517), (769, 33487), (775, 33469), (790, 33430), (805, 33364), (841, 33283), (842, 33280), (868, 33199), (936, 33049), (938, 33046), (946, 33010), (954, 32986), (959, 32977), (963, 32965), (985, 32890), (993, 32869),

Gene: Joselito\_45 Start: 30776, Stop: 28989, Start Num: 234

Candidate Starts for Joselito\_45:

(Start: 234 @30776 has 938 MA's), (353, 30572), (395, 30500), (405, 30470), (415, 30443), (543, 30191), (571, 30140), (619, 30059), (639, 30014), (703, 29873), (728, 29831), (740, 29786), (759, 29705), (778, 29654), (790, 29618), (805, 29552), (837, 29492), (839, 29480), (871, 29378), (879, 29354), (884, 29336), (921, 29273), (935, 29246), (936, 29237), (942, 29213), (985, 29078), (989, 29066), (993, 29057),

Gene: JoshKayV\_46 Start: 31792, Stop: 30005, Start Num: 234

Candidate Starts for JoshKayV\_46:

(Start: 234 @31792 has 938 MA's), (355, 31585), (359, 31579), (368, 31564), (379, 31549), (397, 31513), (405, 31486), (415, 31459), (424, 31438), (465, 31306), (541, 31213), (566, 31165), (571, 31156), (582, 31141), (619, 31075), (655, 30994), (675, 30946), (679, 30940), (710, 30877), (759, 30721), (789, 30637), (790, 30634), (805, 30568), (818, 30529), (837, 30508), (859, 30433), (862, 30421), (888, 30343), (908, 30307), (921, 30289), (936, 30253), (942, 30229), (968, 30151), (985, 30094), (989, 30082), (993, 30073),

Gene: Journey13\_40 Start: 30167, Stop: 28380, Start Num: 234

Candidate Starts for Journey13\_40:

(Start: 234 @30167 has 938 MA's), (353, 29963), (355, 29960), (359, 29954), (379, 29924), (390, 29903), (394, 29894), (395, 29891), (405, 29861), (415, 29834), (424, 29813), (463, 29687), (465, 29681), (541, 29588), (544, 29579), (566, 29540), (582, 29516), (619, 29450), (663, 29342), (675, 29321), (759, 29096), (778, 29045), (793, 29000), (798, 28973), (805, 28943), (818, 28904), (837, 28883), (859, 28808), (864, 28790), (879, 28745), (888, 28718), (908, 28682), (921, 28664), (936, 28628), (942, 28604), (985, 28469), (989, 28457), (993, 28448),

Gene: Jovita\_43 Start: 29600, Stop: 31474, Start Num: 234

Candidate Starts for Jovita\_43:

(Start: 231 @29597 has 7 MA's), (Start: 234 @29600 has 938 MA's), (273, 29669), (284, 29690), (395, 29870), (432, 29978), (603, 30272), (663, 30407), (709, 30506), (747, 30629), (759, 30689), (761, 30695), (778, 30740), (782, 30755), (786, 30770), (796, 30806), (805, 30842), (840, 30935), (869, 31028), (901, 31106), (902, 31109), (936, 31178), (938, 31181), (946, 31217), (962, 31259), (967, 31277), (985, 31337), (993, 31358),

Gene: Jovo\_38 Start: 30627, Stop: 28783, Start Num: 234

Candidate Starts for Jovo\_38:



(Start: 234 @30627 has 938 MA's), (266, 30576), (301, 30516), (336, 30453), (353, 30423), (355, 30420), (390, 30363), (395, 30351), (405, 30321), (415, 30294), (448, 30192), (453, 30177), (465, 30141), (520, 30081), (541, 30045), (566, 29997), (618, 29913), (619, 29907), (652, 29835), (663, 29802), (670, 29787), (679, 29775), (724, 29676), (759, 29541), (769, 29511), (775, 29493), (778, 29490), (790, 29454), (793, 29445), (796, 29424), (799, 29415), (805, 29388), (806, 29385), (837, 29328), (841, 29307), (879, 29190), (903, 29136), (908, 29127), (921, 29109), (947, 29031), (967, 28974), (978, 28938), (985, 28914), (989, 28902),

Gene: Jsquared\_43 Start: 30314, Stop: 28527, Start Num: 233

Candidate Starts for Jsquared\_43:

(140, 30455), (Start: 233 @30314 has 10 MA's), (353, 30110), (355, 30107), (359, 30101), (368, 30086), (379, 30071), (394, 30041), (395, 30038), (405, 30008), (415, 29981), (424, 29960), (432, 29930), (465, 29828), (541, 29735), (566, 29687), (571, 29678), (582, 29663), (619, 29597), (655, 29516), (675, 29468), (700, 29423), (759, 29243), (775, 29195), (778, 29192), (790, 29156), (805, 29090), (818, 29051), (837, 29030), (859, 28955), (864, 28937), (879, 28892), (888, 28865), (908, 28829), (921, 28811), (936, 28775), (942, 28751), (985, 28616), (989, 28604), (993, 28595), (995, 28592),

Gene: Jstan\_41 Start: 30355, Stop: 32220, Start Num: 234

Candidate Starts for Jstan\_41:

(Start: 234 @30355 has 938 MA's), (265, 30403), (377, 30586), (382, 30592), (405, 30652), (411, 30673), (436, 30742), (546, 30958), (598, 31048), (603, 31057), (615, 31072), (635, 31117), (675, 31210), (730, 31348), (759, 31468), (769, 31498), (790, 31555), (803, 31612), (805, 31621), (814, 31645), (840, 31714), (862, 31786), (865, 31795), (905, 31894), (936, 31957), (985, 32116), (988, 32125),

Gene: Juanyo\_37 Start: 28491, Stop: 26590, Start Num: 283

Candidate Starts for Juanyo\_37:

(Start: 283 @28491 has 147 MA's), (330, 28392), (347, 28368), (357, 28353), (367, 28338), (371, 28332), (387, 28305), (398, 28281), (418, 28230), (426, 28203), (428, 28197), (447, 28146), (460, 28107), (479, 28047), (512, 27978), (532, 27921), (537, 27912), (541, 27900), (553, 27870), (611, 27813), (680, 27666), (744, 27510), (805, 27243), (819, 27201), (832, 27171), (839, 27150), (849, 27114), (913, 26925), (917, 26916), (938, 26856), (943, 26832), (946, 26820), (954, 26799), (956, 26793), (986, 26688),

Gene: Juicer\_40 Start: 29369, Stop: 27471, Start Num: 283

Candidate Starts for Juicer\_40:

(Start: 283 @29369 has 147 MA's), (357, 29231), (367, 29216), (371, 29210), (398, 29159), (420, 29102), (426, 29081), (428, 29075), (446, 29027), (447, 29024), (479, 28925), (503, 28877), (532, 28802), (537, 28793), (541, 28781), (553, 28751), (566, 28730), (590, 28715), (634, 28649), (701, 28502), (730, 28442), (733, 28427), (741, 28400), (796, 28160), (805, 28124), (819, 28082), (832, 28052), (849, 27995), (894, 27851), (900, 27836), (917, 27797), (926, 27776), (943, 27713), (954, 27680), (970, 27629), (971, 27623), (986, 27569),

Gene: JuliaChild\_45 Start: 34674, Stop: 32845, Start Num: 234

Candidate Starts for JuliaChild\_45:

(Start: 234 @34674 has 938 MA's), (359, 34461), (368, 34446), (395, 34398), (405, 34368), (411, 34347), (415, 34341), (419, 34332), (457, 34215), (465, 34188), (541, 34095), (546, 34080), (558, 34059), (596, 33996), (598, 33993), (634, 33927), (648, 33897), (657, 33867), (679, 33822), (700, 33783), (759, 33603), (775, 33555), (793, 33507), (802, 33468), (805, 33450), (818, 33411), (837, 33390), (841, 33369), (846, 33354), (885, 33231), (960, 33060), (967, 33036), (982, 32988), (985, 32976), (993, 32955), (997, 32949), (1025, 32901), (1030, 32886),

Gene: JuneStar\_42 Start: 31105, Stop: 33111, Start Num: 137

Candidate Starts for JuneStar\_42:

(125, 31072), (Start: 137 @31105 has 1 MA's), (Start: 145 @31132 has 1 MA's), (148, 31135), (163, 31162), (Start: 234 @31246 has 938 MA's), (265, 31294), (405, 31543), (436, 31633), (445, 31663), (543, 31840), (546, 31849), (603, 31948), (615, 31963), (619, 31975), (675, 32101), (730, 32239), (759, 32359), (790, 32446), (805, 32512), (840, 32605), (942, 32872), (960, 32923), (985, 33007),

Gene: JustBecause\_62 Start: 44100, Stop: 42133, Start Num: 258

Candidate Starts for JustBecause\_62:

(Start: 258 @44100 has 7 MA's), (297, 44022), (304, 44004), (305, 44001), (339, 43932), (397, 43830), (412, 43782), (437, 43704), (455, 43656), (483, 43551), (492, 43512), (497, 43500), (508, 43473), (527, 43437), (560, 43365), (584, 43320), (641, 43209), (672, 43137), (725, 42999), (733, 42972), (743, 42939), (752, 42909), (764, 42849), (780, 42804), (799, 42738), (806, 42708), (810, 42687), (812, 42681), (872, 42519), (878, 42501), (879, 42498), (939, 42378), (949, 42330), (953, 42318), (959, 42309), (963, 42297), (968, 42279), (970, 42270), (974, 42255), (983, 42231),

Gene: KADY\_48 Start: 31884, Stop: 30070, Start Num: 234

Candidate Starts for KADY\_48:

(Start: 234 @31884 has 938 MA's), (262, 31845), (266, 31833), (353, 31680), (362, 31665), (395, 31608), (415, 31551), (419, 31542), (432, 31500), (448, 31449), (465, 31398), (518, 31344), (541, 31305), (566, 31257), (582, 31233), (603, 31194), (619, 31167), (634, 31137), (670, 31044), (679, 31032), (701, 30984), (710, 30969), (759, 30813), (778, 30762), (789, 30729), (790, 30726), (805, 30660), (818, 30621), (842, 30549), (856, 30510), (862, 30486), (868, 30468), (879, 30435), (921, 30354), (942, 30294), (970, 30207), (985, 30159), (989, 30147), (993, 30138), (995, 30135),

Gene: KBG\_46 Start: 35895, Stop: 34069, Start Num: 234

Candidate Starts for KBG\_46:

(Start: 234 @35895 has 938 MA's), (359, 35682), (368, 35667), (395, 35619), (405, 35589), (408, 35577), (411, 35568), (415, 35562), (419, 35553), (457, 35436), (465, 35409), (541, 35316), (546, 35301), (566, 35268), (596, 35217), (598, 35214), (634, 35148), (648, 35118), (657, 35088), (679, 35043), (700, 35004), (759, 34824), (769, 34794), (775, 34776), (778, 34773), (790, 34737), (805, 34671), (841, 34590), (842, 34587), (868, 34506), (936, 34356), (938, 34353), (946, 34317), (954, 34293), (959, 34284), (963, 34272), (970, 34245), (985, 34197), (993, 34176),

Gene: KFPoly\_44 Start: 31564, Stop: 29738, Start Num: 234

Candidate Starts for KFPoly\_44:

(Start: 234 @31564 has 938 MA's), (252, 31543), (266, 31513), (279, 31483), (379, 31321), (389, 31303), (415, 31231), (419, 31222), (458, 31102), (465, 31078), (541, 30985), (568, 30937), (582, 30916), (603, 30877), (663, 30745), (675, 30724), (700, 30679), (703, 30667), (756, 30514), (759, 30493), (798, 30370), (805, 30340), (818, 30301), (841, 30235), (842, 30232), (847, 30217), (856, 30193), (862, 30169), (942, 29962), (985, 29827), (989, 29815), (993, 29806),

Gene: KLucky39\_59 Start: 53611, Stop: 51752, Start Num: 197

Candidate Starts for KLucky39\_59:

(Start: 180 @53635 has 1 MA's), (Start: 197 @53611 has 298 MA's), (Start: 225 @53587 has 5 MA's), (Start: 238 @53581 has 2 MA's), (Start: 261 @53539 has 10 MA's), (269, 53518), (323, 53404), (328, 53398), (349, 53368), (385, 53308), (394, 53287), (410, 53233), (418, 53221), (425, 53203), (427, 53191), (462, 53086), (496, 53029), (511, 52993), (516, 52981), (535, 52954), (545, 52927), (555, 52909), (566, 52891), (588, 52852), (595, 52843), (597, 52840), (724, 52582), (754, 52480), (760, 52447), (765, 52426), (799, 52333), (802, 52324), (822, 52261), (841, 52225), (842, 52222), (847, 52207), (872, 52129), (877, 52117), (883, 52096), (902, 52057), (942, 51967), (947, 51949), (949, 51943), (954, 51928), (964, 51904), (968, 51889), (969, 51886), (972, 51874), (979, 51850), (1002, 51802), (1015, 51778),

Gene: KSSJEB\_43 Start: 34167, Stop: 32338, Start Num: 234

Candidate Starts for KSSJEB\_43:

(Start: 234 @34167 has 938 MA's), (359, 33954), (368, 33939), (395, 33891), (405, 33861), (411, 33840), (415, 33834), (419, 33825), (457, 33708), (465, 33681), (541, 33588), (546, 33573), (566, 33540), (596, 33489), (598, 33486), (634, 33420), (657, 33360), (679, 33315), (700, 33276), (759, 33096), (775, 33048), (793, 33000), (802, 32961), (805, 32943), (818, 32904), (837, 32883), (841, 32862), (846, 32847), (885, 32724), (960, 32553), (967, 32529), (982, 32481), (985, 32469), (993, 32448), (997, 32442), (1025, 32394), (1030, 32379),

Gene: KSunshine22\_93 Start: 75419, Stop: 77137, Start Num: 284

Candidate Starts for KSunshine22\_93:

(Start: 248 @75344 has 2 MA's), (265, 75377), (273, 75398), (276, 75407), (284, 75419), (418, 75656), (426, 75683), (428, 75689), (464, 75782), (518, 75824), (586, 75941), (603, 75968), (609, 75974), (615, 75983), (638, 76037), (650, 76061), (700, 76169), (706, 76190), (721, 76217), (735, 76265), (746, 76298), (756, 76337), (759, 76358), (761, 76364), (796, 76481), (818, 76568), (840, 76631), (843, 76643), (856, 76679), (865, 76712), (883, 76766), (890, 76784), (931, 76868), (936, 76889), (943, 76916), (960, 76964), (962, 76970), (967, 76988), (970, 77000), (973, 77012), (974, 77015), (985, 77048), (999, 77075), (1017, 77099),

Gene: Kachowdy\_45 Start: 31435, Stop: 29597, Start Num: 234

Candidate Starts for Kachowdy\_45:

(179, 31507), (Start: 234 @31435 has 938 MA's), (266, 31384), (353, 31231), (390, 31171), (395, 31159), (415, 31102), (419, 31093), (424, 31081), (458, 30973), (465, 30949), (541, 30853), (568, 30805), (603, 30745), (636, 30682), (663, 30613), (675, 30592), (710, 30523), (713, 30517), (729, 30478), (759, 30355), (790, 30268), (798, 30232), (805, 30202), (816, 30172), (842, 30091), (856, 30052), (862, 30028), (868, 30010), (921, 29881), (942, 29821), (985, 29686), (989, 29674), (993, 29665),

Gene: Kahve\_60 Start: 54557, Stop: 52698, Start Num: 197

Candidate Starts for Kahve\_60:

(Start: 180 @54581 has 1 MA's), (Start: 197 @54557 has 298 MA's), (Start: 225 @54533 has 5 MA's), (Start: 238 @54527 has 2 MA's), (Start: 261 @54485 has 10 MA's), (269, 54464), (323, 54350), (328, 54344), (349, 54314), (385, 54254), (394, 54233), (410, 54179), (418, 54167), (425, 54149), (427, 54137), (462, 54032), (496, 53975), (511, 53939), (516, 53927), (535, 53900), (545, 53873), (555, 53855), (566, 53837), (588, 53798), (595, 53789), (597, 53786), (724, 53528), (754, 53426), (760, 53393), (765, 53372), (799, 53279), (802, 53270), (822, 53207), (841, 53171), (842, 53168), (847, 53153), (872, 53075), (877, 53063), (883, 53042), (902, 53003), (942, 52913), (947, 52895), (949, 52889), (954, 52874), (964, 52850), (968, 52835), (969, 52832), (972, 52820), (979, 52796), (985, 52775), (1002, 52748), (1015, 52724),

Gene: Kailash\_61 Start: 54637, Stop: 52778, Start Num: 197

Candidate Starts for Kailash\_61:

(Start: 180 @54661 has 1 MA's), (Start: 197 @54637 has 298 MA's), (Start: 225 @54613 has 5 MA's), (Start: 238 @54607 has 2 MA's), (Start: 261 @54565 has 10 MA's), (269, 54544), (323, 54430), (328, 54424), (349, 54394), (385, 54334), (394, 54313), (410, 54259), (418, 54247), (425, 54229), (427, 54217), (462, 54112), (496, 54055), (511, 54019), (516, 54007), (534, 53983), (539, 53971), (545, 53953), (555, 53935), (566, 53917), (588, 53878), (595, 53869), (597, 53866), (599, 53863), (754, 53506), (760, 53473), (765, 53452), (799, 53359), (802, 53350), (822, 53287), (841, 53251), (842, 53248), (847, 53233), (872, 53155), (877, 53143), (883, 53122), (902, 53083), (942, 52993), (947, 52975), (949, 52969), (954, 52954), (964, 52930), (968, 52915), (969, 52912), (972, 52900), (979, 52876), (1002, 52828), (1015, 52804),

Gene: Kalb97\_49 Start: 31752, Stop: 29938, Start Num: 234

Candidate Starts for Kalb97\_49:

(Start: 234 @31752 has 938 MA's), (262, 31713), (266, 31701), (353, 31548), (362, 31533), (395, 31476), (415, 31419), (419, 31410), (432, 31368), (448, 31317), (465, 31266), (541, 31173), (566, 31125), (582, 31101), (603, 31062), (619, 31035), (634, 31005), (670, 30912), (679, 30900), (701, 30852), (710, 30837), (759, 30681), (778, 30630), (789, 30597), (790, 30594), (805, 30528), (818, 30489), (842, 30417), (856, 30378), (862, 30354), (868, 30336), (879, 30303), (921, 30222), (942, 30162), (947, 30144), (968, 30084), (970, 30075), (985, 30027), (989, 30015), (993, 30006),

Gene: Kale\_38 Start: 28634, Stop: 26769, Start Num: 283

Candidate Starts for Kale\_38:

(Start: 234 @28721 has 938 MA's), (Start: 283 @28634 has 147 MA's), (Start: 291 @28625 has 5 MA's), (342, 28520), (347, 28511), (367, 28481), (369, 28478), (424, 28358), (426, 28346), (428, 28340), (466, 28235), (473, 28208), (532, 28067), (535, 28061), (537, 28058), (541, 28046), (551, 28019), (553, 28016), (562, 28001), (566, 27995), (570, 27989), (613, 27956), (701, 27767), (798, 27452), (801, 27443), (802, 27440), (805, 27422), (819, 27380), (822, 27374), (832, 27350), (849, 27293), (900, 27134), (913, 27104), (917, 27095), (938, 27035), (943, 27011), (956, 26972), (967, 26939), (970, 26927), (986, 26867),

Gene: Kaleb\_57 Start: 52637, Stop: 50808, Start Num: 197

Candidate Starts for Kaleb\_57:

(Start: 197 @52637 has 298 MA's), (Start: 238 @52610 has 2 MA's), (253, 52580), (Start: 261 @52568 has 10 MA's), (272, 52541), (273, 52538), (277, 52529), (301, 52511), (355, 52415), (385, 52364), (395, 52340), (450, 52178), (459, 52154), (462, 52142), (496, 52085), (511, 52049), (516, 52037), (534, 52013), (580, 51929), (595, 51899), (597, 51896), (618, 51866), (678, 51722), (710, 51656), (737, 51605), (743, 51584), (749, 51566), (760, 51509), (793, 51425), (799, 51395), (802, 51386), (822, 51320), (839, 51293), (841, 51284), (844, 51275), (847, 51266), (856, 51242), (872, 51188), (877, 51176), (883, 51155), (921, 51086), (942, 51026), (947, 51008), (960, 50975), (964, 50963), (968, 50948), (969, 50945), (972, 50933), (979, 50909), (980, 50906), (1002, 50858), (1004, 50855), (1015, 50834), (1023, 50813),

Gene: Kalimba\_38 Start: 27589, Stop: 29571, Start Num: 234

Candidate Starts for Kalimba\_38:

(Start: 234 @27589 has 938 MA's), (336, 27763), (382, 27826), (397, 27859), (424, 27934), (518, 28162), (603, 28336), (675, 28492), (730, 28630), (753, 28717), (759, 28750), (769, 28780), (790, 28837), (805, 28903), (840, 28996), (942, 29263), (949, 29287), (985, 29398), (1040, 29506),

Gene: Kalnoky\_49 Start: 31750, Stop: 29936, Start Num: 234

Candidate Starts for Kalnoky\_49:

(Start: 234 @31750 has 938 MA's), (262, 31711), (266, 31699), (353, 31546), (362, 31531), (395, 31474), (415, 31417), (419, 31408), (432, 31366), (448, 31315), (465, 31264), (541, 31171), (566, 31123), (582, 31099), (603, 31060), (619, 31033), (634, 31003), (670, 30910), (679, 30898), (701, 30850), (710, 30835), (759, 30679), (778, 30628), (789, 30595), (790, 30592), (805, 30526), (818, 30487), (842, 30415), (856, 30376), (862, 30352), (868, 30334), (879, 30301), (921, 30220), (942, 30160), (947, 30142), (968, 30082), (970, 30073), (985, 30025), (989, 30013), (993, 30004),

Gene: Kalpine\_44 Start: 31973, Stop: 30186, Start Num: 234

Candidate Starts for Kalpine\_44:

(Start: 234 @31973 has 938 MA's), (355, 31766), (359, 31760), (379, 31730), (394, 31700), (397, 31694), (405, 31667), (415, 31640), (424, 31619), (432, 31589), (465, 31487), (541, 31394), (566, 31346), (571, 31337), (582, 31322), (619, 31256), (655, 31175), (675, 31127), (744, 30971), (759, 30902), (778, 30851), (789, 30818), (790, 30815), (805, 30749), (818, 30710), (837, 30689), (859, 30614), (862, 30602), (864, 30596), (908, 30488), (936, 30434), (942, 30410), (962, 30353), (968,

30332), (985, 30275), (989, 30263),

Gene: Kamiyu\_58 Start: 53644, Stop: 51827, Start Num: 235

Candidate Starts for Kamiyu\_58:

(129, 53827), (Start: 235 @53644 has 43 MA's), (252, 53614), (359, 53434), (424, 53281), (426, 53269), (437, 53239), (442, 53233), (462, 53170), (464, 53164), (496, 53113), (511, 53077), (539, 53029), (597, 52924), (647, 52828), (664, 52777), (737, 52633), (749, 52594), (755, 52564), (760, 52537), (763, 52525), (797, 52429), (799, 52423), (802, 52414), (804, 52402), (834, 52330), (841, 52300), (847, 52282), (851, 52273), (872, 52204), (877, 52192), (883, 52171), (921, 52102), (931, 52087), (938, 52063), (942, 52042), (949, 52018), (964, 51979), (969, 51961), (972, 51949), (975, 51937), (979, 51925), (994, 51883), (1015, 51853),

Gene: Kampy\_45 Start: 31572, Stop: 29746, Start Num: 234

Candidate Starts for Kampy\_45:

(Start: 234 @31572 has 938 MA's), (252, 31551), (266, 31521), (279, 31491), (379, 31329), (389, 31311), (415, 31239), (419, 31230), (458, 31110), (465, 31086), (541, 30993), (568, 30945), (582, 30924), (603, 30885), (663, 30753), (675, 30732), (700, 30687), (703, 30675), (756, 30522), (759, 30501), (798, 30378), (805, 30348), (818, 30309), (841, 30243), (842, 30240), (847, 30225), (856, 30201), (862, 30177), (942, 29970), (985, 29835), (989, 29823), (993, 29814),

Gene: Kanely\_45 Start: 34951, Stop: 33125, Start Num: 234

Candidate Starts for Kanely\_45:

(Start: 234 @34951 has 938 MA's), (359, 34738), (395, 34675), (405, 34645), (411, 34624), (415, 34618), (419, 34609), (457, 34492), (465, 34465), (541, 34372), (546, 34357), (596, 34273), (598, 34270), (634, 34204), (648, 34174), (657, 34144), (679, 34099), (700, 34060), (759, 33880), (775, 33832), (790, 33793), (805, 33727), (818, 33688), (837, 33667), (841, 33646), (847, 33628), (868, 33562), (936, 33412), (938, 33409), (946, 33373), (954, 33349), (959, 33340), (963, 33328), (985, 33253), (993, 33232),

Gene: KannH\_38 Start: 28619, Stop: 26754, Start Num: 283

Candidate Starts for KannH\_38:

(Start: 234 @28706 has 938 MA's), (Start: 237 @28703 has 2 MA's), (Start: 283 @28619 has 147 MA's), (Start: 291 @28610 has 5 MA's), (342, 28505), (347, 28496), (367, 28466), (369, 28463), (424, 28343), (426, 28331), (428, 28325), (466, 28220), (473, 28193), (532, 28052), (535, 28046), (537, 28043), (541, 28031), (551, 28004), (553, 28001), (562, 27986), (566, 27980), (570, 27974), (613, 27941), (671, 27812), (701, 27752), (798, 27437), (801, 27428), (802, 27425), (805, 27407), (819, 27365), (822, 27359), (825, 27350), (832, 27335), (849, 27278), (900, 27119), (913, 27089), (917, 27080), (938, 27020), (943, 26996), (956, 26957), (967, 26924), (970, 26912), (986, 26852),

Gene: KarasumaRum\_58 Start: 54598, Stop: 52751, Start Num: 181

Candidate Starts for KarasumaRum\_58:

(15, 55093), (17, 55087), (Start: 27 @55036 has 1 MA's), (33, 55018), (Start: 44 @54961 has 1 MA's), (93, 54817), (140, 54664), (181, 54598), (236, 54550), (252, 54523), (276, 54472), (301, 54451), (323, 54397), (358, 54352), (387, 54301), (425, 54202), (441, 54160), (452, 54124), (462, 54094), (511, 54001), (516, 53989), (534, 53965), (539, 53953), (545, 53935), (583, 53872), (597, 53848), (650, 53743), (703, 53620), (739, 53554), (743, 53536), (755, 53488), (760, 53461), (797, 53353), (799, 53347), (802, 53338), (806, 53317), (834, 53254), (842, 53221), (847, 53206), (866, 53146), (872, 53128), (877, 53116), (883, 53095), (885, 53086), (887, 53083), (894, 53071), (942, 52966), (947, 52948), (949, 52942), (964, 52903), (968, 52888), (969, 52885), (975, 52861), (979, 52849), (980, 52846), (1004, 52798), (1015, 52777),

Gene: KatChan\_40 Start: 28364, Stop: 26472, Start Num: 283

Candidate Starts for KatChan\_40:

(Start: 231 @28454 has 7 MA's), (Start: 283 @28364 has 147 MA's), (Start: 291 @28355 has 5 MA's), (315, 28298), (330, 28268), (357, 28229), (367, 28214), (371, 28208), (382, 28190), (398, 28157), (426, 28079), (428, 28073), (447, 28022), (460, 27983), (503, 27872), (537, 27788), (541, 27776), (553, 27746), (562, 27731), (566, 27725), (570, 27719), (574, 27713), (593, 27707), (744, 27392), (787, 27197), (805, 27125), (819, 27083), (832, 27053), (839, 27032), (849, 26996), (867, 26924), (913, 26807), (917, 26798), (938, 26738), (943, 26714), (946, 26702), (960, 26666), (986, 26570),

Gene: Katalie136\_44 Start: 31522, Stop: 29693, Start Num: 234

Candidate Starts for Katalie136\_44:

(Start: 234 @31522 has 938 MA's), (266, 31471), (279, 31441), (379, 31279), (389, 31261), (395, 31246), (415, 31189), (419, 31180), (458, 31060), (465, 31036), (513, 30994), (541, 30943), (568, 30895), (582, 30874), (603, 30835), (628, 30790), (630, 30784), (663, 30703), (675, 30682), (700, 30637), (756, 30472), (759, 30451), (805, 30298), (818, 30259), (842, 30187), (847, 30172), (856, 30148), (861, 30130), (862, 30124), (864, 30118), (942, 29917), (985, 29782), (989, 29770), (993, 29761),

Gene: Kate33\_42 Start: 29550, Stop: 31424, Start Num: 234

Candidate Starts for Kate33\_42:

(Start: 231 @29547 has 7 MA's), (Start: 234 @29550 has 938 MA's), (273, 29619), (284, 29640), (419, 29886), (453, 29982), (541, 30108), (603, 30222), (709, 30456), (746, 30576), (747, 30579), (759, 30639), (761, 30645), (778, 30690), (782, 30705), (786, 30720), (796, 30756), (805, 30792), (840, 30885), (901, 31056), (902, 31059), (936, 31128), (946, 31167), (962, 31209), (967, 31227), (978, 31263), (985, 31287), (993, 31308),

Gene: KatherineG\_48 Start: 30182, Stop: 28392, Start Num: 234

Candidate Starts for KatherineG\_48:

(Start: 234 @30182 has 938 MA's), (336, 30008), (395, 29903), (397, 29900), (405, 29873), (415, 29846), (432, 29795), (465, 29693), (541, 29600), (563, 29555), (566, 29552), (571, 29543), (655, 29381), (663, 29354), (675, 29333), (679, 29327), (730, 29228), (740, 29189), (754, 29138), (759, 29108), (778, 29057), (789, 29024), (796, 28991), (798, 28985), (805, 28955), (837, 28895), (841, 28874), (856, 28832), (863, 28805), (868, 28790), (903, 28703), (936, 28640), (938, 28637), (985, 28481), (989, 28469), (995, 28457),

Gene: Katniss\_61 Start: 53995, Stop: 52136, Start Num: 197

Candidate Starts for Katniss\_61:

(Start: 180 @54019 has 1 MA's), (Start: 197 @53995 has 298 MA's), (Start: 225 @53971 has 5 MA's), (Start: 238 @53965 has 2 MA's), (Start: 261 @53923 has 10 MA's), (269, 53902), (323, 53788), (328, 53782), (349, 53752), (385, 53692), (394, 53671), (410, 53617), (418, 53605), (425, 53587), (427, 53575), (462, 53470), (496, 53413), (511, 53377), (516, 53365), (535, 53338), (545, 53311), (555, 53293), (566, 53275), (588, 53236), (595, 53227), (597, 53224), (599, 53221), (724, 52966), (754, 52864), (760, 52831), (765, 52810), (799, 52717), (802, 52708), (822, 52645), (841, 52609), (842, 52606), (847, 52591), (872, 52513), (877, 52501), (883, 52480), (902, 52441), (942, 52351), (947, 52333), (949, 52327), (954, 52312), (964, 52288), (968, 52273), (969, 52270), (972, 52258), (979, 52234), (1002, 52186), (1015, 52162),

Gene: Katzastrophic\_41 Start: 29917, Stop: 31788, Start Num: 234

Candidate Starts for Katzastrophic\_41:

(Start: 234 @29917 has 938 MA's), (273, 29986), (334, 30091), (340, 30100), (419, 30253), (453, 30349), (457, 30358), (603, 30589), (615, 30604), (655, 30697), (700, 30787), (759, 31003), (778, 31054), (782, 31069), (796, 31120), (805, 31156), (840, 31249), (862, 31321), (901, 31420), (936, 31492), (942, 31516), (962, 31573), (978, 31627), (985, 31651), (993, 31672),

Gene: Kauala\_37 Start: 28473, Stop: 26623, Start Num: 281

Candidate Starts for Kauala\_37:

(Start: 281 @28473 has 18 MA's), (329, 28377), (347, 28350), (369, 28317), (420, 28206), (426, 28185), (428, 28179), (431, 28170), (445, 28134), (447, 28128), (512, 27972), (532, 27918), (537, 27909), (541, 27897), (553, 27867), (611, 27810), (680, 27663), (741, 27516), (798, 27306), (802, 27294), (805, 27276), (819, 27234), (825, 27219), (849, 27147), (913, 26958), (917, 26949), (938, 26889), (943, 26865), (949, 26844), (954, 26832), (986, 26721),

Gene: KayGee\_46 Start: 34208, Stop: 31833, Start Num: 47

Candidate Starts for KayGee\_46:

(Start: 47 @34208 has 13 MA's), (64, 34148), (82, 34106), (96, 34067), (136, 33947), (141, 33926), (170, 33902), (Start: 223 @33824 has 3 MA's), (228, 33818), (Start: 230 @33815 has 13 MA's), (252, 33785), (262, 33767), (268, 33749), (290, 33710), (Start: 291 @33707 has 5 MA's), (317, 33650), (329, 33626), (342, 33611), (380, 33548), (391, 33524), (395, 33515), (398, 33509), (399, 33503), (409, 33470), (420, 33449), (426, 33428), (495, 33245), (524, 33170), (541, 33128), (655, 33017), (662, 32993), (677, 32963), (711, 32912), (713, 32909), (718, 32894), (728, 32873), (772, 32699), (773, 32690), (781, 32660), (805, 32555), (817, 32519), (819, 32513), (822, 32507), (824, 32501), (842, 32444), (849, 32420), (878, 32315), (879, 32312), (919, 32219), (926, 32201), (938, 32162), (948, 32120), (958, 32096), (967, 32066), (979, 32018), (986, 31994), (1008, 31949), (1046, 31862),

Gene: KayaCho\_51 Start: 52386, Stop: 50545, Start Num: 191

Candidate Starts for KayaCho\_51:

(127, 52506), (Start: 191 @52386 has 2 MA's), (252, 52329), (Start: 261 @52314 has 10 MA's), (355, 52140), (379, 52098), (385, 52089), (387, 52086), (395, 52065), (410, 52014), (412, 52008), (424, 51990), (434, 51957), (437, 51948), (441, 51945), (442, 51942), (450, 51915), (496, 51822), (511, 51786), (516, 51774), (595, 51636), (597, 51633), (643, 51543), (704, 51402), (733, 51348), (739, 51333), (743, 51315), (749, 51297), (754, 51273), (760, 51240), (797, 51132), (799, 51126), (802, 51117), (822, 51054), (835, 51039), (839, 51027), (841, 51018), (847, 51000), (853, 50985), (872, 50922), (877, 50910), (883, 50889), (884, 50883), (902, 50850), (921, 50820), (931, 50805), (942, 50760), (947, 50742), (949, 50736), (964, 50697), (967, 50685), (968, 50682), (969, 50679), (972, 50667), (979, 50643), (1015, 50571),

Gene: Kaylissa\_42 Start: 30090, Stop: 31955, Start Num: 234

Candidate Starts for Kaylissa\_42:

(Start: 234 @30090 has 938 MA's), (265, 30138), (314, 30228), (317, 30234), (405, 30387), (424, 30435), (436, 30477), (543, 30684), (546, 30693), (598, 30783), (603, 30792), (615, 30807), (635, 30852), (655, 30897), (675, 30945), (703, 31002), (730, 31083), (753, 31170), (759, 31203), (769, 31233), (790, 31290), (805, 31356), (814, 31380), (840, 31449), (862, 31521), (905, 31629), (936, 31692), (942, 31716), (978, 31827), (985, 31851), (988, 31860),

Gene: Kazan\_46 Start: 29633, Stop: 27792, Start Num: 234

Candidate Starts for Kazan\_46:

(Start: 234 @29633 has 938 MA's), (353, 29429), (395, 29354), (397, 29351), (405, 29324), (409, 29309), (415, 29297), (432, 29246), (461, 29156), (465, 29144), (541, 29051), (559, 29012), (571, 28994), (582, 28979), (619, 28913), (635, 28880), (636, 28877), (681, 28775), (710, 28715), (740, 28631), (759, 28550), (789, 28466), (790, 28463), (793, 28454), (798, 28427), (805, 28397), (837, 28337), (847, 28298), (936, 28082), (938, 28079), (942, 28058), (985, 27923), (989, 27911), (993, 27902), (995, 27899), (1042, 27806),

Gene: KeAlii\_40 Start: 29667, Stop: 31577, Start Num: 234

Candidate Starts for KeAlii\_40:

(103, 29409), (166, 29580), (Start: 234 @29667 has 938 MA's), (265, 29715), (377, 29898), (405, 29964), (436, 30054), (507, 30213), (543, 30306), (546, 30315), (603, 30414), (615, 30429), (635, 30474), (655, 30519), (675, 30567), (730, 30705), (745, 30759), (759, 30825), (781, 30888), (803,

30969), (805, 30978), (840, 31071), (905, 31251), (942, 31338), (985, 31473), (988, 31482), (993, 31494),

Gene: Keitherie\_62 Start: 54618, Stop: 52759, Start Num: 197

Candidate Starts for Keitherie\_62:

(Start: 180 @54642 has 1 MA's), (Start: 197 @54618 has 298 MA's), (Start: 225 @54594 has 5 MA's), (Start: 238 @54588 has 2 MA's), (Start: 261 @54546 has 10 MA's), (269, 54525), (323, 54411), (328, 54405), (349, 54375), (385, 54315), (394, 54294), (410, 54240), (418, 54228), (425, 54210), (427, 54198), (462, 54093), (496, 54036), (511, 54000), (516, 53988), (534, 53964), (539, 53952), (545, 53934), (555, 53916), (566, 53898), (588, 53859), (595, 53850), (597, 53847), (599, 53844), (754, 53487), (760, 53454), (765, 53433), (799, 53340), (802, 53331), (822, 53268), (841, 53232), (842, 53229), (847, 53214), (872, 53136), (877, 53124), (883, 53103), (902, 53064), (942, 52974), (947, 52956), (949, 52950), (954, 52935), (964, 52911), (968, 52896), (969, 52893), (972, 52881), (979, 52857), (1002, 52809), (1015, 52785),

Gene: Kela\_63 Start: 43965, Stop: 41998, Start Num: 258

Candidate Starts for Kela\_63:

(Start: 258 @43965 has 7 MA's), (297, 43887), (304, 43869), (305, 43866), (339, 43797), (397, 43695), (412, 43647), (437, 43569), (455, 43521), (483, 43416), (492, 43377), (497, 43365), (508, 43338), (527, 43302), (560, 43230), (584, 43185), (641, 43074), (672, 43002), (686, 42975), (725, 42864), (733, 42837), (743, 42804), (752, 42774), (764, 42714), (780, 42669), (799, 42603), (806, 42573), (810, 42552), (812, 42546), (872, 42384), (878, 42366), (879, 42363), (939, 42243), (949, 42195), (953, 42183), (959, 42174), (963, 42162), (968, 42144), (970, 42135), (974, 42120), (983, 42096),

Gene: Kenmech\_48 Start: 35912, Stop: 34083, Start Num: 234

Candidate Starts for Kenmech\_48:

(Start: 234 @35912 has 938 MA's), (359, 35699), (395, 35636), (405, 35606), (411, 35585), (415, 35579), (419, 35570), (457, 35453), (465, 35426), (541, 35333), (546, 35318), (596, 35234), (598, 35231), (634, 35165), (648, 35135), (657, 35105), (679, 35060), (700, 35021), (759, 34841), (775, 34793), (793, 34745), (802, 34706), (805, 34688), (818, 34649), (837, 34628), (841, 34607), (846, 34592), (885, 34469), (960, 34298), (967, 34274), (982, 34226), (985, 34214), (993, 34193), (997, 34187), (1025, 34139), (1030, 34124),

Gene: Kenzers\_43 Start: 29644, Stop: 31518, Start Num: 234

Candidate Starts for Kenzers\_43:

(Start: 231 @29641 has 7 MA's), (Start: 234 @29644 has 938 MA's), (273, 29713), (284, 29734), (353, 29851), (395, 29914), (419, 29980), (432, 30022), (603, 30316), (709, 30550), (747, 30673), (759, 30733), (761, 30739), (778, 30784), (786, 30814), (796, 30850), (805, 30886), (840, 30979), (869, 31072), (901, 31150), (936, 31222), (946, 31261), (962, 31303), (967, 31321), (985, 31381), (993, 31402),

Gene: Kerberos\_47 Start: 31153, Stop: 29330, Start Num: 234

Candidate Starts for Kerberos\_47:

(Start: 234 @31153 has 938 MA's), (353, 30949), (368, 30925), (379, 30907), (389, 30889), (395, 30874), (397, 30871), (405, 30844), (415, 30817), (432, 30766), (465, 30664), (541, 30571), (566, 30523), (571, 30514), (581, 30502), (582, 30499), (619, 30433), (648, 30373), (700, 30259), (710, 30235), (728, 30196), (759, 30070), (778, 30019), (790, 29983), (805, 29917), (818, 29878), (842, 29809), (856, 29770), (869, 29725), (879, 29695), (908, 29632), (918, 29620), (921, 29614), (942, 29554), (985, 29419), (989, 29407), (993, 29398),

Gene: Keziacharles14\_44 Start: 32157, Stop: 30364, Start Num: 233

Candidate Starts for Keziacharles14\_44:



(161, 32262), (Start: 233 @32157 has 10 MA's), (246, 32148), (314, 32019), (334, 31986), (353, 31953), (379, 31911), (395, 31878), (397, 31875), (409, 31833), (415, 31821), (432, 31770), (465, 31668), (466, 31665), (541, 31575), (558, 31539), (634, 31407), (703, 31248), (726, 31209), (729, 31203), (759, 31080), (793, 30984), (796, 30963), (805, 30927), (841, 30846), (879, 30729), (885, 30708), (908, 30666), (936, 30612), (968, 30510), (985, 30453), (989, 30441), (993, 30432),

Gene: Khan1\_61 Start: 54513, Stop: 52654, Start Num: 197

Candidate Starts for Khan1\_61:

(Start: 180 @54537 has 1 MA's), (Start: 197 @54513 has 298 MA's), (Start: 225 @54489 has 5 MA's), (Start: 238 @54483 has 2 MA's), (Start: 261 @54441 has 10 MA's), (269, 54420), (323, 54306), (328, 54300), (349, 54270), (385, 54210), (394, 54189), (410, 54135), (418, 54123), (425, 54105), (427, 54093), (462, 53988), (496, 53931), (511, 53895), (516, 53883), (534, 53859), (539, 53847), (545, 53829), (555, 53811), (566, 53793), (588, 53754), (595, 53745), (597, 53742), (599, 53739), (724, 53484), (754, 53382), (760, 53349), (765, 53328), (799, 53235), (802, 53226), (822, 53163), (841, 53127), (842, 53124), (847, 53109), (872, 53031), (877, 53019), (883, 52998), (902, 52959), (942, 52869), (947, 52851), (949, 52845), (954, 52830), (964, 52806), (968, 52791), (969, 52788), (972, 52776), (979, 52752), (985, 52731), (1002, 52704), (1015, 52680),

Gene: Kheth\_57 Start: 52520, Stop: 50691, Start Num: 197

Candidate Starts for Kheth\_57:

(Start: 197 @52520 has 298 MA's), (Start: 238 @52493 has 2 MA's), (253, 52463), (Start: 261 @52451 has 10 MA's), (272, 52424), (273, 52421), (277, 52412), (301, 52394), (355, 52298), (385, 52247), (395, 52223), (402, 52199), (450, 52061), (459, 52037), (462, 52025), (496, 51968), (511, 51932), (516, 51920), (534, 51896), (580, 51812), (595, 51782), (597, 51779), (618, 51749), (678, 51605), (710, 51539), (733, 51500), (737, 51488), (743, 51467), (749, 51449), (760, 51392), (793, 51308), (799, 51278), (802, 51269), (822, 51203), (839, 51176), (841, 51167), (847, 51149), (856, 51125), (872, 51071), (877, 51059), (883, 51038), (921, 50969), (942, 50909), (947, 50891), (960, 50858), (964, 50846), (968, 50831), (969, 50828), (972, 50816), (979, 50792), (980, 50789), (1002, 50741), (1004, 50738), (1015, 50717), (1023, 50696),

Gene: Kieran\_40 Start: 29929, Stop: 31800, Start Num: 234

Candidate Starts for Kieran\_40:

(Start: 234 @29929 has 938 MA's), (340, 30112), (362, 30151), (382, 30169), (419, 30265), (424, 30277), (425, 30280), (453, 30361), (579, 30553), (603, 30601), (649, 30691), (709, 30832), (747, 30955), (759, 31015), (782, 31081), (786, 31096), (796, 31132), (799, 31141), (805, 31168), (840, 31261), (901, 31432), (936, 31504), (946, 31543), (962, 31585), (978, 31639), (985, 31663), (993, 31684), (1008, 31708),

Gene: Kikipoo\_62 Start: 54547, Stop: 52688, Start Num: 197

Candidate Starts for Kikipoo\_62:

(Start: 180 @54571 has 1 MA's), (Start: 197 @54547 has 298 MA's), (Start: 225 @54523 has 5 MA's), (Start: 238 @54517 has 2 MA's), (Start: 261 @54475 has 10 MA's), (269, 54454), (323, 54340), (328, 54334), (349, 54304), (385, 54244), (394, 54223), (410, 54169), (418, 54157), (425, 54139), (427, 54127), (462, 54022), (496, 53965), (511, 53929), (516, 53917), (520, 53908), (535, 53890), (545, 53863), (555, 53845), (566, 53827), (588, 53788), (595, 53779), (597, 53776), (599, 53773), (724, 53518), (754, 53416), (760, 53383), (765, 53362), (799, 53269), (802, 53260), (822, 53197), (841, 53161), (842, 53158), (847, 53143), (872, 53065), (877, 53053), (883, 53032), (902, 52993), (942, 52903), (947, 52885), (949, 52879), (954, 52864), (964, 52840), (968, 52825), (969, 52822), (972, 52810), (979, 52786), (1002, 52738), (1015, 52714),

Gene: Killigrew\_44 Start: 34598, Stop: 32769, Start Num: 234

Candidate Starts for Killigrew\_44:

(Start: 234 @34598 has 938 MA's), (359, 34385), (368, 34370), (395, 34322), (405, 34292), (411, 34271), (415, 34265), (419, 34256), (457, 34139), (465, 34112), (541, 34019), (546, 34004), (596, 33920), (598, 33917), (634, 33851), (648, 33821), (657, 33791), (679, 33746), (700, 33707), (759, 33527), (775, 33479), (793, 33431), (802, 33392), (805, 33374), (818, 33335), (837, 33314), (841, 33293), (846, 33278), (885, 33155), (960, 32984), (967, 32960), (982, 32912), (985, 32900), (993, 32879), (997, 32873), (1025, 32825), (1030, 32810),

Gene: KimJongPhill\_80 Start: 57331, Stop: 59844, Start Num: 37

Candidate Starts for KimJongPhill\_80:

(Start: 14 @57226 has 1 MA's), (24, 57268), (32, 57298), (Start: 37 @57331 has 1 MA's), (77, 57460), (Start: 79 @57466 has 1 MA's), (84, 57475), (113, 57571), (121, 57589), (187, 57733), (210, 57766), (Start: 230 @57796 has 13 MA's), (279, 57892), (Start: 291 @57910 has 5 MA's), (317, 57979), (409, 58159), (418, 58174), (426, 58201), (452, 58273), (475, 58321), (524, 58438), (634, 58567), (711, 58753), (713, 58756), (724, 58780), (732, 58804), (755, 58891), (792, 59047), (795, 59068), (805, 59110), (817, 59146), (819, 59152), (822, 59158), (824, 59164), (849, 59245), (890, 59383), (900, 59404), (942, 59524), (947, 59542), (958, 59569), (976, 59638), (978, 59644), (982, 59656), (986, 59671), (1003, 59704), (1030, 59770),

Gene: Kimbrough\_61 Start: 54598, Stop: 52739, Start Num: 197

Candidate Starts for Kimbrough\_61:

(Start: 180 @54622 has 1 MA's), (Start: 197 @54598 has 298 MA's), (Start: 225 @54574 has 5 MA's), (Start: 238 @54568 has 2 MA's), (Start: 261 @54526 has 10 MA's), (269, 54505), (323, 54391), (328, 54385), (349, 54355), (385, 54295), (394, 54274), (410, 54220), (418, 54208), (425, 54190), (427, 54178), (462, 54073), (496, 54016), (511, 53980), (516, 53968), (534, 53944), (539, 53932), (545, 53914), (555, 53896), (566, 53878), (588, 53839), (595, 53830), (597, 53827), (599, 53824), (754, 53467), (760, 53434), (765, 53413), (799, 53320), (802, 53311), (822, 53248), (841, 53212), (842, 53209), (847, 53194), (872, 53116), (877, 53104), (883, 53083), (902, 53044), (942, 52954), (947, 52936), (949, 52930), (954, 52915), (964, 52891), (968, 52876), (969, 52873), (972, 52861), (979, 52837), (1002, 52789), (1015, 52765),

Gene: Kimona\_43 Start: 29598, Stop: 27742, Start Num: 234

Candidate Starts for Kimona\_43:

(Start: 234 @29598 has 938 MA's), (353, 29394), (405, 29292), (411, 29271), (415, 29265), (419, 29256), (461, 29124), (465, 29112), (541, 29016), (603, 28905), (619, 28878), (663, 28773), (675, 28752), (700, 28707), (723, 28638), (740, 28581), (759, 28500), (805, 28347), (818, 28308), (842, 28236), (847, 28221), (856, 28197), (868, 28155), (879, 28122), (985, 27831), (989, 27819), (993, 27810),

Gene: KingCyrus\_47 Start: 33203, Stop: 31416, Start Num: 234

Candidate Starts for KingCyrus\_47:

(Start: 193 @33239 has 1 MA's), (Start: 234 @33203 has 938 MA's), (355, 32996), (359, 32990), (368, 32975), (379, 32960), (397, 32924), (405, 32897), (415, 32870), (424, 32849), (465, 32717), (541, 32624), (566, 32576), (571, 32567), (582, 32552), (619, 32486), (655, 32405), (675, 32357), (700, 32312), (710, 32288), (759, 32132), (778, 32081), (789, 32048), (790, 32045), (805, 31979), (818, 31940), (837, 31919), (859, 31844), (862, 31832), (879, 31781), (908, 31718), (921, 31700), (936, 31664), (968, 31562), (985, 31505), (989, 31493), (993, 31484),

Gene: KingJulien\_38 Start: 29054, Stop: 27189, Start Num: 283

Candidate Starts for KingJulien\_38:

(Start: 283 @29054 has 147 MA's), (Start: 291 @29045 has 5 MA's), (423, 28781), (426, 28766), (428, 28760), (473, 28628), (498, 28574), (503, 28562), (532, 28487), (537, 28478), (541, 28466), (551, 28439), (553, 28436), (562, 28421), (566, 28415), (574, 28403), (634, 28334), (741, 28085), (798, 27872), (801, 27863), (802, 27860), (805, 27842), (819, 27800), (849, 27713), (900, 27554), (913,

27524), (938, 27455), (943, 27431), (956, 27392), (967, 27359), (970, 27347),

Gene: KingTut\_53 Start: 50762, Stop: 48903, Start Num: 197

Candidate Starts for KingTut\_53:

(Start: 180 @50786 has 1 MA's), (Start: 197 @50762 has 298 MA's), (Start: 225 @50738 has 5 MA's), (Start: 238 @50732 has 2 MA's), (Start: 261 @50690 has 10 MA's), (269, 50669), (323, 50555), (328, 50549), (349, 50519), (385, 50459), (394, 50438), (410, 50384), (418, 50372), (425, 50354), (427, 50342), (462, 50237), (496, 50180), (511, 50144), (516, 50132), (535, 50105), (545, 50078), (555, 50060), (566, 50042), (588, 50003), (595, 49994), (597, 49991), (724, 49733), (754, 49631), (760, 49598), (765, 49577), (799, 49484), (802, 49475), (822, 49412), (841, 49376), (842, 49373), (847, 49358), (872, 49280), (877, 49268), (883, 49247), (902, 49208), (942, 49118), (947, 49100), (949, 49094), (954, 49079), (964, 49055), (968, 49040), (969, 49037), (972, 49025), (979, 49001), (1002, 48953), (1015, 48929),

Gene: KingVeVeVe\_59 Start: 53565, Stop: 51706, Start Num: 197

Candidate Starts for KingVeVeVe\_59:

(Start: 180 @53589 has 1 MA's), (Start: 197 @53565 has 298 MA's), (Start: 225 @53541 has 5 MA's), (Start: 238 @53535 has 2 MA's), (252, 53508), (Start: 261 @53493 has 10 MA's), (269, 53472), (323, 53358), (328, 53352), (349, 53322), (385, 53262), (394, 53241), (410, 53187), (418, 53175), (425, 53157), (427, 53145), (462, 53040), (496, 52983), (511, 52947), (516, 52935), (535, 52908), (539, 52899), (555, 52863), (588, 52806), (595, 52797), (597, 52794), (599, 52791), (754, 52434), (760, 52401), (765, 52380), (799, 52287), (802, 52278), (822, 52215), (841, 52179), (842, 52176), (847, 52161), (872, 52083), (877, 52071), (883, 52050), (902, 52011), (942, 51921), (947, 51903), (949, 51897), (954, 51882), (964, 51858), (968, 51843), (969, 51840), (972, 51828), (979, 51804), (1002, 51756), (1015, 51732),

Gene: Kingmustik0402\_45 Start: 31559, Stop: 29733, Start Num: 234

Candidate Starts for Kingmustik0402\_45:

(Start: 234 @31559 has 938 MA's), (252, 31538), (266, 31508), (279, 31478), (379, 31316), (389, 31298), (415, 31226), (419, 31217), (458, 31097), (465, 31073), (541, 30980), (568, 30932), (582, 30911), (603, 30872), (663, 30740), (675, 30719), (700, 30674), (703, 30662), (756, 30509), (759, 30488), (798, 30365), (805, 30335), (818, 30296), (841, 30230), (842, 30227), (847, 30212), (856, 30188), (862, 30164), (942, 29957), (985, 29822), (989, 29810), (993, 29801),

Gene: Kinmap\_43 Start: 30677, Stop: 28872, Start Num: 234

Candidate Starts for Kinmap\_43:

(Start: 234 @30677 has 938 MA's), (379, 30431), (395, 30398), (397, 30395), (405, 30368), (415, 30341), (419, 30332), (465, 30188), (541, 30095), (566, 30047), (733, 29699), (744, 29663), (759, 29594), (778, 29537), (798, 29465), (805, 29435), (841, 29354), (879, 29237), (936, 29120), (985, 28961), (989, 28949), (993, 28940),

Gene: Kipper29\_45 Start: 29646, Stop: 27805, Start Num: 234

Candidate Starts for Kipper29\_45:

(Start: 234 @29646 has 938 MA's), (353, 29442), (395, 29367), (397, 29364), (405, 29337), (409, 29322), (415, 29310), (432, 29259), (461, 29169), (465, 29157), (541, 29064), (559, 29025), (571, 29007), (582, 28992), (619, 28926), (635, 28893), (636, 28890), (681, 28788), (710, 28728), (740, 28644), (759, 28563), (789, 28479), (790, 28476), (793, 28467), (798, 28440), (805, 28410), (837, 28350), (847, 28311), (936, 28095), (938, 28092), (942, 28071), (985, 27936), (989, 27924), (993, 27915), (995, 27912), (1042, 27819),

Gene: KittenMittens\_41 Start: 30386, Stop: 28554, Start Num: 234

Candidate Starts for KittenMittens\_41:

(Start: 234 @30386 has 938 MA's), (266, 30335), (303, 30269), (353, 30182), (359, 30173), (390, 30122), (395, 30110), (415, 30053), (441, 29972), (445, 29960), (448, 29951), (458, 29924), (465, 29900), (541, 29807), (559, 29768), (603, 29699), (619, 29672), (679, 29540), (759, 29312), (782, 29246), (798, 29189), (805, 29159), (818, 29120), (842, 29048), (847, 29033), (856, 29009), (868, 28967), (879, 28934), (942, 28778), (949, 28754), (970, 28691), (985, 28643), (989, 28631), (993, 28622),

Gene: KlimbOn\_60 Start: 54056, Stop: 52197, Start Num: 197

Candidate Starts for KlimbOn\_60:

(Start: 180 @54080 has 1 MA's), (Start: 197 @54056 has 298 MA's), (Start: 225 @54032 has 5 MA's), (Start: 238 @54026 has 2 MA's), (Start: 261 @53984 has 10 MA's), (269, 53963), (323, 53849), (328, 53843), (349, 53813), (385, 53753), (394, 53732), (410, 53678), (418, 53666), (425, 53648), (427, 53636), (462, 53531), (496, 53474), (511, 53438), (516, 53426), (534, 53402), (539, 53390), (545, 53372), (555, 53354), (566, 53336), (588, 53297), (595, 53288), (597, 53285), (599, 53282), (724, 53027), (754, 52925), (760, 52892), (765, 52871), (799, 52778), (802, 52769), (822, 52706), (841, 52670), (842, 52667), (847, 52652), (872, 52574), (877, 52562), (883, 52541), (902, 52502), (942, 52412), (947, 52394), (949, 52388), (954, 52373), (964, 52349), (968, 52334), (969, 52331), (972, 52319), (979, 52295), (1002, 52247), (1015, 52223),

Gene: Klimt\_38 Start: 28614, Stop: 26749, Start Num: 283

Candidate Starts for Klimt\_38:

(Start: 234 @28701 has 938 MA's), (Start: 283 @28614 has 147 MA's), (Start: 291 @28605 has 5 MA's), (342, 28500), (347, 28491), (367, 28461), (369, 28458), (424, 28338), (426, 28326), (428, 28320), (466, 28215), (473, 28188), (532, 28047), (535, 28041), (537, 28038), (541, 28026), (551, 27999), (553, 27996), (562, 27981), (566, 27975), (570, 27969), (613, 27936), (671, 27807), (701, 27747), (798, 27432), (801, 27423), (802, 27420), (805, 27402), (819, 27360), (822, 27354), (832, 27330), (849, 27273), (900, 27114), (913, 27084), (917, 27075), (938, 27015), (943, 26991), (956, 26952), (967, 26919), (970, 26907), (986, 26847),

Gene: Kloppinator\_61 Start: 54207, Stop: 52348, Start Num: 197

Candidate Starts for Kloppinator\_61:

(Start: 180 @54231 has 1 MA's), (Start: 197 @54207 has 298 MA's), (Start: 225 @54183 has 5 MA's), (Start: 238 @54177 has 2 MA's), (Start: 261 @54135 has 10 MA's), (269, 54114), (323, 54000), (328, 53994), (349, 53964), (385, 53904), (394, 53883), (410, 53829), (418, 53817), (425, 53799), (426, 53790), (427, 53787), (462, 53682), (496, 53625), (511, 53589), (516, 53577), (534, 53553), (539, 53541), (545, 53523), (555, 53505), (566, 53487), (588, 53448), (595, 53439), (597, 53436), (599, 53433), (754, 53076), (760, 53043), (765, 53022), (799, 52929), (802, 52920), (822, 52857), (841, 52821), (842, 52818), (847, 52803), (872, 52725), (877, 52713), (883, 52692), (902, 52653), (942, 52563), (947, 52545), (949, 52539), (954, 52524), (964, 52500), (968, 52485), (969, 52482), (972, 52470), (979, 52446), (1002, 52398), (1015, 52374),

Gene: Knocker\_59 Start: 55993, Stop: 54140, Start Num: 197

Candidate Starts for Knocker\_59:

(Start: 197 @55993 has 298 MA's), (252, 55936), (273, 55891), (279, 55879), (280, 55876), (298, 55855), (355, 55750), (426, 55588), (427, 55585), (434, 55567), (462, 55480), (496, 55423), (500, 55411), (511, 55387), (516, 55375), (539, 55339), (541, 55333), (583, 55252), (595, 55231), (597, 55228), (615, 55204), (618, 55198), (654, 55114), (663, 55084), (698, 55018), (724, 54970), (731, 54949), (739, 54928), (749, 54892), (755, 54862), (760, 54835), (765, 54814), (797, 54727), (799, 54721), (802, 54712), (822, 54649), (841, 54613), (842, 54610), (843, 54607), (847, 54595), (856, 54571), (872, 54517), (877, 54505), (883, 54484), (885, 54475), (921, 54415), (938, 54376), (947, 54337), (949, 54331), (964, 54292), (967, 54280), (968, 54277), (969, 54274), (975, 54250), (979, 54238), (986, 54214), (1002, 54190), (1004, 54187), (1015, 54166), (1023, 54145),

Gene: Knox\_39 Start: 28934, Stop: 27069, Start Num: 283

Candidate Starts for Knox\_39:

(Start: 234 @29021 has 938 MA's), (Start: 237 @29018 has 2 MA's), (Start: 283 @28934 has 147 MA's), (Start: 291 @28925 has 5 MA's), (342, 28820), (347, 28811), (367, 28781), (369, 28778), (423, 28661), (426, 28646), (428, 28640), (466, 28535), (473, 28508), (532, 28367), (537, 28358), (541, 28346), (551, 28319), (553, 28316), (562, 28301), (566, 28295), (570, 28289), (613, 28256), (701, 28067), (728, 28013), (733, 27992), (798, 27752), (801, 27743), (802, 27740), (805, 27722), (819, 27680), (822, 27674), (832, 27650), (849, 27593), (900, 27434), (913, 27404), (917, 27395), (938, 27335), (943, 27311), (956, 27272), (967, 27239), (970, 27227), (986, 27167),

Gene: Koan\_43 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Koan\_43:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Koduck\_44 Start: 30337, Stop: 28550, Start Num: 233

Candidate Starts for Koduck\_44:

(Start: 233 @30337 has 10 MA's), (355, 30130), (359, 30124), (368, 30109), (379, 30094), (394, 30064), (395, 30061), (405, 30031), (415, 30004), (424, 29983), (432, 29953), (465, 29851), (541, 29758), (563, 29713), (566, 29710), (571, 29701), (582, 29686), (619, 29620), (635, 29587), (655, 29539), (675, 29491), (759, 29266), (778, 29215), (789, 29182), (790, 29179), (805, 29113), (818, 29074), (837, 29053), (859, 28978), (864, 28960), (879, 28915), (888, 28888), (908, 28852), (921, 28834), (936, 28798), (942, 28774), (962, 28717), (985, 28639), (989, 28627), (993, 28618),

Gene: Koji\_37 Start: 28666, Stop: 26816, Start Num: 281

Candidate Starts for Koji\_37:

(Start: 281 @28666 has 18 MA's), (347, 28543), (369, 28510), (420, 28399), (426, 28378), (428, 28372), (431, 28363), (447, 28321), (512, 28165), (532, 28111), (535, 28105), (537, 28102), (541, 28090), (553, 28060), (611, 28003), (715, 27787), (741, 27709), (798, 27499), (802, 27487), (805, 27469), (819, 27427), (849, 27340), (913, 27151), (917, 27142), (938, 27082), (943, 27058), (949, 27037), (954, 27025), (986, 26914),

Gene: Koko\_47 Start: 30329, Stop: 28530, Start Num: 234

Candidate Starts for Koko\_47:

(Start: 234 @30329 has 938 MA's), (353, 30125), (359, 30116), (395, 30050), (397, 30047), (405, 30020), (409, 30005), (415, 29993), (432, 29942), (461, 29852), (465, 29840), (541, 29747), (566, 29699), (571, 29690), (660, 29507), (733, 29357), (759, 29252), (778, 29195), (790, 29159), (793, 29150), (798, 29123), (805, 29093), (818, 29054), (837, 29033), (845, 29000), (847, 28994), (879, 28895), (908, 28832), (936, 28778), (942, 28754), (962, 28697), (985, 28619), (989, 28607), (993, 28598), (995, 28595),

Gene: Kolhan\_57 Start: 52487, Stop: 50658, Start Num: 197

Candidate Starts for Kolhan\_57:

(Start: 197 @52487 has 298 MA's), (Start: 238 @52460 has 2 MA's), (253, 52430), (Start: 261 @52418 has 10 MA's), (272, 52391), (273, 52388), (277, 52379), (301, 52361), (355, 52265), (385, 52214), (395, 52190), (402, 52166), (450, 52028), (459, 52004), (462, 51992), (496, 51935), (511, 51899), (516, 51887), (534, 51863), (580, 51779), (595, 51749), (597, 51746), (618, 51716), (678, 51572), (710, 51506), (737, 51455), (743, 51434), (749, 51416), (760, 51359), (793, 51275), (799, 51245), (802, 51236), (822, 51170), (839, 51143), (841, 51134), (847, 51116), (856, 51092), (872, 51038), (877, 51026), (883, 51005), (921, 50936), (942, 50876), (947, 50858), (960, 50825), (964, 50813),

(968, 50798), (969, 50795), (972, 50783), (979, 50759), (980, 50756), (1002, 50708), (1004, 50705), (1015, 50684), (1023, 50663),

Gene: Koreni\_44 Start: 31251, Stop: 29425, Start Num: 234

Candidate Starts for Koreni\_44:

(Start: 234 @31251 has 938 MA's), (252, 31230), (266, 31200), (279, 31170), (379, 31008), (389, 30990), (415, 30918), (419, 30909), (458, 30789), (465, 30765), (541, 30672), (568, 30624), (582, 30603), (603, 30564), (663, 30432), (675, 30411), (700, 30366), (703, 30354), (756, 30201), (759, 30180), (798, 30057), (805, 30027), (818, 29988), (841, 29922), (842, 29919), (847, 29904), (856, 29880), (862, 29856), (942, 29649), (985, 29514), (989, 29502), (993, 29493),

Gene: Kradal\_67 Start: 46750, Stop: 44786, Start Num: 258

Candidate Starts for Kradal\_67:

(Start: 258 @46750 has 7 MA's), (304, 46654), (361, 46546), (369, 46534), (397, 46480), (425, 46396), (470, 46261), (492, 46162), (497, 46150), (508, 46123), (515, 46108), (584, 45970), (631, 45883), (672, 45787), (716, 45679), (717, 45676), (726, 45649), (734, 45622), (743, 45592), (752, 45562), (780, 45457), (808, 45349), (810, 45340), (812, 45334), (866, 45190), (872, 45172), (878, 45154), (914, 45100), (949, 44983), (953, 44971), (959, 44962), (963, 44950), (968, 44932), (974, 44908), (983, 44884), (988, 44866),

Gene: Kratak\_45 Start: 31709, Stop: 29883, Start Num: 234

Candidate Starts for Kratak\_45:

(Start: 234 @31709 has 938 MA's), (252, 31688), (266, 31658), (279, 31628), (379, 31466), (389, 31448), (415, 31376), (419, 31367), (458, 31247), (465, 31223), (541, 31130), (568, 31082), (603, 31022), (663, 30890), (675, 30869), (700, 30824), (703, 30812), (756, 30659), (759, 30638), (798, 30515), (805, 30485), (818, 30446), (841, 30380), (842, 30377), (847, 30362), (856, 30338), (862, 30314), (942, 30107), (985, 29972), (989, 29960), (993, 29951),

Gene: Kremtemulon\_45 Start: 31521, Stop: 29695, Start Num: 234

Candidate Starts for Kremtemulon\_45:

(Start: 234 @31521 has 938 MA's), (265, 31473), (353, 31317), (395, 31245), (415, 31188), (419, 31179), (458, 31059), (465, 31035), (518, 30981), (541, 30942), (568, 30894), (582, 30873), (603, 30834), (663, 30702), (667, 30693), (675, 30681), (700, 30636), (703, 30624), (756, 30471), (759, 30450), (798, 30327), (805, 30297), (818, 30258), (841, 30192), (842, 30189), (847, 30174), (856, 30150), (862, 30126), (942, 29919), (985, 29784), (989, 29772), (993, 29763),

Gene: Krishelle\_36 Start: 28397, Stop: 26613, Start Num: 234

Candidate Starts for Krishelle\_36:

(Start: 234 @28397 has 938 MA's), (334, 28226), (374, 28163), (394, 28124), (395, 28121), (409, 28076), (415, 28064), (419, 28055), (431, 28016), (465, 27911), (541, 27818), (566, 27770), (603, 27707), (619, 27680), (663, 27575), (679, 27548), (700, 27509), (759, 27329), (775, 27281), (805, 27176), (806, 27173), (837, 27116), (841, 27095), (858, 27047), (881, 26972), (918, 26903), (936, 26861), (938, 26858), (942, 26837), (946, 26822), (968, 26759), (985, 26702), (989, 26690), (1010, 26651), (1021, 26633),

Gene: Kristoff\_44 Start: 31492, Stop: 29657, Start Num: 234

Candidate Starts for Kristoff\_44:

(Start: 234 @31492 has 938 MA's), (266, 31441), (303, 31375), (353, 31288), (368, 31264), (390, 31228), (395, 31216), (415, 31159), (419, 31150), (465, 31006), (513, 30964), (541, 30913), (568, 30865), (603, 30805), (661, 30676), (663, 30673), (675, 30652), (679, 30646), (729, 30538), (759, 30415), (775, 30367), (798, 30292), (805, 30262), (818, 30223), (841, 30154), (842, 30151), (856, 30112), (862, 30088), (864, 30082), (868, 30070), (942, 29881), (949, 29857), (970, 29794), (985, 29746), (989, 29734), (993, 29725),

Gene: Kronus\_58 Start: 54729, Stop: 52912, Start Num: 235

Candidate Starts for Kronus\_58:

(129, 54912), (Start: 235 @54729 has 43 MA's), (252, 54699), (359, 54519), (406, 54414), (424, 54366), (426, 54354), (437, 54324), (442, 54318), (462, 54255), (464, 54249), (496, 54198), (511, 54162), (539, 54114), (597, 54009), (647, 53913), (664, 53862), (737, 53718), (749, 53679), (755, 53649), (760, 53622), (763, 53610), (797, 53514), (799, 53508), (802, 53499), (804, 53487), (834, 53415), (841, 53385), (847, 53367), (851, 53358), (872, 53289), (877, 53277), (883, 53256), (921, 53187), (931, 53172), (938, 53148), (942, 53127), (947, 53109), (949, 53103), (962, 53070), (964, 53064), (969, 53046), (972, 53034), (975, 53022), (979, 53010), (994, 52968), (1015, 52938),

Gene: Kugel\_46 Start: 35094, Stop: 33268, Start Num: 234

Candidate Starts for Kugel\_46:

(Start: 234 @35094 has 938 MA's), (359, 34881), (368, 34866), (395, 34818), (405, 34788), (411, 34767), (415, 34761), (419, 34752), (457, 34635), (465, 34608), (541, 34515), (546, 34500), (566, 34467), (596, 34416), (598, 34413), (634, 34347), (657, 34287), (679, 34242), (700, 34203), (759, 34023), (775, 33975), (790, 33936), (805, 33870), (818, 33831), (837, 33810), (841, 33789), (847, 33771), (868, 33705), (936, 33555), (938, 33552), (946, 33516), (954, 33492), (959, 33483), (963, 33471), (985, 33396), (993, 33375),

Gene: Kurt1\_39 Start: 28930, Stop: 27065, Start Num: 283

Candidate Starts for Kurt1\_39:

(Start: 234 @29017 has 938 MA's), (Start: 237 @29014 has 2 MA's), (Start: 283 @28930 has 147 MA's), (Start: 291 @28921 has 5 MA's), (342, 28816), (347, 28807), (367, 28777), (369, 28774), (424, 28654), (426, 28642), (428, 28636), (466, 28531), (473, 28504), (532, 28363), (535, 28357), (537, 28354), (541, 28342), (551, 28315), (553, 28312), (562, 28297), (566, 28291), (570, 28285), (613, 28252), (701, 28063), (798, 27748), (801, 27739), (802, 27736), (805, 27718), (819, 27676), (822, 27670), (825, 27661), (832, 27646), (849, 27589), (900, 27430), (913, 27400), (917, 27391), (938, 27331), (943, 27307), (956, 27268), (967, 27235), (970, 27223), (986, 27163),

Gene: Kwadwo\_59 Start: 54008, Stop: 52149, Start Num: 197

Candidate Starts for Kwadwo\_59:

(Start: 180 @54032 has 1 MA's), (Start: 197 @54008 has 298 MA's), (Start: 225 @53984 has 5 MA's), (Start: 238 @53978 has 2 MA's), (Start: 261 @53936 has 10 MA's), (269, 53915), (323, 53801), (328, 53795), (349, 53765), (385, 53705), (394, 53684), (410, 53630), (418, 53618), (425, 53600), (427, 53588), (462, 53483), (496, 53426), (511, 53390), (516, 53378), (535, 53351), (555, 53306), (588, 53249), (595, 53240), (597, 53237), (724, 52979), (754, 52877), (760, 52844), (765, 52823), (799, 52730), (802, 52721), (822, 52658), (841, 52622), (842, 52619), (847, 52604), (872, 52526), (877, 52514), (883, 52493), (902, 52454), (942, 52364), (947, 52346), (949, 52340), (954, 52325), (964, 52301), (968, 52286), (969, 52283), (972, 52271), (979, 52247), (1002, 52199), (1015, 52175),

Gene: Kwksand96\_61 Start: 54137, Stop: 52278, Start Num: 197

Candidate Starts for Kwksand96\_61:

(Start: 180 @54161 has 1 MA's), (Start: 197 @54137 has 298 MA's), (Start: 225 @54113 has 5 MA's), (Start: 238 @54107 has 2 MA's), (Start: 261 @54065 has 10 MA's), (269, 54044), (323, 53930), (328, 53924), (349, 53894), (385, 53834), (394, 53813), (410, 53759), (418, 53747), (425, 53729), (427, 53717), (462, 53612), (496, 53555), (511, 53519), (516, 53507), (535, 53480), (555, 53435), (588, 53378), (595, 53369), (597, 53366), (754, 53006), (760, 52973), (765, 52952), (799, 52859), (802, 52850), (822, 52787), (841, 52751), (842, 52748), (847, 52733), (872, 52655), (877, 52643), (883, 52622), (902, 52583), (942, 52493), (947, 52475), (949, 52469), (954, 52454), (964, 52430), (968, 52415), (969, 52412), (972, 52400), (979, 52376), (1002, 52328), (1015, 52304), (1019, 52289),

Gene: KyMonks1A\_47 Start: 34990, Stop: 33164, Start Num: 234

Candidate Starts for KyMonks1A\_47:

(Start: 234 @34990 has 938 MA's), (359, 34777), (368, 34762), (405, 34684), (411, 34663), (415, 34657), (419, 34648), (457, 34531), (465, 34504), (541, 34411), (546, 34396), (566, 34363), (596, 34312), (598, 34309), (634, 34243), (648, 34213), (657, 34183), (679, 34138), (700, 34099), (759, 33919), (775, 33871), (790, 33832), (805, 33766), (818, 33727), (837, 33706), (841, 33685), (847, 33667), (868, 33601), (936, 33451), (938, 33448), (946, 33412), (954, 33388), (959, 33379), (963, 33367), (970, 33340), (985, 33292), (993, 33271),

Gene: Kye\_45 Start: 31568, Stop: 29742, Start Num: 234

Candidate Starts for Kye\_45:

(Start: 234 @31568 has 938 MA's), (252, 31547), (266, 31517), (279, 31487), (379, 31325), (389, 31307), (415, 31235), (419, 31226), (458, 31106), (465, 31082), (541, 30989), (568, 30941), (582, 30920), (603, 30881), (663, 30749), (675, 30728), (700, 30683), (703, 30671), (756, 30518), (759, 30497), (798, 30374), (805, 30344), (818, 30305), (841, 30239), (842, 30236), (847, 30221), (856, 30197), (862, 30173), (942, 29966), (985, 29831), (989, 29819), (993, 29810),

Gene: Kykar\_45 Start: 34788, Stop: 32959, Start Num: 234

Candidate Starts for Kykar\_45:

(Start: 234 @34788 has 938 MA's), (359, 34575), (368, 34560), (405, 34482), (411, 34461), (415, 34455), (419, 34446), (465, 34302), (541, 34209), (546, 34194), (596, 34110), (598, 34107), (634, 34041), (648, 34011), (657, 33981), (679, 33936), (700, 33897), (759, 33717), (775, 33669), (793, 33621), (802, 33582), (805, 33564), (818, 33525), (837, 33504), (841, 33483), (846, 33468), (885, 33345), (960, 33174), (967, 33150), (982, 33102), (985, 33090), (993, 33069), (997, 33063), (1025, 33015), (1030, 33000),

Gene: L5\_44 Start: 30476, Stop: 28689, Start Num: 233

Candidate Starts for L5\_44:

(Start: 233 @30476 has 10 MA's), (353, 30272), (355, 30269), (359, 30263), (368, 30248), (379, 30233), (394, 30203), (395, 30200), (405, 30170), (415, 30143), (424, 30122), (432, 30092), (465, 29990), (541, 29897), (563, 29852), (566, 29849), (571, 29840), (582, 29825), (619, 29759), (635, 29726), (655, 29678), (675, 29630), (759, 29405), (778, 29354), (789, 29321), (790, 29318), (805, 29252), (818, 29213), (837, 29192), (859, 29117), (864, 29099), (879, 29054), (888, 29027), (908, 28991), (921, 28973), (936, 28937), (942, 28913), (962, 28856), (985, 28778), (989, 28766), (993, 28757),

Gene: LBerry\_49 Start: 31856, Stop: 30042, Start Num: 234

Candidate Starts for LBerry\_49:

(Start: 234 @31856 has 938 MA's), (262, 31817), (266, 31805), (353, 31652), (362, 31637), (395, 31580), (415, 31523), (419, 31514), (432, 31472), (448, 31421), (465, 31370), (541, 31277), (566, 31229), (571, 31220), (582, 31205), (603, 31166), (619, 31139), (634, 31109), (670, 31016), (701, 30956), (710, 30941), (759, 30785), (790, 30698), (805, 30632), (818, 30593), (842, 30521), (856, 30482), (862, 30458), (868, 30440), (879, 30407), (888, 30380), (921, 30326), (942, 30266), (968, 30188), (985, 30131), (989, 30119), (993, 30110),

Gene: LHTSCC\_47 Start: 31992, Stop: 30166, Start Num: 234

Candidate Starts for LHTSCC\_47:

(Start: 234 @31992 has 938 MA's), (265, 31944), (353, 31788), (395, 31716), (415, 31659), (419, 31650), (458, 31530), (465, 31506), (541, 31413), (568, 31365), (582, 31344), (603, 31305), (628, 31260), (663, 31173), (667, 31164), (675, 31152), (700, 31107), (703, 31095), (756, 30942), (759, 30921), (798, 30798), (805, 30768), (818, 30729), (841, 30663), (842, 30660), (856, 30621), (862, 30597), (942, 30390), (985, 30255), (989, 30243), (993, 30234),

Gene: Labeouficaum\_61 Start: 54131, Stop: 52272, Start Num: 197



Candidate Starts for Labeouficaum\_61:

(Start: 180 @54155 has 1 MA's), (Start: 197 @54131 has 298 MA's), (Start: 225 @54107 has 5 MA's), (Start: 238 @54101 has 2 MA's), (Start: 261 @54059 has 10 MA's), (269, 54038), (323, 53924), (328, 53918), (349, 53888), (385, 53828), (394, 53807), (410, 53753), (418, 53741), (425, 53723), (427, 53711), (462, 53606), (496, 53549), (511, 53513), (516, 53501), (534, 53477), (539, 53465), (545, 53447), (555, 53429), (566, 53411), (588, 53372), (595, 53363), (597, 53360), (599, 53357), (724, 53102), (754, 53000), (760, 52967), (765, 52946), (799, 52853), (802, 52844), (822, 52781), (841, 52745), (842, 52742), (847, 52727), (872, 52649), (877, 52637), (883, 52616), (902, 52577), (942, 52487), (947, 52469), (949, 52463), (954, 52448), (964, 52424), (968, 52409), (969, 52406), (972, 52394), (979, 52370), (985, 52349), (1002, 52322), (1015, 52298), (1019, 52283),

Gene: LadyAstra\_48 Start: 30680, Stop: 32542, Start Num: 234

Candidate Starts for LadyAstra\_48:

(Start: 234 @30680 has 938 MA's), (265, 30728), (359, 30893), (405, 30977), (428, 31043), (550, 31289), (603, 31379), (670, 31526), (675, 31532), (712, 31616), (759, 31790), (789, 31874), (796, 31907), (840, 32036), (842, 32045), (876, 32147), (942, 32303), (949, 32327), (960, 32354), (964, 32366), (985, 32438),

Gene: LadyBird\_47 Start: 31737, Stop: 29950, Start Num: 234

Candidate Starts for LadyBird\_47:

(Start: 234 @31737 has 938 MA's), (353, 31533), (355, 31530), (359, 31524), (368, 31509), (379, 31494), (395, 31461), (397, 31458), (405, 31431), (415, 31404), (424, 31383), (432, 31353), (465, 31251), (541, 31158), (544, 31149), (566, 31110), (571, 31101), (582, 31086), (619, 31020), (655, 30939), (675, 30891), (679, 30885), (740, 30747), (759, 30666), (778, 30615), (789, 30582), (790, 30579), (805, 30513), (818, 30474), (837, 30453), (859, 30378), (864, 30360), (879, 30315), (888, 30288), (908, 30252), (921, 30234), (936, 30198), (942, 30174), (962, 30117), (985, 30039), (989, 30027), (993, 30018),

Gene: Lahqtemish\_42 Start: 29831, Stop: 31705, Start Num: 234

Candidate Starts for Lahqtemish\_42:

(Start: 234 @29831 has 938 MA's), (273, 29900), (284, 29921), (395, 30101), (425, 30182), (603, 30503), (709, 30737), (746, 30857), (747, 30860), (759, 30920), (761, 30926), (782, 30986), (786, 31001), (796, 31037), (799, 31046), (805, 31073), (840, 31166), (845, 31184), (856, 31214), (901, 31337), (902, 31340), (936, 31409), (946, 31448), (949, 31457), (962, 31490), (964, 31496), (967, 31508), (978, 31544), (985, 31568), (989, 31580), (993, 31589), (1008, 31613),

Gene: Lambano\_52 Start: 52998, Stop: 51175, Start Num: 189

Candidate Starts for Lambano\_52:

(Start: 175 @53016 has 4 MA's), (Start: 189 @52998 has 26 MA's), (Start: 238 @52974 has 2 MA's), (252, 52947), (Start: 261 @52932 has 10 MA's), (269, 52911), (316, 52824), (382, 52719), (399, 52677), (425, 52611), (434, 52581), (437, 52572), (441, 52569), (442, 52566), (450, 52539), (496, 52446), (504, 52428), (511, 52410), (516, 52398), (528, 52383), (535, 52371), (595, 52260), (597, 52257), (618, 52227), (634, 52191), (737, 51966), (739, 51963), (749, 51927), (754, 51903), (760, 51870), (797, 51762), (799, 51756), (801, 51750), (802, 51747), (841, 51648), (842, 51645), (847, 51630), (872, 51552), (877, 51540), (883, 51519), (885, 51510), (902, 51480), (918, 51456), (935, 51423), (942, 51390), (947, 51372), (949, 51366), (964, 51327), (969, 51309), (972, 51297), (979, 51273), (994, 51231), (1002, 51225), (1015, 51201),

Gene: Lambert1\_44 Start: 31597, Stop: 29759, Start Num: 234

Candidate Starts for Lambert1\_44:

(Start: 234 @31597 has 938 MA's), (266, 31546), (353, 31393), (395, 31321), (405, 31291), (415, 31264), (419, 31255), (465, 31111), (541, 31015), (568, 30967), (603, 30907), (648, 30820), (663, 30775), (675, 30754), (711, 30682), (729, 30640), (740, 30598), (759, 30517), (775, 30469), (790,

30430), (798, 30394), (805, 30364), (816, 30334), (842, 30253), (856, 30214), (862, 30190), (868, 30172), (869, 30169), (921, 30043), (942, 29983), (970, 29896), (985, 29848), (989, 29836), (993, 29827),

Gene: Lamina13\_45 Start: 34387, Stop: 32561, Start Num: 234

Candidate Starts for Lamina13\_45:

(Start: 234 @34387 has 938 MA's), (359, 34174), (368, 34159), (405, 34081), (411, 34060), (415, 34054), (419, 34045), (457, 33928), (465, 33901), (541, 33808), (546, 33793), (596, 33709), (598, 33706), (634, 33640), (648, 33610), (657, 33580), (679, 33535), (700, 33496), (759, 33316), (775, 33268), (790, 33229), (805, 33163), (818, 33124), (837, 33103), (841, 33082), (847, 33064), (868, 32998), (936, 32848), (938, 32845), (946, 32809), (954, 32785), (959, 32776), (963, 32764), (985, 32689), (993, 32668),

Gene: Landor\_44 Start: 32538, Stop: 30748, Start Num: 234

Candidate Starts for Landor\_44:

(Start: 234 @32538 has 938 MA's), (353, 32334), (359, 32325), (397, 32256), (405, 32229), (415, 32202), (465, 32049), (541, 31956), (566, 31908), (571, 31899), (582, 31884), (619, 31818), (635, 31785), (667, 31701), (710, 31620), (728, 31590), (759, 31464), (769, 31434), (778, 31413), (798, 31341), (805, 31311), (818, 31272), (837, 31251), (841, 31230), (908, 31050), (918, 31038), (936, 30996), (942, 30972), (962, 30915), (968, 30894), (985, 30837), (989, 30825), (993, 30816),

Gene: LappelDuVide\_45 Start: 31569, Stop: 29743, Start Num: 234

Candidate Starts for LappelDuVide\_45:

(Start: 234 @31569 has 938 MA's), (252, 31548), (266, 31518), (279, 31488), (379, 31326), (389, 31308), (415, 31236), (419, 31227), (458, 31107), (465, 31083), (541, 30990), (568, 30942), (582, 30921), (603, 30882), (663, 30750), (675, 30729), (700, 30684), (703, 30672), (756, 30519), (759, 30498), (798, 30375), (805, 30345), (818, 30306), (841, 30240), (842, 30237), (847, 30222), (856, 30198), (862, 30174), (942, 29967), (985, 29832), (989, 29820), (993, 29811),

Gene: Larenn\_44 Start: 31600, Stop: 29807, Start Num: 234

Candidate Starts for Larenn\_44:

(Start: 234 @31600 has 938 MA's), (353, 31396), (355, 31393), (359, 31387), (379, 31357), (395, 31324), (397, 31321), (405, 31294), (415, 31267), (432, 31216), (465, 31114), (541, 31021), (566, 30973), (571, 30964), (582, 30949), (619, 30883), (655, 30802), (675, 30754), (679, 30748), (740, 30610), (759, 30529), (778, 30472), (789, 30439), (798, 30400), (805, 30370), (818, 30331), (837, 30310), (841, 30289), (918, 30097), (921, 30091), (936, 30055), (942, 30031), (962, 29974), (968, 29953), (985, 29896), (989, 29884), (993, 29875),

Gene: LarryKay\_48 Start: 31886, Stop: 30072, Start Num: 234

Candidate Starts for LarryKay\_48:

(Start: 234 @31886 has 938 MA's), (262, 31847), (266, 31835), (353, 31682), (362, 31667), (395, 31610), (415, 31553), (419, 31544), (432, 31502), (448, 31451), (465, 31400), (518, 31346), (541, 31307), (566, 31259), (582, 31235), (603, 31196), (619, 31169), (634, 31139), (670, 31046), (679, 31034), (701, 30986), (710, 30971), (759, 30815), (778, 30764), (789, 30731), (790, 30728), (805, 30662), (818, 30623), (842, 30551), (856, 30512), (862, 30488), (868, 30470), (879, 30437), (921, 30356), (942, 30296), (970, 30209), (985, 30161), (989, 30149), (993, 30140), (995, 30137),

Gene: Lars\_57 Start: 52585, Stop: 50756, Start Num: 197

Candidate Starts for Lars\_57:

(Start: 197 @52585 has 298 MA's), (Start: 238 @52558 has 2 MA's), (253, 52528), (Start: 261 @52516 has 10 MA's), (272, 52489), (273, 52486), (277, 52477), (301, 52459), (355, 52363), (385, 52312), (395, 52288), (402, 52264), (450, 52126), (459, 52102), (462, 52090), (496, 52033), (511, 51997), (516, 51985), (534, 51961), (574, 51883), (580, 51877), (583, 51868), (595, 51847), (597, 51844),

(618, 51814), (678, 51670), (710, 51604), (737, 51553), (743, 51532), (749, 51514), (760, 51457), (793, 51373), (799, 51343), (802, 51334), (822, 51268), (839, 51241), (841, 51232), (847, 51214), (856, 51190), (872, 51136), (877, 51124), (883, 51103), (921, 51034), (942, 50974), (947, 50956), (960, 50923), (964, 50911), (968, 50896), (969, 50893), (972, 50881), (979, 50857), (980, 50854), (1002, 50806), (1004, 50803), (1015, 50782), (1023, 50761),

Gene: LasagnaCat\_62 Start: 54420, Stop: 52561, Start Num: 197

Candidate Starts for LasagnaCat\_62:

(Start: 180 @54444 has 1 MA's), (Start: 197 @54420 has 298 MA's), (Start: 225 @54396 has 5 MA's), (Start: 238 @54390 has 2 MA's), (Start: 261 @54348 has 10 MA's), (269, 54327), (323, 54213), (328, 54207), (349, 54177), (385, 54117), (394, 54096), (410, 54042), (418, 54030), (425, 54012), (427, 54000), (462, 53895), (496, 53838), (511, 53802), (516, 53790), (535, 53763), (545, 53736), (555, 53718), (566, 53700), (588, 53661), (595, 53652), (597, 53649), (599, 53646), (754, 53289), (760, 53256), (765, 53235), (799, 53142), (802, 53133), (822, 53070), (841, 53034), (842, 53031), (847, 53016), (872, 52938), (877, 52926), (883, 52905), (902, 52866), (942, 52776), (947, 52758), (949, 52752), (954, 52737), (964, 52713), (968, 52698), (969, 52695), (972, 52683), (979, 52659), (1002, 52611), (1015, 52587),

Gene: Lasso\_61 Start: 54283, Stop: 52424, Start Num: 197

Candidate Starts for Lasso\_61:

(Start: 180 @54307 has 1 MA's), (Start: 197 @54283 has 298 MA's), (Start: 225 @54259 has 5 MA's), (Start: 238 @54253 has 2 MA's), (Start: 261 @54211 has 10 MA's), (269, 54190), (323, 54076), (328, 54070), (349, 54040), (385, 53980), (394, 53959), (410, 53905), (418, 53893), (425, 53875), (427, 53863), (462, 53758), (496, 53701), (511, 53665), (516, 53653), (535, 53626), (555, 53581), (588, 53524), (595, 53515), (597, 53512), (754, 53152), (760, 53119), (765, 53098), (799, 53005), (802, 52996), (822, 52933), (841, 52897), (842, 52894), (847, 52879), (872, 52801), (877, 52789), (883, 52768), (902, 52729), (942, 52639), (947, 52621), (949, 52615), (954, 52600), (964, 52576), (968, 52561), (969, 52558), (972, 52546), (979, 52522), (1002, 52474), (1015, 52450),

Gene: LastResort\_46 Start: 29743, Stop: 27953, Start Num: 234

Candidate Starts for LastResort\_46:

(Start: 234 @29743 has 938 MA's), (336, 29569), (395, 29464), (397, 29461), (405, 29434), (415, 29407), (432, 29356), (465, 29254), (541, 29161), (563, 29116), (566, 29113), (571, 29104), (655, 28942), (663, 28915), (675, 28894), (679, 28888), (730, 28789), (740, 28750), (754, 28699), (759, 28669), (778, 28618), (789, 28585), (796, 28552), (798, 28546), (805, 28516), (837, 28456), (841, 28435), (856, 28393), (863, 28366), (868, 28351), (903, 28264), (936, 28201), (938, 28198), (985, 28042), (989, 28030), (995, 28018),

Gene: Lauer\_41 Start: 35269, Stop: 32888, Start Num: 47

Candidate Starts for Lauer\_41:

(Start: 47 @35269 has 13 MA's), (64, 35209), (82, 35167), (96, 35128), (124, 35038), (136, 35008), (141, 34987), (170, 34963), (Start: 223 @34885 has 3 MA's), (228, 34879), (Start: 230 @34876 has 13 MA's), (252, 34846), (273, 34798), (290, 34771), (Start: 291 @34768 has 5 MA's), (317, 34711), (329, 34687), (342, 34672), (354, 34651), (380, 34609), (391, 34585), (395, 34576), (398, 34570), (399, 34564), (409, 34531), (420, 34510), (426, 34489), (495, 34306), (524, 34231), (541, 34189), (634, 34102), (677, 34024), (682, 34018), (711, 33973), (713, 33970), (718, 33955), (728, 33934), (759, 33808), (772, 33760), (773, 33751), (781, 33721), (784, 33709), (805, 33616), (817, 33580), (819, 33574), (822, 33568), (824, 33562), (842, 33505), (849, 33481), (878, 33376), (879, 33373), (919, 33280), (926, 33262), (938, 33223), (948, 33181), (958, 33157), (967, 33127), (979, 33079), (982, 33070), (986, 33055), (1008, 33010), (1035, 32944), (1046, 32923), (1047, 32917), (1050, 32911),

Gene: Laurie\_57 Start: 52312, Stop: 50483, Start Num: 197

Candidate Starts for Laurie\_57:

(Start: 197 @52312 has 298 MA's), (Start: 238 @52285 has 2 MA's), (253, 52255), (Start: 261 @52243 has 10 MA's), (272, 52216), (273, 52213), (277, 52204), (301, 52186), (355, 52090), (385, 52039), (395, 52015), (450, 51853), (456, 51838), (459, 51829), (462, 51817), (496, 51760), (511, 51724), (516, 51712), (534, 51688), (574, 51610), (580, 51604), (583, 51595), (595, 51574), (597, 51571), (618, 51541), (678, 51397), (710, 51331), (737, 51280), (743, 51259), (749, 51241), (760, 51184), (783, 51127), (793, 51100), (799, 51070), (802, 51061), (822, 50995), (839, 50968), (841, 50959), (847, 50941), (856, 50917), (872, 50863), (877, 50851), (883, 50830), (921, 50761), (942, 50701), (947, 50683), (960, 50650), (964, 50638), (968, 50623), (969, 50620), (972, 50608), (979, 50584), (980, 50581), (1002, 50533), (1004, 50530), (1015, 50509), (1023, 50488),

Gene: Leaf\_95 Start: 58518, Stop: 60557, Start Num: 208

Candidate Starts for Leaf\_95:

(Start: 208 @58518 has 5 MA's), (269, 58629), (270, 58632), (284, 58659), (309, 58716), (329, 58752), (350, 58791), (382, 58845), (388, 58857), (391, 58866), (403, 58902), (424, 58962), (427, 58977), (431, 58989), (448, 59034), (459, 59064), (503, 59178), (541, 59271), (542, 59274), (545, 59283), (553, 59301), (647, 59409), (660, 59463), (665, 59475), (697, 59541), (726, 59610), (779, 59763), (798, 59847), (805, 59877), (848, 60009), (849, 60012), (857, 60048), (866, 60081), (879, 60120), (938, 60270), (943, 60294), (945, 60300), (949, 60315), (959, 60345), (980, 60423), (986, 60444), (998, 60474), (1018, 60516), (1033, 60552),

Gene: Leafus\_38 Start: 29199, Stop: 27334, Start Num: 283

Candidate Starts for Leafus\_38:

(Start: 283 @29199 has 147 MA's), (Start: 291 @29190 has 5 MA's), (423, 28926), (426, 28911), (428, 28905), (473, 28773), (498, 28719), (532, 28632), (537, 28623), (541, 28611), (551, 28584), (553, 28581), (562, 28566), (566, 28560), (634, 28479), (701, 28332), (741, 28230), (798, 28017), (801, 28008), (802, 28005), (805, 27987), (819, 27945), (834, 27915), (849, 27858), (900, 27699), (913, 27669), (938, 27600), (943, 27576), (956, 27537), (970, 27492),

Gene: LeeLot\_61 Start: 54638, Stop: 52779, Start Num: 197

Candidate Starts for LeeLot\_61:

(Start: 180 @54662 has 1 MA's), (Start: 197 @54638 has 298 MA's), (Start: 225 @54614 has 5 MA's), (Start: 238 @54608 has 2 MA's), (Start: 261 @54566 has 10 MA's), (269, 54545), (323, 54431), (328, 54425), (349, 54395), (385, 54335), (394, 54314), (410, 54260), (418, 54248), (425, 54230), (427, 54218), (462, 54113), (496, 54056), (511, 54020), (516, 54008), (535, 53981), (555, 53936), (588, 53879), (595, 53870), (597, 53867), (754, 53507), (760, 53474), (765, 53453), (799, 53360), (802, 53351), (822, 53288), (841, 53252), (842, 53249), (847, 53234), (872, 53156), (877, 53144), (883, 53123), (902, 53084), (942, 52994), (947, 52976), (949, 52970), (954, 52955), (964, 52931), (968, 52916), (969, 52913), (972, 52901), (979, 52877), (1002, 52829), (1015, 52805),

Gene: LeeroyJenkins\_68 Start: 39223, Stop: 37388, Start Num: 256

Candidate Starts for LeeroyJenkins\_68:

(245, 39238), (Start: 256 @39223 has 5 MA's), (264, 39208), (300, 39139), (328, 39079), (341, 39052), (342, 39049), (363, 39016), (371, 39004), (378, 38995), (387, 38986), (457, 38821), (463, 38803), (487, 38752), (489, 38743), (502, 38704), (515, 38683), (536, 38644), (550, 38611), (558, 38599), (561, 38593), (584, 38557), (607, 38524), (624, 38491), (636, 38464), (710, 38317), (734, 38260), (761, 38155), (776, 38107), (790, 38068), (793, 38059), (840, 37864), (854, 37837), (858, 37825), (875, 37813), (893, 37774), (914, 37726), (924, 37702), (946, 37618), (957, 37588), (962, 37570), (964, 37564), (968, 37549), (974, 37525), (979, 37513), (983, 37501), (985, 37492), (988, 37483), (1000, 37462), (1012, 37438), (1018, 37423),

Gene: Lego\_41 Start: 29589, Stop: 31454, Start Num: 234

Candidate Starts for Lego\_41:

(Start: 234 @29589 has 938 MA's), (265, 29637), (405, 29886), (436, 29976), (543, 30183), (546, 30192), (598, 30282), (603, 30291), (615, 30306), (635, 30351), (655, 30396), (675, 30444), (703, 30501), (730, 30582), (753, 30669), (759, 30702), (769, 30732), (790, 30789), (805, 30855), (840, 30948), (862, 31020), (905, 31128), (936, 31191), (942, 31215), (978, 31326), (985, 31350), (988, 31359),

Gene: Lego3393\_59 Start: 54589, Stop: 52730, Start Num: 197

Candidate Starts for Lego3393\_59:

(Start: 180 @54613 has 1 MA's), (Start: 197 @54589 has 298 MA's), (Start: 225 @54565 has 5 MA's), (Start: 238 @54559 has 2 MA's), (Start: 261 @54517 has 10 MA's), (269, 54496), (323, 54382), (328, 54376), (349, 54346), (385, 54286), (394, 54265), (410, 54211), (418, 54199), (425, 54181), (427, 54169), (462, 54064), (496, 54007), (511, 53971), (516, 53959), (535, 53932), (545, 53905), (555, 53887), (566, 53869), (588, 53830), (595, 53821), (597, 53818), (754, 53458), (760, 53425), (765, 53404), (799, 53311), (802, 53302), (822, 53239), (841, 53203), (842, 53200), (847, 53185), (872, 53107), (877, 53095), (883, 53074), (902, 53035), (942, 52945), (947, 52927), (949, 52921), (954, 52906), (964, 52882), (968, 52867), (969, 52864), (972, 52852), (979, 52828), (1002, 52780), (1015, 52756),

Gene: Legolas\_62 Start: 54377, Stop: 52518, Start Num: 197

Candidate Starts for Legolas\_62:

(Start: 180 @54401 has 1 MA's), (Start: 197 @54377 has 298 MA's), (Start: 225 @54353 has 5 MA's), (Start: 238 @54347 has 2 MA's), (Start: 261 @54305 has 10 MA's), (269, 54284), (323, 54170), (328, 54164), (349, 54134), (385, 54074), (394, 54053), (410, 53999), (418, 53987), (425, 53969), (427, 53957), (462, 53852), (496, 53795), (511, 53759), (516, 53747), (535, 53720), (555, 53675), (588, 53618), (595, 53609), (597, 53606), (754, 53246), (760, 53213), (765, 53192), (799, 53099), (802, 53090), (822, 53027), (841, 52991), (842, 52988), (847, 52973), (872, 52895), (877, 52883), (883, 52862), (902, 52823), (942, 52733), (947, 52715), (949, 52709), (954, 52694), (964, 52670), (968, 52655), (969, 52652), (972, 52640), (979, 52616), (1002, 52568), (1015, 52544),

Gene: LeiMonet\_63 Start: 54494, Stop: 52635, Start Num: 197

Candidate Starts for LeiMonet\_63:

(Start: 180 @54518 has 1 MA's), (Start: 197 @54494 has 298 MA's), (Start: 225 @54470 has 5 MA's), (Start: 238 @54464 has 2 MA's), (Start: 261 @54422 has 10 MA's), (269, 54401), (323, 54287), (328, 54281), (349, 54251), (385, 54191), (394, 54170), (410, 54116), (418, 54104), (425, 54086), (427, 54074), (462, 53969), (496, 53912), (511, 53876), (516, 53864), (534, 53840), (539, 53828), (545, 53810), (555, 53792), (566, 53774), (588, 53735), (595, 53726), (597, 53723), (599, 53720), (754, 53363), (760, 53330), (765, 53309), (799, 53216), (802, 53207), (822, 53144), (841, 53108), (842, 53105), (847, 53090), (872, 53012), (877, 53000), (883, 52979), (902, 52940), (942, 52850), (947, 52832), (949, 52826), (954, 52811), (964, 52787), (968, 52772), (969, 52769), (972, 52757), (979, 52733), (1002, 52685), (1015, 52661),

Gene: LemonSlice\_61 Start: 53968, Stop: 52109, Start Num: 197

Candidate Starts for LemonSlice\_61:

(Start: 180 @53992 has 1 MA's), (Start: 197 @53968 has 298 MA's), (Start: 225 @53944 has 5 MA's), (Start: 238 @53938 has 2 MA's), (Start: 261 @53896 has 10 MA's), (269, 53875), (323, 53761), (328, 53755), (349, 53725), (385, 53665), (394, 53644), (410, 53590), (418, 53578), (425, 53560), (427, 53548), (462, 53443), (496, 53386), (511, 53350), (516, 53338), (535, 53311), (545, 53284), (555, 53266), (566, 53248), (588, 53209), (595, 53200), (597, 53197), (724, 52939), (754, 52837), (760, 52804), (765, 52783), (799, 52690), (802, 52681), (822, 52618), (841, 52582), (842, 52579), (847, 52564), (872, 52486), (877, 52474), (883, 52453), (902, 52414), (942, 52324), (947, 52306), (949, 52300), (954, 52285), (964, 52261), (968, 52246), (969, 52243), (972, 52231), (979, 52207), (1002, 52159), (1015, 52135),

Gene: Lemur\_45 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for Lemur\_45:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: LeoAvram\_45 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for LeoAvram\_45:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: LeoJr\_98 Start: 78660, Stop: 80378, Start Num: 284

Candidate Starts for LeoJr\_98:

(Start: 248 @78585 has 2 MA's), (273, 78639), (276, 78648), (284, 78660), (407, 78879), (418, 78897), (426, 78924), (428, 78930), (468, 79035), (586, 79182), (603, 79209), (615, 79224), (638, 79278), (729, 79479), (735, 79506), (746, 79539), (756, 79578), (759, 79599), (761, 79605), (796, 79722), (817, 79806), (818, 79809), (840, 79872), (843, 79884), (856, 79920), (865, 79953), (883, 80007), (890, 80025), (936, 80130), (943, 80157), (947, 80172), (960, 80205), (962, 80211), (967, 80229), (970, 80241), (973, 80253), (974, 80256), (985, 80289), (1017, 80340),

Gene: Leogania\_44 Start: 32411, Stop: 30624, Start Num: 234

Candidate Starts for Leogania\_44:

(Start: 234 @32411 has 938 MA's), (355, 32204), (359, 32198), (368, 32183), (379, 32168), (405, 32105), (415, 32078), (424, 32057), (465, 31925), (541, 31832), (571, 31775), (582, 31760), (619, 31694), (655, 31613), (675, 31565), (679, 31559), (740, 31421), (759, 31340), (778, 31289), (789, 31256), (790, 31253), (793, 31244), (798, 31217), (805, 31187), (818, 31148), (837, 31127), (841, 31106), (921, 30908), (936, 30872), (942, 30848), (962, 30791), (968, 30770), (985, 30713), (989, 30701), (993, 30692),

Gene: Lephleur\_57 Start: 52497, Stop: 50668, Start Num: 197

Candidate Starts for Lephleur\_57:

(Start: 197 @52497 has 298 MA's), (Start: 238 @52470 has 2 MA's), (253, 52440), (Start: 261 @52428 has 10 MA's), (272, 52401), (273, 52398), (277, 52389), (301, 52371), (355, 52275), (385, 52224), (395, 52200), (402, 52176), (450, 52038), (459, 52014), (462, 52002), (496, 51945), (511, 51909), (516, 51897), (534, 51873), (580, 51789), (595, 51759), (597, 51756), (618, 51726), (678, 51582), (710, 51516), (733, 51477), (737, 51465), (743, 51444), (749, 51426), (760, 51369), (793, 51285), (799, 51255), (802, 51246), (822, 51180), (839, 51153), (841, 51144), (847, 51126), (856, 51102), (872, 51048), (877, 51036), (883, 51015), (921, 50946), (942, 50886), (947, 50868), (960, 50835), (964, 50823), (968, 50808), (969, 50805), (972, 50793), (979, 50769), (980, 50766), (1002, 50718), (1004, 50715), (1015, 50694), (1023, 50673),

Gene: Lesedi\_42 Start: 33941, Stop: 32115, Start Num: 234

Candidate Starts for Lesedi\_42:

(Start: 234 @33941 has 938 MA's), (359, 33728), (395, 33665), (405, 33635), (411, 33614), (415, 33608), (419, 33599), (457, 33482), (465, 33455), (541, 33362), (546, 33347), (566, 33314), (596, 33263), (598, 33260), (634, 33194), (648, 33164), (657, 33134), (679, 33089), (700, 33050), (759, 32870), (775, 32822), (790, 32783), (805, 32717), (818, 32678), (837, 32657), (841, 32636), (847, 32618), (868, 32552), (936, 32402), (938, 32399), (946, 32363), (954, 32339), (959, 32330), (963,

32318), (985, 32243), (993, 32222),

Gene: LestyG\_57 Start: 53332, Stop: 51515, Start Num: 235

Candidate Starts for LestyG\_57:

(61, 53716), (129, 53515), (Start: 235 @53332 has 43 MA's), (252, 53302), (359, 53122), (424, 52969), (426, 52957), (437, 52927), (442, 52921), (462, 52858), (464, 52852), (496, 52801), (511, 52765), (539, 52717), (597, 52612), (647, 52516), (664, 52465), (737, 52321), (749, 52282), (755, 52252), (760, 52225), (763, 52213), (797, 52117), (799, 52111), (802, 52102), (804, 52090), (834, 52018), (841, 51988), (847, 51970), (851, 51961), (872, 51892), (877, 51880), (883, 51859), (921, 51790), (931, 51775), (938, 51751), (942, 51730), (949, 51706), (964, 51667), (969, 51649), (972, 51637), (975, 51625), (979, 51613), (994, 51571), (1015, 51541),

Gene: Lev2\_38 Start: 30259, Stop: 28415, Start Num: 234

Candidate Starts for Lev2\_38:

(Start: 234 @30259 has 938 MA's), (266, 30208), (301, 30148), (336, 30085), (353, 30055), (355, 30052), (390, 29995), (395, 29983), (405, 29953), (415, 29926), (448, 29824), (453, 29809), (465, 29773), (520, 29713), (541, 29677), (566, 29629), (618, 29545), (619, 29539), (652, 29467), (663, 29434), (670, 29419), (679, 29407), (724, 29308), (759, 29173), (769, 29143), (775, 29125), (778, 29122), (790, 29086), (793, 29077), (796, 29056), (799, 29047), (805, 29020), (806, 29017), (837, 28960), (841, 28939), (879, 28822), (903, 28768), (908, 28759), (921, 28741), (947, 28663), (967, 28606), (978, 28570), (985, 28546), (989, 28534),

Gene: Leviathan\_46 Start: 31790, Stop: 30003, Start Num: 234

Candidate Starts for Leviathan\_46:

(160, 31877), (Start: 234 @31790 has 938 MA's), (355, 31583), (359, 31577), (368, 31562), (379, 31547), (397, 31511), (405, 31484), (415, 31457), (424, 31436), (465, 31304), (541, 31211), (566, 31163), (571, 31154), (582, 31139), (619, 31073), (655, 30992), (675, 30944), (679, 30938), (759, 30719), (778, 30668), (789, 30635), (790, 30632), (805, 30566), (818, 30527), (837, 30506), (859, 30431), (862, 30419), (879, 30368), (908, 30305), (921, 30287), (936, 30251), (942, 30227), (968, 30149), (985, 30092), (989, 30080), (993, 30071),

Gene: Librie\_37 Start: 26990, Stop: 25125, Start Num: 283

Candidate Starts for Librie\_37:

(Start: 283 @26990 has 147 MA's), (290, 26984), (337, 26885), (342, 26876), (357, 26852), (367, 26837), (371, 26831), (398, 26780), (399, 26777), (428, 26696), (479, 26546), (489, 26543), (524, 26444), (535, 26417), (537, 26414), (541, 26402), (553, 26372), (566, 26351), (611, 26315), (680, 26168), (729, 26066), (752, 25988), (798, 25808), (805, 25778), (824, 25724), (832, 25706), (849, 25649), (854, 25622), (866, 25580), (879, 25541), (913, 25460), (917, 25451), (938, 25391), (943, 25367), (946, 25355), (949, 25346), (956, 25328), (967, 25295), (986, 25223),

Gene: Licorice\_48 Start: 36210, Stop: 34423, Start Num: 234

Candidate Starts for Licorice\_48:

(Start: 234 @36210 has 938 MA's), (359, 35997), (368, 35982), (405, 35904), (411, 35883), (415, 35877), (419, 35868), (457, 35751), (465, 35724), (541, 35631), (546, 35616), (566, 35583), (596, 35532), (598, 35529), (628, 35475), (634, 35463), (648, 35433), (657, 35403), (679, 35358), (700, 35319), (759, 35139), (775, 35091), (790, 35052), (805, 34986), (839, 34914), (841, 34905), (868, 34821), (903, 34734), (954, 34608), (960, 34596), (985, 34512), (987, 34506),

Gene: Liebe\_42 Start: 31253, Stop: 33223, Start Num: 145

Candidate Starts for Liebe\_42:

(Start: 145 @31253 has 1 MA's), (148, 31256), (Start: 234 @31379 has 938 MA's), (405, 31676), (543, 31952), (600, 32054), (615, 32075), (675, 32213), (705, 32276), (759, 32471), (761, 32477), (769, 32501), (790, 32558), (803, 32615), (805, 32624), (847, 32741), (862, 32789), (933, 32948), (936,

32960), (962, 33041), (985, 33119), (1008, 33164),

Gene: Lifes\_61 Start: 36067, Stop: 34232, Start Num: 256

Candidate Starts for Lifes\_61:

(245, 36082), (Start: 256 @36067 has 5 MA's), (264, 36052), (300, 35983), (328, 35923), (341, 35896), (342, 35893), (363, 35860), (371, 35848), (378, 35839), (387, 35830), (457, 35665), (459, 35659), (495, 35566), (515, 35527), (536, 35488), (550, 35455), (558, 35443), (561, 35437), (584, 35401), (587, 35395), (607, 35368), (624, 35335), (636, 35308), (710, 35161), (734, 35104), (761, 34999), (776, 34951), (790, 34912), (793, 34903), (840, 34708), (854, 34681), (858, 34669), (875, 34657), (893, 34618), (914, 34570), (924, 34546), (946, 34462), (957, 34432), (962, 34414), (964, 34408), (968, 34393), (974, 34369), (979, 34357), (983, 34345), (985, 34336), (988, 34327), (1000, 34306), (1012, 34282), (1018, 34267),

Gene: Ligma\_51 Start: 45981, Stop: 44164, Start Num: 230

Candidate Starts for Ligma\_51:

(73, 46302), (84, 46278), (Start: 230 @45981 has 13 MA's), (252, 45945), (Start: 261 @45930 has 10 MA's), (273, 45900), (344, 45774), (406, 45651), (410, 45636), (427, 45594), (462, 45498), (511, 45405), (583, 45276), (597, 45252), (743, 44940), (749, 44922), (760, 44865), (799, 44751), (802, 44742), (822, 44679), (842, 44640), (847, 44625), (872, 44547), (877, 44535), (883, 44514), (885, 44505), (935, 44418), (943, 44382), (946, 44370), (961, 44331), (964, 44322), (968, 44307), (979, 44262), (1015, 44190),

Gene: LilBib\_45 Start: 35268, Stop: 33442, Start Num: 234

Candidate Starts for LilBib\_45:

(Start: 234 @35268 has 938 MA's), (359, 35055), (368, 35040), (395, 34992), (405, 34962), (411, 34941), (415, 34935), (419, 34926), (457, 34809), (465, 34782), (541, 34689), (546, 34674), (566, 34641), (596, 34590), (598, 34587), (634, 34521), (648, 34491), (657, 34461), (679, 34416), (700, 34377), (759, 34197), (775, 34149), (793, 34101), (802, 34062), (805, 34044), (818, 34005), (837, 33984), (841, 33963), (846, 33948), (885, 33825), (946, 33690), (954, 33666), (959, 33657), (963, 33645), (985, 33570), (993, 33549),

Gene: LilMcDreamy\_55 Start: 53828, Stop: 51987, Start Num: 189

Candidate Starts for LilMcDreamy\_55:

