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r01: Hermia_26	11/25	148/176	243	262	315/1	339	388/8	432	451	476	500	558/1	592	614	619	612	709/1	741	764	826	842	855	876	888/8						
r02: Magnar_24	11/25	148/176	250/2	281	316	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8					
r03: Dexes_25	11/25	148/176	250/2	276	316	321	328	339	348	388/8	413	460	476	500	518	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8	
r04: Raid_25	11/25	148/176	250/2	276	316	321	328	339	348	388/8	413	460	476	500	518	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8		
r05: Niza_26	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	518	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8		
r06: Sios6_26 + 1	11/25	148/176	250/2	276	316	321	328	339	348	388/8	413	460	476	500	518	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8	
r07: Paraseleu_23	11/25	148/176	238	260	288	316	321	328	339	376	388/8	413	460	476	500	518	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r08: Anglerfish_25	11/25	148/176	238	260	288	316	321	328	339	376	388/8	413	460	476	500	518	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r09: Rajelicia_24 + 2	11/25	148/176	243	262	281	316	321	328	339	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r10: Bethlehem_24	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r11: Homines_24	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r12: Altman_26 + 2	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r13: HarryOW_25	11/25	148/176	234	260	288	316	321	328	339	416	483	525/8	558/8	592	615/1	619	612	709/1	741	751	826	855	876	888/8						
r14: Jorgensen_24	11/25	148/176	234	260	288	316	321	328	339	416	483	525/8	558/8	592	615/1	619	612	709/1	741	751	826	855	876	888/8						
r15: Kykar_22	11/25	148/176	234	260	288	316	321	328	339	416	483	525/8	558/8	592	615/1	619	612	709/1	741	751	826	855	876	888/8						
r16: Norz_26	11/25	148/176	243	262	281	316	321	328	339	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r17: Euphoria_24	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r18: Scow_25	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r19: Sorpresa_24 + 1	11/25	148/176	250/2	276	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r20: Dulcie_23	11/25	148/176	250/2	276	316	321	328	339	348	388/8	413	460	476	500	518	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8	
r21: Paphu_23	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	826	855	876	888/8				
r22: RidgeCB_24	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	826	855	876	888/8				
r23: Trait4T2_26 + 1	11/25	148/176	262	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	842	855	876	888/8		
r24: Monet_26	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r25: Jasper_25	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	826	855	876	888/8				
r26: Chanagan_23	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r27: Ashbanier_23	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r28: Pinto_26	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	826	855	876	888/8				
r29: Aeneas_26	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	842	855	876	888/8		
r30: Tripist_25	11/25	148/176	243	262	281	316	321	328	339	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r31: BeesKnees_25	11/25	148/176	243	262	281	316	321	328	339	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r32: Rubeus_25	11/25	148/176	250/2	281	316	321	328	339	348	376	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8		
r33: Kilmgrew_22	11/25	148/176	262	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r34: Sagelire_25	11/25	148/176	262	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	842	855	876	888/8		
r35: Mkhuseu_25	11/25	148/176	262	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r36: GrecoEtereo_25	11/25	148/176	262	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r37: Ichabod_25	11/25	148/176	243	262	281	316	321	328	339	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r38: Ajay_24	11/25	148/176	250/2	281	316	321	328	339	348	388/8	413	460	476	500	558/8	592	615/1	619	612	709/1	741	751	773	826	855	876	888/8			
r39: Zeeculate_23	10	20	225	281	316	321	328	339	348	312	391	411	430	440	488	525/8	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r40: DontArgue_24	10	20	225	281	316	321	328	339	348	312	391	411	430	440	488	525/8	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r41: Kristoff_26	10	20	225	281	316	321	328	339	348	312	391	411	430	440	488	525/8	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r42: Rowdy_29 + 3	10	20	225	281	316	321	328	339	348	312	391	411	430	440	488	525/8	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r43: Eaglepride_26	10	20	225	281	316	321	328	339	348	312	391	411	430	440	488	525/8	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r44: Edison31_25 + 1	10	20	225	281	316	321	328	339	348	312	391	411	430	440	488	525/8	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r45: KittenMittens_24	10	20	225	281	316	321	328	339	348	312	391	411	430	440	488	525/8	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r46: PeaceMeal_24 + 1	10	20	225	281	316	321	328	339	348	312	391	411	430	440	488	525/8	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r47: OKCentral2016_25	10	20	225	281	316	321	328	339	348	312	391	411	430	440	488	525/8	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r48: Poompha_24	10	20	225	281	316	321	328	339	348	312	391	411	430	440	488	525/8	558/8	592	615/1	619	612	709/1	728	741	751	773	826	855	876	888/8
r49: WalterMcVirkey_25 + 1	10	20	225																											





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201: Colin_30	107	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
202: Adzzy_27	107	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
203: IronMan_28	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
204: WeiHuaDA_32	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
205: Flare16_26	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
206: Phaded_29	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
207: Retro23_26 + 1	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
208: L5_26	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
209: MissWhite_26	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
210: Kerberos_29 + 1	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
211: Chef2_28	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
212: BobSwaget_29	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
213: Bianca1192_28	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
214: NothingSpecial_28	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
215: Piro94_27	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
216: AN18_29 + 3	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
217: AnnaL29_29	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
218: Leogania_28	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
219: Dignity_28	88	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902
220: Loser_29	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
221: AN3_26 + 1	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
222: XianYue_26	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
223: Superchunik_25	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
224: Iwokeupikedis_27	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
225: DBQu4n_29 + 1	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
226: Sknot_27	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
227: Pukovnik_28	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
228: KingCyrus_28 + 1	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
229: Anseim_26	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
230: Malec_27	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
231: NicoleTera_30	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
232: Koduck_26	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
233: Jerm_28	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
234: Serenity_25	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
235: TarsusIV_26	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
236: EZIMoney23_316	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
237: First_0026	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
238: Ph8s_27	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
239: HarryHoudini_28	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
240: CRBT_26	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
241: Trixie_29	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
242: SnapTap_26	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
243: Agape74_28 + 1	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
244: JoshKayV_28	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
245: DudeLittle_26	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
246: Miiko_29	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
247: Drake55_28	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
248: NaSiaJalie_26	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846	874	902	
249: RedRock_16	101	144	172	202	230	258	286	314	342	370	398	426	454	482	510	538	566	594	622	650	678	706	734	762	790	818	846			

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251: ZUES_26	46	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
252: Rachael_29		107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
253: LOKK_29		107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
254: Deloris_27		107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
255: Leviathan_28		107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
256: LITURB_28		107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
257: LadyBird_26		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
258: BabyBack_28		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
259: Bactobuster_27		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
260: SwinSquare_28		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
261: GaugeLDP_28		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
262: BengiVuitton_27		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
263: Jaan_29		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
264: KaiPine_29		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
265: Journey13_24		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
266: Centaur_28		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
267: Landor_27		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
268: Caraxes_26		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
269: Turbido_28		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
270: Changeling_28		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
271: StarStuff_29		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
272: Pomar16_29		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
273: Hellatump_28		14	178	202	312	383	410	420	471	507	649	703	718	756	890	890	890
274: Power_26	84	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
275: ArcherNIM_28		107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
276: Smeagan_28		107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
277: EvilSenius_25	100	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
278: Anthony_26	100	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
279: Kinmap_26	31	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
280: Texage_25	35	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
281: LBBerry_27	30	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
282: Sabinator_27	33	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
283: Rockstar_28	35	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
284: Phoxy_27	30	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
285: Phranny_28	112	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
286: Fred313_25	33	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
287: Margo_26	35	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
288: Jobu08_27	30	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
289: AugsMagni_26	35	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
290: ACFishnoo_27	30	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
291: JeppinRM_27	35	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
292: Snickers_27	30	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
293: Ollie_27	30	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
294: PhisnRPhm_26	36	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
295: Phantastic_24	31	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
296: Chiqui_24	31	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
297: Idleandcover_25	31	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
298: Marchesa_25	31	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
299: Scout_25	31	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890
300: BabyRay_25	31	107	178	286	312	383	410	420	471	507	649	703	718	756	890	890	890



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501: MAS_25	31	86	81	143	193	258	279	289	338	348	359	383	393	440	446	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893				
502: Zetzy_26	30	86	86	124	143	193	214	226	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
503: Aglet_27	30	86	86	124	143	193	214	226	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
504: OlanP_27	30	86	86	124	143	193	214	226	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
505: Rummer_28	30	86	86	124	143	193	214	226	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
506: Grum1_27	30	86	86	124	143	193	214	226	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
507: P28Green	30	86	86	124	143	193	214	226	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
508: Gni_27							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
509: Mundrea_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
510: Alberto7_26 + 11							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
511: Camperdown11_24							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
512: TinaFeyge_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
513: JetBlade_25 + 6							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
514: LHTSCC_26 + 1							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
515: Katalie136_25 + 2							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
516: LeoAvram_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
517: Florean_25 + 15							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
518: Phingter1804_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
519: Nemo27_25 + 4							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
520: ICleared_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
521: Dhanush_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
522: LittleB_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
523: Cerulean_26 + 3							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
524: LittleGuy_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
525: Badger_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
526: Holi_25 + 5							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
527: Lunford_26 + 1							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
528: Skippit_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
529: Kingmustik0402_25 + 2							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
530: Medusa_25 + 4							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
531: Kamy_25 + 3							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
532: Romney_25 + 1							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
533: Happiness_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
534: Eros_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
535: YoSam321_25							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
536: Burger_24							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	583	637	684	689	706	726	744	762	780	808	816	881	887	893
537: Stasia_26							222	234	258	279	289	338	348	359	383	393	440	446	479	491	512	522	532	58													

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551: Abdiel_24	100	100	210	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
552: SeñorCleon_24	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
553: Cintron_25	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
554: Pheipe_25	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
555: Nebs_25 + 1	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
556: Lemur_25	100	100	220	230	310	330	340	360	411	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890
557: Tinybot_24	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
558: Cindaradix_24	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
559: Eris_24	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
560: Kratak_25 + 1	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
561: Iracemab4_26	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
562: Cici_25	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
563: Noelle_25	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
564: Spino_25	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
565: Mazhar510_25 + 1	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
566: Ruin_25	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
567: Perplexer_25	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
568: Commander_25	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
569: Rosa24_24	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
570: Kremtemulon_25	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
571: LochMonster_25	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
572: Iceman_26	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
573: Pipcraft_25 + 1	100	100	220	230	310	330	340	360	457	461	469	530	545	606	607	700	726	762	807	880	875	882	890	
574: Koan_24	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
575: Micasa_22	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
576: Theia_20 + 3	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
577: Agentiv_22_3 + 10	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
578: Mlicery_22	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
579: Tarsneal_21 + 3	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
580: Jadru_22	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
581: Coog_22 + 3	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
582: Swirley_22	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
583: George_21	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
584: Chawwick_23	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
585: Pellen_23	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
586: Humkeners_16_22	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
587: Gno_Boo_25_2	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
588: Naxol_22	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
589: UmJonJack_22	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
590: Eri_Per69_22	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
591: Scopia_23	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
592: Benedict_22_3	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
593: Tigs_22	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
594: Annid_22	120	140	210	230	310	330	340	360	391	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
595: SuperCalle99_29 + 1	80	88	100	220	310	330	340	360	408	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
596: Indra_29	80	88	100	220	310	330	340	360	408	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
597: SuperAwesome_29 + 1	80	88	100	220	310	330	340	360	408	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
598: Hexamo_29 + 17	80	88	100	220	310	330	340	360	408	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
599: Garak_30 + 2	80	88	100	220	310	330	340	360	408	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890
600: Ritter_29	80	88	100	220	310	330	340	360	408	412	429	469	530	545	606	607	700	726	762	807	880	875	882	890



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		116	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850	
#01: Isiphiwo_29																			
#02: Koko_29	80	88	116	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#03: Jordennis_29 + 1	80	88	116	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#04: Blinni_29	80	88	116	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#05: Pnamq_29	71	91	116	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#06: Toro_20 + 1	59	71	116	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#07: FinNdel_26	71	91	116	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#08: Sheen_27	71	91	116	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#09: PP_35x1	71	91	116	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#10: Droogwrm_26	71	91	116	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#11: Ngisika_26	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#12: Danican_21x2	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#13: Egebelgarmu_21 + 2	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#14: Dion_22	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#15: Pailis_22	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#16: Saito_22	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#17: Rigan_22	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#18: NeanyHeadless	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#19: Jawan_26	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#20: Darrell_28	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#21: Eldsmoe_27 + 2	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#22: Charm_26	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#23: Conquerage_27	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#24: Beemo_27 + 4	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#25: Toaka_25	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#26: Vanisoo_25	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#27: RyeScarlet_28 + 1	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#28: Tubs_27 + 6	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#29: EmyBug_27	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#30: Rahalelujan_25	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#31: Holec_26	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#32: BogosyJay_27	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#33: Catalina_27	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#34: EdogawaKiddo_26	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#35: Onglai_26x2	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#36: SheaKeria_26	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#37: Scherzo_27 + 1	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#38: Arissanee_27	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#39: Yecey3_26	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#40: Elephantoon_27	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#41: Keziachanes14	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#42: Mammama_27	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#43: LoneWolf_27	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#44: Lilieska_27	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850
#45: DreamTeam1_26	73	101	128	186	212	246	274	315	343	357	412	499	590	680	710	746	786	809	850

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 202535 Report

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

Pham number 202535 has 838 members, 68 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_26
- Track 2 : Corvo\_24, Snazzy\_22
- Track 3 : StrongArm\_23, Bexan\_23
- Track 4 : HermioneGrange\_24, TwoPeat\_25
- Track 5 : Eyeball\_24
- Track 6 : QTRlifeCrisis\_24
- Track 7 : Graduation\_26
- Track 8 : Naira\_25, Fenn\_25, Squee\_25
- Track 9 : Nhonho\_24
- Track 10 : SwissCheese\_24
- Track 11 : Pelly\_25, Marge\_25, AFIS\_24
- Track 12 : KSSJEB\_24, Seabiscuit\_26, DreamCatcher\_27, Switzer\_25, U2\_24
- Track 13 : Forsytheast\_23, Moose\_23
- Track 14 : Magnito\_23, Turj99\_23
- Track 15 : SarFire\_24, Thor\_24
- Track 16 : Bob3\_23, Molly\_25, MPlant7149\_23, NEHalo\_24, Jerm2\_25, BigMau\_26, Zephyr\_24, Lopton\_25, Rohr\_25
- Track 17 : Conceptll\_25
- Track 18 : Atkinbua\_25
- Track 19 : Fushigi\_25
- Track 20 : Lamina13\_24
- Track 21 : Oogway\_23
- Track 22 : Gandalf20\_25
- Track 23 : Ohno789\_24, MetalQZJ\_24, MaryBeth\_24, Teodoridan\_22, Hami1\_26
- Track 24 : Peterson\_27
- Track 25 : Gwendoluna\_26, Blue\_24, LilBib\_25
- Track 26 : Wilkins\_24, Topgun\_24
- Track 27 : Licorice\_26
- Track 28 : MrGordo\_24, Barriga\_24, Big3\_24
- Track 29 : Smairt\_25, Violet\_23, Maroc7\_23
- Track 30 : BPBiabs31\_25, Solon\_24, Pita2\_26, PSullivan\_26, Rufus\_25, Tote\_26, JuliaChild\_26, Ciao\_24, Swole\_26, Sanya\_23
- Track 31 : Fascinus\_23
- Track 32 : Papez\_26, Francis47\_24
- Track 33 : Wheeler\_24
- Track 34 : Bigfoot\_23
- Track 35 : CactusRose\_23



- Track 36 : SkiPole\_26
- Track 37 : Marcell\_24
- Track 38 : Petp2012\_26
- Track 39 : Target\_26
- Track 40 : SpikeBT\_26, ShortQueendom\_23
- Track 41 : PinkPlastic\_23
- Track 42 : Briton15\_26, McGuire\_25, Dynamix\_25
- Track 43 : Gompeii16\_24, Bircsak\_24
- Track 44 : Mule\_24, Crispicous1\_23, PhrostyMug\_24
- Track 45 : Agaliana\_25
- Track 46 : Beatrix\_23
- Track 47 : Acme\_26, Greg\_26, Pippin\_26, Fajezeel\_26
- Track 48 : Mryolo\_23
- Track 49 : Ruotula\_23
- Track 50 : Nerujay\_25, Zeuska\_25, Applejack\_24, KyMonks1A\_26, Kugel\_25, Sunshine924\_23
- Track 51 : Ringer\_24
- Track 52 : BK1\_22, A6\_22
- Track 53 : StewieG\_23
- Track 54 : GageAP\_26
- Track 55 : Pepe\_25
- Track 56 : Tasp14\_25, Parliament\_23
- Track 57 : PascalRango\_23
- Track 58 : lLeeKay\_26, Sumter\_23
- Track 59 : Inyanga\_23
- Track 60 : Petruchio\_24
- Track 61 : Bruns\_23
- Track 62 : PattyP\_26, Burton\_25, Slagathor\_25, Museum\_26
- Track 63 : Alvin\_25
- Track 64 : HanShotFirst\_24
- Track 65 : Seanderson\_25
- Track 66 : Makemake\_24
- Track 67 : Gyzlar\_26
- Track 68 : DrFeelGood\_23
- Track 69 : DD5\_25, Lockley\_24, Watermelon\_26
- Track 70 : Lesedi\_23
- Track 71 : Bones\_24
- Track 72 : Payneiful\_24, Marchy\_23
- Track 73 : Adahisdi\_25
- Track 74 : Rutherferd\_26
- Track 75 : Doom\_25
- Track 76 : Abrogate\_250
- Track 77 : Abbyshoes\_25, Dussy\_25, Kenmech\_27
- Track 78 : JackSparrow\_25
- Track 79 : Dreamboat\_25
- Track 80 : Trouble\_24
- Track 81 : Rhynn\_24
- Track 82 : Edtherson\_25, Treddle\_26
- Track 83 : BillKnuckles\_25, Bxb1\_22
- Track 84 : BigPaolini\_25
- Track 85 : Marsha\_24
- Track 86 : Manatee\_25, Pari\_25
- Track 87 : Perseus\_25

- Track 88 : Carlyle\_26
- Track 89 : BaconJack\_26
- Track 90 : STLscum\_25
- Track 91 : PherrisBueller\_25
- Track 92 : ProMouse\_23
- Track 93 : IgnatiusPatJac\_23, BluSpix\_24
- Track 94 : Froghopper\_25
- Track 95 : Espresso\_24, Michley\_24, KBG\_25, PacerPaul\_24
- Track 96 : Smeagol\_26
- Track 97 : Buttons\_25
- Track 98 : Alsfro\_28
- Track 99 : TheloniousMonk\_26
- Track 100 : Hope4ever\_24
- Track 101 : Hermia\_26
- Track 102 : Magnar\_24
- Track 103 : Dexes\_25
- Track 104 : Raid\_25
- Track 105 : Niza\_26
- Track 106 : Sibs6\_26, Arlo\_23
- Track 107 : Paraselene\_23
- Track 108 : Anglerfish\_25
- Track 109 : Rajelicia\_24, Arcanine\_25, GMonster\_23
- Track 110 : Bethlehem\_24
- Track 111 : Homines\_24
- Track 112 : Altman\_26, Kanely\_25, Cueylyss\_24
- Track 113 : HarryOW\_25
- Track 114 : Jorgensen\_24
- Track 115 : Kykar\_22
- Track 116 : Norz\_26
- Track 117 : Euphoria\_24
- Track 118 : Scowl\_25
- Track 119 : Sorpresa\_24, Sandaddy\_23
- Track 120 : Dulcie\_23
- Track 121 : Paphu\_23
- Track 122 : RidgeCB\_24
- Track 123 : Traft412\_26, JC27\_26
- Track 124 : Monet\_26
- Track 125 : Jasper\_25
- Track 126 : Chanagan\_23
- Track 127 : Ashballer\_23
- Track 128 : Pinto\_26
- Track 129 : Aeneas\_26
- Track 130 : Tripl3t\_25
- Track 131 : BeesKnees\_25
- Track 132 : Rubeus\_25
- Track 133 : Killigrew\_22
- Track 134 : Sagefire\_25
- Track 135 : Mkhuseli\_25
- Track 136 : GrecoEtereo\_25
- Track 137 : Ichabod\_25
- Track 138 : Ajay\_24
- Track 139 : Zeeculate\_23
- Track 140 : DontArgue\_24

- Track 141 : Kristoff\_26
- Track 142 : Rowdy\_29, RhynO\_26, DustyMartin\_29, Shapes\_29
- Track 143 : Eaglepride\_26
- Track 144 : Edison31\_25, Twister\_25
- Track 145 : KittenMittens\_24
- Track 146 : PeaceMeal1\_24, Drake94\_24
- Track 147 : OKCentral2016\_25
- Track 148 : Poompha\_24
- Track 149 : WalterMcMickey\_25, Topanga\_25
- Track 150 : Trike\_23
- Track 151 : Goose\_25
- Track 152 : Severus\_24
- Track 153 : Rebeuca\_26
- Track 154 : Chupacabra\_25
- Track 155 : Petersenfast\_25
- Track 156 : Aneem\_26
- Track 157 : Flaverint\_26, Salz\_26, Hutc2\_26, Orange\_26, Jabith\_26, Insomnia\_26, Bowtie\_26, Mabel\_26, Mulciber\_26, Sham4\_26, Lucivia\_26, Gilberta\_26, MaCh\_26
- Track 158 : Bachome\_26, Ebony\_26
- Track 159 : Timothy\_26, Fibonacci\_26
- Track 160 : TinyTimmy\_26
- Track 161 : Joselito\_26
- Track 162 : Bud\_26, Et2Brutus\_25, Snape\_26, Munch\_26
- Track 163 : Refuge\_29
- Track 164 : Pharaoh\_26
- Track 165 : DARTHPhader\_27
- Track 166 : Steamy\_27
- Track 167 : Zimmer\_28
- Track 168 : Phlei\_21
- Track 169 : Jeeves\_25
- Track 170 : Gail\_25
- Track 171 : SororFago\_25
- Track 172 : Luchador\_27
- Track 173 : Sunhee\_24
- Track 174 : Anon\_26
- Track 175 : Epsocamisio\_28, Strosahl\_28, Boohoo\_28, Oofda\_29, ReMo\_28, Looper\_29, Remus\_28, Rosalind\_28, Soups\_28, Waits\_28, ShayRa\_29, Switzerland\_28, LastResort\_28
- Track 176 : DekHockey33\_28, KatherineG\_28
- Track 177 : Battleship\_29, JSwag\_28, MinecraftSteve\_29, Anaysia\_28
- Track 178 : Warrior24\_29
- Track 179 : Nedarya\_27
- Track 180 : Nebulosus\_28
- Track 181 : PainterBoy\_27
- Track 182 : EagleEye\_28
- Track 183 : Lucyedi\_27
- Track 184 : 40AC\_29
- Track 185 : MyraDee\_23
- Track 186 : Kimona\_22
- Track 187 : SemperFi\_28, QueenBeesly\_26, Georgie2\_27, SweetiePie\_26, Crucio\_26, FiringLine\_26
- Track 188 : Trooper\_26
- Track 189 : TopsytheTRex\_25



- Track 190 : Benvolio\_26, Echild\_26
- Track 191 : Bradman\_25, MajorMajor\_25, Quokka\_24
- Track 192 : Jsquared\_25
- Track 193 : Odin\_25
- Track 194 : Herbertwm\_23
- Track 195 : AbbyPaige\_28
- Track 196 : Whabigail7\_28
- Track 197 : Equemioh13\_28, Baehexic\_27, Updawg\_28, MiculUcigas\_26, WideWale\_28
- Track 198 : Larenn\_27
- Track 199 : D29\_26, D32\_29, Naji\_29, Travvers\_29
- Track 200 : QueenB2\_26, Fameo\_26
- Track 201 : Colin\_30
- Track 202 : Adzzy\_27
- Track 203 : IronMan\_28
- Track 204 : WeiHuaDA\_32
- Track 205 : Flare16\_26
- Track 206 : Phaded\_29
- Track 207 : Retro23\_26, Dalmatian\_26
- Track 208 : L5\_26
- Track 209 : MissWhite\_26
- Track 210 : Kerberos\_29, Tomathan\_29
- Track 211 : Che12\_28
- Track 212 : BobSwaget\_29
- Track 213 : BiancaTri92\_28
- Track 214 : NothingSpecial\_28
- Track 215 : Piro94\_27
- Track 216 : ANI8\_29, VC3\_29, C3\_24, AN9\_29
- Track 217 : AnnaL29\_29
- Track 218 : Leogania\_28
- Track 219 : Dignity\_28
- Track 220 : Loser\_29
- Track 221 : AN3\_26, VA6\_26
- Track 222 : XianYue\_26
- Track 223 : Superchunk\_25
- Track 224 : Iwokeuplikedis\_27
- Track 225 : DBQu4n\_29, Duplo\_29
- Track 226 : Sknot\_27
- Track 227 : Pukovnik\_28
- Track 228 : KingCyrus\_28, ChipMunk\_28
- Track 229 : Anselm\_26
- Track 230 : Malec\_27
- Track 231 : NicoleTera\_30
- Track 232 : Koduck\_26
- Track 233 : Jerm\_28
- Track 234 : Serenity\_25
- Track 235 : TarsusIV\_26
- Track 236 : EZMoney23\_30
- Track 237 : First\_0026
- Track 238 : Ph8s\_27
- Track 239 : HarryHoudini\_28
- Track 240 : CRB1\_26
- Track 241 : Trixie\_29

- Track 242 : SnapTap\_26
- Track 243 : Agape74\_28, Buggy\_28
- Track 244 : JoshKayV\_28
- Track 245 : DudeLittle\_26
- Track 246 : Miko\_29
- Track 247 : Drake55\_28
- Track 248 : NaSiaTalie\_26
- Track 249 : RedRock\_29
- Track 250 : Acolyte\_26
- Track 251 : 20ES\_26
- Track 252 : Rachaly\_29
- Track 253 : Lokk\_29
- Track 254 : Deloris\_27
- Track 255 : Leviathan\_28
- Track 256 : LilTurb\_28
- Track 257 : LadyBird\_26
- Track 258 : BabyBack\_28
- Track 259 : Bactobuster\_27
- Track 260 : SwirlSquare\_28
- Track 261 : GaugeLDP\_28
- Track 262 : BengiVuitton\_27
- Track 263 : Jaan\_29
- Track 264 : Kalpine\_29
- Track 265 : Journey13\_24
- Track 266 : Centaur\_28
- Track 267 : Landor\_27
- Track 268 : Caraxes\_25
- Track 269 : Turbido\_28
- Track 270 : Changeling\_28
- Track 271 : StarStuff\_29
- Track 272 : Pomar16\_29
- Track 273 : Heffalump\_28
- Track 274 : Power\_26
- Track 275 : ArcherNM\_28
- Track 276 : Smeagan\_28
- Track 277 : EvilGenius\_28
- Track 278 : Anthony\_25
- Track 279 : Kinmap\_26
- Track 280 : Texage\_25, Lambert1\_26, Norbert\_25, Panamaxus\_25, Pocahontas\_26, Noella\_26, ResDef\_26, Hookmount\_26, Popcicle\_26
- Track 281 : LBerry\_27
- Track 282 : Sabinator\_27, Hercules11\_27, GingkoMaracino\_27, TinyPebbles\_27, KADY\_28, Cullens\_27, LugYA\_29, AgronaGT15\_27, Dieselweasel\_27, Vix\_27, Wooldri\_29, Anubis\_29, SoYo\_27, Methuselah\_26, Beauxregard13\_27, Louie6\_27, Bxz2\_26, Soshari\_29, PotatoSplit\_28, Misomonster\_29, Penny1\_27, EpicPhail\_27, Marie\_27, MarQuardt\_27, Tiffany\_27, Fernando\_27, BuzzBuzz\_26, LarryKay\_27, Colbster\_27, Daishi\_26, JHC117\_27, GtownJaz\_27, JenCasNa\_27, MoneyMay\_27, Taurus\_27, HashRod\_28
- Track 283 : Rockstar\_25, JF2\_25, MK4\_25, Isca\_25, JF4\_25, B1\_23
- Track 284 : Phoxy\_27, Spike509\_27
- Track 285 : Phranny\_28, PurpleHaze\_27, Gemma\_27, Manu\_28, HaveUMetTed\_28, Groupthink\_28, Kalnokky\_28, Calvinny\_28, Kalb97\_28, Reba\_28, Marius\_28, Pawn\_27, Heliosoles\_27

- Track 286 : Fred313\_25, HelDan\_25, Kachowdy\_25, Heathen\_25
- Track 287 : Margo\_26, Veracruz\_25, Todacoro\_26, Caviar\_26, QuinnKiro\_25
- Track 288 : Jobu08\_27, SoilDragon\_27
- Track 289 : AugsMagnumOpus\_29, Mainiac\_27, Watson\_27, Stagni\_27, Sabia\_27, Lilith\_27, Farber\_27, Phoebe\_27, Grub\_27, StepMih\_27, MadMarie\_27, PGHhamlin\_29, Microwolf\_27, Pembroke\_27, Malinsilva\_29, MuchMore\_29, DaHudson\_27, BreSam8\_27
- Track 290 : ACFishhook\_27
- Track 291 : JeppNRM\_28
- Track 292 : Snickers\_27
- Track 293 : Ollie\_27
- Track 294 : PhishRPhriends\_26
- Track 295 : Phantastic\_25
- Track 296 : Chiqui\_24, BabyJohn\_24
- Track 297 : Idleandcovert\_25, Giroux\_25, Puppy\_26, Bugatti\_25, TNguyen7\_25, SaturnRing\_25, BlueBird\_26, Pistachio\_26
- Track 298 : Marchesa\_25, DropBear\_25
- Track 299 : Scout\_25
- Track 300 : BabyRay\_25
- Track 301 : MA5\_25
- Track 302 : Zetzy\_26
- Track 303 : Aglet\_27
- Track 304 : OlanP\_27
- Track 305 : Rummer\_27
- Track 306 : Grum1\_27
- Track 307 : P28Green\_27
- Track 308 : Grif\_27
- Track 309 : Mundrea\_25
- Track 310 : Alberto7\_26, KFPoly\_25, TroyPia\_25, Chaph\_25, Maverick\_25, Phacado\_25, Thanksgivukkah\_25, Wander\_25, Cocoaberry\_25, Bombshell\_25, PeterPeter\_25, Avle17\_25
- Track 311 : Camperdownii\_24
- Track 312 : TinaFeyge\_25
- Track 313 : JetBlade\_25, Connomayer\_25, MeeZee\_25, Palestino\_24, Kyee\_25, Pumbaa\_25, BubbleTrouble\_25
- Track 314 : LHTSCC\_26, Obama12\_26
- Track 315 : Katalie136\_25, Bumblebee11\_25, Morpher26\_25
- Track 316 : LeoAvram\_25
- Track 317 : Florean\_25, Caelakin\_25, Citius\_25, Broseidon\_25, Scamp\_25, Bartimeaus\_25, Melvin\_25, Sabertooth\_25, Druantia\_25, Wizard007\_25, CentreCat\_25, Blackmoor\_25, Bruiser\_24, NorthStar\_25, Sparxx\_25, Baby16\_25
- Track 318 : Phighter1804\_25
- Track 319 : Nemo27\_25, NotAPhaseMom\_25, Houdini22\_25, Huxley\_25, Gadost\_25
- Track 320 : ICleared\_25
- Track 321 : Dhanush\_25
- Track 322 : LittleB\_25
- Track 323 : Cerulean\_26, BangNhom\_25, ChampagnePapi\_26, SheldonCooper\_26
- Track 324 : LittleGuy\_25
- Track 325 : Badger\_25
- Track 326 : Holli\_25, JoongJeon\_25, OKaNui\_26, Taquarus\_25, Relief\_25, Clarenza\_25
- Track 327 : Lunsford\_26, Deano\_25



- Track 328 : Skipitt\_25
- Track 329 : Kingmustik0402\_25, Millski\_24, HamSlice\_24
- Track 330 : Medusa\_25, Jaykayelowell\_25, Roosevelt\_25, Annyong\_25, Peaches\_25
- Track 331 : Kamy\_25, Funston\_25, Lorenzo\_25, Maxo\_25
- Track 332 : Romney\_25, Koreni\_24
- Track 333 : Happiness\_25
- Track 334 : Eros\_25
- Track 335 : YoSam321\_25
- Track 336 : Burger\_24
- Track 337 : Stasia\_26
- Track 338 : Wilbur\_25
- Track 339 : Backyardigan\_25, Wile\_25, Achebe\_24, Datway\_25, Xena\_25
- Track 340 : Arturo\_24
- Track 341 : PetiteSangsue\_25, AbbysRanger\_25
- Track 342 : Albee\_25
- Track 343 : TygerBlood\_25
- Track 344 : Stink\_26, Miramae\_25, AvatarAhPeg\_26
- Track 345 : Flux\_25, LappelDuVide\_25, Nyxis\_25
- Track 346 : Phontbonne\_25, TiroTheta9\_25, Polymorphads\_25, Morrow\_25, Eurydice\_25
- Track 347 : Shygu2\_25
- Track 348 : Eagle\_24
- Track 349 : Shaka\_25
- Track 350 : Ohfah\_25
- Track 351 : Abdiel\_24
- Track 352 : SenorClean\_24
- Track 353 : Cintron\_25
- Track 354 : Phelipe\_25
- Track 355 : Nebs\_25, BellusTerra\_25
- Track 356 : Lemur\_25
- Track 357 : Tinybot\_24
- Track 358 : Cindaradix\_24
- Track 359 : Eris\_24
- Track 360 : Kratark\_25, DirtyDunning\_25
- Track 361 : Iracema64\_26
- Track 362 : Cici\_25
- Track 363 : Noelle\_25
- Track 364 : Spino\_25
- Track 365 : Mazhar510\_25, Ulysses\_24
- Track 366 : Ruin\_25
- Track 367 : Perplexer\_25
- Track 368 : Commander\_25
- Track 369 : Rosa24\_24
- Track 370 : Kremtemulon\_25
- Track 371 : LochMonster\_25
- Track 372 : Iceman\_26
- Track 373 : Pipcraft\_25, Eapen\_25
- Track 374 : Koan\_24
- Track 375 : Micasa\_22
- Track 376 : Theia\_20, Dublin\_21, MarysWell\_21
- Track 377 : AgentM\_22, Archetta\_22, PickleBack\_22, Bluefalcon\_21, Lev2\_22, ForGetIt\_22, Phlorence\_22, Conspiracy\_22, Jovo\_22, Aragog\_22, Discoknowium\_22

- Track 378 : Milcery\_22
- Track 379 : Tarynearal\_21, LittleCherry\_22, Bonamassa\_22, Twigg\_22
- Track 380 : Jabiru\_22
- Track 381 : Coog\_22, Midas2\_22, Cuco\_22
- Track 382 : Swirley\_22
- Track 383 : George\_21
- Track 384 : Chadwick\_23
- Track 385 : PetterN\_23
- Track 386 : HuhtaEnerson15\_22
- Track 387 : Ghoulboy\_22, Zolita\_21, SydNat\_22
- Track 388 : Naca\_22
- Track 389 : UnionJack\_22
- Track 390 : EITiger69\_22
- Track 391 : Scorpia\_23
- Track 392 : Benedict\_22
- Track 393 : Tiger\_22
- Track 394 : Airmid\_22
- Track 395 : SuperCallie99\_29, Pmask\_29
- Track 396 : Indra\_29
- Track 397 : SuperAwesome\_29, JewelBug\_29, Neeharika16\_29, Kazan\_29, Candra\_29, GreedyLawyer\_29, EricB\_29, McFly\_29, SmellyB\_29, VohminGhazi\_29, BABullseye\_29, Cookiedough\_29, Newrala\_29, Chartreuse\_29, Kipper29\_29, DaVinci\_29, Hoot\_29
- Track 398 : Hexamo\_29, CloudWang3\_29, Gladiator\_29, Jeffabunny\_29, Blue7\_29, Hammer\_29, Wiks\_29, BlessJoy\_29, Tucker\_29, ToneTone\_27, Lilbunny\_29, Yokurt\_29, Gruunaga\_29, Roksolana\_29, Artemis2UCLA\_29, Zaka\_29, Zulu\_29, WunderPhul\_29
- Track 399 : Garak\_30, Helmet\_30, Temprado\_30
- Track 400 : Rifter\_29
- Track 401 : Isiphiwo\_29
- Track 402 : Koko\_29
- Track 403 : Jordennis\_29, Dorothea\_29
- Track 404 : Blinn1\_29
- Track 405 : Priamo\_29
- Track 406 : Toro\_28, FlyCatcher\_29
- Track 407 : HINdeR\_25
- Track 408 : Sheen\_27
- Track 409 : PP\_35
- Track 410 : DroogsArmy\_26
- Track 411 : Timshel\_26
- Track 412 : Danforth\_21, Stephig9\_22, Groundhog\_21
- Track 413 : Expelliarmus\_21, Smeadley\_22, Astro\_22
- Track 414 : Dixon\_22
- Track 415 : Phillis\_22
- Track 416 : Saintus\_22
- Track 417 : Roary\_22
- Track 418 : NearlyHeadless\_22
- Track 419 : Jiawan\_26
- Track 420 : Darrell\_28
- Track 421 : Eidsmoe\_27, Spouty\_27, Priya\_27, Alma\_27
- Track 422 : Charm\_26
- Track 423 : Conquerage\_27



- Track 424 : Beemo\_27, ExplosioNervosa\_27, Qobbit\_27, Pioneer\_27, Phonnegut\_27
- Track 425 : Toaka\_25
- Track 426 : Vanisoa\_25
- Track 427 : RyeScarlet\_28, Hanray\_26
- Track 428 : Tubs\_27, Aliter\_27, PackMan\_27, Fayely\_27, Phaeder\_27, Myxus\_27, HortumSL17\_27
- Track 429 : EmyBug\_27
- Track 430 : Rahalelujah\_25
- Track 431 : Halex\_26
- Track 432 : BogosyJay\_27
- Track 433 : Catalina\_27
- Track 434 : EdogawaKiddo\_25, Sachima\_25
- Track 435 : Onglai\_26
- Track 436 : SheaKeira\_26
- Track 437 : Scherzo\_27, Ugenie5\_24
- Track 438 : Arissanae\_25
- Track 439 : Yecey3\_26
- Track 440 : Elephantoon\_27
- Track 441 : Keziacharles14\_25
- Track 442 : Maminiaina\_27
- Track 443 : LoneWolf\_27
- Track 444 : Lilleskat\_25
- Track 445 : DreamTeam1\_26

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

The start number called the most often in the published annotations is 111, it was called in 200 of the 770 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6\_22, AFIS\_24, Abbyshoes\_25, Abrogate\_250, Acme\_26, Adahisdi\_25, Aeneas\_26, Agaliana\_25, Ajay\_24, Alsfro\_28, Altman\_26, Alvin\_25, Anglerfish\_25, Applejack\_24, Arcanine\_25, Arlo\_23, Ashballer\_23, Atkinbua\_25, BK1\_22, BPBiebs31\_25, BaconJack\_26, Barriga\_24, Beatrix\_23, Bethlehem\_24, Bexan\_23, Big3\_24, BigMau\_26, BigPaolini\_25, Bigfoot\_23, BillKnuckles\_25, Bircsak\_24, BluSpix\_24, Blue\_24, Bob3\_23, Bones\_24, Bruns\_23, Burton\_25, Buttons\_25, Bxb1\_22, CactusRose\_23, Carlyle\_26, Chanagan\_23, Ciao\_24, ConceptII\_25, Corvo\_24, Crispicous1\_23, Cueylyss\_24, DD5\_25, Dexes\_25, Doom\_25, DrFeelGood\_23, DreamCatcher\_27, Dreamboat\_25, Dulcie\_23, Dussy\_25, Edtherson\_25, Espresso\_24, Euphoria\_24, Eyeball\_24, Fajezeel\_26, Fascinus\_23, Fenn\_25, Forsytheast\_23, Francis47\_24, Froghopper\_25, Fushigi\_25, GMonster\_23, GageAP\_26, Gandalf20\_25, Gompeii16\_24, Graduation\_26, GrecoEtereo\_25, Greg\_26, Gwendoluna\_26, Gyzlar\_26, Hami1\_26, HanShotFirst\_24, HarryOW\_25, Hermia\_26, HermioneGrange\_24, Homines\_24, ILeeKay\_26, Ichabod\_25, IgnatiusPatJac\_23, Inyanga\_23, JC27\_26, JackSparrow\_25, Jasper\_25, Jerm2\_25, Jorgensen\_24, JuliaChild\_26, KBG\_25, KSSJEB\_24, Kanely\_25, Kenmech\_27, Kugel\_25, KyMonks1A\_26, Kykar\_22, Lamina13\_24, Lesedi\_23, Licorice\_26, LilBib\_25, Lockley\_24, Lopton\_25, MPlant7149\_23, Magnar\_24, Magnito\_23, Makemake\_24, Manatee\_25, Marcell\_24, Marchy\_23, Marge\_25, Maroc7\_23,

Marsha\_24, MaryBeth\_24, MetalQZJ\_24, Michley\_24, Mkhuseleli\_25, Molly\_25, Monet\_26, Moose\_23, MrGordo\_24, Mryolo\_23, Mule\_24, Museum\_26, NEHalo\_24, Naira\_25, Nerujay\_25, Nhonho\_24, Niza\_26, Norz\_26, Ohno789\_24, Oogway\_23, PSullivan\_26, PacerPaul\_24, Papez\_26, Paphu\_23, Paraselene\_23, Pari\_25, Parliament\_23, PascalRango\_23, PattyP\_26, Payneful\_24, Pelly\_25, Pepe\_25, Perseus\_25, Peterson\_27, Petp2012\_26, Petruccio\_24, PherrisBueller\_25, PhrostyMug\_24, PinkPlastic\_23, Pinto\_26, Pippin\_26, Pita2\_26, ProMouse\_23, QTRLifeCrisis\_24, Rajelicia\_24, Rhynn\_24, RidgeCB\_24, Rohr\_25, Rubeus\_25, Rufus\_25, Ruotula\_23, Rutherford\_26, STLscum\_25, Sagefire\_25, Sandaddy\_23, Sanya\_23, SarFire\_24, Scowl\_25, Seabiscuit\_26, Seanderson\_25, ShortQueendom\_23, Sibs6\_26, SkiPole\_26, Slagathor\_25, Smairt\_25, Smeagol\_26, Snazzy\_22, Solon\_24, Sorpresa\_24, SpikeBT\_26, Squee\_25, StewieG\_23, StrongArm\_23, Sumter\_23, Sunshine924\_23, SwissCheese\_24, Switzer\_25, Swole\_26, Target\_26, Tasp14\_25, Teodoridan\_22, Thor\_24, Topgun\_24, Tote\_26, Traft412\_26, Treddle\_26, Tripl3t\_25, Trouble\_24, Turj99\_23, TwoPeat\_25, U2\_24, Violet\_23, Watermelon\_26, Wilkins\_24, Zeeculate\_23, Zephyr\_24, Zeuska\_25,

