

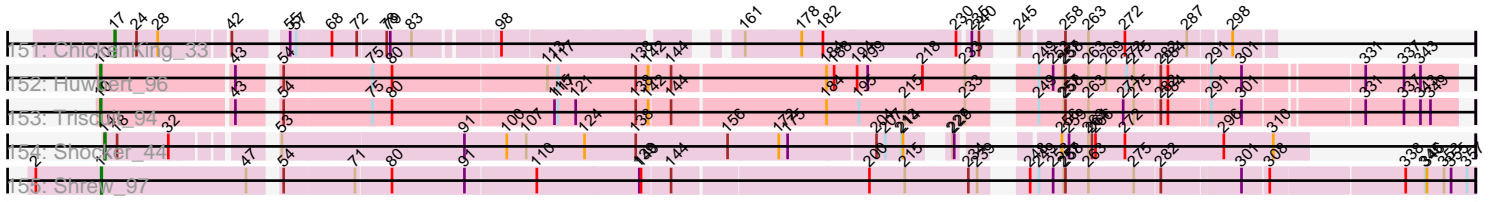
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1. JacoRe_57	30	31	38	72	92	102	112	122	131	145	168	178	188	202	212	222	232	242	252	262	272	282	292	302	312	322	332	342	352			
2. LongJia_58	31	38	56	73	92	98	103	113	123	133	146	171	181	191	203	213	223	233	243	253	263	273	283	293	303	313	323	333	343	353		
3. NoShow_52	31	38	56	72	92	102	112	122	131	145	168	178	188	202	212	222	232	242	252	262	272	282	292	302	312	322	332	342	352	362		
4. FF47_56+	31	38	56	72	92	102	112	122	131	145	168	178	188	202	212	222	232	242	252	262	272	282	292	302	312	322	332	342	352	362		
5. Mac06_62	31	38	56	72	92	102	112	122	131	145	168	178	188	202	212	222	232	242	252	262	272	282	292	302	312	322	332	342	352	362		
6. Muddy_64	33	39	51	61	86	111	111	121	131	141	153	161	171	181	191	201	211	221	231	241	251	261	271	281	291	301	311	321	331	341	351	
7. Ada3_64	33	39	51	61	86	111	111	121	131	141	153	161	171	181	191	201	211	221	231	241	251	261	271	281	291	301	311	321	331	341	351	
8. Jasmine_69	37	45	59	69	86	111	111	121	131	141	153	161	171	181	191	201	211	221	231	241	251	261	271	281	291	301	311	321	331	341	351	
9. GalaxyCater_38	44	52	66	76	86	92	111	111	121	131	141	153	161	171	181	191	201	211	221	231	241	251	261	271	281	291	301	311	321	331	341	351
10. LagyJockey_43	45	53	67	77	86	92	111	111	121	131	141	153	161	171	181	191	201	211	221	231	241	251	261	271	281	291	301	311	321	331	341	351
11. Cassette_36	45	53	67	77	86	92	111	111	121	131	141	153	161	171	181	191	201	211	221	231	241	251	261	271	281	291	301	311	321	331	341	351
12. PigHead_41	39	47	61	71	86	92	111	111	121	131	141	153	161	171	181	191	201	211	221	231	241	251	261	271	281	291	301	311	321	331	341	351
13. Pirog_30	46	54	68	78	86	91	111	111	121	131	141	153	161	171	181	191	201	211	221	231	241	251	261	271	281	291	301	311	321	331	341	351
14. Hippo_64	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
15. Button_60	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
16. RSCN_30	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
17. Noodle_52	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
18. Sweat_60	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
19. Gigolo_61	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
20. Malignant_65	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
21. Waitress_5+2	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
22. Typhoonm_57	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
23. Sopesean_55+2	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
24. BillDove_58	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
25. GolfFester_59+2	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
26. Survivor_60	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
27. Flipsal_63	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
28. PolE_61+1	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
29. SketchMex_58+1	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
30. RanchamCat_62	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
31. Yam_60+3	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
32. Canes_59_57+2	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
33. GIRA_61	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
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35. ElGiras_63	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
36. BaguetteC_63	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
37. ChenLinn_62	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
38. Emalya_67	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
39. Azula_63	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
40. BigClairius_61+5	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
41. Agatha_58	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
42. AikoCason_59	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
43. Quasar_58	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
44. Itoje_63	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
45. Yakul_69	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
46. Cozz_65	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324	334	344	354	364	
47. MS_63	53	61	75	85	91	98	113	123	133	144	164	174	184	194	204	214	224	234														

51: Horse	Edish	60 + 2	76	81	87	108	114	120	146	173	180	209	231	261	300	316	332	352
52: An	20	76	81	87	92	100	114	120	146	173	180	209	231	251	261	300	316	332
53: Poni	76	81	87	92	99	100	114	120	146	173	180	209	231	251	261	300	316	332
54: Cleo	76	81	87	92	94	114	120	146	154	173	180	209	231	248	261	300	316	332
55: Carso	ale	81	87	92	94	114	120	146	154	173	180	209	231	248	261	300	316	332
56: Munk	eeR	bachy	81	87	92	114	120	146	154	173	180	209	231	248	261	300	316	332
57: Chick	ee	60	70	81	87	92	114	120	146	153	173	180	209	231	248	261	300	316
58: He	76	81	87	92	100	114	120	146	153	173	180	209	231	248	261	300	316	332
59: MAn	76	81	87	92	97	100	114	120	146	153	173	180	209	211	248	261	300	316
60: Maga	76	81	87	92	100	114	120	146	153	173	180	209	231	248	261	300	316	332
61: Shec	76	81	87	92	100	114	120	146	153	173	180	209	231	248	261	300	316	332
62: Noo	76	81	87	90	88	114	120	146	153	173	180	209	231	248	261	300	316	332
63: Jam	76	81	87	90	88	114	120	146	153	173	180	209	231	248	261	300	316	332
64: Ori	76	81	87	91	100	114	120	146	153	173	180	209	231	248	261	300	316	332
65: May	76	81	87	92	100	114	120	146	153	173	180	209	231	248	261	300	316	332
66: Lau	76	81	87	92	100	114	120	146	153	173	180	209	231	248	261	300	316	332
67: Merce	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
68: Ludga	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
69: ManR	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
70: SonO	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
71: Asta	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
72: Natt	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
73: Kani	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
74: Thor	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
75: Bais	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
76: Benja	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
77: Phide	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
78: Duoca	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
79: Oxtob	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
80: Leafu	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
81: Farne	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
82: Caris	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
83: Anio	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
84: Cianc	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
85: Jerbit	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
86: Endor	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
87: Haven	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
88: Phrien	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
89: Etna	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
90: Going	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
91: Kouch	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
92: Gona	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
93: Jason	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
94: Rosie	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
95: Kelly	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
96: Phred	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
97: Jenos	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
98: Racco	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
99: Gard	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332
100: Thomp	76	81	87	92	94	100	114	120	146	161	169	178	212	261	281	300	316	332

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r01: McGa	1 24 28	51	58	68	72	83	94	98	161	169	193	234	259	263	270	276	281	287	291	298	304
r02: Acosta	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r03: MonC	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r04: Zada	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r05: Quan	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r06: Hairy	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r07: Mand	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r08: Juan	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r09: Yuu	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r10: Sciss	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r11: Schin	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r12: Ixel	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r13: Tmyin	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r14: Pent	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r15: Kavo	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r16: Sansa	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r17: Xebus	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
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r19: Phani	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r20: PSira	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r21: Pajaz	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r22: Jingi	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
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r34: Zepp	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r35: Zayul	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r36: Alaka	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
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r42: KatCh	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r43: William	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r44: Momi	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r45: Jemel	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r46: Juicer	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r47: Chepi	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r48: Schu	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r49: GaeCr	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304
r50: Chee	1 24 28	51	58	68	72	83	94	98	161	169	178	182	221	230	233	242	281	287	291	298	304

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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 307943 Report

This analysis was run 06/27/26 on database version 652.

Pham number 307943 has 318 members, 40 are drafts.

Phages represented in each track:

- Track 1 : JacoRen57\_50
- Track 2 : LongHai\_56, Salvus\_56
- Track 3 : NoShow\_62
- Track 4 : FF47\_52, 8UZL\_54
- Track 5 : Maco6\_52
- Track 6 : Muddy\_54
- Track 7 : Adat\_37, GurgleFerb\_37, Brad\_37, Nellie\_37
- Track 8 : Jasmine\_39
- Track 9 : GalaxyEater\_38
- Track 10 : LadyJasley\_41
- Track 11 : Casserole\_36
- Track 12 : PigHeaded\_41
- Track 13 : Phroglets\_32
- Track 14 : HippoPololi\_54
- Track 15 : Button\_60
- Track 16 : RSchmailzl\_59
- Track 17 : Nibbles\_52
- Track 18 : SweatNTears\_60
- Track 19 : Gibbous\_54, Dre3\_54
- Track 20 : Mayweather\_65
- Track 21 : Wallaby\_55, MaVan\_53, Zareef\_53
- Track 22 : Typhonomachy\_57, Socotra\_59, Bubble\_56, Axym\_57, Burnsey\_58, Nina\_58
- Track 23 : Sopespian\_55, PsychoKiller\_57, Elliott\_58
- Track 24 : BillDoor\_58
- Track 25 : GoldHunter\_59, Starburst\_58, RADical\_59
- Track 26 : Survivors\_53
- Track 27 : Fribs8\_53
- Track 28 : PotPie\_61, SummitAcademy\_61, Tarnish\_61
- Track 29 : SketchMex\_58, Biskit\_60
- Track 30 : RanchParmCat\_62
- Track 31 : Yarn\_55, AndPeggy\_55, SteamedHams\_59, Tolls\_59
- Track 32 : CanesSauce\_57, CaramelLatte\_57, ChocoMunchkin\_57
- Track 33 : GiKK\_63
- Track 34 : GTE2\_47
- Track 35 : ElJefes\_63, McDazzle\_63
- Track 36 : Bavailard\_60

- Track 37 : CherryonLim\_62
- Track 38 : Emalyn\_57
- Track 39 : Azira\_53
- Track 40 : BigChungus\_61, Feastonyeet\_61, Balloona\_60, Yucky\_64, CocoaPuff\_61, Vine\_64
- Track 41 : Agatha\_58
- Track 42 : AikoCarson\_59
- Track 43 : Quasar\_58
- Track 44 : Troje\_60
- Track 45 : Yakult\_59
- Track 46 : Cozz\_56
- Track 47 : MScarn\_62, Blondies\_61
- Track 48 : Elinal\_66, KayGee\_64
- Track 49 : RedBaron\_64
- Track 50 : Wolfwood\_53
- Track 51 : Horseradish\_60, Yummy\_60, Buttrmlkdreams\_60
- Track 52 : Amok\_59
- Track 53 : Pons\_63
- Track 54 : Cleo\_51
- Track 55 : Carsonalex\_61
- Track 56 : MunkgeeRoachy\_56
- Track 57 : ChickenTender\_60
- Track 58 : Hexbug\_63
- Track 59 : MAnor\_63
- Track 60 : Margaret\_63
- Track 61 : SheckWes\_65
- Track 62 : Nodigi\_63
- Track 63 : Jamzy\_63
- Track 64 : Orla\_65
- Track 65 : Malvina\_56
- Track 66 : Lauer\_56
- Track 67 : Mercedes\_28
- Track 68 : Ludgate\_34, Alyxandracam\_34, Bandik\_34, SJay\_34, Ioannes\_34, Nagem\_34
- Track 69 : ManRay\_33, Christoph\_33
- Track 70 : SonOfLevi\_33
- Track 71 : Asta\_33, Blage\_34, TeddyBear\_33, BigRedClifford\_34, BeautPeep30\_34, Raptor\_34, Espinosa\_33, Gargoyle\_34, BonesMcCoy\_34, Gershwin\_33, ShaiHulud\_34, Aubergine\_33, Tenda\_33, Knox\_34, Oats\_33, Convict\_34
- Track 72 : Nattles\_33, Etta\_33, Erla\_33, Klimt\_33, Calix\_33, Kale\_33, Chamuel\_33, Pocket\_33, Bonino\_33, Gelo\_33
- Track 73 : KannH\_33, HankSprout\_34, StirfryIV\_33, Gubbabump\_33, Winzigespinne\_33, AranulaLuti\_33, Baines\_33, JasperRussell\_33, Rog141\_33, Chako\_33, HanSolo\_33
- Track 74 : Thorongil\_34, AxiPup\_34, Strathdee\_34, Vispistious\_34, PuppyEggo\_34, Teagan\_34, WildNOut\_34
- Track 75 : Balsa\_33, Hamlet\_33, Peppino\_33, Redfield\_33, BeeBee8\_34, PhillyPhantom\_33, Schnapsidee\_33
- Track 76 : Benjal Lauren\_34, Ilzat\_33, HungryHenry\_33, Symere\_33, JeriBeth\_33, Papafritta\_33, Sedgewig\_33, StingRay\_33, Janus167\_33, CoraRita\_33
- Track 77 : Phiderman\_34, Inventa\_34, MrWorldwide\_34, MillyPhilly\_34, Phireproof\_34, Robinson\_34, TatarkaPM\_34, Antoinette\_34, TinSulphur\_34,

Rapheph\_34, ParleG\_34, Byron23\_34, SolidSnake\_35, Superfresh\_34, Peep\_34, NickSell\_34, Pherferi\_34, Shee\_34, Martin\_35, AlexAdler\_34, Dave\_34, Dothraki\_34, Stanktossa\_34, Renzie\_34

- Track 78 : Duocatuli\_33, Kurt1\_34
- Track 79 : Oxtober96\_34, Velene\_34, Den3\_34, Lovelyunicorn\_34
- Track 80 : Leafus\_33
- Track 81 : FarmerDoug\_33
- Track 82 : CarisSwetlik\_36
- Track 83 : Anilorac\_33, Agente005\_34
- Track 84 : Clancy\_33
- Track 85 : Jerbirus\_34
- Track 86 : Endor\_34
- Track 87 : HavenFinLeoSun\_35
- Track 88 : Phriends\_34, MaeLinda\_34, SoilGremlin\_34, Delphidian\_34, Garey24\_33, OldNelly\_34, Riyhil\_34, Merida02\_35, Figueroism\_34
- Track 89 : Etna\_33, KingJulien\_33, Stormbreaker8\_33, Soror1\_33
- Track 90 : GoingMerry\_34, Greys\_34
- Track 91 : Kouch\_33, Exploradora\_33
- Track 92 : GoneGirl\_34
- Track 93 : JasonD\_36
- Track 94 : RosieMae\_33
- Track 95 : KellyGreen\_34
- Track 96 : PhredFlintston\_34
- Track 97 : Jenos\_37
- Track 98 : Raccoon\_33
- Track 99 : GardenB\_33
- Track 100 : Thompsone\_34
- Track 101 : McGalleon\_36
- Track 102 : Acosta\_35
- Track 103 : MonChoix\_32
- Track 104 : Zada\_34
- Track 105 : Quartz\_31
- Track 106 : HairyMan\_29
- Track 107 : Mandalorian\_30, Carostasia\_30, Nucci\_30
- Track 108 : Juanyo\_31, MiniVolent\_31
- Track 109 : YuuY\_32
- Track 110 : Scissor2024\_32
- Track 111 : Schimmels22\_32
- Track 112 : Ixel\_32
- Track 113 : Tinyman4\_32, HerculesXL\_32
- Track 114 : Penta\_30, WestPM\_30
- Track 115 : Kavo\_31
- Track 116 : Sansa\_31
- Track 117 : Xebius\_32, ChikPic\_32, Glamour\_31, Andromedas\_32, Eleri\_32, Zenitsu\_32, Saratos\_32, Shamu\_32, ColaCorta\_32
- Track 118 : Finny\_32, MCubed\_32
- Track 119 : Phanita\_32
- Track 120 : PSirce\_32
- Track 121 : Pajaza\_30, Pikmin\_30, Casey\_30
- Track 122 : Jingles\_31
- Track 123 : Koji\_31
- Track 124 : Lucky3\_31, Golden\_31
- Track 125 : Guetzie\_31

- Track 126 : Kauala\_31
- Track 127 : Bustleton\_31, Pherbot\_31
- Track 128 : SirVictor\_31
- Track 129 : PrincePhergus\_31, RenegadeRaider\_32
- Track 130 : BouleyBill\_31
- Track 131 : Sinatra\_31
- Track 132 : Hasitha\_31
- Track 133 : Librie\_31, CaptainRex\_31
- Track 134 : Zepp\_32, QuadZero\_31
- Track 135 : Zayuliv\_31, Wardwill\_33, Fulton\_31
- Track 136 : Alakazam\_32
- Track 137 : Greenlvy\_31, BaronJohn\_31, LilTerminator\_31
- Track 138 : TwoBits\_31
- Track 139 : Clock\_31
- Track 140 : Neferthena\_31
- Track 141 : Nebulous\_31
- Track 142 : KatChan\_33, Luna18\_33
- Track 143 : WilliamStrong\_32
- Track 144 : Morrigan\_33
- Track 145 : Jemerald\_34
- Track 146 : Juicer\_34
- Track 147 : Chepli\_33
- Track 148 : Schubert\_31
- Track 149 : GaeCeo\_34
- Track 150 : Cheeto1\_34
- Track 151 : ChickenKing\_33
- Track 152 : Huwbert\_96
- Track 153 : Triscuit\_94
- Track 154 : Shocker\_44
- Track 155 : Shrew\_97

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

The start number called the most often in the published annotations is 17, it was called in 184 of the 278 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acosta\_35, Agente005\_34, Alakazam\_32, AlexAdler\_34, Alyxandracam\_34, Andromedas\_32, Anilorac\_33, Antoinette\_34, AranulaLuti\_33, Asta\_33, Aubergine\_33, AxiPup\_34, Baines\_33, Balsa\_33, Bandik\_34, BaronJohn\_31, BeautPeep30\_34, BeeBee8\_34, Benjalauren\_34, BigRedClifford\_34, Blage\_34, BonesMcCoy\_34, Bonino\_33, BouleyBill\_31, Bustleton\_31, Byron23\_34, Calix\_33, CaptainRex\_31, CarisSwetlik\_36, Carostasia\_30, Casey\_30, Chako\_33, Chamuel\_33, Cheeto1\_34, Chepli\_33, ChickenKing\_33, ChikPic\_32, Clancy\_33, Clock\_31, ColaCorta\_32, Convict\_34, CoraRita\_33, Dave\_34, Delphidian\_34, Den3\_34, Dothraki\_34, Eleri\_32, Endor\_34, Erla\_33, Espinosa\_33, Etna\_33, Etta\_33, Exploradora\_33, FarmerDoug\_33, Figueroism\_34, Finny\_32, Fulton\_31, GaeCeo\_34, GardenB\_33, Garey24\_33, Gargoyle\_34, Gelo\_33, Gershwin\_33, Glamour\_31, Greenlvy\_31, Gubbabump\_33, HairyMan\_29, Hamlet\_33, HanSolo\_33, HankSprout\_34, Hasitha\_31, HavenFinLeoSun\_35, HerculesXL\_32,

HungryHenry\_33, Ilzat\_33, Inventa\_34, Ioannes\_34, Ixel\_32, Janus167\_33, JasonD\_36, JasperRussell\_33, Jenos\_37, JeriBeth\_33, Jingles\_31, Juanyo\_31, Juicer\_34, Kale\_33, KannH\_33, KatChan\_33, Kauala\_31, Kavvo\_31, KingJulien\_33, Klimt\_33, Knox\_34, Kouch\_33, Librie\_31, LilTerminator\_31, Lovelyunicorn\_34, Ludgate\_34, Luna18\_33, MCubed\_32, MaeLinda\_34, Mandalorian\_30, Martin\_35, McGalleon\_36, Mercedes\_28, Merida02\_35, MillyPhilly\_34, MiniVolent\_31, Morrigan\_33, MrWorldwide\_34, Nagem\_34, Nattles\_33, Nebulous\_31, Neferthena\_31, NickSell\_34, Nucci\_30, Oats\_33, OldNelly\_34, Oxtober96\_34, PSirce\_32, Pajaza\_30, Papafritta\_33, ParleG\_34, Peep\_34, Penta\_30, Peppino\_33, Phanita\_32, Pherbot\_31, Pherferi\_34, Phiderman\_34, PhillyPhantom\_33, Phireproof\_34, PhredFlintston\_34, Phriends\_34, Pikmin\_30, Pocket\_33, PrincePhergus\_31, PuppyEggo\_34, QuadZero\_31, Quartz\_31, Raccoon\_33, Rappheph\_34, Raptor\_34, Redfield\_33, RenegadeRaider\_32, Renzie\_34, Riyhil\_34, Robinson\_34, Rog141\_33, RosieMae\_33, SJay\_34, Sansa\_31, Saratos\_32, Schimmels22\_32, Schnapsidee\_33, Schubert\_31, Sedgewig\_33, ShaiHulud\_34, Shamu\_32, Shee\_34, Sinatra\_31, SirVictor\_31, SoilGremlin\_34, SolidSnake\_35, Soror1\_33, Stanktossa\_34, StingRay\_33, StirfryIV\_33, Stormbreaker8\_33, Strathdee\_34, Superfresh\_34, Symere\_33, TatarkaPM\_34, Teagan\_34, TeddyBear\_33, Tenda\_33, Thorongil\_34, TinSulphur\_34, Tinyman4\_32, Velene\_34, Vispistious\_34, Wardwill\_33, WestPM\_30, WildNOut\_34, WilliamStrong\_32, Winzigespinne\_33, Xebius\_32, YuuY\_32, Zada\_34, Zayuliv\_31, Zenitsu\_32, Zepp\_32,

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

- Christoph\_33, Duocatuli\_33, GoingMerry\_34, Golden\_31, GoneGirl\_34, Greys\_34, Guetzie\_31, Jemerald\_34, Jerbirus\_34, KellyGreen\_34, Koji\_31, Kurt1\_34, Leafus\_33, Lucky3\_31, ManRay\_33, MonChoix\_32, Scissor2024\_32, SonOfLevi\_33, Thompsone\_34, TwoBits\_31,

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

- 8UZL\_54, Adat\_37, Agatha\_58, AikoCarson\_59, Amok\_59, AndPeggy\_55, Axym\_57, Azira\_53, Balloona\_60, Bavidard\_60, BigChungus\_61, BillDoor\_58, Biskit\_60, Blondies\_61, Brad\_37, Bubble\_56, Burnsey\_58, Button\_60, Buttrmilkdreams\_60, CanesSauce\_57, CaramelLatte\_57, Carsonalex\_61, Casserole\_36, CherryonLim\_62, ChickenTender\_60, ChocoMunchkin\_57, Cleo\_51, CocoaPuff\_61, Cozz\_56, Dre3\_54, ElJefes\_63, Elinal\_66, Elliott\_58, Emalyn\_57, FF47\_52, Feastonyeet\_61, Fribs8\_53, GTE2\_47, GalaxyEater\_38, GiKK\_63, Gibbous\_54, GoldHunter\_59, GurgleFerb\_37, Hexbug\_63, HippoPololi\_54, Horseradish\_60, Huwbert\_96, JacoRen57\_50, Jamzy\_63, Jasmine\_39, KayGee\_64, LadyJasley\_41, Lauer\_56, LongHai\_56, MAnor\_63, MScarn\_62, MaVan\_53, Maco6\_52, Malvina\_56, Margaret\_63, Mayweather\_65, McDazzle\_63, Muddy\_54, MunkgeeRoachy\_56, Nellie\_37, Nibbles\_52, Nina\_58, NoShow\_62, Nodigi\_63, Orla\_65, Phroglets\_32, PigHeaded\_41, Pons\_63, PotPie\_61, PsychoKiller\_57, Quasar\_58, RADical\_59, RSchmailzl\_59, RanchParmCat\_62, RedBaron\_64, Salvus\_56, SheckWes\_65, Shocker\_44, Shrew\_97, SketchMex\_58, Socotra\_59, Sopespian\_55, Starburst\_58, SteamedHams\_59, SummitAcademy\_61, Survivors\_53, SweatNTears\_60, Tarnish\_61, Tolls\_59, Triscuit\_94, Troje\_60, Typhonmarchy\_57, Vine\_64, Wallaby\_55, Wolfwood\_53, Yakult\_59, Yarn\_55, Yucky\_64, Yummy\_60, Zareef\_53,

### Summary by start number:

Start 4:

- Found in 6 of 318 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 6 of 278
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adat\_37 (AV), Brad\_37 (AV), Casserole\_36 (AV), GurgleFerb\_37 (AV), Jasmine\_39 (AV), Nellie\_37 (AV),

#### Start 7:

- Found in 20 of 318 ( 6.3% ) of genes in pham
- Manual Annotations of this start: 15 of 278
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Balloona\_60 (CT), Bavidard\_60 (CT), BigChungus\_61 (CT), CherryonLim\_62 (CT), CocoaPuff\_61 (CT), ElJefes\_63 (CT), Elinal\_66 (CT), Feastonyeet\_61 (CT), KayGee\_64 (CT), Lauer\_56 (CT), MAnor\_63 (CT), Mayweather\_65 (CT), McDazzle\_63 (CT), Pons\_63 (CT), PotPie\_61 (CT), SheckWes\_65 (CT), SummitAcademy\_61 (CT), Tarnish\_61 (CT), Vine\_64 (CT), Yucky\_64 (CT),

#### Start 8:

- Found in 2 of 318 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 278
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Margaret\_63 (CT), RanchParmCat\_62 (CT),

#### Start 9:

- Found in 4 of 318 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 3 of 278
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Button\_60 (CT), Jamzy\_63 (CT), Yakult\_59 (CT),

#### Start 10:

- Found in 2 of 318 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 278
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Huwbert\_96 (GG), Triscuit\_94 (GG),

#### Start 11:

- Found in 2 of 318 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 278
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Shrew\_97 (singleton),

#### Start 12:

- Found in 3 of 318 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 3 of 278
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hexbug\_63 (CT), Nodigi\_63 (CT), Orla\_65 (CT),

#### Start 13:

- Found in 14 of 318 ( 4.4% ) of genes in pham
- Manual Annotations of this start: 12 of 278

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azira\_53 (CT), Cleo\_51 (CT), Dre3\_54 (CT), Fribs8\_53 (CT), Gibbous\_54 (CT), HippoPololi\_54 (CT), JacoRen57\_50 (AB), MaVan\_53 (CT), Malvina\_56 (CT), Nibbles\_52 (CT), Survivors\_53 (CT), Wallaby\_55 (CT), Wolfwood\_53 (CT), Zareef\_53 (CT),

#### Start 14:

- Found in 1 of 318 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 278
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shocker\_44 (singleton),

#### Start 15:

- Found in 54 of 318 ( 17.0% ) of genes in pham
- Manual Annotations of this start: 31 of 278
- Called 88.9% of time when present
- Phage (with cluster) where this start called: 8UZL\_54 (AB), Agatha\_58 (CT), AikoCarson\_59 (CT), Amok\_59 (CT), AndPeggy\_55 (CT), Axym\_57 (CT), BillDoor\_58 (CT), Biskit\_60 (CT), Blondies\_61 (CT), Bubble\_56 (CT), Burnsey\_58 (CT), Buttrmlkdreams\_60 (CT), CanesSauce\_57 (CT), CaramelLatte\_57 (CT), Carsonalex\_61 (CT), ChickenTender\_60 (CT), ChocoMunchkin\_57 (CT), Cozz\_56 (CT), Elliott\_58 (CT), Emalyn\_57 (CT), FF47\_52 (AB), GTE2\_47 (CT), GoldHunter\_59 (CT), Horseradish\_60 (CT), LongHai\_56 (AB), MScarn\_62 (CT), Maco6\_52 (AB), Muddy\_54 (AB), MunkgeeRoachy\_56 (CT), Nina\_58 (CT), NoShow\_62 (AB), PsychoKiller\_57 (CT), Quasar\_58 (CT), RADical\_59 (CT), RSchmailzl\_59 (CT), RedBaron\_64 (CT), Salvus\_56 (AB), SketchMex\_58 (CT), Socotra\_59 (CT), Sopespian\_55 (CT), Starburst\_58 (CT), SteamedHams\_59 (CT), SweatNTears\_60 (CT), Tolls\_59 (CT), Troje\_60 (CT), Typhonmarchy\_57 (CT), Yarn\_55 (CT), Yummy\_60 (CT),

#### Start 16:

- Found in 4 of 318 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 2 of 278
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GalaxyEater\_38 (AV), LadyJasley\_41 (AV), Phroglets\_32 (AV), PigHeaded\_41 (AV),

#### Start 17:

- Found in 213 of 318 ( 67.0% ) of genes in pham
- Manual Annotations of this start: 184 of 278
- Called 90.6% of time when present
- Phage (with cluster) where this start called: Acosta\_35 (EA1), Agente005\_34 (EA1), Alakazam\_32 (EA5), AlexAdler\_34 (EA1), Alyxandracam\_34 (EA1), Andromedas\_32 (EA2), Anilorac\_33 (EA1), Antoinette\_34 (EA1), AranulaLuti\_33 (EA1), Asta\_33 (EA1), Aubergine\_33 (EA1), AxiPup\_34 (EA1), Baines\_33 (EA1), Balsa\_33 (EA1), Bandik\_34 (EA1), BaronJohn\_31 (EA5), BeautPeep30\_34 (EA1), BeeBee8\_34 (EA1), Benjalauren\_34 (EA1), BigRedClifford\_34 (EA1), Blage\_34 (EA1), BonesMcCoy\_34 (EA1), Bonino\_33 (EA1), BouleyBill\_31 (EA4), Bustleton\_31 (EA4), Byron23\_34 (EA1), Calix\_33 (EA1), CaptainRex\_31 (EA5), CarisSwetlik\_36 (EA1), Carostasia\_30 (EA10), Casey\_30 (EA3), Chako\_33 (EA1), Chamuel\_33 (EA1), Cheeto1\_34 (EA9), Chepli\_33 (EA6), ChickenKing\_33 (EA9), ChikPic\_32 (EA2), Clancy\_33 (EA1), Clock\_31 (EA5), ColaCorta\_32 (EA2), Convict\_34 (EA1), CoraRita\_33 (EA1), Dave\_34 (EA1), Delphidian\_34 (EA1), Den3\_34 (EA1), Dothraki\_34 (EA1), Eleri\_32