(Start: 189 @53828 has 26 MA's), (Start: 238 @53786 has 2 MA's), (252, 53759), (355, 53591), (394, 53519), (402, 53492), (424, 53441), (441, 53396), (442, 53393), (452, 53360), (456, 53351), (462, 53330), (511, 53237), (516, 53225), (539, 53189), (566, 53135), (580, 53117), (588, 53096), (595, 53087), (597, 53084), (648, 52985), (664, 52937), (737, 52793), (749, 52754), (760, 52697), (765, 52676), (780, 52646), (799, 52583), (802, 52574), (806, 52553), (834, 52490), (841, 52460), (847, 52442), (872, 52364), (877, 52352), (883, 52331), (885, 52322), (942, 52202), (964, 52139), (967, 52127), (975, 52097), (979, 52085), (994, 52043), (1015, 52013),

Gene: LilSmirk\_57 Start: 52488, Stop: 50659, Start Num: 197

Candidate Starts for LilSmirk\_57:

(Start: 197 @52488 has 298 MA's), (Start: 238 @52461 has 2 MA's), (253, 52431), (Start: 261 @52419 has 10 MA's), (272, 52392), (273, 52389), (277, 52380), (301, 52362), (355, 52266), (385, 52215), (395, 52191), (450, 52029), (459, 52005), (462, 51993), (496, 51936), (511, 51900), (516, 51888), (534, 51864), (580, 51780), (595, 51750), (597, 51747), (618, 51717), (678, 51573), (710, 51507), (737, 51456), (743, 51435), (749, 51417), (760, 51360), (783, 51303), (793, 51276), (799, 51246), (802, 51237), (822, 51171), (839, 51144), (841, 51135), (847, 51117), (856, 51093), (872, 51039), (877, 51027), (883, 51006), (921, 50937), (942, 50877), (947, 50859), (960, 50826), (964, 50814), (968, 50799), (969, 50796), (972, 50784), (979, 50760), (980, 50757), (1002, 50709), (1004, 50706), (1015, 50685), (1023, 50664),



Gene: LilTerminator\_38 Start: 27012, Stop: 25147, Start Num: 283

Candidate Starts for LilTerminator\_38:

(Start: 283 @27012 has 147 MA's), (290, 27006), (337, 26907), (342, 26898), (357, 26874), (367, 26859), (371, 26853), (398, 26802), (399, 26799), (428, 26718), (479, 26568), (489, 26565), (524, 26466), (535, 26439), (537, 26436), (541, 26424), (553, 26394), (566, 26373), (611, 26337), (680, 26190), (715, 26121), (749, 26022), (752, 26010), (798, 25830), (805, 25800), (824, 25746), (832, 25728), (849, 25671), (854, 25644), (866, 25602), (913, 25482), (917, 25473), (938, 25413), (943, 25389), (946, 25377), (949, 25368), (956, 25350), (967, 25317), (986, 25245),

Gene: LilTurb\_45 Start: 31623, Stop: 29836, Start Num: 234

Candidate Starts for LilTurb\_45:

(Start: 234 @31623 has 938 MA's), (355, 31416), (359, 31410), (368, 31395), (379, 31380), (397, 31344), (405, 31317), (415, 31290), (424, 31269), (465, 31137), (541, 31044), (566, 30996), (571, 30987), (582, 30972), (619, 30906), (655, 30825), (675, 30777), (679, 30771), (710, 30708), (759, 30552), (778, 30501), (789, 30468), (790, 30465), (805, 30399), (818, 30360), (837, 30339), (859, 30264), (862, 30252), (879, 30201), (908, 30138), (921, 30120), (936, 30084), (942, 30060), (968, 29982), (985, 29925), (989, 29913), (993, 29904),

Gene: Lilbooboo\_34 Start: 26910, Stop: 28784, Start Num: 234

Candidate Starts for Lilbooboo\_34:

(Start: 234 @26910 has 938 MA's), (252, 26931), (259, 26943), (279, 26991), (353, 27111), (405, 27213), (406, 27216), (411, 27234), (419, 27249), (453, 27357), (467, 27399), (576, 27546), (581, 27558), (596, 27588), (603, 27600), (617, 27618), (632, 27654), (663, 27732), (669, 27744), (675, 27753), (703, 27810), (704, 27813), (747, 27951), (754, 27981), (759, 28011), (775, 28062), (790, 28104), (796, 28134), (798, 28140), (799, 28143), (802, 28152), (803, 28161), (805, 28170), (817, 28236), (839, 28290), (876, 28404), (905, 28473), (931, 28515), (935, 28527), (946, 28575), (949, 28584), (960, 28611), (962, 28617), (968, 28638), (985, 28695), (987, 28701), (993, 28716),

Gene: Lilbunny\_44 Start: 29422, Stop: 27581, Start Num: 234

Candidate Starts for Lilbunny\_44:

(Start: 212 @29452 has 1 MA's), (Start: 234 @29422 has 938 MA's), (353, 29218), (395, 29143), (397, 29140), (405, 29113), (409, 29098), (415, 29086), (432, 29035), (461, 28945), (465, 28933), (541, 28840), (559, 28801), (571, 28783), (582, 28768), (619, 28702), (635, 28669), (636, 28666), (681, 28564), (710, 28504), (740, 28420), (759, 28339), (789, 28255), (790, 28252), (793, 28243), (798, 28216), (805, 28186), (837, 28126), (847, 28087), (936, 27871), (938, 27868), (942, 27847), (985, 27712), (989, 27700), (993, 27691), (995, 27688), (1042, 27595),

Gene: Lilith\_49 Start: 31846, Stop: 30032, Start Num: 234

Candidate Starts for Lilith\_49:

(Start: 234 @31846 has 938 MA's), (262, 31807), (266, 31795), (353, 31642), (362, 31627), (395, 31570), (415, 31513), (419, 31504), (432, 31462), (448, 31411), (465, 31360), (541, 31267), (566, 31219), (571, 31210), (582, 31195), (603, 31156), (619, 31129), (634, 31099), (670, 31006), (679, 30994), (701, 30946), (710, 30931), (759, 30775), (790, 30688), (805, 30622), (818, 30583), (842, 30511), (856, 30472), (862, 30448), (868, 30430), (879, 30397), (888, 30370), (921, 30316), (942, 30256), (968, 30178), (985, 30121), (989, 30109), (993, 30100),

Gene: Lilleskat\_43 Start: 31443, Stop: 29650, Start Num: 234

Candidate Starts for Lilleskat\_43:

(Start: 234 @31443 has 938 MA's), (246, 31434), (266, 31392), (334, 31272), (336, 31269), (364, 31221), (397, 31161), (406, 31131), (409, 31119), (415, 31107), (465, 30954), (541, 30861), (619, 30723), (634, 30693), (703, 30534), (710, 30522), (726, 30495), (756, 30387), (759, 30366), (802, 30231), (805, 30213), (841, 30132), (856, 30090), (879, 30015), (885, 29994), (918, 29940), (936, 29898), (968, 29796), (985, 29739), (989, 29727), (993, 29718),

Gene: Lillie\_36 Start: 28113, Stop: 26329, Start Num: 234

Candidate Starts for Lillie\_36:

(Start: 234 @28113 has 938 MA's), (374, 27879), (390, 27849), (394, 27840), (395, 27837), (409, 27792), (415, 27780), (432, 27729), (465, 27627), (492, 27606), (541, 27534), (563, 27489), (566, 27486), (589, 27444), (594, 27438), (603, 27423), (619, 27396), (663, 27291), (667, 27282), (679, 27264), (681, 27261), (700, 27225), (759, 27045), (775, 26997), (805, 26892), (806, 26889), (837, 26832), (841, 26811), (858, 26763), (881, 26688), (918, 26619), (936, 26577), (942, 26553), (968, 26475), (985, 26418), (989, 26406), (993, 26397), (1010, 26367), (1021, 26349),

Gene: LimaBean\_42 Start: 29163, Stop: 31037, Start Num: 234

Candidate Starts for LimaBean\_42:

(Start: 231 @29160 has 7 MA's), (Start: 234 @29163 has 938 MA's), (273, 29232), (284, 29253), (419, 29499), (432, 29541), (603, 29835), (709, 30069), (747, 30192), (759, 30252), (761, 30258), (778, 30303), (782, 30318), (786, 30333), (796, 30369), (805, 30405), (840, 30498), (869, 30591), (901, 30669), (936, 30741), (938, 30744), (946, 30780), (962, 30822), (967, 30840), (978, 30876), (985, 30900), (993, 30921),

Gene: LittleB\_45 Start: 31571, Stop: 29745, Start Num: 234

Candidate Starts for LittleB\_45:

(Start: 234 @31571 has 938 MA's), (252, 31550), (266, 31520), (279, 31490), (379, 31328), (389, 31310), (415, 31238), (419, 31229), (458, 31109), (465, 31085), (541, 30992), (568, 30944), (582, 30923), (603, 30884), (663, 30752), (675, 30731), (700, 30686), (703, 30674), (756, 30521), (759, 30500), (798, 30377), (805, 30347), (818, 30308), (841, 30242), (842, 30239), (847, 30224), (856, 30200), (862, 30176), (942, 29969), (985, 29834), (989, 29822), (993, 29813),

Gene: LittleCherry\_39 Start: 30596, Stop: 28731, Start Num: 234

Candidate Starts for LittleCherry\_39:

(Start: 234 @30596 has 938 MA's), (266, 30545), (301, 30485), (336, 30422), (353, 30392), (355, 30389), (390, 30332), (395, 30320), (405, 30290), (415, 30263), (465, 30110), (541, 30014), (566, 29966), (618, 29882), (619, 29876), (652, 29804), (663, 29771), (670, 29756), (679, 29744), (724, 29645), (759, 29510), (769, 29480), (775, 29462), (782, 29444), (790, 29423), (793, 29414), (805, 29357), (818, 29318), (841, 29276), (847, 29258), (862, 29210), (879, 29159), (903, 29105), (908, 29096), (921, 29078), (942, 29018), (947, 29000), (978, 28907), (985, 28883), (989, 28871), (1042, 28766),

Gene: LittleGuy\_45 Start: 31466, Stop: 29640, Start Num: 234

Candidate Starts for LittleGuy\_45:

(Start: 234 @31466 has 938 MA's), (252, 31445), (266, 31415), (279, 31385), (379, 31223), (389, 31205), (415, 31133), (419, 31124), (458, 31004), (465, 30980), (541, 30887), (568, 30839), (582, 30818), (603, 30779), (663, 30647), (675, 30626), (700, 30581), (703, 30569), (756, 30416), (759, 30395), (798, 30272), (805, 30242), (818, 30203), (841, 30137), (842, 30134), (847, 30119), (856, 30095), (862, 30071), (942, 29864), (985, 29729), (989, 29717), (993, 29708),

Gene: LittleMunchkin\_52 Start: 48656, Stop: 46845, Start Num: 225

Candidate Starts for LittleMunchkin\_52:

(Start: 225 @48656 has 5 MA's), (259, 48608), (Start: 261 @48605 has 10 MA's), (269, 48584), (273, 48575), (349, 48446), (402, 48338), (406, 48326), (424, 48287), (427, 48272), (456, 48197), (462, 48176), (511, 48083), (581, 47960), (597, 47930), (737, 47639), (760, 47543), (797, 47438), (799, 47432), (802, 47423), (822, 47360), (839, 47333), (847, 47306), (853, 47291), (856, 47282), (872, 47228), (877, 47216), (883, 47195), (931, 47111), (935, 47099), (943, 47063), (964, 47003), (968, 46988), (979, 46943), (1002, 46895), (1015, 46871),

Gene: LizLemon\_57 Start: 52610, Stop: 50781, Start Num: 197

Candidate Starts for LizLemon\_57:

(Start: 197 @52610 has 298 MA's), (Start: 238 @52583 has 2 MA's), (253, 52553), (Start: 261 @52541 has 10 MA's), (272, 52514), (273, 52511), (277, 52502), (301, 52484), (355, 52388), (385, 52337), (395, 52313), (402, 52289), (450, 52151), (459, 52127), (462, 52115), (496, 52058), (511, 52022), (516, 52010), (534, 51986), (580, 51902), (595, 51872), (597, 51869), (618, 51839), (678, 51695), (710, 51629), (733, 51590), (737, 51578), (743, 51557), (749, 51539), (760, 51482), (793, 51398), (799, 51368), (802, 51359), (822, 51293), (839, 51266), (841, 51257), (847, 51239), (856, 51215), (872, 51161), (877, 51149), (883, 51128), (921, 51059), (942, 50999), (947, 50981), (960, 50948), (964, 50936), (968, 50921), (969, 50918), (972, 50906), (979, 50882), (980, 50879), (1002, 50831), (1004, 50828), (1015, 50807), (1023, 50786),

Gene: Lizalica\_39 Start: 28785, Stop: 30650, Start Num: 234

Candidate Starts for Lizalica\_39:

(Start: 234 @28785 has 938 MA's), (265, 28833), (405, 29082), (436, 29172), (543, 29379), (546, 29388), (598, 29478), (603, 29487), (615, 29502), (635, 29547), (655, 29592), (675, 29640), (703, 29697), (730, 29778), (753, 29865), (759, 29898), (769, 29928), (790, 29985), (803, 30042), (805, 30051), (905, 30324), (936, 30387), (985, 30546), (988, 30555), (1031, 30633),

Gene: LochMonster\_46 Start: 31806, Stop: 29980, Start Num: 234

Candidate Starts for LochMonster\_46:

(Start: 234 @31806 has 938 MA's), (252, 31785), (266, 31755), (279, 31725), (379, 31563), (389, 31545), (415, 31473), (419, 31464), (458, 31344), (465, 31320), (541, 31227), (568, 31179), (582, 31158), (603, 31119), (628, 31074), (630, 31068), (663, 30987), (675, 30966), (700, 30921), (703, 30909), (756, 30756), (759, 30735), (798, 30612), (805, 30582), (818, 30543), (841, 30477), (842, 30474), (847, 30459), (856, 30435), (862, 30411), (942, 30204), (985, 30069), (989, 30057), (993, 30048),

Gene: Lockley\_44 Start: 34369, Stop: 32543, Start Num: 234

Candidate Starts for Lockley\_44:

(Start: 234 @34369 has 938 MA's), (359, 34156), (395, 34093), (405, 34063), (415, 34036), (419, 34027), (457, 33910), (465, 33883), (541, 33790), (546, 33775), (596, 33691), (598, 33688), (634, 33622), (648, 33592), (657, 33562), (679, 33517), (700, 33478), (759, 33298), (775, 33250), (790, 33211), (805, 33145), (818, 33106), (837, 33085), (841, 33064), (847, 33046), (868, 32980), (936, 32830), (938, 32827), (946, 32791), (959, 32758), (963, 32746), (985, 32671), (993, 32650),

Gene: Loka\_45 Start: 31915, Stop: 30128, Start Num: 234

Candidate Starts for Loka\_45:

(Start: 234 @31915 has 938 MA's), (355, 31708), (359, 31702), (379, 31672), (395, 31639), (397, 31636), (409, 31594), (415, 31582), (465, 31429), (541, 31336), (566, 31288), (571, 31279), (582, 31264), (619, 31198), (675, 31069), (733, 30949), (740, 30925), (759, 30844), (778, 30793), (789, 30760), (790, 30757), (805, 30691), (818, 30652), (837, 30631), (859, 30556), (862, 30544), (888, 30466), (908, 30430), (921, 30412), (936, 30376), (942, 30352), (968, 30274), (985, 30217), (989, 30205), (993, 30196),

Gene: Lolalove\_54 Start: 54016, Stop: 52190, Start Num: 189

Candidate Starts for Lolalove\_54:

(Start: 189 @54016 has 26 MA's), (Start: 238 @53989 has 2 MA's), (252, 53962), (Start: 261 @53947 has 10 MA's), (269, 53926), (316, 53839), (382, 53734), (394, 53707), (399, 53692), (425, 53626), (434, 53596), (437, 53587), (441, 53584), (442, 53581), (496, 53461), (504, 53443), (511, 53425), (516, 53413), (535, 53386), (566, 53323), (588, 53284), (595, 53275), (597, 53272), (618, 53242), (634, 53206), (737, 52981), (739, 52978), (749, 52942), (754, 52918), (760, 52885), (797, 52777), (799, 52771), (802, 52762), (841, 52663), (842, 52660), (847, 52645), (872, 52567), (877, 52555),

(883, 52534), (885, 52525), (902, 52495), (921, 52465), (935, 52438), (942, 52405), (949, 52381), (964, 52342), (969, 52324), (972, 52312), (979, 52288), (994, 52246), (1002, 52240), (1015, 52216),

Gene: London\_39 Start: 30351, Stop: 32216, Start Num: 234

Candidate Starts for London\_39:

(Start: 234 @30351 has 938 MA's), (265, 30399), (377, 30582), (382, 30588), (405, 30648), (411, 30669), (436, 30738), (546, 30954), (598, 31044), (603, 31053), (615, 31068), (635, 31113), (675, 31206), (730, 31344), (759, 31464), (769, 31494), (790, 31551), (803, 31608), (805, 31617), (814, 31641), (840, 31710), (862, 31782), (865, 31791), (905, 31890), (936, 31953), (985, 32112), (988, 32121),

Gene: LoneWolf\_45 Start: 31301, Stop: 29508, Start Num: 234

Candidate Starts for LoneWolf\_45:

(Start: 234 @31301 has 938 MA's), (246, 31292), (353, 31097), (379, 31055), (397, 31019), (405, 30992), (415, 30965), (432, 30914), (458, 30836), (465, 30812), (541, 30719), (563, 30674), (634, 30551), (726, 30353), (729, 30347), (759, 30224), (793, 30128), (798, 30101), (805, 30071), (818, 30032), (839, 29999), (841, 29990), (879, 29873), (885, 29852), (942, 29732), (968, 29654), (985, 29597), (989, 29585), (993, 29576),

Gene: Longacauda\_61 Start: 54397, Stop: 52538, Start Num: 197

Candidate Starts for Longacauda\_61:

(Start: 180 @54421 has 1 MA's), (Start: 197 @54397 has 298 MA's), (Start: 225 @54373 has 5 MA's), (Start: 238 @54367 has 2 MA's), (Start: 261 @54325 has 10 MA's), (269, 54304), (323, 54190), (328, 54184), (349, 54154), (385, 54094), (394, 54073), (410, 54019), (418, 54007), (425, 53989), (427, 53977), (462, 53872), (496, 53815), (511, 53779), (516, 53767), (535, 53740), (555, 53695), (588, 53638), (595, 53629), (597, 53626), (724, 53368), (754, 53266), (760, 53233), (765, 53212), (799, 53119), (802, 53110), (822, 53047), (841, 53011), (842, 53008), (847, 52993), (872, 52915), (877, 52903), (883, 52882), (902, 52843), (942, 52753), (947, 52735), (949, 52729), (954, 52714), (964, 52690), (968, 52675), (969, 52672), (972, 52660), (979, 52636), (1002, 52588), (1015, 52564),

Gene: Looper\_47 Start: 29720, Stop: 27930, Start Num: 234

Candidate Starts for Looper\_47:

(Start: 234 @29720 has 938 MA's), (336, 29546), (395, 29441), (397, 29438), (405, 29411), (415, 29384), (432, 29333), (465, 29231), (541, 29138), (563, 29093), (566, 29090), (571, 29081), (655, 28919), (663, 28892), (675, 28871), (679, 28865), (730, 28766), (740, 28727), (754, 28676), (759, 28646), (778, 28595), (789, 28562), (796, 28529), (798, 28523), (805, 28493), (837, 28433), (841, 28412), (856, 28370), (863, 28343), (868, 28328), (903, 28241), (936, 28178), (938, 28175), (985, 28019), (989, 28007), (995, 27995),

Gene: Lopsy\_59 Start: 53696, Stop: 51837, Start Num: 197

Candidate Starts for Lopsy\_59:

(Start: 180 @53720 has 1 MA's), (Start: 197 @53696 has 298 MA's), (Start: 225 @53672 has 5 MA's), (Start: 238 @53666 has 2 MA's), (Start: 261 @53624 has 10 MA's), (269, 53603), (323, 53489), (328, 53483), (349, 53453), (385, 53393), (394, 53372), (410, 53318), (418, 53306), (425, 53288), (426, 53279), (427, 53276), (462, 53171), (496, 53114), (511, 53078), (516, 53066), (534, 53042), (539, 53030), (545, 53012), (555, 52994), (566, 52976), (588, 52937), (595, 52928), (597, 52925), (599, 52922), (754, 52565), (760, 52532), (765, 52511), (799, 52418), (802, 52409), (822, 52346), (841, 52310), (842, 52307), (847, 52292), (872, 52214), (877, 52202), (883, 52181), (902, 52142), (942, 52052), (949, 52028), (954, 52013), (964, 51989), (968, 51974), (969, 51971), (972, 51959), (979, 51935), (1002, 51887), (1015, 51863),

Gene: Lopton\_45 Start: 35870, Stop: 34044, Start Num: 234

Candidate Starts for Lopton\_45:

(Start: 234 @35870 has 938 MA's), (359, 35657), (395, 35594), (405, 35564), (411, 35543), (415, 35537), (419, 35528), (457, 35411), (465, 35384), (541, 35291), (546, 35276), (566, 35243), (596, 35192), (598, 35189), (634, 35123), (648, 35093), (657, 35063), (679, 35018), (700, 34979), (759, 34799), (775, 34751), (790, 34712), (805, 34646), (818, 34607), (837, 34586), (841, 34565), (847, 34547), (868, 34481), (936, 34331), (938, 34328), (946, 34292), (954, 34268), (963, 34247), (970, 34220), (985, 34172), (993, 34151),

Gene: Lorenzo\_45 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Lorenzo\_45:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Loser\_46 Start: 32256, Stop: 30469, Start Num: 234

Candidate Starts for Loser\_46:

(Start: 234 @32256 has 938 MA's), (353, 32052), (355, 32049), (368, 32028), (379, 32013), (395, 31980), (405, 31950), (415, 31923), (424, 31902), (432, 31872), (465, 31770), (541, 31677), (566, 31629), (571, 31620), (582, 31605), (619, 31539), (655, 31458), (675, 31410), (711, 31338), (740, 31266), (759, 31185), (778, 31134), (789, 31101), (790, 31098), (805, 31032), (818, 30993), (837, 30972), (854, 30915), (859, 30897), (888, 30807), (908, 30771), (921, 30753), (936, 30717), (942, 30693), (962, 30636), (968, 30615), (985, 30558), (989, 30546), (993, 30537),

Gene: LostAndPhound\_61 Start: 54582, Stop: 52723, Start Num: 197

Candidate Starts for LostAndPhound\_61:

(Start: 180 @54606 has 1 MA's), (Start: 197 @54582 has 298 MA's), (Start: 225 @54558 has 5 MA's), (Start: 238 @54552 has 2 MA's), (Start: 261 @54510 has 10 MA's), (269, 54489), (323, 54375), (328, 54369), (349, 54339), (385, 54279), (394, 54258), (410, 54204), (418, 54192), (425, 54174), (427, 54162), (462, 54057), (496, 54000), (511, 53964), (516, 53952), (535, 53925), (545, 53898), (555, 53880), (566, 53862), (588, 53823), (595, 53814), (597, 53811), (724, 53553), (754, 53451), (760, 53418), (765, 53397), (799, 53304), (802, 53295), (822, 53232), (841, 53196), (842, 53193), (847, 53178), (872, 53100), (877, 53088), (883, 53067), (902, 53028), (942, 52938), (947, 52920), (949, 52914), (954, 52899), (964, 52875), (968, 52860), (969, 52857), (972, 52845), (979, 52821), (1002, 52773), (1015, 52749),

Gene: Louie6\_47 Start: 31885, Stop: 30071, Start Num: 234

Candidate Starts for Louie6\_47:

(Start: 234 @31885 has 938 MA's), (262, 31846), (266, 31834), (353, 31681), (362, 31666), (395, 31609), (415, 31552), (419, 31543), (432, 31501), (448, 31450), (465, 31399), (518, 31345), (541, 31306), (566, 31258), (582, 31234), (603, 31195), (619, 31168), (634, 31138), (670, 31045), (679, 31033), (701, 30985), (710, 30970), (759, 30814), (778, 30763), (789, 30730), (790, 30727), (805, 30661), (818, 30622), (842, 30550), (856, 30511), (862, 30487), (868, 30469), (879, 30436), (921, 30355), (942, 30295), (970, 30208), (985, 30160), (989, 30148), (993, 30139), (995, 30136),

Gene: Lovelyunicorn\_39 Start: 28935, Stop: 27070, Start Num: 283

Candidate Starts for Lovelyunicorn\_39:

(Start: 234 @29022 has 938 MA's), (Start: 237 @29019 has 2 MA's), (274, 28950), (Start: 283 @28935 has 147 MA's), (Start: 291 @28926 has 5 MA's), (342, 28821), (347, 28812), (367, 28782), (369, 28779), (424, 28659), (426, 28647), (428, 28641), (466, 28536), (473, 28509), (532, 28368), (537, 28359), (541, 28347), (551, 28320), (553, 28317), (562, 28302), (566, 28296), (570, 28290), (613, 28257), (701, 28068), (798, 27753), (801, 27744), (802, 27741), (805, 27723), (819, 27681), (822, 27675), (832, 27651), (849, 27594), (900, 27435), (913, 27405), (917, 27396), (938, 27336), (943,

27312), (956, 27273), (967, 27240), (970, 27228), (986, 27168),

Gene: Luchador\_50 Start: 33745, Stop: 31952, Start Num: 234

Candidate Starts for Luchador\_50:

(Start: 234 @33745 has 938 MA's), (246, 33736), (263, 33703), (301, 33634), (353, 33541), (395, 33466), (397, 33463), (405, 33436), (415, 33409), (432, 33358), (458, 33280), (465, 33256), (541, 33163), (550, 33139), (563, 33118), (619, 33025), (634, 32995), (700, 32848), (726, 32797), (740, 32749), (759, 32668), (769, 32638), (782, 32602), (798, 32545), (805, 32515), (841, 32434), (868, 32350), (879, 32317), (888, 32290), (936, 32200), (962, 32119), (968, 32098), (970, 32089), (985, 32041), (989, 32029), (993, 32020), (995, 32017),

Gene: Lucivia\_45 Start: 30825, Stop: 29038, Start Num: 234

Candidate Starts for Lucivia\_45:

(Start: 234 @30825 has 938 MA's), (353, 30621), (395, 30549), (405, 30519), (415, 30492), (543, 30240), (571, 30189), (619, 30108), (639, 30063), (675, 29979), (703, 29922), (728, 29880), (740, 29835), (759, 29754), (778, 29703), (790, 29667), (805, 29601), (837, 29541), (839, 29529), (871, 29427), (879, 29403), (884, 29385), (921, 29322), (935, 29295), (936, 29286), (942, 29262), (985, 29127), (989, 29115), (993, 29106),

Gene: Lucky3\_37 Start: 28582, Stop: 26732, Start Num: 281

Candidate Starts for Lucky3\_37:

(200, 28723), (260, 28633), (Start: 281 @28582 has 18 MA's), (330, 28483), (347, 28459), (369, 28426), (420, 28315), (426, 28294), (428, 28288), (445, 28243), (447, 28237), (512, 28081), (537, 28018), (541, 28006), (553, 27976), (611, 27919), (741, 27625), (798, 27415), (801, 27406), (802, 27403), (805, 27385), (819, 27343), (849, 27256), (938, 26998), (943, 26974), (944, 26971), (954, 26941), (986, 26830),

Gene: LuckyMarjie\_58 Start: 53758, Stop: 51899, Start Num: 197

Candidate Starts for LuckyMarjie\_58:

(Start: 180 @53782 has 1 MA's), (Start: 197 @53758 has 298 MA's), (Start: 225 @53734 has 5 MA's), (Start: 238 @53728 has 2 MA's), (Start: 261 @53686 has 10 MA's), (269, 53665), (323, 53551), (328, 53545), (349, 53515), (385, 53455), (394, 53434), (410, 53380), (418, 53368), (425, 53350), (427, 53338), (462, 53233), (496, 53176), (511, 53140), (516, 53128), (534, 53104), (539, 53092), (545, 53074), (555, 53056), (566, 53038), (588, 52999), (595, 52990), (597, 52987), (599, 52984), (754, 52627), (760, 52594), (765, 52573), (799, 52480), (802, 52471), (822, 52408), (841, 52372), (842, 52369), (847, 52354), (872, 52276), (877, 52264), (883, 52243), (902, 52204), (942, 52114), (947, 52096), (949, 52090), (954, 52075), (964, 52051), (968, 52036), (969, 52033), (972, 52021), (979, 51997), (1002, 51949), (1015, 51925),

Gene: Lucyedi\_45 Start: 30972, Stop: 29140, Start Num: 234

Candidate Starts for Lucyedi\_45:

(Start: 234 @30972 has 938 MA's), (353, 30768), (355, 30765), (395, 30696), (397, 30693), (405, 30666), (411, 30645), (415, 30639), (419, 30630), (432, 30588), (458, 30510), (465, 30486), (541, 30393), (634, 30225), (726, 30027), (759, 29898), (793, 29802), (802, 29763), (805, 29745), (839, 29673), (841, 29664), (885, 29526), (935, 29439), (936, 29430), (968, 29328), (985, 29271), (989, 29259), (1042, 29154),

Gene: Ludgate\_39 Start: 28930, Stop: 27065, Start Num: 283

Candidate Starts for Ludgate\_39:

(Start: 234 @29017 has 938 MA's), (Start: 283 @28930 has 147 MA's), (Start: 291 @28921 has 5 MA's), (342, 28816), (347, 28807), (367, 28777), (369, 28774), (424, 28654), (426, 28642), (428, 28636), (466, 28531), (473, 28504), (532, 28363), (535, 28357), (537, 28354), (541, 28342), (551, 28315), (553, 28312), (562, 28297), (566, 28291), (570, 28285), (613, 28252), (671, 28123), (701,

28063), (798, 27748), (801, 27739), (802, 27736), (805, 27718), (819, 27676), (822, 27670), (832, 27646), (849, 27589), (900, 27430), (913, 27400), (917, 27391), (938, 27331), (943, 27307), (956, 27268), (967, 27235), (970, 27223), (986, 27163),

Gene: LugYA\_51 Start: 31853, Stop: 30039, Start Num: 234

Candidate Starts for LugYA\_51:

(Start: 234 @31853 has 938 MA's), (262, 31814), (266, 31802), (353, 31649), (362, 31634), (395, 31577), (415, 31520), (419, 31511), (432, 31469), (448, 31418), (465, 31367), (541, 31274), (566, 31226), (571, 31217), (582, 31202), (603, 31163), (619, 31136), (634, 31106), (670, 31013), (701, 30953), (710, 30938), (759, 30782), (790, 30695), (805, 30629), (818, 30590), (842, 30518), (856, 30479), (862, 30455), (868, 30437), (879, 30404), (888, 30377), (921, 30323), (942, 30263), (968, 30185), (985, 30128), (989, 30116), (993, 30107),

Gene: Lulumae\_58 Start: 53743, Stop: 51884, Start Num: 197

Candidate Starts for Lulumae\_58:

(Start: 180 @53767 has 1 MA's), (Start: 197 @53743 has 298 MA's), (Start: 225 @53719 has 5 MA's), (Start: 238 @53713 has 2 MA's), (Start: 261 @53671 has 10 MA's), (269, 53650), (323, 53536), (328, 53530), (349, 53500), (385, 53440), (394, 53419), (410, 53365), (418, 53353), (425, 53335), (427, 53323), (462, 53218), (496, 53161), (511, 53125), (516, 53113), (535, 53086), (545, 53059), (555, 53041), (566, 53023), (588, 52984), (595, 52975), (597, 52972), (599, 52969), (754, 52612), (760, 52579), (765, 52558), (799, 52465), (802, 52456), (822, 52393), (841, 52357), (842, 52354), (847, 52339), (872, 52261), (877, 52249), (883, 52228), (902, 52189), (942, 52099), (947, 52081), (949, 52075), (954, 52060), (964, 52036), (968, 52021), (969, 52018), (972, 52006), (979, 51982), (1002, 51934), (1015, 51910),

Gene: Lulwa\_58 Start: 53340, Stop: 51481, Start Num: 197

Candidate Starts for Lulwa\_58:

(Start: 180 @53364 has 1 MA's), (Start: 197 @53340 has 298 MA's), (Start: 225 @53316 has 5 MA's), (Start: 238 @53310 has 2 MA's), (Start: 261 @53268 has 10 MA's), (269, 53247), (323, 53133), (328, 53127), (349, 53097), (385, 53037), (394, 53016), (410, 52962), (418, 52950), (425, 52932), (427, 52920), (462, 52815), (496, 52758), (511, 52722), (516, 52710), (535, 52683), (545, 52656), (555, 52638), (566, 52620), (588, 52581), (595, 52572), (597, 52569), (724, 52311), (754, 52209), (760, 52176), (765, 52155), (799, 52062), (802, 52053), (822, 51990), (841, 51954), (842, 51951), (847, 51936), (872, 51858), (877, 51846), (883, 51825), (902, 51786), (942, 51696), (947, 51678), (949, 51672), (954, 51657), (964, 51633), (968, 51618), (969, 51615), (972, 51603), (979, 51579), (1002, 51531), (1015, 51507),

Gene: Lumine\_61 Start: 54227, Stop: 52368, Start Num: 197

Candidate Starts for Lumine\_61:

(Start: 180 @54251 has 1 MA's), (Start: 197 @54227 has 298 MA's), (Start: 225 @54203 has 5 MA's), (Start: 238 @54197 has 2 MA's), (Start: 261 @54155 has 10 MA's), (269, 54134), (323, 54020), (328, 54014), (349, 53984), (385, 53924), (394, 53903), (410, 53849), (418, 53837), (425, 53819), (427, 53807), (462, 53702), (496, 53645), (511, 53609), (516, 53597), (534, 53573), (539, 53561), (545, 53543), (555, 53525), (566, 53507), (588, 53468), (595, 53459), (597, 53456), (599, 53453), (754, 53096), (760, 53063), (765, 53042), (799, 52949), (802, 52940), (822, 52877), (841, 52841), (842, 52838), (847, 52823), (872, 52745), (877, 52733), (883, 52712), (902, 52673), (942, 52583), (947, 52565), (949, 52559), (954, 52544), (964, 52520), (968, 52505), (969, 52502), (972, 52490), (979, 52466), (1002, 52418), (1015, 52394),

Gene: Luna18\_40 Start: 28364, Stop: 26472, Start Num: 283

Candidate Starts for Luna18\_40:

(Start: 231 @28454 has 7 MA's), (Start: 283 @28364 has 147 MA's), (Start: 291 @28355 has 5 MA's), (315, 28298), (330, 28268), (357, 28229), (367, 28214), (371, 28208), (382, 28190), (398, 28157),

(426, 28079), (428, 28073), (447, 28022), (460, 27983), (503, 27872), (537, 27788), (541, 27776), (553, 27746), (562, 27731), (566, 27725), (570, 27719), (574, 27713), (593, 27707), (744, 27392), (787, 27197), (805, 27125), (819, 27083), (832, 27053), (839, 27032), (849, 26996), (867, 26924), (913, 26807), (917, 26798), (938, 26738), (943, 26714), (946, 26702), (960, 26666), (986, 26570),

Gene: Lunsford\_46 Start: 31564, Stop: 29738, Start Num: 234

Candidate Starts for Lunsford\_46:

(Start: 234 @31564 has 938 MA's), (252, 31543), (266, 31513), (279, 31483), (379, 31321), (389, 31303), (415, 31231), (419, 31222), (458, 31102), (465, 31078), (541, 30985), (568, 30937), (582, 30916), (603, 30877), (663, 30745), (675, 30724), (700, 30679), (703, 30667), (756, 30514), (759, 30493), (798, 30370), (805, 30340), (818, 30301), (841, 30235), (842, 30232), (847, 30217), (856, 30193), (862, 30169), (942, 29962), (985, 29827), (989, 29815), (993, 29806),

Gene: Lynlen\_43 Start: 29644, Stop: 31518, Start Num: 234

Candidate Starts for Lynlen\_43:

(Start: 231 @29641 has 7 MA's), (Start: 234 @29644 has 938 MA's), (273, 29713), (284, 29734), (419, 29980), (432, 30022), (556, 30235), (603, 30316), (663, 30451), (709, 30550), (747, 30673), (759, 30733), (761, 30739), (778, 30784), (782, 30799), (786, 30814), (796, 30850), (805, 30886), (840, 30979), (869, 31072), (901, 31150), (936, 31222), (946, 31261), (962, 31303), (967, 31321), (985, 31381), (993, 31402),

Gene: MA5\_45 Start: 30880, Stop: 29042, Start Num: 234

Candidate Starts for MA5\_45:

(179, 30952), (Start: 234 @30880 has 938 MA's), (266, 30829), (353, 30676), (379, 30637), (395, 30604), (415, 30547), (419, 30538), (424, 30526), (458, 30418), (465, 30394), (541, 30298), (568, 30250), (603, 30190), (663, 30058), (675, 30037), (729, 29923), (740, 29881), (759, 29800), (790, 29713), (798, 29677), (805, 29647), (842, 29536), (856, 29497), (862, 29473), (868, 29455), (869, 29452), (921, 29326), (942, 29266), (985, 29131), (989, 29119), (993, 29110),

Gene: MAnor\_46 Start: 34598, Stop: 32220, Start Num: 47

Candidate Starts for MAnor\_46:

(Start: 47 @34598 has 13 MA's), (64, 34538), (96, 34457), (136, 34337), (170, 34292), (Start: 223 @34214 has 3 MA's), (228, 34208), (Start: 230 @34205 has 13 MA's), (Start: 232 @34202 has 15 MA's), (252, 34175), (269, 34136), (273, 34127), (Start: 291 @34097 has 5 MA's), (317, 34040), (342, 34001), (354, 33980), (380, 33938), (385, 33929), (391, 33914), (395, 33905), (399, 33893), (409, 33860), (410, 33857), (420, 33839), (426, 33818), (495, 33635), (524, 33560), (541, 33518), (634, 33431), (677, 33353), (682, 33347), (711, 33302), (713, 33299), (718, 33284), (728, 33263), (752, 33179), (758, 33149), (772, 33089), (773, 33080), (779, 33065), (781, 33050), (784, 33038), (805, 32945), (817, 32909), (819, 32903), (822, 32897), (824, 32891), (842, 32834), (849, 32810), (878, 32705), (879, 32702), (900, 32651), (919, 32609), (926, 32591), (938, 32552), (948, 32510), (958, 32486), (979, 32408), (986, 32384), (996, 32360), (1008, 32339), (1030, 32285), (1046, 32252), (1050, 32240),

Gene: MCubed\_38 Start: 28748, Stop: 26883, Start Num: 283

Candidate Starts for MCubed\_38:

(Start: 283 @28748 has 147 MA's), (330, 28649), (371, 28589), (398, 28538), (426, 28460), (428, 28454), (445, 28409), (446, 28406), (447, 28403), (460, 28364), (479, 28304), (532, 28181), (537, 28172), (541, 28160), (545, 28148), (553, 28130), (566, 28109), (574, 28097), (680, 27926), (749, 27758), (793, 27593), (801, 27557), (805, 27536), (819, 27494), (849, 27407), (859, 27362), (894, 27263), (913, 27218), (938, 27149), (943, 27125), (954, 27092), (986, 26981),

Gene: MK4\_45 Start: 30963, Stop: 29125, Start Num: 234

Candidate Starts for MK4\_45:



(179, 31035), (Start: 234 @30963 has 938 MA's), (266, 30912), (353, 30759), (379, 30720), (395, 30687), (415, 30630), (419, 30621), (424, 30609), (458, 30501), (465, 30477), (541, 30381), (568, 30333), (603, 30273), (663, 30141), (675, 30120), (710, 30051), (729, 30006), (740, 29964), (759, 29883), (790, 29796), (798, 29760), (805, 29730), (842, 29619), (856, 29580), (862, 29556), (868, 29538), (918, 29415), (921, 29409), (942, 29349), (984, 29217), (985, 29214), (989, 29202), (993, 29193),

Gene: MPlant7149\_43 Start: 33801, Stop: 32014, Start Num: 234

Candidate Starts for MPlant7149\_43:

(Start: 234 @33801 has 938 MA's), (359, 33588), (368, 33573), (395, 33525), (405, 33495), (411, 33474), (415, 33468), (419, 33459), (457, 33342), (465, 33315), (541, 33222), (546, 33207), (596, 33123), (598, 33120), (634, 33054), (648, 33024), (657, 32994), (679, 32949), (700, 32910), (759, 32730), (775, 32682), (790, 32643), (805, 32577), (839, 32505), (841, 32496), (868, 32412), (903, 32325), (954, 32199), (960, 32187), (978, 32127), (985, 32103), (987, 32097),

Gene: MRabcd\_60 Start: 54351, Stop: 52492, Start Num: 197

Candidate Starts for MRabcd\_60:

(Start: 180 @54375 has 1 MA's), (Start: 197 @54351 has 298 MA's), (Start: 225 @54327 has 5 MA's), (Start: 238 @54321 has 2 MA's), (Start: 261 @54279 has 10 MA's), (269, 54258), (323, 54144), (328, 54138), (349, 54108), (385, 54048), (394, 54027), (410, 53973), (418, 53961), (425, 53943), (427, 53931), (462, 53826), (496, 53769), (511, 53733), (516, 53721), (535, 53694), (555, 53649), (588, 53592), (595, 53583), (597, 53580), (754, 53220), (760, 53187), (765, 53166), (799, 53073), (802, 53064), (822, 53001), (841, 52965), (842, 52962), (847, 52947), (872, 52869), (877, 52857), (883, 52836), (902, 52797), (942, 52707), (947, 52689), (949, 52683), (954, 52668), (964, 52644), (968, 52629), (969, 52626), (972, 52614), (979, 52590), (1002, 52542), (1015, 52518),

Gene: MScarn\_47 Start: 32630, Stop: 30240, Start Num: 36

Candidate Starts for MScarn\_47:

(Start: 36 @32630 has 16 MA's), (71, 32549), (76, 32534), (96, 32480), (100, 32468), (105, 32447), (119, 32414), (127, 32387), (136, 32363), (159, 32336), (Start: 230 @32231 has 13 MA's), (262, 32183), (317, 32066), (366, 31985), (382, 31958), (391, 31937), (409, 31883), (410, 31880), (420, 31862), (426, 31841), (448, 31781), (524, 31583), (541, 31541), (634, 31454), (643, 31430), (655, 31424), (677, 31370), (682, 31364), (707, 31322), (711, 31319), (713, 31316), (758, 31169), (773, 31100), (774, 31094), (784, 31058), (805, 30965), (817, 30929), (819, 30923), (822, 30917), (824, 30911), (842, 30854), (849, 30830), (859, 30785), (986, 30404), (1008, 30359), (1013, 30350), (1037, 30290),

Gene: MaCh\_45 Start: 30763, Stop: 28976, Start Num: 234

Candidate Starts for MaCh\_45:

(Start: 234 @30763 has 938 MA's), (353, 30559), (395, 30487), (405, 30457), (415, 30430), (543, 30178), (571, 30127), (619, 30046), (639, 30001), (640, 29998), (675, 29917), (703, 29860), (728, 29818), (740, 29773), (759, 29692), (778, 29641), (790, 29605), (805, 29539), (837, 29479), (839, 29467), (871, 29365), (879, 29341), (884, 29323), (921, 29260), (935, 29233), (936, 29224), (942, 29200), (985, 29065), (989, 29053), (993, 29044),

Gene: MaGuCo\_40 Start: 30008, Stop: 31852, Start Num: 234

Candidate Starts for MaGuCo\_40:

(Start: 234 @30008 has 938 MA's), (405, 30305), (411, 30326), (543, 30581), (600, 30683), (615, 30704), (655, 30794), (675, 30842), (705, 30905), (759, 31100), (761, 31106), (790, 31187), (805, 31253), (847, 31370), (876, 31457), (933, 31577), (936, 31589), (985, 31748), (1008, 31793),

Gene: MaVan\_40 Start: 32050, Stop: 29693, Start Num: 45

Candidate Starts for MaVan\_40:

(42, 32059), (Start: 45 @32050 has 24 MA's), (52, 32035), (58, 31999), (110, 31864), (136, 31801), (168, 31759), (177, 31747), (249, 31645), (252, 31642), (290, 31567), (306, 31528), (317, 31507), (352, 31456), (376, 31414), (391, 31384), (409, 31330), (420, 31309), (426, 31288), (449, 31225), (499, 31090), (506, 31075), (524, 31030), (570, 30946), (626, 30910), (682, 30817), (707, 30775), (711, 30772), (713, 30769), (724, 30745), (729, 30733), (732, 30721), (770, 30580), (773, 30553), (805, 30418), (817, 30382), (819, 30376), (822, 30370), (824, 30364), (834, 30340), (842, 30307), (849, 30283), (859, 30238), (861, 30232), (880, 30172), (926, 30064), (944, 29998), (945, 29995), (948, 29983), (958, 29959), (979, 29881), (986, 29857), (1018, 29788),

Gene: Mabel\_45 Start: 30748, Stop: 28961, Start Num: 234

Candidate Starts for Mabel\_45:

(Start: 234 @30748 has 938 MA's), (353, 30544), (395, 30472), (405, 30442), (415, 30415), (543, 30163), (571, 30112), (619, 30031), (639, 29986), (675, 29902), (703, 29845), (728, 29803), (740, 29758), (759, 29677), (778, 29626), (790, 29590), (805, 29524), (837, 29464), (839, 29452), (871, 29350), (879, 29326), (884, 29308), (921, 29245), (935, 29218), (936, 29209), (942, 29185), (985, 29050), (989, 29038), (993, 29029),

Gene: Mabodamaca\_48 Start: 32455, Stop: 34320, Start Num: 233

Candidate Starts for Mabodamaca\_48:

(188, 32392), (195, 32401), (Start: 233 @32455 has 10 MA's), (436, 32842), (563, 33088), (603, 33157), (675, 33310), (740, 33487), (759, 33568), (781, 33631), (796, 33685), (806, 33724), (861, 33880), (869, 33907), (903, 33991), (964, 34144), (985, 34216), (1001, 34246),

Gene: Maco6\_42 Start: 33485, Stop: 31179, Start Num: 79

Candidate Starts for Maco6\_42:

(Start: 44 @33590 has 1 MA's), (49, 33581), (Start: 60 @33536 has 1 MA's), (Start: 65 @33524 has 1 MA's), (Start: 79 @33485 has 1 MA's), (100, 33428), (136, 33326), (143, 33296), (170, 33266), (275, 33098), (342, 32978), (398, 32876), (426, 32795), (448, 32735), (450, 32729), (472, 32669), (524, 32537), (543, 32489), (626, 32417), (634, 32408), (638, 32396), (682, 32327), (781, 32021), (782, 32018), (792, 31979), (796, 31952), (798, 31946), (817, 31880), (819, 31874), (822, 31868), (824, 31862), (834, 31838), (842, 31805), (847, 31790), (849, 31781), (900, 31622), (913, 31592), (978, 31382), (986, 31355), (1018, 31286),

Gene: MadMarie\_48 Start: 31855, Stop: 30041, Start Num: 234

Candidate Starts for MadMarie\_48:

(Start: 234 @31855 has 938 MA's), (262, 31816), (266, 31804), (353, 31651), (362, 31636), (395, 31579), (415, 31522), (419, 31513), (432, 31471), (448, 31420), (465, 31369), (541, 31276), (566, 31228), (571, 31219), (582, 31204), (603, 31165), (619, 31138), (634, 31108), (670, 31015), (679, 31003), (701, 30955), (710, 30940), (759, 30784), (790, 30697), (802, 30649), (805, 30631), (818, 30592), (842, 30520), (856, 30481), (862, 30457), (868, 30439), (879, 30406), (888, 30379), (921, 30325), (942, 30265), (968, 30187), (985, 30130), (989, 30118), (993, 30109),

Gene: MaeLinda\_39 Start: 28934, Stop: 27069, Start Num: 283

Candidate Starts for MaeLinda\_39:

(Start: 234 @29021 has 938 MA's), (Start: 237 @29018 has 2 MA's), (Start: 283 @28934 has 147 MA's), (Start: 291 @28925 has 5 MA's), (342, 28820), (347, 28811), (367, 28781), (369, 28778), (424, 28658), (426, 28646), (428, 28640), (466, 28535), (473, 28508), (532, 28367), (535, 28361), (537, 28358), (541, 28346), (551, 28319), (553, 28316), (562, 28301), (566, 28295), (570, 28289), (613, 28256), (671, 28127), (701, 28067), (798, 27752), (801, 27743), (802, 27740), (805, 27722), (819, 27680), (822, 27674), (825, 27665), (832, 27650), (849, 27593), (900, 27434), (913, 27404), (917, 27395), (938, 27335), (943, 27311), (956, 27272), (967, 27239), (970, 27227), (986, 27167),

Gene: Mag7\_61 Start: 54187, Stop: 52328, Start Num: 197

Candidate Starts for Mag7\_61:

(Start: 180 @54211 has 1 MA's), (Start: 197 @54187 has 298 MA's), (Start: 225 @54163 has 5 MA's), (Start: 238 @54157 has 2 MA's), (Start: 261 @54115 has 10 MA's), (269, 54094), (323, 53980), (328, 53974), (349, 53944), (385, 53884), (394, 53863), (410, 53809), (418, 53797), (425, 53779), (427, 53767), (462, 53662), (496, 53605), (511, 53569), (516, 53557), (534, 53533), (539, 53521), (545, 53503), (555, 53485), (566, 53467), (588, 53428), (595, 53419), (597, 53416), (599, 53413), (754, 53056), (760, 53023), (765, 53002), (799, 52909), (802, 52900), (822, 52837), (841, 52801), (842, 52798), (847, 52783), (872, 52705), (877, 52693), (883, 52672), (902, 52633), (942, 52543), (947, 52525), (949, 52519), (954, 52504), (964, 52480), (968, 52465), (969, 52462), (972, 52450), (979, 52426), (1002, 52378), (1015, 52354),

Gene: Magic8\_61 Start: 54339, Stop: 52480, Start Num: 197

Candidate Starts for Magic8\_61:

(Start: 180 @54363 has 1 MA's), (Start: 197 @54339 has 298 MA's), (Start: 225 @54315 has 5 MA's), (Start: 238 @54309 has 2 MA's), (Start: 261 @54267 has 10 MA's), (269, 54246), (323, 54132), (328, 54126), (349, 54096), (385, 54036), (394, 54015), (410, 53961), (418, 53949), (425, 53931), (427, 53919), (462, 53814), (496, 53757), (511, 53721), (516, 53709), (535, 53682), (545, 53655), (555, 53637), (566, 53619), (588, 53580), (595, 53571), (597, 53568), (599, 53565), (754, 53208), (760, 53175), (765, 53154), (799, 53061), (802, 53052), (822, 52989), (841, 52953), (842, 52950), (847, 52935), (872, 52857), (877, 52845), (883, 52824), (902, 52785), (942, 52695), (947, 52677), (949, 52671), (954, 52656), (964, 52632), (968, 52617), (969, 52614), (972, 52602), (979, 52578), (1002, 52530), (1015, 52506),

Gene: Magnar\_44 Start: 35145, Stop: 33328, Start Num: 234

Candidate Starts for Magnar\_44:

(Start: 234 @35145 has 938 MA's), (359, 34932), (368, 34917), (405, 34839), (411, 34818), (415, 34812), (419, 34803), (457, 34686), (465, 34659), (541, 34566), (546, 34551), (566, 34518), (596, 34467), (598, 34464), (634, 34398), (648, 34368), (657, 34338), (679, 34293), (700, 34254), (759, 34074), (769, 34044), (775, 34026), (790, 33987), (805, 33921), (841, 33840), (842, 33837), (868, 33756), (936, 33606), (938, 33603), (946, 33567), (954, 33543), (959, 33534), (963, 33522), (985, 33447), (993, 33426),

Gene: Magnito\_42 Start: 33719, Stop: 31893, Start Num: 234

Candidate Starts for Magnito\_42:

(Start: 234 @33719 has 938 MA's), (359, 33506), (368, 33491), (405, 33413), (408, 33401), (411, 33392), (415, 33386), (419, 33377), (457, 33260), (465, 33233), (541, 33140), (546, 33125), (566, 33092), (596, 33041), (598, 33038), (628, 32984), (634, 32972), (648, 32942), (657, 32912), (679, 32867), (700, 32828), (759, 32648), (775, 32600), (778, 32597), (790, 32561), (805, 32495), (818, 32456), (837, 32435), (841, 32414), (847, 32396), (868, 32330), (936, 32180), (938, 32177), (946, 32141), (954, 32117), (959, 32108), (963, 32096), (977, 32048), (985, 32021), (993, 32000),

Gene: Magpie\_52 Start: 53908, Stop: 52085, Start Num: 189

Candidate Starts for Magpie\_52:

(Start: 175 @53926 has 4 MA's), (Start: 189 @53908 has 26 MA's), (Start: 238 @53884 has 2 MA's), (252, 53857), (Start: 261 @53842 has 10 MA's), (269, 53821), (316, 53734), (382, 53629), (394, 53602), (399, 53587), (425, 53521), (434, 53491), (437, 53482), (441, 53479), (442, 53476), (450, 53449), (462, 53413), (496, 53356), (504, 53338), (511, 53320), (516, 53308), (535, 53281), (566, 53218), (588, 53179), (595, 53170), (597, 53167), (618, 53137), (634, 53101), (724, 52915), (737, 52876), (739, 52873), (749, 52837), (754, 52813), (760, 52780), (797, 52672), (799, 52666), (802, 52657), (841, 52558), (842, 52555), (847, 52540), (872, 52462), (877, 52450), (883, 52429), (885, 52420), (902, 52390), (921, 52360), (935, 52333), (942, 52300), (949, 52276), (964, 52237), (969, 52219), (972, 52207), (979, 52183), (994, 52141), (1002, 52135), (1015, 52111),

Gene: Mahdia\_44 Start: 34961, Stop: 32724, Start Num: 3

Candidate Starts for Mahdia\_44:

(1, 35099), (Start: 3 @34961 has 5 MA's), (26, 34808), (28, 34805), (41, 34754), (91, 34676), (126, 34622), (164, 34610), (186, 34580), (196, 34568), (Start: 205 @34556 has 2 MA's), (227, 34526), (273, 34448), (290, 34424), (301, 34421), (308, 34400), (410, 34199), (426, 34163), (432, 34148), (453, 34091), (460, 34070), (462, 34064), (465, 34055), (495, 34013), (511, 33974), (543, 33911), (561, 33878), (574, 33860), (581, 33851), (597, 33821), (618, 33791), (664, 33671), (737, 33527), (746, 33497), (749, 33488), (754, 33464), (760, 33431), (793, 33350), (797, 33326), (799, 33320), (822, 33248), (839, 33221), (841, 33212), (842, 33209), (847, 33194), (856, 33170), (872, 33116), (877, 33104), (930, 32990), (935, 32975), (968, 32864), (969, 32861), (975, 32837), (979, 32825), (1002, 32774), (1015, 32750),

Gene: Maih\_47 Start: 39368, Stop: 37368, Start Num: 261

Candidate Starts for Maih\_47:

(Start: 261 @39368 has 10 MA's), (297, 39299), (361, 39167), (365, 39161), (369, 39155), (400, 39107), (403, 39095), (405, 39089), (413, 39068), (417, 39053), (441, 38984), (485, 38843), (525, 38747), (568, 38660), (584, 38636), (592, 38624), (601, 38612), (636, 38543), (703, 38396), (744, 38291), (749, 38276), (761, 38219), (767, 38198), (781, 38156), (792, 38126), (798, 38093), (810, 38039), (817, 38009), (830, 37940), (837, 37919), (856, 37856), (861, 37838), (864, 37826), (872, 37802), (942, 37601), (943, 37598), (949, 37577), (963, 37544), (968, 37526), (978, 37493), (985, 37469), (1009, 37421),

Gene: Mainiac\_48 Start: 31846, Stop: 30032, Start Num: 234

Candidate Starts for Mainiac\_48:

(Start: 234 @31846 has 938 MA's), (262, 31807), (266, 31795), (353, 31642), (362, 31627), (395, 31570), (415, 31513), (419, 31504), (432, 31462), (448, 31411), (465, 31360), (541, 31267), (566, 31219), (571, 31210), (582, 31195), (603, 31156), (619, 31129), (634, 31099), (670, 31006), (701, 30946), (710, 30931), (759, 30775), (790, 30688), (805, 30622), (818, 30583), (842, 30511), (856, 30472), (862, 30448), (868, 30430), (879, 30397), (888, 30370), (921, 30316), (942, 30256), (968, 30178), (985, 30121), (989, 30109), (993, 30100),

Gene: MajorMajor\_44 Start: 30374, Stop: 28545, Start Num: 233

Candidate Starts for MajorMajor\_44:

(Start: 233 @30374 has 10 MA's), (353, 30170), (355, 30167), (359, 30161), (368, 30146), (379, 30131), (394, 30101), (395, 30098), (405, 30068), (415, 30041), (424, 30020), (432, 29990), (465, 29888), (541, 29795), (566, 29747), (571, 29738), (582, 29723), (619, 29657), (655, 29576), (675, 29528), (700, 29483), (759, 29303), (775, 29255), (778, 29252), (790, 29216), (805, 29150), (818, 29111), (837, 29090), (859, 29015), (864, 28997), (879, 28952), (888, 28925), (908, 28889), (921, 28871), (936, 28835), (942, 28811), (968, 28733), (985, 28676), (989, 28664), (993, 28655), (1021, 28607), (1037, 28577), (1043, 28559), (1045, 28556),

Gene: Makemake\_44 Start: 35340, Stop: 33514, Start Num: 234

Candidate Starts for Makemake\_44:

(Start: 234 @35340 has 938 MA's), (359, 35127), (368, 35112), (395, 35064), (405, 35034), (411, 35013), (415, 35007), (419, 34998), (457, 34881), (465, 34854), (541, 34761), (546, 34746), (566, 34713), (596, 34662), (598, 34659), (634, 34593), (648, 34563), (657, 34533), (679, 34488), (700, 34449), (759, 34269), (769, 34239), (775, 34221), (778, 34218), (790, 34182), (805, 34116), (841, 34035), (842, 34032), (868, 33951), (936, 33801), (938, 33798), (946, 33762), (954, 33738), (959, 33729), (963, 33717), (985, 33642), (993, 33621),

Gene: MakoManhole\_51 Start: 47082, Stop: 45265, Start Num: 230

Candidate Starts for MakoManhole\_51:

(Start: 230 @47082 has 13 MA's), (Start: 238 @47073 has 2 MA's), (252, 47046), (259, 47034), (269, 47010), (273, 47001), (323, 46905), (355, 46863), (375, 46827), (406, 46752), (434, 46677), (462, 46599), (496, 46542), (511, 46506), (516, 46494), (534, 46470), (583, 46377), (597, 46353), (610, 46335), (737, 46062), (749, 46023), (755, 45993), (760, 45966), (797, 45858), (799, 45852), (802, 45843), (839, 45753), (841, 45744), (842, 45741), (847, 45726), (872, 45648), (877, 45636), (878, 45630), (883, 45615), (907, 45567), (935, 45519), (942, 45486), (949, 45462), (964, 45423), (967, 45411), (968, 45408), (979, 45363), (1002, 45315), (1015, 45291), (1023, 45270),

Gene: Malec\_45 Start: 32164, Stop: 30371, Start Num: 234

Candidate Starts for Malec\_45:

(Start: 234 @32164 has 938 MA's), (353, 31960), (355, 31957), (359, 31951), (379, 31921), (395, 31888), (397, 31885), (405, 31858), (415, 31831), (432, 31780), (465, 31678), (541, 31585), (566, 31537), (571, 31528), (582, 31513), (619, 31447), (655, 31366), (675, 31318), (679, 31312), (740, 31174), (759, 31093), (778, 31036), (789, 31003), (798, 30964), (805, 30934), (818, 30895), (837, 30874), (841, 30853), (918, 30661), (921, 30655), (936, 30619), (942, 30595), (962, 30538), (968, 30517), (985, 30460), (989, 30448), (993, 30439),

Gene: Malinsilva\_50 Start: 31845, Stop: 30031, Start Num: 234

Candidate Starts for Malinsilva\_50:

(Start: 234 @31845 has 938 MA's), (262, 31806), (266, 31794), (353, 31641), (362, 31626), (395, 31569), (415, 31512), (419, 31503), (432, 31461), (448, 31410), (465, 31359), (541, 31266), (566, 31218), (571, 31209), (582, 31194), (603, 31155), (619, 31128), (634, 31098), (670, 31005), (679, 30993), (701, 30945), (710, 30930), (759, 30774), (790, 30687), (805, 30621), (818, 30582), (842, 30510), (856, 30471), (862, 30447), (868, 30429), (879, 30396), (888, 30369), (921, 30315), (942, 30255), (968, 30177), (985, 30120), (989, 30108), (993, 30099),

Gene: Maminiaina\_44 Start: 31324, Stop: 29531, Start Num: 234

Candidate Starts for Maminiaina\_44:

(Start: 234 @31324 has 938 MA's), (246, 31315), (301, 31213), (334, 31153), (336, 31150), (353, 31120), (359, 31111), (379, 31078), (395, 31045), (397, 31042), (405, 31015), (409, 31000), (415, 30988), (465, 30835), (541, 30742), (619, 30604), (634, 30574), (710, 30403), (726, 30376), (729, 30370), (759, 30247), (802, 30112), (805, 30094), (841, 30013), (879, 29896), (936, 29779), (942, 29755), (968, 29677), (985, 29620), (989, 29608), (993, 29599),

Gene: ManRay\_38 Start: 28632, Stop: 26767, Start Num: 283

Candidate Starts for ManRay\_38:

(Start: 234 @28719 has 938 MA's), (Start: 237 @28716 has 2 MA's), (Start: 283 @28632 has 147 MA's), (Start: 291 @28623 has 5 MA's), (342, 28518), (347, 28509), (367, 28479), (369, 28476), (424, 28356), (426, 28344), (428, 28338), (466, 28233), (473, 28206), (532, 28065), (535, 28059), (537, 28056), (541, 28044), (551, 28017), (553, 28014), (562, 27999), (566, 27993), (570, 27987), (613, 27954), (671, 27825), (701, 27765), (798, 27450), (801, 27441), (802, 27438), (805, 27420), (819, 27378), (822, 27372), (825, 27363), (832, 27348), (849, 27291), (900, 27132), (913, 27102), (917, 27093), (938, 27033), (943, 27009), (956, 26970), (967, 26937), (970, 26925), (986, 26865),

Gene: Mana\_59 Start: 54023, Stop: 52164, Start Num: 197

Candidate Starts for Mana\_59:

(Start: 180 @54047 has 1 MA's), (Start: 197 @54023 has 298 MA's), (Start: 225 @53999 has 5 MA's), (Start: 238 @53993 has 2 MA's), (Start: 261 @53951 has 10 MA's), (269, 53930), (323, 53816), (328, 53810), (349, 53780), (385, 53720), (394, 53699), (410, 53645), (418, 53633), (425, 53615), (427, 53603), (462, 53498), (496, 53441), (511, 53405), (516, 53393), (535, 53366), (545, 53339), (555, 53321), (566, 53303), (588, 53264), (595, 53255), (597, 53252), (754, 52892), (760, 52859), (765, 52838), (799, 52745), (802, 52736), (822, 52673), (841, 52637), (842, 52634), (847, 52619), (872, 52541), (877, 52529), (883, 52508), (902, 52469), (942, 52379), (947, 52361), (949, 52355), (954,

52340), (964, 52316), (968, 52301), (969, 52298), (972, 52286), (979, 52262), (1002, 52214), (1015, 52190),

Gene: Manad\_60 Start: 54307, Stop: 52448, Start Num: 197

Candidate Starts for Manad\_60:

(Start: 180 @54331 has 1 MA's), (Start: 197 @54307 has 298 MA's), (Start: 225 @54283 has 5 MA's), (Start: 238 @54277 has 2 MA's), (Start: 261 @54235 has 10 MA's), (269, 54214), (323, 54100), (328, 54094), (349, 54064), (385, 54004), (394, 53983), (410, 53929), (418, 53917), (425, 53899), (427, 53887), (462, 53782), (496, 53725), (511, 53689), (516, 53677), (534, 53653), (539, 53641), (545, 53623), (555, 53605), (566, 53587), (588, 53548), (595, 53539), (597, 53536), (599, 53533), (754, 53176), (760, 53143), (765, 53122), (799, 53029), (802, 53020), (822, 52957), (841, 52921), (842, 52918), (847, 52903), (872, 52825), (877, 52813), (883, 52792), (902, 52753), (942, 52663), (947, 52645), (949, 52639), (954, 52624), (964, 52600), (968, 52585), (969, 52582), (972, 52570), (979, 52546), (1002, 52498), (1015, 52474),

Gene: Manatee\_45 Start: 34036, Stop: 32210, Start Num: 234

Candidate Starts for Manatee\_45:

(Start: 234 @34036 has 938 MA's), (359, 33823), (395, 33760), (405, 33730), (411, 33709), (415, 33703), (419, 33694), (457, 33577), (465, 33550), (541, 33457), (546, 33442), (596, 33358), (598, 33355), (634, 33289), (648, 33259), (657, 33229), (679, 33184), (700, 33145), (759, 32965), (775, 32917), (778, 32914), (790, 32878), (805, 32812), (818, 32773), (837, 32752), (841, 32731), (847, 32713), (868, 32647), (936, 32497), (938, 32494), (946, 32458), (954, 32434), (959, 32425), (963, 32413), (985, 32338), (993, 32317),

Gene: Mandalorian\_37 Start: 28518, Stop: 26617, Start Num: 283

Candidate Starts for Mandalorian\_37:

(Start: 283 @28518 has 147 MA's), (347, 28395), (357, 28380), (367, 28365), (387, 28332), (391, 28323), (398, 28308), (409, 28272), (418, 28257), (426, 28230), (428, 28224), (447, 28173), (460, 28134), (479, 28074), (532, 27948), (537, 27939), (541, 27927), (553, 27897), (566, 27876), (611, 27840), (680, 27693), (701, 27648), (744, 27537), (787, 27342), (798, 27300), (805, 27270), (819, 27228), (832, 27198), (839, 27177), (849, 27141), (938, 26883), (943, 26859), (954, 26826), (956, 26820), (986, 26715),

Gene: Manu\_48 Start: 31753, Stop: 29939, Start Num: 234

Candidate Starts for Manu\_48:

(Start: 234 @31753 has 938 MA's), (262, 31714), (266, 31702), (353, 31549), (362, 31534), (395, 31477), (415, 31420), (419, 31411), (432, 31369), (448, 31318), (465, 31267), (541, 31174), (566, 31126), (582, 31102), (603, 31063), (619, 31036), (634, 31006), (670, 30913), (679, 30901), (701, 30853), (710, 30838), (759, 30682), (778, 30631), (789, 30598), (790, 30595), (805, 30529), (818, 30490), (842, 30418), (856, 30379), (862, 30355), (868, 30337), (879, 30304), (921, 30223), (942, 30163), (947, 30145), (968, 30085), (970, 30076), (985, 30028), (989, 30016), (993, 30007),

Gene: MarQuardt\_48 Start: 31854, Stop: 30040, Start Num: 234

Candidate Starts for MarQuardt\_48:

(Start: 234 @31854 has 938 MA's), (262, 31815), (266, 31803), (353, 31650), (362, 31635), (395, 31578), (415, 31521), (419, 31512), (432, 31470), (448, 31419), (465, 31368), (541, 31275), (566, 31227), (571, 31218), (582, 31203), (603, 31164), (619, 31137), (634, 31107), (670, 31014), (701, 30954), (710, 30939), (759, 30783), (790, 30696), (805, 30630), (818, 30591), (842, 30519), (856, 30480), (862, 30456), (868, 30438), (879, 30405), (888, 30378), (921, 30324), (942, 30264), (968, 30186), (985, 30129), (989, 30117), (993, 30108),

Gene: Marcell\_43 Start: 34431, Stop: 32605, Start Num: 234

Candidate Starts for Marcell\_43:

(Start: 234 @34431 has 938 MA's), (359, 34218), (368, 34203), (395, 34155), (405, 34125), (411, 34104), (415, 34098), (419, 34089), (457, 33972), (465, 33945), (541, 33852), (546, 33837), (596, 33753), (598, 33750), (634, 33684), (648, 33654), (657, 33624), (679, 33579), (700, 33540), (759, 33360), (775, 33312), (778, 33309), (790, 33273), (805, 33207), (818, 33168), (837, 33147), (841, 33126), (847, 33108), (868, 33042), (936, 32892), (938, 32889), (946, 32853), (954, 32829), (959, 32820), (963, 32808), (985, 32733), (993, 32712),

Gene: Marchesa\_45 Start: 31433, Stop: 29595, Start Num: 234

Candidate Starts for Marchesa\_45:

(179, 31505), (Start: 234 @31433 has 938 MA's), (266, 31382), (353, 31229), (390, 31169), (395, 31157), (415, 31100), (419, 31091), (424, 31079), (458, 30971), (465, 30947), (541, 30851), (568, 30803), (603, 30743), (636, 30680), (663, 30611), (675, 30590), (710, 30521), (713, 30515), (729, 30476), (759, 30353), (790, 30266), (798, 30230), (805, 30200), (816, 30170), (842, 30089), (856, 30050), (862, 30026), (868, 30008), (921, 29879), (942, 29819), (985, 29684), (989, 29672), (993, 29663),

Gene: Marchy\_39 Start: 31191, Stop: 29365, Start Num: 234

Candidate Starts for Marchy\_39:

(Start: 234 @31191 has 938 MA's), (359, 30978), (368, 30963), (405, 30885), (411, 30864), (415, 30858), (419, 30849), (457, 30732), (465, 30705), (541, 30612), (546, 30597), (596, 30513), (598, 30510), (634, 30444), (648, 30414), (657, 30384), (679, 30339), (700, 30300), (759, 30120), (769, 30090), (775, 30072), (778, 30069), (790, 30033), (805, 29967), (841, 29886), (842, 29883), (868, 29802), (936, 29652), (938, 29649), (946, 29613), (954, 29589), (959, 29580), (963, 29568), (970, 29541), (985, 29493), (993, 29472),

Gene: Mareelih\_171 Start: 99155, Stop: 97374, Start Num: 241

Candidate Starts for Mareelih\_171:

(Start: 241 @99155 has 4 MA's), (266, 99110), (276, 99083), (334, 98990), (370, 98930), (374, 98927), (379, 98918), (394, 98894), (407, 98852), (408, 98849), (426, 98804), (445, 98762), (463, 98708), (541, 98624), (586, 98540), (603, 98513), (615, 98498), (689, 98339), (700, 98315), (704, 98300), (710, 98291), (744, 98204), (751, 98177), (752, 98174), (756, 98153), (759, 98132), (777, 98081), (802, 97997), (807, 97970), (816, 97937), (830, 97895), (865, 97784), (874, 97757), (886, 97721), (891, 97712), (893, 97709), (897, 97700), (943, 97580), (949, 97559), (951, 97553), (964, 97520), (969, 97502), (970, 97496), (981, 97463), (985, 97448), (1002, 97424), (1004, 97421), (1019, 97397),

Gene: Margaret\_49 Start: 33864, Stop: 31474, Start Num: 45

Candidate Starts for Margaret\_49:

(16, 33993), (19, 33984), (Start: 45 @33864 has 24 MA's), (Start: 65 @33798 has 1 MA's), (92, 33732), (109, 33675), (127, 33636), (136, 33612), (141, 33591), (168, 33570), (216, 33501), (250, 33453), (259, 33438), (279, 33390), (319, 33309), (324, 33297), (366, 33228), (380, 33204), (391, 33180), (420, 33105), (426, 33084), (448, 33024), (464, 32979), (478, 32931), (522, 32823), (524, 32817), (568, 32736), (634, 32688), (668, 32628), (711, 32556), (729, 32514), (732, 32502), (770, 32361), (772, 32337), (774, 32322), (784, 32286), (805, 32193), (817, 32157), (819, 32151), (824, 32139), (834, 32115), (849, 32058), (851, 32040), (880, 31947), (910, 31878), (922, 31851), (926, 31839), (927, 31836), (938, 31800), (942, 31779), (952, 31746), (960, 31728), (978, 31659), (986, 31632), (996, 31608), (1046, 31500), (1050, 31488),

Gene: Marge\_45 Start: 35242, Stop: 33455, Start Num: 234

Candidate Starts for Marge\_45:

(Start: 234 @35242 has 938 MA's), (359, 35029), (368, 35014), (405, 34936), (411, 34915), (415, 34909), (419, 34900), (448, 34807), (457, 34783), (465, 34756), (541, 34663), (546, 34648), (566, 34615), (596, 34564), (598, 34561), (634, 34495), (648, 34465), (657, 34435), (679, 34390), (700, 34351), (759, 34171), (775, 34123), (790, 34084), (805, 34018), (839, 33946), (841, 33937), (868,

33853), (903, 33766), (954, 33640), (960, 33628), (985, 33544), (987, 33538),

Gene: Margo\_44 Start: 31623, Stop: 29785, Start Num: 234

Candidate Starts for Margo\_44:

(Start: 234 @31623 has 938 MA's), (266, 31572), (353, 31419), (395, 31347), (405, 31317), (415, 31290), (419, 31281), (465, 31137), (541, 31041), (568, 30993), (603, 30933), (648, 30846), (663, 30801), (675, 30780), (711, 30708), (729, 30666), (740, 30624), (759, 30543), (775, 30495), (790, 30456), (798, 30420), (805, 30390), (816, 30360), (842, 30279), (856, 30240), (862, 30216), (868, 30198), (869, 30195), (921, 30069), (942, 30009), (970, 29922), (985, 29874), (989, 29862), (993, 29853),

Gene: Marie\_48 Start: 31852, Stop: 30038, Start Num: 234

Candidate Starts for Marie\_48:

(Start: 234 @31852 has 938 MA's), (262, 31813), (266, 31801), (353, 31648), (362, 31633), (395, 31576), (415, 31519), (419, 31510), (432, 31468), (448, 31417), (465, 31366), (541, 31273), (566, 31225), (571, 31216), (582, 31201), (603, 31162), (619, 31135), (634, 31105), (670, 31012), (701, 30952), (710, 30937), (759, 30781), (790, 30694), (805, 30628), (818, 30589), (842, 30517), (856, 30478), (862, 30454), (868, 30436), (879, 30403), (888, 30376), (921, 30322), (942, 30262), (968, 30184), (985, 30127), (989, 30115), (993, 30106),

Gene: Mariokart\_50 Start: 45633, Stop: 43816, Start Num: 230

Candidate Starts for Mariokart\_50:

(98, 45906), (107, 45873), (Start: 230 @45633 has 13 MA's), (252, 45597), (259, 45585), (Start: 261 @45582 has 10 MA's), (273, 45552), (344, 45426), (375, 45378), (406, 45303), (427, 45246), (456, 45171), (462, 45150), (511, 45057), (583, 44928), (597, 44904), (634, 44838), (648, 44805), (737, 44613), (743, 44592), (749, 44574), (760, 44517), (799, 44403), (802, 44394), (842, 44292), (847, 44277), (872, 44199), (877, 44187), (883, 44166), (885, 44157), (918, 44103), (935, 44070), (942, 44037), (943, 44034), (954, 43998), (964, 43974), (979, 43914), (1015, 43842), (1023, 43821),

Gene: Marius\_49 Start: 31750, Stop: 29936, Start Num: 234

Candidate Starts for Marius\_49:

(Start: 234 @31750 has 938 MA's), (262, 31711), (266, 31699), (353, 31546), (362, 31531), (395, 31474), (415, 31417), (419, 31408), (432, 31366), (448, 31315), (465, 31264), (541, 31171), (566, 31123), (582, 31099), (603, 31060), (619, 31033), (634, 31003), (670, 30910), (679, 30898), (701, 30850), (710, 30835), (759, 30679), (778, 30628), (789, 30595), (790, 30592), (805, 30526), (818, 30487), (842, 30415), (856, 30376), (862, 30352), (868, 30334), (879, 30301), (921, 30220), (942, 30160), (947, 30142), (968, 30082), (970, 30073), (985, 30025), (989, 30013), (993, 30004),

Gene: Marley1013\_59 Start: 54530, Stop: 52713, Start Num: 235

Candidate Starts for Marley1013\_59:

(61, 54914), (129, 54713), (Start: 235 @54530 has 43 MA's), (252, 54500), (359, 54320), (424, 54167), (426, 54155), (437, 54125), (442, 54119), (462, 54056), (464, 54050), (496, 53999), (511, 53963), (539, 53915), (597, 53810), (647, 53714), (664, 53663), (737, 53519), (749, 53480), (755, 53450), (760, 53423), (763, 53411), (797, 53315), (799, 53309), (802, 53300), (804, 53288), (834, 53216), (841, 53186), (847, 53168), (851, 53159), (872, 53090), (877, 53078), (883, 53057), (921, 52988), (931, 52973), (938, 52949), (949, 52904), (964, 52865), (969, 52847), (972, 52835), (975, 52823), (979, 52811), (994, 52769), (1015, 52739),

Gene: Maroc7\_43 Start: 34287, Stop: 32461, Start Num: 234

Candidate Starts for Maroc7\_43:

(Start: 234 @34287 has 938 MA's), (359, 34074), (368, 34059), (395, 34011), (405, 33981), (411, 33960), (415, 33954), (419, 33945), (457, 33828), (465, 33801), (541, 33708), (546, 33693), (566, 33660), (596, 33609), (598, 33606), (634, 33540), (657, 33480), (679, 33435), (700, 33396), (759,



33216), (775, 33168), (790, 33129), (805, 33063), (818, 33024), (837, 33003), (841, 32982), (847, 32964), (868, 32898), (936, 32748), (938, 32745), (946, 32709), (954, 32685), (959, 32676), (963, 32664), (970, 32637), (985, 32589), (993, 32568),

Gene: Marsha\_45 Start: 35798, Stop: 33972, Start Num: 234

Candidate Starts for Marsha\_45:

(Start: 234 @35798 has 938 MA's), (359, 35585), (368, 35570), (395, 35522), (405, 35492), (411, 35471), (415, 35465), (419, 35456), (457, 35339), (465, 35312), (541, 35219), (546, 35204), (596, 35120), (598, 35117), (634, 35051), (657, 34991), (679, 34946), (700, 34907), (759, 34727), (769, 34697), (775, 34679), (778, 34676), (790, 34640), (805, 34574), (841, 34493), (842, 34490), (868, 34409), (936, 34259), (938, 34256), (946, 34220), (954, 34196), (963, 34175), (970, 34148), (985, 34100), (993, 34079),

Gene: Martin\_40 Start: 28939, Stop: 27074, Start Num: 283

Candidate Starts for Martin\_40:

(Start: 234 @29026 has 938 MA's), (Start: 237 @29023 has 2 MA's), (Start: 283 @28939 has 147 MA's), (Start: 291 @28930 has 5 MA's), (342, 28825), (347, 28816), (367, 28786), (369, 28783), (424, 28663), (426, 28651), (428, 28645), (466, 28540), (473, 28513), (532, 28372), (535, 28366), (537, 28363), (541, 28351), (551, 28324), (553, 28321), (562, 28306), (566, 28300), (570, 28294), (613, 28261), (701, 28072), (798, 27757), (801, 27748), (802, 27745), (805, 27727), (819, 27685), (822, 27679), (825, 27670), (832, 27655), (849, 27598), (900, 27439), (913, 27409), (917, 27400), (938, 27340), (943, 27316), (956, 27277), (967, 27244), (970, 27232), (986, 27172),

Gene: Maru\_60 Start: 54462, Stop: 52603, Start Num: 197

Candidate Starts for Maru\_60:

(Start: 180 @54486 has 1 MA's), (Start: 197 @54462 has 298 MA's), (Start: 225 @54438 has 5 MA's), (Start: 238 @54432 has 2 MA's), (Start: 261 @54390 has 10 MA's), (269, 54369), (323, 54255), (328, 54249), (349, 54219), (385, 54159), (394, 54138), (410, 54084), (418, 54072), (425, 54054), (427, 54042), (462, 53937), (496, 53880), (511, 53844), (516, 53832), (535, 53805), (555, 53760), (566, 53742), (588, 53703), (595, 53694), (597, 53691), (599, 53688), (754, 53331), (760, 53298), (765, 53277), (799, 53184), (802, 53175), (822, 53112), (841, 53076), (842, 53073), (847, 53058), (872, 52980), (877, 52968), (883, 52947), (902, 52908), (942, 52818), (947, 52800), (949, 52794), (954, 52779), (964, 52755), (968, 52740), (969, 52737), (972, 52725), (979, 52701), (1002, 52653), (1015, 52629),

Gene: MaryBeth\_45 Start: 34704, Stop: 32875, Start Num: 234

Candidate Starts for MaryBeth\_45:

(Start: 234 @34704 has 938 MA's), (359, 34491), (368, 34476), (395, 34428), (405, 34398), (411, 34377), (415, 34371), (419, 34362), (432, 34320), (457, 34245), (465, 34218), (541, 34125), (546, 34110), (596, 34026), (598, 34023), (634, 33957), (648, 33927), (657, 33897), (679, 33852), (700, 33813), (759, 33633), (775, 33585), (793, 33537), (802, 33498), (805, 33480), (818, 33441), (837, 33420), (841, 33399), (846, 33384), (885, 33261), (960, 33090), (967, 33066), (982, 33018), (985, 33006), (993, 32985), (997, 32979), (1025, 32931), (1030, 32916),

Gene: MarysWell\_37 Start: 30459, Stop: 28594, Start Num: 234

Candidate Starts for MarysWell\_37:

(Start: 234 @30459 has 938 MA's), (266, 30408), (336, 30285), (353, 30255), (355, 30252), (390, 30195), (405, 30153), (415, 30126), (419, 30117), (458, 29997), (465, 29973), (541, 29877), (550, 29853), (563, 29832), (618, 29745), (619, 29739), (635, 29706), (652, 29667), (670, 29619), (679, 29607), (700, 29568), (759, 29373), (769, 29343), (775, 29325), (789, 29289), (790, 29286), (793, 29277), (805, 29220), (818, 29181), (841, 29139), (847, 29121), (862, 29073), (864, 29067), (879, 29022), (903, 28968), (908, 28959), (921, 28941), (947, 28863), (967, 28806), (978, 28770), (985, 28746), (989, 28734),

Gene: Maskar\_62 Start: 54257, Stop: 52398, Start Num: 197

Candidate Starts for Maskar\_62:

(Start: 180 @54281 has 1 MA's), (Start: 197 @54257 has 298 MA's), (Start: 225 @54233 has 5 MA's), (Start: 238 @54227 has 2 MA's), (Start: 261 @54185 has 10 MA's), (269, 54164), (323, 54050), (328, 54044), (349, 54014), (385, 53954), (394, 53933), (410, 53879), (418, 53867), (425, 53849), (427, 53837), (462, 53732), (496, 53675), (511, 53639), (516, 53627), (534, 53603), (539, 53591), (545, 53573), (555, 53555), (566, 53537), (588, 53498), (595, 53489), (597, 53486), (599, 53483), (724, 53228), (754, 53126), (760, 53093), (765, 53072), (799, 52979), (802, 52970), (822, 52907), (841, 52871), (842, 52868), (847, 52853), (872, 52775), (877, 52763), (883, 52742), (902, 52703), (942, 52613), (947, 52595), (949, 52589), (954, 52574), (964, 52550), (968, 52535), (969, 52532), (972, 52520), (979, 52496), (985, 52475), (1002, 52448), (1015, 52424),

Gene: MasterPo\_57 Start: 52506, Stop: 50677, Start Num: 197

Candidate Starts for MasterPo\_57:

(Start: 197 @52506 has 298 MA's), (Start: 238 @52479 has 2 MA's), (253, 52449), (Start: 261 @52437 has 10 MA's), (272, 52410), (273, 52407), (277, 52398), (301, 52380), (355, 52284), (385, 52233), (395, 52209), (402, 52185), (450, 52047), (459, 52023), (462, 52011), (496, 51954), (511, 51918), (516, 51906), (534, 51882), (580, 51798), (595, 51768), (597, 51765), (618, 51735), (678, 51591), (710, 51525), (733, 51486), (737, 51474), (743, 51453), (749, 51435), (760, 51378), (793, 51294), (799, 51264), (802, 51255), (822, 51189), (839, 51162), (841, 51153), (847, 51135), (856, 51111), (872, 51057), (877, 51045), (883, 51024), (921, 50955), (942, 50895), (947, 50877), (960, 50844), (964, 50832), (968, 50817), (969, 50814), (972, 50802), (979, 50778), (980, 50775), (1002, 50727), (1004, 50724), (1015, 50703), (1023, 50682),

Gene: Matalotodo\_60 Start: 54575, Stop: 52716, Start Num: 197

Candidate Starts for Matalotodo\_60:

(Start: 180 @54599 has 1 MA's), (Start: 197 @54575 has 298 MA's), (Start: 225 @54551 has 5 MA's), (Start: 238 @54545 has 2 MA's), (Start: 261 @54503 has 10 MA's), (269, 54482), (323, 54368), (328, 54362), (349, 54332), (385, 54272), (394, 54251), (410, 54197), (418, 54185), (425, 54167), (427, 54155), (462, 54050), (496, 53993), (511, 53957), (516, 53945), (535, 53918), (545, 53891), (555, 53873), (566, 53855), (588, 53816), (595, 53807), (597, 53804), (724, 53546), (754, 53444), (760, 53411), (765, 53390), (799, 53297), (802, 53288), (822, 53225), (841, 53189), (842, 53186), (847, 53171), (872, 53093), (877, 53081), (883, 53060), (902, 53021), (942, 52931), (947, 52913), (949, 52907), (954, 52892), (964, 52868), (968, 52853), (969, 52850), (972, 52838), (979, 52814), (1002, 52766), (1015, 52742),

Gene: Maureen\_42 Start: 31379, Stop: 33223, Start Num: 234

Candidate Starts for Maureen\_42:

(Start: 145 @31253 has 1 MA's), (148, 31256), (Start: 234 @31379 has 938 MA's), (405, 31676), (543, 31952), (600, 32054), (615, 32075), (675, 32213), (705, 32276), (759, 32471), (761, 32477), (769, 32501), (790, 32558), (803, 32615), (805, 32624), (847, 32741), (862, 32789), (933, 32948), (936, 32960), (962, 33041), (985, 33119), (1008, 33164),

Gene: Maverick\_45 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Maverick\_45:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Maxo\_46 Start: 31572, Stop: 29746, Start Num: 234

Candidate Starts for Maxo\_46:

(Start: 234 @31572 has 938 MA's), (252, 31551), (266, 31521), (279, 31491), (379, 31329), (389, 31311), (415, 31239), (419, 31230), (458, 31110), (465, 31086), (541, 30993), (568, 30945), (582, 30924), (603, 30885), (663, 30753), (675, 30732), (700, 30687), (703, 30675), (756, 30522), (759, 30501), (798, 30378), (805, 30348), (818, 30309), (841, 30243), (842, 30240), (847, 30225), (856, 30201), (862, 30177), (942, 29970), (985, 29835), (989, 29823), (993, 29814),

Gene: Mayweather\_49 Start: 35337, Stop: 32956, Start Num: 47

Candidate Starts for Mayweather\_49:

(Start: 47 @35337 has 13 MA's), (64, 35277), (96, 35196), (136, 35076), (170, 35031), (Start: 223 @34953 has 3 MA's), (228, 34947), (Start: 230 @34944 has 13 MA's), (252, 34914), (269, 34875), (273, 34866), (Start: 291 @34836 has 5 MA's), (317, 34779), (342, 34740), (354, 34719), (380, 34677), (385, 34668), (391, 34653), (395, 34644), (399, 34632), (409, 34599), (410, 34596), (420, 34578), (426, 34557), (495, 34374), (524, 34299), (541, 34257), (634, 34170), (662, 34122), (677, 34092), (682, 34086), (711, 34041), (713, 34038), (718, 34023), (728, 34002), (752, 33918), (758, 33888), (772, 33828), (773, 33819), (779, 33804), (781, 33789), (784, 33777), (805, 33684), (817, 33648), (819, 33642), (822, 33636), (824, 33630), (842, 33573), (849, 33549), (878, 33444), (879, 33441), (900, 33390), (919, 33348), (926, 33330), (938, 33291), (948, 33249), (958, 33225), (979, 33147), (986, 33123), (1008, 33078), (1035, 33012), (1046, 32991), (1047, 32985), (1050, 32979),

Gene: Mazhar510\_45 Start: 31571, Stop: 29745, Start Num: 234

Candidate Starts for Mazhar510\_45:

(Start: 234 @31571 has 938 MA's), (252, 31550), (266, 31520), (279, 31490), (379, 31328), (389, 31310), (415, 31238), (419, 31229), (458, 31109), (465, 31085), (541, 30992), (568, 30944), (582, 30923), (603, 30884), (663, 30752), (675, 30731), (700, 30686), (703, 30674), (756, 30521), (759, 30500), (798, 30377), (805, 30347), (818, 30308), (841, 30242), (842, 30239), (847, 30224), (856, 30200), (862, 30176), (942, 29969), (985, 29834), (989, 29822), (993, 29813),

Gene: McFly\_45 Start: 29627, Stop: 27786, Start Num: 234

Candidate Starts for McFly\_45:

(Start: 234 @29627 has 938 MA's), (353, 29423), (395, 29348), (397, 29345), (405, 29318), (409, 29303), (415, 29291), (432, 29240), (461, 29150), (465, 29138), (541, 29045), (559, 29006), (571, 28988), (582, 28973), (619, 28907), (635, 28874), (636, 28871), (681, 28769), (710, 28709), (740, 28625), (759, 28544), (789, 28460), (790, 28457), (793, 28448), (798, 28421), (805, 28391), (837, 28331), (847, 28292), (936, 28076), (938, 28073), (942, 28052), (985, 27917), (989, 27905), (993, 27896), (995, 27893), (1042, 27800),

Gene: McGalleon\_41 Start: 30345, Stop: 28477, Start Num: 283

Candidate Starts for McGalleon\_41:

(274, 30360), (Start: 283 @30345 has 147 MA's), (Start: 291 @30336 has 5 MA's), (367, 30192), (369, 30189), (420, 30078), (424, 30069), (426, 30057), (428, 30051), (466, 29946), (503, 29853), (532, 29778), (537, 29769), (541, 29757), (553, 29727), (562, 29712), (566, 29706), (570, 29700), (701, 29478), (798, 29163), (801, 29154), (802, 29151), (805, 29133), (819, 29091), (849, 29001), (854, 28974), (900, 28842), (917, 28803), (938, 28743), (943, 28719), (956, 28680), (967, 28647), (970, 28635),

Gene: McGuire\_45 Start: 34382, Stop: 32553, Start Num: 234

Candidate Starts for McGuire\_45:

(Start: 234 @34382 has 938 MA's), (359, 34169), (395, 34106), (405, 34076), (411, 34055), (415, 34049), (419, 34040), (457, 33923), (465, 33896), (541, 33803), (546, 33788), (566, 33755), (596, 33704), (598, 33701), (628, 33647), (634, 33635), (648, 33605), (657, 33575), (679, 33530), (700, 33491), (759, 33311), (775, 33263), (793, 33215), (802, 33176), (805, 33158), (818, 33119), (837, 33098), (841, 33077), (846, 33062), (885, 32939), (960, 32768), (967, 32744), (982, 32696), (985,

32684), (993, 32663), (997, 32657), (1025, 32609), (1030, 32594),

Gene: Mcshane\_59 Start: 54021, Stop: 52162, Start Num: 197

Candidate Starts for Mcshane\_59:

(Start: 180 @54045 has 1 MA's), (Start: 197 @54021 has 298 MA's), (Start: 225 @53997 has 5 MA's), (Start: 238 @53991 has 2 MA's), (Start: 261 @53949 has 10 MA's), (269, 53928), (323, 53814), (328, 53808), (349, 53778), (385, 53718), (394, 53697), (410, 53643), (418, 53631), (425, 53613), (427, 53601), (462, 53496), (496, 53439), (511, 53403), (516, 53391), (535, 53364), (545, 53337), (555, 53319), (566, 53301), (588, 53262), (595, 53253), (597, 53250), (724, 52992), (754, 52890), (760, 52857), (765, 52836), (799, 52743), (802, 52734), (822, 52671), (841, 52635), (842, 52632), (847, 52617), (872, 52539), (877, 52527), (883, 52506), (902, 52467), (942, 52377), (947, 52359), (949, 52353), (954, 52338), (964, 52314), (968, 52299), (969, 52296), (972, 52284), (979, 52260), (1002, 52212), (1015, 52188),

Gene: Mecca\_60 Start: 54586, Stop: 52727, Start Num: 197

Candidate Starts for Mecca\_60:

(Start: 180 @54610 has 1 MA's), (Start: 197 @54586 has 298 MA's), (Start: 225 @54562 has 5 MA's), (Start: 238 @54556 has 2 MA's), (Start: 261 @54514 has 10 MA's), (269, 54493), (323, 54379), (328, 54373), (349, 54343), (385, 54283), (394, 54262), (410, 54208), (418, 54196), (425, 54178), (427, 54166), (462, 54061), (496, 54004), (511, 53968), (516, 53956), (534, 53932), (539, 53920), (545, 53902), (555, 53884), (566, 53866), (588, 53827), (595, 53818), (597, 53815), (599, 53812), (754, 53455), (760, 53422), (765, 53401), (799, 53308), (802, 53299), (822, 53236), (841, 53200), (842, 53197), (847, 53182), (872, 53104), (877, 53092), (883, 53071), (902, 53032), (942, 52942), (947, 52924), (949, 52918), (954, 52903), (964, 52879), (968, 52864), (969, 52861), (972, 52849), (979, 52825), (1002, 52777), (1015, 52753),

Gene: Medusa\_45 Start: 31569, Stop: 29743, Start Num: 234

Candidate Starts for Medusa\_45:

(Start: 234 @31569 has 938 MA's), (252, 31548), (266, 31518), (279, 31488), (379, 31326), (389, 31308), (415, 31236), (419, 31227), (458, 31107), (465, 31083), (541, 30990), (568, 30942), (582, 30921), (603, 30882), (663, 30750), (675, 30729), (700, 30684), (703, 30672), (756, 30519), (759, 30498), (798, 30375), (805, 30345), (818, 30306), (841, 30240), (842, 30237), (847, 30222), (856, 30198), (862, 30174), (942, 29967), (985, 29832), (989, 29820), (993, 29811),

Gene: MeeZee\_45 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for MeeZee\_45:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Megamind20\_61 Start: 54009, Stop: 52150, Start Num: 197

Candidate Starts for Megamind20\_61:

(Start: 180 @54033 has 1 MA's), (Start: 197 @54009 has 298 MA's), (Start: 225 @53985 has 5 MA's), (Start: 238 @53979 has 2 MA's), (Start: 261 @53937 has 10 MA's), (269, 53916), (323, 53802), (328, 53796), (349, 53766), (385, 53706), (394, 53685), (410, 53631), (418, 53619), (425, 53601), (427, 53589), (462, 53484), (496, 53427), (511, 53391), (516, 53379), (535, 53352), (545, 53325), (555, 53307), (566, 53289), (588, 53250), (595, 53241), (597, 53238), (724, 52980), (754, 52878), (760, 52845), (765, 52824), (799, 52731), (802, 52722), (822, 52659), (841, 52623), (842, 52620), (847, 52605), (872, 52527), (877, 52515), (883, 52494), (902, 52455), (942, 52365), (947, 52347), (949, 52341), (954, 52326), (964, 52302), (968, 52287), (969, 52284), (972, 52272), (979, 52248), (1002, 52200), (1015, 52176),

Gene: Megatron\_61 Start: 54535, Stop: 52676, Start Num: 197

Candidate Starts for Megatron\_61:

(Start: 180 @54559 has 1 MA's), (Start: 197 @54535 has 298 MA's), (Start: 225 @54511 has 5 MA's), (Start: 238 @54505 has 2 MA's), (Start: 261 @54463 has 10 MA's), (269, 54442), (323, 54328), (328, 54322), (349, 54292), (385, 54232), (394, 54211), (410, 54157), (418, 54145), (425, 54127), (427, 54115), (462, 54010), (496, 53953), (511, 53917), (516, 53905), (535, 53878), (545, 53851), (555, 53833), (566, 53815), (588, 53776), (595, 53767), (597, 53764), (724, 53506), (754, 53404), (760, 53371), (765, 53350), (799, 53257), (802, 53248), (822, 53185), (841, 53149), (842, 53146), (847, 53131), (872, 53053), (877, 53041), (883, 53020), (902, 52981), (942, 52891), (947, 52873), (949, 52867), (954, 52852), (964, 52828), (968, 52813), (969, 52810), (972, 52798), (979, 52774), (1002, 52726), (1015, 52702),

Gene: Melc17\_60 Start: 54852, Stop: 52993, Start Num: 197

Candidate Starts for Melc17\_60:

(Start: 180 @54876 has 1 MA's), (Start: 197 @54852 has 298 MA's), (Start: 225 @54828 has 5 MA's), (Start: 238 @54822 has 2 MA's), (Start: 261 @54780 has 10 MA's), (269, 54759), (323, 54645), (328, 54639), (349, 54609), (385, 54549), (394, 54528), (410, 54474), (418, 54462), (425, 54444), (427, 54432), (462, 54327), (496, 54270), (511, 54234), (516, 54222), (534, 54198), (539, 54186), (545, 54168), (555, 54150), (566, 54132), (588, 54093), (595, 54084), (597, 54081), (599, 54078), (754, 53721), (760, 53688), (765, 53667), (799, 53574), (802, 53565), (822, 53502), (841, 53466), (842, 53463), (847, 53448), (872, 53370), (877, 53358), (883, 53337), (902, 53298), (942, 53208), (947, 53190), (949, 53184), (954, 53169), (964, 53145), (968, 53130), (969, 53127), (972, 53115), (979, 53091), (1002, 53043), (1015, 53019),

Gene: MelsMeow\_61 Start: 54310, Stop: 52451, Start Num: 197

Candidate Starts for MelsMeow\_61:

(Start: 180 @54334 has 1 MA's), (Start: 197 @54310 has 298 MA's), (Start: 225 @54286 has 5 MA's), (Start: 238 @54280 has 2 MA's), (Start: 261 @54238 has 10 MA's), (269, 54217), (323, 54103), (328, 54097), (349, 54067), (385, 54007), (394, 53986), (410, 53932), (418, 53920), (425, 53902), (427, 53890), (462, 53785), (496, 53728), (511, 53692), (516, 53680), (535, 53653), (555, 53608), (588, 53551), (595, 53542), (597, 53539), (724, 53281), (754, 53179), (760, 53146), (765, 53125), (799, 53032), (802, 53023), (822, 52960), (841, 52924), (842, 52921), (847, 52906), (872, 52828), (877, 52816), (883, 52795), (902, 52756), (942, 52666), (947, 52648), (949, 52642), (954, 52627), (964, 52603), (968, 52588), (969, 52585), (972, 52573), (979, 52549), (985, 52528), (1002, 52501), (1015, 52477), (1019, 52462),

Gene: Melvin\_47 Start: 31565, Stop: 29739, Start Num: 234

Candidate Starts for Melvin\_47:

(Start: 234 @31565 has 938 MA's), (252, 31544), (266, 31514), (279, 31484), (379, 31322), (389, 31304), (415, 31232), (419, 31223), (458, 31103), (465, 31079), (541, 30986), (568, 30938), (582, 30917), (603, 30878), (663, 30746), (675, 30725), (700, 30680), (703, 30668), (756, 30515), (759, 30494), (798, 30371), (805, 30341), (818, 30302), (841, 30236), (842, 30233), (847, 30218), (856, 30194), (862, 30170), (942, 29963), (985, 29828), (989, 29816), (993, 29807),

Gene: Mercedes\_34 Start: 25967, Stop: 24108, Start Num: 283

Candidate Starts for Mercedes\_34:

(Start: 283 @25967 has 147 MA's), (290, 25961), (330, 25868), (367, 25814), (371, 25808), (420, 25700), (426, 25679), (428, 25673), (447, 25622), (474, 25538), (537, 25403), (541, 25391), (553, 25361), (562, 25346), (566, 25340), (574, 25328), (680, 25157), (714, 25091), (728, 25058), (749, 24989), (752, 24977), (798, 24797), (805, 24767), (842, 24656), (849, 24632), (850, 24629), (854, 24605), (917, 24434), (938, 24374), (943, 24350), (946, 24338), (949, 24329), (967, 24278), (986, 24206),

Gene: Mesh1\_62 Start: 54599, Stop: 52740, Start Num: 197

Candidate Starts for Mesh1\_62:

(Start: 180 @54623 has 1 MA's), (Start: 197 @54599 has 298 MA's), (Start: 225 @54575 has 5 MA's), (Start: 238 @54569 has 2 MA's), (Start: 261 @54527 has 10 MA's), (269, 54506), (323, 54392), (328, 54386), (349, 54356), (385, 54296), (394, 54275), (410, 54221), (418, 54209), (425, 54191), (427, 54179), (462, 54074), (496, 54017), (511, 53981), (516, 53969), (535, 53942), (545, 53915), (555, 53897), (566, 53879), (588, 53840), (595, 53831), (597, 53828), (724, 53570), (754, 53468), (760, 53435), (765, 53414), (799, 53321), (802, 53312), (822, 53249), (841, 53213), (842, 53210), (847, 53195), (872, 53117), (877, 53105), (883, 53084), (902, 53045), (942, 52955), (947, 52937), (949, 52931), (954, 52916), (964, 52892), (968, 52877), (969, 52874), (972, 52862), (979, 52838), (1002, 52790), (1015, 52766),

Gene: Mesmerelda\_62 Start: 54579, Stop: 52720, Start Num: 197

Candidate Starts for Mesmerelda\_62:

(Start: 180 @54603 has 1 MA's), (Start: 197 @54579 has 298 MA's), (Start: 225 @54555 has 5 MA's), (Start: 238 @54549 has 2 MA's), (Start: 261 @54507 has 10 MA's), (269, 54486), (323, 54372), (328, 54366), (349, 54336), (385, 54276), (394, 54255), (410, 54201), (418, 54189), (425, 54171), (427, 54159), (462, 54054), (496, 53997), (511, 53961), (516, 53949), (535, 53922), (545, 53895), (555, 53877), (566, 53859), (588, 53820), (595, 53811), (597, 53808), (724, 53550), (754, 53448), (760, 53415), (765, 53394), (799, 53301), (802, 53292), (822, 53229), (841, 53193), (842, 53190), (847, 53175), (872, 53097), (877, 53085), (883, 53064), (902, 53025), (942, 52935), (947, 52917), (949, 52911), (954, 52896), (964, 52872), (968, 52857), (969, 52854), (972, 52842), (979, 52818), (1002, 52770), (1015, 52746),

Gene: MetalQZJ\_44 Start: 34704, Stop: 32875, Start Num: 234

Candidate Starts for MetalQZJ\_44:

(Start: 234 @34704 has 938 MA's), (359, 34491), (368, 34476), (395, 34428), (405, 34398), (411, 34377), (415, 34371), (419, 34362), (432, 34320), (457, 34245), (465, 34218), (541, 34125), (546, 34110), (596, 34026), (598, 34023), (634, 33957), (648, 33927), (657, 33897), (679, 33852), (700, 33813), (759, 33633), (775, 33585), (793, 33537), (802, 33498), (805, 33480), (818, 33441), (837, 33420), (841, 33399), (846, 33384), (885, 33261), (960, 33090), (967, 33066), (982, 33018), (985, 33006), (993, 32985), (997, 32979), (1025, 32931), (1030, 32916),

Gene: Methuselah\_45 Start: 31880, Stop: 30066, Start Num: 234

Candidate Starts for Methuselah\_45:

(Start: 234 @31880 has 938 MA's), (262, 31841), (266, 31829), (353, 31676), (362, 31661), (395, 31604), (415, 31547), (419, 31538), (432, 31496), (448, 31445), (465, 31394), (518, 31340), (541, 31301), (566, 31253), (582, 31229), (603, 31190), (619, 31163), (634, 31133), (670, 31040), (679, 31028), (701, 30980), (710, 30965), (759, 30809), (778, 30758), (789, 30725), (790, 30722), (805, 30656), (818, 30617), (842, 30545), (856, 30506), (862, 30482), (868, 30464), (879, 30431), (921, 30350), (942, 30290), (970, 30203), (985, 30155), (989, 30143), (993, 30134), (995, 30131),

Gene: Micasa\_40 Start: 30726, Stop: 28861, Start Num: 234

Candidate Starts for Micasa\_40:

(Start: 234 @30726 has 938 MA's), (266, 30675), (301, 30615), (336, 30552), (353, 30522), (355, 30519), (390, 30462), (395, 30450), (405, 30420), (415, 30393), (465, 30240), (541, 30144), (566, 30096), (618, 30012), (619, 30006), (652, 29934), (663, 29901), (670, 29886), (679, 29874), (724, 29775), (759, 29640), (769, 29610), (775, 29592), (778, 29589), (790, 29553), (793, 29544), (798, 29517), (805, 29487), (818, 29448), (841, 29406), (847, 29388), (862, 29340), (879, 29289), (903, 29235), (908, 29226), (921, 29208), (942, 29148), (947, 29130), (978, 29037), (985, 29013), (989, 29001), (1042, 28896),

Gene: MichaelPhcott\_61 Start: 54184, Stop: 52325, Start Num: 197

Candidate Starts for MichaelPhcott\_61:

(Start: 180 @54208 has 1 MA's), (Start: 197 @54184 has 298 MA's), (Start: 225 @54160 has 5 MA's), (Start: 238 @54154 has 2 MA's), (Start: 261 @54112 has 10 MA's), (269, 54091), (323, 53977), (328, 53971), (349, 53941), (385, 53881), (394, 53860), (410, 53806), (418, 53794), (425, 53776), (427, 53764), (462, 53659), (496, 53602), (511, 53566), (516, 53554), (534, 53530), (539, 53518), (545, 53500), (555, 53482), (566, 53464), (588, 53425), (595, 53416), (597, 53413), (599, 53410), (754, 53053), (760, 53020), (765, 52999), (799, 52906), (802, 52897), (822, 52834), (841, 52798), (842, 52795), (847, 52780), (872, 52702), (877, 52690), (883, 52669), (902, 52630), (942, 52540), (947, 52522), (949, 52516), (954, 52501), (964, 52477), (968, 52462), (969, 52459), (972, 52447), (979, 52423), (1002, 52375), (1015, 52351),

Gene: Michley\_44 Start: 34222, Stop: 32396, Start Num: 234

Candidate Starts for Michley\_44:

(Start: 234 @34222 has 938 MA's), (359, 34009), (405, 33916), (411, 33895), (415, 33889), (419, 33880), (457, 33763), (465, 33736), (541, 33643), (546, 33628), (566, 33595), (596, 33544), (598, 33541), (634, 33475), (648, 33445), (657, 33415), (679, 33370), (700, 33331), (759, 33151), (775, 33103), (790, 33064), (805, 32998), (818, 32959), (837, 32938), (841, 32917), (847, 32899), (868, 32833), (936, 32683), (938, 32680), (946, 32644), (954, 32620), (959, 32611), (963, 32599), (985, 32524), (993, 32503),

Gene: Microwolf\_48 Start: 31854, Stop: 30040, Start Num: 234

Candidate Starts for Microwolf\_48:

(Start: 234 @31854 has 938 MA's), (262, 31815), (266, 31803), (353, 31650), (362, 31635), (395, 31578), (415, 31521), (419, 31512), (432, 31470), (448, 31419), (465, 31368), (541, 31275), (566, 31227), (571, 31218), (582, 31203), (603, 31164), (619, 31137), (634, 31107), (670, 31014), (679, 31002), (701, 30954), (710, 30939), (759, 30783), (790, 30696), (805, 30630), (818, 30591), (842, 30519), (856, 30480), (862, 30456), (868, 30438), (879, 30405), (888, 30378), (921, 30324), (942, 30264), (968, 30186), (985, 30129), (989, 30117), (993, 30108),

Gene: MiculUcigas\_44 Start: 31260, Stop: 29473, Start Num: 234

Candidate Starts for MiculUcigas\_44:

(Start: 234 @31260 has 938 MA's), (353, 31056), (355, 31053), (359, 31047), (379, 31017), (395, 30984), (397, 30981), (405, 30954), (415, 30927), (432, 30876), (465, 30774), (541, 30681), (566, 30633), (571, 30624), (582, 30609), (619, 30543), (655, 30462), (675, 30414), (740, 30270), (759, 30189), (778, 30138), (789, 30105), (805, 30036), (818, 29997), (837, 29976), (841, 29955), (845, 29943), (918, 29763), (921, 29757), (936, 29721), (942, 29697), (968, 29619), (985, 29562), (989, 29550),

Gene: Midas2\_38 Start: 30444, Stop: 28579, Start Num: 234

Candidate Starts for Midas2\_38:

(Start: 234 @30444 has 938 MA's), (266, 30393), (301, 30333), (336, 30270), (353, 30240), (355, 30237), (390, 30180), (395, 30168), (405, 30138), (415, 30111), (465, 29958), (541, 29862), (566, 29814), (618, 29730), (619, 29724), (635, 29691), (652, 29652), (663, 29619), (670, 29604), (679, 29592), (724, 29493), (759, 29358), (769, 29328), (775, 29310), (778, 29307), (790, 29271), (793, 29262), (798, 29235), (805, 29205), (818, 29166), (841, 29124), (847, 29106), (862, 29058), (879, 29007), (903, 28953), (908, 28944), (921, 28926), (942, 28866), (947, 28848), (978, 28755), (985, 28731), (989, 28719), (1042, 28614),

Gene: Miko\_43 Start: 31812, Stop: 30025, Start Num: 234

Candidate Starts for Miko\_43:

(Start: 234 @31812 has 938 MA's), (355, 31605), (359, 31599), (379, 31569), (395, 31536), (397, 31533), (409, 31491), (415, 31479), (465, 31326), (541, 31233), (566, 31185), (571, 31176), (582,

31161), (619, 31095), (675, 30966), (740, 30822), (759, 30741), (778, 30690), (789, 30657), (790, 30654), (805, 30588), (818, 30549), (837, 30528), (859, 30453), (862, 30441), (879, 30390), (888, 30363), (908, 30327), (921, 30309), (936, 30273), (942, 30249), (968, 30171), (985, 30114), (989, 30102), (993, 30093),

Gene: Mikota\_59 Start: 53562, Stop: 51703, Start Num: 197

Candidate Starts for Mikota\_59:

(Start: 180 @53586 has 1 MA's), (Start: 197 @53562 has 298 MA's), (Start: 225 @53538 has 5 MA's), (Start: 238 @53532 has 2 MA's), (252, 53505), (Start: 261 @53490 has 10 MA's), (269, 53469), (323, 53355), (328, 53349), (349, 53319), (385, 53259), (394, 53238), (410, 53184), (418, 53172), (425, 53154), (427, 53142), (462, 53037), (496, 52980), (511, 52944), (516, 52932), (535, 52905), (555, 52860), (588, 52803), (595, 52794), (597, 52791), (599, 52788), (754, 52431), (760, 52398), (765, 52377), (799, 52284), (802, 52275), (822, 52212), (841, 52176), (842, 52173), (847, 52158), (872, 52080), (877, 52068), (883, 52047), (902, 52008), (942, 51918), (947, 51900), (949, 51894), (954, 51879), (964, 51855), (968, 51840), (969, 51837), (972, 51825), (979, 51801), (1002, 51753), (1015, 51729),

Gene: Milcery\_39 Start: 30563, Stop: 28704, Start Num: 234

Candidate Starts for Milcery\_39:

(Start: 234 @30563 has 938 MA's), (266, 30512), (301, 30452), (336, 30389), (353, 30359), (355, 30356), (390, 30299), (395, 30287), (405, 30257), (415, 30230), (465, 30077), (541, 29981), (556, 29948), (566, 29933), (618, 29849), (619, 29843), (652, 29771), (663, 29738), (670, 29723), (679, 29711), (724, 29612), (759, 29477), (769, 29447), (775, 29429), (778, 29426), (790, 29390), (793, 29381), (796, 29360), (799, 29351), (805, 29324), (806, 29321), (837, 29264), (841, 29243), (879, 29126), (903, 29072), (908, 29063), (921, 29045), (942, 28985), (947, 28967), (978, 28874), (985, 28850), (989, 28838), (1049, 28721), (1050, 28718),

Gene: Millski\_44 Start: 31571, Stop: 29745, Start Num: 234

Candidate Starts for Millski\_44:

(Start: 234 @31571 has 938 MA's), (252, 31550), (266, 31520), (279, 31490), (379, 31328), (389, 31310), (415, 31238), (419, 31229), (458, 31109), (465, 31085), (541, 30992), (568, 30944), (582, 30923), (603, 30884), (663, 30752), (675, 30731), (700, 30686), (703, 30674), (756, 30521), (759, 30500), (798, 30377), (805, 30347), (818, 30308), (841, 30242), (842, 30239), (847, 30224), (856, 30200), (862, 30176), (942, 29969), (985, 29834), (989, 29822), (993, 29813),

Gene: MillyPhilly\_39 Start: 28927, Stop: 27062, Start Num: 283

Candidate Starts for MillyPhilly\_39:

(Start: 234 @29014 has 938 MA's), (Start: 237 @29011 has 2 MA's), (Start: 283 @28927 has 147 MA's), (Start: 291 @28918 has 5 MA's), (342, 28813), (347, 28804), (367, 28774), (369, 28771), (424, 28651), (426, 28639), (428, 28633), (466, 28528), (473, 28501), (532, 28360), (535, 28354), (537, 28351), (541, 28339), (551, 28312), (553, 28309), (562, 28294), (566, 28288), (570, 28282), (613, 28249), (701, 28060), (798, 27745), (801, 27736), (802, 27733), (805, 27715), (819, 27673), (822, 27667), (825, 27658), (832, 27643), (849, 27586), (900, 27427), (913, 27397), (917, 27388), (938, 27328), (943, 27304), (956, 27265), (967, 27232), (970, 27220), (986, 27160),

Gene: Mimi\_105 Start: 77797, Stop: 79593, Start Num: 248

Candidate Starts for Mimi\_105:

(Start: 248 @77797 has 2 MA's), (301, 77893), (418, 78109), (426, 78136), (428, 78142), (457, 78211), (468, 78247), (586, 78394), (588, 78400), (603, 78421), (615, 78436), (700, 78625), (720, 78670), (731, 78703), (735, 78721), (746, 78754), (756, 78793), (759, 78814), (761, 78820), (796, 78934), (817, 79018), (821, 79024), (825, 79036), (840, 79084), (843, 79096), (856, 79132), (865, 79165), (868, 79174), (883, 79219), (890, 79237), (931, 79321), (936, 79342), (943, 79369), (947, 79384), (960, 79417), (967, 79441), (973, 79465), (985, 79501), (999, 79528),