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

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

- 20ES\_26, 40AC\_29, ACFishhook\_27, AN3\_26, AN9\_29, ANI8\_29, AbbyPaige\_28, AbbysRanger\_25, Abdiel\_24, Achebe\_24, Acolyte\_26, Adzzy\_27, Agape74\_28, AgentM\_22, Aglet\_27, AgronaGT15\_27, Airmid\_22, Albee\_25, Alberto7\_26, Aliter\_27, Alma\_27, Anaysia\_28, Aneem\_26, AnnaL29\_29, Anyong\_25, Anon\_26, Anselm\_26, Anthony\_25, Anubis\_29, Aragog\_22, ArcherNM\_28, Archetta\_22, Arissanae\_25, Artemis2UCLA\_29, Arturo\_24, Astro\_22, AugsMagnumOpus\_29, AvatarAhPeg\_26, Avle17\_25, B1\_23, BABullseye\_29, Baby16\_25, BabyBack\_28, BabyJohn\_24, BabyRay\_25, Bachome\_26, Backyardigan\_25, Bactobuster\_27, Badger\_25, Baehexic\_27, BangNhom\_25, Bartimeaus\_25, Battleship\_29, Beauxregard13\_27, Beemo\_27, BeesKnees\_25, BellusTerra\_25, Benedict\_22, BengiVuitton\_27, Benvolio\_26, BiancaTri92\_28, Blackmoor\_25, BlessJoy\_29, Blinn1\_29, Blue7\_29, BlueBird\_26, Bluefalcon\_21, BobSwaget\_29, BogosyJay\_27, Bombshell\_25, Bonamassa\_22, Boohoo\_28, Bowtie\_26, Bradman\_25, BreSam8\_27, Briton15\_26, Broseidon\_25, Bruiser\_24, BubbleTrouble\_25, Bud\_26, Bugatti\_25, Buggy\_28, Bumblebee11\_25, Burger\_24, BuzzBuzz\_26, Bxz2\_26, C3\_24, CRB1\_26, Caelakin\_25, Calvinny\_28, Camperdownii\_24, Candra\_29, Caraxes\_25, Catalina\_27, Caviar\_26, Centaur\_28, CentreCat\_25, Cerulean\_26, Chadwick\_23, ChampagnePapi\_26, Changeling\_28, Chaph\_25, Chargerpower\_26, Charm\_26, Chartreuse\_29, Che12\_28, ChipMunk\_28, Chiqui\_24, Chupacabra\_25, Cici\_25, Cindaradix\_24, Cintron\_25, Citius\_25, Clarenza\_25, CloudWang3\_29, Cocoaberry\_25, Colbster\_27, Colin\_30, Commander\_25, Connomayer\_25, Conquerage\_27, Conspiracy\_22, Coog\_22, Cookiedough\_29, Crucio\_26, Cuco\_22, Cullens\_27, D29\_26, D32\_29, DBQu4n\_29, DaHudson\_27, DaVinci\_29, Daishi\_26, Dalmatian\_26, Danforth\_21, Darrell\_28, DARTHPhader\_27, Datway\_25, Deano\_25, DekHockey33\_28, Deloris\_27, Dhanush\_25, Dieselweasel\_27, Dignity\_28, DirtyDunning\_25, Discoknowium\_22, Dixon\_22, DontArgue\_24, Dorothea\_29, Drake55\_28, Drake94\_24, DreamTeam1\_26, DroogsArmy\_26, DropBear\_25, Druantia\_25, Dublin\_21, DudeLittle\_26, Duplo\_29, DustyMartin\_29, Dynamix\_25, EZMoney23\_30, EagleEye\_28, Eagle\_24, Eaglepride\_26, Eapen\_25, Ebony\_26, Echild\_26, Edison31\_25, EdogawaKiddo\_25, Eidsmoe\_27, EITiger69\_22, Elephantoon\_27, EmyBug\_27, EpicPhail\_27, Epsocamisio\_28, Equemioh13\_28, EricB\_29, Eris\_24, Eros\_25, Et2Brutus\_25, Eurydice\_25, EvilGenius\_28,

Expelliarmus\_21, ExplosioNervosa\_27, Fameo\_26, Farber\_27, Fayely\_27, Fernando\_27, Fibonacci\_26, FiringLine\_26, First\_0026, Flare16\_26, Flaverint\_26, Florean\_25, Flux\_25, FlyCatcher\_29, ForGetIt\_22, Fred313\_25, Funston\_25, Gadost\_25, Gail\_25, Garak\_30, GaugeLDP\_28, Gemma\_27, George\_21, Georgie2\_27, Ghoulyboy\_22, Gilberta\_26, GingkoMaracino\_27, Giroux\_25, Gladiator\_29, Goose\_25, GreedyLawyer\_29, Grif\_27, Groundhog\_21, Groupthink\_28, Grub\_27, Grum1\_27, Gruunaga\_29, GtownJaz\_27, HINdeR\_25, HamSlice\_24, Hammer\_29, Hanray\_26, Happiness\_25, HarryHoudini\_28, HashRod\_28, HaveUMetTed\_28, Heathen\_25, Heffalump\_28, HelDan\_25, Heliosoles\_27, Helmet\_30, Herbertwm\_23, Hercules11\_27, Hexamo\_29, Holes\_26, Holli\_25, Hookmount\_26, Hoot\_29, Hope4ever\_24, HortumSL17\_27, Houdini22\_25, HuhtaEnerson15\_22, Hutc2\_26, Huxley\_25, ICleared\_25, Iceman\_26, Idleandcovert\_25, Indra\_29, Insomnia\_26, Iracema64\_26, IronMan\_28, Isca\_25, Isiphiwo\_29, Iwokeuplikedis\_27, JF2\_25, JF4\_25, JHC117\_27, JSwag\_28, Jaan\_29, Jabiru\_22, Jabith\_26, Jaykayelowell\_25, Jeeves\_25, Jeffabunny\_29, JenCasNa\_27, JeppNRM\_28, Jerm\_28, JetBlade\_25, JewelBug\_29, Jiawan\_26, Jobu08\_27, JoongJeon\_25, Jordennis\_29, Joselito\_26, JoshKayV\_28, Journey13\_24, Jovo\_22, Jsquared\_25, KADY\_28, KFPoly\_25, Kachowdy\_25, Kalb97\_28, Kalnok\_28, Kalpine\_29, Kamy\_25, Katalie136\_25, KatherineG\_28, Kazan\_29, Kerberos\_29, Keziacharles14\_25, Killigrew\_22, Kimona\_22, KingCyrus\_28, Kingmustik0402\_25, Kinmap\_26, Kipper29\_29, KittenMittens\_24, Koan\_24, Koduck\_26, Koko\_29, Koreni\_24, Kratak\_25, Kremtemulon\_25, Kristoff\_26, Kyee\_25, L5\_26, LBerry\_27, LHTSCC\_26, LadyBird\_26, Lambert1\_26, Landor\_27, LappelDuVide\_25, Larenn\_27, LarryKay\_27, LastResort\_28, Lemur\_25, LeoAvram\_25, Leogania\_28, Lev2\_22, Leviathan\_28, LilTurb\_28, Lilbunny\_29, Lilith\_27, Lilleskat\_25, LittleB\_25, LittleCherry\_22, LittleGuy\_25, LochMonster\_25, Lokk\_29, LoneWolf\_27, Looper\_29, Lorenzo\_25, Loser\_29, Louie6\_27, Luchador\_27, Lucivia\_26, Lucyedi\_27, LugYA\_29, Lunsford\_26, MA5\_25, MK4\_25, MaCh\_26, Mabel\_26, MadMarie\_27, Mainiac\_27, MajorMajor\_25, Malec\_27, Malinsilva\_29, Maminiaina\_27, Manu\_28, MarQuardt\_27, Marchesa\_25, Margo\_26, Marie\_27, Marius\_28, MarysWell\_21, Maverick\_25, Maxo\_25, Mazhar510\_25, McFly\_29, McGuire\_25, Medusa\_25, MeeZee\_25, Melvin\_25, Methuselah\_26, Micasa\_22, Microwolf\_27, MiculUcigas\_26, Midas2\_22, Miko\_29, Milcery\_22, Millski\_24, MinecraftSteve\_29, Miramae\_25, Misomonster\_29, MissWhite\_26, MoneyMay\_27, Morpher26\_25, Morrow\_25, MuchMore\_29, Mulciber\_26, Munch\_26, Mundrea\_25, MyraDee\_23, Myxus\_27, NaSiaTalie\_26, Naca\_22, Naji\_29, NearlyHeadless\_22, Nebs\_25, Nebulosus\_28, Nedarya\_27, Neeharika16\_29, Nemo27\_25, Newrala\_29, NicoleTera\_30, Noella\_26, Noelle\_25, Norbert\_25, NorthStar\_25, NotAPhaseMom\_25, NothingSpecial\_28, Nyxis\_25, OKCentral2016\_25, OKaNui\_26, Obama12\_26, Odin\_25, Ohfah\_25, OlanP\_27, Ollie\_27, Onglai\_26, Oofda\_29, Orange\_26, P28Green\_27, PGHhamlin\_29, PP\_35, PackMan\_27, PainterBoy\_27, Palestino\_24, Panamaxus\_25, Pawn\_27, PeaceMeal1\_24, Peaches\_25, Pembroke\_27, Penny1\_27, Perplexer\_25, PeterPeter\_25, Petersenfast\_25, PetiteSangsue\_25, PetterN\_23, Ph8s\_27, Phacado\_25, Phaded\_29, Phaeder\_27, Phantastic\_25, Pharaoh\_26, Phelipe\_25, Phighter1804\_25, Phillis\_22, PhishRPhriends\_26, Phlei\_21, Phlorence\_22, Phoebe\_27, Phonnegut\_27, Phontbonne\_25, Phoxy\_27, Phranny\_28, PickleBack\_22, Pioneer\_27, Pipcraft\_25, Piro94\_27, Pistachio\_26, Pmask\_29, Pocahontas\_26, Polymorphads\_25, Pomar16\_29, Poompha\_24, Popcicle\_26, PotatoSplit\_28, Power\_26, Priamo\_29, Priya\_27, Pukovnik\_28, Pumbaa\_25, Puppy\_26, PurpleHaze\_27, Qobbit\_27, QueenB2\_26, QueenBeesly\_26, QuinnKiro\_25, Quokka\_24, Rachaly\_29, Rahalelujah\_25, Raid\_25, ReMo\_28, Reba\_28, Rebeuca\_26, RedRock\_29, Refuge\_29, Relief\_25, Remus\_28, ResDef\_26, Retro23\_26, RhynO\_26, Rifter\_29, Ringer\_24, Roary\_22, Rockstar\_25,



Roksolana\_29, Romney\_25, Roosevelt\_25, Rosa24\_24, Rosalind\_28, Rowdy\_29, Ruin\_25, Rummer\_27, RyeScarlet\_28, Sabertooth\_25, Sabia\_27, Sabinator\_27, Sachima\_25, Saintus\_22, Salz\_26, SaturnRing\_25, Scamp\_25, Scherzo\_27, Scorpia\_23, Scout\_25, SemperFi\_28, SenorClean\_24, Serenity\_25, Severus\_24, Shaka\_25, Sham4\_26, Shapes\_29, ShayRa\_29, SheaKeira\_26, Sheen\_27, SheldonCooper\_26, Shygu2\_25, Skipitt\_25, Sknot\_27, Smeadley\_22, Smeagan\_28, SmellyB\_29, SnapTap\_26, Snape\_26, Snickers\_27, SoYo\_27, SoilDragon\_27, SororFago\_25, Soshari\_29, Soups\_28, Sparxx\_25, Spike509\_27, Spino\_25, Spouty\_27, Stagni\_27, StarStuff\_29, Stasia\_26, Steamy\_27, StepMih\_27, Stephig9\_22, Stink\_26, Strosahl\_28, Sunhee\_24, SuperAwesome\_29, SuperCallie99\_29, Superchunk\_25, SweetiePie\_26, SwirlSquare\_28, Swirley\_22, Switzerland\_28, SydNat\_22, TNguyen7\_25, Taquarus\_25, TarsusIV\_26, Tarynearal\_21, Taurus\_27, Temprado\_30, Texage\_25, Thanksgivukkah\_25, Theia\_20, TheloniousMonk\_26, Tiffany\_27, Tiger\_22, Timothy\_26, Timshel\_26, TinaFeyge\_25, TinyPebbles\_27, TinyTimmy\_26, Tinybot\_24, TipsytheTRex\_25, TiroTheta9\_25, Toaka\_25, Todacoro\_26, Tomathan\_29, ToneTone\_27, Topanga\_25, Toro\_28, Travvers\_29, Trike\_23, Trixie\_29, Trooper\_26, TroyPia\_25, Tubs\_27, Tucker\_29, Turbido\_28, Twigg\_22, Twister\_25, TygerBlood\_25, Ugenie5\_24, Ulysses\_24, UnionJack\_22, Updawg\_28, VA6\_26, VC3\_29, Vanisoa\_25, Veracruz\_25, Vix\_27, VohminGhazi\_29, Waits\_28, WalterMcMickey\_25, Wander\_25, Warrior24\_29, Watson\_27, WeiHuaDA\_32, Whabigail7\_28, Wheeler\_24, WideWale\_28, Wiks\_29, Wilbur\_25, Wile\_25, Wizard007\_25, Wooldri\_29, WunderPhul\_29, Xena\_25, XianYue\_26, Yecey3\_26, YoSam321\_25, Yokurt\_29, Zaka\_29, Zetzy\_26, Zimmer\_28, Zolita\_21, Zulu\_29,

### Summary by start number:

#### Start 1:

- Found in 31 of 838 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 30 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AgentM\_22 (A5), Aragog\_22 (A5), Archetta\_22 (A5), Bluefalcon\_21 (A5), Bonamassa\_22 (A5), Conspiracy\_22 (A5), Coog\_22 (A5), Cuco\_22 (A5), Discoknowium\_22 (A5), Dublin\_21 (A5), ForGetIt\_22 (A5), George\_21 (A5), Ghoulyboy\_22 (A5), HuhtaEnerson15\_22 (A5), Jovo\_22 (A5), Lev2\_22 (A5), LittleCherry\_22 (A5), MarysWell\_21 (A5), Micasa\_22 (A5), Midas2\_22 (A5), Milcery\_22 (A5), Naca\_22 (A5), Phlorence\_22 (A5), PickleBack\_22 (A5), Swirley\_22 (A5), SydNat\_22 (A5), Tarynearal\_21 (A5), Theia\_20 (A5), Tiger\_22 (A5), Twigg\_22 (A5), Zolita\_21 (A5),

#### Start 2:

- Found in 8 of 838 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 8 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Airmid\_22 (A5), Benedict\_22 (A5), Chadwick\_23 (A5), ElTiger69\_22 (A5), Jabiru\_22 (A5), PetterN\_23 (A5), Scorpia\_23 (A5), UnionJack\_22 (A5),

#### Start 4:

- Found in 1 of 838 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phlei\_21 (A13),

Start 5:

- Found in 3 of 838 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 3 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EagleEye\_28 (A16), Lucyedi\_27 (A16), PainterBoy\_27 (A16),

Start 9:

- Found in 12 of 838 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 11 of 770
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Astro\_22 (A8), Danforth\_21 (A8), Dixon\_22 (A8), Expelliarmus\_21 (A8), Groundhog\_21 (A8), NearlyHeadless\_22 (A8), Phillis\_22 (A8), Roary\_22 (A8), Saintus\_22 (A8), Smeadley\_22 (A8), Stephig9\_22 (A8),

Start 11:

- Found in 1 of 838 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anthony\_25 (A20),

Start 17:

- Found in 6 of 838 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 4 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DroogsArmy\_26 (A7), FlyCatcher\_29 (A7), HINdeR\_25 (A7), Sheen\_27 (A7), Timshel\_26 (A7), Toro\_28 (A7),

Start 23:

- Found in 3 of 838 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 770
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Charm\_26 (A9),

Start 25:

- Found in 1 of 838 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acolyte\_26 (A2),

Start 27:

- Found in 5 of 838 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 5 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DARTHPhader\_27 (A12), Pharaoh\_26 (A12), Refuge\_29 (A12), Steamy\_27 (A12), Zimmer\_28 (A12),

Start 32:

- Found in 1 of 838 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 770
- Called 100.0% of time when present

- Phage (with cluster) where this start called: PP\_35 (A7),

#### Start 34:

- Found in 43 of 838 ( 5.1% ) of genes in pham
- Manual Annotations of this start: 1 of 770
- Called 2.3% of time when present
- Phage (with cluster) where this start called: LoneWolf\_27 (A9),

#### Start 37:

- Found in 51 of 838 ( 6.1% ) of genes in pham
- Manual Annotations of this start: 32 of 770
- Called 78.4% of time when present
- Phage (with cluster) where this start called: B1\_23 (A3), BabyJohn\_24 (A3), BabyRay\_25 (A3), BlueBird\_26 (A3), Bugatti\_25 (A3), Caviar\_26 (A3), Chiqui\_24 (A3), DropBear\_25 (A3), Fred313\_25 (A3), Giroux\_25 (A3), Heathen\_25 (A3), HelDan\_25 (A3), Hookmount\_26 (A3), Idleandcovert\_25 (A3), Isca\_25 (A3), JF2\_25 (A3), JF4\_25 (A3), Kachowdy\_25 (A3), Lambert1\_26 (A3), MA5\_25 (A3), MK4\_25 (A3), Marchesa\_25 (A3), Margo\_26 (A3), Noella\_26 (A3), Norbert\_25 (A3), Panamaxus\_25 (A3), Phantastic\_25 (A3), Pistachio\_26 (A3), Pocahontas\_26 (A3), Popcicle\_26 (A3), Puppy\_26 (A3), QuinnKiro\_25 (A3), ResDef\_26 (A3), Rockstar\_25 (A3), SaturnRing\_25 (A3), Scout\_25 (A3), TNguyen7\_25 (A3), Texage\_25 (A3), Todacoro\_26 (A3), Veracruz\_25 (A3),

#### Start 38:

- Found in 85 of 838 ( 10.1% ) of genes in pham
- Manual Annotations of this start: 82 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ACFishhook\_27 (A3), Aglet\_27 (A3), AgronaGT15\_27 (A3), Anubis\_29 (A3), AugsMagnumOpus\_29 (A3), Beauxregard13\_27 (A3), BreSam8\_27 (A3), BuzzBuzz\_26 (A3), Bxz2\_26 (A3), Calvinny\_28 (A3), Colbster\_27 (A3), Cullens\_27 (A3), DaHudson\_27 (A3), Daishi\_26 (A3), Dieselweasel\_27 (A3), EpicPhail\_27 (A3), Farber\_27 (A3), Fernando\_27 (A3), Gemma\_27 (A3), GingkoMaracino\_27 (A3), Grif\_27 (A3), Groupthink\_28 (A3), Grub\_27 (A3), Grum1\_27 (A3), GtownJaz\_27 (A3), HashRod\_28 (A3), HaveUMetTed\_28 (A3), Heliosoles\_27 (A3), Hercules11\_27 (A3), JHC117\_27 (A3), JenCasNa\_27 (A3), JeppNRM\_28 (A3), Jobu08\_27 (A3), KADY\_28 (A3), Kalb97\_28 (A3), Kalnoky\_28 (A3), Kimona\_22 (A19), LBerry\_27 (A3), LarryKay\_27 (A3), Lilith\_27 (A3), Louie6\_27 (A3), LugYA\_29 (A3), MadMarie\_27 (A3), Mainiac\_27 (A3), Malinsilva\_29 (A3), Manu\_28 (A3), MarQuardt\_27 (A3), Marie\_27 (A3), Marius\_28 (A3), Methuselah\_26 (A3), Microwolf\_27 (A3), Misomonster\_29 (A3), MoneyMay\_27 (A3), MuchMore\_29 (A3), OlanP\_27 (A3), Ollie\_27 (A3), P28Green\_27 (A3), PGHhamlin\_29 (A3), Pawn\_27 (A3), Pembroke\_27 (A3), Penny1\_27 (A3), PhishRPhriends\_26 (A3), Phoebe\_27 (A3), Phoxy\_27 (A3), Phranny\_28 (A3), PotatoSplit\_28 (A3), PurpleHaze\_27 (A3), Reba\_28 (A3), Rummer\_27 (A3), Sabia\_27 (A3), Sabinator\_27 (A3), Snickers\_27 (A3), SoYo\_27 (A3), SoilDragon\_27 (A3), Soshari\_29 (A3), Spike509\_27 (A3), Stagni\_27 (A3), StepMih\_27 (A3), Taurus\_27 (A3), Tiffany\_27 (A3), TinyPebbles\_27 (A3), Vix\_27 (A3), Watson\_27 (A3), Wooldri\_29 (A3), Zetzy\_26 (A3),

#### Start 52:

- Found in 48 of 838 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 33 of 770
- Called 85.4% of time when present



- Phage (with cluster) where this start called: Aliter\_27 (A9), Alma\_27 (A9), Arissanae\_25 (A9), Beemo\_27 (A9), BogosyJay\_27 (A9), Catalina\_27 (A9), Conquerage\_27 (A9), Darrell\_28 (A9), DreamTeam1\_26 (A9), EdogawaKiddo\_25 (A9), Eidsmoe\_27 (A9), Elephantoon\_27 (A9), EmyBug\_27 (A9), ExplosioNervosa\_27 (A9), Fayely\_27 (A9), Hanray\_26 (A9), Holecx\_26 (A9), HortumSL17\_27 (A9), Jiawan\_26 (A9), Keziacharles14\_25 (A9), Lilleskat\_25 (A9), Maminaiaina\_27 (A9), Myxus\_27 (A9), Onglai\_26 (A9), PackMan\_27 (A9), Phaeder\_27 (A9), Phonnegut\_27 (A9), Pioneer\_27 (A9), Priya\_27 (A9), Qobbit\_27 (A9), Rahalelujah\_25 (A9), RyeScarlet\_28 (A9), Sachima\_25 (A9), Scherzo\_27 (A9), SheaKeira\_26 (A9), Spouty\_27 (A9), Toaka\_25 (A9), Tubs\_27 (A9), Ugenie5\_24 (A9), Vanisoa\_25 (A9), Yecey3\_26 (A9),

#### Start 102:

- Found in 1 of 838 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Odin\_25 (A2),

#### Start 103:

- Found in 6 of 838 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 4 of 770
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Adzzy\_27 (A2), Che12\_28 (A2), Ph8s\_27 (A2), Superchunk\_25 (A2),

#### Start 105:

- Found in 21 of 838 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 8 of 770
- Called 38.1% of time when present
- Phage (with cluster) where this start called: Drake94\_24 (A10), Edison31\_25 (A10), Goose\_25 (A10), Kristoff\_26 (A10), PeaceMeal1\_24 (A10), Poompha\_24 (A10), Rebeuca\_26 (A10), Twister\_25 (A10),

#### Start 107:

- Found in 112 of 838 ( 13.4% ) of genes in pham
- Manual Annotations of this start: 89 of 770
- Called 90.2% of time when present
- Phage (with cluster) where this start called: 20ES\_26 (A2), AN3\_26 (A2), AN9\_29 (A2), ANI8\_29 (A2), AbbyPaige\_28 (A2), Agape74\_28 (A2), AnnaL29\_29 (A2), Anselm\_26 (A2), ArcherNM\_28 (A2), BabyBack\_28 (A2), Baehexic\_27 (A2), BengiVuitton\_27 (A2), Benvolio\_26 (A2), BiancaTri92\_28 (A2), BobSwaget\_29 (A2), Bradman\_25 (A2), Buggy\_28 (A2), C3\_24 (A2), CRB1\_26 (A2), Centaur\_28 (A2), Changeling\_28 (A2), ChipMunk\_28 (A2), Colin\_30 (A2), Crucio\_26 (A2), D29\_26 (A2), D32\_29 (A2), DBQu4n\_29 (A2), Dalmatian\_26 (A2), Deloris\_27 (A2), Dignity\_28 (A2), Drake55\_28 (A2), DudeLittle\_26 (A2), Duplo\_29 (A2), EZMoney23\_30 (A2), Echild\_26 (A2), Equemioh13\_28 (A2), EvilGenius\_28 (A2), Fameo\_26 (A2), FiringLine\_26 (A2), First\_0026 (A2), Flare16\_26 (A2), GaugeLDP\_28 (A2), Georgie2\_27 (A2), HarryHoudini\_28 (A2), Heffalump\_28 (A2), Jerm\_28 (A2), JoshKayV\_28 (A2), Journey13\_24 (A2), Jsquared\_25 (A2), Kalpine\_29 (A2), Kerberos\_29 (A2), KingCyrus\_28 (A2), Koduck\_26 (A2), Koko\_29 (A6), L5\_26 (A2), LadyBird\_26 (A2), Larenn\_27 (A2), Leogania\_28 (A2), Leviathan\_28 (A2), LilTurb\_28 (A2), Lokk\_29 (A2), Loser\_29 (A2), MajorMajor\_25 (A2), Malec\_27 (A2), MiculUcigas\_26 (A2), Miko\_29 (A2), MissWhite\_26 (A2), NaSiaTalie\_26 (A2), Naji\_29

(A2), NicoleTera\_30 (A2), NothingSpecial\_28 (A2), Piro94\_27 (A2), Pomar16\_29 (A2), Power\_26 (A2), QueenB2\_26 (A2), QueenBeesly\_26 (A2), Quokka\_24 (A2), Rachaly\_29 (A2), RedRock\_29 (A2), Retro23\_26 (A2), SemperFi\_28 (A2), Serenity\_25 (A2), Sknot\_27 (A2), Smeagan\_28 (A2), SnapTap\_26 (A2), StarStuff\_29 (A2), SweetiePie\_26 (A2), TarsusIV\_26 (A2), TipsytheTRex\_25 (A2), Tomathan\_29 (A2), Travvers\_29 (A2), Trixie\_29 (A2), Trooper\_26 (A2), Turbido\_28 (A2), Updawg\_28 (A2), VA6\_26 (A2), VC3\_29 (A2), WeiHuaDA\_32 (A2), Whabigail7\_28 (A2), WideWale\_28 (A2), XianYue\_26 (A2),

#### Start 109:

- Found in 141 of 838 ( 16.8% ) of genes in pham
- Manual Annotations of this start: 113 of 770
- Called 80.1% of time when present
- Phage (with cluster) where this start called: AbbysRanger\_25 (A4), Abdiel\_24 (A4), Achebe\_24 (A4), Albee\_25 (A4), Alberto7\_26 (A4), Annyong\_25 (A4), AvatarAhPeg\_26 (A4), Avle17\_25 (A4), Baby16\_25 (A4), Backyardigan\_25 (A4), Badger\_25 (A4), BangNhom\_25 (A4), Bartimeaus\_25 (A4), BellusTerra\_25 (A4), Blackmoor\_25 (A4), Bombshell\_25 (A4), Broseidon\_25 (A4), Bruiser\_24 (A4), BubbleTrouble\_25 (A4), Bumblebee11\_25 (A4), Burger\_24 (A4), Caelakin\_25 (A4), Camperdownii\_24 (A4), CentreCat\_25 (A4), Cerulean\_26 (A4), ChampagnePapi\_26 (A4), Chaph\_25 (A4), Cici\_25 (A4), Citius\_25 (A4), Clarenza\_25 (A4), Cocoaberry\_25 (A4), Connomayer\_25 (A4), Datway\_25 (A4), Deano\_25 (A4), Dhanush\_25 (A4), DirtyDunning\_25 (A4), Druantia\_25 (A4), Eris\_24 (A4), Eros\_25 (A4), Eurydice\_25 (A4), Florean\_25 (A4), Funston\_25 (A4), HamSlice\_24 (A4), Happiness\_25 (A4), Holli\_25 (A4), Iceman\_26 (A4), Iracema64\_26 (A4), Jaykayelowell\_25 (A4), JetBlade\_25 (A4), JoongJeon\_25 (A4), KFPoly\_25 (A4), Kampy\_25 (A4), Katalie136\_25 (A4), Kingmustik0402\_25 (A4), Koreni\_24 (A4), Kratark\_25 (A4), Kremtemulon\_25 (A4), Kyee\_25 (A4), Lemur\_25 (A4), LittleB\_25 (A4), LittleGuy\_25 (A4), Lorenzo\_25 (A4), Lunsford\_26 (A4), Maverick\_25 (A4), Maxo\_25 (A4), Mazhar510\_25 (A4), Medusa\_25 (A4), MeeZee\_25 (A4), Melvin\_25 (A4), Millski\_24 (A4), Miramae\_25 (A4), Morpher26\_25 (A4), Morrow\_25 (A4), Mundrea\_25 (A4), Nebs\_25 (A4), Noelle\_25 (A4), NorthStar\_25 (A4), OKaNui\_26 (A4), Ohfah\_25 (A4), Palestino\_24 (A4), Peaches\_25 (A4), Perplexer\_25 (A4), PeterPeter\_25 (A4), PetiteSangsue\_25 (A4), Phacado\_25 (A4), Phelipe\_25 (A4), Phighter1804\_25 (A4), Phontbonne\_25 (A4), Polymorphads\_25 (A4), Pumbaa\_25 (A4), Relief\_25 (A4), Romney\_25 (A4), Roosevelt\_25 (A4), Ruin\_25 (A4), Sabertooth\_25 (A4), Scamp\_25 (A4), Shaka\_25 (A4), SheldonCooper\_26 (A4), Shygu2\_25 (A4), Sparxx\_25 (A4), Stasia\_26 (A4), Stink\_26 (A4), Taquarus\_25 (A4), Thanksgivukkah\_25 (A4), TiroTheta9\_25 (A4), TroyPia\_25 (A4), TygerBlood\_25 (A4), Ulysses\_24 (A4), Wander\_25 (A4), Wile\_25 (A4), Wizard007\_25 (A4), Xena\_25 (A4), YoSam321\_25 (A4),

#### Start 110:

- Found in 7 of 838 ( 0.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Caraxes\_25 (A2), SwirlSquare\_28 (A2),

#### Start 111:

- Found in 210 of 838 ( 25.1% ) of genes in pham
- Manual Annotations of this start: 200 of 770
- Called 100.0% of time when present

- Phage (with cluster) where this start called: A6\_22 (A1), AFIS\_24 (A1), Abbyshoes\_25 (A1), Abrogate\_250 (A1), Acme\_26 (A1), Adahisdi\_25 (A1), Aeneas\_26 (A1), Agaliana\_25 (A1), Ajay\_24 (A1), Alsfro\_28 (A1), Altman\_26 (A1), Alvin\_25 (A1), Anglerfish\_25 (A1), Applejack\_24 (A1), Arcanine\_25 (A1), Arlo\_23 (A1), Ashballer\_23 (A1), Atkinbua\_25 (A1), BK1\_22 (A1), BPBiebs31\_25 (A1), BaconJack\_26 (A1), Barriga\_24 (A1), Beatrix\_23 (A1), Bethlehem\_24 (A1), Bexan\_23 (A1), Big3\_24 (A1), BigMau\_26 (A1), BigPaolini\_25 (A1), Bigfoot\_23 (A1), BillKnuckles\_25 (A1), Bircsak\_24 (A1), BluSpix\_24 (A1), Blue\_24 (A1), Bob3\_23 (A1), Bones\_24 (A1), Bruns\_23 (A1), Burton\_25 (A1), Buttons\_25 (A1), Bxb1\_22 (A1), CactusRose\_23 (A1), Carlyle\_26 (A1), Chanagan\_23 (A1), Ciao\_24 (A1), ConceptII\_25 (A1), Corvo\_24 (A1), Crispicous1\_23 (A1), Cueylyss\_24 (A1), DD5\_25 (A1), Dexes\_25 (A1), Doom\_25 (A1), DrFeelGood\_23 (A1), DreamCatcher\_27 (A1), Dreamboat\_25 (A1), Dulcie\_23 (A1), Dussy\_25 (A1), Edtherson\_25 (A1), Espresso\_24 (A1), Euphoria\_24 (A1), Eyeball\_24 (A1), Fajezeel\_26 (A1), Fascinus\_23 (A1), Fenn\_25 (A1), Forsytheast\_23 (A1), Francis47\_24 (A1), Froghopper\_25 (A1), Fushigi\_25 (A1), GMonster\_23 (A1), GageAP\_26 (A1), Gandalf20\_25 (A1), Gompeii16\_24 (A1), Graduation\_26 (A1), GrecoEtereo\_25 (A1), Greg\_26 (A1), Gwendoluna\_26 (A1), Gyzlar\_26 (A1), Hami1\_26 (A1), HanShotFirst\_24 (A1), HarryOW\_25 (A1), Hermia\_26 (A1), HermioneGrange\_24 (A1), Homines\_24 (A1), ILeeKay\_26 (A1), Ichabod\_25 (A1), IgnatiusPatJac\_23 (A1), Inyanga\_23 (A1), JC27\_26 (A1), JackSparrow\_25 (A1), Jasper\_25 (A1), Jerm2\_25 (A1), Jorgensen\_24 (A1), JuliaChild\_26 (A1), KBG\_25 (A1), KSSJEB\_24 (A1), Kanely\_25 (A1), Kenmech\_27 (A1), Kugel\_25 (A1), KyMonks1A\_26 (A1), Kykar\_22 (A1), Lamina13\_24 (A1), Lesedi\_23 (A1), Licorice\_26 (A1), LilBib\_25 (A1), Lockley\_24 (A1), Lopton\_25 (A1), MPlant7149\_23 (A1), Magnar\_24 (A1), Magnito\_23 (A1), Makemake\_24 (A1), Manatee\_25 (A1), Marcell\_24 (A1), Marchy\_23 (A1), Marge\_25 (A1), Maroc7\_23 (A1), Marsha\_24 (A1), MaryBeth\_24 (A1), MetalQZJ\_24 (A1), Michley\_24 (A1), Mkhuseleli\_25 (A1), Molly\_25 (A1), Monet\_26 (A1), Moose\_23 (A1), MrGordo\_24 (A1), Mryolo\_23 (A1), Mule\_24 (A1), Museum\_26 (A1), NEHalo\_24 (A1), Naira\_25 (A1), Nerujay\_25 (A1), Nhonho\_24 (A1), Niza\_26 (A1), Norz\_26 (A1), Ohno789\_24 (A1), Oogway\_23 (A1), PSullivan\_26 (A1), PacerPaul\_24 (A1), Papez\_26 (A1), Paphu\_23 (A1), Paraselene\_23 (A1), Pari\_25 (A1), Parliament\_23 (A1), PascalRango\_23 (A1), PattyP\_26 (A1), Payneful\_24 (A1), Pelly\_25 (A1), Pepe\_25 (A1), Perseus\_25 (A1), Peterson\_27 (A1), Petp2012\_26 (A1), Petruchio\_24 (A1), PherrisBueller\_25 (A1), PhrostyMug\_24 (A1), PinkPlastic\_23 (A1), Pinto\_26 (A1), Pippin\_26 (A1), Pita2\_26 (A1), ProMouse\_23 (A1), QTRlifeCrisis\_24 (A1), Rajelicia\_24 (A1), Rhynn\_24 (A1), RidgeCB\_24 (A1), Rohr\_25 (A1), Rubeus\_25 (A1), Rufus\_25 (A1), Ruotula\_23 (A1), Rutherford\_26 (A1), STLscum\_25 (A1), Sagefire\_25 (A1), Sandaddy\_23 (A1), Sanya\_23 (A1), SarFire\_24 (A1), Scowl\_25 (A1), Seabiscuit\_26 (A1), Seanderson\_25 (A1), ShortQueendom\_23 (A1), Sibs6\_26 (A1), SkiPole\_26 (A1), Slagathor\_25 (A1), Smairt\_25 (A1), Smeagol\_26 (A1), Snazzy\_22 (A1), Solon\_24 (A1), Sorpresa\_24 (A1), SpikeBT\_26 (A1), Squee\_25 (A1), StewieG\_23 (A1), StrongArm\_23 (A1), Sumter\_23 (A1), Sunshine924\_23 (A1), SwissCheese\_24 (A1), Switzer\_25 (A1), Swole\_26 (A1), Target\_26 (A1), Tasp14\_25 (A1), Teodoridan\_22 (A1), Thor\_24 (A1), Topgun\_24 (A1), Tote\_26 (A1), Traft412\_26 (A1), Treddle\_26 (A1), Tripl3t\_25 (A1), Trouble\_24 (A1), Turj99\_23 (A1), TwoPeat\_25 (A1), U2\_24 (A1), Violet\_23 (A1), Watermelon\_26 (A1), Wilkins\_24 (A1), Zeeculate\_23 (A1), Zephyr\_24 (A1), Zeuska\_25 (A1),

Start 112:

- Found in 34 of 838 ( 4.1% ) of genes in pham
- Manual Annotations of this start: 30 of 770
- Called 91.2% of time when present

- Phage (with cluster) where this start called: Aneem\_26 (A11), BeesKnees\_25 (A1), Bowtie\_26 (A11), Briton15\_26 (A1), Bud\_26 (A11), Dynamix\_25 (A1), Et2Brutus\_25 (A11), Fibonacci\_26 (A11), Flaverint\_26 (A11), Gilberta\_26 (A11), Hope4ever\_24 (A1), Hutc2\_26 (A11), Insomnia\_26 (A11), Jabith\_26 (A11), Joselito\_26 (A11), Lucivia\_26 (A11), MaCh\_26 (A11), Mabel\_26 (A11), McGuire\_25 (A1), Mulciber\_26 (A11), Munch\_26 (A11), Orange\_26 (A11), Raid\_25 (A1), Ringer\_24 (A1), Salz\_26 (A11), Sham4\_26 (A11), Snape\_26 (A11), TheloniousMonk\_26 (A1), Timothy\_26 (A11), TinyTimmy\_26 (A11), Wheeler\_24 (A1),

#### Start 113:

- Found in 1 of 838 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Killigrew\_22 (A1),

#### Start 115:

- Found in 22 of 838 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 770
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Nebulosus\_28 (A15),

#### Start 116:

- Found in 48 of 838 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 41 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 40AC\_29 (A17), Artemis2UCLA\_29 (A6), BABullseye\_29 (A6), BlessJoy\_29 (A6), Blinn1\_29 (A6), Blue7\_29 (A6), Candra\_29 (A6), Chartreuse\_29 (A6), CloudWang3\_29 (A6), Cookiedough\_29 (A6), DaVinci\_29 (A6), Dorothea\_29 (A6), EricB\_29 (A6), Garak\_30 (A6), Gladiator\_29 (A6), GreedyLawyer\_29 (A6), Gruunaga\_29 (A6), Hammer\_29 (A6), Helmet\_30 (A6), Hexamo\_29 (A6), Hoot\_29 (A6), Indra\_29 (A6), Isiphiwo\_29 (A6), Jeffabunny\_29 (A6), JewelBug\_29 (A6), Jordennis\_29 (A6), Kazan\_29 (A6), Kipper29\_29 (A6), Lilbunny\_29 (A6), McFly\_29 (A6), Neeharika16\_29 (A6), Newrala\_29 (A6), Pmask\_29 (A6), Priamo\_29 (A6), Rifter\_29 (A6), Roksolana\_29 (A6), SmellyB\_29 (A6), SuperAwesome\_29 (A6), SuperCallie99\_29 (A6), Temprado\_30 (A6), ToneTone\_27 (A6), Tucker\_29 (A6), VohminGhazi\_29 (A6), Wiks\_29 (A6), WunderPhul\_29 (A6), Yokurt\_29 (A6), Zaka\_29 (A6), Zulu\_29 (A6),

#### Start 117:

- Found in 49 of 838 ( 5.8% ) of genes in pham
- Manual Annotations of this start: 5 of 770
- Called 10.2% of time when present
- Phage (with cluster) where this start called: Anaysia\_28 (A15), Battleship\_29 (A15), JSwag\_28 (A15), MinecraftSteve\_29 (A15), MyraDee\_23 (A18),

#### Start 118:

- Found in 30 of 838 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 2 of 770
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Bachome\_26 (A11), Ebony\_26 (A11), Petersenfast\_25 (A11),

#### Start 136:



- Found in 1 of 838 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anon\_26 (A15),

Start 141:

- Found in 32 of 838 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 1 of 770
- Called 3.1% of time when present
- Phage (with cluster) where this start called: SororFago\_25 (A14),

Start 143:

- Found in 135 of 838 ( 16.1% ) of genes in pham
- Manual Annotations of this start: 5 of 770
- Called 3.7% of time when present
- Phage (with cluster) where this start called: Chargerpower\_26 (A), Gail\_25 (A14), Luchador\_27 (A14), Phaded\_29 (A2), Pukovnik\_28 (A2),

Start 146:

- Found in 3 of 838 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 2 of 770
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Herbertwm\_23 (A2), Iwokeuplikedis\_27 (A2), Kinmap\_26 (A21),

Start 149:

- Found in 5 of 838 ( 0.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: DontArgue\_24 (A10),

Start 152:

- Found in 34 of 838 ( 4.1% ) of genes in pham
- Manual Annotations of this start: 5 of 770
- Called 17.6% of time when present
- Phage (with cluster) where this start called: Bactobuster\_27 (A2), IronMan\_28 (A2), Jaan\_29 (A2), Jeeves\_25 (A14), Landor\_27 (A2), Sunhee\_24 (A14),

Start 155:

- Found in 334 of 838 ( 39.9% ) of genes in pham
- Manual Annotations of this start: 22 of 770
- Called 7.2% of time when present
- Phage (with cluster) where this start called: Arturo\_24 (A4), Cintron\_25 (A4), Commander\_25 (A4), Eagle\_24 (A4), Eapen\_25 (A4), Flux\_25 (A4), Gadost\_25 (A4), Houdini22\_25 (A4), Huxley\_25 (A4), ICleared\_25 (A4), LHTSCC\_26 (A4), LappelDuVide\_25 (A4), LochMonster\_25 (A4), Nemo27\_25 (A4), NotAPhaseMom\_25 (A4), Nyxis\_25 (A4), Obama12\_26 (A4), Pipcraft\_25 (A4), SenorClean\_24 (A4), Skipitt\_25 (A4), Spino\_25 (A4), TinaFeyge\_25 (A4), Tinybot\_24 (A4), Wilbur\_25 (A4),

Start 163:

- Found in 139 of 838 ( 16.6% ) of genes in pham
- Manual Annotations of this start: 10 of 770
- Called 10.8% of time when present

- Phage (with cluster) where this start called: Chupacabra\_25 (A10), DustyMartin\_29 (A10), Eaglepride\_26 (A10), KittenMittens\_24 (A10), Koan\_24 (A4), LeoAvram\_25 (A4), OKCentral2016\_25 (A10), RhynO\_26 (A10), Rosa24\_24 (A4), Rowdy\_29 (A10), Severus\_24 (A10), Shapes\_29 (A10), Topanga\_25 (A10), Trike\_23 (A10), WalterMcMickey\_25 (A10),

Start 174:

- Found in 5 of 838 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 770
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Cindaradix\_24 (A4),

Start 179:

- Found in 22 of 838 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 15 of 770
- Called 77.3% of time when present
- Phage (with cluster) where this start called: Boohoo\_28 (A15), DekHockey33\_28 (A15), Epsocamisio\_28 (A15), KatherineG\_28 (A15), LastResort\_28 (A15), Looper\_29 (A15), Nedarya\_27 (A15), Oofda\_29 (A15), ReMo\_28 (A15), Remus\_28 (A15), Rosalind\_28 (A15), ShayRa\_29 (A15), Soups\_28 (A15), Strosahl\_28 (A15), Switzerland\_28 (A15), Waits\_28 (A15), Warrior24\_29 (A15),

### Summary by clusters:

There are 22 clusters represented in this pham: A15, A14, A17, A16, A11, A10, A13, A12, A19, A18, A1, A3, A2, A5, A4, A7, A6, A9, A8, A, A20, A21,

Info for manual annotations of cluster A:

- Start number 143 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A1:

- Start number 111 was manually annotated 200 times for cluster A1.
- Start number 112 was manually annotated 8 times for cluster A1.
- Start number 113 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster A10:

- Start number 105 was manually annotated 8 times for cluster A10.
- Start number 163 was manually annotated 9 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 112 was manually annotated 22 times for cluster A11.
- Start number 118 was manually annotated 2 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 27 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 141 was manually annotated 1 time for cluster A14.
- Start number 143 was manually annotated 2 times for cluster A14.
- Start number 152 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A15:

- Start number 115 was manually annotated 1 time for cluster A15.
- Start number 117 was manually annotated 4 times for cluster A15.
- Start number 136 was manually annotated 1 time for cluster A15.
- Start number 179 was manually annotated 15 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 5 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 117 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 38 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 25 was manually annotated 1 time for cluster A2.
- Start number 102 was manually annotated 1 time for cluster A2.
- Start number 103 was manually annotated 4 times for cluster A2.
- Start number 107 was manually annotated 88 times for cluster A2.
- Start number 143 was manually annotated 2 times for cluster A2.
- Start number 146 was manually annotated 2 times for cluster A2.
- Start number 152 was manually annotated 4 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 11 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 37 was manually annotated 32 times for cluster A3.
- Start number 38 was manually annotated 81 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 109 was manually annotated 113 times for cluster A4.
- Start number 155 was manually annotated 22 times for cluster A4.
- Start number 163 was manually annotated 1 time for cluster A4.
- Start number 174 was manually annotated 1 time for cluster A4.