(EA2), Endor\_34 (EA1), Erla\_33 (EA1), Espinosa\_33 (EA1), Etna\_33 (EA1), Etta\_33 (EA1), Exploradora\_33 (EA1), FarmerDoug\_33 (EA1), Figueroism\_34 (EA1), Finny\_32 (EA2), Fulton\_31 (EA5), GaeCeo\_34 (EA9), GardenB\_33 (EA1), Garey24\_33 (EA1), Gargoyle\_34 (EA1), Gelo\_33 (EA1), Gershwin\_33 (EA1), Glamour\_31 (EA2), Greenivy\_31 (EA5), Gubbabump\_33 (EA1), HairyMan\_29 (EA10), Hamlet\_33 (EA1), HanSolo\_33 (EA1), HankSprout\_34 (EA1), Hasitha\_31 (EA5), HavenFinLeoSun\_35 (EA1), HerculesXL\_32 (EA11), HungryHenry\_33 (EA1), Ilzat\_33 (EA1), Inventa\_34 (EA1), Ioannes\_34 (EA1), Ixel\_32 (EA11), Janus167\_33 (EA1), JasonD\_36 (EA1), JasperRussell\_33 (EA1), Jenos\_37 (EA1), JeriBeth\_33 (EA1), Jingles\_31 (EA4), Juanyo\_31 (EA10), Juicer\_34 (EA6), Kale\_33 (EA1), KannH\_33 (EA1), KatChan\_33 (EA6), Kauala\_31 (EA4), Kavo\_31 (EA11), KingJulien\_33 (EA1), Klimt\_33 (EA1), Knox\_34 (EA1), Kouch\_33 (EA1), Librie\_31 (EA5), LilTerminator\_31 (EA5), Lovelyunicorn\_34 (EA1), Ludgate\_34 (EA1), Luna18\_33 (EA6), MCubed\_32 (EA2), MaeLinda\_34 (EA1), Mandalorian\_30 (EA10), Martin\_35 (EA1), McGalleon\_36 (EA1), Mercedes\_28 (EA), Merida02\_35 (EA1), MillyPhilly\_34 (EA1), MiniVolent\_31 (EA10), Morrigan\_33 (EA6), MrWorldwide\_34 (EA1), Nagem\_34 (EA1), Nattles\_33 (EA1), Nebulous\_31 (EA5), Neferthena\_31 (EA5), NickSell\_34 (EA1), Nucci\_30 (EA10), Oats\_33 (EA1), OldNelly\_34 (EA1), Oxtober96\_34 (EA1), PSirce\_32 (EA2), Pajaza\_30 (EA3), Papafritta\_33 (EA1), ParleG\_34 (EA1), Peep\_34 (EA1), Penta\_30 (EA11), Peppino\_33 (EA1), Phanita\_32 (EA2), Pherbot\_31 (EA4), Pherferi\_34 (EA1), Phiderman\_34 (EA1), PhillyPhantom\_33 (EA1), Phireproof\_34 (EA1), PhredFlintston\_34 (EA1), Phriends\_34 (EA1), Pikmin\_30 (EA3), Pocket\_33 (EA1), PrincePhergus\_31 (EA4), PuppyEggo\_34 (EA1), QuadZero\_31 (EA5), Quartz\_31 (EA10), Raccoon\_33 (EA1), Rappheph\_34 (EA1), Raptor\_34 (EA1), Redfield\_33 (EA1), RenegadeRaider\_32 (EA4), Renzie\_34 (EA1), Rihhil\_34 (EA1), Robinson\_34 (EA1), Rog141\_33 (EA1), RosieMae\_33 (EA1), SJay\_34 (EA1), Sansa\_31 (EA2), Saratos\_32 (EA2), Schimmels22\_32 (EA11), Schnapsidee\_33 (EA1), Schubert\_31 (EA8), Sedgewig\_33 (EA1), ShaiHulud\_34 (EA1), Shamu\_32 (EA2), Shee\_34 (EA1), Sinatra\_31 (EA4), SirVictor\_31 (EA4), SoilGremlin\_34 (EA1), SolidSnake\_35 (EA1), Soror1\_33 (EA1), Stanktossa\_34 (EA1), StingRay\_33 (EA1), StirfryIV\_33 (EA1), Stormbreaker8\_33 (EA1), Strathdee\_34 (EA1), Superfresh\_34 (EA1), Symere\_33 (EA1), TatarkaPM\_34 (EA1), Teagan\_34 (EA1), TeddyBear\_33 (EA1), Tenda\_33 (EA1), Thorongil\_34 (EA1), TinSulphur\_34 (EA1), Tinyman4\_32 (EA11), Velene\_34 (EA1), Vispistious\_34 (EA1), Wardwill\_33 (EA5), WestPM\_30 (EA11), WildNOut\_34 (EA1), WilliamStrong\_32 (EA6), Winzigespinne\_33 (EA1), Xebius\_32 (EA2), YuuY\_32 (EA10), Zada\_34 (EA1), Zayuliv\_31 (EA5), Zenitsu\_32 (EA2), Zepp\_32 (EA5),

#### Start 22:

- Found in 19 of 318 ( 6.0% ) of genes in pham
- Manual Annotations of this start: 1 of 278
- Called 10.5% of time when present
- Phage (with cluster) where this start called: GoneGirl\_34 (EA1), Jemerald\_34 (EA6),

#### Start 24:

- Found in 184 of 318 ( 57.9% ) of genes in pham
- Manual Annotations of this start: 5 of 278
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Golden\_31 (EA4), Guetzie\_31 (EA4), Koji\_31 (EA4), Lucky3\_31 (EA4), SonOfLevi\_33 (EA1),

#### Start 25:

- Found in 7 of 318 ( 2.2% ) of genes in pham

- Manual Annotations of this start: 1 of 278
- Called 14.3% of time when present
- Phage (with cluster) where this start called: GiKK\_63 (CT),

#### Start 26:

- Found in 88 of 318 ( 27.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.1% of time when present
- Phage (with cluster) where this start called: Scissor2024\_32 (EA11),

#### Start 27:

- Found in 49 of 318 ( 15.4% ) of genes in pham
- Manual Annotations of this start: 1 of 278
- Called 2.0% of time when present
- Phage (with cluster) where this start called: MonChoix\_32 (EA1),

#### Start 28:

- Found in 205 of 318 ( 64.5% ) of genes in pham
- Manual Annotations of this start: 8 of 278
- Called 5.4% of time when present
- Phage (with cluster) where this start called: Christoph\_33 (EA1), Duocatuli\_33 (EA1), GoingMerry\_34 (EA1), Greys\_34 (EA1), Jerbirus\_34 (EA1), KellyGreen\_34 (EA1), Kurt1\_34 (EA1), Leafus\_33 (EA1), ManRay\_33 (EA1), Thompsone\_34 (EA1), TwoBits\_31 (EA5),

### Summary by clusters:

There are 16 clusters represented in this pham: GG, singleton, AB, EA11, EA10, EA6, EA, EA9, EA8, AV, EA1, EA3, EA2, EA5, EA4, CT,

#### Info for manual annotations of cluster AB:

- Start number 13 was manually annotated 1 time for cluster AB.
- Start number 15 was manually annotated 3 times for cluster AB.

#### Info for manual annotations of cluster AV:

- Start number 4 was manually annotated 6 times for cluster AV.
- Start number 16 was manually annotated 2 times for cluster AV.

#### Info for manual annotations of cluster CT:

- Start number 7 was manually annotated 15 times for cluster CT.
- Start number 8 was manually annotated 2 times for cluster CT.
- Start number 9 was manually annotated 3 times for cluster CT.
- Start number 12 was manually annotated 3 times for cluster CT.
- Start number 13 was manually annotated 11 times for cluster CT.
- Start number 15 was manually annotated 28 times for cluster CT.
- Start number 25 was manually annotated 1 time for cluster CT.

#### Info for manual annotations of cluster EA:

- Start number 17 was manually annotated 1 time for cluster EA.

#### Info for manual annotations of cluster EA1:

- Start number 17 was manually annotated 122 times for cluster EA1.
- Start number 24 was manually annotated 1 time for cluster EA1.

- Start number 27 was manually annotated 1 time for cluster EA1.
- Start number 28 was manually annotated 7 times for cluster EA1.

Info for manual annotations of cluster EA10:

- Start number 17 was manually annotated 7 times for cluster EA10.

Info for manual annotations of cluster EA11:

- Start number 17 was manually annotated 5 times for cluster EA11.

Info for manual annotations of cluster EA2:

- Start number 17 was manually annotated 13 times for cluster EA2.

Info for manual annotations of cluster EA3:

- Start number 17 was manually annotated 3 times for cluster EA3.

Info for manual annotations of cluster EA4:

- Start number 17 was manually annotated 8 times for cluster EA4.
- Start number 24 was manually annotated 4 times for cluster EA4.

Info for manual annotations of cluster EA5:

- Start number 17 was manually annotated 15 times for cluster EA5.
- Start number 28 was manually annotated 1 time for cluster EA5.

Info for manual annotations of cluster EA6:

- Start number 17 was manually annotated 6 times for cluster EA6.
- Start number 22 was manually annotated 1 time for cluster EA6.

Info for manual annotations of cluster EA8:

- Start number 17 was manually annotated 1 time for cluster EA8.

Info for manual annotations of cluster EA9:

- Start number 17 was manually annotated 3 times for cluster EA9.

Info for manual annotations of cluster GG:

- Start number 10 was manually annotated 2 times for cluster GG.

### **Gene Information:**

Gene: 8UZL\_54 Start: 40017, Stop: 41942, Start Num: 15

Candidate Starts for 8UZL\_54:

(Start: 15 @40017 has 31 MA's), (26, 40083), (37, 40179), (46, 40230), (47, 40233), (72, 40389), (92, 40554), (102, 40623), (122, 40728), (137, 40821), (145, 40887), (180, 41088), (182, 41106), (202, 41184), (208, 41208), (212, 41229), (229, 41304), (235, 41319), (237, 41322), (241, 41334), (261, 41433), (262, 41439), (263, 41457), (268, 41481), (272, 41517), (274, 41523), (282, 41571), (288, 41619), (303, 41709),

Gene: Acosta\_35 Start: 24488, Stop: 22806, Start Num: 17

Candidate Starts for Acosta\_35:

(Start: 17 @24488 has 184 MA's), (Start: 24 @24455 has 5 MA's), (Start: 28 @24419 has 8 MA's), (39, 24332), (40, 24326), (55, 24230), (64, 24185), (68, 24164), (72, 24122), (78, 24077), (79, 24071), (87, 24011), (94, 23945), (161, 23603), (169, 23561), (230, 23255), (258, 23138), (263, 23099), (271,

23045), (272, 23042), (281, 22985), (287, 22940), (291, 22907), (298, 22880), (304, 22847), (312, 22814),

Gene: Adat\_37 Start: 33687, Stop: 31822, Start Num: 4

Candidate Starts for Adat\_37:

(Start: 4 @33687 has 6 MA's), (Start: 15 @33627 has 31 MA's), (21, 33588), (33, 33513), (49, 33369), (50, 33366), (51, 33363), (61, 33306), (111, 32940), (117, 32910), (130, 32865), (134, 32829), (137, 32814), (151, 32715), (153, 32697), (160, 32664), (182, 32526), (188, 32508), (194, 32469), (200, 32448), (204, 32436), (205, 32430), (208, 32418), (210, 32412), (216, 32376), (226, 32352), (236, 32322), (258, 32238), (266, 32187), (278, 32109), (281, 32085), (288, 32034), (295, 31986), (301, 31953), (319, 31839),

Gene: Agatha\_58 Start: 39975, Stop: 41969, Start Num: 15

Candidate Starts for Agatha\_58:

(Start: 15 @39975 has 31 MA's), (46, 40191), (54, 40230), (56, 40245), (85, 40449), (87, 40458), (92, 40515), (114, 40638), (123, 40689), (140, 40788), (142, 40800), (146, 40845), (161, 40923), (168, 40959), (171, 40977), (173, 40989), (180, 41037), (191, 41094), (199, 41121), (209, 41157), (231, 41238), (237, 41250), (249, 41301), (263, 41385), (271, 41442), (275, 41460), (282, 41499), (300, 41625), (315, 41700), (317, 41721), (322, 41748), (326, 41793), (333, 41838), (344, 41901), (345, 41904), (352, 41925),

Gene: Agente005\_34 Start: 24312, Stop: 22615, Start Num: 17

Candidate Starts for Agente005\_34:

(Start: 17 @24312 has 184 MA's), (26, 24261), (Start: 27 @24249 has 1 MA's), (Start: 28 @24243 has 8 MA's), (39, 24156), (55, 24042), (62, 24003), (64, 23997), (72, 23934), (78, 23889), (83, 23847), (87, 23823), (161, 23418), (169, 23376), (178, 23325), (182, 23289), (193, 23238), (224, 23091), (258, 22950), (263, 22911), (271, 22857), (272, 22854), (281, 22797), (287, 22752), (291, 22719), (298, 22692), (304, 22659),

Gene: AikoCarson\_59 Start: 40159, Stop: 42156, Start Num: 15

Candidate Starts for AikoCarson\_59:

(Start: 15 @40159 has 31 MA's), (46, 40375), (54, 40414), (81, 40591), (87, 40642), (92, 40699), (106, 40780), (108, 40792), (113, 40819), (114, 40822), (118, 40843), (140, 40972), (142, 40984), (146, 41029), (173, 41176), (180, 41224), (186, 41254), (189, 41263), (209, 41344), (231, 41425), (261, 41548), (271, 41629), (275, 41647), (282, 41686), (300, 41812), (317, 41908), (322, 41935), (324, 41953), (326, 41980), (333, 42025), (336, 42049), (344, 42088), (345, 42091), (352, 42112), (354, 42130),

Gene: Alakazam\_32 Start: 23606, Stop: 21930, Start Num: 17

Candidate Starts for Alakazam\_32:

(Start: 17 @23606 has 184 MA's), (Start: 24 @23573 has 5 MA's), (42, 23438), (47, 23414), (57, 23339), (68, 23282), (73, 23228), (78, 23195), (79, 23189), (87, 23129), (91, 23084), (94, 23063), (98, 23033), (161, 22718), (179, 22610), (193, 22538), (198, 22520), (227, 22379), (230, 22373), (256, 22262), (258, 22256), (263, 22217), (265, 22208), (271, 22163), (287, 22058), (297, 22010),

Gene: AlexAdler\_34 Start: 24088, Stop: 22418, Start Num: 17

Candidate Starts for AlexAdler\_34:

(Start: 17 @24088 has 184 MA's), (Start: 24 @24055 has 5 MA's), (Start: 28 @24019 has 8 MA's), (34, 23962), (39, 23932), (40, 23926), (64, 23800), (78, 23692), (79, 23686), (94, 23560), (98, 23530), (161, 23218), (169, 23176), (178, 23125), (193, 23038), (258, 22753), (263, 22714), (272, 22657), (281, 22600), (287, 22555), (291, 22522), (295, 22513), (298, 22495), (304, 22462),

Gene: Alyxandracam\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for Alyxandracam\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (96, 23551), (98, 23539), (161, 23227), (169, 23185), (178, 23134), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: Amok\_59 Start: 40087, Stop: 42084, Start Num: 15

Candidate Starts for Amok\_59:

(Start: 15 @40087 has 31 MA's), (46, 40303), (54, 40342), (81, 40519), (87, 40570), (92, 40627), (106, 40708), (108, 40720), (113, 40747), (114, 40750), (118, 40771), (140, 40900), (142, 40912), (146, 40957), (173, 41104), (180, 41152), (186, 41182), (189, 41191), (209, 41272), (229, 41347), (231, 41353), (261, 41476), (268, 41524), (271, 41557), (275, 41575), (282, 41614), (300, 41740), (309, 41788), (317, 41836), (322, 41863), (324, 41881), (326, 41908), (329, 41926), (333, 41953), (345, 42019), (348, 42025), (352, 42040),

Gene: AndPeggy\_55 Start: 39391, Stop: 41388, Start Num: 15

Candidate Starts for AndPeggy\_55:

(Start: 15 @39391 has 31 MA's), (46, 39607), (54, 39646), (81, 39823), (86, 39868), (87, 39874), (106, 40012), (114, 40054), (115, 40063), (129, 40138), (140, 40204), (142, 40216), (146, 40261), (168, 40378), (171, 40396), (173, 40408), (180, 40456), (191, 40513), (199, 40540), (209, 40576), (231, 40657), (237, 40669), (242, 40690), (261, 40780), (268, 40828), (271, 40861), (275, 40879), (277, 40894), (282, 40918), (300, 41044), (309, 41092), (315, 41119), (317, 41140), (322, 41167), (324, 41185), (326, 41212), (333, 41257), (336, 41281), (344, 41320), (345, 41323), (352, 41344), (354, 41362),

Gene: Andromedas\_32 Start: 23711, Stop: 22029, Start Num: 17

Candidate Starts for Andromedas\_32:

(Start: 17 @23711 has 184 MA's), (Start: 22 @23687 has 1 MA's), (Start: 24 @23678 has 5 MA's), (26, 23660), (Start: 27 @23648 has 1 MA's), (Start: 28 @23642 has 8 MA's), (38, 23561), (55, 23450), (57, 23441), (68, 23384), (79, 23291), (83, 23255), (87, 23231), (94, 23165), (96, 23147), (98, 23135), (115, 23057), (125, 23006), (167, 22790), (169, 22778), (172, 22766), (178, 22727), (179, 22712), (184, 22685), (196, 22628), (198, 22622), (230, 22481), (258, 22364), (262, 22343), (263, 22325), (272, 22268), (286, 22169), (288, 22160), (298, 22106),

Gene: Anilorac\_33 Start: 24156, Stop: 22459, Start Num: 17

Candidate Starts for Anilorac\_33:

(Start: 17 @24156 has 184 MA's), (26, 24105), (Start: 27 @24093 has 1 MA's), (Start: 28 @24087 has 8 MA's), (39, 24000), (55, 23886), (62, 23847), (64, 23841), (72, 23778), (78, 23733), (83, 23691), (87, 23667), (161, 23262), (169, 23220), (178, 23169), (182, 23133), (193, 23082), (224, 22935), (258, 22794), (263, 22755), (271, 22701), (272, 22698), (281, 22641), (287, 22596), (291, 22563), (298, 22536), (304, 22503),

Gene: Antoinette\_34 Start: 24085, Stop: 22415, Start Num: 17

Candidate Starts for Antoinette\_34:

(Start: 17 @24085 has 184 MA's), (Start: 24 @24052 has 5 MA's), (Start: 28 @24016 has 8 MA's), (34, 23959), (39, 23929), (40, 23923), (64, 23797), (78, 23689), (79, 23683), (94, 23557), (98, 23527), (161, 23215), (169, 23173), (178, 23122), (193, 23035), (258, 22750), (263, 22711), (272, 22654), (281, 22597), (287, 22552), (291, 22519), (295, 22510), (298, 22492), (304, 22459),

Gene: AranulaLuti\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for AranulaLuti\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (96, 23236), (98,

23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: Asta\_33 Start: 23795, Stop: 22125, Start Num: 17

Candidate Starts for Asta\_33:

(Start: 17 @23795 has 184 MA's), (Start: 24 @23762 has 5 MA's), (Start: 28 @23726 has 8 MA's), (34, 23669), (39, 23639), (40, 23633), (64, 23507), (78, 23399), (79, 23393), (94, 23267), (98, 23237), (161, 22925), (169, 22883), (178, 22832), (258, 22460), (263, 22421), (272, 22364), (281, 22307), (287, 22262), (291, 22229), (295, 22220), (298, 22202), (304, 22169),

Gene: Aubergine\_33 Start: 23795, Stop: 22125, Start Num: 17

Candidate Starts for Aubergine\_33:

(Start: 17 @23795 has 184 MA's), (Start: 24 @23762 has 5 MA's), (Start: 28 @23726 has 8 MA's), (34, 23669), (39, 23639), (40, 23633), (64, 23507), (78, 23399), (79, 23393), (94, 23267), (98, 23237), (161, 22925), (169, 22883), (178, 22832), (258, 22460), (263, 22421), (272, 22364), (281, 22307), (287, 22262), (291, 22229), (295, 22220), (298, 22202), (304, 22169),

Gene: AxiPup\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for AxiPup\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: Axym\_57 Start: 39872, Stop: 41866, Start Num: 15

Candidate Starts for Axym\_57:

(Start: 15 @39872 has 31 MA's), (46, 40088), (54, 40127), (56, 40142), (81, 40304), (85, 40346), (87, 40355), (92, 40412), (114, 40535), (123, 40586), (140, 40685), (142, 40697), (146, 40742), (168, 40856), (171, 40874), (173, 40886), (180, 40934), (191, 40991), (199, 41018), (209, 41054), (231, 41135), (237, 41147), (249, 41198), (263, 41282), (271, 41339), (275, 41357), (282, 41396), (300, 41522), (315, 41597), (317, 41618), (322, 41645), (326, 41690), (333, 41735), (344, 41798), (345, 41801), (352, 41822),

Gene: Azira\_53 Start: 38960, Stop: 40975, Start Num: 13

Candidate Starts for Azira\_53:

(6, 38927), (Start: 13 @38960 has 12 MA's), (18, 38984), (30, 39059), (46, 39179), (60, 39254), (62, 39269), (85, 39437), (87, 39446), (92, 39503), (98, 39557), (100, 39563), (104, 39581), (106, 39584), (113, 39623), (115, 39635), (122, 39671), (123, 39677), (129, 39710), (138, 39767), (142, 39788), (144, 39821), (146, 39833), (153, 39881), (164, 39929), (173, 39977), (180, 40025), (206, 40139), (221, 40208), (231, 40241), (252, 40325), (253, 40328), (255, 40334), (261, 40364), (275, 40463), (282, 40502), (287, 40544), (288, 40550), (300, 40628), (303, 40640), (309, 40676), (320, 40730), (322, 40742), (332, 40820), (333, 40844), (337, 40877), (338, 40880), (339, 40886), (340, 40889), (345, 40913), (351, 40931), (354, 40952),

Gene: Baines\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for Baines\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (96, 23236), (98, 23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: Balloona\_60 Start: 41998, Stop: 44079, Start Num: 7

Candidate Starts for Balloona\_60:

(5, 41962), (Start: 7 @41998 has 15 MA's), (18, 42037), (26, 42085), (32, 42121), (46, 42238), (70, 42388), (76, 42418), (81, 42454), (82, 42460), (92, 42562), (100, 42622), (103, 42637), (113, 42682), (115, 42694), (122, 42730), (125, 42748), (133, 42793), (139, 42832), (146, 42892), (149, 42913), (171, 43054), (173, 43066), (180, 43114), (199, 43198), (209, 43234), (224, 43306), (231, 43333), (271, 43537), (272, 43540), (274, 43546), (275, 43555), (277, 43570), (282, 43594), (288, 43642), (291, 43672), (292, 43678), (306, 43759), (322, 43858), (326, 43906), (333, 43951), (335, 43972), (344, 44014), (345, 44017),

Gene: Balsa\_33 Start: 24202, Stop: 22460, Start Num: 17

Candidate Starts for Balsa\_33:

(Start: 17 @24202 has 184 MA's), (26, 24151), (Start: 27 @24139 has 1 MA's), (Start: 28 @24133 has 8 MA's), (39, 24046), (55, 23932), (62, 23893), (64, 23887), (72, 23824), (78, 23779), (95, 23632), (97, 23626), (98, 23617), (101, 23605), (161, 23308), (163, 23299), (169, 23266), (178, 23215), (182, 23179), (193, 23128), (224, 22981), (243, 22903), (244, 22873), (250, 22837), (258, 22795), (263, 22756), (272, 22699), (281, 22642), (287, 22597), (291, 22564), (298, 22537), (304, 22504),

Gene: Bandik\_34 Start: 24093, Stop: 22423, Start Num: 17

Candidate Starts for Bandik\_34:

(Start: 17 @24093 has 184 MA's), (Start: 24 @24060 has 5 MA's), (Start: 28 @24024 has 8 MA's), (34, 23967), (39, 23937), (40, 23931), (64, 23805), (78, 23697), (79, 23691), (94, 23565), (96, 23547), (98, 23535), (161, 23223), (169, 23181), (178, 23130), (258, 22758), (263, 22719), (272, 22662), (281, 22605), (287, 22560), (291, 22527), (295, 22518), (298, 22500), (304, 22467),

Gene: BaronJohn\_31 Start: 22528, Stop: 20861, Start Num: 17

Candidate Starts for BaronJohn\_31:

(Start: 17 @22528 has 184 MA's), (Start: 24 @22495 has 5 MA's), (Start: 28 @22459 has 8 MA's), (34, 22402), (62, 22246), (66, 22234), (68, 22219), (73, 22165), (79, 22126), (84, 22084), (87, 22066), (94, 22000), (95, 21985), (98, 21970), (100, 21961), (161, 21652), (166, 21625), (171, 21601), (176, 21565), (178, 21559), (203, 21439), (227, 21313), (230, 21307), (258, 21190), (263, 21151), (271, 21097), (287, 20992), (295, 20950), (297, 20944),

Gene: Bavilard\_60 Start: 41008, Stop: 43089, Start Num: 7

Candidate Starts for Bavilard\_60:

(5, 40972), (Start: 7 @41008 has 15 MA's), (18, 41047), (26, 41095), (32, 41131), (46, 41248), (70, 41398), (76, 41428), (81, 41464), (82, 41470), (92, 41572), (100, 41632), (103, 41647), (113, 41692), (115, 41704), (122, 41740), (125, 41758), (133, 41803), (139, 41842), (146, 41902), (149, 41923), (171, 42064), (173, 42076), (180, 42124), (199, 42208), (209, 42244), (224, 42316), (231, 42343), (271, 42547), (274, 42556), (275, 42565), (277, 42580), (282, 42604), (288, 42652), (291, 42682), (292, 42688), (306, 42769), (322, 42868), (326, 42916), (333, 42961), (335, 42982), (344, 43024), (345, 43027),

Gene: BeautPeep30\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for BeautPeep30\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: BeeBee8\_34 Start: 24369, Stop: 22627, Start Num: 17

Candidate Starts for BeeBee8\_34:

(Start: 17 @24369 has 184 MA's), (26, 24318), (Start: 27 @24306 has 1 MA's), (Start: 28 @24300 has 8 MA's), (39, 24213), (55, 24099), (62, 24060), (64, 24054), (72, 23991), (78, 23946), (95, 23799), (97, 23793), (98, 23784), (101, 23772), (161, 23475), (163, 23466), (169, 23433), (178, 23382), (182,

23346), (193, 23295), (224, 23148), (243, 23070), (244, 23040), (250, 23004), (258, 22962), (263, 22923), (272, 22866), (281, 22809), (287, 22764), (291, 22731), (298, 22704), (304, 22671),

Gene: Benjalauren\_34 Start: 23792, Stop: 22122, Start Num: 17

Candidate Starts for Benjalauren\_34:

(Start: 17 @23792 has 184 MA's), (Start: 24 @23759 has 5 MA's), (Start: 28 @23723 has 8 MA's), (34, 23666), (39, 23636), (40, 23630), (64, 23504), (78, 23396), (79, 23390), (94, 23264), (98, 23234), (161, 22922), (169, 22880), (193, 22742), (258, 22457), (263, 22418), (272, 22361), (281, 22304), (287, 22259), (291, 22226), (295, 22217), (298, 22199), (304, 22166),

Gene: BigChungus\_61 Start: 41539, Stop: 43620, Start Num: 7

Candidate Starts for BigChungus\_61:

(5, 41503), (Start: 7 @41539 has 15 MA's), (18, 41578), (26, 41626), (32, 41662), (46, 41779), (70, 41929), (76, 41959), (81, 41995), (82, 42001), (92, 42103), (100, 42163), (103, 42178), (113, 42223), (115, 42235), (122, 42271), (125, 42289), (133, 42334), (139, 42373), (146, 42433), (149, 42454), (171, 42595), (173, 42607), (180, 42655), (199, 42739), (209, 42775), (224, 42847), (231, 42874), (271, 43078), (272, 43081), (274, 43087), (275, 43096), (277, 43111), (282, 43135), (288, 43183), (291, 43213), (292, 43219), (306, 43300), (322, 43399), (326, 43447), (333, 43492), (335, 43513), (344, 43555), (345, 43558),

Gene: BigRedClifford\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for BigRedClifford\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (178, 23134), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: BillDoor\_58 Start: 39067, Stop: 41064, Start Num: 15

Candidate Starts for BillDoor\_58:

(Start: 15 @39067 has 31 MA's), (46, 39283), (54, 39322), (81, 39499), (86, 39544), (87, 39550), (106, 39688), (114, 39730), (115, 39739), (129, 39814), (140, 39880), (142, 39892), (146, 39937), (173, 40084), (180, 40132), (189, 40171), (209, 40252), (231, 40333), (261, 40456), (268, 40504), (271, 40537), (275, 40555), (277, 40570), (282, 40594), (300, 40720), (309, 40768), (315, 40795), (317, 40816), (322, 40843), (324, 40861), (326, 40888), (333, 40933), (336, 40957), (345, 40999), (352, 41020), (354, 41038),

Gene: Biskit\_60 Start: 39757, Stop: 41754, Start Num: 15

Candidate Starts for Biskit\_60:

(Start: 15 @39757 has 31 MA's), (46, 39973), (54, 40012), (87, 40240), (106, 40378), (108, 40390), (114, 40420), (120, 40453), (138, 40561), (140, 40570), (142, 40582), (146, 40627), (161, 40708), (173, 40774), (180, 40822), (186, 40852), (189, 40861), (209, 40942), (231, 41023), (261, 41146), (271, 41227), (274, 41236), (275, 41245), (282, 41284), (300, 41410), (309, 41458), (315, 41485), (322, 41533), (324, 41551), (325, 41572), (326, 41578), (333, 41623), (341, 41671), (344, 41686), (345, 41689), (352, 41710),

Gene: Blage\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for Blage\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (178, 23134), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: Blondies\_61 Start: 40074, Stop: 42071, Start Num: 15

Candidate Starts for Blondies\_61:

(Start: 15 @40074 has 31 MA's), (46, 40290), (54, 40329), (87, 40557), (106, 40695), (108, 40707), (114, 40737), (120, 40770), (138, 40878), (140, 40887), (142, 40899), (146, 40944), (173, 41091), (180, 41139), (186, 41169), (189, 41178), (209, 41259), (231, 41340), (261, 41463), (271, 41544), (274, 41553), (275, 41562), (282, 41601), (300, 41727), (309, 41775), (315, 41802), (322, 41850), (324, 41868), (325, 41889), (326, 41895), (333, 41940), (341, 41988), (344, 42003), (345, 42006), (352, 42027),

Gene: BonesMcCoy\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for BonesMcCoy\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (178, 23134), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: Bonino\_33 Start: 23771, Stop: 22101, Start Num: 17

Candidate Starts for Bonino\_33:

(Start: 17 @23771 has 184 MA's), (Start: 24 @23738 has 5 MA's), (Start: 28 @23702 has 8 MA's), (34, 23645), (39, 23615), (40, 23609), (64, 23483), (78, 23375), (79, 23369), (94, 23243), (98, 23213), (161, 22901), (169, 22859), (193, 22721), (258, 22436), (263, 22397), (272, 22340), (281, 22283), (287, 22238), (291, 22205), (298, 22178), (304, 22145),

Gene: BouleyBill\_31 Start: 23662, Stop: 21995, Start Num: 17

Candidate Starts for BouleyBill\_31:

(Start: 17 @23662 has 184 MA's), (Start: 24 @23629 has 5 MA's), (Start: 28 @23593 has 8 MA's), (30, 23581), (34, 23536), (35, 23533), (55, 23419), (57, 23410), (72, 23311), (73, 23299), (78, 23266), (79, 23260), (92, 23152), (94, 23134), (98, 23104), (161, 22783), (163, 22774), (169, 22741), (178, 22690), (179, 22675), (184, 22648), (198, 22585), (230, 22444), (235, 22429), (253, 22348), (258, 22327), (263, 22288), (272, 22231), (280, 22183), (298, 22066), (302, 22045),

Gene: Brad\_37 Start: 33685, Stop: 31820, Start Num: 4

Candidate Starts for Brad\_37:

(Start: 4 @33685 has 6 MA's), (Start: 15 @33625 has 31 MA's), (21, 33586), (33, 33511), (49, 33367), (50, 33364), (51, 33361), (61, 33304), (111, 32938), (117, 32908), (130, 32863), (134, 32827), (137, 32812), (151, 32713), (153, 32695), (160, 32662), (182, 32524), (188, 32506), (194, 32467), (200, 32446), (204, 32434), (205, 32428), (208, 32416), (210, 32410), (216, 32374), (226, 32350), (236, 32320), (258, 32236), (266, 32185), (278, 32107), (281, 32083), (288, 32032), (295, 31984), (301, 31951), (319, 31837),

Gene: Bubble\_56 Start: 39560, Stop: 41554, Start Num: 15

Candidate Starts for Bubble\_56:

(Start: 15 @39560 has 31 MA's), (46, 39776), (54, 39815), (56, 39830), (81, 39992), (85, 40034), (87, 40043), (92, 40100), (114, 40223), (123, 40274), (140, 40373), (142, 40385), (146, 40430), (168, 40544), (171, 40562), (173, 40574), (180, 40622), (191, 40679), (199, 40706), (209, 40742), (231, 40823), (237, 40835), (249, 40886), (263, 40970), (271, 41027), (275, 41045), (282, 41084), (300, 41210), (315, 41285), (317, 41306), (322, 41333), (326, 41378), (333, 41423), (344, 41486), (345, 41489), (352, 41510),

Gene: Burnsey\_58 Start: 39966, Stop: 41960, Start Num: 15

Candidate Starts for Burnsey\_58:

(Start: 15 @39966 has 31 MA's), (46, 40182), (54, 40221), (56, 40236), (81, 40398), (85, 40440), (87, 40449), (92, 40506), (114, 40629), (123, 40680), (140, 40779), (142, 40791), (146, 40836), (168, 40950), (171, 40968), (173, 40980), (180, 41028), (191, 41085), (199, 41112), (209, 41148), (231,

41229), (237, 41241), (249, 41292), (263, 41376), (271, 41433), (275, 41451), (282, 41490), (300, 41616), (315, 41691), (317, 41712), (322, 41739), (326, 41784), (333, 41829), (344, 41892), (345, 41895), (352, 41916),

Gene: Bustleton\_31 Start: 23662, Stop: 21995, Start Num: 17

Candidate Starts for Bustleton\_31:

(Start: 17 @23662 has 184 MA's), (Start: 24 @23629 has 5 MA's), (Start: 28 @23593 has 8 MA's), (30, 23581), (34, 23536), (35, 23533), (55, 23419), (72, 23311), (73, 23299), (78, 23266), (79, 23260), (92, 23152), (94, 23134), (98, 23104), (161, 22783), (163, 22774), (169, 22741), (178, 22690), (179, 22675), (184, 22648), (198, 22585), (223, 22468), (230, 22444), (235, 22429), (253, 22348), (258, 22327), (263, 22288), (272, 22231), (280, 22183), (298, 22066), (302, 22045),

Gene: Button\_60 Start: 39852, Stop: 41897, Start Num: 9

Candidate Starts for Button\_60:

(Start: 9 @39852 has 3 MA's), (19, 39891), (23, 39915), (Start: 25 @39930 has 1 MA's), (46, 40083), (47, 40086), (54, 40122), (58, 40149), (62, 40173), (70, 40233), (73, 40251), (90, 40401), (98, 40461), (115, 40539), (120, 40563), (122, 40575), (123, 40581), (140, 40680), (142, 40692), (144, 40725), (164, 40842), (168, 40860), (172, 40881), (173, 40890), (181, 40950), (197, 41016), (199, 41022), (209, 41058), (220, 41121), (224, 41130), (231, 41157), (248, 41217), (249, 41220), (252, 41241), (263, 41304), (271, 41361), (274, 41370), (275, 41379), (282, 41418), (288, 41466), (291, 41496), (309, 41592), (314, 41619), (320, 41667), (322, 41679), (324, 41697), (325, 41718), (340, 41805), (342, 41817), (344, 41826), (352, 41850),

Gene: Buttrmlkdreams\_60 Start: 40204, Stop: 42201, Start Num: 15

Candidate Starts for Buttrmlkdreams\_60:

(Start: 15 @40204 has 31 MA's), (46, 40420), (54, 40459), (87, 40687), (106, 40825), (108, 40837), (114, 40867), (120, 40900), (138, 41008), (140, 41017), (142, 41029), (146, 41074), (173, 41221), (180, 41269), (186, 41299), (189, 41308), (209, 41389), (231, 41470), (261, 41593), (271, 41674), (274, 41683), (275, 41692), (282, 41731), (300, 41857), (309, 41905), (315, 41932), (322, 41980), (324, 41998), (325, 42019), (326, 42025), (333, 42070), (344, 42133), (345, 42136), (352, 42157),

Gene: Byron23\_34 Start: 24102, Stop: 22432, Start Num: 17

Candidate Starts for Byron23\_34:

(Start: 17 @24102 has 184 MA's), (Start: 24 @24069 has 5 MA's), (Start: 28 @24033 has 8 MA's), (34, 23976), (39, 23946), (40, 23940), (64, 23814), (78, 23706), (79, 23700), (94, 23574), (98, 23544), (161, 23232), (169, 23190), (178, 23139), (193, 23052), (258, 22767), (263, 22728), (272, 22671), (281, 22614), (287, 22569), (291, 22536), (295, 22527), (298, 22509), (304, 22476),

Gene: Calix\_33 Start: 23775, Stop: 22105, Start Num: 17

Candidate Starts for Calix\_33:

(Start: 17 @23775 has 184 MA's), (Start: 24 @23742 has 5 MA's), (Start: 28 @23706 has 8 MA's), (34, 23649), (39, 23619), (40, 23613), (64, 23487), (78, 23379), (79, 23373), (94, 23247), (98, 23217), (161, 22905), (169, 22863), (193, 22725), (258, 22440), (263, 22401), (272, 22344), (281, 22287), (287, 22242), (291, 22209), (298, 22182), (304, 22149),

Gene: CanesSauce\_57 Start: 39552, Stop: 41549, Start Num: 15

Candidate Starts for CanesSauce\_57:

(Start: 15 @39552 has 31 MA's), (46, 39768), (54, 39807), (81, 39984), (86, 40029), (87, 40035), (106, 40173), (114, 40215), (115, 40224), (120, 40248), (129, 40299), (140, 40365), (142, 40377), (146, 40422), (168, 40539), (171, 40557), (180, 40617), (191, 40674), (199, 40701), (209, 40737), (231, 40818), (237, 40830), (242, 40851), (261, 40941), (268, 40989), (271, 41022), (275, 41040), (277, 41055), (282, 41079), (300, 41205), (309, 41253), (315, 41280), (317, 41301), (322, 41328), (324, 41346), (326, 41373), (333, 41418), (336, 41442), (344, 41481), (345, 41484), (352, 41505), (354,

41523),

Gene: CaptainRex\_31 Start: 21940, Stop: 20273, Start Num: 17

Candidate Starts for CaptainRex\_31:

(Start: 17 @21940 has 184 MA's), (Start: 24 @21907 has 5 MA's), (Start: 28 @21871 has 8 MA's), (34, 21814), (62, 21658), (66, 21646), (68, 21631), (73, 21577), (79, 21538), (84, 21496), (87, 21478), (94, 21412), (95, 21397), (98, 21382), (100, 21373), (161, 21064), (166, 21037), (171, 21013), (176, 20977), (178, 20971), (203, 20851), (227, 20725), (230, 20719), (258, 20602), (263, 20563), (271, 20509), (283, 20443), (287, 20404), (295, 20362), (297, 20356),

Gene: CaramellLatte\_57 Start: 39552, Stop: 41549, Start Num: 15

Candidate Starts for CaramellLatte\_57:

(Start: 15 @39552 has 31 MA's), (46, 39768), (54, 39807), (81, 39984), (86, 40029), (87, 40035), (106, 40173), (114, 40215), (115, 40224), (120, 40248), (129, 40299), (140, 40365), (142, 40377), (146, 40422), (168, 40539), (171, 40557), (180, 40617), (191, 40674), (199, 40701), (209, 40737), (231, 40818), (237, 40830), (242, 40851), (261, 40941), (268, 40989), (271, 41022), (275, 41040), (277, 41055), (282, 41079), (300, 41205), (309, 41253), (315, 41280), (317, 41301), (322, 41328), (324, 41346), (326, 41373), (333, 41418), (336, 41442), (344, 41481), (345, 41484), (352, 41505), (354, 41523),

Gene: CarisSwetlik\_36 Start: 24983, Stop: 23301, Start Num: 17

Candidate Starts for CarisSwetlik\_36:

(Start: 17 @24983 has 184 MA's), (Start: 24 @24950 has 5 MA's), (Start: 28 @24914 has 8 MA's), (39, 24827), (40, 24821), (55, 24725), (57, 24716), (64, 24680), (68, 24659), (72, 24617), (78, 24572), (79, 24566), (83, 24530), (94, 24440), (98, 24410), (161, 24098), (169, 24056), (230, 23750), (258, 23633), (263, 23594), (272, 23537), (281, 23480), (287, 23435), (291, 23402), (298, 23375), (304, 23342),

Gene: Carostasia\_30 Start: 23385, Stop: 21709, Start Num: 17

Candidate Starts for Carostasia\_30:

(Start: 17 @23385 has 184 MA's), (Start: 24 @23352 has 5 MA's), (Start: 27 @23322 has 1 MA's), (Start: 28 @23316 has 8 MA's), (34, 23259), (57, 23115), (68, 23058), (74, 22998), (79, 22965), (87, 22905), (89, 22893), (91, 22860), (94, 22839), (95, 22824), (98, 22809), (125, 22680), (127, 22668), (161, 22500), (169, 22458), (171, 22449), (179, 22392), (193, 22320), (198, 22302), (227, 22158), (240, 22125), (253, 22056), (256, 22041), (258, 22035), (263, 21996), (272, 21939), (280, 21891), (287, 21837), (297, 21789), (300, 21765), (305, 21735),

Gene: Carsonalex\_61 Start: 40354, Stop: 42348, Start Num: 15

Candidate Starts for Carsonalex\_61:

(Start: 15 @40354 has 31 MA's), (46, 40570), (54, 40609), (56, 40624), (72, 40729), (85, 40828), (87, 40837), (92, 40894), (114, 41017), (123, 41068), (140, 41167), (142, 41179), (146, 41224), (168, 41338), (171, 41356), (173, 41368), (180, 41416), (191, 41473), (199, 41500), (209, 41536), (231, 41617), (237, 41629), (249, 41680), (263, 41764), (271, 41821), (275, 41839), (282, 41878), (300, 42004), (315, 42079), (317, 42100), (322, 42127), (326, 42172), (333, 42217), (344, 42280), (345, 42283), (352, 42304),

Gene: Casey\_30 Start: 23059, Stop: 21395, Start Num: 17

Candidate Starts for Casey\_30:

(Start: 17 @23059 has 184 MA's), (Start: 24 @23023 has 5 MA's), (26, 23005), (Start: 28 @22987 has 8 MA's), (36, 22921), (42, 22885), (47, 22861), (55, 22813), (63, 22771), (72, 22705), (78, 22660), (79, 22654), (93, 22531), (98, 22498), (105, 22468), (116, 22417), (127, 22357), (143, 22264), (161, 22192), (169, 22150), (171, 22141), (172, 22138), (173, 22129), (174, 22126), (178, 22099), (179, 22084), (184, 22057), (185, 22054), (207, 21961), (230, 21853), (240, 21826), (252, 21760), (258, 21736), (262, 21715), (263, 21697), (271, 21640), (272, 21637), (298, 21472), (308, 21418),

Gene: Casserole\_36 Start: 34663, Stop: 32798, Start Num: 4

Candidate Starts for Casserole\_36:

(Start: 4 @34663 has 6 MA's), (Start: 15 @34603 has 31 MA's), (21, 34564), (33, 34489), (49, 34345), (50, 34342), (51, 34339), (61, 34282), (111, 33916), (117, 33886), (130, 33841), (134, 33805), (137, 33790), (141, 33769), (151, 33691), (153, 33673), (160, 33640), (162, 33631), (177, 33541), (182, 33502), (194, 33445), (200, 33424), (204, 33412), (205, 33406), (208, 33394), (210, 33388), (216, 33352), (217, 33346), (226, 33328), (236, 33298), (258, 33214), (266, 33163), (278, 33085), (288, 33010), (295, 32962), (301, 32929), (319, 32815),

Gene: Chako\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for Chako\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (96, 23236), (98, 23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: Chamuel\_33 Start: 23777, Stop: 22107, Start Num: 17

Candidate Starts for Chamuel\_33:

(Start: 17 @23777 has 184 MA's), (Start: 24 @23744 has 5 MA's), (Start: 28 @23708 has 8 MA's), (34, 23651), (39, 23621), (40, 23615), (64, 23489), (78, 23381), (79, 23375), (94, 23249), (98, 23219), (161, 22907), (169, 22865), (193, 22727), (258, 22442), (263, 22403), (272, 22346), (281, 22289), (287, 22244), (291, 22211), (298, 22184), (304, 22151),

Gene: Cheeto1\_34 Start: 24251, Stop: 22590, Start Num: 17

Candidate Starts for Cheeto1\_34:

(Start: 17 @24251 has 184 MA's), (Start: 24 @24218 has 5 MA's), (Start: 28 @24182 has 8 MA's), (42, 24080), (55, 24008), (57, 23999), (68, 23942), (72, 23900), (78, 23855), (79, 23849), (83, 23813), (98, 23693), (161, 23384), (178, 23291), (182, 23255), (230, 23036), (235, 23021), (240, 23009), (245, 22985), (258, 22919), (262, 22898), (263, 22880), (272, 22820), (287, 22718), (298, 22655),

Gene: Chepli\_33 Start: 23166, Stop: 21499, Start Num: 17

Candidate Starts for Chepli\_33:

(Start: 17 @23166 has 184 MA's), (Start: 24 @23133 has 5 MA's), (26, 23115), (Start: 27 @23103 has 1 MA's), (57, 22914), (68, 22857), (69, 22833), (79, 22764), (84, 22722), (94, 22638), (98, 22608), (101, 22596), (147, 22356), (161, 22293), (166, 22266), (167, 22263), (171, 22242), (179, 22185), (186, 22152), (198, 22095), (213, 22035), (227, 21957), (230, 21951), (258, 21834), (263, 21795), (276, 21711), (287, 21636), (289, 21627), (290, 21609), (291, 21603), (298, 21576), (311, 21513),

Gene: CherryonLim\_62 Start: 43018, Stop: 45099, Start Num: 7

Candidate Starts for CherryonLim\_62:

(5, 42982), (Start: 7 @43018 has 15 MA's), (18, 43057), (26, 43105), (32, 43141), (46, 43258), (70, 43408), (76, 43438), (81, 43474), (82, 43480), (100, 43642), (113, 43702), (115, 43714), (120, 43738), (122, 43750), (125, 43768), (139, 43852), (146, 43912), (149, 43933), (168, 44056), (171, 44074), (173, 44086), (180, 44134), (199, 44218), (209, 44254), (224, 44326), (231, 44353), (251, 44431), (266, 44512), (271, 44557), (274, 44566), (275, 44575), (277, 44590), (282, 44614), (288, 44662), (291, 44692), (292, 44698), (299, 44737), (306, 44779), (320, 44866), (322, 44878), (326, 44926), (333, 44971), (335, 44992), (339, 45010), (344, 45034), (345, 45037),

Gene: ChickenKing\_33 Start: 24164, Stop: 22503, Start Num: 17

Candidate Starts for ChickenKing\_33:

(Start: 17 @24164 has 184 MA's), (Start: 24 @24131 has 5 MA's), (Start: 28 @24095 has 8 MA's), (42, 23993), (55, 23921), (57, 23912), (68, 23855), (72, 23813), (78, 23768), (79, 23762), (83, 23726), (98,

23606), (161, 23297), (178, 23204), (182, 23168), (230, 22949), (235, 22934), (240, 22922), (245, 22898), (258, 22832), (263, 22793), (272, 22733), (287, 22631), (298, 22568),

Gene: ChickenTender\_60 Start: 39537, Stop: 41531, Start Num: 15

Candidate Starts for ChickenTender\_60:

(Start: 15 @39537 has 31 MA's), (46, 39753), (54, 39792), (56, 39807), (81, 39969), (85, 40011), (87, 40020), (92, 40077), (114, 40200), (123, 40251), (140, 40350), (142, 40362), (146, 40407), (168, 40521), (171, 40539), (173, 40551), (180, 40599), (191, 40656), (193, 40662), (199, 40683), (209, 40719), (231, 40800), (237, 40812), (249, 40863), (263, 40947), (271, 41004), (275, 41022), (282, 41061), (300, 41187), (315, 41262), (317, 41283), (333, 41400), (337, 41430), (344, 41463), (345, 41466), (352, 41487),

Gene: ChikPic\_32 Start: 23727, Stop: 22045, Start Num: 17

Candidate Starts for ChikPic\_32:

(Start: 17 @23727 has 184 MA's), (Start: 22 @23703 has 1 MA's), (Start: 24 @23694 has 5 MA's), (26, 23676), (Start: 27 @23664 has 1 MA's), (Start: 28 @23658 has 8 MA's), (38, 23577), (55, 23466), (57, 23457), (68, 23400), (79, 23307), (83, 23271), (87, 23247), (94, 23181), (96, 23163), (98, 23151), (115, 23073), (125, 23022), (167, 22806), (169, 22794), (172, 22782), (178, 22743), (179, 22728), (184, 22701), (196, 22644), (198, 22638), (230, 22497), (258, 22380), (262, 22359), (263, 22341), (272, 22284), (286, 22185), (288, 22176), (298, 22122),

Gene: ChocoMunchkin\_57 Start: 39552, Stop: 41549, Start Num: 15

Candidate Starts for ChocoMunchkin\_57:

(Start: 15 @39552 has 31 MA's), (46, 39768), (54, 39807), (81, 39984), (86, 40029), (87, 40035), (106, 40173), (114, 40215), (115, 40224), (120, 40248), (129, 40299), (140, 40365), (142, 40377), (146, 40422), (168, 40539), (171, 40557), (180, 40617), (191, 40674), (199, 40701), (209, 40737), (231, 40818), (237, 40830), (242, 40851), (261, 40941), (268, 40989), (271, 41022), (275, 41040), (277, 41055), (282, 41079), (300, 41205), (309, 41253), (315, 41280), (317, 41301), (322, 41328), (324, 41346), (326, 41373), (333, 41418), (336, 41442), (344, 41481), (345, 41484), (352, 41505), (354, 41523),

Gene: Christoph\_33 Start: 23724, Stop: 22123, Start Num: 28

Candidate Starts for Christoph\_33:

(Start: 17 @23793 has 184 MA's), (Start: 24 @23760 has 5 MA's), (Start: 28 @23724 has 8 MA's), (34, 23667), (39, 23637), (40, 23631), (64, 23505), (78, 23397), (79, 23391), (94, 23265), (98, 23235), (161, 22923), (169, 22881), (178, 22830), (258, 22458), (263, 22419), (272, 22362), (281, 22305), (287, 22260), (291, 22227), (295, 22218), (298, 22200), (304, 22167),

Gene: Clancy\_33 Start: 23827, Stop: 22112, Start Num: 17

Candidate Starts for Clancy\_33:

(Start: 17 @23827 has 184 MA's), (Start: 24 @23794 has 5 MA's), (Start: 28 @23758 has 8 MA's), (34, 23701), (39, 23671), (40, 23665), (64, 23539), (78, 23431), (79, 23425), (94, 23299), (98, 23269), (161, 22957), (169, 22915), (243, 22555), (250, 22489), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (298, 22189), (304, 22156),

Gene: Cleo\_51 Start: 38722, Stop: 40737, Start Num: 13

Candidate Starts for Cleo\_51:

(Start: 13 @38722 has 12 MA's), (18, 38746), (20, 38755), (Start: 25 @38785 has 1 MA's), (30, 38821), (46, 38941), (60, 39016), (62, 39031), (85, 39199), (87, 39208), (91, 39262), (98, 39319), (100, 39325), (104, 39343), (106, 39346), (115, 39397), (122, 39433), (123, 39439), (129, 39472), (138, 39529), (142, 39550), (146, 39595), (153, 39643), (157, 39658), (173, 39739), (180, 39787), (197, 39868), (199, 39874), (209, 39910), (212, 39928), (231, 39997), (252, 40081), (255, 40090), (261, 40120), (263, 40144), (275, 40219), (282, 40258), (286, 40297), (287, 40300), (288, 40306), (300, 40384),

(302, 40393), (309, 40432), (320, 40492), (322, 40504), (333, 40606), (338, 40642), (339, 40648), (340, 40651), (345, 40675),

Gene: Clock\_31 Start: 24784, Stop: 23105, Start Num: 17

Candidate Starts for Clock\_31:

(Start: 17 @24784 has 184 MA's), (Start: 28 @24715 has 8 MA's), (63, 24484), (68, 24460), (73, 24406), (78, 24373), (79, 24367), (83, 24331), (87, 24307), (98, 24211), (121, 24100), (161, 23893), (171, 23842), (179, 23785), (188, 23746), (193, 23713), (198, 23695), (227, 23554), (230, 23548), (258, 23431), (263, 23392), (265, 23383), (271, 23338), (287, 23233), (295, 23191), (297, 23185),

Gene: CocoaPuff\_61 Start: 41544, Stop: 43625, Start Num: 7

Candidate Starts for CocoaPuff\_61:

(5, 41508), (Start: 7 @41544 has 15 MA's), (18, 41583), (26, 41631), (32, 41667), (46, 41784), (70, 41934), (76, 41964), (81, 42000), (82, 42006), (92, 42108), (100, 42168), (103, 42183), (113, 42228), (115, 42240), (122, 42276), (125, 42294), (133, 42339), (139, 42378), (146, 42438), (149, 42459), (171, 42600), (173, 42612), (180, 42660), (199, 42744), (209, 42780), (224, 42852), (231, 42879), (271, 43083), (272, 43086), (274, 43092), (275, 43101), (277, 43116), (282, 43140), (288, 43188), (291, 43218), (292, 43224), (306, 43305), (322, 43404), (326, 43452), (333, 43497), (335, 43518), (344, 43560), (345, 43563),

Gene: ColaCorta\_32 Start: 23711, Stop: 22029, Start Num: 17

Candidate Starts for ColaCorta\_32:

(Start: 17 @23711 has 184 MA's), (Start: 22 @23687 has 1 MA's), (Start: 24 @23678 has 5 MA's), (26, 23660), (Start: 27 @23648 has 1 MA's), (Start: 28 @23642 has 8 MA's), (38, 23561), (55, 23450), (57, 23441), (68, 23384), (79, 23291), (83, 23255), (87, 23231), (94, 23165), (96, 23147), (98, 23135), (115, 23057), (125, 23006), (167, 22790), (169, 22778), (172, 22766), (178, 22727), (179, 22712), (184, 22685), (196, 22628), (198, 22622), (230, 22481), (258, 22364), (262, 22343), (263, 22325), (272, 22268), (286, 22169), (288, 22160), (298, 22106),

Gene: Convict\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for Convict\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (178, 23134), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: CoraRita\_33 Start: 23791, Stop: 22121, Start Num: 17

Candidate Starts for CoraRita\_33:

(Start: 17 @23791 has 184 MA's), (Start: 24 @23758 has 5 MA's), (Start: 28 @23722 has 8 MA's), (34, 23665), (39, 23635), (40, 23629), (64, 23503), (78, 23395), (79, 23389), (94, 23263), (98, 23233), (161, 22921), (169, 22879), (193, 22741), (258, 22456), (263, 22417), (272, 22360), (281, 22303), (287, 22258), (291, 22225), (295, 22216), (298, 22198), (304, 22165),

Gene: Cozz\_56 Start: 39563, Stop: 41557, Start Num: 15

Candidate Starts for Cozz\_56:

(Start: 15 @39563 has 31 MA's), (46, 39779), (54, 39818), (56, 39833), (85, 40037), (87, 40046), (92, 40103), (114, 40226), (123, 40277), (140, 40376), (142, 40388), (146, 40433), (168, 40547), (171, 40565), (173, 40577), (180, 40625), (191, 40682), (199, 40709), (209, 40745), (231, 40826), (237, 40838), (249, 40889), (263, 40973), (271, 41030), (275, 41048), (282, 41087), (300, 41213), (315, 41288), (317, 41309), (326, 41381), (333, 41426), (344, 41489), (345, 41492), (352, 41513),

Gene: Dave\_34 Start: 24085, Stop: 22415, Start Num: 17

Candidate Starts for Dave\_34:

(Start: 17 @24085 has 184 MA's), (Start: 24 @24052 has 5 MA's), (Start: 28 @24016 has 8 MA's), (34, 23959), (39, 23929), (40, 23923), (64, 23797), (78, 23689), (79, 23683), (94, 23557), (98, 23527), (161, 23215), (169, 23173), (178, 23122), (193, 23035), (258, 22750), (263, 22711), (272, 22654), (281, 22597), (287, 22552), (291, 22519), (295, 22510), (298, 22492), (304, 22459),

Gene: Delphidian\_34 Start: 24096, Stop: 22426, Start Num: 17

Candidate Starts for Delphidian\_34:

(Start: 17 @24096 has 184 MA's), (Start: 24 @24063 has 5 MA's), (Start: 28 @24027 has 8 MA's), (34, 23970), (39, 23940), (40, 23934), (64, 23808), (78, 23700), (79, 23694), (94, 23568), (98, 23538), (161, 23226), (169, 23184), (178, 23133), (193, 23046), (258, 22761), (263, 22722), (272, 22665), (281, 22608), (287, 22563), (291, 22530), (298, 22503), (304, 22470),

Gene: Den3\_34 Start: 24102, Stop: 22432, Start Num: 17

Candidate Starts for Den3\_34:

(Start: 17 @24102 has 184 MA's), (Start: 24 @24069 has 5 MA's), (Start: 28 @24033 has 8 MA's), (34, 23976), (39, 23946), (40, 23940), (64, 23814), (78, 23706), (79, 23700), (94, 23574), (98, 23544), (161, 23232), (169, 23190), (258, 22767), (263, 22728), (272, 22671), (281, 22614), (283, 22608), (287, 22569), (291, 22536), (295, 22527), (298, 22509), (304, 22476),

Gene: Dothraki\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for Dothraki\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: Dre3\_54 Start: 39566, Stop: 41581, Start Num: 13

Candidate Starts for Dre3\_54:

(Start: 13 @39566 has 12 MA's), (18, 39590), (20, 39599), (Start: 25 @39629 has 1 MA's), (30, 39665), (46, 39785), (60, 39860), (62, 39875), (85, 40043), (87, 40052), (91, 40106), (98, 40163), (100, 40169), (104, 40187), (106, 40190), (115, 40241), (122, 40277), (123, 40283), (129, 40316), (138, 40373), (142, 40394), (146, 40439), (153, 40487), (157, 40502), (173, 40583), (180, 40631), (193, 40697), (197, 40712), (199, 40718), (209, 40754), (212, 40772), (231, 40841), (252, 40925), (255, 40934), (261, 40964), (263, 40988), (275, 41063), (282, 41102), (287, 41144), (288, 41150), (300, 41228), (302, 41237), (309, 41276), (320, 41336), (322, 41348), (332, 41426), (333, 41450), (338, 41486), (339, 41492), (340, 41495), (345, 41519),

Gene: Duocatuli\_33 Start: 23713, Stop: 22112, Start Num: 28

Candidate Starts for Duocatuli\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (98, 23224), (161, 22912), (169, 22870), (178, 22819), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: ElJefes\_63 Start: 42074, Stop: 44158, Start Num: 7

Candidate Starts for ElJefes\_63:

(5, 42038), (Start: 7 @42074 has 15 MA's), (18, 42113), (26, 42161), (32, 42197), (46, 42314), (70, 42464), (76, 42494), (81, 42530), (82, 42536), (92, 42638), (100, 42698), (113, 42758), (115, 42770), (120, 42794), (122, 42806), (125, 42824), (136, 42890), (139, 42908), (146, 42968), (149, 42989), (168, 43112), (173, 43142), (199, 43274), (209, 43310), (224, 43382), (225, 43385), (231, 43409), (251, 43487), (266, 43568), (271, 43613), (274, 43622), (275, 43631), (277, 43646), (282, 43670), (288, 43718), (291, 43748), (292, 43754), (299, 43793), (306, 43835), (320, 43922), (321, 43931), (322, 43934), (326, 43982), (327, 43988), (333, 44027), (334, 44042), (345, 44093), (352, 44114),

(354, 44132), (356, 44141),

Gene: Eleri\_32 Start: 23724, Stop: 22042, Start Num: 17

Candidate Starts for Eleri\_32:

(Start: 17 @23724 has 184 MA's), (Start: 22 @23700 has 1 MA's), (Start: 24 @23691 has 5 MA's), (26, 23673), (Start: 27 @23661 has 1 MA's), (Start: 28 @23655 has 8 MA's), (38, 23574), (55, 23463), (57, 23454), (68, 23397), (79, 23304), (83, 23268), (87, 23244), (94, 23178), (96, 23160), (98, 23148), (115, 23070), (125, 23019), (167, 22803), (169, 22791), (172, 22779), (178, 22740), (179, 22725), (184, 22698), (196, 22641), (198, 22635), (230, 22494), (258, 22377), (262, 22356), (263, 22338), (272, 22281), (286, 22182), (288, 22173), (298, 22119),

Gene: Elinal\_66 Start: 42347, Stop: 44428, Start Num: 7

Candidate Starts for Elinal\_66:

(5, 42311), (Start: 7 @42347 has 15 MA's), (18, 42386), (26, 42434), (32, 42470), (46, 42587), (56, 42641), (70, 42737), (76, 42767), (81, 42803), (82, 42809), (92, 42911), (100, 42971), (113, 43031), (115, 43043), (120, 43067), (122, 43079), (125, 43097), (133, 43142), (139, 43181), (146, 43241), (171, 43403), (173, 43415), (180, 43463), (199, 43547), (209, 43583), (224, 43655), (231, 43682), (271, 43886), (272, 43889), (274, 43895), (275, 43904), (277, 43919), (282, 43943), (288, 43991), (291, 44021), (292, 44027), (306, 44108), (318, 44186), (321, 44204), (326, 44255), (329, 44273), (333, 44300), (335, 44321), (344, 44363), (345, 44366),