Gene: MinecraftSteve\_48 Start: 29943, Stop: 28153, Start Num: 234

Candidate Starts for MinecraftSteve\_48:

(Start: 234 @29943 has 938 MA's), (336, 29769), (395, 29664), (397, 29661), (405, 29634), (415, 29607), (432, 29556), (465, 29454), (541, 29361), (559, 29322), (571, 29304), (663, 29115), (700, 29049), (730, 28989), (740, 28950), (754, 28899), (756, 28890), (759, 28869), (778, 28818), (789, 28785), (798, 28746), (805, 28716), (837, 28656), (841, 28635), (856, 28593), (863, 28566), (903, 28464), (936, 28401), (938, 28398), (985, 28242), (989, 28230), (995, 28218),

Gene: MiniBoss\_58 Start: 53368, Stop: 51509, Start Num: 197

Candidate Starts for MiniBoss\_58:

(Start: 180 @53392 has 1 MA's), (Start: 197 @53368 has 298 MA's), (Start: 225 @53344 has 5 MA's), (Start: 238 @53338 has 2 MA's), (252, 53311), (Start: 261 @53296 has 10 MA's), (269, 53275), (323, 53161), (328, 53155), (349, 53125), (385, 53065), (394, 53044), (410, 52990), (418, 52978), (425, 52960), (427, 52948), (462, 52843), (496, 52786), (511, 52750), (516, 52738), (535, 52711), (539, 52702), (555, 52666), (588, 52609), (595, 52600), (597, 52597), (599, 52594), (754, 52237), (760, 52204), (765, 52183), (799, 52090), (802, 52081), (822, 52018), (841, 51982), (842, 51979), (847, 51964), (872, 51886), (877, 51874), (883, 51853), (902, 51814), (942, 51724), (947, 51706), (949, 51700), (954, 51685), (964, 51661), (968, 51646), (969, 51643), (972, 51631), (979, 51607), (1002, 51559), (1015, 51535),

Gene: MiniMommy\_47 Start: 30558, Stop: 32420, Start Num: 234

Candidate Starts for MiniMommy\_47:

(160, 30459), (Start: 172 @30477 has 1 MA's), (Start: 234 @30558 has 938 MA's), (265, 30606), (355, 30765), (359, 30771), (411, 30876), (428, 30921), (535, 31128), (603, 31257), (655, 31362), (675, 31410), (712, 31494), (759, 31668), (789, 31752), (796, 31785), (799, 31794), (814, 31845), (840, 31914), (876, 32025), (905, 32094), (908, 32100), (949, 32205), (985, 32316),

Gene: Miramae\_44 Start: 31710, Stop: 29881, Start Num: 234

Candidate Starts for Miramae\_44:

(Start: 234 @31710 has 938 MA's), (266, 31659), (279, 31629), (379, 31467), (389, 31449), (415, 31377), (419, 31368), (458, 31248), (465, 31224), (541, 31131), (568, 31083), (603, 31023), (628, 30978), (663, 30891), (675, 30870), (700, 30825), (703, 30813), (759, 30639), (793, 30543), (798, 30516), (799, 30513), (805, 30486), (818, 30447), (841, 30378), (842, 30375), (847, 30360), (856, 30336), (861, 30318), (862, 30312), (864, 30306), (942, 30105), (985, 29970), (989, 29958), (993, 29949),

Gene: Mischief19\_57 Start: 49917, Stop: 47956, Start Num: 261

Candidate Starts for Mischief19\_57:

(Start: 261 @49917 has 10 MA's), (297, 49848), (331, 49770), (348, 49734), (361, 49716), (400, 49644), (411, 49611), (451, 49494), (482, 49428), (502, 49362), (531, 49311), (538, 49299), (601, 49185), (627, 49137), (636, 49116), (678, 49026), (710, 48957), (714, 48948), (731, 48906), (740, 48876), (745, 48861), (752, 48837), (761, 48792), (780, 48732), (789, 48705), (802, 48654), (806, 48633), (808, 48621), (817, 48582), (828, 48552), (837, 48522), (841, 48501), (851, 48474), (856, 48459), (869, 48414), (872, 48405), (885, 48363), (896, 48342), (914, 48300), (924, 48273), (937, 48231), (949, 48180), (960, 48156), (964, 48144), (968, 48129), (985, 48072), (993, 48051), (1006, 48033),

Gene: Misomonster\_49 Start: 31883, Stop: 30069, Start Num: 234

Candidate Starts for Misomonster\_49:

(Start: 234 @31883 has 938 MA's), (262, 31844), (266, 31832), (353, 31679), (362, 31664), (395, 31607), (415, 31550), (419, 31541), (432, 31499), (448, 31448), (465, 31397), (518, 31343), (541, 31304), (566, 31256), (582, 31232), (603, 31193), (619, 31166), (634, 31136), (670, 31043), (679,

31031), (701, 30983), (710, 30968), (759, 30812), (778, 30761), (789, 30728), (790, 30725), (805, 30659), (818, 30620), (842, 30548), (856, 30509), (862, 30485), (868, 30467), (879, 30434), (921, 30353), (942, 30293), (970, 30206), (985, 30158), (989, 30146), (993, 30137), (995, 30134),

Gene: MissSwiss\_41 Start: 28328, Stop: 30193, Start Num: 234

Candidate Starts for MissSwiss\_41:

(Start: 234 @28328 has 938 MA's), (265, 28376), (336, 28502), (405, 28625), (436, 28715), (543, 28922), (546, 28931), (603, 29030), (615, 29045), (635, 29090), (675, 29183), (730, 29321), (759, 29441), (769, 29471), (781, 29504), (782, 29507), (790, 29528), (805, 29594), (840, 29687), (862, 29759), (905, 29867), (936, 29930), (985, 30089), (988, 30098),

Gene: MissWhite\_43 Start: 29746, Stop: 27959, Start Num: 234

Candidate Starts for MissWhite\_43:

(Start: 234 @29746 has 938 MA's), (353, 29542), (355, 29539), (359, 29533), (379, 29503), (390, 29482), (394, 29473), (395, 29470), (405, 29440), (415, 29413), (424, 29392), (432, 29362), (465, 29260), (541, 29167), (566, 29119), (571, 29110), (582, 29095), (619, 29029), (663, 28921), (675, 28900), (759, 28675), (778, 28624), (793, 28579), (805, 28522), (818, 28483), (837, 28462), (859, 28387), (864, 28369), (879, 28324), (908, 28261), (918, 28249), (936, 28207), (942, 28183), (962, 28126), (968, 28105), (985, 28048), (989, 28036), (993, 28027),

Gene: MitKao\_60 Start: 54033, Stop: 52174, Start Num: 197

Candidate Starts for MitKao\_60:

(Start: 180 @54057 has 1 MA's), (Start: 197 @54033 has 298 MA's), (Start: 225 @54009 has 5 MA's), (Start: 238 @54003 has 2 MA's), (Start: 261 @53961 has 10 MA's), (269, 53940), (323, 53826), (328, 53820), (349, 53790), (385, 53730), (394, 53709), (410, 53655), (418, 53643), (425, 53625), (427, 53613), (462, 53508), (496, 53451), (511, 53415), (516, 53403), (535, 53376), (555, 53331), (588, 53274), (595, 53265), (597, 53262), (754, 52902), (760, 52869), (765, 52848), (799, 52755), (802, 52746), (822, 52683), (841, 52647), (842, 52644), (847, 52629), (872, 52551), (877, 52539), (883, 52518), (902, 52479), (942, 52389), (947, 52371), (949, 52365), (954, 52350), (964, 52326), (968, 52311), (969, 52308), (972, 52296), (979, 52272), (1002, 52224), (1015, 52200),

Gene: Mithril\_53 Start: 54005, Stop: 52182, Start Num: 189

Candidate Starts for Mithril\_53:

(Start: 175 @54023 has 4 MA's), (Start: 189 @54005 has 26 MA's), (Start: 238 @53981 has 2 MA's), (Start: 261 @53939 has 10 MA's), (269, 53918), (316, 53831), (382, 53726), (394, 53699), (399, 53684), (425, 53618), (434, 53588), (437, 53579), (441, 53576), (442, 53573), (496, 53453), (504, 53435), (511, 53417), (516, 53405), (535, 53378), (566, 53315), (588, 53276), (595, 53267), (597, 53264), (618, 53234), (634, 53198), (724, 53012), (737, 52973), (739, 52970), (749, 52934), (754, 52910), (760, 52877), (797, 52769), (799, 52763), (802, 52754), (841, 52655), (842, 52652), (847, 52637), (872, 52559), (877, 52547), (883, 52526), (885, 52517), (902, 52487), (921, 52457), (935, 52430), (942, 52397), (949, 52373), (964, 52334), (969, 52316), (972, 52304), (979, 52280), (994, 52238), (1002, 52232), (1015, 52208),

Gene: Mkhuseli\_44 Start: 34107, Stop: 32281, Start Num: 234

Candidate Starts for Mkhuseli\_44:

(Start: 234 @34107 has 938 MA's), (359, 33894), (368, 33879), (405, 33801), (411, 33780), (415, 33774), (419, 33765), (457, 33648), (465, 33621), (541, 33528), (546, 33513), (566, 33480), (596, 33429), (598, 33426), (634, 33360), (648, 33330), (657, 33300), (679, 33255), (700, 33216), (759, 33036), (769, 33006), (775, 32988), (790, 32949), (805, 32883), (841, 32802), (842, 32799), (868, 32718), (936, 32568), (938, 32565), (946, 32529), (954, 32505), (959, 32496), (963, 32484), (985, 32409), (993, 32388),

Gene: MmasiCarm\_59 Start: 54089, Stop: 52272, Start Num: 235

Candidate Starts for MmasiCarm\_59:

(129, 54272), (Start: 235 @54089 has 43 MA's), (252, 54059), (359, 53879), (424, 53726), (426, 53714), (437, 53684), (442, 53678), (462, 53615), (464, 53609), (496, 53558), (509, 53531), (511, 53522), (539, 53474), (597, 53369), (647, 53273), (664, 53222), (737, 53078), (749, 53039), (755, 53009), (760, 52982), (763, 52970), (797, 52874), (799, 52868), (802, 52859), (804, 52847), (834, 52775), (841, 52745), (847, 52727), (851, 52718), (872, 52649), (877, 52637), (883, 52616), (921, 52547), (931, 52532), (938, 52508), (942, 52487), (947, 52469), (949, 52463), (962, 52430), (964, 52424), (969, 52406), (972, 52394), (975, 52382), (979, 52370), (994, 52328), (1015, 52298),

Gene: Molivia\_56 Start: 35308, Stop: 33140, Start Num: 202

Candidate Starts for Molivia\_56:

(Start: 202 @35308 has 13 MA's), (219, 35281), (239, 35254), (279, 35170), (332, 35062), (341, 35044), (342, 35041), (356, 35017), (377, 34981), (381, 34975), (393, 34951), (397, 34942), (414, 34885), (415, 34876), (420, 34864), (426, 34846), (427, 34843), (474, 34693), (476, 34690), (484, 34651), (565, 34456), (572, 34444), (601, 34393), (604, 34387), (616, 34372), (621, 34357), (633, 34330), (699, 34174), (706, 34150), (755, 33988), (766, 33940), (780, 33907), (789, 33883), (799, 33841), (815, 33766), (838, 33706), (861, 33628), (862, 33622), (873, 33589), (898, 33526), (899, 33520), (916, 33481), (932, 33433), (941, 33403), (961, 33349), (964, 33340), (976, 33298), (982, 33280), (985, 33268), (995, 33244), (1006, 33229), (1022, 33187),

Gene: Molly\_45 Start: 33982, Stop: 32153, Start Num: 234

Candidate Starts for Molly\_45:

(Start: 234 @33982 has 938 MA's), (359, 33769), (368, 33754), (395, 33706), (405, 33676), (411, 33655), (415, 33649), (419, 33640), (457, 33523), (465, 33496), (541, 33403), (546, 33388), (558, 33367), (596, 33304), (598, 33301), (634, 33235), (657, 33175), (679, 33130), (700, 33091), (759, 32911), (775, 32863), (793, 32815), (802, 32776), (805, 32758), (818, 32719), (837, 32698), (841, 32677), (846, 32662), (885, 32539), (960, 32368), (967, 32344), (982, 32296), (985, 32284), (993, 32263), (997, 32257), (1025, 32209), (1030, 32194),

Gene: MonChoix\_37 Start: 28950, Stop: 27082, Start Num: 283

Candidate Starts for MonChoix\_37:

(Start: 180 @29115 has 1 MA's), (211, 29070), (Start: 244 @29025 has 1 MA's), (Start: 283 @28950 has 147 MA's), (Start: 291 @28941 has 5 MA's), (420, 28683), (423, 28677), (426, 28662), (428, 28656), (473, 28524), (498, 28470), (532, 28383), (537, 28374), (541, 28362), (551, 28335), (553, 28332), (562, 28317), (566, 28311), (574, 28299), (741, 27981), (801, 27759), (802, 27756), (805, 27738), (819, 27696), (849, 27606), (854, 27579), (900, 27447), (913, 27417), (917, 27408), (938, 27348), (943, 27324), (945, 27318), (956, 27285), (967, 27252), (970, 27240),

Gene: Monet\_48 Start: 36234, Stop: 34408, Start Num: 234

Candidate Starts for Monet\_48:

(Start: 234 @36234 has 938 MA's), (359, 36021), (368, 36006), (405, 35928), (411, 35907), (415, 35901), (419, 35892), (457, 35775), (465, 35748), (541, 35655), (546, 35640), (596, 35556), (598, 35553), (634, 35487), (648, 35457), (657, 35427), (679, 35382), (700, 35343), (759, 35163), (775, 35115), (790, 35076), (805, 35010), (818, 34971), (837, 34950), (841, 34929), (847, 34911), (868, 34845), (936, 34695), (938, 34692), (946, 34656), (954, 34632), (963, 34611), (970, 34584), (985, 34536), (993, 34515),

Gene: MoneyMay\_48 Start: 31852, Stop: 30038, Start Num: 234

Candidate Starts for MoneyMay\_48:

(Start: 234 @31852 has 938 MA's), (262, 31813), (266, 31801), (353, 31648), (362, 31633), (395, 31576), (415, 31519), (419, 31510), (432, 31468), (448, 31417), (465, 31366), (541, 31273), (566, 31225), (571, 31216), (582, 31201), (603, 31162), (619, 31135), (634, 31105), (670, 31012), (701, 30952), (710, 30937), (759, 30781), (790, 30694), (805, 30628), (818, 30589), (842, 30517), (856,

30478), (862, 30454), (868, 30436), (879, 30403), (888, 30376), (921, 30322), (942, 30262), (968, 30184), (985, 30127), (989, 30115), (993, 30106),

Gene: Moose\_44 Start: 34479, Stop: 32653, Start Num: 234

Candidate Starts for Moose\_44:

(Start: 234 @34479 has 938 MA's), (359, 34266), (368, 34251), (405, 34173), (411, 34152), (415, 34146), (419, 34137), (457, 34020), (465, 33993), (541, 33900), (546, 33885), (558, 33864), (566, 33852), (596, 33801), (598, 33798), (634, 33732), (648, 33702), (657, 33672), (679, 33627), (700, 33588), (759, 33408), (775, 33360), (790, 33321), (805, 33255), (818, 33216), (837, 33195), (841, 33174), (847, 33156), (868, 33090), (936, 32940), (938, 32937), (946, 32901), (954, 32877), (959, 32868), (963, 32856), (985, 32781), (993, 32760),

Gene: Morgushi\_60 Start: 54022, Stop: 52163, Start Num: 197

Candidate Starts for Morgushi\_60:

(Start: 180 @54046 has 1 MA's), (Start: 197 @54022 has 298 MA's), (Start: 225 @53998 has 5 MA's), (Start: 238 @53992 has 2 MA's), (Start: 261 @53950 has 10 MA's), (269, 53929), (323, 53815), (328, 53809), (349, 53779), (385, 53719), (394, 53698), (410, 53644), (418, 53632), (425, 53614), (427, 53602), (462, 53497), (496, 53440), (511, 53404), (516, 53392), (535, 53365), (555, 53320), (588, 53263), (595, 53254), (597, 53251), (754, 52891), (760, 52858), (765, 52837), (799, 52744), (802, 52735), (822, 52672), (841, 52636), (842, 52633), (847, 52618), (872, 52540), (877, 52528), (883, 52507), (902, 52468), (942, 52378), (947, 52360), (949, 52354), (954, 52339), (964, 52315), (968, 52300), (969, 52297), (972, 52285), (979, 52261), (1002, 52213), (1015, 52189),

Gene: Morpher26\_44 Start: 31543, Stop: 29714, Start Num: 234

Candidate Starts for Morpher26\_44:

(Start: 234 @31543 has 938 MA's), (266, 31492), (279, 31462), (379, 31300), (389, 31282), (395, 31267), (415, 31210), (419, 31201), (458, 31081), (465, 31057), (513, 31015), (541, 30964), (568, 30916), (582, 30895), (603, 30856), (628, 30811), (630, 30805), (663, 30724), (675, 30703), (700, 30658), (756, 30493), (759, 30472), (805, 30319), (818, 30280), (842, 30208), (847, 30193), (856, 30169), (861, 30151), (862, 30145), (864, 30139), (942, 29938), (985, 29803), (989, 29791), (993, 29782),

Gene: Morrigan\_40 Start: 28385, Stop: 26493, Start Num: 283

Candidate Starts for Morrigan\_40:

(Start: 283 @28385 has 147 MA's), (Start: 291 @28376 has 5 MA's), (315, 28319), (330, 28289), (347, 28265), (357, 28250), (367, 28235), (371, 28229), (382, 28211), (398, 28178), (426, 28100), (428, 28094), (503, 27893), (537, 27809), (541, 27797), (553, 27767), (562, 27752), (566, 27746), (570, 27740), (574, 27734), (590, 27731), (730, 27464), (744, 27413), (759, 27347), (805, 27146), (819, 27104), (832, 27074), (839, 27053), (849, 27017), (867, 26945), (917, 26819), (938, 26759), (943, 26735), (946, 26723), (986, 26591),

Gene: Morrissey\_47 Start: 37547, Stop: 35145, Start Num: 3

Candidate Starts for Morrissey\_47:

(Start: 3 @37547 has 5 MA's), (22, 37442), (26, 37418), (41, 37364), (51, 37337), (53, 37334), (62, 37292), (63, 37289), (80, 37244), (89, 37223), (102, 37199), (112, 37160), (120, 37145), (126, 37121), (131, 37112), (133, 37106), (Start: 157 @37043 has 1 MA's), (164, 37031), (Start: 205 @36977 has 2 MA's), (273, 36869), (301, 36842), (308, 36821), (393, 36677), (409, 36623), (410, 36620), (412, 36614), (426, 36584), (432, 36569), (453, 36512), (460, 36491), (462, 36485), (465, 36476), (511, 36395), (543, 36332), (561, 36299), (581, 36272), (597, 36242), (618, 36212), (664, 36092), (669, 36083), (731, 35966), (737, 35948), (746, 35918), (749, 35909), (754, 35885), (760, 35852), (793, 35771), (797, 35747), (799, 35741), (822, 35669), (839, 35642), (847, 35615), (856, 35591), (872, 35537), (877, 35525), (928, 35414), (930, 35411), (968, 35285), (969, 35282), (975, 35258), (979, 35246), (1002, 35195), (1015, 35171), (1023, 35150),

Gene: Morrow\_46 Start: 31576, Stop: 29750, Start Num: 234

Candidate Starts for Morrow\_46:

(Start: 234 @31576 has 938 MA's), (252, 31555), (266, 31525), (279, 31495), (379, 31333), (389, 31315), (415, 31243), (419, 31234), (458, 31114), (465, 31090), (541, 30997), (568, 30949), (582, 30928), (603, 30889), (663, 30757), (675, 30736), (700, 30691), (703, 30679), (756, 30526), (759, 30505), (798, 30382), (805, 30352), (818, 30313), (841, 30247), (842, 30244), (847, 30229), (856, 30205), (862, 30181), (942, 29974), (985, 29839), (989, 29827), (993, 29818),

Gene: Mortcellus\_58 Start: 54744, Stop: 52927, Start Num: 235

Candidate Starts for Mortcellus\_58:

(129, 54927), (Start: 235 @54744 has 43 MA's), (252, 54714), (359, 54534), (424, 54381), (426, 54369), (437, 54339), (442, 54333), (462, 54270), (464, 54264), (496, 54213), (509, 54186), (511, 54177), (539, 54129), (597, 54024), (647, 53928), (664, 53877), (737, 53733), (749, 53694), (755, 53664), (760, 53637), (763, 53625), (797, 53529), (799, 53523), (802, 53514), (804, 53502), (834, 53430), (841, 53400), (847, 53382), (851, 53373), (872, 53304), (877, 53292), (883, 53271), (921, 53202), (931, 53187), (938, 53163), (942, 53142), (949, 53118), (964, 53079), (969, 53061), (972, 53049), (975, 53037), (979, 53025), (994, 52983), (1015, 52953),

Gene: Morty\_61 Start: 54544, Stop: 52685, Start Num: 197

Candidate Starts for Morty\_61:

(Start: 180 @54568 has 1 MA's), (Start: 197 @54544 has 298 MA's), (Start: 225 @54520 has 5 MA's), (Start: 238 @54514 has 2 MA's), (Start: 261 @54472 has 10 MA's), (269, 54451), (323, 54337), (328, 54331), (349, 54301), (385, 54241), (394, 54220), (410, 54166), (418, 54154), (425, 54136), (427, 54124), (462, 54019), (496, 53962), (511, 53926), (516, 53914), (534, 53890), (539, 53878), (545, 53860), (555, 53842), (566, 53824), (588, 53785), (595, 53776), (597, 53773), (599, 53770), (754, 53413), (760, 53380), (765, 53359), (799, 53266), (802, 53257), (822, 53194), (841, 53158), (842, 53155), (847, 53140), (872, 53062), (877, 53050), (883, 53029), (902, 52990), (942, 52900), (947, 52882), (949, 52876), (954, 52861), (964, 52837), (968, 52822), (969, 52819), (972, 52807), (979, 52783), (1002, 52735), (1015, 52711),

Gene: Morty007\_58 Start: 54530, Stop: 52713, Start Num: 235

Candidate Starts for Morty007\_58:

(61, 54914), (129, 54713), (Start: 235 @54530 has 43 MA's), (252, 54500), (359, 54320), (424, 54167), (426, 54155), (437, 54125), (442, 54119), (462, 54056), (464, 54050), (496, 53999), (511, 53963), (539, 53915), (597, 53810), (647, 53714), (664, 53663), (737, 53519), (749, 53480), (755, 53450), (760, 53423), (763, 53411), (797, 53315), (799, 53309), (802, 53300), (804, 53288), (834, 53216), (841, 53186), (847, 53168), (851, 53159), (872, 53090), (877, 53078), (883, 53057), (921, 52988), (931, 52973), (938, 52949), (949, 52904), (964, 52865), (969, 52847), (972, 52835), (975, 52823), (979, 52811), (994, 52769), (1015, 52739),

Gene: Mosaic\_59 Start: 54027, Stop: 52168, Start Num: 197

Candidate Starts for Mosaic\_59:

(Start: 180 @54051 has 1 MA's), (Start: 197 @54027 has 298 MA's), (Start: 225 @54003 has 5 MA's), (Start: 238 @53997 has 2 MA's), (Start: 261 @53955 has 10 MA's), (269, 53934), (323, 53820), (328, 53814), (349, 53784), (385, 53724), (394, 53703), (410, 53649), (418, 53637), (425, 53619), (427, 53607), (462, 53502), (496, 53445), (511, 53409), (516, 53397), (535, 53370), (555, 53325), (588, 53268), (595, 53259), (597, 53256), (754, 52896), (760, 52863), (765, 52842), (799, 52749), (802, 52740), (822, 52677), (841, 52641), (842, 52638), (847, 52623), (872, 52545), (877, 52533), (883, 52512), (902, 52473), (942, 52383), (947, 52365), (949, 52359), (954, 52344), (964, 52320), (968, 52305), (969, 52302), (972, 52290), (979, 52266), (1002, 52218), (1015, 52194),

Gene: Moss\_38 Start: 27679, Stop: 29661, Start Num: 234

Candidate Starts for Moss\_38:

(Start: 234 @27679 has 938 MA's), (336, 27853), (353, 27883), (382, 27916), (397, 27949), (424, 28024), (431, 28051), (518, 28252), (603, 28426), (675, 28582), (730, 28720), (753, 28807), (759, 28840), (769, 28870), (790, 28927), (805, 28993), (840, 29086), (942, 29353), (949, 29377), (985, 29488),

Gene: MossRose\_53 Start: 47650, Stop: 45833, Start Num: 230

Candidate Starts for MossRose\_53:

(Start: 230 @47650 has 13 MA's), (Start: 238 @47641 has 2 MA's), (252, 47614), (259, 47602), (269, 47578), (273, 47569), (355, 47431), (375, 47395), (406, 47320), (434, 47245), (462, 47167), (496, 47110), (511, 47074), (516, 47062), (534, 47038), (583, 46945), (597, 46921), (610, 46903), (737, 46630), (749, 46591), (755, 46561), (760, 46534), (797, 46426), (799, 46420), (802, 46411), (839, 46321), (841, 46312), (842, 46309), (843, 46306), (847, 46294), (872, 46216), (877, 46204), (878, 46198), (883, 46183), (907, 46135), (935, 46087), (942, 46054), (949, 46030), (964, 45991), (968, 45976), (979, 45931), (1015, 45859),

Gene: MrGordo\_44 Start: 34016, Stop: 32190, Start Num: 234

Candidate Starts for MrGordo\_44:

(Start: 234 @34016 has 938 MA's), (359, 33803), (368, 33788), (395, 33740), (405, 33710), (411, 33689), (415, 33683), (419, 33674), (457, 33557), (465, 33530), (541, 33437), (546, 33422), (566, 33389), (596, 33338), (598, 33335), (634, 33269), (648, 33239), (657, 33209), (679, 33164), (700, 33125), (759, 32945), (775, 32897), (790, 32858), (805, 32792), (818, 32753), (837, 32732), (841, 32711), (847, 32693), (868, 32627), (936, 32477), (938, 32474), (946, 32438), (954, 32414), (959, 32405), (963, 32393), (970, 32366), (985, 32318), (993, 32297),

Gene: MrPhizzler\_61 Start: 54490, Stop: 52631, Start Num: 197

Candidate Starts for MrPhizzler\_61:

(Start: 180 @54514 has 1 MA's), (Start: 197 @54490 has 298 MA's), (Start: 225 @54466 has 5 MA's), (Start: 238 @54460 has 2 MA's), (Start: 261 @54418 has 10 MA's), (269, 54397), (323, 54283), (328, 54277), (349, 54247), (385, 54187), (394, 54166), (410, 54112), (418, 54100), (425, 54082), (427, 54070), (462, 53965), (496, 53908), (511, 53872), (516, 53860), (534, 53836), (539, 53824), (545, 53806), (555, 53788), (566, 53770), (588, 53731), (595, 53722), (597, 53719), (599, 53716), (724, 53461), (754, 53359), (760, 53326), (765, 53305), (799, 53212), (802, 53203), (822, 53140), (841, 53104), (842, 53101), (847, 53086), (872, 53008), (877, 52996), (883, 52975), (902, 52936), (942, 52846), (947, 52828), (949, 52822), (954, 52807), (964, 52783), (968, 52768), (969, 52765), (972, 52753), (979, 52729), (985, 52708), (1002, 52681), (1015, 52657),

Gene: MrWorldwide\_39 Start: 28937, Stop: 27072, Start Num: 283

Candidate Starts for MrWorldwide\_39:

(Start: 234 @29024 has 938 MA's), (Start: 237 @29021 has 2 MA's), (Start: 283 @28937 has 147 MA's), (Start: 291 @28928 has 5 MA's), (342, 28823), (347, 28814), (367, 28784), (369, 28781), (424, 28661), (426, 28649), (428, 28643), (466, 28538), (473, 28511), (532, 28370), (535, 28364), (537, 28361), (541, 28349), (551, 28322), (553, 28319), (562, 28304), (566, 28298), (570, 28292), (613, 28259), (671, 28130), (701, 28070), (798, 27755), (801, 27746), (802, 27743), (805, 27725), (819, 27683), (822, 27677), (825, 27668), (832, 27653), (849, 27596), (900, 27437), (913, 27407), (917, 27398), (938, 27338), (943, 27314), (956, 27275), (967, 27242), (970, 27230), (986, 27170),

Gene: Mryolo\_42 Start: 33954, Stop: 32128, Start Num: 234

Candidate Starts for Mryolo\_42:

(Start: 234 @33954 has 938 MA's), (359, 33741), (395, 33678), (405, 33648), (411, 33627), (415, 33621), (419, 33612), (457, 33495), (465, 33468), (541, 33375), (546, 33360), (566, 33327), (596, 33276), (598, 33273), (634, 33207), (648, 33177), (657, 33147), (679, 33102), (700, 33063), (759, 32883), (775, 32835), (790, 32796), (805, 32730), (818, 32691), (837, 32670), (841, 32649), (847,

32631), (868, 32565), (936, 32415), (938, 32412), (946, 32376), (954, 32352), (959, 32343), (963, 32331), (970, 32304), (985, 32256), (993, 32235),

Gene: MsUbiquitous\_43 Start: 29585, Stop: 31459, Start Num: 234

Candidate Starts for MsUbiquitous\_43:

(Start: 231 @29582 has 7 MA's), (Start: 234 @29585 has 938 MA's), (273, 29654), (284, 29675), (395, 29855), (419, 29921), (432, 29963), (603, 30257), (663, 30392), (709, 30491), (747, 30614), (759, 30674), (761, 30680), (778, 30725), (786, 30755), (796, 30791), (805, 30827), (840, 30920), (869, 31013), (901, 31091), (936, 31163), (946, 31202), (962, 31244), (967, 31262), (985, 31322), (993, 31343),

Gene: MuchMore\_51 Start: 31845, Stop: 30031, Start Num: 234

Candidate Starts for MuchMore\_51:

(Start: 234 @31845 has 938 MA's), (262, 31806), (266, 31794), (353, 31641), (362, 31626), (395, 31569), (415, 31512), (419, 31503), (432, 31461), (448, 31410), (465, 31359), (541, 31266), (566, 31218), (571, 31209), (582, 31194), (603, 31155), (619, 31128), (634, 31098), (670, 31005), (679, 30993), (701, 30945), (710, 30930), (759, 30774), (790, 30687), (805, 30621), (818, 30582), (842, 30510), (856, 30471), (862, 30447), (868, 30429), (879, 30396), (888, 30369), (921, 30315), (942, 30255), (968, 30177), (985, 30120), (989, 30108), (993, 30099),

Gene: Muddy\_44 Start: 34756, Stop: 32411, Start Num: 65

Candidate Starts for Muddy\_44:

(Start: 44 @34822 has 1 MA's), (49, 34813), (Start: 60 @34768 has 1 MA's), (Start: 65 @34756 has 1 MA's), (Start: 79 @34717 has 1 MA's), (136, 34558), (143, 34528), (170, 34498), (275, 34330), (342, 34210), (398, 34108), (426, 34027), (448, 33967), (472, 33901), (524, 33769), (626, 33649), (634, 33640), (638, 33628), (682, 33559), (759, 33346), (772, 33292), (792, 33211), (798, 33178), (817, 33112), (819, 33106), (822, 33100), (824, 33094), (834, 33070), (842, 33037), (847, 33022), (849, 33013), (900, 32854), (913, 32824), (942, 32734), (978, 32614), (986, 32587), (1018, 32518),

Gene: Mudpuppy\_38 Start: 29455, Stop: 31320, Start Num: 234

Candidate Starts for Mudpuppy\_38:

(Start: 234 @29455 has 938 MA's), (265, 29503), (405, 29752), (436, 29842), (543, 30049), (546, 30058), (598, 30148), (603, 30157), (615, 30172), (635, 30217), (655, 30262), (675, 30310), (703, 30367), (730, 30448), (753, 30535), (759, 30568), (769, 30598), (790, 30655), (805, 30721), (814, 30745), (840, 30814), (862, 30886), (865, 30895), (905, 30994), (936, 31057), (942, 31081), (978, 31192), (985, 31216), (988, 31225),

Gene: Mudslide\_53 Start: 54263, Stop: 52440, Start Num: 189

Candidate Starts for Mudslide\_53:

(Start: 175 @54281 has 4 MA's), (Start: 189 @54263 has 26 MA's), (Start: 238 @54239 has 2 MA's), (252, 54212), (Start: 261 @54197 has 10 MA's), (269, 54176), (316, 54089), (382, 53984), (399, 53942), (425, 53876), (434, 53846), (437, 53837), (441, 53834), (442, 53831), (450, 53804), (496, 53711), (504, 53693), (511, 53675), (516, 53663), (528, 53648), (535, 53636), (566, 53573), (588, 53534), (595, 53525), (597, 53522), (618, 53492), (634, 53456), (737, 53231), (739, 53228), (749, 53192), (754, 53168), (760, 53135), (797, 53027), (799, 53021), (802, 53012), (841, 52913), (842, 52910), (847, 52895), (872, 52817), (877, 52805), (883, 52784), (885, 52775), (902, 52745), (935, 52688), (942, 52655), (947, 52637), (949, 52631), (964, 52592), (969, 52574), (972, 52562), (979, 52538), (994, 52496), (1002, 52490), (1015, 52466),

Gene: Mulan\_60 Start: 54261, Stop: 52402, Start Num: 197

Candidate Starts for Mulan\_60:

(Start: 180 @54285 has 1 MA's), (Start: 197 @54261 has 298 MA's), (Start: 225 @54237 has 5 MA's), (Start: 238 @54231 has 2 MA's), (Start: 261 @54189 has 10 MA's), (269, 54168), (323, 54054), (328,

54048), (349, 54018), (385, 53958), (394, 53937), (410, 53883), (418, 53871), (425, 53853), (427, 53841), (462, 53736), (496, 53679), (511, 53643), (516, 53631), (535, 53604), (545, 53577), (555, 53559), (566, 53541), (588, 53502), (595, 53493), (597, 53490), (724, 53232), (754, 53130), (760, 53097), (765, 53076), (799, 52983), (802, 52974), (822, 52911), (841, 52875), (842, 52872), (847, 52857), (872, 52779), (877, 52767), (883, 52746), (902, 52707), (942, 52617), (947, 52599), (949, 52593), (954, 52578), (964, 52554), (968, 52539), (969, 52536), (972, 52524), (979, 52500), (1002, 52452), (1015, 52428),

Gene: Mulciber\_44 Start: 30327, Stop: 28540, Start Num: 234

Candidate Starts for Mulciber\_44:

(Start: 234 @30327 has 938 MA's), (353, 30123), (395, 30051), (405, 30021), (415, 29994), (543, 29742), (571, 29691), (619, 29610), (639, 29565), (675, 29481), (703, 29424), (728, 29382), (740, 29337), (759, 29256), (778, 29205), (790, 29169), (805, 29103), (837, 29043), (839, 29031), (871, 28929), (879, 28905), (884, 28887), (921, 28824), (935, 28797), (936, 28788), (942, 28764), (985, 28629), (989, 28617), (993, 28608),

Gene: Mule\_42 Start: 32266, Stop: 30440, Start Num: 234

Candidate Starts for Mule\_42:

(Start: 234 @32266 has 938 MA's), (359, 32053), (368, 32038), (405, 31960), (411, 31939), (415, 31933), (419, 31924), (445, 31840), (457, 31807), (465, 31780), (541, 31687), (546, 31672), (558, 31651), (566, 31639), (596, 31588), (598, 31585), (634, 31519), (648, 31489), (657, 31459), (679, 31414), (700, 31375), (759, 31195), (775, 31147), (790, 31108), (805, 31042), (841, 30961), (842, 30958), (868, 30877), (936, 30727), (938, 30724), (946, 30688), (959, 30655), (963, 30643), (977, 30595), (985, 30568), (993, 30547),

Gene: Munch\_45 Start: 30776, Stop: 28989, Start Num: 234

Candidate Starts for Munch\_45:

(Start: 234 @30776 has 938 MA's), (353, 30572), (395, 30500), (405, 30470), (415, 30443), (543, 30191), (571, 30140), (619, 30059), (639, 30014), (703, 29873), (728, 29831), (740, 29786), (759, 29705), (778, 29654), (790, 29618), (805, 29552), (837, 29492), (839, 29480), (871, 29378), (879, 29354), (884, 29336), (921, 29273), (935, 29246), (936, 29237), (942, 29213), (985, 29078), (989, 29066), (993, 29057),

Gene: Mundrea\_44 Start: 31530, Stop: 29701, Start Num: 234

Candidate Starts for Mundrea\_44:

(Start: 234 @31530 has 938 MA's), (266, 31479), (279, 31449), (379, 31287), (389, 31269), (395, 31254), (415, 31197), (419, 31188), (458, 31068), (465, 31044), (541, 30951), (568, 30903), (582, 30882), (603, 30843), (628, 30798), (663, 30711), (667, 30702), (675, 30690), (700, 30645), (703, 30633), (759, 30459), (793, 30363), (798, 30336), (799, 30333), (805, 30306), (816, 30276), (818, 30267), (841, 30198), (842, 30195), (847, 30180), (856, 30156), (862, 30132), (864, 30126), (942, 29925), (985, 29790), (989, 29778), (993, 29769),

Gene: MunkgeeRoachy\_41 Start: 31903, Stop: 29510, Start Num: 36

Candidate Starts for MunkgeeRoachy\_41:

(Start: 36 @31903 has 16 MA's), (Start: 60 @31849 has 1 MA's), (76, 31807), (86, 31783), (127, 31657), (136, 31633), (170, 31588), (206, 31537), (216, 31522), (Start: 230 @31501 has 13 MA's), (262, 31453), (279, 31411), (317, 31336), (322, 31324), (366, 31255), (385, 31222), (391, 31207), (409, 31153), (410, 31150), (420, 31132), (426, 31111), (431, 31096), (448, 31051), (495, 30928), (497, 30922), (524, 30853), (541, 30811), (634, 30724), (643, 30700), (655, 30694), (662, 30670), (666, 30661), (674, 30646), (682, 30634), (707, 30592), (711, 30589), (713, 30586), (746, 30490), (758, 30439), (759, 30427), (773, 30370), (774, 30364), (784, 30328), (796, 30271), (805, 30235), (817, 30199), (819, 30193), (822, 30187), (824, 30181), (842, 30124), (849, 30100), (859, 30055), (910, 29920), (985, 29677), (986, 29674), (1008, 29629), (1013, 29620), (1037, 29560),



Gene: Murdoc\_59 Start: 54023, Stop: 52164, Start Num: 197

Candidate Starts for Murdoc\_59:

(Start: 180 @54047 has 1 MA's), (Start: 197 @54023 has 298 MA's), (Start: 225 @53999 has 5 MA's), (Start: 238 @53993 has 2 MA's), (Start: 261 @53951 has 10 MA's), (269, 53930), (323, 53816), (328, 53810), (349, 53780), (385, 53720), (394, 53699), (410, 53645), (418, 53633), (425, 53615), (427, 53603), (462, 53498), (496, 53441), (511, 53405), (516, 53393), (535, 53366), (545, 53339), (555, 53321), (566, 53303), (588, 53264), (595, 53255), (597, 53252), (599, 53249), (754, 52892), (760, 52859), (765, 52838), (799, 52745), (802, 52736), (822, 52673), (841, 52637), (842, 52634), (847, 52619), (872, 52541), (877, 52529), (883, 52508), (902, 52469), (942, 52379), (947, 52361), (949, 52355), (954, 52340), (964, 52316), (968, 52301), (969, 52298), (972, 52286), (979, 52262), (1002, 52214), (1015, 52190),

Gene: Museum\_45 Start: 34023, Stop: 32197, Start Num: 234

Candidate Starts for Museum\_45:

(Start: 234 @34023 has 938 MA's), (359, 33810), (368, 33795), (395, 33747), (405, 33717), (411, 33696), (415, 33690), (419, 33681), (457, 33564), (465, 33537), (541, 33444), (546, 33429), (566, 33396), (596, 33345), (598, 33342), (634, 33276), (648, 33246), (657, 33216), (679, 33171), (700, 33132), (759, 32952), (775, 32904), (790, 32865), (805, 32799), (818, 32760), (837, 32739), (841, 32718), (847, 32700), (868, 32634), (936, 32484), (938, 32481), (946, 32445), (954, 32421), (959, 32412), (963, 32400), (985, 32325), (993, 32304),

Gene: Mutante\_60 Start: 54033, Stop: 52174, Start Num: 197

Candidate Starts for Mutante\_60:

(Start: 180 @54057 has 1 MA's), (Start: 197 @54033 has 298 MA's), (Start: 225 @54009 has 5 MA's), (Start: 238 @54003 has 2 MA's), (Start: 261 @53961 has 10 MA's), (269, 53940), (323, 53826), (328, 53820), (349, 53790), (385, 53730), (394, 53709), (410, 53655), (418, 53643), (425, 53625), (427, 53613), (462, 53508), (496, 53451), (511, 53415), (516, 53403), (535, 53376), (545, 53349), (555, 53331), (588, 53274), (595, 53265), (597, 53262), (754, 52902), (760, 52869), (765, 52848), (799, 52755), (802, 52746), (822, 52683), (842, 52644), (847, 52629), (872, 52551), (877, 52539), (883, 52518), (902, 52479), (938, 52410), (942, 52389), (947, 52371), (949, 52365), (954, 52350), (964, 52326), (968, 52311), (969, 52308), (972, 52296), (979, 52272), (1002, 52224), (1015, 52200),

Gene: MyraDee\_40 Start: 28864, Stop: 27056, Start Num: 234

Candidate Starts for MyraDee\_40:

(Start: 234 @28864 has 938 MA's), (262, 28825), (266, 28813), (334, 28693), (379, 28621), (415, 28531), (419, 28522), (432, 28480), (438, 28462), (448, 28429), (449, 28426), (458, 28402), (465, 28378), (537, 28297), (541, 28285), (552, 28258), (563, 28240), (603, 28174), (628, 28129), (644, 28093), (657, 28060), (667, 28033), (679, 28015), (711, 27949), (729, 27919), (759, 27796), (775, 27748), (805, 27643), (818, 27604), (842, 27535), (856, 27496), (868, 27454), (878, 27424), (947, 27262), (985, 27145), (989, 27133), (993, 27124),

Gene: Mysterious\_58 Start: 54574, Stop: 52745, Start Num: 189

Candidate Starts for Mysterious\_58:

(Start: 189 @54574 has 26 MA's), (Start: 222 @54553 has 1 MA's), (Start: 238 @54544 has 2 MA's), (252, 54517), (Start: 261 @54502 has 10 MA's), (394, 54277), (409, 54226), (424, 54199), (427, 54184), (434, 54166), (441, 54154), (452, 54118), (462, 54088), (511, 53995), (516, 53983), (518, 53980), (534, 53959), (535, 53956), (539, 53947), (545, 53929), (583, 53866), (597, 53842), (650, 53737), (703, 53614), (733, 53563), (737, 53551), (739, 53548), (743, 53530), (749, 53512), (755, 53482), (760, 53455), (780, 53404), (799, 53341), (802, 53332), (834, 53248), (842, 53215), (847, 53200), (866, 53140), (872, 53122), (877, 53110), (883, 53089), (885, 53080), (887, 53077), (942, 52960), (947, 52942), (949, 52936), (964, 52897), (967, 52885), (968, 52882), (972, 52867), (975, 52855), (979, 52843), (994, 52801), (1004, 52792), (1015, 52771), (1023, 52750),

Gene: Mysterium\_37 Start: 27509, Stop: 29491, Start Num: 234

Candidate Starts for Mysterium\_37:

(Start: 234 @27509 has 938 MA's), (336, 27683), (353, 27713), (382, 27746), (397, 27779), (424, 27854), (431, 27881), (464, 27983), (518, 28082), (603, 28256), (619, 28283), (675, 28412), (730, 28550), (753, 28637), (759, 28670), (769, 28700), (790, 28757), (805, 28823), (840, 28916), (867, 29003), (942, 29183), (949, 29207), (985, 29318), (1040, 29426),

Gene: Myxus\_45 Start: 31483, Stop: 29690, Start Num: 234

Candidate Starts for Myxus\_45:

(Start: 234 @31483 has 938 MA's), (246, 31474), (266, 31432), (334, 31312), (336, 31309), (364, 31261), (397, 31201), (406, 31171), (409, 31159), (415, 31147), (465, 30994), (541, 30901), (619, 30763), (634, 30733), (703, 30574), (710, 30562), (726, 30535), (756, 30427), (759, 30406), (802, 30271), (805, 30253), (841, 30172), (856, 30130), (879, 30055), (918, 29980), (936, 29938), (968, 29836), (985, 29779), (989, 29767), (993, 29758),

Gene: NEHalo\_43 Start: 34014, Stop: 32185, Start Num: 234

Candidate Starts for NEHalo\_43:

(Start: 234 @34014 has 938 MA's), (359, 33801), (395, 33738), (405, 33708), (411, 33687), (415, 33681), (419, 33672), (457, 33555), (465, 33528), (541, 33435), (546, 33420), (566, 33387), (596, 33336), (598, 33333), (628, 33279), (634, 33267), (648, 33237), (657, 33207), (679, 33162), (700, 33123), (759, 32943), (775, 32895), (793, 32847), (802, 32808), (805, 32790), (818, 32751), (837, 32730), (841, 32709), (846, 32694), (885, 32571), (903, 32538), (960, 32400), (967, 32376), (982, 32328), (985, 32316), (993, 32295), (997, 32289), (1025, 32241), (1030, 32226),

Gene: NHagos\_52 Start: 46533, Stop: 44725, Start Num: 230

Candidate Starts for NHagos\_52:

(Start: 230 @46533 has 13 MA's), (Start: 238 @46524 has 2 MA's), (259, 46485), (Start: 261 @46482 has 10 MA's), (269, 46461), (273, 46452), (292, 46416), (323, 46356), (355, 46314), (379, 46272), (424, 46164), (427, 46149), (434, 46131), (442, 46116), (462, 46053), (496, 45996), (511, 45960), (516, 45948), (583, 45831), (588, 45819), (597, 45807), (610, 45789), (615, 45783), (737, 45516), (739, 45513), (755, 45447), (760, 45420), (783, 45363), (797, 45312), (799, 45306), (802, 45297), (822, 45234), (842, 45195), (847, 45180), (872, 45102), (877, 45090), (883, 45069), (885, 45060), (902, 45030), (935, 44973), (964, 44877), (969, 44859), (979, 44823), (1002, 44775), (1015, 44751),

Gene: NaSiaTalie\_44 Start: 31357, Stop: 29570, Start Num: 234

Candidate Starts for NaSiaTalie\_44:

(Start: 234 @31357 has 938 MA's), (353, 31153), (355, 31150), (359, 31144), (379, 31114), (395, 31081), (397, 31078), (405, 31051), (415, 31024), (432, 30973), (465, 30871), (541, 30778), (566, 30730), (571, 30721), (582, 30706), (619, 30640), (655, 30559), (675, 30511), (740, 30367), (759, 30286), (778, 30235), (789, 30202), (805, 30133), (818, 30094), (837, 30073), (841, 30052), (845, 30040), (918, 29860), (921, 29854), (936, 29818), (942, 29794), (968, 29716), (985, 29659), (989, 29647),

Gene: Naca\_39 Start: 30726, Stop: 28828, Start Num: 205

Candidate Starts for Naca\_39:

(Start: 205 @30726 has 2 MA's), (Start: 234 @30693 has 938 MA's), (301, 30582), (353, 30489), (355, 30486), (395, 30417), (397, 30414), (405, 30387), (415, 30360), (419, 30351), (445, 30267), (453, 30243), (465, 30207), (520, 30147), (541, 30111), (566, 30063), (581, 30042), (582, 30039), (618, 29979), (652, 29901), (670, 29853), (679, 29841), (701, 29793), (724, 29742), (759, 29607), (775, 29559), (782, 29541), (790, 29520), (793, 29511), (799, 29481), (805, 29454), (806, 29451), (841, 29373), (847, 29355), (862, 29307), (879, 29256), (903, 29202), (908, 29193), (921, 29175), (947, 29097), (978, 29004), (985, 28980), (989, 28968), (1042, 28863),

Gene: Nacho\_0062 Start: 54781, Stop: 52922, Start Num: 197

Candidate Starts for Nacho\_0062:

(Start: 180 @54805 has 1 MA's), (Start: 197 @54781 has 298 MA's), (Start: 225 @54757 has 5 MA's), (Start: 238 @54751 has 2 MA's), (Start: 261 @54709 has 10 MA's), (269, 54688), (323, 54574), (328, 54568), (349, 54538), (385, 54478), (394, 54457), (410, 54403), (418, 54391), (425, 54373), (427, 54361), (462, 54256), (496, 54199), (511, 54163), (516, 54151), (535, 54124), (545, 54097), (555, 54079), (566, 54061), (588, 54022), (595, 54013), (597, 54010), (724, 53752), (754, 53650), (760, 53617), (765, 53596), (799, 53503), (802, 53494), (822, 53431), (841, 53395), (842, 53392), (847, 53377), (872, 53299), (877, 53287), (883, 53266), (902, 53227), (942, 53137), (947, 53119), (949, 53113), (954, 53098), (964, 53074), (968, 53059), (969, 53056), (972, 53044), (979, 53020), (1002, 52972), (1015, 52948),

Gene: Nagem\_39 Start: 28930, Stop: 27065, Start Num: 283

Candidate Starts for Nagem\_39:

(Start: 234 @29017 has 938 MA's), (Start: 283 @28930 has 147 MA's), (Start: 291 @28921 has 5 MA's), (342, 28816), (347, 28807), (367, 28777), (369, 28774), (424, 28654), (426, 28642), (428, 28636), (466, 28531), (473, 28504), (532, 28363), (535, 28357), (537, 28354), (541, 28342), (551, 28315), (553, 28312), (562, 28297), (566, 28291), (570, 28285), (613, 28252), (671, 28123), (701, 28063), (798, 27748), (801, 27739), (802, 27736), (805, 27718), (819, 27676), (822, 27670), (832, 27646), (849, 27589), (900, 27430), (913, 27400), (917, 27391), (938, 27331), (943, 27307), (956, 27268), (967, 27235), (970, 27223), (986, 27163),

Gene: Naiad\_36 Start: 28126, Stop: 26342, Start Num: 234

Candidate Starts for Naiad\_36:

(Start: 234 @28126 has 938 MA's), (374, 27892), (390, 27862), (394, 27853), (395, 27850), (409, 27805), (415, 27793), (432, 27742), (465, 27640), (492, 27619), (541, 27547), (563, 27502), (566, 27499), (589, 27457), (594, 27451), (603, 27436), (619, 27409), (663, 27304), (667, 27295), (679, 27277), (681, 27274), (700, 27238), (759, 27058), (775, 27010), (805, 26905), (806, 26902), (837, 26845), (841, 26824), (881, 26701), (921, 26626), (936, 26590), (942, 26566), (968, 26488), (985, 26431), (989, 26419), (1010, 26380), (1021, 26362),

Gene: Naira\_46 Start: 36492, Stop: 34705, Start Num: 234

Candidate Starts for Naira\_46:

(Start: 234 @36492 has 938 MA's), (359, 36279), (368, 36264), (395, 36216), (405, 36186), (411, 36165), (415, 36159), (419, 36150), (457, 36033), (465, 36006), (541, 35913), (546, 35898), (596, 35814), (598, 35811), (634, 35745), (648, 35715), (657, 35685), (679, 35640), (700, 35601), (759, 35421), (775, 35373), (790, 35334), (805, 35268), (839, 35196), (841, 35187), (868, 35103), (903, 35016), (954, 34890), (960, 34878), (985, 34794), (987, 34788),

Gene: Naji\_47 Start: 31153, Stop: 29330, Start Num: 234

Candidate Starts for Naji\_47:

(Start: 234 @31153 has 938 MA's), (353, 30949), (368, 30925), (379, 30907), (389, 30889), (395, 30874), (397, 30871), (405, 30844), (415, 30817), (432, 30766), (465, 30664), (541, 30571), (566, 30523), (571, 30514), (581, 30502), (582, 30499), (619, 30433), (648, 30373), (700, 30259), (710, 30235), (728, 30196), (759, 30070), (778, 30019), (790, 29983), (805, 29917), (818, 29878), (842, 29809), (856, 29770), (869, 29725), (879, 29695), (908, 29632), (921, 29614), (942, 29554), (985, 29419), (989, 29407), (993, 29398),

Gene: Nanao\_52 Start: 52988, Stop: 51165, Start Num: 189

Candidate Starts for Nanao\_52:

(Start: 175 @53006 has 4 MA's), (Start: 189 @52988 has 26 MA's), (Start: 238 @52964 has 2 MA's), (252, 52937), (Start: 261 @52922 has 10 MA's), (269, 52901), (316, 52814), (382, 52709), (399,

52667), (425, 52601), (434, 52571), (437, 52562), (441, 52559), (442, 52556), (450, 52529), (496, 52436), (504, 52418), (511, 52400), (516, 52388), (528, 52373), (535, 52361), (595, 52250), (597, 52247), (618, 52217), (634, 52181), (737, 51956), (739, 51953), (749, 51917), (754, 51893), (760, 51860), (797, 51752), (799, 51746), (801, 51740), (802, 51737), (841, 51638), (842, 51635), (847, 51620), (872, 51542), (877, 51530), (883, 51509), (885, 51500), (902, 51470), (918, 51446), (935, 51413), (942, 51380), (947, 51362), (949, 51356), (964, 51317), (969, 51299), (972, 51287), (979, 51263), (994, 51221), (1002, 51215), (1015, 51191),

Gene: Nancinator\_36 Start: 28114, Stop: 26330, Start Num: 234

Candidate Starts for Nancinator\_36:

(Start: 234 @28114 has 938 MA's), (374, 27880), (390, 27850), (394, 27841), (395, 27838), (409, 27793), (415, 27781), (432, 27730), (465, 27628), (492, 27607), (541, 27535), (563, 27490), (566, 27487), (589, 27445), (594, 27439), (603, 27424), (619, 27397), (663, 27292), (667, 27283), (679, 27265), (700, 27226), (729, 27169), (759, 27046), (775, 26998), (805, 26893), (806, 26890), (837, 26833), (841, 26812), (858, 26764), (881, 26689), (918, 26620), (936, 26578), (942, 26554), (968, 26476), (985, 26419), (989, 26407), (993, 26398), (1010, 26368), (1021, 26350),

Gene: Nangang\_58 Start: 54780, Stop: 52933, Start Num: 181

Candidate Starts for Nangang\_58:

(140, 54846), (181, 54780), (236, 54732), (252, 54705), (276, 54654), (323, 54579), (385, 54486), (425, 54384), (441, 54342), (452, 54306), (462, 54276), (511, 54183), (534, 54147), (539, 54135), (545, 54117), (597, 54030), (650, 53925), (654, 53916), (703, 53802), (739, 53736), (743, 53718), (755, 53670), (760, 53643), (797, 53535), (799, 53529), (802, 53520), (806, 53499), (834, 53436), (842, 53403), (847, 53388), (866, 53328), (872, 53310), (877, 53298), (883, 53277), (885, 53268), (887, 53265), (894, 53253), (942, 53148), (949, 53124), (964, 53085), (968, 53070), (969, 53067), (975, 53043), (979, 53031), (980, 53028), (1015, 52959),

Gene: Nathan\_61 Start: 54114, Stop: 52255, Start Num: 197

Candidate Starts for Nathan\_61:

(Start: 180 @54138 has 1 MA's), (Start: 197 @54114 has 298 MA's), (Start: 225 @54090 has 5 MA's), (Start: 238 @54084 has 2 MA's), (Start: 261 @54042 has 10 MA's), (269, 54021), (323, 53907), (328, 53901), (349, 53871), (385, 53811), (394, 53790), (410, 53736), (418, 53724), (425, 53706), (427, 53694), (462, 53589), (496, 53532), (511, 53496), (516, 53484), (534, 53460), (539, 53448), (545, 53430), (555, 53412), (566, 53394), (588, 53355), (595, 53346), (597, 53343), (599, 53340), (724, 53085), (754, 52983), (760, 52950), (765, 52929), (799, 52836), (802, 52827), (822, 52764), (842, 52725), (847, 52710), (872, 52632), (877, 52620), (883, 52599), (902, 52560), (938, 52491), (942, 52470), (947, 52452), (949, 52446), (954, 52431), (964, 52407), (968, 52392), (969, 52389), (972, 52377), (979, 52353), (1002, 52305), (1015, 52281),

Gene: Natosaleda\_36 Start: 28113, Stop: 26329, Start Num: 234

Candidate Starts for Natosaleda\_36:

(Start: 234 @28113 has 938 MA's), (374, 27879), (390, 27849), (394, 27840), (395, 27837), (409, 27792), (415, 27780), (432, 27729), (465, 27627), (492, 27606), (541, 27534), (563, 27489), (566, 27486), (589, 27444), (594, 27438), (603, 27423), (619, 27396), (663, 27291), (667, 27282), (679, 27264), (700, 27225), (729, 27168), (759, 27045), (775, 26997), (805, 26892), (806, 26889), (837, 26832), (841, 26811), (858, 26763), (881, 26688), (918, 26619), (936, 26577), (942, 26553), (968, 26475), (985, 26418), (989, 26406), (993, 26397), (1010, 26367), (1021, 26349),

Gene: Nattles\_38 Start: 28619, Stop: 26754, Start Num: 283

Candidate Starts for Nattles\_38:

(Start: 234 @28706 has 938 MA's), (Start: 283 @28619 has 147 MA's), (Start: 291 @28610 has 5 MA's), (342, 28505), (347, 28496), (367, 28466), (369, 28463), (424, 28343), (426, 28331), (428, 28325), (466, 28220), (473, 28193), (532, 28052), (535, 28046), (537, 28043), (541, 28031), (551,

28004), (553, 28001), (562, 27986), (566, 27980), (570, 27974), (613, 27941), (701, 27752), (798, 27437), (801, 27428), (802, 27425), (805, 27407), (819, 27365), (822, 27359), (832, 27335), (849, 27278), (900, 27119), (913, 27089), (917, 27080), (938, 27020), (943, 26996), (956, 26957), (967, 26924), (970, 26912), (986, 26852),

Gene: NearlyHeadless\_43 Start: 30653, Stop: 28809, Start Num: 234

Candidate Starts for NearlyHeadless\_43:

(Start: 234 @30653 has 938 MA's), (266, 30602), (336, 30479), (353, 30449), (379, 30410), (395, 30377), (405, 30347), (411, 30326), (415, 30320), (419, 30311), (432, 30269), (448, 30218), (464, 30170), (465, 30167), (541, 30071), (552, 30044), (563, 30026), (571, 30014), (603, 29960), (619, 29933), (640, 29885), (663, 29828), (679, 29801), (703, 29750), (711, 29735), (756, 29588), (759, 29567), (769, 29537), (775, 29519), (778, 29516), (782, 29501), (790, 29480), (793, 29471), (798, 29444), (802, 29432), (805, 29414), (841, 29333), (845, 29321), (862, 29267), (874, 29231), (885, 29195), (903, 29162), (918, 29141), (921, 29135), (938, 29096), (942, 29075), (947, 29057), (985, 28940), (989, 28928),

Gene: Nebs\_46 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Nebs\_46:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Nebulosus\_46 Start: 29739, Stop: 27949, Start Num: 234

Candidate Starts for Nebulosus\_46:

(Start: 234 @29739 has 938 MA's), (336, 29565), (395, 29460), (397, 29457), (405, 29430), (415, 29403), (432, 29352), (465, 29250), (541, 29157), (563, 29112), (566, 29109), (571, 29100), (663, 28911), (700, 28845), (730, 28785), (740, 28746), (754, 28695), (759, 28665), (778, 28614), (789, 28581), (798, 28542), (805, 28512), (837, 28452), (841, 28431), (856, 28389), (863, 28362), (868, 28347), (903, 28260), (936, 28197), (938, 28194), (985, 28038), (989, 28026), (995, 28014),

Gene: Nebulous\_37 Start: 30025, Stop: 28133, Start Num: 283

Candidate Starts for Nebulous\_37:

(Start: 283 @30025 has 147 MA's), (305, 29980), (330, 29926), (337, 29920), (347, 29902), (369, 29869), (371, 29866), (398, 29815), (399, 29812), (427, 29734), (428, 29731), (446, 29683), (460, 29641), (503, 29539), (514, 29506), (532, 29464), (535, 29458), (537, 29455), (541, 29443), (553, 29413), (574, 29380), (590, 29377), (611, 29356), (680, 29209), (744, 29053), (805, 28786), (817, 28750), (819, 28744), (825, 28729), (847, 28666), (849, 28657), (943, 28375), (944, 28372), (956, 28336), (986, 28231),

Gene: Nedarya\_43 Start: 29505, Stop: 27715, Start Num: 234

Candidate Starts for Nedarya\_43:

(Start: 234 @29505 has 938 MA's), (359, 29292), (395, 29226), (397, 29223), (405, 29196), (415, 29169), (465, 29016), (541, 28923), (563, 28878), (566, 28875), (582, 28851), (679, 28650), (700, 28611), (730, 28551), (740, 28512), (756, 28452), (759, 28431), (778, 28380), (789, 28347), (798, 28308), (805, 28278), (837, 28218), (841, 28197), (864, 28125), (903, 28026), (936, 27963), (984, 27807), (985, 27804), (989, 27792),

Gene: Neeharika16\_45 Start: 29638, Stop: 27797, Start Num: 234

Candidate Starts for Neeharika16\_45:

(Start: 234 @29638 has 938 MA's), (353, 29434), (395, 29359), (397, 29356), (405, 29329), (409, 29314), (415, 29302), (432, 29251), (461, 29161), (465, 29149), (541, 29056), (559, 29017), (571,

28999), (582, 28984), (619, 28918), (635, 28885), (636, 28882), (681, 28780), (710, 28720), (740, 28636), (759, 28555), (789, 28471), (790, 28468), (793, 28459), (798, 28432), (805, 28402), (837, 28342), (847, 28303), (936, 28087), (938, 28084), (942, 28063), (985, 27928), (989, 27916), (993, 27907), (995, 27904), (1042, 27811),

Gene: Neferthema\_38 Start: 29229, Stop: 27331, Start Num: 283

Candidate Starts for Neferthema\_38:

(Start: 283 @29229 has 147 MA's), (330, 29130), (337, 29124), (369, 29073), (371, 29070), (398, 29019), (399, 29016), (420, 28962), (423, 28956), (427, 28938), (446, 28887), (479, 28785), (503, 28737), (512, 28716), (514, 28704), (532, 28662), (535, 28656), (537, 28653), (541, 28641), (553, 28611), (566, 28590), (574, 28578), (590, 28575), (611, 28554), (680, 28407), (744, 28251), (805, 27984), (817, 27948), (819, 27942), (825, 27927), (847, 27864), (849, 27855), (859, 27810), (943, 27573), (944, 27570), (956, 27534),

Gene: Nehemiah\_57 Start: 54574, Stop: 52745, Start Num: 189

Candidate Starts for Nehemiah\_57:

(Start: 189 @54574 has 26 MA's), (Start: 222 @54553 has 1 MA's), (Start: 238 @54544 has 2 MA's), (252, 54517), (Start: 261 @54502 has 10 MA's), (394, 54277), (424, 54199), (434, 54166), (441, 54154), (452, 54118), (462, 54088), (511, 53995), (516, 53983), (518, 53980), (534, 53959), (535, 53956), (539, 53947), (545, 53929), (583, 53866), (597, 53842), (650, 53737), (703, 53614), (733, 53563), (737, 53551), (739, 53548), (743, 53530), (749, 53512), (755, 53482), (760, 53455), (780, 53404), (799, 53341), (802, 53332), (834, 53248), (842, 53215), (847, 53200), (866, 53140), (872, 53122), (877, 53110), (883, 53089), (885, 53080), (887, 53077), (942, 52960), (947, 52942), (949, 52936), (964, 52897), (967, 52885), (968, 52882), (972, 52867), (975, 52855), (979, 52843), (994, 52801), (1004, 52792), (1015, 52771), (1023, 52750),

Gene: Nemo27\_45 Start: 31569, Stop: 29743, Start Num: 234

Candidate Starts for Nemo27\_45:

(Start: 234 @31569 has 938 MA's), (252, 31548), (266, 31518), (279, 31488), (379, 31326), (389, 31308), (415, 31236), (419, 31227), (458, 31107), (465, 31083), (541, 30990), (568, 30942), (582, 30921), (603, 30882), (663, 30750), (675, 30729), (700, 30684), (703, 30672), (756, 30519), (759, 30498), (798, 30375), (805, 30345), (818, 30306), (841, 30240), (842, 30237), (847, 30222), (856, 30198), (862, 30174), (942, 29967), (985, 29832), (989, 29820), (993, 29811),

Gene: Neos5\_58 Start: 53992, Stop: 52175, Start Num: 235

Candidate Starts for Neos5\_58:

(61, 54376), (129, 54175), (Start: 235 @53992 has 43 MA's), (252, 53962), (359, 53782), (406, 53677), (424, 53629), (426, 53617), (437, 53587), (442, 53581), (462, 53518), (464, 53512), (496, 53461), (509, 53434), (511, 53425), (539, 53377), (597, 53272), (647, 53176), (664, 53125), (737, 52981), (749, 52942), (755, 52912), (760, 52885), (763, 52873), (797, 52777), (799, 52771), (802, 52762), (804, 52750), (834, 52678), (841, 52648), (847, 52630), (851, 52621), (872, 52552), (877, 52540), (883, 52519), (921, 52450), (931, 52435), (938, 52411), (942, 52390), (947, 52372), (949, 52366), (962, 52333), (964, 52327), (969, 52309), (972, 52297), (975, 52285), (979, 52273), (994, 52231), (1015, 52201),

Gene: Nerujay\_46 Start: 35102, Stop: 33276, Start Num: 234

Candidate Starts for Nerujay\_46:

(Start: 234 @35102 has 938 MA's), (359, 34889), (368, 34874), (405, 34796), (408, 34784), (411, 34775), (415, 34769), (419, 34760), (457, 34643), (465, 34616), (541, 34523), (546, 34508), (566, 34475), (596, 34424), (598, 34421), (634, 34355), (657, 34295), (679, 34250), (700, 34211), (759, 34031), (775, 33983), (790, 33944), (805, 33878), (818, 33839), (837, 33818), (841, 33797), (847, 33779), (868, 33713), (936, 33563), (938, 33560), (946, 33524), (954, 33500), (959, 33491), (963, 33479), (970, 33452), (985, 33404), (993, 33383),

Gene: Nesbitt\_42 Start: 30153, Stop: 32018, Start Num: 234

Candidate Starts for Nesbitt\_42:

(Start: 234 @30153 has 938 MA's), (265, 30201), (273, 30222), (317, 30297), (404, 30456), (405, 30459), (406, 30462), (411, 30480), (419, 30495), (428, 30525), (432, 30537), (467, 30645), (558, 30765), (582, 30807), (603, 30846), (615, 30861), (617, 30864), (618, 30867), (637, 30912), (649, 30933), (655, 30951), (657, 30960), (675, 30999), (691, 31029), (693, 31041), (712, 31104), (747, 31221), (759, 31281), (775, 31329), (790, 31368), (796, 31398), (805, 31434), (825, 31488), (842, 31536), (862, 31599), (901, 31698), (905, 31707), (933, 31758), (949, 31818), (955, 31836), (978, 31905), (985, 31929), (997, 31956),

Gene: Newman\_59 Start: 54059, Stop: 52200, Start Num: 197

Candidate Starts for Newman\_59:

(Start: 180 @54083 has 1 MA's), (Start: 197 @54059 has 298 MA's), (Start: 225 @54035 has 5 MA's), (Start: 238 @54029 has 2 MA's), (Start: 261 @53987 has 10 MA's), (269, 53966), (323, 53852), (328, 53846), (349, 53816), (385, 53756), (394, 53735), (410, 53681), (418, 53669), (425, 53651), (427, 53639), (462, 53534), (496, 53477), (511, 53441), (516, 53429), (535, 53402), (539, 53393), (555, 53357), (588, 53300), (595, 53291), (597, 53288), (599, 53285), (754, 52928), (760, 52895), (765, 52874), (799, 52781), (802, 52772), (822, 52709), (841, 52673), (842, 52670), (847, 52655), (872, 52577), (877, 52565), (883, 52544), (902, 52505), (942, 52415), (947, 52397), (949, 52391), (954, 52376), (964, 52352), (968, 52337), (969, 52334), (972, 52322), (979, 52298), (1002, 52250), (1015, 52226),

Gene: Newrala\_45 Start: 29638, Stop: 27797, Start Num: 234

Candidate Starts for Newrala\_45:

(Start: 234 @29638 has 938 MA's), (353, 29434), (395, 29359), (397, 29356), (405, 29329), (409, 29314), (415, 29302), (432, 29251), (461, 29161), (465, 29149), (541, 29056), (559, 29017), (571, 28999), (582, 28984), (619, 28918), (635, 28885), (636, 28882), (681, 28780), (710, 28720), (740, 28636), (759, 28555), (789, 28471), (790, 28468), (793, 28459), (798, 28432), (805, 28402), (837, 28342), (847, 28303), (936, 28087), (938, 28084), (942, 28063), (985, 27928), (989, 27916), (993, 27907), (995, 27904), (1042, 27811),

Gene: Nhonho\_45 Start: 35071, Stop: 33245, Start Num: 234

Candidate Starts for Nhonho\_45:

(Start: 234 @35071 has 938 MA's), (359, 34858), (395, 34795), (405, 34765), (411, 34744), (415, 34738), (419, 34729), (457, 34612), (465, 34585), (541, 34492), (546, 34477), (566, 34444), (596, 34393), (598, 34390), (634, 34324), (648, 34294), (657, 34264), (679, 34219), (700, 34180), (759, 34000), (775, 33952), (790, 33913), (805, 33847), (818, 33808), (837, 33787), (841, 33766), (847, 33748), (868, 33682), (936, 33532), (938, 33529), (946, 33493), (954, 33469), (959, 33460), (963, 33448), (970, 33421), (985, 33373), (993, 33352),

Gene: Nibbles\_39 Start: 31737, Stop: 29380, Start Num: 45

Candidate Starts for Nibbles\_39:

(42, 31746), (Start: 45 @31737 has 24 MA's), (52, 31722), (58, 31686), (110, 31551), (136, 31488), (168, 31446), (177, 31434), (249, 31332), (252, 31329), (290, 31254), (306, 31215), (317, 31194), (352, 31143), (376, 31101), (391, 31071), (409, 31017), (420, 30996), (426, 30975), (449, 30912), (499, 30777), (506, 30762), (517, 30735), (524, 30717), (570, 30633), (626, 30597), (682, 30504), (707, 30462), (711, 30459), (713, 30456), (724, 30432), (729, 30420), (732, 30408), (770, 30267), (773, 30240), (805, 30105), (817, 30069), (819, 30063), (822, 30057), (824, 30051), (834, 30027), (842, 29994), (849, 29970), (859, 29925), (861, 29919), (880, 29859), (926, 29751), (945, 29682), (948, 29670), (958, 29646), (979, 29568), (986, 29544), (1018, 29475),

Gene: NickSell\_39 Start: 28939, Stop: 27074, Start Num: 283

Candidate Starts for NickSell\_39:

(5, 29698), (69, 29395), (Start: 208 @29065 has 5 MA's), (Start: 232 @29029 has 15 MA's), (Start: 238 @29023 has 2 MA's), (Start: 283 @28939 has 147 MA's), (Start: 291 @28930 has 5 MA's), (342, 28825), (347, 28816), (367, 28786), (369, 28783), (424, 28663), (426, 28651), (428, 28645), (466, 28540), (473, 28513), (532, 28372), (535, 28366), (537, 28363), (541, 28351), (551, 28324), (553, 28321), (562, 28306), (566, 28300), (570, 28294), (613, 28261), (701, 28072), (798, 27757), (801, 27748), (802, 27745), (805, 27727), (819, 27685), (822, 27679), (825, 27670), (832, 27655), (849, 27598), (900, 27439), (913, 27409), (917, 27400), (938, 27340), (943, 27316), (956, 27277), (967, 27244), (970, 27232), (986, 27172),

Gene: Nicky22\_43 Start: 30033, Stop: 31907, Start Num: 234

Candidate Starts for Nicky22\_43:

(Start: 231 @30030 has 7 MA's), (Start: 234 @30033 has 938 MA's), (273, 30102), (284, 30123), (314, 30174), (419, 30369), (432, 30411), (603, 30705), (663, 30840), (709, 30939), (747, 31062), (759, 31122), (761, 31128), (778, 31173), (786, 31203), (796, 31239), (805, 31275), (840, 31368), (869, 31461), (901, 31539), (936, 31611), (946, 31650), (962, 31692), (967, 31710), (978, 31746), (985, 31770), (993, 31791),

Gene: Nicole21\_61 Start: 54312, Stop: 52453, Start Num: 197

Candidate Starts for Nicole21\_61:

(Start: 180 @54336 has 1 MA's), (Start: 197 @54312 has 298 MA's), (Start: 225 @54288 has 5 MA's), (Start: 238 @54282 has 2 MA's), (Start: 261 @54240 has 10 MA's), (269, 54219), (323, 54105), (328, 54099), (349, 54069), (385, 54009), (394, 53988), (410, 53934), (418, 53922), (425, 53904), (427, 53892), (462, 53787), (496, 53730), (511, 53694), (516, 53682), (534, 53658), (539, 53646), (545, 53628), (555, 53610), (566, 53592), (588, 53553), (595, 53544), (597, 53541), (599, 53538), (754, 53181), (760, 53148), (765, 53127), (799, 53034), (802, 53025), (822, 52962), (841, 52926), (842, 52923), (847, 52908), (872, 52830), (877, 52818), (883, 52797), (902, 52758), (942, 52668), (947, 52650), (949, 52644), (954, 52629), (964, 52605), (968, 52590), (969, 52587), (972, 52575), (979, 52551), (1002, 52503), (1015, 52479),

Gene: NicoleTera\_45 Start: 32018, Stop: 30231, Start Num: 234

Candidate Starts for NicoleTera\_45:

(Start: 234 @32018 has 938 MA's), (355, 31811), (368, 31790), (379, 31775), (394, 31745), (395, 31742), (405, 31712), (415, 31685), (424, 31664), (432, 31634), (465, 31532), (541, 31439), (566, 31391), (571, 31382), (619, 31301), (655, 31220), (675, 31172), (710, 31103), (759, 30947), (778, 30896), (789, 30863), (790, 30860), (805, 30794), (818, 30755), (837, 30734), (859, 30659), (862, 30647), (879, 30596), (888, 30569), (908, 30533), (921, 30515), (936, 30479), (942, 30455), (962, 30398), (985, 30320), (989, 30308), (993, 30299),

Gene: Nigel\_54 Start: 53588, Stop: 51732, Start Num: 169

Candidate Starts for Nigel\_54:

(Start: 169 @53588 has 2 MA's), (Start: 191 @53561 has 2 MA's), (Start: 238 @53534 has 2 MA's), (252, 53507), (Start: 261 @53492 has 10 MA's), (301, 53420), (303, 53414), (323, 53366), (328, 53360), (338, 53348), (349, 53330), (355, 53321), (384, 53270), (386, 53267), (425, 53168), (434, 53138), (437, 53129), (441, 53126), (450, 53096), (496, 53003), (504, 52985), (511, 52967), (516, 52955), (535, 52928), (595, 52817), (597, 52814), (610, 52796), (618, 52784), (634, 52748), (636, 52742), (643, 52724), (664, 52667), (724, 52562), (737, 52523), (739, 52520), (749, 52484), (760, 52427), (797, 52319), (799, 52313), (802, 52304), (839, 52214), (841, 52205), (842, 52202), (847, 52187), (872, 52109), (877, 52097), (883, 52076), (885, 52067), (921, 52007), (935, 51980), (942, 51947), (947, 51929), (949, 51923), (964, 51884), (968, 51869), (969, 51866), (972, 51854), (979, 51830), (994, 51788), (1002, 51782), (1015, 51758),

Gene: Nina\_42 Start: 32678, Stop: 30285, Start Num: 36



Candidate Starts for Nina\_42:

(Start: 36 @32678 has 16 MA's), (48, 32672), (Start: 60 @32624 has 1 MA's), (76, 32582), (86, 32558), (127, 32432), (136, 32408), (170, 32363), (206, 32312), (216, 32297), (Start: 230 @32276 has 13 MA's), (262, 32228), (274, 32195), (279, 32186), (317, 32111), (322, 32099), (366, 32030), (382, 32003), (385, 31997), (391, 31982), (409, 31928), (410, 31925), (420, 31907), (426, 31886), (448, 31826), (495, 31703), (497, 31697), (524, 31628), (541, 31586), (634, 31499), (643, 31475), (655, 31469), (662, 31445), (666, 31436), (674, 31421), (682, 31409), (707, 31367), (711, 31364), (713, 31361), (729, 31325), (758, 31214), (773, 31145), (774, 31139), (784, 31103), (796, 31046), (805, 31010), (817, 30974), (819, 30968), (822, 30962), (824, 30956), (842, 30899), (849, 30875), (859, 30830), (986, 30449), (1008, 30404), (1013, 30395), (1037, 30335), (1046, 30317),

Gene: Niobe\_39 Start: 30355, Stop: 32220, Start Num: 234

Candidate Starts for Niobe\_39:

(Start: 234 @30355 has 938 MA's), (265, 30403), (377, 30586), (382, 30592), (405, 30652), (411, 30673), (436, 30742), (546, 30958), (598, 31048), (603, 31057), (615, 31072), (635, 31117), (675, 31210), (730, 31348), (759, 31468), (769, 31498), (790, 31555), (803, 31612), (805, 31621), (814, 31645), (840, 31714), (862, 31786), (865, 31795), (905, 31894), (936, 31957), (985, 32116), (988, 32125),

Gene: Nirvana\_73 Start: 48873, Stop: 46888, Start Num: 247

Candidate Starts for Nirvana\_73:

(219, 48915), (247, 48873), (Start: 258 @48855 has 7 MA's), (304, 48759), (339, 48687), (361, 48651), (397, 48585), (412, 48537), (437, 48459), (439, 48453), (483, 48306), (491, 48270), (497, 48255), (508, 48228), (518, 48207), (521, 48201), (536, 48174), (607, 48039), (631, 47988), (725, 47754), (729, 47745), (733, 47727), (743, 47694), (752, 47664), (780, 47559), (799, 47493), (806, 47463), (810, 47442), (812, 47436), (872, 47274), (914, 47202), (923, 47181), (949, 47085), (953, 47073), (959, 47064), (963, 47052), (968, 47034), (974, 47010), (983, 46986),

Gene: Nitro\_40 Start: 30212, Stop: 32077, Start Num: 234

Candidate Starts for Nitro\_40:

(Start: 234 @30212 has 938 MA's), (265, 30260), (405, 30509), (436, 30599), (543, 30806), (546, 30815), (596, 30902), (603, 30914), (615, 30929), (655, 31019), (703, 31124), (730, 31205), (759, 31325), (769, 31355), (790, 31412), (805, 31478), (862, 31643), (936, 31814), (942, 31838), (947, 31856), (985, 31973), (988, 31982),

Gene: Niza\_47 Start: 35869, Stop: 34082, Start Num: 234

Candidate Starts for Niza\_47:

(Start: 234 @35869 has 938 MA's), (359, 35656), (368, 35641), (395, 35593), (405, 35563), (411, 35542), (415, 35536), (419, 35527), (457, 35410), (465, 35383), (541, 35290), (546, 35275), (566, 35242), (596, 35191), (598, 35188), (634, 35122), (648, 35092), (657, 35062), (679, 35017), (700, 34978), (759, 34798), (775, 34750), (790, 34711), (805, 34645), (839, 34573), (841, 34564), (868, 34480), (903, 34393), (954, 34267), (960, 34255), (978, 34195), (985, 34171), (987, 34165),

Gene: NoShow\_52 Start: 37810, Stop: 35447, Start Num: 55

Candidate Starts for NoShow\_52:

(40, 37861), (Start: 45 @37840 has 24 MA's), (Start: 55 @37810 has 1 MA's), (Start: 60 @37786 has 1 MA's), (77, 37741), (Start: 79 @37735 has 1 MA's), (118, 37630), (121, 37621), (136, 37576), (170, 37531), (206, 37480), (216, 37465), (Start: 230 @37444 has 13 MA's), (387, 37165), (409, 37099), (448, 36997), (490, 36892), (495, 36874), (499, 36859), (523, 36802), (524, 36799), (530, 36781), (541, 36757), (543, 36751), (618, 36682), (626, 36679), (634, 36670), (686, 36580), (692, 36571), (724, 36511), (728, 36502), (730, 36496), (781, 36283), (782, 36280), (792, 36241), (798, 36208), (817, 36142), (819, 36136), (822, 36130), (824, 36124), (842, 36067), (849, 36043), (940, 35776), (967, 35689), (979, 35641), (986, 35617), (1018, 35548),

Gene: Nodigi\_51 Start: 35275, Stop: 32885, Start Num: 45

Candidate Starts for Nodigi\_51:

(16, 35404), (19, 35395), (Start: 45 @35275 has 24 MA's), (92, 35143), (96, 35131), (109, 35086), (136, 35023), (141, 35002), (177, 34969), (216, 34912), (250, 34864), (259, 34849), (279, 34801), (317, 34726), (319, 34720), (322, 34714), (324, 34708), (366, 34639), (380, 34615), (391, 34591), (420, 34516), (426, 34495), (444, 34447), (448, 34435), (464, 34390), (522, 34234), (524, 34228), (634, 34099), (662, 34051), (668, 34039), (711, 33967), (729, 33925), (758, 33814), (770, 33772), (772, 33748), (773, 33739), (784, 33697), (805, 33604), (817, 33568), (819, 33562), (822, 33556), (824, 33550), (842, 33493), (849, 33469), (851, 33451), (880, 33358), (910, 33289), (926, 33250), (938, 33211), (942, 33190), (952, 33157), (960, 33139), (986, 33043), (996, 33019), (1046, 32911),

Gene: Noella\_44 Start: 31598, Stop: 29760, Start Num: 234

Candidate Starts for Noella\_44:

(Start: 234 @31598 has 938 MA's), (266, 31547), (353, 31394), (395, 31322), (405, 31292), (415, 31265), (419, 31256), (465, 31112), (541, 31016), (568, 30968), (603, 30908), (648, 30821), (663, 30776), (675, 30755), (711, 30683), (729, 30641), (740, 30599), (759, 30518), (775, 30470), (790, 30431), (798, 30395), (805, 30365), (816, 30335), (842, 30254), (856, 30215), (862, 30191), (868, 30173), (869, 30170), (921, 30044), (942, 29984), (970, 29897), (985, 29849), (989, 29837), (993, 29828),

Gene: Noelle\_45 Start: 31832, Stop: 30003, Start Num: 234

Candidate Starts for Noelle\_45:

(Start: 234 @31832 has 938 MA's), (Start: 261 @31796 has 10 MA's), (353, 31628), (379, 31589), (389, 31571), (390, 31568), (415, 31499), (419, 31490), (458, 31370), (465, 31346), (541, 31253), (568, 31205), (603, 31145), (628, 31100), (630, 31094), (663, 31013), (675, 30992), (700, 30947), (756, 30782), (759, 30761), (793, 30665), (798, 30638), (799, 30635), (805, 30608), (818, 30569), (842, 30497), (847, 30482), (856, 30458), (861, 30440), (862, 30434), (864, 30428), (942, 30227), (985, 30092), (989, 30080), (993, 30071),

Gene: Norbert\_43 Start: 31597, Stop: 29759, Start Num: 234

Candidate Starts for Norbert\_43:

(Start: 234 @31597 has 938 MA's), (266, 31546), (353, 31393), (395, 31321), (405, 31291), (415, 31264), (419, 31255), (465, 31111), (541, 31015), (568, 30967), (603, 30907), (648, 30820), (663, 30775), (675, 30754), (711, 30682), (729, 30640), (740, 30598), (759, 30517), (775, 30469), (790, 30430), (798, 30394), (805, 30364), (816, 30334), (842, 30253), (856, 30214), (862, 30190), (868, 30172), (869, 30169), (921, 30043), (942, 29983), (970, 29896), (985, 29848), (989, 29836), (993, 29827),

Gene: NorthStar\_44 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for NorthStar\_44:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Norz\_45 Start: 34915, Stop: 33089, Start Num: 234

Candidate Starts for Norz\_45:

(Start: 234 @34915 has 938 MA's), (359, 34702), (368, 34687), (395, 34639), (405, 34609), (411, 34588), (415, 34582), (419, 34573), (457, 34456), (465, 34429), (541, 34336), (546, 34321), (596, 34237), (598, 34234), (634, 34168), (648, 34138), (657, 34108), (679, 34063), (700, 34024), (759, 33844), (769, 33814), (775, 33796), (790, 33757), (805, 33691), (841, 33610), (842, 33607), (868,

33526), (936, 33376), (938, 33373), (946, 33337), (954, 33313), (959, 33304), (963, 33292), (985, 33217), (993, 33196),

Gene: NotAPhaseMom\_45 Start: 31574, Stop: 29748, Start Num: 234

Candidate Starts for NotAPhaseMom\_45:

(Start: 234 @31574 has 938 MA's), (252, 31553), (266, 31523), (279, 31493), (379, 31331), (389, 31313), (415, 31241), (419, 31232), (458, 31112), (465, 31088), (541, 30995), (568, 30947), (582, 30926), (603, 30887), (663, 30755), (675, 30734), (700, 30689), (703, 30677), (756, 30524), (759, 30503), (798, 30380), (805, 30350), (818, 30311), (841, 30245), (842, 30242), (847, 30227), (856, 30203), (862, 30179), (942, 29972), (985, 29837), (989, 29825), (993, 29816),

Gene: NothingSpecial\_43 Start: 32022, Stop: 30235, Start Num: 234

Candidate Starts for NothingSpecial\_43:

(Start: 234 @32022 has 938 MA's), (355, 31815), (359, 31809), (379, 31779), (395, 31746), (397, 31743), (405, 31716), (415, 31689), (419, 31680), (465, 31536), (541, 31443), (566, 31395), (571, 31386), (582, 31371), (619, 31305), (655, 31224), (675, 31176), (759, 30951), (778, 30900), (789, 30867), (805, 30798), (818, 30759), (837, 30738), (841, 30717), (921, 30519), (936, 30483), (942, 30459), (968, 30381), (985, 30324), (989, 30312), (993, 30303),

Gene: Nozo\_58 Start: 54443, Stop: 52626, Start Num: 235

Candidate Starts for Nozo\_58:

(129, 54626), (Start: 235 @54443 has 43 MA's), (252, 54413), (359, 54233), (406, 54128), (424, 54080), (426, 54068), (437, 54038), (442, 54032), (462, 53969), (464, 53963), (496, 53912), (511, 53876), (539, 53828), (597, 53723), (647, 53627), (664, 53576), (737, 53432), (749, 53393), (755, 53363), (760, 53336), (763, 53324), (797, 53228), (799, 53222), (802, 53213), (804, 53201), (834, 53129), (841, 53099), (847, 53081), (851, 53072), (872, 53003), (877, 52991), (883, 52970), (921, 52901), (931, 52886), (938, 52862), (942, 52841), (947, 52823), (949, 52817), (962, 52784), (964, 52778), (969, 52760), (972, 52748), (975, 52736), (979, 52724), (994, 52682), (1015, 52652),

Gene: Nucci\_37 Start: 28513, Stop: 26612, Start Num: 283

Candidate Starts for Nucci\_37:

(Start: 283 @28513 has 147 MA's), (347, 28390), (357, 28375), (367, 28360), (387, 28327), (391, 28318), (398, 28303), (409, 28267), (418, 28252), (426, 28225), (428, 28219), (447, 28168), (460, 28129), (479, 28069), (532, 27943), (537, 27934), (541, 27922), (553, 27892), (566, 27871), (611, 27835), (680, 27688), (701, 27643), (744, 27532), (787, 27337), (798, 27295), (805, 27265), (819, 27223), (832, 27193), (839, 27172), (849, 27136), (938, 26878), (943, 26854), (954, 26821), (956, 26815), (986, 26710),

Gene: Numberten\_60 Start: 54256, Stop: 52397, Start Num: 197

Candidate Starts for Numberten\_60:

(Start: 180 @54280 has 1 MA's), (Start: 197 @54256 has 298 MA's), (Start: 225 @54232 has 5 MA's), (Start: 238 @54226 has 2 MA's), (Start: 261 @54184 has 10 MA's), (269, 54163), (323, 54049), (328, 54043), (349, 54013), (385, 53953), (394, 53932), (410, 53878), (418, 53866), (425, 53848), (427, 53836), (462, 53731), (496, 53674), (511, 53638), (516, 53626), (534, 53602), (539, 53590), (545, 53572), (555, 53554), (566, 53536), (588, 53497), (595, 53488), (597, 53485), (599, 53482), (754, 53125), (760, 53092), (765, 53071), (799, 52978), (802, 52969), (822, 52906), (841, 52870), (842, 52867), (847, 52852), (872, 52774), (877, 52762), (883, 52741), (902, 52702), (942, 52612), (947, 52594), (949, 52588), (954, 52573), (964, 52549), (968, 52534), (969, 52531), (972, 52519), (979, 52495), (1002, 52447), (1015, 52423),

Gene: Nyala\_59 Start: 54031, Stop: 52172, Start Num: 197

Candidate Starts for Nyala\_59:

(Start: 180 @54055 has 1 MA's), (Start: 197 @54031 has 298 MA's), (Start: 225 @54007 has 5 MA's), (Start: 238 @54001 has 2 MA's), (Start: 261 @53959 has 10 MA's), (269, 53938), (323, 53824), (328, 53818), (349, 53788), (385, 53728), (394, 53707), (410, 53653), (418, 53641), (425, 53623), (427, 53611), (462, 53506), (496, 53449), (511, 53413), (516, 53401), (535, 53374), (545, 53347), (555, 53329), (566, 53311), (588, 53272), (595, 53263), (597, 53260), (754, 52900), (760, 52867), (765, 52846), (799, 52753), (802, 52744), (822, 52681), (841, 52645), (842, 52642), (847, 52627), (872, 52549), (877, 52537), (883, 52516), (902, 52477), (942, 52387), (947, 52369), (949, 52363), (954, 52348), (964, 52324), (968, 52309), (969, 52306), (972, 52294), (979, 52270), (1002, 52222), (1015, 52198),

Gene: Nyxis\_45 Start: 31460, Stop: 29634, Start Num: 234

Candidate Starts for Nyxis\_45:

(Start: 234 @31460 has 938 MA's), (252, 31439), (266, 31409), (279, 31379), (379, 31217), (389, 31199), (415, 31127), (419, 31118), (458, 30998), (465, 30974), (541, 30881), (568, 30833), (582, 30812), (603, 30773), (663, 30641), (675, 30620), (700, 30575), (703, 30563), (756, 30410), (759, 30389), (798, 30266), (805, 30236), (818, 30197), (841, 30131), (842, 30128), (847, 30113), (856, 30089), (862, 30065), (942, 29858), (985, 29723), (989, 29711), (993, 29702),

Gene: OKCentral2016\_43 Start: 30827, Stop: 28992, Start Num: 234

Candidate Starts for OKCentral2016\_43:

(Start: 234 @30827 has 938 MA's), (266, 30776), (303, 30710), (353, 30623), (368, 30599), (390, 30563), (395, 30551), (415, 30494), (419, 30485), (445, 30401), (458, 30365), (461, 30353), (464, 30344), (465, 30341), (541, 30248), (568, 30200), (603, 30140), (619, 30113), (630, 30089), (661, 30011), (663, 30008), (675, 29987), (679, 29981), (711, 29915), (729, 29873), (759, 29750), (775, 29702), (798, 29627), (805, 29597), (818, 29558), (842, 29486), (856, 29447), (862, 29423), (864, 29417), (868, 29405), (911, 29297), (942, 29216), (949, 29192), (970, 29129), (985, 29081), (989, 29069), (993, 29060),

Gene: OKaNui\_45 Start: 31620, Stop: 29794, Start Num: 234

Candidate Starts for OKaNui\_45:

(Start: 234 @31620 has 938 MA's), (252, 31599), (266, 31569), (279, 31539), (379, 31377), (389, 31359), (415, 31287), (419, 31278), (465, 31134), (541, 31041), (568, 30993), (582, 30972), (603, 30933), (663, 30801), (675, 30780), (700, 30735), (703, 30723), (756, 30570), (759, 30549), (798, 30426), (805, 30396), (818, 30357), (841, 30291), (842, 30288), (847, 30273), (856, 30249), (862, 30225), (942, 30018), (985, 29883), (989, 29871), (993, 29862),

Gene: OSmaximus\_62 Start: 54777, Stop: 52918, Start Num: 197

Candidate Starts for OSmaximus\_62:

(Start: 180 @54801 has 1 MA's), (Start: 197 @54777 has 298 MA's), (Start: 225 @54753 has 5 MA's), (Start: 238 @54747 has 2 MA's), (Start: 261 @54705 has 10 MA's), (269, 54684), (323, 54570), (328, 54564), (349, 54534), (385, 54474), (394, 54453), (410, 54399), (418, 54387), (425, 54369), (427, 54357), (462, 54252), (496, 54195), (511, 54159), (516, 54147), (534, 54123), (539, 54111), (545, 54093), (555, 54075), (566, 54057), (588, 54018), (595, 54009), (597, 54006), (599, 54003), (754, 53646), (760, 53613), (765, 53592), (799, 53499), (802, 53490), (822, 53427), (841, 53391), (842, 53388), (847, 53373), (872, 53295), (877, 53283), (883, 53262), (902, 53223), (942, 53133), (947, 53115), (949, 53109), (954, 53094), (964, 53070), (968, 53055), (969, 53052), (972, 53040), (979, 53016), (1002, 52968), (1015, 52944),

Gene: Oats\_38 Start: 28632, Stop: 26767, Start Num: 283

Candidate Starts for Oats\_38:

(Start: 234 @28719 has 938 MA's), (Start: 283 @28632 has 147 MA's), (Start: 291 @28623 has 5 MA's), (342, 28518), (347, 28509), (367, 28479), (369, 28476), (424, 28356), (426, 28344), (428, 28338), (466, 28233), (473, 28206), (532, 28065), (535, 28059), (537, 28056), (541, 28044), (551,

28017), (553, 28014), (562, 27999), (566, 27993), (570, 27987), (613, 27954), (701, 27765), (798, 27450), (801, 27441), (802, 27438), (805, 27420), (819, 27378), (822, 27372), (825, 27363), (832, 27348), (849, 27291), (900, 27132), (913, 27102), (917, 27093), (938, 27033), (943, 27009), (956, 26970), (967, 26937), (970, 26925), (986, 26865),

Gene: Obama12\_46 Start: 31994, Stop: 30168, Start Num: 234

Candidate Starts for Obama12\_46:

(Start: 234 @31994 has 938 MA's), (265, 31946), (353, 31790), (395, 31718), (415, 31661), (419, 31652), (458, 31532), (465, 31508), (541, 31415), (568, 31367), (582, 31346), (603, 31307), (628, 31262), (663, 31175), (667, 31166), (675, 31154), (700, 31109), (703, 31097), (756, 30944), (759, 30923), (798, 30800), (805, 30770), (818, 30731), (841, 30665), (842, 30662), (856, 30623), (862, 30599), (942, 30392), (985, 30257), (989, 30245), (993, 30236),

Gene: ObiToo\_46 Start: 30468, Stop: 32333, Start Num: 234

Candidate Starts for ObiToo\_46:

(125, 30285), (Start: 172 @30390 has 1 MA's), (Start: 234 @30468 has 938 MA's), (265, 30516), (359, 30681), (377, 30699), (405, 30765), (411, 30786), (543, 31062), (546, 31071), (603, 31170), (615, 31185), (655, 31275), (675, 31323), (703, 31380), (730, 31461), (759, 31581), (790, 31668), (803, 31725), (805, 31734), (905, 32007), (985, 32229),

Gene: Obutu\_59 Start: 54042, Stop: 52225, Start Num: 235

Candidate Starts for Obutu\_59:

(129, 54225), (Start: 235 @54042 has 43 MA's), (252, 54012), (359, 53832), (424, 53679), (426, 53667), (437, 53637), (442, 53631), (462, 53568), (464, 53562), (496, 53511), (511, 53475), (539, 53427), (597, 53322), (647, 53226), (664, 53175), (737, 53031), (749, 52992), (755, 52962), (760, 52935), (763, 52923), (797, 52827), (799, 52821), (802, 52812), (804, 52800), (834, 52728), (841, 52698), (847, 52680), (851, 52671), (872, 52602), (877, 52590), (883, 52569), (921, 52500), (931, 52485), (938, 52461), (949, 52416), (964, 52377), (969, 52359), (972, 52347), (975, 52335), (979, 52323), (994, 52281), (1015, 52251),

Gene: Odin\_44 Start: 30188, Stop: 28356, Start Num: 234

Candidate Starts for Odin\_44:

(Start: 234 @30188 has 938 MA's), (353, 29984), (364, 29966), (397, 29906), (403, 29885), (405, 29879), (408, 29867), (415, 29852), (425, 29828), (465, 29699), (520, 29639), (535, 29621), (541, 29606), (571, 29549), (619, 29468), (640, 29420), (675, 29339), (759, 29114), (790, 29027), (798, 28991), (805, 28961), (818, 28922), (837, 28901), (841, 28880), (847, 28862), (879, 28763), (888, 28736), (908, 28700), (921, 28682), (936, 28646), (942, 28622), (985, 28487), (989, 28475), (993, 28466), (995, 28463), (1021, 28418), (1036, 28388),

Gene: Ohfah\_46 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Ohfah\_46:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Ohno789\_45 Start: 35178, Stop: 33352, Start Num: 234

Candidate Starts for Ohno789\_45:

(Start: 234 @35178 has 938 MA's), (359, 34965), (395, 34902), (405, 34872), (411, 34851), (415, 34845), (419, 34836), (457, 34719), (465, 34692), (541, 34599), (546, 34584), (596, 34500), (598, 34497), (634, 34431), (657, 34371), (679, 34326), (700, 34287), (759, 34107), (775, 34059), (790, 34020), (805, 33954), (818, 33915), (837, 33894), (841, 33873), (847, 33855), (868, 33789), (936,

33639), (938, 33636), (946, 33600), (954, 33576), (959, 33567), (963, 33555), (985, 33480), (993, 33459),

Gene: Olak\_59 Start: 54034, Stop: 52175, Start Num: 197

Candidate Starts for Olak\_59:

(Start: 180 @54058 has 1 MA's), (Start: 197 @54034 has 298 MA's), (Start: 225 @54010 has 5 MA's), (Start: 238 @54004 has 2 MA's), (Start: 261 @53962 has 10 MA's), (269, 53941), (323, 53827), (328, 53821), (349, 53791), (385, 53731), (394, 53710), (410, 53656), (418, 53644), (425, 53626), (427, 53614), (462, 53509), (496, 53452), (511, 53416), (516, 53404), (535, 53377), (545, 53350), (555, 53332), (566, 53314), (588, 53275), (595, 53266), (597, 53263), (724, 53005), (754, 52903), (760, 52870), (765, 52849), (799, 52756), (802, 52747), (822, 52684), (841, 52648), (842, 52645), (847, 52630), (872, 52552), (877, 52540), (883, 52519), (902, 52480), (942, 52390), (947, 52372), (949, 52366), (954, 52351), (964, 52327), (968, 52312), (969, 52309), (972, 52297), (979, 52273), (1002, 52225), (1015, 52201),

Gene: OlanP\_47 Start: 31923, Stop: 30109, Start Num: 234

Candidate Starts for OlanP\_47:

(Start: 234 @31923 has 938 MA's), (262, 31884), (266, 31872), (353, 31719), (362, 31704), (395, 31647), (415, 31590), (419, 31581), (432, 31539), (448, 31488), (465, 31437), (541, 31344), (566, 31296), (582, 31272), (603, 31233), (619, 31206), (634, 31176), (670, 31083), (679, 31071), (701, 31023), (703, 31020), (710, 31008), (759, 30852), (778, 30801), (789, 30768), (790, 30765), (805, 30699), (818, 30660), (842, 30588), (856, 30549), (862, 30525), (868, 30507), (879, 30474), (921, 30393), (942, 30333), (947, 30315), (968, 30255), (970, 30246), (985, 30198), (989, 30186), (993, 30177),

Gene: OldNelly\_39 Start: 28936, Stop: 27071, Start Num: 283

Candidate Starts for OldNelly\_39:

(Start: 234 @29023 has 938 MA's), (Start: 283 @28936 has 147 MA's), (Start: 291 @28927 has 5 MA's), (342, 28822), (347, 28813), (367, 28783), (369, 28780), (424, 28660), (426, 28648), (428, 28642), (466, 28537), (473, 28510), (532, 28369), (535, 28363), (537, 28360), (541, 28348), (551, 28321), (553, 28318), (562, 28303), (566, 28297), (570, 28291), (613, 28258), (671, 28129), (701, 28069), (798, 27754), (801, 27745), (802, 27742), (805, 27724), (819, 27682), (822, 27676), (825, 27667), (832, 27652), (849, 27595), (900, 27436), (913, 27406), (917, 27397), (938, 27337), (943, 27313), (956, 27274), (967, 27241), (970, 27229), (986, 27169),

Gene: Oline\_61 Start: 54135, Stop: 52276, Start Num: 197

Candidate Starts for Oline\_61:

(Start: 180 @54159 has 1 MA's), (Start: 197 @54135 has 298 MA's), (Start: 225 @54111 has 5 MA's), (Start: 238 @54105 has 2 MA's), (Start: 261 @54063 has 10 MA's), (269, 54042), (323, 53928), (328, 53922), (349, 53892), (385, 53832), (394, 53811), (410, 53757), (418, 53745), (425, 53727), (427, 53715), (462, 53610), (496, 53553), (511, 53517), (516, 53505), (534, 53481), (539, 53469), (545, 53451), (555, 53433), (566, 53415), (588, 53376), (595, 53367), (597, 53364), (599, 53361), (754, 53004), (760, 52971), (765, 52950), (799, 52857), (802, 52848), (822, 52785), (841, 52749), (842, 52746), (847, 52731), (872, 52653), (877, 52641), (883, 52620), (902, 52581), (942, 52491), (947, 52473), (949, 52467), (954, 52452), (964, 52428), (968, 52413), (969, 52410), (972, 52398), (979, 52374), (1002, 52326), (1015, 52302), (1019, 52287),

Gene: Olive\_60 Start: 54247, Stop: 52388, Start Num: 197

Candidate Starts for Olive\_60:

(Start: 180 @54271 has 1 MA's), (Start: 197 @54247 has 298 MA's), (Start: 225 @54223 has 5 MA's), (Start: 238 @54217 has 2 MA's), (Start: 261 @54175 has 10 MA's), (269, 54154), (323, 54040), (328, 54034), (349, 54004), (385, 53944), (394, 53923), (410, 53869), (418, 53857), (425, 53839), (427, 53827), (462, 53722), (496, 53665), (511, 53629), (516, 53617), (534, 53593), (539, 53581), (545,

53563), (555, 53545), (566, 53527), (588, 53488), (595, 53479), (597, 53476), (599, 53473), (754, 53116), (760, 53083), (765, 53062), (799, 52969), (802, 52960), (822, 52897), (841, 52861), (842, 52858), (847, 52843), (872, 52765), (877, 52753), (883, 52732), (902, 52693), (942, 52603), (947, 52585), (949, 52579), (954, 52564), (964, 52540), (968, 52525), (969, 52522), (972, 52510), (979, 52486), (1002, 52438), (1015, 52414),

Gene: OliverWalter\_59 Start: 54066, Stop: 52207, Start Num: 197

Candidate Starts for OliverWalter\_59:

(Start: 180 @54090 has 1 MA's), (Start: 197 @54066 has 298 MA's), (Start: 225 @54042 has 5 MA's), (Start: 238 @54036 has 2 MA's), (Start: 261 @53994 has 10 MA's), (269, 53973), (323, 53859), (328, 53853), (349, 53823), (385, 53763), (394, 53742), (410, 53688), (418, 53676), (425, 53658), (427, 53646), (462, 53541), (496, 53484), (511, 53448), (516, 53436), (535, 53409), (539, 53400), (555, 53364), (588, 53307), (595, 53298), (597, 53295), (599, 53292), (754, 52935), (760, 52902), (765, 52881), (799, 52788), (802, 52779), (822, 52716), (841, 52680), (842, 52677), (847, 52662), (872, 52584), (877, 52572), (883, 52551), (902, 52512), (942, 52422), (947, 52404), (949, 52398), (954, 52383), (964, 52359), (968, 52344), (969, 52341), (972, 52329), (979, 52305), (1002, 52257), (1015, 52233),

Gene: Ollie\_48 Start: 31724, Stop: 29910, Start Num: 234

Candidate Starts for Ollie\_48:

(Start: 234 @31724 has 938 MA's), (262, 31685), (266, 31673), (353, 31520), (362, 31505), (395, 31448), (415, 31391), (419, 31382), (432, 31340), (448, 31289), (465, 31238), (541, 31145), (566, 31097), (571, 31088), (582, 31073), (603, 31034), (619, 31007), (634, 30977), (670, 30884), (679, 30872), (701, 30824), (710, 30809), (759, 30653), (775, 30605), (790, 30566), (805, 30500), (818, 30461), (842, 30389), (856, 30350), (862, 30326), (868, 30308), (879, 30275), (888, 30248), (921, 30194), (942, 30134), (968, 30056), (985, 29999), (989, 29987), (993, 29978),

Gene: Olliecat\_39 Start: 28106, Stop: 29989, Start Num: 223

Candidate Starts for Olliecat\_39:

(Start: 223 @28106 has 3 MA's), (252, 28127), (273, 28175), (284, 28196), (353, 28313), (395, 28376), (405, 28406), (411, 28427), (419, 28442), (424, 28454), (453, 28535), (459, 28550), (556, 28706), (577, 28736), (603, 28787), (618, 28808), (620, 28817), (660, 28916), (759, 29204), (761, 29210), (782, 29270), (790, 29291), (796, 29321), (799, 29330), (805, 29357), (840, 29450), (847, 29474), (868, 29540), (869, 29543), (901, 29621), (903, 29627), (931, 29672), (949, 29741), (962, 29774), (964, 29780), (967, 29792), (968, 29795), (985, 29852), (991, 29867), (993, 29873), (1039, 29954),

Gene: Omniscient\_61 Start: 54894, Stop: 53035, Start Num: 197

Candidate Starts for Omniscient\_61:

(Start: 180 @54918 has 1 MA's), (Start: 197 @54894 has 298 MA's), (Start: 225 @54870 has 5 MA's), (Start: 238 @54864 has 2 MA's), (Start: 261 @54822 has 10 MA's), (269, 54801), (323, 54687), (328, 54681), (349, 54651), (385, 54591), (394, 54570), (410, 54516), (418, 54504), (425, 54486), (427, 54474), (462, 54369), (496, 54312), (511, 54276), (516, 54264), (534, 54240), (539, 54228), (545, 54210), (555, 54192), (566, 54174), (588, 54135), (595, 54126), (597, 54123), (599, 54120), (754, 53763), (760, 53730), (765, 53709), (799, 53616), (802, 53607), (822, 53544), (841, 53508), (842, 53505), (847, 53490), (872, 53412), (877, 53400), (883, 53379), (902, 53340), (942, 53250), (947, 53232), (949, 53226), (954, 53211), (964, 53187), (968, 53172), (969, 53169), (972, 53157), (979, 53133), (1002, 53085), (1015, 53061),

Gene: Onglai\_43 Start: 29824, Stop: 28031, Start Num: 234

Candidate Starts for Onglai\_43:

(Start: 234 @29824 has 938 MA's), (246, 29815), (266, 29773), (334, 29653), (336, 29650), (364, 29602), (397, 29542), (406, 29512), (409, 29500), (415, 29488), (465, 29335), (541, 29242), (619, 29104), (634, 29074), (703, 28915), (710, 28903), (726, 28876), (756, 28768), (759, 28747), (802,

28612), (805, 28594), (841, 28513), (856, 28471), (879, 28396), (918, 28321), (936, 28279), (968, 28177), (985, 28120), (989, 28108), (993, 28099),

Gene: Oofda\_48 Start: 29834, Stop: 28044, Start Num: 234

Candidate Starts for Oofda\_48:

(Start: 234 @29834 has 938 MA's), (395, 29555), (397, 29552), (405, 29525), (415, 29498), (432, 29447), (465, 29345), (541, 29252), (559, 29213), (571, 29195), (663, 29006), (700, 28940), (730, 28880), (740, 28841), (754, 28790), (756, 28781), (759, 28760), (778, 28709), (789, 28676), (796, 28643), (798, 28637), (805, 28607), (837, 28547), (841, 28526), (856, 28484), (863, 28457), (903, 28355), (936, 28292), (938, 28289), (985, 28133), (989, 28121), (995, 28109),

Gene: Oogway\_42 Start: 33561, Stop: 31732, Start Num: 234

Candidate Starts for Oogway\_42:

(Start: 234 @33561 has 938 MA's), (359, 33348), (368, 33333), (405, 33255), (411, 33234), (415, 33228), (419, 33219), (457, 33102), (465, 33075), (541, 32982), (546, 32967), (566, 32934), (596, 32883), (598, 32880), (634, 32814), (648, 32784), (657, 32754), (679, 32709), (700, 32670), (759, 32490), (775, 32442), (793, 32394), (802, 32355), (805, 32337), (818, 32298), (837, 32277), (841, 32256), (846, 32241), (885, 32118), (960, 31947), (967, 31923), (982, 31875), (985, 31863), (993, 31842), (997, 31836), (1025, 31788), (1030, 31773),

Gene: Oosterbaan\_60 Start: 54313, Stop: 52454, Start Num: 197

Candidate Starts for Oosterbaan\_60:

(Start: 180 @54337 has 1 MA's), (Start: 197 @54313 has 298 MA's), (Start: 225 @54289 has 5 MA's), (Start: 238 @54283 has 2 MA's), (Start: 261 @54241 has 10 MA's), (269, 54220), (323, 54106), (328, 54100), (349, 54070), (385, 54010), (394, 53989), (410, 53935), (418, 53923), (425, 53905), (427, 53893), (462, 53788), (496, 53731), (511, 53695), (516, 53683), (535, 53656), (545, 53629), (555, 53611), (566, 53593), (588, 53554), (595, 53545), (597, 53542), (724, 53284), (754, 53182), (760, 53149), (765, 53128), (799, 53035), (802, 53026), (822, 52963), (841, 52927), (842, 52924), (847, 52909), (872, 52831), (877, 52819), (883, 52798), (902, 52759), (942, 52669), (947, 52651), (949, 52645), (954, 52630), (964, 52606), (968, 52591), (969, 52588), (972, 52576), (979, 52552), (1002, 52504), (1015, 52480),

Gene: Opia\_57 Start: 52500, Stop: 50671, Start Num: 197

Candidate Starts for Opia\_57:

(Start: 197 @52500 has 298 MA's), (Start: 238 @52473 has 2 MA's), (253, 52443), (Start: 261 @52431 has 10 MA's), (272, 52404), (273, 52401), (277, 52392), (301, 52374), (355, 52278), (385, 52227), (395, 52203), (402, 52179), (450, 52041), (459, 52017), (462, 52005), (496, 51948), (511, 51912), (516, 51900), (534, 51876), (580, 51792), (595, 51762), (597, 51759), (618, 51729), (678, 51585), (710, 51519), (733, 51480), (737, 51468), (743, 51447), (749, 51429), (760, 51372), (783, 51315), (793, 51288), (799, 51258), (802, 51249), (822, 51183), (839, 51156), (841, 51147), (847, 51129), (856, 51105), (872, 51051), (877, 51039), (883, 51018), (921, 50949), (942, 50889), (947, 50871), (960, 50838), (964, 50826), (968, 50811), (969, 50808), (972, 50796), (979, 50772), (980, 50769), (1002, 50721), (1004, 50718), (1015, 50697), (1023, 50676),

Gene: Orange\_44 Start: 30325, Stop: 28538, Start Num: 234

Candidate Starts for Orange\_44:

(Start: 234 @30325 has 938 MA's), (353, 30121), (395, 30049), (405, 30019), (415, 29992), (543, 29740), (571, 29689), (619, 29608), (639, 29563), (675, 29479), (703, 29422), (728, 29380), (740, 29335), (759, 29254), (778, 29203), (790, 29167), (805, 29101), (837, 29041), (839, 29029), (871, 28927), (879, 28903), (884, 28885), (921, 28822), (935, 28795), (936, 28786), (942, 28762), (985, 28627), (989, 28615), (993, 28606),

Gene: OrangeOswald\_58 Start: 53684, Stop: 51867, Start Num: 235



Candidate Starts for OrangeOswald\_58:

(129, 53867), (Start: 235 @53684 has 43 MA's), (252, 53654), (359, 53474), (406, 53369), (424, 53321), (426, 53309), (437, 53279), (442, 53273), (462, 53210), (464, 53204), (496, 53153), (511, 53117), (539, 53069), (597, 52964), (647, 52868), (664, 52817), (737, 52673), (749, 52634), (755, 52604), (760, 52577), (763, 52565), (797, 52469), (799, 52463), (802, 52454), (804, 52442), (834, 52370), (841, 52340), (847, 52322), (851, 52313), (872, 52244), (877, 52232), (883, 52211), (921, 52142), (931, 52127), (938, 52103), (942, 52082), (947, 52064), (949, 52058), (962, 52025), (964, 52019), (969, 52001), (972, 51989), (975, 51977), (979, 51965), (994, 51923), (1015, 51893),

Gene: Orfeu\_59 Start: 54570, Stop: 52711, Start Num: 197

Candidate Starts for Orfeu\_59:

(Start: 180 @54594 has 1 MA's), (Start: 197 @54570 has 298 MA's), (Start: 225 @54546 has 5 MA's), (Start: 238 @54540 has 2 MA's), (Start: 261 @54498 has 10 MA's), (269, 54477), (323, 54363), (328, 54357), (349, 54327), (385, 54267), (394, 54246), (410, 54192), (418, 54180), (425, 54162), (427, 54150), (462, 54045), (496, 53988), (511, 53952), (516, 53940), (535, 53913), (545, 53886), (555, 53868), (566, 53850), (588, 53811), (595, 53802), (597, 53799), (599, 53796), (754, 53439), (760, 53406), (765, 53385), (799, 53292), (802, 53283), (822, 53220), (841, 53184), (842, 53181), (847, 53166), (872, 53088), (877, 53076), (883, 53055), (902, 53016), (942, 52926), (947, 52908), (949, 52902), (954, 52887), (964, 52863), (968, 52848), (969, 52845), (972, 52833), (979, 52809), (1002, 52761), (1015, 52737),