Info for manual annotations of cluster A5:

- Start number 1 was manually annotated 30 times for cluster A5.
- Start number 2 was manually annotated 8 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 107 was manually annotated 1 time for cluster A6.
- Start number 116 was manually annotated 41 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 17 was manually annotated 4 times for cluster A7.
- Start number 32 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:

- Start number 9 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 23 was manually annotated 1 time for cluster A9.
- Start number 34 was manually annotated 1 time for cluster A9.
- Start number 52 was manually annotated 33 times for cluster A9.

**Gene Information:**

Gene: 20ES\_26 Start: 16642, Stop: 19185, Start Num: 107

Candidate Starts for 20ES\_26:

(46, 16390), (Start: 107 @16642 has 89 MA's), (172, 16822), (173, 16825), (188, 16855), (245, 16990), (249, 16999), (256, 17020), (258, 17029), (268, 17050), (279, 17083), (286, 17116), (312, 17209), (322, 17257), (325, 17275), (332, 17287), (337, 17308), (341, 17329), (344, 17350), (345, 17353), (383, 17539), (393, 17581), (394, 17590), (396, 17599), (410, 17656), (427, 17722), (440, 17761), (477, 17848), (507, 17947), (546, 18067), (552, 18076), (555, 18082), (559, 18091), (568, 18112), (578, 18136), (586, 18157), (607, 18178), (609, 18187), (620, 18217), (623, 18229), (628, 18244), (649, 18286), (687, 18379), (689, 18388), (703, 18415), (718, 18478), (756, 18661), (804, 18751), (810, 18760), (845, 18871), (850, 18901), (866, 18985),

Gene: 40AC\_29 Start: 18647, Stop: 21385, Start Num: 116

Candidate Starts for 40AC\_29:

(Start: 116 @18647 has 41 MA's), (Start: 155 @18758 has 22 MA's), (197, 18836), (206, 18860), (212, 18884), (248, 18989), (252, 18998), (258, 19028), (270, 19064), (293, 19145), (295, 19151), (296, 19154), (297, 19157), (319, 19265), (337, 19352), (339, 19364), (341, 19373), (357, 19457), (366, 19499), (385, 19595), (391, 19631), (399, 19673), (410, 19709), (415, 19736), (431, 19796), (513, 20042), (532, 20111), (535, 20123), (595, 20273), (632, 20399), (684, 20549), (687, 20561), (707, 20645), (746, 20831), (789, 20936), (805, 20966), (808, 20975), (845, 21074), (850, 21104), (864, 21170), (866, 21182), (894, 21323),

Gene: A6\_22 Start: 15930, Stop: 18401, Start Num: 111

Candidate Starts for A6\_22:

(Start: 111 @15930 has 200 MA's), (125, 15969), (144, 16032), (Start: 155 @16062 has 22 MA's), (162, 16083), (176, 16104), (181, 16116), (194, 16134), (243, 16158), (262, 16224), (271, 16251), (315, 16422), (321, 16455), (339, 16521), (389, 16776), (393, 16797), (398, 16824), (410, 16863), (476, 16983), (500, 17019), (555, 17112), (564, 17133), (592, 17190), (644, 17310), (659, 17346), (671, 17376), (682, 17412), (707, 17478), (710, 17499), (721, 17541), (741, 17640), (773, 17781), (784, 17802), (842, 18033), (855, 18114), (875, 18225), (888, 18312), (895, 18351), (897, 18366),

Gene: ACFishhook\_27 Start: 16138, Stop: 19164, Start Num: 38

Candidate Starts for ACFishhook\_27:

(30, 16084), (Start: 38 @16138 has 82 MA's), (55, 16252), (68, 16318), (69, 16321), (73, 16330), (86, 16366), (96, 16417), (124, 16489), (Start: 143 @16561 has 5 MA's), (190, 16681), (193, 16684), (214, 16753), (226, 16798), (258, 16891), (264, 16900), (279, 16945), (288, 16984), (295, 17008), (299, 17020), (308, 17053), (312, 17071), (316, 17092), (327, 17140), (329, 17146), (334, 17161), (337, 17170), (339, 17182), (341, 17191), (359, 17284), (380, 17371), (383, 17401), (384, 17404), (391, 17431), (393, 17443), (405, 17497), (410, 17518), (416, 17548), (427, 17584), (477, 17710), (491, 17764), (507, 17809), (525, 17857), (535, 17899), (538, 17908), (552, 17938), (582, 18010), (585, 18016), (606, 18037), (607, 18040), (610, 18052), (656, 18169), (658, 18178), (689, 18250), (690, 18253), (706, 18289), (710, 18310), (718, 18340), (719, 18343), (721, 18352), (757, 18535), (776, 18601), (780, 18613), (800, 18655), (817, 18718), (836, 18775), (844, 18844), (851, 18880), (867, 18961), (892, 19096), (894, 19108),

Gene: AFIS\_24 Start: 16262, Stop: 18922, Start Num: 111

Candidate Starts for AFIS\_24:

(Start: 111 @16262 has 200 MA's), (125, 16301), (144, 16364), (145, 16370), (Start: 155 @16394 has 22 MA's), (176, 16436), (315, 16745), (329, 16808), (341, 16853), (346, 16877), (361, 16952), (364, 16964), (451, 17285), (565, 17615), (584, 17666), (598, 17693), (671, 17897), (708, 18011), (710, 18020), (715, 18041), (721, 18062), (741, 18161), (750, 18203), (751, 18206), (788, 18335), (815, 18419), (827, 18464), (875, 18746), (888, 18833), (895, 18872), (897, 18887),

Gene: AN3\_26 Start: 16626, Stop: 19163, Start Num: 107

Candidate Starts for AN3\_26:

(Start: 107 @16626 has 89 MA's), (172, 16806), (173, 16809), (202, 16857), (245, 16968), (249, 16977), (256, 16998), (258, 17007), (268, 17028), (279, 17061), (286, 17094), (312, 17187), (322, 17235), (325, 17253), (332, 17265), (337, 17286), (341, 17307), (344, 17328), (345, 17331), (383, 17517), (393, 17559), (394, 17568), (410, 17634), (427, 17700), (436, 17727), (440, 17739), (477, 17826), (507, 17925), (546, 18045), (552, 18054), (555, 18060), (559, 18069), (568, 18090), (578, 18114), (586, 18135), (607, 18156), (608, 18162), (620, 18195), (623, 18207), (649, 18264), (689, 18366), (703, 18393), (718, 18456), (804, 18729), (810, 18738), (845, 18849), (850, 18879), (866, 18963),

Gene: AN9\_29 Start: 16651, Stop: 19164, Start Num: 107

Candidate Starts for AN9\_29:

(Start: 107 @16651 has 89 MA's), (172, 16831), (173, 16834), (233, 16945), (279, 17080), (294, 17140), (299, 17155), (307, 17185), (308, 17188), (325, 17272), (334, 17296), (340, 17320), (344, 17347), (345, 17350), (371, 17461), (383, 17536), (390, 17563), (393, 17578), (405, 17632), (410, 17653), (427, 17719), (434, 17737), (436, 17746), (477, 17845), (486, 17878), (488, 17887), (507, 17944), (512, 17959), (546, 18064), (607, 18175), (610, 18187), (612, 18193), (623, 18226), (673, 18346), (718, 18475), (722, 18490), (727, 18520), (730, 18532), (737, 18568), (765, 18682), (776, 18694), (801, 18736), (861, 18943), (865, 18961), (866, 18964), (902, 19150),

Gene: ANI8\_29 Start: 16651, Stop: 19164, Start Num: 107

Candidate Starts for ANI8\_29:

(Start: 107 @16651 has 89 MA's), (172, 16831), (173, 16834), (233, 16945), (279, 17080), (294, 17140), (299, 17155), (307, 17185), (308, 17188), (325, 17272), (334, 17296), (340, 17320), (344, 17347), (345, 17350), (371, 17461), (383, 17536), (390, 17563), (393, 17578), (405, 17632), (410, 17653), (427, 17719), (434, 17737), (436, 17746), (477, 17845), (486, 17878), (488, 17887), (507, 17944), (512, 17959), (546, 18064), (607, 18175), (610, 18187), (612, 18193), (623, 18226), (673, 18346), (718, 18475), (722, 18490), (727, 18520), (730, 18532), (737, 18568), (765, 18682), (776, 18694), (801, 18736), (861, 18943), (865, 18961), (866, 18964), (902, 19150),

Gene: AbbyPaige\_28 Start: 17120, Stop: 19663, Start Num: 107

Candidate Starts for AbbyPaige\_28:

(Start: 107 @17120 has 89 MA's), (172, 17300), (173, 17303), (188, 17333), (247, 17471), (249, 17477), (256, 17498), (258, 17507), (264, 17516), (268, 17528), (282, 17573), (286, 17594), (299, 17636), (312, 17687), (321, 17732), (322, 17735), (325, 17753), (337, 17786), (339, 17798), (341, 17807), (344, 17828), (345, 17831), (362, 17918), (383, 18017), (393, 18059), (394, 18068), (396, 18077), (410, 18134), (427, 18200), (440, 18239), (479, 18332), (488, 18368), (507, 18425), (529, 18491), (538, 18524), (544, 18539), (546, 18545), (552, 18554), (559, 18569), (568, 18590), (575, 18611), (585, 18632), (586, 18635), (606, 18653), (607, 18656), (623, 18707), (649, 18764), (654, 18782), (664, 18806), (689, 18866), (703, 18893), (718, 18956), (727, 19001), (756, 19139), (804, 19229), (810, 19238), (830, 19262), (843, 19340), (845, 19349), (850, 19379), (866, 19463),

Gene: AbbysRanger\_25 Start: 15899, Stop: 18499, Start Num: 109

Candidate Starts for AbbysRanger\_25:



(Start: 109 @15899 has 113 MA's), (229, 16241), (246, 16289), (263, 16346), (291, 16451), (295, 16466), (299, 16478), (315, 16541), (341, 16649), (344, 16670), (348, 16691), (457, 17042), (481, 17093), (499, 17138), (542, 17249), (545, 17255), (591, 17351), (614, 17387), (626, 17423), (649, 17471), (700, 17588), (726, 17702), (757, 17867), (762, 17885), (802, 17999), (807, 18011), (835, 18101), (847, 18194), (860, 18266), (863, 18275), (875, 18335), (877, 18344), (892, 18431), (899, 18479),

Gene: Abbysshoes\_25 Start: 16660, Stop: 19059, Start Num: 111

Candidate Starts for Abbysshoes\_25:

(Start: 111 @16660 has 200 MA's), (125, 16699), (144, 16762), (Start: 155 @16792 has 22 MA's), (162, 16813), (176, 16834), (181, 16846), (194, 16864), (250, 16909), (262, 16954), (315, 17152), (321, 17185), (339, 17251), (389, 17506), (393, 17527), (398, 17554), (410, 17593), (432, 17650), (451, 17680), (555, 17842), (627, 17995), (638, 18007), (643, 18022), (696, 18139), (712, 18184), (716, 18205), (717, 18208), (753, 18358), (757, 18373), (773, 18439), (793, 18481), (842, 18691), (855, 18772), (875, 18883), (888, 18970), (895, 19009), (897, 19024),

Gene: Abdiel\_24 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for Abdiel\_24:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (283, 16401), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (545, 17238), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: Abrogate\_250 Start: 17018, Stop: 19597, Start Num: 111

Candidate Starts for Abrogate\_250:

(Start: 111 @17018 has 200 MA's), (125, 17057), (144, 17120), (Start: 155 @17150 has 22 MA's), (234, 17234), (286, 17405), (329, 17573), (341, 17618), (345, 17642), (348, 17660), (418, 17972), (483, 18128), (520, 18230), (533, 18263), (571, 18335), (592, 18374), (630, 18461), (671, 18560), (707, 18662), (710, 18683), (714, 18695), (721, 18725), (741, 18824), (753, 18887), (818, 19106), (827, 19139), (875, 19421), (888, 19508), (895, 19547), (897, 19562),

Gene: Achebe\_24 Start: 15879, Stop: 18479, Start Num: 109

Candidate Starts for Achebe\_24:

(Start: 109 @15879 has 113 MA's), (246, 16269), (283, 16398), (291, 16431), (299, 16458), (315, 16521), (341, 16629), (370, 16764), (420, 16962), (471, 17049), (481, 17073), (499, 17118), (542, 17229), (545, 17235), (626, 17403), (649, 17451), (670, 17508), (700, 17568), (710, 17616), (719, 17649), (726, 17682), (729, 17700), (757, 17847), (762, 17865), (807, 17991), (835, 18081), (848, 18180), (860, 18246), (863, 18255), (875, 18315), (877, 18324), (883, 18360), (886, 18378), (892, 18411), (899, 18459),

Gene: Acme\_26 Start: 16689, Stop: 19160, Start Num: 111

Candidate Starts for Acme\_26:

(Start: 111 @16689 has 200 MA's), (125, 16728), (144, 16791), (Start: 155 @16821 has 22 MA's), (162, 16842), (176, 16863), (181, 16875), (194, 16893), (243, 16917), (282, 17055), (291, 17091), (315, 17181), (321, 17214), (339, 17280), (389, 17535), (393, 17556), (398, 17583), (403, 17598), (432, 17679), (476, 17742), (500, 17778), (555, 17871), (564, 17892), (569, 17907), (579, 17928), (580, 17931), (615, 18000), (627, 18036), (644, 18069), (659, 18105), (671, 18135), (682, 18171), (707, 18237), (710, 18258), (741, 18399), (773, 18540), (784, 18561), (826, 18696), (855, 18873), (875, 18984), (885, 19050), (888, 19071), (895, 19110), (897, 19125),

Gene: Acolyte\_26 Start: 16749, Stop: 19700, Start Num: 25

Candidate Starts for Acolyte\_26:

(Start: 25 @16749 has 1 MA's), (28, 16767), (45, 16872), (51, 16929), (53, 16941), (58, 16959), (75, 17031), (95, 17115), (160, 17310), (184, 17358), (202, 17382), (253, 17523), (259, 17550), (264, 17565), (275, 17598), (279, 17610), (294, 17670), (299, 17685), (311, 17727), (321, 17781), (322, 17784), (337, 17835), (339, 17847), (341, 17856), (344, 17877), (383, 18066), (390, 18093), (393, 18108), (405, 18162), (410, 18183), (427, 18249), (437, 18279), (454, 18324), (491, 18429), (496, 18441), (511, 18486), (525, 18522), (542, 18585), (568, 18639), (585, 18681), (606, 18702), (607, 18705), (613, 18726), (647, 18810), (649, 18813), (664, 18855), (718, 19005), (725, 19038), (727, 19050), (730, 19062), (737, 19098), (765, 19212), (804, 19281),

Gene: Adahisdi\_25 Start: 16587, Stop: 19067, Start Num: 111

Candidate Starts for Adahisdi\_25:

(Start: 111 @16587 has 200 MA's), (125, 16626), (144, 16689), (Start: 155 @16719 has 22 MA's), (176, 16761), (285, 16968), (291, 16986), (315, 17076), (329, 17139), (337, 17163), (339, 17175), (348, 17226), (460, 17610), (526, 17712), (537, 17751), (560, 17778), (569, 17802), (671, 18030), (707, 18132), (710, 18153), (721, 18195), (741, 18294), (753, 18357), (818, 18576), (827, 18609), (875, 18891), (888, 18978), (895, 19017), (899, 19047),

Gene: Adzzy\_27 Start: 15361, Stop: 17886, Start Num: 103

Candidate Starts for Adzzy\_27:

(Start: 103 @15361 has 4 MA's), (110, 15379), (144, 15484), (170, 15550), (172, 15553), (173, 15556), (188, 15586), (269, 15775), (279, 15805), (286, 15838), (287, 15841), (299, 15880), (312, 15931), (321, 15976), (325, 15997), (337, 16030), (340, 16045), (341, 16051), (344, 16072), (383, 16261), (390, 16288), (393, 16303), (405, 16357), (408, 16369), (410, 16378), (427, 16444), (507, 16669), (512, 16684), (527, 16726), (542, 16780), (546, 16789), (560, 16816), (568, 16834), (582, 16870), (606, 16897), (607, 16900), (620, 16939), (623, 16951), (658, 17038), (689, 17110), (703, 17137), (713, 17179), (718, 17200), (727, 17245), (765, 17407), (804, 17470), (846, 17596), (861, 17668), (866, 17689), (879, 17764), (889, 17800),

Gene: Aeneas\_26 Start: 16694, Stop: 19174, Start Num: 111

Candidate Starts for Aeneas\_26:

(Start: 111 @16694 has 200 MA's), (125, 16733), (144, 16796), (Start: 155 @16826 has 22 MA's), (176, 16868), (285, 17075), (291, 17093), (315, 17183), (329, 17246), (337, 17270), (339, 17282), (348, 17333), (460, 17717), (526, 17819), (537, 17858), (555, 17873), (569, 17909), (630, 18038), (671, 18137), (707, 18239), (710, 18260), (714, 18272), (721, 18302), (741, 18401), (753, 18464), (818, 18683), (827, 18716), (875, 18998), (888, 19085), (895, 19124), (897, 19139),

Gene: Agaliana\_25 Start: 16638, Stop: 19118, Start Num: 111

Candidate Starts for Agaliana\_25:

(Start: 111 @16638 has 200 MA's), (125, 16677), (144, 16740), (Start: 155 @16770 has 22 MA's), (176, 16812), (285, 17019), (291, 17037), (315, 17127), (329, 17190), (337, 17214), (339, 17226), (348, 17277), (460, 17661), (526, 17763), (537, 17802), (555, 17817), (560, 17829), (569, 17853), (671, 18081), (707, 18183), (710, 18204), (714, 18216), (721, 18246), (741, 18345), (753, 18408), (818, 18627), (827, 18660), (875, 18942), (885, 19008), (888, 19029), (895, 19068), (897, 19083),

Gene: Agape74\_28 Start: 17096, Stop: 19639, Start Num: 107

Candidate Starts for Agape74\_28:

(Start: 107 @17096 has 89 MA's), (172, 17276), (173, 17279), (247, 17447), (249, 17453), (256, 17474), (258, 17483), (264, 17492), (268, 17504), (282, 17549), (286, 17570), (299, 17612), (312, 17663), (321, 17708), (322, 17711), (325, 17729), (337, 17762), (339, 17774), (341, 17783), (344, 17804), (345, 17807), (362, 17894), (383, 17993), (393, 18035), (394, 18044), (396, 18053), (410, 18110), (427, 18176), (440, 18215), (479, 18308), (488, 18344), (507, 18401), (529, 18467), (538, 18500), (544, 18515), (546, 18521), (552, 18530), (559, 18545), (568, 18566), (575, 18587), (585,

18608), (586, 18611), (606, 18629), (607, 18632), (623, 18683), (649, 18740), (654, 18758), (664, 18782), (689, 18842), (703, 18869), (718, 18932), (727, 18977), (756, 19115), (804, 19205), (810, 19214), (830, 19238), (845, 19325), (850, 19355), (866, 19439),

Gene: AgentM\_22 Start: 15319, Stop: 18660, Start Num: 1

Candidate Starts for AgentM\_22:

(Start: 1 @15319 has 30 MA's), (Start: 34 @15757 has 1 MA's), (120, 16069), (Start: 141 @16147 has 1 MA's), (154, 16177), (173, 16234), (227, 16381), (229, 16387), (233, 16393), (270, 16519), (274, 16531), (315, 16681), (322, 16717), (329, 16747), (334, 16762), (341, 16792), (342, 16804), (347, 16828), (361, 16897), (379, 16963), (412, 17119), (428, 17188), (429, 17191), (441, 17218), (449, 17242), (514, 17380), (522, 17401), (540, 17446), (563, 17488), (639, 17680), (652, 17710), (660, 17734), (664, 17746), (672, 17767), (683, 17809), (705, 17896), (710, 17932), (715, 17953), (721, 17974), (736, 18052), (745, 18073), (749, 18094), (752, 18115), (756, 18136), (765, 18160), (808, 18223), (842, 18316), (845, 18334), (859, 18415), (863, 18427), (865, 18439), (867, 18448), (878, 18502), (891, 18586), (892, 18595),

Gene: Aglet\_27 Start: 15980, Stop: 19006, Start Num: 38

Candidate Starts for Aglet\_27:

(30, 15926), (Start: 38 @15980 has 82 MA's), (55, 16094), (68, 16160), (69, 16163), (73, 16172), (86, 16208), (96, 16259), (124, 16331), (Start: 143 @16403 has 5 MA's), (190, 16523), (193, 16526), (214, 16595), (226, 16640), (258, 16733), (264, 16742), (270, 16760), (279, 16787), (295, 16850), (299, 16862), (308, 16895), (312, 16913), (325, 16979), (327, 16982), (329, 16988), (334, 17003), (337, 17012), (339, 17024), (341, 17033), (359, 17126), (383, 17243), (384, 17246), (391, 17273), (393, 17285), (405, 17339), (410, 17360), (427, 17426), (440, 17465), (479, 17558), (491, 17606), (507, 17651), (525, 17699), (535, 17741), (538, 17750), (552, 17780), (553, 17783), (559, 17795), (582, 17852), (585, 17858), (606, 17879), (607, 17882), (658, 18020), (664, 18032), (689, 18092), (706, 18131), (741, 18287), (744, 18308), (749, 18332), (757, 18377), (762, 18395), (776, 18443), (780, 18455), (800, 18497), (817, 18560), (836, 18617), (844, 18686), (851, 18722), (867, 18803), (892, 18938),

Gene: AgronaGT15\_27 Start: 15887, Stop: 18913, Start Num: 38

Candidate Starts for AgronaGT15\_27:

(30, 15833), (Start: 38 @15887 has 82 MA's), (55, 16001), (68, 16067), (69, 16070), (73, 16079), (86, 16115), (96, 16166), (124, 16238), (Start: 143 @16310 has 5 MA's), (190, 16430), (193, 16433), (214, 16502), (226, 16547), (258, 16640), (264, 16649), (270, 16667), (279, 16694), (295, 16757), (299, 16769), (308, 16802), (312, 16820), (325, 16886), (327, 16889), (329, 16895), (334, 16910), (337, 16919), (339, 16931), (341, 16940), (355, 17018), (359, 17033), (383, 17150), (384, 17153), (391, 17180), (393, 17192), (405, 17246), (410, 17267), (427, 17333), (440, 17372), (479, 17465), (491, 17513), (507, 17558), (525, 17606), (535, 17648), (538, 17657), (552, 17687), (553, 17690), (559, 17702), (582, 17759), (585, 17765), (606, 17786), (607, 17789), (658, 17927), (664, 17939), (689, 17999), (709, 18056), (741, 18194), (744, 18215), (749, 18239), (757, 18284), (762, 18302), (776, 18350), (780, 18362), (800, 18404), (817, 18467), (836, 18524), (844, 18593), (851, 18629), (867, 18710), (892, 18845),

Gene: Airmid\_22 Start: 15088, Stop: 17901, Start Num: 2

Candidate Starts for Airmid\_22:

(Start: 2 @15088 has 8 MA's), (10, 15277), (82, 15625), (120, 15760), (121, 15766), (208, 15859), (229, 15910), (246, 15946), (273, 16036), (289, 16102), (295, 16123), (315, 16198), (321, 16231), (337, 16285), (342, 16318), (345, 16330), (365, 16429), (376, 16462), (397, 16591), (450, 16756), (466, 16789), (501, 16822), (554, 16903), (560, 16912), (561, 16915), (630, 17026), (634, 17035), (677, 17101), (683, 17110), (710, 17173), (721, 17215), (734, 17287), (745, 17314), (748, 17329), (752, 17356), (756, 17377), (808, 17464), (829, 17494), (842, 17557), (859, 17656), (863, 17668), (865, 17680), (867, 17689), (892, 17836),

Gene: Ajay\_24 Start: 16404, Stop: 18875, Start Num: 111

Candidate Starts for Ajay\_24:

(Start: 111 @16404 has 200 MA's), (125, 16443), (144, 16506), (Start: 155 @16536 has 22 MA's), (162, 16557), (176, 16578), (194, 16608), (243, 16632), (262, 16698), (315, 16896), (321, 16929), (339, 16995), (389, 17250), (393, 17271), (398, 17298), (476, 17457), (500, 17493), (555, 17586), (564, 17607), (569, 17622), (579, 17643), (580, 17646), (615, 17715), (627, 17751), (644, 17784), (659, 17820), (671, 17850), (682, 17886), (707, 17952), (710, 17973), (741, 18114), (773, 18255), (784, 18276), (826, 18411), (855, 18588), (875, 18699), (888, 18786), (895, 18825),

Gene: Albee\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Albee\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (420, 16968), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Alberto7\_26 Start: 16187, Stop: 18787, Start Num: 109

Candidate Starts for Alberto7\_26:

(Start: 109 @16187 has 113 MA's), (Start: 155 @16328 has 22 MA's), (Start: 163 @16346 has 10 MA's), (240, 16553), (252, 16592), (258, 16622), (291, 16739), (299, 16766), (315, 16829), (329, 16892), (341, 16937), (348, 16979), (365, 17063), (457, 17330), (481, 17381), (499, 17426), (530, 17504), (542, 17537), (545, 17543), (557, 17564), (626, 17711), (636, 17732), (647, 17756), (673, 17822), (700, 17876), (710, 17924), (726, 17990), (757, 18155), (762, 18173), (807, 18299), (859, 18551), (860, 18554), (863, 18563), (875, 18623), (892, 18719), (899, 18767),

Gene: Aliter\_27 Start: 17518, Stop: 20427, Start Num: 52

Candidate Starts for Aliter\_27:

(Start: 52 @17518 has 33 MA's), (55, 17530), (68, 17590), (114, 17749), (130, 17812), (153, 17875), (165, 17917), (193, 17974), (260, 18184), (264, 18190), (269, 18205), (294, 18295), (295, 18298), (299, 18310), (311, 18352), (321, 18406), (341, 18481), (344, 18502), (345, 18505), (348, 18523), (361, 18586), (379, 18652), (383, 18691), (390, 18718), (393, 18733), (399, 18763), (405, 18787), (408, 18799), (410, 18808), (427, 18874), (440, 18913), (468, 18979), (479, 19006), (486, 19033), (507, 19099), (523, 19144), (546, 19219), (568, 19264), (575, 19285), (585, 19306), (586, 19309), (606, 19327), (607, 19330), (615, 19357), (649, 19438), (664, 19480), (718, 19630), (722, 19645), (727, 19675), (738, 19726), (756, 19813), (758, 19822), (771, 19873), (800, 19936), (805, 19957), (816, 19993), (830, 20029), (831, 20035), (844, 20113), (849, 20140), (860, 20200), (875, 20269), (879, 20299), (885, 20326), (894, 20365), (900, 20407),

Gene: Alma\_27 Start: 17597, Stop: 20506, Start Num: 52

Candidate Starts for Alma\_27:

(Start: 52 @17597 has 33 MA's), (55, 17609), (68, 17669), (130, 17891), (153, 17954), (165, 17996), (190, 18050), (193, 18053), (207, 18092), (260, 18263), (264, 18269), (269, 18284), (294, 18374), (295, 18377), (299, 18389), (311, 18431), (321, 18485), (325, 18506), (341, 18560), (344, 18581), (345, 18584), (348, 18602), (361, 18665), (379, 18731), (383, 18770), (390, 18797), (393, 18812), (399, 18842), (405, 18866), (408, 18878), (410, 18887), (427, 18953), (440, 18992), (468, 19058), (479, 19085), (486, 19112), (523, 19223), (546, 19298), (559, 19322), (568, 19343), (575, 19364), (585, 19385), (586, 19388), (606, 19406), (607, 19409), (615, 19436), (640, 19496), (651, 19526), (664, 19559), (676, 19589), (685, 19601), (718, 19709), (722, 19724), (727, 19754), (738, 19805), (756, 19892), (758, 19901), (771, 19952), (800, 20015), (805, 20036), (816, 20072), (830, 20108), (831, 20114), (844, 20192), (849, 20219), (875, 20348), (879, 20378), (885, 20405), (894, 20444),

(900, 20486),

Gene: Alsfro\_28 Start: 17131, Stop: 19605, Start Num: 111

Candidate Starts for Alsfro\_28:

(Start: 111 @17131 has 200 MA's), (125, 17170), (137, 17215), (144, 17233), (145, 17239), (Start: 155 @17263 has 22 MA's), (176, 17305), (285, 17506), (291, 17524), (315, 17614), (329, 17677), (337, 17701), (339, 17713), (348, 17764), (447, 18127), (460, 18148), (526, 18250), (537, 18289), (560, 18316), (569, 18340), (630, 18469), (671, 18568), (687, 18622), (707, 18670), (710, 18691), (721, 18733), (733, 18808), (741, 18832), (753, 18895), (801, 19048), (818, 19114), (827, 19147), (875, 19429), (888, 19516), (895, 19555), (897, 19570),

Gene: Altman\_26 Start: 17183, Stop: 19663, Start Num: 111

Candidate Starts for Altman\_26:

(Start: 111 @17183 has 200 MA's), (125, 17222), (144, 17285), (145, 17291), (Start: 155 @17315 has 22 MA's), (176, 17357), (285, 17564), (291, 17582), (315, 17672), (329, 17735), (337, 17759), (339, 17771), (348, 17822), (460, 18206), (526, 18308), (537, 18347), (560, 18374), (569, 18398), (630, 18527), (671, 18626), (707, 18728), (710, 18749), (714, 18761), (721, 18791), (741, 18890), (753, 18953), (818, 19172), (827, 19205), (875, 19487), (885, 19553), (888, 19574), (895, 19613), (897, 19628),

Gene: Alvin\_25 Start: 16904, Stop: 19375, Start Num: 111

Candidate Starts for Alvin\_25:

(Start: 111 @16904 has 200 MA's), (125, 16943), (144, 17006), (Start: 155 @17036 has 22 MA's), (162, 17057), (176, 17078), (181, 17090), (194, 17108), (243, 17132), (262, 17198), (315, 17396), (321, 17429), (339, 17495), (389, 17750), (393, 17771), (398, 17798), (476, 17957), (500, 17993), (555, 18086), (564, 18107), (592, 18164), (644, 18284), (659, 18320), (671, 18350), (682, 18386), (707, 18452), (710, 18473), (721, 18515), (741, 18614), (773, 18755), (784, 18776), (842, 19007), (855, 19088), (875, 19199), (888, 19286), (895, 19325), (899, 19355),

Gene: Anaysia\_28 Start: 15755, Stop: 18112, Start Num: 117

Candidate Starts for Anaysia\_28:

(Start: 115 @15746 has 1 MA's), (Start: 117 @15755 has 5 MA's), (Start: 179 @15923 has 15 MA's), (269, 16166), (270, 16172), (290, 16241), (306, 16298), (341, 16442), (348, 16484), (358, 16532), (359, 16535), (382, 16646), (385, 16664), (412, 16769), (425, 16817), (484, 16922), (513, 16982), (536, 17036), (555, 17072), (569, 17096), (577, 17105), (608, 17168), (616, 17189), (622, 17204), (629, 17228), (635, 17240), (659, 17294), (667, 17315), (680, 17345), (732, 17516), (734, 17537), (756, 17621), (867, 17924), (892, 18047), (894, 18059),

Gene: Aneem\_26 Start: 17163, Stop: 19709, Start Num: 112

Candidate Starts for Aneem\_26:

(Start: 112 @17163 has 30 MA's), (Start: 118 @17181 has 2 MA's), (187, 17355), (197, 17364), (223, 17439), (252, 17493), (267, 17547), (271, 17562), (272, 17565), (279, 17583), (295, 17646), (299, 17658), (315, 17721), (329, 17784), (334, 17799), (337, 17808), (341, 17829), (345, 17853), (348, 17868), (367, 17955), (369, 17958), (374, 17973), (378, 17994), (380, 18006), (389, 18072), (403, 18135), (404, 18144), (412, 18168), (437, 18249), (441, 18258), (445, 18270), (467, 18312), (492, 18369), (513, 18423), (549, 18531), (567, 18570), (618, 18711), (656, 18807), (661, 18828), (675, 18861), (686, 18894), (687, 18897), (709, 18981), (721, 19026), (722, 19029), (746, 19143), (752, 19176), (791, 19248), (808, 19284), (839, 19356), (850, 19434), (860, 19488), (866, 19512), (876, 19560), (889, 19623),

Gene: Anglerfish\_25 Start: 17554, Stop: 19554, Start Num: 111

Candidate Starts for Anglerfish\_25:



(Start: 111 @17554 has 200 MA's), (125, 17593), (144, 17656), (Start: 155 @17686 has 22 MA's), (162, 17707), (238, 17767), (266, 17863), (285, 17932), (289, 17944), (315, 18040), (321, 18073), (376, 18307), (482, 18595), (534, 18697), (592, 18787), (611, 18829), (639, 18883), (644, 18895), (651, 18910), (657, 18928), (663, 18940), (699, 19048), (723, 19144), (769, 19354), (820, 19504),

Gene: AnnaL29\_29 Start: 18479, Stop: 20977, Start Num: 107

Candidate Starts for AnnaL29\_29:

(Start: 107 @18479 has 89 MA's), (Start: 152 @18608 has 5 MA's), (167, 18647), (188, 18692), (249, 18794), (256, 18815), (264, 18833), (276, 18869), (299, 18953), (312, 19004), (327, 19073), (329, 19079), (334, 19094), (337, 19103), (339, 19115), (341, 19124), (383, 19334), (390, 19361), (393, 19376), (405, 19430), (410, 19451), (427, 19517), (440, 19556), (453, 19589), (465, 19619), (507, 19742), (512, 19757), (517, 19784), (544, 19856), (552, 19871), (555, 19877), (559, 19886), (575, 19928), (582, 19943), (586, 19952), (607, 19973), (608, 19979), (620, 20012), (628, 20039), (644, 20069), (649, 20081), (658, 20111), (664, 20123), (703, 20210), (710, 20243), (718, 20273), (725, 20306), (727, 20318), (730, 20330), (756, 20456), (801, 20537), (804, 20546), (810, 20555), (845, 20666), (850, 20696), (866, 20777), (894, 20918),

Gene: Annyong\_25 Start: 15886, Stop: 18486, Start Num: 109

Candidate Starts for Annyong\_25:

(Start: 109 @15886 has 113 MA's), (Start: 155 @16027 has 22 MA's), (Start: 163 @16045 has 10 MA's), (240, 16252), (252, 16291), (258, 16321), (291, 16438), (299, 16465), (315, 16528), (329, 16591), (341, 16636), (348, 16678), (365, 16762), (457, 17029), (481, 17080), (499, 17125), (530, 17203), (542, 17236), (545, 17242), (591, 17338), (606, 17347), (626, 17410), (636, 17431), (649, 17458), (670, 17515), (673, 17521), (700, 17575), (710, 17623), (726, 17689), (757, 17854), (762, 17872), (807, 17998), (859, 18250), (860, 18253), (863, 18262), (875, 18322), (892, 18418), (899, 18466),

Gene: Anon\_26 Start: 16290, Stop: 18746, Start Num: 136

Candidate Starts for Anon\_26:

(54, 15978), (56, 15987), (65, 16038), (67, 16047), (72, 16068), (Start: 136 @16290 has 1 MA's), (142, 16311), (159, 16356), (168, 16383), (194, 16431), (221, 16509), (231, 16542), (233, 16545), (235, 16551), (256, 16620), (261, 16635), (262, 16638), (263, 16641), (268, 16656), (300, 16773), (315, 16827), (321, 16860), (329, 16890), (334, 16905), (336, 16911), (337, 16914), (339, 16926), (349, 16977), (357, 17013), (361, 17034), (385, 17151), (418, 17268), (421, 17286), (422, 17289), (437, 17322), (458, 17370), (474, 17394), (618, 17739), (678, 17901), (686, 17922), (705, 17976), (737, 18135), (743, 18153), (745, 18162), (749, 18183), (756, 18225), (763, 18237), (840, 18402), (850, 18474), (869, 18561), (870, 18567), (892, 18678),

Gene: Anselm\_26 Start: 16722, Stop: 19259, Start Num: 107

Candidate Starts for Anselm\_26:

(Start: 107 @16722 has 89 MA's), (172, 16902), (173, 16905), (188, 16935), (249, 17073), (256, 17094), (258, 17103), (268, 17124), (279, 17157), (299, 17232), (312, 17283), (321, 17328), (322, 17331), (325, 17349), (337, 17382), (339, 17394), (341, 17403), (344, 17424), (345, 17427), (383, 17613), (393, 17655), (394, 17664), (396, 17673), (410, 17730), (427, 17796), (440, 17835), (479, 17928), (507, 18021), (538, 18120), (544, 18135), (546, 18141), (552, 18150), (559, 18165), (568, 18186), (575, 18207), (578, 18210), (586, 18231), (607, 18252), (608, 18258), (620, 18291), (623, 18303), (664, 18402), (689, 18462), (703, 18489), (718, 18552), (727, 18597), (756, 18735), (804, 18825), (810, 18834), (830, 18858), (845, 18945), (850, 18975), (866, 19059),

Gene: Anthony\_25 Start: 14775, Stop: 17657, Start Num: 11

Candidate Starts for Anthony\_25:

(Start: 9 @14736 has 11 MA's), (Start: 11 @14775 has 1 MA's), (Start: 23 @14934 has 1 MA's), (26, 14946), (33, 14979), (41, 15024), (44, 15045), (76, 15063), (79, 15072), (90, 15117), (104, 15165),

(148, 15288), (198, 15381), (216, 15438), (223, 15468), (252, 15525), (274, 15603), (277, 15612), (283, 15630), (288, 15654), (297, 15684), (315, 15753), (329, 15819), (332, 15822), (337, 15843), (371, 15993), (417, 16209), (429, 16257), (462, 16338), (465, 16341), (538, 16503), (544, 16515), (580, 16596), (603, 16638), (631, 16728), (653, 16776), (666, 16809), (719, 16998), (722, 17010), (724, 17019), (735, 17082), (748, 17121), (749, 17127), (756, 17169), (809, 17247), (861, 17436), (865, 17454), (866, 17457), (875, 17502), (890, 17586), (898, 17634),

Gene: Anubis\_29 Start: 15865, Stop: 18891, Start Num: 38

Candidate Starts for Anubis\_29:

(30, 15811), (Start: 38 @15865 has 82 MA's), (55, 15979), (68, 16045), (69, 16048), (73, 16057), (86, 16093), (96, 16144), (124, 16216), (Start: 143 @16288 has 5 MA's), (190, 16408), (193, 16411), (214, 16480), (226, 16525), (258, 16618), (264, 16627), (270, 16645), (279, 16672), (295, 16735), (299, 16747), (308, 16780), (312, 16798), (325, 16864), (327, 16867), (329, 16873), (334, 16888), (337, 16897), (339, 16909), (341, 16918), (355, 16996), (359, 17011), (383, 17128), (384, 17131), (391, 17158), (393, 17170), (405, 17224), (410, 17245), (427, 17311), (440, 17350), (479, 17443), (491, 17491), (507, 17536), (525, 17584), (535, 17626), (538, 17635), (552, 17665), (553, 17668), (559, 17680), (582, 17737), (585, 17743), (606, 17764), (607, 17767), (658, 17905), (664, 17917), (689, 17977), (709, 18034), (741, 18172), (744, 18193), (749, 18217), (757, 18262), (762, 18280), (776, 18328), (780, 18340), (800, 18382), (817, 18445), (836, 18502), (844, 18571), (851, 18607), (867, 18688), (892, 18823),

Gene: Applejack\_24 Start: 16335, Stop: 18815, Start Num: 111

Candidate Starts for Applejack\_24:

(Start: 111 @16335 has 200 MA's), (125, 16374), (144, 16437), (Start: 155 @16467 has 22 MA's), (176, 16509), (285, 16716), (291, 16734), (315, 16824), (329, 16887), (337, 16911), (339, 16923), (348, 16974), (460, 17358), (526, 17460), (537, 17499), (560, 17526), (569, 17550), (630, 17679), (671, 17778), (707, 17880), (710, 17901), (714, 17913), (721, 17943), (741, 18042), (753, 18105), (818, 18324), (827, 18357), (875, 18639), (888, 18726), (895, 18765), (897, 18780),

Gene: Aragog\_22 Start: 15349, Stop: 18690, Start Num: 1

Candidate Starts for Aragog\_22:

(Start: 1 @15349 has 30 MA's), (Start: 34 @15787 has 1 MA's), (120, 16099), (Start: 141 @16177 has 1 MA's), (154, 16207), (173, 16264), (227, 16411), (229, 16417), (233, 16423), (270, 16549), (274, 16561), (315, 16711), (322, 16747), (329, 16777), (334, 16792), (341, 16822), (342, 16834), (347, 16858), (361, 16927), (379, 16993), (412, 17149), (428, 17218), (429, 17221), (441, 17248), (449, 17272), (514, 17410), (522, 17431), (540, 17476), (563, 17518), (639, 17710), (652, 17740), (660, 17764), (664, 17776), (672, 17797), (683, 17839), (705, 17926), (710, 17962), (715, 17983), (721, 18004), (736, 18082), (745, 18103), (749, 18124), (752, 18145), (756, 18166), (765, 18190), (808, 18253), (842, 18346), (845, 18364), (859, 18445), (863, 18457), (865, 18469), (867, 18478), (878, 18532), (891, 18616), (892, 18625),

Gene: Arcanine\_25 Start: 16570, Stop: 18570, Start Num: 111

Candidate Starts for Arcanine\_25:

(Start: 111 @16570 has 200 MA's), (125, 16609), (144, 16672), (Start: 155 @16702 has 22 MA's), (162, 16723), (238, 16783), (266, 16879), (278, 16918), (285, 16948), (289, 16960), (315, 17056), (321, 17089), (376, 17323), (433, 17548), (482, 17611), (534, 17713), (543, 17725), (592, 17803), (611, 17845), (639, 17899), (644, 17911), (651, 17926), (657, 17944), (663, 17956), (688, 18034), (699, 18064), (710, 18109), (723, 18160), (769, 18370), (820, 18520),

Gene: ArcherNM\_28 Start: 18421, Stop: 20922, Start Num: 107

Candidate Starts for ArcherNM\_28:

(84, 18337), (Start: 107 @18421 has 89 MA's), (144, 18532), (Start: 152 @18550 has 5 MA's), (172, 18604), (177, 18619), (188, 18637), (192, 18643), (245, 18730), (256, 18760), (264, 18778), (299,