Gene: Elliott\_58 Start: 39859, Stop: 41853, Start Num: 15

Candidate Starts for Elliott\_58:

(Start: 15 @39859 has 31 MA's), (46, 40075), (54, 40114), (56, 40129), (81, 40291), (85, 40333), (87, 40342), (92, 40399), (114, 40522), (123, 40573), (140, 40672), (142, 40684), (146, 40729), (168, 40843), (171, 40861), (173, 40873), (180, 40921), (191, 40978), (193, 40984), (199, 41005), (209, 41041), (231, 41122), (237, 41134), (249, 41185), (263, 41269), (271, 41326), (275, 41344), (282, 41383), (300, 41509), (315, 41584), (317, 41605), (322, 41632), (326, 41677), (333, 41722), (344, 41785), (345, 41788), (352, 41809),

Gene: Emalyn\_57 Start: 38879, Stop: 40876, Start Num: 15

Candidate Starts for Emalyn\_57:

(Start: 15 @38879 has 31 MA's), (46, 39095), (54, 39134), (81, 39311), (87, 39362), (92, 39419), (106, 39500), (108, 39512), (113, 39539), (114, 39542), (118, 39563), (140, 39692), (142, 39704), (146, 39749), (173, 39896), (180, 39944), (186, 39974), (189, 39983), (209, 40064), (231, 40145), (261, 40268), (271, 40349), (275, 40367), (282, 40406), (300, 40532), (317, 40628), (322, 40655), (324, 40673), (326, 40700), (333, 40745), (336, 40769), (341, 40793), (344, 40808), (345, 40811), (352, 40832), (354, 40850),

Gene: Endor\_34 Start: 24429, Stop: 22732, Start Num: 17

Candidate Starts for Endor\_34:

(Start: 17 @24429 has 184 MA's), (26, 24378), (Start: 27 @24366 has 1 MA's), (Start: 28 @24360 has 8 MA's), (55, 24159), (62, 24120), (64, 24114), (72, 24051), (78, 24006), (87, 23940), (95, 23859), (97, 23853), (161, 23535), (169, 23493), (178, 23442), (182, 23406), (193, 23355), (224, 23208), (258, 23067), (263, 23028), (271, 22974), (272, 22971), (281, 22914), (287, 22869), (291, 22836), (297, 22821), (298, 22809), (304, 22776),

Gene: Erla\_33 Start: 23775, Stop: 22105, Start Num: 17

Candidate Starts for Erla\_33:

(Start: 17 @23775 has 184 MA's), (Start: 24 @23742 has 5 MA's), (Start: 28 @23706 has 8 MA's), (34, 23649), (39, 23619), (40, 23613), (64, 23487), (78, 23379), (79, 23373), (94, 23247), (98, 23217), (161, 22905), (169, 22863), (193, 22725), (258, 22440), (263, 22401), (272, 22344), (281, 22287), (287, 22242), (291, 22209), (298, 22182), (304, 22149),

Gene: Espinosa\_33 Start: 23793, Stop: 22123, Start Num: 17

Candidate Starts for Espinosa\_33:

(Start: 17 @23793 has 184 MA's), (Start: 24 @23760 has 5 MA's), (Start: 28 @23724 has 8 MA's), (34, 23667), (39, 23637), (40, 23631), (64, 23505), (78, 23397), (79, 23391), (94, 23265), (98, 23235), (161, 22923), (169, 22881), (178, 22830), (258, 22458), (263, 22419), (272, 22362), (281, 22305), (287, 22260), (291, 22227), (295, 22218), (298, 22200), (304, 22167),

Gene: Etna\_33 Start: 24204, Stop: 22462, Start Num: 17

Candidate Starts for Etna\_33:

(Start: 17 @24204 has 184 MA's), (26, 24153), (Start: 27 @24141 has 1 MA's), (Start: 28 @24135 has 8 MA's), (55, 23934), (62, 23895), (64, 23889), (72, 23826), (78, 23781), (95, 23634), (97, 23628), (98, 23619), (101, 23607), (161, 23310), (163, 23301), (169, 23268), (178, 23217), (182, 23181), (193, 23130), (224, 22983), (243, 22905), (244, 22875), (246, 22860), (258, 22797), (263, 22758), (272, 22701), (281, 22644), (287, 22599), (291, 22566), (298, 22539), (304, 22506),

Gene: Etta\_33 Start: 23779, Stop: 22109, Start Num: 17

Candidate Starts for Etta\_33:

(Start: 17 @23779 has 184 MA's), (Start: 24 @23746 has 5 MA's), (Start: 28 @23710 has 8 MA's), (34, 23653), (39, 23623), (40, 23617), (64, 23491), (78, 23383), (79, 23377), (94, 23251), (98, 23221), (161, 22909), (169, 22867), (193, 22729), (258, 22444), (263, 22405), (272, 22348), (281, 22291), (287, 22246), (291, 22213), (298, 22186), (304, 22153),

Gene: Exploradora\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for Exploradora\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (96, 23236), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: FF47\_52 Start: 39928, Stop: 41853, Start Num: 15

Candidate Starts for FF47\_52:

(Start: 15 @39928 has 31 MA's), (26, 39994), (37, 40090), (46, 40141), (47, 40144), (72, 40300), (92, 40465), (102, 40534), (122, 40639), (137, 40732), (145, 40798), (180, 40999), (182, 41017), (202, 41095), (208, 41119), (212, 41140), (229, 41215), (235, 41230), (237, 41233), (241, 41245), (261, 41344), (262, 41350), (263, 41368), (268, 41392), (272, 41428), (274, 41434), (282, 41482), (288, 41530), (303, 41620),

Gene: FarmerDoug\_33 Start: 24070, Stop: 22373, Start Num: 17

Candidate Starts for FarmerDoug\_33:

(Start: 17 @24070 has 184 MA's), (26, 24019), (Start: 27 @24007 has 1 MA's), (Start: 28 @24001 has 8 MA's), (38, 23920), (39, 23914), (55, 23800), (57, 23791), (64, 23755), (72, 23692), (78, 23647), (87, 23581), (97, 23494), (161, 23176), (169, 23134), (178, 23083), (182, 23047), (193, 22996), (224, 22849), (258, 22708), (263, 22669), (271, 22615), (272, 22612), (281, 22555), (287, 22510), (291, 22477), (297, 22462), (298, 22450), (304, 22417),

Gene: Feastonyeet\_61 Start: 41539, Stop: 43620, Start Num: 7

Candidate Starts for Feastonyeet\_61:

(5, 41503), (Start: 7 @41539 has 15 MA's), (18, 41578), (26, 41626), (32, 41662), (46, 41779), (70, 41929), (76, 41959), (81, 41995), (82, 42001), (92, 42103), (100, 42163), (103, 42178), (113, 42223), (115, 42235), (122, 42271), (125, 42289), (133, 42334), (139, 42373), (146, 42433), (149, 42454), (171, 42595), (173, 42607), (180, 42655), (199, 42739), (209, 42775), (224, 42847), (231, 42874), (271, 43078), (272, 43081), (274, 43087), (275, 43096), (277, 43111), (282, 43135), (288, 43183),

(291, 43213), (292, 43219), (306, 43300), (322, 43399), (326, 43447), (333, 43492), (335, 43513), (344, 43555), (345, 43558),

Gene: Figueroism\_34 Start: 24084, Stop: 22414, Start Num: 17

Candidate Starts for Figueroism\_34:

(Start: 17 @24084 has 184 MA's), (Start: 24 @24051 has 5 MA's), (Start: 28 @24015 has 8 MA's), (34, 23958), (39, 23928), (40, 23922), (64, 23796), (78, 23688), (79, 23682), (94, 23556), (98, 23526), (161, 23214), (169, 23172), (178, 23121), (193, 23034), (258, 22749), (263, 22710), (272, 22653), (281, 22596), (287, 22551), (291, 22518), (298, 22491), (304, 22458),

Gene: Finny\_32 Start: 23764, Stop: 22082, Start Num: 17

Candidate Starts for Finny\_32:

(Start: 17 @23764 has 184 MA's), (Start: 22 @23740 has 1 MA's), (Start: 24 @23731 has 5 MA's), (26, 23713), (Start: 27 @23701 has 1 MA's), (Start: 28 @23695 has 8 MA's), (38, 23614), (55, 23503), (68, 23437), (79, 23344), (83, 23308), (87, 23284), (94, 23218), (96, 23200), (98, 23188), (115, 23110), (125, 23059), (167, 22843), (169, 22831), (178, 22780), (179, 22765), (184, 22738), (198, 22675), (230, 22534), (258, 22417), (262, 22396), (263, 22378), (272, 22321), (286, 22222), (288, 22213), (298, 22159),

Gene: Fribs8\_53 Start: 39638, Stop: 41656, Start Num: 13

Candidate Starts for Fribs8\_53:

(Start: 13 @39638 has 12 MA's), (18, 39662), (30, 39737), (46, 39857), (58, 39923), (60, 39932), (62, 39947), (85, 40115), (92, 40181), (100, 40241), (104, 40259), (106, 40262), (115, 40313), (122, 40349), (123, 40355), (129, 40388), (138, 40445), (142, 40466), (146, 40511), (153, 40559), (157, 40574), (164, 40607), (173, 40655), (180, 40703), (195, 40775), (197, 40784), (206, 40817), (221, 40886), (231, 40919), (252, 41003), (255, 41012), (261, 41042), (263, 41066), (275, 41141), (282, 41180), (288, 41228), (300, 41306), (303, 41318), (309, 41354), (320, 41411), (322, 41423), (332, 41501), (333, 41525), (337, 41558), (338, 41561), (339, 41567), (340, 41570), (345, 41594), (351, 41612), (354, 41633),

Gene: Fulton\_31 Start: 21944, Stop: 20277, Start Num: 17

Candidate Starts for Fulton\_31:

(Start: 17 @21944 has 184 MA's), (Start: 24 @21911 has 5 MA's), (Start: 28 @21875 has 8 MA's), (34, 21818), (62, 21662), (66, 21650), (68, 21635), (73, 21581), (79, 21542), (84, 21500), (87, 21482), (94, 21416), (95, 21401), (98, 21386), (100, 21377), (161, 21068), (166, 21041), (171, 21017), (176, 20981), (178, 20975), (203, 20855), (230, 20723), (258, 20606), (263, 20567), (271, 20513), (287, 20408), (295, 20366), (297, 20360),

Gene: GTE2\_47 Start: 39509, Stop: 41506, Start Num: 15

Candidate Starts for GTE2\_47:

(Start: 15 @39509 has 31 MA's), (46, 39725), (54, 39764), (81, 39941), (86, 39986), (87, 39992), (106, 40130), (114, 40172), (115, 40181), (120, 40205), (140, 40322), (142, 40334), (146, 40379), (173, 40526), (180, 40574), (189, 40613), (209, 40694), (231, 40775), (261, 40898), (268, 40946), (271, 40979), (275, 40997), (277, 41012), (282, 41036), (300, 41162), (309, 41210), (315, 41237), (317, 41258), (322, 41285), (324, 41303), (326, 41330), (333, 41375), (336, 41399), (344, 41438), (345, 41441), (352, 41462),

Gene: GaeCeo\_34 Start: 24400, Stop: 22739, Start Num: 17

Candidate Starts for GaeCeo\_34:

(1, 24550), (Start: 17 @24400 has 184 MA's), (Start: 24 @24367 has 5 MA's), (Start: 28 @24331 has 8 MA's), (42, 24229), (55, 24157), (57, 24148), (68, 24091), (72, 24049), (78, 24004), (79, 23998), (83, 23962), (98, 23842), (161, 23533), (178, 23440), (182, 23404), (230, 23185), (235, 23170), (240, 23158), (245, 23134), (258, 23068), (263, 23029), (272, 22969), (287, 22867), (298, 22804),

Gene: GalaxyEater\_38 Start: 35393, Stop: 33513, Start Num: 16

Candidate Starts for GalaxyEater\_38:

(Start: 16 @35393 has 2 MA's), (31, 35300), (45, 35189), (86, 34904), (109, 34730), (110, 34721), (111, 34718), (112, 34715), (130, 34613), (134, 34577), (153, 34445), (165, 34385), (182, 34277), (183, 34274), (192, 34226), (193, 34223), (199, 34202), (205, 34181), (217, 34112), (236, 34064), (258, 33980), (266, 33929), (267, 33920), (273, 33881), (281, 33827), (295, 33722),

Gene: GardenB\_33 Start: 24193, Stop: 22463, Start Num: 17

Candidate Starts for GardenB\_33:

(Start: 17 @24193 has 184 MA's), (Start: 22 @24169 has 1 MA's), (26, 24142), (Start: 27 @24130 has 1 MA's), (Start: 28 @24124 has 8 MA's), (62, 23896), (64, 23890), (72, 23827), (78, 23782), (87, 23716), (98, 23620), (101, 23608), (161, 23311), (163, 23302), (169, 23269), (178, 23218), (182, 23182), (193, 23131), (224, 22984), (243, 22906), (244, 22876), (246, 22861), (258, 22798), (263, 22759), (272, 22702), (281, 22645), (287, 22600), (291, 22567), (297, 22552), (298, 22540), (304, 22507),

Gene: Garey24\_33 Start: 23758, Stop: 22088, Start Num: 17

Candidate Starts for Garey24\_33:

(Start: 17 @23758 has 184 MA's), (Start: 24 @23725 has 5 MA's), (Start: 28 @23689 has 8 MA's), (34, 23632), (39, 23602), (40, 23596), (64, 23470), (78, 23362), (79, 23356), (94, 23230), (98, 23200), (161, 22888), (169, 22846), (178, 22795), (193, 22708), (258, 22423), (263, 22384), (272, 22327), (281, 22270), (287, 22225), (291, 22192), (298, 22165), (304, 22132),

Gene: Gargoyle\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for Gargoyle\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: Gelo\_33 Start: 23779, Stop: 22109, Start Num: 17

Candidate Starts for Gelo\_33:

(Start: 17 @23779 has 184 MA's), (Start: 24 @23746 has 5 MA's), (Start: 28 @23710 has 8 MA's), (34, 23653), (39, 23623), (40, 23617), (64, 23491), (78, 23383), (79, 23377), (94, 23251), (98, 23221), (161, 22909), (169, 22867), (193, 22729), (258, 22444), (263, 22405), (272, 22348), (281, 22291), (287, 22246), (291, 22213), (298, 22186), (304, 22153),

Gene: Gershwin\_33 Start: 23795, Stop: 22125, Start Num: 17

Candidate Starts for Gershwin\_33:

(Start: 17 @23795 has 184 MA's), (Start: 24 @23762 has 5 MA's), (Start: 28 @23726 has 8 MA's), (34, 23669), (39, 23639), (40, 23633), (64, 23507), (78, 23399), (79, 23393), (94, 23267), (98, 23237), (161, 22925), (169, 22883), (178, 22832), (258, 22460), (263, 22421), (272, 22364), (281, 22307), (287, 22262), (291, 22229), (295, 22220), (298, 22202), (304, 22169),

Gene: GiKK\_63 Start: 41097, Stop: 43061, Start Num: 25

Candidate Starts for GiKK\_63:

(Start: 9 @41019 has 3 MA's), (20, 41061), (Start: 25 @41097 has 1 MA's), (46, 41250), (47, 41253), (54, 41289), (58, 41316), (62, 41340), (65, 41349), (70, 41400), (73, 41418), (90, 41568), (98, 41628), (115, 41706), (120, 41730), (122, 41742), (123, 41748), (140, 41847), (142, 41859), (144, 41892), (161, 41991), (164, 42009), (168, 42027), (172, 42048), (173, 42057), (181, 42117), (197, 42183), (199, 42189), (209, 42225), (220, 42288), (224, 42297), (231, 42324), (248, 42384), (249, 42387), (252, 42408), (263, 42471), (271, 42528), (274, 42537), (275, 42546), (282, 42585), (287, 42627),

(288, 42633), (309, 42759), (315, 42795), (320, 42831), (322, 42843), (340, 42969), (344, 42990),

Gene: Gibbous\_54 Start: 39566, Stop: 41581, Start Num: 13

Candidate Starts for Gibbous\_54:

(Start: 13 @39566 has 12 MA's), (18, 39590), (20, 39599), (Start: 25 @39629 has 1 MA's), (30, 39665), (46, 39785), (60, 39860), (62, 39875), (85, 40043), (87, 40052), (91, 40106), (98, 40163), (100, 40169), (104, 40187), (106, 40190), (115, 40241), (122, 40277), (123, 40283), (129, 40316), (138, 40373), (142, 40394), (146, 40439), (153, 40487), (157, 40502), (173, 40583), (180, 40631), (193, 40697), (197, 40712), (199, 40718), (209, 40754), (212, 40772), (231, 40841), (252, 40925), (255, 40934), (261, 40964), (263, 40988), (275, 41063), (282, 41102), (287, 41144), (288, 41150), (300, 41228), (302, 41237), (309, 41276), (320, 41336), (322, 41348), (332, 41426), (333, 41450), (338, 41486), (339, 41492), (340, 41495), (345, 41519),

Gene: Glamour\_31 Start: 23712, Stop: 22030, Start Num: 17

Candidate Starts for Glamour\_31:

(Start: 17 @23712 has 184 MA's), (Start: 22 @23688 has 1 MA's), (Start: 24 @23679 has 5 MA's), (26, 23661), (Start: 27 @23649 has 1 MA's), (Start: 28 @23643 has 8 MA's), (38, 23562), (55, 23451), (57, 23442), (68, 23385), (79, 23292), (83, 23256), (87, 23232), (94, 23166), (96, 23148), (98, 23136), (115, 23058), (125, 23007), (167, 22791), (169, 22779), (172, 22767), (178, 22728), (179, 22713), (184, 22686), (196, 22629), (198, 22623), (230, 22482), (258, 22365), (262, 22344), (263, 22326), (272, 22269), (286, 22170), (288, 22161), (298, 22107),

Gene: GoingMerry\_34 Start: 24038, Stop: 22437, Start Num: 28

Candidate Starts for GoingMerry\_34:

(Start: 17 @24107 has 184 MA's), (Start: 24 @24074 has 5 MA's), (Start: 28 @24038 has 8 MA's), (34, 23981), (39, 23951), (40, 23945), (64, 23819), (78, 23711), (79, 23705), (94, 23579), (98, 23549), (161, 23237), (169, 23195), (258, 22772), (263, 22733), (272, 22676), (281, 22619), (283, 22613), (287, 22574), (291, 22541), (295, 22532), (298, 22514), (304, 22481),

Gene: GoldHunter\_59 Start: 39976, Stop: 41970, Start Num: 15

Candidate Starts for GoldHunter\_59:

(Start: 15 @39976 has 31 MA's), (46, 40192), (54, 40231), (56, 40246), (81, 40408), (85, 40450), (87, 40459), (92, 40516), (114, 40639), (123, 40690), (140, 40789), (142, 40801), (146, 40846), (161, 40924), (168, 40960), (171, 40978), (173, 40990), (180, 41038), (191, 41095), (199, 41122), (209, 41158), (231, 41239), (237, 41251), (249, 41302), (263, 41386), (271, 41443), (275, 41461), (282, 41500), (300, 41626), (315, 41701), (317, 41722), (322, 41749), (326, 41794), (333, 41839), (344, 41902), (345, 41905), (352, 41926),

Gene: Golden\_31 Start: 23730, Stop: 22096, Start Num: 24

Candidate Starts for Golden\_31:

(Start: 17 @23763 has 184 MA's), (Start: 24 @23730 has 5 MA's), (Start: 28 @23694 has 8 MA's), (30, 23682), (57, 23511), (72, 23412), (78, 23367), (79, 23361), (91, 23256), (98, 23205), (135, 23016), (161, 22884), (163, 22875), (169, 22842), (178, 22791), (184, 22749), (198, 22686), (223, 22569), (230, 22545), (235, 22530), (252, 22452), (253, 22449), (258, 22428), (263, 22389), (272, 22332), (280, 22284), (298, 22167), (302, 22146),

Gene: GoneGirl\_34 Start: 24165, Stop: 22504, Start Num: 22

Candidate Starts for GoneGirl\_34:

(Start: 17 @24189 has 184 MA's), (Start: 22 @24165 has 1 MA's), (26, 24138), (Start: 27 @24126 has 1 MA's), (Start: 28 @24120 has 8 MA's), (55, 23931), (62, 23892), (64, 23886), (72, 23823), (78, 23778), (87, 23712), (101, 23604), (161, 23307), (163, 23298), (169, 23265), (178, 23214), (182, 23178), (193, 23127), (224, 22980), (258, 22839), (263, 22800), (271, 22746), (272, 22743), (281, 22686), (287, 22641), (291, 22608), (298, 22581), (304, 22548), (312, 22515),

Gene: Greenlvy\_31 Start: 22530, Stop: 20863, Start Num: 17

Candidate Starts for Greenlvy\_31:

(Start: 17 @22530 has 184 MA's), (Start: 24 @22497 has 5 MA's), (Start: 28 @22461 has 8 MA's), (34, 22404), (62, 22248), (66, 22236), (68, 22221), (73, 22167), (79, 22128), (84, 22086), (87, 22068), (94, 22002), (95, 21987), (98, 21972), (100, 21963), (161, 21654), (166, 21627), (171, 21603), (176, 21567), (178, 21561), (203, 21441), (227, 21315), (230, 21309), (258, 21192), (263, 21153), (271, 21099), (287, 20994), (295, 20952), (297, 20946),

Gene: Greys\_34 Start: 24026, Stop: 22425, Start Num: 28

Candidate Starts for Greys\_34:

(Start: 17 @24095 has 184 MA's), (Start: 24 @24062 has 5 MA's), (Start: 28 @24026 has 8 MA's), (34, 23969), (39, 23939), (40, 23933), (64, 23807), (78, 23699), (79, 23693), (94, 23567), (98, 23537), (161, 23225), (169, 23183), (258, 22760), (263, 22721), (272, 22664), (281, 22607), (283, 22601), (287, 22562), (291, 22529), (295, 22520), (298, 22502), (304, 22469),

Gene: Gubbabump\_33 Start: 23784, Stop: 22114, Start Num: 17

Candidate Starts for Gubbabump\_33:

(Start: 17 @23784 has 184 MA's), (Start: 24 @23751 has 5 MA's), (Start: 28 @23715 has 8 MA's), (34, 23658), (39, 23628), (40, 23622), (64, 23496), (78, 23388), (79, 23382), (94, 23256), (96, 23238), (98, 23226), (161, 22914), (169, 22872), (193, 22734), (258, 22449), (263, 22410), (272, 22353), (281, 22296), (287, 22251), (291, 22218), (295, 22209), (298, 22191), (304, 22158),

Gene: Guetzie\_31 Start: 23718, Stop: 22084, Start Num: 24

Candidate Starts for Guetzie\_31:

(Start: 17 @23751 has 184 MA's), (Start: 24 @23718 has 5 MA's), (Start: 28 @23682 has 8 MA's), (30, 23670), (57, 23499), (72, 23400), (78, 23355), (79, 23349), (91, 23244), (98, 23193), (135, 23004), (161, 22872), (163, 22863), (169, 22830), (178, 22779), (184, 22737), (198, 22674), (223, 22557), (230, 22533), (235, 22518), (253, 22437), (258, 22416), (263, 22377), (272, 22320), (280, 22272), (298, 22155), (302, 22134),

Gene: GurgleFerb\_37 Start: 33686, Stop: 31821, Start Num: 4

Candidate Starts for GurgleFerb\_37:

(Start: 4 @33686 has 6 MA's), (Start: 15 @33626 has 31 MA's), (21, 33587), (33, 33512), (49, 33368), (50, 33365), (51, 33362), (61, 33305), (111, 32939), (117, 32909), (130, 32864), (134, 32828), (137, 32813), (151, 32714), (153, 32696), (160, 32663), (182, 32525), (188, 32507), (194, 32468), (200, 32447), (204, 32435), (205, 32429), (208, 32417), (210, 32411), (216, 32375), (226, 32351), (236, 32321), (258, 32237), (266, 32186), (278, 32108), (281, 32084), (288, 32033), (295, 31985), (301, 31952), (319, 31838),

Gene: HairyMan\_29 Start: 22903, Stop: 21242, Start Num: 17

Candidate Starts for HairyMan\_29:

(3, 22984), (Start: 17 @22903 has 184 MA's), (Start: 24 @22870 has 5 MA's), (Start: 27 @22840 has 1 MA's), (57, 22654), (64, 22618), (68, 22597), (73, 22543), (79, 22504), (83, 22468), (89, 22432), (94, 22378), (96, 22360), (98, 22348), (161, 22033), (178, 21940), (191, 21865), (193, 21853), (230, 21694), (258, 21577), (262, 21556), (263, 21538), (272, 21481), (286, 21382), (291, 21346), (298, 21319),

Gene: Hamlet\_33 Start: 24202, Stop: 22460, Start Num: 17

Candidate Starts for Hamlet\_33:

(Start: 17 @24202 has 184 MA's), (26, 24151), (Start: 27 @24139 has 1 MA's), (Start: 28 @24133 has 8 MA's), (39, 24046), (55, 23932), (62, 23893), (64, 23887), (72, 23824), (78, 23779), (95, 23632), (97, 23626), (98, 23617), (101, 23605), (161, 23308), (163, 23299), (169, 23266), (178, 23215), (182,

23179), (193, 23128), (224, 22981), (243, 22903), (244, 22873), (250, 22837), (258, 22795), (263, 22756), (272, 22699), (281, 22642), (287, 22597), (291, 22564), (298, 22537), (304, 22504),

Gene: HanSolo\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for HanSolo\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (96, 23236), (98, 23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: HankSprout\_34 Start: 23662, Stop: 21992, Start Num: 17

Candidate Starts for HankSprout\_34:

(Start: 17 @23662 has 184 MA's), (Start: 24 @23629 has 5 MA's), (Start: 28 @23593 has 8 MA's), (34, 23536), (39, 23506), (40, 23500), (64, 23374), (78, 23266), (79, 23260), (94, 23134), (96, 23116), (98, 23104), (161, 22792), (169, 22750), (193, 22612), (258, 22327), (263, 22288), (272, 22231), (281, 22174), (287, 22129), (291, 22096), (295, 22087), (298, 22069), (304, 22036),

Gene: Hasitha\_31 Start: 21956, Stop: 20289, Start Num: 17

Candidate Starts for Hasitha\_31:

(Start: 17 @21956 has 184 MA's), (Start: 24 @21923 has 5 MA's), (Start: 28 @21887 has 8 MA's), (34, 21830), (62, 21674), (66, 21662), (68, 21647), (73, 21593), (79, 21554), (84, 21512), (87, 21494), (94, 21428), (95, 21413), (98, 21398), (100, 21389), (161, 21080), (166, 21053), (171, 21029), (176, 20993), (178, 20987), (186, 20939), (203, 20867), (230, 20735), (258, 20618), (263, 20579), (271, 20525), (272, 20522), (287, 20420), (295, 20378), (297, 20372),

Gene: HavenFinLeoSun\_35 Start: 24443, Stop: 22761, Start Num: 17

Candidate Starts for HavenFinLeoSun\_35:

(Start: 17 @24443 has 184 MA's), (Start: 24 @24410 has 5 MA's), (Start: 28 @24374 has 8 MA's), (39, 24287), (40, 24281), (55, 24185), (64, 24140), (68, 24119), (72, 24077), (78, 24032), (79, 24026), (87, 23966), (94, 23900), (161, 23558), (169, 23516), (230, 23210), (258, 23093), (263, 23054), (271, 23000), (272, 22997), (281, 22940), (287, 22895), (291, 22862), (298, 22835), (304, 22802),

Gene: HerculesXL\_32 Start: 22418, Stop: 20745, Start Num: 17

Candidate Starts for HerculesXL\_32:

(Start: 17 @22418 has 184 MA's), (26, 22367), (Start: 28 @22349 has 8 MA's), (57, 22154), (72, 22055), (78, 22010), (79, 22004), (83, 21968), (84, 21962), (95, 21863), (98, 21848), (161, 21533), (179, 21425), (198, 21335), (213, 21275), (253, 21095), (258, 21074), (263, 21035), (272, 20978), (285, 20900), (287, 20876), (297, 20828),

Gene: Hexbug\_63 Start: 41889, Stop: 43901, Start Num: 12

Candidate Starts for Hexbug\_63:

(Start: 12 @41889 has 3 MA's), (26, 41964), (46, 42111), (47, 42114), (54, 42150), (70, 42261), (81, 42327), (118, 42579), (120, 42591), (122, 42603), (123, 42609), (140, 42708), (142, 42720), (145, 42762), (146, 42765), (147, 42768), (150, 42792), (153, 42813), (168, 42888), (173, 42918), (180, 42966), (193, 43032), (199, 43053), (209, 43089), (219, 43149), (224, 43161), (231, 43188), (247, 43239), (248, 43248), (252, 43272), (266, 43347), (271, 43392), (274, 43401), (275, 43410), (282, 43449), (287, 43491), (288, 43497), (303, 43587), (309, 43623), (320, 43692), (324, 43722), (340, 43827), (352, 43872),

Gene: HippoPololi\_54 Start: 38874, Stop: 40883, Start Num: 13

Candidate Starts for HippoPololi\_54:

(Start: 13 @38874 has 12 MA's), (18, 38898), (20, 38907), (30, 38973), (46, 39093), (67, 39198), (85, 39351), (91, 39414), (97, 39462), (98, 39471), (100, 39477), (104, 39495), (106, 39498), (115, 39549),

(122, 39585), (123, 39591), (129, 39624), (138, 39681), (142, 39702), (146, 39747), (157, 39810), (173, 39891), (180, 39939), (188, 39975), (191, 39996), (197, 40020), (209, 40062), (212, 40080), (231, 40149), (252, 40233), (255, 40242), (261, 40272), (271, 40353), (275, 40371), (282, 40410), (287, 40452), (288, 40458), (290, 40479), (300, 40536), (302, 40545), (309, 40584), (320, 40638), (322, 40650), (333, 40752), (338, 40788), (339, 40794), (340, 40797), (345, 40821),

Gene: Horseradish\_60 Start: 39690, Stop: 41687, Start Num: 15

Candidate Starts for Horseradish\_60:

(Start: 15 @39690 has 31 MA's), (46, 39906), (54, 39945), (87, 40173), (106, 40311), (108, 40323), (114, 40353), (120, 40386), (138, 40494), (140, 40503), (142, 40515), (146, 40560), (173, 40707), (180, 40755), (186, 40785), (189, 40794), (209, 40875), (231, 40956), (261, 41079), (271, 41160), (274, 41169), (275, 41178), (282, 41217), (300, 41343), (309, 41391), (315, 41418), (322, 41466), (324, 41484), (325, 41505), (326, 41511), (333, 41556), (344, 41619), (345, 41622), (352, 41643),