Gene: Orion\_62 Start: 53975, Stop: 52116, Start Num: 197

Candidate Starts for Orion\_62:

(Start: 180 @53999 has 1 MA's), (Start: 197 @53975 has 298 MA's), (Start: 225 @53951 has 5 MA's), (Start: 238 @53945 has 2 MA's), (Start: 261 @53903 has 10 MA's), (269, 53882), (323, 53768), (328, 53762), (349, 53732), (385, 53672), (394, 53651), (410, 53597), (418, 53585), (425, 53567), (427, 53555), (462, 53450), (496, 53393), (511, 53357), (516, 53345), (535, 53318), (545, 53291), (555, 53273), (566, 53255), (588, 53216), (595, 53207), (597, 53204), (724, 52946), (754, 52844), (760, 52811), (765, 52790), (799, 52697), (802, 52688), (822, 52625), (841, 52589), (842, 52586), (847, 52571), (872, 52493), (877, 52481), (883, 52460), (902, 52421), (942, 52331), (947, 52313), (949, 52307), (954, 52292), (964, 52268), (968, 52253), (969, 52250), (972, 52238), (979, 52214), (1002, 52166), (1015, 52142),

Gene: Orla\_51 Start: 35183, Stop: 32787, Start Num: 45

Candidate Starts for Orla\_51:

(16, 35312), (19, 35303), (Start: 45 @35183 has 24 MA's), (92, 35051), (96, 35039), (109, 34994), (136, 34931), (141, 34910), (177, 34877), (216, 34820), (250, 34772), (259, 34757), (279, 34709), (317, 34634), (319, 34628), (322, 34622), (324, 34616), (366, 34547), (380, 34523), (391, 34499), (420, 34424), (426, 34403), (444, 34355), (448, 34343), (464, 34298), (522, 34142), (524, 34136), (634, 34007), (662, 33959), (668, 33947), (711, 33875), (729, 33833), (758, 33722), (770, 33680), (772, 33656), (773, 33647), (784, 33605), (805, 33512), (817, 33476), (819, 33470), (822, 33464), (824, 33458), (842, 33401), (849, 33377), (851, 33359), (880, 33266), (910, 33197), (926, 33158), (938, 33119), (942, 33098), (952, 33065), (960, 33047), (986, 32951), (996, 32927), (1016, 32888), (1046, 32819),

Gene: Orwigg\_61 Start: 53955, Stop: 52096, Start Num: 197

Candidate Starts for Orwigg\_61:

(Start: 180 @53979 has 1 MA's), (Start: 197 @53955 has 298 MA's), (Start: 225 @53931 has 5 MA's), (Start: 238 @53925 has 2 MA's), (Start: 261 @53883 has 10 MA's), (269, 53862), (323, 53748), (328, 53742), (349, 53712), (385, 53652), (394, 53631), (410, 53577), (418, 53565), (425, 53547), (427, 53535), (462, 53430), (496, 53373), (511, 53337), (516, 53325), (534, 53301), (539, 53289), (545, 53271), (555, 53253), (566, 53235), (588, 53196), (595, 53187), (597, 53184), (599, 53181), (724, 52926), (754, 52824), (760, 52791), (765, 52770), (799, 52677), (802, 52668), (822, 52605), (841,

52569), (842, 52566), (847, 52551), (872, 52473), (877, 52461), (883, 52440), (902, 52401), (942, 52311), (947, 52293), (949, 52287), (954, 52272), (964, 52248), (968, 52233), (969, 52230), (972, 52218), (979, 52194), (1002, 52146), (1015, 52122),

Gene: Oxtob96\_39 Start: 28935, Stop: 27070, Start Num: 283

Candidate Starts for Oxtob96\_39:

(Start: 234 @29022 has 938 MA's), (Start: 237 @29019 has 2 MA's), (274, 28950), (Start: 283 @28935 has 147 MA's), (Start: 291 @28926 has 5 MA's), (342, 28821), (347, 28812), (367, 28782), (369, 28779), (424, 28659), (426, 28647), (428, 28641), (466, 28536), (473, 28509), (532, 28368), (537, 28359), (541, 28347), (551, 28320), (553, 28317), (562, 28302), (566, 28296), (570, 28290), (613, 28257), (701, 28068), (798, 27753), (801, 27744), (802, 27741), (805, 27723), (819, 27681), (822, 27675), (832, 27651), (849, 27594), (900, 27435), (913, 27405), (917, 27396), (938, 27336), (943, 27312), (956, 27273), (967, 27240), (970, 27228), (986, 27168),

Gene: P28Green\_49 Start: 31855, Stop: 30041, Start Num: 234

Candidate Starts for P28Green\_49:

(Start: 234 @31855 has 938 MA's), (262, 31816), (266, 31804), (353, 31651), (362, 31636), (395, 31579), (415, 31522), (419, 31513), (432, 31471), (448, 31420), (465, 31369), (541, 31276), (566, 31228), (571, 31219), (582, 31204), (603, 31165), (619, 31138), (634, 31108), (670, 31015), (701, 30955), (710, 30940), (759, 30784), (790, 30697), (805, 30631), (818, 30592), (842, 30520), (856, 30481), (862, 30457), (868, 30439), (879, 30406), (888, 30379), (921, 30325), (942, 30265), (968, 30187), (985, 30130), (989, 30118), (993, 30109),

Gene: PG1\_61 Start: 54546, Stop: 52687, Start Num: 197

Candidate Starts for PG1\_61:

(Start: 180 @54570 has 1 MA's), (Start: 197 @54546 has 298 MA's), (Start: 225 @54522 has 5 MA's), (Start: 238 @54516 has 2 MA's), (Start: 261 @54474 has 10 MA's), (269, 54453), (323, 54339), (328, 54333), (349, 54303), (385, 54243), (394, 54222), (410, 54168), (418, 54156), (425, 54138), (427, 54126), (462, 54021), (496, 53964), (511, 53928), (516, 53916), (535, 53889), (545, 53862), (555, 53844), (566, 53826), (588, 53787), (595, 53778), (597, 53775), (724, 53517), (754, 53415), (760, 53382), (765, 53361), (799, 53268), (802, 53259), (822, 53196), (841, 53160), (842, 53157), (847, 53142), (872, 53064), (877, 53052), (883, 53031), (902, 52992), (942, 52902), (947, 52884), (949, 52878), (954, 52863), (964, 52839), (968, 52824), (969, 52821), (972, 52809), (979, 52785), (1002, 52737), (1015, 52713),

Gene: PGHhamlin\_50 Start: 31845, Stop: 30031, Start Num: 234

Candidate Starts for PGHhamlin\_50:

(Start: 234 @31845 has 938 MA's), (262, 31806), (266, 31794), (353, 31641), (362, 31626), (395, 31569), (415, 31512), (419, 31503), (432, 31461), (448, 31410), (465, 31359), (541, 31266), (566, 31218), (571, 31209), (582, 31194), (603, 31155), (619, 31128), (634, 31098), (670, 31005), (679, 30993), (701, 30945), (710, 30930), (759, 30774), (790, 30687), (805, 30621), (818, 30582), (842, 30510), (856, 30471), (862, 30447), (868, 30429), (879, 30396), (888, 30369), (921, 30315), (942, 30255), (968, 30177), (985, 30120), (989, 30108), (993, 30099),

Gene: PP\_46 Start: 35109, Stop: 33271, Start Num: 234

Candidate Starts for PP\_46:

(Start: 234 @35109 has 938 MA's), (266, 35058), (353, 34905), (359, 34896), (368, 34881), (390, 34845), (415, 34776), (419, 34767), (424, 34755), (465, 34623), (541, 34527), (568, 34479), (571, 34473), (603, 34419), (675, 34266), (700, 34221), (759, 34029), (769, 33999), (802, 33894), (805, 33876), (806, 33873), (818, 33837), (842, 33765), (847, 33750), (867, 33687), (918, 33561), (942, 33495), (985, 33360), (989, 33348), (993, 33339),

Gene: PSullivan\_44 Start: 33947, Stop: 32121, Start Num: 234

Candidate Starts for PSullivan\_44:

(Start: 234 @33947 has 938 MA's), (359, 33734), (368, 33719), (395, 33671), (405, 33641), (411, 33620), (415, 33614), (419, 33605), (457, 33488), (465, 33461), (541, 33368), (546, 33353), (558, 33332), (596, 33269), (598, 33266), (634, 33200), (648, 33170), (657, 33140), (679, 33095), (700, 33056), (759, 32876), (769, 32846), (775, 32828), (778, 32825), (790, 32789), (805, 32723), (818, 32684), (837, 32663), (841, 32642), (847, 32624), (868, 32558), (936, 32408), (938, 32405), (946, 32369), (959, 32336), (963, 32324), (985, 32249), (993, 32228),

Gene: PacerPaul\_45 Start: 34817, Stop: 32991, Start Num: 234

Candidate Starts for PacerPaul\_45:

(Start: 234 @34817 has 938 MA's), (359, 34604), (368, 34589), (405, 34511), (411, 34490), (415, 34484), (419, 34475), (457, 34358), (465, 34331), (541, 34238), (546, 34223), (566, 34190), (596, 34139), (598, 34136), (634, 34070), (648, 34040), (657, 34010), (679, 33965), (700, 33926), (759, 33746), (769, 33716), (775, 33698), (778, 33695), (790, 33659), (805, 33593), (841, 33512), (842, 33509), (868, 33428), (932, 33293), (936, 33278), (938, 33275), (946, 33239), (954, 33215), (959, 33206), (963, 33194), (970, 33167), (985, 33119), (993, 33098),

Gene: Pacifista\_59 Start: 54030, Stop: 52171, Start Num: 197

Candidate Starts for Pacifista\_59:

(Start: 180 @54054 has 1 MA's), (Start: 197 @54030 has 298 MA's), (Start: 225 @54006 has 5 MA's), (Start: 238 @54000 has 2 MA's), (Start: 261 @53958 has 10 MA's), (269, 53937), (323, 53823), (328, 53817), (349, 53787), (385, 53727), (394, 53706), (410, 53652), (418, 53640), (425, 53622), (427, 53610), (462, 53505), (496, 53448), (511, 53412), (516, 53400), (534, 53376), (539, 53364), (545, 53346), (555, 53328), (566, 53310), (588, 53271), (595, 53262), (597, 53259), (599, 53256), (754, 52899), (760, 52866), (765, 52845), (799, 52752), (802, 52743), (822, 52680), (841, 52644), (842, 52641), (847, 52626), (872, 52548), (877, 52536), (883, 52515), (902, 52476), (942, 52386), (947, 52368), (949, 52362), (954, 52347), (964, 52323), (968, 52308), (969, 52305), (972, 52293), (979, 52269), (1002, 52221), (1015, 52197),

Gene: PackMan\_44 Start: 31483, Stop: 29690, Start Num: 234

Candidate Starts for PackMan\_44:

(Start: 234 @31483 has 938 MA's), (246, 31474), (266, 31432), (334, 31312), (336, 31309), (364, 31261), (397, 31201), (406, 31171), (409, 31159), (415, 31147), (465, 30994), (541, 30901), (619, 30763), (634, 30733), (703, 30574), (710, 30562), (726, 30535), (756, 30427), (759, 30406), (802, 30271), (805, 30253), (841, 30172), (856, 30130), (879, 30055), (918, 29980), (936, 29938), (968, 29836), (985, 29779), (989, 29767), (993, 29758),

Gene: PainterBoy\_45 Start: 30908, Stop: 29076, Start Num: 234

Candidate Starts for PainterBoy\_45:

(Start: 234 @30908 has 938 MA's), (353, 30704), (355, 30701), (379, 30665), (395, 30632), (397, 30629), (405, 30602), (411, 30581), (415, 30575), (419, 30566), (432, 30524), (458, 30446), (465, 30422), (541, 30329), (634, 30161), (726, 29963), (759, 29834), (793, 29738), (802, 29699), (805, 29681), (839, 29609), (841, 29600), (885, 29462), (935, 29375), (936, 29366), (968, 29264), (985, 29207), (989, 29195), (1042, 29090),

Gene: Pajaza\_35 Start: 27722, Stop: 25905, Start Num: 282

Candidate Starts for Pajaza\_35:

(Start: 282 @27722 has 4 MA's), (292, 27707), (426, 27431), (428, 27425), (498, 27290), (505, 27275), (535, 27197), (537, 27194), (541, 27182), (553, 27152), (611, 27095), (680, 26948), (752, 26768), (787, 26630), (801, 26579), (802, 26576), (805, 26558), (806, 26555), (819, 26516), (849, 26429), (854, 26402), (900, 26270), (943, 26147), (954, 26114), (956, 26108), (960, 26099), (986, 26003), (988, 25997),

Gene: Palestino\_44 Start: 31570, Stop: 29741, Start Num: 234

Candidate Starts for Palestino\_44:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (628, 30838), (630, 30832), (663, 30751), (675, 30730), (700, 30685), (756, 30520), (759, 30499), (805, 30346), (817, 30310), (818, 30307), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Panamaxus\_42 Start: 31597, Stop: 29759, Start Num: 234

Candidate Starts for Panamaxus\_42:

(Start: 234 @31597 has 938 MA's), (266, 31546), (353, 31393), (395, 31321), (405, 31291), (415, 31264), (419, 31255), (465, 31111), (541, 31015), (568, 30967), (603, 30907), (648, 30820), (663, 30775), (675, 30754), (711, 30682), (729, 30640), (740, 30598), (759, 30517), (775, 30469), (790, 30430), (798, 30394), (805, 30364), (816, 30334), (842, 30253), (856, 30214), (862, 30190), (868, 30172), (869, 30169), (921, 30043), (942, 29983), (970, 29896), (985, 29848), (989, 29836), (993, 29827),

Gene: Papafritta\_38 Start: 28640, Stop: 26775, Start Num: 283

Candidate Starts for Papafritta\_38:

(Start: 234 @28727 has 938 MA's), (Start: 237 @28724 has 2 MA's), (Start: 283 @28640 has 147 MA's), (Start: 291 @28631 has 5 MA's), (342, 28526), (347, 28517), (367, 28487), (369, 28484), (424, 28364), (426, 28352), (428, 28346), (466, 28241), (473, 28214), (532, 28073), (535, 28067), (537, 28064), (541, 28052), (551, 28025), (553, 28022), (562, 28007), (566, 28001), (570, 27995), (613, 27962), (671, 27833), (701, 27773), (798, 27458), (801, 27449), (802, 27446), (805, 27428), (819, 27386), (822, 27380), (825, 27371), (832, 27356), (849, 27299), (900, 27140), (913, 27110), (917, 27101), (938, 27041), (943, 27017), (956, 26978), (967, 26945), (970, 26933), (986, 26873),

Gene: Papez\_47 Start: 36969, Stop: 35152, Start Num: 234

Candidate Starts for Papez\_47:

(Start: 234 @36969 has 938 MA's), (359, 36756), (395, 36693), (405, 36663), (411, 36642), (415, 36636), (419, 36627), (448, 36534), (457, 36510), (465, 36483), (541, 36390), (546, 36375), (566, 36342), (596, 36291), (598, 36288), (634, 36222), (657, 36162), (679, 36117), (700, 36078), (759, 35898), (775, 35850), (789, 35814), (790, 35811), (805, 35745), (818, 35706), (837, 35685), (841, 35664), (847, 35646), (868, 35580), (936, 35430), (938, 35427), (946, 35391), (954, 35367), (959, 35358), (963, 35346), (985, 35271), (993, 35250),

Gene: Paphu\_43 Start: 34328, Stop: 32499, Start Num: 234

Candidate Starts for Paphu\_43:

(Start: 234 @34328 has 938 MA's), (359, 34115), (368, 34100), (405, 34022), (411, 34001), (415, 33995), (419, 33986), (457, 33869), (465, 33842), (541, 33749), (546, 33734), (566, 33701), (596, 33650), (598, 33647), (634, 33581), (648, 33551), (657, 33521), (679, 33476), (700, 33437), (759, 33257), (775, 33209), (793, 33161), (802, 33122), (805, 33104), (818, 33065), (837, 33044), (841, 33023), (846, 33008), (885, 32885), (960, 32714), (967, 32690), (982, 32642), (985, 32630), (993, 32609), (997, 32603), (1025, 32555), (1030, 32540),

Gene: Paraselene\_43 Start: 34680, Stop: 32854, Start Num: 234

Candidate Starts for Paraselene\_43:

(Start: 234 @34680 has 938 MA's), (359, 34467), (368, 34452), (395, 34404), (405, 34374), (411, 34353), (415, 34347), (419, 34338), (457, 34221), (465, 34194), (541, 34101), (546, 34086), (566, 34053), (596, 34002), (598, 33999), (634, 33933), (648, 33903), (657, 33873), (679, 33828), (700, 33789), (759, 33609), (775, 33561), (790, 33522), (805, 33456), (818, 33417), (837, 33396), (841, 33375), (847, 33357), (868, 33291), (936, 33141), (938, 33138), (946, 33102), (954, 33078), (959, 33069), (963, 33057), (985, 32982), (993, 32961),

Gene: Pari\_45 Start: 34105, Stop: 32279, Start Num: 234

Candidate Starts for Pari\_45:

(Start: 234 @34105 has 938 MA's), (359, 33892), (368, 33877), (395, 33829), (405, 33799), (411, 33778), (415, 33772), (419, 33763), (457, 33646), (465, 33619), (541, 33526), (546, 33511), (596, 33427), (598, 33424), (634, 33358), (648, 33328), (657, 33298), (679, 33253), (700, 33214), (759, 33034), (775, 32986), (790, 32947), (805, 32881), (818, 32842), (837, 32821), (841, 32800), (847, 32782), (868, 32716), (936, 32566), (938, 32563), (946, 32527), (959, 32494), (963, 32482), (985, 32407), (993, 32386),

Gene: ParleG\_39 Start: 28937, Stop: 27072, Start Num: 283

Candidate Starts for ParleG\_39:

(Start: 234 @29024 has 938 MA's), (Start: 237 @29021 has 2 MA's), (Start: 283 @28937 has 147 MA's), (Start: 291 @28928 has 5 MA's), (342, 28823), (347, 28814), (367, 28784), (369, 28781), (424, 28661), (426, 28649), (428, 28643), (466, 28538), (473, 28511), (532, 28370), (535, 28364), (537, 28361), (541, 28349), (551, 28322), (553, 28319), (562, 28304), (566, 28298), (570, 28292), (613, 28259), (671, 28130), (701, 28070), (798, 27755), (801, 27746), (802, 27743), (805, 27725), (819, 27683), (822, 27677), (825, 27668), (832, 27653), (849, 27596), (900, 27437), (913, 27407), (917, 27398), (938, 27338), (943, 27314), (956, 27275), (967, 27242), (970, 27230), (986, 27170),

Gene: Parliament\_44 Start: 34876, Stop: 33050, Start Num: 234

Candidate Starts for Parliament\_44:

(Start: 234 @34876 has 938 MA's), (359, 34663), (395, 34600), (405, 34570), (411, 34549), (415, 34543), (419, 34534), (457, 34417), (465, 34390), (541, 34297), (546, 34282), (596, 34198), (598, 34195), (634, 34129), (648, 34099), (657, 34069), (679, 34024), (700, 33985), (759, 33805), (775, 33757), (778, 33754), (790, 33718), (805, 33652), (818, 33613), (837, 33592), (841, 33571), (847, 33553), (868, 33487), (936, 33337), (938, 33334), (946, 33298), (954, 33274), (959, 33265), (963, 33253), (985, 33178), (993, 33157),

Gene: Partridge\_36 Start: 28196, Stop: 26412, Start Num: 234

Candidate Starts for Partridge\_36:

(Start: 234 @28196 has 938 MA's), (334, 28025), (374, 27962), (394, 27923), (409, 27875), (415, 27863), (419, 27854), (465, 27710), (541, 27617), (566, 27569), (603, 27506), (619, 27479), (663, 27374), (679, 27347), (700, 27308), (759, 27128), (775, 27080), (805, 26975), (806, 26972), (837, 26915), (841, 26894), (858, 26846), (881, 26771), (918, 26702), (936, 26660), (938, 26657), (942, 26636), (946, 26621), (968, 26558), (985, 26501), (989, 26489), (1010, 26450), (1021, 26432),

Gene: PascalRango\_45 Start: 34446, Stop: 32620, Start Num: 234

Candidate Starts for PascalRango\_45:

(Start: 234 @34446 has 938 MA's), (359, 34233), (368, 34218), (395, 34170), (405, 34140), (411, 34119), (415, 34113), (419, 34104), (457, 33987), (465, 33960), (541, 33867), (546, 33852), (596, 33768), (598, 33765), (634, 33699), (648, 33669), (657, 33639), (679, 33594), (700, 33555), (759, 33375), (769, 33345), (775, 33327), (790, 33288), (805, 33222), (841, 33141), (842, 33138), (868, 33057), (936, 32907), (938, 32904), (946, 32868), (954, 32844), (959, 32835), (963, 32823), (985, 32748), (993, 32727),

Gene: PastaFagioli\_43 Start: 30294, Stop: 32099, Start Num: 273

Candidate Starts for PastaFagioli\_43:

(143, 30102), (151, 30114), (161, 30132), (Start: 191 @30177 has 2 MA's), (Start: 232 @30225 has 15 MA's), (273, 30294), (424, 30573), (425, 30576), (453, 30657), (543, 30789), (648, 30984), (709, 31131), (747, 31254), (759, 31314), (761, 31320), (778, 31365), (782, 31380), (786, 31395), (796, 31431), (805, 31467), (840, 31560), (845, 31578), (856, 31608), (901, 31731), (936, 31803), (946, 31842), (962, 31884), (978, 31938), (985, 31962), (989, 31974), (993, 31983), (1008, 32007),

Gene: Patbob\_100 Start: 78526, Stop: 80328, Start Num: 248

Candidate Starts for Patbob\_100:

(Start: 248 @78526 has 2 MA's), (276, 78589), (284, 78601), (345, 78712), (382, 78766), (418, 78847), (426, 78874), (428, 78880), (457, 78949), (468, 78985), (541, 79054), (586, 79132), (603, 79159), (615, 79174), (700, 79363), (720, 79408), (729, 79432), (731, 79441), (735, 79459), (746, 79492), (756, 79531), (759, 79552), (761, 79558), (796, 79672), (817, 79756), (825, 79774), (840, 79822), (843, 79834), (856, 79870), (865, 79903), (868, 79912), (883, 79957), (890, 79975), (931, 80059), (936, 80080), (943, 80107), (967, 80179), (973, 80203), (985, 80239), (999, 80266),

Gene: PattyP\_45 Start: 34329, Stop: 32500, Start Num: 234

Candidate Starts for PattyP\_45:

(Start: 234 @34329 has 938 MA's), (359, 34116), (368, 34101), (395, 34053), (405, 34023), (411, 34002), (415, 33996), (419, 33987), (445, 33903), (457, 33870), (465, 33843), (541, 33750), (546, 33735), (596, 33651), (598, 33648), (634, 33582), (648, 33552), (657, 33522), (679, 33477), (700, 33438), (759, 33258), (775, 33210), (793, 33162), (802, 33123), (805, 33105), (818, 33066), (837, 33045), (841, 33024), (846, 33009), (885, 32886), (960, 32715), (967, 32691), (982, 32643), (985, 32631), (993, 32610), (997, 32604), (1025, 32556), (1030, 32541),

Gene: PauloDiaboli\_117 Start: 81175, Stop: 79307, Start Num: 244

Candidate Starts for PauloDiaboli\_117:

(Start: 189 @81250 has 26 MA's), (Start: 225 @81196 has 5 MA's), (Start: 232 @81187 has 15 MA's), (Start: 244 @81175 has 1 MA's), (340, 80977), (355, 80950), (382, 80911), (407, 80848), (418, 80830), (426, 80803), (428, 80797), (468, 80689), (544, 80611), (554, 80590), (573, 80557), (586, 80527), (603, 80500), (635, 80440), (683, 80335), (700, 80302), (729, 80233), (731, 80224), (759, 80113), (795, 79999), (816, 79915), (822, 79900), (856, 79789), (858, 79783), (861, 79771), (865, 79756), (904, 79654), (909, 79645), (942, 79555), (954, 79516), (960, 79504), (968, 79477), (985, 79420), (995, 79396),

Gene: Pawn\_48 Start: 31757, Stop: 29943, Start Num: 234

Candidate Starts for Pawn\_48:

(Start: 234 @31757 has 938 MA's), (262, 31718), (266, 31706), (353, 31553), (362, 31538), (395, 31481), (415, 31424), (419, 31415), (432, 31373), (448, 31322), (465, 31271), (541, 31178), (566, 31130), (582, 31106), (603, 31067), (619, 31040), (634, 31010), (670, 30917), (679, 30905), (701, 30857), (710, 30842), (759, 30686), (778, 30635), (789, 30602), (790, 30599), (805, 30533), (818, 30494), (842, 30422), (856, 30383), (862, 30359), (868, 30341), (879, 30308), (921, 30227), (942, 30167), (947, 30149), (968, 30089), (970, 30080), (985, 30032), (989, 30020), (993, 30011),

Gene: Payneful\_44 Start: 33908, Stop: 32082, Start Num: 234

Candidate Starts for Payneful\_44:

(Start: 234 @33908 has 938 MA's), (359, 33695), (368, 33680), (405, 33602), (411, 33581), (415, 33575), (419, 33566), (457, 33449), (465, 33422), (541, 33329), (546, 33314), (596, 33230), (598, 33227), (634, 33161), (648, 33131), (657, 33101), (679, 33056), (700, 33017), (759, 32837), (769, 32807), (775, 32789), (778, 32786), (790, 32750), (805, 32684), (841, 32603), (842, 32600), (868, 32519), (936, 32369), (938, 32366), (946, 32330), (954, 32306), (959, 32297), (963, 32285), (970, 32258), (985, 32210), (993, 32189),

Gene: PeaceMeal1\_42 Start: 30387, Stop: 28555, Start Num: 234

Candidate Starts for PeaceMeal1\_42:

(Start: 234 @30387 has 938 MA's), (266, 30336), (303, 30270), (353, 30183), (359, 30174), (390, 30123), (395, 30111), (415, 30054), (441, 29973), (445, 29961), (448, 29952), (458, 29925), (465, 29901), (541, 29808), (559, 29769), (603, 29700), (619, 29673), (679, 29541), (759, 29313), (782, 29247), (798, 29190), (805, 29160), (818, 29121), (842, 29049), (847, 29034), (856, 29010), (868,

28968), (879, 28935), (942, 28779), (949, 28755), (970, 28692), (985, 28644), (989, 28632), (993, 28623),

Gene: Peaches\_45 Start: 31569, Stop: 29743, Start Num: 234

Candidate Starts for Peaches\_45:

(Start: 234 @31569 has 938 MA's), (252, 31548), (266, 31518), (279, 31488), (379, 31326), (389, 31308), (415, 31236), (419, 31227), (458, 31107), (465, 31083), (541, 30990), (568, 30942), (582, 30921), (603, 30882), (663, 30750), (675, 30729), (700, 30684), (703, 30672), (756, 30519), (759, 30498), (798, 30375), (805, 30345), (818, 30306), (841, 30240), (842, 30237), (847, 30222), (856, 30198), (862, 30174), (942, 29967), (985, 29832), (989, 29820), (993, 29811),

Gene: Peep\_39 Start: 28922, Stop: 27057, Start Num: 283

Candidate Starts for Peep\_39:

(Start: 234 @29009 has 938 MA's), (Start: 237 @29006 has 2 MA's), (Start: 283 @28922 has 147 MA's), (Start: 291 @28913 has 5 MA's), (342, 28808), (347, 28799), (367, 28769), (369, 28766), (424, 28646), (426, 28634), (428, 28628), (466, 28523), (473, 28496), (532, 28355), (535, 28349), (537, 28346), (541, 28334), (551, 28307), (553, 28304), (562, 28289), (566, 28283), (570, 28277), (613, 28244), (671, 28115), (701, 28055), (758, 27890), (798, 27740), (801, 27731), (802, 27728), (805, 27710), (819, 27668), (822, 27662), (825, 27653), (832, 27638), (849, 27581), (900, 27422), (913, 27392), (917, 27383), (938, 27323), (943, 27299), (956, 27260), (967, 27227), (970, 27215), (986, 27155),

Gene: Pelly\_44 Start: 34856, Stop: 33030, Start Num: 234

Candidate Starts for Pelly\_44:

(Start: 234 @34856 has 938 MA's), (368, 34628), (395, 34580), (405, 34550), (411, 34529), (415, 34523), (419, 34514), (457, 34397), (465, 34370), (541, 34277), (546, 34262), (566, 34229), (596, 34178), (598, 34175), (628, 34121), (634, 34109), (648, 34079), (657, 34049), (679, 34004), (700, 33965), (759, 33785), (775, 33737), (790, 33698), (805, 33632), (818, 33593), (837, 33572), (841, 33551), (847, 33533), (868, 33467), (936, 33317), (938, 33314), (946, 33278), (954, 33254), (963, 33233), (970, 33206), (985, 33158), (993, 33137),

Gene: Pembroke\_48 Start: 31854, Stop: 30040, Start Num: 234

Candidate Starts for Pembroke\_48:

(Start: 234 @31854 has 938 MA's), (262, 31815), (266, 31803), (353, 31650), (362, 31635), (395, 31578), (415, 31521), (419, 31512), (432, 31470), (448, 31419), (465, 31368), (541, 31275), (566, 31227), (571, 31218), (582, 31203), (603, 31164), (619, 31137), (634, 31107), (670, 31014), (679, 31002), (701, 30954), (710, 30939), (759, 30783), (790, 30696), (805, 30630), (818, 30591), (842, 30519), (856, 30480), (862, 30456), (868, 30438), (879, 30405), (888, 30378), (921, 30324), (942, 30264), (968, 30186), (985, 30129), (989, 30117), (993, 30108),

Gene: PenguinLover67\_56 Start: 54688, Stop: 52865, Start Num: 201

Candidate Starts for PenguinLover67\_56:

(198, 54691), (Start: 201 @54688 has 2 MA's), (Start: 238 @54667 has 2 MA's), (252, 54640), (273, 54595), (286, 54586), (301, 54568), (355, 54475), (418, 54337), (426, 54313), (434, 54292), (462, 54205), (496, 54148), (511, 54112), (516, 54100), (534, 54076), (535, 54073), (539, 54064), (595, 53956), (597, 53953), (599, 53950), (618, 53923), (704, 53722), (737, 53656), (739, 53653), (743, 53635), (749, 53617), (754, 53593), (755, 53587), (760, 53560), (797, 53452), (799, 53446), (802, 53437), (841, 53338), (842, 53335), (847, 53320), (872, 53242), (877, 53230), (883, 53209), (890, 53191), (907, 53161), (931, 53125), (942, 53080), (947, 53062), (949, 53056), (952, 53047), (964, 53017), (967, 53005), (968, 53002), (979, 52963), (986, 52939), (1002, 52915), (1015, 52891), (1023, 52870),

Gene: Penny1\_49 Start: 31856, Stop: 30042, Start Num: 234

Candidate Starts for Penny1\_49:

(Start: 234 @31856 has 938 MA's), (262, 31817), (266, 31805), (353, 31652), (362, 31637), (395, 31580), (415, 31523), (419, 31514), (432, 31472), (448, 31421), (465, 31370), (541, 31277), (566, 31229), (571, 31220), (582, 31205), (603, 31166), (619, 31139), (634, 31109), (670, 31016), (701, 30956), (710, 30941), (759, 30785), (790, 30698), (805, 30632), (818, 30593), (842, 30521), (856, 30482), (862, 30458), (868, 30440), (879, 30407), (888, 30380), (921, 30326), (942, 30266), (968, 30188), (985, 30131), (989, 30119), (993, 30110),

Gene: Pepe\_42 Start: 33016, Stop: 31229, Start Num: 234

Candidate Starts for Pepe\_42:

(Start: 234 @33016 has 938 MA's), (359, 32803), (368, 32788), (395, 32740), (405, 32710), (411, 32689), (415, 32683), (419, 32674), (457, 32557), (465, 32530), (541, 32437), (546, 32422), (596, 32338), (598, 32335), (634, 32269), (648, 32239), (657, 32209), (679, 32164), (700, 32125), (759, 31945), (775, 31897), (790, 31858), (805, 31792), (839, 31720), (841, 31711), (868, 31627), (903, 31540), (954, 31414), (960, 31402), (978, 31342), (985, 31318), (987, 31312),

Gene: Peppino\_38 Start: 29047, Stop: 27182, Start Num: 283

Candidate Starts for Peppino\_38:

(Start: 283 @29047 has 147 MA's), (Start: 291 @29038 has 5 MA's), (423, 28774), (426, 28759), (428, 28753), (473, 28621), (498, 28567), (532, 28480), (537, 28471), (541, 28459), (551, 28432), (553, 28429), (562, 28414), (566, 28408), (741, 28078), (798, 27865), (801, 27856), (802, 27853), (805, 27835), (819, 27793), (825, 27778), (849, 27706), (854, 27679), (900, 27547), (913, 27517), (938, 27448), (943, 27424), (945, 27418), (956, 27385), (967, 27352), (970, 27340),

Gene: Percival\_49 Start: 32475, Stop: 34340, Start Num: 232

Candidate Starts for Percival\_49:

(149, 32349), (192, 32418), (Start: 232 @32475 has 15 MA's), (405, 32772), (453, 32916), (543, 33069), (603, 33177), (619, 33204), (649, 33264), (670, 33324), (675, 33330), (703, 33387), (705, 33393), (740, 33507), (759, 33588), (781, 33651), (796, 33705), (798, 33711), (858, 33888), (862, 33906), (865, 33915), (869, 33927), (903, 34011), (947, 34119), (964, 34164), (985, 34236), (1026, 34314), (1038, 34335),

Gene: Perplexer\_44 Start: 31519, Stop: 29690, Start Num: 234

Candidate Starts for Perplexer\_44:

(Start: 234 @31519 has 938 MA's), (266, 31468), (279, 31438), (379, 31276), (389, 31258), (395, 31243), (415, 31186), (419, 31177), (458, 31057), (465, 31033), (513, 30991), (541, 30940), (568, 30892), (582, 30871), (603, 30832), (628, 30787), (630, 30781), (663, 30700), (675, 30679), (700, 30634), (756, 30469), (759, 30448), (805, 30295), (818, 30256), (842, 30184), (847, 30169), (856, 30145), (861, 30127), (862, 30121), (864, 30115), (942, 29914), (985, 29779), (989, 29767), (993, 29758),

Gene: Perseus\_45 Start: 35152, Stop: 33323, Start Num: 234

Candidate Starts for Perseus\_45:

(Start: 234 @35152 has 938 MA's), (359, 34939), (368, 34924), (405, 34846), (411, 34825), (415, 34819), (419, 34810), (445, 34726), (457, 34693), (465, 34666), (541, 34573), (546, 34558), (558, 34537), (566, 34525), (596, 34474), (598, 34471), (634, 34405), (648, 34375), (657, 34345), (679, 34300), (700, 34261), (759, 34081), (775, 34033), (793, 33985), (802, 33946), (805, 33928), (818, 33889), (837, 33868), (841, 33847), (846, 33832), (885, 33709), (960, 33538), (967, 33514), (982, 33466), (985, 33454), (993, 33433), (997, 33427), (1025, 33379), (1030, 33364),

Gene: PeterPeter\_45 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for PeterPeter\_45:



(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Petersenfast\_43 Start: 30332, Stop: 28545, Start Num: 234

Candidate Starts for Petersenfast\_43:

(Start: 234 @30332 has 938 MA's), (353, 30128), (395, 30056), (405, 30026), (415, 29999), (543, 29747), (571, 29696), (619, 29615), (639, 29570), (640, 29567), (675, 29486), (703, 29429), (728, 29387), (740, 29342), (759, 29261), (778, 29210), (790, 29174), (805, 29108), (837, 29048), (839, 29036), (871, 28934), (879, 28910), (884, 28892), (921, 28829), (935, 28802), (936, 28793), (942, 28769), (985, 28634), (989, 28622), (993, 28613),

Gene: Peterson\_48 Start: 37027, Stop: 35201, Start Num: 234

Candidate Starts for Peterson\_48:

(Start: 234 @37027 has 938 MA's), (359, 36814), (368, 36799), (405, 36721), (415, 36694), (457, 36568), (465, 36541), (541, 36448), (546, 36433), (566, 36400), (596, 36349), (598, 36346), (634, 36280), (648, 36250), (657, 36220), (679, 36175), (700, 36136), (759, 35956), (775, 35908), (790, 35869), (805, 35803), (818, 35764), (837, 35743), (841, 35722), (847, 35704), (868, 35638), (936, 35488), (938, 35485), (946, 35449), (954, 35425), (959, 35416), (963, 35404), (985, 35329), (993, 35308),

Gene: PetiteSangsue\_44 Start: 31522, Stop: 29693, Start Num: 234

Candidate Starts for PetiteSangsue\_44:

(Start: 234 @31522 has 938 MA's), (266, 31471), (279, 31441), (379, 31279), (389, 31261), (395, 31246), (415, 31189), (419, 31180), (458, 31060), (465, 31036), (513, 30994), (541, 30943), (568, 30895), (582, 30874), (603, 30835), (628, 30790), (630, 30784), (663, 30703), (675, 30682), (700, 30637), (756, 30472), (759, 30451), (805, 30298), (818, 30259), (842, 30187), (847, 30172), (856, 30148), (861, 30130), (862, 30124), (864, 30118), (942, 29917), (985, 29782), (989, 29770), (993, 29761),

Gene: Petp2012\_45 Start: 34941, Stop: 33115, Start Num: 234

Candidate Starts for Petp2012\_45:

(Start: 234 @34941 has 938 MA's), (359, 34728), (368, 34713), (395, 34665), (405, 34635), (411, 34614), (415, 34608), (419, 34599), (457, 34482), (465, 34455), (541, 34362), (546, 34347), (558, 34326), (596, 34263), (598, 34260), (634, 34194), (648, 34164), (657, 34134), (679, 34089), (700, 34050), (759, 33870), (775, 33822), (790, 33783), (805, 33717), (818, 33678), (837, 33657), (841, 33636), (847, 33618), (868, 33552), (936, 33402), (938, 33399), (946, 33363), (954, 33339), (959, 33330), (963, 33318), (985, 33243), (993, 33222),

Gene: Petruccio\_45 Start: 34801, Stop: 32972, Start Num: 234

Candidate Starts for Petruccio\_45:

(Start: 234 @34801 has 938 MA's), (359, 34588), (368, 34573), (395, 34525), (405, 34495), (411, 34474), (415, 34468), (419, 34459), (457, 34342), (465, 34315), (541, 34222), (546, 34207), (566, 34174), (596, 34123), (598, 34120), (628, 34066), (634, 34054), (648, 34024), (657, 33994), (679, 33949), (700, 33910), (759, 33730), (775, 33682), (793, 33634), (802, 33595), (805, 33577), (818, 33538), (837, 33517), (841, 33496), (846, 33481), (885, 33358), (960, 33187), (967, 33163), (982, 33115), (985, 33103), (993, 33082), (997, 33076), (1025, 33028), (1030, 33013),

Gene: PetterN\_40 Start: 30056, Stop: 28191, Start Num: 234

Candidate Starts for PetterN\_40:

(Start: 175 @30131 has 4 MA's), (Start: 205 @30089 has 2 MA's), (Start: 234 @30056 has 938 MA's), (301, 29945), (353, 29852), (355, 29849), (395, 29780), (397, 29777), (405, 29750), (415, 29723), (419, 29714), (445, 29630), (448, 29621), (453, 29606), (465, 29570), (520, 29510), (541, 29474), (566, 29426), (581, 29405), (582, 29402), (618, 29342), (652, 29264), (670, 29216), (679, 29204), (701, 29156), (724, 29105), (759, 28970), (775, 28922), (790, 28883), (793, 28874), (799, 28844), (805, 28817), (806, 28814), (841, 28736), (847, 28718), (862, 28670), (879, 28619), (903, 28565), (908, 28556), (921, 28538), (947, 28460), (985, 28343), (989, 28331), (1042, 28226),

Gene: Ph8s\_46 Start: 30526, Stop: 28739, Start Num: 234

Candidate Starts for Ph8s\_46:

(Start: 234 @30526 has 938 MA's), (353, 30322), (395, 30250), (397, 30247), (405, 30220), (415, 30193), (424, 30172), (465, 30040), (541, 29947), (566, 29899), (619, 29809), (640, 29761), (759, 29455), (789, 29371), (790, 29368), (798, 29332), (805, 29302), (818, 29263), (837, 29242), (839, 29230), (841, 29221), (845, 29209), (879, 29104), (888, 29077), (908, 29041), (921, 29023), (936, 28987), (942, 28963), (985, 28828), (989, 28816), (993, 28807),

Gene: Phacado\_45 Start: 31569, Stop: 29743, Start Num: 234

Candidate Starts for Phacado\_45:

(Start: 234 @31569 has 938 MA's), (252, 31548), (266, 31518), (279, 31488), (379, 31326), (389, 31308), (415, 31236), (419, 31227), (458, 31107), (465, 31083), (541, 30990), (568, 30942), (582, 30921), (603, 30882), (663, 30750), (675, 30729), (700, 30684), (703, 30672), (756, 30519), (759, 30498), (798, 30375), (805, 30345), (818, 30306), (841, 30240), (842, 30237), (847, 30222), (856, 30198), (862, 30174), (942, 29967), (985, 29832), (989, 29820), (993, 29811),

Gene: Phaded\_46 Start: 32625, Stop: 30835, Start Num: 234

Candidate Starts for Phaded\_46:

(Start: 234 @32625 has 938 MA's), (353, 32421), (359, 32412), (397, 32343), (405, 32316), (415, 32289), (465, 32136), (541, 32043), (566, 31995), (571, 31986), (582, 31971), (619, 31905), (635, 31872), (667, 31788), (710, 31707), (728, 31677), (759, 31551), (769, 31521), (778, 31500), (798, 31428), (805, 31398), (818, 31359), (837, 31338), (841, 31317), (845, 31305), (908, 31137), (936, 31083), (942, 31059), (962, 31002), (968, 30981), (985, 30924), (989, 30912), (993, 30903),

Gene: Phaeder\_45 Start: 31483, Stop: 29690, Start Num: 234

Candidate Starts for Phaeder\_45:

(Start: 234 @31483 has 938 MA's), (246, 31474), (266, 31432), (334, 31312), (336, 31309), (364, 31261), (397, 31201), (406, 31171), (409, 31159), (415, 31147), (465, 30994), (541, 30901), (619, 30763), (634, 30733), (703, 30574), (710, 30562), (726, 30535), (756, 30427), (759, 30406), (802, 30271), (805, 30253), (841, 30172), (856, 30130), (879, 30055), (918, 29980), (936, 29938), (968, 29836), (985, 29779), (989, 29767), (993, 29758),

Gene: Phaedrus\_54 Start: 53117, Stop: 51300, Start Num: 235

Candidate Starts for Phaedrus\_54:

(129, 53300), (Start: 235 @53117 has 43 MA's), (252, 53087), (359, 52907), (424, 52754), (426, 52742), (437, 52712), (442, 52706), (462, 52643), (464, 52637), (496, 52586), (509, 52559), (511, 52550), (539, 52502), (597, 52397), (647, 52301), (664, 52250), (737, 52106), (749, 52067), (755, 52037), (760, 52010), (763, 51998), (797, 51902), (799, 51896), (802, 51887), (804, 51875), (834, 51803), (841, 51773), (847, 51755), (851, 51746), (872, 51677), (877, 51665), (883, 51644), (921, 51575), (931, 51560), (938, 51536), (942, 51515), (949, 51491), (964, 51452), (969, 51434), (972, 51422), (975, 51410), (979, 51398), (994, 51356), (1015, 51326),

Gene: PhailMary\_35 Start: 28435, Stop: 26651, Start Num: 234

Candidate Starts for PhailMary\_35:

(Start: 234 @28435 has 938 MA's), (374, 28201), (390, 28171), (394, 28162), (395, 28159), (409, 28114), (415, 28102), (419, 28093), (432, 28051), (465, 27949), (492, 27928), (541, 27856), (563, 27811), (566, 27808), (589, 27766), (594, 27760), (603, 27745), (619, 27718), (663, 27613), (667, 27604), (679, 27586), (700, 27547), (729, 27490), (759, 27367), (775, 27319), (805, 27214), (806, 27211), (837, 27154), (841, 27133), (858, 27085), (881, 27010), (918, 26941), (936, 26899), (942, 26875), (968, 26797), (985, 26740), (989, 26728), (1021, 26671),

Gene: Phamished\_62 Start: 54237, Stop: 52378, Start Num: 197

Candidate Starts for Phamished\_62:

(Start: 180 @54261 has 1 MA's), (Start: 197 @54237 has 298 MA's), (Start: 225 @54213 has 5 MA's), (Start: 238 @54207 has 2 MA's), (Start: 261 @54165 has 10 MA's), (269, 54144), (323, 54030), (328, 54024), (349, 53994), (385, 53934), (394, 53913), (410, 53859), (418, 53847), (425, 53829), (427, 53817), (462, 53712), (496, 53655), (511, 53619), (516, 53607), (534, 53583), (539, 53571), (545, 53553), (555, 53535), (566, 53517), (588, 53478), (595, 53469), (597, 53466), (599, 53463), (754, 53106), (760, 53073), (765, 53052), (799, 52959), (802, 52950), (822, 52887), (841, 52851), (842, 52848), (847, 52833), (872, 52755), (877, 52743), (883, 52722), (902, 52683), (942, 52593), (947, 52575), (949, 52569), (954, 52554), (964, 52530), (968, 52515), (969, 52512), (972, 52500), (979, 52476), (1002, 52428), (1015, 52404),

Gene: Phanita\_37 Start: 28715, Stop: 26850, Start Num: 283

Candidate Starts for Phanita\_37:

(Start: 283 @28715 has 147 MA's), (330, 28616), (371, 28556), (398, 28505), (426, 28427), (428, 28421), (445, 28376), (446, 28373), (447, 28370), (460, 28331), (479, 28271), (532, 28148), (537, 28139), (541, 28127), (545, 28115), (553, 28097), (566, 28076), (574, 28064), (680, 27893), (749, 27725), (793, 27560), (801, 27524), (805, 27503), (819, 27461), (849, 27374), (859, 27329), (894, 27230), (913, 27185), (938, 27116), (943, 27092), (954, 27059), (986, 26948),

Gene: Phantasmagoria\_57 Start: 52498, Stop: 50669, Start Num: 197

Candidate Starts for Phantasmagoria\_57:

(Start: 197 @52498 has 298 MA's), (Start: 238 @52471 has 2 MA's), (253, 52441), (Start: 261 @52429 has 10 MA's), (272, 52402), (273, 52399), (277, 52390), (301, 52372), (355, 52276), (385, 52225), (395, 52201), (402, 52177), (450, 52039), (456, 52024), (459, 52015), (462, 52003), (496, 51946), (511, 51910), (516, 51898), (534, 51874), (580, 51790), (595, 51760), (597, 51757), (618, 51727), (678, 51583), (710, 51517), (737, 51466), (743, 51445), (749, 51427), (760, 51370), (783, 51313), (793, 51286), (799, 51256), (802, 51247), (822, 51181), (839, 51154), (841, 51145), (847, 51127), (856, 51103), (872, 51049), (877, 51037), (883, 51016), (921, 50947), (942, 50887), (947, 50869), (960, 50836), (964, 50824), (968, 50809), (969, 50806), (972, 50794), (979, 50770), (980, 50767), (1002, 50719), (1004, 50716), (1015, 50695), (1023, 50674),

Gene: Phantastic\_46 Start: 31173, Stop: 29335, Start Num: 234

Candidate Starts for Phantastic\_46:

(179, 31245), (Start: 234 @31173 has 938 MA's), (266, 31122), (353, 30969), (395, 30897), (415, 30840), (419, 30831), (424, 30819), (458, 30711), (465, 30687), (541, 30591), (568, 30543), (603, 30483), (636, 30420), (663, 30351), (675, 30330), (710, 30261), (729, 30216), (759, 30093), (775, 30045), (798, 29970), (805, 29940), (842, 29829), (847, 29814), (856, 29790), (862, 29766), (868, 29748), (918, 29625), (921, 29619), (935, 29592), (942, 29559), (985, 29424), (989, 29412), (993, 29403),

Gene: Pharaoh\_39 Start: 30968, Stop: 29124, Start Num: 234

Candidate Starts for Pharaoh\_39:

(Start: 234 @30968 has 938 MA's), (252, 30947), (Start: 261 @30932 has 10 MA's), (265, 30920), (359, 30755), (379, 30722), (395, 30689), (397, 30686), (405, 30659), (415, 30632), (424, 30611), (465, 30479), (541, 30386), (566, 30338), (571, 30329), (582, 30314), (603, 30275), (619, 30248),

(640, 30200), (667, 30131), (710, 30050), (728, 30008), (746, 29945), (759, 29882), (778, 29831), (790, 29795), (798, 29759), (805, 29729), (818, 29690), (837, 29669), (841, 29648), (879, 29531), (908, 29468), (936, 29414), (942, 29390), (962, 29333), (968, 29312), (985, 29255), (989, 29243), (1021, 29186),

Gene: Phareon\_59 Start: 53752, Stop: 51893, Start Num: 197

Candidate Starts for Phareon\_59:

(Start: 180 @53776 has 1 MA's), (Start: 197 @53752 has 298 MA's), (Start: 225 @53728 has 5 MA's), (Start: 238 @53722 has 2 MA's), (Start: 261 @53680 has 10 MA's), (269, 53659), (323, 53545), (328, 53539), (349, 53509), (385, 53449), (394, 53428), (410, 53374), (418, 53362), (425, 53344), (427, 53332), (462, 53227), (496, 53170), (511, 53134), (516, 53122), (534, 53098), (539, 53086), (545, 53068), (555, 53050), (566, 53032), (588, 52993), (595, 52984), (597, 52981), (599, 52978), (754, 52621), (760, 52588), (765, 52567), (799, 52474), (802, 52465), (822, 52402), (841, 52366), (842, 52363), (847, 52348), (872, 52270), (877, 52258), (883, 52237), (902, 52198), (942, 52108), (947, 52090), (949, 52084), (954, 52069), (964, 52045), (968, 52030), (969, 52027), (972, 52015), (979, 51991), (1002, 51943), (1015, 51919),

Gene: PhatCats2014\_61 Start: 54551, Stop: 52692, Start Num: 197

Candidate Starts for PhatCats2014\_61:

(Start: 180 @54575 has 1 MA's), (Start: 197 @54551 has 298 MA's), (Start: 225 @54527 has 5 MA's), (Start: 238 @54521 has 2 MA's), (Start: 261 @54479 has 10 MA's), (269, 54458), (323, 54344), (328, 54338), (349, 54308), (385, 54248), (394, 54227), (410, 54173), (418, 54161), (425, 54143), (427, 54131), (462, 54026), (496, 53969), (511, 53933), (516, 53921), (535, 53894), (545, 53867), (555, 53849), (566, 53831), (588, 53792), (595, 53783), (597, 53780), (724, 53522), (754, 53420), (760, 53387), (765, 53366), (799, 53273), (802, 53264), (822, 53201), (841, 53165), (842, 53162), (847, 53147), (872, 53069), (877, 53057), (883, 53036), (902, 52997), (942, 52907), (947, 52889), (949, 52883), (954, 52868), (964, 52844), (968, 52829), (969, 52826), (972, 52814), (979, 52790), (1002, 52742), (1015, 52718),

Gene: PhatLouie\_62 Start: 54569, Stop: 52710, Start Num: 197

Candidate Starts for PhatLouie\_62:

(Start: 180 @54593 has 1 MA's), (Start: 197 @54569 has 298 MA's), (Start: 225 @54545 has 5 MA's), (Start: 238 @54539 has 2 MA's), (Start: 261 @54497 has 10 MA's), (269, 54476), (323, 54362), (328, 54356), (349, 54326), (385, 54266), (394, 54245), (410, 54191), (418, 54179), (425, 54161), (427, 54149), (462, 54044), (496, 53987), (511, 53951), (516, 53939), (534, 53915), (539, 53903), (545, 53885), (555, 53867), (566, 53849), (588, 53810), (595, 53801), (597, 53798), (599, 53795), (754, 53438), (760, 53405), (765, 53384), (799, 53291), (802, 53282), (822, 53219), (841, 53183), (842, 53180), (847, 53165), (872, 53087), (877, 53075), (883, 53054), (902, 53015), (942, 52925), (947, 52907), (949, 52901), (954, 52886), (964, 52862), (968, 52847), (969, 52844), (972, 52832), (979, 52808), (1002, 52760), (1015, 52736),

Gene: Phayeta\_60 Start: 53944, Stop: 52127, Start Num: 235

Candidate Starts for Phayeta\_60:

(129, 54127), (Start: 235 @53944 has 43 MA's), (252, 53914), (359, 53734), (424, 53581), (426, 53569), (437, 53539), (442, 53533), (462, 53470), (464, 53464), (496, 53413), (511, 53377), (539, 53329), (597, 53224), (647, 53128), (664, 53077), (737, 52933), (749, 52894), (755, 52864), (760, 52837), (763, 52825), (797, 52729), (799, 52723), (802, 52714), (804, 52702), (834, 52630), (841, 52600), (847, 52582), (851, 52573), (872, 52504), (877, 52492), (883, 52471), (921, 52402), (931, 52387), (938, 52363), (942, 52342), (947, 52324), (949, 52318), (962, 52285), (964, 52279), (969, 52261), (972, 52249), (975, 52237), (979, 52225), (994, 52183), (1015, 52153),

Gene: Phelemich\_56 Start: 54570, Stop: 52741, Start Num: 189

Candidate Starts for Phelemich\_56:

(Start: 189 @54570 has 26 MA's), (Start: 222 @54549 has 1 MA's), (Start: 238 @54540 has 2 MA's), (252, 54513), (Start: 261 @54498 has 10 MA's), (301, 54441), (394, 54273), (424, 54195), (427, 54180), (434, 54162), (441, 54150), (452, 54114), (462, 54084), (511, 53991), (516, 53979), (518, 53976), (534, 53955), (535, 53952), (539, 53943), (545, 53925), (583, 53862), (597, 53838), (650, 53733), (703, 53610), (724, 53586), (733, 53559), (737, 53547), (739, 53544), (743, 53526), (749, 53508), (755, 53478), (760, 53451), (780, 53400), (799, 53337), (802, 53328), (834, 53244), (842, 53211), (847, 53196), (866, 53136), (872, 53118), (877, 53106), (883, 53085), (885, 53076), (887, 53073), (942, 52956), (947, 52938), (949, 52932), (964, 52893), (967, 52881), (968, 52878), (972, 52863), (975, 52851), (979, 52839), (994, 52797), (1004, 52788), (1015, 52767), (1023, 52746),

Gene: Phelipe\_46 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Phelipe\_46:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Phendrix\_176 Start: 96123, Stop: 94333, Start Num: 237

Candidate Starts for Phendrix\_176:

(Start: 237 @96123 has 2 MA's), (284, 96036), (308, 95994), (344, 95937), (408, 95814), (409, 95811), (423, 95784), (431, 95754), (445, 95727), (463, 95673), (468, 95658), (518, 95628), (541, 95589), (550, 95565), (559, 95553), (586, 95505), (603, 95478), (615, 95463), (638, 95409), (657, 95364), (679, 95319), (730, 95220), (731, 95214), (756, 95118), (759, 95097), (777, 95046), (796, 94980), (830, 94860), (840, 94830), (853, 94791), (856, 94782), (861, 94764), (865, 94749), (868, 94740), (870, 94734), (872, 94728), (886, 94686), (897, 94665), (932, 94587), (935, 94581), (951, 94518), (961, 94494), (982, 94419), (985, 94407), (1019, 94356),

Gene: PhenghisKhan\_61 Start: 54194, Stop: 52335, Start Num: 197

Candidate Starts for PhenghisKhan\_61:

(Start: 180 @54218 has 1 MA's), (Start: 197 @54194 has 298 MA's), (Start: 225 @54170 has 5 MA's), (Start: 238 @54164 has 2 MA's), (Start: 261 @54122 has 10 MA's), (269, 54101), (323, 53987), (328, 53981), (349, 53951), (385, 53891), (394, 53870), (410, 53816), (418, 53804), (425, 53786), (427, 53774), (462, 53669), (496, 53612), (511, 53576), (516, 53564), (534, 53540), (539, 53528), (545, 53510), (555, 53492), (566, 53474), (588, 53435), (595, 53426), (597, 53423), (599, 53420), (724, 53165), (754, 53063), (760, 53030), (765, 53009), (799, 52916), (802, 52907), (822, 52844), (841, 52808), (842, 52805), (847, 52790), (872, 52712), (877, 52700), (883, 52679), (902, 52640), (942, 52550), (947, 52532), (949, 52526), (954, 52511), (964, 52487), (968, 52472), (969, 52469), (972, 52457), (979, 52433), (985, 52412), (1002, 52385), (1015, 52361),

Gene: Pherbot\_37 Start: 28480, Stop: 26630, Start Num: 281

Candidate Starts for Pherbot\_37:

(Start: 281 @28480 has 18 MA's), (347, 28357), (369, 28324), (420, 28213), (426, 28192), (428, 28186), (447, 28135), (512, 27979), (532, 27925), (535, 27919), (537, 27916), (541, 27904), (553, 27874), (611, 27817), (680, 27670), (741, 27523), (798, 27313), (802, 27301), (805, 27283), (819, 27241), (825, 27226), (839, 27190), (849, 27154), (913, 26965), (917, 26956), (938, 26896), (943, 26872), (949, 26851), (954, 26839), (986, 26728),

Gene: Pherdinand\_62 Start: 54314, Stop: 52455, Start Num: 197

Candidate Starts for Pherdinand\_62:

(Start: 180 @54338 has 1 MA's), (Start: 197 @54314 has 298 MA's), (Start: 225 @54290 has 5 MA's), (Start: 238 @54284 has 2 MA's), (Start: 261 @54242 has 10 MA's), (269, 54221), (323, 54107), (328, 54101), (349, 54071), (385, 54011), (394, 53990), (410, 53936), (418, 53924), (425, 53906), (427,

53894), (462, 53789), (496, 53732), (511, 53696), (516, 53684), (534, 53660), (539, 53648), (545, 53630), (555, 53612), (566, 53594), (588, 53555), (595, 53546), (597, 53543), (599, 53540), (754, 53183), (760, 53150), (765, 53129), (799, 53036), (802, 53027), (822, 52964), (841, 52928), (842, 52925), (847, 52910), (872, 52832), (877, 52820), (883, 52799), (902, 52760), (942, 52670), (947, 52652), (949, 52646), (954, 52631), (964, 52607), (968, 52592), (969, 52589), (972, 52577), (979, 52553), (1002, 52505), (1015, 52481),

Gene: Pherferi\_39 Start: 28930, Stop: 27065, Start Num: 283

Candidate Starts for Pherferi\_39:

(Start: 234 @29017 has 938 MA's), (Start: 237 @29014 has 2 MA's), (Start: 283 @28930 has 147 MA's), (Start: 291 @28921 has 5 MA's), (342, 28816), (347, 28807), (367, 28777), (369, 28774), (424, 28654), (426, 28642), (428, 28636), (466, 28531), (473, 28504), (532, 28363), (535, 28357), (537, 28354), (541, 28342), (551, 28315), (553, 28312), (562, 28297), (566, 28291), (570, 28285), (613, 28252), (701, 28063), (798, 27748), (801, 27739), (802, 27736), (805, 27718), (819, 27676), (822, 27670), (825, 27661), (832, 27646), (849, 27589), (900, 27430), (913, 27400), (917, 27391), (938, 27331), (943, 27307), (956, 27268), (967, 27235), (970, 27223), (986, 27163),

Gene: Phergie\_62 Start: 54186, Stop: 52327, Start Num: 197

Candidate Starts for Phergie\_62:

(Start: 180 @54210 has 1 MA's), (Start: 197 @54186 has 298 MA's), (Start: 225 @54162 has 5 MA's), (Start: 238 @54156 has 2 MA's), (Start: 261 @54114 has 10 MA's), (269, 54093), (323, 53979), (328, 53973), (349, 53943), (385, 53883), (394, 53862), (410, 53808), (418, 53796), (425, 53778), (427, 53766), (462, 53661), (496, 53604), (511, 53568), (516, 53556), (534, 53532), (539, 53520), (545, 53502), (555, 53484), (566, 53466), (588, 53427), (595, 53418), (597, 53415), (599, 53412), (724, 53157), (754, 53055), (760, 53022), (765, 53001), (799, 52908), (802, 52899), (822, 52836), (841, 52800), (842, 52797), (847, 52782), (872, 52704), (877, 52692), (883, 52671), (902, 52632), (942, 52542), (947, 52524), (949, 52518), (954, 52503), (964, 52479), (968, 52464), (969, 52461), (972, 52449), (979, 52425), (985, 52404), (1002, 52377), (1015, 52353),

Gene: PherrisBueller\_44 Start: 33917, Stop: 32091, Start Num: 234

Candidate Starts for PherrisBueller\_44:

(Start: 234 @33917 has 938 MA's), (359, 33704), (368, 33689), (395, 33641), (405, 33611), (411, 33590), (415, 33584), (419, 33575), (457, 33458), (465, 33431), (541, 33338), (546, 33323), (596, 33239), (598, 33236), (634, 33170), (648, 33140), (657, 33110), (679, 33065), (700, 33026), (759, 32846), (775, 32798), (790, 32759), (805, 32693), (818, 32654), (837, 32633), (841, 32612), (847, 32594), (868, 32528), (936, 32378), (938, 32375), (946, 32339), (954, 32315), (959, 32306), (963, 32294), (970, 32267), (985, 32219), (993, 32198),

Gene: Phiderman\_39 Start: 28927, Stop: 27062, Start Num: 283

Candidate Starts for Phiderman\_39:

(Start: 234 @29014 has 938 MA's), (Start: 237 @29011 has 2 MA's), (Start: 283 @28927 has 147 MA's), (Start: 291 @28918 has 5 MA's), (342, 28813), (347, 28804), (367, 28774), (369, 28771), (424, 28651), (426, 28639), (428, 28633), (466, 28528), (473, 28501), (532, 28360), (535, 28354), (537, 28351), (541, 28339), (551, 28312), (553, 28309), (562, 28294), (566, 28288), (570, 28282), (613, 28249), (701, 28060), (798, 27745), (801, 27736), (802, 27733), (805, 27715), (819, 27673), (822, 27667), (825, 27658), (832, 27643), (849, 27586), (900, 27427), (913, 27397), (917, 27388), (938, 27328), (943, 27304), (956, 27265), (967, 27232), (970, 27220), (986, 27160),

Gene: PhigPhack\_43 Start: 29405, Stop: 31279, Start Num: 234

Candidate Starts for PhigPhack\_43:

(Start: 234 @29405 has 938 MA's), (273, 29474), (284, 29495), (419, 29741), (425, 29756), (432, 29783), (603, 30077), (663, 30212), (709, 30311), (747, 30434), (759, 30494), (761, 30500), (778, 30545), (782, 30560), (786, 30575), (796, 30611), (805, 30647), (840, 30740), (869, 30833), (901,

30911), (936, 30983), (946, 31022), (962, 31064), (967, 31082), (978, 31118), (985, 31142), (993, 31163),

Gene: Phighter1804\_45 Start: 31612, Stop: 29786, Start Num: 234

Candidate Starts for Phighter1804\_45:

(Start: 234 @31612 has 938 MA's), (252, 31591), (266, 31561), (279, 31531), (379, 31369), (389, 31351), (415, 31279), (419, 31270), (458, 31150), (465, 31126), (541, 31033), (568, 30985), (582, 30964), (603, 30925), (663, 30793), (675, 30772), (700, 30727), (703, 30715), (756, 30562), (759, 30541), (798, 30418), (805, 30388), (818, 30349), (841, 30283), (842, 30280), (847, 30265), (856, 30241), (862, 30217), (942, 30010), (985, 29875), (989, 29863), (993, 29854),

Gene: Phillis\_44 Start: 30925, Stop: 29081, Start Num: 234

Candidate Starts for Phillis\_44:

(135, 31090), (155, 31042), (Start: 234 @30925 has 938 MA's), (266, 30874), (336, 30751), (353, 30721), (379, 30682), (405, 30619), (411, 30598), (415, 30592), (419, 30583), (432, 30541), (448, 30490), (465, 30439), (541, 30343), (545, 30331), (552, 30316), (563, 30298), (566, 30295), (571, 30286), (603, 30232), (619, 30205), (640, 30157), (663, 30100), (679, 30073), (703, 30022), (711, 30007), (730, 29959), (756, 29860), (759, 29839), (769, 29809), (775, 29791), (778, 29788), (782, 29773), (790, 29752), (793, 29743), (798, 29716), (802, 29704), (805, 29686), (841, 29605), (845, 29593), (862, 29539), (874, 29503), (885, 29467), (903, 29434), (918, 29413), (921, 29407), (938, 29368), (947, 29329), (985, 29212), (989, 29200),

Gene: Philly\_57 Start: 53504, Stop: 51687, Start Num: 235

Candidate Starts for Philly\_57:

(129, 53687), (Start: 235 @53504 has 43 MA's), (252, 53474), (359, 53294), (424, 53141), (426, 53129), (437, 53099), (442, 53093), (462, 53030), (464, 53024), (496, 52973), (509, 52946), (511, 52937), (539, 52889), (597, 52784), (647, 52688), (664, 52637), (737, 52493), (749, 52454), (755, 52424), (760, 52397), (763, 52385), (797, 52289), (799, 52283), (802, 52274), (804, 52262), (834, 52190), (841, 52160), (847, 52142), (851, 52133), (872, 52064), (877, 52052), (883, 52031), (921, 51962), (931, 51947), (938, 51923), (942, 51902), (947, 51884), (949, 51878), (962, 51845), (964, 51839), (969, 51821), (972, 51809), (975, 51797), (979, 51785), (994, 51743), (1015, 51713),

Gene: Phipps\_60 Start: 53823, Stop: 51964, Start Num: 197

Candidate Starts for Phipps\_60:

(Start: 180 @53847 has 1 MA's), (Start: 197 @53823 has 298 MA's), (Start: 225 @53799 has 5 MA's), (Start: 238 @53793 has 2 MA's), (Start: 261 @53751 has 10 MA's), (269, 53730), (323, 53616), (328, 53610), (349, 53580), (385, 53520), (394, 53499), (410, 53445), (418, 53433), (425, 53415), (427, 53403), (462, 53298), (496, 53241), (511, 53205), (516, 53193), (535, 53166), (545, 53139), (555, 53121), (566, 53103), (588, 53064), (595, 53055), (597, 53052), (724, 52794), (754, 52692), (760, 52659), (765, 52638), (799, 52545), (802, 52536), (822, 52473), (841, 52437), (842, 52434), (847, 52419), (872, 52341), (877, 52329), (883, 52308), (902, 52269), (942, 52179), (947, 52161), (949, 52155), (954, 52140), (964, 52116), (968, 52101), (969, 52098), (972, 52086), (979, 52062), (1002, 52014), (1015, 51990),

Gene: Phireproof\_39 Start: 28936, Stop: 27071, Start Num: 283

Candidate Starts for Phireproof\_39:

(Start: 234 @29023 has 938 MA's), (Start: 237 @29020 has 2 MA's), (Start: 283 @28936 has 147 MA's), (Start: 291 @28927 has 5 MA's), (342, 28822), (347, 28813), (367, 28783), (369, 28780), (424, 28660), (426, 28648), (428, 28642), (466, 28537), (473, 28510), (532, 28369), (535, 28363), (537, 28360), (541, 28348), (551, 28321), (553, 28318), (562, 28303), (566, 28297), (570, 28291), (613, 28258), (701, 28069), (798, 27754), (801, 27745), (802, 27742), (805, 27724), (819, 27682), (822, 27676), (832, 27652), (849, 27595), (900, 27436), (913, 27406), (917, 27397), (938, 27337), (943, 27313), (956, 27274), (967, 27241), (970, 27229), (986, 27169),

Gene: Phisb\_43 Start: 29630, Stop: 31504, Start Num: 234

Candidate Starts for Phisb\_43:

(Start: 231 @29627 has 7 MA's), (Start: 234 @29630 has 938 MA's), (273, 29699), (284, 29720), (353, 29837), (395, 29900), (419, 29966), (432, 30008), (603, 30302), (663, 30437), (709, 30536), (747, 30659), (759, 30719), (761, 30725), (778, 30770), (786, 30800), (796, 30836), (805, 30872), (840, 30965), (869, 31058), (901, 31136), (936, 31208), (946, 31247), (962, 31289), (967, 31307), (985, 31367), (993, 31388),

Gene: PhishRPhriends\_46 Start: 30931, Stop: 29117, Start Num: 234

Candidate Starts for PhishRPhriends\_46:

(Start: 234 @30931 has 938 MA's), (262, 30892), (266, 30880), (353, 30727), (362, 30712), (395, 30655), (415, 30598), (419, 30589), (432, 30547), (448, 30496), (465, 30445), (541, 30352), (566, 30304), (582, 30280), (603, 30241), (619, 30214), (634, 30184), (670, 30091), (679, 30079), (701, 30031), (710, 30016), (759, 29860), (778, 29809), (789, 29776), (790, 29773), (805, 29707), (818, 29668), (842, 29596), (856, 29557), (862, 29533), (868, 29515), (879, 29482), (921, 29401), (942, 29341), (947, 29323), (968, 29263), (970, 29254), (985, 29206), (989, 29194), (993, 29185),

Gene: Phives\_43 Start: 31162, Stop: 33027, Start Num: 234

Candidate Starts for Phives\_43:

(Start: 234 @31162 has 938 MA's), (265, 31210), (353, 31366), (405, 31459), (436, 31549), (543, 31756), (598, 31855), (603, 31864), (615, 31879), (619, 31891), (655, 31969), (675, 32017), (703, 32074), (730, 32155), (759, 32275), (769, 32305), (790, 32362), (805, 32428), (840, 32521), (862, 32593), (905, 32701), (936, 32764), (985, 32923), (988, 32932), (1031, 33010),

Gene: Phlei\_33 Start: 30919, Stop: 29120, Start Num: 234

Candidate Starts for Phlei\_33:

(Start: 234 @30919 has 938 MA's), (301, 30808), (303, 30802), (336, 30745), (353, 30715), (364, 30697), (397, 30637), (405, 30610), (415, 30583), (448, 30481), (465, 30430), (537, 30349), (541, 30337), (558, 30301), (566, 30289), (619, 30199), (650, 30133), (687, 30049), (724, 29971), (725, 29968), (756, 29857), (759, 29836), (778, 29785), (790, 29749), (802, 29701), (805, 29683), (818, 29644), (841, 29602), (853, 29569), (936, 29368), (942, 29344), (946, 29329), (949, 29320), (962, 29287), (985, 29209), (989, 29197), (993, 29188), (1021, 29140),

Gene: Phleuron\_61 Start: 54187, Stop: 52328, Start Num: 197

Candidate Starts for Phleuron\_61:

(Start: 180 @54211 has 1 MA's), (Start: 197 @54187 has 298 MA's), (Start: 225 @54163 has 5 MA's), (Start: 238 @54157 has 2 MA's), (Start: 261 @54115 has 10 MA's), (269, 54094), (323, 53980), (328, 53974), (349, 53944), (385, 53884), (394, 53863), (410, 53809), (418, 53797), (425, 53779), (427, 53767), (462, 53662), (496, 53605), (511, 53569), (516, 53557), (534, 53533), (539, 53521), (545, 53503), (555, 53485), (566, 53467), (588, 53428), (595, 53419), (597, 53416), (599, 53413), (754, 53056), (760, 53023), (765, 53002), (799, 52909), (802, 52900), (822, 52837), (841, 52801), (842, 52798), (847, 52783), (872, 52705), (877, 52693), (883, 52672), (902, 52633), (942, 52543), (947, 52525), (949, 52519), (954, 52504), (964, 52480), (968, 52465), (969, 52462), (972, 52450), (979, 52426), (1002, 52378), (1015, 52354),

Gene: Phlorence\_37 Start: 30134, Stop: 28275, Start Num: 234

Candidate Starts for Phlorence\_37:

(Start: 234 @30134 has 938 MA's), (266, 30083), (301, 30023), (336, 29960), (353, 29930), (355, 29927), (390, 29870), (395, 29858), (405, 29828), (415, 29801), (465, 29648), (541, 29552), (566, 29504), (581, 29483), (618, 29420), (619, 29414), (652, 29342), (663, 29309), (670, 29294), (679, 29282), (724, 29183), (759, 29048), (769, 29018), (775, 29000), (782, 28982), (790, 28961), (793, 28952), (805, 28895), (818, 28856), (841, 28814), (847, 28796), (862, 28748), (879, 28697), (903,



28643), (908, 28634), (921, 28616), (942, 28556), (947, 28538), (978, 28445), (985, 28421), (989, 28409), (1049, 28292), (1050, 28289),

Gene: Phlyer\_58 Start: 54386, Stop: 52569, Start Num: 235

Candidate Starts for Phlyer\_58:

(129, 54569), (Start: 235 @54386 has 43 MA's), (252, 54356), (359, 54176), (424, 54023), (426, 54011), (437, 53981), (442, 53975), (462, 53912), (464, 53906), (496, 53855), (509, 53828), (511, 53819), (539, 53771), (597, 53666), (647, 53570), (664, 53519), (737, 53375), (749, 53336), (755, 53306), (760, 53279), (763, 53267), (797, 53171), (799, 53165), (802, 53156), (804, 53144), (834, 53072), (841, 53042), (847, 53024), (851, 53015), (872, 52946), (877, 52934), (883, 52913), (921, 52844), (931, 52829), (938, 52805), (942, 52784), (947, 52766), (949, 52760), (962, 52727), (964, 52721), (969, 52703), (972, 52691), (975, 52679), (979, 52667), (994, 52625), (1015, 52595),

Gene: Phoebe\_49 Start: 31845, Stop: 30031, Start Num: 234

Candidate Starts for Phoebe\_49:

(Start: 234 @31845 has 938 MA's), (262, 31806), (266, 31794), (353, 31641), (362, 31626), (395, 31569), (415, 31512), (419, 31503), (432, 31461), (448, 31410), (465, 31359), (541, 31266), (566, 31218), (571, 31209), (582, 31194), (603, 31155), (619, 31128), (634, 31098), (670, 31005), (701, 30945), (710, 30930), (759, 30774), (790, 30687), (805, 30621), (818, 30582), (842, 30510), (856, 30471), (862, 30447), (868, 30429), (879, 30396), (888, 30369), (921, 30315), (942, 30255), (968, 30177), (985, 30120), (989, 30108), (993, 30099),

Gene: Phonnegut\_45 Start: 31538, Stop: 29745, Start Num: 234

Candidate Starts for Phonnegut\_45:

(Start: 234 @31538 has 938 MA's), (246, 31529), (266, 31487), (334, 31367), (336, 31364), (364, 31316), (397, 31256), (406, 31226), (409, 31214), (415, 31202), (465, 31049), (541, 30956), (619, 30818), (634, 30788), (703, 30629), (710, 30617), (726, 30590), (756, 30482), (759, 30461), (802, 30326), (805, 30308), (841, 30227), (856, 30185), (879, 30110), (918, 30035), (936, 29993), (968, 29891), (985, 29834), (989, 29822), (993, 29813),

Gene: Phontbonne\_45 Start: 31461, Stop: 29635, Start Num: 234

Candidate Starts for Phontbonne\_45:

(Start: 234 @31461 has 938 MA's), (252, 31440), (266, 31410), (279, 31380), (379, 31218), (389, 31200), (415, 31128), (419, 31119), (458, 30999), (465, 30975), (541, 30882), (568, 30834), (582, 30813), (603, 30774), (663, 30642), (675, 30621), (700, 30576), (703, 30564), (756, 30411), (759, 30390), (798, 30267), (805, 30237), (818, 30198), (841, 30132), (842, 30129), (847, 30114), (856, 30090), (862, 30066), (942, 29859), (985, 29724), (989, 29712), (993, 29703),

Gene: Phoxy\_48 Start: 31881, Stop: 30067, Start Num: 234

Candidate Starts for Phoxy\_48:

(Start: 234 @31881 has 938 MA's), (262, 31842), (266, 31830), (353, 31677), (362, 31662), (395, 31605), (415, 31548), (419, 31539), (432, 31497), (448, 31446), (465, 31395), (518, 31341), (541, 31302), (566, 31254), (582, 31230), (603, 31191), (619, 31164), (634, 31134), (670, 31041), (679, 31029), (701, 30981), (710, 30966), (759, 30810), (778, 30759), (789, 30726), (790, 30723), (805, 30657), (818, 30618), (842, 30546), (856, 30507), (862, 30483), (868, 30465), (879, 30432), (921, 30351), (942, 30291), (970, 30204), (985, 30156), (989, 30144), (993, 30135), (995, 30132),

Gene: Phrampa\_94 Start: 80024, Stop: 81826, Start Num: 248

Candidate Starts for Phrampa\_94:

(Start: 248 @80024 has 2 MA's), (Start: 261 @80045 has 10 MA's), (274, 80081), (276, 80087), (303, 80135), (311, 80156), (345, 80210), (375, 80255), (382, 80264), (418, 80345), (426, 80372), (428, 80378), (457, 80447), (468, 80483), (541, 80552), (545, 80564), (550, 80576), (586, 80630), (603, 80657), (615, 80672), (700, 80861), (720, 80906), (729, 80930), (731, 80939), (735, 80957), (746,

80990), (756, 81029), (759, 81050), (761, 81056), (796, 81170), (799, 81179), (817, 81254), (825, 81272), (840, 81320), (843, 81332), (856, 81368), (865, 81401), (868, 81410), (883, 81455), (890, 81473), (931, 81557), (936, 81578), (943, 81605), (967, 81677), (973, 81701), (985, 81737), (1017, 81788),

Gene: PhrankReynolds\_60 Start: 54191, Stop: 52332, Start Num: 197

Candidate Starts for PhrankReynolds\_60:

(Start: 180 @54215 has 1 MA's), (Start: 197 @54191 has 298 MA's), (Start: 225 @54167 has 5 MA's), (Start: 238 @54161 has 2 MA's), (Start: 261 @54119 has 10 MA's), (269, 54098), (323, 53984), (328, 53978), (349, 53948), (385, 53888), (394, 53867), (410, 53813), (418, 53801), (425, 53783), (427, 53771), (462, 53666), (496, 53609), (511, 53573), (516, 53561), (534, 53537), (539, 53525), (545, 53507), (555, 53489), (566, 53471), (588, 53432), (595, 53423), (597, 53420), (599, 53417), (724, 53162), (754, 53060), (760, 53027), (765, 53006), (799, 52913), (802, 52904), (822, 52841), (841, 52805), (842, 52802), (847, 52787), (872, 52709), (877, 52697), (883, 52676), (902, 52637), (942, 52547), (947, 52529), (949, 52523), (954, 52508), (964, 52484), (968, 52469), (969, 52466), (972, 52454), (979, 52430), (985, 52409), (1002, 52382), (1015, 52358),

Gene: Phrankenstein\_36 Start: 28059, Stop: 26275, Start Num: 234

Candidate Starts for Phrankenstein\_36:

(Start: 234 @28059 has 938 MA's), (374, 27825), (390, 27795), (394, 27786), (395, 27783), (409, 27738), (415, 27726), (432, 27675), (465, 27573), (492, 27552), (541, 27480), (563, 27435), (566, 27432), (589, 27390), (594, 27384), (603, 27369), (619, 27342), (663, 27237), (667, 27228), (679, 27210), (681, 27207), (700, 27171), (729, 27114), (759, 26991), (775, 26943), (805, 26838), (806, 26835), (837, 26778), (841, 26757), (858, 26709), (881, 26634), (918, 26565), (936, 26523), (942, 26499), (968, 26421), (985, 26364), (989, 26352), (993, 26343), (1010, 26313), (1021, 26295),

Gene: Phranny\_49 Start: 31739, Stop: 29925, Start Num: 234

Candidate Starts for Phranny\_49:

(Start: 234 @31739 has 938 MA's), (262, 31700), (266, 31688), (353, 31535), (362, 31520), (395, 31463), (415, 31406), (419, 31397), (432, 31355), (448, 31304), (465, 31253), (541, 31160), (566, 31112), (582, 31088), (603, 31049), (619, 31022), (634, 30992), (670, 30899), (679, 30887), (701, 30839), (710, 30824), (759, 30668), (778, 30617), (789, 30584), (790, 30581), (805, 30515), (818, 30476), (842, 30404), (856, 30365), (862, 30341), (868, 30323), (879, 30290), (921, 30209), (942, 30149), (947, 30131), (968, 30071), (970, 30062), (985, 30014), (989, 30002), (993, 29993),

Gene: PhredFlintston\_39 Start: 28930, Stop: 27065, Start Num: 283

Candidate Starts for PhredFlintston\_39:

(Start: 234 @29017 has 938 MA's), (Start: 237 @29014 has 2 MA's), (Start: 283 @28930 has 147 MA's), (Start: 291 @28921 has 5 MA's), (342, 28816), (347, 28807), (367, 28777), (369, 28774), (424, 28654), (426, 28642), (428, 28636), (466, 28531), (473, 28504), (532, 28363), (535, 28357), (537, 28354), (541, 28342), (551, 28315), (553, 28312), (562, 28297), (566, 28291), (570, 28285), (613, 28252), (701, 28063), (798, 27748), (801, 27739), (802, 27736), (805, 27718), (819, 27676), (822, 27670), (825, 27661), (832, 27646), (849, 27589), (900, 27430), (913, 27400), (917, 27391), (938, 27331), (943, 27307), (956, 27268), (967, 27235), (970, 27223), (986, 27163),

Gene: Phriends\_39 Start: 28936, Stop: 27071, Start Num: 283

Candidate Starts for Phriends\_39:

(Start: 234 @29023 has 938 MA's), (Start: 283 @28936 has 147 MA's), (Start: 291 @28927 has 5 MA's), (342, 28822), (347, 28813), (367, 28783), (369, 28780), (424, 28660), (426, 28648), (428, 28642), (466, 28537), (473, 28510), (532, 28369), (535, 28363), (537, 28360), (541, 28348), (551, 28321), (553, 28318), (562, 28303), (566, 28297), (570, 28291), (613, 28258), (671, 28129), (701, 28069), (798, 27754), (801, 27745), (802, 27742), (805, 27724), (819, 27682), (822, 27676), (825, 27667), (832, 27652), (849, 27595), (900, 27436), (913, 27406), (917, 27397), (938, 27337), (943,

27313), (956, 27274), (967, 27241), (970, 27229), (986, 27169),

Gene: PhrodoBaggins\_61 Start: 54411, Stop: 52552, Start Num: 197

Candidate Starts for PhrodoBaggins\_61:

(Start: 180 @54435 has 1 MA's), (Start: 197 @54411 has 298 MA's), (Start: 225 @54387 has 5 MA's), (Start: 238 @54381 has 2 MA's), (Start: 261 @54339 has 10 MA's), (269, 54318), (323, 54204), (328, 54198), (349, 54168), (385, 54108), (394, 54087), (410, 54033), (418, 54021), (425, 54003), (427, 53991), (462, 53886), (496, 53829), (511, 53793), (516, 53781), (535, 53754), (545, 53727), (555, 53709), (566, 53691), (588, 53652), (595, 53643), (597, 53640), (599, 53637), (754, 53280), (760, 53247), (765, 53226), (799, 53133), (802, 53124), (822, 53061), (841, 53025), (842, 53022), (847, 53007), (872, 52929), (877, 52917), (883, 52896), (902, 52857), (942, 52767), (947, 52749), (949, 52743), (954, 52728), (964, 52704), (968, 52689), (969, 52686), (972, 52674), (979, 52650), (1002, 52602), (1015, 52578),

Gene: PhrostyMug\_44 Start: 34431, Stop: 32605, Start Num: 234

Candidate Starts for PhrostyMug\_44:

(Start: 234 @34431 has 938 MA's), (359, 34218), (368, 34203), (405, 34125), (411, 34104), (415, 34098), (419, 34089), (457, 33972), (465, 33945), (541, 33852), (546, 33837), (558, 33816), (566, 33804), (596, 33753), (598, 33750), (634, 33684), (648, 33654), (657, 33624), (679, 33579), (700, 33540), (759, 33360), (769, 33330), (775, 33312), (790, 33273), (805, 33207), (841, 33126), (842, 33123), (868, 33042), (936, 32892), (938, 32889), (946, 32853), (954, 32829), (959, 32820), (963, 32808), (970, 32781), (985, 32733), (993, 32712),

Gene: Phunky\_59 Start: 54049, Stop: 52190, Start Num: 197

Candidate Starts for Phunky\_59:

(Start: 180 @54073 has 1 MA's), (Start: 197 @54049 has 298 MA's), (Start: 225 @54025 has 5 MA's), (Start: 238 @54019 has 2 MA's), (Start: 261 @53977 has 10 MA's), (269, 53956), (323, 53842), (328, 53836), (349, 53806), (385, 53746), (394, 53725), (410, 53671), (418, 53659), (425, 53641), (427, 53629), (462, 53524), (496, 53467), (511, 53431), (516, 53419), (534, 53395), (539, 53383), (545, 53365), (555, 53347), (566, 53329), (588, 53290), (595, 53281), (597, 53278), (599, 53275), (754, 52918), (760, 52885), (765, 52864), (799, 52771), (802, 52762), (822, 52699), (841, 52663), (842, 52660), (847, 52645), (872, 52567), (877, 52555), (883, 52534), (902, 52495), (942, 52405), (947, 52387), (949, 52381), (954, 52366), (964, 52342), (968, 52327), (969, 52324), (972, 52312), (979, 52288), (1002, 52240), (1015, 52216),

Gene: PickleBack\_38 Start: 30260, Stop: 28416, Start Num: 234

Candidate Starts for PickleBack\_38:

(Start: 234 @30260 has 938 MA's), (266, 30209), (301, 30149), (336, 30086), (353, 30056), (355, 30053), (390, 29996), (395, 29984), (405, 29954), (415, 29927), (448, 29825), (453, 29810), (465, 29774), (520, 29714), (541, 29678), (566, 29630), (618, 29546), (619, 29540), (652, 29468), (663, 29435), (670, 29420), (679, 29408), (724, 29309), (759, 29174), (769, 29144), (775, 29126), (778, 29123), (790, 29087), (793, 29078), (796, 29057), (799, 29048), (805, 29021), (806, 29018), (837, 28961), (841, 28940), (879, 28823), (903, 28769), (908, 28760), (921, 28742), (947, 28664), (967, 28607), (978, 28571), (985, 28547), (989, 28535),

Gene: Piglet\_0060 Start: 54547, Stop: 52664, Start Num: 180

Candidate Starts for Piglet\_0060:

(Start: 180 @54547 has 1 MA's), (Start: 197 @54523 has 298 MA's), (Start: 225 @54499 has 5 MA's), (Start: 238 @54493 has 2 MA's), (Start: 261 @54451 has 10 MA's), (269, 54430), (323, 54316), (328, 54310), (349, 54280), (385, 54220), (394, 54199), (410, 54145), (418, 54133), (425, 54115), (427, 54103), (462, 53998), (496, 53941), (511, 53905), (516, 53893), (535, 53866), (545, 53839), (555, 53821), (566, 53803), (588, 53764), (595, 53755), (597, 53752), (724, 53494), (754, 53392), (760, 53359), (765, 53338), (799, 53245), (802, 53236), (822, 53173), (841, 53137), (842, 53134), (847,

53119), (872, 53041), (877, 53029), (883, 53008), (902, 52969), (942, 52879), (947, 52861), (949, 52855), (954, 52840), (964, 52816), (968, 52801), (969, 52798), (972, 52786), (979, 52762), (1002, 52714), (1015, 52690),

Gene: Pikmin\_35 Start: 27722, Stop: 25905, Start Num: 282

Candidate Starts for Pikmin\_35:

(Start: 282 @27722 has 4 MA's), (292, 27707), (426, 27431), (428, 27425), (498, 27290), (505, 27275), (535, 27197), (537, 27194), (541, 27182), (553, 27152), (611, 27095), (680, 26948), (752, 26768), (787, 26630), (801, 26579), (802, 26576), (805, 26558), (806, 26555), (819, 26516), (849, 26429), (854, 26402), (900, 26270), (943, 26147), (954, 26114), (956, 26108), (960, 26099), (986, 26003), (988, 25997),

Gene: Pine5\_49 Start: 43969, Stop: 42167, Start Num: 224

Candidate Starts for Pine5\_49:

(224, 43969), (Start: 261 @43918 has 10 MA's), (362, 43756), (410, 43642), (419, 43627), (427, 43603), (428, 43600), (432, 43591), (437, 43576), (441, 43573), (448, 43549), (450, 43543), (452, 43537), (454, 43531), (459, 43519), (464, 43501), (465, 43498), (581, 43291), (585, 43279), (597, 43261), (618, 43231), (622, 43216), (635, 43195), (664, 43120), (704, 43036), (714, 43027), (765, 42856), (792, 42799), (802, 42754), (856, 42613), (872, 42559), (877, 42547), (928, 42436), (964, 42322), (968, 42307), (979, 42268), (985, 42247), (1023, 42172),

Gene: PinheadLarry\_61 Start: 54548, Stop: 52689, Start Num: 197

Candidate Starts for PinheadLarry\_61:

(Start: 180 @54572 has 1 MA's), (Start: 197 @54548 has 298 MA's), (Start: 225 @54524 has 5 MA's), (Start: 238 @54518 has 2 MA's), (Start: 261 @54476 has 10 MA's), (269, 54455), (323, 54341), (328, 54335), (349, 54305), (385, 54245), (394, 54224), (410, 54170), (418, 54158), (425, 54140), (427, 54128), (462, 54023), (496, 53966), (511, 53930), (516, 53918), (535, 53891), (545, 53864), (555, 53846), (566, 53828), (588, 53789), (595, 53780), (597, 53777), (724, 53519), (754, 53417), (760, 53384), (765, 53363), (799, 53270), (802, 53261), (822, 53198), (841, 53162), (842, 53159), (847, 53144), (872, 53066), (877, 53054), (883, 53033), (902, 52994), (942, 52904), (947, 52886), (949, 52880), (954, 52865), (964, 52841), (968, 52826), (969, 52823), (972, 52811), (979, 52787), (1002, 52739), (1015, 52715),

Gene: PinkPlastic\_43 Start: 34151, Stop: 32325, Start Num: 234

Candidate Starts for PinkPlastic\_43:

(Start: 234 @34151 has 938 MA's), (359, 33938), (368, 33923), (395, 33875), (405, 33845), (411, 33824), (415, 33818), (419, 33809), (432, 33767), (457, 33692), (465, 33665), (541, 33572), (546, 33557), (566, 33524), (596, 33473), (598, 33470), (634, 33404), (648, 33374), (657, 33344), (679, 33299), (700, 33260), (759, 33080), (775, 33032), (790, 32993), (805, 32927), (818, 32888), (837, 32867), (841, 32846), (847, 32828), (868, 32762), (936, 32612), (938, 32609), (946, 32573), (959, 32540), (963, 32528), (970, 32501), (985, 32453), (993, 32432),

Gene: Pinkman\_60 Start: 54129, Stop: 52270, Start Num: 197

Candidate Starts for Pinkman\_60:

(Start: 180 @54153 has 1 MA's), (Start: 197 @54129 has 298 MA's), (Start: 225 @54105 has 5 MA's), (Start: 238 @54099 has 2 MA's), (Start: 261 @54057 has 10 MA's), (269, 54036), (323, 53922), (328, 53916), (349, 53886), (385, 53826), (394, 53805), (410, 53751), (418, 53739), (425, 53721), (427, 53709), (462, 53604), (496, 53547), (511, 53511), (516, 53499), (535, 53472), (555, 53427), (588, 53370), (595, 53361), (597, 53358), (724, 53100), (754, 52998), (760, 52965), (765, 52944), (799, 52851), (802, 52842), (822, 52779), (841, 52743), (842, 52740), (847, 52725), (872, 52647), (877, 52635), (883, 52614), (902, 52575), (942, 52485), (947, 52467), (949, 52461), (954, 52446), (964, 52422), (968, 52407), (969, 52404), (972, 52392), (979, 52368), (985, 52347), (1002, 52320), (1015, 52296), (1019, 52281),

Gene: Pinto\_45 Start: 34258, Stop: 32429, Start Num: 234

Candidate Starts for Pinto\_45:

(Start: 234 @34258 has 938 MA's), (359, 34045), (368, 34030), (395, 33982), (405, 33952), (411, 33931), (415, 33925), (419, 33916), (457, 33799), (465, 33772), (541, 33679), (546, 33664), (566, 33631), (596, 33580), (598, 33577), (628, 33523), (634, 33511), (648, 33481), (657, 33451), (679, 33406), (700, 33367), (759, 33187), (775, 33139), (793, 33091), (802, 33052), (805, 33034), (818, 32995), (837, 32974), (841, 32953), (846, 32938), (885, 32815), (960, 32644), (967, 32620), (982, 32572), (985, 32560), (993, 32539), (997, 32533), (1025, 32485), (1030, 32470),

Gene: Pioneer\_45 Start: 31538, Stop: 29745, Start Num: 234

Candidate Starts for Pioneer\_45:

(Start: 234 @31538 has 938 MA's), (246, 31529), (266, 31487), (334, 31367), (336, 31364), (364, 31316), (397, 31256), (406, 31226), (409, 31214), (415, 31202), (465, 31049), (541, 30956), (619, 30818), (634, 30788), (703, 30629), (710, 30617), (726, 30590), (756, 30482), (759, 30461), (802, 30326), (805, 30308), (841, 30227), (856, 30185), (879, 30110), (918, 30035), (936, 29993), (968, 29891), (985, 29834), (989, 29822), (993, 29813),

Gene: Pipcraft\_43 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Pipcraft\_43:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Pipefish\_59 Start: 54415, Stop: 52598, Start Num: 235

Candidate Starts for Pipefish\_59:

(129, 54598), (Start: 235 @54415 has 43 MA's), (252, 54385), (359, 54205), (424, 54052), (426, 54040), (437, 54010), (442, 54004), (462, 53941), (464, 53935), (496, 53884), (511, 53848), (539, 53800), (597, 53695), (647, 53599), (664, 53548), (737, 53404), (749, 53365), (755, 53335), (760, 53308), (763, 53296), (797, 53200), (799, 53194), (802, 53185), (804, 53173), (834, 53101), (841, 53071), (847, 53053), (851, 53044), (872, 52975), (877, 52963), (883, 52942), (921, 52873), (931, 52858), (938, 52834), (949, 52789), (962, 52756), (964, 52750), (969, 52732), (972, 52720), (975, 52708), (979, 52696), (994, 52654), (1015, 52624),

Gene: Pippin\_47 Start: 35168, Stop: 33381, Start Num: 234

Candidate Starts for Pippin\_47:

(Start: 234 @35168 has 938 MA's), (359, 34955), (368, 34940), (395, 34892), (405, 34862), (411, 34841), (415, 34835), (419, 34826), (457, 34709), (465, 34682), (541, 34589), (546, 34574), (566, 34541), (596, 34490), (598, 34487), (634, 34421), (648, 34391), (657, 34361), (679, 34316), (700, 34277), (759, 34097), (775, 34049), (790, 34010), (805, 33944), (839, 33872), (841, 33863), (868, 33779), (903, 33692), (954, 33566), (960, 33554), (985, 33470), (987, 33464),

Gene: Pipsqueak\_59 Start: 53979, Stop: 52120, Start Num: 197

Candidate Starts for Pipsqueak\_59:

(Start: 180 @54003 has 1 MA's), (Start: 197 @53979 has 298 MA's), (Start: 225 @53955 has 5 MA's), (Start: 238 @53949 has 2 MA's), (Start: 261 @53907 has 10 MA's), (269, 53886), (323, 53772), (328, 53766), (349, 53736), (385, 53676), (394, 53655), (410, 53601), (418, 53589), (425, 53571), (427, 53559), (462, 53454), (496, 53397), (511, 53361), (516, 53349), (534, 53325), (539, 53313), (545, 53295), (555, 53277), (566, 53259), (588, 53220), (595, 53211), (597, 53208), (599, 53205), (754, 52848), (760, 52815), (765, 52794), (799, 52701), (802, 52692), (822, 52629), (841, 52593), (842, 52590), (847, 52575), (872, 52497), (877, 52485), (883, 52464), (902, 52425), (942, 52335), (947,

52317), (949, 52311), (954, 52296), (964, 52272), (968, 52257), (969, 52254), (972, 52242), (979, 52218), (1002, 52170), (1015, 52146),

Gene: Piro94\_44 Start: 31722, Stop: 29935, Start Num: 234

Candidate Starts for Piro94\_44:

(Start: 234 @31722 has 938 MA's), (353, 31518), (355, 31515), (359, 31509), (379, 31479), (395, 31446), (397, 31443), (405, 31416), (415, 31389), (432, 31338), (465, 31236), (541, 31143), (566, 31095), (571, 31086), (582, 31071), (619, 31005), (655, 30924), (675, 30876), (740, 30732), (759, 30651), (778, 30600), (789, 30567), (805, 30498), (818, 30459), (837, 30438), (841, 30417), (845, 30405), (918, 30225), (921, 30219), (936, 30183), (942, 30159), (968, 30081), (985, 30024), (989, 30012),

Gene: Pistachio\_47 Start: 31102, Stop: 29264, Start Num: 234

Candidate Starts for Pistachio\_47:

(Start: 234 @31102 has 938 MA's), (266, 31051), (303, 30985), (353, 30898), (390, 30838), (395, 30826), (415, 30769), (419, 30760), (458, 30640), (465, 30616), (541, 30520), (568, 30472), (603, 30412), (636, 30349), (663, 30280), (675, 30259), (711, 30187), (729, 30145), (740, 30103), (759, 30022), (775, 29974), (798, 29899), (805, 29869), (816, 29839), (842, 29758), (856, 29719), (862, 29695), (868, 29677), (921, 29548), (942, 29488), (985, 29353), (989, 29341), (993, 29332),

Gene: Pita2\_47 Start: 35444, Stop: 33618, Start Num: 234

Candidate Starts for Pita2\_47:

(Start: 234 @35444 has 938 MA's), (359, 35231), (368, 35216), (395, 35168), (405, 35138), (411, 35117), (415, 35111), (419, 35102), (457, 34985), (465, 34958), (541, 34865), (546, 34850), (558, 34829), (596, 34766), (598, 34763), (634, 34697), (648, 34667), (657, 34637), (679, 34592), (700, 34553), (759, 34373), (769, 34343), (775, 34325), (778, 34322), (790, 34286), (805, 34220), (818, 34181), (837, 34160), (841, 34139), (847, 34121), (868, 34055), (936, 33905), (938, 33902), (946, 33866), (959, 33833), (963, 33821), (985, 33746), (993, 33725),

Gene: Pixelle\_41 Start: 30386, Stop: 32251, Start Num: 234

Candidate Starts for Pixelle\_41:

(Start: 234 @30386 has 938 MA's), (265, 30434), (377, 30617), (382, 30623), (405, 30683), (436, 30773), (543, 30980), (546, 30989), (603, 31088), (615, 31103), (675, 31241), (730, 31379), (753, 31466), (759, 31499), (781, 31562), (790, 31586), (805, 31652), (840, 31745), (905, 31925), (936, 31988), (942, 32012), (985, 32147), (988, 32156),

Gene: Placalicious\_61 Start: 55080, Stop: 53221, Start Num: 197

Candidate Starts for Placalicious\_61:

(Start: 180 @55104 has 1 MA's), (Start: 197 @55080 has 298 MA's), (Start: 225 @55056 has 5 MA's), (Start: 238 @55050 has 2 MA's), (Start: 261 @55008 has 10 MA's), (269, 54987), (323, 54873), (328, 54867), (349, 54837), (385, 54777), (394, 54756), (410, 54702), (418, 54690), (425, 54672), (462, 54555), (496, 54498), (511, 54462), (516, 54450), (535, 54423), (545, 54396), (555, 54378), (566, 54360), (588, 54321), (595, 54312), (597, 54309), (724, 54051), (754, 53949), (760, 53916), (765, 53895), (799, 53802), (802, 53793), (822, 53730), (841, 53694), (842, 53691), (847, 53676), (872, 53598), (877, 53586), (883, 53565), (902, 53526), (942, 53436), (947, 53418), (949, 53412), (954, 53397), (964, 53373), (968, 53358), (969, 53355), (972, 53343), (979, 53319), (1002, 53271), (1015, 53247),

Gene: Plmatters\_59 Start: 54053, Stop: 52194, Start Num: 197

Candidate Starts for Plmatters\_59:

(Start: 180 @54077 has 1 MA's), (Start: 197 @54053 has 298 MA's), (Start: 225 @54029 has 5 MA's), (Start: 238 @54023 has 2 MA's), (Start: 261 @53981 has 10 MA's), (269, 53960), (323, 53846), (328, 53840), (349, 53810), (385, 53750), (394, 53729), (410, 53675), (418, 53663), (425, 53645), (427,

53633), (462, 53528), (496, 53471), (511, 53435), (516, 53423), (535, 53396), (545, 53369), (555, 53351), (566, 53333), (588, 53294), (595, 53285), (597, 53282), (724, 53024), (754, 52922), (760, 52889), (765, 52868), (799, 52775), (802, 52766), (822, 52703), (841, 52667), (842, 52664), (847, 52649), (872, 52571), (877, 52559), (883, 52538), (902, 52499), (942, 52409), (947, 52391), (949, 52385), (954, 52370), (964, 52346), (968, 52331), (969, 52328), (972, 52316), (979, 52292), (1002, 52244), (1015, 52220),

Gene: Pmask\_45 Start: 29639, Stop: 27798, Start Num: 234

Candidate Starts for Pmask\_45:

(Start: 234 @29639 has 938 MA's), (353, 29435), (395, 29360), (397, 29357), (405, 29330), (409, 29315), (415, 29303), (432, 29252), (461, 29162), (465, 29150), (541, 29057), (559, 29018), (571, 29000), (582, 28985), (619, 28919), (635, 28886), (636, 28883), (681, 28781), (710, 28721), (740, 28637), (759, 28556), (789, 28472), (790, 28469), (793, 28460), (798, 28433), (805, 28403), (837, 28343), (847, 28304), (936, 28088), (938, 28085), (942, 28064), (985, 27929), (989, 27917), (993, 27908), (995, 27905), (1042, 27812),

Gene: Pocahontas\_44 Start: 31594, Stop: 29756, Start Num: 234

Candidate Starts for Pocahontas\_44:

(Start: 234 @31594 has 938 MA's), (266, 31543), (353, 31390), (395, 31318), (405, 31288), (415, 31261), (419, 31252), (465, 31108), (541, 31012), (568, 30964), (603, 30904), (648, 30817), (663, 30772), (675, 30751), (711, 30679), (729, 30637), (740, 30595), (759, 30514), (775, 30466), (790, 30427), (798, 30391), (805, 30361), (816, 30331), (842, 30250), (856, 30211), (862, 30187), (868, 30169), (869, 30166), (921, 30040), (942, 29980), (970, 29893), (985, 29845), (989, 29833), (993, 29824),

Gene: Pocket\_38 Start: 28623, Stop: 26758, Start Num: 283

Candidate Starts for Pocket\_38:

(Start: 234 @28710 has 938 MA's), (Start: 283 @28623 has 147 MA's), (Start: 291 @28614 has 5 MA's), (342, 28509), (347, 28500), (367, 28470), (369, 28467), (424, 28347), (426, 28335), (428, 28329), (466, 28224), (473, 28197), (532, 28056), (535, 28050), (537, 28047), (541, 28035), (551, 28008), (553, 28005), (562, 27990), (566, 27984), (570, 27978), (613, 27945), (671, 27816), (701, 27756), (798, 27441), (801, 27432), (802, 27429), (805, 27411), (819, 27369), (822, 27363), (832, 27339), (849, 27282), (900, 27123), (913, 27093), (917, 27084), (938, 27024), (943, 27000), (956, 26961), (967, 26928), (970, 26916), (986, 26856),

Gene: Podrick\_59 Start: 53832, Stop: 51973, Start Num: 197

Candidate Starts for Podrick\_59:

(Start: 180 @53856 has 1 MA's), (Start: 197 @53832 has 298 MA's), (Start: 225 @53808 has 5 MA's), (Start: 238 @53802 has 2 MA's), (Start: 261 @53760 has 10 MA's), (269, 53739), (323, 53625), (328, 53619), (349, 53589), (385, 53529), (394, 53508), (410, 53454), (418, 53442), (425, 53424), (427, 53412), (462, 53307), (496, 53250), (511, 53214), (516, 53202), (535, 53175), (545, 53148), (555, 53130), (566, 53112), (588, 53073), (595, 53064), (597, 53061), (724, 52803), (754, 52701), (760, 52668), (765, 52647), (799, 52554), (802, 52545), (822, 52482), (841, 52446), (842, 52443), (847, 52428), (872, 52350), (877, 52338), (883, 52317), (902, 52278), (942, 52188), (947, 52170), (949, 52164), (954, 52149), (964, 52125), (968, 52110), (969, 52107), (972, 52095), (979, 52071), (1002, 52023), (1015, 51999),

Gene: Polymorphads\_46 Start: 31563, Stop: 29737, Start Num: 234

Candidate Starts for Polymorphads\_46:

(Start: 234 @31563 has 938 MA's), (252, 31542), (266, 31512), (279, 31482), (379, 31320), (389, 31302), (415, 31230), (419, 31221), (458, 31101), (465, 31077), (541, 30984), (568, 30936), (582, 30915), (603, 30876), (663, 30744), (675, 30723), (700, 30678), (703, 30666), (756, 30513), (759, 30492), (798, 30369), (805, 30339), (818, 30300), (841, 30234), (842, 30231), (847, 30216), (856,

30192), (862, 30168), (942, 29961), (985, 29826), (989, 29814), (993, 29805),

Gene: Pomar16\_47 Start: 31194, Stop: 29371, Start Num: 234

Candidate Starts for Pomar16\_47:

(Start: 234 @31194 has 938 MA's), (353, 30990), (368, 30966), (379, 30948), (389, 30930), (395, 30915), (397, 30912), (405, 30885), (415, 30858), (432, 30807), (465, 30705), (541, 30612), (566, 30564), (571, 30555), (581, 30543), (582, 30540), (619, 30474), (648, 30414), (700, 30300), (710, 30276), (728, 30237), (759, 30111), (778, 30060), (790, 30024), (805, 29958), (818, 29919), (842, 29850), (856, 29811), (869, 29766), (879, 29736), (908, 29673), (918, 29661), (921, 29655), (942, 29595), (985, 29460), (989, 29448), (993, 29439),

Gene: Pons\_46 Start: 34228, Stop: 31850, Start Num: 47

Candidate Starts for Pons\_46:

(Start: 47 @34228 has 13 MA's), (64, 34168), (96, 34087), (136, 33967), (170, 33922), (Start: 223 @33844 has 3 MA's), (228, 33838), (Start: 230 @33835 has 13 MA's), (252, 33805), (269, 33766), (273, 33757), (290, 33730), (Start: 291 @33727 has 5 MA's), (317, 33670), (342, 33631), (380, 33568), (391, 33544), (395, 33535), (399, 33523), (409, 33490), (410, 33487), (420, 33469), (426, 33448), (448, 33388), (495, 33265), (524, 33190), (541, 33148), (634, 33061), (662, 33013), (677, 32983), (682, 32977), (711, 32932), (713, 32929), (718, 32914), (728, 32893), (746, 32830), (758, 32779), (772, 32719), (773, 32710), (779, 32695), (781, 32680), (784, 32668), (805, 32575), (817, 32539), (819, 32533), (822, 32527), (824, 32521), (842, 32464), (849, 32440), (878, 32335), (879, 32332), (900, 32281), (919, 32239), (926, 32221), (938, 32182), (948, 32140), (958, 32116), (967, 32086), (979, 32038), (982, 32029), (986, 32014), (1008, 31969), (1030, 31915), (1046, 31882), (1050, 31870),

Gene: Ponzi\_14 Start: 9802, Stop: 8006, Start Num: 234

Candidate Starts for Ponzi\_14:

(Start: 234 @9802 has 938 MA's), (405, 9493), (465, 9313), (520, 9253), (541, 9220), (563, 9175), (566, 9172), (603, 9103), (618, 9082), (670, 8956), (705, 8905), (729, 8857), (752, 8776), (759, 8734), (780, 8671), (782, 8665), (788, 8647), (791, 8641), (795, 8620), (802, 8596), (805, 8578), (806, 8575), (836, 8518), (841, 8497), (847, 8479), (857, 8452), (949, 8215), (960, 8188), (979, 8125), (985, 8104), (993, 8083), (1021, 8035),

Gene: Poompha\_43 Start: 30385, Stop: 28553, Start Num: 234

Candidate Starts for Poompha\_43:

(Start: 234 @30385 has 938 MA's), (266, 30334), (303, 30268), (353, 30181), (359, 30172), (390, 30121), (395, 30109), (415, 30052), (441, 29971), (445, 29959), (448, 29950), (458, 29923), (465, 29899), (541, 29806), (603, 29698), (619, 29671), (679, 29539), (759, 29311), (782, 29245), (798, 29188), (805, 29158), (818, 29119), (842, 29047), (847, 29032), (856, 29008), (868, 28966), (879, 28933), (942, 28777), (949, 28753), (970, 28690), (985, 28642), (989, 28630), (993, 28621),

Gene: Popcicle\_44 Start: 31594, Stop: 29756, Start Num: 234

Candidate Starts for Popcicle\_44:

(Start: 234 @31594 has 938 MA's), (266, 31543), (353, 31390), (395, 31318), (405, 31288), (415, 31261), (419, 31252), (465, 31108), (541, 31012), (568, 30964), (603, 30904), (648, 30817), (663, 30772), (675, 30751), (711, 30679), (729, 30637), (740, 30595), (759, 30514), (775, 30466), (790, 30427), (798, 30391), (805, 30361), (816, 30331), (842, 30250), (856, 30211), (862, 30187), (868, 30169), (869, 30166), (921, 30040), (942, 29980), (970, 29893), (985, 29845), (989, 29833), (993, 29824),

Gene: Pops\_60 Start: 54238, Stop: 52379, Start Num: 197

Candidate Starts for Pops\_60:

(Start: 180 @54262 has 1 MA's), (Start: 197 @54238 has 298 MA's), (Start: 225 @54214 has 5 MA's), (Start: 238 @54208 has 2 MA's), (Start: 261 @54166 has 10 MA's), (269, 54145), (323, 54031), (328,



54025), (349, 53995), (385, 53935), (394, 53914), (410, 53860), (418, 53848), (425, 53830), (427, 53818), (462, 53713), (496, 53656), (511, 53620), (516, 53608), (534, 53584), (539, 53572), (545, 53554), (555, 53536), (566, 53518), (588, 53479), (595, 53470), (597, 53467), (599, 53464), (754, 53107), (760, 53074), (765, 53053), (799, 52960), (802, 52951), (822, 52888), (841, 52852), (842, 52849), (847, 52834), (872, 52756), (877, 52744), (883, 52723), (902, 52684), (942, 52594), (947, 52576), (949, 52570), (954, 52555), (964, 52531), (968, 52516), (969, 52513), (972, 52501), (979, 52477), (1002, 52429), (1015, 52405),

Gene: Poster\_52 Start: 52989, Stop: 51166, Start Num: 189

Candidate Starts for Poster\_52:

(Start: 175 @53007 has 4 MA's), (Start: 189 @52989 has 26 MA's), (Start: 238 @52965 has 2 MA's), (252, 52938), (Start: 261 @52923 has 10 MA's), (269, 52902), (316, 52815), (382, 52710), (399, 52668), (425, 52602), (434, 52572), (437, 52563), (441, 52560), (442, 52557), (450, 52530), (496, 52437), (504, 52419), (511, 52401), (516, 52389), (528, 52374), (535, 52362), (595, 52251), (597, 52248), (618, 52218), (634, 52182), (737, 51957), (739, 51954), (749, 51918), (754, 51894), (760, 51861), (797, 51753), (799, 51747), (801, 51741), (802, 51738), (841, 51639), (842, 51636), (847, 51621), (872, 51543), (877, 51531), (883, 51510), (885, 51501), (902, 51471), (918, 51447), (935, 51414), (942, 51381), (947, 51363), (949, 51357), (964, 51318), (969, 51300), (972, 51288), (979, 51264), (994, 51222), (1002, 51216), (1015, 51192),

Gene: PotPie\_44 Start: 34903, Stop: 32528, Start Num: 47

Candidate Starts for PotPie\_44:

(Start: 47 @34903 has 13 MA's), (64, 34843), (82, 34801), (96, 34762), (136, 34642), (141, 34621), (170, 34597), (Start: 223 @34519 has 3 MA's), (228, 34513), (Start: 230 @34510 has 13 MA's), (252, 34480), (273, 34432), (290, 34405), (Start: 291 @34402 has 5 MA's), (317, 34345), (342, 34306), (354, 34285), (380, 34243), (391, 34219), (395, 34210), (398, 34204), (399, 34198), (409, 34165), (420, 34144), (426, 34123), (495, 33940), (524, 33865), (541, 33823), (634, 33736), (655, 33712), (662, 33688), (666, 33679), (677, 33658), (711, 33607), (713, 33604), (718, 33589), (728, 33568), (759, 33442), (772, 33394), (773, 33385), (784, 33343), (805, 33250), (817, 33214), (819, 33208), (822, 33202), (824, 33196), (842, 33139), (849, 33115), (878, 33010), (879, 33007), (919, 32914), (926, 32896), (938, 32857), (948, 32815), (958, 32791), (967, 32761), (979, 32713), (986, 32689), (1008, 32644), (1046, 32557),

Gene: PotatoSplit\_50 Start: 31856, Stop: 30042, Start Num: 234

Candidate Starts for PotatoSplit\_50:

(Start: 234 @31856 has 938 MA's), (262, 31817), (266, 31805), (353, 31652), (362, 31637), (395, 31580), (415, 31523), (419, 31514), (432, 31472), (448, 31421), (465, 31370), (541, 31277), (566, 31229), (571, 31220), (582, 31205), (603, 31166), (619, 31139), (634, 31109), (670, 31016), (701, 30956), (710, 30941), (759, 30785), (790, 30698), (805, 30632), (818, 30593), (842, 30521), (856, 30482), (862, 30458), (868, 30440), (879, 30407), (888, 30380), (921, 30326), (942, 30266), (968, 30188), (985, 30131), (989, 30119), (993, 30110),

Gene: Potter\_59 Start: 54044, Stop: 52185, Start Num: 197

Candidate Starts for Potter\_59:

(Start: 180 @54068 has 1 MA's), (Start: 197 @54044 has 298 MA's), (Start: 225 @54020 has 5 MA's), (Start: 238 @54014 has 2 MA's), (Start: 261 @53972 has 10 MA's), (269, 53951), (323, 53837), (328, 53831), (349, 53801), (385, 53741), (394, 53720), (410, 53666), (418, 53654), (425, 53636), (427, 53624), (462, 53519), (496, 53462), (511, 53426), (516, 53414), (535, 53387), (555, 53342), (588, 53285), (595, 53276), (597, 53273), (754, 52913), (760, 52880), (765, 52859), (799, 52766), (802, 52757), (822, 52694), (841, 52658), (842, 52655), (847, 52640), (872, 52562), (877, 52550), (883, 52529), (902, 52490), (942, 52400), (947, 52382), (949, 52376), (954, 52361), (964, 52337), (968, 52322), (969, 52319), (972, 52307), (979, 52283), (1002, 52235), (1015, 52211),

Gene: Power\_43 Start: 31319, Stop: 29532, Start Num: 234

Candidate Starts for Power\_43:

(104, 31574), (Start: 234 @31319 has 938 MA's), (353, 31115), (355, 31112), (359, 31106), (368, 31091), (379, 31076), (395, 31043), (397, 31040), (405, 31013), (415, 30986), (424, 30965), (432, 30935), (465, 30833), (468, 30824), (541, 30740), (566, 30692), (571, 30683), (582, 30668), (619, 30602), (655, 30521), (675, 30473), (679, 30467), (710, 30404), (740, 30329), (759, 30248), (778, 30197), (789, 30164), (790, 30161), (805, 30095), (818, 30056), (837, 30035), (868, 29930), (879, 29897), (888, 29870), (908, 29834), (918, 29822), (921, 29816), (936, 29780), (942, 29756), (968, 29678), (985, 29621), (989, 29609), (993, 29600),

Gene: Powerpuff\_43 Start: 30792, Stop: 32657, Start Num: 234

Candidate Starts for Powerpuff\_43:

(Start: 234 @30792 has 938 MA's), (265, 30840), (405, 31089), (436, 31179), (543, 31386), (546, 31395), (598, 31485), (603, 31494), (615, 31509), (635, 31554), (655, 31599), (675, 31647), (703, 31704), (730, 31785), (753, 31872), (759, 31905), (769, 31935), (790, 31992), (805, 32058), (814, 32082), (840, 32151), (862, 32223), (865, 32232), (905, 32331), (936, 32394), (942, 32418), (978, 32529), (985, 32553), (988, 32562),

Gene: Priamo\_47 Start: 29939, Stop: 28098, Start Num: 234

Candidate Starts for Priamo\_47:

(Start: 234 @29939 has 938 MA's), (353, 29735), (395, 29660), (397, 29657), (405, 29630), (409, 29615), (415, 29603), (432, 29552), (465, 29450), (541, 29357), (559, 29318), (571, 29300), (619, 29219), (636, 29183), (681, 29081), (710, 29021), (740, 28937), (759, 28856), (789, 28772), (790, 28769), (793, 28760), (798, 28733), (805, 28703), (837, 28643), (847, 28604), (856, 28580), (936, 28388), (938, 28385), (942, 28364), (985, 28229), (989, 28217), (993, 28208), (995, 28205), (1042, 28112),

Gene: Prickles\_62 Start: 54544, Stop: 52685, Start Num: 197

Candidate Starts for Prickles\_62:

(Start: 180 @54568 has 1 MA's), (Start: 197 @54544 has 298 MA's), (Start: 225 @54520 has 5 MA's), (Start: 238 @54514 has 2 MA's), (Start: 261 @54472 has 10 MA's), (269, 54451), (323, 54337), (328, 54331), (349, 54301), (385, 54241), (394, 54220), (410, 54166), (418, 54154), (425, 54136), (427, 54124), (462, 54019), (496, 53962), (511, 53926), (516, 53914), (535, 53887), (539, 53878), (555, 53842), (588, 53785), (595, 53776), (597, 53773), (599, 53770), (754, 53413), (760, 53380), (765, 53359), (799, 53266), (802, 53257), (822, 53194), (841, 53158), (842, 53155), (847, 53140), (872, 53062), (877, 53050), (883, 53029), (902, 52990), (942, 52900), (947, 52882), (949, 52876), (954, 52861), (964, 52837), (968, 52822), (969, 52819), (972, 52807), (979, 52783), (1002, 52735), (1015, 52711),

Gene: Prince\_53 Start: 54170, Stop: 52347, Start Num: 189

Candidate Starts for Prince\_53:

(Start: 175 @54188 has 4 MA's), (Start: 189 @54170 has 26 MA's), (Start: 238 @54146 has 2 MA's), (252, 54119), (Start: 261 @54104 has 10 MA's), (269, 54083), (316, 53996), (382, 53891), (399, 53849), (425, 53783), (434, 53753), (437, 53744), (441, 53741), (442, 53738), (496, 53618), (504, 53600), (511, 53582), (516, 53570), (528, 53555), (535, 53543), (595, 53432), (597, 53429), (618, 53399), (634, 53363), (737, 53138), (739, 53135), (749, 53099), (754, 53075), (760, 53042), (797, 52934), (799, 52928), (802, 52919), (841, 52820), (842, 52817), (847, 52802), (872, 52724), (877, 52712), (883, 52691), (885, 52682), (902, 52652), (935, 52595), (942, 52562), (947, 52544), (949, 52538), (964, 52499), (969, 52481), (972, 52469), (979, 52445), (994, 52403), (1002, 52397), (1015, 52373),

Gene: PrincePhergus\_37 Start: 28495, Stop: 26645, Start Num: 281

Candidate Starts for PrincePhergus\_37:

(Start: 281 @28495 has 18 MA's), (347, 28372), (369, 28339), (420, 28228), (426, 28207), (428, 28201), (431, 28192), (447, 28150), (512, 27994), (532, 27940), (535, 27934), (537, 27931), (541, 27919), (553, 27889), (611, 27832), (680, 27685), (741, 27538), (798, 27328), (801, 27319), (802, 27316), (805, 27298), (819, 27256), (825, 27241), (849, 27169), (913, 26980), (917, 26971), (938, 26911), (943, 26887), (954, 26854), (986, 26743),

Gene: Priya\_45 Start: 31550, Stop: 29757, Start Num: 234

Candidate Starts for Priya\_45:

(Start: 234 @31550 has 938 MA's), (246, 31541), (266, 31499), (334, 31379), (336, 31376), (364, 31328), (397, 31268), (406, 31238), (409, 31226), (415, 31214), (465, 31061), (541, 30968), (619, 30830), (634, 30800), (703, 30641), (710, 30629), (726, 30602), (756, 30494), (759, 30473), (802, 30338), (805, 30320), (841, 30239), (856, 30197), (879, 30122), (918, 30047), (936, 30005), (968, 29903), (985, 29846), (989, 29834), (993, 29825),

Gene: ProMouse\_45 Start: 35152, Stop: 33326, Start Num: 234

Candidate Starts for ProMouse\_45:

(Start: 234 @35152 has 938 MA's), (359, 34939), (395, 34876), (405, 34846), (411, 34825), (415, 34819), (419, 34810), (457, 34693), (465, 34666), (541, 34573), (546, 34558), (596, 34474), (598, 34471), (634, 34405), (648, 34375), (657, 34345), (679, 34300), (700, 34261), (759, 34081), (778, 34030), (790, 33994), (805, 33928), (818, 33889), (837, 33868), (841, 33847), (936, 33613), (938, 33610), (946, 33574), (954, 33550), (977, 33481), (985, 33454), (993, 33433),

Gene: ProfessorX\_60 Start: 54043, Stop: 52184, Start Num: 197

Candidate Starts for ProfessorX\_60:

(Start: 180 @54067 has 1 MA's), (Start: 197 @54043 has 298 MA's), (Start: 225 @54019 has 5 MA's), (Start: 238 @54013 has 2 MA's), (Start: 261 @53971 has 10 MA's), (269, 53950), (323, 53836), (328, 53830), (349, 53800), (385, 53740), (394, 53719), (410, 53665), (418, 53653), (425, 53635), (427, 53623), (462, 53518), (496, 53461), (511, 53425), (516, 53413), (534, 53389), (539, 53377), (545, 53359), (555, 53341), (566, 53323), (588, 53284), (595, 53275), (597, 53272), (599, 53269), (754, 52912), (760, 52879), (765, 52858), (799, 52765), (802, 52756), (822, 52693), (841, 52657), (842, 52654), (847, 52639), (872, 52561), (877, 52549), (883, 52528), (902, 52489), (942, 52399), (947, 52381), (949, 52375), (954, 52360), (964, 52336), (968, 52321), (969, 52318), (972, 52306), (979, 52282), (1002, 52234), (1015, 52210),

Gene: PsychoKiller\_42 Start: 32441, Stop: 30048, Start Num: 36

Candidate Starts for PsychoKiller\_42:

(Start: 36 @32441 has 16 MA's), (48, 32435), (Start: 60 @32387 has 1 MA's), (76, 32345), (86, 32321), (127, 32195), (136, 32171), (170, 32126), (206, 32075), (216, 32060), (Start: 230 @32039 has 13 MA's), (262, 31991), (274, 31958), (279, 31949), (317, 31874), (322, 31862), (366, 31793), (382, 31766), (385, 31760), (391, 31745), (409, 31691), (410, 31688), (420, 31670), (426, 31649), (448, 31589), (495, 31466), (497, 31460), (524, 31391), (541, 31349), (634, 31262), (643, 31238), (655, 31232), (662, 31208), (666, 31199), (674, 31184), (682, 31172), (707, 31130), (711, 31127), (713, 31124), (758, 30977), (770, 30935), (773, 30908), (774, 30902), (805, 30773), (817, 30737), (819, 30731), (822, 30725), (824, 30719), (842, 30662), (849, 30638), (859, 30593), (985, 30215), (986, 30212), (1008, 30167), (1013, 30158), (1037, 30098),

Gene: Puhltonio\_60 Start: 54318, Stop: 52459, Start Num: 197

Candidate Starts for Puhltonio\_60:

(Start: 180 @54342 has 1 MA's), (Start: 197 @54318 has 298 MA's), (Start: 225 @54294 has 5 MA's), (Start: 238 @54288 has 2 MA's), (Start: 261 @54246 has 10 MA's), (269, 54225), (323, 54111), (328, 54105), (349, 54075), (385, 54015), (394, 53994), (410, 53940), (418, 53928), (425, 53910), (427, 53898), (462, 53793), (496, 53736), (511, 53700), (516, 53688), (535, 53661), (545, 53634), (555, 53616), (566, 53598), (588, 53559), (595, 53550), (597, 53547), (724, 53289), (754, 53187), (760,

53154), (765, 53133), (799, 53040), (802, 53031), (822, 52968), (841, 52932), (842, 52929), (847, 52914), (872, 52836), (877, 52824), (883, 52803), (902, 52764), (942, 52674), (947, 52656), (949, 52650), (954, 52635), (964, 52611), (968, 52596), (969, 52593), (972, 52581), (979, 52557), (1002, 52509), (1015, 52485),

Gene: Pukovnik\_43 Start: 32125, Stop: 30323, Start Num: 234

Candidate Starts for Pukovnik\_43:

(Start: 234 @32125 has 938 MA's), (353, 31921), (355, 31918), (397, 31843), (405, 31816), (415, 31789), (424, 31768), (461, 31648), (465, 31636), (541, 31543), (566, 31495), (571, 31486), (582, 31471), (619, 31405), (667, 31288), (700, 31231), (710, 31207), (728, 31165), (746, 31102), (759, 31039), (778, 30988), (790, 30952), (798, 30916), (805, 30886), (818, 30847), (837, 30826), (841, 30805), (879, 30688), (908, 30625), (936, 30571), (942, 30547), (962, 30490), (968, 30469), (985, 30412), (989, 30400), (993, 30391),

Gene: Pumbaa\_45 Start: 31515, Stop: 29686, Start Num: 234

Candidate Starts for Pumbaa\_45:

(Start: 234 @31515 has 938 MA's), (252, 31494), (266, 31464), (279, 31434), (379, 31272), (389, 31254), (415, 31182), (419, 31173), (458, 31053), (465, 31029), (541, 30936), (568, 30888), (582, 30867), (603, 30828), (663, 30696), (675, 30675), (700, 30630), (703, 30618), (759, 30444), (802, 30309), (805, 30291), (818, 30252), (842, 30180), (856, 30141), (862, 30117), (864, 30111), (869, 30096), (942, 29910), (985, 29775), (989, 29763), (993, 29754),

Gene: Pumpernickel\_113 Start: 82450, Stop: 80615, Start Num: 232

Candidate Starts for Pumpernickel\_113:

(Start: 232 @82450 has 15 MA's), (265, 82408), (355, 82222), (393, 82165), (418, 82102), (426, 82075), (452, 82012), (544, 81886), (554, 81865), (564, 81847), (586, 81802), (603, 81775), (628, 81730), (635, 81715), (642, 81697), (649, 81685), (663, 81640), (667, 81631), (759, 81385), (782, 81319), (795, 81271), (822, 81172), (853, 81076), (856, 81067), (865, 81034), (868, 81025), (879, 80992), (894, 80956), (947, 80815), (960, 80782), (964, 80770), (974, 80731), (985, 80698),

Gene: Pumpkins\_40 Start: 29815, Stop: 31680, Start Num: 234

Candidate Starts for Pumpkins\_40:

(Start: 234 @29815 has 938 MA's), (265, 29863), (405, 30112), (445, 30232), (543, 30409), (603, 30517), (615, 30532), (675, 30670), (730, 30808), (759, 30928), (790, 31015), (805, 31081), (840, 31174), (936, 31417), (985, 31576), (988, 31585),

Gene: Puppies\_42 Start: 34640, Stop: 32244, Start Num: 3

Candidate Starts for Puppies\_42:

(Start: 3 @34640 has 5 MA's), (4, 34631), (22, 34535), (125, 34199), (Start: 157 @34169 has 1 MA's), (164, 34157), (Start: 205 @34103 has 2 MA's), (279, 33983), (301, 33962), (318, 33917), (352, 33869), (364, 33848), (432, 33686), (456, 33623), (462, 33602), (465, 33593), (511, 33512), (516, 33500), (544, 33446), (561, 33416), (581, 33389), (595, 33362), (597, 33359), (599, 33356), (664, 33209), (704, 33125), (731, 33074), (743, 33035), (746, 33026), (749, 33017), (760, 32960), (793, 32879), (799, 32849), (833, 32759), (839, 32747), (847, 32720), (872, 32642), (877, 32630), (885, 32600), (930, 32510), (935, 32495), (942, 32462), (962, 32405), (968, 32384), (969, 32381), (975, 32357), (979, 32345), (1002, 32294), (1015, 32270),

Gene: Puppy\_47 Start: 31175, Stop: 29337, Start Num: 234

Candidate Starts for Puppy\_47:

(Start: 234 @31175 has 938 MA's), (266, 31124), (303, 31058), (353, 30971), (390, 30911), (395, 30899), (415, 30842), (419, 30833), (458, 30713), (465, 30689), (541, 30593), (568, 30545), (603, 30485), (636, 30422), (663, 30353), (675, 30332), (711, 30260), (729, 30218), (740, 30176), (759, 30095), (775, 30047), (798, 29972), (805, 29942), (816, 29912), (842, 29831), (856, 29792), (862,

29768), (868, 29750), (921, 29621), (942, 29561), (985, 29426), (989, 29414), (993, 29405),

Gene: PuppyEggo\_39 Start: 28937, Stop: 27072, Start Num: 283

Candidate Starts for PuppyEggo\_39:

(Start: 234 @29024 has 938 MA's), (Start: 237 @29021 has 2 MA's), (Start: 283 @28937 has 147 MA's), (Start: 291 @28928 has 5 MA's), (342, 28823), (347, 28814), (367, 28784), (369, 28781), (424, 28661), (426, 28649), (428, 28643), (466, 28538), (473, 28511), (532, 28370), (535, 28364), (537, 28361), (541, 28349), (551, 28322), (553, 28319), (562, 28304), (566, 28298), (570, 28292), (613, 28259), (671, 28130), (701, 28070), (733, 27995), (798, 27755), (801, 27746), (802, 27743), (805, 27725), (819, 27683), (822, 27677), (825, 27668), (832, 27653), (849, 27596), (900, 27437), (913, 27407), (917, 27398), (938, 27338), (943, 27314), (956, 27275), (967, 27242), (970, 27230), (986, 27170),

Gene: PurpleHaze\_48 Start: 31752, Stop: 29938, Start Num: 234

Candidate Starts for PurpleHaze\_48:

(Start: 234 @31752 has 938 MA's), (262, 31713), (266, 31701), (353, 31548), (362, 31533), (395, 31476), (415, 31419), (419, 31410), (432, 31368), (448, 31317), (465, 31266), (541, 31173), (566, 31125), (582, 31101), (603, 31062), (619, 31035), (634, 31005), (670, 30912), (679, 30900), (701, 30852), (710, 30837), (759, 30681), (778, 30630), (789, 30597), (790, 30594), (805, 30528), (818, 30489), (842, 30417), (856, 30378), (862, 30354), (868, 30336), (879, 30303), (921, 30222), (942, 30162), (947, 30144), (968, 30084), (970, 30075), (985, 30027), (989, 30015), (993, 30006),

Gene: QMacho\_45 Start: 30268, Stop: 32142, Start Num: 234

Candidate Starts for QMacho\_45:

(Start: 231 @30265 has 7 MA's), (Start: 234 @30268 has 938 MA's), (273, 30337), (284, 30358), (301, 30382), (395, 30538), (419, 30604), (603, 30940), (663, 31075), (709, 31174), (747, 31297), (759, 31357), (761, 31363), (778, 31408), (786, 31438), (796, 31474), (805, 31510), (840, 31603), (869, 31696), (901, 31774), (936, 31846), (946, 31885), (962, 31927), (967, 31945), (985, 32005), (993, 32026),

Gene: QTRlifeCrisis\_45 Start: 35266, Stop: 33440, Start Num: 234

Candidate Starts for QTRlifeCrisis\_45:

(Start: 234 @35266 has 938 MA's), (359, 35053), (395, 34990), (405, 34960), (411, 34939), (415, 34933), (419, 34924), (457, 34807), (465, 34780), (541, 34687), (546, 34672), (566, 34639), (596, 34588), (598, 34585), (634, 34519), (648, 34489), (657, 34459), (679, 34414), (700, 34375), (759, 34195), (775, 34147), (790, 34108), (805, 34042), (818, 34003), (837, 33982), (841, 33961), (847, 33943), (868, 33877), (936, 33727), (938, 33724), (946, 33688), (954, 33664), (959, 33655), (963, 33643), (985, 33568), (993, 33547),

Gene: Qobbit\_45 Start: 31512, Stop: 29719, Start Num: 234

Candidate Starts for Qobbit\_45:

(Start: 234 @31512 has 938 MA's), (246, 31503), (266, 31461), (334, 31341), (336, 31338), (364, 31290), (397, 31230), (406, 31200), (409, 31188), (415, 31176), (465, 31023), (541, 30930), (619, 30792), (634, 30762), (703, 30603), (710, 30591), (726, 30564), (756, 30456), (759, 30435), (802, 30300), (805, 30282), (841, 30201), (856, 30159), (879, 30084), (918, 30009), (936, 29967), (968, 29865), (985, 29808), (989, 29796), (993, 29787),

Gene: QuadZero\_37 Start: 27017, Stop: 25152, Start Num: 283

Candidate Starts for QuadZero\_37:

(Start: 283 @27017 has 147 MA's), (290, 27011), (337, 26912), (342, 26903), (357, 26879), (367, 26864), (371, 26858), (398, 26807), (399, 26804), (428, 26723), (479, 26573), (489, 26570), (524, 26471), (535, 26444), (537, 26441), (541, 26429), (553, 26399), (566, 26378), (611, 26342), (680, 26195), (752, 26015), (798, 25835), (805, 25805), (824, 25751), (832, 25733), (849, 25676), (854,

25649), (866, 25607), (879, 25568), (913, 25487), (917, 25478), (938, 25418), (943, 25394), (946, 25382), (949, 25373), (956, 25355), (967, 25322), (986, 25250),

Gene: Quantum\_66 Start: 46750, Stop: 44786, Start Num: 258

Candidate Starts for Quantum\_66:

(Start: 258 @46750 has 7 MA's), (304, 46654), (361, 46546), (369, 46534), (397, 46480), (425, 46396), (470, 46261), (492, 46162), (497, 46150), (508, 46123), (515, 46108), (584, 45970), (631, 45883), (672, 45787), (716, 45679), (717, 45676), (726, 45649), (734, 45622), (743, 45592), (752, 45562), (780, 45457), (808, 45349), (810, 45340), (812, 45334), (866, 45190), (872, 45172), (878, 45154), (914, 45100), (949, 44983), (953, 44971), (959, 44962), (963, 44950), (968, 44932), (974, 44908), (983, 44884), (988, 44866),

Gene: Quartz\_38 Start: 28631, Stop: 26730, Start Num: 283

Candidate Starts for Quartz\_38:

(Start: 283 @28631 has 147 MA's), (347, 28508), (357, 28493), (367, 28478), (387, 28445), (391, 28436), (398, 28421), (409, 28385), (418, 28370), (426, 28343), (428, 28337), (447, 28286), (460, 28247), (479, 28187), (532, 28061), (537, 28052), (541, 28040), (553, 28010), (611, 27953), (680, 27806), (701, 27761), (744, 27650), (787, 27455), (798, 27413), (805, 27383), (819, 27341), (832, 27311), (839, 27290), (849, 27254), (938, 26996), (943, 26972), (954, 26939), (956, 26933), (986, 26828),

Gene: Quasar\_43 Start: 33103, Stop: 30710, Start Num: 36

Candidate Starts for Quasar\_43:

(Start: 36 @33103 has 16 MA's), (48, 33097), (Start: 60 @33049 has 1 MA's), (76, 33007), (86, 32983), (127, 32857), (136, 32833), (170, 32788), (206, 32737), (216, 32722), (Start: 230 @32701 has 13 MA's), (262, 32653), (274, 32620), (279, 32611), (317, 32536), (322, 32524), (366, 32455), (382, 32428), (385, 32422), (391, 32407), (409, 32353), (410, 32350), (420, 32332), (426, 32311), (448, 32251), (495, 32128), (497, 32122), (524, 32053), (541, 32011), (634, 31924), (643, 31900), (655, 31894), (662, 31870), (666, 31861), (674, 31846), (682, 31834), (707, 31792), (711, 31789), (713, 31786), (729, 31750), (758, 31639), (773, 31570), (774, 31564), (784, 31528), (805, 31435), (807, 31426), (817, 31399), (819, 31393), (822, 31387), (824, 31381), (842, 31324), (847, 31309), (849, 31300), (859, 31255), (985, 30877), (986, 30874), (1008, 30829), (1013, 30820), (1037, 30760),

Gene: QueenB2\_44 Start: 31390, Stop: 29603, Start Num: 234

Candidate Starts for QueenB2\_44:

(Start: 234 @31390 has 938 MA's), (355, 31183), (359, 31177), (368, 31162), (379, 31147), (395, 31114), (397, 31111), (405, 31084), (415, 31057), (424, 31036), (465, 30904), (541, 30811), (558, 30775), (566, 30763), (571, 30754), (582, 30739), (619, 30673), (655, 30592), (675, 30544), (679, 30538), (710, 30475), (759, 30319), (778, 30268), (789, 30235), (790, 30232), (805, 30166), (818, 30127), (837, 30106), (859, 30031), (862, 30019), (908, 29905), (921, 29887), (936, 29851), (942, 29827), (968, 29749), (985, 29692), (989, 29680), (993, 29671),

Gene: QueenBeane\_60 Start: 54350, Stop: 52491, Start Num: 197

Candidate Starts for QueenBeane\_60:

(Start: 180 @54374 has 1 MA's), (Start: 197 @54350 has 298 MA's), (Start: 225 @54326 has 5 MA's), (Start: 238 @54320 has 2 MA's), (Start: 261 @54278 has 10 MA's), (269, 54257), (323, 54143), (328, 54137), (349, 54107), (385, 54047), (394, 54026), (410, 53972), (418, 53960), (425, 53942), (427, 53930), (462, 53825), (496, 53768), (511, 53732), (516, 53720), (535, 53693), (555, 53648), (588, 53591), (595, 53582), (597, 53579), (754, 53219), (760, 53186), (765, 53165), (799, 53072), (802, 53063), (822, 53000), (841, 52964), (842, 52961), (847, 52946), (872, 52868), (877, 52856), (883, 52835), (902, 52796), (942, 52706), (947, 52688), (949, 52682), (954, 52667), (964, 52643), (968, 52628), (969, 52625), (972, 52613), (979, 52589), (1002, 52541), (1015, 52517),

Gene: QueenBeesly\_44 Start: 31266, Stop: 29479, Start Num: 234

Candidate Starts for QueenBeesly\_44:

(104, 31521), (Start: 234 @31266 has 938 MA's), (353, 31062), (355, 31059), (359, 31053), (368, 31038), (379, 31023), (395, 30990), (397, 30987), (405, 30960), (415, 30933), (424, 30912), (432, 30882), (465, 30780), (541, 30687), (566, 30639), (571, 30630), (582, 30615), (619, 30549), (655, 30468), (675, 30420), (679, 30414), (710, 30351), (740, 30276), (759, 30195), (778, 30144), (789, 30111), (790, 30108), (805, 30042), (818, 30003), (837, 29982), (859, 29907), (864, 29889), (879, 29844), (888, 29817), (908, 29781), (918, 29769), (921, 29763), (936, 29727), (942, 29703), (968, 29625), (985, 29568), (989, 29556), (993, 29547),

Gene: QueenPie\_51 Start: 53683, Stop: 51860, Start Num: 189

Candidate Starts for QueenPie\_51:

(Start: 175 @53701 has 4 MA's), (Start: 189 @53683 has 26 MA's), (Start: 238 @53659 has 2 MA's), (252, 53632), (Start: 261 @53617 has 10 MA's), (269, 53596), (316, 53509), (382, 53404), (399, 53362), (425, 53296), (434, 53266), (437, 53257), (441, 53254), (442, 53251), (450, 53224), (496, 53131), (504, 53113), (511, 53095), (516, 53083), (535, 53056), (566, 52993), (581, 52972), (588, 52954), (595, 52945), (597, 52942), (634, 52876), (737, 52651), (739, 52648), (749, 52612), (754, 52588), (760, 52555), (797, 52447), (799, 52441), (802, 52432), (841, 52333), (842, 52330), (847, 52315), (872, 52237), (877, 52225), (883, 52204), (885, 52195), (902, 52165), (921, 52135), (935, 52108), (942, 52075), (947, 52057), (949, 52051), (964, 52012), (969, 51994), (972, 51982), (979, 51958), (994, 51916), (1002, 51910), (1015, 51886),

Gene: Quenya\_42 Start: 30106, Stop: 31977, Start Num: 242

Candidate Starts for Quenya\_42:

(206, 30058), (Start: 242 @30106 has 1 MA's), (250, 30124), (273, 30175), (353, 30313), (424, 30454), (425, 30457), (453, 30538), (556, 30697), (580, 30733), (603, 30778), (615, 30793), (648, 30865), (655, 30886), (759, 31192), (778, 31243), (782, 31258), (796, 31309), (799, 31318), (805, 31345), (840, 31438), (869, 31531), (901, 31609), (936, 31681), (942, 31705), (962, 31762), (978, 31816), (985, 31840), (993, 31861),

Gene: Quesadilla\_58 Start: 54997, Stop: 53174, Start Num: 197

Candidate Starts for Quesadilla\_58:

(Start: 197 @54997 has 298 MA's), (252, 54943), (273, 54898), (286, 54889), (301, 54871), (323, 54817), (355, 54778), (402, 54679), (418, 54640), (426, 54616), (449, 54547), (462, 54508), (496, 54451), (511, 54415), (516, 54403), (534, 54379), (535, 54376), (539, 54367), (597, 54256), (610, 54238), (618, 54226), (634, 54190), (733, 53977), (737, 53965), (739, 53962), (743, 53944), (749, 53926), (754, 53902), (755, 53896), (760, 53869), (799, 53755), (802, 53746), (841, 53647), (842, 53644), (847, 53629), (872, 53551), (877, 53539), (883, 53518), (890, 53500), (907, 53470), (931, 53434), (942, 53389), (947, 53371), (949, 53365), (964, 53326), (967, 53314), (968, 53311), (979, 53272), (1002, 53224), (1015, 53200),

Gene: QuinnKiro\_43 Start: 31597, Stop: 29759, Start Num: 234

Candidate Starts for QuinnKiro\_43:

(Start: 234 @31597 has 938 MA's), (266, 31546), (353, 31393), (395, 31321), (405, 31291), (415, 31264), (419, 31255), (465, 31111), (541, 31015), (568, 30967), (603, 30907), (648, 30820), (663, 30775), (675, 30754), (711, 30682), (729, 30640), (740, 30598), (759, 30517), (775, 30469), (790, 30430), (798, 30394), (805, 30364), (816, 30334), (842, 30253), (856, 30214), (862, 30190), (868, 30172), (869, 30169), (921, 30043), (942, 29983), (970, 29896), (985, 29848), (989, 29836), (993, 29827),

Gene: Quisquilliae\_61 Start: 54311, Stop: 52452, Start Num: 197

Candidate Starts for Quisquilliae\_61:

(Start: 180 @54335 has 1 MA's), (Start: 197 @54311 has 298 MA's), (Start: 225 @54287 has 5 MA's), (Start: 238 @54281 has 2 MA's), (Start: 261 @54239 has 10 MA's), (269, 54218), (323, 54104), (328, 54098), (349, 54068), (385, 54008), (394, 53987), (410, 53933), (418, 53921), (425, 53903), (427, 53891), (462, 53786), (496, 53729), (511, 53693), (516, 53681), (534, 53657), (539, 53645), (545, 53627), (555, 53609), (566, 53591), (588, 53552), (595, 53543), (597, 53540), (599, 53537), (754, 53180), (760, 53147), (799, 53033), (802, 53024), (822, 52961), (841, 52925), (842, 52922), (847, 52907), (872, 52829), (877, 52817), (883, 52796), (902, 52757), (942, 52667), (947, 52649), (949, 52643), (954, 52628), (964, 52604), (968, 52589), (969, 52586), (972, 52574), (979, 52550), (1002, 52502), (1015, 52478),

Gene: Quokka\_43 Start: 30374, Stop: 28545, Start Num: 233

Candidate Starts for Quokka\_43:

(Start: 233 @30374 has 10 MA's), (353, 30170), (355, 30167), (359, 30161), (368, 30146), (379, 30131), (394, 30101), (395, 30098), (405, 30068), (415, 30041), (424, 30020), (432, 29990), (465, 29888), (541, 29795), (566, 29747), (571, 29738), (582, 29723), (619, 29657), (655, 29576), (675, 29528), (700, 29483), (759, 29303), (775, 29255), (778, 29252), (790, 29216), (805, 29150), (818, 29111), (837, 29090), (859, 29015), (864, 28997), (879, 28952), (888, 28925), (908, 28889), (921, 28871), (936, 28835), (942, 28811), (968, 28733), (985, 28676), (989, 28664), (993, 28655), (1021, 28607), (1037, 28577), (1043, 28559), (1045, 28556),

Gene: Qyrzula\_52 Start: 52584, Stop: 50782, Start Num: 238

Candidate Starts for Qyrzula\_52:

(Start: 197 @52611 has 298 MA's), (Start: 238 @52584 has 2 MA's), (253, 52554), (Start: 261 @52542 has 10 MA's), (272, 52515), (273, 52512), (277, 52503), (301, 52485), (355, 52389), (385, 52338), (395, 52314), (450, 52152), (459, 52128), (462, 52116), (496, 52059), (511, 52023), (516, 52011), (534, 51987), (574, 51909), (580, 51903), (583, 51894), (595, 51873), (597, 51870), (618, 51840), (678, 51696), (710, 51630), (733, 51591), (737, 51579), (743, 51558), (749, 51540), (760, 51483), (783, 51426), (793, 51399), (799, 51369), (802, 51360), (822, 51294), (839, 51267), (841, 51258), (847, 51240), (856, 51216), (872, 51162), (877, 51150), (883, 51129), (921, 51060), (942, 51000), (947, 50982), (960, 50949), (964, 50937), (968, 50922), (969, 50919), (972, 50907), (979, 50883), (980, 50880), (1002, 50832), (1004, 50829), (1015, 50808), (1023, 50787),

Gene: RER2\_29 Start: 24985, Stop: 23201, Start Num: 234

Candidate Starts for RER2\_29:

(Start: 234 @24985 has 938 MA's), (374, 24751), (390, 24721), (394, 24712), (395, 24709), (409, 24664), (415, 24652), (419, 24643), (432, 24601), (465, 24499), (492, 24478), (541, 24406), (563, 24361), (566, 24358), (589, 24316), (594, 24310), (603, 24295), (619, 24268), (663, 24163), (679, 24136), (700, 24097), (759, 23917), (775, 23869), (805, 23764), (806, 23761), (837, 23704), (841, 23683), (858, 23635), (881, 23560), (918, 23491), (936, 23449), (942, 23425), (968, 23347), (985, 23290), (989, 23278), (1021, 23221),

Gene: RGL3\_31 Start: 25970, Stop: 24174, Start Num: 234

Candidate Starts for RGL3\_31:

(Start: 234 @25970 has 938 MA's), (353, 25766), (359, 25757), (379, 25727), (390, 25706), (411, 25643), (419, 25628), (424, 25616), (458, 25508), (465, 25484), (468, 25475), (516, 25433), (518, 25430), (541, 25391), (563, 25346), (566, 25343), (603, 25280), (618, 25259), (619, 25253), (663, 25148), (679, 25121), (700, 25082), (701, 25073), (711, 25055), (729, 25013), (759, 24890), (775, 24842), (805, 24737), (841, 24656), (845, 24644), (918, 24464), (921, 24458), (936, 24422), (938, 24419), (942, 24398), (985, 24263), (989, 24251), (993, 24242), (1010, 24212), (1021, 24194),

Gene: Raccoon\_38 Start: 29022, Stop: 27157, Start Num: 283

Candidate Starts for Raccoon\_38:



(Start: 283 @29022 has 147 MA's), (Start: 291 @29013 has 5 MA's), (423, 28749), (426, 28734), (428, 28728), (473, 28596), (498, 28542), (532, 28455), (537, 28446), (541, 28434), (551, 28407), (553, 28404), (562, 28389), (566, 28383), (741, 28053), (798, 27840), (801, 27831), (802, 27828), (805, 27810), (819, 27768), (825, 27753), (849, 27681), (854, 27654), (900, 27522), (913, 27492), (938, 27423), (943, 27399), (956, 27360), (970, 27315),

Gene: Racecar\_100 Start: 78450, Stop: 80246, Start Num: 248

Candidate Starts for Racecar\_100:

(Start: 248 @78450 has 2 MA's), (301, 78546), (418, 78762), (426, 78789), (428, 78795), (457, 78864), (468, 78900), (586, 79047), (588, 79053), (603, 79074), (615, 79089), (700, 79278), (720, 79323), (731, 79356), (735, 79374), (746, 79407), (756, 79446), (759, 79467), (761, 79473), (796, 79587), (817, 79671), (821, 79677), (825, 79689), (840, 79737), (843, 79749), (856, 79785), (865, 79818), (868, 79827), (883, 79872), (890, 79890), (931, 79974), (936, 79995), (943, 80022), (947, 80037), (960, 80070), (967, 80094), (973, 80118), (985, 80154), (999, 80181),

Gene: Rachaly\_45 Start: 31989, Stop: 30202, Start Num: 234

Candidate Starts for Rachaly\_45:

(Start: 234 @31989 has 938 MA's), (355, 31782), (359, 31776), (379, 31746), (395, 31713), (397, 31710), (409, 31668), (415, 31656), (465, 31503), (541, 31410), (566, 31362), (571, 31353), (582, 31338), (619, 31272), (675, 31143), (740, 30999), (759, 30918), (778, 30867), (789, 30834), (790, 30831), (805, 30765), (818, 30726), (837, 30705), (859, 30630), (862, 30618), (888, 30540), (908, 30504), (921, 30486), (936, 30450), (942, 30426), (968, 30348), (985, 30291), (989, 30279), (993, 30270),

Gene: RagingRooster\_57 Start: 53332, Stop: 51515, Start Num: 235

Candidate Starts for RagingRooster\_57:

(129, 53515), (Start: 235 @53332 has 43 MA's), (252, 53302), (359, 53122), (424, 52969), (426, 52957), (437, 52927), (442, 52921), (462, 52858), (464, 52852), (496, 52801), (509, 52774), (511, 52765), (539, 52717), (597, 52612), (647, 52516), (664, 52465), (737, 52321), (749, 52282), (755, 52252), (760, 52225), (763, 52213), (797, 52117), (799, 52111), (802, 52102), (804, 52090), (834, 52018), (841, 51988), (847, 51970), (851, 51961), (872, 51892), (877, 51880), (883, 51859), (921, 51790), (931, 51775), (938, 51751), (942, 51730), (947, 51712), (949, 51706), (962, 51673), (964, 51667), (969, 51649), (972, 51637), (975, 51625), (979, 51613), (994, 51571), (1015, 51541),

Gene: Rahalelujah\_44 Start: 30731, Stop: 28938, Start Num: 234

Candidate Starts for Rahalelujah\_44:

(Start: 234 @30731 has 938 MA's), (246, 30722), (266, 30680), (314, 30593), (353, 30527), (359, 30518), (364, 30509), (375, 30491), (397, 30449), (405, 30422), (409, 30407), (415, 30395), (432, 30344), (465, 30242), (535, 30164), (541, 30149), (571, 30092), (634, 29981), (672, 29885), (703, 29822), (726, 29783), (729, 29777), (759, 29654), (793, 29558), (798, 29531), (805, 29501), (818, 29462), (841, 29420), (879, 29303), (918, 29228), (936, 29186), (968, 29084), (985, 29027), (989, 29015), (993, 29006),

Gene: Raid\_45 Start: 34729, Stop: 32903, Start Num: 234

Candidate Starts for Raid\_45:

(Start: 234 @34729 has 938 MA's), (359, 34516), (395, 34453), (405, 34423), (411, 34402), (415, 34396), (419, 34387), (426, 34363), (457, 34270), (465, 34243), (541, 34150), (546, 34135), (596, 34051), (598, 34048), (634, 33982), (648, 33952), (657, 33922), (679, 33877), (700, 33838), (759, 33658), (775, 33610), (790, 33571), (805, 33505), (818, 33466), (837, 33445), (841, 33424), (847, 33406), (868, 33340), (936, 33190), (938, 33187), (946, 33151), (954, 33127), (959, 33118), (963, 33106), (985, 33031), (993, 33010),

Gene: RainyPolka\_49 Start: 39380, Stop: 37371, Start Num: 261

Candidate Starts for RainyPolka\_49:

(Start: 261 @39380 has 10 MA's), (297, 39311), (313, 39269), (325, 39242), (361, 39179), (365, 39173), (369, 39167), (400, 39119), (403, 39107), (413, 39080), (421, 39056), (441, 38996), (450, 38972), (463, 38933), (464, 38930), (485, 38846), (525, 38750), (568, 38663), (584, 38639), (592, 38627), (601, 38615), (636, 38546), (744, 38294), (749, 38279), (761, 38222), (764, 38207), (767, 38201), (781, 38159), (792, 38129), (798, 38096), (806, 38063), (810, 38042), (814, 38024), (820, 38000), (830, 37943), (856, 37859), (861, 37841), (862, 37835), (864, 37829), (869, 37814), (872, 37805), (924, 37673), (939, 37628), (942, 37604), (943, 37601), (963, 37547), (968, 37529), (978, 37496), (985, 37472), (993, 37451), (1009, 37424),

Gene: Rajelicia\_46 Start: 35200, Stop: 33413, Start Num: 234

Candidate Starts for Rajelicia\_46:

(Start: 234 @35200 has 938 MA's), (359, 34987), (368, 34972), (405, 34894), (411, 34873), (415, 34867), (419, 34858), (457, 34741), (465, 34714), (541, 34621), (546, 34606), (596, 34522), (598, 34519), (634, 34453), (648, 34423), (657, 34393), (679, 34348), (700, 34309), (759, 34129), (775, 34081), (790, 34042), (805, 33976), (839, 33904), (841, 33895), (868, 33811), (903, 33724), (954, 33598), (960, 33586), (985, 33502), (987, 33496),

Gene: RanchParmCat\_48 Start: 34005, Stop: 31612, Start Num: 45

Candidate Starts for RanchParmCat\_48:

(16, 34134), (19, 34125), (Start: 45 @34005 has 24 MA's), (Start: 65 @33939 has 1 MA's), (92, 33873), (109, 33816), (127, 33777), (136, 33753), (141, 33732), (216, 33642), (250, 33594), (259, 33579), (279, 33531), (295, 33501), (319, 33450), (322, 33444), (324, 33438), (366, 33366), (380, 33342), (391, 33318), (420, 33243), (426, 33222), (448, 33162), (464, 33117), (478, 33069), (522, 32961), (524, 32955), (568, 32874), (634, 32826), (668, 32766), (711, 32694), (729, 32652), (732, 32640), (770, 32499), (772, 32475), (773, 32466), (784, 32424), (805, 32331), (817, 32295), (819, 32289), (824, 32277), (834, 32253), (842, 32220), (849, 32196), (851, 32178), (880, 32085), (922, 31989), (926, 31977), (927, 31974), (938, 31938), (942, 31917), (952, 31884), (960, 31866), (978, 31797), (986, 31770), (996, 31746), (1046, 31638), (1050, 31626),

Gene: Rapheph\_39 Start: 28930, Stop: 27065, Start Num: 283

Candidate Starts for Rapheph\_39:

(Start: 234 @29017 has 938 MA's), (Start: 237 @29014 has 2 MA's), (Start: 283 @28930 has 147 MA's), (Start: 291 @28921 has 5 MA's), (342, 28816), (347, 28807), (367, 28777), (369, 28774), (424, 28654), (426, 28642), (428, 28636), (466, 28531), (473, 28504), (532, 28363), (535, 28357), (537, 28354), (541, 28342), (551, 28315), (553, 28312), (562, 28297), (566, 28291), (570, 28285), (613, 28252), (671, 28123), (701, 28063), (798, 27748), (801, 27739), (802, 27736), (805, 27718), (819, 27676), (822, 27670), (825, 27661), (832, 27646), (849, 27589), (900, 27430), (913, 27400), (917, 27391), (938, 27331), (943, 27307), (956, 27268), (967, 27235), (970, 27223), (986, 27163),

Gene: Raptor\_39 Start: 28934, Stop: 27069, Start Num: 283

Candidate Starts for Raptor\_39:

(Start: 234 @29021 has 938 MA's), (Start: 283 @28934 has 147 MA's), (Start: 291 @28925 has 5 MA's), (342, 28820), (347, 28811), (367, 28781), (369, 28778), (424, 28658), (426, 28646), (428, 28640), (466, 28535), (473, 28508), (532, 28367), (535, 28361), (537, 28358), (541, 28346), (551, 28319), (553, 28316), (562, 28301), (566, 28295), (570, 28289), (613, 28256), (671, 28127), (701, 28067), (798, 27752), (801, 27743), (802, 27740), (805, 27722), (819, 27680), (822, 27674), (832, 27650), (849, 27593), (900, 27434), (913, 27404), (917, 27395), (938, 27335), (943, 27311), (956, 27272), (967, 27239), (970, 27227), (986, 27167),

Gene: Rasputia\_89 Start: 56570, Stop: 58606, Start Num: 208

Candidate Starts for Rasputia\_89:

(Start: 208 @56570 has 5 MA's), (216, 56582), (246, 56627), (265, 56669), (284, 56711), (380, 56894), (382, 56897), (388, 56909), (401, 56948), (403, 56954), (448, 57086), (459, 57116), (503, 57230), (542, 57323), (553, 57350), (628, 57416), (647, 57458), (650, 57473), (660, 57512), (665, 57524), (669, 57530), (676, 57545), (704, 57611), (779, 57812), (805, 57926), (849, 58061), (868, 58136), (879, 58169), (910, 58241), (927, 58283), (935, 58307), (938, 58319), (943, 58343), (945, 58349), (949, 58364), (959, 58394), (965, 58412), (971, 58439), (972, 58445), (980, 58472), (986, 58493), (992, 58511), (998, 58523), (1008, 58541), (1033, 58601),

Gene: Rasputin\_36 Start: 28083, Stop: 26299, Start Num: 234

Candidate Starts for Rasputin\_36:

(Start: 234 @28083 has 938 MA's), (374, 27849), (390, 27819), (394, 27810), (395, 27807), (409, 27762), (415, 27750), (432, 27699), (465, 27597), (492, 27576), (541, 27504), (563, 27459), (566, 27456), (589, 27414), (594, 27408), (603, 27393), (619, 27366), (663, 27261), (667, 27252), (679, 27234), (700, 27195), (729, 27138), (759, 27015), (775, 26967), (805, 26862), (806, 26859), (837, 26802), (841, 26781), (858, 26733), (881, 26658), (918, 26589), (936, 26547), (942, 26523), (968, 26445), (985, 26388), (989, 26376), (993, 26367), (1010, 26337), (1021, 26319),

Gene: RawrgerThat\_54 Start: 54025, Stop: 52202, Start Num: 189

Candidate Starts for RawrgerThat\_54:

(Start: 175 @54043 has 4 MA's), (Start: 189 @54025 has 26 MA's), (Start: 238 @54001 has 2 MA's), (252, 53974), (Start: 261 @53959 has 10 MA's), (269, 53938), (316, 53851), (382, 53746), (394, 53719), (399, 53704), (425, 53638), (434, 53608), (437, 53599), (441, 53596), (442, 53593), (450, 53566), (462, 53530), (496, 53473), (504, 53455), (511, 53437), (516, 53425), (535, 53398), (566, 53335), (588, 53296), (595, 53287), (597, 53284), (618, 53254), (634, 53218), (737, 52993), (739, 52990), (749, 52954), (760, 52897), (797, 52789), (799, 52783), (802, 52774), (841, 52675), (842, 52672), (847, 52657), (872, 52579), (877, 52567), (883, 52546), (885, 52537), (902, 52507), (921, 52477), (935, 52450), (942, 52417), (949, 52393), (964, 52354), (969, 52336), (972, 52324), (979, 52300), (994, 52258), (1002, 52252), (1015, 52228),

Gene: ReMo\_46 Start: 29740, Stop: 27950, Start Num: 234

Candidate Starts for ReMo\_46:

(Start: 234 @29740 has 938 MA's), (336, 29566), (395, 29461), (397, 29458), (405, 29431), (415, 29404), (432, 29353), (465, 29251), (541, 29158), (563, 29113), (566, 29110), (571, 29101), (655, 28939), (663, 28912), (675, 28891), (679, 28885), (730, 28786), (740, 28747), (754, 28696), (759, 28666), (778, 28615), (789, 28582), (796, 28549), (798, 28543), (805, 28513), (837, 28453), (841, 28432), (856, 28390), (863, 28363), (868, 28348), (903, 28261), (936, 28198), (938, 28195), (985, 28039), (989, 28027), (995, 28015),

Gene: Reba\_48 Start: 31412, Stop: 29598, Start Num: 234

Candidate Starts for Reba\_48:

(Start: 234 @31412 has 938 MA's), (262, 31373), (266, 31361), (353, 31208), (362, 31193), (395, 31136), (415, 31079), (419, 31070), (432, 31028), (448, 30977), (465, 30926), (541, 30833), (566, 30785), (582, 30761), (603, 30722), (619, 30695), (634, 30665), (670, 30572), (679, 30560), (701, 30512), (710, 30497), (759, 30341), (778, 30290), (789, 30257), (790, 30254), (805, 30188), (818, 30149), (842, 30077), (856, 30038), (862, 30014), (868, 29996), (879, 29963), (921, 29882), (942, 29822), (947, 29804), (968, 29744), (970, 29735), (985, 29687), (989, 29675), (993, 29666),

Gene: Rebeuca\_44 Start: 31493, Stop: 29658, Start Num: 234

Candidate Starts for Rebeuca\_44:

(Start: 234 @31493 has 938 MA's), (266, 31442), (303, 31376), (353, 31289), (368, 31265), (390, 31229), (395, 31217), (415, 31160), (419, 31151), (465, 31007), (513, 30965), (541, 30914), (568, 30866), (603, 30806), (661, 30677), (663, 30674), (675, 30653), (679, 30647), (729, 30539), (759, 30416), (775, 30368), (798, 30293), (805, 30263), (818, 30224), (841, 30155), (842, 30152), (856,

30113), (862, 30089), (864, 30083), (868, 30071), (942, 29882), (949, 29858), (970, 29795), (985, 29747), (989, 29735), (993, 29726),

Gene: RedBaron\_45 Start: 32770, Stop: 30377, Start Num: 36

Candidate Starts for RedBaron\_45:

(Start: 36 @32770 has 16 MA's), (48, 32764), (Start: 60 @32716 has 1 MA's), (76, 32674), (86, 32650), (127, 32524), (136, 32500), (170, 32455), (206, 32404), (216, 32389), (Start: 230 @32368 has 13 MA's), (262, 32320), (279, 32278), (317, 32203), (322, 32191), (366, 32122), (385, 32089), (391, 32074), (409, 32020), (410, 32017), (420, 31999), (426, 31978), (448, 31918), (495, 31795), (497, 31789), (524, 31720), (541, 31678), (634, 31591), (643, 31567), (655, 31561), (662, 31537), (666, 31528), (674, 31513), (682, 31501), (707, 31459), (711, 31456), (713, 31453), (758, 31306), (773, 31237), (774, 31231), (784, 31195), (805, 31102), (807, 31093), (817, 31066), (819, 31060), (822, 31054), (824, 31048), (842, 30991), (849, 30967), (859, 30922), (985, 30544), (986, 30541), (1008, 30496), (1013, 30487), (1037, 30427),

Gene: RedMaple\_62 Start: 54786, Stop: 52927, Start Num: 197

Candidate Starts for RedMaple\_62:

(Start: 180 @54810 has 1 MA's), (Start: 197 @54786 has 298 MA's), (Start: 225 @54762 has 5 MA's), (Start: 238 @54756 has 2 MA's), (Start: 261 @54714 has 10 MA's), (269, 54693), (323, 54579), (328, 54573), (349, 54543), (385, 54483), (394, 54462), (410, 54408), (418, 54396), (425, 54378), (427, 54366), (462, 54261), (496, 54204), (511, 54168), (516, 54156), (534, 54132), (539, 54120), (545, 54102), (555, 54084), (566, 54066), (588, 54027), (595, 54018), (597, 54015), (599, 54012), (754, 53655), (760, 53622), (765, 53601), (799, 53508), (802, 53499), (822, 53436), (841, 53400), (842, 53397), (847, 53382), (872, 53304), (877, 53292), (883, 53271), (902, 53232), (942, 53142), (947, 53124), (949, 53118), (954, 53103), (964, 53079), (968, 53064), (969, 53061), (972, 53049), (979, 53025), (1002, 52977), (1015, 52953),

Gene: RedRock\_46 Start: 32469, Stop: 30682, Start Num: 234

Candidate Starts for RedRock\_46:

(Start: 234 @32469 has 938 MA's), (353, 32265), (355, 32262), (368, 32241), (379, 32226), (395, 32193), (405, 32163), (415, 32136), (424, 32115), (465, 31983), (541, 31890), (566, 31842), (571, 31833), (582, 31818), (619, 31752), (655, 31671), (675, 31623), (711, 31551), (740, 31479), (759, 31398), (778, 31347), (789, 31314), (790, 31311), (805, 31245), (818, 31206), (837, 31185), (841, 31164), (921, 30966), (936, 30930), (938, 30927), (942, 30906), (962, 30849), (968, 30828), (985, 30771), (989, 30759), (993, 30750),

Gene: Redfield\_38 Start: 29054, Stop: 27189, Start Num: 283

Candidate Starts for Redfield\_38:

(Start: 283 @29054 has 147 MA's), (Start: 291 @29045 has 5 MA's), (423, 28781), (426, 28766), (428, 28760), (473, 28628), (498, 28574), (532, 28487), (537, 28478), (541, 28466), (551, 28439), (553, 28436), (562, 28421), (566, 28415), (741, 28085), (798, 27872), (801, 27863), (802, 27860), (805, 27842), (819, 27800), (834, 27770), (849, 27713), (900, 27554), (913, 27524), (938, 27455), (943, 27431), (945, 27425), (956, 27392), (967, 27359), (970, 27347),

Gene: Reedo\_40 Start: 27887, Stop: 29797, Start Num: 234

Candidate Starts for Reedo\_40:

(101, 27626), (139, 27752), (Start: 234 @27887 has 938 MA's), (265, 27935), (336, 28061), (353, 28091), (405, 28184), (411, 28205), (436, 28274), (543, 28526), (546, 28535), (603, 28634), (615, 28649), (675, 28787), (730, 28925), (740, 28964), (759, 29045), (790, 29132), (798, 29168), (803, 29189), (805, 29198), (862, 29363), (865, 29372), (985, 29693), (988, 29702),

Gene: Refuge\_44 Start: 32644, Stop: 30800, Start Num: 234

Candidate Starts for Refuge\_44:

(Start: 234 @32644 has 938 MA's), (Start: 261 @32608 has 10 MA's), (265, 32596), (266, 32593), (301, 32533), (303, 32527), (336, 32470), (359, 32431), (395, 32365), (397, 32362), (415, 32308), (424, 32287), (461, 32167), (465, 32155), (541, 32062), (566, 32014), (571, 32005), (582, 31990), (619, 31924), (640, 31876), (667, 31807), (710, 31726), (728, 31684), (740, 31639), (749, 31612), (759, 31558), (778, 31507), (790, 31471), (805, 31405), (818, 31366), (837, 31345), (841, 31324), (908, 31144), (936, 31090), (938, 31087), (942, 31066), (962, 31009), (968, 30988), (985, 30931), (989, 30919), (1021, 30862),

Gene: ReginaGlobina\_98 Start: 78225, Stop: 79943, Start Num: 284

Candidate Starts for ReginaGlobina\_98:

(Start: 248 @78150 has 2 MA's), (273, 78204), (276, 78213), (284, 78225), (407, 78444), (418, 78462), (426, 78489), (428, 78495), (468, 78600), (586, 78747), (603, 78774), (615, 78789), (638, 78843), (729, 79044), (735, 79071), (746, 79104), (756, 79143), (759, 79164), (761, 79170), (796, 79287), (817, 79371), (818, 79374), (840, 79437), (843, 79449), (856, 79485), (865, 79518), (883, 79572), (890, 79590), (936, 79695), (943, 79722), (947, 79737), (960, 79770), (962, 79776), (967, 79794), (970, 79806), (973, 79818), (974, 79821), (985, 79854), (1017, 79905),

Gene: Relief\_44 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for Relief\_44:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Remus\_47 Start: 29659, Stop: 27869, Start Num: 234

Candidate Starts for Remus\_47:

(Start: 234 @29659 has 938 MA's), (336, 29485), (395, 29380), (397, 29377), (405, 29350), (415, 29323), (432, 29272), (465, 29170), (541, 29077), (563, 29032), (566, 29029), (571, 29020), (655, 28858), (663, 28831), (675, 28810), (679, 28804), (730, 28705), (740, 28666), (754, 28615), (759, 28585), (778, 28534), (789, 28501), (798, 28462), (805, 28432), (837, 28372), (841, 28351), (856, 28309), (863, 28282), (903, 28180), (936, 28117), (938, 28114), (985, 27958), (989, 27946), (995, 27934),

Gene: RemusLoopin\_36 Start: 28123, Stop: 30075, Start Num: 234

Candidate Starts for RemusLoopin\_36:

(Start: 234 @28123 has 938 MA's), (252, 28144), (279, 28204), (353, 28333), (389, 28390), (405, 28435), (406, 28438), (467, 28621), (526, 28672), (543, 28711), (576, 28768), (582, 28783), (596, 28810), (602, 28819), (603, 28822), (606, 28825), (617, 28840), (630, 28873), (663, 28954), (675, 28975), (683, 28987), (724, 29119), (759, 29254), (775, 29302), (790, 29341), (792, 29344), (796, 29371), (803, 29398), (805, 29407), (816, 29437), (825, 29461), (847, 29524), (905, 29680), (931, 29722), (935, 29734), (942, 29767), (946, 29782), (949, 29791), (960, 29818), (985, 29902), (989, 29914), (1025, 29977),

Gene: RenegadeRaider\_39 Start: 28571, Stop: 26721, Start Num: 281

Candidate Starts for RenegadeRaider\_39:

(Start: 281 @28571 has 18 MA's), (347, 28448), (369, 28415), (420, 28304), (426, 28283), (428, 28277), (431, 28268), (447, 28226), (512, 28070), (532, 28016), (535, 28010), (537, 28007), (541, 27995), (553, 27965), (611, 27908), (715, 27692), (741, 27614), (798, 27404), (802, 27392), (805, 27374), (819, 27332), (849, 27245), (913, 27056), (917, 27047), (938, 26987), (943, 26963), (949, 26942), (954, 26930), (986, 26819),

Gene: Renzie\_39 Start: 28913, Stop: 27057, Start Num: 291

Candidate Starts for Renzie\_39:

(Start: 234 @29009 has 938 MA's), (Start: 283 @28922 has 147 MA's), (Start: 291 @28913 has 5 MA's), (342, 28808), (347, 28799), (367, 28769), (369, 28766), (424, 28646), (426, 28634), (428, 28628), (466, 28523), (473, 28496), (532, 28355), (535, 28349), (537, 28346), (541, 28334), (551, 28307), (553, 28304), (562, 28289), (566, 28283), (570, 28277), (613, 28244), (671, 28115), (701, 28055), (798, 27740), (801, 27731), (802, 27728), (805, 27710), (819, 27668), (822, 27662), (832, 27638), (849, 27581), (900, 27422), (913, 27392), (917, 27383), (938, 27323), (943, 27299), (956, 27260), (967, 27227), (970, 27215), (986, 27155),

Gene: Reprobate\_57 Start: 54575, Stop: 52746, Start Num: 189

Candidate Starts for Reprobate\_57:

(Start: 189 @54575 has 26 MA's), (Start: 222 @54554 has 1 MA's), (Start: 238 @54545 has 2 MA's), (252, 54518), (Start: 261 @54503 has 10 MA's), (301, 54446), (394, 54278), (424, 54200), (427, 54185), (434, 54167), (441, 54155), (452, 54119), (462, 54089), (511, 53996), (516, 53984), (518, 53981), (534, 53960), (535, 53957), (539, 53948), (545, 53930), (583, 53867), (597, 53843), (650, 53738), (703, 53615), (724, 53591), (733, 53564), (737, 53552), (739, 53549), (743, 53531), (749, 53513), (755, 53483), (760, 53456), (780, 53405), (799, 53342), (802, 53333), (834, 53249), (842, 53216), (847, 53201), (866, 53141), (872, 53123), (877, 53111), (883, 53090), (885, 53081), (887, 53078), (942, 52961), (947, 52943), (949, 52937), (964, 52898), (967, 52886), (968, 52883), (972, 52868), (975, 52856), (979, 52844), (994, 52802), (1004, 52793), (1015, 52772), (1023, 52751),

Gene: ResDef\_44 Start: 31597, Stop: 29759, Start Num: 234

Candidate Starts for ResDef\_44:

(Start: 234 @31597 has 938 MA's), (266, 31546), (353, 31393), (395, 31321), (405, 31291), (415, 31264), (419, 31255), (465, 31111), (541, 31015), (568, 30967), (603, 30907), (648, 30820), (663, 30775), (675, 30754), (711, 30682), (729, 30640), (740, 30598), (759, 30517), (775, 30469), (790, 30430), (798, 30394), (805, 30364), (816, 30334), (842, 30253), (856, 30214), (862, 30190), (868, 30172), (869, 30169), (921, 30043), (942, 29983), (970, 29896), (985, 29848), (989, 29836), (993, 29827),

Gene: Retro23\_45 Start: 31674, Stop: 29887, Start Num: 234

Candidate Starts for Retro23\_45:

(Start: 234 @31674 has 938 MA's), (353, 31470), (355, 31467), (359, 31461), (368, 31446), (379, 31431), (395, 31398), (397, 31395), (405, 31368), (415, 31341), (424, 31320), (465, 31188), (541, 31095), (558, 31059), (566, 31047), (571, 31038), (582, 31023), (619, 30957), (655, 30876), (675, 30828), (679, 30822), (710, 30759), (759, 30603), (778, 30552), (789, 30519), (790, 30516), (805, 30450), (818, 30411), (837, 30390), (859, 30315), (862, 30303), (908, 30189), (921, 30171), (936, 30135), (942, 30111), (968, 30033), (985, 29976), (989, 29964), (993, 29955),

Gene: RexFury\_36 Start: 28144, Stop: 26360, Start Num: 234

Candidate Starts for RexFury\_36:

(Start: 234 @28144 has 938 MA's), (374, 27910), (390, 27880), (394, 27871), (395, 27868), (409, 27823), (415, 27811), (432, 27760), (465, 27658), (492, 27637), (541, 27565), (563, 27520), (566, 27517), (589, 27475), (594, 27469), (603, 27454), (619, 27427), (663, 27322), (667, 27313), (679, 27295), (681, 27292), (700, 27256), (729, 27199), (759, 27076), (775, 27028), (805, 26923), (806, 26920), (837, 26863), (841, 26842), (842, 26839), (858, 26794), (881, 26719), (918, 26650), (936, 26608), (942, 26584), (968, 26506), (985, 26449), (989, 26437), (993, 26428), (1010, 26398), (1021, 26380),

Gene: Rhinoforte\_57 Start: 52610, Stop: 50781, Start Num: 197

Candidate Starts for Rhinoforte\_57:

(Start: 197 @52610 has 298 MA's), (Start: 238 @52583 has 2 MA's), (253, 52553), (Start: 261 @52541 has 10 MA's), (272, 52514), (273, 52511), (277, 52502), (301, 52484), (355, 52388), (385, 52337),

(395, 52313), (402, 52289), (450, 52151), (459, 52127), (462, 52115), (496, 52058), (511, 52022), (516, 52010), (534, 51986), (580, 51902), (595, 51872), (597, 51869), (618, 51839), (678, 51695), (710, 51629), (733, 51590), (737, 51578), (743, 51557), (749, 51539), (760, 51482), (783, 51425), (793, 51398), (799, 51368), (802, 51359), (822, 51293), (839, 51266), (841, 51257), (847, 51239), (856, 51215), (872, 51161), (877, 51149), (883, 51128), (921, 51059), (942, 50999), (947, 50981), (960, 50948), (964, 50936), (968, 50921), (969, 50918), (972, 50906), (979, 50882), (980, 50879), (1002, 50831), (1004, 50828), (1015, 50807), (1023, 50786),

Gene: Rhodalysa\_36 Start: 28113, Stop: 26329, Start Num: 234

Candidate Starts for Rhodalysa\_36:

(Start: 234 @28113 has 938 MA's), (374, 27879), (390, 27849), (394, 27840), (395, 27837), (409, 27792), (415, 27780), (432, 27729), (465, 27627), (492, 27606), (541, 27534), (563, 27489), (566, 27486), (589, 27444), (594, 27438), (603, 27423), (619, 27396), (663, 27291), (667, 27282), (679, 27264), (681, 27261), (700, 27225), (759, 27045), (775, 26997), (805, 26892), (806, 26889), (837, 26832), (841, 26811), (858, 26763), (881, 26688), (918, 26619), (936, 26577), (942, 26553), (968, 26475), (985, 26418), (989, 26406), (993, 26397), (1010, 26367), (1021, 26349),

Gene: RhynO\_45 Start: 31292, Stop: 29457, Start Num: 234

Candidate Starts for RhynO\_45:

(Start: 234 @31292 has 938 MA's), (266, 31241), (303, 31175), (353, 31088), (368, 31064), (390, 31028), (395, 31016), (415, 30959), (419, 30950), (445, 30866), (458, 30830), (461, 30818), (465, 30806), (541, 30713), (568, 30665), (603, 30605), (661, 30476), (663, 30473), (675, 30452), (679, 30446), (729, 30338), (759, 30215), (775, 30167), (798, 30092), (805, 30062), (818, 30023), (841, 29954), (842, 29951), (856, 29912), (862, 29888), (864, 29882), (868, 29870), (911, 29762), (942, 29681), (949, 29657), (970, 29594), (985, 29546), (989, 29534), (993, 29525),

Gene: Rhynn\_44 Start: 34513, Stop: 32687, Start Num: 234

Candidate Starts for Rhynn\_44:

(Start: 234 @34513 has 938 MA's), (359, 34300), (395, 34237), (405, 34207), (411, 34186), (415, 34180), (419, 34171), (457, 34054), (465, 34027), (541, 33934), (546, 33919), (566, 33886), (596, 33835), (598, 33832), (634, 33766), (648, 33736), (657, 33706), (679, 33661), (700, 33622), (759, 33442), (775, 33394), (790, 33355), (805, 33289), (818, 33250), (837, 33229), (841, 33208), (847, 33190), (868, 33124), (936, 32974), (938, 32971), (946, 32935), (954, 32911), (959, 32902), (963, 32890), (985, 32815), (993, 32794),

Gene: Rich\_58 Start: 55836, Stop: 53983, Start Num: 189

Candidate Starts for Rich\_58:

(114, 55995), (140, 55914), (Start: 189 @55836 has 26 MA's), (Start: 222 @55791 has 1 MA's), (252, 55755), (287, 55695), (358, 55584), (425, 55434), (441, 55392), (452, 55356), (462, 55326), (511, 55233), (516, 55221), (534, 55197), (539, 55185), (545, 55167), (583, 55104), (597, 55080), (650, 54975), (739, 54786), (743, 54768), (755, 54720), (760, 54693), (765, 54672), (797, 54585), (799, 54579), (802, 54570), (806, 54549), (834, 54486), (842, 54453), (847, 54438), (866, 54378), (872, 54360), (877, 54348), (883, 54327), (885, 54318), (887, 54315), (942, 54198), (949, 54174), (964, 54135), (968, 54120), (969, 54117), (979, 54081), (980, 54078), (1015, 54009),

Gene: Ricotta\_60 Start: 54043, Stop: 52184, Start Num: 197

Candidate Starts for Ricotta\_60:

(Start: 180 @54067 has 1 MA's), (Start: 197 @54043 has 298 MA's), (Start: 225 @54019 has 5 MA's), (Start: 238 @54013 has 2 MA's), (Start: 261 @53971 has 10 MA's), (269, 53950), (323, 53836), (328, 53830), (349, 53800), (385, 53740), (394, 53719), (410, 53665), (418, 53653), (425, 53635), (427, 53623), (462, 53518), (496, 53461), (511, 53425), (516, 53413), (534, 53389), (539, 53377), (545, 53359), (555, 53341), (566, 53323), (588, 53284), (595, 53275), (597, 53272), (599, 53269), (724, 53014), (754, 52912), (760, 52879), (765, 52858), (799, 52765), (802, 52756), (822, 52693), (841,

52657), (842, 52654), (847, 52639), (872, 52561), (877, 52549), (883, 52528), (902, 52489), (942, 52399), (947, 52381), (949, 52375), (954, 52360), (964, 52336), (968, 52321), (969, 52318), (972, 52306), (979, 52282), (1002, 52234), (1015, 52210),

Gene: RidgeCB\_44 Start: 34287, Stop: 32458, Start Num: 234

Candidate Starts for RidgeCB\_44:

(Start: 234 @34287 has 938 MA's), (359, 34074), (395, 34011), (405, 33981), (411, 33960), (415, 33954), (457, 33828), (465, 33801), (541, 33708), (546, 33693), (596, 33609), (598, 33606), (634, 33540), (648, 33510), (657, 33480), (679, 33435), (700, 33396), (759, 33216), (775, 33168), (793, 33120), (802, 33081), (805, 33063), (818, 33024), (837, 33003), (841, 32982), (846, 32967), (885, 32844), (960, 32673), (967, 32649), (982, 32601), (985, 32589), (993, 32568), (997, 32562), (1025, 32514), (1030, 32499),

Gene: Rifter\_47 Start: 29753, Stop: 27954, Start Num: 234

Candidate Starts for Rifter\_47:

(Start: 234 @29753 has 938 MA's), (353, 29549), (359, 29540), (395, 29474), (397, 29471), (405, 29444), (409, 29429), (415, 29417), (432, 29366), (461, 29276), (465, 29264), (541, 29171), (566, 29123), (571, 29114), (660, 28931), (733, 28781), (759, 28676), (778, 28619), (790, 28583), (793, 28574), (798, 28547), (805, 28517), (818, 28478), (837, 28457), (845, 28424), (847, 28418), (879, 28319), (908, 28256), (936, 28202), (942, 28178), (962, 28121), (985, 28043), (989, 28031), (993, 28022), (995, 28019),

Gene: Riggan\_61 Start: 54343, Stop: 52484, Start Num: 197

Candidate Starts for Riggan\_61:

(Start: 180 @54367 has 1 MA's), (Start: 197 @54343 has 298 MA's), (Start: 225 @54319 has 5 MA's), (Start: 238 @54313 has 2 MA's), (Start: 261 @54271 has 10 MA's), (269, 54250), (323, 54136), (328, 54130), (349, 54100), (385, 54040), (394, 54019), (410, 53965), (418, 53953), (425, 53935), (427, 53923), (462, 53818), (496, 53761), (511, 53725), (516, 53713), (535, 53686), (545, 53659), (555, 53641), (566, 53623), (588, 53584), (595, 53575), (597, 53572), (724, 53314), (754, 53212), (760, 53179), (765, 53158), (799, 53065), (802, 53056), (822, 52993), (841, 52957), (842, 52954), (847, 52939), (872, 52861), (877, 52849), (883, 52828), (902, 52789), (942, 52699), (947, 52681), (949, 52675), (954, 52660), (964, 52636), (968, 52621), (969, 52618), (972, 52606), (979, 52582), (1002, 52534), (1015, 52510),

Gene: Rimu\_63 Start: 54511, Stop: 52652, Start Num: 197

Candidate Starts for Rimu\_63:

(Start: 180 @54535 has 1 MA's), (Start: 197 @54511 has 298 MA's), (Start: 225 @54487 has 5 MA's), (Start: 238 @54481 has 2 MA's), (Start: 261 @54439 has 10 MA's), (269, 54418), (323, 54304), (328, 54298), (349, 54268), (385, 54208), (394, 54187), (410, 54133), (418, 54121), (425, 54103), (427, 54091), (462, 53986), (496, 53929), (511, 53893), (516, 53881), (534, 53857), (539, 53845), (545, 53827), (555, 53809), (566, 53791), (588, 53752), (595, 53743), (597, 53740), (599, 53737), (724, 53482), (754, 53380), (760, 53347), (765, 53326), (799, 53233), (802, 53224), (822, 53161), (841, 53125), (842, 53122), (847, 53107), (872, 53029), (877, 53017), (883, 52996), (902, 52957), (942, 52867), (947, 52849), (949, 52843), (954, 52828), (964, 52804), (968, 52789), (969, 52786), (972, 52774), (979, 52750), (985, 52729), (1002, 52702), (1015, 52678),

Gene: Ringer\_46 Start: 35532, Stop: 33745, Start Num: 234

Candidate Starts for Ringer\_46:

(Start: 234 @35532 has 938 MA's), (359, 35319), (368, 35304), (405, 35226), (411, 35205), (415, 35199), (419, 35190), (457, 35073), (465, 35046), (541, 34953), (546, 34938), (566, 34905), (596, 34854), (598, 34851), (634, 34785), (648, 34755), (657, 34725), (679, 34680), (700, 34641), (759, 34461), (775, 34413), (790, 34374), (805, 34308), (839, 34236), (841, 34227), (868, 34143), (903, 34056), (954, 33930), (960, 33918), (985, 33834), (987, 33828),



Gene: Rings\_55 Start: 36927, Stop: 34759, Start Num: 202

Candidate Starts for Rings\_55:

(200, 36930), (Start: 202 @36927 has 13 MA's), (239, 36873), (279, 36789), (341, 36663), (356, 36636), (361, 36627), (388, 36582), (414, 36504), (415, 36495), (422, 36480), (426, 36465), (427, 36462), (445, 36405), (474, 36312), (484, 36270), (572, 36063), (578, 36057), (587, 36033), (601, 36012), (616, 35991), (621, 35976), (623, 35970), (651, 35907), (672, 35856), (706, 35769), (727, 35709), (740, 35661), (766, 35559), (768, 35553), (780, 35526), (781, 35523), (789, 35502), (799, 35460), (801, 35454), (806, 35430), (814, 35388), (815, 35385), (823, 35358), (838, 35325), (840, 35313), (852, 35277), (859, 35253), (861, 35247), (862, 35241), (880, 35187), (899, 35139), (902, 35136), (925, 35076), (932, 35052), (941, 35022), (961, 34968), (982, 34899), (985, 34887), (1006, 34848),

Gene: Rinke\_56 Start: 54543, Stop: 52693, Start Num: 197

Candidate Starts for Rinke\_56:

(Start: 197 @54543 has 298 MA's), (259, 54474), (269, 54450), (338, 54330), (395, 54228), (402, 54204), (426, 54141), (427, 54138), (434, 54120), (448, 54075), (462, 54033), (496, 53976), (500, 53964), (511, 53940), (516, 53928), (534, 53904), (539, 53892), (583, 53805), (597, 53781), (610, 53763), (615, 53757), (618, 53751), (643, 53691), (654, 53667), (737, 53484), (739, 53481), (749, 53445), (755, 53415), (760, 53388), (765, 53367), (797, 53280), (799, 53274), (802, 53265), (822, 53202), (841, 53166), (842, 53163), (843, 53160), (847, 53148), (856, 53124), (872, 53070), (877, 53058), (883, 53037), (885, 53028), (890, 53019), (921, 52968), (931, 52953), (938, 52929), (942, 52908), (949, 52884), (954, 52869), (964, 52845), (967, 52833), (968, 52830), (979, 52791), (986, 52767), (987, 52764), (994, 52749), (1015, 52719),

Gene: Rita130\_57 Start: 54424, Stop: 52598, Start Num: 189

Candidate Starts for Rita130\_57:

(114, 54583), (140, 54502), (Start: 189 @54424 has 26 MA's), (252, 54370), (287, 54310), (358, 54199), (385, 54151), (425, 54049), (441, 54007), (452, 53971), (462, 53941), (511, 53848), (516, 53836), (534, 53812), (539, 53800), (545, 53782), (583, 53719), (597, 53695), (599, 53692), (650, 53590), (739, 53401), (743, 53383), (755, 53335), (760, 53308), (797, 53200), (799, 53194), (802, 53185), (806, 53164), (834, 53101), (842, 53068), (847, 53053), (866, 52993), (872, 52975), (877, 52963), (883, 52942), (885, 52933), (887, 52930), (942, 52813), (949, 52789), (964, 52750), (968, 52735), (969, 52732), (975, 52708), (979, 52696), (980, 52693), (1004, 52645), (1015, 52624),

Gene: Rita1961\_59 Start: 54042, Stop: 52225, Start Num: 235

Candidate Starts for Rita1961\_59:

(129, 54225), (Start: 235 @54042 has 43 MA's), (252, 54012), (359, 53832), (424, 53679), (426, 53667), (437, 53637), (442, 53631), (462, 53568), (464, 53562), (496, 53511), (511, 53475), (539, 53427), (597, 53322), (647, 53226), (664, 53175), (737, 53031), (749, 52992), (755, 52962), (760, 52935), (763, 52923), (797, 52827), (799, 52821), (802, 52812), (804, 52800), (834, 52728), (841, 52698), (847, 52680), (851, 52671), (872, 52602), (877, 52590), (883, 52569), (921, 52500), (931, 52485), (938, 52461), (949, 52416), (964, 52377), (969, 52359), (972, 52347), (975, 52335), (979, 52323), (994, 52281), (1015, 52251),

Gene: Riyhil\_39 Start: 28940, Stop: 27075, Start Num: 283

Candidate Starts for Riyhil\_39:

(Start: 234 @29027 has 938 MA's), (Start: 237 @29024 has 2 MA's), (Start: 283 @28940 has 147 MA's), (Start: 291 @28931 has 5 MA's), (342, 28826), (347, 28817), (367, 28787), (369, 28784), (424, 28664), (426, 28652), (428, 28646), (466, 28541), (473, 28514), (532, 28373), (535, 28367), (537, 28364), (541, 28352), (551, 28325), (553, 28322), (562, 28307), (566, 28301), (570, 28295), (613, 28262), (671, 28133), (701, 28073), (798, 27758), (801, 27749), (802, 27746), (805, 27728), (819, 27686), (822, 27680), (825, 27671), (832, 27656), (849, 27599), (900, 27440), (913, 27410), (917,

27401), (938, 27341), (943, 27317), (956, 27278), (967, 27245), (970, 27233), (986, 27173),

Gene: Roary\_43 Start: 30556, Stop: 28712, Start Num: 234

Candidate Starts for Roary\_43:

(135, 30721), (Start: 234 @30556 has 938 MA's), (266, 30505), (336, 30382), (353, 30352), (379, 30313), (395, 30280), (405, 30250), (411, 30229), (415, 30223), (419, 30214), (448, 30121), (465, 30070), (541, 29974), (545, 29962), (552, 29947), (563, 29929), (566, 29926), (571, 29917), (603, 29863), (619, 29836), (640, 29788), (679, 29704), (703, 29653), (711, 29638), (756, 29491), (759, 29470), (769, 29440), (775, 29422), (778, 29419), (782, 29404), (790, 29383), (793, 29374), (798, 29347), (802, 29335), (805, 29317), (841, 29236), (845, 29224), (862, 29170), (874, 29134), (903, 29065), (918, 29044), (921, 29038), (938, 28999), (942, 28978), (947, 28960), (985, 28843), (989, 28831),

Gene: Robinson\_39 Start: 28928, Stop: 27063, Start Num: 283

Candidate Starts for Robinson\_39:

(Start: 234 @29015 has 938 MA's), (Start: 237 @29012 has 2 MA's), (Start: 283 @28928 has 147 MA's), (Start: 291 @28919 has 5 MA's), (342, 28814), (347, 28805), (367, 28775), (369, 28772), (424, 28652), (426, 28640), (428, 28634), (466, 28529), (473, 28502), (532, 28361), (535, 28355), (537, 28352), (541, 28340), (551, 28313), (553, 28310), (562, 28295), (566, 28289), (570, 28283), (613, 28250), (671, 28121), (701, 28061), (798, 27746), (801, 27737), (802, 27734), (805, 27716), (819, 27674), (822, 27668), (825, 27659), (832, 27644), (849, 27587), (900, 27428), (913, 27398), (917, 27389), (938, 27329), (943, 27305), (956, 27266), (967, 27233), (970, 27221), (986, 27161),

Gene: Robyn\_60 Start: 54190, Stop: 52331, Start Num: 197

Candidate Starts for Robyn\_60:

(43, 54586), (70, 54499), (75, 54484), (78, 54478), (85, 54463), (90, 54445), (Start: 180 @54214 has 1 MA's), (Start: 197 @54190 has 298 MA's), (Start: 225 @54166 has 5 MA's), (Start: 238 @54160 has 2 MA's), (Start: 261 @54118 has 10 MA's), (269, 54097), (323, 53983), (328, 53977), (349, 53947), (385, 53887), (394, 53866), (410, 53812), (418, 53800), (427, 53770), (462, 53665), (496, 53608), (511, 53572), (516, 53560), (535, 53533), (539, 53524), (555, 53488), (566, 53470), (588, 53431), (595, 53422), (597, 53419), (754, 53059), (760, 53026), (765, 53005), (799, 52912), (802, 52903), (822, 52840), (841, 52804), (842, 52801), (847, 52786), (872, 52708), (877, 52696), (883, 52675), (902, 52636), (942, 52546), (947, 52528), (949, 52522), (954, 52507), (964, 52483), (968, 52468), (969, 52465), (972, 52453), (979, 52429), (1002, 52381), (1015, 52357),

Gene: Rockabye\_103 Start: 71780, Stop: 73480, Start Num: 296

Candidate Starts for Rockabye\_103:

(Start: 248 @71684 has 2 MA's), (276, 71747), (296, 71780), (382, 71915), (418, 71996), (426, 72023), (428, 72029), (468, 72134), (537, 72191), (586, 72281), (603, 72308), (615, 72323), (700, 72512), (704, 72527), (735, 72608), (746, 72641), (754, 72671), (756, 72680), (759, 72701), (761, 72707), (796, 72824), (817, 72908), (840, 72974), (843, 72986), (856, 73022), (865, 73055), (883, 73109), (895, 73136), (943, 73259), (945, 73265), (960, 73307), (962, 73313), (967, 73331), (985, 73391), (1017, 73442),

Gene: Rockstar\_45 Start: 30972, Stop: 29134, Start Num: 234

Candidate Starts for Rockstar\_45:

(179, 31044), (Start: 234 @30972 has 938 MA's), (266, 30921), (353, 30768), (379, 30729), (395, 30696), (415, 30639), (419, 30630), (424, 30618), (458, 30510), (465, 30486), (541, 30390), (568, 30342), (603, 30282), (663, 30150), (675, 30129), (710, 30060), (729, 30015), (740, 29973), (759, 29892), (790, 29805), (798, 29769), (805, 29739), (842, 29628), (856, 29589), (862, 29565), (868, 29547), (918, 29424), (921, 29418), (942, 29358), (985, 29223), (989, 29211), (993, 29202),

Gene: Rog141\_38 Start: 28619, Stop: 26754, Start Num: 283

Candidate Starts for Rog141\_38:

(Start: 234 @28706 has 938 MA's), (Start: 237 @28703 has 2 MA's), (Start: 283 @28619 has 147 MA's), (Start: 291 @28610 has 5 MA's), (342, 28505), (347, 28496), (367, 28466), (369, 28463), (424, 28343), (426, 28331), (428, 28325), (466, 28220), (473, 28193), (532, 28052), (535, 28046), (537, 28043), (541, 28031), (551, 28004), (553, 28001), (562, 27986), (566, 27980), (570, 27974), (613, 27941), (671, 27812), (701, 27752), (798, 27437), (801, 27428), (802, 27425), (805, 27407), (819, 27365), (822, 27359), (825, 27350), (832, 27335), (849, 27278), (900, 27119), (913, 27089), (917, 27080), (938, 27020), (943, 26996), (956, 26957), (967, 26924), (970, 26912), (986, 26852),

Gene: Rohr\_45 Start: 34984, Stop: 33155, Start Num: 234

Candidate Starts for Rohr\_45:

(Start: 234 @34984 has 938 MA's), (359, 34771), (368, 34756), (395, 34708), (405, 34678), (411, 34657), (415, 34651), (419, 34642), (457, 34525), (465, 34498), (541, 34405), (546, 34390), (596, 34306), (598, 34303), (634, 34237), (648, 34207), (657, 34177), (679, 34132), (700, 34093), (759, 33913), (775, 33865), (793, 33817), (802, 33778), (805, 33760), (818, 33721), (837, 33700), (841, 33679), (885, 33541), (960, 33370), (967, 33346), (977, 33313), (982, 33298), (985, 33286), (993, 33265), (997, 33259), (1025, 33211), (1030, 33196),

Gene: Roksolana\_46 Start: 29675, Stop: 27834, Start Num: 234

Candidate Starts for Roksolana\_46:

(Start: 212 @29705 has 1 MA's), (Start: 234 @29675 has 938 MA's), (353, 29471), (395, 29396), (397, 29393), (405, 29366), (409, 29351), (415, 29339), (432, 29288), (461, 29198), (465, 29186), (541, 29093), (559, 29054), (571, 29036), (582, 29021), (619, 28955), (635, 28922), (636, 28919), (681, 28817), (710, 28757), (740, 28673), (759, 28592), (789, 28508), (790, 28505), (793, 28496), (798, 28469), (805, 28439), (837, 28379), (847, 28340), (936, 28124), (938, 28121), (942, 28100), (985, 27965), (989, 27953), (993, 27944), (995, 27941), (1042, 27848),

Gene: Roliet\_58 Start: 53385, Stop: 51526, Start Num: 197

Candidate Starts for Roliet\_58:

(Start: 180 @53409 has 1 MA's), (Start: 197 @53385 has 298 MA's), (Start: 225 @53361 has 5 MA's), (Start: 238 @53355 has 2 MA's), (Start: 261 @53313 has 10 MA's), (269, 53292), (323, 53178), (328, 53172), (349, 53142), (385, 53082), (394, 53061), (410, 53007), (418, 52995), (425, 52977), (427, 52965), (462, 52860), (496, 52803), (511, 52767), (516, 52755), (535, 52728), (539, 52719), (555, 52683), (588, 52626), (595, 52617), (597, 52614), (599, 52611), (724, 52356), (754, 52254), (760, 52221), (765, 52200), (799, 52107), (802, 52098), (822, 52035), (841, 51999), (842, 51996), (847, 51981), (872, 51903), (877, 51891), (883, 51870), (902, 51831), (942, 51741), (947, 51723), (949, 51717), (954, 51702), (964, 51678), (968, 51663), (969, 51660), (972, 51648), (979, 51624), (1002, 51576), (1015, 51552),

Gene: Rollins\_40 Start: 27521, Stop: 29389, Start Num: 231

Candidate Starts for Rollins\_40:

(Start: 231 @27521 has 7 MA's), (Start: 234 @27524 has 938 MA's), (Start: 237 @27527 has 2 MA's), (273, 27596), (425, 27878), (432, 27905), (453, 27959), (559, 28124), (603, 28199), (618, 28220), (747, 28574), (759, 28634), (778, 28685), (796, 28751), (805, 28787), (840, 28880), (901, 29051), (936, 29123), (962, 29204), (984, 29279), (985, 29282), (993, 29303), (1032, 29372),

Gene: RomaT\_58 Start: 54241, Stop: 52424, Start Num: 235

Candidate Starts for RomaT\_58:

(129, 54424), (Start: 235 @54241 has 43 MA's), (252, 54211), (359, 54031), (424, 53878), (426, 53866), (437, 53836), (442, 53830), (462, 53767), (464, 53761), (496, 53710), (509, 53683), (511, 53674), (539, 53626), (597, 53521), (647, 53425), (664, 53374), (737, 53230), (749, 53191), (755, 53161), (760, 53134), (763, 53122), (797, 53026), (799, 53020), (802, 53011), (804, 52999), (834, 52927), (841, 52897), (847, 52879), (851, 52870), (872, 52801), (877, 52789), (883, 52768), (921,

52699), (931, 52684), (938, 52660), (942, 52639), (947, 52621), (949, 52615), (962, 52582), (964, 52576), (969, 52558), (972, 52546), (975, 52534), (979, 52522), (994, 52480), (1015, 52450),

Gene: Romney\_45 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for Romney\_45:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Rona\_40 Start: 29912, Stop: 31783, Start Num: 234

Candidate Starts for Rona\_40:

(Start: 234 @29912 has 938 MA's), (340, 30095), (362, 30134), (382, 30152), (408, 30224), (419, 30248), (424, 30260), (425, 30263), (453, 30344), (579, 30536), (603, 30584), (649, 30674), (709, 30815), (747, 30938), (759, 30998), (782, 31064), (786, 31079), (796, 31115), (799, 31124), (805, 31151), (840, 31244), (869, 31337), (901, 31415), (936, 31487), (946, 31526), (962, 31568), (978, 31622), (985, 31646), (993, 31667), (1008, 31691),

Gene: Roosevelt\_44 Start: 31572, Stop: 29746, Start Num: 234

Candidate Starts for Roosevelt\_44:

(Start: 234 @31572 has 938 MA's), (252, 31551), (266, 31521), (279, 31491), (379, 31329), (389, 31311), (415, 31239), (419, 31230), (458, 31110), (465, 31086), (541, 30993), (568, 30945), (582, 30924), (603, 30885), (663, 30753), (675, 30732), (700, 30687), (703, 30675), (756, 30522), (759, 30501), (798, 30378), (805, 30348), (818, 30309), (841, 30243), (842, 30240), (847, 30225), (856, 30201), (862, 30177), (942, 29970), (985, 29835), (989, 29823), (993, 29814),

Gene: Rosa24\_44 Start: 31601, Stop: 29775, Start Num: 234

Candidate Starts for Rosa24\_44:

(Start: 234 @31601 has 938 MA's), (252, 31580), (266, 31550), (279, 31520), (379, 31358), (389, 31340), (415, 31268), (419, 31259), (458, 31139), (465, 31115), (541, 31022), (568, 30974), (582, 30953), (603, 30914), (663, 30782), (675, 30761), (700, 30716), (703, 30704), (756, 30551), (759, 30530), (798, 30407), (805, 30377), (818, 30338), (841, 30272), (842, 30269), (847, 30254), (856, 30230), (862, 30206), (942, 29999), (985, 29864), (989, 29852), (993, 29843),

Gene: Rosalind\_46 Start: 29862, Stop: 28072, Start Num: 234

Candidate Starts for Rosalind\_46:

(Start: 234 @29862 has 938 MA's), (336, 29688), (395, 29583), (397, 29580), (405, 29553), (415, 29526), (432, 29475), (465, 29373), (541, 29280), (563, 29235), (566, 29232), (571, 29223), (655, 29061), (663, 29034), (675, 29013), (679, 29007), (730, 28908), (740, 28869), (754, 28818), (759, 28788), (778, 28737), (789, 28704), (796, 28671), (798, 28665), (805, 28635), (837, 28575), (841, 28554), (856, 28512), (863, 28485), (868, 28470), (903, 28383), (936, 28320), (938, 28317), (985, 28161), (989, 28149), (995, 28137),

Gene: Roscoe\_61 Start: 54489, Stop: 52630, Start Num: 197

Candidate Starts for Roscoe\_61:

(Start: 180 @54513 has 1 MA's), (Start: 197 @54489 has 298 MA's), (Start: 225 @54465 has 5 MA's), (Start: 238 @54459 has 2 MA's), (Start: 261 @54417 has 10 MA's), (269, 54396), (323, 54282), (328, 54276), (349, 54246), (385, 54186), (394, 54165), (410, 54111), (418, 54099), (425, 54081), (427, 54069), (462, 53964), (496, 53907), (511, 53871), (516, 53859), (535, 53832), (539, 53823), (555, 53787), (588, 53730), (595, 53721), (597, 53718), (599, 53715), (754, 53358), (760, 53325), (765, 53304), (799, 53211), (802, 53202), (822, 53139), (841, 53103), (842, 53100), (847, 53085), (872, 53007), (877, 52995), (883, 52974), (902, 52935), (942, 52845), (947, 52827), (949, 52821), (954,

52806), (964, 52782), (968, 52767), (969, 52764), (972, 52752), (979, 52728), (1002, 52680), (1015, 52656),

Gene: Rosebush\_56 Start: 52637, Stop: 50808, Start Num: 197

Candidate Starts for Rosebush\_56:

(Start: 197 @52637 has 298 MA's), (Start: 238 @52610 has 2 MA's), (253, 52580), (Start: 261 @52568 has 10 MA's), (272, 52541), (273, 52538), (277, 52529), (301, 52511), (355, 52415), (385, 52364), (395, 52340), (450, 52178), (459, 52154), (462, 52142), (496, 52085), (511, 52049), (516, 52037), (534, 52013), (574, 51935), (580, 51929), (583, 51920), (595, 51899), (597, 51896), (618, 51866), (678, 51722), (710, 51656), (737, 51605), (743, 51584), (749, 51566), (760, 51509), (783, 51452), (793, 51425), (799, 51395), (802, 51386), (822, 51320), (839, 51293), (841, 51284), (847, 51266), (856, 51242), (872, 51188), (877, 51176), (883, 51155), (921, 51086), (942, 51026), (947, 51008), (960, 50975), (964, 50963), (968, 50948), (969, 50945), (972, 50933), (979, 50909), (980, 50906), (1002, 50858), (1004, 50855), (1015, 50834), (1023, 50813),

Gene: Rowa\_41 Start: 29682, Stop: 31553, Start Num: 234

Candidate Starts for Rowa\_41:

(210, 29652), (218, 29661), (Start: 234 @29682 has 938 MA's), (405, 29994), (419, 30045), (449, 30141), (453, 30153), (535, 30264), (570, 30333), (571, 30336), (603, 30396), (615, 30411), (617, 30414), (655, 30501), (657, 30510), (675, 30549), (703, 30612), (704, 30615), (746, 30753), (747, 30756), (752, 30774), (754, 30786), (756, 30795), (759, 30816), (761, 30822), (775, 30864), (789, 30900), (790, 30903), (798, 30939), (799, 30942), (803, 30960), (805, 30969), (816, 30999), (825, 31023), (865, 31143), (869, 31155), (876, 31173), (879, 31185), (882, 31194), (901, 31233), (902, 31236), (905, 31242), (908, 31248), (935, 31296), (954, 31368), (967, 31404), (985, 31464), (1029, 31548),

Gene: Rowdy\_48 Start: 31200, Stop: 29365, Start Num: 234

Candidate Starts for Rowdy\_48:

(Start: 234 @31200 has 938 MA's), (266, 31149), (303, 31083), (353, 30996), (368, 30972), (390, 30936), (395, 30924), (415, 30867), (419, 30858), (445, 30774), (458, 30738), (461, 30726), (465, 30714), (541, 30621), (568, 30573), (603, 30513), (661, 30384), (663, 30381), (675, 30360), (679, 30354), (729, 30246), (759, 30123), (775, 30075), (798, 30000), (805, 29970), (818, 29931), (841, 29862), (842, 29859), (856, 29820), (862, 29796), (864, 29790), (868, 29778), (911, 29670), (942, 29589), (949, 29565), (970, 29502), (985, 29454), (989, 29442), (993, 29433),

Gene: Roy17\_59 Start: 53743, Stop: 51884, Start Num: 197

Candidate Starts for Roy17\_59:

(Start: 180 @53767 has 1 MA's), (Start: 197 @53743 has 298 MA's), (Start: 225 @53719 has 5 MA's), (Start: 238 @53713 has 2 MA's), (Start: 261 @53671 has 10 MA's), (269, 53650), (323, 53536), (328, 53530), (349, 53500), (385, 53440), (394, 53419), (410, 53365), (418, 53353), (425, 53335), (427, 53323), (462, 53218), (496, 53161), (511, 53125), (516, 53113), (535, 53086), (545, 53059), (555, 53041), (566, 53023), (588, 52984), (595, 52975), (597, 52972), (599, 52969), (754, 52612), (760, 52579), (765, 52558), (799, 52465), (802, 52456), (822, 52393), (841, 52357), (842, 52354), (847, 52339), (872, 52261), (877, 52249), (883, 52228), (902, 52189), (942, 52099), (947, 52081), (949, 52075), (954, 52060), (964, 52036), (968, 52021), (969, 52018), (972, 52006), (979, 51982), (1002, 51934), (1015, 51910),

Gene: Rubeus\_45 Start: 33074, Stop: 31248, Start Num: 234

Candidate Starts for Rubeus\_45:

(Start: 234 @33074 has 938 MA's), (359, 32861), (395, 32798), (405, 32768), (411, 32747), (415, 32741), (419, 32732), (457, 32615), (465, 32588), (541, 32495), (546, 32480), (596, 32396), (598, 32393), (634, 32327), (648, 32297), (657, 32267), (679, 32222), (700, 32183), (759, 32003), (775, 31955), (790, 31916), (805, 31850), (818, 31811), (837, 31790), (841, 31769), (847, 31751), (868,

31685), (936, 31535), (938, 31532), (946, 31496), (954, 31472), (959, 31463), (963, 31451), (985, 31376), (993, 31355),

Gene: Rufus\_45 Start: 34607, Stop: 32778, Start Num: 234

Candidate Starts for Rufus\_45:

(Start: 234 @34607 has 938 MA's), (359, 34394), (395, 34331), (405, 34301), (411, 34280), (415, 34274), (419, 34265), (457, 34148), (465, 34121), (541, 34028), (546, 34013), (596, 33929), (598, 33926), (634, 33860), (648, 33830), (657, 33800), (679, 33755), (700, 33716), (759, 33536), (775, 33488), (793, 33440), (802, 33401), (805, 33383), (818, 33344), (837, 33323), (841, 33302), (885, 33164), (960, 32993), (967, 32969), (977, 32936), (982, 32921), (985, 32909), (993, 32888), (997, 32882), (1025, 32834), (1030, 32819),

Gene: Ruin\_45 Start: 31563, Stop: 29737, Start Num: 234

Candidate Starts for Ruin\_45:

(Start: 234 @31563 has 938 MA's), (252, 31542), (266, 31512), (279, 31482), (379, 31320), (389, 31302), (415, 31230), (419, 31221), (458, 31101), (465, 31077), (541, 30984), (568, 30936), (582, 30915), (603, 30876), (663, 30744), (675, 30723), (700, 30678), (703, 30666), (756, 30513), (759, 30492), (798, 30369), (805, 30339), (818, 30300), (841, 30234), (842, 30231), (847, 30216), (856, 30192), (862, 30168), (942, 29961), (985, 29826), (989, 29814), (993, 29805),

Gene: Rummer\_47 Start: 31884, Stop: 30070, Start Num: 234

Candidate Starts for Rummer\_47:

(Start: 234 @31884 has 938 MA's), (262, 31845), (266, 31833), (353, 31680), (362, 31665), (395, 31608), (415, 31551), (419, 31542), (432, 31500), (448, 31449), (465, 31398), (518, 31344), (541, 31305), (566, 31257), (582, 31233), (603, 31194), (619, 31167), (634, 31137), (670, 31044), (679, 31032), (701, 30984), (710, 30969), (759, 30813), (778, 30762), (789, 30729), (790, 30726), (805, 30660), (818, 30621), (842, 30549), (856, 30510), (862, 30486), (868, 30468), (879, 30435), (921, 30354), (942, 30294), (970, 30207), (985, 30159), (989, 30147), (993, 30138), (995, 30135),

Gene: Ruotula\_48 Start: 36337, Stop: 34550, Start Num: 234

Candidate Starts for Ruotula\_48:

(Start: 234 @36337 has 938 MA's), (359, 36124), (368, 36109), (395, 36061), (405, 36031), (411, 36010), (415, 36004), (419, 35995), (457, 35878), (465, 35851), (541, 35758), (546, 35743), (566, 35710), (596, 35659), (598, 35656), (634, 35590), (648, 35560), (657, 35530), (679, 35485), (700, 35446), (759, 35266), (775, 35218), (790, 35179), (805, 35113), (839, 35041), (841, 35032), (868, 34948), (903, 34861), (954, 34735), (960, 34723), (978, 34663), (985, 34639), (987, 34633),

Gene: Rutherferd\_47 Start: 35726, Stop: 33900, Start Num: 234

Candidate Starts for Rutherferd\_47:

(Start: 234 @35726 has 938 MA's), (374, 35492), (395, 35450), (405, 35420), (411, 35399), (415, 35393), (419, 35384), (457, 35267), (465, 35240), (541, 35147), (546, 35132), (566, 35099), (596, 35048), (598, 35045), (634, 34979), (648, 34949), (657, 34919), (679, 34874), (700, 34835), (759, 34655), (775, 34607), (790, 34568), (805, 34502), (818, 34463), (837, 34442), (841, 34421), (847, 34403), (868, 34337), (936, 34187), (938, 34184), (946, 34148), (954, 34124), (963, 34103), (985, 34028), (993, 34007),

Gene: RyeScarlet\_46 Start: 31507, Stop: 29714, Start Num: 234

Candidate Starts for RyeScarlet\_46:

(Start: 234 @31507 has 938 MA's), (246, 31498), (266, 31456), (334, 31336), (336, 31333), (364, 31285), (397, 31225), (406, 31195), (409, 31183), (415, 31171), (465, 31018), (541, 30925), (619, 30787), (634, 30757), (703, 30598), (710, 30586), (726, 30559), (756, 30451), (759, 30430), (802, 30295), (805, 30277), (841, 30196), (856, 30154), (879, 30079), (918, 30004), (936, 29962), (968, 29860), (985, 29803), (989, 29791), (993, 29782),

Gene: SDcharge11\_60 Start: 53557, Stop: 51698, Start Num: 197

Candidate Starts for SDcharge11\_60:

(Start: 180 @53581 has 1 MA's), (Start: 197 @53557 has 298 MA's), (Start: 225 @53533 has 5 MA's), (Start: 238 @53527 has 2 MA's), (252, 53500), (Start: 261 @53485 has 10 MA's), (269, 53464), (323, 53350), (328, 53344), (349, 53314), (385, 53254), (394, 53233), (410, 53179), (418, 53167), (425, 53149), (427, 53137), (462, 53032), (496, 52975), (511, 52939), (516, 52927), (535, 52900), (539, 52891), (555, 52855), (588, 52798), (595, 52789), (597, 52786), (599, 52783), (754, 52426), (760, 52393), (765, 52372), (799, 52279), (802, 52270), (822, 52207), (841, 52171), (842, 52168), (847, 52153), (872, 52075), (877, 52063), (883, 52042), (902, 52003), (942, 51913), (947, 51895), (949, 51889), (954, 51874), (964, 51850), (968, 51835), (969, 51832), (972, 51820), (979, 51796), (1002, 51748), (1015, 51724),

Gene: SJReid\_106 Start: 70795, Stop: 72594, Start Num: 248

Candidate Starts for SJReid\_106:

(216, 70753), (Start: 248 @70795 has 2 MA's), (276, 70858), (293, 70888), (296, 70891), (382, 71026), (418, 71107), (426, 71134), (428, 71140), (468, 71245), (537, 71302), (586, 71392), (603, 71419), (615, 71434), (724, 71680), (735, 71719), (746, 71752), (756, 71791), (759, 71812), (761, 71818), (789, 71902), (795, 71929), (796, 71935), (817, 72019), (825, 72037), (840, 72085), (843, 72097), (856, 72133), (865, 72166), (883, 72220), (943, 72370), (947, 72385), (960, 72418), (962, 72424), (967, 72442), (973, 72466), (984, 72499), (985, 72502),

Gene: SJay\_39 Start: 28931, Stop: 27066, Start Num: 283

Candidate Starts for SJay\_39:

(Start: 234 @29018 has 938 MA's), (Start: 283 @28931 has 147 MA's), (Start: 291 @28922 has 5 MA's), (342, 28817), (347, 28808), (367, 28778), (369, 28775), (424, 28655), (426, 28643), (428, 28637), (466, 28532), (473, 28505), (532, 28364), (535, 28358), (537, 28355), (541, 28343), (551, 28316), (553, 28313), (562, 28298), (566, 28292), (570, 28286), (613, 28253), (671, 28124), (701, 28064), (798, 27749), (801, 27740), (802, 27737), (805, 27719), (819, 27677), (822, 27671), (832, 27647), (849, 27590), (900, 27431), (913, 27401), (917, 27392), (938, 27332), (943, 27308), (956, 27269), (967, 27236), (970, 27224), (986, 27164),

Gene: STLscum\_46 Start: 35717, Stop: 33930, Start Num: 234

Candidate Starts for STLscum\_46:

(Start: 234 @35717 has 938 MA's), (359, 35504), (395, 35441), (405, 35411), (411, 35390), (415, 35384), (419, 35375), (457, 35258), (465, 35231), (541, 35138), (546, 35123), (596, 35039), (598, 35036), (634, 34970), (648, 34940), (657, 34910), (679, 34865), (700, 34826), (759, 34646), (775, 34598), (790, 34559), (805, 34493), (839, 34421), (841, 34412), (868, 34328), (903, 34241), (954, 34115), (960, 34103), (978, 34043), (985, 34019), (987, 34013),

Gene: Sabella\_56 Start: 52482, Stop: 50653, Start Num: 197

Candidate Starts for Sabella\_56:

(Start: 197 @52482 has 298 MA's), (Start: 238 @52455 has 2 MA's), (253, 52425), (Start: 261 @52413 has 10 MA's), (272, 52386), (273, 52383), (277, 52374), (301, 52356), (355, 52260), (385, 52209), (395, 52185), (450, 52023), (456, 52008), (459, 51999), (462, 51987), (496, 51930), (511, 51894), (516, 51882), (534, 51858), (580, 51774), (595, 51744), (597, 51741), (618, 51711), (678, 51567), (710, 51501), (737, 51450), (743, 51429), (749, 51411), (760, 51354), (793, 51270), (799, 51240), (802, 51231), (822, 51165), (839, 51138), (841, 51129), (847, 51111), (856, 51087), (872, 51033), (877, 51021), (883, 51000), (921, 50931), (942, 50871), (947, 50853), (960, 50820), (964, 50808), (968, 50793), (969, 50790), (972, 50778), (979, 50754), (980, 50751), (1002, 50703), (1004, 50700), (1015, 50679), (1023, 50658),

Gene: Sabertooth\_45 Start: 31572, Stop: 29746, Start Num: 234

Candidate Starts for Sabertooth\_45:

(Start: 234 @31572 has 938 MA's), (252, 31551), (266, 31521), (279, 31491), (379, 31329), (389, 31311), (415, 31239), (419, 31230), (458, 31110), (465, 31086), (541, 30993), (568, 30945), (582, 30924), (603, 30885), (663, 30753), (675, 30732), (700, 30687), (703, 30675), (756, 30522), (759, 30501), (798, 30378), (805, 30348), (818, 30309), (841, 30243), (842, 30240), (847, 30225), (856, 30201), (862, 30177), (942, 29970), (985, 29835), (989, 29823), (993, 29814),

Gene: Sabia\_48 Start: 31846, Stop: 30032, Start Num: 234

Candidate Starts for Sabia\_48:

(Start: 234 @31846 has 938 MA's), (262, 31807), (266, 31795), (353, 31642), (362, 31627), (395, 31570), (415, 31513), (419, 31504), (432, 31462), (448, 31411), (465, 31360), (541, 31267), (566, 31219), (571, 31210), (582, 31195), (603, 31156), (619, 31129), (634, 31099), (670, 31006), (701, 30946), (710, 30931), (759, 30775), (790, 30688), (805, 30622), (818, 30583), (842, 30511), (856, 30472), (862, 30448), (868, 30430), (879, 30397), (888, 30370), (921, 30316), (942, 30256), (968, 30178), (985, 30121), (989, 30109), (993, 30100),

Gene: Sabinator\_47 Start: 31851, Stop: 30037, Start Num: 234

Candidate Starts for Sabinator\_47:

(Start: 234 @31851 has 938 MA's), (262, 31812), (266, 31800), (353, 31647), (362, 31632), (395, 31575), (415, 31518), (419, 31509), (432, 31467), (448, 31416), (465, 31365), (541, 31272), (566, 31224), (571, 31215), (582, 31200), (603, 31161), (619, 31134), (634, 31104), (670, 31011), (710, 30936), (759, 30780), (790, 30693), (805, 30627), (818, 30588), (842, 30516), (856, 30477), (862, 30453), (868, 30435), (879, 30402), (888, 30375), (921, 30321), (942, 30261), (968, 30183), (985, 30126), (989, 30114), (993, 30105),

Gene: Sachima\_42 Start: 31423, Stop: 29630, Start Num: 234

Candidate Starts for Sachima\_42:

(Start: 234 @31423 has 938 MA's), (246, 31414), (266, 31372), (334, 31252), (336, 31249), (364, 31201), (397, 31141), (406, 31111), (409, 31099), (415, 31087), (465, 30934), (541, 30841), (619, 30703), (634, 30673), (703, 30514), (710, 30502), (726, 30475), (756, 30367), (759, 30346), (802, 30211), (805, 30193), (841, 30112), (856, 30070), (879, 29995), (885, 29974), (918, 29920), (936, 29878), (968, 29776), (985, 29719), (989, 29707), (993, 29698),

Gene: Sagefire\_48 Start: 36086, Stop: 34299, Start Num: 234

Candidate Starts for Sagefire\_48:

(Start: 234 @36086 has 938 MA's), (359, 35873), (405, 35780), (411, 35759), (415, 35753), (419, 35744), (457, 35627), (465, 35600), (541, 35507), (546, 35492), (566, 35459), (596, 35408), (598, 35405), (634, 35339), (648, 35309), (657, 35279), (679, 35234), (700, 35195), (759, 35015), (775, 34967), (790, 34928), (805, 34862), (839, 34790), (841, 34781), (868, 34697), (903, 34610), (954, 34484), (960, 34472), (985, 34388), (987, 34382),

Gene: Saguaro\_58 Start: 54786, Stop: 52945, Start Num: 199

Candidate Starts for Saguaro\_58:

(Start: 199 @54786 has 1 MA's), (252, 54732), (269, 54696), (338, 54576), (372, 54522), (426, 54387), (427, 54384), (434, 54366), (462, 54279), (496, 54222), (511, 54186), (516, 54174), (534, 54150), (595, 54030), (597, 54027), (610, 54009), (618, 53997), (664, 53880), (726, 53769), (737, 53736), (739, 53733), (743, 53715), (755, 53667), (760, 53640), (780, 53589), (797, 53532), (799, 53526), (802, 53517), (816, 53469), (822, 53454), (841, 53418), (842, 53415), (847, 53400), (872, 53322), (877, 53310), (883, 53289), (890, 53271), (901, 53253), (921, 53220), (942, 53160), (947, 53142), (949, 53136), (964, 53097), (967, 53085), (968, 53082), (969, 53079), (972, 53067), (975, 53055), (979, 53043), (994, 53001), (1002, 52995), (1015, 52971), (1023, 52950),

Gene: Saintus\_38 Start: 27584, Stop: 25740, Start Num: 234



Candidate Starts for Sainthus\_38:

(Start: 234 @27584 has 938 MA's), (266, 27533), (336, 27410), (353, 27380), (379, 27341), (395, 27308), (405, 27278), (411, 27257), (415, 27251), (419, 27242), (432, 27200), (448, 27149), (464, 27101), (465, 27098), (541, 27002), (545, 26990), (552, 26975), (563, 26957), (571, 26945), (603, 26891), (619, 26864), (640, 26816), (663, 26759), (669, 26747), (679, 26732), (703, 26681), (711, 26666), (756, 26519), (759, 26498), (769, 26468), (775, 26450), (778, 26447), (782, 26432), (790, 26411), (793, 26402), (798, 26375), (802, 26363), (805, 26345), (841, 26264), (845, 26252), (862, 26198), (874, 26162), (885, 26126), (903, 26093), (918, 26072), (921, 26066), (938, 26027), (942, 26006), (947, 25988), (985, 25871), (989, 25859),

Gene: Salete\_48 Start: 39366, Stop: 37366, Start Num: 261

Candidate Starts for Salete\_48:

(Start: 261 @39366 has 10 MA's), (297, 39297), (361, 39165), (365, 39159), (369, 39153), (400, 39105), (403, 39093), (405, 39087), (413, 39066), (417, 39051), (441, 38982), (485, 38841), (525, 38745), (568, 38658), (584, 38634), (592, 38622), (601, 38610), (636, 38541), (703, 38394), (744, 38289), (749, 38274), (761, 38217), (767, 38196), (781, 38154), (792, 38124), (798, 38091), (810, 38037), (817, 38007), (830, 37938), (837, 37917), (856, 37854), (861, 37836), (864, 37824), (872, 37800), (942, 37599), (943, 37596), (949, 37575), (963, 37542), (968, 37524), (978, 37491), (985, 37467), (1009, 37419),

Gene: Salz\_44 Start: 30686, Stop: 28899, Start Num: 234

Candidate Starts for Salz\_44:

(Start: 234 @30686 has 938 MA's), (353, 30482), (395, 30410), (405, 30380), (415, 30353), (543, 30101), (571, 30050), (619, 29969), (639, 29924), (675, 29840), (703, 29783), (728, 29741), (740, 29696), (759, 29615), (778, 29564), (790, 29528), (805, 29462), (837, 29402), (839, 29390), (871, 29288), (879, 29264), (884, 29246), (921, 29183), (935, 29156), (936, 29147), (942, 29123), (985, 28988), (989, 28976), (993, 28967),

Gene: Samaymay\_60 Start: 54350, Stop: 52491, Start Num: 197

Candidate Starts for Samaymay\_60:

(Start: 180 @54374 has 1 MA's), (Start: 197 @54350 has 298 MA's), (Start: 225 @54326 has 5 MA's), (Start: 238 @54320 has 2 MA's), (Start: 261 @54278 has 10 MA's), (269, 54257), (323, 54143), (328, 54137), (349, 54107), (385, 54047), (394, 54026), (410, 53972), (418, 53960), (425, 53942), (427, 53930), (462, 53825), (496, 53768), (511, 53732), (516, 53720), (535, 53693), (555, 53648), (588, 53591), (595, 53582), (597, 53579), (754, 53219), (760, 53186), (765, 53165), (799, 53072), (802, 53063), (822, 53000), (841, 52964), (842, 52961), (847, 52946), (872, 52868), (877, 52856), (883, 52835), (902, 52796), (942, 52706), (947, 52688), (949, 52682), (954, 52667), (964, 52643), (968, 52628), (969, 52625), (972, 52613), (979, 52589), (1002, 52541), (1015, 52517),

Gene: Samora\_36 Start: 27510, Stop: 29363, Start Num: 234

Candidate Starts for Samora\_36:

(Start: 234 @27510 has 938 MA's), (259, 27543), (279, 27591), (303, 27624), (374, 27741), (405, 27813), (406, 27816), (411, 27834), (419, 27849), (471, 28011), (576, 28146), (581, 28158), (596, 28188), (603, 28200), (617, 28218), (632, 28254), (669, 28344), (675, 28353), (703, 28410), (704, 28413), (708, 28422), (754, 28581), (759, 28611), (769, 28644), (775, 28662), (790, 28704), (796, 28734), (798, 28740), (799, 28743), (802, 28752), (805, 28770), (817, 28815), (839, 28869), (902, 29046), (905, 29052), (908, 29058), (935, 29106), (946, 29154), (949, 29163), (960, 29190), (962, 29196), (968, 29217), (985, 29274), (987, 29280), (993, 29295),

Gene: Samy\_65 Start: 41466, Stop: 43436, Start Num: 234

Candidate Starts for Samy\_65:

(Start: 234 @41466 has 938 MA's), (250, 41484), (303, 41583), (336, 41643), (340, 41649), (395, 41745), (411, 41799), (426, 41838), (467, 41964), (545, 42060), (603, 42165), (655, 42270), (675,

42318), (685, 42336), (756, 42576), (759, 42597), (761, 42603), (803, 42741), (805, 42750), (846, 42864), (862, 42915), (879, 42966), (901, 43014), (902, 43017), (908, 43029), (933, 43074), (943, 43113), (949, 43134), (985, 43245), (993, 43266), (1025, 43320), (1053, 43407),

Gene: SanaSana\_45 Start: 31138, Stop: 33012, Start Num: 234

Candidate Starts for SanaSana\_45:

(Start: 234 @31138 has 938 MA's), (273, 31207), (284, 31228), (419, 31474), (425, 31489), (432, 31516), (603, 31810), (709, 32044), (746, 32164), (747, 32167), (759, 32227), (761, 32233), (778, 32278), (782, 32293), (786, 32308), (796, 32344), (805, 32380), (840, 32473), (869, 32566), (901, 32644), (902, 32647), (936, 32716), (942, 32740), (946, 32755), (962, 32797), (967, 32815), (985, 32875), (993, 32896),

Gene: Sandaddy\_44 Start: 34872, Stop: 33046, Start Num: 234

Candidate Starts for Sandaddy\_44:

(Start: 234 @34872 has 938 MA's), (359, 34659), (368, 34644), (405, 34566), (411, 34545), (415, 34539), (419, 34530), (457, 34413), (465, 34386), (541, 34293), (546, 34278), (566, 34245), (596, 34194), (598, 34191), (634, 34125), (648, 34095), (657, 34065), (679, 34020), (700, 33981), (759, 33801), (775, 33753), (790, 33714), (805, 33648), (841, 33567), (842, 33564), (868, 33483), (936, 33333), (938, 33330), (946, 33294), (954, 33270), (959, 33261), (963, 33249), (985, 33174), (993, 33153),

Gene: SansAfet\_43 Start: 29492, Stop: 31366, Start Num: 234

Candidate Starts for SansAfet\_43:

(Start: 234 @29492 has 938 MA's), (273, 29561), (284, 29582), (419, 29828), (425, 29843), (432, 29870), (603, 30164), (663, 30299), (709, 30398), (747, 30521), (759, 30581), (761, 30587), (778, 30632), (782, 30647), (786, 30662), (796, 30698), (805, 30734), (840, 30827), (869, 30920), (901, 30998), (936, 31070), (946, 31109), (962, 31151), (967, 31169), (978, 31205), (985, 31229), (993, 31250),

Gene: Sansa\_37 Start: 28809, Stop: 26944, Start Num: 283

Candidate Starts for Sansa\_37:

(Start: 283 @28809 has 147 MA's), (305, 28764), (330, 28710), (371, 28650), (398, 28599), (420, 28542), (426, 28521), (428, 28515), (445, 28470), (446, 28467), (447, 28464), (460, 28425), (479, 28365), (532, 28242), (537, 28233), (541, 28221), (545, 28209), (553, 28191), (566, 28170), (574, 28158), (611, 28134), (668, 28008), (680, 27987), (749, 27819), (793, 27654), (801, 27618), (805, 27597), (819, 27555), (849, 27468), (859, 27423), (894, 27324), (913, 27279), (917, 27270), (938, 27210), (943, 27186), (954, 27153), (986, 27042),

Gene: Sanya\_43 Start: 35162, Stop: 33336, Start Num: 234

Candidate Starts for Sanya\_43:

(Start: 234 @35162 has 938 MA's), (359, 34949), (395, 34886), (405, 34856), (411, 34835), (415, 34829), (419, 34820), (457, 34703), (465, 34676), (541, 34583), (546, 34568), (596, 34484), (598, 34481), (634, 34415), (648, 34385), (657, 34355), (679, 34310), (700, 34271), (759, 34091), (775, 34043), (790, 34004), (805, 33938), (818, 33899), (837, 33878), (841, 33857), (847, 33839), (868, 33773), (936, 33623), (938, 33620), (946, 33584), (959, 33551), (963, 33539), (970, 33512), (985, 33464), (993, 33443),

Gene: SarBear\_42 Start: 29278, Stop: 31152, Start Num: 234

Candidate Starts for SarBear\_42:

(Start: 231 @29275 has 7 MA's), (Start: 234 @29278 has 938 MA's), (273, 29347), (284, 29368), (353, 29485), (395, 29548), (419, 29614), (432, 29656), (603, 29950), (663, 30085), (709, 30184), (747, 30307), (759, 30367), (761, 30373), (778, 30418), (782, 30433), (786, 30448), (796, 30484), (805, 30520), (840, 30613), (869, 30706), (901, 30784), (936, 30856), (946, 30895), (962, 30937), (967,

30955), (985, 31015), (993, 31036),

Gene: SarFire\_43 Start: 34438, Stop: 32612, Start Num: 234

Candidate Starts for SarFire\_43:

(Start: 234 @34438 has 938 MA's), (359, 34225), (368, 34210), (405, 34132), (411, 34111), (415, 34105), (419, 34096), (457, 33979), (465, 33952), (541, 33859), (546, 33844), (596, 33760), (598, 33757), (634, 33691), (648, 33661), (657, 33631), (679, 33586), (700, 33547), (759, 33367), (775, 33319), (790, 33280), (805, 33214), (818, 33175), (837, 33154), (841, 33133), (847, 33115), (868, 33049), (936, 32899), (938, 32896), (946, 32860), (959, 32827), (963, 32815), (977, 32767), (985, 32740), (993, 32719),

Gene: Saratos\_38 Start: 28717, Stop: 26852, Start Num: 283

Candidate Starts for Saratos\_38:

(Start: 283 @28717 has 147 MA's), (305, 28672), (330, 28618), (371, 28558), (398, 28507), (426, 28429), (428, 28423), (445, 28378), (446, 28375), (447, 28372), (460, 28333), (479, 28273), (532, 28150), (537, 28141), (541, 28129), (545, 28117), (553, 28099), (566, 28078), (574, 28066), (611, 28042), (680, 27895), (749, 27727), (793, 27562), (801, 27526), (805, 27505), (819, 27463), (849, 27376), (859, 27331), (894, 27232), (913, 27187), (917, 27178), (938, 27118), (943, 27094), (954, 27061), (986, 26950),

Gene: SassyCat97\_59 Start: 54035, Stop: 52176, Start Num: 197

Candidate Starts for SassyCat97\_59:

(Start: 180 @54059 has 1 MA's), (Start: 197 @54035 has 298 MA's), (Start: 225 @54011 has 5 MA's), (Start: 238 @54005 has 2 MA's), (Start: 261 @53963 has 10 MA's), (269, 53942), (323, 53828), (328, 53822), (349, 53792), (385, 53732), (394, 53711), (410, 53657), (418, 53645), (425, 53627), (427, 53615), (462, 53510), (496, 53453), (511, 53417), (516, 53405), (535, 53378), (545, 53351), (555, 53333), (566, 53315), (588, 53276), (595, 53267), (597, 53264), (724, 53006), (754, 52904), (760, 52871), (765, 52850), (799, 52757), (802, 52748), (822, 52685), (841, 52649), (842, 52646), (847, 52631), (872, 52553), (877, 52541), (883, 52520), (902, 52481), (942, 52391), (947, 52373), (949, 52367), (954, 52352), (964, 52328), (968, 52313), (969, 52310), (972, 52298), (979, 52274), (1002, 52226), (1015, 52202),

Gene: Satis\_67 Start: 46746, Stop: 44782, Start Num: 258

Candidate Starts for Satis\_67:

(Start: 258 @46746 has 7 MA's), (304, 46650), (325, 46605), (339, 46578), (351, 46557), (361, 46542), (369, 46530), (397, 46476), (425, 46392), (470, 46257), (492, 46158), (497, 46146), (508, 46119), (515, 46104), (584, 45966), (631, 45879), (672, 45783), (716, 45675), (717, 45672), (726, 45645), (734, 45618), (743, 45588), (752, 45558), (780, 45453), (808, 45345), (810, 45336), (812, 45330), (866, 45186), (872, 45168), (878, 45150), (914, 45096), (949, 44979), (953, 44967), (959, 44958), (963, 44946), (968, 44928), (974, 44904), (983, 44880), (988, 44862),

Gene: SaturnRing\_46 Start: 31555, Stop: 29717, Start Num: 234

Candidate Starts for SaturnRing\_46:

(Start: 234 @31555 has 938 MA's), (266, 31504), (303, 31438), (353, 31351), (390, 31291), (395, 31279), (415, 31222), (419, 31213), (458, 31093), (465, 31069), (541, 30973), (568, 30925), (603, 30865), (636, 30802), (663, 30733), (675, 30712), (711, 30640), (729, 30598), (740, 30556), (759, 30475), (775, 30427), (798, 30352), (805, 30322), (816, 30292), (842, 30211), (856, 30172), (862, 30148), (868, 30130), (921, 30001), (942, 29941), (985, 29806), (989, 29794), (993, 29785),

Gene: Scamp\_45 Start: 31572, Stop: 29746, Start Num: 234

Candidate Starts for Scamp\_45:

(Start: 234 @31572 has 938 MA's), (252, 31551), (266, 31521), (279, 31491), (379, 31329), (389, 31311), (415, 31239), (419, 31230), (458, 31110), (465, 31086), (541, 30993), (568, 30945), (582,

30924), (603, 30885), (663, 30753), (675, 30732), (700, 30687), (703, 30675), (756, 30522), (759, 30501), (798, 30378), (805, 30348), (818, 30309), (841, 30243), (842, 30240), (847, 30225), (856, 30201), (862, 30177), (942, 29970), (985, 29835), (989, 29823), (993, 29814),

Gene: Schadenfreude\_60 Start: 53915, Stop: 52056, Start Num: 197

Candidate Starts for Schadenfreude\_60:

(Start: 180 @53939 has 1 MA's), (Start: 197 @53915 has 298 MA's), (Start: 225 @53891 has 5 MA's), (Start: 238 @53885 has 2 MA's), (Start: 261 @53843 has 10 MA's), (269, 53822), (323, 53708), (328, 53702), (349, 53672), (385, 53612), (394, 53591), (410, 53537), (418, 53525), (425, 53507), (427, 53495), (462, 53390), (496, 53333), (511, 53297), (516, 53285), (534, 53261), (539, 53249), (545, 53231), (555, 53213), (566, 53195), (588, 53156), (595, 53147), (597, 53144), (599, 53141), (754, 52784), (760, 52751), (765, 52730), (799, 52637), (802, 52628), (822, 52565), (841, 52529), (842, 52526), (847, 52511), (872, 52433), (877, 52421), (883, 52400), (902, 52361), (942, 52271), (947, 52253), (949, 52247), (954, 52232), (964, 52208), (968, 52193), (969, 52190), (972, 52178), (979, 52154), (1002, 52106), (1015, 52082),

Gene: Scherzo\_45 Start: 31727, Stop: 29934, Start Num: 234

Candidate Starts for Scherzo\_45:

(Start: 234 @31727 has 938 MA's), (246, 31718), (266, 31676), (334, 31556), (336, 31553), (364, 31505), (397, 31445), (406, 31415), (409, 31403), (415, 31391), (465, 31238), (541, 31145), (619, 31007), (634, 30977), (703, 30818), (710, 30806), (726, 30779), (756, 30671), (759, 30650), (802, 30515), (805, 30497), (841, 30416), (856, 30374), (879, 30299), (885, 30278), (918, 30224), (936, 30182), (968, 30080), (985, 30023), (989, 30011), (993, 30002),

Gene: Schimmels22\_37 Start: 27687, Stop: 25789, Start Num: 281

Candidate Starts for Schimmels22\_37:

(8, 28425), (10, 28419), (62, 28164), (260, 27738), (Start: 281 @27687 has 18 MA's), (310, 27624), (342, 27573), (367, 27534), (398, 27477), (420, 27420), (424, 27411), (426, 27399), (428, 27393), (447, 27342), (460, 27303), (489, 27240), (503, 27195), (532, 27120), (537, 27111), (541, 27099), (553, 27069), (566, 27048), (574, 27036), (611, 27012), (682, 26862), (771, 26601), (793, 26499), (796, 26478), (805, 26442), (817, 26406), (819, 26400), (849, 26313), (854, 26286), (900, 26154), (917, 26115), (926, 26094), (938, 26055), (943, 26031), (945, 26025), (954, 25998), (986, 25887),

Gene: Schnapsidee\_38 Start: 29060, Stop: 27195, Start Num: 283

Candidate Starts for Schnapsidee\_38:

(Start: 283 @29060 has 147 MA's), (Start: 291 @29051 has 5 MA's), (423, 28787), (426, 28772), (428, 28766), (473, 28634), (498, 28580), (532, 28493), (537, 28484), (541, 28472), (551, 28445), (553, 28442), (562, 28427), (566, 28421), (741, 28091), (798, 27878), (801, 27869), (802, 27866), (805, 27848), (819, 27806), (825, 27791), (849, 27719), (854, 27692), (900, 27560), (913, 27530), (938, 27461), (943, 27437), (945, 27431), (956, 27398), (967, 27365), (970, 27353),

Gene: Schubert\_36 Start: 28339, Stop: 26486, Start Num: 281

Candidate Starts for Schubert\_36:

(Start: 248 @28408 has 2 MA's), (Start: 281 @28339 has 18 MA's), (367, 28186), (369, 28183), (399, 28126), (426, 28051), (428, 28045), (445, 28000), (460, 27955), (471, 27925), (512, 27838), (537, 27775), (541, 27763), (553, 27733), (566, 27712), (574, 27700), (741, 27382), (796, 27175), (798, 27169), (802, 27157), (805, 27139), (819, 27097), (825, 27082), (849, 27010), (859, 26965), (938, 26752), (943, 26728), (946, 26716), (949, 26707), (954, 26695), (979, 26608), (986, 26584), (988, 26578),

Gene: Schueller\_62 Start: 54272, Stop: 52413, Start Num: 197

Candidate Starts for Schueller\_62:

(Start: 180 @54296 has 1 MA's), (Start: 197 @54272 has 298 MA's), (Start: 225 @54248 has 5 MA's), (Start: 238 @54242 has 2 MA's), (Start: 261 @54200 has 10 MA's), (269, 54179), (323, 54065), (328, 54059), (349, 54029), (385, 53969), (394, 53948), (410, 53894), (418, 53882), (425, 53864), (427, 53852), (462, 53747), (496, 53690), (511, 53654), (516, 53642), (534, 53618), (539, 53606), (545, 53588), (555, 53570), (566, 53552), (588, 53513), (595, 53504), (597, 53501), (599, 53498), (724, 53243), (754, 53141), (760, 53108), (765, 53087), (799, 52994), (802, 52985), (822, 52922), (841, 52886), (842, 52883), (847, 52868), (872, 52790), (877, 52778), (883, 52757), (902, 52718), (942, 52628), (947, 52610), (949, 52604), (954, 52589), (964, 52565), (968, 52550), (969, 52547), (972, 52535), (979, 52511), (985, 52490), (1002, 52463), (1015, 52439), (1019, 52424),

Gene: Scissor2024\_37 Start: 27324, Stop: 25426, Start Num: 282

Candidate Starts for Scissor2024\_37:

(Start: 242 @27405 has 1 MA's), (Start: 282 @27324 has 4 MA's), (310, 27261), (342, 27210), (367, 27171), (398, 27114), (420, 27057), (424, 27048), (426, 27036), (428, 27030), (447, 26979), (460, 26940), (503, 26832), (532, 26757), (537, 26748), (541, 26736), (553, 26706), (566, 26685), (574, 26673), (611, 26649), (682, 26499), (771, 26238), (793, 26136), (796, 26115), (805, 26079), (817, 26043), (819, 26037), (849, 25950), (854, 25923), (900, 25791), (917, 25752), (926, 25731), (938, 25692), (943, 25668), (945, 25662), (954, 25635), (986, 25524),

Gene: Scoot17C\_61 Start: 53977, Stop: 52118, Start Num: 197

Candidate Starts for Scoot17C\_61:

(Start: 180 @54001 has 1 MA's), (Start: 197 @53977 has 298 MA's), (Start: 225 @53953 has 5 MA's), (Start: 238 @53947 has 2 MA's), (Start: 261 @53905 has 10 MA's), (269, 53884), (323, 53770), (328, 53764), (349, 53734), (385, 53674), (394, 53653), (410, 53599), (418, 53587), (425, 53569), (427, 53557), (462, 53452), (496, 53395), (511, 53359), (516, 53347), (535, 53320), (545, 53293), (555, 53275), (566, 53257), (588, 53218), (595, 53209), (597, 53206), (724, 52948), (754, 52846), (760, 52813), (765, 52792), (799, 52699), (802, 52690), (822, 52627), (841, 52591), (842, 52588), (847, 52573), (872, 52495), (877, 52483), (883, 52462), (902, 52423), (942, 52333), (947, 52315), (949, 52309), (954, 52294), (964, 52270), (968, 52255), (969, 52252), (972, 52240), (979, 52216), (1002, 52168), (1015, 52144),

Gene: Scorpia\_40 Start: 30133, Stop: 28268, Start Num: 234

Candidate Starts for Scorpia\_40:

(Start: 205 @30166 has 2 MA's), (Start: 234 @30133 has 938 MA's), (301, 30022), (355, 29926), (395, 29857), (397, 29854), (405, 29827), (415, 29800), (419, 29791), (445, 29707), (448, 29698), (453, 29683), (465, 29647), (520, 29587), (541, 29551), (566, 29503), (581, 29482), (582, 29479), (618, 29419), (652, 29341), (670, 29293), (679, 29281), (701, 29233), (724, 29182), (759, 29047), (775, 28999), (782, 28981), (790, 28960), (793, 28951), (799, 28921), (805, 28894), (806, 28891), (841, 28813), (847, 28795), (862, 28747), (879, 28696), (903, 28642), (908, 28633), (921, 28615), (947, 28537), (985, 28420), (989, 28408), (1042, 28303),

Gene: Scout\_45 Start: 30682, Stop: 28844, Start Num: 234

Candidate Starts for Scout\_45:

(179, 30754), (Start: 234 @30682 has 938 MA's), (266, 30631), (353, 30478), (390, 30418), (395, 30406), (415, 30349), (419, 30340), (424, 30328), (458, 30220), (465, 30196), (541, 30100), (568, 30052), (603, 29992), (636, 29929), (663, 29860), (675, 29839), (710, 29770), (713, 29764), (729, 29725), (759, 29602), (790, 29515), (798, 29479), (805, 29449), (816, 29419), (842, 29338), (856, 29299), (862, 29275), (868, 29257), (921, 29128), (942, 29068), (985, 28933), (989, 28921), (993, 28912),

Gene: Scowl\_45 Start: 35221, Stop: 33395, Start Num: 234

Candidate Starts for Scowl\_45:

(Start: 234 @35221 has 938 MA's), (359, 35008), (368, 34993), (395, 34945), (405, 34915), (411, 34894), (415, 34888), (419, 34879), (457, 34762), (465, 34735), (541, 34642), (546, 34627), (596, 34543), (598, 34540), (634, 34474), (648, 34444), (657, 34414), (679, 34369), (700, 34330), (759, 34150), (775, 34102), (790, 34063), (805, 33997), (818, 33958), (837, 33937), (841, 33916), (847, 33898), (868, 33832), (936, 33682), (938, 33679), (946, 33643), (954, 33619), (959, 33610), (963, 33598), (970, 33571), (985, 33523), (993, 33502),

Gene: Scrick\_61 Start: 54049, Stop: 52190, Start Num: 197

Candidate Starts for Scrick\_61:

(Start: 180 @54073 has 1 MA's), (Start: 197 @54049 has 298 MA's), (Start: 225 @54025 has 5 MA's), (Start: 238 @54019 has 2 MA's), (Start: 261 @53977 has 10 MA's), (269, 53956), (323, 53842), (328, 53836), (349, 53806), (385, 53746), (394, 53725), (410, 53671), (418, 53659), (425, 53641), (427, 53629), (462, 53524), (496, 53467), (511, 53431), (516, 53419), (534, 53395), (539, 53383), (545, 53365), (555, 53347), (566, 53329), (588, 53290), (595, 53281), (597, 53278), (599, 53275), (754, 52918), (760, 52885), (765, 52864), (799, 52771), (802, 52762), (822, 52699), (841, 52663), (842, 52660), (847, 52645), (872, 52567), (877, 52555), (883, 52534), (902, 52495), (942, 52405), (947, 52387), (949, 52381), (954, 52366), (964, 52342), (968, 52327), (969, 52324), (972, 52312), (979, 52288), (1002, 52240), (1015, 52216),

Gene: Seabiscuit\_46 Start: 34373, Stop: 32547, Start Num: 234

Candidate Starts for Seabiscuit\_46:

(Start: 234 @34373 has 938 MA's), (359, 34160), (395, 34097), (405, 34067), (411, 34046), (415, 34040), (419, 34031), (457, 33914), (465, 33887), (541, 33794), (546, 33779), (566, 33746), (596, 33695), (598, 33692), (634, 33626), (657, 33566), (679, 33521), (700, 33482), (759, 33302), (775, 33254), (790, 33215), (805, 33149), (818, 33110), (837, 33089), (841, 33068), (847, 33050), (868, 32984), (936, 32834), (938, 32831), (946, 32795), (959, 32762), (963, 32750), (977, 32702), (985, 32675), (993, 32654),

Gene: Seanderson\_47 Start: 35777, Stop: 33948, Start Num: 234

Candidate Starts for Seanderson\_47:

(Start: 234 @35777 has 938 MA's), (359, 35564), (368, 35549), (395, 35501), (405, 35471), (411, 35450), (415, 35444), (419, 35435), (457, 35318), (465, 35291), (541, 35198), (546, 35183), (596, 35099), (598, 35096), (634, 35030), (657, 34970), (679, 34925), (700, 34886), (759, 34706), (775, 34658), (793, 34610), (802, 34571), (805, 34553), (818, 34514), (837, 34493), (841, 34472), (846, 34457), (885, 34334), (960, 34163), (967, 34139), (982, 34091), (985, 34079), (993, 34058), (997, 34052), (1025, 34004), (1030, 33989),

Gene: Sebastisaurus\_36 Start: 27845, Stop: 29776, Start Num: 234

Candidate Starts for Sebastisaurus\_36:

(213, 27815), (Start: 234 @27845 has 938 MA's), (279, 27926), (336, 28025), (382, 28097), (385, 28103), (405, 28157), (406, 28160), (537, 28415), (543, 28433), (576, 28490), (582, 28505), (596, 28532), (602, 28541), (603, 28544), (606, 28547), (617, 28562), (675, 28697), (700, 28742), (708, 28766), (759, 28955), (761, 28961), (775, 29003), (790, 29042), (796, 29072), (803, 29099), (805, 29108), (816, 29138), (825, 29162), (847, 29225), (902, 29375), (905, 29381), (931, 29423), (935, 29435), (942, 29468), (946, 29483), (949, 29492), (960, 29519), (962, 29525), (967, 29543), (970, 29555), (985, 29603), (989, 29615), (1025, 29678),

Gene: Sedgewig\_38 Start: 28617, Stop: 26752, Start Num: 283

Candidate Starts for Sedgewig\_38:

(Start: 234 @28704 has 938 MA's), (Start: 237 @28701 has 2 MA's), (Start: 283 @28617 has 147 MA's), (Start: 291 @28608 has 5 MA's), (342, 28503), (347, 28494), (367, 28464), (369, 28461), (424, 28341), (426, 28329), (428, 28323), (466, 28218), (473, 28191), (532, 28050), (535, 28044), (537, 28041), (541, 28029), (551, 28002), (553, 27999), (562, 27984), (566, 27978), (570, 27972), (613,

27939), (671, 27810), (701, 27750), (798, 27435), (801, 27426), (802, 27423), (805, 27405), (819, 27363), (822, 27357), (825, 27348), (832, 27333), (849, 27276), (900, 27117), (913, 27087), (917, 27078), (938, 27018), (943, 26994), (956, 26955), (967, 26922), (970, 26910), (986, 26850),

Gene: Selr12\_61 Start: 54059, Stop: 52200, Start Num: 197

Candidate Starts for Selr12\_61:

(Start: 180 @54083 has 1 MA's), (Start: 197 @54059 has 298 MA's), (Start: 225 @54035 has 5 MA's), (Start: 238 @54029 has 2 MA's), (Start: 261 @53987 has 10 MA's), (269, 53966), (323, 53852), (328, 53846), (349, 53816), (385, 53756), (394, 53735), (410, 53681), (418, 53669), (425, 53651), (427, 53639), (462, 53534), (496, 53477), (511, 53441), (516, 53429), (535, 53402), (545, 53375), (555, 53357), (566, 53339), (588, 53300), (595, 53291), (597, 53288), (754, 52928), (760, 52895), (765, 52874), (799, 52781), (802, 52772), (822, 52709), (841, 52673), (842, 52670), (847, 52655), (872, 52577), (877, 52565), (883, 52544), (902, 52505), (942, 52415), (947, 52397), (949, 52391), (954, 52376), (964, 52352), (968, 52337), (969, 52334), (972, 52322), (979, 52298), (1002, 52250), (1015, 52226),

Gene: SemperFi\_45 Start: 31534, Stop: 29747, Start Num: 234

Candidate Starts for SemperFi\_45:

(104, 31789), (Start: 234 @31534 has 938 MA's), (353, 31330), (355, 31327), (359, 31321), (368, 31306), (379, 31291), (395, 31258), (397, 31255), (405, 31228), (415, 31201), (424, 31180), (432, 31150), (465, 31048), (541, 30955), (566, 30907), (571, 30898), (582, 30883), (619, 30817), (655, 30736), (675, 30688), (679, 30682), (710, 30619), (740, 30544), (759, 30463), (778, 30412), (789, 30379), (790, 30376), (805, 30310), (818, 30271), (837, 30250), (859, 30175), (864, 30157), (879, 30112), (888, 30085), (908, 30049), (918, 30037), (921, 30031), (936, 29995), (942, 29971), (968, 29893), (985, 29836), (989, 29824), (993, 29815),

Gene: SenorClean\_43 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for SenorClean\_43:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Serendipitous\_56 Start: 53740, Stop: 51905, Start Num: 201

Candidate Starts for Serendipitous\_56:

(181, 53764), (Start: 201 @53740 has 2 MA's), (Start: 238 @53704 has 2 MA's), (425, 53356), (434, 53326), (441, 53314), (452, 53278), (462, 53248), (511, 53155), (516, 53143), (520, 53134), (534, 53119), (539, 53107), (545, 53089), (583, 53026), (597, 53002), (650, 52897), (739, 52708), (743, 52690), (755, 52642), (760, 52615), (797, 52507), (799, 52501), (802, 52492), (834, 52408), (842, 52375), (847, 52360), (866, 52300), (872, 52282), (877, 52270), (883, 52249), (885, 52240), (887, 52237), (949, 52096), (952, 52087), (964, 52057), (968, 52042), (969, 52039), (975, 52015), (979, 52003), (980, 52000), (994, 51961), (1015, 51931), (1023, 51910),

Gene: Serendipity\_60 Start: 54332, Stop: 52473, Start Num: 197

Candidate Starts for Serendipity\_60:

(Start: 180 @54356 has 1 MA's), (Start: 197 @54332 has 298 MA's), (Start: 225 @54308 has 5 MA's), (Start: 238 @54302 has 2 MA's), (Start: 261 @54260 has 10 MA's), (269, 54239), (323, 54125), (328, 54119), (349, 54089), (385, 54029), (394, 54008), (410, 53954), (418, 53942), (425, 53924), (427, 53912), (462, 53807), (496, 53750), (511, 53714), (516, 53702), (535, 53675), (555, 53630), (588, 53573), (595, 53564), (597, 53561), (754, 53201), (760, 53168), (765, 53147), (799, 53054), (802, 53045), (822, 52982), (841, 52946), (842, 52943), (847, 52928), (872, 52850), (877, 52838), (883, 52817), (902, 52778), (942, 52688), (947, 52670), (949, 52664), (954, 52649), (964, 52625), (968,

52610), (969, 52607), (972, 52595), (979, 52571), (1002, 52523), (1015, 52499),

Gene: Serenity\_45 Start: 30497, Stop: 28668, Start Num: 234

Candidate Starts for Serenity\_45:

(Start: 234 @30497 has 938 MA's), (353, 30293), (355, 30290), (359, 30284), (368, 30269), (379, 30254), (394, 30224), (395, 30221), (405, 30191), (415, 30164), (424, 30143), (432, 30113), (465, 30011), (541, 29918), (566, 29870), (571, 29861), (582, 29846), (619, 29780), (655, 29699), (675, 29651), (700, 29606), (759, 29426), (775, 29378), (778, 29375), (790, 29339), (805, 29273), (818, 29234), (837, 29213), (859, 29138), (864, 29120), (879, 29075), (888, 29048), (908, 29012), (921, 28994), (936, 28958), (942, 28934), (968, 28856), (985, 28799), (989, 28787), (993, 28778), (1021, 28730), (1037, 28700), (1043, 28682), (1045, 28679),

Gene: Serpentine\_0060 Start: 54415, Stop: 52556, Start Num: 197

Candidate Starts for Serpentine\_0060:

(Start: 180 @54439 has 1 MA's), (Start: 197 @54415 has 298 MA's), (Start: 225 @54391 has 5 MA's), (Start: 238 @54385 has 2 MA's), (Start: 261 @54343 has 10 MA's), (269, 54322), (323, 54208), (328, 54202), (349, 54172), (385, 54112), (394, 54091), (410, 54037), (418, 54025), (425, 54007), (427, 53995), (462, 53890), (496, 53833), (511, 53797), (516, 53785), (535, 53758), (545, 53731), (555, 53713), (566, 53695), (588, 53656), (595, 53647), (597, 53644), (724, 53386), (754, 53284), (760, 53251), (765, 53230), (799, 53137), (802, 53128), (822, 53065), (841, 53029), (842, 53026), (847, 53011), (872, 52933), (877, 52921), (883, 52900), (902, 52861), (942, 52771), (947, 52753), (949, 52747), (954, 52732), (964, 52708), (968, 52693), (969, 52690), (972, 52678), (979, 52654), (1002, 52606), (1015, 52582),

Gene: Severus\_42 Start: 30385, Stop: 28553, Start Num: 234

Candidate Starts for Severus\_42:

(Start: 234 @30385 has 938 MA's), (266, 30334), (303, 30268), (353, 30181), (359, 30172), (390, 30121), (395, 30109), (415, 30052), (441, 29971), (445, 29959), (448, 29950), (458, 29923), (465, 29899), (541, 29806), (559, 29767), (603, 29698), (619, 29671), (679, 29539), (759, 29311), (782, 29245), (798, 29188), (805, 29158), (818, 29119), (842, 29047), (847, 29032), (856, 29008), (868, 28966), (879, 28933), (942, 28777), (949, 28753), (970, 28690), (985, 28642), (989, 28630), (993, 28621),

Gene: Shaffner\_41 Start: 30040, Stop: 31905, Start Num: 234

Candidate Starts for Shaffner\_41:

(Start: 234 @30040 has 938 MA's), (265, 30088), (314, 30178), (355, 30247), (405, 30337), (445, 30457), (543, 30634), (603, 30742), (615, 30757), (619, 30769), (675, 30895), (730, 31033), (759, 31153), (790, 31240), (805, 31306), (840, 31399), (985, 31801), (988, 31810), (993, 31822),

Gene: ShaiHulud\_39 Start: 28925, Stop: 27069, Start Num: 291

Candidate Starts for ShaiHulud\_39:

(Start: 234 @29021 has 938 MA's), (Start: 237 @29018 has 2 MA's), (Start: 283 @28934 has 147 MA's), (Start: 291 @28925 has 5 MA's), (342, 28820), (347, 28811), (367, 28781), (369, 28778), (424, 28658), (426, 28646), (428, 28640), (466, 28535), (473, 28508), (532, 28367), (535, 28361), (537, 28358), (541, 28346), (551, 28319), (553, 28316), (562, 28301), (566, 28295), (570, 28289), (613, 28256), (671, 28127), (701, 28067), (733, 27992), (798, 27752), (801, 27743), (802, 27740), (805, 27722), (819, 27680), (822, 27674), (825, 27665), (832, 27650), (849, 27593), (900, 27434), (913, 27404), (917, 27395), (938, 27335), (943, 27311), (956, 27272), (967, 27239), (970, 27227), (986, 27167),

Gene: Shaka\_45 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for Shaka\_45:



(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: ShakeltOph\_47 Start: 30557, Stop: 32419, Start Num: 234

Candidate Starts for ShakeltOph\_47:

(160, 30458), (Start: 172 @30476 has 1 MA's), (Start: 234 @30557 has 938 MA's), (265, 30605), (355, 30764), (359, 30770), (411, 30875), (428, 30920), (535, 31127), (603, 31256), (655, 31361), (675, 31409), (712, 31493), (759, 31667), (789, 31751), (796, 31784), (799, 31793), (814, 31844), (840, 31913), (876, 32024), (905, 32093), (908, 32099), (949, 32204), (985, 32315),

Gene: Sham4\_44 Start: 30331, Stop: 28544, Start Num: 234

Candidate Starts for Sham4\_44:

(Start: 234 @30331 has 938 MA's), (353, 30127), (395, 30055), (405, 30025), (415, 29998), (543, 29746), (571, 29695), (619, 29614), (639, 29569), (640, 29566), (675, 29485), (703, 29428), (728, 29386), (740, 29341), (759, 29260), (778, 29209), (790, 29173), (805, 29107), (837, 29047), (839, 29035), (871, 28933), (879, 28909), (884, 28891), (921, 28828), (935, 28801), (936, 28792), (942, 28768), (985, 28633), (989, 28621), (993, 28612),

Gene: Shamu\_38 Start: 28738, Stop: 26873, Start Num: 283

Candidate Starts for Shamu\_38:

(Start: 283 @28738 has 147 MA's), (305, 28693), (330, 28639), (371, 28579), (398, 28528), (426, 28450), (428, 28444), (445, 28399), (446, 28396), (447, 28393), (460, 28354), (479, 28294), (532, 28171), (537, 28162), (541, 28150), (545, 28138), (553, 28120), (566, 28099), (574, 28087), (680, 27916), (749, 27748), (793, 27583), (801, 27547), (805, 27526), (819, 27484), (849, 27397), (859, 27352), (894, 27253), (913, 27208), (917, 27199), (938, 27139), (943, 27115), (954, 27082), (986, 26971),

Gene: Shapes\_48 Start: 31200, Stop: 29365, Start Num: 234

Candidate Starts for Shapes\_48:

(Start: 234 @31200 has 938 MA's), (266, 31149), (303, 31083), (353, 30996), (368, 30972), (390, 30936), (395, 30924), (415, 30867), (419, 30858), (445, 30774), (458, 30738), (461, 30726), (465, 30714), (541, 30621), (568, 30573), (603, 30513), (661, 30384), (663, 30381), (675, 30360), (679, 30354), (729, 30246), (759, 30123), (775, 30075), (798, 30000), (805, 29970), (818, 29931), (841, 29862), (842, 29859), (856, 29820), (862, 29796), (864, 29790), (868, 29778), (911, 29670), (942, 29589), (949, 29565), (970, 29502), (985, 29454), (989, 29442), (993, 29433),

Gene: Sharkboy\_41 Start: 30011, Stop: 31882, Start Num: 234

Candidate Starts for Sharkboy\_41:

(Start: 234 @30011 has 938 MA's), (340, 30194), (362, 30233), (382, 30251), (408, 30323), (419, 30347), (424, 30359), (425, 30362), (453, 30443), (579, 30635), (603, 30683), (649, 30773), (709, 30914), (747, 31037), (759, 31097), (782, 31163), (786, 31178), (796, 31214), (799, 31223), (805, 31250), (840, 31343), (869, 31436), (901, 31514), (936, 31586), (946, 31625), (962, 31667), (978, 31721), (985, 31745), (993, 31766), (1008, 31790),

Gene: Shatter\_51 Start: 45981, Stop: 44164, Start Num: 230

Candidate Starts for Shatter\_51:

(73, 46302), (84, 46278), (Start: 230 @45981 has 13 MA's), (252, 45945), (Start: 261 @45930 has 10 MA's), (273, 45900), (344, 45774), (406, 45651), (410, 45636), (427, 45594), (462, 45498), (511, 45405), (583, 45276), (597, 45252), (743, 44940), (749, 44922), (760, 44865), (799, 44751), (802, 44742), (822, 44679), (842, 44640), (847, 44625), (872, 44547), (877, 44535), (883, 44514), (885,

44505), (935, 44418), (943, 44382), (946, 44370), (961, 44331), (964, 44322), (968, 44307), (979, 44262), (1015, 44190),

Gene: Shawty\_33 Start: 26720, Stop: 28573, Start Num: 234

Candidate Starts for Shawty\_33:

(Start: 234 @26720 has 938 MA's), (279, 26801), (353, 26921), (411, 27044), (419, 27059), (543, 27299), (556, 27326), (576, 27356), (581, 27368), (596, 27398), (603, 27410), (617, 27428), (632, 27464), (669, 27554), (675, 27563), (704, 27623), (708, 27632), (754, 27791), (759, 27821), (769, 27854), (775, 27872), (781, 27887), (790, 27914), (796, 27944), (798, 27950), (799, 27953), (802, 27962), (803, 27971), (805, 27980), (809, 27995), (817, 28025), (839, 28079), (876, 28193), (902, 28256), (905, 28262), (908, 28268), (931, 28304), (935, 28316), (942, 28349), (946, 28364), (947, 28367), (949, 28373), (960, 28400), (962, 28406), (968, 28427), (985, 28484), (987, 28490), (989, 28496), (993, 28505),

Gene: ShayRa\_48 Start: 29944, Stop: 28154, Start Num: 234

Candidate Starts for ShayRa\_48:

(Start: 234 @29944 has 938 MA's), (336, 29770), (395, 29665), (397, 29662), (405, 29635), (415, 29608), (432, 29557), (465, 29455), (541, 29362), (563, 29317), (566, 29314), (571, 29305), (655, 29143), (663, 29116), (675, 29095), (679, 29089), (730, 28990), (740, 28951), (754, 28900), (759, 28870), (778, 28819), (789, 28786), (796, 28753), (798, 28747), (805, 28717), (837, 28657), (841, 28636), (856, 28594), (863, 28567), (868, 28552), (903, 28465), (936, 28402), (938, 28399), (985, 28243), (989, 28231), (995, 28219),

Gene: Shayna\_42 Start: 28849, Stop: 30720, Start Num: 234

Candidate Starts for Shayna\_42:

(Start: 234 @28849 has 938 MA's), (265, 28897), (273, 28918), (284, 28939), (419, 29182), (424, 29194), (426, 29206), (428, 29212), (453, 29278), (579, 29473), (603, 29521), (723, 29800), (759, 29938), (804, 30085), (805, 30091), (840, 30184), (859, 30244), (901, 30355), (903, 30361), (949, 30475), (961, 30505), (962, 30508), (985, 30586), (988, 30595),

Gene: SheaKeira\_43 Start: 30794, Stop: 29001, Start Num: 234

Candidate Starts for SheaKeira\_43:

(Start: 234 @30794 has 938 MA's), (246, 30785), (266, 30743), (334, 30623), (336, 30620), (359, 30581), (364, 30572), (397, 30512), (405, 30485), (409, 30470), (415, 30458), (432, 30407), (465, 30305), (541, 30212), (550, 30188), (563, 30167), (634, 30044), (703, 29885), (704, 29882), (726, 29846), (729, 29840), (759, 29717), (782, 29651), (798, 29594), (802, 29582), (805, 29564), (837, 29504), (841, 29483), (847, 29465), (879, 29366), (908, 29303), (936, 29249), (962, 29168), (968, 29147), (985, 29090), (989, 29078), (993, 29069),

Gene: SheckWes\_48 Start: 33927, Stop: 31552, Start Num: 47

Candidate Starts for SheckWes\_48:

(Start: 47 @33927 has 13 MA's), (64, 33867), (96, 33786), (136, 33666), (170, 33621), (Start: 223 @33543 has 3 MA's), (228, 33537), (Start: 230 @33534 has 13 MA's), (252, 33504), (262, 33486), (273, 33456), (290, 33429), (Start: 291 @33426 has 5 MA's), (317, 33369), (326, 33348), (342, 33330), (380, 33267), (391, 33243), (395, 33234), (399, 33222), (409, 33189), (420, 33168), (426, 33147), (495, 32964), (524, 32889), (532, 32868), (541, 32847), (634, 32760), (662, 32712), (677, 32682), (682, 32676), (711, 32631), (713, 32628), (718, 32613), (728, 32592), (729, 32589), (752, 32508), (758, 32478), (772, 32418), (773, 32409), (779, 32394), (781, 32379), (784, 32367), (805, 32274), (817, 32238), (819, 32232), (822, 32226), (824, 32220), (842, 32163), (849, 32139), (878, 32034), (879, 32031), (900, 31980), (919, 31938), (926, 31920), (938, 31881), (948, 31839), (958, 31815), (967, 31785), (979, 31737), (982, 31728), (986, 31713), (996, 31689), (1008, 31668), (1030, 31614), (1046, 31581),

Gene: Shee\_39 Start: 28927, Stop: 27062, Start Num: 283

Candidate Starts for Shee\_39:

(Start: 234 @29014 has 938 MA's), (Start: 237 @29011 has 2 MA's), (Start: 283 @28927 has 147 MA's), (Start: 291 @28918 has 5 MA's), (342, 28813), (347, 28804), (367, 28774), (369, 28771), (424, 28651), (426, 28639), (428, 28633), (466, 28528), (473, 28501), (532, 28360), (535, 28354), (537, 28351), (541, 28339), (551, 28312), (553, 28309), (562, 28294), (566, 28288), (570, 28282), (613, 28249), (701, 28060), (798, 27745), (801, 27736), (802, 27733), (805, 27715), (819, 27673), (822, 27667), (825, 27658), (832, 27643), (849, 27586), (900, 27427), (913, 27397), (917, 27388), (938, 27328), (943, 27304), (956, 27265), (967, 27232), (970, 27220), (986, 27160),

Gene: Sheen\_44 Start: 33301, Stop: 31466, Start Num: 234

Candidate Starts for Sheen\_44:

(Start: 234 @33301 has 938 MA's), (252, 33280), (301, 33190), (383, 33052), (411, 32974), (415, 32968), (465, 32815), (537, 32731), (541, 32719), (563, 32674), (568, 32671), (603, 32611), (630, 32560), (636, 32548), (675, 32458), (700, 32413), (729, 32344), (740, 32302), (756, 32242), (759, 32221), (775, 32173), (793, 32125), (798, 32098), (799, 32095), (805, 32068), (818, 32029), (842, 31960), (856, 31921), (868, 31879), (869, 31876), (879, 31846), (921, 31750), (935, 31723), (946, 31675), (947, 31672), (985, 31555), (989, 31543), (993, 31534),

Gene: Sheila\_58 Start: 53417, Stop: 51558, Start Num: 197

Candidate Starts for Sheila\_58:

(Start: 180 @53441 has 1 MA's), (Start: 197 @53417 has 298 MA's), (Start: 225 @53393 has 5 MA's), (Start: 238 @53387 has 2 MA's), (252, 53360), (Start: 261 @53345 has 10 MA's), (269, 53324), (328, 53204), (349, 53174), (385, 53114), (394, 53093), (410, 53039), (418, 53027), (425, 53009), (427, 52997), (462, 52892), (496, 52835), (511, 52799), (516, 52787), (535, 52760), (555, 52715), (588, 52658), (595, 52649), (597, 52646), (599, 52643), (724, 52388), (754, 52286), (760, 52253), (765, 52232), (799, 52139), (802, 52130), (822, 52067), (841, 52031), (842, 52028), (847, 52013), (872, 51935), (877, 51923), (883, 51902), (902, 51863), (942, 51773), (947, 51755), (949, 51749), (954, 51734), (964, 51710), (968, 51695), (969, 51692), (972, 51680), (979, 51656), (1002, 51608), (1015, 51584),

Gene: SheldonCooper\_47 Start: 31993, Stop: 30167, Start Num: 234

Candidate Starts for SheldonCooper\_47:

(Start: 234 @31993 has 938 MA's), (265, 31945), (353, 31789), (395, 31717), (415, 31660), (419, 31651), (458, 31531), (465, 31507), (541, 31414), (568, 31366), (582, 31345), (603, 31306), (628, 31261), (663, 31174), (667, 31165), (675, 31153), (700, 31108), (703, 31096), (756, 30943), (759, 30922), (798, 30799), (805, 30769), (818, 30730), (841, 30664), (842, 30661), (856, 30622), (862, 30598), (942, 30391), (985, 30256), (989, 30244), (993, 30235),

Gene: Shenyu\_58 Start: 54813, Stop: 52966, Start Num: 181

Candidate Starts for Shenyu\_58:

(15, 55296), (17, 55290), (Start: 27 @55239 has 1 MA's), (33, 55221), (Start: 44 @55164 has 1 MA's), (140, 54876), (181, 54813), (236, 54765), (252, 54738), (276, 54687), (358, 54567), (425, 54417), (441, 54375), (452, 54339), (462, 54309), (511, 54216), (516, 54204), (534, 54180), (539, 54168), (545, 54150), (583, 54087), (597, 54063), (650, 53958), (654, 53949), (703, 53835), (739, 53769), (743, 53751), (755, 53703), (760, 53676), (797, 53568), (799, 53562), (802, 53553), (806, 53532), (834, 53469), (842, 53436), (847, 53421), (866, 53361), (872, 53343), (877, 53331), (883, 53310), (885, 53301), (887, 53298), (894, 53286), (942, 53181), (947, 53163), (949, 53157), (964, 53118), (968, 53103), (969, 53100), (975, 53076), (979, 53064), (980, 53061), (1004, 53013), (1015, 52992), (1023, 52971),

Gene: ShiVal\_58 Start: 54054, Stop: 52195, Start Num: 197

Candidate Starts for ShiVal\_58:

(Start: 180 @54078 has 1 MA's), (Start: 197 @54054 has 298 MA's), (Start: 225 @54030 has 5 MA's), (Start: 238 @54024 has 2 MA's), (Start: 261 @53982 has 10 MA's), (269, 53961), (323, 53847), (328, 53841), (349, 53811), (385, 53751), (394, 53730), (410, 53676), (418, 53664), (425, 53646), (427, 53634), (462, 53529), (496, 53472), (511, 53436), (516, 53424), (535, 53397), (545, 53370), (555, 53352), (566, 53334), (588, 53295), (595, 53286), (597, 53283), (724, 53025), (754, 52923), (760, 52890), (765, 52869), (799, 52776), (802, 52767), (822, 52704), (841, 52668), (842, 52665), (847, 52650), (872, 52572), (877, 52560), (883, 52539), (902, 52500), (942, 52410), (947, 52392), (949, 52386), (954, 52371), (964, 52347), (968, 52332), (969, 52329), (972, 52317), (979, 52293), (1002, 52245), (1015, 52221),

Gene: Shocker\_43 Start: 33276, Stop: 31243, Start Num: 271

Candidate Starts for Shocker\_43:

(Start: 271 @33276 has 1 MA's), (346, 33123), (367, 33090), (376, 33072), (395, 33033), (429, 32913), (433, 32904), (529, 32709), (547, 32664), (596, 32583), (600, 32577), (603, 32571), (618, 32550), (634, 32511), (647, 32481), (654, 32454), (667, 32412), (672, 32403), (695, 32343), (728, 32268), (800, 32001), (811, 31935), (845, 31803), (853, 31764), (882, 31668), (898, 31632), (905, 31617), (909, 31608), (926, 31566), (931, 31551), (943, 31497), (944, 31494), (962, 31440), (1008, 31302), (1016, 31293),

Gene: ShortQueendom\_39 Start: 30936, Stop: 29110, Start Num: 234

Candidate Starts for ShortQueendom\_39:

(Start: 234 @30936 has 938 MA's), (359, 30723), (368, 30708), (395, 30660), (405, 30630), (411, 30609), (415, 30603), (419, 30594), (457, 30477), (465, 30450), (541, 30357), (546, 30342), (566, 30309), (596, 30258), (598, 30255), (634, 30189), (648, 30159), (657, 30129), (679, 30084), (700, 30045), (759, 29865), (769, 29835), (775, 29817), (778, 29814), (790, 29778), (805, 29712), (841, 29631), (842, 29628), (868, 29547), (936, 29397), (938, 29394), (946, 29358), (954, 29334), (959, 29325), (963, 29313), (985, 29238), (993, 29217),

Gene: Shrew\_79 Start: 46522, Stop: 49053, Start Num: 27

Candidate Starts for Shrew\_79:

(Start: 27 @46522 has 1 MA's), (83, 46708), (136, 46867), (210, 46969), (228, 46996), (Start: 230 @46999 has 13 MA's), (264, 47047), (Start: 282 @47089 has 4 MA's), (315, 47167), (329, 47194), (339, 47215), (360, 47251), (410, 47365), (426, 47404), (447, 47461), (477, 47530), (494, 47563), (524, 47641), (654, 47848), (666, 47887), (702, 47965), (707, 47977), (713, 47983), (724, 48007), (729, 48019), (772, 48193), (774, 48208), (779, 48217), (801, 48316), (805, 48337), (826, 48400), (840, 48439), (849, 48475), (890, 48613), (910, 48655), (926, 48694), (938, 48733), (946, 48769), (967, 48829), (986, 48901), (989, 48910), (1005, 48940), (1016, 48967), (1041, 49033),

Gene: Shuman\_36 Start: 28126, Stop: 26342, Start Num: 234

Candidate Starts for Shuman\_36:

(Start: 234 @28126 has 938 MA's), (374, 27892), (390, 27862), (394, 27853), (395, 27850), (409, 27805), (415, 27793), (432, 27742), (465, 27640), (492, 27619), (541, 27547), (563, 27502), (566, 27499), (589, 27457), (594, 27451), (603, 27436), (619, 27409), (663, 27304), (667, 27295), (679, 27277), (700, 27238), (729, 27181), (759, 27058), (775, 27010), (805, 26905), (806, 26902), (837, 26845), (841, 26824), (858, 26776), (881, 26701), (918, 26632), (936, 26590), (942, 26566), (968, 26488), (985, 26431), (989, 26419), (993, 26410), (1010, 26380), (1021, 26362),

Gene: Shygu2\_44 Start: 31522, Stop: 29693, Start Num: 234

Candidate Starts for Shygu2\_44:

(Start: 234 @31522 has 938 MA's), (266, 31471), (279, 31441), (379, 31279), (389, 31261), (395, 31246), (415, 31189), (419, 31180), (424, 31168), (458, 31060), (465, 31036), (541, 30943), (568, 30895), (582, 30874), (603, 30835), (663, 30703), (675, 30682), (700, 30637), (703, 30625), (756, 30472), (759, 30451), (805, 30298), (817, 30262), (818, 30259), (842, 30187), (847, 30172), (856,

30148), (861, 30130), (862, 30124), (864, 30118), (942, 29917), (985, 29782), (989, 29770), (993, 29761),

Gene: Sibs6\_45 Start: 33579, Stop: 31753, Start Num: 234

Candidate Starts for Sibs6\_45:

(Start: 234 @33579 has 938 MA's), (359, 33366), (368, 33351), (395, 33303), (405, 33273), (411, 33252), (415, 33246), (419, 33237), (457, 33120), (465, 33093), (541, 33000), (546, 32985), (596, 32901), (598, 32898), (634, 32832), (648, 32802), (657, 32772), (679, 32727), (700, 32688), (759, 32508), (775, 32460), (790, 32421), (805, 32355), (818, 32316), (837, 32295), (841, 32274), (847, 32256), (868, 32190), (936, 32040), (938, 32037), (946, 32001), (954, 31977), (959, 31968), (963, 31956), (977, 31908), (985, 31881), (993, 31860),

Gene: Sigman\_61 Start: 54010, Stop: 52151, Start Num: 197

Candidate Starts for Sigman\_61:

(Start: 180 @54034 has 1 MA's), (Start: 197 @54010 has 298 MA's), (Start: 225 @53986 has 5 MA's), (Start: 238 @53980 has 2 MA's), (Start: 261 @53938 has 10 MA's), (269, 53917), (323, 53803), (328, 53797), (349, 53767), (385, 53707), (394, 53686), (410, 53632), (418, 53620), (425, 53602), (427, 53590), (462, 53485), (496, 53428), (511, 53392), (516, 53380), (534, 53356), (539, 53344), (545, 53326), (555, 53308), (566, 53290), (588, 53251), (595, 53242), (597, 53239), (599, 53236), (754, 52879), (760, 52846), (765, 52825), (799, 52732), (802, 52723), (822, 52660), (841, 52624), (842, 52621), (847, 52606), (872, 52528), (877, 52516), (883, 52495), (902, 52456), (942, 52366), (947, 52348), (949, 52342), (954, 52327), (964, 52303), (968, 52288), (969, 52285), (972, 52273), (979, 52249), (1002, 52201), (1015, 52177),

Gene: SilverBell\_61 Start: 54295, Stop: 52436, Start Num: 197

Candidate Starts for SilverBell\_61:

(Start: 180 @54319 has 1 MA's), (Start: 197 @54295 has 298 MA's), (Start: 225 @54271 has 5 MA's), (Start: 238 @54265 has 2 MA's), (Start: 261 @54223 has 10 MA's), (269, 54202), (323, 54088), (328, 54082), (349, 54052), (385, 53992), (394, 53971), (410, 53917), (418, 53905), (425, 53887), (427, 53875), (462, 53770), (496, 53713), (511, 53677), (516, 53665), (534, 53641), (539, 53629), (545, 53611), (555, 53593), (566, 53575), (588, 53536), (595, 53527), (597, 53524), (599, 53521), (754, 53164), (760, 53131), (765, 53110), (799, 53017), (802, 53008), (822, 52945), (841, 52909), (842, 52906), (847, 52891), (872, 52813), (877, 52801), (883, 52780), (902, 52741), (942, 52651), (947, 52633), (949, 52627), (954, 52612), (964, 52588), (968, 52573), (969, 52570), (972, 52558), (979, 52534), (1002, 52486), (1015, 52462),

Gene: Simielle\_60 Start: 54014, Stop: 52155, Start Num: 197

Candidate Starts for Simielle\_60:

(Start: 180 @54038 has 1 MA's), (Start: 197 @54014 has 298 MA's), (Start: 225 @53990 has 5 MA's), (Start: 238 @53984 has 2 MA's), (Start: 261 @53942 has 10 MA's), (269, 53921), (323, 53807), (328, 53801), (349, 53771), (385, 53711), (394, 53690), (410, 53636), (418, 53624), (425, 53606), (427, 53594), (462, 53489), (496, 53432), (511, 53396), (516, 53384), (535, 53357), (555, 53312), (588, 53255), (595, 53246), (597, 53243), (724, 52985), (754, 52883), (760, 52850), (765, 52829), (799, 52736), (802, 52727), (822, 52664), (841, 52628), (842, 52625), (847, 52610), (872, 52532), (877, 52520), (883, 52499), (902, 52460), (942, 52370), (947, 52352), (949, 52346), (954, 52331), (964, 52307), (968, 52292), (969, 52289), (972, 52277), (979, 52253), (1002, 52205), (1015, 52181),

Gene: Simpson\_43 Start: 29708, Stop: 31573, Start Num: 234

Candidate Starts for Simpson\_43:

(Start: 234 @29708 has 938 MA's), (265, 29756), (405, 30005), (424, 30053), (436, 30095), (543, 30302), (546, 30311), (598, 30401), (603, 30410), (615, 30425), (635, 30470), (655, 30515), (675, 30563), (703, 30620), (730, 30701), (753, 30788), (759, 30821), (769, 30851), (790, 30908), (805, 30974), (840, 31067), (862, 31139), (905, 31247), (936, 31310), (942, 31334), (978, 31445), (985,

31469), (988, 31478),

Gene: Sinatra\_37 Start: 28491, Stop: 26641, Start Num: 281

Candidate Starts for Sinatra\_37:

(Start: 281 @28491 has 18 MA's), (347, 28368), (369, 28335), (420, 28224), (426, 28203), (428, 28197), (447, 28146), (512, 27990), (532, 27936), (535, 27930), (537, 27927), (541, 27915), (553, 27885), (570, 27858), (611, 27828), (680, 27681), (741, 27534), (798, 27324), (802, 27312), (805, 27294), (819, 27252), (825, 27237), (839, 27201), (849, 27165), (913, 26976), (917, 26967), (938, 26907), (943, 26883), (949, 26862), (954, 26850), (986, 26739),

Gene: SirJeffery\_57 Start: 54475, Stop: 52676, Start Num: 238

Candidate Starts for SirJeffery\_57:

(128, 54625), (154, 54559), (Start: 189 @54505 has 26 MA's), (Start: 222 @54484 has 1 MA's), (Start: 238 @54475 has 2 MA's), (252, 54448), (275, 54400), (345, 54289), (358, 54277), (425, 54127), (434, 54097), (441, 54085), (452, 54049), (462, 54019), (511, 53926), (516, 53914), (518, 53911), (534, 53890), (539, 53878), (545, 53860), (583, 53797), (597, 53773), (650, 53668), (703, 53545), (724, 53521), (733, 53494), (737, 53482), (739, 53479), (743, 53461), (755, 53413), (760, 53386), (780, 53335), (799, 53272), (802, 53263), (834, 53179), (842, 53146), (847, 53131), (866, 53071), (872, 53053), (877, 53041), (883, 53020), (885, 53011), (887, 53008), (942, 52891), (947, 52873), (949, 52867), (964, 52828), (967, 52816), (968, 52813), (972, 52798), (975, 52786), (979, 52774), (980, 52771), (994, 52732), (1004, 52723), (1015, 52702), (1023, 52681),

Gene: SirVictor\_37 Start: 28567, Stop: 26717, Start Num: 281

Candidate Starts for SirVictor\_37:

(200, 28708), (260, 28618), (Start: 281 @28567 has 18 MA's), (330, 28468), (347, 28444), (369, 28411), (420, 28300), (426, 28279), (428, 28273), (445, 28228), (447, 28222), (512, 28066), (537, 28003), (541, 27991), (553, 27961), (611, 27904), (741, 27610), (798, 27400), (801, 27391), (802, 27388), (805, 27370), (819, 27328), (849, 27241), (938, 26983), (943, 26959), (944, 26956), (954, 26926), (986, 26815),

Gene: Sisko\_49 Start: 45974, Stop: 44160, Start Num: 225

Candidate Starts for Sisko\_49:

(165, 46064), (168, 46058), (Start: 225 @45974 has 5 MA's), (Start: 238 @45965 has 2 MA's), (Start: 261 @45923 has 10 MA's), (323, 45797), (355, 45755), (379, 45713), (406, 45644), (424, 45605), (426, 45593), (427, 45590), (456, 45515), (462, 45494), (511, 45401), (582, 45275), (588, 45260), (597, 45248), (643, 45158), (743, 44936), (760, 44861), (799, 44747), (802, 44738), (822, 44675), (842, 44636), (847, 44621), (872, 44543), (877, 44531), (878, 44525), (883, 44510), (885, 44501), (890, 44492), (935, 44414), (942, 44381), (943, 44378), (962, 44324), (964, 44318), (972, 44282), (979, 44258), (1015, 44186),

Gene: Sixama\_172 Start: 99122, Stop: 97338, Start Num: 240

Candidate Starts for Sixama\_172:

(Start: 191 @99188 has 2 MA's), (210, 99161), (Start: 240 @99122 has 1 MA's), (296, 99014), (334, 98954), (353, 98921), (394, 98858), (408, 98813), (426, 98768), (427, 98765), (459, 98687), (463, 98672), (464, 98669), (468, 98657), (541, 98588), (586, 98504), (603, 98477), (615, 98462), (689, 98303), (700, 98279), (752, 98138), (756, 98117), (759, 98096), (813, 97916), (830, 97859), (862, 97757), (865, 97748), (886, 97685), (893, 97673), (897, 97664), (943, 97544), (946, 97532), (949, 97523), (951, 97517), (960, 97496), (962, 97490), (964, 97484), (969, 97466), (970, 97460), (985, 97412), (1019, 97361),

Gene: SketchMex\_43 Start: 32515, Stop: 30125, Start Num: 36

Candidate Starts for SketchMex\_43:

(Start: 36 @32515 has 16 MA's), (64, 32452), (71, 32434), (76, 32419), (96, 32365), (100, 32353), (105, 32332), (119, 32299), (127, 32272), (136, 32248), (159, 32221), (Start: 230 @32116 has 13 MA's), (262, 32068), (317, 31951), (366, 31870), (382, 31843), (391, 31822), (409, 31768), (410, 31765), (420, 31747), (426, 31726), (448, 31666), (524, 31468), (541, 31426), (634, 31339), (643, 31315), (655, 31309), (677, 31255), (682, 31249), (707, 31207), (711, 31204), (713, 31201), (758, 31054), (770, 31012), (773, 30985), (784, 30943), (805, 30850), (817, 30814), (819, 30808), (822, 30802), (824, 30796), (834, 30772), (842, 30739), (849, 30715), (859, 30670), (878, 30610), (938, 30457), (986, 30289), (1008, 30244), (1013, 30235), (1016, 30226),

Gene: SkiPole\_47 Start: 35312, Stop: 33483, Start Num: 234

Candidate Starts for SkiPole\_47:

(Start: 234 @35312 has 938 MA's), (359, 35099), (368, 35084), (395, 35036), (405, 35006), (411, 34985), (415, 34979), (419, 34970), (457, 34853), (465, 34826), (541, 34733), (546, 34718), (596, 34634), (598, 34631), (634, 34565), (657, 34505), (679, 34460), (700, 34421), (759, 34241), (775, 34193), (793, 34145), (802, 34106), (805, 34088), (818, 34049), (837, 34028), (841, 34007), (846, 33992), (885, 33869), (960, 33698), (967, 33674), (982, 33626), (985, 33614), (993, 33593), (997, 33587), (1025, 33539), (1030, 33524),

Gene: Skipitt\_44 Start: 31564, Stop: 29738, Start Num: 234

Candidate Starts for Skipitt\_44:

(Start: 234 @31564 has 938 MA's), (252, 31543), (266, 31513), (279, 31483), (379, 31321), (389, 31303), (415, 31231), (419, 31222), (458, 31102), (465, 31078), (541, 30985), (568, 30937), (582, 30916), (603, 30877), (663, 30745), (675, 30724), (700, 30679), (703, 30667), (756, 30514), (759, 30493), (798, 30370), (805, 30340), (818, 30301), (841, 30235), (842, 30232), (847, 30217), (856, 30193), (862, 30169), (942, 29962), (985, 29827), (989, 29815), (993, 29806),

Gene: Skippy\_61 Start: 54268, Stop: 52409, Start Num: 197

Candidate Starts for Skippy\_61:

(Start: 180 @54292 has 1 MA's), (Start: 197 @54268 has 298 MA's), (Start: 225 @54244 has 5 MA's), (Start: 238 @54238 has 2 MA's), (Start: 261 @54196 has 10 MA's), (269, 54175), (323, 54061), (328, 54055), (349, 54025), (385, 53965), (394, 53944), (410, 53890), (418, 53878), (425, 53860), (427, 53848), (462, 53743), (496, 53686), (511, 53650), (516, 53638), (534, 53614), (539, 53602), (545, 53584), (555, 53566), (566, 53548), (588, 53509), (595, 53500), (597, 53497), (599, 53494), (724, 53239), (754, 53137), (760, 53104), (765, 53083), (799, 52990), (802, 52981), (822, 52918), (841, 52882), (842, 52879), (847, 52864), (872, 52786), (877, 52774), (883, 52753), (902, 52714), (942, 52624), (947, 52606), (949, 52600), (954, 52585), (964, 52561), (968, 52546), (969, 52543), (972, 52531), (979, 52507), (985, 52486), (1002, 52459), (1015, 52435),

Gene: Sknot\_46 Start: 31360, Stop: 29573, Start Num: 234

Candidate Starts for Sknot\_46:

(Start: 234 @31360 has 938 MA's), (353, 31156), (355, 31153), (359, 31147), (379, 31117), (395, 31084), (397, 31081), (405, 31054), (415, 31027), (432, 30976), (465, 30874), (541, 30781), (566, 30733), (571, 30724), (582, 30709), (619, 30643), (655, 30562), (675, 30514), (740, 30370), (759, 30289), (778, 30238), (789, 30205), (805, 30136), (818, 30097), (837, 30076), (841, 30055), (845, 30043), (918, 29863), (921, 29857), (936, 29821), (942, 29797), (968, 29719), (985, 29662), (989, 29650),

Gene: Skylord\_40 Start: 27452, Stop: 29320, Start Num: 231

Candidate Starts for Skylord\_40:

(Start: 231 @27452 has 7 MA's), (Start: 234 @27455 has 938 MA's), (Start: 237 @27458 has 2 MA's), (273, 27527), (425, 27809), (432, 27836), (453, 27890), (559, 28055), (603, 28130), (618, 28151), (747, 28505), (759, 28565), (778, 28616), (796, 28682), (805, 28718), (840, 28811), (901, 28982), (936, 29054), (962, 29135), (984, 29210), (985, 29213), (993, 29234), (1032, 29303),

Gene: Slagathor\_47 Start: 35125, Stop: 33338, Start Num: 234

Candidate Starts for Slagathor\_47:

(Start: 234 @35125 has 938 MA's), (359, 34912), (368, 34897), (405, 34819), (411, 34798), (415, 34792), (419, 34783), (457, 34666), (465, 34639), (541, 34546), (546, 34531), (566, 34498), (596, 34447), (598, 34444), (634, 34378), (648, 34348), (657, 34318), (679, 34273), (700, 34234), (759, 34054), (775, 34006), (790, 33967), (805, 33901), (839, 33829), (841, 33820), (868, 33736), (903, 33649), (954, 33523), (960, 33511), (985, 33427), (987, 33421),

Gene: Slatt\_61 Start: 54333, Stop: 52474, Start Num: 197

Candidate Starts for Slatt\_61:

(Start: 180 @54357 has 1 MA's), (Start: 197 @54333 has 298 MA's), (Start: 225 @54309 has 5 MA's), (Start: 238 @54303 has 2 MA's), (Start: 261 @54261 has 10 MA's), (269, 54240), (323, 54126), (328, 54120), (349, 54090), (385, 54030), (394, 54009), (410, 53955), (418, 53943), (425, 53925), (427, 53913), (462, 53808), (496, 53751), (511, 53715), (516, 53703), (535, 53676), (545, 53649), (555, 53631), (566, 53613), (588, 53574), (595, 53565), (597, 53562), (754, 53202), (760, 53169), (765, 53148), (799, 53055), (802, 53046), (822, 52983), (841, 52947), (842, 52944), (847, 52929), (872, 52851), (877, 52839), (883, 52818), (902, 52779), (942, 52689), (947, 52671), (949, 52665), (954, 52650), (964, 52626), (968, 52611), (969, 52608), (972, 52596), (979, 52572), (1002, 52524), (1015, 52500),

Gene: Slay\_43 Start: 30006, Stop: 31880, Start Num: 234

Candidate Starts for Slay\_43:

(Start: 231 @30003 has 7 MA's), (Start: 234 @30006 has 938 MA's), (273, 30075), (284, 30096), (353, 30213), (395, 30276), (419, 30342), (432, 30384), (603, 30678), (663, 30813), (709, 30912), (747, 31035), (759, 31095), (761, 31101), (778, 31146), (782, 31161), (786, 31176), (796, 31212), (805, 31248), (840, 31341), (869, 31434), (901, 31512), (936, 31584), (946, 31623), (962, 31665), (967, 31683), (985, 31743), (993, 31764),

Gene: SlippinJimmy\_60 Start: 54842, Stop: 53025, Start Num: 235

Candidate Starts for SlippinJimmy\_60:

(129, 55025), (Start: 235 @54842 has 43 MA's), (252, 54812), (359, 54632), (424, 54479), (426, 54467), (437, 54437), (442, 54431), (462, 54368), (464, 54362), (496, 54311), (511, 54275), (539, 54227), (597, 54122), (647, 54026), (664, 53975), (737, 53831), (749, 53792), (755, 53762), (760, 53735), (763, 53723), (797, 53627), (799, 53621), (802, 53612), (804, 53600), (834, 53528), (841, 53498), (847, 53480), (851, 53471), (872, 53402), (877, 53390), (883, 53369), (921, 53300), (931, 53285), (938, 53261), (942, 53240), (947, 53222), (949, 53216), (962, 53183), (964, 53177), (969, 53159), (972, 53147), (975, 53135), (979, 53123), (994, 53081), (1015, 53051),

Gene: Smairt\_47 Start: 35424, Stop: 33637, Start Num: 234

Candidate Starts for Smairt\_47:

(Start: 234 @35424 has 938 MA's), (359, 35211), (368, 35196), (405, 35118), (411, 35097), (415, 35091), (419, 35082), (457, 34965), (465, 34938), (541, 34845), (546, 34830), (558, 34809), (566, 34797), (596, 34746), (598, 34743), (628, 34689), (634, 34677), (648, 34647), (657, 34617), (679, 34572), (700, 34533), (759, 34353), (775, 34305), (790, 34266), (805, 34200), (839, 34128), (841, 34119), (868, 34035), (903, 33948), (954, 33822), (960, 33810), (985, 33726), (987, 33720),

Gene: Smeadley\_43 Start: 30722, Stop: 28878, Start Num: 234

Candidate Starts for Smeadley\_43:

(135, 30887), (Start: 234 @30722 has 938 MA's), (266, 30671), (336, 30548), (353, 30518), (379, 30479), (395, 30446), (405, 30416), (411, 30395), (415, 30389), (419, 30380), (432, 30338), (448, 30287), (464, 30239), (465, 30236), (541, 30140), (552, 30113), (563, 30095), (566, 30092), (571, 30083), (603, 30029), (619, 30002), (640, 29954), (663, 29897), (679, 29870), (703, 29819), (711,



29804), (756, 29657), (759, 29636), (769, 29606), (775, 29588), (778, 29585), (782, 29570), (790, 29549), (793, 29540), (798, 29513), (802, 29501), (805, 29483), (841, 29402), (845, 29390), (862, 29336), (874, 29300), (885, 29264), (903, 29231), (918, 29210), (921, 29204), (938, 29165), (942, 29144), (947, 29126), (985, 29009), (987, 29003), (989, 28997),

Gene: Smeagan\_47 Start: 31877, Stop: 30090, Start Num: 234

Candidate Starts for Smeagan\_47:

(Start: 234 @31877 has 938 MA's), (355, 31670), (359, 31664), (368, 31649), (379, 31634), (397, 31598), (405, 31571), (415, 31544), (424, 31523), (465, 31391), (541, 31298), (563, 31253), (566, 31250), (571, 31241), (582, 31226), (619, 31160), (655, 31079), (675, 31031), (679, 31025), (759, 30806), (778, 30755), (789, 30722), (790, 30719), (805, 30653), (818, 30614), (837, 30593), (859, 30518), (862, 30506), (879, 30455), (908, 30392), (921, 30374), (936, 30338), (942, 30314), (968, 30236), (985, 30179), (989, 30167), (993, 30158),

Gene: Smeagol\_46 Start: 35946, Stop: 34120, Start Num: 234

Candidate Starts for Smeagol\_46:

(Start: 234 @35946 has 938 MA's), (359, 35733), (368, 35718), (405, 35640), (411, 35619), (415, 35613), (419, 35604), (457, 35487), (465, 35460), (541, 35367), (546, 35352), (566, 35319), (596, 35268), (598, 35265), (634, 35199), (648, 35169), (657, 35139), (679, 35094), (700, 35055), (759, 34875), (775, 34827), (778, 34824), (790, 34788), (805, 34722), (841, 34641), (842, 34638), (868, 34557), (936, 34407), (938, 34404), (946, 34368), (954, 34344), (963, 34323), (985, 34248), (993, 34227),

Gene: SmellyB\_45 Start: 29627, Stop: 27786, Start Num: 234

Candidate Starts for SmellyB\_45:

(Start: 234 @29627 has 938 MA's), (353, 29423), (395, 29348), (397, 29345), (405, 29318), (409, 29303), (415, 29291), (432, 29240), (461, 29150), (465, 29138), (541, 29045), (559, 29006), (571, 28988), (582, 28973), (619, 28907), (635, 28874), (636, 28871), (681, 28769), (710, 28709), (740, 28625), (759, 28544), (789, 28460), (790, 28457), (793, 28448), (798, 28421), (805, 28391), (837, 28331), (847, 28292), (936, 28076), (938, 28073), (942, 28052), (985, 27917), (989, 27905), (993, 27896), (995, 27893), (1042, 27800),

Gene: SnapTap\_44 Start: 31345, Stop: 29558, Start Num: 234

Candidate Starts for SnapTap\_44:

(104, 31600), (Start: 234 @31345 has 938 MA's), (353, 31141), (355, 31138), (359, 31132), (368, 31117), (379, 31102), (395, 31069), (397, 31066), (405, 31039), (415, 31012), (424, 30991), (432, 30961), (465, 30859), (541, 30766), (566, 30718), (571, 30709), (582, 30694), (619, 30628), (655, 30547), (675, 30499), (679, 30493), (710, 30430), (740, 30355), (759, 30274), (778, 30223), (789, 30190), (790, 30187), (805, 30121), (818, 30082), (837, 30061), (859, 29986), (864, 29968), (879, 29923), (888, 29896), (908, 29860), (918, 29848), (921, 29842), (936, 29806), (942, 29782), (968, 29704), (985, 29647), (989, 29635), (993, 29626),

Gene: Snape\_44 Start: 30329, Stop: 28542, Start Num: 234

Candidate Starts for Snape\_44:

(Start: 234 @30329 has 938 MA's), (353, 30125), (395, 30053), (405, 30023), (415, 29996), (543, 29744), (571, 29693), (619, 29612), (639, 29567), (675, 29483), (703, 29426), (728, 29384), (740, 29339), (759, 29258), (778, 29207), (790, 29171), (805, 29105), (837, 29045), (839, 29033), (871, 28931), (879, 28907), (884, 28889), (921, 28826), (935, 28799), (936, 28790), (942, 28766), (985, 28631), (989, 28619), (993, 28610),

Gene: Snazzy\_42 Start: 34003, Stop: 32177, Start Num: 234

Candidate Starts for Snazzy\_42:

(Start: 234 @34003 has 938 MA's), (359, 33790), (368, 33775), (405, 33697), (411, 33676), (415, 33670), (419, 33661), (457, 33544), (465, 33517), (541, 33424), (546, 33409), (566, 33376), (596, 33325), (598, 33322), (634, 33256), (648, 33226), (657, 33196), (679, 33151), (700, 33112), (759, 32932), (769, 32902), (775, 32884), (778, 32881), (790, 32845), (805, 32779), (841, 32698), (842, 32695), (868, 32614), (936, 32464), (938, 32461), (946, 32425), (954, 32401), (959, 32392), (963, 32380), (985, 32305), (993, 32284),

Gene: Snek\_40 Start: 28185, Stop: 30029, Start Num: 234

Candidate Starts for Snek\_40:

(Start: 234 @28185 has 938 MA's), (265, 28233), (299, 28293), (353, 28389), (377, 28416), (397, 28455), (411, 28503), (436, 28572), (543, 28758), (603, 28866), (615, 28881), (669, 29010), (675, 29019), (730, 29157), (759, 29277), (790, 29364), (803, 29421), (805, 29430), (840, 29523), (936, 29766), (985, 29925), (988, 29934), (1031, 30012),

Gene: Snickers\_48 Start: 31826, Stop: 30012, Start Num: 234

Candidate Starts for Snickers\_48:

(Start: 234 @31826 has 938 MA's), (262, 31787), (266, 31775), (353, 31622), (362, 31607), (395, 31550), (415, 31493), (419, 31484), (432, 31442), (448, 31391), (465, 31340), (541, 31247), (566, 31199), (571, 31190), (582, 31175), (603, 31136), (619, 31109), (634, 31079), (670, 30986), (701, 30926), (710, 30911), (759, 30755), (790, 30668), (805, 30602), (818, 30563), (842, 30491), (856, 30452), (862, 30428), (868, 30410), (879, 30377), (888, 30350), (921, 30296), (942, 30236), (968, 30158), (985, 30101), (989, 30089), (993, 30080),

Gene: SoYo\_48 Start: 31764, Stop: 29950, Start Num: 234

Candidate Starts for SoYo\_48:

(Start: 234 @31764 has 938 MA's), (262, 31725), (266, 31713), (353, 31560), (362, 31545), (395, 31488), (415, 31431), (419, 31422), (432, 31380), (448, 31329), (465, 31278), (541, 31185), (566, 31137), (571, 31128), (582, 31113), (603, 31074), (619, 31047), (634, 31017), (670, 30924), (701, 30864), (710, 30849), (759, 30693), (790, 30606), (805, 30540), (818, 30501), (842, 30429), (856, 30390), (862, 30366), (868, 30348), (879, 30315), (888, 30288), (921, 30234), (942, 30174), (968, 30096), (985, 30039), (989, 30027), (993, 30018),

Gene: Softsoap\_42 Start: 29403, Stop: 31277, Start Num: 234

Candidate Starts for Softsoap\_42:

(Start: 234 @29403 has 938 MA's), (273, 29472), (284, 29493), (419, 29739), (425, 29754), (432, 29781), (603, 30075), (663, 30210), (709, 30309), (747, 30432), (759, 30492), (778, 30543), (782, 30558), (786, 30573), (796, 30609), (805, 30645), (840, 30738), (869, 30831), (901, 30909), (936, 30981), (946, 31020), (962, 31062), (967, 31080), (978, 31116), (985, 31140), (993, 31161),

Gene: SoilDragon\_48 Start: 31301, Stop: 29487, Start Num: 234

Candidate Starts for SoilDragon\_48:

(Start: 234 @31301 has 938 MA's), (262, 31262), (266, 31250), (353, 31097), (362, 31082), (395, 31025), (415, 30968), (419, 30959), (432, 30917), (448, 30866), (465, 30815), (541, 30722), (566, 30674), (571, 30665), (582, 30650), (603, 30611), (619, 30584), (634, 30554), (670, 30461), (679, 30449), (701, 30401), (710, 30386), (759, 30230), (790, 30143), (805, 30077), (818, 30038), (842, 29966), (856, 29927), (862, 29903), (868, 29885), (879, 29852), (888, 29825), (921, 29771), (942, 29711), (968, 29633), (985, 29576), (989, 29564), (993, 29555),

Gene: SoilGremlin\_39 Start: 28933, Stop: 27068, Start Num: 283

Candidate Starts for SoilGremlin\_39:

(Start: 234 @29020 has 938 MA's), (Start: 283 @28933 has 147 MA's), (Start: 291 @28924 has 5 MA's), (342, 28819), (347, 28810), (367, 28780), (369, 28777), (424, 28657), (426, 28645), (428, 28639), (466, 28534), (473, 28507), (532, 28366), (535, 28360), (537, 28357), (541, 28345), (551,

28318), (553, 28315), (562, 28300), (566, 28294), (570, 28288), (613, 28255), (671, 28126), (701, 28066), (798, 27751), (801, 27742), (802, 27739), (805, 27721), (819, 27679), (822, 27673), (825, 27664), (832, 27649), (849, 27592), (900, 27433), (913, 27403), (917, 27394), (938, 27334), (943, 27310), (956, 27271), (967, 27238), (970, 27226), (986, 27166),

Gene: Soile\_61 Start: 54557, Stop: 52698, Start Num: 197

Candidate Starts for Soile\_61:

(Start: 180 @54581 has 1 MA's), (Start: 197 @54557 has 298 MA's), (Start: 225 @54533 has 5 MA's), (Start: 238 @54527 has 2 MA's), (Start: 261 @54485 has 10 MA's), (269, 54464), (323, 54350), (328, 54344), (349, 54314), (385, 54254), (394, 54233), (410, 54179), (418, 54167), (425, 54149), (427, 54137), (462, 54032), (496, 53975), (511, 53939), (516, 53927), (534, 53903), (539, 53891), (545, 53873), (555, 53855), (566, 53837), (588, 53798), (595, 53789), (597, 53786), (599, 53783), (754, 53426), (760, 53393), (765, 53372), (799, 53279), (802, 53270), (822, 53207), (841, 53171), (842, 53168), (847, 53153), (872, 53075), (877, 53063), (883, 53042), (902, 53003), (942, 52913), (947, 52895), (949, 52889), (954, 52874), (964, 52850), (968, 52835), (969, 52832), (972, 52820), (979, 52796), (1002, 52748), (1015, 52724),

Gene: Solon\_44 Start: 34769, Stop: 32940, Start Num: 234

Candidate Starts for Solon\_44:

(Start: 234 @34769 has 938 MA's), (359, 34556), (368, 34541), (395, 34493), (405, 34463), (411, 34442), (415, 34436), (419, 34427), (457, 34310), (465, 34283), (541, 34190), (546, 34175), (566, 34142), (596, 34091), (598, 34088), (634, 34022), (648, 33992), (657, 33962), (679, 33917), (700, 33878), (759, 33698), (775, 33650), (793, 33602), (802, 33563), (805, 33545), (818, 33506), (837, 33485), (841, 33464), (846, 33449), (885, 33326), (960, 33155), (967, 33131), (982, 33083), (985, 33071), (993, 33050), (997, 33044), (1025, 32996), (1030, 32981),

Gene: Solosis\_59 Start: 54029, Stop: 52170, Start Num: 197

Candidate Starts for Solosis\_59:

(Start: 180 @54053 has 1 MA's), (Start: 197 @54029 has 298 MA's), (Start: 225 @54005 has 5 MA's), (Start: 238 @53999 has 2 MA's), (Start: 261 @53957 has 10 MA's), (269, 53936), (323, 53822), (328, 53816), (349, 53786), (385, 53726), (394, 53705), (410, 53651), (418, 53639), (425, 53621), (427, 53609), (462, 53504), (496, 53447), (511, 53411), (516, 53399), (535, 53372), (555, 53327), (588, 53270), (595, 53261), (597, 53258), (754, 52898), (760, 52865), (765, 52844), (799, 52751), (802, 52742), (822, 52679), (841, 52643), (842, 52640), (847, 52625), (872, 52547), (877, 52535), (883, 52514), (902, 52475), (942, 52385), (947, 52367), (949, 52361), (954, 52346), (964, 52322), (968, 52307), (969, 52304), (972, 52292), (979, 52268), (1002, 52220), (1015, 52196),

Gene: SonOfLevi\_38 Start: 28701, Stop: 26749, Start Num: 234

Candidate Starts for SonOfLevi\_38:

(Start: 234 @28701 has 938 MA's), (Start: 283 @28614 has 147 MA's), (Start: 291 @28605 has 5 MA's), (342, 28500), (347, 28491), (367, 28461), (369, 28458), (424, 28338), (426, 28326), (428, 28320), (466, 28215), (473, 28188), (532, 28047), (535, 28041), (537, 28038), (541, 28026), (551, 27999), (553, 27996), (562, 27981), (566, 27975), (570, 27969), (613, 27936), (671, 27807), (701, 27747), (798, 27432), (801, 27423), (802, 27420), (805, 27402), (819, 27360), (822, 27354), (832, 27330), (849, 27273), (900, 27114), (913, 27084), (917, 27075), (938, 27015), (943, 26991), (956, 26952), (967, 26919), (970, 26907), (986, 26847),

Gene: Soondubu\_37 Start: 30879, Stop: 32723, Start Num: 234

Candidate Starts for Soondubu\_37:

(Start: 234 @30879 has 938 MA's), (387, 31125), (405, 31176), (581, 31518), (603, 31560), (615, 31575), (619, 31587), (663, 31692), (669, 31704), (675, 31713), (730, 31851), (759, 31971), (769, 32001), (805, 32124), (816, 32154), (840, 32217), (842, 32226), (936, 32460), (942, 32484), (954, 32523), (960, 32535), (962, 32541), (967, 32559), (985, 32619),

Gene: Sooty\_38 Start: 27604, Stop: 29586, Start Num: 234

Candidate Starts for Sooty\_38:

(Start: 234 @27604 has 938 MA's), (336, 27778), (382, 27841), (397, 27874), (424, 27949), (518, 28177), (603, 28351), (675, 28507), (730, 28645), (753, 28732), (759, 28765), (769, 28795), (790, 28852), (805, 28918), (840, 29011), (942, 29278), (949, 29302), (985, 29413), (1040, 29521),

Gene: Sopespian\_41 Start: 32442, Stop: 30049, Start Num: 36

Candidate Starts for Sopespian\_41:

(Start: 36 @32442 has 16 MA's), (48, 32436), (Start: 60 @32388 has 1 MA's), (76, 32346), (86, 32322), (127, 32196), (136, 32172), (170, 32127), (206, 32076), (216, 32061), (Start: 230 @32040 has 13 MA's), (262, 31992), (274, 31959), (279, 31950), (317, 31875), (322, 31863), (366, 31794), (382, 31767), (385, 31761), (391, 31746), (409, 31692), (410, 31689), (420, 31671), (426, 31650), (448, 31590), (495, 31467), (497, 31461), (524, 31392), (541, 31350), (634, 31263), (643, 31239), (655, 31233), (662, 31209), (666, 31200), (674, 31185), (682, 31173), (707, 31131), (711, 31128), (713, 31125), (758, 30978), (770, 30936), (773, 30909), (774, 30903), (805, 30774), (817, 30738), (819, 30732), (822, 30726), (824, 30720), (842, 30663), (849, 30639), (859, 30594), (985, 30216), (986, 30213), (1008, 30168), (1013, 30159), (1037, 30099),

Gene: Sophia\_59 Start: 54023, Stop: 52164, Start Num: 197

Candidate Starts for Sophia\_59:

(Start: 180 @54047 has 1 MA's), (Start: 197 @54023 has 298 MA's), (Start: 225 @53999 has 5 MA's), (Start: 238 @53993 has 2 MA's), (Start: 261 @53951 has 10 MA's), (269, 53930), (323, 53816), (328, 53810), (349, 53780), (385, 53720), (394, 53699), (410, 53645), (418, 53633), (425, 53615), (427, 53603), (462, 53498), (496, 53441), (511, 53405), (516, 53393), (535, 53366), (555, 53321), (588, 53264), (595, 53255), (597, 53252), (724, 52994), (754, 52892), (760, 52859), (765, 52838), (799, 52745), (802, 52736), (822, 52673), (842, 52634), (847, 52619), (872, 52541), (877, 52529), (883, 52508), (902, 52469), (942, 52379), (947, 52361), (949, 52355), (954, 52340), (964, 52316), (968, 52301), (969, 52298), (972, 52286), (979, 52262), (1002, 52214), (1015, 52190),

Gene: SorJuana\_54 Start: 36486, Stop: 34318, Start Num: 202

Candidate Starts for SorJuana\_54:

(200, 36489), (Start: 202 @36486 has 13 MA's), (239, 36432), (279, 36348), (356, 36195), (361, 36186), (388, 36141), (414, 36063), (415, 36054), (422, 36039), (426, 36024), (427, 36021), (445, 35964), (474, 35871), (484, 35829), (565, 35634), (572, 35622), (578, 35616), (587, 35592), (601, 35571), (616, 35550), (621, 35535), (623, 35529), (651, 35466), (672, 35415), (706, 35328), (727, 35268), (740, 35220), (766, 35118), (768, 35112), (780, 35085), (781, 35082), (789, 35061), (799, 35019), (801, 35013), (806, 34989), (814, 34947), (815, 34944), (823, 34917), (838, 34884), (840, 34872), (852, 34836), (859, 34812), (861, 34806), (862, 34800), (880, 34746), (899, 34698), (902, 34695), (925, 34635), (932, 34611), (941, 34581), (961, 34527), (982, 34458), (985, 34446), (1006, 34407),

Gene: SororFago\_48 Start: 33066, Stop: 31273, Start Num: 234

Candidate Starts for SororFago\_48:

(Start: 234 @33066 has 938 MA's), (246, 33057), (263, 33024), (301, 32955), (353, 32862), (395, 32787), (397, 32784), (415, 32730), (419, 32721), (458, 32601), (465, 32577), (541, 32484), (563, 32439), (634, 32316), (700, 32169), (726, 32118), (759, 31989), (775, 31941), (778, 31938), (782, 31923), (805, 31836), (837, 31776), (839, 31764), (841, 31755), (847, 31737), (868, 31671), (879, 31638), (888, 31611), (935, 31530), (936, 31521), (962, 31440), (968, 31419), (970, 31410), (985, 31362), (989, 31350), (993, 31341),

Gene: Sorpresa\_44 Start: 34874, Stop: 33048, Start Num: 234

Candidate Starts for Sorpresa\_44:

(Start: 234 @34874 has 938 MA's), (359, 34661), (368, 34646), (405, 34568), (411, 34547), (415, 34541), (419, 34532), (457, 34415), (465, 34388), (541, 34295), (546, 34280), (566, 34247), (596, 34196), (598, 34193), (634, 34127), (648, 34097), (657, 34067), (679, 34022), (700, 33983), (759, 33803), (775, 33755), (790, 33716), (805, 33650), (841, 33569), (842, 33566), (868, 33485), (936, 33335), (938, 33332), (946, 33296), (954, 33272), (959, 33263), (963, 33251), (985, 33176), (993, 33155),

Gene: Soshari\_50 Start: 31880, Stop: 30066, Start Num: 234

Candidate Starts for Soshari\_50:

(Start: 234 @31880 has 938 MA's), (262, 31841), (266, 31829), (353, 31676), (362, 31661), (395, 31604), (415, 31547), (419, 31538), (432, 31496), (448, 31445), (465, 31394), (518, 31340), (541, 31301), (566, 31253), (582, 31229), (603, 31190), (619, 31163), (634, 31133), (670, 31040), (679, 31028), (701, 30980), (710, 30965), (759, 30809), (778, 30758), (789, 30725), (790, 30722), (805, 30656), (818, 30617), (842, 30545), (856, 30506), (862, 30482), (868, 30464), (879, 30431), (921, 30350), (942, 30290), (970, 30203), (985, 30155), (989, 30143), (993, 30134), (995, 30131),

Gene: Soto\_59 Start: 53590, Stop: 51731, Start Num: 197

Candidate Starts for Soto\_59:

(Start: 180 @53614 has 1 MA's), (Start: 197 @53590 has 298 MA's), (Start: 225 @53566 has 5 MA's), (Start: 238 @53560 has 2 MA's), (252, 53533), (Start: 261 @53518 has 10 MA's), (269, 53497), (323, 53383), (328, 53377), (349, 53347), (385, 53287), (394, 53266), (410, 53212), (418, 53200), (425, 53182), (427, 53170), (462, 53065), (496, 53008), (511, 52972), (516, 52960), (535, 52933), (539, 52924), (555, 52888), (588, 52831), (595, 52822), (597, 52819), (599, 52816), (754, 52459), (760, 52426), (765, 52405), (799, 52312), (802, 52303), (822, 52240), (841, 52204), (842, 52201), (847, 52186), (872, 52108), (877, 52096), (883, 52075), (902, 52036), (942, 51946), (947, 51928), (949, 51922), (954, 51907), (964, 51883), (968, 51868), (969, 51865), (972, 51853), (979, 51829), (1002, 51781), (1015, 51757),

Gene: Soups\_47 Start: 29943, Stop: 28153, Start Num: 234

Candidate Starts for Soups\_47:

(Start: 234 @29943 has 938 MA's), (336, 29769), (395, 29664), (397, 29661), (405, 29634), (415, 29607), (432, 29556), (465, 29454), (541, 29361), (563, 29316), (566, 29313), (571, 29304), (655, 29142), (663, 29115), (675, 29094), (679, 29088), (730, 28989), (740, 28950), (754, 28899), (759, 28869), (778, 28818), (789, 28785), (796, 28752), (798, 28746), (805, 28716), (837, 28656), (841, 28635), (856, 28593), (863, 28566), (868, 28551), (903, 28464), (936, 28401), (938, 28398), (985, 28242), (989, 28230), (995, 28218),

Gene: Sour\_53 Start: 49160, Stop: 47364, Start Num: 238

Candidate Starts for Sour\_53:

(Start: 225 @49166 has 5 MA's), (Start: 238 @49160 has 2 MA's), (252, 49133), (259, 49121), (Start: 261 @49118 has 10 MA's), (273, 49088), (349, 48962), (406, 48842), (424, 48803), (427, 48788), (456, 48713), (462, 48695), (511, 48602), (539, 48554), (583, 48473), (597, 48449), (615, 48425), (634, 48383), (664, 48302), (673, 48284), (743, 48137), (760, 48062), (797, 47957), (799, 47951), (802, 47942), (822, 47879), (842, 47840), (843, 47837), (847, 47825), (872, 47747), (877, 47735), (883, 47714), (885, 47705), (907, 47666), (931, 47630), (935, 47618), (942, 47585), (943, 47582), (964, 47522), (968, 47507), (979, 47462), (1002, 47414), (1015, 47390),

Gene: Spartan300\_60 Start: 54251, Stop: 52392, Start Num: 197

Candidate Starts for Spartan300\_60:

(Start: 180 @54275 has 1 MA's), (Start: 197 @54251 has 298 MA's), (Start: 225 @54227 has 5 MA's), (Start: 238 @54221 has 2 MA's), (Start: 261 @54179 has 10 MA's), (269, 54158), (323, 54044), (328, 54038), (349, 54008), (385, 53948), (394, 53927), (410, 53873), (418, 53861), (425, 53843), (427, 53831), (462, 53726), (496, 53669), (511, 53633), (516, 53621), (534, 53597), (539, 53585), (545,

53567), (555, 53549), (566, 53531), (588, 53492), (595, 53483), (597, 53480), (599, 53477), (754, 53120), (760, 53087), (765, 53066), (799, 52973), (802, 52964), (822, 52901), (841, 52865), (842, 52862), (847, 52847), (872, 52769), (877, 52757), (883, 52736), (902, 52697), (942, 52607), (947, 52589), (949, 52583), (954, 52568), (964, 52544), (968, 52529), (969, 52526), (972, 52514), (979, 52490), (1002, 52442), (1015, 52418),

Gene: Sparxx\_46 Start: 31565, Stop: 29739, Start Num: 234

Candidate Starts for Sparxx\_46:

(Start: 234 @31565 has 938 MA's), (252, 31544), (266, 31514), (279, 31484), (379, 31322), (389, 31304), (415, 31232), (419, 31223), (458, 31103), (465, 31079), (541, 30986), (568, 30938), (582, 30917), (603, 30878), (675, 30725), (700, 30680), (703, 30668), (756, 30515), (759, 30494), (798, 30371), (805, 30341), (818, 30302), (841, 30236), (842, 30233), (847, 30218), (856, 30194), (862, 30170), (942, 29963), (985, 29828), (989, 29816), (993, 29807),

Gene: SpecialK\_38 Start: 27587, Stop: 29569, Start Num: 234

Candidate Starts for SpecialK\_38:

(Start: 234 @27587 has 938 MA's), (336, 27761), (353, 27791), (382, 27824), (397, 27857), (424, 27932), (431, 27959), (518, 28160), (603, 28334), (675, 28490), (730, 28628), (753, 28715), (759, 28748), (769, 28778), (790, 28835), (805, 28901), (840, 28994), (942, 29261), (949, 29285), (985, 29396), (1040, 29504),

Gene: Spike509\_48 Start: 31881, Stop: 30067, Start Num: 234

Candidate Starts for Spike509\_48:

(Start: 234 @31881 has 938 MA's), (262, 31842), (266, 31830), (353, 31677), (362, 31662), (395, 31605), (415, 31548), (419, 31539), (432, 31497), (448, 31446), (465, 31395), (518, 31341), (541, 31302), (566, 31254), (582, 31230), (603, 31191), (619, 31164), (634, 31134), (670, 31041), (679, 31029), (701, 30981), (710, 30966), (759, 30810), (778, 30759), (789, 30726), (790, 30723), (805, 30657), (818, 30618), (842, 30546), (856, 30507), (862, 30483), (868, 30465), (879, 30432), (921, 30351), (942, 30291), (970, 30204), (985, 30156), (989, 30144), (993, 30135), (995, 30132),

Gene: SpikeBT\_45 Start: 35111, Stop: 33285, Start Num: 234

Candidate Starts for SpikeBT\_45:

(Start: 234 @35111 has 938 MA's), (359, 34898), (395, 34835), (405, 34805), (411, 34784), (415, 34778), (419, 34769), (457, 34652), (465, 34625), (541, 34532), (546, 34517), (566, 34484), (596, 34433), (598, 34430), (628, 34376), (634, 34364), (648, 34334), (657, 34304), (679, 34259), (700, 34220), (759, 34040), (769, 34010), (775, 33992), (778, 33989), (790, 33953), (805, 33887), (841, 33806), (842, 33803), (868, 33722), (936, 33572), (938, 33569), (946, 33533), (954, 33509), (959, 33500), (963, 33488), (985, 33413), (993, 33392),

Gene: Spino\_44 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for Spino\_44:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Spooks\_18 Start: 12624, Stop: 10834, Start Num: 234

Candidate Starts for Spooks\_18:

(Start: 234 @12624 has 938 MA's), (353, 12423), (359, 12414), (379, 12384), (405, 12321), (415, 12294), (424, 12273), (465, 12141), (535, 12063), (541, 12048), (675, 11778), (679, 11772), (705, 11733), (713, 11718), (744, 11631), (752, 11604), (759, 11562), (780, 11499), (795, 11448), (796, 11442), (805, 11406), (836, 11346), (839, 11334), (841, 11325), (857, 11280), (935, 11100), (960,

11016), (978, 10956), (985, 10932), (1021, 10863),

Gene: Spouty\_45 Start: 31549, Stop: 29756, Start Num: 234

Candidate Starts for Spouty\_45:

(Start: 234 @31549 has 938 MA's), (246, 31540), (266, 31498), (334, 31378), (336, 31375), (364, 31327), (397, 31267), (406, 31237), (409, 31225), (415, 31213), (465, 31060), (541, 30967), (619, 30829), (634, 30799), (703, 30640), (710, 30628), (726, 30601), (756, 30493), (759, 30472), (802, 30337), (805, 30319), (841, 30238), (856, 30196), (879, 30121), (918, 30046), (936, 30004), (968, 29902), (985, 29845), (989, 29833), (993, 29824),

Gene: Squee\_44 Start: 34851, Stop: 33025, Start Num: 234

Candidate Starts for Squee\_44:

(Start: 234 @34851 has 938 MA's), (359, 34638), (368, 34623), (395, 34575), (405, 34545), (411, 34524), (415, 34518), (419, 34509), (457, 34392), (465, 34365), (541, 34272), (546, 34257), (596, 34173), (598, 34170), (634, 34104), (648, 34074), (657, 34044), (679, 33999), (700, 33960), (759, 33780), (769, 33750), (775, 33732), (778, 33729), (790, 33693), (805, 33627), (841, 33546), (842, 33543), (868, 33462), (936, 33312), (938, 33309), (946, 33273), (954, 33249), (959, 33240), (963, 33228), (985, 33153), (993, 33132),

Gene: Squid\_60 Start: 54035, Stop: 52176, Start Num: 197

Candidate Starts for Squid\_60:

(Start: 180 @54059 has 1 MA's), (Start: 197 @54035 has 298 MA's), (Start: 225 @54011 has 5 MA's), (Start: 238 @54005 has 2 MA's), (Start: 261 @53963 has 10 MA's), (269, 53942), (323, 53828), (328, 53822), (349, 53792), (385, 53732), (394, 53711), (410, 53657), (418, 53645), (425, 53627), (427, 53615), (462, 53510), (496, 53453), (511, 53417), (516, 53405), (535, 53378), (545, 53351), (555, 53333), (566, 53315), (588, 53276), (595, 53267), (597, 53264), (724, 53006), (754, 52904), (760, 52871), (765, 52850), (799, 52757), (802, 52748), (822, 52685), (841, 52649), (842, 52646), (847, 52631), (872, 52553), (877, 52541), (883, 52520), (902, 52481), (942, 52391), (947, 52373), (949, 52367), (954, 52352), (964, 52328), (968, 52313), (969, 52310), (972, 52298), (979, 52274), (1002, 52226), (1015, 52202),

Gene: Squiggle\_61 Start: 54043, Stop: 52184, Start Num: 197

Candidate Starts for Squiggle\_61:

(Start: 180 @54067 has 1 MA's), (Start: 197 @54043 has 298 MA's), (Start: 225 @54019 has 5 MA's), (Start: 238 @54013 has 2 MA's), (Start: 261 @53971 has 10 MA's), (269, 53950), (323, 53836), (328, 53830), (349, 53800), (385, 53740), (394, 53719), (410, 53665), (418, 53653), (425, 53635), (427, 53623), (462, 53518), (496, 53461), (511, 53425), (516, 53413), (535, 53386), (555, 53341), (588, 53284), (595, 53275), (597, 53272), (754, 52912), (760, 52879), (765, 52858), (799, 52765), (802, 52756), (822, 52693), (841, 52657), (842, 52654), (847, 52639), (872, 52561), (877, 52549), (883, 52528), (902, 52489), (938, 52420), (942, 52399), (947, 52381), (949, 52375), (954, 52360), (964, 52336), (968, 52321), (969, 52318), (972, 52306), (979, 52282), (1002, 52234), (1015, 52210),

Gene: Squirrel\_39 Start: 28105, Stop: 29988, Start Num: 223

Candidate Starts for Squirrel\_39:

(Start: 223 @28105 has 3 MA's), (252, 28126), (273, 28174), (284, 28195), (353, 28312), (395, 28375), (405, 28405), (411, 28426), (419, 28441), (424, 28453), (453, 28534), (459, 28549), (556, 28705), (577, 28735), (603, 28786), (618, 28807), (620, 28816), (660, 28915), (759, 29203), (761, 29209), (782, 29269), (790, 29290), (796, 29320), (799, 29329), (805, 29356), (840, 29449), (847, 29473), (868, 29539), (869, 29542), (901, 29620), (903, 29626), (931, 29671), (949, 29740), (962, 29773), (964, 29779), (967, 29791), (968, 29794), (985, 29851), (991, 29866), (993, 29872), (1039, 29953),

Gene: StAugustine\_89 Start: 66670, Stop: 64871, Start Num: 232

Candidate Starts for StAugustine\_89:

(Start: 232 @66670 has 15 MA's), (252, 66637), (Start: 261 @66622 has 10 MA's), (266, 66610), (278, 66583), (289, 66565), (310, 66538), (373, 66445), (385, 66427), (393, 66409), (410, 66352), (432, 66301), (496, 66160), (509, 66133), (511, 66124), (574, 66010), (597, 65971), (618, 65941), (625, 65923), (664, 65809), (724, 65704), (730, 65689), (754, 65602), (760, 65569), (762, 65563), (797, 65461), (799, 65455), (802, 65446), (841, 65347), (842, 65344), (847, 65329), (853, 65314), (872, 65251), (877, 65239), (883, 65218), (935, 65122), (942, 65089), (964, 65026), (972, 64996), (974, 64990), (975, 64984), (979, 64972), (999, 64924), (1015, 64897), (1019, 64882), (1023, 64876),

Gene: StCroix\_36 Start: 28126, Stop: 26342, Start Num: 234

Candidate Starts for StCroix\_36:

(Start: 234 @28126 has 938 MA's), (374, 27892), (390, 27862), (394, 27853), (395, 27850), (409, 27805), (415, 27793), (432, 27742), (465, 27640), (492, 27619), (541, 27547), (563, 27502), (566, 27499), (589, 27457), (594, 27451), (603, 27436), (619, 27409), (663, 27304), (667, 27295), (679, 27277), (681, 27274), (700, 27238), (759, 27058), (775, 27010), (805, 26905), (806, 26902), (837, 26845), (841, 26824), (881, 26701), (921, 26626), (936, 26590), (942, 26566), (968, 26488), (985, 26431), (989, 26419), (1010, 26380), (1021, 26362),

Gene: Stagni\_48 Start: 31855, Stop: 30041, Start Num: 234

Candidate Starts for Stagni\_48:

(Start: 234 @31855 has 938 MA's), (262, 31816), (266, 31804), (353, 31651), (362, 31636), (395, 31579), (415, 31522), (419, 31513), (432, 31471), (448, 31420), (465, 31369), (541, 31276), (566, 31228), (571, 31219), (582, 31204), (603, 31165), (619, 31138), (634, 31108), (670, 31015), (701, 30955), (710, 30940), (759, 30784), (790, 30697), (805, 30631), (818, 30592), (842, 30520), (856, 30481), (862, 30457), (868, 30439), (879, 30406), (888, 30379), (921, 30325), (942, 30265), (968, 30187), (985, 30130), (989, 30118), (993, 30109),

Gene: Stanktossa\_39 Start: 28930, Stop: 27065, Start Num: 283

Candidate Starts for Stanktossa\_39:

(Start: 234 @29017 has 938 MA's), (Start: 237 @29014 has 2 MA's), (Start: 283 @28930 has 147 MA's), (Start: 291 @28921 has 5 MA's), (342, 28816), (347, 28807), (367, 28777), (369, 28774), (424, 28654), (426, 28642), (428, 28636), (466, 28531), (473, 28504), (532, 28363), (535, 28357), (537, 28354), (541, 28342), (551, 28315), (553, 28312), (562, 28297), (566, 28291), (570, 28285), (613, 28252), (701, 28063), (798, 27748), (801, 27739), (802, 27736), (805, 27718), (819, 27676), (822, 27670), (825, 27661), (832, 27646), (849, 27589), (900, 27430), (913, 27400), (917, 27391), (938, 27331), (943, 27307), (956, 27268), (967, 27235), (970, 27223), (986, 27163),

Gene: StarStuff\_47 Start: 31156, Stop: 29333, Start Num: 234

Candidate Starts for StarStuff\_47:

(Start: 234 @31156 has 938 MA's), (353, 30952), (368, 30928), (379, 30910), (389, 30892), (395, 30877), (397, 30874), (405, 30847), (415, 30820), (432, 30769), (465, 30667), (541, 30574), (566, 30526), (571, 30517), (581, 30505), (619, 30436), (648, 30376), (700, 30262), (710, 30238), (728, 30199), (759, 30073), (778, 30022), (790, 29986), (805, 29920), (818, 29881), (842, 29812), (856, 29773), (869, 29728), (879, 29698), (908, 29635), (918, 29623), (921, 29617), (942, 29557), (985, 29422), (989, 29410), (993, 29401),

Gene: Starburst\_43 Start: 32435, Stop: 30042, Start Num: 36

Candidate Starts for Starburst\_43:

(Start: 36 @32435 has 16 MA's), (48, 32429), (Start: 60 @32381 has 1 MA's), (76, 32339), (86, 32315), (127, 32189), (136, 32165), (170, 32120), (206, 32069), (216, 32054), (Start: 230 @32033 has 13 MA's), (262, 31985), (279, 31943), (317, 31868), (322, 31856), (366, 31787), (382, 31760), (385, 31754), (391, 31739), (409, 31685), (410, 31682), (420, 31664), (426, 31643), (448, 31583), (495, 31460), (497, 31454), (524, 31385), (541, 31343), (634, 31256), (643, 31232), (655, 31226), (662, 31202), (666, 31193), (674, 31178), (682, 31166), (707, 31124), (711, 31121), (713, 31118), (758,



30971), (773, 30902), (774, 30896), (784, 30860), (796, 30803), (805, 30767), (817, 30731), (819, 30725), (822, 30719), (824, 30713), (842, 30656), (849, 30632), (859, 30587), (985, 30209), (986, 30206), (1008, 30161), (1013, 30152), (1037, 30092),

Gene: Stasia\_44 Start: 31442, Stop: 29613, Start Num: 234

Candidate Starts for Stasia\_44:

(164, 31535), (174, 31520), (176, 31517), (186, 31502), (Start: 234 @31442 has 938 MA's), (266, 31391), (279, 31361), (379, 31199), (389, 31181), (395, 31166), (415, 31109), (419, 31100), (458, 30980), (465, 30956), (541, 30863), (568, 30815), (582, 30794), (603, 30755), (663, 30623), (667, 30614), (675, 30602), (700, 30557), (756, 30392), (759, 30371), (798, 30248), (805, 30218), (818, 30179), (841, 30110), (842, 30107), (847, 30092), (856, 30068), (862, 30044), (864, 30038), (869, 30023), (942, 29837), (985, 29702), (989, 29690), (993, 29681),

Gene: SteamedHams\_43 Start: 32003, Stop: 29616, Start Num: 45

Candidate Starts for SteamedHams\_43:

(20, 32075), (23, 32060), (Start: 45 @32003 has 24 MA's), (49, 31994), (52, 31988), (76, 31907), (119, 31787), (136, 31736), (Start: 230 @31604 has 13 MA's), (250, 31577), (259, 31562), (279, 31514), (295, 31484), (317, 31439), (366, 31361), (391, 31313), (409, 31259), (410, 31256), (420, 31238), (426, 31217), (445, 31166), (448, 31157), (449, 31154), (473, 31079), (495, 31034), (519, 30974), (524, 30959), (570, 30875), (634, 30830), (643, 30806), (655, 30800), (662, 30776), (707, 30698), (711, 30695), (713, 30692), (758, 30545), (773, 30476), (796, 30377), (805, 30341), (817, 30305), (819, 30299), (822, 30293), (824, 30287), (834, 30263), (842, 30230), (849, 30206), (859, 30161), (878, 30101), (938, 29948), (947, 29909), (948, 29906), (986, 29780), (1008, 29735), (1013, 29726),

Gene: Steamy\_41 Start: 30942, Stop: 29098, Start Num: 234

Candidate Starts for Steamy\_41:

(111, 31173), (134, 31104), (Start: 234 @30942 has 938 MA's), (252, 30921), (Start: 261 @30906 has 10 MA's), (265, 30894), (336, 30768), (359, 30729), (387, 30684), (397, 30660), (405, 30633), (415, 30606), (424, 30585), (465, 30453), (541, 30360), (566, 30312), (571, 30303), (582, 30288), (619, 30222), (728, 29982), (746, 29919), (759, 29856), (778, 29805), (790, 29769), (798, 29733), (805, 29703), (818, 29664), (837, 29643), (841, 29622), (879, 29505), (902, 29454), (908, 29442), (936, 29388), (938, 29385), (942, 29364), (962, 29307), (968, 29286), (976, 29259), (985, 29229), (989, 29217), (1021, 29160),

Gene: StepMih\_48 Start: 31846, Stop: 30032, Start Num: 234

Candidate Starts for StepMih\_48:

(Start: 234 @31846 has 938 MA's), (262, 31807), (266, 31795), (353, 31642), (362, 31627), (395, 31570), (415, 31513), (419, 31504), (432, 31462), (448, 31411), (465, 31360), (541, 31267), (566, 31219), (571, 31210), (582, 31195), (603, 31156), (619, 31129), (634, 31099), (670, 31006), (701, 30946), (710, 30931), (759, 30775), (790, 30688), (805, 30622), (818, 30583), (842, 30511), (856, 30472), (862, 30448), (868, 30430), (879, 30397), (888, 30370), (921, 30316), (942, 30256), (968, 30178), (985, 30121), (989, 30109), (993, 30100),

Gene: StepHig9\_43 Start: 30581, Stop: 28737, Start Num: 234

Candidate Starts for StepHig9\_43:

(130, 30764), (135, 30746), (Start: 234 @30581 has 938 MA's), (266, 30530), (336, 30407), (353, 30377), (379, 30338), (395, 30305), (405, 30275), (411, 30254), (415, 30248), (419, 30239), (432, 30197), (448, 30146), (464, 30098), (465, 30095), (541, 29999), (552, 29972), (566, 29951), (571, 29942), (603, 29888), (619, 29861), (640, 29813), (655, 29783), (663, 29756), (679, 29729), (703, 29678), (711, 29663), (756, 29516), (759, 29495), (769, 29465), (775, 29447), (778, 29444), (782, 29429), (790, 29408), (793, 29399), (798, 29372), (802, 29360), (805, 29342), (841, 29261), (862, 29195), (874, 29159), (885, 29123), (903, 29090), (918, 29069), (921, 29063), (938, 29024), (942, 29003), (947, 28985), (985, 28868), (989, 28856),

Gene: StewieG\_44 Start: 32301, Stop: 30472, Start Num: 234

Candidate Starts for StewieG\_44:

(Start: 234 @32301 has 938 MA's), (359, 32088), (368, 32073), (395, 32025), (405, 31995), (411, 31974), (415, 31968), (419, 31959), (457, 31842), (465, 31815), (541, 31722), (546, 31707), (566, 31674), (596, 31623), (598, 31620), (634, 31554), (648, 31524), (657, 31494), (679, 31449), (700, 31410), (759, 31230), (775, 31182), (793, 31134), (802, 31095), (805, 31077), (818, 31038), (837, 31017), (841, 30996), (846, 30981), (885, 30858), (960, 30687), (967, 30663), (982, 30615), (985, 30603), (993, 30582), (997, 30576), (1025, 30528), (1030, 30513),

Gene: StingRay\_38 Start: 28635, Stop: 26770, Start Num: 283

Candidate Starts for StingRay\_38:

(Start: 234 @28722 has 938 MA's), (Start: 237 @28719 has 2 MA's), (Start: 283 @28635 has 147 MA's), (Start: 291 @28626 has 5 MA's), (342, 28521), (347, 28512), (367, 28482), (369, 28479), (424, 28359), (426, 28347), (428, 28341), (466, 28236), (473, 28209), (532, 28068), (535, 28062), (537, 28059), (541, 28047), (551, 28020), (553, 28017), (562, 28002), (566, 27996), (570, 27990), (613, 27957), (671, 27828), (701, 27768), (798, 27453), (801, 27444), (802, 27441), (805, 27423), (819, 27381), (822, 27375), (825, 27366), (832, 27351), (849, 27294), (900, 27135), (913, 27105), (917, 27096), (938, 27036), (943, 27012), (956, 26973), (967, 26940), (970, 26928), (986, 26868),

Gene: Stinger\_54 Start: 52910, Stop: 51081, Start Num: 183

Candidate Starts for Stinger\_54:

(Start: 183 @52910 has 1 MA's), (Start: 238 @52880 has 2 MA's), (252, 52853), (Start: 261 @52838 has 10 MA's), (269, 52817), (316, 52730), (323, 52712), (382, 52625), (394, 52598), (399, 52583), (425, 52517), (427, 52505), (434, 52487), (437, 52478), (441, 52475), (442, 52472), (450, 52445), (496, 52352), (504, 52334), (511, 52316), (516, 52304), (535, 52277), (595, 52166), (597, 52163), (618, 52133), (622, 52118), (634, 52097), (663, 52019), (739, 51869), (749, 51833), (755, 51803), (760, 51776), (797, 51668), (799, 51662), (802, 51653), (839, 51563), (841, 51554), (842, 51551), (847, 51536), (872, 51458), (877, 51446), (883, 51425), (885, 51416), (902, 51386), (935, 51329), (942, 51296), (947, 51278), (949, 51272), (960, 51245), (964, 51233), (968, 51218), (969, 51215), (972, 51203), (979, 51179), (994, 51137), (1002, 51131), (1015, 51107),

Gene: Stink\_45 Start: 31990, Stop: 30161, Start Num: 234

Candidate Starts for Stink\_45:

(Start: 234 @31990 has 938 MA's), (266, 31939), (279, 31909), (379, 31747), (389, 31729), (415, 31657), (419, 31648), (458, 31528), (465, 31504), (541, 31411), (568, 31363), (582, 31342), (603, 31303), (628, 31258), (630, 31252), (663, 31171), (667, 31162), (675, 31150), (700, 31105), (703, 31093), (759, 30919), (793, 30823), (798, 30796), (799, 30793), (805, 30766), (818, 30727), (841, 30658), (842, 30655), (847, 30640), (856, 30616), (862, 30592), (864, 30586), (942, 30385), (985, 30250), (989, 30238), (993, 30229),

Gene: StinkyVeggy\_58 Start: 54598, Stop: 52751, Start Num: 181

Candidate Starts for StinkyVeggy\_58:

(15, 55093), (17, 55087), (Start: 27 @55036 has 1 MA's), (33, 55018), (Start: 44 @54961 has 1 MA's), (93, 54817), (140, 54664), (181, 54598), (236, 54550), (252, 54523), (276, 54472), (301, 54451), (323, 54397), (358, 54352), (387, 54301), (425, 54202), (441, 54160), (452, 54124), (462, 54094), (511, 54001), (516, 53989), (534, 53965), (539, 53953), (545, 53935), (583, 53872), (597, 53848), (650, 53743), (703, 53620), (739, 53554), (743, 53536), (755, 53488), (760, 53461), (797, 53353), (799, 53347), (802, 53338), (806, 53317), (834, 53254), (842, 53221), (847, 53206), (866, 53146), (872, 53128), (877, 53116), (883, 53095), (885, 53086), (887, 53083), (894, 53071), (942, 52966), (947, 52948), (949, 52942), (964, 52903), (968, 52888), (969, 52885), (975, 52861), (979, 52849), (980, 52846), (1004, 52798), (1015, 52777),

Gene: StirfryIV\_38 Start: 28628, Stop: 26763, Start Num: 283

Candidate Starts for StirfryIV\_38:

(Start: 234 @28715 has 938 MA's), (Start: 237 @28712 has 2 MA's), (Start: 283 @28628 has 147 MA's), (Start: 291 @28619 has 5 MA's), (342, 28514), (347, 28505), (367, 28475), (369, 28472), (424, 28352), (426, 28340), (428, 28334), (466, 28229), (473, 28202), (532, 28061), (535, 28055), (537, 28052), (541, 28040), (551, 28013), (553, 28010), (562, 27995), (566, 27989), (570, 27983), (613, 27950), (671, 27821), (701, 27761), (798, 27446), (801, 27437), (802, 27434), (805, 27416), (819, 27374), (822, 27368), (825, 27359), (832, 27344), (849, 27287), (900, 27128), (913, 27098), (917, 27089), (938, 27029), (943, 27005), (956, 26966), (967, 26933), (970, 26921), (986, 26861),

Gene: Stoor\_43 Start: 30807, Stop: 32681, Start Num: 234

Candidate Starts for Stoor\_43:

(Start: 234 @30807 has 938 MA's), (273, 30876), (284, 30897), (419, 31143), (425, 31158), (432, 31185), (543, 31371), (556, 31398), (566, 31413), (603, 31479), (709, 31713), (746, 31833), (747, 31836), (759, 31896), (761, 31902), (778, 31947), (782, 31962), (786, 31977), (796, 32013), (805, 32049), (840, 32142), (869, 32235), (901, 32313), (902, 32316), (936, 32385), (942, 32409), (946, 32424), (962, 32466), (967, 32484), (985, 32544), (993, 32565),

Gene: Stormbreaker8\_38 Start: 29054, Stop: 27189, Start Num: 283

Candidate Starts for Stormbreaker8\_38:

(Start: 283 @29054 has 147 MA's), (Start: 291 @29045 has 5 MA's), (423, 28781), (426, 28766), (428, 28760), (473, 28628), (498, 28574), (503, 28562), (532, 28487), (537, 28478), (541, 28466), (551, 28439), (553, 28436), (562, 28421), (566, 28415), (574, 28403), (634, 28334), (741, 28085), (798, 27872), (801, 27863), (802, 27860), (805, 27842), (819, 27800), (849, 27713), (900, 27554), (913, 27524), (938, 27455), (943, 27431), (956, 27392), (967, 27359), (970, 27347),

Gene: Strathdee\_39 Start: 28935, Stop: 27070, Start Num: 283

Candidate Starts for Strathdee\_39:

(Start: 234 @29022 has 938 MA's), (Start: 237 @29019 has 2 MA's), (Start: 283 @28935 has 147 MA's), (Start: 291 @28926 has 5 MA's), (342, 28821), (347, 28812), (367, 28782), (369, 28779), (424, 28659), (426, 28647), (428, 28641), (466, 28536), (473, 28509), (532, 28368), (535, 28362), (537, 28359), (541, 28347), (551, 28320), (553, 28317), (562, 28302), (566, 28296), (570, 28290), (613, 28257), (671, 28128), (701, 28068), (733, 27993), (798, 27753), (801, 27744), (802, 27741), (805, 27723), (819, 27681), (822, 27675), (825, 27666), (832, 27651), (849, 27594), (900, 27435), (913, 27405), (917, 27396), (938, 27336), (943, 27312), (956, 27273), (967, 27240), (970, 27228), (986, 27168),

Gene: Stromboli\_43 Start: 30669, Stop: 32543, Start Num: 234

Candidate Starts for Stromboli\_43:

(Start: 234 @30669 has 938 MA's), (273, 30738), (284, 30759), (419, 31005), (425, 31020), (432, 31047), (556, 31260), (566, 31275), (603, 31341), (709, 31575), (746, 31695), (747, 31698), (759, 31758), (761, 31764), (778, 31809), (782, 31824), (786, 31839), (796, 31875), (805, 31911), (840, 32004), (869, 32097), (901, 32175), (902, 32178), (936, 32247), (942, 32271), (946, 32286), (962, 32328), (967, 32346), (985, 32406), (993, 32427),

Gene: StrongArm\_44 Start: 35747, Stop: 33960, Start Num: 234

Candidate Starts for StrongArm\_44:

(Start: 234 @35747 has 938 MA's), (359, 35534), (395, 35471), (405, 35441), (411, 35420), (415, 35414), (419, 35405), (457, 35288), (465, 35261), (541, 35168), (546, 35153), (566, 35120), (596, 35069), (598, 35066), (634, 35000), (648, 34970), (657, 34940), (679, 34895), (700, 34856), (759, 34676), (775, 34628), (790, 34589), (805, 34523), (839, 34451), (841, 34442), (868, 34358), (903, 34271), (954, 34145), (960, 34133), (978, 34073), (985, 34049), (987, 34043),

Gene: Strosahl\_47 Start: 29659, Stop: 27869, Start Num: 234

Candidate Starts for Strosahl\_47:

(Start: 234 @29659 has 938 MA's), (336, 29485), (395, 29380), (397, 29377), (405, 29350), (415, 29323), (432, 29272), (465, 29170), (541, 29077), (563, 29032), (566, 29029), (571, 29020), (655, 28858), (663, 28831), (675, 28810), (679, 28804), (730, 28705), (740, 28666), (754, 28615), (759, 28585), (778, 28534), (789, 28501), (798, 28462), (805, 28432), (837, 28372), (841, 28351), (856, 28309), (863, 28282), (903, 28180), (936, 28117), (938, 28114), (985, 27958), (989, 27946), (995, 27934),

Gene: Struggle\_61 Start: 54120, Stop: 52261, Start Num: 197

Candidate Starts for Struggle\_61:

(Start: 180 @54144 has 1 MA's), (Start: 197 @54120 has 298 MA's), (Start: 225 @54096 has 5 MA's), (Start: 238 @54090 has 2 MA's), (Start: 261 @54048 has 10 MA's), (269, 54027), (323, 53913), (328, 53907), (349, 53877), (385, 53817), (394, 53796), (410, 53742), (418, 53730), (425, 53712), (427, 53700), (462, 53595), (496, 53538), (511, 53502), (516, 53490), (534, 53466), (539, 53454), (545, 53436), (555, 53418), (566, 53400), (588, 53361), (595, 53352), (597, 53349), (599, 53346), (754, 52989), (760, 52956), (765, 52935), (799, 52842), (802, 52833), (822, 52770), (841, 52734), (842, 52731), (847, 52716), (872, 52638), (877, 52626), (883, 52605), (902, 52566), (942, 52476), (947, 52458), (949, 52452), (954, 52437), (964, 52413), (968, 52398), (969, 52395), (972, 52383), (979, 52359), (985, 52338), (1002, 52311), (1015, 52287), (1019, 52272),

Gene: SuMoo\_50 Start: 32117, Stop: 33982, Start Num: 232

Candidate Starts for SuMoo\_50:

(Start: 232 @32117 has 15 MA's), (436, 32504), (563, 32750), (603, 32819), (675, 32972), (705, 33035), (740, 33149), (759, 33230), (781, 33293), (796, 33347), (806, 33386), (869, 33569), (903, 33653), (964, 33806), (985, 33878), (1001, 33908),

Gene: Success\_19 Start: 11835, Stop: 10045, Start Num: 234

Candidate Starts for Success\_19:

(Start: 234 @11835 has 938 MA's), (353, 11634), (359, 11625), (405, 11532), (415, 11505), (424, 11484), (432, 11454), (437, 11439), (465, 11352), (535, 11274), (541, 11259), (603, 11142), (675, 10989), (705, 10944), (713, 10929), (759, 10773), (780, 10710), (782, 10704), (795, 10659), (796, 10653), (805, 10617), (841, 10536), (857, 10491), (960, 10227), (978, 10167), (985, 10143), (1021, 10074), (1024, 10071),

Gene: Sue2\_42 Start: 30222, Stop: 32132, Start Num: 234

Candidate Starts for Sue2\_42:

(138, 30078), (166, 30132), (Start: 234 @30222 has 938 MA's), (265, 30270), (377, 30453), (382, 30459), (405, 30519), (436, 30609), (543, 30861), (546, 30870), (598, 30960), (603, 30969), (619, 30996), (635, 31029), (675, 31122), (703, 31179), (730, 31260), (759, 31380), (769, 31410), (782, 31446), (790, 31467), (798, 31503), (805, 31533), (840, 31626), (905, 31806), (918, 31827), (942, 31893), (985, 32028),

Gene: Suffolk\_59 Start: 53538, Stop: 51679, Start Num: 197

Candidate Starts for Suffolk\_59:

(Start: 180 @53562 has 1 MA's), (Start: 197 @53538 has 298 MA's), (Start: 225 @53514 has 5 MA's), (Start: 238 @53508 has 2 MA's), (Start: 261 @53466 has 10 MA's), (269, 53445), (323, 53331), (328, 53325), (349, 53295), (385, 53235), (394, 53214), (410, 53160), (418, 53148), (425, 53130), (427, 53118), (462, 53013), (496, 52956), (511, 52920), (516, 52908), (534, 52884), (539, 52872), (545, 52854), (555, 52836), (566, 52818), (588, 52779), (595, 52770), (597, 52767), (599, 52764), (754, 52407), (760, 52374), (765, 52353), (799, 52260), (802, 52251), (822, 52188), (841, 52152), (842, 52149), (847, 52134), (872, 52056), (877, 52044), (883, 52023), (902, 51984), (942, 51894), (947, 51876), (949, 51870), (954, 51855), (964, 51831), (968, 51816), (969, 51813), (972, 51801), (979,

51777), (1002, 51729), (1015, 51705),

Gene: Suigeneris\_59 Start: 54668, Stop: 52842, Start Num: 189

Candidate Starts for Suigeneris\_59:

(Start: 189 @54668 has 26 MA's), (252, 54614), (287, 54554), (358, 54443), (385, 54395), (425, 54293), (434, 54263), (441, 54251), (452, 54215), (462, 54185), (511, 54092), (516, 54080), (534, 54056), (539, 54044), (545, 54026), (583, 53963), (597, 53939), (599, 53936), (650, 53834), (739, 53645), (743, 53627), (749, 53609), (755, 53579), (760, 53552), (797, 53444), (799, 53438), (802, 53429), (806, 53408), (834, 53345), (842, 53312), (847, 53297), (866, 53237), (872, 53219), (877, 53207), (883, 53186), (885, 53177), (887, 53174), (942, 53057), (949, 53033), (964, 52994), (968, 52979), (969, 52976), (975, 52952), (979, 52940), (980, 52937), (985, 52919), (1004, 52889), (1015, 52868), (1023, 52847),

Gene: SummitAcademy\_44 Start: 33992, Stop: 31611, Start Num: 47

Candidate Starts for SummitAcademy\_44:

(Start: 47 @33992 has 13 MA's), (64, 33932), (82, 33890), (96, 33851), (136, 33731), (141, 33710), (170, 33686), (Start: 223 @33608 has 3 MA's), (228, 33602), (Start: 230 @33599 has 13 MA's), (252, 33569), (273, 33521), (290, 33494), (Start: 291 @33491 has 5 MA's), (317, 33434), (342, 33395), (354, 33374), (380, 33332), (391, 33308), (395, 33299), (398, 33293), (399, 33287), (409, 33254), (420, 33233), (426, 33212), (495, 33029), (524, 32954), (541, 32912), (634, 32825), (655, 32801), (662, 32777), (666, 32768), (677, 32747), (711, 32696), (713, 32693), (718, 32678), (728, 32657), (759, 32531), (772, 32483), (773, 32474), (784, 32432), (805, 32339), (817, 32303), (819, 32297), (822, 32291), (824, 32285), (842, 32228), (849, 32204), (878, 32099), (879, 32096), (919, 32003), (926, 31985), (938, 31946), (948, 31904), (958, 31880), (967, 31850), (979, 31802), (986, 31778), (1008, 31733), (1035, 31667), (1046, 31646), (1047, 31640), (1050, 31634),

Gene: Sumter\_42 Start: 34474, Stop: 32645, Start Num: 234

Candidate Starts for Sumter\_42:

(Start: 234 @34474 has 938 MA's), (359, 34261), (368, 34246), (405, 34168), (411, 34147), (415, 34141), (419, 34132), (457, 34015), (465, 33988), (541, 33895), (546, 33880), (566, 33847), (596, 33796), (598, 33793), (628, 33739), (634, 33727), (648, 33697), (657, 33667), (679, 33622), (700, 33583), (759, 33403), (775, 33355), (793, 33307), (802, 33268), (805, 33250), (818, 33211), (837, 33190), (841, 33169), (846, 33154), (885, 33031), (960, 32860), (967, 32836), (982, 32788), (985, 32776), (993, 32755), (997, 32749), (1025, 32701), (1030, 32686),

Gene: Sunhee\_47 Start: 31200, Stop: 29407, Start Num: 234

Candidate Starts for Sunhee\_47:

(Start: 234 @31200 has 938 MA's), (246, 31191), (266, 31149), (336, 31026), (359, 30987), (364, 30978), (397, 30918), (415, 30864), (458, 30735), (465, 30711), (541, 30618), (563, 30573), (634, 30450), (726, 30252), (759, 30123), (798, 30000), (805, 29970), (837, 29910), (841, 29889), (845, 29877), (879, 29772), (885, 29751), (936, 29655), (962, 29574), (968, 29553), (970, 29544), (985, 29496), (989, 29484), (993, 29475),

Gene: SunnyD\_42 Start: 28854, Stop: 30725, Start Num: 234

Candidate Starts for SunnyD\_42:

(Start: 234 @28854 has 938 MA's), (273, 28923), (284, 28944), (419, 29187), (424, 29199), (426, 29211), (428, 29217), (453, 29283), (579, 29478), (603, 29526), (723, 29805), (759, 29943), (804, 30090), (805, 30096), (840, 30189), (859, 30249), (901, 30360), (903, 30366), (949, 30480), (961, 30510), (962, 30513), (985, 30591), (988, 30600),

Gene: Sunshine924\_45 Start: 34152, Stop: 32323, Start Num: 234

Candidate Starts for Sunshine924\_45:

(Start: 234 @34152 has 938 MA's), (359, 33939), (395, 33876), (405, 33846), (411, 33825), (415, 33819), (419, 33810), (457, 33693), (465, 33666), (541, 33573), (546, 33558), (596, 33474), (598, 33471), (634, 33405), (648, 33375), (657, 33345), (679, 33300), (700, 33261), (759, 33081), (775, 33033), (793, 32985), (802, 32946), (805, 32928), (818, 32889), (837, 32868), (841, 32847), (846, 32832), (885, 32709), (960, 32538), (967, 32514), (982, 32466), (985, 32454), (993, 32433), (997, 32427), (1025, 32379), (1030, 32364),

Gene: SuperAwesome\_45 Start: 29638, Stop: 27797, Start Num: 234

Candidate Starts for SuperAwesome\_45:

(Start: 234 @29638 has 938 MA's), (353, 29434), (395, 29359), (397, 29356), (405, 29329), (409, 29314), (415, 29302), (432, 29251), (461, 29161), (465, 29149), (541, 29056), (559, 29017), (571, 28999), (582, 28984), (619, 28918), (635, 28885), (636, 28882), (681, 28780), (710, 28720), (740, 28636), (759, 28555), (789, 28471), (790, 28468), (793, 28459), (798, 28432), (805, 28402), (837, 28342), (847, 28303), (936, 28087), (938, 28084), (942, 28063), (985, 27928), (989, 27916), (993, 27907), (995, 27904), (1042, 27811),

Gene: SuperCallie99\_45 Start: 29637, Stop: 27796, Start Num: 234

Candidate Starts for SuperCallie99\_45:

(Start: 234 @29637 has 938 MA's), (353, 29433), (395, 29358), (397, 29355), (405, 29328), (409, 29313), (415, 29301), (432, 29250), (461, 29160), (465, 29148), (541, 29055), (559, 29016), (571, 28998), (582, 28983), (619, 28917), (635, 28884), (636, 28881), (681, 28779), (710, 28719), (740, 28635), (759, 28554), (789, 28470), (790, 28467), (793, 28458), (798, 28431), (805, 28401), (837, 28341), (847, 28302), (936, 28086), (938, 28083), (942, 28062), (985, 27927), (989, 27915), (993, 27906), (995, 27903), (1042, 27810),

Gene: Superchunk\_44 Start: 30012, Stop: 28183, Start Num: 234

Candidate Starts for Superchunk\_44:

(Start: 234 @30012 has 938 MA's), (353, 29808), (359, 29799), (379, 29769), (395, 29736), (397, 29733), (405, 29706), (415, 29679), (424, 29658), (465, 29526), (541, 29433), (566, 29385), (619, 29295), (640, 29247), (675, 29166), (759, 28941), (790, 28854), (798, 28818), (805, 28788), (818, 28749), (837, 28728), (841, 28707), (847, 28689), (879, 28590), (888, 28563), (908, 28527), (921, 28509), (936, 28473), (985, 28314), (989, 28302), (993, 28293), (1021, 28245), (1036, 28215),

Gene: Superfresh\_39 Start: 28922, Stop: 27057, Start Num: 283

Candidate Starts for Superfresh\_39:

(Start: 234 @29009 has 938 MA's), (Start: 283 @28922 has 147 MA's), (Start: 291 @28913 has 5 MA's), (342, 28808), (347, 28799), (367, 28769), (369, 28766), (424, 28646), (426, 28634), (428, 28628), (466, 28523), (473, 28496), (532, 28355), (535, 28349), (537, 28346), (541, 28334), (551, 28307), (553, 28304), (562, 28289), (566, 28283), (570, 28277), (613, 28244), (671, 28115), (701, 28055), (798, 27740), (801, 27731), (802, 27728), (805, 27710), (819, 27668), (822, 27662), (832, 27638), (849, 27581), (900, 27422), (913, 27392), (917, 27383), (938, 27323), (943, 27299), (956, 27260), (967, 27227), (970, 27215), (986, 27155),

Gene: Surely\_60 Start: 54325, Stop: 52466, Start Num: 197

Candidate Starts for Surely\_60:

(Start: 180 @54349 has 1 MA's), (Start: 197 @54325 has 298 MA's), (Start: 225 @54301 has 5 MA's), (Start: 238 @54295 has 2 MA's), (Start: 261 @54253 has 10 MA's), (269, 54232), (323, 54118), (328, 54112), (349, 54082), (385, 54022), (394, 54001), (410, 53947), (418, 53935), (425, 53917), (427, 53905), (462, 53800), (496, 53743), (511, 53707), (516, 53695), (535, 53668), (545, 53641), (555, 53623), (566, 53605), (588, 53566), (595, 53557), (597, 53554), (724, 53296), (754, 53194), (760, 53161), (765, 53140), (799, 53047), (802, 53038), (822, 52975), (841, 52939), (842, 52936), (847, 52921), (872, 52843), (877, 52831), (883, 52810), (902, 52771), (942, 52681), (947, 52663), (949, 52657), (954, 52642), (964, 52618), (968, 52603), (969, 52600), (972, 52588), (979, 52564), (985,

52543), (1002, 52516), (1015, 52492),

Gene: Survivors\_40 Start: 31946, Stop: 29589, Start Num: 45

Candidate Starts for Survivors\_40:

(42, 31955), (Start: 45 @31946 has 24 MA's), (52, 31931), (58, 31895), (110, 31760), (136, 31697), (177, 31643), (249, 31541), (252, 31538), (290, 31463), (317, 31403), (352, 31352), (376, 31310), (391, 31280), (409, 31226), (420, 31205), (426, 31184), (449, 31121), (499, 30986), (506, 30971), (517, 30944), (524, 30926), (570, 30842), (626, 30806), (682, 30713), (707, 30671), (711, 30668), (713, 30665), (724, 30641), (729, 30629), (732, 30617), (770, 30476), (773, 30449), (805, 30314), (817, 30278), (819, 30272), (822, 30266), (824, 30260), (834, 30236), (842, 30203), (849, 30179), (859, 30134), (861, 30128), (880, 30068), (926, 29960), (944, 29894), (945, 29891), (948, 29879), (958, 29855), (979, 29777), (986, 29753), (1018, 29684),

Gene: SwainyDoc\_59 Start: 54074, Stop: 52254, Start Num: 232

Candidate Starts for SwainyDoc\_59:

(Start: 232 @54074 has 15 MA's), (252, 54041), (359, 53861), (406, 53756), (424, 53708), (426, 53696), (437, 53666), (442, 53660), (462, 53597), (464, 53591), (496, 53540), (511, 53504), (539, 53456), (597, 53351), (647, 53255), (664, 53204), (737, 53060), (749, 53021), (755, 52991), (760, 52964), (763, 52952), (797, 52856), (799, 52850), (802, 52841), (804, 52829), (834, 52757), (841, 52727), (847, 52709), (851, 52700), (872, 52631), (877, 52619), (883, 52598), (921, 52529), (931, 52514), (938, 52490), (942, 52469), (947, 52451), (949, 52445), (962, 52412), (964, 52406), (969, 52388), (972, 52376), (975, 52364), (979, 52352), (994, 52310), (1015, 52280),

Gene: Swann\_36 Start: 28113, Stop: 26329, Start Num: 234

Candidate Starts for Swann\_36:

(Start: 234 @28113 has 938 MA's), (374, 27879), (390, 27849), (394, 27840), (395, 27837), (409, 27792), (415, 27780), (432, 27729), (465, 27627), (492, 27606), (541, 27534), (563, 27489), (566, 27486), (589, 27444), (594, 27438), (603, 27423), (619, 27396), (663, 27291), (667, 27282), (679, 27264), (681, 27261), (700, 27225), (729, 27168), (759, 27045), (775, 26997), (805, 26892), (806, 26889), (837, 26832), (841, 26811), (858, 26763), (881, 26688), (918, 26619), (936, 26577), (942, 26553), (968, 26475), (985, 26418), (989, 26406), (993, 26397), (1010, 26367), (1021, 26349),

Gene: SweatNTears\_44 Start: 32451, Stop: 30061, Start Num: 36

Candidate Starts for SweatNTears\_44:

(Start: 36 @32451 has 16 MA's), (64, 32388), (71, 32370), (76, 32355), (96, 32301), (100, 32289), (105, 32268), (119, 32235), (127, 32208), (136, 32184), (159, 32157), (Start: 230 @32052 has 13 MA's), (262, 32004), (317, 31887), (366, 31806), (382, 31779), (391, 31758), (409, 31704), (410, 31701), (420, 31683), (426, 31662), (448, 31602), (524, 31404), (541, 31362), (634, 31275), (643, 31251), (655, 31245), (677, 31191), (682, 31185), (707, 31143), (711, 31140), (713, 31137), (758, 30990), (770, 30948), (773, 30921), (784, 30879), (805, 30786), (817, 30750), (819, 30744), (822, 30738), (824, 30732), (834, 30708), (842, 30675), (849, 30651), (859, 30606), (878, 30546), (938, 30393), (986, 30225), (1008, 30180), (1013, 30171), (1016, 30162),

Gene: SweetiePie\_44 Start: 31345, Stop: 29558, Start Num: 234

Candidate Starts for SweetiePie\_44:

(Start: 234 @31345 has 938 MA's), (353, 31141), (355, 31138), (359, 31132), (368, 31117), (379, 31102), (395, 31069), (397, 31066), (405, 31039), (415, 31012), (424, 30991), (432, 30961), (465, 30859), (541, 30766), (566, 30718), (571, 30709), (582, 30694), (619, 30628), (655, 30547), (675, 30499), (679, 30493), (710, 30430), (740, 30355), (759, 30274), (778, 30223), (789, 30190), (790, 30187), (805, 30121), (818, 30082), (837, 30061), (859, 29986), (864, 29968), (879, 29923), (888, 29896), (908, 29860), (918, 29848), (921, 29842), (936, 29806), (942, 29782), (968, 29704), (985, 29647), (989, 29635), (993, 29626),

Gene: Swervy\_43 Start: 29550, Stop: 31424, Start Num: 234

Candidate Starts for Swervy\_43:

(Start: 231 @29547 has 7 MA's), (Start: 234 @29550 has 938 MA's), (273, 29619), (284, 29640), (353, 29757), (395, 29820), (419, 29886), (432, 29928), (603, 30222), (663, 30357), (709, 30456), (747, 30579), (759, 30639), (761, 30645), (778, 30690), (786, 30720), (796, 30756), (805, 30792), (840, 30885), (869, 30978), (901, 31056), (936, 31128), (946, 31167), (962, 31209), (967, 31227), (985, 31287), (993, 31308),

Gene: Swiphy\_64 Start: 54569, Stop: 52710, Start Num: 197

Candidate Starts for Swiphy\_64:

(Start: 180 @54593 has 1 MA's), (Start: 197 @54569 has 298 MA's), (Start: 225 @54545 has 5 MA's), (Start: 238 @54539 has 2 MA's), (Start: 261 @54497 has 10 MA's), (269, 54476), (323, 54362), (328, 54356), (349, 54326), (385, 54266), (394, 54245), (410, 54191), (418, 54179), (425, 54161), (427, 54149), (462, 54044), (496, 53987), (511, 53951), (516, 53939), (534, 53915), (539, 53903), (545, 53885), (555, 53867), (566, 53849), (588, 53810), (595, 53801), (597, 53798), (599, 53795), (754, 53438), (760, 53405), (765, 53384), (799, 53291), (802, 53282), (822, 53219), (841, 53183), (842, 53180), (847, 53165), (872, 53087), (877, 53075), (883, 53054), (902, 53015), (942, 52925), (947, 52907), (949, 52901), (954, 52886), (964, 52862), (968, 52847), (969, 52844), (972, 52832), (979, 52808), (1002, 52760), (1015, 52736),

Gene: SwirlSquare\_48 Start: 30249, Stop: 28459, Start Num: 234

Candidate Starts for SwirlSquare\_48:

(Start: 234 @30249 has 938 MA's), (353, 30045), (364, 30027), (387, 29991), (395, 29970), (397, 29967), (405, 29940), (408, 29928), (415, 29913), (424, 29892), (465, 29760), (541, 29667), (566, 29619), (619, 29529), (675, 29400), (759, 29175), (790, 29088), (798, 29052), (805, 29022), (818, 28983), (837, 28962), (841, 28941), (847, 28923), (879, 28824), (888, 28797), (908, 28761), (921, 28743), (936, 28707), (942, 28683), (985, 28548), (989, 28536), (993, 28527),

Gene: Swirley\_41 Start: 30927, Stop: 29062, Start Num: 234

Candidate Starts for Swirley\_41:

(Start: 234 @30927 has 938 MA's), (266, 30876), (301, 30816), (336, 30753), (353, 30723), (355, 30720), (390, 30663), (395, 30651), (405, 30621), (415, 30594), (465, 30441), (541, 30345), (566, 30297), (618, 30213), (619, 30207), (652, 30135), (663, 30102), (670, 30087), (679, 30075), (724, 29976), (759, 29841), (769, 29811), (775, 29793), (782, 29775), (790, 29754), (793, 29745), (805, 29688), (818, 29649), (841, 29607), (847, 29589), (862, 29541), (879, 29490), (903, 29436), (908, 29427), (921, 29409), (942, 29349), (947, 29331), (978, 29238), (985, 29214), (989, 29202), (1042, 29097),

Gene: Swish\_62 Start: 54299, Stop: 52440, Start Num: 197

Candidate Starts for Swish\_62:

(Start: 180 @54323 has 1 MA's), (Start: 197 @54299 has 298 MA's), (Start: 225 @54275 has 5 MA's), (Start: 238 @54269 has 2 MA's), (Start: 261 @54227 has 10 MA's), (269, 54206), (323, 54092), (328, 54086), (349, 54056), (385, 53996), (394, 53975), (410, 53921), (418, 53909), (425, 53891), (427, 53879), (462, 53774), (496, 53717), (511, 53681), (516, 53669), (534, 53645), (539, 53633), (545, 53615), (555, 53597), (566, 53579), (588, 53540), (595, 53531), (597, 53528), (599, 53525), (754, 53168), (760, 53135), (765, 53114), (799, 53021), (802, 53012), (822, 52949), (841, 52913), (842, 52910), (847, 52895), (872, 52817), (877, 52805), (883, 52784), (902, 52745), (942, 52655), (947, 52637), (949, 52631), (954, 52616), (964, 52592), (968, 52577), (969, 52574), (972, 52562), (979, 52538), (1002, 52490), (1015, 52466),

Gene: SwissCheese\_46 Start: 34979, Stop: 33153, Start Num: 234

Candidate Starts for SwissCheese\_46:



(Start: 234 @34979 has 938 MA's), (359, 34766), (368, 34751), (405, 34673), (411, 34652), (415, 34646), (419, 34637), (457, 34520), (465, 34493), (541, 34400), (546, 34385), (558, 34364), (566, 34352), (596, 34301), (598, 34298), (634, 34232), (648, 34202), (657, 34172), (679, 34127), (700, 34088), (759, 33908), (775, 33860), (790, 33821), (805, 33755), (818, 33716), (837, 33695), (841, 33674), (847, 33656), (868, 33590), (936, 33440), (938, 33437), (946, 33401), (954, 33377), (959, 33368), (963, 33356), (985, 33281), (993, 33260),

Gene: Switzer\_45 Start: 34442, Stop: 32616, Start Num: 234

Candidate Starts for Switzer\_45:

(Start: 234 @34442 has 938 MA's), (359, 34229), (395, 34166), (405, 34136), (411, 34115), (415, 34109), (419, 34100), (457, 33983), (465, 33956), (541, 33863), (546, 33848), (596, 33764), (598, 33761), (634, 33695), (648, 33665), (657, 33635), (679, 33590), (700, 33551), (759, 33371), (775, 33323), (790, 33284), (805, 33218), (818, 33179), (837, 33158), (841, 33137), (847, 33119), (868, 33053), (936, 32903), (938, 32900), (946, 32864), (959, 32831), (963, 32819), (970, 32792), (985, 32744), (993, 32723),

Gene: Switzerland\_47 Start: 30042, Stop: 28252, Start Num: 234

Candidate Starts for Switzerland\_47:

(Start: 234 @30042 has 938 MA's), (336, 29868), (395, 29763), (397, 29760), (405, 29733), (415, 29706), (432, 29655), (465, 29553), (541, 29460), (563, 29415), (566, 29412), (571, 29403), (655, 29241), (663, 29214), (675, 29193), (679, 29187), (730, 29088), (740, 29049), (754, 28998), (759, 28968), (778, 28917), (789, 28884), (796, 28851), (798, 28845), (805, 28815), (837, 28755), (841, 28734), (856, 28692), (863, 28665), (868, 28650), (903, 28563), (936, 28500), (938, 28497), (985, 28341), (989, 28329), (995, 28317),

Gene: Swole\_45 Start: 34149, Stop: 32320, Start Num: 234

Candidate Starts for Swole\_45:

(Start: 234 @34149 has 938 MA's), (359, 33936), (368, 33921), (395, 33873), (405, 33843), (411, 33822), (415, 33816), (419, 33807), (457, 33690), (465, 33663), (541, 33570), (546, 33555), (558, 33534), (596, 33471), (598, 33468), (634, 33402), (648, 33372), (657, 33342), (679, 33297), (700, 33258), (759, 33078), (775, 33030), (793, 32982), (802, 32943), (805, 32925), (818, 32886), (837, 32865), (841, 32844), (846, 32829), (885, 32706), (960, 32535), (967, 32511), (982, 32463), (985, 32451), (993, 32430), (997, 32424), (1025, 32376), (1030, 32361),

Gene: SydNat\_40 Start: 31117, Stop: 29252, Start Num: 234

Candidate Starts for SydNat\_40:

(Start: 234 @31117 has 938 MA's), (266, 31066), (301, 31006), (336, 30943), (353, 30913), (355, 30910), (390, 30853), (405, 30811), (415, 30784), (465, 30631), (541, 30535), (556, 30502), (566, 30487), (618, 30403), (619, 30397), (635, 30364), (670, 30277), (679, 30265), (700, 30226), (724, 30166), (759, 30031), (769, 30001), (775, 29983), (789, 29947), (790, 29944), (805, 29878), (818, 29839), (841, 29797), (847, 29779), (862, 29731), (864, 29725), (879, 29680), (903, 29626), (908, 29617), (921, 29599), (947, 29521), (967, 29464), (978, 29428), (985, 29404), (989, 29392), (1051, 29260),

Gene: Symere\_39 Start: 28615, Stop: 26750, Start Num: 283

Candidate Starts for Symere\_39:

(Start: 234 @28702 has 938 MA's), (Start: 237 @28699 has 2 MA's), (Start: 283 @28615 has 147 MA's), (Start: 291 @28606 has 5 MA's), (342, 28501), (347, 28492), (367, 28462), (369, 28459), (424, 28339), (426, 28327), (428, 28321), (466, 28216), (473, 28189), (532, 28048), (535, 28042), (537, 28039), (541, 28027), (551, 28000), (553, 27997), (562, 27982), (566, 27976), (570, 27970), (613, 27937), (671, 27808), (701, 27748), (798, 27433), (801, 27424), (802, 27421), (805, 27403), (819, 27361), (822, 27355), (825, 27346), (832, 27331), (849, 27274), (900, 27115), (913, 27085), (917, 27076), (938, 27016), (943, 26992), (956, 26953), (967, 26920), (970, 26908), (986, 26848),

Gene: SynergyX\_58 Start: 53681, Stop: 51864, Start Num: 235

Candidate Starts for SynergyX\_58:

(129, 53864), (Start: 235 @53681 has 43 MA's), (252, 53651), (359, 53471), (424, 53318), (426, 53306), (437, 53276), (442, 53270), (462, 53207), (464, 53201), (496, 53150), (511, 53114), (539, 53066), (597, 52961), (647, 52865), (664, 52814), (737, 52670), (749, 52631), (755, 52601), (760, 52574), (763, 52562), (797, 52466), (799, 52460), (802, 52451), (804, 52439), (834, 52367), (841, 52337), (847, 52319), (851, 52310), (872, 52241), (877, 52229), (883, 52208), (921, 52139), (931, 52124), (938, 52100), (942, 52079), (947, 52061), (949, 52055), (962, 52022), (964, 52016), (969, 51998), (972, 51986), (975, 51974), (979, 51962), (994, 51920), (1015, 51890),

Gene: TA17A\_57 Start: 52484, Stop: 50655, Start Num: 197

Candidate Starts for TA17A\_57:

(Start: 197 @52484 has 298 MA's), (Start: 238 @52457 has 2 MA's), (253, 52427), (Start: 261 @52415 has 10 MA's), (272, 52388), (273, 52385), (277, 52376), (301, 52358), (355, 52262), (385, 52211), (395, 52187), (402, 52163), (450, 52025), (459, 52001), (462, 51989), (496, 51932), (511, 51896), (534, 51860), (580, 51776), (595, 51746), (597, 51743), (618, 51713), (678, 51569), (710, 51503), (737, 51452), (743, 51431), (749, 51413), (760, 51356), (783, 51299), (793, 51272), (799, 51242), (802, 51233), (822, 51167), (839, 51140), (841, 51131), (847, 51113), (856, 51089), (872, 51035), (877, 51023), (883, 51002), (921, 50933), (942, 50873), (947, 50855), (960, 50822), (964, 50810), (968, 50795), (969, 50792), (972, 50780), (979, 50756), (980, 50753), (1002, 50705), (1004, 50702), (1015, 50681), (1023, 50660),

Gene: TG1\_31 Start: 25848, Stop: 27695, Start Num: 234

Candidate Starts for TG1\_31:

(176, 25767), (Start: 190 @25788 has 1 MA's), (Start: 202 @25803 has 13 MA's), (213, 25821), (Start: 234 @25848 has 938 MA's), (263, 25890), (279, 25929), (298, 25953), (353, 26049), (385, 26097), (404, 26148), (411, 26172), (467, 26337), (543, 26427), (544, 26430), (576, 26484), (582, 26499), (596, 26526), (603, 26538), (615, 26553), (632, 26592), (670, 26685), (675, 26691), (703, 26748), (704, 26751), (753, 26916), (759, 26949), (775, 26997), (781, 27012), (796, 27066), (798, 27072), (803, 27093), (805, 27102), (809, 27117), (817, 27147), (847, 27228), (853, 27243), (902, 27378), (905, 27384), (908, 27390), (931, 27426), (946, 27486), (949, 27495), (954, 27510), (960, 27522), (962, 27528), (970, 27558), (985, 27606), (987, 27612), (993, 27627), (997, 27633),

Gene: TMaxx\_43 Start: 29595, Stop: 27817, Start Num: 231

Candidate Starts for TMaxx\_43:

(144, 29724), (Start: 231 @29595 has 7 MA's), (274, 29517), (301, 29475), (321, 29427), (395, 29322), (426, 29235), (432, 29217), (459, 29154), (460, 29148), (468, 29124), (541, 29055), (586, 28974), (603, 28947), (615, 28932), (642, 28869), (664, 28812), (683, 28782), (700, 28746), (703, 28734), (716, 28710), (752, 28617), (756, 28596), (759, 28575), (761, 28569), (794, 28473), (799, 28449), (805, 28422), (818, 28383), (856, 28272), (861, 28254), (865, 28239), (879, 28197), (881, 28191), (888, 28170), (912, 28116), (920, 28101), (943, 28035), (947, 28020), (952, 28005), (960, 27984), (962, 27978), (968, 27957), (969, 27954), (973, 27936), (979, 27921), (1027, 27828),

Gene: TNguyen7\_46 Start: 31522, Stop: 29684, Start Num: 234

Candidate Starts for TNguyen7\_46:

(Start: 234 @31522 has 938 MA's), (266, 31471), (303, 31405), (353, 31318), (390, 31258), (395, 31246), (415, 31189), (419, 31180), (458, 31060), (465, 31036), (541, 30940), (568, 30892), (603, 30832), (636, 30769), (663, 30700), (675, 30679), (711, 30607), (729, 30565), (740, 30523), (759, 30442), (775, 30394), (798, 30319), (805, 30289), (816, 30259), (842, 30178), (856, 30139), (862, 30115), (868, 30097), (921, 29968), (942, 29908), (985, 29773), (989, 29761), (993, 29752),

Gene: TP1604\_48 Start: 39372, Stop: 37372, Start Num: 261

Candidate Starts for TP1604\_48:

(Start: 261 @39372 has 10 MA's), (297, 39303), (361, 39171), (365, 39165), (369, 39159), (400, 39111), (403, 39099), (405, 39093), (413, 39072), (417, 39057), (441, 38988), (485, 38847), (525, 38751), (568, 38664), (584, 38640), (592, 38628), (601, 38616), (636, 38547), (703, 38400), (744, 38295), (749, 38280), (761, 38223), (767, 38202), (781, 38160), (792, 38130), (798, 38097), (810, 38043), (817, 38013), (830, 37944), (837, 37923), (856, 37860), (861, 37842), (864, 37830), (872, 37806), (942, 37605), (943, 37602), (963, 37548), (968, 37530), (978, 37497), (985, 37473), (1009, 37425),

Gene: TPA2\_63 Start: 52427, Stop: 50550, Start Num: 226

Candidate Starts for TPA2\_63:

(67, 52787), (129, 52604), (226, 52427), (Start: 238 @52418 has 2 MA's), (259, 52379), (277, 52337), (285, 52325), (288, 52319), (349, 52232), (355, 52223), (379, 52181), (393, 52154), (400, 52133), (431, 52043), (441, 52022), (447, 52004), (449, 51998), (456, 51980), (496, 51902), (511, 51866), (516, 51854), (518, 51851), (534, 51830), (584, 51734), (605, 51701), (634, 51647), (704, 51482), (734, 51431), (749, 51383), (760, 51326), (790, 51248), (793, 51239), (797, 51215), (799, 51209), (822, 51137), (841, 51101), (847, 51083), (866, 51023), (872, 51005), (877, 50993), (883, 50972), (885, 50963), (916, 50912), (960, 50792), (964, 50780), (975, 50732), (978, 50723), (979, 50720), (982, 50711), (985, 50699), (1011, 50651), (1027, 50612), (1034, 50594),

Gene: TWAMP\_36 Start: 28113, Stop: 26329, Start Num: 234

Candidate Starts for TWAMP\_36:

(Start: 234 @28113 has 938 MA's), (374, 27879), (390, 27849), (394, 27840), (395, 27837), (409, 27792), (415, 27780), (432, 27729), (465, 27627), (492, 27606), (541, 27534), (563, 27489), (566, 27486), (589, 27444), (594, 27438), (603, 27423), (619, 27396), (663, 27291), (667, 27282), (679, 27264), (681, 27261), (700, 27225), (759, 27045), (775, 26997), (805, 26892), (806, 26889), (837, 26832), (841, 26811), (858, 26763), (881, 26688), (918, 26619), (936, 26577), (942, 26553), (968, 26475), (985, 26418), (989, 26406), (993, 26397), (1010, 26367), (1021, 26349),

Gene: Takoda\_36 Start: 28086, Stop: 26302, Start Num: 234

Candidate Starts for Takoda\_36:

(Start: 234 @28086 has 938 MA's), (334, 27915), (379, 27843), (394, 27813), (395, 27810), (409, 27765), (415, 27753), (419, 27744), (432, 27702), (465, 27600), (492, 27579), (516, 27549), (541, 27507), (566, 27459), (603, 27396), (619, 27369), (663, 27264), (667, 27255), (679, 27237), (700, 27198), (759, 27018), (775, 26970), (805, 26865), (806, 26862), (837, 26805), (841, 26784), (858, 26736), (881, 26661), (918, 26592), (936, 26550), (942, 26526), (968, 26448), (985, 26391), (989, 26379), (1010, 26340), (1021, 26322),

Gene: Talia1610\_99 Start: 77815, Stop: 79611, Start Num: 248

Candidate Starts for Talia1610\_99:

(Start: 248 @77815 has 2 MA's), (301, 77911), (418, 78127), (426, 78154), (428, 78160), (457, 78229), (468, 78265), (586, 78412), (588, 78418), (603, 78439), (615, 78454), (700, 78643), (720, 78688), (731, 78721), (735, 78739), (746, 78772), (756, 78811), (759, 78832), (761, 78838), (796, 78952), (817, 79036), (821, 79042), (825, 79054), (840, 79102), (843, 79114), (856, 79150), (865, 79183), (868, 79192), (883, 79237), (890, 79255), (936, 79360), (943, 79387), (947, 79402), (960, 79435), (967, 79459), (973, 79483), (985, 79519), (999, 79546),

Gene: TallGrassMM\_60 Start: 53939, Stop: 52080, Start Num: 197

Candidate Starts for TallGrassMM\_60:

(Start: 180 @53963 has 1 MA's), (Start: 197 @53939 has 298 MA's), (Start: 225 @53915 has 5 MA's), (Start: 238 @53909 has 2 MA's), (Start: 261 @53867 has 10 MA's), (269, 53846), (323, 53732), (328, 53726), (349, 53696), (385, 53636), (394, 53615), (410, 53561), (418, 53549), (425, 53531), (427, 53519), (462, 53414), (496, 53357), (511, 53321), (516, 53309), (535, 53282), (555, 53237), (588,

53180), (595, 53171), (597, 53168), (754, 52808), (760, 52775), (765, 52754), (799, 52661), (802, 52652), (822, 52589), (841, 52553), (842, 52550), (847, 52535), (872, 52457), (877, 52445), (883, 52424), (902, 52385), (942, 52295), (947, 52277), (949, 52271), (954, 52256), (964, 52232), (968, 52217), (969, 52214), (972, 52202), (979, 52178), (1002, 52130), (1015, 52106),

Gene: Tallboi\_40 Start: 30542, Stop: 32407, Start Num: 234

Candidate Starts for Tallboi\_40:

(Start: 234 @30542 has 938 MA's), (265, 30590), (336, 30716), (405, 30839), (436, 30929), (543, 31136), (546, 31145), (603, 31244), (615, 31259), (619, 31271), (675, 31397), (730, 31535), (759, 31655), (769, 31685), (790, 31742), (805, 31808), (840, 31901), (862, 31973), (905, 32081), (936, 32144), (985, 32303), (988, 32312),

Gene: Taquarus\_45 Start: 31573, Stop: 29747, Start Num: 234

Candidate Starts for Taquarus\_45:

(Start: 234 @31573 has 938 MA's), (252, 31552), (266, 31522), (279, 31492), (379, 31330), (389, 31312), (415, 31240), (419, 31231), (458, 31111), (465, 31087), (541, 30994), (568, 30946), (582, 30925), (603, 30886), (663, 30754), (675, 30733), (700, 30688), (703, 30676), (756, 30523), (759, 30502), (798, 30379), (805, 30349), (818, 30310), (841, 30244), (842, 30241), (847, 30226), (856, 30202), (862, 30178), (942, 29971), (985, 29836), (989, 29824), (993, 29815),

Gene: Target\_45 Start: 33552, Stop: 31723, Start Num: 234

Candidate Starts for Target\_45:

(Start: 234 @33552 has 938 MA's), (359, 33339), (368, 33324), (395, 33276), (405, 33246), (411, 33225), (415, 33219), (419, 33210), (457, 33093), (465, 33066), (541, 32973), (546, 32958), (566, 32925), (596, 32874), (598, 32871), (634, 32805), (657, 32745), (679, 32700), (700, 32661), (759, 32481), (775, 32433), (793, 32385), (802, 32346), (805, 32328), (818, 32289), (837, 32268), (841, 32247), (846, 32232), (885, 32109), (960, 31938), (967, 31914), (982, 31866), (985, 31854), (993, 31833), (997, 31827), (1025, 31779), (1030, 31764),

Gene: TarsusIV\_42 Start: 31027, Stop: 29240, Start Num: 233

Candidate Starts for TarsusIV\_42:

(Start: 233 @31027 has 10 MA's), (359, 30814), (368, 30799), (379, 30784), (395, 30751), (397, 30748), (405, 30721), (415, 30694), (419, 30685), (465, 30541), (541, 30448), (558, 30412), (566, 30400), (571, 30391), (582, 30376), (655, 30229), (675, 30181), (679, 30175), (759, 29956), (778, 29905), (789, 29872), (790, 29869), (805, 29803), (818, 29764), (837, 29743), (859, 29668), (862, 29656), (879, 29605), (908, 29542), (936, 29488), (942, 29464), (962, 29407), (968, 29386), (985, 29329), (989, 29317), (993, 29308),

Gene: Tarynearal\_37 Start: 30369, Stop: 28504, Start Num: 234

Candidate Starts for Tarynearal\_37:

(Start: 234 @30369 has 938 MA's), (266, 30318), (301, 30258), (336, 30195), (353, 30165), (355, 30162), (390, 30105), (395, 30093), (405, 30063), (415, 30036), (465, 29883), (541, 29787), (566, 29739), (618, 29655), (619, 29649), (652, 29577), (663, 29544), (670, 29529), (679, 29517), (724, 29418), (759, 29283), (769, 29253), (775, 29235), (778, 29232), (790, 29196), (793, 29187), (796, 29166), (799, 29157), (805, 29130), (806, 29127), (837, 29070), (841, 29049), (879, 28932), (903, 28878), (908, 28869), (921, 28851), (942, 28791), (947, 28773), (967, 28716), (978, 28680), (985, 28656), (989, 28644),

Gene: Tasp14\_46 Start: 35011, Stop: 33185, Start Num: 234

Candidate Starts for Tasp14\_46:

(Start: 234 @35011 has 938 MA's), (359, 34798), (368, 34783), (405, 34705), (411, 34684), (415, 34678), (419, 34669), (457, 34552), (465, 34525), (541, 34432), (546, 34417), (596, 34333), (598, 34330), (634, 34264), (648, 34234), (657, 34204), (679, 34159), (700, 34120), (759, 33940), (775,

33892), (790, 33853), (805, 33787), (818, 33748), (837, 33727), (841, 33706), (847, 33688), (868, 33622), (936, 33472), (938, 33469), (946, 33433), (954, 33409), (959, 33400), (963, 33388), (985, 33313), (993, 33292),

Gene: TatarkaPM\_39 Start: 29065, Stop: 27074, Start Num: 208

Candidate Starts for TatarkaPM\_39:

(5, 29698), (69, 29395), (Start: 208 @29065 has 5 MA's), (Start: 232 @29029 has 15 MA's), (Start: 238 @29023 has 2 MA's), (Start: 283 @28939 has 147 MA's), (Start: 291 @28930 has 5 MA's), (342, 28825), (347, 28816), (367, 28786), (369, 28783), (424, 28663), (426, 28651), (428, 28645), (466, 28540), (473, 28513), (532, 28372), (535, 28366), (537, 28363), (541, 28351), (551, 28324), (553, 28321), (562, 28306), (566, 28300), (570, 28294), (613, 28261), (701, 28072), (798, 27757), (801, 27748), (802, 27745), (805, 27727), (819, 27685), (822, 27679), (825, 27670), (832, 27655), (849, 27598), (900, 27439), (913, 27409), (917, 27400), (938, 27340), (943, 27316), (956, 27277), (967, 27244), (970, 27232), (986, 27172),

Gene: Taurus\_49 Start: 31852, Stop: 30038, Start Num: 234

Candidate Starts for Taurus\_49:

(Start: 234 @31852 has 938 MA's), (262, 31813), (266, 31801), (353, 31648), (362, 31633), (395, 31576), (415, 31519), (419, 31510), (432, 31468), (448, 31417), (465, 31366), (541, 31273), (566, 31225), (571, 31216), (582, 31201), (603, 31162), (619, 31135), (634, 31105), (670, 31012), (701, 30952), (710, 30937), (759, 30781), (790, 30694), (805, 30628), (818, 30589), (842, 30517), (856, 30478), (862, 30454), (868, 30436), (879, 30403), (888, 30376), (921, 30322), (942, 30262), (968, 30184), (985, 30127), (989, 30115), (993, 30106),

Gene: Tbone\_40 Start: 29503, Stop: 31368, Start Num: 234

Candidate Starts for Tbone\_40:

(Start: 234 @29503 has 938 MA's), (265, 29551), (405, 29800), (436, 29890), (543, 30097), (546, 30106), (598, 30196), (603, 30205), (615, 30220), (635, 30265), (655, 30310), (675, 30358), (703, 30415), (730, 30496), (759, 30616), (769, 30646), (790, 30703), (805, 30769), (814, 30793), (840, 30862), (862, 30934), (865, 30943), (905, 31042), (936, 31105), (942, 31129), (985, 31264), (988, 31273),

Gene: Teagan\_39 Start: 28930, Stop: 27065, Start Num: 283

Candidate Starts for Teagan\_39:

(Start: 234 @29017 has 938 MA's), (Start: 237 @29014 has 2 MA's), (Start: 283 @28930 has 147 MA's), (Start: 291 @28921 has 5 MA's), (342, 28816), (347, 28807), (367, 28777), (369, 28774), (424, 28654), (426, 28642), (428, 28636), (466, 28531), (473, 28504), (532, 28363), (535, 28357), (537, 28354), (541, 28342), (551, 28315), (553, 28312), (562, 28297), (566, 28291), (570, 28285), (613, 28252), (701, 28063), (733, 27988), (798, 27748), (801, 27739), (802, 27736), (805, 27718), (819, 27676), (822, 27670), (825, 27661), (832, 27646), (849, 27589), (900, 27430), (913, 27400), (917, 27391), (938, 27331), (943, 27307), (956, 27268), (967, 27235), (970, 27223), (986, 27163),

Gene: Teagster\_43 Start: 29747, Stop: 31618, Start Num: 234

Candidate Starts for Teagster\_43:

(Start: 234 @29747 has 938 MA's), (252, 29768), (265, 29795), (273, 29816), (284, 29837), (419, 30080), (424, 30092), (426, 30104), (428, 30110), (453, 30176), (558, 30338), (579, 30371), (603, 30419), (723, 30698), (759, 30836), (804, 30983), (805, 30989), (840, 31082), (859, 31142), (901, 31253), (903, 31259), (949, 31373), (961, 31403), (962, 31406), (985, 31484), (988, 31493),

Gene: TeddyBear\_38 Start: 28632, Stop: 26767, Start Num: 283

Candidate Starts for TeddyBear\_38:

(Start: 234 @28719 has 938 MA's), (Start: 283 @28632 has 147 MA's), (Start: 291 @28623 has 5 MA's), (342, 28518), (347, 28509), (367, 28479), (369, 28476), (424, 28356), (426, 28344), (428,

28338), (466, 28233), (473, 28206), (532, 28065), (535, 28059), (537, 28056), (541, 28044), (551, 28017), (553, 28014), (562, 27999), (566, 27993), (570, 27987), (613, 27954), (671, 27825), (701, 27765), (798, 27450), (801, 27441), (802, 27438), (805, 27420), (819, 27378), (822, 27372), (832, 27348), (849, 27291), (900, 27132), (913, 27102), (917, 27093), (938, 27033), (943, 27009), (956, 26970), (967, 26937), (970, 26925), (986, 26865),

Gene: Telesworld\_58 Start: 54144, Stop: 52285, Start Num: 197

Candidate Starts for Telesworld\_58:

(Start: 180 @54168 has 1 MA's), (Start: 197 @54144 has 298 MA's), (Start: 225 @54120 has 5 MA's), (Start: 238 @54114 has 2 MA's), (Start: 261 @54072 has 10 MA's), (269, 54051), (323, 53937), (328, 53931), (349, 53901), (385, 53841), (394, 53820), (410, 53766), (418, 53754), (425, 53736), (427, 53724), (462, 53619), (496, 53562), (511, 53526), (516, 53514), (535, 53487), (555, 53442), (588, 53385), (595, 53376), (597, 53373), (754, 53013), (760, 52980), (765, 52959), (799, 52866), (802, 52857), (822, 52794), (841, 52758), (842, 52755), (847, 52740), (872, 52662), (877, 52650), (883, 52629), (902, 52590), (942, 52500), (947, 52482), (949, 52476), (954, 52461), (964, 52437), (968, 52422), (969, 52419), (972, 52407), (979, 52383), (1002, 52335), (1015, 52311),

Gene: Temprado\_47 Start: 29791, Stop: 27950, Start Num: 234

Candidate Starts for Temprado\_47:

(Start: 234 @29791 has 938 MA's), (353, 29587), (395, 29512), (397, 29509), (405, 29482), (409, 29467), (415, 29455), (432, 29404), (461, 29314), (465, 29302), (541, 29209), (559, 29170), (571, 29152), (582, 29137), (619, 29071), (635, 29038), (636, 29035), (681, 28933), (710, 28873), (740, 28789), (759, 28708), (789, 28624), (790, 28621), (793, 28612), (798, 28585), (805, 28555), (837, 28495), (847, 28456), (936, 28240), (938, 28237), (942, 28216), (985, 28081), (989, 28069), (993, 28060), (995, 28057), (1042, 27964),

Gene: Tenda\_38 Start: 28630, Stop: 26765, Start Num: 283

Candidate Starts for Tenda\_38:

(Start: 234 @28717 has 938 MA's), (Start: 237 @28714 has 2 MA's), (Start: 283 @28630 has 147 MA's), (Start: 291 @28621 has 5 MA's), (342, 28516), (347, 28507), (367, 28477), (369, 28474), (424, 28354), (426, 28342), (428, 28336), (466, 28231), (473, 28204), (532, 28063), (535, 28057), (537, 28054), (541, 28042), (551, 28015), (553, 28012), (562, 27997), (566, 27991), (570, 27985), (613, 27952), (671, 27823), (701, 27763), (798, 27448), (801, 27439), (802, 27436), (805, 27418), (819, 27376), (822, 27370), (825, 27361), (832, 27346), (849, 27289), (900, 27130), (913, 27100), (917, 27091), (938, 27031), (943, 27007), (956, 26968), (967, 26935), (970, 26923), (986, 26863),

Gene: Teodoridan\_43 Start: 34199, Stop: 32412, Start Num: 234

Candidate Starts for Teodoridan\_43:

(Start: 234 @34199 has 938 MA's), (359, 33986), (395, 33923), (405, 33893), (411, 33872), (415, 33866), (419, 33857), (457, 33740), (465, 33713), (541, 33620), (546, 33605), (558, 33584), (596, 33521), (598, 33518), (634, 33452), (648, 33422), (657, 33392), (679, 33347), (700, 33308), (759, 33128), (775, 33080), (790, 33041), (805, 32975), (839, 32903), (841, 32894), (868, 32810), (903, 32723), (954, 32597), (960, 32585), (985, 32501), (987, 32495),

Gene: Texage\_43 Start: 31598, Stop: 29760, Start Num: 234

Candidate Starts for Texage\_43:

(Start: 234 @31598 has 938 MA's), (266, 31547), (353, 31394), (395, 31322), (405, 31292), (415, 31265), (419, 31256), (465, 31112), (541, 31016), (568, 30968), (603, 30908), (648, 30821), (663, 30776), (675, 30755), (711, 30683), (729, 30641), (740, 30599), (759, 30518), (775, 30470), (790, 30431), (798, 30395), (805, 30365), (816, 30335), (842, 30254), (856, 30215), (862, 30191), (868, 30173), (869, 30170), (921, 30044), (942, 29984), (970, 29897), (985, 29849), (989, 29837), (993, 29828),

Gene: TforTroy\_42 Start: 29677, Stop: 31542, Start Num: 234

Candidate Starts for TforTroy\_42:

(Start: 234 @29677 has 938 MA's), (265, 29725), (411, 29995), (445, 30094), (546, 30280), (603, 30379), (615, 30394), (619, 30406), (675, 30532), (730, 30670), (759, 30790), (769, 30820), (790, 30877), (805, 30943), (840, 31036), (936, 31279), (985, 31438), (988, 31447),

Gene: Thanksgivukkah\_44 Start: 31568, Stop: 29742, Start Num: 234

Candidate Starts for Thanksgivukkah\_44:

(Start: 234 @31568 has 938 MA's), (252, 31547), (266, 31517), (279, 31487), (379, 31325), (389, 31307), (395, 31292), (415, 31235), (419, 31226), (458, 31106), (465, 31082), (541, 30989), (568, 30941), (582, 30920), (603, 30881), (663, 30749), (675, 30728), (700, 30683), (703, 30671), (756, 30518), (759, 30497), (798, 30374), (805, 30344), (818, 30305), (841, 30239), (842, 30236), (847, 30221), (856, 30197), (862, 30173), (942, 29966), (985, 29831), (989, 29819), (993, 29810),

Gene: Theia\_36 Start: 30392, Stop: 28533, Start Num: 234

Candidate Starts for Theia\_36:

(Start: 234 @30392 has 938 MA's), (266, 30341), (301, 30281), (336, 30218), (353, 30188), (355, 30185), (390, 30128), (405, 30086), (415, 30059), (465, 29906), (541, 29810), (566, 29762), (618, 29678), (619, 29672), (652, 29600), (663, 29567), (670, 29552), (679, 29540), (724, 29441), (759, 29306), (769, 29276), (775, 29258), (778, 29255), (790, 29219), (793, 29210), (796, 29189), (799, 29180), (805, 29153), (806, 29150), (837, 29093), (841, 29072), (879, 28955), (903, 28901), (908, 28892), (921, 28874), (947, 28796), (978, 28703), (985, 28679), (989, 28667), (1049, 28550), (1050, 28547),

Gene: TheloniousMonk\_46 Start: 36133, Stop: 34346, Start Num: 234

Candidate Starts for TheloniousMonk\_46:

(Start: 234 @36133 has 938 MA's), (359, 35920), (368, 35905), (405, 35827), (411, 35806), (415, 35800), (419, 35791), (457, 35674), (465, 35647), (541, 35554), (546, 35539), (566, 35506), (596, 35455), (598, 35452), (628, 35398), (634, 35386), (648, 35356), (657, 35326), (679, 35281), (700, 35242), (759, 35062), (775, 35014), (790, 34975), (805, 34909), (839, 34837), (841, 34828), (868, 34744), (903, 34657), (954, 34531), (960, 34519), (985, 34435), (987, 34429),

Gene: Thompsone\_39 Start: 28937, Stop: 27072, Start Num: 283

Candidate Starts for Thompsone\_39:

(Start: 234 @29024 has 938 MA's), (Start: 237 @29021 has 2 MA's), (Start: 283 @28937 has 147 MA's), (Start: 291 @28928 has 5 MA's), (342, 28823), (347, 28814), (367, 28784), (369, 28781), (423, 28664), (426, 28649), (428, 28643), (466, 28538), (473, 28511), (532, 28370), (537, 28361), (541, 28349), (551, 28322), (553, 28319), (562, 28304), (566, 28298), (570, 28292), (613, 28259), (671, 28130), (701, 28070), (733, 27995), (798, 27755), (801, 27746), (802, 27743), (805, 27725), (819, 27683), (822, 27677), (825, 27668), (832, 27653), (849, 27596), (900, 27437), (913, 27407), (917, 27398), (938, 27338), (943, 27314), (956, 27275), (967, 27242), (970, 27230), (986, 27170),

Gene: Thonko\_60 Start: 53153, Stop: 51336, Start Num: 222

Candidate Starts for Thonko\_60:

(Start: 222 @53153 has 1 MA's), (Start: 238 @53135 has 2 MA's), (252, 53108), (312, 52991), (355, 52925), (462, 52664), (496, 52607), (511, 52571), (516, 52559), (539, 52523), (551, 52490), (588, 52430), (595, 52421), (597, 52418), (678, 52244), (737, 52127), (744, 52103), (755, 52058), (760, 52031), (765, 52010), (797, 51923), (799, 51917), (802, 51908), (822, 51845), (842, 51806), (844, 51800), (847, 51791), (872, 51713), (877, 51701), (883, 51680), (887, 51668), (902, 51641), (935, 51584), (942, 51551), (949, 51527), (964, 51488), (979, 51434), (1015, 51362),

Gene: Thor\_43 Start: 33796, Stop: 31970, Start Num: 234

Candidate Starts for Thor\_43:

(Start: 234 @33796 has 938 MA's), (359, 33583), (368, 33568), (405, 33490), (411, 33469), (415, 33463), (419, 33454), (457, 33337), (465, 33310), (541, 33217), (546, 33202), (596, 33118), (598, 33115), (634, 33049), (648, 33019), (657, 32989), (679, 32944), (700, 32905), (759, 32725), (775, 32677), (790, 32638), (805, 32572), (818, 32533), (837, 32512), (841, 32491), (847, 32473), (868, 32407), (936, 32257), (938, 32254), (946, 32218), (959, 32185), (963, 32173), (977, 32125), (985, 32098), (993, 32077),

Gene: Thora\_60 Start: 54321, Stop: 52462, Start Num: 197

Candidate Starts for Thora\_60:

(Start: 180 @54345 has 1 MA's), (Start: 197 @54321 has 298 MA's), (Start: 225 @54297 has 5 MA's), (Start: 238 @54291 has 2 MA's), (Start: 261 @54249 has 10 MA's), (269, 54228), (323, 54114), (328, 54108), (349, 54078), (385, 54018), (394, 53997), (410, 53943), (418, 53931), (425, 53913), (427, 53901), (462, 53796), (496, 53739), (511, 53703), (516, 53691), (535, 53664), (545, 53637), (555, 53619), (566, 53601), (588, 53562), (595, 53553), (597, 53550), (724, 53292), (754, 53190), (760, 53157), (765, 53136), (799, 53043), (802, 53034), (822, 52971), (841, 52935), (842, 52932), (847, 52917), (872, 52839), (877, 52827), (883, 52806), (902, 52767), (942, 52677), (947, 52659), (949, 52653), (954, 52638), (964, 52614), (968, 52599), (969, 52596), (972, 52584), (979, 52560), (1002, 52512), (1015, 52488),

Gene: Thorongil\_39 Start: 28937, Stop: 27072, Start Num: 283

Candidate Starts for Thorongil\_39:

(Start: 234 @29024 has 938 MA's), (Start: 237 @29021 has 2 MA's), (Start: 283 @28937 has 147 MA's), (Start: 291 @28928 has 5 MA's), (342, 28823), (347, 28814), (367, 28784), (369, 28781), (424, 28661), (426, 28649), (428, 28643), (466, 28538), (473, 28511), (532, 28370), (535, 28364), (537, 28361), (541, 28349), (551, 28322), (553, 28319), (562, 28304), (566, 28298), (570, 28292), (613, 28259), (671, 28130), (701, 28070), (798, 27755), (801, 27746), (802, 27743), (805, 27725), (819, 27683), (822, 27677), (825, 27668), (832, 27653), (849, 27596), (900, 27437), (913, 27407), (917, 27398), (938, 27338), (943, 27314), (956, 27275), (967, 27242), (970, 27230), (986, 27170),

Gene: ThreeOh3D2\_62 Start: 54542, Stop: 52683, Start Num: 197

Candidate Starts for ThreeOh3D2\_62:

(Start: 180 @54566 has 1 MA's), (Start: 197 @54542 has 298 MA's), (Start: 225 @54518 has 5 MA's), (Start: 238 @54512 has 2 MA's), (Start: 261 @54470 has 10 MA's), (269, 54449), (323, 54335), (328, 54329), (349, 54299), (385, 54239), (394, 54218), (410, 54164), (418, 54152), (425, 54134), (427, 54122), (462, 54017), (496, 53960), (511, 53924), (516, 53912), (535, 53885), (545, 53858), (555, 53840), (566, 53822), (588, 53783), (595, 53774), (597, 53771), (599, 53768), (754, 53411), (760, 53378), (765, 53357), (799, 53264), (802, 53255), (822, 53192), (841, 53156), (842, 53153), (847, 53138), (872, 53060), (877, 53048), (883, 53027), (902, 52988), (942, 52898), (947, 52880), (949, 52874), (954, 52859), (964, 52835), (968, 52820), (969, 52817), (972, 52805), (979, 52781), (1002, 52733), (1015, 52709),

Gene: Thunderbird\_60 Start: 54275, Stop: 52416, Start Num: 197

Candidate Starts for Thunderbird\_60:

(Start: 180 @54299 has 1 MA's), (Start: 197 @54275 has 298 MA's), (Start: 225 @54251 has 5 MA's), (Start: 238 @54245 has 2 MA's), (Start: 261 @54203 has 10 MA's), (269, 54182), (323, 54068), (328, 54062), (349, 54032), (385, 53972), (394, 53951), (410, 53897), (418, 53885), (425, 53867), (427, 53855), (462, 53750), (496, 53693), (511, 53657), (516, 53645), (535, 53618), (555, 53573), (588, 53516), (595, 53507), (597, 53504), (754, 53144), (760, 53111), (765, 53090), (799, 52997), (802, 52988), (822, 52925), (841, 52889), (842, 52886), (847, 52871), (872, 52793), (877, 52781), (883, 52760), (902, 52721), (942, 52631), (947, 52613), (949, 52607), (954, 52592), (964, 52568), (968, 52553), (969, 52550), (972, 52538), (979, 52514), (1002, 52466), (1015, 52442), (1019, 52427),

Gene: Thunderclap\_54 Start: 36908, Stop: 34740, Start Num: 202



Candidate Starts for Thunderclap\_54:

(200, 36911), (Start: 202 @36908 has 13 MA's), (239, 36854), (279, 36770), (356, 36617), (361, 36608), (388, 36563), (414, 36485), (415, 36476), (422, 36461), (426, 36446), (427, 36443), (445, 36386), (474, 36293), (484, 36251), (565, 36056), (572, 36044), (578, 36038), (587, 36014), (601, 35993), (616, 35972), (621, 35957), (623, 35951), (651, 35888), (672, 35837), (706, 35750), (727, 35690), (740, 35642), (766, 35540), (768, 35534), (780, 35507), (781, 35504), (789, 35483), (799, 35441), (801, 35435), (806, 35411), (814, 35369), (815, 35366), (823, 35339), (838, 35306), (840, 35294), (852, 35258), (859, 35234), (861, 35228), (862, 35222), (880, 35168), (899, 35120), (902, 35117), (925, 35057), (932, 35033), (941, 35003), (961, 34949), (982, 34880), (985, 34868), (1006, 34829),

Gene: Tian\_39 Start: 30363, Stop: 32228, Start Num: 234

Candidate Starts for Tian\_39:

(Start: 172 @30285 has 1 MA's), (Start: 234 @30363 has 938 MA's), (265, 30411), (336, 30537), (353, 30567), (377, 30594), (382, 30600), (405, 30660), (436, 30750), (543, 30957), (546, 30966), (603, 31065), (615, 31080), (675, 31218), (730, 31356), (753, 31443), (759, 31476), (781, 31539), (790, 31563), (803, 31620), (805, 31629), (840, 31722), (862, 31794), (905, 31902), (936, 31965), (942, 31989), (985, 32124), (988, 32133),

Gene: Tiffany\_48 Start: 31738, Stop: 29924, Start Num: 234

Candidate Starts for Tiffany\_48:

(Start: 234 @31738 has 938 MA's), (262, 31699), (266, 31687), (353, 31534), (362, 31519), (395, 31462), (415, 31405), (419, 31396), (432, 31354), (448, 31303), (465, 31252), (541, 31159), (566, 31111), (571, 31102), (582, 31087), (603, 31048), (619, 31021), (634, 30991), (670, 30898), (701, 30838), (710, 30823), (759, 30667), (790, 30580), (805, 30514), (818, 30475), (842, 30403), (856, 30364), (862, 30340), (868, 30322), (879, 30289), (888, 30262), (921, 30208), (942, 30148), (968, 30070), (985, 30013), (989, 30001), (993, 29992),

Gene: Tiger\_37 Start: 29925, Stop: 28066, Start Num: 234

Candidate Starts for Tiger\_37:

(Start: 234 @29925 has 938 MA's), (266, 29874), (301, 29814), (336, 29751), (353, 29721), (355, 29718), (390, 29661), (395, 29649), (405, 29619), (415, 29592), (465, 29439), (541, 29343), (566, 29295), (581, 29274), (618, 29211), (619, 29205), (652, 29133), (663, 29100), (670, 29085), (679, 29073), (724, 28974), (759, 28839), (769, 28809), (775, 28791), (782, 28773), (790, 28752), (793, 28743), (805, 28686), (818, 28647), (841, 28605), (847, 28587), (862, 28539), (879, 28488), (903, 28434), (908, 28425), (921, 28407), (942, 28347), (947, 28329), (978, 28236), (985, 28212), (989, 28200), (1049, 28083), (1050, 28080),

Gene: Timmi\_59 Start: 54024, Stop: 52165, Start Num: 197

Candidate Starts for Timmi\_59:

(Start: 180 @54048 has 1 MA's), (Start: 197 @54024 has 298 MA's), (Start: 225 @54000 has 5 MA's), (Start: 238 @53994 has 2 MA's), (Start: 261 @53952 has 10 MA's), (269, 53931), (323, 53817), (328, 53811), (349, 53781), (385, 53721), (394, 53700), (410, 53646), (418, 53634), (425, 53616), (427, 53604), (462, 53499), (496, 53442), (511, 53406), (516, 53394), (535, 53367), (555, 53322), (588, 53265), (595, 53256), (597, 53253), (754, 52893), (760, 52860), (765, 52839), (799, 52746), (802, 52737), (822, 52674), (841, 52638), (842, 52635), (847, 52620), (872, 52542), (877, 52530), (883, 52509), (902, 52470), (942, 52380), (947, 52362), (949, 52356), (954, 52341), (964, 52317), (968, 52302), (969, 52299), (972, 52287), (979, 52263), (1002, 52215), (1015, 52191),

Gene: Timothy\_45 Start: 30689, Stop: 28902, Start Num: 234

Candidate Starts for Timothy\_45:

(Start: 234 @30689 has 938 MA's), (353, 30485), (395, 30413), (405, 30383), (415, 30356), (543, 30104), (571, 30053), (619, 29972), (639, 29927), (675, 29843), (703, 29786), (728, 29744), (740,

29699), (759, 29618), (778, 29567), (790, 29531), (805, 29465), (837, 29405), (839, 29393), (871, 29291), (879, 29267), (884, 29249), (921, 29186), (935, 29159), (936, 29150), (942, 29126), (985, 28991), (989, 28979), (993, 28970),

Gene: Timshel\_43 Start: 33330, Stop: 31495, Start Num: 234

Candidate Starts for Timshel\_43:

(Start: 234 @33330 has 938 MA's), (301, 33219), (359, 33117), (383, 33081), (394, 33057), (411, 33003), (415, 32997), (424, 32976), (448, 32895), (465, 32844), (535, 32763), (541, 32748), (552, 32721), (563, 32703), (568, 32700), (582, 32679), (603, 32640), (636, 32577), (661, 32511), (663, 32508), (675, 32487), (720, 32397), (729, 32376), (740, 32334), (759, 32253), (775, 32205), (793, 32157), (798, 32130), (805, 32100), (818, 32061), (841, 31992), (842, 31989), (847, 31974), (856, 31950), (868, 31908), (921, 31779), (935, 31752), (942, 31719), (947, 31701), (960, 31668), (985, 31584), (989, 31572), (993, 31563),

Gene: TinSulphur\_39 Start: 28936, Stop: 27071, Start Num: 283

Candidate Starts for TinSulphur\_39:

(Start: 234 @29023 has 938 MA's), (Start: 237 @29020 has 2 MA's), (Start: 283 @28936 has 147 MA's), (Start: 291 @28927 has 5 MA's), (342, 28822), (347, 28813), (367, 28783), (369, 28780), (424, 28660), (426, 28648), (428, 28642), (466, 28537), (473, 28510), (532, 28369), (535, 28363), (537, 28360), (541, 28348), (551, 28321), (553, 28318), (562, 28303), (566, 28297), (570, 28291), (613, 28258), (701, 28069), (798, 27754), (801, 27745), (802, 27742), (805, 27724), (819, 27682), (822, 27676), (825, 27667), (832, 27652), (849, 27595), (900, 27436), (913, 27406), (917, 27397), (938, 27337), (943, 27313), (956, 27274), (967, 27241), (970, 27229), (986, 27169),

Gene: TinaFeyge\_45 Start: 31565, Stop: 29739, Start Num: 234

Candidate Starts for TinaFeyge\_45:

(Start: 234 @31565 has 938 MA's), (252, 31544), (266, 31514), (279, 31484), (379, 31322), (389, 31304), (415, 31232), (419, 31223), (458, 31103), (465, 31079), (541, 30986), (568, 30938), (582, 30917), (603, 30878), (663, 30746), (675, 30725), (700, 30680), (703, 30668), (756, 30515), (759, 30494), (798, 30371), (805, 30341), (818, 30302), (841, 30236), (842, 30233), (847, 30218), (856, 30194), (862, 30170), (942, 29963), (985, 29828), (989, 29816), (993, 29807),

Gene: Tinciduntolum\_58 Start: 52640, Stop: 50811, Start Num: 197

Candidate Starts for Tinciduntolum\_58:

(Start: 197 @52640 has 298 MA's), (Start: 238 @52613 has 2 MA's), (253, 52583), (Start: 261 @52571 has 10 MA's), (272, 52544), (273, 52541), (277, 52532), (301, 52514), (355, 52418), (385, 52367), (395, 52343), (450, 52181), (456, 52166), (459, 52157), (462, 52145), (496, 52088), (511, 52052), (516, 52040), (534, 52016), (580, 51932), (595, 51902), (597, 51899), (618, 51869), (678, 51725), (710, 51659), (733, 51620), (737, 51608), (743, 51587), (749, 51569), (760, 51512), (783, 51455), (793, 51428), (799, 51398), (802, 51389), (822, 51323), (839, 51296), (841, 51287), (847, 51269), (856, 51245), (872, 51191), (877, 51179), (883, 51158), (921, 51089), (942, 51029), (947, 51011), (960, 50978), (964, 50966), (968, 50951), (969, 50948), (972, 50936), (979, 50912), (980, 50909), (1002, 50861), (1004, 50858), (1015, 50837), (1023, 50816),

Gene: TinyPebbles\_47 Start: 31886, Stop: 30072, Start Num: 234

Candidate Starts for TinyPebbles\_47:

(Start: 234 @31886 has 938 MA's), (262, 31847), (266, 31835), (353, 31682), (362, 31667), (395, 31610), (415, 31553), (419, 31544), (432, 31502), (448, 31451), (465, 31400), (518, 31346), (541, 31307), (566, 31259), (582, 31235), (603, 31196), (619, 31169), (634, 31139), (670, 31046), (679, 31034), (701, 30986), (710, 30971), (759, 30815), (778, 30764), (789, 30731), (790, 30728), (805, 30662), (818, 30623), (842, 30551), (856, 30512), (862, 30488), (868, 30470), (879, 30437), (921, 30356), (942, 30296), (970, 30209), (985, 30161), (989, 30149), (993, 30140), (995, 30137),

Gene: TinyTerror\_59 Start: 54114, Stop: 52294, Start Num: 232

Candidate Starts for TinyTerror\_59:

(Start: 232 @54114 has 15 MA's), (252, 54081), (424, 53748), (426, 53736), (437, 53706), (442, 53700), (462, 53637), (464, 53631), (496, 53580), (511, 53544), (539, 53496), (597, 53391), (647, 53295), (664, 53244), (737, 53100), (749, 53061), (755, 53031), (760, 53004), (763, 52992), (797, 52896), (799, 52890), (802, 52881), (804, 52869), (834, 52797), (841, 52767), (847, 52749), (851, 52740), (872, 52671), (877, 52659), (883, 52638), (921, 52569), (931, 52554), (938, 52530), (942, 52509), (947, 52491), (949, 52485), (962, 52452), (964, 52446), (969, 52428), (972, 52416), (975, 52404), (979, 52392), (994, 52350), (1015, 52320),

Gene: TinyTimmy\_45 Start: 30732, Stop: 28945, Start Num: 234

Candidate Starts for TinyTimmy\_45:

(Start: 234 @30732 has 938 MA's), (353, 30528), (395, 30456), (405, 30426), (415, 30399), (543, 30147), (571, 30096), (619, 30015), (639, 29970), (675, 29886), (703, 29829), (728, 29787), (740, 29742), (759, 29661), (778, 29610), (790, 29574), (805, 29508), (837, 29448), (839, 29436), (871, 29334), (879, 29310), (884, 29292), (921, 29229), (935, 29202), (936, 29193), (942, 29169), (985, 29034), (989, 29022), (993, 29013),

Gene: Tinybot\_44 Start: 31597, Stop: 29771, Start Num: 234

Candidate Starts for Tinybot\_44:

(Start: 234 @31597 has 938 MA's), (252, 31576), (266, 31546), (279, 31516), (379, 31354), (389, 31336), (415, 31264), (419, 31255), (458, 31135), (465, 31111), (541, 31018), (568, 30970), (582, 30949), (603, 30910), (663, 30778), (675, 30757), (700, 30712), (703, 30700), (756, 30547), (759, 30526), (798, 30403), (805, 30373), (818, 30334), (841, 30268), (842, 30265), (847, 30250), (856, 30226), (862, 30202), (942, 29995), (985, 29860), (989, 29848), (993, 29839),

Gene: Tinyman4\_37 Start: 27313, Stop: 25415, Start Num: 281

Candidate Starts for Tinyman4\_37:

(8, 28051), (10, 28045), (62, 27790), (260, 27364), (Start: 281 @27313 has 18 MA's), (310, 27250), (342, 27199), (367, 27160), (398, 27103), (420, 27046), (424, 27037), (426, 27025), (428, 27019), (445, 26974), (447, 26968), (489, 26866), (503, 26821), (532, 26746), (537, 26737), (541, 26725), (553, 26695), (566, 26674), (574, 26662), (611, 26638), (682, 26488), (771, 26227), (793, 26125), (796, 26104), (805, 26068), (817, 26032), (819, 26026), (849, 25939), (854, 25912), (900, 25780), (917, 25741), (926, 25720), (938, 25681), (943, 25657), (945, 25651), (954, 25624), (986, 25513),

Gene: TipsytheTRex\_42 Start: 30574, Stop: 28787, Start Num: 234

Candidate Starts for TipsytheTRex\_42:

(Start: 234 @30574 has 938 MA's), (353, 30370), (355, 30367), (359, 30361), (368, 30346), (379, 30331), (395, 30298), (405, 30268), (415, 30241), (424, 30220), (432, 30190), (465, 30088), (541, 29995), (566, 29947), (571, 29938), (582, 29923), (619, 29857), (655, 29776), (675, 29728), (700, 29683), (759, 29503), (775, 29455), (778, 29452), (790, 29416), (805, 29350), (818, 29311), (837, 29290), (859, 29215), (864, 29197), (879, 29152), (888, 29125), (908, 29089), (921, 29071), (936, 29035), (942, 29011), (968, 28933), (985, 28876), (989, 28864), (993, 28855), (995, 28852),

Gene: TiroTheta9\_45 Start: 31564, Stop: 29738, Start Num: 234

Candidate Starts for TiroTheta9\_45:

(Start: 234 @31564 has 938 MA's), (252, 31543), (266, 31513), (279, 31483), (379, 31321), (389, 31303), (415, 31231), (419, 31222), (458, 31102), (465, 31078), (541, 30985), (568, 30937), (582, 30916), (603, 30877), (663, 30745), (675, 30724), (700, 30679), (703, 30667), (756, 30514), (759, 30493), (798, 30370), (805, 30340), (818, 30301), (841, 30235), (842, 30232), (847, 30217), (856, 30193), (862, 30169), (942, 29962), (985, 29827), (989, 29815), (993, 29806),

Gene: Toaka\_44 Start: 30969, Stop: 29176, Start Num: 233

Candidate Starts for Toaka\_44:

(Start: 233 @30969 has 10 MA's), (246, 30960), (334, 30798), (336, 30795), (353, 30765), (374, 30732), (397, 30687), (405, 30660), (409, 30645), (415, 30633), (432, 30582), (458, 30504), (465, 30480), (541, 30387), (571, 30330), (634, 30219), (672, 30123), (726, 30021), (729, 30015), (759, 29892), (793, 29796), (798, 29769), (802, 29757), (805, 29739), (841, 29658), (879, 29541), (936, 29424), (985, 29265), (989, 29253),

Gene: Todacoro\_44 Start: 31597, Stop: 29759, Start Num: 234

Candidate Starts for Todacoro\_44:

(Start: 234 @31597 has 938 MA's), (266, 31546), (353, 31393), (395, 31321), (405, 31291), (415, 31264), (419, 31255), (465, 31111), (541, 31015), (568, 30967), (603, 30907), (648, 30820), (663, 30775), (675, 30754), (711, 30682), (729, 30640), (740, 30598), (759, 30517), (775, 30469), (790, 30430), (798, 30394), (805, 30364), (816, 30334), (842, 30253), (856, 30214), (862, 30190), (868, 30172), (869, 30169), (921, 30043), (942, 29983), (970, 29896), (985, 29848), (989, 29836), (993, 29827),

Gene: Tolls\_44 Start: 32396, Stop: 30009, Start Num: 45

Candidate Starts for Tolls\_44:

(20, 32468), (23, 32453), (Start: 45 @32396 has 24 MA's), (49, 32387), (52, 32381), (76, 32300), (119, 32180), (136, 32129), (Start: 230 @31997 has 13 MA's), (250, 31970), (295, 31877), (317, 31832), (366, 31754), (391, 31706), (409, 31652), (410, 31649), (420, 31631), (426, 31610), (445, 31559), (448, 31550), (449, 31547), (473, 31472), (495, 31427), (519, 31367), (524, 31352), (570, 31268), (634, 31223), (643, 31199), (655, 31193), (662, 31169), (707, 31091), (711, 31088), (713, 31085), (758, 30938), (773, 30869), (796, 30770), (805, 30734), (817, 30698), (819, 30692), (822, 30686), (824, 30680), (834, 30656), (842, 30623), (849, 30599), (859, 30554), (878, 30494), (938, 30341), (947, 30302), (948, 30299), (986, 30173), (1008, 30128), (1013, 30119),

Gene: TomBombadil\_60 Start: 54309, Stop: 52450, Start Num: 197

Candidate Starts for TomBombadil\_60:

(Start: 180 @54333 has 1 MA's), (Start: 197 @54309 has 298 MA's), (Start: 225 @54285 has 5 MA's), (Start: 238 @54279 has 2 MA's), (Start: 261 @54237 has 10 MA's), (269, 54216), (323, 54102), (328, 54096), (349, 54066), (385, 54006), (394, 53985), (410, 53931), (418, 53919), (425, 53901), (427, 53889), (462, 53784), (496, 53727), (511, 53691), (516, 53679), (535, 53652), (545, 53625), (555, 53607), (566, 53589), (588, 53550), (595, 53541), (597, 53538), (724, 53280), (754, 53178), (760, 53145), (765, 53124), (799, 53031), (802, 53022), (822, 52959), (841, 52923), (842, 52920), (847, 52905), (872, 52827), (877, 52815), (883, 52794), (902, 52755), (942, 52665), (947, 52647), (949, 52641), (954, 52626), (964, 52602), (968, 52587), (969, 52584), (972, 52572), (979, 52548), (1002, 52500), (1015, 52476),

Gene: Tomathan\_47 Start: 31153, Stop: 29330, Start Num: 234

Candidate Starts for Tomathan\_47:

(Start: 234 @31153 has 938 MA's), (353, 30949), (368, 30925), (379, 30907), (389, 30889), (395, 30874), (397, 30871), (405, 30844), (415, 30817), (432, 30766), (465, 30664), (541, 30571), (566, 30523), (571, 30514), (581, 30502), (582, 30499), (619, 30433), (648, 30373), (700, 30259), (710, 30235), (728, 30196), (759, 30070), (778, 30019), (790, 29983), (805, 29917), (818, 29878), (842, 29809), (856, 29770), (869, 29725), (879, 29695), (908, 29632), (918, 29620), (921, 29614), (942, 29554), (985, 29419), (989, 29407), (993, 29398),

Gene: Tomlarah\_61 Start: 54878, Stop: 53019, Start Num: 197

Candidate Starts for Tomlarah\_61:

(Start: 180 @54902 has 1 MA's), (Start: 197 @54878 has 298 MA's), (Start: 225 @54854 has 5 MA's), (Start: 238 @54848 has 2 MA's), (Start: 261 @54806 has 10 MA's), (269, 54785), (323, 54671), (328, 54665), (349, 54635), (385, 54575), (394, 54554), (410, 54500), (418, 54488), (425, 54470), (427,

54458), (462, 54353), (496, 54296), (511, 54260), (516, 54248), (535, 54221), (545, 54194), (555, 54176), (566, 54158), (588, 54119), (595, 54110), (597, 54107), (724, 53849), (754, 53747), (760, 53714), (765, 53693), (799, 53600), (802, 53591), (822, 53528), (841, 53492), (842, 53489), (847, 53474), (872, 53396), (877, 53384), (883, 53363), (902, 53324), (942, 53234), (947, 53216), (949, 53210), (954, 53195), (964, 53171), (968, 53156), (969, 53153), (972, 53141), (979, 53117), (1002, 53069), (1015, 53045),

Gene: ToneTone\_42 Start: 29354, Stop: 27513, Start Num: 234

Candidate Starts for ToneTone\_42:

(Start: 212 @29384 has 1 MA's), (Start: 234 @29354 has 938 MA's), (353, 29150), (395, 29075), (397, 29072), (405, 29045), (409, 29030), (415, 29018), (432, 28967), (461, 28877), (465, 28865), (541, 28772), (559, 28733), (571, 28715), (582, 28700), (619, 28634), (635, 28601), (636, 28598), (681, 28496), (710, 28436), (740, 28352), (759, 28271), (789, 28187), (790, 28184), (793, 28175), (798, 28148), (805, 28118), (837, 28058), (847, 28019), (936, 27803), (938, 27800), (942, 27779), (985, 27644), (989, 27632), (993, 27623), (995, 27620), (1042, 27527),

Gene: Toni\_60 Start: 54471, Stop: 52612, Start Num: 197

Candidate Starts for Toni\_60:

(Start: 180 @54495 has 1 MA's), (Start: 197 @54471 has 298 MA's), (Start: 225 @54447 has 5 MA's), (Start: 238 @54441 has 2 MA's), (Start: 261 @54399 has 10 MA's), (269, 54378), (323, 54264), (328, 54258), (349, 54228), (385, 54168), (394, 54147), (410, 54093), (418, 54081), (425, 54063), (427, 54051), (462, 53946), (496, 53889), (511, 53853), (516, 53841), (535, 53814), (545, 53787), (555, 53769), (566, 53751), (588, 53712), (595, 53703), (597, 53700), (599, 53697), (754, 53340), (760, 53307), (765, 53286), (799, 53193), (802, 53184), (822, 53121), (841, 53085), (842, 53082), (847, 53067), (872, 52989), (877, 52977), (883, 52956), (902, 52917), (942, 52827), (947, 52809), (949, 52803), (954, 52788), (964, 52764), (968, 52749), (969, 52746), (972, 52734), (979, 52710), (1002, 52662), (1015, 52638),

Gene: Tooj\_59 Start: 53694, Stop: 51835, Start Num: 197

Candidate Starts for Tooj\_59:

(Start: 180 @53718 has 1 MA's), (Start: 197 @53694 has 298 MA's), (Start: 225 @53670 has 5 MA's), (Start: 238 @53664 has 2 MA's), (Start: 261 @53622 has 10 MA's), (269, 53601), (323, 53487), (328, 53481), (349, 53451), (385, 53391), (394, 53370), (410, 53316), (418, 53304), (425, 53286), (427, 53274), (462, 53169), (496, 53112), (511, 53076), (516, 53064), (535, 53037), (539, 53028), (555, 52992), (588, 52935), (595, 52926), (597, 52923), (599, 52920), (754, 52563), (760, 52530), (765, 52509), (799, 52416), (802, 52407), (822, 52344), (841, 52308), (842, 52305), (847, 52290), (872, 52212), (877, 52200), (883, 52179), (902, 52140), (942, 52050), (947, 52032), (949, 52026), (954, 52011), (964, 51987), (968, 51972), (969, 51969), (972, 51957), (979, 51933), (1002, 51885), (1015, 51861),

Gene: Topanga\_42 Start: 31142, Stop: 29307, Start Num: 234

Candidate Starts for Topanga\_42:

(Start: 234 @31142 has 938 MA's), (266, 31091), (303, 31025), (353, 30938), (368, 30914), (390, 30878), (395, 30866), (415, 30809), (419, 30800), (445, 30716), (458, 30680), (461, 30668), (465, 30656), (541, 30563), (568, 30515), (603, 30455), (619, 30428), (661, 30326), (663, 30323), (675, 30302), (679, 30296), (729, 30188), (759, 30065), (775, 30017), (798, 29942), (805, 29912), (816, 29882), (818, 29873), (841, 29804), (842, 29801), (856, 29762), (862, 29738), (864, 29732), (868, 29720), (942, 29531), (949, 29507), (970, 29444), (985, 29396), (989, 29384), (993, 29375),

Gene: Topgun\_44 Start: 34288, Stop: 32462, Start Num: 234

Candidate Starts for Topgun\_44:

(Start: 234 @34288 has 938 MA's), (359, 34075), (368, 34060), (395, 34012), (405, 33982), (411, 33961), (415, 33955), (419, 33946), (457, 33829), (465, 33802), (541, 33709), (546, 33694), (596,

33610), (598, 33607), (634, 33541), (648, 33511), (657, 33481), (679, 33436), (700, 33397), (759, 33217), (775, 33169), (790, 33130), (805, 33064), (818, 33025), (837, 33004), (841, 32983), (847, 32965), (868, 32899), (936, 32749), (938, 32746), (946, 32710), (954, 32686), (959, 32677), (963, 32665), (977, 32617), (985, 32590), (993, 32569),

Gene: Toro\_45 Start: 33412, Stop: 31577, Start Num: 234

Candidate Starts for Toro\_45:

(Start: 234 @33412 has 938 MA's), (252, 33391), (301, 33301), (383, 33163), (411, 33085), (415, 33079), (465, 32926), (537, 32842), (541, 32830), (563, 32785), (568, 32782), (603, 32722), (630, 32671), (636, 32659), (675, 32569), (700, 32524), (729, 32455), (740, 32413), (756, 32353), (759, 32332), (775, 32284), (793, 32236), (798, 32209), (799, 32206), (805, 32179), (818, 32140), (842, 32071), (856, 32032), (868, 31990), (869, 31987), (879, 31957), (921, 31861), (935, 31834), (946, 31786), (947, 31783), (985, 31666), (989, 31654), (993, 31645),

Gene: Tote\_40 Start: 31416, Stop: 29587, Start Num: 234

Candidate Starts for Tote\_40:

(Start: 234 @31416 has 938 MA's), (359, 31203), (368, 31188), (395, 31140), (405, 31110), (411, 31089), (415, 31083), (419, 31074), (457, 30957), (465, 30930), (541, 30837), (546, 30822), (558, 30801), (596, 30738), (598, 30735), (634, 30669), (648, 30639), (657, 30609), (679, 30564), (700, 30525), (759, 30345), (775, 30297), (793, 30249), (802, 30210), (805, 30192), (818, 30153), (837, 30132), (841, 30111), (846, 30096), (885, 29973), (960, 29802), (967, 29778), (982, 29730), (985, 29718), (993, 29697), (997, 29691), (1025, 29643), (1030, 29628),

Gene: Traft412\_45 Start: 35231, Stop: 33405, Start Num: 234

Candidate Starts for Traft412\_45:

(Start: 234 @35231 has 938 MA's), (359, 35018), (368, 35003), (405, 34925), (411, 34904), (415, 34898), (419, 34889), (457, 34772), (465, 34745), (541, 34652), (546, 34637), (558, 34616), (596, 34553), (598, 34550), (628, 34496), (634, 34484), (648, 34454), (657, 34424), (679, 34379), (700, 34340), (759, 34160), (775, 34112), (790, 34073), (805, 34007), (818, 33968), (837, 33947), (841, 33926), (847, 33908), (868, 33842), (936, 33692), (938, 33689), (946, 33653), (954, 33629), (959, 33620), (963, 33608), (970, 33581), (985, 33533), (993, 33512),

Gene: Travvers\_47 Start: 31153, Stop: 29330, Start Num: 234

Candidate Starts for Travvers\_47:

(Start: 234 @31153 has 938 MA's), (353, 30949), (368, 30925), (379, 30907), (389, 30889), (395, 30874), (397, 30871), (405, 30844), (415, 30817), (432, 30766), (465, 30664), (541, 30571), (566, 30523), (571, 30514), (581, 30502), (582, 30499), (619, 30433), (648, 30373), (700, 30259), (710, 30235), (728, 30196), (759, 30070), (778, 30019), (790, 29983), (805, 29917), (818, 29878), (842, 29809), (856, 29770), (869, 29725), (879, 29695), (908, 29632), (921, 29614), (942, 29554), (985, 29419), (989, 29407), (993, 29398),

Gene: Treddle\_46 Start: 35746, Stop: 33920, Start Num: 234

Candidate Starts for Treddle\_46:

(Start: 234 @35746 has 938 MA's), (359, 35533), (368, 35518), (395, 35470), (405, 35440), (411, 35419), (415, 35413), (419, 35404), (457, 35287), (465, 35260), (541, 35167), (546, 35152), (596, 35068), (598, 35065), (634, 34999), (648, 34969), (657, 34939), (679, 34894), (700, 34855), (759, 34675), (775, 34627), (790, 34588), (805, 34522), (841, 34441), (842, 34438), (868, 34357), (936, 34207), (938, 34204), (946, 34168), (954, 34144), (959, 34135), (963, 34123), (985, 34048), (993, 34027),

Gene: Tres\_57 Start: 52494, Stop: 50665, Start Num: 197

Candidate Starts for Tres\_57:

(Start: 197 @52494 has 298 MA's), (Start: 238 @52467 has 2 MA's), (253, 52437), (Start: 261 @52425 has 10 MA's), (272, 52398), (273, 52395), (277, 52386), (301, 52368), (355, 52272), (385, 52221), (395, 52197), (450, 52035), (459, 52011), (462, 51999), (496, 51942), (511, 51906), (516, 51894), (534, 51870), (580, 51786), (595, 51756), (597, 51753), (618, 51723), (678, 51579), (710, 51513), (733, 51474), (737, 51462), (743, 51441), (749, 51423), (760, 51366), (783, 51309), (793, 51282), (799, 51252), (802, 51243), (822, 51177), (839, 51150), (841, 51141), (847, 51123), (856, 51099), (872, 51045), (877, 51033), (883, 51012), (921, 50943), (942, 50883), (947, 50865), (960, 50832), (964, 50820), (968, 50805), (969, 50802), (972, 50790), (979, 50766), (980, 50763), (1002, 50715), (1004, 50712), (1015, 50691), (1023, 50670),

Gene: Trike\_42 Start: 30393, Stop: 28561, Start Num: 234

Candidate Starts for Trike\_42:

(Start: 234 @30393 has 938 MA's), (266, 30342), (303, 30276), (353, 30189), (359, 30180), (390, 30129), (395, 30117), (415, 30060), (441, 29979), (445, 29967), (448, 29958), (458, 29931), (465, 29907), (541, 29814), (559, 29775), (603, 29706), (619, 29679), (679, 29547), (759, 29319), (782, 29253), (798, 29196), (805, 29166), (818, 29127), (842, 29055), (847, 29040), (856, 29016), (868, 28974), (879, 28941), (942, 28785), (949, 28761), (970, 28698), (985, 28650), (989, 28638), (993, 28629),

Gene: Trine\_42 Start: 34854, Stop: 32935, Start Num: 157

Candidate Starts for Trine\_42:

(Start: 157 @34854 has 1 MA's), (186, 34812), (Start: 205 @34788 has 2 MA's), (227, 34758), (253, 34722), (Start: 261 @34710 has 10 MA's), (273, 34680), (352, 34560), (387, 34500), (402, 34455), (410, 34428), (427, 34389), (432, 34377), (451, 34326), (462, 34293), (490, 34260), (495, 34242), (511, 34203), (561, 34107), (581, 34080), (588, 34062), (597, 34050), (618, 34020), (704, 33816), (737, 33747), (746, 33717), (749, 33708), (754, 33684), (760, 33651), (793, 33570), (799, 33540), (833, 33450), (841, 33429), (842, 33426), (847, 33411), (856, 33387), (872, 33333), (877, 33321), (903, 33258), (929, 33204), (935, 33186), (969, 33072), (979, 33036), (1002, 32985), (1015, 32961), (1023, 32940),

Gene: Tripl3t\_45 Start: 35417, Stop: 33591, Start Num: 234

Candidate Starts for Tripl3t\_45:

(Start: 234 @35417 has 938 MA's), (359, 35204), (368, 35189), (395, 35141), (405, 35111), (411, 35090), (415, 35084), (419, 35075), (457, 34958), (465, 34931), (541, 34838), (546, 34823), (566, 34790), (596, 34739), (598, 34736), (634, 34670), (648, 34640), (657, 34610), (679, 34565), (700, 34526), (759, 34346), (775, 34298), (790, 34259), (805, 34193), (818, 34154), (837, 34133), (841, 34112), (847, 34094), (868, 34028), (936, 33878), (938, 33875), (946, 33839), (954, 33815), (959, 33806), (963, 33794), (985, 33719), (993, 33698),

Gene: Triscuit\_70 Start: 43915, Stop: 46587, Start Num: 25

Candidate Starts for Triscuit\_70:

(Start: 25 @43915 has 2 MA's), (49, 44005), (50, 44008), (52, 44011), (68, 44071), (170, 44317), (Start: 282 @44494 has 4 MA's), (Start: 291 @44506 has 5 MA's), (308, 44551), (315, 44566), (329, 44593), (385, 44692), (398, 44722), (409, 44761), (426, 44803), (447, 44860), (452, 44875), (477, 44929), (524, 45040), (590, 45181), (608, 45205), (666, 45355), (668, 45358), (677, 45376), (702, 45433), (729, 45493), (746, 45553), (792, 45748), (805, 45811), (826, 45874), (849, 45949), (870, 46030), (880, 46060), (906, 46120), (926, 46168), (938, 46207), (944, 46234), (946, 46243), (966, 46306), (967, 46309), (986, 46381), (989, 46390), (1005, 46420), (1048, 46528), (1052, 46546), (1054, 46564),

Gene: Trixie\_44 Start: 31811, Stop: 30024, Start Num: 234

Candidate Starts for Trixie\_44:

(Start: 234 @31811 has 938 MA's), (355, 31604), (359, 31598), (368, 31583), (379, 31568), (397, 31532), (405, 31505), (415, 31478), (424, 31457), (432, 31427), (465, 31325), (541, 31232), (566, 31184), (571, 31175), (582, 31160), (619, 31094), (675, 30965), (759, 30740), (778, 30689), (789, 30656), (790, 30653), (805, 30587), (818, 30548), (837, 30527), (859, 30452), (862, 30440), (864, 30434), (908, 30326), (936, 30272), (942, 30248), (962, 30191), (968, 30170), (985, 30113), (989, 30101), (995, 30089),

Gene: Troje\_45 Start: 32853, Stop: 30463, Start Num: 36

Candidate Starts for Troje\_45:

(Start: 36 @32853 has 16 MA's), (64, 32790), (71, 32772), (76, 32757), (96, 32703), (100, 32691), (105, 32670), (119, 32637), (127, 32610), (136, 32586), (159, 32559), (Start: 230 @32454 has 13 MA's), (262, 32406), (317, 32289), (366, 32208), (382, 32181), (391, 32160), (409, 32106), (410, 32103), (420, 32085), (426, 32064), (448, 32004), (524, 31806), (541, 31764), (634, 31677), (643, 31653), (655, 31647), (677, 31593), (682, 31587), (707, 31545), (711, 31542), (713, 31539), (758, 31392), (770, 31350), (773, 31323), (784, 31281), (805, 31188), (817, 31152), (819, 31146), (822, 31140), (824, 31134), (834, 31110), (842, 31077), (849, 31053), (859, 31008), (910, 30873), (985, 30630), (986, 30627), (1008, 30582), (1013, 30573), (1037, 30513),

Gene: Trooper\_45 Start: 31579, Stop: 29792, Start Num: 233

Candidate Starts for Trooper\_45:

(Start: 233 @31579 has 10 MA's), (355, 31372), (359, 31366), (368, 31351), (379, 31336), (395, 31303), (397, 31300), (405, 31273), (415, 31246), (419, 31237), (465, 31093), (468, 31084), (541, 31000), (566, 30952), (571, 30943), (582, 30928), (619, 30862), (655, 30781), (675, 30733), (679, 30727), (740, 30589), (759, 30508), (789, 30424), (790, 30421), (805, 30355), (818, 30316), (837, 30295), (859, 30220), (862, 30208), (908, 30094), (918, 30082), (921, 30076), (936, 30040), (942, 30016), (962, 29959), (968, 29938), (985, 29881), (989, 29869),

Gene: Trouble\_46 Start: 35902, Stop: 34073, Start Num: 234

Candidate Starts for Trouble\_46:

(Start: 234 @35902 has 938 MA's), (368, 35674), (405, 35596), (411, 35575), (415, 35569), (419, 35560), (457, 35443), (465, 35416), (541, 35323), (546, 35308), (566, 35275), (596, 35224), (598, 35221), (634, 35155), (648, 35125), (657, 35095), (679, 35050), (700, 35011), (759, 34831), (775, 34783), (793, 34735), (802, 34696), (805, 34678), (818, 34639), (837, 34618), (841, 34597), (846, 34582), (885, 34459), (946, 34324), (960, 34288), (967, 34264), (982, 34216), (985, 34204), (993, 34183), (997, 34177), (1025, 34129), (1030, 34114),

Gene: TroyPia\_46 Start: 31568, Stop: 29742, Start Num: 234

Candidate Starts for TroyPia\_46:

(Start: 234 @31568 has 938 MA's), (252, 31547), (266, 31517), (279, 31487), (379, 31325), (389, 31307), (415, 31235), (419, 31226), (458, 31106), (465, 31082), (541, 30989), (568, 30941), (582, 30920), (603, 30881), (663, 30749), (675, 30728), (700, 30683), (703, 30671), (756, 30518), (759, 30497), (798, 30374), (805, 30344), (818, 30305), (841, 30239), (842, 30236), (847, 30221), (856, 30197), (862, 30173), (942, 29966), (985, 29831), (989, 29819), (993, 29810),

Gene: True\_59 Start: 54034, Stop: 52175, Start Num: 197

Candidate Starts for True\_59:

(Start: 180 @54058 has 1 MA's), (Start: 197 @54034 has 298 MA's), (Start: 225 @54010 has 5 MA's), (Start: 238 @54004 has 2 MA's), (Start: 261 @53962 has 10 MA's), (269, 53941), (323, 53827), (328, 53821), (349, 53791), (385, 53731), (394, 53710), (410, 53656), (418, 53644), (425, 53626), (427, 53614), (462, 53509), (496, 53452), (511, 53416), (516, 53404), (534, 53380), (539, 53368), (545, 53350), (555, 53332), (566, 53314), (588, 53275), (595, 53266), (597, 53263), (599, 53260), (754, 52903), (760, 52870), (765, 52849), (799, 52756), (802, 52747), (822, 52684), (841, 52648), (842, 52645), (847, 52630), (872, 52552), (877, 52540), (883, 52519), (902, 52480), (942, 52390), (947,



52372), (949, 52366), (954, 52351), (964, 52327), (968, 52312), (969, 52309), (972, 52297), (979, 52273), (1002, 52225), (1015, 52201),

Gene: Trypo\_63 Start: 54706, Stop: 52847, Start Num: 197

Candidate Starts for Trypo\_63:

(Start: 180 @54730 has 1 MA's), (Start: 197 @54706 has 298 MA's), (Start: 225 @54682 has 5 MA's), (Start: 238 @54676 has 2 MA's), (Start: 261 @54634 has 10 MA's), (269, 54613), (323, 54499), (328, 54493), (349, 54463), (385, 54403), (394, 54382), (410, 54328), (418, 54316), (425, 54298), (427, 54286), (462, 54181), (496, 54124), (511, 54088), (516, 54076), (534, 54052), (539, 54040), (545, 54022), (555, 54004), (566, 53986), (588, 53947), (595, 53938), (597, 53935), (599, 53932), (724, 53677), (754, 53575), (760, 53542), (765, 53521), (799, 53428), (802, 53419), (822, 53356), (841, 53320), (842, 53317), (847, 53302), (872, 53224), (877, 53212), (883, 53191), (902, 53152), (942, 53062), (947, 53044), (949, 53038), (954, 53023), (964, 52999), (968, 52984), (969, 52981), (972, 52969), (979, 52945), (985, 52924), (1002, 52897), (1015, 52873),

Gene: Tubs\_45 Start: 31483, Stop: 29690, Start Num: 234

Candidate Starts for Tubs\_45:

(Start: 234 @31483 has 938 MA's), (246, 31474), (266, 31432), (334, 31312), (336, 31309), (364, 31261), (397, 31201), (406, 31171), (409, 31159), (415, 31147), (465, 30994), (541, 30901), (619, 30763), (634, 30733), (703, 30574), (710, 30562), (726, 30535), (756, 30427), (759, 30406), (802, 30271), (805, 30253), (841, 30172), (856, 30130), (879, 30055), (918, 29980), (936, 29938), (968, 29836), (985, 29779), (989, 29767), (993, 29758),

Gene: Tuck\_44 Start: 31714, Stop: 33579, Start Num: 234

Candidate Starts for Tuck\_44:

(Start: 234 @31714 has 938 MA's), (265, 31762), (353, 31918), (405, 32011), (436, 32101), (543, 32308), (598, 32407), (603, 32416), (615, 32431), (619, 32443), (655, 32521), (675, 32569), (703, 32626), (730, 32707), (759, 32827), (769, 32857), (790, 32914), (805, 32980), (840, 33073), (862, 33145), (905, 33253), (936, 33316), (985, 33475), (988, 33484), (1031, 33562),

Gene: Tucker\_46 Start: 29792, Stop: 27951, Start Num: 234

Candidate Starts for Tucker\_46:

(Start: 212 @29822 has 1 MA's), (Start: 234 @29792 has 938 MA's), (353, 29588), (395, 29513), (397, 29510), (405, 29483), (409, 29468), (415, 29456), (432, 29405), (461, 29315), (465, 29303), (541, 29210), (559, 29171), (571, 29153), (582, 29138), (619, 29072), (635, 29039), (636, 29036), (681, 28934), (710, 28874), (740, 28790), (759, 28709), (789, 28625), (790, 28622), (793, 28613), (798, 28586), (805, 28556), (837, 28496), (847, 28457), (936, 28241), (938, 28238), (942, 28217), (985, 28082), (989, 28070), (993, 28061), (995, 28058), (1042, 27965),

Gene: TukTuk\_43 Start: 29558, Stop: 31432, Start Num: 234

Candidate Starts for TukTuk\_43:

(Start: 231 @29555 has 7 MA's), (Start: 234 @29558 has 938 MA's), (273, 29627), (284, 29648), (395, 29828), (419, 29894), (432, 29936), (603, 30230), (663, 30365), (709, 30464), (747, 30587), (759, 30647), (761, 30653), (778, 30698), (786, 30728), (796, 30764), (805, 30800), (840, 30893), (869, 30986), (901, 31064), (936, 31136), (946, 31175), (962, 31217), (967, 31235), (985, 31295), (993, 31316),

Gene: Turab\_38 Start: 28808, Stop: 30673, Start Num: 234

Candidate Starts for Turab\_38:

(Start: 234 @28808 has 938 MA's), (265, 28856), (353, 29012), (411, 29126), (436, 29195), (543, 29402), (598, 29501), (603, 29510), (615, 29525), (619, 29537), (635, 29570), (675, 29663), (703, 29720), (730, 29801), (759, 29921), (769, 29951), (790, 30008), (803, 30065), (805, 30074), (840, 30167), (862, 30239), (865, 30248), (905, 30347), (936, 30410), (978, 30545), (985, 30569), (988,

30578), (1031, 30656),

Gene: Turbido\_45 Start: 31617, Stop: 29830, Start Num: 234

Candidate Starts for Turbido\_45:

(160, 31704), (Start: 234 @31617 has 938 MA's), (355, 31410), (359, 31404), (368, 31389), (379, 31374), (397, 31338), (405, 31311), (415, 31284), (424, 31263), (465, 31131), (541, 31038), (566, 30990), (571, 30981), (582, 30966), (619, 30900), (655, 30819), (675, 30771), (679, 30765), (710, 30702), (759, 30546), (778, 30495), (789, 30462), (790, 30459), (805, 30393), (818, 30354), (837, 30333), (859, 30258), (862, 30246), (879, 30195), (908, 30132), (921, 30114), (936, 30078), (942, 30054), (968, 29976), (985, 29919), (989, 29907), (993, 29898),

Gene: Turj99\_42 Start: 33989, Stop: 32163, Start Num: 234

Candidate Starts for Turj99\_42:

(Start: 234 @33989 has 938 MA's), (359, 33776), (368, 33761), (405, 33683), (408, 33671), (411, 33662), (415, 33656), (419, 33647), (457, 33530), (465, 33503), (541, 33410), (546, 33395), (566, 33362), (596, 33311), (598, 33308), (628, 33254), (634, 33242), (648, 33212), (657, 33182), (679, 33137), (700, 33098), (759, 32918), (775, 32870), (778, 32867), (790, 32831), (805, 32765), (818, 32726), (837, 32705), (841, 32684), (847, 32666), (868, 32600), (936, 32450), (938, 32447), (946, 32411), (954, 32387), (959, 32378), (963, 32366), (977, 32318), (985, 32291), (993, 32270),

Gene: Tutumahutu\_42 Start: 29675, Stop: 31540, Start Num: 234

Candidate Starts for Tutumahutu\_42:

(102, 29414), (Start: 172 @29597 has 1 MA's), (Start: 234 @29675 has 938 MA's), (265, 29723), (405, 29972), (436, 30062), (543, 30269), (546, 30278), (598, 30368), (603, 30377), (615, 30392), (635, 30437), (655, 30482), (675, 30530), (703, 30587), (730, 30668), (753, 30755), (759, 30788), (769, 30818), (790, 30875), (805, 30941), (840, 31034), (862, 31106), (905, 31214), (936, 31277), (942, 31301), (978, 31412), (985, 31436), (988, 31445),

Gene: Tweety19\_41 Start: 28185, Stop: 30029, Start Num: 234

Candidate Starts for Tweety19\_41:

(Start: 234 @28185 has 938 MA's), (265, 28233), (299, 28293), (353, 28389), (377, 28416), (397, 28455), (411, 28503), (436, 28572), (543, 28758), (603, 28866), (615, 28881), (669, 29010), (675, 29019), (730, 29157), (759, 29277), (790, 29364), (803, 29421), (805, 29430), (840, 29523), (936, 29766), (985, 29925), (988, 29934), (1031, 30012),

Gene: Twigg\_39 Start: 30566, Stop: 28701, Start Num: 234

Candidate Starts for Twigg\_39:

(Start: 234 @30566 has 938 MA's), (266, 30515), (301, 30455), (336, 30392), (353, 30362), (355, 30359), (390, 30302), (395, 30290), (405, 30260), (415, 30233), (465, 30080), (541, 29984), (566, 29936), (618, 29852), (619, 29846), (652, 29774), (663, 29741), (670, 29726), (679, 29714), (724, 29615), (759, 29480), (769, 29450), (775, 29432), (782, 29414), (790, 29393), (793, 29384), (805, 29327), (818, 29288), (841, 29246), (847, 29228), (862, 29180), (879, 29129), (903, 29075), (908, 29066), (921, 29048), (942, 28988), (947, 28970), (978, 28877), (985, 28853), (989, 28841), (1042, 28736),

Gene: Twister\_42 Start: 31053, Stop: 29218, Start Num: 234

Candidate Starts for Twister\_42:

(Start: 234 @31053 has 938 MA's), (266, 31002), (303, 30936), (353, 30849), (368, 30825), (390, 30789), (395, 30777), (415, 30720), (419, 30711), (445, 30627), (458, 30591), (461, 30579), (465, 30567), (541, 30474), (568, 30426), (603, 30366), (619, 30339), (661, 30237), (663, 30234), (675, 30213), (679, 30207), (729, 30099), (759, 29976), (775, 29928), (798, 29853), (805, 29823), (816, 29793), (818, 29784), (841, 29715), (842, 29712), (856, 29673), (862, 29649), (864, 29643), (868, 29631), (942, 29442), (949, 29418), (970, 29355), (985, 29307), (989, 29295), (993, 29286),

Gene: TwoPeat\_45 Start: 34739, Stop: 32910, Start Num: 234

Candidate Starts for TwoPeat\_45:

(Start: 234 @34739 has 938 MA's), (359, 34526), (368, 34511), (395, 34463), (405, 34433), (411, 34412), (415, 34406), (419, 34397), (457, 34280), (465, 34253), (541, 34160), (546, 34145), (558, 34124), (596, 34061), (598, 34058), (634, 33992), (648, 33962), (657, 33932), (679, 33887), (700, 33848), (759, 33668), (775, 33620), (793, 33572), (802, 33533), (805, 33515), (818, 33476), (837, 33455), (841, 33434), (846, 33419), (885, 33296), (960, 33125), (967, 33101), (982, 33053), (985, 33041), (993, 33020), (997, 33014), (1025, 32966), (1030, 32951),

Gene: Tydolla\_56 Start: 53884, Stop: 52067, Start Num: 235

Candidate Starts for Tydolla\_56:

(61, 54268), (129, 54067), (Start: 235 @53884 has 43 MA's), (252, 53854), (359, 53674), (424, 53521), (426, 53509), (437, 53479), (442, 53473), (462, 53410), (464, 53404), (496, 53353), (509, 53326), (511, 53317), (539, 53269), (597, 53164), (647, 53068), (664, 53017), (737, 52873), (749, 52834), (755, 52804), (760, 52777), (763, 52765), (797, 52669), (799, 52663), (802, 52654), (804, 52642), (834, 52570), (841, 52540), (847, 52522), (851, 52513), (872, 52444), (877, 52432), (883, 52411), (921, 52342), (931, 52327), (938, 52303), (942, 52282), (947, 52264), (949, 52258), (962, 52225), (964, 52219), (969, 52201), (972, 52189), (975, 52177), (979, 52165), (994, 52123), (1015, 52093),

Gene: TygerBlood\_45 Start: 31570, Stop: 29744, Start Num: 234

Candidate Starts for TygerBlood\_45:

(Start: 234 @31570 has 938 MA's), (252, 31549), (266, 31519), (279, 31489), (379, 31327), (389, 31309), (415, 31237), (419, 31228), (458, 31108), (465, 31084), (541, 30991), (568, 30943), (582, 30922), (603, 30883), (663, 30751), (675, 30730), (700, 30685), (703, 30673), (756, 30520), (759, 30499), (798, 30376), (805, 30346), (818, 30307), (841, 30241), (842, 30238), (847, 30223), (856, 30199), (862, 30175), (942, 29968), (985, 29833), (989, 29821), (993, 29812),

Gene: Typhonomachy\_43 Start: 32264, Stop: 29871, Start Num: 36

Candidate Starts for Typhonomachy\_43:

(Start: 36 @32264 has 16 MA's), (48, 32258), (Start: 60 @32210 has 1 MA's), (76, 32168), (86, 32144), (127, 32018), (136, 31994), (170, 31949), (206, 31898), (216, 31883), (Start: 230 @31862 has 13 MA's), (262, 31814), (279, 31772), (317, 31697), (322, 31685), (366, 31616), (382, 31589), (385, 31583), (391, 31568), (409, 31514), (410, 31511), (420, 31493), (426, 31472), (495, 31289), (497, 31283), (524, 31214), (541, 31172), (634, 31085), (643, 31061), (655, 31055), (662, 31031), (666, 31022), (674, 31007), (682, 30995), (707, 30953), (711, 30950), (713, 30947), (758, 30800), (773, 30731), (774, 30725), (784, 30689), (805, 30596), (807, 30587), (817, 30560), (819, 30554), (822, 30548), (824, 30542), (842, 30485), (849, 30461), (859, 30416), (986, 30035), (1008, 29990), (1013, 29981), (1037, 29921),

Gene: TyrionL\_61 Start: 54131, Stop: 52272, Start Num: 197

Candidate Starts for TyrionL\_61:

(Start: 180 @54155 has 1 MA's), (Start: 197 @54131 has 298 MA's), (Start: 225 @54107 has 5 MA's), (Start: 238 @54101 has 2 MA's), (Start: 261 @54059 has 10 MA's), (269, 54038), (323, 53924), (328, 53918), (349, 53888), (385, 53828), (394, 53807), (410, 53753), (418, 53741), (425, 53723), (427, 53711), (462, 53606), (496, 53549), (511, 53513), (516, 53501), (534, 53477), (539, 53465), (545, 53447), (555, 53429), (566, 53411), (588, 53372), (595, 53363), (597, 53360), (599, 53357), (724, 53102), (754, 53000), (760, 52967), (765, 52946), (799, 52853), (802, 52844), (822, 52781), (841, 52745), (842, 52742), (847, 52727), (872, 52649), (877, 52637), (883, 52616), (902, 52577), (942, 52487), (947, 52469), (949, 52463), (954, 52448), (964, 52424), (968, 52409), (969, 52406), (972, 52394), (979, 52370), (985, 52349), (1002, 52322), (1015, 52298), (1019, 52283),

Gene: U2\_43 Start: 34422, Stop: 32596, Start Num: 234

Candidate Starts for U2\_43:

(Start: 234 @34422 has 938 MA's), (359, 34209), (368, 34194), (395, 34146), (405, 34116), (411, 34095), (415, 34089), (419, 34080), (465, 33936), (541, 33843), (546, 33828), (596, 33744), (598, 33741), (634, 33675), (657, 33615), (679, 33570), (700, 33531), (759, 33351), (775, 33303), (790, 33264), (805, 33198), (818, 33159), (837, 33138), (841, 33117), (847, 33099), (868, 33033), (936, 32883), (938, 32880), (946, 32844), (954, 32820), (959, 32811), (963, 32799), (985, 32724), (993, 32703),

Gene: UACh1\_60 Start: 54265, Stop: 52406, Start Num: 197

Candidate Starts for UACh1\_60:

(Start: 180 @54289 has 1 MA's), (Start: 197 @54265 has 298 MA's), (Start: 225 @54241 has 5 MA's), (Start: 238 @54235 has 2 MA's), (Start: 261 @54193 has 10 MA's), (269, 54172), (323, 54058), (328, 54052), (349, 54022), (385, 53962), (394, 53941), (410, 53887), (418, 53875), (425, 53857), (427, 53845), (462, 53740), (496, 53683), (511, 53647), (516, 53635), (534, 53611), (539, 53599), (545, 53581), (555, 53563), (566, 53545), (588, 53506), (595, 53497), (597, 53494), (599, 53491), (754, 53134), (760, 53101), (765, 53080), (799, 52987), (802, 52978), (822, 52915), (841, 52879), (842, 52876), (847, 52861), (872, 52783), (877, 52771), (883, 52750), (902, 52711), (942, 52621), (947, 52603), (949, 52597), (954, 52582), (964, 52558), (968, 52543), (969, 52540), (972, 52528), (979, 52504), (1002, 52456), (1015, 52432),

Gene: Ugenie5\_42 Start: 31726, Stop: 29933, Start Num: 234

Candidate Starts for Ugenie5\_42:

(Start: 234 @31726 has 938 MA's), (246, 31717), (266, 31675), (334, 31555), (336, 31552), (364, 31504), (397, 31444), (406, 31414), (409, 31402), (415, 31390), (465, 31237), (541, 31144), (619, 31006), (634, 30976), (703, 30817), (710, 30805), (726, 30778), (756, 30670), (759, 30649), (802, 30514), (805, 30496), (841, 30415), (856, 30373), (879, 30298), (885, 30277), (918, 30223), (936, 30181), (968, 30079), (985, 30022), (989, 30010), (993, 30001),

Gene: UhSalsa\_36 Start: 28114, Stop: 26330, Start Num: 234

Candidate Starts for UhSalsa\_36:

(Start: 234 @28114 has 938 MA's), (374, 27880), (390, 27850), (394, 27841), (395, 27838), (409, 27793), (415, 27781), (432, 27730), (465, 27628), (492, 27607), (541, 27535), (563, 27490), (566, 27487), (589, 27445), (594, 27439), (603, 27424), (619, 27397), (663, 27292), (667, 27283), (679, 27265), (700, 27226), (729, 27169), (759, 27046), (775, 26998), (805, 26893), (806, 26890), (837, 26833), (841, 26812), (858, 26764), (881, 26689), (918, 26620), (936, 26578), (942, 26554), (968, 26476), (985, 26419), (989, 26407), (993, 26398), (1010, 26368), (1021, 26350),

Gene: Ulysses\_44 Start: 31247, Stop: 29421, Start Num: 234

Candidate Starts for Ulysses\_44:

(Start: 234 @31247 has 938 MA's), (252, 31226), (266, 31196), (279, 31166), (379, 31004), (389, 30986), (415, 30914), (419, 30905), (458, 30785), (465, 30761), (541, 30668), (568, 30620), (582, 30599), (603, 30560), (628, 30515), (630, 30509), (663, 30428), (675, 30407), (700, 30362), (703, 30350), (756, 30197), (759, 30176), (798, 30053), (805, 30023), (818, 29984), (841, 29918), (842, 29915), (847, 29900), (856, 29876), (862, 29852), (942, 29645), (985, 29510), (989, 29498), (993, 29489),

Gene: UncleHowie\_59 Start: 53736, Stop: 51877, Start Num: 197

Candidate Starts for UncleHowie\_59:

(Start: 180 @53760 has 1 MA's), (Start: 197 @53736 has 298 MA's), (Start: 225 @53712 has 5 MA's), (Start: 238 @53706 has 2 MA's), (Start: 261 @53664 has 10 MA's), (269, 53643), (323, 53529), (328, 53523), (349, 53493), (385, 53433), (394, 53412), (410, 53358), (418, 53346), (425, 53328), (427, 53316), (462, 53211), (496, 53154), (511, 53118), (516, 53106), (535, 53079), (545, 53052), (555, 53034), (566, 53016), (588, 52977), (595, 52968), (597, 52965), (599, 52962), (754, 52605), (760,

52572), (765, 52551), (799, 52458), (802, 52449), (822, 52386), (841, 52350), (842, 52347), (847, 52332), (872, 52254), (877, 52242), (883, 52221), (902, 52182), (942, 52092), (947, 52074), (949, 52068), (954, 52053), (964, 52029), (968, 52014), (969, 52011), (972, 51999), (979, 51975), (1002, 51927), (1015, 51903),

Gene: UnionJack\_39 Start: 29889, Stop: 28024, Start Num: 234

Candidate Starts for UnionJack\_39:

(Start: 234 @29889 has 938 MA's), (301, 29778), (353, 29685), (355, 29682), (395, 29613), (405, 29583), (415, 29556), (419, 29547), (448, 29454), (453, 29439), (465, 29403), (541, 29307), (563, 29262), (566, 29259), (582, 29235), (618, 29175), (652, 29097), (663, 29064), (670, 29049), (679, 29037), (724, 28938), (759, 28803), (769, 28773), (775, 28755), (778, 28752), (790, 28716), (793, 28707), (796, 28686), (799, 28677), (805, 28650), (806, 28647), (837, 28590), (841, 28569), (862, 28503), (879, 28452), (903, 28398), (908, 28389), (921, 28371), (942, 28311), (947, 28293), (978, 28200), (985, 28176), (989, 28164), (1042, 28059),

Gene: Updawg\_45 Start: 31601, Stop: 29814, Start Num: 234

Candidate Starts for Updawg\_45:

(Start: 234 @31601 has 938 MA's), (353, 31397), (355, 31394), (359, 31388), (379, 31358), (395, 31325), (397, 31322), (405, 31295), (415, 31268), (432, 31217), (465, 31115), (541, 31022), (566, 30974), (571, 30965), (582, 30950), (619, 30884), (655, 30803), (675, 30755), (740, 30611), (759, 30530), (778, 30479), (789, 30446), (805, 30377), (818, 30338), (837, 30317), (841, 30296), (845, 30284), (918, 30104), (921, 30098), (936, 30062), (942, 30038), (968, 29960), (985, 29903), (989, 29891),

Gene: Upyo\_46 Start: 36456, Stop: 34090, Start Num: 18

Candidate Starts for Upyo\_46:

(1, 36705), (2, 36570), (6, 36546), (7, 36540), (9, 36528), (12, 36480), (Start: 18 @36456 has 1 MA's), (46, 36330), (62, 36273), (83, 36219), (94, 36183), (115, 36114), (117, 36108), (153, 36009), (308, 35775), (320, 35748), (389, 35640), (410, 35574), (419, 35559), (432, 35523), (462, 35439), (465, 35430), (496, 35382), (511, 35346), (516, 35334), (544, 35280), (561, 35250), (574, 35232), (581, 35223), (597, 35193), (638, 35115), (664, 35043), (746, 34869), (749, 34860), (754, 34836), (760, 34803), (783, 34746), (793, 34722), (799, 34692), (804, 34671), (839, 34593), (847, 34566), (867, 34503), (872, 34488), (877, 34476), (883, 34455), (930, 34356), (942, 34308), (946, 34293), (949, 34284), (968, 34230), (969, 34227), (979, 34191), (1002, 34140), (1015, 34116),

Gene: Usavi\_60 Start: 54404, Stop: 52545, Start Num: 197

Candidate Starts for Usavi\_60:

(Start: 180 @54428 has 1 MA's), (Start: 197 @54404 has 298 MA's), (Start: 225 @54380 has 5 MA's), (Start: 238 @54374 has 2 MA's), (Start: 261 @54332 has 10 MA's), (269, 54311), (323, 54197), (328, 54191), (349, 54161), (385, 54101), (394, 54080), (410, 54026), (418, 54014), (425, 53996), (427, 53984), (462, 53879), (496, 53822), (511, 53786), (516, 53774), (535, 53747), (545, 53720), (555, 53702), (566, 53684), (588, 53645), (595, 53636), (597, 53633), (724, 53375), (754, 53273), (760, 53240), (765, 53219), (799, 53126), (802, 53117), (822, 53054), (841, 53018), (842, 53015), (847, 53000), (872, 52922), (877, 52910), (883, 52889), (902, 52850), (942, 52760), (947, 52742), (949, 52736), (954, 52721), (964, 52697), (968, 52682), (969, 52679), (972, 52667), (979, 52643), (1002, 52595), (1015, 52571),

Gene: UtzChips\_47 Start: 31134, Stop: 32999, Start Num: 233

Candidate Starts for UtzChips\_47:

(153, 31014), (162, 31032), (Start: 233 @31134 has 10 MA's), (299, 31242), (600, 31830), (603, 31836), (675, 31989), (705, 32052), (759, 32247), (781, 32310), (796, 32364), (798, 32370), (806, 32403), (869, 32586), (985, 32895), (1026, 32973), (1038, 32994),

Gene: VA6\_43 Start: 31120, Stop: 29333, Start Num: 234

Candidate Starts for VA6\_43:

(Start: 234 @31120 has 938 MA's), (353, 30916), (355, 30913), (359, 30907), (368, 30892), (379, 30877), (395, 30844), (397, 30841), (405, 30814), (415, 30787), (424, 30766), (432, 30736), (465, 30634), (541, 30541), (544, 30532), (566, 30493), (571, 30484), (582, 30469), (619, 30403), (655, 30322), (675, 30274), (679, 30268), (740, 30130), (759, 30049), (778, 29998), (789, 29965), (790, 29962), (805, 29896), (818, 29857), (837, 29836), (859, 29761), (864, 29743), (879, 29698), (888, 29671), (908, 29635), (921, 29617), (936, 29581), (942, 29557), (962, 29500), (985, 29422), (989, 29410), (993, 29401),

Gene: VC3\_48 Start: 31569, Stop: 29770, Start Num: 234

Candidate Starts for VC3\_48:

(Start: 234 @31569 has 938 MA's), (353, 31365), (395, 31290), (397, 31287), (405, 31260), (409, 31245), (415, 31233), (432, 31182), (465, 31080), (541, 30987), (544, 30978), (566, 30939), (571, 30930), (619, 30849), (635, 30816), (648, 30789), (700, 30675), (710, 30651), (759, 30486), (775, 30438), (790, 30399), (798, 30363), (805, 30333), (818, 30294), (837, 30273), (868, 30168), (879, 30135), (908, 30072), (936, 30018), (942, 29994), (985, 29859), (989, 29847), (993, 29838),

Gene: VResidence\_41 Start: 29109, Stop: 31019, Start Num: 234

Candidate Starts for VResidence\_41:

(Start: 234 @29109 has 938 MA's), (265, 29157), (336, 29283), (377, 29340), (411, 29427), (436, 29496), (543, 29748), (546, 29757), (603, 29856), (615, 29871), (675, 30009), (730, 30147), (740, 30186), (759, 30267), (790, 30354), (798, 30390), (803, 30411), (805, 30420), (862, 30585), (865, 30594), (936, 30756), (947, 30798), (960, 30831), (985, 30915), (988, 30924), (1031, 31002),

Gene: Vaishali24\_59 Start: 53939, Stop: 52080, Start Num: 197

Candidate Starts for Vaishali24\_59:

(43, 54335), (70, 54248), (75, 54233), (78, 54227), (85, 54212), (90, 54194), (Start: 180 @53963 has 1 MA's), (Start: 197 @53939 has 298 MA's), (Start: 225 @53915 has 5 MA's), (Start: 238 @53909 has 2 MA's), (Start: 261 @53867 has 10 MA's), (269, 53846), (323, 53732), (328, 53726), (349, 53696), (385, 53636), (394, 53615), (410, 53561), (418, 53549), (427, 53519), (462, 53414), (496, 53357), (511, 53321), (516, 53309), (535, 53282), (539, 53273), (555, 53237), (566, 53219), (588, 53180), (595, 53171), (597, 53168), (754, 52808), (760, 52775), (765, 52754), (799, 52661), (802, 52652), (822, 52589), (841, 52553), (842, 52550), (847, 52535), (872, 52457), (877, 52445), (883, 52424), (902, 52385), (942, 52295), (947, 52277), (949, 52271), (954, 52256), (964, 52232), (968, 52217), (969, 52214), (972, 52202), (979, 52178), (1002, 52130), (1015, 52106),

Gene: Valjean\_60 Start: 54261, Stop: 52402, Start Num: 197

Candidate Starts for Valjean\_60:

(Start: 180 @54285 has 1 MA's), (Start: 197 @54261 has 298 MA's), (Start: 225 @54237 has 5 MA's), (Start: 238 @54231 has 2 MA's), (Start: 261 @54189 has 10 MA's), (269, 54168), (323, 54054), (328, 54048), (349, 54018), (385, 53958), (394, 53937), (410, 53883), (418, 53871), (425, 53853), (427, 53841), (462, 53736), (496, 53679), (511, 53643), (516, 53631), (534, 53607), (539, 53595), (545, 53577), (555, 53559), (566, 53541), (588, 53502), (595, 53493), (597, 53490), (599, 53487), (754, 53130), (760, 53097), (765, 53076), (799, 52983), (802, 52974), (822, 52911), (841, 52875), (842, 52872), (847, 52857), (872, 52779), (877, 52767), (883, 52746), (902, 52707), (942, 52617), (947, 52599), (949, 52593), (954, 52578), (964, 52554), (968, 52539), (969, 52536), (972, 52524), (979, 52500), (1002, 52452), (1015, 52428),

Gene: Vanisoa\_44 Start: 32049, Stop: 30256, Start Num: 234

Candidate Starts for Vanisoa\_44:

(Start: 234 @32049 has 938 MA's), (246, 32040), (266, 31998), (334, 31878), (336, 31875), (353, 31845), (364, 31827), (395, 31770), (397, 31767), (406, 31737), (409, 31725), (415, 31713), (419,

31704), (432, 31662), (438, 31644), (464, 31563), (465, 31560), (541, 31467), (634, 31299), (672, 31203), (703, 31140), (726, 31101), (729, 31095), (759, 30972), (769, 30942), (782, 30906), (793, 30876), (805, 30819), (841, 30738), (879, 30621), (936, 30504), (942, 30480), (968, 30402), (985, 30345), (989, 30333), (993, 30324),

Gene: Vash\_34 Start: 26753, Stop: 28627, Start Num: 234

Candidate Starts for Vash\_34:

(Start: 234 @26753 has 938 MA's), (279, 26834), (353, 26954), (405, 27056), (406, 27059), (411, 27077), (419, 27092), (581, 27401), (596, 27431), (603, 27443), (617, 27461), (632, 27497), (663, 27575), (669, 27587), (675, 27596), (703, 27653), (704, 27656), (705, 27659), (750, 27803), (759, 27854), (775, 27905), (796, 27977), (798, 27983), (799, 27986), (803, 28004), (805, 28013), (817, 28079), (839, 28133), (876, 28247), (902, 28310), (905, 28316), (908, 28322), (931, 28358), (935, 28370), (946, 28418), (949, 28427), (960, 28454), (968, 28481), (985, 28538), (987, 28544), (993, 28559), (997, 28565),

Gene: Vaticameos\_57 Start: 52569, Stop: 50710, Start Num: 197

Candidate Starts for Vaticameos\_57:

(Start: 180 @52593 has 1 MA's), (Start: 197 @52569 has 298 MA's), (Start: 225 @52545 has 5 MA's), (Start: 238 @52539 has 2 MA's), (Start: 261 @52497 has 10 MA's), (269, 52476), (323, 52362), (328, 52356), (349, 52326), (385, 52266), (394, 52245), (410, 52191), (418, 52179), (425, 52161), (427, 52149), (462, 52044), (496, 51987), (511, 51951), (516, 51939), (535, 51912), (545, 51885), (555, 51867), (566, 51849), (588, 51810), (595, 51801), (597, 51798), (724, 51540), (754, 51438), (760, 51405), (765, 51384), (799, 51291), (802, 51282), (822, 51219), (841, 51183), (842, 51180), (847, 51165), (872, 51087), (877, 51075), (883, 51054), (902, 51015), (942, 50925), (947, 50907), (949, 50901), (954, 50886), (964, 50862), (968, 50847), (969, 50844), (972, 50832), (979, 50808), (1002, 50760), (1015, 50736),

Gene: Velene\_39 Start: 28935, Stop: 27070, Start Num: 283

Candidate Starts for Velene\_39:

(Start: 234 @29022 has 938 MA's), (Start: 237 @29019 has 2 MA's), (274, 28950), (Start: 283 @28935 has 147 MA's), (Start: 291 @28926 has 5 MA's), (342, 28821), (347, 28812), (367, 28782), (369, 28779), (424, 28659), (426, 28647), (428, 28641), (466, 28536), (473, 28509), (532, 28368), (537, 28359), (541, 28347), (551, 28320), (553, 28317), (562, 28302), (566, 28296), (570, 28290), (613, 28257), (701, 28068), (798, 27753), (801, 27744), (802, 27741), (805, 27723), (819, 27681), (822, 27675), (832, 27651), (849, 27594), (900, 27435), (913, 27405), (917, 27396), (938, 27336), (943, 27312), (956, 27273), (967, 27240), (970, 27228), (986, 27168),

Gene: Veracruz\_43 Start: 31597, Stop: 29759, Start Num: 234

Candidate Starts for Veracruz\_43:

(Start: 234 @31597 has 938 MA's), (266, 31546), (353, 31393), (395, 31321), (405, 31291), (415, 31264), (419, 31255), (465, 31111), (541, 31015), (568, 30967), (603, 30907), (648, 30820), (663, 30775), (675, 30754), (711, 30682), (729, 30640), (740, 30598), (759, 30517), (775, 30469), (790, 30430), (798, 30394), (805, 30364), (816, 30334), (842, 30253), (856, 30214), (862, 30190), (868, 30172), (869, 30169), (921, 30043), (942, 29983), (970, 29896), (985, 29848), (989, 29836), (993, 29827),

Gene: Veritas\_62 Start: 54399, Stop: 52540, Start Num: 197

Candidate Starts for Veritas\_62:

(Start: 180 @54423 has 1 MA's), (Start: 197 @54399 has 298 MA's), (Start: 225 @54375 has 5 MA's), (Start: 238 @54369 has 2 MA's), (Start: 261 @54327 has 10 MA's), (269, 54306), (323, 54192), (328, 54186), (349, 54156), (385, 54096), (394, 54075), (410, 54021), (418, 54009), (425, 53991), (427, 53979), (462, 53874), (496, 53817), (511, 53781), (516, 53769), (535, 53742), (555, 53697), (588, 53640), (595, 53631), (597, 53628), (754, 53268), (760, 53235), (765, 53214), (799, 53121), (802,

53112), (822, 53049), (841, 53013), (842, 53010), (847, 52995), (872, 52917), (877, 52905), (883, 52884), (902, 52845), (942, 52755), (947, 52737), (949, 52731), (954, 52716), (964, 52692), (968, 52677), (969, 52674), (972, 52662), (979, 52638), (1002, 52590), (1015, 52566), (1019, 52551),

Gene: Vic9\_58 Start: 53336, Stop: 51507, Start Num: 197

Candidate Starts for Vic9\_58:

(Start: 197 @53336 has 298 MA's), (Start: 238 @53309 has 2 MA's), (253, 53279), (Start: 261 @53267 has 10 MA's), (272, 53240), (273, 53237), (277, 53228), (301, 53210), (355, 53114), (385, 53063), (395, 53039), (450, 52877), (456, 52862), (459, 52853), (462, 52841), (496, 52784), (511, 52748), (516, 52736), (534, 52712), (574, 52634), (580, 52628), (583, 52619), (595, 52598), (597, 52595), (618, 52565), (678, 52421), (710, 52355), (737, 52304), (743, 52283), (749, 52265), (760, 52208), (783, 52151), (793, 52124), (799, 52094), (802, 52085), (822, 52019), (839, 51992), (841, 51983), (847, 51965), (856, 51941), (872, 51887), (877, 51875), (883, 51854), (921, 51785), (942, 51725), (947, 51707), (960, 51674), (964, 51662), (968, 51647), (969, 51644), (972, 51632), (979, 51608), (980, 51605), (1002, 51557), (1004, 51554), (1015, 51533), (1023, 51512),

Gene: Vincenzo\_56 Start: 55146, Stop: 53320, Start Num: 189

Candidate Starts for Vincenzo\_56:

(Start: 189 @55146 has 26 MA's), (Start: 222 @55128 has 1 MA's), (Start: 261 @55077 has 10 MA's), (269, 55056), (349, 54918), (382, 54864), (402, 54810), (425, 54756), (434, 54726), (441, 54714), (442, 54711), (496, 54591), (511, 54555), (516, 54543), (535, 54516), (588, 54414), (597, 54402), (619, 54366), (634, 54336), (648, 54303), (664, 54255), (755, 54042), (760, 54015), (797, 53907), (799, 53901), (802, 53892), (804, 53880), (822, 53829), (839, 53802), (841, 53793), (842, 53790), (843, 53787), (847, 53775), (872, 53697), (877, 53685), (883, 53664), (885, 53655), (890, 53646), (942, 53535), (947, 53517), (949, 53511), (964, 53472), (968, 53457), (972, 53442), (975, 53430), (979, 53418), (1002, 53370), (1015, 53346),

Gene: Vine\_47 Start: 34669, Stop: 32288, Start Num: 47

Candidate Starts for Vine\_47:

(Start: 47 @34669 has 13 MA's), (64, 34609), (82, 34567), (96, 34528), (136, 34408), (141, 34387), (170, 34363), (Start: 223 @34285 has 3 MA's), (228, 34279), (Start: 230 @34276 has 13 MA's), (252, 34246), (273, 34198), (290, 34171), (Start: 291 @34168 has 5 MA's), (317, 34111), (342, 34072), (354, 34051), (380, 34009), (391, 33985), (395, 33976), (398, 33970), (399, 33964), (409, 33931), (420, 33910), (426, 33889), (495, 33706), (524, 33631), (541, 33589), (634, 33502), (655, 33478), (662, 33454), (666, 33445), (677, 33424), (711, 33373), (713, 33370), (718, 33355), (728, 33334), (759, 33208), (772, 33160), (773, 33151), (784, 33109), (805, 33016), (817, 32980), (819, 32974), (822, 32968), (824, 32962), (842, 32905), (849, 32881), (878, 32776), (879, 32773), (919, 32680), (926, 32662), (938, 32623), (948, 32581), (958, 32557), (967, 32527), (979, 32479), (986, 32455), (1008, 32410), (1035, 32344), (1046, 32323), (1047, 32317), (1050, 32311),

Gene: Violet\_42 Start: 34578, Stop: 32752, Start Num: 234

Candidate Starts for Violet\_42:

(Start: 234 @34578 has 938 MA's), (359, 34365), (395, 34302), (405, 34272), (411, 34251), (415, 34245), (419, 34236), (457, 34119), (465, 34092), (541, 33999), (546, 33984), (596, 33900), (598, 33897), (634, 33831), (657, 33771), (679, 33726), (700, 33687), (759, 33507), (775, 33459), (790, 33420), (805, 33354), (816, 33324), (818, 33315), (837, 33294), (841, 33273), (847, 33255), (868, 33189), (936, 33039), (938, 33036), (946, 33000), (954, 32976), (959, 32967), (963, 32955), (985, 32880), (993, 32859),

Gene: VioletZ\_55 Start: 54089, Stop: 52266, Start Num: 189

Candidate Starts for VioletZ\_55:

(Start: 175 @54107 has 4 MA's), (Start: 189 @54089 has 26 MA's), (Start: 238 @54065 has 2 MA's), (252, 54038), (Start: 261 @54023 has 10 MA's), (269, 54002), (316, 53915), (382, 53810), (394,



53783), (399, 53768), (425, 53702), (434, 53672), (437, 53663), (441, 53660), (442, 53657), (450, 53630), (496, 53537), (504, 53519), (511, 53501), (516, 53489), (535, 53462), (566, 53399), (595, 53351), (597, 53348), (618, 53318), (634, 53282), (737, 53057), (739, 53054), (749, 53018), (754, 52994), (760, 52961), (797, 52853), (799, 52847), (802, 52838), (841, 52739), (842, 52736), (847, 52721), (872, 52643), (877, 52631), (883, 52610), (885, 52601), (902, 52571), (921, 52541), (935, 52514), (942, 52481), (949, 52457), (964, 52418), (969, 52400), (972, 52388), (979, 52364), (994, 52322), (1002, 52316), (1015, 52292),

Gene: Virapocalypse\_61 Start: 54360, Stop: 52501, Start Num: 197

Candidate Starts for Virapocalypse\_61:

(Start: 180 @54384 has 1 MA's), (Start: 197 @54360 has 298 MA's), (Start: 225 @54336 has 5 MA's), (Start: 238 @54330 has 2 MA's), (Start: 261 @54288 has 10 MA's), (269, 54267), (323, 54153), (328, 54147), (349, 54117), (385, 54057), (394, 54036), (410, 53982), (418, 53970), (425, 53952), (427, 53940), (462, 53835), (496, 53778), (511, 53742), (516, 53730), (534, 53706), (539, 53694), (545, 53676), (555, 53658), (566, 53640), (588, 53601), (595, 53592), (597, 53589), (599, 53586), (754, 53229), (760, 53196), (765, 53175), (799, 53082), (802, 53073), (822, 53010), (841, 52974), (842, 52971), (847, 52956), (872, 52878), (877, 52866), (883, 52845), (902, 52806), (942, 52716), (947, 52698), (949, 52692), (954, 52677), (964, 52653), (968, 52638), (969, 52635), (972, 52623), (979, 52599), (1002, 52551), (1015, 52527),

Gene: Virgeve\_60 Start: 53997, Stop: 52138, Start Num: 197

Candidate Starts for Virgeve\_60:

(Start: 180 @54021 has 1 MA's), (Start: 197 @53997 has 298 MA's), (Start: 225 @53973 has 5 MA's), (Start: 238 @53967 has 2 MA's), (Start: 261 @53925 has 10 MA's), (269, 53904), (323, 53790), (328, 53784), (349, 53754), (385, 53694), (394, 53673), (410, 53619), (418, 53607), (425, 53589), (427, 53577), (462, 53472), (496, 53415), (511, 53379), (516, 53367), (534, 53343), (539, 53331), (545, 53313), (555, 53295), (566, 53277), (588, 53238), (595, 53229), (597, 53226), (599, 53223), (754, 52866), (760, 52833), (765, 52812), (799, 52719), (802, 52710), (822, 52647), (841, 52611), (842, 52608), (847, 52593), (872, 52515), (877, 52503), (883, 52482), (902, 52443), (942, 52353), (947, 52335), (949, 52329), (954, 52314), (964, 52290), (968, 52275), (969, 52272), (972, 52260), (979, 52236), (1002, 52188), (1015, 52164),

Gene: Vispitious\_39 Start: 28937, Stop: 27072, Start Num: 283

Candidate Starts for Vispitious\_39:

(Start: 234 @29024 has 938 MA's), (Start: 237 @29021 has 2 MA's), (Start: 283 @28937 has 147 MA's), (Start: 291 @28928 has 5 MA's), (342, 28823), (347, 28814), (367, 28784), (369, 28781), (424, 28661), (426, 28649), (428, 28643), (466, 28538), (473, 28511), (532, 28370), (535, 28364), (537, 28361), (541, 28349), (551, 28322), (553, 28319), (562, 28304), (566, 28298), (570, 28292), (613, 28259), (671, 28130), (701, 28070), (733, 27995), (798, 27755), (801, 27746), (802, 27743), (805, 27725), (819, 27683), (822, 27677), (825, 27668), (832, 27653), (849, 27596), (900, 27437), (913, 27407), (917, 27398), (938, 27338), (943, 27314), (956, 27275), (967, 27242), (970, 27230), (986, 27170),

Gene: Vista\_60 Start: 54037, Stop: 52178, Start Num: 197

Candidate Starts for Vista\_60:

(Start: 180 @54061 has 1 MA's), (Start: 197 @54037 has 298 MA's), (Start: 225 @54013 has 5 MA's), (Start: 238 @54007 has 2 MA's), (Start: 261 @53965 has 10 MA's), (269, 53944), (323, 53830), (328, 53824), (349, 53794), (385, 53734), (394, 53713), (410, 53659), (418, 53647), (425, 53629), (427, 53617), (462, 53512), (496, 53455), (511, 53419), (516, 53407), (535, 53380), (545, 53353), (555, 53335), (566, 53317), (588, 53278), (595, 53269), (597, 53266), (754, 52906), (760, 52873), (765, 52852), (799, 52759), (802, 52750), (822, 52687), (841, 52651), (842, 52648), (847, 52633), (872, 52555), (877, 52543), (883, 52522), (902, 52483), (942, 52393), (947, 52375), (949, 52369), (954, 52354), (964, 52330), (968, 52315), (969, 52312), (972, 52300), (979, 52276), (1002, 52228), (1015,

52204),

Gene: Vitas\_40 Start: 27434, Stop: 29302, Start Num: 231

Candidate Starts for Vitas\_40:

(Start: 231 @27434 has 7 MA's), (Start: 234 @27437 has 938 MA's), (Start: 237 @27440 has 2 MA's), (273, 27509), (425, 27791), (432, 27818), (453, 27872), (559, 28037), (603, 28112), (618, 28133), (747, 28487), (759, 28547), (778, 28598), (796, 28664), (805, 28700), (840, 28793), (901, 28964), (936, 29036), (962, 29117), (984, 29192), (985, 29195), (993, 29216), (1032, 29285),

Gene: Vivaldi\_62 Start: 54495, Stop: 52636, Start Num: 197

Candidate Starts for Vivaldi\_62:

(Start: 180 @54519 has 1 MA's), (Start: 197 @54495 has 298 MA's), (Start: 225 @54471 has 5 MA's), (Start: 238 @54465 has 2 MA's), (Start: 261 @54423 has 10 MA's), (269, 54402), (323, 54288), (328, 54282), (349, 54252), (385, 54192), (394, 54171), (410, 54117), (418, 54105), (425, 54087), (427, 54075), (462, 53970), (496, 53913), (511, 53877), (516, 53865), (534, 53841), (539, 53829), (545, 53811), (555, 53793), (566, 53775), (588, 53736), (595, 53727), (597, 53724), (599, 53721), (754, 53364), (760, 53331), (765, 53310), (799, 53217), (802, 53208), (822, 53145), (841, 53109), (842, 53106), (847, 53091), (872, 53013), (877, 53001), (883, 52980), (902, 52941), (942, 52851), (947, 52833), (949, 52827), (954, 52812), (964, 52788), (968, 52773), (969, 52770), (972, 52758), (979, 52734), (1002, 52686), (1015, 52662),

Gene: Vix\_48 Start: 31935, Stop: 30121, Start Num: 234

Candidate Starts for Vix\_48:

(Start: 234 @31935 has 938 MA's), (262, 31896), (266, 31884), (353, 31731), (362, 31716), (395, 31659), (415, 31602), (419, 31593), (432, 31551), (448, 31500), (465, 31449), (541, 31356), (566, 31308), (571, 31299), (582, 31284), (603, 31245), (619, 31218), (634, 31188), (670, 31095), (701, 31035), (710, 31020), (759, 30864), (790, 30777), (805, 30711), (818, 30672), (842, 30600), (856, 30561), (862, 30537), (868, 30519), (879, 30486), (888, 30459), (921, 30405), (942, 30345), (968, 30267), (985, 30210), (989, 30198), (993, 30189),

Gene: VohminGhazi\_45 Start: 29628, Stop: 27787, Start Num: 234

Candidate Starts for VohminGhazi\_45:

(Start: 234 @29628 has 938 MA's), (353, 29424), (395, 29349), (397, 29346), (405, 29319), (409, 29304), (415, 29292), (432, 29241), (461, 29151), (465, 29139), (541, 29046), (559, 29007), (571, 28989), (582, 28974), (619, 28908), (635, 28875), (636, 28872), (681, 28770), (710, 28710), (740, 28626), (759, 28545), (789, 28461), (790, 28458), (793, 28449), (798, 28422), (805, 28392), (837, 28332), (847, 28293), (936, 28077), (938, 28074), (942, 28053), (985, 27918), (989, 27906), (993, 27897), (995, 27894), (1042, 27801),

Gene: Vortex\_60 Start: 54019, Stop: 52160, Start Num: 197

Candidate Starts for Vortex\_60:

(Start: 180 @54043 has 1 MA's), (Start: 197 @54019 has 298 MA's), (Start: 225 @53995 has 5 MA's), (Start: 238 @53989 has 2 MA's), (Start: 261 @53947 has 10 MA's), (269, 53926), (323, 53812), (328, 53806), (349, 53776), (385, 53716), (394, 53695), (410, 53641), (418, 53629), (425, 53611), (427, 53599), (462, 53494), (496, 53437), (511, 53401), (516, 53389), (535, 53362), (555, 53317), (588, 53260), (595, 53251), (597, 53248), (754, 52888), (760, 52855), (765, 52834), (799, 52741), (802, 52732), (822, 52669), (841, 52633), (842, 52630), (847, 52615), (872, 52537), (877, 52525), (883, 52504), (902, 52465), (942, 52375), (947, 52357), (949, 52351), (954, 52336), (964, 52312), (968, 52297), (969, 52294), (972, 52282), (979, 52258), (1002, 52210), (1015, 52186),

Gene: VroomVroom\_45 Start: 30595, Stop: 32457, Start Num: 234

Candidate Starts for VroomVroom\_45:

(Start: 234 @30595 has 938 MA's), (265, 30643), (395, 30862), (428, 30958), (535, 31165), (603, 31294), (635, 31354), (655, 31399), (675, 31447), (712, 31531), (759, 31705), (769, 31735), (796, 31822), (798, 31828), (840, 31951), (842, 31960), (876, 32062), (942, 32218), (949, 32242), (985, 32353),

Gene: WaddleDee\_92 Start: 73545, Stop: 75263, Start Num: 284

Candidate Starts for WaddleDee\_92:

(Start: 248 @73470 has 2 MA's), (265, 73503), (273, 73524), (276, 73533), (284, 73545), (418, 73782), (426, 73809), (428, 73815), (518, 73950), (586, 74067), (603, 74094), (609, 74100), (615, 74109), (638, 74163), (700, 74295), (706, 74316), (721, 74343), (735, 74391), (746, 74424), (756, 74463), (759, 74484), (761, 74490), (796, 74607), (817, 74691), (818, 74694), (840, 74757), (843, 74769), (856, 74805), (865, 74838), (883, 74892), (890, 74910), (931, 74994), (936, 75015), (943, 75042), (960, 75090), (962, 75096), (967, 75114), (970, 75126), (973, 75138), (974, 75141), (985, 75174), (999, 75201), (1017, 75225),

Gene: Waits\_47 Start: 29831, Stop: 28041, Start Num: 234

Candidate Starts for Waits\_47:

(Start: 234 @29831 has 938 MA's), (395, 29552), (397, 29549), (405, 29522), (415, 29495), (432, 29444), (465, 29342), (541, 29249), (559, 29210), (571, 29192), (663, 29003), (700, 28937), (730, 28877), (740, 28838), (754, 28787), (756, 28778), (759, 28757), (778, 28706), (789, 28673), (796, 28640), (798, 28634), (805, 28604), (837, 28544), (841, 28523), (856, 28481), (863, 28454), (903, 28352), (936, 28289), (938, 28286), (985, 28130), (989, 28118), (995, 28106),

Gene: Waleliano\_53 Start: 54042, Stop: 52219, Start Num: 189

Candidate Starts for Waleliano\_53:

(Start: 175 @54060 has 4 MA's), (Start: 189 @54042 has 26 MA's), (Start: 238 @54018 has 2 MA's), (252, 53991), (Start: 261 @53976 has 10 MA's), (269, 53955), (316, 53868), (382, 53763), (394, 53736), (399, 53721), (425, 53655), (434, 53625), (437, 53616), (441, 53613), (442, 53610), (450, 53583), (496, 53490), (504, 53472), (511, 53454), (516, 53442), (535, 53415), (566, 53352), (588, 53313), (595, 53304), (597, 53301), (618, 53271), (634, 53235), (737, 53010), (739, 53007), (749, 52971), (754, 52947), (760, 52914), (797, 52806), (799, 52800), (802, 52791), (841, 52692), (842, 52689), (847, 52674), (872, 52596), (877, 52584), (883, 52563), (885, 52554), (902, 52524), (935, 52467), (942, 52434), (949, 52410), (964, 52371), (969, 52353), (972, 52341), (979, 52317), (994, 52275), (1002, 52269), (1015, 52245),

Gene: WalkingDead\_44 Start: 31418, Stop: 33292, Start Num: 230

Candidate Starts for WalkingDead\_44:

(Start: 230 @31418 has 13 MA's), (255, 31445), (273, 31487), (284, 31508), (419, 31754), (425, 31769), (432, 31796), (543, 31982), (556, 32009), (603, 32090), (670, 32240), (709, 32324), (746, 32444), (747, 32447), (759, 32507), (761, 32513), (778, 32558), (782, 32573), (786, 32588), (796, 32624), (799, 32633), (805, 32660), (840, 32753), (869, 32846), (901, 32924), (902, 32927), (936, 32996), (946, 33035), (962, 33077), (967, 33095), (985, 33155), (993, 33176),

Gene: Wallhey\_61 Start: 54135, Stop: 52276, Start Num: 197

Candidate Starts for Wallhey\_61:

(Start: 180 @54159 has 1 MA's), (Start: 197 @54135 has 298 MA's), (Start: 225 @54111 has 5 MA's), (Start: 238 @54105 has 2 MA's), (Start: 261 @54063 has 10 MA's), (269, 54042), (323, 53928), (328, 53922), (349, 53892), (385, 53832), (394, 53811), (410, 53757), (418, 53745), (425, 53727), (427, 53715), (462, 53610), (496, 53553), (511, 53517), (516, 53505), (535, 53478), (555, 53433), (588, 53376), (595, 53367), (597, 53364), (724, 53106), (754, 53004), (760, 52971), (765, 52950), (799, 52857), (802, 52848), (822, 52785), (841, 52749), (842, 52746), (847, 52731), (872, 52653), (877, 52641), (883, 52620), (902, 52581), (942, 52491), (947, 52473), (949, 52467), (954, 52452), (964, 52428), (968, 52413), (969, 52410), (972, 52398), (979, 52374), (985, 52353), (1002, 52326), (1015,

52302), (1019, 52287),

Gene: WalterMcMickey\_42 Start: 31053, Stop: 29218, Start Num: 234

Candidate Starts for WalterMcMickey\_42:

(Start: 234 @31053 has 938 MA's), (266, 31002), (303, 30936), (353, 30849), (368, 30825), (390, 30789), (395, 30777), (415, 30720), (419, 30711), (445, 30627), (458, 30591), (461, 30579), (465, 30567), (541, 30474), (568, 30426), (603, 30366), (619, 30339), (661, 30237), (663, 30234), (675, 30213), (679, 30207), (729, 30099), (759, 29976), (775, 29928), (798, 29853), (805, 29823), (816, 29793), (818, 29784), (841, 29715), (842, 29712), (856, 29673), (862, 29649), (864, 29643), (868, 29631), (942, 29442), (949, 29418), (970, 29355), (985, 29307), (989, 29295), (993, 29286),

Gene: Wander\_45 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for Wander\_45:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: Warda\_41 Start: 29679, Stop: 31544, Start Num: 234

Candidate Starts for Warda\_41:

(Start: 234 @29679 has 938 MA's), (265, 29727), (405, 29976), (436, 30066), (543, 30273), (546, 30282), (598, 30372), (603, 30381), (615, 30396), (635, 30441), (655, 30486), (675, 30534), (703, 30591), (730, 30672), (759, 30792), (769, 30822), (790, 30879), (803, 30936), (805, 30945), (905, 31218), (936, 31281), (978, 31416), (985, 31440), (988, 31449),

Gene: Wardwill\_39 Start: 27171, Stop: 25306, Start Num: 283

Candidate Starts for Wardwill\_39:

(Start: 283 @27171 has 147 MA's), (290, 27165), (337, 27066), (342, 27057), (343, 27054), (357, 27033), (367, 27018), (371, 27012), (398, 26961), (399, 26958), (428, 26877), (460, 26787), (479, 26727), (489, 26724), (535, 26598), (537, 26595), (541, 26583), (553, 26553), (566, 26532), (611, 26496), (680, 26349), (749, 26181), (752, 26169), (798, 25989), (805, 25959), (824, 25905), (832, 25887), (849, 25830), (854, 25803), (866, 25761), (913, 25641), (917, 25632), (938, 25572), (943, 25548), (946, 25536), (949, 25527), (956, 25509), (967, 25476), (986, 25404),

Gene: Warrior24\_49 Start: 30037, Stop: 28247, Start Num: 234

Candidate Starts for Warrior24\_49:

(146, 30169), (Start: 234 @30037 has 938 MA's), (395, 29758), (397, 29755), (405, 29728), (415, 29701), (432, 29650), (465, 29548), (541, 29455), (559, 29416), (571, 29398), (663, 29209), (700, 29143), (730, 29083), (740, 29044), (754, 28993), (756, 28984), (759, 28963), (778, 28912), (789, 28879), (798, 28840), (805, 28810), (837, 28750), (841, 28729), (856, 28687), (863, 28660), (903, 28558), (936, 28495), (938, 28492), (985, 28336), (989, 28324), (995, 28312),

Gene: WaterT\_64 Start: 38299, Stop: 36338, Start Num: 256

Candidate Starts for WaterT\_64:

(Start: 256 @38299 has 5 MA's), (284, 38239), (316, 38179), (342, 38125), (371, 38080), (389, 38056), (396, 38050), (430, 37942), (435, 37930), (502, 37777), (515, 37756), (525, 37738), (533, 37723), (558, 37672), (569, 37651), (575, 37642), (587, 37621), (614, 37585), (624, 37561), (629, 37549), (694, 37411), (713, 37384), (730, 37351), (738, 37324), (742, 37306), (743, 37303), (747, 37291), (775, 37183), (799, 37099), (844, 36880), (855, 36835), (875, 36769), (889, 36727), (903, 36697), (924, 36646), (926, 36640), (934, 36616), (941, 36589), (942, 36577), (943, 36574), (960, 36520), (967, 36496), (969, 36490), (985, 36436), (1000, 36406), (1012, 36382),

Gene: Waterdiva\_60 Start: 54398, Stop: 52539, Start Num: 197

Candidate Starts for Waterdiva\_60:

(Start: 180 @54422 has 1 MA's), (Start: 197 @54398 has 298 MA's), (Start: 225 @54374 has 5 MA's), (Start: 238 @54368 has 2 MA's), (Start: 261 @54326 has 10 MA's), (269, 54305), (323, 54191), (328, 54185), (349, 54155), (385, 54095), (394, 54074), (410, 54020), (418, 54008), (425, 53990), (427, 53978), (462, 53873), (496, 53816), (511, 53780), (516, 53768), (535, 53741), (545, 53714), (555, 53696), (566, 53678), (588, 53639), (595, 53630), (597, 53627), (724, 53369), (754, 53267), (760, 53234), (765, 53213), (799, 53120), (802, 53111), (822, 53048), (841, 53012), (842, 53009), (847, 52994), (872, 52916), (877, 52904), (883, 52883), (902, 52844), (942, 52754), (947, 52736), (949, 52730), (954, 52715), (964, 52691), (968, 52676), (969, 52673), (972, 52661), (979, 52637), (1002, 52589), (1015, 52565),

Gene: Watermelon\_46 Start: 35165, Stop: 33339, Start Num: 234

Candidate Starts for Watermelon\_46:

(Start: 234 @35165 has 938 MA's), (359, 34952), (368, 34937), (405, 34859), (411, 34838), (415, 34832), (419, 34823), (457, 34706), (465, 34679), (541, 34586), (546, 34571), (596, 34487), (598, 34484), (634, 34418), (648, 34388), (657, 34358), (679, 34313), (700, 34274), (759, 34094), (775, 34046), (790, 34007), (805, 33941), (841, 33860), (842, 33857), (868, 33776), (936, 33626), (938, 33623), (946, 33587), (954, 33563), (959, 33554), (963, 33542), (985, 33467), (993, 33446),

Gene: Watson\_48 Start: 31845, Stop: 30031, Start Num: 234

Candidate Starts for Watson\_48:

(Start: 234 @31845 has 938 MA's), (262, 31806), (266, 31794), (353, 31641), (362, 31626), (395, 31569), (415, 31512), (419, 31503), (432, 31461), (448, 31410), (465, 31359), (541, 31266), (566, 31218), (571, 31209), (582, 31194), (603, 31155), (619, 31128), (634, 31098), (670, 31005), (679, 30993), (701, 30945), (710, 30930), (759, 30774), (790, 30687), (805, 30621), (818, 30582), (842, 30510), (856, 30471), (862, 30447), (868, 30429), (879, 30396), (888, 30369), (921, 30315), (942, 30255), (968, 30177), (985, 30120), (989, 30108), (993, 30099),

Gene: Weher20\_60 Start: 54841, Stop: 52982, Start Num: 197

Candidate Starts for Weher20\_60:

(Start: 180 @54865 has 1 MA's), (Start: 197 @54841 has 298 MA's), (Start: 225 @54817 has 5 MA's), (Start: 238 @54811 has 2 MA's), (Start: 261 @54769 has 10 MA's), (269, 54748), (323, 54634), (328, 54628), (349, 54598), (385, 54538), (394, 54517), (410, 54463), (418, 54451), (425, 54433), (427, 54421), (462, 54316), (496, 54259), (511, 54223), (516, 54211), (534, 54187), (539, 54175), (545, 54157), (555, 54139), (566, 54121), (588, 54082), (595, 54073), (597, 54070), (599, 54067), (754, 53710), (760, 53677), (765, 53656), (799, 53563), (802, 53554), (822, 53491), (841, 53455), (842, 53452), (847, 53437), (872, 53359), (877, 53347), (883, 53326), (902, 53287), (942, 53197), (947, 53179), (949, 53173), (954, 53158), (964, 53134), (968, 53119), (969, 53116), (972, 53104), (979, 53080), (1002, 53032), (1015, 53008),

Gene: WeiHuaDA\_48 Start: 32697, Stop: 30910, Start Num: 234

Candidate Starts for WeiHuaDA\_48:

(Start: 234 @32697 has 938 MA's), (355, 32490), (359, 32484), (379, 32454), (394, 32424), (397, 32418), (405, 32391), (415, 32364), (424, 32343), (432, 32313), (461, 32223), (465, 32211), (541, 32118), (566, 32070), (571, 32061), (582, 32046), (619, 31980), (655, 31899), (675, 31851), (759, 31626), (778, 31575), (789, 31542), (790, 31539), (805, 31473), (818, 31434), (837, 31413), (859, 31338), (862, 31326), (864, 31320), (908, 31212), (936, 31158), (942, 31134), (962, 31077), (968, 31056), (985, 30999), (989, 30987), (995, 30975),

Gene: West99\_57 Start: 52637, Stop: 50808, Start Num: 197

Candidate Starts for West99\_57:

(Start: 197 @52637 has 298 MA's), (Start: 238 @52610 has 2 MA's), (253, 52580), (Start: 261 @52568 has 10 MA's), (272, 52541), (273, 52538), (277, 52529), (301, 52511), (355, 52415), (385, 52364), (395, 52340), (450, 52178), (456, 52163), (459, 52154), (462, 52142), (496, 52085), (511, 52049), (516, 52037), (534, 52013), (580, 51929), (595, 51899), (597, 51896), (618, 51866), (678, 51722), (710, 51656), (733, 51617), (737, 51605), (743, 51584), (749, 51566), (760, 51509), (793, 51425), (799, 51395), (802, 51386), (822, 51320), (839, 51293), (841, 51284), (847, 51266), (856, 51242), (872, 51188), (877, 51176), (883, 51155), (921, 51086), (942, 51026), (947, 51008), (960, 50975), (964, 50963), (968, 50948), (969, 50945), (972, 50933), (979, 50909), (980, 50906), (1002, 50858), (1004, 50855), (1015, 50834), (1023, 50813),

Gene: WestPM\_35 Start: 27173, Stop: 25272, Start Num: 282

Candidate Starts for WestPM\_35:

(Start: 282 @27173 has 4 MA's), (347, 27050), (367, 27020), (371, 27014), (394, 26972), (398, 26963), (420, 26906), (424, 26897), (426, 26885), (428, 26879), (503, 26678), (532, 26603), (537, 26594), (541, 26582), (553, 26552), (566, 26531), (574, 26519), (611, 26495), (682, 26345), (758, 26138), (771, 26084), (793, 25982), (796, 25961), (805, 25925), (817, 25889), (819, 25883), (849, 25796), (854, 25769), (900, 25637), (917, 25598), (926, 25577), (938, 25538), (943, 25514), (945, 25508), (954, 25481), (986, 25370),

Gene: Whabigail7\_45 Start: 31605, Stop: 29818, Start Num: 234

Candidate Starts for Whabigail7\_45:

(160, 31692), (Start: 234 @31605 has 938 MA's), (355, 31398), (359, 31392), (368, 31377), (379, 31362), (397, 31326), (405, 31299), (415, 31272), (424, 31251), (465, 31119), (541, 31026), (566, 30978), (571, 30969), (582, 30954), (619, 30888), (655, 30807), (675, 30759), (679, 30753), (710, 30690), (759, 30534), (778, 30483), (789, 30450), (790, 30447), (805, 30381), (818, 30342), (837, 30321), (859, 30246), (862, 30234), (879, 30183), (908, 30120), (921, 30102), (936, 30066), (942, 30042), (968, 29964), (985, 29907), (989, 29895), (993, 29886),

Gene: Wheeler\_45 Start: 34873, Stop: 33047, Start Num: 234

Candidate Starts for Wheeler\_45:

(Start: 234 @34873 has 938 MA's), (359, 34660), (368, 34645), (395, 34597), (405, 34567), (411, 34546), (415, 34540), (419, 34531), (457, 34414), (465, 34387), (541, 34294), (546, 34279), (566, 34246), (596, 34195), (598, 34192), (634, 34126), (648, 34096), (657, 34066), (679, 34021), (700, 33982), (759, 33802), (769, 33772), (775, 33754), (778, 33751), (790, 33715), (805, 33649), (841, 33568), (842, 33565), (868, 33484), (936, 33334), (938, 33331), (946, 33295), (954, 33271), (959, 33262), (963, 33250), (985, 33175), (993, 33154),

Gene: WideWale\_45 Start: 31601, Stop: 29814, Start Num: 234

Candidate Starts for WideWale\_45:

(Start: 234 @31601 has 938 MA's), (353, 31397), (355, 31394), (359, 31388), (379, 31358), (395, 31325), (397, 31322), (405, 31295), (415, 31268), (432, 31217), (465, 31115), (541, 31022), (566, 30974), (571, 30965), (582, 30950), (619, 30884), (655, 30803), (675, 30755), (740, 30611), (759, 30530), (778, 30479), (789, 30446), (805, 30377), (818, 30338), (837, 30317), (841, 30296), (845, 30284), (918, 30104), (921, 30098), (936, 30062), (942, 30038), (968, 29960), (985, 29903), (989, 29891),

Gene: Widow\_43 Start: 35284, Stop: 32969, Start Num: 3

Candidate Starts for Widow\_43:

(Start: 3 @35284 has 5 MA's), (4, 35275), (22, 35179), (30, 35149), (46, 35083), (125, 34924), (Start: 157 @34894 has 1 MA's), (164, 34882), (Start: 205 @34828 has 2 MA's), (221, 34807), (279, 34708), (301, 34687), (318, 34642), (352, 34594), (432, 34411), (456, 34348), (462, 34327), (465, 34318), (511, 34237), (516, 34225), (544, 34171), (561, 34141), (581, 34114), (595, 34087), (597, 34084), (599, 34081), (664, 33934), (704, 33850), (731, 33799), (743, 33760), (746, 33751), (749, 33742),

(760, 33685), (793, 33604), (799, 33574), (833, 33484), (839, 33472), (847, 33445), (872, 33367), (877, 33355), (885, 33325), (930, 33235), (935, 33220), (942, 33187), (968, 33109), (969, 33106), (975, 33082), (979, 33070), (1002, 33019), (1015, 32995),

Gene: Wiks\_44 Start: 29422, Stop: 27581, Start Num: 234

Candidate Starts for Wiks\_44:

(Start: 212 @29452 has 1 MA's), (Start: 234 @29422 has 938 MA's), (353, 29218), (395, 29143), (397, 29140), (405, 29113), (409, 29098), (415, 29086), (432, 29035), (461, 28945), (465, 28933), (541, 28840), (559, 28801), (571, 28783), (582, 28768), (619, 28702), (635, 28669), (636, 28666), (681, 28564), (710, 28504), (740, 28420), (759, 28339), (789, 28255), (790, 28252), (793, 28243), (798, 28216), (805, 28186), (837, 28126), (847, 28087), (936, 27871), (938, 27868), (942, 27847), (985, 27712), (989, 27700), (993, 27691), (995, 27688), (1042, 27595),

Gene: Wilbur\_45 Start: 31567, Stop: 29741, Start Num: 234

Candidate Starts for Wilbur\_45:

(Start: 234 @31567 has 938 MA's), (252, 31546), (266, 31516), (279, 31486), (379, 31324), (389, 31306), (415, 31234), (419, 31225), (458, 31105), (465, 31081), (541, 30988), (568, 30940), (582, 30919), (603, 30880), (663, 30748), (675, 30727), (700, 30682), (703, 30670), (756, 30517), (759, 30496), (798, 30373), (805, 30343), (818, 30304), (841, 30238), (842, 30235), (847, 30220), (856, 30196), (862, 30172), (942, 29965), (985, 29830), (989, 29818), (993, 29809),

Gene: WildNOut\_39 Start: 28934, Stop: 27069, Start Num: 283

Candidate Starts for WildNOut\_39:

(Start: 283 @28934 has 147 MA's), (Start: 291 @28925 has 5 MA's), (342, 28820), (347, 28811), (367, 28781), (369, 28778), (424, 28658), (426, 28646), (428, 28640), (466, 28535), (473, 28508), (532, 28367), (535, 28361), (537, 28358), (541, 28346), (551, 28319), (553, 28316), (562, 28301), (566, 28295), (570, 28289), (613, 28256), (671, 28127), (701, 28067), (733, 27992), (798, 27752), (801, 27743), (802, 27740), (805, 27722), (819, 27680), (822, 27674), (825, 27665), (832, 27650), (849, 27593), (900, 27434), (913, 27404), (917, 27395), (938, 27335), (943, 27311), (956, 27272), (967, 27239), (970, 27227), (986, 27167),

Gene: Wildwest\_40 Start: 29139, Stop: 30983, Start Num: 234

Candidate Starts for Wildwest\_40:

(123, 28944), (150, 29022), (167, 29052), (Start: 234 @29139 has 938 MA's), (336, 29313), (353, 29343), (377, 29370), (405, 29436), (436, 29526), (543, 29712), (546, 29721), (563, 29751), (603, 29820), (615, 29835), (675, 29973), (730, 30111), (759, 30231), (790, 30318), (803, 30375), (805, 30384), (862, 30549), (936, 30720), (985, 30879), (988, 30888), (993, 30900),

Gene: Wile\_44 Start: 31553, Stop: 29724, Start Num: 234

Candidate Starts for Wile\_44:

(Start: 234 @31553 has 938 MA's), (266, 31502), (279, 31472), (379, 31310), (389, 31292), (395, 31277), (415, 31220), (419, 31211), (458, 31091), (465, 31067), (513, 31025), (541, 30974), (568, 30926), (582, 30905), (603, 30866), (628, 30821), (630, 30815), (663, 30734), (675, 30713), (700, 30668), (756, 30503), (759, 30482), (805, 30329), (818, 30290), (842, 30218), (847, 30203), (856, 30179), (861, 30161), (862, 30155), (864, 30149), (942, 29948), (985, 29813), (989, 29801), (993, 29792),

Gene: Wilkins\_44 Start: 34221, Stop: 32395, Start Num: 234

Candidate Starts for Wilkins\_44:

(Start: 234 @34221 has 938 MA's), (359, 34008), (368, 33993), (395, 33945), (405, 33915), (411, 33894), (415, 33888), (419, 33879), (457, 33762), (465, 33735), (541, 33642), (546, 33627), (596, 33543), (598, 33540), (634, 33474), (648, 33444), (657, 33414), (679, 33369), (700, 33330), (759, 33150), (775, 33102), (790, 33063), (805, 32997), (818, 32958), (837, 32937), (841, 32916), (847,

32898), (868, 32832), (936, 32682), (938, 32679), (946, 32643), (954, 32619), (959, 32610), (963, 32598), (977, 32550), (985, 32523), (993, 32502),

Gene: WilliamStrong\_38 Start: 28667, Stop: 26775, Start Num: 283

Candidate Starts for WilliamStrong\_38:

(Start: 283 @28667 has 147 MA's), (Start: 291 @28658 has 5 MA's), (330, 28571), (357, 28532), (367, 28517), (371, 28511), (398, 28460), (426, 28382), (428, 28376), (460, 28286), (512, 28154), (532, 28100), (537, 28091), (541, 28079), (553, 28049), (566, 28028), (570, 28022), (574, 28016), (590, 28013), (671, 27866), (698, 27821), (701, 27806), (744, 27695), (758, 27641), (759, 27629), (802, 27446), (805, 27428), (819, 27386), (832, 27356), (839, 27335), (849, 27299), (867, 27227), (900, 27140), (917, 27101), (938, 27041), (943, 27017), (960, 26969), (967, 26945), (986, 26873),

Gene: Windsor\_60 Start: 54584, Stop: 52725, Start Num: 197

Candidate Starts for Windsor\_60:

(Start: 180 @54608 has 1 MA's), (Start: 197 @54584 has 298 MA's), (Start: 225 @54560 has 5 MA's), (Start: 238 @54554 has 2 MA's), (Start: 261 @54512 has 10 MA's), (269, 54491), (323, 54377), (328, 54371), (349, 54341), (385, 54281), (394, 54260), (410, 54206), (418, 54194), (425, 54176), (427, 54164), (462, 54059), (496, 54002), (511, 53966), (516, 53954), (534, 53930), (539, 53918), (545, 53900), (555, 53882), (566, 53864), (588, 53825), (595, 53816), (597, 53813), (599, 53810), (754, 53453), (760, 53420), (765, 53399), (799, 53306), (802, 53297), (822, 53234), (841, 53198), (842, 53195), (847, 53180), (872, 53102), (877, 53090), (883, 53069), (902, 53030), (942, 52940), (947, 52922), (949, 52916), (954, 52901), (964, 52877), (968, 52862), (969, 52859), (972, 52847), (979, 52823), (1002, 52775), (1015, 52751),

Gene: Winzigespinne\_38 Start: 28618, Stop: 26753, Start Num: 283

Candidate Starts for Winzigespinne\_38:

(Start: 234 @28705 has 938 MA's), (Start: 283 @28618 has 147 MA's), (Start: 291 @28609 has 5 MA's), (342, 28504), (347, 28495), (367, 28465), (369, 28462), (424, 28342), (426, 28330), (428, 28324), (466, 28219), (473, 28192), (532, 28051), (535, 28045), (537, 28042), (541, 28030), (551, 28003), (553, 28000), (562, 27985), (566, 27979), (570, 27973), (613, 27940), (701, 27751), (798, 27436), (801, 27427), (802, 27424), (805, 27406), (819, 27364), (822, 27358), (832, 27334), (849, 27277), (900, 27118), (913, 27088), (917, 27079), (938, 27019), (943, 26995), (956, 26956), (967, 26923), (970, 26911), (986, 26851),

Gene: Wizard007\_45 Start: 31575, Stop: 29749, Start Num: 234

Candidate Starts for Wizard007\_45:

(Start: 234 @31575 has 938 MA's), (252, 31554), (266, 31524), (279, 31494), (379, 31332), (389, 31314), (415, 31242), (419, 31233), (458, 31113), (465, 31089), (541, 30996), (568, 30948), (582, 30927), (603, 30888), (663, 30756), (675, 30735), (700, 30690), (703, 30678), (756, 30525), (759, 30504), (798, 30381), (805, 30351), (818, 30312), (841, 30246), (842, 30243), (847, 30228), (856, 30204), (862, 30180), (942, 29973), (985, 29838), (989, 29826), (993, 29817),

Gene: Wooldri\_50 Start: 31764, Stop: 29950, Start Num: 234

Candidate Starts for Wooldri\_50:

(Start: 234 @31764 has 938 MA's), (262, 31725), (266, 31713), (353, 31560), (362, 31545), (395, 31488), (415, 31431), (419, 31422), (432, 31380), (448, 31329), (465, 31278), (541, 31185), (566, 31137), (571, 31128), (582, 31113), (603, 31074), (619, 31047), (634, 31017), (670, 30924), (701, 30864), (710, 30849), (759, 30693), (790, 30606), (805, 30540), (818, 30501), (842, 30429), (856, 30390), (862, 30366), (868, 30348), (879, 30315), (888, 30288), (921, 30234), (942, 30174), (968, 30096), (985, 30039), (989, 30027), (993, 30018),

Gene: Wooper\_54 Start: 47982, Stop: 46165, Start Num: 230

Candidate Starts for Wooper\_54:



(Start: 230 @47982 has 13 MA's), (Start: 238 @47973 has 2 MA's), (252, 47946), (259, 47934), (269, 47910), (273, 47901), (375, 47727), (406, 47652), (434, 47577), (462, 47499), (496, 47442), (511, 47406), (516, 47394), (534, 47370), (583, 47277), (597, 47253), (610, 47235), (737, 46962), (749, 46923), (755, 46893), (760, 46866), (797, 46758), (799, 46752), (802, 46743), (839, 46653), (841, 46644), (842, 46641), (847, 46626), (872, 46548), (877, 46536), (878, 46530), (883, 46515), (907, 46467), (935, 46419), (942, 46386), (949, 46362), (964, 46323), (968, 46308), (979, 46263), (1015, 46191),

Gene: WunderPhul\_45 Start: 29420, Stop: 27579, Start Num: 234

Candidate Starts for WunderPhul\_45:

(Start: 212 @29450 has 1 MA's), (Start: 234 @29420 has 938 MA's), (353, 29216), (395, 29141), (397, 29138), (405, 29111), (409, 29096), (415, 29084), (432, 29033), (461, 28943), (465, 28931), (541, 28838), (559, 28799), (571, 28781), (582, 28766), (619, 28700), (635, 28667), (636, 28664), (681, 28562), (710, 28502), (740, 28418), (759, 28337), (789, 28253), (790, 28250), (793, 28241), (798, 28214), (805, 28184), (837, 28124), (847, 28085), (936, 27869), (938, 27866), (942, 27845), (985, 27710), (989, 27698), (993, 27689), (995, 27686), (1042, 27593),

Gene: Xavier\_59 Start: 54026, Stop: 52167, Start Num: 197

Candidate Starts for Xavier\_59:

(Start: 180 @54050 has 1 MA's), (Start: 197 @54026 has 298 MA's), (Start: 225 @54002 has 5 MA's), (Start: 238 @53996 has 2 MA's), (Start: 261 @53954 has 10 MA's), (269, 53933), (323, 53819), (328, 53813), (349, 53783), (385, 53723), (394, 53702), (410, 53648), (418, 53636), (425, 53618), (427, 53606), (462, 53501), (496, 53444), (511, 53408), (516, 53396), (535, 53369), (555, 53324), (588, 53267), (595, 53258), (597, 53255), (754, 52895), (760, 52862), (765, 52841), (799, 52748), (802, 52739), (822, 52676), (841, 52640), (842, 52637), (847, 52622), (872, 52544), (877, 52532), (883, 52511), (902, 52472), (942, 52382), (947, 52364), (949, 52358), (954, 52343), (964, 52319), (968, 52304), (969, 52301), (972, 52289), (979, 52265), (1002, 52217), (1015, 52193),

Gene: Xena\_43 Start: 31519, Stop: 29690, Start Num: 234

Candidate Starts for Xena\_43:

(Start: 234 @31519 has 938 MA's), (266, 31468), (279, 31438), (379, 31276), (389, 31258), (395, 31243), (415, 31186), (419, 31177), (458, 31057), (465, 31033), (513, 30991), (541, 30940), (568, 30892), (582, 30871), (603, 30832), (628, 30787), (630, 30781), (663, 30700), (675, 30679), (700, 30634), (756, 30469), (759, 30448), (805, 30295), (818, 30256), (842, 30184), (847, 30169), (856, 30145), (861, 30127), (862, 30121), (864, 30115), (942, 29914), (985, 29779), (989, 29767), (993, 29758),

Gene: XianYue\_44 Start: 31263, Stop: 29476, Start Num: 234

Candidate Starts for XianYue\_44:

(Start: 234 @31263 has 938 MA's), (353, 31059), (355, 31056), (359, 31050), (379, 31020), (390, 30999), (395, 30987), (405, 30957), (415, 30930), (424, 30909), (465, 30777), (541, 30684), (571, 30627), (582, 30612), (619, 30546), (655, 30465), (675, 30417), (711, 30345), (759, 30192), (778, 30141), (789, 30108), (790, 30105), (805, 30039), (818, 30000), (837, 29979), (859, 29904), (862, 29892), (864, 29886), (879, 29841), (908, 29778), (936, 29724), (942, 29700), (968, 29622), (985, 29565), (989, 29553), (993, 29544),

Gene: Xincheng\_54 Start: 55076, Stop: 53253, Start Num: 189

Candidate Starts for Xincheng\_54:

(Start: 175 @55094 has 4 MA's), (Start: 189 @55076 has 26 MA's), (Start: 238 @55052 has 2 MA's), (252, 55025), (Start: 261 @55010 has 10 MA's), (269, 54989), (316, 54902), (323, 54884), (382, 54797), (394, 54770), (399, 54755), (425, 54689), (434, 54659), (437, 54650), (441, 54647), (442, 54644), (450, 54617), (496, 54524), (504, 54506), (511, 54488), (516, 54476), (535, 54449), (566, 54386), (588, 54347), (595, 54338), (597, 54335), (618, 54305), (634, 54269), (737, 54044), (739,

54041), (749, 54005), (754, 53981), (760, 53948), (797, 53840), (799, 53834), (802, 53825), (841, 53726), (842, 53723), (847, 53708), (872, 53630), (877, 53618), (883, 53597), (885, 53588), (902, 53558), (921, 53528), (935, 53501), (942, 53468), (947, 53450), (949, 53444), (964, 53405), (969, 53387), (972, 53375), (979, 53351), (994, 53309), (1002, 53303), (1015, 53279),

Gene: Xkcd426\_52 Start: 45445, Stop: 43514, Start Num: 261

Candidate Starts for Xkcd426\_52:

(Start: 261 @45445 has 10 MA's), (313, 45334), (314, 45331), (325, 45307), (328, 45304), (361, 45244), (463, 44998), (482, 44968), (485, 44959), (491, 44929), (510, 44890), (538, 44839), (568, 44776), (575, 44767), (601, 44728), (636, 44659), (696, 44527), (734, 44437), (740, 44419), (745, 44404), (749, 44392), (761, 44335), (764, 44320), (792, 44242), (798, 44209), (806, 44176), (810, 44155), (814, 44137), (828, 44095), (856, 44002), (861, 43984), (862, 43978), (864, 43972), (872, 43948), (924, 43816), (942, 43747), (943, 43744), (968, 43672), (978, 43639), (985, 43615),

Gene: YDN12\_50 Start: 39191, Stop: 37182, Start Num: 261

Candidate Starts for YDN12\_50:

(219, 39257), (221, 39254), (Start: 261 @39191 has 10 MA's), (297, 39122), (361, 38990), (365, 38984), (400, 38930), (403, 38918), (405, 38912), (413, 38891), (421, 38867), (441, 38807), (464, 38741), (510, 38588), (525, 38561), (536, 38540), (550, 38504), (568, 38474), (584, 38450), (592, 38438), (601, 38426), (636, 38357), (690, 38246), (749, 38090), (761, 38033), (767, 38012), (781, 37970), (792, 37940), (798, 37907), (806, 37874), (810, 37853), (814, 37835), (856, 37670), (861, 37652), (864, 37640), (869, 37625), (872, 37616), (924, 37484), (939, 37439), (942, 37415), (943, 37412), (968, 37340), (978, 37307), (985, 37283), (993, 37262), (1009, 37235),

Gene: Yago84\_49 Start: 46049, Stop: 44235, Start Num: 225

Candidate Starts for Yago84\_49:

(165, 46139), (168, 46133), (Start: 225 @46049 has 5 MA's), (Start: 238 @46040 has 2 MA's), (Start: 261 @45998 has 10 MA's), (323, 45872), (355, 45830), (379, 45788), (406, 45719), (424, 45680), (426, 45668), (427, 45665), (456, 45590), (462, 45569), (511, 45476), (582, 45350), (588, 45335), (597, 45323), (643, 45233), (743, 45011), (760, 44936), (799, 44822), (802, 44813), (822, 44750), (842, 44711), (847, 44696), (872, 44618), (877, 44606), (878, 44600), (883, 44585), (885, 44576), (890, 44567), (935, 44489), (942, 44456), (943, 44453), (962, 44399), (964, 44393), (972, 44357), (979, 44333), (1015, 44261),

Gene: Yahalom\_57 Start: 53658, Stop: 51841, Start Num: 235

Candidate Starts for Yahalom\_57:

(61, 54042), (129, 53841), (Start: 235 @53658 has 43 MA's), (252, 53628), (359, 53448), (424, 53295), (426, 53283), (437, 53253), (442, 53247), (462, 53184), (464, 53178), (496, 53127), (509, 53100), (511, 53091), (539, 53043), (597, 52938), (647, 52842), (664, 52791), (737, 52647), (749, 52608), (755, 52578), (760, 52551), (763, 52539), (797, 52443), (799, 52437), (802, 52428), (804, 52416), (834, 52344), (841, 52314), (847, 52296), (851, 52287), (872, 52218), (877, 52206), (883, 52185), (921, 52116), (931, 52101), (938, 52077), (942, 52056), (947, 52038), (949, 52032), (962, 51999), (964, 51993), (969, 51975), (972, 51963), (975, 51951), (979, 51939), (994, 51897), (1015, 51867),

Gene: Yakult\_46 Start: 33938, Stop: 31554, Start Num: 45

Candidate Starts for Yakult\_46:

(Start: 45 @33938 has 24 MA's), (Start: 55 @33908 has 1 MA's), (86, 33824), (96, 33794), (136, 33686), (141, 33665), (250, 33527), (259, 33512), (279, 33464), (317, 33389), (319, 33383), (322, 33377), (324, 33371), (366, 33302), (380, 33278), (390, 33257), (391, 33254), (395, 33245), (420, 33179), (426, 33158), (445, 33107), (478, 33011), (501, 32957), (524, 32897), (532, 32876), (557, 32819), (570, 32813), (634, 32768), (662, 32720), (668, 32708), (711, 32636), (729, 32594), (732, 32582), (758, 32483), (770, 32441), (772, 32417), (784, 32366), (805, 32273), (817, 32237), (819, 32231), (822, 32225), (824, 32219), (842, 32162), (849, 32138), (900, 31979), (910, 31958), (926,

31919), (938, 31880), (942, 31859), (948, 31838), (952, 31826), (960, 31808), (972, 31760), (986, 31712), (996, 31688), (1008, 31667), (1046, 31580),

Gene: Yang\_41 Start: 29089, Stop: 31023, Start Num: 172

Candidate Starts for Yang\_41:

(Start: 172 @29089 has 1 MA's), (Start: 234 @29158 has 938 MA's), (265, 29206), (405, 29455), (445, 29575), (543, 29752), (546, 29761), (603, 29860), (615, 29875), (619, 29887), (675, 30013), (730, 30151), (759, 30271), (790, 30358), (803, 30415), (805, 30424), (814, 30448), (865, 30598), (936, 30760), (985, 30919),

Gene: Yappy\_80 Start: 40185, Stop: 38026, Start Num: 203

Candidate Starts for Yappy\_80:

(Start: 203 @40185 has 1 MA's), (229, 40149), (239, 40137), (243, 40128), (251, 40113), (266, 40083), (302, 40014), (306, 39999), (335, 39933), (367, 39885), (369, 39882), (392, 39846), (395, 39840), (397, 39837), (406, 39804), (426, 39741), (440, 39696), (454, 39654), (474, 39588), (486, 39534), (540, 39393), (565, 39339), (578, 39321), (612, 39261), (661, 39138), (708, 39027), (719, 38997), (736, 38949), (747, 38913), (752, 38898), (796, 38700), (798, 38694), (799, 38691), (810, 38640), (815, 38616), (846, 38523), (915, 38331), (916, 38328), (941, 38250), (970, 38160), (978, 38136), (985, 38112), (1014, 38052),

Gene: Yarn\_40 Start: 32156, Stop: 29769, Start Num: 45

Candidate Starts for Yarn\_40:

(20, 32228), (23, 32213), (Start: 45 @32156 has 24 MA's), (49, 32147), (52, 32141), (76, 32060), (119, 31940), (136, 31889), (Start: 230 @31757 has 13 MA's), (250, 31730), (295, 31637), (317, 31592), (366, 31514), (391, 31466), (409, 31412), (410, 31409), (420, 31391), (426, 31370), (445, 31319), (448, 31310), (449, 31307), (473, 31232), (495, 31187), (519, 31127), (524, 31112), (570, 31028), (634, 30983), (643, 30959), (655, 30953), (662, 30929), (666, 30920), (707, 30851), (711, 30848), (713, 30845), (758, 30698), (773, 30629), (796, 30530), (805, 30494), (817, 30458), (819, 30452), (822, 30446), (824, 30440), (834, 30416), (842, 30383), (849, 30359), (859, 30314), (878, 30254), (947, 30062), (948, 30059), (986, 29933), (1008, 29888), (1013, 29879),

Gene: Yecey3\_46 Start: 30987, Stop: 29194, Start Num: 234

Candidate Starts for Yecey3\_46:

(Start: 234 @30987 has 938 MA's), (246, 30978), (353, 30783), (375, 30747), (379, 30741), (395, 30708), (405, 30678), (415, 30651), (419, 30642), (465, 30498), (541, 30405), (634, 30237), (663, 30159), (726, 30039), (729, 30033), (759, 29910), (782, 29844), (798, 29787), (802, 29775), (805, 29757), (839, 29685), (841, 29676), (921, 29478), (942, 29418), (968, 29340), (985, 29283), (989, 29271), (1010, 29232),

Gene: Yeezus\_55 Start: 36878, Stop: 34710, Start Num: 202

Candidate Starts for Yeezus\_55:

(200, 36881), (Start: 202 @36878 has 13 MA's), (239, 36824), (279, 36740), (356, 36587), (361, 36578), (388, 36533), (414, 36455), (415, 36446), (422, 36431), (426, 36416), (427, 36413), (445, 36356), (474, 36263), (484, 36221), (565, 36026), (572, 36014), (578, 36008), (587, 35984), (601, 35963), (616, 35942), (621, 35927), (623, 35921), (651, 35858), (672, 35807), (706, 35720), (727, 35660), (740, 35612), (766, 35510), (768, 35504), (780, 35477), (781, 35474), (789, 35453), (799, 35411), (801, 35405), (806, 35381), (814, 35339), (815, 35336), (823, 35309), (838, 35276), (840, 35264), (852, 35228), (859, 35204), (861, 35198), (862, 35192), (880, 35138), (899, 35090), (902, 35087), (925, 35027), (932, 35003), (941, 34973), (961, 34919), (982, 34850), (985, 34838), (1006, 34799),

Gene: YesChef\_41 Start: 29651, Stop: 31516, Start Num: 234

Candidate Starts for YesChef\_41:

(Start: 234 @29651 has 938 MA's), (265, 29699), (405, 29948), (436, 30038), (543, 30245), (546, 30254), (598, 30344), (603, 30353), (615, 30368), (635, 30413), (655, 30458), (675, 30506), (703, 30563), (730, 30644), (753, 30731), (759, 30764), (769, 30794), (790, 30851), (805, 30917), (814, 30941), (840, 31010), (862, 31082), (865, 31091), (905, 31190), (936, 31253), (942, 31277), (978, 31388), (985, 31412), (988, 31421),

Gene: Yeshua\_54 Start: 47959, Stop: 46142, Start Num: 230

Candidate Starts for Yeshua\_54:

(Start: 230 @47959 has 13 MA's), (Start: 238 @47950 has 2 MA's), (252, 47923), (259, 47911), (269, 47887), (273, 47878), (375, 47704), (406, 47629), (434, 47554), (462, 47476), (496, 47419), (511, 47383), (516, 47371), (534, 47347), (583, 47254), (597, 47230), (610, 47212), (737, 46939), (739, 46936), (755, 46870), (760, 46843), (797, 46735), (799, 46729), (802, 46720), (839, 46630), (841, 46621), (842, 46618), (847, 46603), (872, 46525), (877, 46513), (883, 46492), (907, 46444), (935, 46396), (942, 46363), (949, 46339), (964, 46300), (968, 46285), (979, 46240), (1015, 46168),

Gene: Yinz\_58 Start: 53540, Stop: 51720, Start Num: 232

Candidate Starts for Yinz\_58:

(129, 53720), (Start: 232 @53540 has 15 MA's), (252, 53507), (359, 53327), (424, 53174), (426, 53162), (437, 53132), (442, 53126), (462, 53063), (464, 53057), (496, 53006), (509, 52979), (511, 52970), (539, 52922), (597, 52817), (647, 52721), (664, 52670), (737, 52526), (749, 52487), (755, 52457), (760, 52430), (763, 52418), (797, 52322), (799, 52316), (802, 52307), (804, 52295), (834, 52223), (841, 52193), (847, 52175), (851, 52166), (872, 52097), (877, 52085), (883, 52064), (921, 51995), (931, 51980), (938, 51956), (942, 51935), (949, 51911), (964, 51872), (969, 51854), (972, 51842), (975, 51830), (979, 51818), (994, 51776), (1015, 51746),

Gene: YoSam321\_45 Start: 31564, Stop: 29738, Start Num: 234

Candidate Starts for YoSam321\_45:

(Start: 234 @31564 has 938 MA's), (252, 31543), (266, 31513), (279, 31483), (379, 31321), (389, 31303), (415, 31231), (419, 31222), (458, 31102), (465, 31078), (541, 30985), (568, 30937), (582, 30916), (603, 30877), (663, 30745), (675, 30724), (700, 30679), (703, 30667), (756, 30514), (759, 30493), (798, 30370), (805, 30340), (818, 30301), (841, 30235), (842, 30232), (847, 30217), (856, 30193), (862, 30169), (942, 29962), (985, 29827), (989, 29815), (993, 29806),

Gene: Yogi\_36 Start: 28087, Stop: 26303, Start Num: 234

Candidate Starts for Yogi\_36:

(Start: 234 @28087 has 938 MA's), (374, 27853), (390, 27823), (394, 27814), (395, 27811), (409, 27766), (415, 27754), (419, 27745), (432, 27703), (465, 27601), (492, 27580), (541, 27508), (563, 27463), (566, 27460), (589, 27418), (594, 27412), (603, 27397), (619, 27370), (663, 27265), (679, 27238), (700, 27199), (759, 27019), (775, 26971), (805, 26866), (806, 26863), (837, 26806), (841, 26785), (858, 26737), (881, 26662), (918, 26593), (936, 26551), (942, 26527), (968, 26449), (985, 26392), (989, 26380), (1021, 26323),

Gene: Yokurt\_45 Start: 29422, Stop: 27581, Start Num: 234

Candidate Starts for Yokurt\_45:

(Start: 212 @29452 has 1 MA's), (Start: 234 @29422 has 938 MA's), (353, 29218), (395, 29143), (397, 29140), (405, 29113), (409, 29098), (415, 29086), (432, 29035), (461, 28945), (465, 28933), (541, 28840), (559, 28801), (571, 28783), (582, 28768), (619, 28702), (635, 28669), (636, 28666), (681, 28564), (710, 28504), (740, 28420), (759, 28339), (789, 28255), (790, 28252), (793, 28243), (798, 28216), (805, 28186), (837, 28126), (847, 28087), (936, 27871), (938, 27868), (942, 27847), (985, 27712), (989, 27700), (993, 27691), (995, 27688), (1042, 27595),

Gene: Yoncess\_36 Start: 28088, Stop: 26304, Start Num: 234

Candidate Starts for Yoncess\_36:

(Start: 234 @28088 has 938 MA's), (374, 27854), (390, 27824), (394, 27815), (395, 27812), (409, 27767), (415, 27755), (432, 27704), (465, 27602), (492, 27581), (541, 27509), (563, 27464), (566, 27461), (589, 27419), (594, 27413), (596, 27410), (603, 27398), (619, 27371), (644, 27317), (663, 27266), (679, 27239), (700, 27200), (759, 27020), (775, 26972), (805, 26867), (806, 26864), (837, 26807), (841, 26786), (858, 26738), (881, 26663), (918, 26594), (936, 26552), (942, 26528), (968, 26450), (985, 26393), (989, 26381), (1021, 26324),

Gene: Yoshand\_62 Start: 54312, Stop: 52453, Start Num: 197

Candidate Starts for Yoshand\_62:

(Start: 180 @54336 has 1 MA's), (Start: 197 @54312 has 298 MA's), (Start: 225 @54288 has 5 MA's), (Start: 238 @54282 has 2 MA's), (Start: 261 @54240 has 10 MA's), (269, 54219), (323, 54105), (328, 54099), (349, 54069), (385, 54009), (394, 53988), (410, 53934), (418, 53922), (425, 53904), (427, 53892), (462, 53787), (496, 53730), (511, 53694), (516, 53682), (534, 53658), (539, 53646), (545, 53628), (555, 53610), (566, 53592), (588, 53553), (595, 53544), (597, 53541), (599, 53538), (754, 53181), (760, 53148), (765, 53127), (799, 53034), (802, 53025), (822, 52962), (841, 52926), (842, 52923), (847, 52908), (872, 52830), (877, 52818), (883, 52797), (902, 52758), (942, 52668), (947, 52650), (949, 52644), (954, 52629), (964, 52605), (968, 52590), (969, 52587), (972, 52575), (979, 52551), (1002, 52503), (1015, 52479),

Gene: YouGoGlencoco\_61 Start: 54264, Stop: 52405, Start Num: 197

Candidate Starts for YouGoGlencoco\_61:

(Start: 180 @54288 has 1 MA's), (Start: 197 @54264 has 298 MA's), (Start: 225 @54240 has 5 MA's), (Start: 238 @54234 has 2 MA's), (Start: 261 @54192 has 10 MA's), (269, 54171), (323, 54057), (328, 54051), (349, 54021), (385, 53961), (394, 53940), (410, 53886), (418, 53874), (425, 53856), (427, 53844), (462, 53739), (496, 53682), (511, 53646), (516, 53634), (535, 53607), (545, 53580), (555, 53562), (566, 53544), (588, 53505), (595, 53496), (597, 53493), (724, 53235), (754, 53133), (760, 53100), (765, 53079), (799, 52986), (802, 52977), (822, 52914), (841, 52878), (842, 52875), (847, 52860), (872, 52782), (877, 52770), (883, 52749), (902, 52710), (942, 52620), (947, 52602), (949, 52596), (954, 52581), (964, 52557), (968, 52542), (969, 52539), (972, 52527), (979, 52503), (1002, 52455), (1015, 52431),

Gene: Yucky\_48 Start: 34461, Stop: 32086, Start Num: 47

Candidate Starts for Yucky\_48:

(Start: 47 @34461 has 13 MA's), (64, 34401), (82, 34359), (96, 34320), (136, 34200), (141, 34179), (170, 34155), (Start: 223 @34077 has 3 MA's), (228, 34071), (Start: 230 @34068 has 13 MA's), (252, 34038), (273, 33990), (290, 33963), (Start: 291 @33960 has 5 MA's), (317, 33903), (342, 33864), (354, 33843), (380, 33801), (391, 33777), (395, 33768), (398, 33762), (399, 33756), (409, 33723), (420, 33702), (426, 33681), (495, 33498), (497, 33492), (524, 33423), (541, 33381), (634, 33294), (655, 33270), (662, 33246), (677, 33216), (711, 33165), (713, 33162), (718, 33147), (728, 33126), (759, 33000), (772, 32952), (773, 32943), (784, 32901), (805, 32808), (817, 32772), (819, 32766), (822, 32760), (824, 32754), (842, 32697), (849, 32673), (878, 32568), (879, 32565), (919, 32472), (926, 32454), (938, 32415), (948, 32373), (958, 32349), (967, 32319), (979, 32271), (986, 32247), (1046, 32115),

Gene: Yummy\_45 Start: 32562, Stop: 30172, Start Num: 36

Candidate Starts for Yummy\_45:

(Start: 36 @32562 has 16 MA's), (64, 32499), (71, 32481), (76, 32466), (96, 32412), (100, 32400), (105, 32379), (119, 32346), (127, 32319), (136, 32295), (159, 32268), (Start: 230 @32163 has 13 MA's), (262, 32115), (317, 31998), (366, 31917), (382, 31890), (391, 31869), (409, 31815), (410, 31812), (420, 31794), (426, 31773), (448, 31713), (524, 31515), (541, 31473), (634, 31386), (643, 31362), (655, 31356), (677, 31302), (682, 31296), (707, 31254), (711, 31251), (713, 31248), (758, 31101), (770, 31059), (773, 31032), (784, 30990), (805, 30897), (817, 30861), (819, 30855), (822, 30849), (824, 30843), (834, 30819), (842, 30786), (849, 30762), (859, 30717), (878, 30657), (938,

30504), (986, 30336), (1008, 30291), (1013, 30282), (1016, 30273),

Gene: YuuY\_37 Start: 29162, Stop: 27261, Start Num: 283

Candidate Starts for YuuY\_37:

(Start: 283 @29162 has 147 MA's), (357, 29024), (367, 29009), (371, 29003), (387, 28976), (398, 28952), (409, 28916), (426, 28874), (428, 28868), (447, 28817), (460, 28778), (479, 28718), (512, 28649), (532, 28592), (537, 28583), (541, 28571), (553, 28541), (590, 28505), (680, 28337), (701, 28292), (744, 28181), (795, 27956), (796, 27950), (799, 27941), (805, 27914), (849, 27785), (861, 27734), (938, 27527), (943, 27503), (954, 27470), (956, 27464), (986, 27359),

Gene: Zada\_39 Start: 28906, Stop: 27041, Start Num: 283

Candidate Starts for Zada\_39:

(Start: 234 @28993 has 938 MA's), (Start: 237 @28990 has 2 MA's), (Start: 283 @28906 has 147 MA's), (Start: 291 @28897 has 5 MA's), (342, 28792), (347, 28783), (367, 28753), (369, 28750), (424, 28630), (426, 28618), (428, 28612), (466, 28507), (473, 28480), (532, 28339), (535, 28333), (537, 28330), (541, 28318), (551, 28291), (553, 28288), (562, 28273), (566, 28267), (570, 28261), (613, 28228), (671, 28099), (701, 28039), (798, 27724), (801, 27715), (802, 27712), (805, 27694), (819, 27652), (822, 27646), (825, 27637), (832, 27622), (849, 27565), (900, 27406), (913, 27376), (917, 27367), (938, 27307), (943, 27283), (956, 27244), (967, 27211), (970, 27199), (986, 27139),

Gene: Zaider\_61 Start: 54505, Stop: 52646, Start Num: 197

Candidate Starts for Zaider\_61:

(Start: 180 @54529 has 1 MA's), (Start: 197 @54505 has 298 MA's), (Start: 225 @54481 has 5 MA's), (Start: 238 @54475 has 2 MA's), (Start: 261 @54433 has 10 MA's), (269, 54412), (323, 54298), (328, 54292), (349, 54262), (385, 54202), (394, 54181), (410, 54127), (418, 54115), (425, 54097), (427, 54085), (462, 53980), (496, 53923), (511, 53887), (516, 53875), (534, 53851), (539, 53839), (545, 53821), (555, 53803), (566, 53785), (588, 53746), (595, 53737), (597, 53734), (599, 53731), (754, 53374), (760, 53341), (765, 53320), (799, 53227), (802, 53218), (822, 53155), (841, 53119), (842, 53116), (847, 53101), (872, 53023), (877, 53011), (883, 52990), (902, 52951), (942, 52861), (947, 52843), (949, 52837), (954, 52822), (964, 52798), (968, 52783), (969, 52780), (972, 52768), (979, 52744), (1002, 52696), (1015, 52672),

Gene: Zaka\_45 Start: 29422, Stop: 27581, Start Num: 234

Candidate Starts for Zaka\_45:

(Start: 212 @29452 has 1 MA's), (Start: 234 @29422 has 938 MA's), (353, 29218), (395, 29143), (397, 29140), (405, 29113), (409, 29098), (415, 29086), (432, 29035), (461, 28945), (465, 28933), (541, 28840), (559, 28801), (571, 28783), (582, 28768), (619, 28702), (635, 28669), (636, 28666), (681, 28564), (710, 28504), (740, 28420), (759, 28339), (789, 28255), (790, 28252), (793, 28243), (798, 28216), (805, 28186), (837, 28126), (847, 28087), (936, 27871), (938, 27868), (942, 27847), (985, 27712), (989, 27700), (993, 27691), (995, 27688), (1042, 27595),

Gene: Zareef\_42 Start: 32040, Stop: 29683, Start Num: 45

Candidate Starts for Zareef\_42:

(42, 32049), (Start: 45 @32040 has 24 MA's), (52, 32025), (58, 31989), (110, 31854), (136, 31791), (168, 31749), (177, 31737), (249, 31635), (252, 31632), (290, 31557), (306, 31518), (317, 31497), (352, 31446), (376, 31404), (391, 31374), (409, 31320), (420, 31299), (426, 31278), (449, 31215), (499, 31080), (506, 31065), (517, 31038), (524, 31020), (570, 30936), (626, 30900), (682, 30807), (707, 30765), (711, 30762), (713, 30759), (724, 30735), (729, 30723), (732, 30711), (770, 30570), (773, 30543), (805, 30408), (817, 30372), (819, 30366), (822, 30360), (824, 30354), (834, 30330), (842, 30297), (849, 30273), (859, 30228), (861, 30222), (880, 30162), (926, 30054), (945, 29985), (948, 29973), (958, 29949), (979, 29871), (986, 29847), (1018, 29778),

Gene: Zayuliv\_37 Start: 27590, Stop: 25725, Start Num: 283

Candidate Starts for Zayuliv\_37:

(Start: 283 @27590 has 147 MA's), (290, 27584), (337, 27485), (342, 27476), (357, 27452), (367, 27437), (371, 27431), (398, 27380), (399, 27377), (428, 27296), (479, 27146), (489, 27143), (524, 27044), (535, 27017), (537, 27014), (541, 27002), (553, 26972), (566, 26951), (611, 26915), (680, 26768), (752, 26588), (798, 26408), (805, 26378), (824, 26324), (832, 26306), (849, 26249), (854, 26222), (866, 26180), (913, 26060), (917, 26051), (938, 25991), (943, 25967), (946, 25955), (949, 25946), (956, 25928), (967, 25895), (986, 25823),

Gene: Zeeculate\_43 Start: 34848, Stop: 33013, Start Num: 234

Candidate Starts for Zeeculate\_43:

(Start: 234 @34848 has 938 MA's), (334, 34677), (368, 34620), (405, 34542), (411, 34521), (415, 34515), (419, 34506), (448, 34413), (457, 34389), (465, 34362), (541, 34269), (546, 34254), (566, 34221), (596, 34170), (598, 34167), (634, 34101), (648, 34071), (657, 34041), (679, 33996), (700, 33957), (759, 33777), (769, 33747), (775, 33729), (790, 33690), (805, 33624), (841, 33543), (842, 33540), (868, 33459), (936, 33309), (938, 33306), (946, 33270), (954, 33246), (963, 33225), (985, 33150), (993, 33129),

Gene: Zelda\_61 Start: 54666, Stop: 52807, Start Num: 197

Candidate Starts for Zelda\_61:

(Start: 180 @54690 has 1 MA's), (Start: 197 @54666 has 298 MA's), (Start: 225 @54642 has 5 MA's), (Start: 238 @54636 has 2 MA's), (Start: 261 @54594 has 10 MA's), (269, 54573), (323, 54459), (328, 54453), (349, 54423), (385, 54363), (394, 54342), (410, 54288), (418, 54276), (425, 54258), (427, 54246), (462, 54141), (496, 54084), (511, 54048), (516, 54036), (535, 54009), (555, 53964), (588, 53907), (595, 53898), (597, 53895), (754, 53535), (760, 53502), (765, 53481), (799, 53388), (802, 53379), (822, 53316), (841, 53280), (842, 53277), (847, 53262), (872, 53184), (877, 53172), (883, 53151), (902, 53112), (942, 53022), (947, 53004), (949, 52998), (954, 52983), (964, 52959), (968, 52944), (969, 52941), (972, 52929), (979, 52905), (1002, 52857), (1015, 52833),

Gene: Zemanar\_54 Start: 53874, Stop: 52054, Start Num: 193

Candidate Starts for Zemanar\_54:

(Start: 175 @53892 has 4 MA's), (Start: 193 @53874 has 1 MA's), (Start: 238 @53850 has 2 MA's), (252, 53823), (Start: 261 @53808 has 10 MA's), (301, 53736), (303, 53730), (379, 53601), (384, 53592), (386, 53589), (395, 53568), (402, 53544), (416, 53508), (419, 53502), (427, 53478), (428, 53475), (434, 53460), (437, 53451), (441, 53448), (496, 53325), (504, 53307), (511, 53289), (516, 53277), (535, 53250), (595, 53139), (597, 53136), (610, 53118), (618, 53106), (636, 53064), (640, 53052), (664, 52989), (737, 52845), (739, 52842), (749, 52806), (754, 52782), (755, 52776), (760, 52749), (799, 52635), (802, 52626), (839, 52536), (841, 52527), (847, 52509), (872, 52431), (877, 52419), (883, 52398), (890, 52380), (902, 52359), (921, 52329), (942, 52269), (947, 52251), (949, 52245), (964, 52206), (968, 52191), (969, 52188), (972, 52176), (979, 52152), (994, 52110), (1002, 52104), (1004, 52101), (1015, 52080),

Gene: Zenitsu\_38 Start: 28753, Stop: 26888, Start Num: 283

Candidate Starts for Zenitsu\_38:

(Start: 283 @28753 has 147 MA's), (330, 28654), (371, 28594), (398, 28543), (426, 28465), (428, 28459), (445, 28414), (446, 28411), (447, 28408), (460, 28369), (479, 28309), (532, 28186), (537, 28177), (541, 28165), (545, 28153), (553, 28135), (566, 28114), (574, 28102), (680, 27931), (749, 27763), (793, 27598), (801, 27562), (805, 27541), (819, 27499), (849, 27412), (859, 27367), (894, 27268), (913, 27223), (938, 27154), (943, 27130), (954, 27097), (986, 26986),

Gene: Zenteno07\_62 Start: 54178, Stop: 52334, Start Num: 220

Candidate Starts for Zenteno07\_62:

(Start: 220 @54178 has 3 MA's), (Start: 261 @54121 has 10 MA's), (272, 54094), (295, 54058), (328, 53992), (385, 53905), (395, 53881), (404, 53851), (410, 53830), (424, 53806), (427, 53791), (462,

53686), (511, 53593), (516, 53581), (539, 53545), (597, 53440), (664, 53293), (704, 53209), (706, 53203), (737, 53143), (739, 53140), (749, 53104), (754, 53080), (760, 53047), (799, 52933), (802, 52924), (841, 52810), (847, 52792), (872, 52714), (877, 52702), (883, 52681), (921, 52612), (931, 52597), (942, 52552), (949, 52528), (964, 52489), (968, 52474), (972, 52459), (979, 52435), (994, 52390), (1002, 52384), (1015, 52360),

Gene: Zephyr\_44 Start: 34559, Stop: 32733, Start Num: 234

Candidate Starts for Zephyr\_44:

(Start: 234 @34559 has 938 MA's), (334, 34388), (359, 34346), (368, 34331), (395, 34283), (405, 34253), (411, 34232), (415, 34226), (419, 34217), (457, 34100), (465, 34073), (541, 33980), (546, 33965), (596, 33881), (598, 33878), (634, 33812), (648, 33782), (657, 33752), (679, 33707), (700, 33668), (759, 33488), (769, 33458), (775, 33440), (790, 33401), (805, 33335), (841, 33254), (842, 33251), (868, 33170), (936, 33020), (938, 33017), (946, 32981), (954, 32957), (959, 32948), (963, 32936), (985, 32861), (993, 32840),

Gene: Zepp\_38 Start: 27049, Stop: 25184, Start Num: 283

Candidate Starts for Zepp\_38:

(Start: 283 @27049 has 147 MA's), (290, 27043), (337, 26944), (342, 26935), (357, 26911), (367, 26896), (371, 26890), (398, 26839), (399, 26836), (428, 26755), (450, 26695), (479, 26605), (489, 26602), (524, 26503), (535, 26476), (537, 26473), (541, 26461), (553, 26431), (566, 26410), (611, 26374), (680, 26227), (752, 26047), (798, 25867), (805, 25837), (824, 25783), (832, 25765), (849, 25708), (854, 25681), (866, 25639), (913, 25519), (917, 25510), (938, 25450), (943, 25426), (946, 25414), (949, 25405), (956, 25387), (967, 25354), (986, 25282),

Gene: Zeta1847\_40 Start: 29119, Stop: 31065, Start Num: 232

Candidate Starts for Zeta1847\_40:

(142, 28978), (156, 29005), (Start: 190 @29059 has 1 MA's), (Start: 193 @29062 has 1 MA's), (Start: 232 @29119 has 15 MA's), (265, 29167), (299, 29227), (329, 29284), (336, 29293), (353, 29323), (393, 29380), (397, 29389), (424, 29464), (464, 29593), (535, 29692), (543, 29713), (594, 29806), (603, 29821), (615, 29836), (675, 29974), (705, 30040), (729, 30112), (759, 30235), (765, 30256), (796, 30352), (798, 30358), (825, 30442), (847, 30505), (856, 30529), (861, 30547), (869, 30574), (916, 30679), (938, 30727), (954, 30787), (985, 30883), (1008, 30928),

Gene: Zetzy\_47 Start: 31416, Stop: 29602, Start Num: 234

Candidate Starts for Zetzy\_47:

(Start: 234 @31416 has 938 MA's), (262, 31377), (266, 31365), (353, 31212), (362, 31197), (395, 31140), (415, 31083), (419, 31074), (432, 31032), (448, 30981), (465, 30930), (541, 30837), (566, 30789), (571, 30780), (582, 30765), (603, 30726), (619, 30699), (634, 30669), (663, 30591), (670, 30576), (701, 30516), (710, 30501), (759, 30345), (789, 30261), (790, 30258), (805, 30192), (818, 30153), (842, 30081), (856, 30042), (862, 30018), (868, 30000), (879, 29967), (888, 29940), (921, 29886), (942, 29826), (985, 29691), (989, 29679), (993, 29670),

Gene: Zeuska\_44 Start: 34791, Stop: 32962, Start Num: 234

Candidate Starts for Zeuska\_44:

(Start: 234 @34791 has 938 MA's), (359, 34578), (368, 34563), (395, 34515), (405, 34485), (411, 34464), (415, 34458), (419, 34449), (457, 34332), (465, 34305), (541, 34212), (546, 34197), (566, 34164), (596, 34113), (598, 34110), (634, 34044), (648, 34014), (657, 33984), (679, 33939), (700, 33900), (759, 33720), (775, 33672), (793, 33624), (802, 33585), (805, 33567), (818, 33528), (837, 33507), (841, 33486), (846, 33471), (885, 33348), (960, 33177), (967, 33153), (982, 33105), (985, 33093), (993, 33072), (997, 33066), (1025, 33018), (1030, 33003),

Gene: Zimmer\_42 Start: 32129, Stop: 30285, Start Num: 234

Candidate Starts for Zimmer\_42:



(139, 32273), (152, 32246), (Start: 234 @32129 has 938 MA's), (314, 31991), (336, 31955), (353, 31925), (379, 31883), (397, 31847), (411, 31799), (415, 31793), (424, 31772), (461, 31652), (465, 31640), (541, 31547), (544, 31538), (566, 31499), (571, 31490), (582, 31475), (619, 31409), (640, 31361), (667, 31292), (710, 31211), (728, 31169), (740, 31124), (749, 31097), (759, 31043), (778, 30992), (790, 30956), (805, 30890), (818, 30851), (837, 30830), (841, 30809), (879, 30692), (908, 30629), (936, 30575), (938, 30572), (942, 30551), (962, 30494), (968, 30473), (985, 30416), (989, 30404), (1021, 30347),

Gene: Zolita\_39 Start: 31121, Stop: 29256, Start Num: 234

Candidate Starts for Zolita\_39:

(Start: 234 @31121 has 938 MA's), (266, 31070), (301, 31010), (336, 30947), (353, 30917), (355, 30914), (390, 30857), (405, 30815), (415, 30788), (465, 30635), (541, 30539), (556, 30506), (566, 30491), (618, 30407), (619, 30401), (635, 30368), (670, 30281), (679, 30269), (700, 30230), (724, 30170), (759, 30035), (769, 30005), (775, 29987), (789, 29951), (790, 29948), (805, 29882), (818, 29843), (841, 29801), (847, 29783), (862, 29735), (864, 29729), (879, 29684), (903, 29630), (908, 29621), (921, 29603), (947, 29525), (967, 29468), (978, 29432), (985, 29408), (989, 29396), (1051, 29264),

Gene: Zonia\_62 Start: 54586, Stop: 52727, Start Num: 197

Candidate Starts for Zonia\_62:

(Start: 180 @54610 has 1 MA's), (Start: 197 @54586 has 298 MA's), (Start: 225 @54562 has 5 MA's), (Start: 238 @54556 has 2 MA's), (Start: 261 @54514 has 10 MA's), (269, 54493), (323, 54379), (328, 54373), (349, 54343), (385, 54283), (394, 54262), (410, 54208), (418, 54196), (425, 54178), (427, 54166), (462, 54061), (496, 54004), (511, 53968), (516, 53956), (535, 53929), (555, 53884), (588, 53827), (595, 53818), (597, 53815), (724, 53557), (754, 53455), (760, 53422), (765, 53401), (799, 53308), (802, 53299), (822, 53236), (841, 53200), (842, 53197), (847, 53182), (872, 53104), (877, 53092), (883, 53071), (902, 53032), (942, 52942), (947, 52924), (949, 52918), (954, 52903), (964, 52879), (968, 52864), (969, 52861), (972, 52849), (979, 52825), (985, 52804), (1002, 52777), (1015, 52753), (1019, 52738),

Gene: Zooman\_100 Start: 78594, Stop: 76723, Start Num: 232

Candidate Starts for Zooman\_100:

(Start: 189 @78654 has 26 MA's), (194, 78648), (210, 78624), (217, 78615), (Start: 223 @78606 has 3 MA's), (Start: 232 @78594 has 15 MA's), (334, 78393), (370, 78333), (382, 78318), (426, 78210), (428, 78204), (463, 78111), (469, 78093), (518, 78066), (544, 78018), (586, 77934), (603, 77907), (635, 77847), (650, 77814), (664, 77772), (700, 77709), (711, 77682), (721, 77661), (759, 77520), (777, 77469), (795, 77406), (816, 77322), (822, 77307), (825, 77298), (853, 77211), (856, 77202), (865, 77169), (931, 77013), (960, 76917), (968, 76890), (973, 76869), (985, 76833),

Gene: Zuko\_78 Start: 57486, Stop: 60083, Start Num: 14

Candidate Starts for Zuko\_78:

(Start: 14 @57486 has 1 MA's), (24, 57528), (29, 57549), (32, 57558), (Start: 37 @57591 has 1 MA's), (77, 57720), (Start: 79 @57726 has 1 MA's), (121, 57849), (Start: 145 @57927 has 1 MA's), (187, 57990), (210, 58023), (216, 58032), (263, 58110), (267, 58122), (Start: 291 @58167 has 5 MA's), (317, 58236), (326, 58257), (409, 58416), (418, 58431), (426, 58458), (448, 58518), (452, 58530), (475, 58578), (524, 58695), (626, 58815), (702, 58995), (711, 59010), (713, 59013), (744, 59103), (755, 59148), (773, 59232), (792, 59304), (798, 59337), (805, 59367), (817, 59403), (819, 59409), (822, 59415), (824, 59421), (842, 59478), (849, 59502), (892, 59643), (910, 59682), (942, 59781), (947, 59799), (958, 59826), (976, 59895), (982, 59913), (986, 59928), (1007, 59967), (1008, 59973), (1028, 60021),

Gene: Zulu\_46 Start: 29773, Stop: 27932, Start Num: 234

Candidate Starts for Zulu\_46:

(Start: 212 @29803 has 1 MA's), (Start: 234 @29773 has 938 MA's), (353, 29569), (395, 29494), (397, 29491), (405, 29464), (409, 29449), (415, 29437), (432, 29386), (461, 29296), (465, 29284), (541, 29191), (559, 29152), (571, 29134), (582, 29119), (619, 29053), (635, 29020), (636, 29017), (681, 28915), (710, 28855), (740, 28771), (759, 28690), (789, 28606), (790, 28603), (793, 28594), (798, 28567), (805, 28537), (837, 28477), (847, 28438), (936, 28222), (938, 28219), (942, 28198), (985, 28063), (989, 28051), (993, 28042), (995, 28039), (1042, 27946),

Gene: phiBT1\_11 Start: 28224, Stop: 30098, Start Num: 234

Candidate Starts for phiBT1\_11:

(Start: 234 @28224 has 938 MA's), (279, 28305), (303, 28338), (353, 28425), (400, 28512), (405, 28527), (411, 28548), (419, 28563), (464, 28704), (537, 28785), (543, 28803), (576, 28860), (596, 28902), (603, 28914), (617, 28932), (632, 28968), (663, 29046), (669, 29058), (675, 29067), (700, 29112), (703, 29124), (708, 29136), (737, 29232), (750, 29274), (759, 29325), (775, 29376), (796, 29448), (798, 29454), (799, 29457), (802, 29466), (805, 29484), (817, 29550), (839, 29604), (902, 29781), (905, 29787), (931, 29829), (935, 29841), (942, 29874), (946, 29889), (949, 29898), (960, 29925), (968, 29952), (985, 30009), (987, 30015), (993, 30030),

Gene: phiSASD1\_12 Start: 28284, Stop: 30140, Start Num: 234

Candidate Starts for phiSASD1\_12:

(Start: 234 @28284 has 938 MA's), (265, 28332), (266, 28335), (374, 28530), (418, 28638), (438, 28701), (543, 28881), (576, 28938), (589, 28971), (603, 28992), (655, 29097), (700, 29190), (705, 29208), (747, 29343), (756, 29382), (759, 29403), (761, 29409), (775, 29451), (790, 29490), (792, 29493), (795, 29514), (798, 29526), (799, 29529), (805, 29556), (825, 29610), (856, 29697), (869, 29742), (901, 29820), (949, 29940), (967, 29991), (985, 30051),