18898), (312, 18949), (327, 19018), (329, 19024), (334, 19039), (337, 19048), (339, 19060), (341, 19069), (383, 19279), (390, 19306), (393, 19321), (405, 19375), (410, 19396), (427, 19462), (440, 19501), (507, 19687), (517, 19729), (538, 19786), (544, 19801), (546, 19807), (552, 19816), (559, 19831), (568, 19852), (575, 19873), (606, 19915), (610, 19930), (620, 19957), (644, 20014), (649, 20026), (664, 20068), (689, 20128), (703, 20155), (709, 20185), (718, 20218), (727, 20263), (730, 20275), (801, 20482), (804, 20491), (810, 20500), (845, 20611), (850, 20641), (866, 20722), (892, 20851),

Gene: Archetta\_22 Start: 15062, Stop: 18403, Start Num: 1

Candidate Starts for Archetta\_22:

(Start: 1 @15062 has 30 MA's), (Start: 34 @15500 has 1 MA's), (120, 15812), (Start: 141 @15890 has 1 MA's), (154, 15920), (173, 15977), (227, 16124), (229, 16130), (233, 16136), (270, 16262), (274, 16274), (315, 16424), (322, 16460), (329, 16490), (334, 16505), (341, 16535), (342, 16547), (347, 16571), (361, 16640), (379, 16706), (412, 16862), (428, 16931), (429, 16934), (441, 16961), (449, 16985), (514, 17123), (522, 17144), (540, 17189), (563, 17231), (639, 17423), (652, 17453), (660, 17477), (664, 17489), (672, 17510), (683, 17552), (705, 17639), (710, 17675), (715, 17696), (721, 17717), (736, 17795), (745, 17816), (749, 17837), (752, 17858), (756, 17879), (765, 17903), (808, 17966), (842, 18059), (845, 18077), (859, 18158), (863, 18170), (865, 18182), (867, 18191), (878, 18245), (891, 18329), (892, 18338),

Gene: Arissanae\_25 Start: 15680, Stop: 18592, Start Num: 52

Candidate Starts for Arissanae\_25:

(Start: 52 @15680 has 33 MA's), (55, 15692), (61, 15716), (63, 15728), (94, 15848), (106, 15890), (114, 15911), (165, 16079), (190, 16133), (193, 16136), (254, 16328), (260, 16346), (266, 16358), (268, 16364), (279, 16397), (286, 16430), (297, 16466), (299, 16472), (303, 16493), (312, 16523), (321, 16568), (325, 16589), (334, 16613), (335, 16616), (339, 16634), (341, 16643), (342, 16655), (352, 16703), (361, 16748), (383, 16853), (404, 16946), (405, 16949), (407, 16955), (410, 16970), (412, 16979), (414, 16991), (420, 17015), (424, 17027), (427, 17036), (456, 17120), (465, 17138), (468, 17141), (542, 17372), (546, 17381), (568, 17426), (575, 17447), (582, 17462), (585, 17468), (606, 17489), (607, 17492), (615, 17519), (624, 17546), (649, 17600), (664, 17642), (685, 17684), (718, 17792), (738, 17888), (756, 17975), (758, 17984), (771, 18035), (800, 18098), (816, 18158), (830, 18194), (831, 18200), (844, 18278), (849, 18305), (851, 18314), (879, 18464), (889, 18500), (892, 18518), (894, 18530),

Gene: Arlo\_23 Start: 15964, Stop: 18444, Start Num: 111

Candidate Starts for Arlo\_23:

(Start: 111 @15964 has 200 MA's), (125, 16003), (144, 16066), (Start: 155 @16096 has 22 MA's), (176, 16138), (285, 16345), (291, 16363), (315, 16453), (329, 16516), (337, 16540), (339, 16552), (348, 16603), (460, 16987), (526, 17089), (537, 17128), (555, 17143), (560, 17155), (569, 17179), (630, 17308), (671, 17407), (707, 17509), (710, 17530), (721, 17572), (741, 17671), (753, 17734), (777, 17824), (818, 17953), (827, 17986), (875, 18268), (885, 18334), (888, 18355), (895, 18394), (899, 18424),

Gene: Artemis2UCLA\_29 Start: 16617, Stop: 18833, Start Num: 116

Candidate Starts for Artemis2UCLA\_29:

(93, 16572), (Start: 116 @16617 has 41 MA's), (160, 16728), (223, 16884), (270, 17031), (274, 17043), (314, 17190), (315, 17193), (321, 17226), (343, 17316), (357, 17385), (376, 17460), (412, 17628), (590, 17886), (618, 17931), (680, 18039), (710, 18102), (721, 18144), (745, 18243), (749, 18264), (756, 18306), (791, 18357), (805, 18384), (839, 18465), (850, 18555),

Gene: Arturo\_24 Start: 16137, Stop: 18596, Start Num: 155

Candidate Starts for Arturo\_24:

(Start: 109 @15996 has 113 MA's), (Start: 155 @16137 has 22 MA's), (Start: 163 @16155 has 10 MA's), (222, 16311), (240, 16362), (258, 16431), (291, 16548), (299, 16575), (315, 16638), (329, 16701), (341, 16746), (348, 16788), (365, 16872), (457, 17139), (481, 17190), (499, 17235), (530, 17313), (542, 17346), (545, 17352), (608, 17466), (626, 17520), (647, 17565), (670, 17625), (700, 17685), (726, 17799), (729, 17817), (757, 17964), (762, 17982), (807, 18108), (859, 18360), (860, 18363), (863, 18372), (874, 18429), (875, 18432), (883, 18477), (892, 18528), (899, 18576),

Gene: Ashballer\_23 Start: 16347, Stop: 18818, Start Num: 111

Candidate Starts for Ashballer\_23:

(Start: 111 @16347 has 200 MA's), (125, 16386), (144, 16449), (Start: 155 @16479 has 22 MA's), (162, 16500), (176, 16521), (181, 16533), (194, 16551), (262, 16641), (315, 16839), (321, 16872), (339, 16938), (389, 17193), (393, 17214), (398, 17241), (476, 17400), (500, 17436), (555, 17529), (564, 17550), (592, 17607), (644, 17727), (659, 17763), (671, 17793), (682, 17829), (707, 17895), (710, 17916), (741, 18057), (773, 18198), (784, 18219), (826, 18354), (855, 18531), (875, 18642), (885, 18708), (888, 18729), (895, 18768),

Gene: Astro\_22 Start: 14549, Stop: 17626, Start Num: 9

Candidate Starts for Astro\_22:

(Start: 9 @14549 has 11 MA's), (15, 14633), (Start: 34 @14801 has 1 MA's), (Start: 37 @14825 has 32 MA's), (73, 14873), (Start: 107 @14993 has 89 MA's), (129, 15065), (189, 15215), (191, 15218), (196, 15224), (252, 15410), (269, 15470), (270, 15476), (289, 15542), (297, 15569), (300, 15584), (314, 15635), (315, 15638), (321, 15671), (329, 15704), (367, 15872), (404, 16055), (412, 16079), (422, 16127), (428, 16148), (429, 16151), (493, 16295), (516, 16352), (531, 16382), (547, 16421), (580, 16493), (601, 16523), (630, 16622), (642, 16652), (660, 16697), (710, 16895), (715, 16916), (719, 16928), (745, 17036), (756, 17099), (765, 17123), (792, 17153), (808, 17186), (830, 17219), (842, 17279), (846, 17306), (866, 17405), (867, 17411), (883, 17501), (886, 17522), (893, 17561), (903, 17609),

Gene: Atkinbua\_25 Start: 16303, Stop: 18771, Start Num: 111

Candidate Starts for Atkinbua\_25:

(Start: 111 @16303 has 200 MA's), (Start: 117 @16318 has 5 MA's), (144, 16402), (145, 16408), (Start: 155 @16432 has 22 MA's), (162, 16453), (176, 16474), (194, 16504), (243, 16528), (262, 16594), (315, 16792), (321, 16825), (339, 16891), (389, 17146), (393, 17167), (398, 17194), (476, 17353), (555, 17482), (564, 17503), (569, 17518), (579, 17539), (580, 17542), (615, 17611), (627, 17647), (644, 17680), (659, 17716), (671, 17746), (682, 17782), (707, 17848), (710, 17869), (741, 18010), (773, 18151), (784, 18172), (826, 18307), (855, 18484), (875, 18595), (885, 18661), (888, 18682), (895, 18721),

Gene: AugsMagnumOpus\_29 Start: 15971, Stop: 18997, Start Num: 38

Candidate Starts for AugsMagnumOpus\_29:

(30, 15917), (Start: 38 @15971 has 82 MA's), (55, 16085), (68, 16151), (69, 16154), (73, 16163), (86, 16199), (96, 16250), (124, 16322), (Start: 143 @16394 has 5 MA's), (190, 16514), (193, 16517), (214, 16586), (226, 16631), (258, 16724), (264, 16733), (270, 16751), (279, 16778), (295, 16841), (299, 16853), (308, 16886), (312, 16904), (325, 16970), (327, 16973), (329, 16979), (334, 16994), (337, 17003), (339, 17015), (341, 17024), (359, 17117), (383, 17234), (384, 17237), (391, 17264), (393, 17276), (405, 17330), (410, 17351), (427, 17417), (436, 17444), (479, 17549), (491, 17597), (507, 17642), (525, 17690), (535, 17732), (538, 17741), (552, 17771), (553, 17774), (559, 17786), (582, 17843), (585, 17849), (606, 17870), (607, 17873), (658, 18011), (664, 18023), (689, 18083), (710, 18143), (718, 18173), (719, 18176), (721, 18185), (741, 18278), (757, 18368), (776, 18434), (780, 18446), (800, 18488), (817, 18551), (836, 18608), (844, 18677), (851, 18713), (867, 18794), (892, 18929),

Gene: AvatarAhPeg\_26 Start: 16164, Stop: 18764, Start Num: 109

Candidate Starts for AvatarAhPeg\_26:

(Start: 109 @16164 has 113 MA's), (Start: 174 @16347 has 1 MA's), (229, 16506), (246, 16554), (291, 16716), (296, 16734), (315, 16806), (341, 16914), (357, 16998), (420, 17247), (471, 17334), (481, 17358), (499, 17403), (542, 17514), (545, 17520), (614, 17652), (626, 17688), (636, 17709), (649, 17736), (670, 17793), (700, 17853), (726, 17967), (757, 18132), (762, 18150), (786, 18219), (807, 18276), (848, 18465), (860, 18531), (863, 18540), (875, 18600), (877, 18609), (883, 18645), (886, 18663), (892, 18696), (899, 18744),

Gene: Avle17\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Avle17\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: B1\_23 Start: 15174, Stop: 18218, Start Num: 37

Candidate Starts for B1\_23:

(Start: 37 @15174 has 32 MA's), (66, 15348), (69, 15360), (Start: 143 @15603 has 5 MA's), (190, 15723), (193, 15726), (261, 15948), (279, 15993), (299, 16068), (308, 16101), (312, 16119), (315, 16131), (332, 16197), (339, 16230), (341, 16239), (348, 16281), (359, 16332), (383, 16449), (393, 16491), (405, 16545), (410, 16566), (424, 16623), (427, 16632), (477, 16758), (479, 16764), (486, 16791), (507, 16857), (512, 16872), (523, 16902), (525, 16905), (538, 16956), (542, 16968), (553, 16989), (559, 17001), (568, 17022), (582, 17058), (606, 17085), (617, 17118), (621, 17130), (637, 17172), (664, 17238), (689, 17298), (706, 17337), (718, 17388), (719, 17391), (721, 17400), (726, 17424), (741, 17493), (744, 17514), (757, 17583), (762, 17601), (776, 17649), (780, 17661), (800, 17703), (803, 17715), (816, 17763), (851, 17934), (863, 17994), (867, 18015), (892, 18150), (894, 18162), (899, 18198),

Gene: BABullseye\_29 Start: 16728, Stop: 18932, Start Num: 116

Candidate Starts for BABullseye\_29:

(60, 16569), (93, 16683), (Start: 116 @16728 has 41 MA's), (160, 16839), (166, 16845), (212, 16953), (223, 16995), (246, 17061), (274, 17154), (283, 17181), (315, 17304), (321, 17337), (343, 17427), (357, 17496), (412, 17739), (499, 17877), (590, 17997), (680, 18150), (710, 18213), (721, 18255), (745, 18354), (749, 18375), (752, 18396), (756, 18417), (791, 18468), (800, 18480), (805, 18495), (839, 18576), (850, 18654),

Gene: BK1\_22 Start: 15930, Stop: 18401, Start Num: 111

Candidate Starts for BK1\_22:

(Start: 111 @15930 has 200 MA's), (125, 15969), (144, 16032), (Start: 155 @16062 has 22 MA's), (162, 16083), (176, 16104), (181, 16116), (194, 16134), (243, 16158), (262, 16224), (271, 16251), (315, 16422), (321, 16455), (339, 16521), (389, 16776), (393, 16797), (398, 16824), (410, 16863), (476, 16983), (500, 17019), (555, 17112), (564, 17133), (592, 17190), (644, 17310), (659, 17346), (671, 17376), (682, 17412), (707, 17478), (710, 17499), (721, 17541), (741, 17640), (773, 17781), (784, 17802), (842, 18033), (855, 18114), (875, 18225), (888, 18312), (895, 18351), (897, 18366),

Gene: BPBiebs31\_25 Start: 16611, Stop: 19082, Start Num: 111

Candidate Starts for BPBiebs31\_25:

(Start: 111 @16611 has 200 MA's), (125, 16650), (144, 16713), (Start: 155 @16743 has 22 MA's), (162, 16764), (176, 16785), (181, 16797), (194, 16815), (262, 16905), (315, 17103), (321, 17136), (339, 17202), (389, 17457), (393, 17478), (398, 17505), (476, 17664), (500, 17700), (555, 17793), (564, 17814), (592, 17871), (644, 17991), (659, 18027), (671, 18057), (682, 18093), (707, 18159),



(710, 18180), (741, 18321), (773, 18462), (784, 18483), (826, 18618), (855, 18795), (875, 18906), (885, 18972), (888, 18993), (895, 19032), (897, 19047),

Gene: Baby16\_25 Start: 15894, Stop: 18494, Start Num: 109

Candidate Starts for Baby16\_25:

(Start: 109 @15894 has 113 MA's), (Start: 155 @16035 has 22 MA's), (Start: 163 @16053 has 10 MA's), (240, 16260), (252, 16299), (258, 16329), (291, 16446), (299, 16473), (315, 16536), (329, 16599), (341, 16644), (348, 16686), (365, 16770), (457, 17037), (481, 17088), (499, 17133), (530, 17211), (545, 17250), (557, 17271), (626, 17418), (636, 17439), (647, 17463), (670, 17523), (673, 17529), (674, 17532), (700, 17583), (710, 17631), (726, 17697), (757, 17862), (762, 17880), (807, 18006), (859, 18258), (860, 18261), (863, 18270), (875, 18330), (892, 18426), (899, 18474),

Gene: BabyBack\_28 Start: 18230, Stop: 20749, Start Num: 107

Candidate Starts for BabyBack\_28:

(Start: 107 @18230 has 89 MA's), (144, 18341), (172, 18410), (175, 18419), (202, 18461), (256, 18584), (258, 18593), (264, 18602), (276, 18638), (279, 18647), (281, 18656), (312, 18773), (323, 18830), (327, 18842), (329, 18848), (334, 18863), (339, 18884), (341, 18893), (383, 19103), (391, 19133), (393, 19145), (405, 19199), (410, 19220), (424, 19277), (427, 19286), (507, 19511), (512, 19526), (517, 19553), (538, 19610), (544, 19625), (552, 19640), (559, 19655), (566, 19670), (568, 19676), (575, 19697), (607, 19742), (620, 19781), (628, 19808), (658, 19880), (689, 19952), (703, 19979), (709, 20009), (710, 20012), (718, 20042), (730, 20099), (737, 20135), (752, 20204), (801, 20303), (804, 20312), (810, 20321), (845, 20432), (858, 20519), (865, 20546), (866, 20549), (899, 20726),

Gene: BabyJohn\_24 Start: 15764, Stop: 18802, Start Num: 37

Candidate Starts for BabyJohn\_24:

(Start: 37 @15764 has 32 MA's), (66, 15938), (81, 15983), (Start: 143 @16193 has 5 MA's), (193, 16316), (258, 16523), (279, 16577), (299, 16652), (308, 16685), (312, 16703), (315, 16715), (332, 16781), (337, 16802), (339, 16814), (341, 16823), (348, 16865), (359, 16916), (383, 17033), (384, 17036), (393, 17075), (405, 17129), (410, 17150), (427, 17216), (436, 17243), (479, 17348), (491, 17396), (507, 17441), (512, 17456), (525, 17489), (535, 17531), (538, 17540), (552, 17570), (559, 17585), (568, 17606), (582, 17642), (606, 17669), (607, 17672), (613, 17693), (620, 17711), (637, 17756), (654, 17798), (656, 17801), (689, 17882), (706, 17921), (718, 17972), (719, 17975), (721, 17984), (726, 18008), (741, 18077), (744, 18098), (757, 18167), (762, 18185), (776, 18233), (780, 18245), (795, 18275), (800, 18287), (803, 18299), (816, 18347), (851, 18518), (863, 18578), (867, 18599), (885, 18695), (892, 18734), (899, 18782),

Gene: BabyRay\_25 Start: 15740, Stop: 18778, Start Num: 37

Candidate Starts for BabyRay\_25:

(Start: 37 @15740 has 32 MA's), (66, 15914), (69, 15926), (Start: 143 @16169 has 5 MA's), (158, 16214), (193, 16292), (258, 16499), (279, 16553), (295, 16616), (299, 16628), (308, 16661), (315, 16691), (321, 16724), (332, 16757), (339, 16790), (341, 16799), (359, 16892), (383, 17009), (385, 17021), (393, 17051), (405, 17105), (410, 17126), (427, 17192), (479, 17324), (482, 17333), (491, 17372), (507, 17417), (512, 17432), (535, 17507), (538, 17516), (552, 17546), (559, 17561), (560, 17564), (568, 17582), (575, 17603), (578, 17606), (585, 17624), (606, 17645), (607, 17648), (637, 17732), (656, 17777), (664, 17798), (689, 17858), (709, 17915), (710, 17918), (718, 17948), (719, 17951), (721, 17960), (741, 18053), (744, 18074), (757, 18143), (762, 18161), (776, 18209), (780, 18221), (800, 18263), (803, 18275), (816, 18323), (851, 18494), (863, 18554), (865, 18566), (866, 18569), (867, 18575), (892, 18710), (894, 18722), (899, 18758),

Gene: Bachome\_26 Start: 17172, Stop: 19700, Start Num: 118

Candidate Starts for Bachome\_26:

(Start: 112 @17154 has 30 MA's), (Start: 118 @17172 has 2 MA's), (187, 17346), (197, 17355), (223, 17430), (252, 17484), (267, 17538), (271, 17553), (272, 17556), (279, 17574), (295, 17637), (299, 17649), (315, 17712), (329, 17775), (334, 17790), (337, 17799), (341, 17820), (345, 17844), (348, 17859), (367, 17946), (369, 17949), (374, 17964), (378, 17985), (380, 17997), (389, 18063), (397, 18105), (403, 18126), (404, 18135), (412, 18159), (437, 18240), (441, 18249), (445, 18261), (467, 18303), (492, 18360), (513, 18414), (549, 18522), (567, 18561), (618, 18702), (656, 18798), (661, 18819), (675, 18852), (686, 18885), (687, 18888), (709, 18972), (721, 19017), (722, 19020), (746, 19134), (752, 19167), (791, 19239), (808, 19275), (839, 19347), (850, 19425), (860, 19479), (866, 19503), (889, 19614),

Gene: Backyardigan\_25 Start: 15891, Stop: 18491, Start Num: 109

Candidate Starts for Backyardigan\_25:

(Start: 109 @15891 has 113 MA's), (246, 16281), (283, 16410), (291, 16443), (299, 16470), (315, 16533), (341, 16641), (370, 16776), (420, 16974), (471, 17061), (481, 17085), (499, 17130), (542, 17241), (545, 17247), (626, 17415), (649, 17463), (670, 17520), (700, 17580), (710, 17628), (719, 17661), (726, 17694), (729, 17712), (757, 17859), (762, 17877), (807, 18003), (835, 18093), (848, 18192), (860, 18258), (863, 18267), (875, 18327), (877, 18336), (883, 18372), (886, 18390), (892, 18423), (899, 18471),

Gene: BaconJack\_26 Start: 16685, Stop: 19084, Start Num: 111

Candidate Starts for BaconJack\_26:

(Start: 111 @16685 has 200 MA's), (125, 16724), (144, 16787), (Start: 155 @16817 has 22 MA's), (162, 16838), (176, 16859), (194, 16889), (243, 16913), (262, 16979), (315, 17177), (321, 17210), (339, 17276), (389, 17531), (393, 17552), (398, 17579), (476, 17738), (500, 17774), (555, 17867), (627, 18020), (638, 18032), (643, 18047), (696, 18164), (712, 18209), (716, 18230), (717, 18233), (757, 18398), (773, 18464), (793, 18506), (842, 18716), (855, 18797), (875, 18908), (885, 18974), (888, 18995), (895, 19034), (899, 19064),

Gene: Bactobuster\_27 Start: 18366, Stop: 20744, Start Num: 152

Candidate Starts for Bactobuster\_27:

(Start: 143 @18348 has 5 MA's), (Start: 152 @18366 has 5 MA's), (161, 18399), (164, 18405), (207, 18501), (220, 18543), (274, 18699), (277, 18711), (278, 18714), (284, 18744), (285, 18753), (296, 18789), (299, 18798), (315, 18861), (321, 18894), (334, 18939), (339, 18960), (341, 18969), (361, 19074), (392, 19215), (470, 19383), (473, 19395), (500, 19461), (505, 19467), (517, 19518), (564, 19629), (573, 19647), (644, 19803), (664, 19857), (677, 19893), (693, 19944), (709, 20004), (718, 20037), (721, 20049), (727, 20082), (728, 20085), (753, 20223), (756, 20235), (786, 20277), (801, 20313), (804, 20325), (806, 20331), (866, 20541),

Gene: Badger\_25 Start: 15880, Stop: 18480, Start Num: 109

Candidate Starts for Badger\_25:

(Start: 109 @15880 has 113 MA's), (246, 16270), (283, 16399), (291, 16432), (299, 16459), (315, 16522), (341, 16630), (370, 16765), (471, 17050), (481, 17074), (499, 17119), (542, 17230), (545, 17236), (626, 17404), (649, 17452), (670, 17509), (700, 17569), (710, 17617), (719, 17650), (726, 17683), (729, 17701), (757, 17848), (762, 17866), (807, 17992), (835, 18082), (848, 18181), (860, 18247), (863, 18256), (875, 18316), (877, 18325), (883, 18361), (886, 18379), (892, 18412), (899, 18460),

Gene: Baehexic\_27 Start: 17134, Stop: 19641, Start Num: 107

Candidate Starts for Baehexic\_27:

(Start: 107 @17134 has 89 MA's), (144, 17245), (167, 17302), (256, 17488), (279, 17551), (286, 17584), (288, 17590), (334, 17770), (337, 17779), (341, 17800), (344, 17821), (345, 17824), (348, 17842), (360, 17902), (383, 18010), (393, 18052), (405, 18106), (410, 18127), (426, 18190), (427, 18193), (434, 18211), (440, 18232), (507, 18418), (512, 18433), (517, 18460), (538, 18517), (544,

18532), (546, 18538), (552, 18547), (555, 18553), (568, 18583), (575, 18604), (607, 18649), (608, 18655), (620, 18688), (628, 18715), (658, 18787), (664, 18799), (689, 18859), (703, 18886), (718, 18949), (727, 18994), (730, 19006), (737, 19042), (746, 19078), (752, 19111), (786, 19174), (800, 19198), (846, 19342), (866, 19441), (882, 19528), (902, 19627),

Gene: BangNhom\_25 Start: 16196, Stop: 18796, Start Num: 109

Candidate Starts for BangNhom\_25:

(Start: 109 @16196 has 113 MA's), (Start: 155 @16337 has 22 MA's), (Start: 163 @16355 has 10 MA's), (222, 16511), (240, 16562), (258, 16631), (291, 16748), (299, 16775), (315, 16838), (329, 16901), (341, 16946), (348, 16988), (365, 17072), (420, 17279), (457, 17339), (481, 17390), (499, 17435), (530, 17513), (542, 17546), (545, 17552), (626, 17720), (636, 17741), (647, 17765), (670, 17825), (673, 17831), (674, 17834), (700, 17885), (710, 17933), (726, 17999), (757, 18164), (762, 18182), (807, 18308), (859, 18560), (860, 18563), (863, 18572), (874, 18629), (875, 18632), (883, 18677), (892, 18728), (899, 18776),

Gene: Barriga\_24 Start: 16199, Stop: 18670, Start Num: 111

Candidate Starts for Barriga\_24:

(Start: 111 @16199 has 200 MA's), (125, 16238), (144, 16301), (Start: 155 @16331 has 22 MA's), (162, 16352), (176, 16373), (194, 16403), (243, 16427), (262, 16493), (315, 16691), (321, 16724), (339, 16790), (389, 17045), (393, 17066), (398, 17093), (476, 17252), (500, 17288), (555, 17381), (564, 17402), (569, 17417), (579, 17438), (580, 17441), (615, 17510), (627, 17546), (644, 17579), (659, 17615), (671, 17645), (682, 17681), (707, 17747), (710, 17768), (741, 17909), (773, 18050), (784, 18071), (826, 18206), (855, 18383), (875, 18494), (888, 18581), (895, 18620), (897, 18635),

Gene: Bartimeaus\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Bartimeaus\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (674, 17523), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Battleship\_29 Start: 15870, Stop: 18224, Start Num: 117

Candidate Starts for Battleship\_29:

(Start: 115 @15861 has 1 MA's), (Start: 117 @15870 has 5 MA's), (Start: 179 @16038 has 15 MA's), (269, 16278), (270, 16284), (290, 16353), (306, 16410), (341, 16554), (348, 16596), (358, 16644), (359, 16647), (382, 16758), (385, 16776), (412, 16881), (425, 16929), (484, 17034), (513, 17094), (536, 17148), (555, 17184), (569, 17208), (577, 17217), (608, 17280), (616, 17301), (622, 17316), (629, 17340), (635, 17352), (659, 17406), (667, 17427), (680, 17457), (732, 17628), (734, 17649), (756, 17733), (867, 18036), (892, 18159), (894, 18171),

Gene: Beatrix\_23 Start: 17117, Stop: 19777, Start Num: 111

Candidate Starts for Beatrix\_23:

(Start: 111 @17117 has 200 MA's), (125, 17156), (144, 17219), (Start: 155 @17249 has 22 MA's), (176, 17291), (315, 17600), (329, 17663), (341, 17708), (346, 17732), (361, 17807), (364, 17819), (451, 18140), (565, 18470), (584, 18521), (598, 18548), (671, 18752), (708, 18866), (710, 18875), (715, 18896), (721, 18917), (741, 19016), (750, 19058), (751, 19061), (788, 19190), (815, 19274), (827, 19319), (875, 19601), (888, 19688), (895, 19727),

Gene: Beauxregard13\_27 Start: 15979, Stop: 19005, Start Num: 38

Candidate Starts for Beauxregard13\_27:

(30, 15925), (Start: 38 @15979 has 82 MA's), (55, 16093), (68, 16159), (69, 16162), (73, 16171), (86, 16207), (96, 16258), (124, 16330), (Start: 143 @16402 has 5 MA's), (190, 16522), (193, 16525), (214, 16594), (226, 16639), (258, 16732), (264, 16741), (270, 16759), (279, 16786), (295, 16849), (299, 16861), (308, 16894), (312, 16912), (325, 16978), (327, 16981), (329, 16987), (334, 17002), (337, 17011), (339, 17023), (341, 17032), (355, 17110), (359, 17125), (383, 17242), (384, 17245), (391, 17272), (393, 17284), (405, 17338), (410, 17359), (427, 17425), (440, 17464), (479, 17557), (491, 17605), (507, 17650), (525, 17698), (535, 17740), (538, 17749), (552, 17779), (553, 17782), (559, 17794), (582, 17851), (585, 17857), (606, 17878), (607, 17881), (658, 18019), (664, 18031), (689, 18091), (709, 18148), (741, 18286), (744, 18307), (749, 18331), (757, 18376), (762, 18394), (776, 18442), (780, 18454), (800, 18496), (817, 18559), (836, 18616), (844, 18685), (851, 18721), (867, 18802), (892, 18937),

Gene: Beemo\_27 Start: 17624, Stop: 20533, Start Num: 52

Candidate Starts for Beemo\_27:

(Start: 52 @17624 has 33 MA's), (55, 17636), (68, 17696), (114, 17855), (130, 17918), (153, 17981), (165, 18023), (193, 18080), (207, 18119), (260, 18290), (264, 18296), (269, 18311), (294, 18401), (295, 18404), (299, 18416), (311, 18458), (321, 18512), (341, 18587), (344, 18608), (345, 18611), (348, 18629), (361, 18692), (379, 18758), (383, 18797), (390, 18824), (393, 18839), (399, 18869), (405, 18893), (408, 18905), (410, 18914), (427, 18980), (440, 19019), (468, 19085), (479, 19112), (486, 19139), (523, 19250), (546, 19325), (568, 19370), (575, 19391), (585, 19412), (586, 19415), (606, 19433), (607, 19436), (615, 19463), (624, 19490), (649, 19544), (718, 19736), (722, 19751), (727, 19781), (738, 19832), (756, 19919), (758, 19928), (771, 19979), (800, 20042), (805, 20063), (816, 20099), (830, 20135), (831, 20141), (844, 20219), (849, 20246), (860, 20306), (875, 20375), (879, 20405), (885, 20432), (894, 20471), (900, 20513),

Gene: BeesKnees\_25 Start: 16392, Stop: 18869, Start Num: 112

Candidate Starts for BeesKnees\_25:

(Start: 112 @16392 has 30 MA's), (Start: 117 @16407 has 5 MA's), (Start: 155 @16521 has 22 MA's), (176, 16563), (285, 16770), (291, 16788), (315, 16878), (329, 16941), (337, 16965), (339, 16977), (348, 17028), (460, 17412), (526, 17514), (537, 17553), (560, 17580), (569, 17604), (630, 17733), (671, 17832), (707, 17934), (710, 17955), (721, 17997), (741, 18096), (753, 18159), (777, 18249), (818, 18378), (827, 18411), (855, 18582), (875, 18693), (885, 18759), (888, 18780), (895, 18819), (899, 18849),

Gene: BellusTerra\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for BellusTerra\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (542, 17232), (545, 17238), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: Benedict\_22 Start: 15091, Stop: 17904, Start Num: 2

Candidate Starts for Benedict\_22:

(Start: 2 @15091 has 8 MA's), (10, 15280), (82, 15628), (120, 15763), (121, 15769), (208, 15862), (229, 15913), (246, 15949), (273, 16039), (289, 16105), (295, 16126), (315, 16201), (321, 16234), (337, 16288), (342, 16321), (343, 16324), (345, 16333), (365, 16432), (371, 16441), (376, 16465), (397, 16594), (426, 16708), (450, 16759), (501, 16825), (561, 16918), (576, 16951), (634, 17038), (655, 17071), (664, 17083), (683, 17113), (710, 17176), (721, 17218), (734, 17290), (735, 17293), (745, 17317), (748, 17332), (752, 17359), (756, 17380), (808, 17467), (829, 17497), (830, 17500), (842, 17560), (859, 17659), (863, 17671), (865, 17683), (867, 17692), (892, 17839),

Gene: BengiVuitton\_27 Start: 17042, Stop: 19579, Start Num: 107

Candidate Starts for BengiVuitton\_27:

(Start: 107 @17042 has 89 MA's), (172, 17222), (173, 17225), (202, 17273), (249, 17393), (256, 17414), (258, 17423), (268, 17444), (279, 17477), (286, 17510), (299, 17552), (312, 17603), (316, 17624), (321, 17648), (322, 17651), (325, 17669), (337, 17702), (339, 17714), (341, 17723), (344, 17744), (345, 17747), (362, 17834), (383, 17933), (393, 17975), (394, 17984), (396, 17993), (410, 18050), (427, 18116), (440, 18155), (546, 18461), (552, 18470), (555, 18476), (559, 18485), (568, 18506), (578, 18530), (586, 18551), (607, 18572), (608, 18578), (620, 18611), (623, 18623), (664, 18722), (689, 18782), (703, 18809), (718, 18872), (727, 18917), (730, 18929), (804, 19145), (810, 19154), (845, 19265), (850, 19295), (866, 19379),

Gene: Benvolio\_26 Start: 16721, Stop: 19258, Start Num: 107

Candidate Starts for Benvolio\_26:

(Start: 107 @16721 has 89 MA's), (172, 16901), (188, 16934), (247, 17066), (249, 17072), (256, 17093), (258, 17102), (286, 17189), (299, 17231), (312, 17282), (320, 17318), (322, 17330), (325, 17348), (337, 17381), (339, 17393), (340, 17396), (341, 17402), (344, 17423), (345, 17426), (383, 17612), (393, 17654), (394, 17663), (396, 17672), (410, 17729), (427, 17795), (440, 17834), (496, 17987), (546, 18140), (552, 18149), (555, 18155), (559, 18164), (568, 18185), (578, 18209), (586, 18230), (607, 18251), (620, 18290), (623, 18302), (664, 18401), (689, 18461), (703, 18488), (718, 18551), (727, 18596), (737, 18644), (804, 18824), (810, 18833), (845, 18944), (850, 18974), (866, 19058),

Gene: Bethlehem\_24 Start: 17626, Stop: 20097, Start Num: 111

Candidate Starts for Bethlehem\_24:

(Start: 111 @17626 has 200 MA's), (125, 17665), (144, 17728), (Start: 155 @17758 has 22 MA's), (162, 17779), (176, 17800), (194, 17830), (243, 17854), (262, 17920), (315, 18118), (321, 18151), (339, 18217), (389, 18472), (393, 18493), (398, 18520), (476, 18679), (500, 18715), (555, 18808), (564, 18829), (592, 18886), (644, 19006), (659, 19042), (671, 19072), (682, 19108), (707, 19174), (710, 19195), (721, 19237), (741, 19336), (773, 19477), (784, 19498), (826, 19633), (855, 19810), (875, 19921), (885, 19987), (888, 20008), (895, 20047), (897, 20062),

Gene: Bexan\_23 Start: 17348, Stop: 19819, Start Num: 111

Candidate Starts for Bexan\_23:

(Start: 111 @17348 has 200 MA's), (125, 17387), (144, 17450), (Start: 155 @17480 has 22 MA's), (162, 17501), (176, 17522), (181, 17534), (194, 17552), (243, 17576), (250, 17597), (262, 17642), (315, 17840), (321, 17873), (339, 17939), (389, 18194), (393, 18215), (398, 18242), (476, 18401), (500, 18437), (555, 18530), (564, 18551), (592, 18608), (644, 18728), (659, 18764), (671, 18794), (682, 18830), (707, 18896), (710, 18917), (741, 19058), (773, 19199), (784, 19220), (826, 19355), (855, 19532), (875, 19643), (888, 19730), (895, 19769), (899, 19799),

Gene: BiancaTri92\_28 Start: 18408, Stop: 20945, Start Num: 107

Candidate Starts for BiancaTri92\_28:

(Start: 107 @18408 has 89 MA's), (172, 18588), (173, 18591), (202, 18639), (249, 18759), (256, 18780), (258, 18789), (268, 18810), (279, 18843), (286, 18876), (299, 18918), (311, 18960), (312, 18969), (322, 19017), (325, 19035), (337, 19068), (339, 19080), (341, 19089), (342, 19101), (344, 19110), (383, 19299), (390, 19326), (393, 19341), (405, 19395), (410, 19416), (427, 19482), (440, 19521), (477, 19608), (546, 19827), (555, 19842), (568, 19872), (575, 19893), (578, 19896), (582, 19908), (606, 19935), (620, 19977), (628, 20004), (649, 20046), (658, 20076), (664, 20088), (689, 20148), (703, 20175), (718, 20238), (727, 20283), (730, 20295), (761, 20433), (801, 20502), (804, 20511), (810, 20520), (845, 20631), (850, 20661), (858, 20715), (866, 20745),

Gene: Big3\_24 Start: 16979, Stop: 19450, Start Num: 111

Candidate Starts for Big3\_24:



(Start: 111 @16979 has 200 MA's), (125, 17018), (144, 17081), (Start: 155 @17111 has 22 MA's), (162, 17132), (176, 17153), (194, 17183), (243, 17207), (262, 17273), (315, 17471), (321, 17504), (339, 17570), (389, 17825), (393, 17846), (398, 17873), (476, 18032), (500, 18068), (555, 18161), (564, 18182), (569, 18197), (579, 18218), (580, 18221), (615, 18290), (627, 18326), (644, 18359), (659, 18395), (671, 18425), (682, 18461), (707, 18527), (710, 18548), (741, 18689), (773, 18830), (784, 18851), (826, 18986), (855, 19163), (875, 19274), (888, 19361), (895, 19400), (897, 19415),

Gene: BigMau\_26 Start: 16571, Stop: 19051, Start Num: 111

Candidate Starts for BigMau\_26:

(Start: 111 @16571 has 200 MA's), (125, 16610), (144, 16673), (Start: 155 @16703 has 22 MA's), (176, 16745), (285, 16952), (291, 16970), (315, 17060), (329, 17123), (337, 17147), (339, 17159), (348, 17210), (460, 17594), (526, 17696), (537, 17735), (555, 17750), (560, 17762), (569, 17786), (630, 17915), (671, 18014), (707, 18116), (710, 18137), (721, 18179), (741, 18278), (753, 18341), (777, 18431), (818, 18560), (827, 18593), (875, 18875), (885, 18941), (888, 18962), (895, 19001), (897, 19016),

Gene: BigPaolini\_25 Start: 16999, Stop: 19470, Start Num: 111

Candidate Starts for BigPaolini\_25:

(Start: 111 @16999 has 200 MA's), (125, 17038), (144, 17101), (Start: 155 @17131 has 22 MA's), (162, 17152), (176, 17173), (181, 17185), (194, 17203), (262, 17293), (315, 17491), (321, 17524), (339, 17590), (389, 17845), (393, 17866), (398, 17893), (476, 18052), (500, 18088), (555, 18181), (564, 18202), (569, 18217), (579, 18238), (580, 18241), (615, 18310), (627, 18346), (644, 18379), (659, 18415), (671, 18445), (682, 18481), (707, 18547), (710, 18568), (741, 18709), (773, 18850), (784, 18871), (826, 19006), (855, 19183), (875, 19294), (888, 19381), (895, 19420), (897, 19435),

Gene: Bigfoot\_23 Start: 16100, Stop: 18679, Start Num: 111

Candidate Starts for Bigfoot\_23:

(Start: 111 @16100 has 200 MA's), (125, 16139), (144, 16202), (Start: 155 @16232 has 22 MA's), (277, 16451), (286, 16487), (329, 16655), (341, 16700), (345, 16724), (348, 16742), (418, 17054), (483, 17210), (520, 17312), (533, 17345), (571, 17417), (592, 17456), (630, 17543), (671, 17642), (707, 17744), (710, 17765), (714, 17777), (721, 17807), (741, 17906), (753, 17969), (777, 18059), (818, 18188), (827, 18221), (875, 18503), (888, 18590), (895, 18629), (899, 18659),

Gene: BillKnuckles\_25 Start: 17064, Stop: 19535, Start Num: 111

Candidate Starts for BillKnuckles\_25:

(Start: 111 @17064 has 200 MA's), (125, 17103), (144, 17166), (Start: 155 @17196 has 22 MA's), (162, 17217), (176, 17238), (181, 17250), (194, 17268), (250, 17313), (262, 17358), (315, 17556), (321, 17589), (339, 17655), (389, 17910), (393, 17931), (398, 17958), (476, 18117), (500, 18153), (555, 18246), (564, 18267), (592, 18324), (644, 18444), (659, 18480), (671, 18510), (682, 18546), (707, 18612), (710, 18633), (741, 18774), (773, 18915), (784, 18936), (826, 19071), (855, 19248), (875, 19359), (885, 19425), (888, 19446), (895, 19485), (897, 19500),

Gene: Bircsak\_24 Start: 16849, Stop: 19329, Start Num: 111

Candidate Starts for Bircsak\_24:

(Start: 111 @16849 has 200 MA's), (125, 16888), (144, 16951), (Start: 155 @16981 has 22 MA's), (176, 17023), (285, 17230), (291, 17248), (315, 17338), (329, 17401), (337, 17425), (339, 17437), (348, 17488), (460, 17872), (526, 17974), (537, 18013), (555, 18028), (560, 18040), (569, 18064), (671, 18292), (707, 18394), (710, 18415), (714, 18427), (721, 18457), (741, 18556), (753, 18619), (818, 18838), (827, 18871), (875, 19153), (888, 19240), (895, 19279), (899, 19309),

Gene: Blackmoor\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Blackmoor\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (674, 17523), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: BlessJoy\_29 Start: 16715, Stop: 18931, Start Num: 116

Candidate Starts for BlessJoy\_29:

(93, 16670), (Start: 116 @16715 has 41 MA's), (160, 16826), (223, 16982), (270, 17129), (274, 17141), (314, 17288), (315, 17291), (321, 17324), (343, 17414), (357, 17483), (376, 17558), (412, 17726), (590, 17984), (618, 18029), (680, 18137), (710, 18200), (721, 18242), (745, 18341), (749, 18362), (756, 18404), (791, 18455), (805, 18482), (839, 18563), (850, 18653),

Gene: Blinn1\_29 Start: 16777, Stop: 19005, Start Num: 116

Candidate Starts for Blinn1\_29:

(60, 16618), (93, 16732), (Start: 116 @16777 has 41 MA's), (160, 16888), (166, 16894), (223, 17044), (274, 17203), (283, 17230), (314, 17350), (315, 17353), (321, 17386), (343, 17476), (357, 17545), (399, 17743), (412, 17788), (556, 17992), (590, 18046), (662, 18169), (710, 18268), (713, 18277), (718, 18298), (727, 18343), (731, 18355), (805, 18562), (810, 18580), (843, 18682), (845, 18691), (850, 18721),

Gene: BluSpix\_24 Start: 16360, Stop: 18831, Start Num: 111

Candidate Starts for BluSpix\_24:

(Start: 111 @16360 has 200 MA's), (125, 16399), (144, 16462), (Start: 155 @16492 has 22 MA's), (162, 16513), (176, 16534), (181, 16546), (194, 16564), (262, 16654), (315, 16852), (321, 16885), (339, 16951), (389, 17206), (393, 17227), (398, 17254), (476, 17413), (500, 17449), (555, 17542), (564, 17563), (592, 17620), (644, 17740), (659, 17776), (671, 17806), (682, 17842), (707, 17908), (710, 17929), (741, 18070), (773, 18211), (784, 18232), (826, 18367), (855, 18544), (875, 18655), (885, 18721), (888, 18742), (895, 18781), (899, 18811),

Gene: Blue\_24 Start: 16469, Stop: 19303, Start Num: 111

Candidate Starts for Blue\_24:

(Start: 111 @16469 has 200 MA's), (132, 16541), (257, 16784), (263, 16799), (278, 16844), (305, 16964), (310, 16982), (317, 17030), (326, 17075), (339, 17120), (340, 17123), (348, 17171), (386, 17354), (393, 17381), (413, 17465), (428, 17522), (435, 17540), (453, 17585), (469, 17621), (486, 17681), (503, 17729), (518, 17792), (519, 17795), (551, 17888), (562, 17912), (573, 17948), (583, 17975), (589, 17987), (597, 18005), (602, 18020), (622, 18083), (669, 18212), (684, 18257), (694, 18290), (700, 18302), (729, 18431), (747, 18527), (764, 18614), (765, 18617), (770, 18635), (825, 18839), (855, 19016), (875, 19127), (888, 19214), (895, 19253), (897, 19268),