Gene: HungryHenry\_33 Start: 23793, Stop: 22123, Start Num: 17

Candidate Starts for HungryHenry\_33:

(Start: 17 @23793 has 184 MA's), (Start: 24 @23760 has 5 MA's), (Start: 28 @23724 has 8 MA's), (34, 23667), (39, 23637), (40, 23631), (64, 23505), (78, 23397), (79, 23391), (94, 23265), (98, 23235), (161, 22923), (169, 22881), (193, 22743), (258, 22458), (263, 22419), (272, 22362), (281, 22305), (287, 22260), (291, 22227), (295, 22218), (298, 22200), (304, 22167),

Gene: Huwbert\_96 Start: 56318, Stop: 58402, Start Num: 10

Candidate Starts for Huwbert\_96:

(Start: 10 @56318 has 2 MA's), (43, 56531), (54, 56585), (75, 56729), (80, 56762), (113, 57011), (117, 57029), (138, 57155), (142, 57176), (144, 57209), (184, 57458), (188, 57470), (194, 57506), (199, 57524), (218, 57617), (233, 57689), (249, 57767), (253, 57791), (257, 57809), (258, 57812), (263, 57851), (269, 57881), (273, 57914), (275, 57926), (282, 57962), (284, 57974), (291, 58034), (301, 58082), (331, 58256), (337, 58316), (343, 58343),

Gene: Ilzat\_33 Start: 23792, Stop: 22122, Start Num: 17

Candidate Starts for Ilzat\_33:

(Start: 17 @23792 has 184 MA's), (Start: 24 @23759 has 5 MA's), (Start: 28 @23723 has 8 MA's), (34, 23666), (39, 23636), (40, 23630), (64, 23504), (78, 23396), (79, 23390), (94, 23264), (98, 23234), (161, 22922), (169, 22880), (193, 22742), (258, 22457), (263, 22418), (272, 22361), (281, 22304), (287, 22259), (291, 22226), (295, 22217), (298, 22199), (304, 22166),

Gene: Inventa\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for Inventa\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: loannes\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for loannes\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (96, 23551), (98, 23539), (161, 23227), (169, 23185), (178, 23134), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: Ixel\_32 Start: 22378, Stop: 20696, Start Num: 17

Candidate Starts for Ixel\_32:

(Start: 17 @22378 has 184 MA's), (Start: 22 @22354 has 1 MA's), (Start: 24 @22345 has 5 MA's), (68, 22051), (78, 21964), (79, 21958), (91, 21853), (98, 21802), (161, 21484), (166, 21457), (213, 21226), (232, 21136), (258, 21025), (263, 20986), (265, 20977), (272, 20929), (285, 20851), (287, 20827), (291, 20794),

Gene: JacoRen57\_50 Start: 40975, Stop: 42969, Start Num: 13

Candidate Starts for JacoRen57\_50:

(Start: 13 @40975 has 12 MA's), (26, 41044), (29, 41065), (46, 41191), (72, 41350), (97, 41560), (115, 41653), (121, 41686), (122, 41689), (126, 41716), (132, 41740), (136, 41776), (137, 41785), (140, 41797), (145, 41851), (171, 41995), (182, 42073), (190, 42097), (199, 42142), (202, 42151), (229, 42271), (235, 42286), (241, 42301), (253, 42364), (254, 42367), (257, 42382), (272, 42481), (282, 42535), (285, 42553), (287, 42577), (292, 42619), (303, 42673), (323, 42805), (330, 42850), (341, 42916), (350, 42943),

Gene: Jamzy\_63 Start: 40755, Stop: 42797, Start Num: 9

Candidate Starts for Jamzy\_63:

(Start: 9 @40755 has 3 MA's), (20, 40797), (Start: 25 @40833 has 1 MA's), (46, 40986), (47, 40989), (54, 41025), (58, 41052), (62, 41076), (70, 41136), (73, 41154), (90, 41304), (98, 41364), (115, 41442), (120, 41466), (122, 41478), (123, 41484), (140, 41583), (142, 41595), (144, 41628), (161, 41727), (164, 41745), (168, 41763), (172, 41784), (173, 41793), (181, 41853), (197, 41919), (199, 41925), (209, 41961), (220, 42024), (224, 42033), (231, 42060), (248, 42120), (249, 42123), (252, 42144), (256, 42162), (263, 42207), (271, 42264), (274, 42273), (275, 42282), (282, 42321), (291, 42399), (309, 42495), (315, 42531), (320, 42567), (322, 42579), (324, 42597), (328, 42630), (340, 42705), (344, 42726),

Gene: Janus167\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for Janus167\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (98, 23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: Jasmine\_39 Start: 35196, Stop: 33331, Start Num: 4

Candidate Starts for Jasmine\_39:

(Start: 4 @35196 has 6 MA's), (Start: 15 @35136 has 31 MA's), (21, 35097), (33, 35022), (49, 34878), (50, 34875), (51, 34872), (61, 34815), (111, 34449), (117, 34419), (130, 34374), (134, 34338), (137, 34323), (141, 34302), (153, 34206), (160, 34173), (162, 34164), (177, 34074), (182, 34035), (188, 34017), (194, 33978), (200, 33957), (204, 33945), (205, 33939), (208, 33927), (209, 33924), (210, 33921), (216, 33885), (217, 33879), (226, 33861), (236, 33831), (258, 33747), (266, 33696), (278, 33618), (288, 33543), (295, 33495), (301, 33462), (319, 33348),

Gene: JasonD\_36 Start: 24620, Stop: 22938, Start Num: 17

Candidate Starts for JasonD\_36:

(Start: 17 @24620 has 184 MA's), (Start: 24 @24587 has 5 MA's), (Start: 28 @24551 has 8 MA's), (39, 24464), (40, 24458), (48, 24401), (55, 24362), (64, 24317), (68, 24296), (72, 24254), (78, 24209), (79, 24203), (87, 24143), (161, 23735), (163, 23726), (169, 23693), (230, 23387), (258, 23270), (263, 23231), (272, 23174), (281, 23117), (287, 23072), (291, 23039), (298, 23012), (304, 22979),

Gene: JasperRussell\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for JasperRussell\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (96, 23236), (98, 23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281,

22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: Jemerald\_34 Start: 24415, Stop: 22775, Start Num: 22

Candidate Starts for Jemerald\_34:

(Start: 17 @24439 has 184 MA's), (Start: 22 @24415 has 1 MA's), (Start: 24 @24406 has 5 MA's), (26, 24388), (Start: 28 @24370 has 8 MA's), (52, 24202), (68, 24115), (69, 24091), (70, 24082), (72, 24073), (78, 24028), (79, 24022), (83, 23986), (86, 23968), (87, 23962), (92, 23914), (94, 23896), (96, 23878), (98, 23866), (158, 23581), (161, 23566), (169, 23524), (171, 23515), (173, 23503), (198, 23368), (203, 23353), (225, 23245), (230, 23224), (252, 23131), (258, 23107), (262, 23086), (263, 23068), (267, 23047), (272, 23011), (286, 22912), (287, 22909), (294, 22867), (298, 22843),

Gene: Jenos\_37 Start: 25280, Stop: 23598, Start Num: 17

Candidate Starts for Jenos\_37:

(Start: 17 @25280 has 184 MA's), (Start: 24 @25247 has 5 MA's), (Start: 28 @25211 has 8 MA's), (39, 25124), (40, 25118), (64, 24977), (68, 24956), (72, 24914), (78, 24869), (79, 24863), (83, 24827), (94, 24737), (98, 24707), (161, 24395), (169, 24353), (193, 24215), (227, 24053), (230, 24047), (234, 24038), (258, 23930), (263, 23891), (270, 23861), (272, 23834), (276, 23807), (281, 23777), (287, 23732), (291, 23699), (298, 23672), (304, 23639),

Gene: Jerbirus\_34 Start: 23713, Stop: 22112, Start Num: 28

Candidate Starts for Jerbirus\_34:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (96, 23236), (98, 23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: JeriBeth\_33 Start: 23639, Stop: 21969, Start Num: 17

Candidate Starts for JeriBeth\_33:

(Start: 17 @23639 has 184 MA's), (Start: 24 @23606 has 5 MA's), (Start: 28 @23570 has 8 MA's), (34, 23513), (39, 23483), (40, 23477), (64, 23351), (78, 23243), (79, 23237), (94, 23111), (98, 23081), (161, 22769), (169, 22727), (193, 22589), (258, 22304), (263, 22265), (272, 22208), (281, 22151), (287, 22106), (291, 22073), (295, 22064), (298, 22046), (304, 22013),

Gene: Jingles\_31 Start: 23669, Stop: 22002, Start Num: 17

Candidate Starts for Jingles\_31:

(Start: 17 @23669 has 184 MA's), (Start: 24 @23636 has 5 MA's), (Start: 28 @23600 has 8 MA's), (30, 23588), (34, 23543), (35, 23540), (55, 23426), (72, 23318), (78, 23273), (79, 23267), (92, 23159), (94, 23141), (98, 23111), (161, 22790), (163, 22781), (169, 22748), (178, 22697), (179, 22682), (184, 22655), (198, 22592), (223, 22475), (230, 22451), (235, 22436), (253, 22355), (258, 22334), (263, 22295), (272, 22238), (280, 22190), (298, 22073), (302, 22052),

Gene: Juanyo\_31 Start: 23441, Stop: 21765, Start Num: 17

Candidate Starts for Juanyo\_31:

(Start: 17 @23441 has 184 MA's), (Start: 24 @23408 has 5 MA's), (26, 23390), (Start: 27 @23378 has 1 MA's), (Start: 28 @23372 has 8 MA's), (34, 23315), (42, 23270), (57, 23171), (68, 23114), (74, 23054), (79, 23021), (87, 22961), (89, 22949), (91, 22916), (94, 22895), (95, 22880), (98, 22865), (127, 22724), (161, 22556), (169, 22514), (171, 22505), (178, 22463), (193, 22376), (198, 22358), (240, 22181), (253, 22112), (258, 22091), (262, 22070), (263, 22052), (272, 21995), (280, 21947), (287, 21893), (297, 21845), (300, 21821), (305, 21791), (309, 21776),

Gene: Juicer\_34 Start: 24439, Stop: 22775, Start Num: 17

Candidate Starts for Juicer\_34:

(Start: 17 @24439 has 184 MA's), (Start: 22 @24415 has 1 MA's), (Start: 24 @24406 has 5 MA's), (26, 24388), (Start: 28 @24370 has 8 MA's), (52, 24202), (68, 24115), (69, 24091), (70, 24082), (72, 24073), (78, 24028), (79, 24022), (83, 23986), (86, 23968), (87, 23962), (92, 23914), (94, 23896), (96, 23878), (98, 23866), (158, 23581), (161, 23566), (169, 23524), (171, 23515), (173, 23503), (198, 23368), (203, 23353), (225, 23245), (230, 23224), (252, 23131), (258, 23107), (262, 23086), (263, 23068), (267, 23047), (272, 23011), (286, 22912), (287, 22909), (294, 22867), (298, 22843),

Gene: Kale\_33 Start: 23797, Stop: 22127, Start Num: 17

Candidate Starts for Kale\_33:

(Start: 17 @23797 has 184 MA's), (Start: 24 @23764 has 5 MA's), (Start: 28 @23728 has 8 MA's), (34, 23671), (39, 23641), (40, 23635), (64, 23509), (78, 23401), (79, 23395), (94, 23269), (98, 23239), (161, 22927), (169, 22885), (193, 22747), (258, 22462), (263, 22423), (272, 22366), (281, 22309), (287, 22264), (291, 22231), (298, 22204), (304, 22171),

Gene: KannH\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for KannH\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (96, 23236), (98, 23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: KatChan\_33 Start: 23172, Stop: 21505, Start Num: 17

Candidate Starts for KatChan\_33:

(Start: 17 @23172 has 184 MA's), (Start: 24 @23139 has 5 MA's), (26, 23121), (Start: 27 @23109 has 1 MA's), (57, 22920), (68, 22863), (69, 22839), (79, 22770), (84, 22728), (94, 22644), (98, 22614), (101, 22602), (147, 22362), (161, 22299), (166, 22272), (167, 22269), (171, 22248), (179, 22191), (184, 22164), (186, 22158), (198, 22101), (213, 22041), (227, 21963), (230, 21957), (258, 21840), (263, 21801), (276, 21717), (287, 21642), (289, 21633), (290, 21615), (291, 21609), (298, 21582), (311, 21519),

Gene: Kauala\_31 Start: 23655, Stop: 21988, Start Num: 17

Candidate Starts for Kauala\_31:

(Start: 17 @23655 has 184 MA's), (Start: 24 @23622 has 5 MA's), (Start: 28 @23586 has 8 MA's), (30, 23574), (34, 23529), (35, 23526), (55, 23412), (72, 23304), (78, 23259), (79, 23253), (92, 23145), (94, 23127), (98, 23097), (178, 22683), (179, 22668), (184, 22641), (211, 22530), (230, 22437), (235, 22422), (253, 22341), (258, 22320), (263, 22281), (272, 22224), (280, 22176), (298, 22059), (302, 22038),

Gene: Kavo\_31 Start: 22255, Stop: 20582, Start Num: 17

Candidate Starts for Kavo\_31:

(Start: 17 @22255 has 184 MA's), (26, 22204), (Start: 28 @22186 has 8 MA's), (57, 21991), (72, 21892), (78, 21847), (79, 21841), (83, 21805), (84, 21799), (95, 21700), (98, 21685), (161, 21370), (179, 21262), (213, 21112), (253, 20932), (258, 20911), (263, 20872), (265, 20863), (272, 20815), (287, 20713), (297, 20665),

Gene: KayGee\_64 Start: 42347, Stop: 44428, Start Num: 7

Candidate Starts for KayGee\_64:

(5, 42311), (Start: 7 @42347 has 15 MA's), (18, 42386), (26, 42434), (32, 42470), (46, 42587), (56, 42641), (70, 42737), (76, 42767), (81, 42803), (82, 42809), (92, 42911), (100, 42971), (113, 43031), (115, 43043), (120, 43067), (122, 43079), (125, 43097), (133, 43142), (139, 43181), (146, 43241), (171, 43403), (173, 43415), (180, 43463), (199, 43547), (209, 43583), (224, 43655), (231, 43682), (271, 43886), (272, 43889), (274, 43895), (275, 43904), (277, 43919), (282, 43943), (288, 43991), (291, 44021), (292, 44027), (306, 44108), (318, 44186), (321, 44204), (326, 44255), (329, 44273),

(333, 44300), (335, 44321), (344, 44363), (345, 44366),

Gene: KellyGreen\_34 Start: 23713, Stop: 22112, Start Num: 28

Candidate Starts for KellyGreen\_34:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (98, 23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (298, 22189), (304, 22156),

Gene: KingJulien\_33 Start: 24195, Stop: 22453, Start Num: 17

Candidate Starts for KingJulien\_33:

(Start: 17 @24195 has 184 MA's), (26, 24144), (Start: 27 @24132 has 1 MA's), (Start: 28 @24126 has 8 MA's), (55, 23925), (62, 23886), (64, 23880), (72, 23817), (78, 23772), (95, 23625), (97, 23619), (98, 23610), (101, 23598), (161, 23301), (163, 23292), (169, 23259), (178, 23208), (182, 23172), (193, 23121), (224, 22974), (243, 22896), (244, 22866), (246, 22851), (258, 22788), (263, 22749), (272, 22692), (281, 22635), (287, 22590), (291, 22557), (298, 22530), (304, 22497),

Gene: Klimt\_33 Start: 23777, Stop: 22107, Start Num: 17

Candidate Starts for Klimt\_33:

(Start: 17 @23777 has 184 MA's), (Start: 24 @23744 has 5 MA's), (Start: 28 @23708 has 8 MA's), (34, 23651), (39, 23621), (40, 23615), (64, 23489), (78, 23381), (79, 23375), (94, 23249), (98, 23219), (161, 22907), (169, 22865), (193, 22727), (258, 22442), (263, 22403), (272, 22346), (281, 22289), (287, 22244), (291, 22211), (298, 22184), (304, 22151),

Gene: Knox\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for Knox\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (178, 23134), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: Koji\_31 Start: 23757, Stop: 22123, Start Num: 24

Candidate Starts for Koji\_31:

(Start: 17 @23790 has 184 MA's), (Start: 24 @23757 has 5 MA's), (Start: 28 @23721 has 8 MA's), (30, 23709), (55, 23547), (72, 23439), (73, 23427), (78, 23394), (79, 23388), (92, 23280), (94, 23262), (98, 23232), (163, 22902), (171, 22860), (178, 22818), (179, 22803), (184, 22776), (188, 22764), (223, 22596), (230, 22572), (235, 22557), (253, 22476), (258, 22455), (263, 22416), (272, 22359), (280, 22311), (298, 22194), (302, 22173),

Gene: Kouch\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for Kouch\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (96, 23236), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: Kurt1\_34 Start: 24030, Stop: 22429, Start Num: 28

Candidate Starts for Kurt1\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: LadyJasley\_41 Start: 35179, Stop: 33335, Start Num: 16

Candidate Starts for LadyJasley\_41:

(Start: 16 @35179 has 2 MA's), (44, 34978), (62, 34858), (77, 34762), (80, 34738), (86, 34687), (92, 34615), (110, 34504), (112, 34498), (130, 34396), (134, 34360), (155, 34222), (182, 34060), (187, 34045), (205, 33967), (248, 33808), (258, 33766), (266, 33715), (267, 33706), (281, 33613), (301, 33475), (307, 33436),

Gene: Lauer\_56 Start: 42524, Stop: 44608, Start Num: 7

Candidate Starts for Lauer\_56:

(5, 42488), (Start: 7 @42524 has 15 MA's), (18, 42563), (26, 42611), (32, 42647), (46, 42764), (70, 42914), (76, 42944), (81, 42980), (82, 42986), (92, 43088), (100, 43148), (113, 43208), (115, 43220), (120, 43244), (122, 43256), (125, 43274), (139, 43358), (146, 43418), (149, 43439), (168, 43562), (173, 43592), (199, 43724), (209, 43760), (224, 43832), (231, 43859), (251, 43937), (266, 44018), (271, 44063), (274, 44072), (275, 44081), (277, 44096), (282, 44120), (288, 44168), (292, 44204), (299, 44243), (306, 44285), (320, 44372), (321, 44381), (322, 44384), (326, 44432), (327, 44438), (333, 44477), (334, 44492), (345, 44543), (352, 44564), (354, 44582), (356, 44591),

Gene: Leafus\_33 Start: 24268, Stop: 22595, Start Num: 28

Candidate Starts for Leafus\_33:

(Start: 17 @24337 has 184 MA's), (26, 24286), (Start: 27 @24274 has 1 MA's), (Start: 28 @24268 has 8 MA's), (39, 24181), (55, 24067), (62, 24028), (64, 24022), (72, 23959), (78, 23914), (95, 23767), (97, 23761), (98, 23752), (101, 23740), (161, 23443), (163, 23434), (169, 23401), (178, 23350), (182, 23314), (193, 23263), (224, 23116), (243, 23038), (246, 22993), (258, 22930), (263, 22891), (272, 22834), (281, 22777), (287, 22732), (291, 22699), (295, 22690), (297, 22684), (298, 22672), (304, 22639),

Gene: Librie\_31 Start: 21940, Stop: 20273, Start Num: 17

Candidate Starts for Librie\_31:

(Start: 17 @21940 has 184 MA's), (Start: 24 @21907 has 5 MA's), (Start: 28 @21871 has 8 MA's), (34, 21814), (62, 21658), (66, 21646), (68, 21631), (73, 21577), (79, 21538), (84, 21496), (87, 21478), (94, 21412), (95, 21397), (98, 21382), (100, 21373), (161, 21064), (166, 21037), (171, 21013), (176, 20977), (178, 20971), (203, 20851), (227, 20725), (230, 20719), (258, 20602), (263, 20563), (271, 20509), (283, 20443), (287, 20404), (295, 20362), (297, 20356),

Gene: LilTerminator\_31 Start: 21962, Stop: 20295, Start Num: 17

Candidate Starts for LilTerminator\_31:

(Start: 17 @21962 has 184 MA's), (Start: 24 @21929 has 5 MA's), (Start: 28 @21893 has 8 MA's), (34, 21836), (62, 21680), (66, 21668), (68, 21653), (73, 21599), (79, 21560), (84, 21518), (87, 21500), (94, 21434), (95, 21419), (98, 21404), (100, 21395), (161, 21086), (166, 21059), (171, 21035), (176, 20999), (178, 20993), (203, 20873), (227, 20747), (230, 20741), (258, 20624), (263, 20585), (271, 20531), (287, 20426), (295, 20384), (297, 20378),

Gene: LongHai\_56 Start: 40329, Stop: 42254, Start Num: 15

Candidate Starts for LongHai\_56:

(Start: 15 @40329 has 31 MA's), (26, 40395), (37, 40491), (46, 40542), (47, 40545), (72, 40701), (92, 40866), (102, 40935), (119, 41025), (122, 41040), (137, 41133), (145, 41199), (147, 41205), (180, 41400), (181, 41412), (182, 41418), (202, 41496), (208, 41520), (209, 41523), (212, 41541), (229, 41616), (235, 41631), (237, 41634), (241, 41646), (261, 41745), (262, 41751), (263, 41769), (268, 41793), (272, 41829), (274, 41835), (282, 41883), (288, 41931), (303, 42021),

Gene: Lovelyunicorn\_34 Start: 24098, Stop: 22428, Start Num: 17

Candidate Starts for Lovelyunicorn\_34:

(Start: 17 @24098 has 184 MA's), (Start: 24 @24065 has 5 MA's), (Start: 28 @24029 has 8 MA's), (34, 23972), (39, 23942), (40, 23936), (64, 23810), (78, 23702), (79, 23696), (94, 23570), (98, 23540), (161, 23228), (169, 23186), (258, 22763), (263, 22724), (272, 22667), (281, 22610), (283, 22604), (287, 22565), (291, 22532), (295, 22523), (298, 22505), (304, 22472),

Gene: Lucky3\_31 Start: 23730, Stop: 22096, Start Num: 24

Candidate Starts for Lucky3\_31:

(Start: 17 @23763 has 184 MA's), (Start: 24 @23730 has 5 MA's), (Start: 28 @23694 has 8 MA's), (30, 23682), (57, 23511), (72, 23412), (78, 23367), (79, 23361), (91, 23256), (98, 23205), (135, 23016), (161, 22884), (163, 22875), (169, 22842), (178, 22791), (184, 22749), (198, 22686), (223, 22569), (230, 22545), (235, 22530), (252, 22452), (253, 22449), (258, 22428), (263, 22389), (272, 22332), (280, 22284), (298, 22167), (302, 22146),

Gene: Ludgate\_34 Start: 24093, Stop: 22423, Start Num: 17

Candidate Starts for Ludgate\_34:

(Start: 17 @24093 has 184 MA's), (Start: 24 @24060 has 5 MA's), (Start: 28 @24024 has 8 MA's), (34, 23967), (39, 23937), (40, 23931), (64, 23805), (78, 23697), (79, 23691), (94, 23565), (96, 23547), (98, 23535), (161, 23223), (169, 23181), (178, 23130), (258, 22758), (263, 22719), (272, 22662), (281, 22605), (287, 22560), (291, 22527), (295, 22518), (298, 22500), (304, 22467),

Gene: Luna18\_33 Start: 23172, Stop: 21505, Start Num: 17

Candidate Starts for Luna18\_33:

(Start: 17 @23172 has 184 MA's), (Start: 24 @23139 has 5 MA's), (26, 23121), (Start: 27 @23109 has 1 MA's), (57, 22920), (68, 22863), (69, 22839), (79, 22770), (84, 22728), (94, 22644), (98, 22614), (101, 22602), (147, 22362), (161, 22299), (166, 22272), (167, 22269), (171, 22248), (179, 22191), (184, 22164), (186, 22158), (198, 22101), (213, 22041), (227, 21963), (230, 21957), (258, 21840), (263, 21801), (276, 21717), (287, 21642), (289, 21633), (290, 21615), (291, 21609), (298, 21582), (311, 21519),

Gene: MAnor\_63 Start: 42478, Stop: 44562, Start Num: 7

Candidate Starts for MAnor\_63:

(5, 42442), (Start: 7 @42478 has 15 MA's), (18, 42517), (26, 42565), (32, 42601), (46, 42718), (70, 42868), (76, 42898), (81, 42934), (82, 42940), (100, 43102), (113, 43162), (115, 43174), (120, 43198), (122, 43210), (125, 43228), (139, 43312), (146, 43372), (149, 43393), (168, 43516), (173, 43546), (199, 43678), (209, 43714), (224, 43786), (231, 43813), (266, 43972), (271, 44017), (274, 44026), (275, 44035), (277, 44050), (282, 44074), (288, 44122), (291, 44152), (292, 44158), (299, 44197), (306, 44239), (320, 44326), (321, 44335), (322, 44338), (326, 44386), (327, 44392), (333, 44431), (334, 44446), (345, 44497), (352, 44518), (354, 44536), (356, 44545),

Gene: MCubed\_32 Start: 23734, Stop: 22052, Start Num: 17

Candidate Starts for MCubed\_32:

(Start: 17 @23734 has 184 MA's), (Start: 22 @23710 has 1 MA's), (Start: 24 @23701 has 5 MA's), (26, 23683), (Start: 27 @23671 has 1 MA's), (Start: 28 @23665 has 8 MA's), (38, 23584), (55, 23473), (68, 23407), (79, 23314), (83, 23278), (87, 23254), (94, 23188), (96, 23170), (98, 23158), (115, 23080), (125, 23029), (167, 22813), (169, 22801), (178, 22750), (179, 22735), (184, 22708), (198, 22645), (230, 22504), (258, 22387), (262, 22366), (263, 22348), (272, 22291), (286, 22192), (288, 22183), (298, 22129),

Gene: MScarn\_62 Start: 39872, Stop: 41869, Start Num: 15

Candidate Starts for MScarn\_62:

(Start: 15 @39872 has 31 MA's), (46, 40088), (54, 40127), (87, 40355), (106, 40493), (108, 40505), (114, 40535), (120, 40568), (138, 40676), (140, 40685), (142, 40697), (146, 40742), (173, 40889), (180, 40937), (186, 40967), (189, 40976), (209, 41057), (231, 41138), (261, 41261), (271, 41342),

(274, 41351), (275, 41360), (282, 41399), (300, 41525), (309, 41573), (315, 41600), (322, 41648), (324, 41666), (325, 41687), (326, 41693), (333, 41738), (341, 41786), (344, 41801), (345, 41804), (352, 41825),

Gene: MaVan\_53 Start: 38989, Stop: 41004, Start Num: 13

Candidate Starts for MaVan\_53:

(6, 38956), (Start: 13 @38989 has 12 MA's), (18, 39013), (30, 39088), (46, 39208), (60, 39283), (62, 39298), (85, 39466), (87, 39475), (92, 39532), (98, 39586), (100, 39592), (104, 39610), (106, 39613), (113, 39652), (115, 39664), (122, 39700), (123, 39706), (129, 39739), (138, 39796), (142, 39817), (144, 39850), (146, 39862), (153, 39910), (157, 39925), (164, 39958), (173, 40006), (180, 40054), (206, 40168), (221, 40237), (231, 40270), (252, 40354), (253, 40357), (255, 40363), (261, 40393), (275, 40492), (282, 40531), (287, 40573), (288, 40579), (300, 40657), (303, 40669), (309, 40705), (320, 40759), (322, 40771), (332, 40849), (333, 40873), (337, 40906), (338, 40909), (339, 40915), (340, 40918), (345, 40942), (351, 40960), (354, 40981),

Gene: Maco6\_52 Start: 39268, Stop: 41193, Start Num: 15

Candidate Starts for Maco6\_52:

(Start: 15 @39268 has 31 MA's), (26, 39334), (37, 39430), (46, 39481), (47, 39484), (72, 39640), (92, 39805), (102, 39874), (122, 39979), (137, 40072), (145, 40138), (180, 40339), (182, 40357), (202, 40435), (208, 40459), (212, 40480), (229, 40555), (235, 40570), (237, 40573), (241, 40585), (253, 40648), (261, 40684), (262, 40690), (263, 40708), (268, 40732), (272, 40768), (274, 40774), (282, 40822), (288, 40870), (303, 40960),

Gene: MaeLinda\_34 Start: 24100, Stop: 22430, Start Num: 17

Candidate Starts for MaeLinda\_34:

(Start: 17 @24100 has 184 MA's), (Start: 24 @24067 has 5 MA's), (Start: 28 @24031 has 8 MA's), (34, 23974), (39, 23944), (40, 23938), (64, 23812), (78, 23704), (79, 23698), (94, 23572), (98, 23542), (161, 23230), (169, 23188), (178, 23137), (193, 23050), (258, 22765), (263, 22726), (272, 22669), (281, 22612), (287, 22567), (291, 22534), (298, 22507), (304, 22474),

Gene: Malvina\_56 Start: 38872, Stop: 40881, Start Num: 13

Candidate Starts for Malvina\_56:

(Start: 13 @38872 has 12 MA's), (18, 38896), (20, 38905), (30, 38971), (46, 39091), (62, 39181), (67, 39196), (85, 39349), (87, 39358), (91, 39412), (97, 39460), (98, 39469), (100, 39475), (104, 39493), (106, 39496), (115, 39547), (122, 39583), (123, 39589), (129, 39622), (138, 39679), (142, 39700), (146, 39745), (157, 39808), (173, 39889), (180, 39937), (188, 39973), (191, 39994), (197, 40018), (209, 40060), (212, 40078), (231, 40147), (252, 40231), (255, 40240), (261, 40270), (271, 40351), (275, 40369), (282, 40408), (287, 40450), (288, 40456), (290, 40477), (300, 40534), (302, 40543), (309, 40582), (320, 40636), (322, 40648), (333, 40750), (338, 40786), (339, 40792), (340, 40795), (345, 40819),

Gene: ManRay\_33 Start: 23726, Stop: 22125, Start Num: 28

Candidate Starts for ManRay\_33:

(Start: 17 @23795 has 184 MA's), (Start: 24 @23762 has 5 MA's), (Start: 28 @23726 has 8 MA's), (34, 23669), (39, 23639), (40, 23633), (64, 23507), (78, 23399), (79, 23393), (94, 23267), (98, 23237), (161, 22925), (169, 22883), (178, 22832), (258, 22460), (263, 22421), (272, 22364), (281, 22307), (287, 22262), (291, 22229), (295, 22220), (298, 22202), (304, 22169),

Gene: Mandalorian\_30 Start: 23383, Stop: 21707, Start Num: 17

Candidate Starts for Mandalorian\_30:

(Start: 17 @23383 has 184 MA's), (Start: 24 @23350 has 5 MA's), (Start: 27 @23320 has 1 MA's), (Start: 28 @23314 has 8 MA's), (34, 23257), (57, 23113), (68, 23056), (74, 22996), (79, 22963), (87, 22903), (89, 22891), (91, 22858), (94, 22837), (95, 22822), (98, 22807), (125, 22678), (127, 22666),

(161, 22498), (169, 22456), (171, 22447), (179, 22390), (193, 22318), (198, 22300), (227, 22156), (240, 22123), (253, 22054), (256, 22039), (258, 22033), (263, 21994), (272, 21937), (280, 21889), (287, 21835), (297, 21787), (300, 21763), (305, 21733),

Gene: Margaret\_63 Start: 40914, Stop: 42935, Start Num: 8

Candidate Starts for Margaret\_63:

(Start: 8 @40914 has 2 MA's), (26, 40995), (46, 41142), (47, 41145), (54, 41181), (70, 41292), (81, 41358), (87, 41409), (88, 41415), (97, 41511), (108, 41559), (115, 41598), (118, 41610), (120, 41622), (122, 41634), (123, 41640), (142, 41751), (146, 41796), (153, 41844), (172, 41940), (173, 41949), (180, 41997), (209, 42120), (217, 42171), (224, 42192), (231, 42219), (235, 42228), (248, 42279), (252, 42303), (266, 42378), (271, 42423), (274, 42432), (275, 42441), (282, 42480), (287, 42522), (309, 42654), (320, 42726), (324, 42756), (340, 42861), (352, 42906),

Gene: Martin\_35 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for Martin\_35:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: Mayweather\_65 Start: 42741, Stop: 44825, Start Num: 7

Candidate Starts for Mayweather\_65:

(5, 42705), (Start: 7 @42741 has 15 MA's), (18, 42780), (26, 42828), (32, 42864), (46, 42981), (70, 43131), (76, 43161), (82, 43203), (92, 43305), (100, 43365), (103, 43380), (113, 43425), (115, 43437), (120, 43461), (122, 43473), (125, 43491), (133, 43536), (139, 43575), (146, 43635), (149, 43656), (171, 43797), (173, 43809), (180, 43857), (199, 43941), (209, 43977), (224, 44049), (231, 44076), (251, 44154), (266, 44235), (271, 44280), (274, 44289), (275, 44298), (277, 44313), (282, 44337), (288, 44385), (291, 44415), (292, 44421), (299, 44460), (306, 44502), (320, 44589), (322, 44601), (326, 44649), (327, 44655), (333, 44694), (334, 44709), (345, 44760), (352, 44781), (354, 44799), (356, 44808),

Gene: McDazzle\_63 Start: 42068, Stop: 44152, Start Num: 7

Candidate Starts for McDazzle\_63:

(5, 42032), (Start: 7 @42068 has 15 MA's), (18, 42107), (26, 42155), (32, 42191), (46, 42308), (70, 42458), (76, 42488), (81, 42524), (82, 42530), (92, 42632), (100, 42692), (113, 42752), (115, 42764), (120, 42788), (122, 42800), (125, 42818), (136, 42884), (139, 42902), (146, 42962), (149, 42983), (168, 43106), (173, 43136), (199, 43268), (209, 43304), (224, 43376), (225, 43379), (231, 43403), (251, 43481), (266, 43562), (271, 43607), (274, 43616), (275, 43625), (277, 43640), (282, 43664), (288, 43712), (291, 43742), (292, 43748), (299, 43787), (306, 43829), (320, 43916), (321, 43925), (322, 43928), (326, 43976), (327, 43982), (333, 44021), (334, 44036), (345, 44087), (352, 44108), (354, 44126), (356, 44135),

Gene: McGalleon\_36 Start: 25497, Stop: 23815, Start Num: 17

Candidate Starts for McGalleon\_36:

(Start: 17 @25497 has 184 MA's), (Start: 24 @25464 has 5 MA's), (Start: 28 @25428 has 8 MA's), (39, 25341), (40, 25335), (57, 25230), (64, 25194), (68, 25173), (72, 25131), (78, 25086), (79, 25080), (83, 25044), (94, 24954), (98, 24924), (161, 24612), (169, 24570), (193, 24432), (227, 24270), (230, 24264), (234, 24255), (258, 24147), (263, 24108), (270, 24078), (272, 24051), (276, 24024), (281, 23994), (287, 23949), (291, 23916), (298, 23889), (304, 23856),

Gene: Mercedes\_28 Start: 20953, Stop: 19292, Start Num: 17

Candidate Starts for Mercedes\_28:

(Start: 17 @20953 has 184 MA's), (Start: 24 @20920 has 5 MA's), (Start: 27 @20890 has 1 MA's), (Start: 28 @20884 has 8 MA's), (35, 20824), (62, 20671), (66, 20659), (68, 20644), (72, 20602), (73, 20590), (79, 20551), (87, 20491), (95, 20410), (98, 20395), (161, 20077), (163, 20068), (171, 20026), (179, 19969), (213, 19819), (225, 19756), (230, 19735), (258, 19618), (263, 19579), (271, 19525), (287, 19420), (297, 19372),

Gene: Merida02\_35 Start: 24096, Stop: 22426, Start Num: 17

Candidate Starts for Merida02\_35:

(Start: 17 @24096 has 184 MA's), (Start: 24 @24063 has 5 MA's), (Start: 28 @24027 has 8 MA's), (34, 23970), (39, 23940), (40, 23934), (64, 23808), (78, 23700), (79, 23694), (94, 23568), (98, 23538), (161, 23226), (169, 23184), (178, 23133), (193, 23046), (258, 22761), (263, 22722), (272, 22665), (281, 22608), (287, 22563), (291, 22530), (298, 22503), (304, 22470),

Gene: MillyPhilly\_34 Start: 24096, Stop: 22426, Start Num: 17

Candidate Starts for MillyPhilly\_34:

(Start: 17 @24096 has 184 MA's), (Start: 24 @24063 has 5 MA's), (Start: 28 @24027 has 8 MA's), (34, 23970), (39, 23940), (40, 23934), (64, 23808), (78, 23700), (79, 23694), (94, 23568), (98, 23538), (161, 23226), (169, 23184), (178, 23133), (193, 23046), (258, 22761), (263, 22722), (272, 22665), (281, 22608), (287, 22563), (291, 22530), (295, 22521), (298, 22503), (304, 22470),

Gene: MiniVolent\_31 Start: 23400, Stop: 21724, Start Num: 17

Candidate Starts for MiniVolent\_31:

(Start: 17 @23400 has 184 MA's), (Start: 24 @23367 has 5 MA's), (26, 23349), (Start: 27 @23337 has 1 MA's), (Start: 28 @23331 has 8 MA's), (34, 23274), (42, 23229), (57, 23130), (68, 23073), (74, 23013), (79, 22980), (87, 22920), (89, 22908), (91, 22875), (94, 22854), (95, 22839), (98, 22824), (127, 22683), (161, 22515), (169, 22473), (171, 22464), (178, 22422), (193, 22335), (198, 22317), (240, 22140), (253, 22071), (258, 22050), (262, 22029), (263, 22011), (272, 21954), (280, 21906), (287, 21852), (297, 21804), (300, 21780), (305, 21750), (309, 21735),

Gene: MonChoix\_32 Start: 24036, Stop: 22402, Start Num: 27

Candidate Starts for MonChoix\_32:

(Start: 17 @24099 has 184 MA's), (26, 24048), (Start: 27 @24036 has 1 MA's), (Start: 28 @24030 has 8 MA's), (39, 23943), (57, 23820), (64, 23784), (68, 23763), (72, 23721), (78, 23676), (79, 23670), (80, 23667), (83, 23634), (87, 23610), (94, 23544), (96, 23526), (98, 23514), (161, 23205), (169, 23163), (178, 23112), (182, 23076), (193, 23025), (221, 22899), (224, 22878), (258, 22737), (263, 22698), (272, 22641), (281, 22584), (287, 22539), (291, 22506), (295, 22497), (298, 22479), (304, 22446),

Gene: Morrigan\_33 Start: 23202, Stop: 21544, Start Num: 17

Candidate Starts for Morrigan\_33:

(Start: 17 @23202 has 184 MA's), (Start: 24 @23169 has 5 MA's), (26, 23151), (Start: 27 @23139 has 1 MA's), (42, 23031), (57, 22950), (68, 22893), (69, 22869), (79, 22800), (98, 22644), (123, 22527), (147, 22392), (161, 22329), (166, 22302), (167, 22299), (171, 22278), (179, 22221), (198, 22131), (211, 22083), (213, 22071), (230, 21987), (250, 21912), (258, 21870), (263, 21831), (267, 21810), (276, 21747), (287, 21672), (291, 21639), (298, 21612), (304, 21579),

Gene: MrWorldwide\_34 Start: 24100, Stop: 22430, Start Num: 17

Candidate Starts for MrWorldwide\_34:

(Start: 17 @24100 has 184 MA's), (Start: 24 @24067 has 5 MA's), (Start: 28 @24031 has 8 MA's), (34, 23974), (39, 23944), (40, 23938), (64, 23812), (78, 23704), (79, 23698), (94, 23572), (98, 23542), (161, 23230), (169, 23188), (178, 23137), (193, 23050), (258, 22765), (263, 22726), (272, 22669), (281, 22612), (287, 22567), (291, 22534), (295, 22525), (298, 22507), (304, 22474),

Gene: Muddy\_54 Start: 40500, Stop: 42425, Start Num: 15

Candidate Starts for Muddy\_54:

(Start: 15 @40500 has 31 MA's), (26, 40566), (37, 40662), (46, 40713), (72, 40872), (92, 41037), (102, 41106), (122, 41211), (137, 41304), (145, 41370), (180, 41571), (182, 41589), (202, 41667), (208, 41691), (212, 41712), (229, 41787), (235, 41802), (237, 41805), (241, 41817), (253, 41880), (261, 41916), (262, 41922), (263, 41940), (268, 41964), (272, 42000), (274, 42006), (282, 42054), (288, 42102), (303, 42192),

Gene: MunkgeeRoachy\_56 Start: 39322, Stop: 41316, Start Num: 15

Candidate Starts for MunkgeeRoachy\_56:

(Start: 15 @39322 has 31 MA's), (26, 39391), (46, 39538), (54, 39577), (56, 39592), (81, 39754), (85, 39796), (87, 39805), (92, 39862), (94, 39880), (114, 39985), (123, 40036), (142, 40147), (146, 40192), (154, 40240), (168, 40306), (173, 40336), (180, 40384), (181, 40396), (191, 40441), (199, 40468), (209, 40504), (231, 40585), (237, 40597), (249, 40648), (263, 40732), (271, 40789), (275, 40807), (282, 40846), (300, 40972), (315, 41047), (317, 41068), (322, 41095), (326, 41140), (333, 41185), (344, 41248), (345, 41251), (352, 41272),

Gene: Nagem\_34 Start: 24093, Stop: 22423, Start Num: 17

Candidate Starts for Nagem\_34:

(Start: 17 @24093 has 184 MA's), (Start: 24 @24060 has 5 MA's), (Start: 28 @24024 has 8 MA's), (34, 23967), (39, 23937), (40, 23931), (64, 23805), (78, 23697), (79, 23691), (94, 23565), (96, 23547), (98, 23535), (161, 23223), (169, 23181), (178, 23130), (258, 22758), (263, 22719), (272, 22662), (281, 22605), (287, 22560), (291, 22527), (295, 22518), (298, 22500), (304, 22467),

Gene: Nattles\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for Nattles\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (98, 23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (298, 22189), (304, 22156),

Gene: Nebulous\_31 Start: 24965, Stop: 23286, Start Num: 17

Candidate Starts for Nebulous\_31:

(Start: 17 @24965 has 184 MA's), (Start: 28 @24896 has 8 MA's), (68, 24641), (73, 24587), (78, 24554), (79, 24548), (83, 24512), (87, 24488), (98, 24392), (161, 24074), (179, 23966), (188, 23927), (193, 23894), (198, 23876), (227, 23735), (230, 23729), (258, 23612), (263, 23573), (265, 23564), (271, 23519), (287, 23414), (295, 23372), (297, 23366),

Gene: Neferthema\_31 Start: 24055, Stop: 22373, Start Num: 17

Candidate Starts for Neferthema\_31:

(Start: 17 @24055 has 184 MA's), (Start: 24 @24022 has 5 MA's), (Start: 28 @23986 has 8 MA's), (57, 23785), (68, 23728), (73, 23674), (78, 23641), (79, 23635), (87, 23575), (95, 23494), (98, 23479), (161, 23164), (171, 23113), (179, 23056), (193, 22984), (198, 22966), (227, 22825), (230, 22819), (250, 22744), (258, 22702), (263, 22663), (265, 22654), (271, 22609), (286, 22507), (287, 22504), (297, 22456),

Gene: Nellie\_37 Start: 33687, Stop: 31822, Start Num: 4

Candidate Starts for Nellie\_37:

(Start: 4 @33687 has 6 MA's), (Start: 15 @33627 has 31 MA's), (21, 33588), (33, 33513), (49, 33369), (50, 33366), (51, 33363), (61, 33306), (111, 32940), (117, 32910), (130, 32865), (134, 32829), (137, 32814), (151, 32715), (153, 32697), (160, 32664), (182, 32526), (188, 32508), (194, 32469), (200, 32448), (204, 32436), (205, 32430), (208, 32418), (210, 32412), (216, 32376), (226, 32352), (236, 32322), (258, 32238), (266, 32187), (278, 32109), (281, 32085), (288, 32034), (295, 31986), (301, 31953), (319, 31839),

Gene: Nibbles\_52 Start: 38682, Stop: 40688, Start Num: 13

Candidate Starts for Nibbles\_52:

(6, 38649), (Start: 13 @38682 has 12 MA's), (18, 38706), (30, 38781), (46, 38901), (47, 38904), (60, 38976), (62, 38991), (70, 39051), (85, 39159), (87, 39168), (92, 39225), (98, 39279), (100, 39285), (104, 39303), (106, 39306), (113, 39345), (115, 39357), (122, 39393), (123, 39399), (129, 39432), (138, 39489), (142, 39510), (144, 39543), (146, 39555), (153, 39603), (157, 39618), (173, 39699), (180, 39747), (197, 39828), (199, 39834), (209, 39870), (212, 39888), (231, 39954), (252, 40038), (255, 40047), (261, 40077), (271, 40158), (275, 40176), (282, 40215), (287, 40257), (288, 40263), (290, 40284), (300, 40341), (302, 40350), (303, 40353), (309, 40389), (320, 40443), (322, 40455), (332, 40533), (333, 40557), (338, 40593), (339, 40599), (340, 40602), (345, 40626), (351, 40644), (354, 40665),

Gene: NickSell\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for NickSell\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: Nina\_58 Start: 40462, Stop: 42456, Start Num: 15

Candidate Starts for Nina\_58:

(Start: 15 @40462 has 31 MA's), (46, 40678), (54, 40717), (56, 40732), (81, 40894), (85, 40936), (87, 40945), (92, 41002), (114, 41125), (123, 41176), (140, 41275), (142, 41287), (146, 41332), (168, 41446), (171, 41464), (173, 41476), (180, 41524), (191, 41581), (199, 41608), (209, 41644), (231, 41725), (237, 41737), (249, 41788), (263, 41872), (271, 41929), (275, 41947), (282, 41986), (300, 42112), (315, 42187), (317, 42208), (322, 42235), (326, 42280), (333, 42325), (344, 42388), (345, 42391), (352, 42412),

Gene: NoShow\_62 Start: 43789, Stop: 45756, Start Num: 15

Candidate Starts for NoShow\_62:

(6, 43753), (Start: 15 @43789 has 31 MA's), (19, 43813), (20, 43816), (26, 43858), (29, 43879), (46, 44005), (56, 44059), (72, 44164), (73, 44173), (99, 44389), (115, 44467), (118, 44479), (121, 44500), (122, 44503), (126, 44530), (137, 44599), (138, 44602), (140, 44611), (180, 44869), (182, 44887), (199, 44956), (202, 44965), (212, 45010), (229, 45085), (241, 45115), (246, 45136), (253, 45178), (254, 45181), (266, 45250), (271, 45295), (274, 45304), (282, 45352), (313, 45529), (341, 45715), (347, 45736),

Gene: Nodigi\_63 Start: 41908, Stop: 43920, Start Num: 12

Candidate Starts for Nodigi\_63:

(Start: 12 @41908 has 3 MA's), (26, 41983), (46, 42130), (47, 42133), (54, 42169), (70, 42280), (81, 42346), (85, 42388), (115, 42586), (118, 42598), (120, 42610), (122, 42622), (123, 42628), (140, 42727), (142, 42739), (145, 42781), (146, 42784), (147, 42787), (153, 42832), (161, 42871), (167, 42901), (168, 42907), (173, 42937), (180, 42985), (193, 43051), (199, 43072), (209, 43108), (219, 43168), (224, 43180), (231, 43207), (247, 43258), (248, 43267), (252, 43291), (266, 43366), (271, 43411), (274, 43420), (275, 43429), (282, 43468), (287, 43510), (288, 43516), (303, 43606), (309, 43642), (320, 43711), (324, 43741), (340, 43846), (352, 43891),

Gene: Nucci\_30 Start: 23372, Stop: 21696, Start Num: 17

Candidate Starts for Nucci\_30:

(Start: 17 @23372 has 184 MA's), (Start: 24 @23339 has 5 MA's), (Start: 27 @23309 has 1 MA's), (Start: 28 @23303 has 8 MA's), (34, 23246), (57, 23102), (68, 23045), (74, 22985), (79, 22952), (87, 22892), (89, 22880), (91, 22847), (94, 22826), (95, 22811), (98, 22796), (125, 22667), (127, 22655),

(161, 22487), (169, 22445), (171, 22436), (179, 22379), (193, 22307), (198, 22289), (227, 22145), (240, 22112), (253, 22043), (256, 22028), (258, 22022), (263, 21983), (272, 21926), (280, 21878), (287, 21824), (297, 21776), (300, 21752), (305, 21722),

Gene: Oats\_33 Start: 23795, Stop: 22125, Start Num: 17

Candidate Starts for Oats\_33:

(Start: 17 @23795 has 184 MA's), (Start: 24 @23762 has 5 MA's), (Start: 28 @23726 has 8 MA's), (34, 23669), (39, 23639), (40, 23633), (64, 23507), (78, 23399), (79, 23393), (94, 23267), (98, 23237), (161, 22925), (169, 22883), (178, 22832), (258, 22460), (263, 22421), (272, 22364), (281, 22307), (287, 22262), (291, 22229), (295, 22220), (298, 22202), (304, 22169),

Gene: OldNelly\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for OldNelly\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (298, 22506), (304, 22473),

Gene: Orla\_65 Start: 42231, Stop: 44243, Start Num: 12

Candidate Starts for Orla\_65:

(Start: 12 @42231 has 3 MA's), (26, 42306), (46, 42453), (47, 42456), (54, 42492), (70, 42603), (81, 42669), (118, 42921), (120, 42933), (122, 42945), (123, 42951), (140, 43050), (142, 43062), (145, 43104), (146, 43107), (147, 43110), (153, 43155), (168, 43230), (173, 43260), (180, 43308), (193, 43374), (199, 43395), (209, 43431), (219, 43491), (224, 43503), (231, 43530), (247, 43581), (248, 43590), (252, 43614), (266, 43689), (271, 43734), (274, 43743), (275, 43752), (282, 43791), (287, 43833), (288, 43839), (303, 43929), (309, 43965), (320, 44034), (324, 44064), (325, 44085), (340, 44169), (341, 44175), (352, 44214),

Gene: Oxtober96\_34 Start: 24098, Stop: 22428, Start Num: 17

Candidate Starts for Oxtober96\_34:

(Start: 17 @24098 has 184 MA's), (Start: 24 @24065 has 5 MA's), (Start: 28 @24029 has 8 MA's), (34, 23972), (39, 23942), (40, 23936), (64, 23810), (78, 23702), (79, 23696), (94, 23570), (98, 23540), (161, 23228), (169, 23186), (258, 22763), (263, 22724), (272, 22667), (281, 22610), (283, 22604), (287, 22565), (291, 22532), (295, 22523), (298, 22505), (304, 22472),

Gene: PSirce\_32 Start: 23727, Stop: 22045, Start Num: 17

Candidate Starts for PSirce\_32:

(Start: 17 @23727 has 184 MA's), (Start: 22 @23703 has 1 MA's), (Start: 24 @23694 has 5 MA's), (26, 23676), (Start: 27 @23664 has 1 MA's), (Start: 28 @23658 has 8 MA's), (35, 23598), (38, 23577), (55, 23466), (57, 23457), (68, 23400), (79, 23307), (83, 23271), (87, 23247), (94, 23181), (96, 23163), (98, 23151), (115, 23073), (125, 23022), (167, 22806), (169, 22794), (172, 22782), (178, 22743), (179, 22728), (184, 22701), (196, 22644), (198, 22638), (230, 22497), (258, 22380), (262, 22359), (263, 22341), (272, 22284), (286, 22185), (288, 22176), (298, 22122),

Gene: Pajaza\_30 Start: 23059, Stop: 21395, Start Num: 17

Candidate Starts for Pajaza\_30:

(Start: 17 @23059 has 184 MA's), (Start: 24 @23023 has 5 MA's), (26, 23005), (Start: 28 @22987 has 8 MA's), (36, 22921), (42, 22885), (47, 22861), (55, 22813), (63, 22771), (72, 22705), (78, 22660), (79, 22654), (93, 22531), (98, 22498), (105, 22468), (116, 22417), (127, 22357), (143, 22264), (161, 22192), (169, 22150), (171, 22141), (172, 22138), (173, 22129), (174, 22126), (178, 22099), (179, 22084), (184, 22057), (185, 22054), (207, 21961), (230, 21853), (240, 21826), (252, 21760), (258, 21736), (262, 21715), (263, 21697), (271, 21640), (272, 21637), (298, 21472), (308, 21418),

Gene: Papafritta\_33 Start: 23791, Stop: 22121, Start Num: 17

Candidate Starts for Papafritta\_33:

(Start: 17 @23791 has 184 MA's), (Start: 24 @23758 has 5 MA's), (Start: 28 @23722 has 8 MA's), (34, 23665), (39, 23635), (40, 23629), (64, 23503), (78, 23395), (79, 23389), (94, 23263), (98, 23233), (161, 22921), (169, 22879), (193, 22741), (258, 22456), (263, 22417), (272, 22360), (281, 22303), (287, 22258), (291, 22225), (295, 22216), (298, 22198), (304, 22165),

Gene: ParleG\_34 Start: 24100, Stop: 22430, Start Num: 17

Candidate Starts for ParleG\_34:

(Start: 17 @24100 has 184 MA's), (Start: 24 @24067 has 5 MA's), (Start: 28 @24031 has 8 MA's), (34, 23974), (39, 23944), (40, 23938), (64, 23812), (78, 23704), (79, 23698), (94, 23572), (98, 23542), (161, 23230), (169, 23188), (178, 23137), (193, 23050), (258, 22765), (263, 22726), (272, 22669), (281, 22612), (287, 22567), (291, 22534), (295, 22525), (298, 22507), (304, 22474),

Gene: Peep\_34 Start: 24085, Stop: 22415, Start Num: 17

Candidate Starts for Peep\_34:

(Start: 17 @24085 has 184 MA's), (Start: 24 @24052 has 5 MA's), (Start: 28 @24016 has 8 MA's), (34, 23959), (39, 23929), (40, 23923), (64, 23797), (78, 23689), (79, 23683), (94, 23557), (98, 23527), (161, 23215), (169, 23173), (178, 23122), (193, 23035), (258, 22750), (263, 22711), (272, 22654), (281, 22597), (287, 22552), (291, 22519), (295, 22510), (298, 22492), (304, 22459),

Gene: Penta\_30 Start: 22112, Stop: 20439, Start Num: 17

Candidate Starts for Penta\_30:

(Start: 17 @22112 has 184 MA's), (26, 22061), (Start: 28 @22043 has 8 MA's), (57, 21848), (72, 21749), (78, 21704), (79, 21698), (83, 21662), (84, 21656), (95, 21557), (98, 21542), (161, 21227), (179, 21119), (213, 20969), (225, 20906), (258, 20768), (263, 20729), (265, 20720), (272, 20672), (285, 20594), (287, 20570), (297, 20522),

Gene: Peppino\_33 Start: 24194, Stop: 22452, Start Num: 17

Candidate Starts for Peppino\_33:

(Start: 17 @24194 has 184 MA's), (26, 24143), (Start: 27 @24131 has 1 MA's), (Start: 28 @24125 has 8 MA's), (39, 24038), (55, 23924), (62, 23885), (64, 23879), (72, 23816), (78, 23771), (95, 23624), (97, 23618), (98, 23609), (101, 23597), (161, 23300), (163, 23291), (169, 23258), (178, 23207), (182, 23171), (193, 23120), (224, 22973), (243, 22895), (244, 22865), (250, 22829), (258, 22787), (263, 22748), (272, 22691), (281, 22634), (287, 22589), (291, 22556), (298, 22529), (304, 22496),

Gene: Phanita\_32 Start: 23707, Stop: 22025, Start Num: 17

Candidate Starts for Phanita\_32:

(Start: 17 @23707 has 184 MA's), (Start: 22 @23683 has 1 MA's), (Start: 24 @23674 has 5 MA's), (26, 23656), (Start: 27 @23644 has 1 MA's), (Start: 28 @23638 has 8 MA's), (38, 23557), (55, 23446), (68, 23380), (79, 23287), (83, 23251), (87, 23227), (94, 23161), (96, 23143), (98, 23131), (115, 23053), (125, 23002), (167, 22786), (169, 22774), (178, 22723), (179, 22708), (184, 22681), (230, 22477), (258, 22360), (262, 22339), (263, 22321), (272, 22264), (286, 22165), (288, 22156), (298, 22102),

Gene: Pherbot\_31 Start: 23661, Stop: 21994, Start Num: 17

Candidate Starts for Pherbot\_31:

(Start: 17 @23661 has 184 MA's), (Start: 24 @23628 has 5 MA's), (Start: 28 @23592 has 8 MA's), (30, 23580), (34, 23535), (35, 23532), (55, 23418), (72, 23310), (73, 23298), (78, 23265), (79, 23259), (92, 23151), (94, 23133), (98, 23103), (161, 22782), (163, 22773), (169, 22740), (178, 22689), (179, 22674), (184, 22647), (198, 22584), (223, 22467), (230, 22443), (235, 22428), (253, 22347), (258, 22326), (263, 22287), (272, 22230), (280, 22182), (298, 22065), (302, 22044),

Gene: Pherferi\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for Pherferi\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: Phiderman\_34 Start: 24096, Stop: 22426, Start Num: 17

Candidate Starts for Phiderman\_34:

(Start: 17 @24096 has 184 MA's), (Start: 24 @24063 has 5 MA's), (Start: 28 @24027 has 8 MA's), (34, 23970), (39, 23940), (40, 23934), (64, 23808), (78, 23700), (79, 23694), (94, 23568), (98, 23538), (161, 23226), (169, 23184), (178, 23133), (193, 23046), (258, 22761), (263, 22722), (272, 22665), (281, 22608), (287, 22563), (291, 22530), (295, 22521), (298, 22503), (304, 22470),

Gene: PhillyPhantom\_33 Start: 24175, Stop: 22433, Start Num: 17

Candidate Starts for PhillyPhantom\_33:

(Start: 17 @24175 has 184 MA's), (26, 24124), (Start: 27 @24112 has 1 MA's), (Start: 28 @24106 has 8 MA's), (39, 24019), (55, 23905), (62, 23866), (64, 23860), (72, 23797), (78, 23752), (95, 23605), (97, 23599), (98, 23590), (101, 23578), (161, 23281), (163, 23272), (169, 23239), (178, 23188), (182, 23152), (193, 23101), (224, 22954), (243, 22876), (244, 22846), (250, 22810), (258, 22768), (263, 22729), (272, 22672), (281, 22615), (287, 22570), (291, 22537), (298, 22510), (304, 22477),

Gene: Phireproof\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for Phireproof\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: PhredFlintston\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for PhredFlintston\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: Phriends\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for Phriends\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (298, 22506), (304, 22473),

Gene: Phroglets\_32 Start: 32982, Stop: 31213, Start Num: 16

Candidate Starts for Phroglets\_32:

(Start: 11 @32997 has 1 MA's), (Start: 16 @32982 has 2 MA's), (59, 32688), (72, 32613), (86, 32514), (117, 32298), (131, 32244), (134, 32211), (140, 32184), (145, 32124), (170, 31998), (171, 31989), (181, 31917), (182, 31911), (184, 31905), (194, 31860), (200, 31839), (205, 31821), (208, 31809), (209, 31806), (228, 31737), (238, 31710), (248, 31674), (249, 31671), (281, 31479), (287, 31434), (295, 31380), (298, 31362), (304, 31329), (316, 31257),

Gene: PigHeaded\_41 Start: 34486, Stop: 32621, Start Num: 16

Candidate Starts for PigHeaded\_41:

(Start: 16 @34486 has 2 MA's), (62, 34168), (86, 33997), (109, 33823), (110, 33814), (112, 33808), (128, 33712), (130, 33706), (134, 33670), (148, 33574), (153, 33538), (159, 33511), (182, 33367), (184, 33361), (185, 33358), (190, 33343), (200, 33289), (201, 33286), (205, 33271), (217, 33202), (248, 33112), (249, 33109), (258, 33070), (260, 33061), (266, 33019), (267, 33010), (279, 32935), (293, 32821), (302, 32773),

Gene: Pikmin\_30 Start: 23059, Stop: 21395, Start Num: 17

Candidate Starts for Pikmin\_30:

(Start: 17 @23059 has 184 MA's), (Start: 24 @23023 has 5 MA's), (26, 23005), (Start: 28 @22987 has 8 MA's), (36, 22921), (42, 22885), (47, 22861), (55, 22813), (63, 22771), (72, 22705), (78, 22660), (79, 22654), (93, 22531), (98, 22498), (105, 22468), (116, 22417), (127, 22357), (143, 22264), (161, 22192), (169, 22150), (171, 22141), (172, 22138), (173, 22129), (174, 22126), (178, 22099), (179, 22084), (184, 22057), (185, 22054), (207, 21961), (230, 21853), (240, 21826), (252, 21760), (258, 21736), (262, 21715), (263, 21697), (271, 21640), (272, 21637), (298, 21472), (308, 21418),

Gene: Pocket\_33 Start: 23780, Stop: 22110, Start Num: 17

Candidate Starts for Pocket\_33:

(Start: 17 @23780 has 184 MA's), (Start: 24 @23747 has 5 MA's), (Start: 28 @23711 has 8 MA's), (34, 23654), (39, 23624), (40, 23618), (64, 23492), (78, 23384), (79, 23378), (94, 23252), (98, 23222), (161, 22910), (169, 22868), (193, 22730), (258, 22445), (263, 22406), (272, 22349), (281, 22292), (287, 22247), (291, 22214), (298, 22187), (304, 22154),