Gene: Blue7\_29 Start: 16707, Stop: 18923, Start Num: 116

Candidate Starts for Blue7\_29:

(93, 16662), (Start: 116 @16707 has 41 MA's), (160, 16818), (223, 16974), (270, 17121), (274, 17133), (314, 17280), (315, 17283), (321, 17316), (343, 17406), (357, 17475), (376, 17550), (412, 17718), (590, 17976), (618, 18021), (680, 18129), (710, 18192), (721, 18234), (745, 18333), (749, 18354), (756, 18396), (791, 18447), (805, 18474), (839, 18555), (850, 18645),

Gene: BlueBird\_26 Start: 15495, Stop: 18530, Start Num: 37

Candidate Starts for BlueBird\_26:

(Start: 37 @15495 has 32 MA's), (66, 15669), (69, 15681), (81, 15714), (Start: 143 @15924 has 5 MA's), (190, 16044), (193, 16047), (258, 16251), (268, 16272), (277, 16302), (279, 16305), (295, 16368), (299, 16380), (308, 16413), (312, 16431), (327, 16500), (329, 16506), (334, 16521), (337,

16530), (339, 16542), (341, 16551), (359, 16644), (383, 16761), (384, 16764), (390, 16788), (391, 16791), (393, 16803), (405, 16857), (410, 16878), (414, 16899), (427, 16944), (436, 16971), (440, 16983), (491, 17124), (507, 17169), (512, 17184), (535, 17259), (538, 17268), (552, 17298), (559, 17313), (560, 17316), (568, 17334), (575, 17355), (578, 17358), (606, 17397), (607, 17400), (637, 17484), (664, 17550), (673, 17571), (689, 17610), (706, 17649), (710, 17670), (718, 17700), (719, 17703), (721, 17712), (726, 17736), (741, 17805), (744, 17826), (757, 17895), (762, 17913), (776, 17961), (780, 17973), (800, 18015), (803, 18027), (816, 18075), (851, 18246), (855, 18276), (863, 18306), (867, 18327), (892, 18462), (899, 18510),

Gene: Bluefalcon\_21 Start: 15319, Stop: 18660, Start Num: 1

Candidate Starts for Bluefalcon\_21:

(Start: 1 @15319 has 30 MA's), (Start: 34 @15757 has 1 MA's), (120, 16069), (Start: 141 @16147 has 1 MA's), (154, 16177), (173, 16234), (227, 16381), (229, 16387), (233, 16393), (270, 16519), (274, 16531), (315, 16681), (322, 16717), (329, 16747), (334, 16762), (341, 16792), (342, 16804), (347, 16828), (361, 16897), (379, 16963), (412, 17119), (428, 17188), (429, 17191), (441, 17218), (449, 17242), (514, 17380), (522, 17401), (540, 17446), (563, 17488), (639, 17680), (652, 17710), (660, 17734), (664, 17746), (672, 17767), (683, 17809), (705, 17896), (710, 17932), (715, 17953), (721, 17974), (736, 18052), (745, 18073), (749, 18094), (752, 18115), (756, 18136), (765, 18160), (808, 18223), (842, 18316), (845, 18334), (859, 18415), (863, 18427), (865, 18439), (867, 18448), (878, 18502), (891, 18586), (892, 18595),

Gene: Bob3\_23 Start: 15911, Stop: 18391, Start Num: 111

Candidate Starts for Bob3\_23:

(Start: 111 @15911 has 200 MA's), (125, 15950), (144, 16013), (Start: 155 @16043 has 22 MA's), (176, 16085), (285, 16292), (291, 16310), (315, 16400), (329, 16463), (337, 16487), (339, 16499), (348, 16550), (460, 16934), (526, 17036), (537, 17075), (555, 17090), (560, 17102), (569, 17126), (630, 17255), (671, 17354), (707, 17456), (710, 17477), (721, 17519), (741, 17618), (753, 17681), (777, 17771), (818, 17900), (827, 17933), (875, 18215), (885, 18281), (888, 18302), (895, 18341), (897, 18356),

Gene: BobSwaget\_29 Start: 18249, Stop: 20777, Start Num: 107

Candidate Starts for BobSwaget\_29:

(Start: 107 @18249 has 89 MA's), (144, 18360), (149, 18372), (172, 18429), (173, 18432), (256, 18621), (279, 18684), (311, 18801), (312, 18810), (316, 18831), (321, 18855), (339, 18921), (341, 18930), (344, 18951), (345, 18954), (383, 19140), (393, 19182), (410, 19257), (427, 19323), (440, 19362), (507, 19548), (538, 19647), (546, 19668), (568, 19713), (606, 19776), (620, 19818), (628, 19845), (658, 19917), (664, 19929), (701, 20013), (703, 20016), (718, 20079), (727, 20124), (730, 20136), (749, 20220), (761, 20274), (795, 20325), (810, 20358), (830, 20382), (850, 20499), (866, 20577),

Gene: BogosyJay\_27 Start: 17339, Stop: 20263, Start Num: 52

Candidate Starts for BogosyJay\_27:

(Start: 52 @17339 has 33 MA's), (55, 17351), (61, 17375), (63, 17387), (114, 17576), (130, 17639), (153, 17702), (165, 17744), (193, 17801), (197, 17807), (260, 18017), (264, 18023), (269, 18038), (284, 18089), (294, 18128), (299, 18143), (311, 18185), (312, 18194), (321, 18239), (327, 18263), (341, 18314), (344, 18335), (345, 18338), (348, 18356), (379, 18485), (383, 18524), (390, 18551), (393, 18566), (399, 18596), (405, 18620), (410, 18641), (427, 18707), (440, 18746), (479, 18839), (486, 18866), (507, 18932), (523, 18977), (546, 19052), (568, 19097), (575, 19118), (585, 19139), (586, 19142), (606, 19160), (607, 19163), (615, 19190), (617, 19193), (624, 19217), (650, 19277), (654, 19289), (685, 19355), (718, 19463), (727, 19508), (730, 19520), (737, 19556), (738, 19559), (749, 19604), (755, 19640), (758, 19655), (771, 19706), (800, 19769), (816, 19829), (831, 19871), (844, 19949), (849, 19976), (851, 19985), (860, 20036), (879, 20135), (885, 20162), (894, 20201), (900, 20243),

Gene: Bombshell\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Bombshell\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Bonamassa\_22 Start: 15244, Stop: 18582, Start Num: 1

Candidate Starts for Bonamassa\_22:

(Start: 1 @15244 has 30 MA's), (Start: 34 @15682 has 1 MA's), (120, 15994), (Start: 141 @16072 has 1 MA's), (154, 16102), (173, 16159), (211, 16243), (227, 16306), (229, 16312), (269, 16432), (294, 16522), (295, 16525), (315, 16600), (324, 16645), (329, 16663), (341, 16708), (344, 16729), (384, 16921), (417, 17059), (429, 17107), (459, 17185), (516, 17311), (522, 17323), (532, 17347), (563, 17410), (639, 17602), (652, 17632), (660, 17656), (664, 17668), (683, 17731), (710, 17854), (715, 17875), (721, 17896), (736, 17974), (745, 17995), (752, 18037), (756, 18058), (808, 18145), (829, 18175), (842, 18238), (845, 18256), (859, 18337), (863, 18349), (865, 18361), (867, 18370), (878, 18424), (891, 18508), (896, 18547),

Gene: Bones\_24 Start: 16097, Stop: 18757, Start Num: 111

Candidate Starts for Bones\_24:

(Start: 111 @16097 has 200 MA's), (125, 16136), (144, 16199), (Start: 155 @16229 has 22 MA's), (176, 16271), (315, 16580), (329, 16643), (341, 16688), (346, 16712), (361, 16787), (364, 16799), (451, 17120), (565, 17450), (584, 17501), (598, 17528), (671, 17732), (708, 17846), (710, 17855), (715, 17876), (721, 17897), (741, 17996), (750, 18038), (751, 18041), (788, 18170), (815, 18254), (827, 18299), (875, 18581), (885, 18647), (888, 18668), (895, 18707), (897, 18722),

Gene: Boohoo\_28 Start: 15923, Stop: 18112, Start Num: 179

Candidate Starts for Boohoo\_28:

(Start: 115 @15746 has 1 MA's), (Start: 117 @15755 has 5 MA's), (Start: 179 @15923 has 15 MA's), (269, 16166), (270, 16172), (290, 16241), (306, 16298), (341, 16442), (348, 16484), (358, 16532), (359, 16535), (382, 16646), (385, 16664), (412, 16769), (425, 16817), (484, 16922), (513, 16982), (536, 17036), (555, 17072), (569, 17096), (577, 17105), (608, 17168), (616, 17189), (622, 17204), (629, 17228), (635, 17240), (659, 17294), (667, 17315), (680, 17345), (732, 17516), (734, 17537), (756, 17621), (867, 17924), (892, 18047), (894, 18059),

Gene: Bowtie\_26 Start: 17163, Stop: 19709, Start Num: 112

Candidate Starts for Bowtie\_26:

(Start: 112 @17163 has 30 MA's), (Start: 118 @17181 has 2 MA's), (187, 17355), (197, 17364), (223, 17439), (252, 17493), (267, 17547), (271, 17562), (272, 17565), (279, 17583), (295, 17646), (299, 17658), (315, 17721), (329, 17784), (334, 17799), (337, 17808), (341, 17829), (345, 17853), (348, 17868), (367, 17955), (369, 17958), (374, 17973), (378, 17994), (380, 18006), (389, 18072), (404, 18144), (412, 18168), (437, 18249), (441, 18258), (445, 18270), (467, 18312), (492, 18369), (513, 18423), (549, 18531), (567, 18570), (618, 18711), (656, 18807), (661, 18828), (675, 18861), (686, 18894), (687, 18897), (709, 18981), (721, 19026), (722, 19029), (746, 19143), (752, 19176), (791, 19248), (808, 19284), (839, 19356), (850, 19434), (860, 19488), (866, 19512), (889, 19623),

Gene: Bradman\_25 Start: 15528, Stop: 18041, Start Num: 107

Candidate Starts for Bradman\_25:

(Start: 107 @15528 has 89 MA's), (144, 15639), (170, 15705), (172, 15708), (173, 15711), (256, 15897), (258, 15906), (264, 15915), (299, 16035), (312, 16086), (323, 16143), (327, 16155), (331,

16161), (334, 16176), (339, 16197), (341, 16206), (350, 16254), (383, 16416), (391, 16446), (393, 16458), (402, 16497), (405, 16512), (410, 16533), (424, 16590), (427, 16599), (436, 16626), (477, 16725), (507, 16824), (512, 16839), (538, 16923), (546, 16944), (568, 16989), (606, 17052), (607, 17055), (623, 17106), (628, 17121), (689, 17265), (703, 17292), (718, 17355), (722, 17370), (727, 17400), (749, 17496), (765, 17562), (804, 17625), (860, 17820), (861, 17823), (866, 17844),

Gene: BreSam8\_27 Start: 15972, Stop: 18998, Start Num: 38

Candidate Starts for BreSam8\_27:

(30, 15918), (Start: 38 @15972 has 82 MA's), (55, 16086), (68, 16152), (69, 16155), (73, 16164), (86, 16200), (96, 16251), (124, 16323), (Start: 143 @16395 has 5 MA's), (190, 16515), (193, 16518), (214, 16587), (226, 16632), (258, 16725), (264, 16734), (270, 16752), (279, 16779), (295, 16842), (299, 16854), (308, 16887), (312, 16905), (325, 16971), (327, 16974), (329, 16980), (334, 16995), (337, 17004), (339, 17016), (341, 17025), (359, 17118), (383, 17235), (384, 17238), (391, 17265), (393, 17277), (405, 17331), (410, 17352), (427, 17418), (436, 17445), (479, 17550), (491, 17598), (507, 17643), (525, 17691), (535, 17733), (538, 17742), (552, 17772), (553, 17775), (559, 17787), (582, 17844), (585, 17850), (606, 17871), (607, 17874), (658, 18012), (664, 18024), (689, 18084), (710, 18144), (718, 18174), (719, 18177), (721, 18186), (741, 18279), (757, 18369), (776, 18435), (780, 18447), (800, 18489), (817, 18552), (836, 18609), (844, 18678), (851, 18714), (867, 18795), (892, 18930),

Gene: Briton15\_26 Start: 16649, Stop: 19126, Start Num: 112

Candidate Starts for Briton15\_26:

(Start: 112 @16649 has 30 MA's), (Start: 117 @16664 has 5 MA's), (Start: 155 @16778 has 22 MA's), (176, 16820), (285, 17027), (291, 17045), (315, 17135), (329, 17198), (337, 17222), (339, 17234), (348, 17285), (460, 17669), (526, 17771), (537, 17810), (560, 17837), (569, 17861), (630, 17990), (671, 18089), (707, 18191), (710, 18212), (721, 18254), (741, 18353), (753, 18416), (777, 18506), (818, 18635), (827, 18668), (855, 18839), (875, 18950), (885, 19016), (888, 19037), (895, 19076), (897, 19091),

Gene: Broseidon\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Broseidon\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (674, 17523), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Bruiser\_24 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Bruiser\_24:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (674, 17523), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Bruns\_23 Start: 16283, Stop: 18754, Start Num: 111

Candidate Starts for Bruns\_23:

(Start: 111 @16283 has 200 MA's), (125, 16322), (144, 16385), (Start: 155 @16415 has 22 MA's), (162, 16436), (176, 16457), (181, 16469), (194, 16487), (262, 16577), (315, 16775), (321, 16808), (339, 16874), (389, 17129), (393, 17150), (398, 17177), (476, 17336), (500, 17372), (555, 17465), (564, 17486), (569, 17501), (579, 17522), (580, 17525), (615, 17594), (627, 17630), (644, 17663),

(659, 17699), (662, 17708), (671, 17729), (682, 17765), (707, 17831), (710, 17852), (741, 17993), (773, 18134), (784, 18155), (826, 18290), (855, 18467), (875, 18578), (888, 18665), (895, 18704), (897, 18719),

Gene: BubbleTrouble\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for BubbleTrouble\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (608, 17355), (626, 17409), (647, 17454), (670, 17514), (685, 17532), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Bud\_26 Start: 17169, Stop: 19715, Start Num: 112

Candidate Starts for Bud\_26:

(Start: 112 @17169 has 30 MA's), (Start: 118 @17187 has 2 MA's), (187, 17361), (197, 17370), (223, 17445), (252, 17499), (267, 17553), (271, 17568), (272, 17571), (279, 17589), (295, 17652), (299, 17664), (315, 17727), (329, 17790), (334, 17805), (337, 17814), (341, 17835), (345, 17859), (348, 17874), (367, 17961), (369, 17964), (374, 17979), (378, 18000), (380, 18012), (389, 18078), (403, 18141), (404, 18150), (412, 18174), (437, 18255), (441, 18264), (445, 18276), (467, 18318), (492, 18375), (513, 18429), (549, 18537), (567, 18576), (618, 18717), (656, 18813), (661, 18834), (675, 18867), (686, 18900), (687, 18903), (709, 18987), (721, 19032), (722, 19035), (746, 19149), (752, 19182), (791, 19254), (808, 19290), (839, 19362), (850, 19440), (860, 19494), (866, 19518), (889, 19629),

Gene: Bugatti\_25 Start: 15495, Stop: 18530, Start Num: 37

Candidate Starts for Bugatti\_25:

(Start: 37 @15495 has 32 MA's), (66, 15669), (69, 15681), (81, 15714), (Start: 143 @15924 has 5 MA's), (190, 16044), (193, 16047), (258, 16251), (268, 16272), (277, 16302), (279, 16305), (295, 16368), (299, 16380), (308, 16413), (312, 16431), (327, 16500), (329, 16506), (334, 16521), (337, 16530), (339, 16542), (341, 16551), (359, 16644), (383, 16761), (384, 16764), (390, 16788), (391, 16791), (393, 16803), (405, 16857), (410, 16878), (414, 16899), (427, 16944), (436, 16971), (440, 16983), (491, 17124), (507, 17169), (512, 17184), (535, 17259), (538, 17268), (552, 17298), (559, 17313), (560, 17316), (568, 17334), (575, 17355), (578, 17358), (606, 17397), (607, 17400), (637, 17484), (664, 17550), (673, 17571), (689, 17610), (706, 17649), (710, 17670), (718, 17700), (719, 17703), (721, 17712), (726, 17736), (741, 17805), (744, 17826), (757, 17895), (762, 17913), (776, 17961), (780, 17973), (800, 18015), (803, 18027), (816, 18075), (851, 18246), (855, 18276), (863, 18306), (867, 18327), (892, 18462), (899, 18510),

Gene: Buggy\_28 Start: 17119, Stop: 19662, Start Num: 107

Candidate Starts for Buggy\_28:

(Start: 107 @17119 has 89 MA's), (172, 17299), (173, 17302), (247, 17470), (249, 17476), (256, 17497), (258, 17506), (264, 17515), (268, 17527), (282, 17572), (286, 17593), (299, 17635), (312, 17686), (321, 17731), (322, 17734), (325, 17752), (337, 17785), (339, 17797), (341, 17806), (344, 17827), (345, 17830), (362, 17917), (383, 18016), (393, 18058), (394, 18067), (396, 18076), (410, 18133), (427, 18199), (440, 18238), (479, 18331), (488, 18367), (507, 18424), (529, 18490), (538, 18523), (544, 18538), (546, 18544), (552, 18553), (559, 18568), (568, 18589), (575, 18610), (585, 18631), (586, 18634), (606, 18652), (607, 18655), (623, 18706), (649, 18763), (654, 18781), (664, 18805), (689, 18865), (703, 18892), (718, 18955), (727, 19000), (756, 19138), (804, 19228), (810, 19237), (830, 19261), (845, 19348), (850, 19378), (866, 19462),

Gene: Bumblebee11\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Bumblebee11\_25:

(Start: 109 @15885 has 113 MA's), (222, 16200), (229, 16227), (246, 16275), (263, 16332), (291, 16437), (295, 16452), (299, 16464), (315, 16527), (341, 16635), (344, 16656), (348, 16677), (481, 17079), (497, 17121), (499, 17124), (542, 17235), (545, 17241), (614, 17373), (626, 17409), (649, 17457), (700, 17574), (726, 17688), (757, 17853), (762, 17871), (802, 17985), (807, 17997), (835, 18087), (847, 18180), (860, 18252), (863, 18261), (875, 18321), (877, 18330), (892, 18417), (899, 18465),

Gene: Burger\_24 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Burger\_24:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (420, 16968), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (591, 17337), (606, 17346), (626, 17409), (636, 17430), (649, 17457), (670, 17514), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Burton\_25 Start: 16481, Stop: 18952, Start Num: 111

Candidate Starts for Burton\_25:

(Start: 111 @16481 has 200 MA's), (125, 16520), (144, 16583), (Start: 155 @16613 has 22 MA's), (162, 16634), (176, 16655), (181, 16667), (194, 16685), (243, 16709), (262, 16775), (315, 16973), (321, 17006), (339, 17072), (389, 17327), (393, 17348), (398, 17375), (476, 17534), (500, 17570), (555, 17663), (564, 17684), (592, 17741), (644, 17861), (659, 17897), (671, 17927), (682, 17963), (707, 18029), (710, 18050), (741, 18191), (773, 18332), (784, 18353), (826, 18488), (855, 18665), (875, 18776), (885, 18842), (888, 18863), (895, 18902), (897, 18917),

Gene: Buttons\_25 Start: 16845, Stop: 19313, Start Num: 111

Candidate Starts for Buttons\_25:

(Start: 111 @16845 has 200 MA's), (125, 16884), (144, 16947), (Start: 155 @16977 has 22 MA's), (162, 16998), (176, 17019), (181, 17031), (194, 17049), (262, 17139), (315, 17334), (321, 17367), (339, 17433), (389, 17688), (393, 17709), (398, 17736), (410, 17775), (432, 17832), (451, 17862), (476, 17895), (500, 17931), (555, 18024), (564, 18045), (592, 18102), (644, 18222), (659, 18258), (671, 18288), (682, 18324), (707, 18390), (710, 18411), (721, 18453), (741, 18552), (773, 18693), (784, 18714), (842, 18945), (855, 19026), (875, 19137), (888, 19224), (895, 19263), (897, 19278),

Gene: BuzzBuzz\_26 Start: 16063, Stop: 19089, Start Num: 38

Candidate Starts for BuzzBuzz\_26:

(30, 16009), (Start: 38 @16063 has 82 MA's), (55, 16177), (68, 16243), (69, 16246), (73, 16255), (86, 16291), (96, 16342), (124, 16414), (Start: 143 @16486 has 5 MA's), (190, 16606), (193, 16609), (214, 16678), (226, 16723), (258, 16816), (264, 16825), (270, 16843), (279, 16870), (295, 16933), (299, 16945), (308, 16978), (312, 16996), (325, 17062), (327, 17065), (329, 17071), (334, 17086), (337, 17095), (339, 17107), (341, 17116), (355, 17194), (359, 17209), (383, 17326), (384, 17329), (391, 17356), (393, 17368), (405, 17422), (410, 17443), (427, 17509), (440, 17548), (479, 17641), (491, 17689), (507, 17734), (525, 17782), (535, 17824), (538, 17833), (552, 17863), (553, 17866), (559, 17878), (582, 17935), (585, 17941), (606, 17962), (607, 17965), (658, 18103), (664, 18115), (689, 18175), (709, 18232), (741, 18370), (744, 18391), (749, 18415), (757, 18460), (762, 18478), (776, 18526), (780, 18538), (800, 18580), (817, 18643), (836, 18700), (844, 18769), (851, 18805), (867, 18886), (892, 19021),

Gene: Bxb1\_22 Start: 16432, Stop: 18903, Start Num: 111

Candidate Starts for Bxb1\_22:

(Start: 111 @16432 has 200 MA's), (125, 16471), (144, 16534), (Start: 155 @16564 has 22 MA's), (162, 16585), (176, 16606), (181, 16618), (194, 16636), (250, 16681), (262, 16726), (315, 16924),



(321, 16957), (339, 17023), (389, 17278), (393, 17299), (398, 17326), (476, 17485), (500, 17521), (555, 17614), (564, 17635), (592, 17692), (644, 17812), (659, 17848), (671, 17878), (682, 17914), (707, 17980), (710, 18001), (741, 18142), (773, 18283), (784, 18304), (826, 18439), (855, 18616), (875, 18727), (885, 18793), (888, 18814), (895, 18853), (897, 18868),

Gene: Bxz2\_26 Start: 16073, Stop: 19099, Start Num: 38

Candidate Starts for Bxz2\_26:

(30, 16019), (Start: 38 @16073 has 82 MA's), (55, 16187), (68, 16253), (69, 16256), (73, 16265), (86, 16301), (96, 16352), (124, 16424), (Start: 143 @16496 has 5 MA's), (190, 16616), (193, 16619), (214, 16688), (226, 16733), (258, 16826), (264, 16835), (270, 16853), (279, 16880), (295, 16943), (299, 16955), (308, 16988), (312, 17006), (325, 17072), (327, 17075), (329, 17081), (334, 17096), (337, 17105), (339, 17117), (341, 17126), (355, 17204), (359, 17219), (383, 17336), (384, 17339), (391, 17366), (393, 17378), (405, 17432), (410, 17453), (427, 17519), (440, 17558), (479, 17651), (491, 17699), (507, 17744), (525, 17792), (535, 17834), (538, 17843), (552, 17873), (553, 17876), (559, 17888), (582, 17945), (585, 17951), (606, 17972), (607, 17975), (658, 18113), (664, 18125), (689, 18185), (709, 18242), (741, 18380), (744, 18401), (749, 18425), (757, 18470), (762, 18488), (776, 18536), (780, 18548), (800, 18590), (817, 18653), (836, 18710), (844, 18779), (851, 18815), (867, 18896), (892, 19031),

Gene: C3\_24 Start: 16651, Stop: 19164, Start Num: 107

Candidate Starts for C3\_24:

(Start: 107 @16651 has 89 MA's), (172, 16831), (173, 16834), (233, 16945), (279, 17080), (294, 17140), (299, 17155), (307, 17185), (308, 17188), (325, 17272), (334, 17296), (340, 17320), (344, 17347), (345, 17350), (371, 17461), (383, 17536), (390, 17563), (393, 17578), (405, 17632), (410, 17653), (427, 17719), (434, 17737), (436, 17746), (477, 17845), (486, 17878), (488, 17887), (507, 17944), (512, 17959), (546, 18064), (607, 18175), (610, 18187), (612, 18193), (623, 18226), (673, 18346), (718, 18475), (722, 18490), (727, 18520), (730, 18532), (737, 18568), (765, 18682), (776, 18694), (801, 18736), (861, 18943), (865, 18961), (866, 18964), (902, 19150),

Gene: CRB1\_26 Start: 16605, Stop: 19142, Start Num: 107

Candidate Starts for CRB1\_26:

(Start: 107 @16605 has 89 MA's), (172, 16785), (173, 16788), (202, 16836), (247, 16950), (249, 16956), (256, 16977), (258, 16986), (266, 17001), (286, 17073), (299, 17115), (312, 17166), (322, 17214), (325, 17232), (337, 17265), (339, 17277), (341, 17286), (383, 17496), (393, 17538), (394, 17547), (396, 17556), (410, 17613), (426, 17676), (427, 17679), (440, 17718), (496, 17871), (498, 17877), (507, 17904), (523, 17949), (546, 18024), (552, 18033), (559, 18048), (568, 18069), (578, 18093), (586, 18114), (607, 18135), (623, 18186), (649, 18243), (664, 18285), (687, 18336), (689, 18345), (703, 18372), (718, 18435), (756, 18618), (804, 18708), (810, 18717), (845, 18828), (850, 18858), (866, 18942),

Gene: CactusRose\_23 Start: 16092, Stop: 18752, Start Num: 111

Candidate Starts for CactusRose\_23:

(Start: 111 @16092 has 200 MA's), (125, 16131), (144, 16194), (145, 16200), (Start: 155 @16224 has 22 MA's), (176, 16266), (315, 16575), (329, 16638), (341, 16683), (346, 16707), (361, 16782), (364, 16794), (451, 17115), (565, 17445), (584, 17496), (598, 17523), (671, 17727), (708, 17841), (710, 17850), (715, 17871), (721, 17892), (741, 17991), (750, 18033), (751, 18036), (768, 18111), (788, 18165), (815, 18249), (827, 18294), (875, 18576), (888, 18663), (895, 18702), (897, 18717),

Gene: Caelakin\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Caelakin\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530,

17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (674, 17523), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Calvinny\_28 Start: 16057, Stop: 19083, Start Num: 38

Candidate Starts for Calvinny\_28:

(30, 16003), (Start: 38 @16057 has 82 MA's), (55, 16171), (68, 16237), (69, 16240), (73, 16249), (86, 16285), (96, 16336), (124, 16408), (Start: 143 @16480 has 5 MA's), (190, 16600), (193, 16603), (214, 16672), (226, 16717), (258, 16810), (264, 16819), (279, 16864), (288, 16903), (295, 16927), (299, 16939), (308, 16972), (312, 16990), (316, 17011), (327, 17059), (329, 17065), (334, 17080), (337, 17089), (339, 17101), (341, 17110), (359, 17203), (380, 17290), (383, 17320), (384, 17323), (391, 17350), (393, 17362), (405, 17416), (410, 17437), (416, 17467), (427, 17503), (477, 17629), (491, 17683), (507, 17728), (525, 17776), (535, 17818), (538, 17827), (552, 17857), (582, 17929), (585, 17935), (606, 17956), (607, 17959), (610, 17971), (656, 18088), (658, 18097), (689, 18169), (690, 18172), (706, 18208), (718, 18259), (719, 18262), (721, 18271), (757, 18454), (776, 18520), (780, 18532), (800, 18574), (817, 18637), (836, 18694), (844, 18763), (851, 18799), (867, 18880), (892, 19015), (894, 19027),

Gene: Camperdownii\_24 Start: 15504, Stop: 18104, Start Num: 109

Candidate Starts for Camperdownii\_24:

(Start: 109 @15504 has 113 MA's), (Start: 155 @15645 has 22 MA's), (Start: 163 @15663 has 10 MA's), (222, 15819), (240, 15870), (252, 15909), (258, 15939), (299, 16083), (315, 16146), (329, 16209), (341, 16254), (348, 16296), (365, 16380), (457, 16647), (481, 16698), (499, 16743), (530, 16821), (542, 16854), (545, 16860), (608, 16974), (626, 17028), (647, 17073), (670, 17133), (700, 17193), (726, 17307), (757, 17472), (762, 17490), (807, 17616), (859, 17868), (860, 17871), (863, 17880), (875, 17940), (892, 18036), (899, 18084),

Gene: Candra\_29 Start: 16771, Stop: 18975, Start Num: 116

Candidate Starts for Candra\_29:

(60, 16612), (93, 16726), (Start: 116 @16771 has 41 MA's), (160, 16882), (166, 16888), (212, 16996), (223, 17038), (246, 17104), (274, 17197), (283, 17224), (315, 17347), (321, 17380), (343, 17470), (357, 17539), (412, 17782), (499, 17920), (590, 18040), (680, 18193), (710, 18256), (721, 18298), (745, 18397), (749, 18418), (752, 18439), (756, 18460), (791, 18511), (800, 18523), (805, 18538), (839, 18619), (850, 18697),

Gene: Caraxes\_25 Start: 15288, Stop: 17795, Start Num: 110

Candidate Starts for Caraxes\_25:

(Start: 103 @15270 has 4 MA's), (110, 15288), (144, 15393), (170, 15459), (172, 15462), (173, 15465), (237, 15585), (264, 15666), (279, 15711), (299, 15786), (311, 15828), (321, 15882), (325, 15903), (337, 15936), (341, 15957), (344, 15978), (345, 15981), (383, 16167), (390, 16194), (393, 16209), (405, 16263), (410, 16284), (427, 16350), (507, 16575), (512, 16590), (517, 16617), (523, 16620), (546, 16695), (559, 16719), (560, 16722), (568, 16740), (606, 16803), (607, 16806), (620, 16845), (623, 16857), (658, 16944), (664, 16956), (689, 17016), (690, 17019), (703, 17043), (709, 17073), (718, 17106), (749, 17247), (765, 17313), (804, 17376), (861, 17574), (866, 17595), (879, 17670), (889, 17706), (901, 17781),

Gene: Carlyle\_26 Start: 17233, Stop: 19632, Start Num: 111

Candidate Starts for Carlyle\_26:

(Start: 111 @17233 has 200 MA's), (125, 17272), (144, 17335), (Start: 155 @17365 has 22 MA's), (162, 17386), (176, 17407), (181, 17419), (194, 17437), (262, 17527), (315, 17725), (321, 17758), (339, 17824), (389, 18079), (393, 18100), (398, 18127), (410, 18166), (432, 18223), (451, 18253), (555, 18415), (627, 18568), (638, 18580), (643, 18595), (696, 18712), (712, 18757), (716, 18778), (717, 18781), (753, 18931), (757, 18946), (773, 19012), (793, 19054), (842, 19264), (855, 19345),

(875, 19456), (888, 19543), (895, 19582), (897, 19597),

Gene: Catalina\_27 Start: 17591, Stop: 20500, Start Num: 52

Candidate Starts for Catalina\_27:

(Start: 52 @17591 has 33 MA's), (55, 17603), (68, 17663), (114, 17822), (130, 17885), (153, 17948), (165, 17990), (190, 18044), (193, 18047), (207, 18086), (260, 18257), (264, 18263), (269, 18278), (294, 18368), (295, 18371), (299, 18383), (311, 18425), (321, 18479), (325, 18500), (341, 18554), (344, 18575), (345, 18578), (348, 18596), (361, 18659), (379, 18725), (383, 18764), (390, 18791), (393, 18806), (399, 18836), (405, 18860), (408, 18872), (410, 18881), (427, 18947), (440, 18986), (468, 19052), (479, 19079), (486, 19106), (507, 19172), (523, 19217), (546, 19292), (568, 19337), (575, 19358), (585, 19379), (586, 19382), (606, 19400), (607, 19403), (615, 19430), (649, 19511), (664, 19553), (718, 19703), (722, 19718), (727, 19748), (738, 19799), (756, 19886), (758, 19895), (771, 19946), (800, 20009), (805, 20030), (816, 20066), (830, 20102), (831, 20108), (844, 20186), (849, 20213), (860, 20273), (875, 20342), (879, 20372), (885, 20399), (894, 20438), (900, 20480),

Gene: Caviar\_26 Start: 16043, Stop: 19081, Start Num: 37

Candidate Starts for Caviar\_26:

(Start: 37 @16043 has 32 MA's), (66, 16217), (69, 16229), (81, 16262), (Start: 143 @16469 has 5 MA's), (Start: 152 @16490 has 5 MA's), (190, 16589), (193, 16592), (258, 16802), (264, 16811), (268, 16823), (279, 16856), (295, 16919), (299, 16931), (308, 16964), (312, 16982), (316, 17003), (327, 17051), (329, 17057), (334, 17072), (337, 17081), (339, 17093), (341, 17102), (359, 17195), (383, 17312), (384, 17315), (391, 17342), (393, 17354), (405, 17408), (410, 17429), (427, 17495), (440, 17534), (491, 17675), (507, 17720), (535, 17810), (538, 17819), (552, 17849), (575, 17906), (582, 17921), (606, 17948), (607, 17951), (612, 17969), (656, 18080), (689, 18161), (709, 18218), (720, 18260), (741, 18356), (744, 18377), (749, 18401), (757, 18446), (762, 18464), (776, 18512), (780, 18524), (800, 18566), (803, 18578), (816, 18626), (851, 18797), (863, 18857), (865, 18869), (872, 18896), (875, 18917), (892, 19013), (899, 19061),

Gene: Centaur\_28 Start: 17112, Stop: 19619, Start Num: 107

Candidate Starts for Centaur\_28:

(Start: 107 @17112 has 89 MA's), (144, 17223), (167, 17280), (256, 17466), (279, 17529), (286, 17562), (288, 17568), (334, 17748), (337, 17757), (340, 17772), (341, 17778), (344, 17799), (345, 17802), (348, 17820), (359, 17871), (360, 17880), (383, 17988), (393, 18030), (394, 18039), (396, 18048), (405, 18084), (410, 18105), (426, 18168), (427, 18171), (434, 18189), (440, 18210), (507, 18396), (512, 18411), (517, 18438), (538, 18495), (544, 18510), (546, 18516), (552, 18525), (555, 18531), (568, 18561), (575, 18582), (607, 18627), (608, 18633), (620, 18666), (628, 18693), (647, 18732), (658, 18765), (664, 18777), (689, 18837), (703, 18864), (718, 18927), (727, 18972), (730, 18984), (737, 19020), (746, 19056), (752, 19089), (786, 19152), (800, 19176), (846, 19320), (866, 19419), (882, 19506), (902, 19605),

Gene: CentreCat\_25 Start: 15886, Stop: 18486, Start Num: 109

Candidate Starts for CentreCat\_25:

(Start: 109 @15886 has 113 MA's), (Start: 155 @16027 has 22 MA's), (Start: 163 @16045 has 10 MA's), (240, 16252), (252, 16291), (258, 16321), (291, 16438), (299, 16465), (315, 16528), (329, 16591), (341, 16636), (348, 16678), (365, 16762), (457, 17029), (481, 17080), (499, 17125), (530, 17203), (545, 17242), (557, 17263), (626, 17410), (636, 17431), (647, 17455), (670, 17515), (673, 17521), (674, 17524), (700, 17575), (710, 17623), (726, 17689), (757, 17854), (762, 17872), (807, 17998), (859, 18250), (860, 18253), (863, 18262), (875, 18322), (892, 18418), (899, 18466),

Gene: Cerulean\_26 Start: 16197, Stop: 18797, Start Num: 109

Candidate Starts for Cerulean\_26:

(Start: 109 @16197 has 113 MA's), (Start: 155 @16338 has 22 MA's), (Start: 163 @16356 has 10 MA's), (222, 16512), (240, 16563), (258, 16632), (291, 16749), (299, 16776), (315, 16839), (329,

16902), (341, 16947), (348, 16989), (365, 17073), (420, 17280), (457, 17340), (481, 17391), (499, 17436), (530, 17514), (542, 17547), (545, 17553), (626, 17721), (636, 17742), (647, 17766), (670, 17826), (673, 17832), (674, 17835), (700, 17886), (710, 17934), (726, 18000), (757, 18165), (762, 18183), (807, 18309), (859, 18561), (860, 18564), (863, 18573), (874, 18630), (875, 18633), (883, 18678), (892, 18729), (899, 18777),

Gene: Chadwick\_23 Start: 15059, Stop: 17872, Start Num: 2

Candidate Starts for Chadwick\_23:

(Start: 2 @15059 has 8 MA's), (10, 15248), (82, 15596), (120, 15731), (121, 15737), (208, 15830), (229, 15881), (273, 16007), (289, 16073), (295, 16094), (315, 16169), (321, 16202), (337, 16256), (342, 16289), (343, 16292), (345, 16301), (365, 16400), (376, 16433), (397, 16562), (426, 16676), (450, 16727), (501, 16793), (561, 16886), (576, 16919), (634, 17006), (655, 17039), (664, 17051), (683, 17081), (710, 17144), (721, 17186), (734, 17258), (735, 17261), (745, 17285), (748, 17300), (752, 17327), (756, 17348), (808, 17435), (829, 17465), (830, 17468), (842, 17528), (859, 17627), (863, 17639), (865, 17651), (867, 17660), (889, 17789), (892, 17807),

Gene: ChampagnePapi\_26 Start: 16196, Stop: 18796, Start Num: 109

Candidate Starts for ChampagnePapi\_26:

(Start: 109 @16196 has 113 MA's), (Start: 155 @16337 has 22 MA's), (Start: 163 @16355 has 10 MA's), (222, 16511), (240, 16562), (258, 16631), (291, 16748), (299, 16775), (315, 16838), (329, 16901), (341, 16946), (348, 16988), (365, 17072), (420, 17279), (457, 17339), (481, 17390), (499, 17435), (530, 17513), (542, 17546), (545, 17552), (626, 17720), (636, 17741), (647, 17765), (670, 17825), (673, 17831), (674, 17834), (700, 17885), (710, 17933), (726, 17999), (757, 18164), (762, 18182), (807, 18308), (859, 18560), (860, 18563), (863, 18572), (874, 18629), (875, 18632), (883, 18677), (892, 18728), (899, 18776),

Gene: Chanagan\_23 Start: 15937, Stop: 18417, Start Num: 111

Candidate Starts for Chanagan\_23:

(Start: 111 @15937 has 200 MA's), (125, 15976), (144, 16039), (Start: 155 @16069 has 22 MA's), (176, 16111), (285, 16318), (291, 16336), (315, 16426), (329, 16489), (337, 16513), (339, 16525), (348, 16576), (460, 16960), (526, 17062), (537, 17101), (560, 17128), (569, 17152), (671, 17380), (707, 17482), (710, 17503), (721, 17545), (741, 17644), (753, 17707), (818, 17926), (827, 17959), (875, 18241), (888, 18328), (895, 18367), (897, 18382),

Gene: Changeling\_28 Start: 18472, Stop: 20976, Start Num: 107

Candidate Starts for Changeling\_28:

(Start: 107 @18472 has 89 MA's), (144, 18583), (Start: 152 @18601 has 5 MA's), (167, 18640), (175, 18661), (188, 18685), (245, 18781), (256, 18811), (264, 18829), (299, 18949), (312, 19000), (327, 19069), (329, 19075), (334, 19090), (337, 19099), (339, 19111), (341, 19120), (383, 19330), (390, 19357), (393, 19372), (405, 19426), (410, 19447), (427, 19513), (440, 19552), (507, 19738), (512, 19753), (538, 19837), (544, 19852), (546, 19858), (552, 19867), (559, 19882), (568, 19903), (575, 19924), (606, 19966), (610, 19981), (620, 20008), (624, 20023), (644, 20065), (649, 20077), (664, 20119), (689, 20179), (703, 20206), (709, 20236), (718, 20269), (727, 20314), (730, 20326), (765, 20476), (801, 20533), (804, 20542), (810, 20551), (845, 20662), (850, 20692), (866, 20776), (892, 20905),

Gene: Chaph\_25 Start: 15894, Stop: 18494, Start Num: 109

Candidate Starts for Chaph\_25:

(Start: 109 @15894 has 113 MA's), (Start: 155 @16035 has 22 MA's), (Start: 163 @16053 has 10 MA's), (240, 16260), (252, 16299), (258, 16329), (291, 16446), (299, 16473), (315, 16536), (329, 16599), (341, 16644), (348, 16686), (365, 16770), (457, 17037), (481, 17088), (499, 17133), (530, 17211), (542, 17244), (545, 17250), (557, 17271), (626, 17418), (636, 17439), (647, 17463), (673, 17529), (700, 17583), (710, 17631), (726, 17697), (757, 17862), (762, 17880), (807, 18006), (859,

18258), (860, 18261), (863, 18270), (875, 18330), (892, 18426), (899, 18474),

Gene: Chargerpower\_26 Start: 15837, Stop: 18245, Start Num: 143

Candidate Starts for Chargerpower\_26:

(Start: 143 @15837 has 5 MA's), (Start: 152 @15855 has 5 MA's), (156, 15873), (164, 15894), (207, 15990), (220, 16032), (250, 16119), (261, 16161), (278, 16215), (299, 16299), (307, 16329), (315, 16362), (321, 16395), (334, 16440), (341, 16470), (344, 16491), (392, 16716), (398, 16731), (400, 16737), (431, 16830), (478, 16902), (506, 16977), (573, 17151), (578, 17163), (587, 17184), (609, 17211), (626, 17262), (630, 17271), (673, 17382), (704, 17469), (718, 17541), (721, 17553), (724, 17565), (728, 17589), (753, 17727), (756, 17739), (765, 17763), (801, 17817), (804, 17829), (851, 17976), (866, 18045), (883, 18135), (894, 18186), (899, 18222),

Gene: Charm\_26 Start: 15553, Stop: 18648, Start Num: 23

Candidate Starts for Charm\_26:

(Start: 23 @15553 has 1 MA's), (42, 15655), (Start: 52 @15742 has 33 MA's), (55, 15754), (89, 15886), (94, 15907), (99, 15928), (114, 15970), (Start: 118 @15982 has 2 MA's), (130, 16033), (153, 16096), (165, 16138), (193, 16195), (260, 16405), (264, 16411), (294, 16516), (299, 16531), (309, 16570), (311, 16573), (325, 16648), (327, 16651), (341, 16702), (344, 16723), (345, 16726), (348, 16744), (383, 16912), (390, 16939), (393, 16954), (405, 17008), (410, 17029), (426, 17092), (427, 17095), (440, 17134), (479, 17227), (486, 17254), (525, 17368), (527, 17377), (539, 17422), (552, 17449), (568, 17485), (575, 17506), (582, 17521), (606, 17548), (607, 17551), (613, 17572), (624, 17605), (650, 17665), (664, 17701), (718, 17851), (727, 17896), (738, 17947), (752, 18013), (757, 18037), (762, 18055), (767, 18076), (771, 18094), (786, 18124), (800, 18157), (805, 18178), (813, 18208), (831, 18259), (844, 18337), (851, 18373), (860, 18424), (866, 18448), (879, 18523), (894, 18589), (900, 18631),

Gene: Chartreuse\_29 Start: 16682, Stop: 18886, Start Num: 116

Candidate Starts for Chartreuse\_29:

(60, 16523), (93, 16637), (Start: 116 @16682 has 41 MA's), (160, 16793), (166, 16799), (212, 16907), (223, 16949), (246, 17015), (274, 17108), (283, 17135), (315, 17258), (321, 17291), (343, 17381), (357, 17450), (412, 17693), (499, 17831), (590, 17951), (680, 18104), (710, 18167), (721, 18209), (745, 18308), (749, 18329), (752, 18350), (756, 18371), (791, 18422), (800, 18434), (805, 18449), (839, 18530), (850, 18608),

Gene: Che12\_28 Start: 15530, Stop: 18055, Start Num: 103

Candidate Starts for Che12\_28:

(Start: 103 @15530 has 4 MA's), (110, 15548), (144, 15653), (170, 15719), (172, 15722), (173, 15725), (279, 15974), (286, 16007), (287, 16010), (299, 16049), (312, 16100), (321, 16145), (325, 16166), (337, 16199), (340, 16214), (341, 16220), (344, 16241), (383, 16430), (390, 16457), (393, 16472), (405, 16526), (410, 16547), (427, 16613), (477, 16739), (507, 16838), (512, 16853), (517, 16880), (525, 16886), (546, 16958), (559, 16982), (560, 16985), (568, 17003), (582, 17039), (606, 17066), (607, 17069), (623, 17120), (624, 17123), (658, 17207), (689, 17279), (703, 17306), (709, 17336), (718, 17369), (722, 17384), (765, 17576), (804, 17639), (861, 17837), (866, 17858), (879, 17933), (889, 17969),

Gene: ChipMunk\_28 Start: 17023, Stop: 19566, Start Num: 107

Candidate Starts for ChipMunk\_28:

(Start: 107 @17023 has 89 MA's), (170, 17200), (172, 17203), (173, 17206), (245, 17371), (249, 17380), (256, 17401), (258, 17410), (268, 17431), (279, 17464), (286, 17497), (299, 17539), (312, 17590), (321, 17635), (322, 17638), (325, 17656), (337, 17689), (339, 17701), (341, 17710), (344, 17731), (345, 17734), (383, 17920), (393, 17962), (394, 17971), (396, 17980), (410, 18037), (427, 18103), (440, 18142), (479, 18235), (488, 18271), (507, 18328), (529, 18394), (538, 18427), (544, 18442), (546, 18448), (552, 18457), (559, 18472), (568, 18493), (575, 18514), (585, 18535), (586,

18538), (606, 18556), (607, 18559), (620, 18598), (623, 18610), (649, 18667), (654, 18685), (664, 18709), (689, 18769), (703, 18796), (718, 18859), (756, 19042), (801, 19123), (804, 19132), (810, 19141), (845, 19252), (850, 19282), (866, 19366),

Gene: Chiqui\_24 Start: 15764, Stop: 18802, Start Num: 37

Candidate Starts for Chiqui\_24:

(Start: 37 @15764 has 32 MA's), (66, 15938), (81, 15983), (Start: 143 @16193 has 5 MA's), (193, 16316), (258, 16523), (279, 16577), (299, 16652), (308, 16685), (312, 16703), (315, 16715), (332, 16781), (337, 16802), (339, 16814), (341, 16823), (348, 16865), (359, 16916), (383, 17033), (384, 17036), (393, 17075), (405, 17129), (410, 17150), (427, 17216), (436, 17243), (479, 17348), (491, 17396), (507, 17441), (512, 17456), (525, 17489), (535, 17531), (538, 17540), (552, 17570), (559, 17585), (568, 17606), (582, 17642), (606, 17669), (607, 17672), (613, 17693), (620, 17711), (637, 17756), (654, 17798), (656, 17801), (689, 17882), (706, 17921), (718, 17972), (719, 17975), (721, 17984), (726, 18008), (741, 18077), (744, 18098), (757, 18167), (762, 18185), (776, 18233), (780, 18245), (795, 18275), (800, 18287), (803, 18299), (816, 18347), (851, 18518), (863, 18578), (867, 18599), (885, 18695), (892, 18734), (899, 18782),

Gene: Chupacabra\_25 Start: 15864, Stop: 18416, Start Num: 163

Candidate Starts for Chupacabra\_25:

(50, 15456), (Start: 105 @15687 has 8 MA's), (Start: 163 @15864 has 10 MA's), (171, 15885), (181, 15909), (200, 15939), (201, 15942), (203, 15951), (214, 15990), (220, 16005), (225, 16029), (261, 16137), (265, 16149), (268, 16158), (281, 16212), (295, 16266), (298, 16275), (302, 16299), (309, 16320), (330, 16425), (339, 16467), (401, 16779), (489, 16989), (528, 17109), (542, 17154), (544, 17157), (545, 17160), (557, 17181), (558, 17184), (574, 17229), (626, 17337), (636, 17358), (659, 17418), (674, 17451), (705, 17514), (721, 17592), (726, 17616), (741, 17691), (752, 17757), (757, 17781), (762, 17799), (770, 17835), (782, 17865), (799, 17907), (802, 17919), (807, 17931), (819, 17967), (823, 17979), (863, 18192), (865, 18204), (871, 18228), (875, 18252), (892, 18348), (899, 18396),

Gene: Ciao\_24 Start: 16311, Stop: 18782, Start Num: 111

Candidate Starts for Ciao\_24:

(Start: 111 @16311 has 200 MA's), (125, 16350), (144, 16413), (Start: 155 @16443 has 22 MA's), (162, 16464), (176, 16485), (181, 16497), (194, 16515), (262, 16605), (315, 16803), (321, 16836), (339, 16902), (389, 17157), (393, 17178), (398, 17205), (476, 17364), (500, 17400), (555, 17493), (564, 17514), (592, 17571), (644, 17691), (659, 17727), (671, 17757), (682, 17793), (707, 17859), (710, 17880), (741, 18021), (773, 18162), (784, 18183), (826, 18318), (855, 18495), (875, 18606), (885, 18672), (888, 18693), (895, 18732), (897, 18747),

Gene: Cici\_25 Start: 15876, Stop: 18476, Start Num: 109

Candidate Starts for Cici\_25:

(Start: 109 @15876 has 113 MA's), (229, 16218), (246, 16266), (263, 16323), (291, 16428), (295, 16443), (299, 16455), (315, 16518), (341, 16626), (344, 16647), (348, 16668), (457, 17019), (481, 17070), (499, 17115), (542, 17226), (545, 17232), (626, 17400), (649, 17448), (670, 17505), (700, 17565), (710, 17613), (719, 17646), (726, 17679), (729, 17697), (757, 17844), (762, 17862), (807, 17988), (835, 18078), (848, 18177), (860, 18243), (863, 18252), (875, 18312), (877, 18321), (883, 18357), (886, 18375), (892, 18408), (899, 18456),

Gene: Cindaradix\_24 Start: 15793, Stop: 18210, Start Num: 174

Candidate Starts for Cindaradix\_24:

(Start: 109 @15610 has 113 MA's), (Start: 174 @15793 has 1 MA's), (229, 15952), (242, 15979), (246, 16000), (278, 16105), (291, 16162), (315, 16252), (341, 16360), (357, 16444), (471, 16780), (481, 16804), (499, 16849), (591, 17062), (614, 17098), (626, 17134), (647, 17179), (700, 17299), (726, 17413), (757, 17578), (762, 17596), (807, 17722), (848, 17911), (860, 17977), (863, 17986), (875,

18046), (877, 18055), (883, 18091), (886, 18109), (892, 18142), (899, 18190),

Gene: Cintron\_25 Start: 16074, Stop: 18533, Start Num: 155

Candidate Starts for Cintron\_25:

(Start: 109 @15933 has 113 MA's), (Start: 155 @16074 has 22 MA's), (222, 16248), (240, 16299), (252, 16338), (258, 16368), (291, 16485), (299, 16512), (315, 16575), (329, 16638), (341, 16683), (348, 16725), (457, 17076), (481, 17127), (499, 17172), (545, 17289), (626, 17457), (636, 17478), (647, 17502), (670, 17562), (673, 17568), (674, 17571), (700, 17622), (710, 17670), (726, 17736), (757, 17901), (762, 17919), (807, 18045), (859, 18297), (860, 18300), (863, 18309), (874, 18366), (875, 18369), (883, 18414), (892, 18465), (899, 18513),

Gene: Citius\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Citius\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (674, 17523), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Clarenza\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for Clarenza\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (545, 17238), (626, 17406), (636, 17427), (647, 17451), (673, 17517), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: CloudWang3\_29 Start: 16717, Stop: 18933, Start Num: 116

Candidate Starts for CloudWang3\_29:

(93, 16672), (Start: 116 @16717 has 41 MA's), (160, 16828), (223, 16984), (270, 17131), (274, 17143), (314, 17290), (315, 17293), (321, 17326), (343, 17416), (357, 17485), (376, 17560), (412, 17728), (590, 17986), (618, 18031), (680, 18139), (710, 18202), (721, 18244), (745, 18343), (749, 18364), (756, 18406), (791, 18457), (805, 18484), (839, 18565), (850, 18655),

Gene: Cocoaberry\_25 Start: 15889, Stop: 18489, Start Num: 109

Candidate Starts for Cocoaberry\_25:

(Start: 109 @15889 has 113 MA's), (Start: 155 @16030 has 22 MA's), (Start: 163 @16048 has 10 MA's), (240, 16255), (252, 16294), (258, 16324), (291, 16441), (299, 16468), (315, 16531), (329, 16594), (341, 16639), (348, 16681), (365, 16765), (457, 17032), (481, 17083), (499, 17128), (530, 17206), (542, 17239), (545, 17245), (557, 17266), (626, 17413), (636, 17434), (647, 17458), (673, 17524), (700, 17578), (710, 17626), (726, 17692), (757, 17857), (762, 17875), (807, 18001), (859, 18253), (860, 18256), (863, 18265), (875, 18325), (892, 18421), (899, 18469),

Gene: Colbster\_27 Start: 15979, Stop: 19005, Start Num: 38

Candidate Starts for Colbster\_27:

(30, 15925), (Start: 38 @15979 has 82 MA's), (55, 16093), (68, 16159), (69, 16162), (73, 16171), (86, 16207), (96, 16258), (124, 16330), (Start: 143 @16402 has 5 MA's), (190, 16522), (193, 16525), (214, 16594), (226, 16639), (258, 16732), (264, 16741), (270, 16759), (279, 16786), (295, 16849), (299, 16861), (308, 16894), (312, 16912), (325, 16978), (327, 16981), (329, 16987), (334, 17002), (337, 17011), (339, 17023), (341, 17032), (355, 17110), (359, 17125), (383, 17242), (384, 17245), (391, 17272), (393, 17284), (405, 17338), (410, 17359), (427, 17425), (440, 17464), (479, 17557), (491,



17605), (507, 17650), (525, 17698), (535, 17740), (538, 17749), (552, 17779), (553, 17782), (559, 17794), (582, 17851), (585, 17857), (606, 17878), (607, 17881), (658, 18019), (664, 18031), (689, 18091), (709, 18148), (741, 18286), (744, 18307), (749, 18331), (757, 18376), (762, 18394), (776, 18442), (780, 18454), (800, 18496), (817, 18559), (836, 18616), (844, 18685), (851, 18721), (867, 18802), (892, 18937),

Gene: Colin\_30 Start: 18311, Stop: 20851, Start Num: 107

Candidate Starts for Colin\_30:

(Start: 107 @18311 has 89 MA's), (172, 18491), (202, 18542), (249, 18662), (256, 18683), (258, 18692), (266, 18707), (268, 18713), (279, 18746), (286, 18779), (288, 18785), (299, 18821), (334, 18965), (337, 18974), (340, 18989), (341, 18995), (344, 19016), (348, 19037), (360, 19097), (383, 19205), (393, 19247), (394, 19256), (396, 19265), (405, 19301), (408, 19313), (410, 19322), (427, 19388), (440, 19427), (489, 19559), (507, 19613), (525, 19661), (546, 19733), (555, 19748), (568, 19778), (586, 19823), (607, 19844), (620, 19883), (628, 19910), (664, 19994), (689, 20054), (703, 20081), (718, 20144), (727, 20189), (737, 20237), (801, 20408), (804, 20417), (810, 20426), (845, 20537), (850, 20567), (865, 20648), (866, 20651),

Gene: Commander\_25 Start: 16026, Stop: 18485, Start Num: 155

Candidate Starts for Commander\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: ConceptII\_25 Start: 16819, Stop: 19299, Start Num: 111

Candidate Starts for ConceptII\_25:

(Start: 111 @16819 has 200 MA's), (125, 16858), (144, 16921), (145, 16927), (Start: 155 @16951 has 22 MA's), (176, 16993), (285, 17200), (291, 17218), (315, 17308), (329, 17371), (337, 17395), (339, 17407), (348, 17458), (460, 17842), (526, 17944), (537, 17983), (560, 18010), (569, 18034), (630, 18163), (671, 18262), (707, 18364), (710, 18385), (741, 18526), (753, 18589), (818, 18808), (827, 18841), (855, 19012), (875, 19123), (885, 19189), (888, 19210), (895, 19249),

Gene: Connomayer\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Connomayer\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (608, 17355), (626, 17409), (647, 17454), (670, 17514), (685, 17532), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Conquerage\_27 Start: 17620, Stop: 20529, Start Num: 52

Candidate Starts for Conquerage\_27:

(Start: 52 @17620 has 33 MA's), (55, 17632), (68, 17692), (130, 17914), (153, 17977), (165, 18019), (190, 18073), (193, 18076), (207, 18115), (260, 18286), (264, 18292), (269, 18307), (294, 18397), (295, 18400), (299, 18412), (311, 18454), (321, 18508), (325, 18529), (341, 18583), (344, 18604), (345, 18607), (348, 18625), (361, 18688), (379, 18754), (383, 18793), (390, 18820), (393, 18835), (399, 18865), (405, 18889), (408, 18901), (410, 18910), (427, 18976), (440, 19015), (468, 19081), (479, 19108), (486, 19135), (523, 19246), (546, 19321), (559, 19345), (568, 19366), (575, 19387), (585, 19408), (586, 19411), (606, 19429), (607, 19432), (615, 19459), (640, 19519), (651, 19549), (664, 19582), (676, 19612), (685, 19624), (718, 19732), (722, 19747), (727, 19777), (738, 19828),

(756, 19915), (758, 19924), (771, 19975), (800, 20038), (805, 20059), (816, 20095), (830, 20131), (831, 20137), (844, 20215), (849, 20242), (875, 20371), (879, 20401), (885, 20428), (894, 20467), (900, 20509),

Gene: Conspiracy\_22 Start: 15069, Stop: 18410, Start Num: 1

Candidate Starts for Conspiracy\_22:

(Start: 1 @15069 has 30 MA's), (Start: 34 @15507 has 1 MA's), (120, 15819), (Start: 141 @15897 has 1 MA's), (154, 15927), (173, 15984), (227, 16131), (229, 16137), (233, 16143), (270, 16269), (274, 16281), (315, 16431), (322, 16467), (329, 16497), (334, 16512), (341, 16542), (342, 16554), (347, 16578), (361, 16647), (379, 16713), (412, 16869), (428, 16938), (429, 16941), (441, 16968), (449, 16992), (514, 17130), (522, 17151), (540, 17196), (563, 17238), (639, 17430), (652, 17460), (660, 17484), (664, 17496), (672, 17517), (683, 17559), (705, 17646), (710, 17682), (715, 17703), (721, 17724), (736, 17802), (745, 17823), (749, 17844), (752, 17865), (756, 17886), (765, 17910), (808, 17973), (842, 18066), (845, 18084), (859, 18165), (863, 18177), (865, 18189), (867, 18198), (878, 18252), (891, 18336), (892, 18345),

Gene: Coog\_22 Start: 15213, Stop: 18551, Start Num: 1

Candidate Starts for Coog\_22:

(Start: 1 @15213 has 30 MA's), (Start: 34 @15651 has 1 MA's), (120, 15963), (Start: 141 @16041 has 1 MA's), (154, 16071), (173, 16128), (227, 16275), (229, 16281), (269, 16401), (271, 16410), (294, 16491), (295, 16494), (315, 16569), (324, 16614), (329, 16632), (341, 16677), (344, 16698), (384, 16890), (417, 17028), (429, 17076), (459, 17154), (516, 17280), (522, 17292), (532, 17316), (563, 17379), (639, 17571), (652, 17601), (660, 17625), (664, 17637), (683, 17700), (710, 17823), (715, 17844), (721, 17865), (736, 17943), (745, 17964), (752, 18006), (756, 18027), (808, 18114), (829, 18144), (842, 18207), (845, 18225), (859, 18306), (863, 18318), (865, 18330), (867, 18339), (878, 18393), (891, 18477), (896, 18516),

Gene: Cookiedough\_29 Start: 16728, Stop: 18932, Start Num: 116

Candidate Starts for Cookiedough\_29:

(60, 16569), (93, 16683), (Start: 116 @16728 has 41 MA's), (160, 16839), (166, 16845), (212, 16953), (223, 16995), (246, 17061), (274, 17154), (283, 17181), (315, 17304), (321, 17337), (343, 17427), (357, 17496), (412, 17739), (499, 17877), (590, 17997), (680, 18150), (710, 18213), (721, 18255), (745, 18354), (749, 18375), (752, 18396), (756, 18417), (791, 18468), (800, 18480), (805, 18495), (839, 18576), (850, 18654),

Gene: Corvo\_24 Start: 16803, Stop: 19274, Start Num: 111

Candidate Starts for Corvo\_24:

(Start: 111 @16803 has 200 MA's), (125, 16842), (144, 16905), (Start: 155 @16935 has 22 MA's), (162, 16956), (176, 16977), (181, 16989), (194, 17007), (262, 17097), (315, 17295), (321, 17328), (339, 17394), (389, 17649), (393, 17670), (398, 17697), (476, 17856), (500, 17892), (555, 17985), (564, 18006), (592, 18063), (644, 18183), (659, 18219), (671, 18249), (682, 18285), (707, 18351), (710, 18372), (741, 18513), (773, 18654), (784, 18675), (826, 18810), (855, 18987), (875, 19098), (888, 19185), (895, 19224),

Gene: Crispicous1\_23 Start: 15808, Stop: 18288, Start Num: 111

Candidate Starts for Crispicous1\_23:

(Start: 111 @15808 has 200 MA's), (125, 15847), (144, 15910), (Start: 155 @15940 has 22 MA's), (176, 15982), (285, 16189), (291, 16207), (315, 16297), (329, 16360), (337, 16384), (339, 16396), (348, 16447), (460, 16831), (526, 16933), (537, 16972), (560, 16999), (569, 17023), (630, 17152), (671, 17251), (707, 17353), (710, 17374), (721, 17416), (741, 17515), (753, 17578), (818, 17797), (827, 17830), (875, 18112), (888, 18199), (895, 18238), (897, 18253),

Gene: Crucio\_26 Start: 16547, Stop: 19084, Start Num: 107

Candidate Starts for Crucio\_26:

(Start: 107 @16547 has 89 MA's), (170, 16724), (172, 16727), (173, 16730), (188, 16760), (249, 16898), (256, 16919), (258, 16928), (268, 16949), (279, 16982), (294, 17042), (299, 17057), (312, 17108), (322, 17156), (325, 17174), (337, 17207), (339, 17219), (340, 17222), (341, 17228), (344, 17249), (345, 17252), (362, 17339), (383, 17438), (393, 17480), (394, 17489), (396, 17498), (408, 17546), (410, 17555), (427, 17621), (440, 17660), (507, 17846), (512, 17861), (525, 17894), (538, 17945), (546, 17966), (555, 17981), (559, 17990), (566, 18005), (606, 18074), (664, 18227), (673, 18248), (718, 18377), (727, 18422), (730, 18434), (737, 18470), (804, 18650), (810, 18659), (845, 18770), (850, 18800), (866, 18884),

Gene: Cuco\_22 Start: 15243, Stop: 18581, Start Num: 1

Candidate Starts for Cuco\_22:

(Start: 1 @15243 has 30 MA's), (Start: 34 @15681 has 1 MA's), (120, 15993), (Start: 141 @16071 has 1 MA's), (154, 16101), (173, 16158), (227, 16305), (229, 16311), (269, 16431), (271, 16440), (294, 16521), (295, 16524), (315, 16599), (324, 16644), (329, 16662), (341, 16707), (344, 16728), (384, 16920), (417, 17058), (429, 17106), (459, 17184), (516, 17310), (522, 17322), (532, 17346), (563, 17409), (639, 17601), (652, 17631), (660, 17655), (664, 17667), (683, 17730), (710, 17853), (715, 17874), (721, 17895), (736, 17973), (745, 17994), (752, 18036), (756, 18057), (808, 18144), (829, 18174), (842, 18237), (845, 18255), (859, 18336), (863, 18348), (865, 18360), (867, 18369), (878, 18423), (891, 18507), (896, 18546),

Gene: Cueyllyss\_24 Start: 16510, Stop: 18990, Start Num: 111

Candidate Starts for Cueyllyss\_24:

(Start: 111 @16510 has 200 MA's), (125, 16549), (144, 16612), (145, 16618), (Start: 155 @16642 has 22 MA's), (176, 16684), (285, 16891), (291, 16909), (315, 16999), (329, 17062), (337, 17086), (339, 17098), (348, 17149), (460, 17533), (526, 17635), (537, 17674), (560, 17701), (569, 17725), (630, 17854), (671, 17953), (707, 18055), (710, 18076), (714, 18088), (721, 18118), (741, 18217), (753, 18280), (818, 18499), (827, 18532), (875, 18814), (885, 18880), (888, 18901), (895, 18940), (897, 18955),

Gene: Cullens\_27 Start: 15978, Stop: 19004, Start Num: 38

Candidate Starts for Cullens\_27:

(30, 15924), (Start: 38 @15978 has 82 MA's), (55, 16092), (68, 16158), (69, 16161), (73, 16170), (86, 16206), (96, 16257), (124, 16329), (Start: 143 @16401 has 5 MA's), (190, 16521), (193, 16524), (214, 16593), (226, 16638), (258, 16731), (264, 16740), (270, 16758), (279, 16785), (295, 16848), (299, 16860), (308, 16893), (312, 16911), (325, 16977), (327, 16980), (329, 16986), (334, 17001), (337, 17010), (339, 17022), (341, 17031), (355, 17109), (359, 17124), (383, 17241), (384, 17244), (391, 17271), (393, 17283), (405, 17337), (410, 17358), (427, 17424), (440, 17463), (479, 17556), (491, 17604), (507, 17649), (525, 17697), (535, 17739), (538, 17748), (552, 17778), (553, 17781), (559, 17793), (582, 17850), (585, 17856), (606, 17877), (607, 17880), (658, 18018), (664, 18030), (689, 18090), (709, 18147), (741, 18285), (744, 18306), (749, 18330), (757, 18375), (762, 18393), (776, 18441), (780, 18453), (800, 18495), (817, 18558), (836, 18615), (844, 18684), (851, 18720), (867, 18801), (892, 18936),

Gene: D29\_26 Start: 16508, Stop: 19021, Start Num: 107

Candidate Starts for D29\_26:

(Start: 107 @16508 has 89 MA's), (172, 16688), (173, 16691), (277, 16934), (279, 16937), (294, 16997), (299, 17012), (307, 17042), (308, 17045), (325, 17129), (334, 17153), (340, 17177), (344, 17204), (345, 17207), (371, 17318), (383, 17393), (390, 17420), (393, 17435), (405, 17489), (410, 17510), (427, 17576), (434, 17594), (436, 17603), (477, 17702), (486, 17735), (488, 17744), (507, 17801), (512, 17816), (546, 17921), (607, 18032), (610, 18044), (612, 18050), (623, 18083), (624, 18086), (673, 18203), (718, 18332), (722, 18347), (727, 18377), (730, 18389), (737, 18425), (765, 18539), (776, 18551), (801, 18593), (861, 18800), (865, 18818), (866, 18821), (902, 19007),

Gene: D32\_29 Start: 16508, Stop: 19021, Start Num: 107

Candidate Starts for D32\_29:

(Start: 107 @16508 has 89 MA's), (172, 16688), (173, 16691), (277, 16934), (279, 16937), (294, 16997), (299, 17012), (307, 17042), (308, 17045), (325, 17129), (334, 17153), (340, 17177), (344, 17204), (345, 17207), (371, 17318), (383, 17393), (390, 17420), (393, 17435), (405, 17489), (410, 17510), (427, 17576), (434, 17594), (436, 17603), (477, 17702), (486, 17735), (488, 17744), (507, 17801), (512, 17816), (546, 17921), (607, 18032), (610, 18044), (612, 18050), (623, 18083), (624, 18086), (673, 18203), (718, 18332), (722, 18347), (727, 18377), (730, 18389), (737, 18425), (765, 18539), (776, 18551), (801, 18593), (861, 18800), (865, 18818), (866, 18821), (902, 19007),

Gene: DBQu4n\_29 Start: 16508, Stop: 19021, Start Num: 107

Candidate Starts for DBQu4n\_29:

(Start: 107 @16508 has 89 MA's), (172, 16688), (173, 16691), (279, 16937), (294, 16997), (299, 17012), (307, 17042), (308, 17045), (325, 17129), (334, 17153), (340, 17177), (344, 17204), (345, 17207), (368, 17312), (383, 17393), (390, 17420), (393, 17435), (405, 17489), (410, 17510), (427, 17576), (434, 17594), (436, 17603), (477, 17702), (486, 17735), (488, 17744), (507, 17801), (512, 17816), (546, 17921), (607, 18032), (610, 18044), (612, 18050), (623, 18083), (673, 18203), (718, 18332), (722, 18347), (727, 18377), (730, 18389), (737, 18425), (765, 18539), (776, 18551), (801, 18593), (861, 18800), (865, 18818), (866, 18821), (902, 19007),

Gene: DD5\_25 Start: 17058, Stop: 19538, Start Num: 111

Candidate Starts for DD5\_25:

(Start: 111 @17058 has 200 MA's), (125, 17097), (144, 17160), (Start: 155 @17190 has 22 MA's), (176, 17232), (285, 17439), (291, 17457), (315, 17547), (329, 17610), (337, 17634), (339, 17646), (348, 17697), (460, 18081), (526, 18183), (537, 18222), (560, 18249), (569, 18273), (630, 18402), (671, 18501), (707, 18603), (710, 18624), (721, 18666), (741, 18765), (753, 18828), (818, 19047), (827, 19080), (855, 19251), (875, 19362), (888, 19449), (895, 19488), (897, 19503),

Gene: DaHudson\_27 Start: 15971, Stop: 18997, Start Num: 38

Candidate Starts for DaHudson\_27:

(30, 15917), (Start: 38 @15971 has 82 MA's), (55, 16085), (68, 16151), (69, 16154), (73, 16163), (86, 16199), (96, 16250), (124, 16322), (Start: 143 @16394 has 5 MA's), (190, 16514), (193, 16517), (214, 16586), (226, 16631), (258, 16724), (264, 16733), (270, 16751), (279, 16778), (295, 16841), (299, 16853), (308, 16886), (312, 16904), (325, 16970), (327, 16973), (329, 16979), (334, 16994), (337, 17003), (339, 17015), (341, 17024), (359, 17117), (383, 17234), (384, 17237), (391, 17264), (393, 17276), (405, 17330), (410, 17351), (427, 17417), (436, 17444), (479, 17549), (491, 17597), (507, 17642), (525, 17690), (535, 17732), (538, 17741), (552, 17771), (553, 17774), (559, 17786), (582, 17843), (585, 17849), (606, 17870), (607, 17873), (658, 18011), (664, 18023), (689, 18083), (710, 18143), (718, 18173), (719, 18176), (721, 18185), (741, 18278), (757, 18368), (776, 18434), (780, 18446), (800, 18488), (817, 18551), (836, 18608), (844, 18677), (851, 18713), (867, 18794), (892, 18929),

Gene: DaVinci\_29 Start: 16736, Stop: 18940, Start Num: 116

Candidate Starts for DaVinci\_29:

(60, 16577), (93, 16691), (Start: 116 @16736 has 41 MA's), (160, 16847), (166, 16853), (212, 16961), (223, 17003), (246, 17069), (274, 17162), (283, 17189), (315, 17312), (321, 17345), (343, 17435), (357, 17504), (412, 17747), (499, 17885), (590, 18005), (680, 18158), (710, 18221), (721, 18263), (745, 18362), (749, 18383), (752, 18404), (756, 18425), (791, 18476), (800, 18488), (805, 18503), (839, 18584), (850, 18662),

Gene: Daishi\_26 Start: 14904, Stop: 17930, Start Num: 38

Candidate Starts for Daishi\_26:

(30, 14850), (Start: 38 @14904 has 82 MA's), (55, 15018), (68, 15084), (69, 15087), (73, 15096), (86, 15132), (96, 15183), (124, 15255), (Start: 143 @15327 has 5 MA's), (190, 15447), (193, 15450), (214, 15519), (226, 15564), (258, 15657), (264, 15666), (270, 15684), (279, 15711), (295, 15774), (299, 15786), (308, 15819), (312, 15837), (325, 15903), (327, 15906), (329, 15912), (334, 15927), (337, 15936), (339, 15948), (341, 15957), (355, 16035), (359, 16050), (383, 16167), (384, 16170), (391, 16197), (393, 16209), (405, 16263), (410, 16284), (427, 16350), (440, 16389), (479, 16482), (491, 16530), (507, 16575), (525, 16623), (535, 16665), (538, 16674), (552, 16704), (553, 16707), (559, 16719), (582, 16776), (585, 16782), (606, 16803), (607, 16806), (658, 16944), (664, 16956), (689, 17016), (709, 17073), (741, 17211), (744, 17232), (749, 17256), (757, 17301), (762, 17319), (776, 17367), (780, 17379), (800, 17421), (817, 17484), (836, 17541), (844, 17610), (851, 17646), (867, 17727), (892, 17862),

Gene: Dalmatian\_26 Start: 16688, Stop: 19231, Start Num: 107

Candidate Starts for Dalmatian\_26:

(Start: 107 @16688 has 89 MA's), (170, 16865), (172, 16868), (173, 16871), (247, 17039), (249, 17045), (256, 17066), (258, 17075), (268, 17096), (279, 17129), (286, 17162), (312, 17255), (322, 17303), (325, 17321), (334, 17345), (337, 17354), (339, 17366), (340, 17369), (341, 17375), (344, 17396), (345, 17399), (362, 17486), (383, 17585), (393, 17627), (396, 17645), (402, 17666), (408, 17693), (410, 17702), (427, 17768), (440, 17807), (507, 17993), (512, 18008), (525, 18041), (538, 18092), (546, 18113), (555, 18128), (559, 18137), (566, 18152), (606, 18221), (664, 18374), (673, 18395), (718, 18524), (722, 18539), (727, 18569), (730, 18581), (737, 18617), (804, 18797), (810, 18806), (845, 18917), (850, 18947), (866, 19031),

Gene: Danforth\_21 Start: 14528, Stop: 17605, Start Num: 9

Candidate Starts for Danforth\_21:

(Start: 9 @14528 has 11 MA's), (15, 14612), (Start: 34 @14780 has 1 MA's), (Start: 37 @14804 has 32 MA's), (73, 14852), (Start: 107 @14972 has 89 MA's), (129, 15044), (189, 15194), (191, 15197), (196, 15203), (252, 15389), (269, 15449), (270, 15455), (289, 15521), (297, 15548), (300, 15563), (314, 15614), (315, 15617), (321, 15650), (329, 15683), (367, 15851), (404, 16034), (412, 16058), (422, 16106), (428, 16127), (429, 16130), (493, 16274), (516, 16331), (531, 16361), (547, 16400), (580, 16472), (601, 16502), (630, 16601), (642, 16631), (660, 16676), (672, 16709), (710, 16874), (715, 16895), (719, 16907), (734, 16988), (745, 17015), (756, 17078), (765, 17102), (792, 17132), (808, 17165), (830, 17198), (842, 17258), (846, 17285), (866, 17384), (867, 17390), (883, 17480), (886, 17501), (893, 17540), (903, 17588),

Gene: Darrell\_28 Start: 17782, Stop: 20697, Start Num: 52

Candidate Starts for Darrell\_28:

(Start: 52 @17782 has 33 MA's), (55, 17794), (68, 17854), (114, 18013), (130, 18076), (153, 18139), (165, 18181), (193, 18238), (260, 18451), (264, 18457), (269, 18472), (294, 18562), (295, 18565), (299, 18577), (309, 18616), (311, 18619), (321, 18673), (325, 18694), (341, 18748), (344, 18769), (345, 18772), (348, 18790), (361, 18853), (379, 18919), (383, 18958), (390, 18985), (393, 19000), (399, 19030), (405, 19054), (410, 19075), (427, 19141), (440, 19180), (479, 19273), (489, 19312), (546, 19486), (552, 19495), (568, 19531), (575, 19552), (582, 19567), (585, 19573), (606, 19594), (607, 19597), (624, 19651), (649, 19705), (650, 19711), (676, 19777), (685, 19789), (710, 19867), (718, 19897), (727, 19942), (738, 19993), (756, 20080), (758, 20089), (771, 20140), (786, 20170), (800, 20203), (816, 20263), (831, 20305), (844, 20383), (849, 20410), (860, 20470), (879, 20569), (889, 20605), (894, 20635), (900, 20677),

Gene: DARTHPhader\_27 Start: 17575, Stop: 20688, Start Num: 27

Candidate Starts for DARTHPhader\_27:

(7, 17329), (22, 17545), (Start: 27 @17575 has 5 MA's), (Start: 52 @17752 has 33 MA's), (55, 17764), (63, 17800), (130, 18034), (153, 18097), (190, 18193), (193, 18196), (207, 18235), (256, 18397), (258, 18406), (260, 18409), (266, 18421), (279, 18460), (286, 18493), (303, 18556), (312, 18586), (321,

18631), (325, 18652), (327, 18655), (334, 18676), (341, 18706), (342, 18718), (351, 18757), (352, 18766), (356, 18787), (361, 18811), (395, 18973), (406, 19015), (410, 19033), (412, 19042), (414, 19054), (426, 19096), (427, 19099), (440, 19138), (482, 19240), (486, 19258), (507, 19324), (542, 19435), (546, 19444), (568, 19489), (574, 19504), (586, 19534), (605, 19546), (606, 19552), (608, 19561), (610, 19567), (626, 19615), (628, 19621), (631, 19627), (658, 19693), (689, 19765), (690, 19768), (710, 19825), (718, 19855), (721, 19867), (726, 19891), (727, 19900), (757, 20056), (766, 20092), (768, 20101), (800, 20176), (822, 20257), (824, 20266), (851, 20413), (859, 20461), (860, 20464), (866, 20488), (892, 20617), (894, 20629),

Gene: Datway\_25 Start: 15891, Stop: 18491, Start Num: 109

Candidate Starts for Datway\_25:

(Start: 109 @15891 has 113 MA's), (246, 16281), (283, 16410), (291, 16443), (299, 16470), (315, 16533), (341, 16641), (370, 16776), (420, 16974), (471, 17061), (481, 17085), (499, 17130), (542, 17241), (545, 17247), (626, 17415), (649, 17463), (670, 17520), (700, 17580), (710, 17628), (719, 17661), (726, 17694), (729, 17712), (757, 17859), (762, 17877), (807, 18003), (835, 18093), (848, 18192), (860, 18258), (863, 18267), (875, 18327), (877, 18336), (883, 18372), (886, 18390), (892, 18423), (899, 18471),

Gene: Deano\_25 Start: 15893, Stop: 18493, Start Num: 109

Candidate Starts for Deano\_25:

(Start: 109 @15893 has 113 MA's), (Start: 155 @16034 has 22 MA's), (Start: 163 @16052 has 10 MA's), (240, 16259), (252, 16298), (258, 16328), (291, 16445), (299, 16472), (315, 16535), (329, 16598), (341, 16643), (348, 16685), (365, 16769), (457, 17036), (481, 17087), (499, 17132), (530, 17210), (542, 17243), (545, 17249), (626, 17417), (636, 17438), (647, 17462), (673, 17528), (700, 17582), (710, 17630), (726, 17696), (757, 17861), (762, 17879), (807, 18005), (859, 18257), (860, 18260), (863, 18269), (875, 18329), (892, 18425), (899, 18473),

Gene: DekHockey33\_28 Start: 16045, Stop: 18231, Start Num: 179

Candidate Starts for DekHockey33\_28:

(Start: 115 @15868 has 1 MA's), (Start: 117 @15877 has 5 MA's), (Start: 179 @16045 has 15 MA's), (269, 16285), (270, 16291), (290, 16360), (306, 16417), (339, 16552), (341, 16561), (348, 16603), (358, 16651), (359, 16654), (382, 16765), (385, 16783), (412, 16888), (425, 16936), (484, 17041), (513, 17101), (536, 17155), (555, 17191), (569, 17215), (577, 17224), (608, 17287), (616, 17308), (622, 17323), (629, 17347), (635, 17359), (659, 17413), (667, 17434), (680, 17464), (732, 17635), (734, 17656), (756, 17740), (867, 18043), (892, 18166), (894, 18178),

Gene: Deloris\_27 Start: 17042, Stop: 19579, Start Num: 107

Candidate Starts for Deloris\_27:

(Start: 107 @17042 has 89 MA's), (172, 17222), (173, 17225), (202, 17273), (249, 17393), (256, 17414), (258, 17423), (268, 17444), (279, 17477), (286, 17510), (299, 17552), (312, 17603), (316, 17624), (321, 17648), (322, 17651), (325, 17669), (337, 17702), (339, 17714), (341, 17723), (344, 17744), (345, 17747), (362, 17834), (383, 17933), (393, 17975), (394, 17984), (396, 17993), (410, 18050), (427, 18116), (440, 18155), (546, 18461), (552, 18470), (555, 18476), (559, 18485), (568, 18506), (578, 18530), (586, 18551), (607, 18572), (608, 18578), (620, 18611), (623, 18623), (664, 18722), (689, 18782), (703, 18809), (718, 18872), (804, 19145), (810, 19154), (845, 19265), (850, 19295), (866, 19379),

Gene: Dexes\_25 Start: 17027, Stop: 19498, Start Num: 111

Candidate Starts for Dexes\_25:

(Start: 111 @17027 has 200 MA's), (125, 17066), (144, 17129), (Start: 155 @17159 has 22 MA's), (162, 17180), (176, 17201), (181, 17213), (194, 17231), (250, 17276), (262, 17321), (315, 17519), (321, 17552), (339, 17618), (389, 17873), (393, 17894), (398, 17921), (476, 18080), (500, 18116), (555, 18209), (564, 18230), (569, 18245), (579, 18266), (580, 18269), (615, 18338), (627, 18374),

(644, 18407), (659, 18443), (671, 18473), (682, 18509), (707, 18575), (710, 18596), (741, 18737), (773, 18878), (784, 18899), (826, 19034), (855, 19211), (875, 19322), (888, 19409), (895, 19448), (899, 19478),

Gene: Dhanush\_25 Start: 15888, Stop: 18488, Start Num: 109

Candidate Starts for Dhanush\_25:

(Start: 109 @15888 has 113 MA's), (Start: 155 @16029 has 22 MA's), (Start: 163 @16047 has 10 MA's), (240, 16254), (252, 16293), (258, 16323), (291, 16440), (299, 16467), (315, 16530), (329, 16593), (341, 16638), (348, 16680), (365, 16764), (457, 17031), (481, 17082), (499, 17127), (530, 17205), (545, 17244), (591, 17340), (606, 17349), (626, 17412), (636, 17433), (673, 17523), (700, 17577), (710, 17625), (726, 17691), (757, 17856), (762, 17874), (807, 18000), (859, 18252), (860, 18255), (863, 18264), (875, 18324), (892, 18420), (899, 18468),

Gene: Dieselweasel\_27 Start: 15980, Stop: 19006, Start Num: 38

Candidate Starts for Dieselweasel\_27:

(30, 15926), (Start: 38 @15980 has 82 MA's), (55, 16094), (68, 16160), (69, 16163), (73, 16172), (86, 16208), (96, 16259), (124, 16331), (Start: 143 @16403 has 5 MA's), (190, 16523), (193, 16526), (214, 16595), (226, 16640), (258, 16733), (264, 16742), (270, 16760), (279, 16787), (295, 16850), (299, 16862), (308, 16895), (312, 16913), (325, 16979), (327, 16982), (329, 16988), (334, 17003), (337, 17012), (339, 17024), (341, 17033), (355, 17111), (359, 17126), (383, 17243), (384, 17246), (391, 17273), (393, 17285), (405, 17339), (410, 17360), (427, 17426), (440, 17465), (479, 17558), (491, 17606), (507, 17651), (525, 17699), (535, 17741), (538, 17750), (552, 17780), (553, 17783), (559, 17795), (582, 17852), (585, 17858), (606, 17879), (607, 17882), (658, 18020), (664, 18032), (689, 18092), (709, 18149), (741, 18287), (744, 18308), (749, 18332), (757, 18377), (762, 18395), (776, 18443), (780, 18455), (800, 18497), (817, 18560), (836, 18617), (844, 18686), (851, 18722), (867, 18803), (892, 18938),

Gene: Dignity\_28 Start: 17064, Stop: 19607, Start Num: 107

Candidate Starts for Dignity\_28:

(Start: 107 @17064 has 89 MA's), (172, 17244), (173, 17247), (247, 17415), (249, 17421), (256, 17442), (258, 17451), (264, 17460), (268, 17472), (282, 17517), (286, 17538), (299, 17580), (312, 17631), (321, 17676), (322, 17679), (325, 17697), (337, 17730), (339, 17742), (341, 17751), (344, 17772), (345, 17775), (362, 17862), (383, 17961), (393, 18003), (394, 18012), (396, 18021), (410, 18078), (427, 18144), (440, 18183), (477, 18270), (479, 18276), (488, 18312), (507, 18369), (529, 18435), (538, 18468), (544, 18483), (546, 18489), (552, 18498), (559, 18513), (568, 18534), (575, 18555), (585, 18576), (586, 18579), (606, 18597), (607, 18600), (623, 18651), (649, 18708), (654, 18726), (664, 18750), (689, 18810), (703, 18837), (718, 18900), (727, 18945), (756, 19083), (804, 19173), (810, 19182), (830, 19206), (843, 19284), (845, 19293), (850, 19323), (866, 19407),

Gene: DirtyDunning\_25 Start: 15881, Stop: 18481, Start Num: 109

Candidate Starts for DirtyDunning\_25:

(Start: 109 @15881 has 113 MA's), (Start: 155 @16022 has 22 MA's), (Start: 163 @16040 has 10 MA's), (240, 16247), (252, 16286), (258, 16316), (299, 16460), (315, 16523), (329, 16586), (341, 16631), (348, 16673), (365, 16757), (457, 17024), (481, 17075), (499, 17120), (530, 17198), (542, 17231), (545, 17237), (608, 17351), (626, 17405), (647, 17450), (670, 17510), (700, 17570), (726, 17684), (757, 17849), (762, 17867), (807, 17993), (859, 18245), (860, 18248), (863, 18257), (875, 18317), (892, 18413), (899, 18461),

Gene: Discoknowium\_22 Start: 15358, Stop: 18699, Start Num: 1

Candidate Starts for Discoknowium\_22:

(Start: 1 @15358 has 30 MA's), (Start: 34 @15796 has 1 MA's), (120, 16108), (Start: 141 @16186 has 1 MA's), (154, 16216), (173, 16273), (227, 16420), (229, 16426), (233, 16432), (270, 16558), (274, 16570), (315, 16720), (322, 16756), (329, 16786), (334, 16801), (341, 16831), (342, 16843), (347,



16867), (361, 16936), (379, 17002), (412, 17158), (428, 17227), (429, 17230), (441, 17257), (449, 17281), (514, 17419), (522, 17440), (540, 17485), (563, 17527), (639, 17719), (652, 17749), (660, 17773), (664, 17785), (672, 17806), (683, 17848), (705, 17935), (710, 17971), (715, 17992), (721, 18013), (736, 18091), (745, 18112), (749, 18133), (752, 18154), (756, 18175), (765, 18199), (808, 18262), (842, 18355), (845, 18373), (859, 18454), (863, 18466), (865, 18478), (867, 18487), (878, 18541), (891, 18625), (892, 18634),

Gene: Dixon\_22 Start: 14547, Stop: 17624, Start Num: 9

Candidate Starts for Dixon\_22:

(Start: 9 @14547 has 11 MA's), (15, 14631), (Start: 34 @14799 has 1 MA's), (Start: 37 @14823 has 32 MA's), (73, 14871), (Start: 107 @14991 has 89 MA's), (129, 15063), (189, 15213), (191, 15216), (196, 15222), (252, 15408), (269, 15468), (270, 15474), (289, 15540), (297, 15567), (300, 15582), (314, 15633), (315, 15636), (321, 15669), (329, 15702), (367, 15870), (404, 16053), (412, 16077), (422, 16125), (428, 16146), (429, 16149), (493, 16293), (516, 16350), (531, 16380), (547, 16419), (580, 16491), (601, 16521), (630, 16620), (642, 16650), (660, 16695), (672, 16728), (710, 16893), (715, 16914), (719, 16926), (734, 17007), (745, 17034), (752, 17076), (756, 17097), (765, 17121), (792, 17151), (808, 17184), (830, 17217), (842, 17277), (846, 17304), (866, 17403), (883, 17499), (886, 17520), (893, 17559), (903, 17607),

Gene: DontArgue\_24 Start: 14083, Stop: 16779, Start Num: 149

Candidate Starts for DontArgue\_24:

(50, 13720), (Start: 105 @13951 has 8 MA's), (149, 14083), (Start: 163 @14128 has 10 MA's), (201, 14206), (225, 14305), (261, 14413), (265, 14425), (273, 14452), (274, 14455), (281, 14488), (285, 14509), (301, 14566), (309, 14596), (312, 14611), (313, 14617), (318, 14638), (327, 14680), (339, 14743), (373, 14914), (381, 14965), (388, 15007), (399, 15061), (430, 15184), (448, 15238), (489, 15349), (494, 15364), (528, 15469), (539, 15505), (545, 15520), (557, 15541), (558, 15544), (574, 15589), (623, 15688), (626, 15697), (636, 15718), (642, 15730), (659, 15778), (673, 15808), (705, 15874), (725, 15973), (726, 15976), (741, 16051), (752, 16117), (757, 16141), (762, 16159), (775, 16210), (782, 16234), (802, 16288), (807, 16300), (819, 16330), (831, 16369), (873, 16600), (875, 16615), (889, 16693), (892, 16711), (899, 16759),

Gene: Doom\_25 Start: 17148, Stop: 19628, Start Num: 111

Candidate Starts for Doom\_25:

(Start: 111 @17148 has 200 MA's), (125, 17187), (144, 17250), (Start: 155 @17280 has 22 MA's), (176, 17322), (285, 17529), (291, 17547), (315, 17637), (329, 17700), (337, 17724), (339, 17736), (348, 17787), (460, 18171), (526, 18273), (537, 18312), (569, 18363), (630, 18492), (671, 18591), (707, 18693), (710, 18714), (714, 18726), (721, 18756), (740, 18852), (741, 18855), (753, 18918), (818, 19137), (827, 19170), (855, 19341), (875, 19452), (885, 19518), (888, 19539), (895, 19578), (897, 19593),

Gene: Dorothea\_29 Start: 16736, Stop: 18940, Start Num: 116

Candidate Starts for Dorothea\_29:

(60, 16577), (93, 16691), (Start: 116 @16736 has 41 MA's), (160, 16847), (212, 16961), (223, 17003), (263, 17126), (274, 17162), (283, 17189), (315, 17312), (321, 17345), (343, 17435), (357, 17504), (412, 17747), (499, 17885), (590, 18005), (680, 18158), (710, 18221), (721, 18263), (745, 18362), (749, 18383), (752, 18404), (756, 18425), (791, 18476), (800, 18488), (805, 18503), (839, 18584), (850, 18662),

Gene: DrFeelGood\_23 Start: 16492, Stop: 19152, Start Num: 111

Candidate Starts for DrFeelGood\_23:

(Start: 111 @16492 has 200 MA's), (125, 16531), (144, 16594), (Start: 155 @16624 has 22 MA's), (176, 16666), (315, 16975), (329, 17038), (341, 17083), (346, 17107), (361, 17182), (364, 17194), (451, 17515), (565, 17845), (584, 17896), (598, 17923), (671, 18127), (708, 18241), (710, 18250),

(715, 18271), (721, 18292), (741, 18391), (750, 18433), (751, 18436), (788, 18565), (815, 18649), (827, 18694), (875, 18976), (888, 19063), (895, 19102), (897, 19117),

Gene: Drake55\_28 Start: 17129, Stop: 19636, Start Num: 107

Candidate Starts for Drake55\_28:

(Start: 107 @17129 has 89 MA's), (144, 17240), (167, 17297), (245, 17453), (256, 17483), (258, 17492), (279, 17546), (286, 17579), (288, 17585), (334, 17765), (337, 17774), (340, 17789), (341, 17795), (344, 17816), (345, 17819), (348, 17837), (359, 17888), (360, 17897), (383, 18005), (393, 18047), (394, 18056), (405, 18101), (410, 18122), (427, 18188), (440, 18227), (507, 18413), (512, 18428), (517, 18455), (538, 18512), (544, 18527), (546, 18533), (552, 18542), (559, 18557), (568, 18578), (575, 18599), (586, 18623), (608, 18650), (610, 18656), (620, 18683), (658, 18782), (664, 18794), (703, 18881), (718, 18944), (727, 18989), (737, 19037), (746, 19073), (752, 19106), (786, 19169), (800, 19193), (846, 19337), (866, 19436), (882, 19523), (902, 19622),

Gene: Drake94\_24 Start: 13780, Stop: 16512, Start Num: 105

Candidate Starts for Drake94\_24:

(Start: 105 @13780 has 8 MA's), (Start: 163 @13957 has 10 MA's), (200, 14032), (203, 14044), (255, 14206), (261, 14227), (265, 14239), (274, 14269), (281, 14302), (292, 14347), (298, 14365), (301, 14380), (302, 14389), (309, 14410), (330, 14515), (339, 14557), (372, 14722), (404, 14884), (411, 14911), (489, 15088), (506, 15133), (528, 15208), (544, 15256), (545, 15259), (557, 15280), (558, 15283), (574, 15328), (615, 15403), (617, 15406), (623, 15427), (632, 15451), (659, 15517), (673, 15547), (685, 15559), (709, 15646), (714, 15661), (726, 15715), (741, 15790), (754, 15868), (757, 15880), (762, 15898), (772, 15937), (779, 15949), (782, 15961), (799, 16003), (802, 16015), (807, 16027), (812, 16042), (819, 16063), (823, 16075), (863, 16288), (875, 16348), (883, 16393), (892, 16444), (899, 16492),

Gene: DreamCatcher\_27 Start: 17777, Stop: 20245, Start Num: 111

Candidate Starts for DreamCatcher\_27:

(Start: 111 @17777 has 200 MA's), (Start: 117 @17792 has 5 MA's), (Start: 155 @17906 has 22 MA's), (162, 17927), (176, 17948), (194, 17978), (243, 18002), (250, 18023), (262, 18068), (315, 18266), (321, 18299), (339, 18365), (389, 18620), (393, 18641), (398, 18668), (476, 18827), (500, 18863), (555, 18956), (564, 18977), (569, 18992), (579, 19013), (580, 19016), (615, 19085), (627, 19121), (644, 19154), (659, 19190), (671, 19220), (682, 19256), (707, 19322), (710, 19343), (721, 19385), (741, 19484), (773, 19625), (784, 19646), (826, 19781), (855, 19958), (875, 20069), (888, 20156), (895, 20195), (899, 20225),

Gene: DreamTeam1\_26 Start: 15742, Stop: 18648, Start Num: 52

Candidate Starts for DreamTeam1\_26:

(Start: 23 @15553 has 1 MA's), (42, 15655), (Start: 52 @15742 has 33 MA's), (55, 15754), (89, 15886), (94, 15907), (99, 15928), (114, 15970), (Start: 118 @15982 has 2 MA's), (130, 16033), (153, 16096), (165, 16138), (193, 16195), (207, 16234), (260, 16405), (264, 16411), (294, 16516), (299, 16531), (309, 16570), (311, 16573), (325, 16648), (327, 16651), (341, 16702), (344, 16723), (345, 16726), (348, 16744), (383, 16912), (390, 16939), (393, 16954), (405, 17008), (410, 17029), (426, 17092), (427, 17095), (440, 17134), (479, 17227), (486, 17254), (525, 17368), (527, 17377), (539, 17422), (552, 17449), (568, 17485), (575, 17506), (582, 17521), (606, 17548), (607, 17551), (613, 17572), (624, 17605), (650, 17665), (664, 17701), (718, 17851), (727, 17896), (738, 17947), (752, 18013), (757, 18037), (762, 18055), (767, 18076), (771, 18094), (786, 18124), (800, 18157), (805, 18178), (813, 18208), (831, 18259), (844, 18337), (851, 18373), (860, 18424), (866, 18448), (879, 18523), (894, 18589), (900, 18631),

Gene: Dreamboat\_25 Start: 16304, Stop: 18775, Start Num: 111

Candidate Starts for Dreamboat\_25:

(Start: 111 @16304 has 200 MA's), (125, 16343), (144, 16406), (Start: 155 @16436 has 22 MA's), (162, 16457), (176, 16478), (194, 16508), (243, 16532), (262, 16598), (315, 16796), (321, 16829), (339, 16895), (389, 17150), (393, 17171), (398, 17198), (476, 17357), (500, 17393), (555, 17486), (564, 17507), (592, 17564), (644, 17684), (659, 17720), (671, 17750), (682, 17786), (707, 17852), (710, 17873), (741, 18014), (773, 18155), (784, 18176), (842, 18407), (855, 18488), (875, 18599), (888, 18686), (895, 18725), (899, 18755),

Gene: DroogsArmy\_26 Start: 17266, Stop: 20634, Start Num: 17

Candidate Starts for DroogsArmy\_26:

(Start: 17 @17266 has 4 MA's), (31, 17395), (40, 17449), (47, 17491), (77, 17653), (119, 17803), (147, 17905), (205, 18040), (268, 18238), (286, 18304), (294, 18331), (295, 18334), (299, 18346), (315, 18409), (316, 18418), (321, 18442), (329, 18472), (341, 18517), (345, 18541), (378, 18685), (383, 18727), (390, 18754), (393, 18769), (402, 18808), (405, 18823), (410, 18844), (424, 18901), (427, 18910), (430, 18919), (483, 19060), (508, 19138), (527, 19192), (546, 19255), (555, 19270), (568, 19300), (573, 19312), (574, 19315), (581, 19333), (585, 19342), (593, 19357), (599, 19375), (607, 19408), (612, 19426), (633, 19489), (656, 19555), (658, 19564), (659, 19567), (664, 19576), (665, 19579), (668, 19588), (672, 19597), (681, 19630), (685, 19642), (691, 19666), (705, 19696), (721, 19774), (724, 19786), (725, 19795), (726, 19798), (727, 19807), (729, 19816), (744, 19894), (749, 19918), (757, 19963), (762, 19981), (778, 20038), (783, 20056), (790, 20080), (794, 20089), (800, 20110), (805, 20131), (809, 20143), (813, 20164), (824, 20203), (833, 20236), (845, 20317), (851, 20350), (860, 20401), (865, 20422), (871, 20446), (882, 20512), (885, 20527), (886, 20533),

Gene: DropBear\_25 Start: 15555, Stop: 18593, Start Num: 37

Candidate Starts for DropBear\_25:

(Start: 37 @15555 has 32 MA's), (66, 15729), (69, 15741), (81, 15774), (Start: 143 @15984 has 5 MA's), (193, 16107), (202, 16128), (258, 16314), (279, 16368), (295, 16431), (299, 16443), (308, 16476), (312, 16494), (327, 16563), (329, 16569), (334, 16584), (337, 16593), (339, 16605), (341, 16614), (359, 16707), (383, 16824), (384, 16827), (391, 16854), (393, 16866), (405, 16920), (410, 16941), (414, 16962), (427, 17007), (440, 17046), (491, 17187), (507, 17232), (512, 17247), (535, 17322), (538, 17331), (552, 17361), (559, 17376), (560, 17379), (568, 17397), (575, 17418), (578, 17421), (585, 17439), (606, 17460), (607, 17463), (637, 17547), (664, 17613), (673, 17634), (689, 17673), (706, 17712), (718, 17763), (719, 17766), (721, 17775), (726, 17799), (741, 17868), (744, 17889), (757, 17958), (762, 17976), (776, 18024), (780, 18036), (800, 18078), (803, 18090), (816, 18138), (851, 18309), (855, 18339), (863, 18369), (867, 18390), (892, 18525), (894, 18537), (899, 18573),

Gene: Druantia\_25 Start: 15886, Stop: 18486, Start Num: 109

Candidate Starts for Druantia\_25:

(Start: 109 @15886 has 113 MA's), (Start: 155 @16027 has 22 MA's), (Start: 163 @16045 has 10 MA's), (240, 16252), (252, 16291), (258, 16321), (291, 16438), (299, 16465), (315, 16528), (329, 16591), (341, 16636), (348, 16678), (365, 16762), (457, 17029), (481, 17080), (499, 17125), (530, 17203), (545, 17242), (557, 17263), (626, 17410), (636, 17431), (647, 17455), (670, 17515), (673, 17521), (674, 17524), (700, 17575), (710, 17623), (726, 17689), (757, 17854), (762, 17872), (807, 17998), (859, 18250), (860, 18253), (863, 18262), (875, 18322), (892, 18418), (899, 18466),

Gene: Dublin\_21 Start: 15212, Stop: 18550, Start Num: 1

Candidate Starts for Dublin\_21:

(Start: 1 @15212 has 30 MA's), (Start: 34 @15650 has 1 MA's), (120, 15962), (129, 16004), (Start: 141 @16040 has 1 MA's), (154, 16070), (173, 16127), (211, 16211), (227, 16274), (229, 16280), (263, 16382), (269, 16400), (295, 16493), (315, 16568), (324, 16613), (329, 16631), (341, 16676), (344, 16697), (384, 16889), (397, 16949), (417, 17027), (429, 17075), (459, 17153), (516, 17279), (522, 17291), (532, 17315), (563, 17378), (639, 17570), (652, 17600), (660, 17624), (664, 17636), (683, 17699), (710, 17822), (715, 17843), (721, 17864), (736, 17942), (745, 17963), (752, 18005), (756,

18026), (781, 18062), (808, 18113), (829, 18143), (842, 18206), (845, 18224), (859, 18305), (863, 18317), (865, 18329), (867, 18338), (878, 18392), (891, 18476), (896, 18515),

Gene: DudeLittle\_26 Start: 16690, Stop: 19233, Start Num: 107

Candidate Starts for DudeLittle\_26:

(Start: 107 @16690 has 89 MA's), (170, 16867), (172, 16870), (173, 16873), (247, 17041), (249, 17047), (256, 17068), (258, 17077), (268, 17098), (279, 17131), (286, 17164), (312, 17257), (322, 17305), (325, 17323), (334, 17347), (337, 17356), (339, 17368), (340, 17371), (341, 17377), (344, 17398), (345, 17401), (362, 17488), (383, 17587), (393, 17629), (396, 17647), (408, 17695), (410, 17704), (427, 17770), (440, 17809), (507, 17995), (512, 18010), (525, 18043), (538, 18094), (546, 18115), (555, 18130), (559, 18139), (566, 18154), (606, 18223), (664, 18376), (673, 18397), (718, 18526), (727, 18571), (730, 18583), (737, 18619), (804, 18799), (810, 18808), (845, 18919), (850, 18949), (866, 19033),

Gene: Dulcie\_23 Start: 16001, Stop: 18472, Start Num: 111

Candidate Starts for Dulcie\_23:

(Start: 111 @16001 has 200 MA's), (125, 16040), (144, 16103), (Start: 155 @16133 has 22 MA's), (162, 16154), (176, 16175), (181, 16187), (194, 16205), (262, 16295), (274, 16331), (315, 16493), (321, 16526), (339, 16592), (389, 16847), (393, 16868), (398, 16895), (476, 17054), (500, 17090), (555, 17183), (564, 17204), (592, 17261), (644, 17381), (659, 17417), (671, 17447), (682, 17483), (707, 17549), (710, 17570), (741, 17711), (773, 17852), (784, 17873), (826, 18008), (855, 18185), (875, 18296), (885, 18362), (888, 18383), (895, 18422), (897, 18437),

Gene: Duplo\_29 Start: 16546, Stop: 19059, Start Num: 107

Candidate Starts for Duplo\_29:

(Start: 107 @16546 has 89 MA's), (172, 16726), (173, 16729), (279, 16975), (294, 17035), (299, 17050), (307, 17080), (308, 17083), (325, 17167), (334, 17191), (340, 17215), (344, 17242), (345, 17245), (368, 17350), (383, 17431), (390, 17458), (393, 17473), (405, 17527), (410, 17548), (427, 17614), (434, 17632), (436, 17641), (477, 17740), (486, 17773), (488, 17782), (507, 17839), (512, 17854), (546, 17959), (607, 18070), (610, 18082), (612, 18088), (623, 18121), (673, 18241), (718, 18370), (722, 18385), (727, 18415), (730, 18427), (737, 18463), (765, 18577), (776, 18589), (801, 18631), (861, 18838), (865, 18856), (866, 18859), (902, 19045),

Gene: Dussy\_25 Start: 16660, Stop: 19059, Start Num: 111

Candidate Starts for Dussy\_25:

(Start: 111 @16660 has 200 MA's), (125, 16699), (144, 16762), (Start: 155 @16792 has 22 MA's), (162, 16813), (176, 16834), (181, 16846), (194, 16864), (250, 16909), (262, 16954), (315, 17152), (321, 17185), (339, 17251), (389, 17506), (393, 17527), (398, 17554), (410, 17593), (432, 17650), (451, 17680), (555, 17842), (627, 17995), (638, 18007), (643, 18022), (696, 18139), (712, 18184), (716, 18205), (717, 18208), (753, 18358), (757, 18373), (773, 18439), (793, 18481), (842, 18691), (855, 18772), (875, 18883), (888, 18970), (895, 19009), (897, 19024),

Gene: DustyMartin\_29 Start: 15937, Stop: 18492, Start Num: 163

Candidate Starts for DustyMartin\_29:

(Start: 105 @15760 has 8 MA's), (Start: 163 @15937 has 10 MA's), (171, 15958), (201, 16015), (227, 16111), (232, 16120), (265, 16225), (273, 16252), (281, 16288), (301, 16366), (302, 16375), (309, 16396), (315, 16423), (330, 16501), (339, 16543), (372, 16708), (402, 16858), (404, 16870), (489, 17065), (528, 17185), (542, 17230), (544, 17233), (545, 17236), (557, 17257), (558, 17260), (574, 17305), (591, 17341), (608, 17359), (615, 17380), (626, 17413), (674, 17527), (705, 17590), (721, 17668), (726, 17692), (741, 17767), (752, 17833), (757, 17857), (762, 17875), (796, 17971), (802, 17995), (807, 18007), (812, 18022), (819, 18043), (823, 18055), (863, 18268), (871, 18304), (874, 18325), (875, 18328), (892, 18424), (899, 18472),

Gene: Dynamix\_25 Start: 16399, Stop: 18876, Start Num: 112

Candidate Starts for Dynamix\_25:

(Start: 112 @16399 has 30 MA's), (Start: 117 @16414 has 5 MA's), (Start: 155 @16528 has 22 MA's), (176, 16570), (285, 16777), (291, 16795), (315, 16885), (329, 16948), (337, 16972), (339, 16984), (348, 17035), (460, 17419), (526, 17521), (537, 17560), (560, 17587), (569, 17611), (630, 17740), (671, 17839), (707, 17941), (710, 17962), (721, 18004), (741, 18103), (753, 18166), (777, 18256), (818, 18385), (827, 18418), (855, 18589), (875, 18700), (885, 18766), (888, 18787), (895, 18826), (897, 18841),

Gene: EZMoney23\_30 Start: 18597, Stop: 21101, Start Num: 107

Candidate Starts for EZMoney23\_30:

(Start: 107 @18597 has 89 MA's), (144, 18708), (Start: 152 @18726 has 5 MA's), (167, 18765), (175, 18786), (188, 18810), (256, 18939), (258, 18948), (299, 19077), (312, 19128), (327, 19197), (329, 19203), (334, 19218), (337, 19227), (339, 19239), (341, 19248), (383, 19458), (390, 19485), (393, 19500), (405, 19554), (410, 19575), (427, 19641), (440, 19680), (507, 19866), (538, 19965), (544, 19980), (546, 19986), (552, 19995), (559, 20010), (568, 20031), (575, 20052), (606, 20094), (610, 20109), (620, 20136), (644, 20193), (649, 20205), (664, 20247), (689, 20307), (703, 20334), (709, 20364), (718, 20397), (727, 20442), (730, 20454), (801, 20661), (804, 20670), (810, 20679), (840, 20760), (845, 20790), (850, 20820), (866, 20901),

Gene: Eagle\_24 Start: 16026, Stop: 18485, Start Num: 155

Candidate Starts for Eagle\_24:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (283, 16404), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (591, 17337), (606, 17346), (626, 17409), (636, 17430), (649, 17457), (670, 17514), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: EagleEye\_28 Start: 16836, Stop: 19898, Start Num: 5

Candidate Starts for EagleEye\_28:

(Start: 5 @16836 has 3 MA's), (16, 17010), (29, 17127), (57, 17304), (100, 17460), (108, 17466), (150, 17568), (195, 17664), (227, 17772), (229, 17778), (270, 17892), (289, 17958), (297, 17985), (315, 18054), (321, 18087), (322, 18090), (342, 18177), (343, 18180), (359, 18258), (375, 18318), (384, 18378), (469, 18612), (495, 18642), (499, 18645), (511, 18669), (568, 18798), (641, 18975), (646, 18987), (710, 19182), (715, 19203), (734, 19296), (745, 19323), (749, 19344), (752, 19365), (847, 19605), (850, 19623), (861, 19680), (883, 19791),

Gene: Eaglepride\_26 Start: 15877, Stop: 18447, Start Num: 163

Candidate Starts for Eaglepride\_26:

(Start: 105 @15700 has 8 MA's), (Start: 163 @15877 has 10 MA's), (201, 15955), (220, 16030), (225, 16054), (232, 16069), (255, 16141), (265, 16174), (268, 16183), (277, 16216), (281, 16237), (295, 16291), (298, 16300), (301, 16315), (302, 16324), (309, 16345), (325, 16426), (330, 16450), (378, 16690), (411, 16849), (412, 16852), (506, 17068), (528, 17143), (544, 17191), (545, 17194), (557, 17215), (558, 17218), (591, 17299), (606, 17308), (615, 17338), (632, 17386), (636, 17392), (674, 17485), (713, 17593), (721, 17626), (724, 17638), (726, 17650), (729, 17668), (741, 17725), (752, 17791), (757, 17815), (762, 17833), (767, 17854), (772, 17872), (786, 17905), (796, 17926), (807, 17962), (819, 17998), (823, 18010), (863, 18223), (875, 18283), (892, 18379), (899, 18427),

Gene: Eapen\_25 Start: 16025, Stop: 18484, Start Num: 155

Candidate Starts for Eapen\_25:

(Start: 109 @15884 has 113 MA's), (Start: 155 @16025 has 22 MA's), (Start: 163 @16043 has 10 MA's), (240, 16250), (252, 16289), (258, 16319), (291, 16436), (299, 16463), (315, 16526), (329, 16589), (341, 16634), (348, 16676), (365, 16760), (457, 17027), (481, 17078), (499, 17123), (530, 17201), (545, 17240), (626, 17408), (636, 17429), (647, 17453), (673, 17519), (700, 17573), (710, 17621), (726, 17687), (757, 17852), (762, 17870), (807, 17996), (859, 18248), (860, 18251), (863, 18260), (875, 18320), (892, 18416), (899, 18464),

Gene: Ebony\_26 Start: 17224, Stop: 19752, Start Num: 118

Candidate Starts for Ebony\_26:

(Start: 112 @17206 has 30 MA's), (Start: 118 @17224 has 2 MA's), (187, 17398), (197, 17407), (223, 17482), (252, 17536), (267, 17590), (271, 17605), (272, 17608), (279, 17626), (295, 17689), (299, 17701), (315, 17764), (329, 17827), (334, 17842), (337, 17851), (341, 17872), (345, 17896), (348, 17911), (367, 17998), (369, 18001), (374, 18016), (378, 18037), (380, 18049), (389, 18115), (397, 18157), (403, 18178), (404, 18187), (412, 18211), (437, 18292), (441, 18301), (445, 18313), (467, 18355), (492, 18412), (513, 18466), (549, 18574), (567, 18613), (618, 18754), (656, 18850), (661, 18871), (675, 18904), (686, 18937), (687, 18940), (709, 19024), (721, 19069), (722, 19072), (746, 19186), (752, 19219), (791, 19291), (808, 19327), (839, 19399), (850, 19477), (860, 19531), (866, 19555), (889, 19666),

Gene: Echild\_26 Start: 16721, Stop: 19258, Start Num: 107

Candidate Starts for Echild\_26:

(Start: 107 @16721 has 89 MA's), (172, 16901), (188, 16934), (247, 17066), (249, 17072), (256, 17093), (258, 17102), (286, 17189), (299, 17231), (312, 17282), (320, 17318), (322, 17330), (325, 17348), (337, 17381), (339, 17393), (340, 17396), (341, 17402), (344, 17423), (345, 17426), (383, 17612), (393, 17654), (394, 17663), (396, 17672), (410, 17729), (427, 17795), (440, 17834), (496, 17987), (546, 18140), (552, 18149), (555, 18155), (559, 18164), (568, 18185), (578, 18209), (586, 18230), (607, 18251), (620, 18290), (623, 18302), (664, 18401), (689, 18461), (703, 18488), (718, 18551), (727, 18596), (737, 18644), (804, 18824), (810, 18833), (845, 18944), (850, 18974), (866, 19058),

Gene: Edison31\_25 Start: 15727, Stop: 18456, Start Num: 105

Candidate Starts for Edison31\_25:

(Start: 105 @15727 has 8 MA's), (Start: 163 @15904 has 10 MA's), (171, 15925), (181, 15949), (200, 15979), (201, 15982), (203, 15991), (214, 16030), (220, 16045), (225, 16069), (243, 16114), (255, 16156), (265, 16189), (268, 16198), (281, 16252), (295, 16306), (298, 16315), (302, 16339), (309, 16360), (330, 16465), (339, 16507), (489, 17029), (528, 17149), (542, 17194), (544, 17197), (545, 17200), (558, 17224), (574, 17269), (591, 17305), (615, 17344), (626, 17377), (674, 17491), (721, 17632), (726, 17656), (741, 17731), (752, 17797), (757, 17821), (762, 17839), (782, 17905), (802, 17959), (807, 17971), (812, 17986), (819, 18007), (823, 18019), (863, 18232), (871, 18268), (874, 18289), (875, 18292), (892, 18388), (899, 18436),

Gene: EdogawaKiddo\_25 Start: 17590, Stop: 20499, Start Num: 52

Candidate Starts for EdogawaKiddo\_25:

(Start: 52 @17590 has 33 MA's), (55, 17602), (68, 17662), (130, 17884), (153, 17947), (165, 17989), (193, 18046), (207, 18085), (260, 18256), (264, 18262), (269, 18277), (294, 18367), (295, 18370), (299, 18382), (311, 18424), (321, 18478), (341, 18553), (344, 18574), (345, 18577), (348, 18595), (361, 18658), (379, 18724), (383, 18763), (390, 18790), (393, 18805), (399, 18835), (405, 18859), (410, 18880), (427, 18946), (440, 18985), (468, 19051), (479, 19078), (486, 19105), (507, 19171), (523, 19216), (546, 19291), (568, 19336), (575, 19357), (585, 19378), (586, 19381), (606, 19399), (607, 19402), (615, 19429), (624, 19456), (649, 19510), (718, 19702), (722, 19717), (727, 19747), (738, 19798), (756, 19885), (758, 19894), (771, 19945), (800, 20008), (805, 20029), (816, 20065), (830, 20101), (831, 20107), (844, 20185), (849, 20212), (860, 20272), (875, 20341), (879, 20371), (885, 20398), (894, 20437), (900, 20479),

Gene: Edtherson\_25 Start: 17152, Stop: 19623, Start Num: 111

Candidate Starts for Edtherson\_25:

(Start: 111 @17152 has 200 MA's), (125, 17191), (144, 17254), (Start: 155 @17284 has 22 MA's), (162, 17305), (176, 17326), (181, 17338), (194, 17356), (262, 17446), (315, 17644), (321, 17677), (339, 17743), (389, 17998), (393, 18019), (398, 18046), (410, 18085), (432, 18142), (451, 18172), (476, 18205), (500, 18241), (555, 18334), (564, 18355), (592, 18412), (644, 18532), (659, 18568), (671, 18598), (682, 18634), (707, 18700), (710, 18721), (721, 18763), (741, 18862), (773, 19003), (784, 19024), (842, 19255), (855, 19336), (875, 19447), (888, 19534), (895, 19573), (899, 19603),

Gene: Eidsmoe\_27 Start: 17620, Stop: 20529, Start Num: 52

Candidate Starts for Eidsmoe\_27:

(Start: 52 @17620 has 33 MA's), (55, 17632), (68, 17692), (130, 17914), (153, 17977), (165, 18019), (190, 18073), (193, 18076), (207, 18115), (260, 18286), (264, 18292), (269, 18307), (294, 18397), (295, 18400), (299, 18412), (311, 18454), (321, 18508), (325, 18529), (341, 18583), (344, 18604), (345, 18607), (348, 18625), (361, 18688), (379, 18754), (383, 18793), (390, 18820), (393, 18835), (399, 18865), (405, 18889), (408, 18901), (410, 18910), (427, 18976), (440, 19015), (468, 19081), (479, 19108), (486, 19135), (523, 19246), (546, 19321), (559, 19345), (568, 19366), (575, 19387), (585, 19408), (586, 19411), (606, 19429), (607, 19432), (615, 19459), (640, 19519), (651, 19549), (664, 19582), (676, 19612), (685, 19624), (718, 19732), (722, 19747), (727, 19777), (738, 19828), (756, 19915), (758, 19924), (771, 19975), (800, 20038), (805, 20059), (816, 20095), (830, 20131), (831, 20137), (844, 20215), (849, 20242), (875, 20371), (879, 20401), (885, 20428), (894, 20467), (900, 20509),

Gene: EITiger69\_22 Start: 15089, Stop: 17902, Start Num: 2

Candidate Starts for EITiger69\_22:

(Start: 2 @15089 has 8 MA's), (10, 15278), (120, 15761), (121, 15767), (208, 15860), (229, 15911), (246, 15947), (273, 16037), (289, 16103), (295, 16124), (315, 16199), (321, 16232), (337, 16286), (342, 16319), (343, 16322), (345, 16331), (365, 16430), (376, 16463), (397, 16592), (450, 16757), (466, 16790), (501, 16823), (554, 16904), (561, 16916), (576, 16949), (634, 17036), (655, 17069), (664, 17081), (683, 17111), (710, 17174), (721, 17216), (734, 17288), (745, 17315), (748, 17330), (752, 17357), (756, 17378), (808, 17465), (829, 17495), (842, 17558), (859, 17657), (863, 17669), (865, 17681), (867, 17690), (892, 17837),

Gene: Elephantoon\_27 Start: 17214, Stop: 20141, Start Num: 52

Candidate Starts for Elephantoon\_27:

(Start: 52 @17214 has 33 MA's), (55, 17226), (63, 17262), (68, 17286), (130, 17508), (153, 17571), (165, 17613), (190, 17667), (193, 17670), (260, 17883), (264, 17889), (269, 17904), (294, 17994), (295, 17997), (299, 18009), (309, 18048), (321, 18105), (339, 18171), (341, 18180), (344, 18201), (345, 18204), (348, 18222), (361, 18285), (383, 18390), (384, 18393), (385, 18402), (390, 18417), (393, 18432), (405, 18486), (410, 18507), (426, 18570), (427, 18573), (440, 18612), (479, 18705), (546, 18918), (568, 18963), (585, 19005), (606, 19026), (607, 19029), (613, 19050), (628, 19095), (654, 19155), (664, 19179), (689, 19239), (690, 19242), (710, 19299), (718, 19329), (721, 19341), (726, 19365), (727, 19374), (741, 19440), (752, 19506), (757, 19530), (800, 19650), (805, 19671), (816, 19707), (831, 19749), (834, 19764), (844, 19827), (849, 19854), (860, 19914), (879, 20013), (889, 20049), (894, 20079), (900, 20121),

Gene: EmyBug\_27 Start: 17620, Stop: 20529, Start Num: 52

Candidate Starts for EmyBug\_27:

(Start: 52 @17620 has 33 MA's), (55, 17632), (68, 17692), (130, 17914), (153, 17977), (165, 18019), (190, 18073), (193, 18076), (207, 18115), (260, 18286), (264, 18292), (269, 18307), (294, 18397), (295, 18400), (299, 18412), (311, 18454), (321, 18508), (325, 18529), (341, 18583), (344, 18604), (345, 18607), (348, 18625), (361, 18688), (379, 18754), (383, 18793), (390, 18820), (393, 18835),



(399, 18865), (405, 18889), (408, 18901), (410, 18910), (427, 18976), (440, 19015), (468, 19081), (479, 19108), (486, 19135), (523, 19246), (546, 19321), (568, 19366), (575, 19387), (585, 19408), (586, 19411), (606, 19429), (607, 19432), (615, 19459), (624, 19486), (649, 19540), (718, 19732), (722, 19747), (727, 19777), (738, 19828), (756, 19915), (758, 19924), (771, 19975), (800, 20038), (805, 20059), (816, 20095), (830, 20131), (831, 20137), (844, 20215), (849, 20242), (875, 20371), (879, 20401), (885, 20428), (894, 20467), (900, 20509),

Gene: EpicPhail\_27 Start: 15979, Stop: 19005, Start Num: 38

Candidate Starts for EpicPhail\_27:

(30, 15925), (Start: 38 @15979 has 82 MA's), (55, 16093), (68, 16159), (69, 16162), (73, 16171), (86, 16207), (96, 16258), (124, 16330), (Start: 143 @16402 has 5 MA's), (190, 16522), (193, 16525), (214, 16594), (226, 16639), (258, 16732), (264, 16741), (270, 16759), (279, 16786), (295, 16849), (299, 16861), (308, 16894), (312, 16912), (325, 16978), (327, 16981), (329, 16987), (334, 17002), (337, 17011), (339, 17023), (341, 17032), (355, 17110), (359, 17125), (383, 17242), (384, 17245), (391, 17272), (393, 17284), (405, 17338), (410, 17359), (427, 17425), (440, 17464), (479, 17557), (491, 17605), (507, 17650), (525, 17698), (535, 17740), (538, 17749), (552, 17779), (553, 17782), (559, 17794), (582, 17851), (585, 17857), (606, 17878), (607, 17881), (658, 18019), (664, 18031), (689, 18091), (709, 18148), (741, 18286), (744, 18307), (749, 18331), (757, 18376), (762, 18394), (776, 18442), (780, 18454), (800, 18496), (817, 18559), (836, 18616), (844, 18685), (851, 18721), (867, 18802), (892, 18937),

Gene: Epsocamisio\_28 Start: 15923, Stop: 18109, Start Num: 179

Candidate Starts for Epsocamisio\_28:

(Start: 115 @15746 has 1 MA's), (Start: 117 @15755 has 5 MA's), (Start: 179 @15923 has 15 MA's), (269, 16163), (270, 16169), (290, 16238), (306, 16295), (341, 16439), (348, 16481), (358, 16529), (359, 16532), (382, 16643), (385, 16661), (412, 16766), (425, 16814), (484, 16919), (513, 16979), (536, 17033), (555, 17069), (569, 17093), (577, 17102), (608, 17165), (616, 17186), (622, 17201), (629, 17225), (635, 17237), (659, 17291), (667, 17312), (680, 17342), (732, 17513), (734, 17534), (756, 17618), (867, 17921), (892, 18044), (894, 18056),

Gene: Equemioh13\_28 Start: 17115, Stop: 19622, Start Num: 107

Candidate Starts for Equemioh13\_28:

(Start: 107 @17115 has 89 MA's), (144, 17226), (167, 17283), (256, 17469), (279, 17532), (286, 17565), (288, 17571), (334, 17751), (337, 17760), (341, 17781), (344, 17802), (345, 17805), (348, 17823), (360, 17883), (383, 17991), (393, 18033), (405, 18087), (410, 18108), (426, 18171), (427, 18174), (434, 18192), (440, 18213), (507, 18399), (512, 18414), (517, 18441), (538, 18498), (544, 18513), (546, 18519), (552, 18528), (555, 18534), (568, 18564), (575, 18585), (607, 18630), (608, 18636), (620, 18669), (628, 18696), (658, 18768), (664, 18780), (689, 18840), (703, 18867), (718, 18930), (727, 18975), (730, 18987), (737, 19023), (746, 19059), (752, 19092), (786, 19155), (800, 19179), (846, 19323), (866, 19422), (882, 19509), (902, 19608),

Gene: EricB\_29 Start: 16728, Stop: 18932, Start Num: 116

Candidate Starts for EricB\_29:

(60, 16569), (93, 16683), (Start: 116 @16728 has 41 MA's), (160, 16839), (166, 16845), (212, 16953), (223, 16995), (246, 17061), (274, 17154), (283, 17181), (315, 17304), (321, 17337), (343, 17427), (357, 17496), (412, 17739), (499, 17877), (590, 17997), (680, 18150), (710, 18213), (721, 18255), (745, 18354), (749, 18375), (752, 18396), (756, 18417), (791, 18468), (800, 18480), (805, 18495), (839, 18576), (850, 18654),

Gene: Eris\_24 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Eris\_24:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329,

16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Eros\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Eros\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (674, 17523), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Espresso\_24 Start: 16449, Stop: 18920, Start Num: 111

Candidate Starts for Espresso\_24:

(Start: 111 @16449 has 200 MA's), (125, 16488), (144, 16551), (Start: 155 @16581 has 22 MA's), (162, 16602), (176, 16623), (194, 16653), (243, 16677), (262, 16743), (315, 16941), (321, 16974), (339, 17040), (389, 17295), (393, 17316), (398, 17343), (476, 17502), (500, 17538), (555, 17631), (564, 17652), (569, 17667), (579, 17688), (580, 17691), (615, 17760), (627, 17796), (644, 17829), (659, 17865), (671, 17895), (682, 17931), (707, 17997), (710, 18018), (741, 18159), (773, 18300), (784, 18321), (826, 18456), (855, 18633), (875, 18744), (885, 18810), (888, 18831), (895, 18870), (897, 18885),

Gene: Et2Brutus\_25 Start: 17166, Stop: 19712, Start Num: 112

Candidate Starts for Et2Brutus\_25:

(Start: 112 @17166 has 30 MA's), (Start: 118 @17184 has 2 MA's), (187, 17358), (197, 17367), (223, 17442), (252, 17496), (267, 17550), (271, 17565), (272, 17568), (279, 17586), (295, 17649), (299, 17661), (315, 17724), (329, 17787), (334, 17802), (337, 17811), (341, 17832), (345, 17856), (348, 17871), (367, 17958), (369, 17961), (374, 17976), (378, 17997), (380, 18009), (389, 18075), (403, 18138), (404, 18147), (412, 18171), (437, 18252), (441, 18261), (445, 18273), (467, 18315), (492, 18372), (513, 18426), (549, 18534), (567, 18573), (618, 18714), (656, 18810), (661, 18831), (675, 18864), (686, 18897), (687, 18900), (709, 18984), (721, 19029), (722, 19032), (746, 19146), (752, 19179), (791, 19251), (808, 19287), (839, 19359), (850, 19437), (860, 19491), (866, 19515), (889, 19626),

Gene: Euphoria\_24 Start: 16340, Stop: 18808, Start Num: 111

Candidate Starts for Euphoria\_24:

(Start: 111 @16340 has 200 MA's), (Start: 117 @16355 has 5 MA's), (Start: 155 @16469 has 22 MA's), (162, 16490), (176, 16511), (194, 16541), (243, 16565), (262, 16631), (315, 16829), (321, 16862), (339, 16928), (389, 17183), (393, 17204), (398, 17231), (476, 17390), (500, 17426), (555, 17519), (564, 17540), (569, 17555), (579, 17576), (580, 17579), (615, 17648), (627, 17684), (644, 17717), (659, 17753), (671, 17783), (682, 17819), (707, 17885), (710, 17906), (741, 18047), (773, 18188), (784, 18209), (826, 18344), (855, 18521), (875, 18632), (885, 18698), (888, 18719), (895, 18758), (897, 18773),

Gene: Eurydice\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for Eurydice\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (420, 16965), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (542, 17232), (545, 17238), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762,

17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: EvilGenius\_28 Start: 17032, Stop: 19575, Start Num: 107

Candidate Starts for EvilGenius\_28:

(Start: 107 @17032 has 89 MA's), (170, 17209), (172, 17212), (173, 17215), (245, 17380), (249, 17389), (256, 17410), (258, 17419), (268, 17440), (279, 17473), (286, 17506), (299, 17548), (312, 17599), (315, 17611), (321, 17644), (322, 17647), (325, 17665), (337, 17698), (339, 17710), (341, 17719), (344, 17740), (345, 17743), (383, 17929), (393, 17971), (394, 17980), (396, 17989), (410, 18046), (427, 18112), (440, 18151), (479, 18244), (488, 18280), (507, 18337), (529, 18403), (538, 18436), (544, 18451), (546, 18457), (552, 18466), (559, 18481), (568, 18502), (575, 18523), (585, 18544), (586, 18547), (606, 18565), (607, 18568), (620, 18607), (623, 18619), (649, 18676), (654, 18694), (664, 18718), (689, 18778), (703, 18805), (718, 18868), (756, 19051), (801, 19132), (804, 19141), (810, 19150), (845, 19261), (850, 19291), (866, 19375),

Gene: Expelliarmus\_21 Start: 14514, Stop: 17591, Start Num: 9

Candidate Starts for Expelliarmus\_21:

(Start: 9 @14514 has 11 MA's), (15, 14598), (Start: 34 @14766 has 1 MA's), (Start: 37 @14790 has 32 MA's), (73, 14838), (Start: 107 @14958 has 89 MA's), (129, 15030), (189, 15180), (191, 15183), (196, 15189), (252, 15375), (269, 15435), (270, 15441), (289, 15507), (297, 15534), (300, 15549), (314, 15600), (315, 15603), (321, 15636), (329, 15669), (367, 15837), (404, 16020), (412, 16044), (422, 16092), (428, 16113), (429, 16116), (493, 16260), (516, 16317), (531, 16347), (547, 16386), (580, 16458), (601, 16488), (630, 16587), (642, 16617), (660, 16662), (710, 16860), (715, 16881), (719, 16893), (745, 17001), (756, 17064), (765, 17088), (792, 17118), (808, 17151), (830, 17184), (842, 17244), (846, 17271), (866, 17370), (867, 17376), (883, 17466), (886, 17487), (893, 17526), (903, 17574),