Gene: Pons\_63 Start: 42083, Stop: 44167, Start Num: 7

Candidate Starts for Pons\_63:

(5, 42047), (Start: 7 @42083 has 15 MA's), (18, 42122), (26, 42170), (32, 42206), (46, 42323), (70, 42473), (76, 42503), (81, 42539), (82, 42545), (92, 42647), (100, 42707), (113, 42767), (115, 42779), (120, 42803), (122, 42815), (125, 42833), (133, 42878), (139, 42917), (146, 42977), (149, 42998), (173, 43151), (180, 43199), (199, 43283), (209, 43319), (224, 43391), (231, 43418), (251, 43496), (266, 43577), (271, 43622), (274, 43631), (275, 43640), (277, 43655), (282, 43679), (288, 43727), (291, 43757), (292, 43763), (299, 43802), (306, 43844), (320, 43931), (322, 43943), (326, 43991), (327, 43997), (333, 44036), (334, 44051), (345, 44102), (352, 44123), (354, 44141), (356, 44150),

Gene: PotPie\_61 Start: 42574, Stop: 44655, Start Num: 7

Candidate Starts for PotPie\_61:

(5, 42538), (Start: 7 @42574 has 15 MA's), (18, 42613), (26, 42661), (32, 42697), (46, 42814), (70, 42964), (76, 42994), (81, 43030), (82, 43036), (92, 43138), (100, 43198), (103, 43213), (113, 43258), (115, 43270), (122, 43306), (125, 43324), (133, 43369), (139, 43408), (146, 43468), (149, 43489), (173, 43642), (180, 43690), (199, 43774), (209, 43810), (224, 43882), (231, 43909), (271, 44113), (272, 44116), (274, 44122), (275, 44131), (277, 44146), (282, 44170), (288, 44218), (291, 44248), (292, 44254), (306, 44335), (322, 44434), (326, 44482), (333, 44527), (335, 44548), (344, 44590), (345, 44593),

Gene: PrincePhergus\_31 Start: 23664, Stop: 21997, Start Num: 17

Candidate Starts for PrincePhergus\_31:

(Start: 17 @23664 has 184 MA's), (Start: 24 @23631 has 5 MA's), (Start: 28 @23595 has 8 MA's), (30, 23583), (55, 23421), (72, 23313), (73, 23301), (78, 23268), (79, 23262), (92, 23154), (94, 23136), (98, 23106), (163, 22776), (171, 22734), (178, 22692), (179, 22677), (184, 22650), (188, 22638), (223, 22470), (230, 22446), (235, 22431), (253, 22350), (258, 22329), (263, 22290), (272, 22233), (280, 22185), (298, 22068), (302, 22047),

Gene: PsychoKiller\_57 Start: 39860, Stop: 41854, Start Num: 15

Candidate Starts for PsychoKiller\_57:

(Start: 15 @39860 has 31 MA's), (46, 40076), (54, 40115), (56, 40130), (81, 40292), (85, 40334), (87, 40343), (92, 40400), (114, 40523), (123, 40574), (140, 40673), (142, 40685), (146, 40730), (168, 40844), (171, 40862), (173, 40874), (180, 40922), (191, 40979), (193, 40985), (199, 41006), (209, 41042), (231, 41123), (237, 41135), (249, 41186), (263, 41270), (271, 41327), (275, 41345), (282, 41384), (300, 41510), (315, 41585), (317, 41606), (322, 41633), (326, 41678), (333, 41723), (344, 41786), (345, 41789), (352, 41810),

Gene: PuppyEggo\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for PuppyEggo\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: QuadZero\_31 Start: 21970, Stop: 20303, Start Num: 17

Candidate Starts for QuadZero\_31:

(Start: 17 @21970 has 184 MA's), (Start: 24 @21937 has 5 MA's), (Start: 28 @21901 has 8 MA's), (34, 21844), (62, 21688), (66, 21676), (68, 21661), (73, 21607), (79, 21568), (84, 21526), (87, 21508), (94, 21442), (95, 21427), (98, 21412), (100, 21403), (161, 21094), (166, 21067), (171, 21043), (176, 21007), (178, 21001), (203, 20881), (211, 20848), (213, 20836), (227, 20755), (230, 20749), (258, 20632), (263, 20593), (271, 20539), (287, 20434), (295, 20392), (297, 20386),

Gene: Quartz\_31 Start: 23508, Stop: 21832, Start Num: 17

Candidate Starts for Quartz\_31:

(Start: 17 @23508 has 184 MA's), (Start: 24 @23475 has 5 MA's), (Start: 27 @23445 has 1 MA's), (Start: 28 @23439 has 8 MA's), (34, 23382), (57, 23238), (68, 23181), (74, 23121), (79, 23088), (87, 23028), (89, 23016), (91, 22983), (94, 22962), (95, 22947), (98, 22932), (125, 22803), (127, 22791), (161, 22623), (169, 22581), (171, 22572), (179, 22515), (193, 22443), (198, 22425), (227, 22281), (240, 22248), (253, 22179), (256, 22164), (258, 22158), (263, 22119), (272, 22062), (280, 22014), (287, 21960), (297, 21912), (300, 21888), (305, 21858), (309, 21843), (310, 21840),

Gene: Quasar\_58 Start: 40564, Stop: 42558, Start Num: 15

Candidate Starts for Quasar\_58:

(Start: 15 @40564 has 31 MA's), (46, 40780), (54, 40819), (56, 40834), (85, 41038), (87, 41047), (92, 41104), (114, 41227), (123, 41278), (140, 41377), (142, 41389), (146, 41434), (168, 41548), (171, 41566), (173, 41578), (180, 41626), (191, 41683), (199, 41710), (209, 41746), (231, 41827), (237, 41839), (249, 41890), (263, 41974), (271, 42031), (275, 42049), (282, 42088), (300, 42214), (315, 42289), (317, 42310), (322, 42337), (326, 42382), (333, 42427), (344, 42490), (345, 42493), (352, 42514),

Gene: RADical\_59 Start: 39854, Stop: 41848, Start Num: 15

Candidate Starts for RADical\_59:

(Start: 15 @39854 has 31 MA's), (46, 40070), (54, 40109), (56, 40124), (81, 40286), (85, 40328), (87, 40337), (92, 40394), (114, 40517), (123, 40568), (140, 40667), (142, 40679), (146, 40724), (161, 40802), (168, 40838), (171, 40856), (173, 40868), (180, 40916), (191, 40973), (199, 41000), (209, 41036), (231, 41117), (237, 41129), (249, 41180), (263, 41264), (271, 41321), (275, 41339), (282, 41378), (300, 41504), (315, 41579), (317, 41600), (322, 41627), (326, 41672), (333, 41717), (344, 41780), (345, 41783), (352, 41804),

Gene: RSchmailzl\_59 Start: 40019, Stop: 42013, Start Num: 15

Candidate Starts for RSchmailzl\_59:

(Start: 15 @40019 has 31 MA's), (46, 40235), (54, 40274), (56, 40289), (58, 40301), (81, 40451), (85, 40493), (87, 40502), (91, 40556), (92, 40559), (114, 40682), (123, 40733), (140, 40832), (142, 40844),

(146, 40889), (154, 40937), (168, 41003), (171, 41021), (173, 41033), (180, 41081), (191, 41138), (199, 41165), (209, 41201), (231, 41282), (237, 41294), (249, 41345), (263, 41429), (266, 41441), (271, 41486), (275, 41504), (282, 41543), (300, 41669), (315, 41744), (317, 41765), (322, 41792), (326, 41837), (333, 41882), (344, 41945), (345, 41948), (352, 41969),

Gene: Raccoon\_33 Start: 24160, Stop: 22418, Start Num: 17

Candidate Starts for Raccoon\_33:

(Start: 17 @24160 has 184 MA's), (26, 24109), (Start: 27 @24097 has 1 MA's), (Start: 28 @24091 has 8 MA's), (39, 24004), (41, 23992), (55, 23890), (62, 23851), (64, 23845), (72, 23782), (78, 23737), (95, 23590), (97, 23584), (98, 23575), (101, 23563), (161, 23266), (163, 23257), (169, 23224), (178, 23173), (182, 23137), (193, 23086), (224, 22939), (243, 22861), (246, 22816), (258, 22753), (263, 22714), (272, 22657), (281, 22600), (287, 22555), (291, 22522), (295, 22513), (297, 22507), (298, 22495), (304, 22462),

Gene: RanchParmCat\_62 Start: 41196, Stop: 43217, Start Num: 8

Candidate Starts for RanchParmCat\_62:

(Start: 8 @41196 has 2 MA's), (26, 41277), (46, 41424), (47, 41427), (54, 41463), (70, 41574), (81, 41640), (87, 41691), (88, 41697), (108, 41841), (115, 41880), (118, 41892), (122, 41916), (123, 41922), (142, 42033), (146, 42078), (153, 42126), (172, 42222), (173, 42231), (180, 42279), (209, 42402), (224, 42474), (231, 42501), (235, 42510), (248, 42561), (252, 42585), (266, 42660), (271, 42705), (274, 42714), (275, 42723), (282, 42762), (287, 42804), (309, 42936), (320, 43008), (324, 43038), (340, 43143), (352, 43188),

Gene: Rapheph\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for Rapheph\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: Raptor\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for Raptor\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (178, 23134), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: RedBaron\_64 Start: 40937, Stop: 42931, Start Num: 15

Candidate Starts for RedBaron\_64:

(Start: 15 @40937 has 31 MA's), (46, 41153), (47, 41156), (54, 41192), (56, 41207), (81, 41369), (85, 41411), (87, 41420), (92, 41477), (114, 41600), (123, 41651), (140, 41750), (142, 41762), (146, 41807), (168, 41921), (171, 41939), (173, 41951), (180, 41999), (191, 42056), (199, 42083), (209, 42119), (231, 42200), (237, 42212), (249, 42263), (263, 42347), (271, 42404), (275, 42422), (282, 42461), (300, 42587), (315, 42662), (317, 42683), (322, 42710), (326, 42755), (333, 42800), (344, 42863), (345, 42866), (352, 42887),

Gene: Redfield\_33 Start: 24201, Stop: 22459, Start Num: 17

Candidate Starts for Redfield\_33:

(Start: 17 @24201 has 184 MA's), (26, 24150), (Start: 27 @24138 has 1 MA's), (Start: 28 @24132 has 8 MA's), (39, 24045), (55, 23931), (62, 23892), (64, 23886), (72, 23823), (78, 23778), (95, 23631), (97, 23625), (98, 23616), (101, 23604), (161, 23307), (163, 23298), (169, 23265), (178, 23214), (182, 23178), (193, 23127), (224, 22980), (243, 22902), (244, 22872), (250, 22836), (258, 22794), (263, 22755), (272, 22698), (281, 22641), (287, 22596), (291, 22563), (298, 22536), (304, 22503),

Gene: RenegadeRaider\_32 Start: 23507, Stop: 21840, Start Num: 17

Candidate Starts for RenegadeRaider\_32:

(Start: 17 @23507 has 184 MA's), (Start: 24 @23474 has 5 MA's), (Start: 28 @23438 has 8 MA's), (30, 23426), (55, 23264), (72, 23156), (73, 23144), (78, 23111), (79, 23105), (92, 22997), (94, 22979), (98, 22949), (163, 22619), (171, 22577), (178, 22535), (179, 22520), (184, 22493), (188, 22481), (223, 22313), (230, 22289), (235, 22274), (253, 22193), (258, 22172), (263, 22133), (272, 22076), (280, 22028), (298, 21911), (302, 21890),

Gene: Renzie\_34 Start: 24085, Stop: 22415, Start Num: 17

Candidate Starts for Renzie\_34:

(Start: 17 @24085 has 184 MA's), (Start: 24 @24052 has 5 MA's), (Start: 28 @24016 has 8 MA's), (34, 23959), (39, 23929), (40, 23923), (64, 23797), (78, 23689), (79, 23683), (94, 23557), (98, 23527), (161, 23215), (169, 23173), (178, 23122), (193, 23035), (258, 22750), (263, 22711), (272, 22654), (281, 22597), (287, 22552), (291, 22519), (295, 22510), (298, 22492), (304, 22459),

Gene: Riyhil\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for Riyhil\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (298, 22506), (304, 22473),

Gene: Robinson\_34 Start: 24091, Stop: 22421, Start Num: 17

Candidate Starts for Robinson\_34:

(Start: 17 @24091 has 184 MA's), (Start: 24 @24058 has 5 MA's), (Start: 28 @24022 has 8 MA's), (34, 23965), (39, 23935), (40, 23929), (64, 23803), (78, 23695), (79, 23689), (94, 23563), (98, 23533), (161, 23221), (169, 23179), (178, 23128), (193, 23041), (258, 22756), (263, 22717), (272, 22660), (281, 22603), (287, 22558), (291, 22525), (295, 22516), (298, 22498), (304, 22465),

Gene: Rog141\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for Rog141\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (96, 23236), (98, 23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: RosieMae\_33 Start: 23837, Stop: 22122, Start Num: 17

Candidate Starts for RosieMae\_33:

(Start: 17 @23837 has 184 MA's), (Start: 24 @23804 has 5 MA's), (Start: 28 @23768 has 8 MA's), (34, 23711), (39, 23681), (40, 23675), (64, 23549), (78, 23441), (79, 23435), (94, 23309), (96, 23291), (98, 23279), (161, 22967), (169, 22925), (193, 22787), (243, 22565), (250, 22499), (258, 22457), (263, 22418), (272, 22361), (281, 22304), (287, 22259), (291, 22226), (295, 22217), (298, 22199), (304, 22166),

Gene: SJay\_34 Start: 24094, Stop: 22424, Start Num: 17

Candidate Starts for SJay\_34:

(Start: 17 @24094 has 184 MA's), (Start: 24 @24061 has 5 MA's), (Start: 28 @24025 has 8 MA's), (34, 23968), (39, 23938), (40, 23932), (64, 23806), (78, 23698), (79, 23692), (94, 23566), (96, 23548), (98, 23536), (161, 23224), (169, 23182), (178, 23131), (258, 22759), (263, 22720), (272, 22663), (281, 22606), (287, 22561), (291, 22528), (295, 22519), (298, 22501), (304, 22468),

Gene: Salvus\_56 Start: 40329, Stop: 42254, Start Num: 15

Candidate Starts for Salvus\_56:

(Start: 15 @40329 has 31 MA's), (26, 40395), (37, 40491), (46, 40542), (47, 40545), (72, 40701), (92, 40866), (102, 40935), (119, 41025), (122, 41040), (137, 41133), (145, 41199), (147, 41205), (180, 41400), (181, 41412), (182, 41418), (202, 41496), (208, 41520), (209, 41523), (212, 41541), (229, 41616), (235, 41631), (237, 41634), (241, 41646), (261, 41745), (262, 41751), (263, 41769), (268, 41793), (272, 41829), (274, 41835), (282, 41883), (288, 41931), (303, 42021),

Gene: Sansa\_31 Start: 23795, Stop: 22116, Start Num: 17

Candidate Starts for Sansa\_31:

(Start: 17 @23795 has 184 MA's), (Start: 22 @23771 has 1 MA's), (Start: 24 @23762 has 5 MA's), (26, 23744), (Start: 27 @23732 has 1 MA's), (Start: 28 @23726 has 8 MA's), (38, 23645), (55, 23534), (68, 23468), (79, 23375), (83, 23339), (87, 23315), (94, 23249), (96, 23231), (98, 23219), (115, 23141), (125, 23090), (167, 22874), (169, 22862), (172, 22850), (178, 22811), (179, 22796), (184, 22769), (196, 22712), (198, 22706), (230, 22565), (232, 22559), (258, 22448), (262, 22427), (263, 22409), (272, 22352), (286, 22253), (288, 22244), (298, 22190),

Gene: Saratos\_32 Start: 23709, Stop: 22027, Start Num: 17

Candidate Starts for Saratos\_32:

(Start: 17 @23709 has 184 MA's), (Start: 22 @23685 has 1 MA's), (Start: 24 @23676 has 5 MA's), (26, 23658), (Start: 27 @23646 has 1 MA's), (Start: 28 @23640 has 8 MA's), (38, 23559), (55, 23448), (57, 23439), (68, 23382), (79, 23289), (83, 23253), (87, 23229), (94, 23163), (96, 23145), (98, 23133), (115, 23055), (125, 23004), (167, 22788), (169, 22776), (172, 22764), (178, 22725), (179, 22710), (184, 22683), (196, 22626), (198, 22620), (230, 22479), (258, 22362), (262, 22341), (263, 22323), (272, 22266), (286, 22167), (288, 22158), (298, 22104),

Gene: Schimmels22\_32 Start: 22792, Stop: 21119, Start Num: 17

Candidate Starts for Schimmels22\_32:

(Start: 17 @22792 has 184 MA's), (26, 22741), (Start: 28 @22723 has 8 MA's), (57, 22528), (72, 22429), (78, 22384), (79, 22378), (83, 22342), (84, 22336), (95, 22237), (98, 22222), (161, 21907), (179, 21799), (198, 21709), (213, 21649), (225, 21586), (253, 21469), (258, 21448), (263, 21409), (265, 21400), (272, 21352), (285, 21274), (287, 21250), (297, 21202),

Gene: Schnapsidee\_33 Start: 24195, Stop: 22453, Start Num: 17

Candidate Starts for Schnapsidee\_33:

(Start: 17 @24195 has 184 MA's), (26, 24144), (Start: 27 @24132 has 1 MA's), (Start: 28 @24126 has 8 MA's), (39, 24039), (55, 23925), (62, 23886), (64, 23880), (72, 23817), (78, 23772), (95, 23625), (97, 23619), (98, 23610), (101, 23598), (161, 23301), (163, 23292), (169, 23259), (178, 23208), (182, 23172), (193, 23121), (224, 22974), (243, 22896), (244, 22866), (250, 22830), (258, 22788), (263, 22749), (272, 22692), (281, 22635), (287, 22590), (291, 22557), (298, 22530), (304, 22497),

Gene: Schubert\_31 Start: 23665, Stop: 21992, Start Num: 17

Candidate Starts for Schubert\_31:

(Start: 17 @23665 has 184 MA's), (Start: 24 @23632 has 5 MA's), (Start: 28 @23596 has 8 MA's), (47, 23473), (57, 23416), (68, 23359), (78, 23272), (79, 23266), (83, 23230), (87, 23206), (98, 23110), (118, 23020), (161, 22804), (182, 22675), (198, 22606), (230, 22456), (253, 22360), (258, 22339), (262, 22318), (263, 22300), (272, 22243), (298, 22078), (302, 22057),

Gene: Scissor2024\_32 Start: 22377, Stop: 20755, Start Num: 26

Candidate Starts for Scissor2024\_32:

(Start: 17 @22428 has 184 MA's), (26, 22377), (Start: 28 @22359 has 8 MA's), (57, 22164), (72, 22065), (78, 22020), (79, 22014), (83, 21978), (84, 21972), (95, 21873), (98, 21858), (161, 21543), (179, 21435), (198, 21345), (213, 21285), (225, 21222), (253, 21105), (258, 21084), (263, 21045), (265, 21036), (272, 20988), (285, 20910), (287, 20886), (297, 20838),

Gene: Sedgewig\_33 Start: 23774, Stop: 22104, Start Num: 17

Candidate Starts for Sedgewig\_33:

(Start: 17 @23774 has 184 MA's), (Start: 24 @23741 has 5 MA's), (Start: 28 @23705 has 8 MA's), (34, 23648), (39, 23618), (40, 23612), (64, 23486), (78, 23378), (79, 23372), (94, 23246), (98, 23216), (161, 22904), (169, 22862), (193, 22724), (258, 22439), (263, 22400), (272, 22343), (281, 22286), (287, 22241), (291, 22208), (295, 22199), (298, 22181), (304, 22148),

Gene: ShaiHulud\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for ShaiHulud\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (178, 23134), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: Shamu\_32 Start: 23724, Stop: 22042, Start Num: 17

Candidate Starts for Shamu\_32:

(Start: 17 @23724 has 184 MA's), (Start: 22 @23700 has 1 MA's), (Start: 24 @23691 has 5 MA's), (26, 23673), (Start: 27 @23661 has 1 MA's), (Start: 28 @23655 has 8 MA's), (38, 23574), (55, 23463), (57, 23454), (68, 23397), (79, 23304), (83, 23268), (87, 23244), (94, 23178), (96, 23160), (98, 23148), (115, 23070), (125, 23019), (167, 22803), (169, 22791), (172, 22779), (178, 22740), (179, 22725), (184, 22698), (196, 22641), (198, 22635), (230, 22494), (258, 22377), (262, 22356), (263, 22338), (272, 22281), (286, 22182), (288, 22173), (298, 22119),

Gene: SheckWes\_65 Start: 41614, Stop: 43698, Start Num: 7

Candidate Starts for SheckWes\_65:

(5, 41578), (Start: 7 @41614 has 15 MA's), (18, 41653), (26, 41701), (32, 41737), (46, 41854), (70, 42004), (76, 42034), (81, 42070), (82, 42076), (92, 42178), (100, 42238), (113, 42298), (115, 42310), (120, 42334), (122, 42346), (125, 42364), (136, 42430), (139, 42448), (146, 42508), (149, 42529), (173, 42682), (180, 42730), (199, 42814), (209, 42850), (224, 42922), (225, 42925), (231, 42949), (251, 43027), (266, 43108), (271, 43153), (274, 43162), (275, 43171), (277, 43186), (282, 43210), (288, 43258), (291, 43288), (292, 43294), (299, 43333), (306, 43375), (320, 43462), (321, 43471), (322, 43474), (326, 43522), (327, 43528), (333, 43567), (334, 43582), (345, 43633), (352, 43654), (354, 43672), (356, 43681),

Gene: Shee\_34 Start: 24096, Stop: 22426, Start Num: 17

Candidate Starts for Shee\_34:

(Start: 17 @24096 has 184 MA's), (Start: 24 @24063 has 5 MA's), (Start: 28 @24027 has 8 MA's), (34, 23970), (39, 23940), (40, 23934), (64, 23808), (78, 23700), (79, 23694), (94, 23568), (98, 23538), (161, 23226), (169, 23184), (178, 23133), (193, 23046), (258, 22761), (263, 22722), (272, 22665), (281, 22608), (287, 22563), (291, 22530), (295, 22521), (298, 22503), (304, 22470),

Gene: Shocker\_44 Start: 35083, Stop: 33251, Start Num: 14

Candidate Starts for Shocker\_44:

(Start: 14 @35083 has 1 MA's), (18, 35062), (32, 34978), (53, 34852), (91, 34549), (100, 34477), (107, 34444), (124, 34345), (138, 34258), (156, 34102), (172, 34015), (175, 34000), (204, 33859), (207, 33844), (213, 33817), (214, 33814), (227, 33769), (229, 33766), (256, 33661), (259, 33652), (263, 33619), (264, 33613), (266, 33607), (272, 33559), (296, 33394), (310, 33310),

Gene: Shrew\_97 Start: 56997, Stop: 59129, Start Num: 11

Candidate Starts for Shrew\_97:

(2, 56886), (Start: 11 @56997 has 1 MA's), (47, 57240), (54, 57276), (71, 57390), (80, 57447), (91, 57570), (110, 57681), (139, 57843), (140, 57846), (144, 57891), (200, 58203), (215, 58263), (234,

58368), (239, 58383), (248, 58425), (249, 58440), (253, 58464), (257, 58482), (258, 58485), (263, 58524), (275, 58599), (282, 58635), (301, 58755), (308, 58794), (338, 59013), (345, 59046), (346, 59049), (353, 59076), (355, 59088), (357, 59115),

Gene: Sinatra\_31 Start: 23660, Stop: 21993, Start Num: 17

Candidate Starts for Sinatra\_31:

(Start: 17 @23660 has 184 MA's), (Start: 24 @23627 has 5 MA's), (Start: 28 @23591 has 8 MA's), (30, 23579), (34, 23534), (35, 23531), (55, 23417), (57, 23408), (72, 23309), (73, 23297), (78, 23264), (79, 23258), (92, 23150), (94, 23132), (98, 23102), (161, 22781), (163, 22772), (169, 22739), (178, 22688), (179, 22673), (184, 22646), (198, 22583), (223, 22466), (230, 22442), (235, 22427), (253, 22346), (258, 22325), (263, 22286), (272, 22229), (280, 22181), (298, 22064), (302, 22043),

Gene: SirVictor\_31 Start: 23751, Stop: 22084, Start Num: 17

Candidate Starts for SirVictor\_31:

(Start: 17 @23751 has 184 MA's), (Start: 24 @23718 has 5 MA's), (Start: 28 @23682 has 8 MA's), (30, 23670), (57, 23499), (72, 23400), (78, 23355), (79, 23349), (91, 23244), (98, 23193), (135, 23004), (161, 22872), (163, 22863), (169, 22830), (178, 22779), (184, 22737), (198, 22674), (223, 22557), (230, 22533), (235, 22518), (253, 22437), (258, 22416), (263, 22377), (272, 22320), (280, 22272), (298, 22155), (302, 22134),

Gene: SketchMex\_58 Start: 39757, Stop: 41754, Start Num: 15

Candidate Starts for SketchMex\_58:

(Start: 15 @39757 has 31 MA's), (46, 39973), (54, 40012), (87, 40240), (106, 40378), (108, 40390), (114, 40420), (120, 40453), (138, 40561), (140, 40570), (142, 40582), (146, 40627), (161, 40708), (173, 40774), (180, 40822), (186, 40852), (189, 40861), (209, 40942), (231, 41023), (261, 41146), (271, 41227), (274, 41236), (275, 41245), (282, 41284), (300, 41410), (309, 41458), (315, 41485), (322, 41533), (324, 41551), (325, 41572), (326, 41578), (333, 41623), (341, 41671), (344, 41686), (345, 41689), (352, 41710),

Gene: Socotra\_59 Start: 39972, Stop: 41966, Start Num: 15

Candidate Starts for Socotra\_59:

(Start: 15 @39972 has 31 MA's), (46, 40188), (54, 40227), (56, 40242), (81, 40404), (85, 40446), (87, 40455), (92, 40512), (114, 40635), (123, 40686), (140, 40785), (142, 40797), (146, 40842), (168, 40956), (171, 40974), (173, 40986), (180, 41034), (191, 41091), (199, 41118), (209, 41154), (231, 41235), (237, 41247), (249, 41298), (263, 41382), (271, 41439), (275, 41457), (282, 41496), (300, 41622), (315, 41697), (317, 41718), (322, 41745), (326, 41790), (333, 41835), (344, 41898), (345, 41901), (352, 41922),

Gene: SoilGremlin\_34 Start: 24096, Stop: 22426, Start Num: 17

Candidate Starts for SoilGremlin\_34:

(Start: 17 @24096 has 184 MA's), (Start: 24 @24063 has 5 MA's), (Start: 28 @24027 has 8 MA's), (34, 23970), (39, 23940), (40, 23934), (64, 23808), (78, 23700), (79, 23694), (94, 23568), (98, 23538), (161, 23226), (169, 23184), (178, 23133), (193, 23046), (258, 22761), (263, 22722), (272, 22665), (281, 22608), (287, 22563), (291, 22530), (298, 22503), (304, 22470),

Gene: SolidSnake\_35 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for SolidSnake\_35:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: SonOfLevi\_33 Start: 23744, Stop: 22107, Start Num: 24

Candidate Starts for SonOfLevi\_33:

(Start: 17 @23777 has 184 MA's), (Start: 24 @23744 has 5 MA's), (Start: 28 @23708 has 8 MA's), (34, 23651), (39, 23621), (40, 23615), (64, 23489), (78, 23381), (79, 23375), (94, 23249), (98, 23219), (161, 22907), (169, 22865), (193, 22727), (258, 22442), (263, 22403), (272, 22346), (281, 22289), (287, 22244), (291, 22211), (298, 22184), (304, 22151),

Gene: Sopespian\_55 Start: 39861, Stop: 41855, Start Num: 15

Candidate Starts for Sopespian\_55:

(Start: 15 @39861 has 31 MA's), (46, 40077), (54, 40116), (56, 40131), (81, 40293), (85, 40335), (87, 40344), (92, 40401), (114, 40524), (123, 40575), (140, 40674), (142, 40686), (146, 40731), (168, 40845), (171, 40863), (173, 40875), (180, 40923), (191, 40980), (193, 40986), (199, 41007), (209, 41043), (231, 41124), (237, 41136), (249, 41187), (263, 41271), (271, 41328), (275, 41346), (282, 41385), (300, 41511), (315, 41586), (317, 41607), (322, 41634), (326, 41679), (333, 41724), (344, 41787), (345, 41790), (352, 41811),

Gene: Soror1\_33 Start: 24204, Stop: 22462, Start Num: 17

Candidate Starts for Soror1\_33:

(Start: 17 @24204 has 184 MA's), (26, 24153), (Start: 27 @24141 has 1 MA's), (Start: 28 @24135 has 8 MA's), (55, 23934), (62, 23895), (64, 23889), (72, 23826), (78, 23781), (95, 23634), (97, 23628), (98, 23619), (101, 23607), (161, 23310), (163, 23301), (169, 23268), (178, 23217), (182, 23181), (193, 23130), (224, 22983), (243, 22905), (244, 22875), (246, 22860), (258, 22797), (263, 22758), (272, 22701), (281, 22644), (287, 22599), (291, 22566), (298, 22539), (304, 22506),

Gene: Stanktossa\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for Stanktossa\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: Starburst\_58 Start: 39856, Stop: 41850, Start Num: 15

Candidate Starts for Starburst\_58:

(Start: 15 @39856 has 31 MA's), (46, 40072), (54, 40111), (56, 40126), (81, 40288), (85, 40330), (87, 40339), (92, 40396), (114, 40519), (123, 40570), (140, 40669), (142, 40681), (146, 40726), (161, 40804), (168, 40840), (171, 40858), (173, 40870), (180, 40918), (191, 40975), (199, 41002), (209, 41038), (231, 41119), (237, 41131), (249, 41182), (263, 41266), (271, 41323), (275, 41341), (282, 41380), (300, 41506), (315, 41581), (317, 41602), (322, 41629), (326, 41674), (333, 41719), (344, 41782), (345, 41785), (352, 41806),

Gene: SteamedHams\_59 Start: 39368, Stop: 41365, Start Num: 15

Candidate Starts for SteamedHams\_59:

(Start: 15 @39368 has 31 MA's), (46, 39584), (54, 39623), (81, 39800), (86, 39845), (87, 39851), (106, 39989), (114, 40031), (115, 40040), (129, 40115), (140, 40181), (142, 40193), (146, 40238), (168, 40355), (171, 40373), (173, 40385), (180, 40433), (191, 40490), (199, 40517), (209, 40553), (231, 40634), (237, 40646), (242, 40667), (261, 40757), (268, 40805), (271, 40838), (275, 40856), (277, 40871), (282, 40895), (300, 41021), (309, 41069), (315, 41096), (317, 41117), (322, 41144), (324, 41162), (326, 41189), (333, 41234), (336, 41258), (344, 41297), (345, 41300), (352, 41321), (354, 41339),

Gene: StingRay\_33 Start: 23792, Stop: 22122, Start Num: 17

Candidate Starts for StingRay\_33:

(Start: 17 @23792 has 184 MA's), (Start: 24 @23759 has 5 MA's), (Start: 28 @23723 has 8 MA's), (34, 23666), (39, 23636), (40, 23630), (64, 23504), (78, 23396), (79, 23390), (94, 23264), (98, 23234), (161,

22922), (169, 22880), (193, 22742), (258, 22457), (263, 22418), (272, 22361), (281, 22304), (287, 22259), (291, 22226), (295, 22217), (298, 22199), (304, 22166),

Gene: StirfryIV\_33 Start: 23782, Stop: 22112, Start Num: 17

Candidate Starts for StirfryIV\_33:

(Start: 17 @23782 has 184 MA's), (Start: 24 @23749 has 5 MA's), (Start: 28 @23713 has 8 MA's), (34, 23656), (39, 23626), (40, 23620), (64, 23494), (78, 23386), (79, 23380), (94, 23254), (96, 23236), (98, 23224), (161, 22912), (169, 22870), (193, 22732), (258, 22447), (263, 22408), (272, 22351), (281, 22294), (287, 22249), (291, 22216), (295, 22207), (298, 22189), (304, 22156),

Gene: Stormbreaker8\_33 Start: 24195, Stop: 22453, Start Num: 17

Candidate Starts for Stormbreaker8\_33:

(Start: 17 @24195 has 184 MA's), (26, 24144), (Start: 27 @24132 has 1 MA's), (Start: 28 @24126 has 8 MA's), (55, 23925), (62, 23886), (64, 23880), (72, 23817), (78, 23772), (95, 23625), (97, 23619), (98, 23610), (101, 23598), (161, 23301), (163, 23292), (169, 23259), (178, 23208), (182, 23172), (193, 23121), (224, 22974), (243, 22896), (244, 22866), (246, 22851), (258, 22788), (263, 22749), (272, 22692), (281, 22635), (287, 22590), (291, 22557), (298, 22530), (304, 22497),

Gene: Strathdee\_34 Start: 24098, Stop: 22428, Start Num: 17

Candidate Starts for Strathdee\_34:

(Start: 17 @24098 has 184 MA's), (Start: 24 @24065 has 5 MA's), (Start: 28 @24029 has 8 MA's), (34, 23972), (39, 23942), (40, 23936), (64, 23810), (78, 23702), (79, 23696), (94, 23570), (98, 23540), (161, 23228), (169, 23186), (258, 22763), (263, 22724), (272, 22667), (281, 22610), (287, 22565), (291, 22532), (295, 22523), (298, 22505), (304, 22472),

Gene: SummitAcademy\_61 Start: 41717, Stop: 43798, Start Num: 7

Candidate Starts for SummitAcademy\_61:

(5, 41681), (Start: 7 @41717 has 15 MA's), (18, 41756), (26, 41804), (32, 41840), (46, 41957), (70, 42107), (76, 42137), (81, 42173), (82, 42179), (92, 42281), (100, 42341), (103, 42356), (113, 42401), (115, 42413), (122, 42449), (125, 42467), (133, 42512), (139, 42551), (146, 42611), (149, 42632), (173, 42785), (180, 42833), (199, 42917), (209, 42953), (224, 43025), (231, 43052), (271, 43256), (272, 43259), (274, 43265), (275, 43274), (277, 43289), (282, 43313), (288, 43361), (291, 43391), (292, 43397), (306, 43478), (322, 43577), (326, 43625), (333, 43670), (335, 43691), (344, 43733), (345, 43736),

Gene: Superfresh\_34 Start: 24085, Stop: 22415, Start Num: 17

Candidate Starts for Superfresh\_34:

(Start: 17 @24085 has 184 MA's), (Start: 24 @24052 has 5 MA's), (Start: 28 @24016 has 8 MA's), (34, 23959), (39, 23929), (40, 23923), (64, 23797), (78, 23689), (79, 23683), (94, 23557), (98, 23527), (161, 23215), (169, 23173), (178, 23122), (193, 23035), (258, 22750), (263, 22711), (272, 22654), (281, 22597), (287, 22552), (291, 22519), (295, 22510), (298, 22492), (304, 22459),

Gene: Survivors\_53 Start: 38882, Stop: 40897, Start Num: 13

Candidate Starts for Survivors\_53:

(6, 38849), (Start: 13 @38882 has 12 MA's), (18, 38906), (30, 38981), (46, 39101), (47, 39104), (60, 39176), (62, 39191), (70, 39251), (85, 39359), (87, 39368), (92, 39425), (98, 39479), (100, 39485), (104, 39503), (106, 39506), (113, 39545), (115, 39557), (122, 39593), (123, 39599), (129, 39632), (138, 39689), (142, 39710), (144, 39743), (146, 39755), (153, 39803), (157, 39818), (164, 39851), (173, 39899), (180, 39947), (206, 40061), (221, 40130), (231, 40163), (252, 40247), (253, 40250), (255, 40256), (261, 40286), (275, 40385), (282, 40424), (287, 40466), (288, 40472), (300, 40550), (303, 40562), (309, 40598), (320, 40652), (322, 40664), (332, 40742), (333, 40766), (337, 40799), (338, 40802), (339, 40808), (340, 40811), (345, 40835), (351, 40853), (354, 40874),

Gene: SweatNTears\_60 Start: 40103, Stop: 42097, Start Num: 15

Candidate Starts for SweatNTears\_60:

(Start: 15 @40103 has 31 MA's), (46, 40319), (54, 40358), (56, 40373), (81, 40535), (85, 40577), (87, 40586), (92, 40643), (114, 40766), (123, 40817), (140, 40916), (142, 40928), (146, 40973), (168, 41087), (171, 41105), (173, 41117), (180, 41165), (191, 41222), (199, 41249), (209, 41285), (231, 41366), (237, 41378), (249, 41429), (263, 41513), (271, 41570), (275, 41588), (282, 41627), (300, 41753), (309, 41801), (315, 41828), (322, 41876), (324, 41894), (325, 41915), (326, 41921), (333, 41966), (341, 42014), (344, 42029), (345, 42032), (352, 42053),

Gene: Symere\_33 Start: 23772, Stop: 22102, Start Num: 17

Candidate Starts for Symere\_33:

(Start: 17 @23772 has 184 MA's), (Start: 24 @23739 has 5 MA's), (Start: 28 @23703 has 8 MA's), (34, 23646), (39, 23616), (40, 23610), (64, 23484), (78, 23376), (79, 23370), (94, 23244), (98, 23214), (161, 22902), (169, 22860), (193, 22722), (258, 22437), (263, 22398), (272, 22341), (281, 22284), (287, 22239), (291, 22206), (295, 22197), (298, 22179), (304, 22146),

Gene: Tarnish\_61 Start: 41898, Stop: 43979, Start Num: 7

Candidate Starts for Tarnish\_61:

(5, 41862), (Start: 7 @41898 has 15 MA's), (18, 41937), (26, 41985), (32, 42021), (46, 42138), (70, 42288), (76, 42318), (81, 42354), (82, 42360), (92, 42462), (100, 42522), (103, 42537), (113, 42582), (115, 42594), (122, 42630), (125, 42648), (133, 42693), (139, 42732), (146, 42792), (149, 42813), (173, 42966), (180, 43014), (199, 43098), (209, 43134), (224, 43206), (231, 43233), (271, 43437), (272, 43440), (274, 43446), (275, 43455), (277, 43470), (282, 43494), (288, 43542), (291, 43572), (292, 43578), (306, 43659), (322, 43758), (326, 43806), (333, 43851), (335, 43872), (344, 43914), (345, 43917),

Gene: TatarkaPM\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for TatarkaPM\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: Teagan\_34 Start: 24093, Stop: 22423, Start Num: 17

Candidate Starts for Teagan\_34:

(Start: 17 @24093 has 184 MA's), (Start: 24 @24060 has 5 MA's), (Start: 28 @24024 has 8 MA's), (34, 23967), (39, 23937), (40, 23931), (64, 23805), (78, 23697), (79, 23691), (94, 23565), (98, 23535), (161, 23223), (169, 23181), (258, 22758), (263, 22719), (272, 22662), (281, 22605), (287, 22560), (291, 22527), (295, 22518), (298, 22500), (304, 22467),

Gene: TeddyBear\_33 Start: 23795, Stop: 22125, Start Num: 17

Candidate Starts for TeddyBear\_33:

(Start: 17 @23795 has 184 MA's), (Start: 24 @23762 has 5 MA's), (Start: 28 @23726 has 8 MA's), (34, 23669), (39, 23639), (40, 23633), (64, 23507), (78, 23399), (79, 23393), (94, 23267), (98, 23237), (161, 22925), (169, 22883), (178, 22832), (258, 22460), (263, 22421), (272, 22364), (281, 22307), (287, 22262), (291, 22229), (295, 22220), (298, 22202), (304, 22169),

Gene: Tenda\_33 Start: 23793, Stop: 22123, Start Num: 17

Candidate Starts for Tenda\_33:

(Start: 17 @23793 has 184 MA's), (Start: 24 @23760 has 5 MA's), (Start: 28 @23724 has 8 MA's), (34, 23667), (39, 23637), (40, 23631), (64, 23505), (78, 23397), (79, 23391), (94, 23265), (98, 23235), (161, 22923), (169, 22881), (178, 22830), (258, 22458), (263, 22419), (272, 22362), (281, 22305), (287, 22260), (291, 22227), (295, 22218), (298, 22200), (304, 22167),

Gene: Thompsone\_34 Start: 24028, Stop: 22427, Start Num: 28

Candidate Starts for Thompsone\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: Thorongil\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for Thorongil\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: TinSulphur\_34 Start: 24099, Stop: 22429, Start Num: 17

Candidate Starts for TinSulphur\_34:

(Start: 17 @24099 has 184 MA's), (Start: 24 @24066 has 5 MA's), (Start: 28 @24030 has 8 MA's), (34, 23973), (39, 23943), (40, 23937), (64, 23811), (78, 23703), (79, 23697), (94, 23571), (98, 23541), (161, 23229), (169, 23187), (178, 23136), (193, 23049), (258, 22764), (263, 22725), (272, 22668), (281, 22611), (287, 22566), (291, 22533), (295, 22524), (298, 22506), (304, 22473),

Gene: Tinyman4\_32 Start: 22418, Stop: 20745, Start Num: 17

Candidate Starts for Tinyman4\_32:

(Start: 17 @22418 has 184 MA's), (26, 22367), (Start: 28 @22349 has 8 MA's), (57, 22154), (72, 22055), (78, 22010), (79, 22004), (83, 21968), (84, 21962), (95, 21863), (98, 21848), (161, 21533), (179, 21425), (198, 21335), (213, 21275), (253, 21095), (258, 21074), (263, 21035), (272, 20978), (285, 20900), (287, 20876), (297, 20828),

Gene: Tolls\_59 Start: 39639, Stop: 41636, Start Num: 15

Candidate Starts for Tolls\_59:

(Start: 15 @39639 has 31 MA's), (46, 39855), (54, 39894), (81, 40071), (86, 40116), (87, 40122), (106, 40260), (114, 40302), (115, 40311), (129, 40386), (140, 40452), (142, 40464), (146, 40509), (168, 40626), (171, 40644), (173, 40656), (180, 40704), (191, 40761), (199, 40788), (209, 40824), (231, 40905), (237, 40917), (242, 40938), (261, 41028), (268, 41076), (271, 41109), (275, 41127), (277, 41142), (282, 41166), (300, 41292), (309, 41340), (315, 41367), (317, 41388), (322, 41415), (324, 41433), (326, 41460), (333, 41505), (336, 41529), (344, 41568), (345, 41571), (352, 41592), (354, 41610),

Gene: Triscuit\_94 Start: 56061, Stop: 58145, Start Num: 10

Candidate Starts for Triscuit\_94:

(Start: 10 @56061 has 2 MA's), (43, 56274), (54, 56328), (75, 56472), (80, 56505), (115, 56766), (117, 56772), (121, 56799), (138, 56898), (142, 56919), (144, 56952), (184, 57201), (195, 57252), (215, 57330), (233, 57432), (249, 57510), (257, 57552), (258, 57555), (263, 57594), (271, 57651), (275, 57669), (282, 57705), (284, 57717), (291, 57777), (301, 57825), (331, 57999), (337, 58059), (343, 58086), (349, 58101),

Gene: Troje\_60 Start: 40095, Stop: 42092, Start Num: 15

Candidate Starts for Troje\_60:

(Start: 15 @40095 has 31 MA's), (46, 40311), (54, 40350), (87, 40578), (106, 40716), (108, 40728), (114, 40758), (120, 40791), (138, 40899), (140, 40908), (142, 40920), (146, 40965), (173, 41112), (180, 41160), (186, 41190), (189, 41199), (209, 41280), (231, 41361), (242, 41394), (261, 41484), (271, 41565), (275, 41583), (282, 41622), (300, 41748), (309, 41796), (315, 41823), (322, 41871),

(324, 41889), (325, 41910), (326, 41916), (333, 41961), (344, 42024), (345, 42027), (352, 42048),

Gene: TwoBits\_31 Start: 22284, Stop: 20680, Start Num: 28

Candidate Starts for TwoBits\_31:

(Start: 17 @22353 has 184 MA's), (Start: 24 @22320 has 5 MA's), (Start: 27 @22290 has 1 MA's), (Start: 28 @22284 has 8 MA's), (62, 22062), (66, 22050), (68, 22035), (73, 21981), (79, 21942), (87, 21882), (94, 21816), (95, 21801), (98, 21786), (100, 21777), (161, 21468), (166, 21441), (171, 21417), (176, 21381), (178, 21375), (179, 21360), (227, 21129), (230, 21123), (258, 21006), (263, 20967), (271, 20913), (287, 20808), (295, 20766), (297, 20760),

Gene: Typhonomachy\_57 Start: 39685, Stop: 41679, Start Num: 15

Candidate Starts for Typhonomachy\_57:

(Start: 15 @39685 has 31 MA's), (46, 39901), (54, 39940), (56, 39955), (81, 40117), (85, 40159), (87, 40168), (92, 40225), (114, 40348), (123, 40399), (140, 40498), (142, 40510), (146, 40555), (168, 40669), (171, 40687), (173, 40699), (180, 40747), (191, 40804), (199, 40831), (209, 40867), (231, 40948), (237, 40960), (249, 41011), (263, 41095), (271, 41152), (275, 41170), (282, 41209), (300, 41335), (315, 41410), (317, 41431), (322, 41458), (326, 41503), (333, 41548), (344, 41611), (345, 41614), (352, 41635),

Gene: Velene\_34 Start: 24098, Stop: 22428, Start Num: 17

Candidate Starts for Velene\_34:

(Start: 17 @24098 has 184 MA's), (Start: 24 @24065 has 5 MA's), (Start: 28 @24029 has 8 MA's), (34, 23972), (39, 23942), (40, 23936), (64, 23810), (78, 23702), (79, 23696), (94, 23570), (98, 23540), (161, 23228), (169, 23186), (258, 22763), (263, 22724), (272, 22667), (281, 22610), (283, 22604), (287, 22565), (291, 22532), (295, 22523), (298, 22505), (304, 22472),

Gene: Vine\_64 Start: 42340, Stop: 44421, Start Num: 7

Candidate Starts for Vine\_64:

(5, 42304), (Start: 7 @42340 has 15 MA's), (18, 42379), (26, 42427), (32, 42463), (46, 42580), (70, 42730), (76, 42760), (81, 42796), (82, 42802), (92, 42904), (100, 42964), (103, 42979), (113, 43024), (115, 43036), (122, 43072), (125, 43090), (133, 43135), (139, 43174), (146, 43234), (149, 43255), (171, 43396), (173, 43408), (180, 43456), (199, 43540), (209, 43576), (224, 43648), (231, 43675), (271, 43879), (272, 43882), (274, 43888), (275, 43897), (277, 43912), (282, 43936), (288, 43984), (291, 44014), (292, 44020), (306, 44101), (322, 44200), (326, 44248), (333, 44293), (335, 44314), (344, 44356), (345, 44359),

Gene: Vispistious\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for Vispistious\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: Wallaby\_55 Start: 38983, Stop: 40998, Start Num: 13

Candidate Starts for Wallaby\_55:

(6, 38950), (Start: 13 @38983 has 12 MA's), (18, 39007), (30, 39082), (46, 39202), (60, 39277), (62, 39292), (85, 39460), (87, 39469), (92, 39526), (98, 39580), (100, 39586), (104, 39604), (106, 39607), (113, 39646), (115, 39658), (122, 39694), (123, 39700), (129, 39733), (138, 39790), (142, 39811), (144, 39844), (146, 39856), (153, 39904), (157, 39919), (164, 39952), (173, 40000), (180, 40048), (206, 40162), (221, 40231), (231, 40264), (252, 40348), (253, 40351), (255, 40357), (261, 40387), (275, 40486), (282, 40525), (287, 40567), (288, 40573), (300, 40651), (303, 40663), (309, 40699), (320, 40753), (322, 40765), (332, 40843), (333, 40867), (337, 40900), (338, 40903), (339, 40909), (340, 40912), (345, 40936), (351, 40954), (354, 40975),

Gene: Wardwill\_33 Start: 22124, Stop: 20457, Start Num: 17

Candidate Starts for Wardwill\_33:

(Start: 17 @22124 has 184 MA's), (Start: 24 @22091 has 5 MA's), (Start: 28 @22055 has 8 MA's), (34, 21998), (62, 21842), (66, 21830), (68, 21815), (73, 21761), (79, 21722), (84, 21680), (87, 21662), (94, 21596), (95, 21581), (98, 21566), (100, 21557), (161, 21248), (166, 21221), (171, 21197), (176, 21161), (178, 21155), (203, 21035), (230, 20903), (258, 20786), (263, 20747), (271, 20693), (287, 20588), (295, 20546), (297, 20540),

Gene: WestPM\_30 Start: 22275, Stop: 20602, Start Num: 17

Candidate Starts for WestPM\_30:

(Start: 17 @22275 has 184 MA's), (26, 22224), (Start: 28 @22206 has 8 MA's), (57, 22011), (72, 21912), (78, 21867), (79, 21861), (83, 21825), (84, 21819), (95, 21720), (98, 21705), (161, 21390), (179, 21282), (213, 21132), (225, 21069), (258, 20931), (263, 20892), (265, 20883), (272, 20835), (285, 20757), (287, 20733), (297, 20685),

Gene: WildNOut\_34 Start: 24097, Stop: 22427, Start Num: 17

Candidate Starts for WildNOut\_34:

(Start: 17 @24097 has 184 MA's), (Start: 24 @24064 has 5 MA's), (Start: 28 @24028 has 8 MA's), (34, 23971), (39, 23941), (40, 23935), (64, 23809), (78, 23701), (79, 23695), (94, 23569), (98, 23539), (161, 23227), (169, 23185), (258, 22762), (263, 22723), (272, 22666), (281, 22609), (287, 22564), (291, 22531), (295, 22522), (298, 22504), (304, 22471),

Gene: WilliamStrong\_32 Start: 23496, Stop: 21829, Start Num: 17

Candidate Starts for WilliamStrong\_32:

(Start: 17 @23496 has 184 MA's), (Start: 24 @23463 has 5 MA's), (26, 23445), (Start: 27 @23433 has 1 MA's), (Start: 28 @23427 has 8 MA's), (42, 23325), (57, 23244), (68, 23187), (69, 23163), (79, 23094), (84, 23052), (87, 23034), (98, 22938), (152, 22653), (161, 22620), (169, 22578), (171, 22569), (178, 22527), (184, 22485), (222, 22308), (230, 22272), (256, 22161), (258, 22155), (262, 22134), (263, 22116), (272, 22059), (287, 21957), (298, 21897), (300, 21885), (304, 21864),

Gene: Winzigespinne\_33 Start: 23781, Stop: 22111, Start Num: 17

Candidate Starts for Winzigespinne\_33:

(Start: 17 @23781 has 184 MA's), (Start: 24 @23748 has 5 MA's), (Start: 28 @23712 has 8 MA's), (34, 23655), (39, 23625), (40, 23619), (64, 23493), (78, 23385), (79, 23379), (94, 23253), (96, 23235), (98, 23223), (161, 22911), (169, 22869), (193, 22731), (258, 22446), (263, 22407), (272, 22350), (281, 22293), (287, 22248), (291, 22215), (295, 22206), (298, 22188), (304, 22155),

Gene: Wolfwood\_53 Start: 38957, Stop: 40972, Start Num: 13

Candidate Starts for Wolfwood\_53:

(6, 38924), (Start: 13 @38957 has 12 MA's), (18, 38981), (30, 39056), (46, 39176), (60, 39251), (62, 39266), (85, 39434), (87, 39443), (92, 39500), (98, 39554), (100, 39560), (104, 39578), (106, 39581), (113, 39620), (115, 39632), (122, 39668), (123, 39674), (129, 39707), (138, 39764), (142, 39785), (144, 39818), (146, 39830), (153, 39878), (157, 39893), (164, 39926), (173, 39974), (180, 40022), (206, 40136), (221, 40205), (231, 40238), (252, 40322), (253, 40325), (255, 40331), (261, 40361), (275, 40460), (282, 40499), (287, 40541), (288, 40547), (300, 40625), (303, 40637), (309, 40673), (320, 40727), (322, 40739), (332, 40817), (333, 40841), (338, 40877), (339, 40883), (340, 40886), (345, 40910), (351, 40928), (354, 40949),

Gene: Xebius\_32 Start: 23712, Stop: 22030, Start Num: 17

Candidate Starts for Xebius\_32:

(Start: 17 @23712 has 184 MA's), (Start: 22 @23688 has 1 MA's), (Start: 24 @23679 has 5 MA's), (26, 23661), (Start: 27 @23649 has 1 MA's), (Start: 28 @23643 has 8 MA's), (38, 23562), (55, 23451), (57,

23442), (68, 23385), (79, 23292), (83, 23256), (87, 23232), (94, 23166), (96, 23148), (98, 23136), (115, 23058), (125, 23007), (167, 22791), (169, 22779), (172, 22767), (178, 22728), (179, 22713), (184, 22686), (196, 22629), (198, 22623), (230, 22482), (258, 22365), (262, 22344), (263, 22326), (272, 22269), (286, 22170), (288, 22161), (298, 22107),

Gene: Yakult\_59 Start: 40677, Stop: 42719, Start Num: 9

Candidate Starts for Yakult\_59:

(Start: 9 @40677 has 3 MA's), (20, 40719), (Start: 25 @40755 has 1 MA's), (46, 40908), (47, 40911), (54, 40947), (58, 40974), (62, 40998), (70, 41058), (73, 41076), (90, 41226), (98, 41286), (115, 41364), (120, 41388), (122, 41400), (123, 41406), (140, 41505), (142, 41517), (144, 41550), (164, 41667), (168, 41685), (172, 41706), (173, 41715), (181, 41775), (197, 41841), (199, 41847), (209, 41883), (220, 41946), (224, 41955), (231, 41982), (248, 42042), (249, 42045), (252, 42066), (263, 42129), (271, 42186), (274, 42195), (275, 42204), (282, 42243), (288, 42291), (291, 42321), (309, 42417), (315, 42453), (320, 42489), (322, 42501), (324, 42519), (328, 42552), (340, 42627), (344, 42648), (352, 42672),

Gene: Yarn\_55 Start: 39396, Stop: 41393, Start Num: 15

Candidate Starts for Yarn\_55:

(Start: 15 @39396 has 31 MA's), (46, 39612), (54, 39651), (81, 39828), (86, 39873), (87, 39879), (106, 40017), (114, 40059), (115, 40068), (129, 40143), (140, 40209), (142, 40221), (146, 40266), (168, 40383), (171, 40401), (173, 40413), (180, 40461), (191, 40518), (199, 40545), (209, 40581), (231, 40662), (237, 40674), (242, 40695), (261, 40785), (268, 40833), (271, 40866), (275, 40884), (277, 40899), (282, 40923), (300, 41049), (309, 41097), (315, 41124), (317, 41145), (322, 41172), (324, 41190), (326, 41217), (333, 41262), (336, 41286), (344, 41325), (345, 41328), (352, 41349), (354, 41367),

Gene: Yucky\_64 Start: 42132, Stop: 44213, Start Num: 7

Candidate Starts for Yucky\_64:

(5, 42096), (Start: 7 @42132 has 15 MA's), (18, 42171), (26, 42219), (32, 42255), (46, 42372), (70, 42522), (76, 42552), (81, 42588), (82, 42594), (92, 42696), (100, 42756), (103, 42771), (113, 42816), (115, 42828), (122, 42864), (125, 42882), (133, 42927), (139, 42966), (146, 43026), (149, 43047), (171, 43188), (173, 43200), (180, 43248), (199, 43332), (209, 43368), (224, 43440), (231, 43467), (271, 43671), (272, 43674), (274, 43680), (275, 43689), (277, 43704), (282, 43728), (288, 43776), (291, 43806), (292, 43812), (306, 43893), (322, 43992), (326, 44040), (333, 44085), (335, 44106), (344, 44148), (345, 44151),

Gene: Yummy\_60 Start: 39804, Stop: 41801, Start Num: 15

Candidate Starts for Yummy\_60:

(Start: 15 @39804 has 31 MA's), (46, 40020), (54, 40059), (87, 40287), (106, 40425), (108, 40437), (114, 40467), (120, 40500), (138, 40608), (140, 40617), (142, 40629), (146, 40674), (173, 40821), (180, 40869), (186, 40899), (189, 40908), (209, 40989), (231, 41070), (261, 41193), (271, 41274), (274, 41283), (275, 41292), (282, 41331), (300, 41457), (309, 41505), (315, 41532), (322, 41580), (324, 41598), (325, 41619), (326, 41625), (333, 41670), (344, 41733), (345, 41736), (352, 41757),

Gene: YuuY\_32 Start: 24116, Stop: 22437, Start Num: 17

Candidate Starts for YuuY\_32:

(Start: 17 @24116 has 184 MA's), (Start: 24 @24083 has 5 MA's), (26, 24065), (Start: 27 @24053 has 1 MA's), (Start: 28 @24047 has 8 MA's), (34, 23990), (42, 23945), (57, 23846), (68, 23789), (74, 23729), (79, 23696), (87, 23636), (89, 23624), (91, 23591), (95, 23555), (98, 23540), (127, 23399), (163, 23219), (169, 23186), (171, 23177), (178, 23135), (179, 23120), (193, 23048), (198, 23030), (230, 22880), (240, 22853), (253, 22784), (258, 22763), (262, 22742), (263, 22724), (272, 22667), (280, 22619), (287, 22565), (295, 22523), (297, 22517), (300, 22493), (304, 22472), (305, 22463), (309, 22448), (310, 22445),

Gene: Zada\_34 Start: 24078, Stop: 22408, Start Num: 17

Candidate Starts for Zada\_34:

(Start: 17 @24078 has 184 MA's), (Start: 24 @24045 has 5 MA's), (Start: 28 @24009 has 8 MA's), (34, 23952), (39, 23922), (40, 23916), (64, 23790), (78, 23682), (79, 23676), (87, 23616), (94, 23550), (98, 23520), (161, 23208), (169, 23166), (178, 23115), (193, 23028), (258, 22743), (263, 22704), (272, 22647), (281, 22590), (287, 22545), (291, 22512), (295, 22503), (298, 22485), (304, 22452),

Gene: Zareef\_53 Start: 38979, Stop: 40994, Start Num: 13

Candidate Starts for Zareef\_53:

(6, 38946), (Start: 13 @38979 has 12 MA's), (18, 39003), (30, 39078), (46, 39198), (60, 39273), (62, 39288), (85, 39456), (87, 39465), (92, 39522), (98, 39576), (100, 39582), (104, 39600), (106, 39603), (113, 39642), (115, 39654), (122, 39690), (123, 39696), (129, 39729), (138, 39786), (142, 39807), (144, 39840), (146, 39852), (153, 39900), (157, 39915), (164, 39948), (173, 39996), (180, 40044), (206, 40158), (221, 40227), (231, 40260), (252, 40344), (253, 40347), (255, 40353), (261, 40383), (275, 40482), (282, 40521), (287, 40563), (288, 40569), (300, 40647), (303, 40659), (309, 40695), (320, 40749), (322, 40761), (332, 40839), (333, 40863), (337, 40896), (338, 40899), (339, 40905), (340, 40908), (345, 40932), (351, 40950), (354, 40971),

Gene: Zayuliv\_31 Start: 22552, Stop: 20885, Start Num: 17

Candidate Starts for Zayuliv\_31:

(Start: 17 @22552 has 184 MA's), (Start: 24 @22519 has 5 MA's), (Start: 28 @22483 has 8 MA's), (34, 22426), (62, 22270), (66, 22258), (68, 22243), (73, 22189), (79, 22150), (84, 22108), (87, 22090), (94, 22024), (95, 22009), (98, 21994), (100, 21985), (161, 21676), (166, 21649), (171, 21625), (176, 21589), (178, 21583), (203, 21463), (230, 21331), (258, 21214), (263, 21175), (271, 21121), (287, 21016), (295, 20974), (297, 20968),

Gene: Zenitsu\_32 Start: 23739, Stop: 22057, Start Num: 17

Candidate Starts for Zenitsu\_32:

(Start: 17 @23739 has 184 MA's), (Start: 22 @23715 has 1 MA's), (Start: 24 @23706 has 5 MA's), (26, 23688), (Start: 27 @23676 has 1 MA's), (Start: 28 @23670 has 8 MA's), (38, 23589), (55, 23478), (57, 23469), (68, 23412), (79, 23319), (83, 23283), (87, 23259), (94, 23193), (96, 23175), (98, 23163), (115, 23085), (125, 23034), (167, 22818), (169, 22806), (172, 22794), (178, 22755), (179, 22740), (184, 22713), (196, 22656), (198, 22650), (230, 22509), (258, 22392), (262, 22371), (263, 22353), (272, 22296), (286, 22197), (288, 22188), (298, 22134),

Gene: Zepp\_32 Start: 22020, Stop: 20353, Start Num: 17

Candidate Starts for Zepp\_32:

(Start: 17 @22020 has 184 MA's), (Start: 24 @21987 has 5 MA's), (Start: 28 @21951 has 8 MA's), (34, 21894), (62, 21738), (66, 21726), (68, 21711), (73, 21657), (79, 21618), (84, 21576), (87, 21558), (94, 21492), (95, 21477), (98, 21462), (100, 21453), (161, 21144), (166, 21117), (171, 21093), (176, 21057), (178, 21051), (203, 20931), (211, 20898), (213, 20886), (227, 20805), (230, 20799), (258, 20682), (263, 20643), (271, 20589), (287, 20484), (295, 20442), (297, 20436),