Gene: ExplosioNervosa\_27 Start: 17623, Stop: 20532, Start Num: 52

Candidate Starts for ExplosioNervosa\_27:

(Start: 52 @17623 has 33 MA's), (55, 17635), (68, 17695), (114, 17854), (130, 17917), (153, 17980), (165, 18022), (193, 18079), (207, 18118), (260, 18289), (264, 18295), (269, 18310), (294, 18400), (295, 18403), (299, 18415), (311, 18457), (321, 18511), (341, 18586), (344, 18607), (345, 18610), (348, 18628), (361, 18691), (379, 18757), (383, 18796), (390, 18823), (393, 18838), (399, 18868), (405, 18892), (408, 18904), (410, 18913), (427, 18979), (440, 19018), (468, 19084), (479, 19111), (486, 19138), (523, 19249), (546, 19324), (568, 19369), (575, 19390), (585, 19411), (586, 19414), (606, 19432), (607, 19435), (615, 19462), (624, 19489), (649, 19543), (718, 19735), (722, 19750), (727, 19780), (738, 19831), (756, 19918), (758, 19927), (771, 19978), (800, 20041), (805, 20062), (816, 20098), (830, 20134), (831, 20140), (844, 20218), (849, 20245), (860, 20305), (875, 20374), (879, 20404), (885, 20431), (894, 20470), (900, 20512),

Gene: Eyeball\_24 Start: 16155, Stop: 18635, Start Num: 111

Candidate Starts for Eyeball\_24:

(Start: 111 @16155 has 200 MA's), (125, 16194), (144, 16257), (Start: 155 @16287 has 22 MA's), (176, 16329), (285, 16536), (291, 16554), (315, 16644), (329, 16707), (337, 16731), (339, 16743), (348, 16794), (460, 17178), (526, 17280), (537, 17319), (560, 17346), (569, 17370), (630, 17499), (671, 17598), (707, 17700), (710, 17721), (714, 17733), (721, 17763), (741, 17862), (753, 17925), (777, 18015), (818, 18144), (827, 18177), (875, 18459), (888, 18546), (895, 18585), (897, 18600),

Gene: Fajezeel\_26 Start: 16674, Stop: 19145, Start Num: 111

Candidate Starts for Fajezeel\_26:

(Start: 111 @16674 has 200 MA's), (125, 16713), (144, 16776), (Start: 155 @16806 has 22 MA's), (162, 16827), (176, 16848), (181, 16860), (194, 16878), (243, 16902), (282, 17040), (291, 17076), (315, 17166), (321, 17199), (339, 17265), (389, 17520), (393, 17541), (398, 17568), (403, 17583),

(432, 17664), (476, 17727), (500, 17763), (555, 17856), (564, 17877), (569, 17892), (579, 17913), (580, 17916), (615, 17985), (627, 18021), (644, 18054), (659, 18090), (671, 18120), (682, 18156), (707, 18222), (710, 18243), (741, 18384), (773, 18525), (784, 18546), (826, 18681), (855, 18858), (875, 18969), (885, 19035), (888, 19056), (895, 19095), (897, 19110),

Gene: Fameo\_26 Start: 16665, Stop: 19202, Start Num: 107

Candidate Starts for Fameo\_26:

(Start: 107 @16665 has 89 MA's), (170, 16842), (172, 16845), (173, 16848), (247, 17010), (249, 17016), (256, 17037), (258, 17046), (268, 17067), (279, 17100), (286, 17133), (312, 17226), (322, 17274), (325, 17292), (337, 17325), (339, 17337), (340, 17340), (341, 17346), (344, 17367), (345, 17370), (383, 17556), (393, 17598), (394, 17607), (408, 17664), (410, 17673), (427, 17739), (440, 17778), (479, 17871), (483, 17889), (507, 17964), (538, 18063), (544, 18078), (546, 18084), (552, 18093), (559, 18108), (568, 18129), (575, 18150), (586, 18174), (607, 18195), (608, 18201), (620, 18234), (623, 18246), (626, 18255), (664, 18345), (689, 18405), (703, 18432), (718, 18495), (727, 18540), (756, 18678), (804, 18768), (810, 18777), (845, 18888), (850, 18918), (866, 19002),

Gene: Farber\_27 Start: 15972, Stop: 18998, Start Num: 38

Candidate Starts for Farber\_27:

(30, 15918), (Start: 38 @15972 has 82 MA's), (55, 16086), (68, 16152), (69, 16155), (73, 16164), (86, 16200), (96, 16251), (124, 16323), (Start: 143 @16395 has 5 MA's), (190, 16515), (193, 16518), (214, 16587), (226, 16632), (258, 16725), (264, 16734), (270, 16752), (279, 16779), (295, 16842), (299, 16854), (308, 16887), (312, 16905), (325, 16971), (327, 16974), (329, 16980), (334, 16995), (337, 17004), (339, 17016), (341, 17025), (359, 17118), (383, 17235), (384, 17238), (391, 17265), (393, 17277), (405, 17331), (410, 17352), (427, 17418), (436, 17445), (479, 17550), (491, 17598), (507, 17643), (525, 17691), (535, 17733), (538, 17742), (552, 17772), (553, 17775), (559, 17787), (582, 17844), (585, 17850), (606, 17871), (607, 17874), (658, 18012), (664, 18024), (689, 18084), (710, 18144), (718, 18174), (719, 18177), (721, 18186), (741, 18279), (757, 18369), (776, 18435), (780, 18447), (800, 18489), (817, 18552), (836, 18609), (844, 18678), (851, 18714), (867, 18795), (892, 18930),

Gene: Fascinus\_23 Start: 16097, Stop: 18676, Start Num: 111

Candidate Starts for Fascinus\_23:

(Start: 111 @16097 has 200 MA's), (125, 16136), (144, 16199), (Start: 155 @16229 has 22 MA's), (277, 16448), (286, 16484), (329, 16652), (341, 16697), (345, 16721), (348, 16739), (418, 17051), (483, 17207), (520, 17309), (533, 17342), (571, 17414), (592, 17453), (630, 17540), (671, 17639), (707, 17741), (710, 17762), (714, 17774), (721, 17804), (741, 17903), (753, 17966), (777, 18056), (818, 18185), (827, 18218), (875, 18500), (888, 18587), (895, 18626), (897, 18641),

Gene: Fayely\_27 Start: 17623, Stop: 20532, Start Num: 52

Candidate Starts for Fayely\_27:

(Start: 52 @17623 has 33 MA's), (55, 17635), (68, 17695), (114, 17854), (130, 17917), (153, 17980), (165, 18022), (193, 18079), (260, 18289), (264, 18295), (269, 18310), (294, 18400), (295, 18403), (299, 18415), (311, 18457), (321, 18511), (341, 18586), (344, 18607), (345, 18610), (348, 18628), (361, 18691), (379, 18757), (383, 18796), (390, 18823), (393, 18838), (399, 18868), (405, 18892), (408, 18904), (410, 18913), (427, 18979), (440, 19018), (468, 19084), (479, 19111), (486, 19138), (507, 19204), (523, 19249), (546, 19324), (568, 19369), (575, 19390), (585, 19411), (586, 19414), (606, 19432), (607, 19435), (615, 19462), (649, 19543), (664, 19585), (718, 19735), (722, 19750), (727, 19780), (738, 19831), (756, 19918), (758, 19927), (771, 19978), (800, 20041), (805, 20062), (816, 20098), (830, 20134), (831, 20140), (844, 20218), (849, 20245), (860, 20305), (875, 20374), (879, 20404), (885, 20431), (894, 20470), (900, 20512),

Gene: Fenn\_25 Start: 17895, Stop: 20510, Start Num: 111

Candidate Starts for Fenn\_25:

(Start: 111 @17895 has 200 MA's), (125, 17934), (144, 17997), (145, 18003), (Start: 155 @18027 has 22 MA's), (250, 18135), (299, 18306), (314, 18366), (315, 18369), (342, 18492), (348, 18522), (361, 18585), (412, 18804), (437, 18876), (459, 18924), (482, 18969), (562, 19194), (565, 19203), (579, 19239), (598, 19281), (671, 19485), (708, 19599), (710, 19608), (715, 19629), (721, 19650), (741, 19749), (750, 19791), (751, 19794), (788, 19923), (815, 20007), (827, 20052), (875, 20334), (885, 20400), (888, 20421), (895, 20460), (897, 20475),

Gene: Fernando\_27 Start: 15978, Stop: 19004, Start Num: 38

Candidate Starts for Fernando\_27:

(30, 15924), (Start: 38 @15978 has 82 MA's), (55, 16092), (68, 16158), (69, 16161), (73, 16170), (86, 16206), (96, 16257), (124, 16329), (Start: 143 @16401 has 5 MA's), (190, 16521), (193, 16524), (214, 16593), (226, 16638), (258, 16731), (264, 16740), (270, 16758), (279, 16785), (295, 16848), (299, 16860), (308, 16893), (312, 16911), (325, 16977), (327, 16980), (329, 16986), (334, 17001), (337, 17010), (339, 17022), (341, 17031), (355, 17109), (359, 17124), (383, 17241), (384, 17244), (391, 17271), (393, 17283), (405, 17337), (410, 17358), (427, 17424), (440, 17463), (479, 17556), (491, 17604), (507, 17649), (525, 17697), (535, 17739), (538, 17748), (552, 17778), (553, 17781), (559, 17793), (582, 17850), (585, 17856), (606, 17877), (607, 17880), (658, 18018), (664, 18030), (689, 18090), (709, 18147), (741, 18285), (744, 18306), (749, 18330), (757, 18375), (762, 18393), (776, 18441), (780, 18453), (800, 18495), (817, 18558), (836, 18615), (844, 18684), (851, 18720), (867, 18801), (892, 18936),

Gene: Fibonacci\_26 Start: 17160, Stop: 19706, Start Num: 112

Candidate Starts for Fibonacci\_26:

(Start: 112 @17160 has 30 MA's), (Start: 118 @17178 has 2 MA's), (187, 17352), (197, 17361), (223, 17436), (267, 17544), (271, 17559), (272, 17562), (279, 17580), (295, 17643), (299, 17655), (315, 17718), (329, 17781), (334, 17796), (337, 17805), (341, 17826), (345, 17850), (348, 17865), (367, 17952), (369, 17955), (374, 17970), (378, 17991), (380, 18003), (389, 18069), (397, 18111), (403, 18132), (404, 18141), (412, 18165), (437, 18246), (441, 18255), (445, 18267), (467, 18309), (492, 18366), (513, 18420), (549, 18528), (567, 18567), (618, 18708), (656, 18804), (661, 18825), (675, 18858), (686, 18891), (687, 18894), (709, 18978), (721, 19023), (722, 19026), (746, 19140), (752, 19173), (791, 19245), (808, 19281), (839, 19353), (850, 19431), (860, 19485), (866, 19509), (889, 19620),

Gene: FiringLine\_26 Start: 16547, Stop: 19084, Start Num: 107

Candidate Starts for FiringLine\_26:

(Start: 107 @16547 has 89 MA's), (170, 16724), (172, 16727), (173, 16730), (188, 16760), (249, 16898), (256, 16919), (258, 16928), (268, 16949), (279, 16982), (294, 17042), (299, 17057), (312, 17108), (322, 17156), (325, 17174), (337, 17207), (339, 17219), (340, 17222), (341, 17228), (344, 17249), (345, 17252), (362, 17339), (383, 17438), (393, 17480), (394, 17489), (396, 17498), (408, 17546), (410, 17555), (427, 17621), (440, 17660), (507, 17846), (512, 17861), (525, 17894), (538, 17945), (546, 17966), (555, 17981), (559, 17990), (566, 18005), (606, 18074), (664, 18227), (673, 18248), (718, 18377), (727, 18422), (730, 18434), (737, 18470), (804, 18650), (810, 18659), (845, 18770), (850, 18800), (866, 18884),

Gene: First\_0026 Start: 16642, Stop: 19185, Start Num: 107

Candidate Starts for First\_0026:

(46, 16390), (Start: 107 @16642 has 89 MA's), (172, 16822), (173, 16825), (188, 16855), (245, 16990), (249, 16999), (256, 17020), (258, 17029), (268, 17050), (279, 17083), (286, 17116), (312, 17209), (322, 17257), (325, 17275), (332, 17287), (337, 17308), (341, 17329), (344, 17350), (345, 17353), (383, 17539), (393, 17581), (394, 17590), (396, 17599), (410, 17656), (427, 17722), (440, 17761), (477, 17848), (507, 17947), (546, 18067), (552, 18076), (555, 18082), (559, 18091), (568, 18112), (578, 18136), (586, 18157), (607, 18178), (609, 18187), (620, 18217), (623, 18229), (628, 18244), (649, 18286), (687, 18379), (689, 18388), (703, 18415), (718, 18478), (804, 18751), (810, 18760),

(845, 18871), (850, 18901), (866, 18985),

Gene: Flare16\_26 Start: 16673, Stop: 19180, Start Num: 107

Candidate Starts for Flare16\_26:

(Start: 107 @16673 has 89 MA's), (144, 16784), (167, 16841), (245, 16997), (256, 17027), (279, 17090), (286, 17123), (288, 17129), (334, 17309), (337, 17318), (341, 17339), (344, 17360), (345, 17363), (348, 17381), (360, 17441), (383, 17549), (393, 17591), (405, 17645), (410, 17666), (426, 17729), (427, 17732), (434, 17750), (440, 17771), (507, 17957), (512, 17972), (517, 17999), (538, 18056), (544, 18071), (546, 18077), (552, 18086), (555, 18092), (568, 18122), (575, 18143), (607, 18188), (608, 18194), (620, 18227), (628, 18254), (658, 18326), (664, 18338), (689, 18398), (703, 18425), (718, 18488), (727, 18533), (737, 18581), (746, 18617), (752, 18650), (786, 18713), (800, 18737), (846, 18881), (866, 18980), (882, 19067), (902, 19166),

Gene: Flaverint\_26 Start: 17157, Stop: 19703, Start Num: 112

Candidate Starts for Flaverint\_26:

(Start: 112 @17157 has 30 MA's), (Start: 118 @17175 has 2 MA's), (187, 17349), (197, 17358), (223, 17433), (252, 17487), (267, 17541), (271, 17556), (272, 17559), (279, 17577), (295, 17640), (299, 17652), (315, 17715), (329, 17778), (334, 17793), (337, 17802), (341, 17823), (345, 17847), (348, 17862), (367, 17949), (369, 17952), (374, 17967), (378, 17988), (380, 18000), (389, 18066), (404, 18138), (412, 18162), (437, 18243), (441, 18252), (445, 18264), (467, 18306), (492, 18363), (513, 18417), (549, 18525), (567, 18564), (618, 18705), (656, 18801), (661, 18822), (675, 18855), (686, 18888), (687, 18891), (709, 18975), (721, 19020), (722, 19023), (746, 19137), (752, 19170), (791, 19242), (808, 19278), (839, 19350), (850, 19428), (860, 19482), (866, 19506), (889, 19617),

Gene: Florean\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for Florean\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (545, 17238), (557, 17259), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: Flux\_25 Start: 16026, Stop: 18485, Start Num: 155

Candidate Starts for Flux\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (674, 17523), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: FlyCatcher\_29 Start: 17560, Stop: 20943, Start Num: 17

Candidate Starts for FlyCatcher\_29:

(Start: 17 @17560 has 4 MA's), (77, 17947), (91, 18004), (127, 18136), (131, 18148), (147, 18199), (209, 18346), (266, 18529), (268, 18535), (279, 18568), (282, 18580), (307, 18673), (312, 18694), (315, 18706), (350, 18862), (354, 18886), (371, 18949), (383, 19024), (393, 19066), (405, 19120), (410, 19141), (424, 19198), (426, 19204), (427, 19207), (456, 19291), (463, 19306), (477, 19333), (479, 19339), (507, 19432), (511, 19444), (512, 19447), (568, 19597), (574, 19612), (581, 19630), (593, 19654), (599, 19672), (600, 19675), (633, 19786), (654, 19849), (656, 19852), (676, 19909), (679, 19915), (691, 19963), (705, 19993), (721, 20071), (724, 20083), (725, 20092), (729, 20113), (744, 20191), (757, 20260), (762, 20278), (773, 20329), (783, 20365), (785, 20377), (798, 20410), (805, 20440), (811, 20461), (824, 20512), (833, 20545), (845, 20626), (851, 20659), (855, 20689),

(865, 20731), (871, 20755), (882, 20821), (885, 20836), (886, 20842), (895, 20893),

Gene: ForGetIt\_22 Start: 15094, Stop: 18435, Start Num: 1

Candidate Starts for ForGetIt\_22:

(Start: 1 @15094 has 30 MA's), (Start: 34 @15532 has 1 MA's), (120, 15844), (Start: 141 @15922 has 1 MA's), (154, 15952), (173, 16009), (227, 16156), (229, 16162), (233, 16168), (270, 16294), (274, 16306), (315, 16456), (322, 16492), (329, 16522), (334, 16537), (341, 16567), (342, 16579), (347, 16603), (361, 16672), (379, 16738), (412, 16894), (428, 16963), (429, 16966), (441, 16993), (449, 17017), (514, 17155), (522, 17176), (540, 17221), (563, 17263), (639, 17455), (652, 17485), (660, 17509), (664, 17521), (672, 17542), (683, 17584), (705, 17671), (710, 17707), (715, 17728), (721, 17749), (736, 17827), (745, 17848), (749, 17869), (752, 17890), (756, 17911), (765, 17935), (808, 17998), (842, 18091), (845, 18109), (859, 18190), (863, 18202), (865, 18214), (867, 18223), (878, 18277), (891, 18361), (892, 18370),

Gene: Forsytheast\_23 Start: 16363, Stop: 18834, Start Num: 111

Candidate Starts for Forsytheast\_23:

(Start: 111 @16363 has 200 MA's), (125, 16402), (144, 16465), (Start: 155 @16495 has 22 MA's), (162, 16516), (176, 16537), (181, 16549), (194, 16567), (262, 16657), (315, 16855), (321, 16888), (339, 16954), (389, 17209), (393, 17230), (398, 17257), (476, 17416), (500, 17452), (555, 17545), (564, 17566), (592, 17623), (644, 17743), (659, 17779), (671, 17809), (682, 17845), (707, 17911), (710, 17932), (741, 18073), (773, 18214), (784, 18235), (842, 18466), (855, 18547), (875, 18658), (881, 18700), (888, 18745), (895, 18784), (897, 18799),

Gene: Francis47\_24 Start: 16902, Stop: 19382, Start Num: 111

Candidate Starts for Francis47\_24:

(Start: 111 @16902 has 200 MA's), (125, 16941), (144, 17004), (Start: 155 @17034 has 22 MA's), (176, 17076), (285, 17283), (291, 17301), (315, 17391), (329, 17454), (337, 17478), (339, 17490), (348, 17541), (460, 17925), (526, 18027), (537, 18066), (560, 18093), (569, 18117), (671, 18345), (707, 18447), (710, 18468), (714, 18480), (721, 18510), (741, 18609), (753, 18672), (818, 18891), (827, 18924), (875, 19206), (888, 19293), (895, 19332), (899, 19362),

Gene: Fred313\_25 Start: 15240, Stop: 18278, Start Num: 37

Candidate Starts for Fred313\_25:

(Start: 37 @15240 has 32 MA's), (66, 15414), (69, 15426), (81, 15459), (Start: 143 @15669 has 5 MA's), (193, 15792), (202, 15813), (258, 15999), (268, 16020), (279, 16053), (295, 16116), (299, 16128), (308, 16161), (312, 16179), (327, 16248), (329, 16254), (334, 16269), (337, 16278), (339, 16290), (341, 16299), (359, 16392), (383, 16509), (384, 16512), (391, 16539), (393, 16551), (405, 16605), (410, 16626), (414, 16647), (427, 16692), (440, 16731), (479, 16824), (491, 16872), (507, 16917), (512, 16932), (535, 17007), (538, 17016), (542, 17028), (552, 17046), (559, 17061), (582, 17118), (606, 17145), (607, 17148), (613, 17169), (664, 17298), (673, 17319), (689, 17358), (706, 17397), (710, 17418), (718, 17448), (719, 17451), (721, 17460), (726, 17484), (741, 17553), (744, 17574), (757, 17643), (762, 17661), (776, 17709), (780, 17721), (800, 17763), (803, 17775), (816, 17823), (851, 17994), (855, 18024), (863, 18054), (867, 18075), (892, 18210), (894, 18222), (899, 18258),

Gene: Froghopper\_25 Start: 16326, Stop: 18797, Start Num: 111

Candidate Starts for Froghopper\_25:

(Start: 111 @16326 has 200 MA's), (125, 16365), (144, 16428), (Start: 155 @16458 has 22 MA's), (162, 16479), (176, 16500), (181, 16512), (194, 16530), (250, 16575), (262, 16620), (315, 16818), (321, 16851), (339, 16917), (389, 17172), (393, 17193), (398, 17220), (476, 17379), (500, 17415), (555, 17508), (564, 17529), (592, 17586), (644, 17706), (659, 17742), (671, 17772), (682, 17808), (707, 17874), (710, 17895), (733, 18012), (741, 18036), (773, 18177), (784, 18198), (842, 18429), (855, 18510), (875, 18621), (885, 18687), (888, 18708), (895, 18747), (897, 18762),

Gene: Funston\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Funston\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Fushigi\_25 Start: 16774, Stop: 19254, Start Num: 111

Candidate Starts for Fushigi\_25:

(Start: 111 @16774 has 200 MA's), (125, 16813), (144, 16876), (Start: 155 @16906 has 22 MA's), (176, 16948), (285, 17155), (291, 17173), (315, 17263), (329, 17326), (337, 17350), (339, 17362), (348, 17413), (460, 17797), (526, 17899), (537, 17938), (555, 17953), (560, 17965), (569, 17989), (630, 18118), (671, 18217), (707, 18319), (710, 18340), (714, 18352), (721, 18382), (741, 18481), (753, 18544), (818, 18763), (827, 18796), (875, 19078), (885, 19144), (888, 19165), (895, 19204), (899, 19234),

Gene: GMonster\_23 Start: 16194, Stop: 18194, Start Num: 111

Candidate Starts for GMonster\_23:

(Start: 111 @16194 has 200 MA's), (125, 16233), (144, 16296), (Start: 155 @16326 has 22 MA's), (162, 16347), (238, 16407), (266, 16503), (278, 16542), (285, 16572), (289, 16584), (315, 16680), (321, 16713), (376, 16947), (433, 17172), (482, 17235), (534, 17337), (543, 17349), (592, 17427), (611, 17469), (639, 17523), (644, 17535), (651, 17550), (657, 17568), (663, 17580), (688, 17658), (699, 17688), (710, 17733), (723, 17784), (769, 17994), (820, 18144),

Gene: Gadost\_25 Start: 16030, Stop: 18489, Start Num: 155

Candidate Starts for Gadost\_25:

(Start: 109 @15889 has 113 MA's), (Start: 155 @16030 has 22 MA's), (Start: 163 @16048 has 10 MA's), (240, 16255), (252, 16294), (258, 16324), (291, 16441), (299, 16468), (315, 16531), (329, 16594), (341, 16639), (348, 16681), (365, 16765), (457, 17032), (481, 17083), (499, 17128), (530, 17206), (542, 17239), (545, 17245), (557, 17266), (626, 17413), (636, 17434), (647, 17458), (673, 17524), (700, 17578), (710, 17626), (726, 17692), (757, 17857), (762, 17875), (807, 18001), (859, 18253), (860, 18256), (863, 18265), (875, 18325), (892, 18421), (899, 18469),

Gene: GageAP\_26 Start: 17075, Stop: 19546, Start Num: 111

Candidate Starts for GageAP\_26:

(Start: 111 @17075 has 200 MA's), (125, 17114), (144, 17177), (145, 17183), (Start: 155 @17207 has 22 MA's), (162, 17228), (176, 17249), (194, 17279), (243, 17303), (262, 17369), (315, 17567), (321, 17600), (339, 17666), (389, 17921), (393, 17942), (398, 17969), (476, 18128), (500, 18164), (555, 18257), (564, 18278), (569, 18293), (579, 18314), (580, 18317), (615, 18386), (627, 18422), (644, 18455), (659, 18491), (671, 18521), (682, 18557), (707, 18623), (710, 18644), (741, 18785), (773, 18926), (784, 18947), (826, 19082), (855, 19259), (875, 19370), (881, 19412), (888, 19457), (895, 19496), (897, 19511),

Gene: Gail\_25 Start: 15723, Stop: 18137, Start Num: 143

Candidate Starts for Gail\_25:

(Start: 143 @15723 has 5 MA's), (Start: 152 @15741 has 5 MA's), (161, 15774), (207, 15876), (220, 15918), (236, 15960), (240, 15972), (274, 16086), (285, 16140), (299, 16185), (315, 16248), (321, 16281), (344, 16377), (361, 16461), (392, 16602), (453, 16746), (482, 16800), (485, 16815), (496, 16842), (500, 16854), (573, 17040), (644, 17196), (677, 17286), (693, 17337), (709, 17397), (718, 17430), (721, 17442), (727, 17475), (729, 17484), (753, 17616), (756, 17628), (765, 17652), (801,



17706), (843, 17823), (866, 17934), (879, 18009), (894, 18075), (899, 18111),

Gene: Gandalf20\_25 Start: 17202, Stop: 19673, Start Num: 111

Candidate Starts for Gandalf20\_25:

(Start: 111 @17202 has 200 MA's), (125, 17241), (144, 17304), (Start: 155 @17334 has 22 MA's), (162, 17355), (176, 17376), (181, 17388), (194, 17406), (243, 17430), (262, 17496), (315, 17694), (321, 17727), (339, 17793), (389, 18048), (393, 18069), (398, 18096), (476, 18255), (500, 18291), (555, 18384), (564, 18405), (592, 18462), (615, 18513), (627, 18549), (644, 18582), (659, 18618), (671, 18648), (682, 18684), (707, 18750), (710, 18771), (741, 18912), (773, 19053), (784, 19074), (826, 19209), (855, 19386), (875, 19497), (885, 19563), (888, 19584), (895, 19623), (897, 19638),

Gene: Garak\_30 Start: 16733, Stop: 18937, Start Num: 116

Candidate Starts for Garak\_30:

(60, 16574), (93, 16688), (Start: 116 @16733 has 41 MA's), (160, 16844), (223, 17000), (270, 17147), (274, 17159), (315, 17309), (321, 17342), (343, 17432), (357, 17501), (412, 17744), (499, 17882), (590, 18002), (680, 18155), (710, 18218), (721, 18260), (745, 18359), (749, 18380), (752, 18401), (756, 18422), (791, 18473), (800, 18485), (805, 18500), (839, 18581), (850, 18659),

Gene: GaugeLDP\_28 Start: 17905, Stop: 20424, Start Num: 107

Candidate Starts for GaugeLDP\_28:

(Start: 107 @17905 has 89 MA's), (144, 18016), (172, 18085), (173, 18088), (204, 18142), (256, 18259), (258, 18268), (264, 18277), (279, 18322), (281, 18331), (312, 18448), (323, 18505), (327, 18517), (329, 18523), (334, 18538), (339, 18559), (341, 18568), (383, 18778), (391, 18808), (393, 18820), (405, 18874), (410, 18895), (427, 18961), (436, 18988), (440, 19000), (491, 19141), (507, 19186), (512, 19201), (517, 19228), (523, 19231), (538, 19285), (555, 19321), (559, 19330), (568, 19351), (578, 19375), (582, 19387), (606, 19414), (607, 19417), (620, 19456), (623, 19468), (628, 19483), (689, 19627), (703, 19654), (709, 19684), (710, 19687), (718, 19717), (727, 19762), (730, 19774), (737, 19810), (752, 19879), (801, 19978), (804, 19987), (810, 19996), (845, 20107), (858, 20194), (866, 20224), (899, 20401),

Gene: Gemma\_27 Start: 16053, Stop: 19079, Start Num: 38

Candidate Starts for Gemma\_27:

(30, 15999), (Start: 38 @16053 has 82 MA's), (55, 16167), (68, 16233), (69, 16236), (73, 16245), (86, 16281), (96, 16332), (124, 16404), (Start: 143 @16476 has 5 MA's), (190, 16596), (193, 16599), (214, 16668), (226, 16713), (258, 16806), (264, 16815), (279, 16860), (288, 16899), (295, 16923), (299, 16935), (308, 16968), (312, 16986), (316, 17007), (327, 17055), (329, 17061), (334, 17076), (337, 17085), (339, 17097), (341, 17106), (359, 17199), (380, 17286), (383, 17316), (384, 17319), (391, 17346), (393, 17358), (405, 17412), (410, 17433), (416, 17463), (427, 17499), (477, 17625), (491, 17679), (507, 17724), (525, 17772), (535, 17814), (538, 17823), (552, 17853), (582, 17925), (585, 17931), (606, 17952), (607, 17955), (610, 17967), (656, 18084), (658, 18093), (689, 18165), (690, 18168), (706, 18204), (718, 18255), (719, 18258), (721, 18267), (757, 18450), (776, 18516), (780, 18528), (800, 18570), (817, 18633), (836, 18690), (844, 18759), (851, 18795), (867, 18876), (892, 19011), (894, 19023),

Gene: George\_21 Start: 15244, Stop: 18582, Start Num: 1

Candidate Starts for George\_21:

(Start: 1 @15244 has 30 MA's), (Start: 34 @15682 has 1 MA's), (120, 15994), (Start: 141 @16072 has 1 MA's), (154, 16102), (173, 16159), (211, 16243), (227, 16306), (229, 16312), (269, 16432), (294, 16522), (295, 16525), (315, 16600), (324, 16645), (329, 16663), (341, 16708), (344, 16729), (384, 16921), (417, 17059), (429, 17107), (459, 17185), (516, 17311), (522, 17323), (532, 17347), (563, 17410), (639, 17602), (652, 17632), (660, 17656), (664, 17668), (683, 17731), (710, 17854), (715, 17875), (721, 17896), (736, 17974), (745, 17995), (752, 18037), (756, 18058), (808, 18145), (829, 18175), (842, 18238), (845, 18256), (859, 18337), (863, 18349), (865, 18361), (867, 18370), (878,

18424), (896, 18547),

Gene: Georgie2\_27 Start: 16538, Stop: 19075, Start Num: 107

Candidate Starts for Georgie2\_27:

(Start: 107 @16538 has 89 MA's), (170, 16715), (172, 16718), (173, 16721), (188, 16751), (249, 16889), (256, 16910), (258, 16919), (268, 16940), (279, 16973), (294, 17033), (299, 17048), (312, 17099), (322, 17147), (325, 17165), (337, 17198), (339, 17210), (340, 17213), (341, 17219), (344, 17240), (345, 17243), (362, 17330), (383, 17429), (393, 17471), (394, 17480), (396, 17489), (408, 17537), (410, 17546), (427, 17612), (440, 17651), (507, 17837), (512, 17852), (525, 17885), (538, 17936), (546, 17957), (555, 17972), (559, 17981), (566, 17996), (606, 18065), (664, 18218), (673, 18239), (718, 18368), (727, 18413), (730, 18425), (737, 18461), (804, 18641), (810, 18650), (845, 18761), (850, 18791), (866, 18875),

Gene: Ghoulboy\_22 Start: 15349, Stop: 18750, Start Num: 1

Candidate Starts for Ghoulboy\_22:

(Start: 1 @15349 has 30 MA's), (3, 15409), (12, 15562), (14, 15601), (Start: 34 @15787 has 1 MA's), (73, 16015), (78, 16027), (83, 16039), (120, 16171), (Start: 141 @16249 has 1 MA's), (154, 16279), (173, 16336), (227, 16483), (229, 16489), (233, 16495), (270, 16621), (274, 16633), (315, 16783), (322, 16819), (329, 16849), (334, 16864), (341, 16894), (342, 16906), (347, 16930), (361, 16999), (379, 17065), (412, 17221), (428, 17290), (429, 17293), (441, 17320), (449, 17344), (514, 17482), (522, 17503), (540, 17536), (563, 17578), (639, 17770), (652, 17800), (660, 17824), (664, 17836), (672, 17857), (683, 17899), (705, 17986), (710, 18022), (715, 18043), (721, 18064), (736, 18142), (745, 18163), (749, 18184), (752, 18205), (756, 18226), (765, 18250), (808, 18313), (842, 18406), (845, 18424), (859, 18505), (863, 18517), (865, 18529), (867, 18538), (878, 18592), (891, 18676), (892, 18685),

Gene: Gilberta\_26 Start: 17154, Stop: 19700, Start Num: 112

Candidate Starts for Gilberta\_26:

(Start: 112 @17154 has 30 MA's), (Start: 118 @17172 has 2 MA's), (187, 17346), (197, 17355), (223, 17430), (252, 17484), (267, 17538), (271, 17553), (272, 17556), (279, 17574), (295, 17637), (299, 17649), (315, 17712), (329, 17775), (334, 17790), (337, 17799), (341, 17820), (345, 17844), (348, 17859), (367, 17946), (369, 17949), (374, 17964), (378, 17985), (380, 17997), (389, 18063), (404, 18135), (412, 18159), (437, 18240), (441, 18249), (445, 18261), (467, 18303), (492, 18360), (513, 18414), (549, 18522), (567, 18561), (618, 18702), (656, 18798), (661, 18819), (675, 18852), (686, 18885), (687, 18888), (709, 18972), (721, 19017), (722, 19020), (746, 19134), (752, 19167), (791, 19239), (808, 19275), (839, 19347), (850, 19425), (860, 19479), (866, 19503), (889, 19614),

Gene: GingkoMaracino\_27 Start: 15865, Stop: 18891, Start Num: 38

Candidate Starts for GingkoMaracino\_27:

(30, 15811), (Start: 38 @15865 has 82 MA's), (55, 15979), (68, 16045), (69, 16048), (73, 16057), (86, 16093), (96, 16144), (124, 16216), (Start: 143 @16288 has 5 MA's), (190, 16408), (193, 16411), (214, 16480), (226, 16525), (258, 16618), (264, 16627), (270, 16645), (279, 16672), (295, 16735), (299, 16747), (308, 16780), (312, 16798), (325, 16864), (327, 16867), (329, 16873), (334, 16888), (337, 16897), (339, 16909), (341, 16918), (355, 16996), (359, 17011), (383, 17128), (384, 17131), (391, 17158), (393, 17170), (405, 17224), (410, 17245), (427, 17311), (440, 17350), (479, 17443), (491, 17491), (507, 17536), (525, 17584), (535, 17626), (538, 17635), (552, 17665), (553, 17668), (559, 17680), (582, 17737), (585, 17743), (606, 17764), (607, 17767), (658, 17905), (664, 17917), (689, 17977), (709, 18034), (741, 18172), (744, 18193), (749, 18217), (757, 18262), (762, 18280), (776, 18328), (780, 18340), (800, 18382), (817, 18445), (836, 18502), (844, 18571), (851, 18607), (867, 18688), (892, 18823),

Gene: Giroux\_25 Start: 15495, Stop: 18530, Start Num: 37

Candidate Starts for Giroux\_25:

(Start: 37 @15495 has 32 MA's), (66, 15669), (69, 15681), (81, 15714), (Start: 143 @15924 has 5 MA's), (190, 16044), (193, 16047), (258, 16251), (268, 16272), (277, 16302), (279, 16305), (295, 16368), (299, 16380), (308, 16413), (312, 16431), (327, 16500), (329, 16506), (334, 16521), (337, 16530), (339, 16542), (341, 16551), (359, 16644), (383, 16761), (384, 16764), (390, 16788), (391, 16791), (393, 16803), (405, 16857), (410, 16878), (414, 16899), (427, 16944), (436, 16971), (440, 16983), (491, 17124), (507, 17169), (512, 17184), (535, 17259), (538, 17268), (552, 17298), (559, 17313), (560, 17316), (568, 17334), (575, 17355), (578, 17358), (606, 17397), (607, 17400), (637, 17484), (664, 17550), (673, 17571), (689, 17610), (706, 17649), (710, 17670), (718, 17700), (719, 17703), (721, 17712), (726, 17736), (741, 17805), (744, 17826), (757, 17895), (762, 17913), (776, 17961), (780, 17973), (800, 18015), (803, 18027), (816, 18075), (851, 18246), (855, 18276), (863, 18306), (867, 18327), (892, 18462), (899, 18510),

Gene: Gladiator\_29 Start: 16707, Stop: 18923, Start Num: 116

Candidate Starts for Gladiator\_29:

(93, 16662), (Start: 116 @16707 has 41 MA's), (160, 16818), (223, 16974), (270, 17121), (274, 17133), (314, 17280), (315, 17283), (321, 17316), (343, 17406), (357, 17475), (376, 17550), (412, 17718), (590, 17976), (618, 18021), (680, 18129), (710, 18192), (721, 18234), (745, 18333), (749, 18354), (756, 18396), (791, 18447), (805, 18474), (839, 18555), (850, 18645),

Gene: Gompeii16\_24 Start: 16850, Stop: 19330, Start Num: 111

Candidate Starts for Gompeii16\_24:

(Start: 111 @16850 has 200 MA's), (125, 16889), (144, 16952), (Start: 155 @16982 has 22 MA's), (176, 17024), (285, 17231), (291, 17249), (315, 17339), (329, 17402), (337, 17426), (339, 17438), (348, 17489), (460, 17873), (526, 17975), (537, 18014), (555, 18029), (560, 18041), (569, 18065), (671, 18293), (707, 18395), (710, 18416), (714, 18428), (721, 18458), (741, 18557), (753, 18620), (818, 18839), (827, 18872), (875, 19154), (888, 19241), (895, 19280), (899, 19310),

Gene: Goose\_25 Start: 15688, Stop: 18417, Start Num: 105

Candidate Starts for Goose\_25:

(50, 15457), (Start: 105 @15688 has 8 MA's), (Start: 163 @15865 has 10 MA's), (171, 15886), (181, 15910), (186, 15916), (200, 15940), (201, 15943), (203, 15952), (214, 15991), (219, 16000), (220, 16006), (225, 16030), (243, 16075), (255, 16117), (265, 16150), (268, 16159), (281, 16213), (295, 16267), (298, 16276), (302, 16300), (309, 16321), (330, 16426), (339, 16468), (402, 16783), (404, 16795), (411, 16822), (489, 16990), (528, 17110), (542, 17155), (544, 17158), (545, 17161), (557, 17182), (558, 17185), (574, 17230), (626, 17338), (636, 17359), (659, 17419), (674, 17452), (705, 17515), (721, 17593), (726, 17617), (741, 17692), (752, 17758), (757, 17782), (762, 17800), (770, 17836), (782, 17866), (799, 17908), (802, 17920), (807, 17932), (819, 17968), (823, 17980), (863, 18193), (865, 18205), (871, 18229), (875, 18253), (892, 18349), (899, 18397),

Gene: Graduation\_26 Start: 17109, Stop: 19577, Start Num: 111

Candidate Starts for Graduation\_26:

(Start: 111 @17109 has 200 MA's), (Start: 117 @17124 has 5 MA's), (Start: 155 @17238 has 22 MA's), (176, 17280), (194, 17310), (243, 17334), (262, 17400), (315, 17598), (321, 17631), (339, 17697), (389, 17952), (393, 17973), (398, 18000), (476, 18159), (500, 18195), (555, 18288), (564, 18309), (569, 18324), (579, 18345), (580, 18348), (615, 18417), (627, 18453), (644, 18486), (659, 18522), (671, 18552), (682, 18588), (707, 18654), (710, 18675), (741, 18816), (773, 18957), (784, 18978), (826, 19113), (855, 19290), (875, 19401), (885, 19467), (888, 19488), (895, 19527), (897, 19542),

Gene: GrecoEtereo\_25 Start: 16652, Stop: 19120, Start Num: 111

Candidate Starts for GrecoEtereo\_25:

(Start: 111 @16652 has 200 MA's), (Start: 117 @16667 has 5 MA's), (Start: 155 @16781 has 22 MA's), (176, 16823), (194, 16853), (262, 16943), (263, 16946), (315, 17141), (339, 17240), (389,

17495), (393, 17516), (398, 17543), (476, 17702), (500, 17738), (555, 17831), (564, 17852), (592, 17909), (644, 18029), (659, 18065), (671, 18095), (682, 18131), (707, 18197), (710, 18218), (741, 18359), (773, 18500), (784, 18521), (826, 18656), (855, 18833), (875, 18944), (881, 18986), (888, 19031), (895, 19070),

Gene: GreedyLawyer\_29 Start: 16735, Stop: 18939, Start Num: 116

Candidate Starts for GreedyLawyer\_29:

(60, 16576), (93, 16690), (Start: 116 @16735 has 41 MA's), (160, 16846), (166, 16852), (212, 16960), (223, 17002), (246, 17068), (274, 17161), (283, 17188), (315, 17311), (321, 17344), (343, 17434), (357, 17503), (412, 17746), (499, 17884), (590, 18004), (680, 18157), (710, 18220), (721, 18262), (745, 18361), (749, 18382), (752, 18403), (756, 18424), (791, 18475), (800, 18487), (805, 18502), (839, 18583), (850, 18661),

Gene: Greg\_26 Start: 16674, Stop: 19145, Start Num: 111

Candidate Starts for Greg\_26:

(Start: 111 @16674 has 200 MA's), (125, 16713), (144, 16776), (Start: 155 @16806 has 22 MA's), (162, 16827), (176, 16848), (181, 16860), (194, 16878), (243, 16902), (282, 17040), (291, 17076), (315, 17166), (321, 17199), (339, 17265), (389, 17520), (393, 17541), (398, 17568), (403, 17583), (432, 17664), (476, 17727), (500, 17763), (555, 17856), (564, 17877), (569, 17892), (579, 17913), (580, 17916), (615, 17985), (627, 18021), (644, 18054), (659, 18090), (671, 18120), (682, 18156), (707, 18222), (710, 18243), (741, 18384), (773, 18525), (784, 18546), (826, 18681), (855, 18858), (875, 18969), (885, 19035), (888, 19056), (895, 19095), (897, 19110),

Gene: Grif\_27 Start: 16062, Stop: 19088, Start Num: 38

Candidate Starts for Grif\_27:

(30, 16008), (Start: 38 @16062 has 82 MA's), (55, 16176), (68, 16242), (69, 16245), (73, 16254), (86, 16290), (96, 16341), (124, 16413), (Start: 143 @16485 has 5 MA's), (190, 16605), (193, 16608), (214, 16677), (226, 16722), (258, 16815), (264, 16824), (270, 16842), (279, 16869), (295, 16932), (299, 16944), (308, 16977), (312, 16995), (325, 17061), (327, 17064), (329, 17070), (334, 17085), (337, 17094), (339, 17106), (341, 17115), (359, 17208), (383, 17325), (384, 17328), (391, 17355), (393, 17367), (405, 17421), (410, 17442), (427, 17508), (440, 17547), (479, 17640), (491, 17688), (507, 17733), (525, 17781), (535, 17823), (538, 17832), (552, 17862), (553, 17865), (559, 17877), (582, 17934), (585, 17940), (606, 17961), (607, 17964), (658, 18102), (664, 18114), (689, 18174), (710, 18234), (718, 18264), (719, 18267), (721, 18276), (741, 18369), (749, 18414), (757, 18459), (762, 18477), (776, 18525), (780, 18537), (800, 18579), (817, 18642), (836, 18699), (844, 18768), (851, 18804), (867, 18885), (892, 19020),

Gene: Groundhog\_21 Start: 14515, Stop: 17592, Start Num: 9

Candidate Starts for Groundhog\_21:

(Start: 9 @14515 has 11 MA's), (15, 14599), (Start: 34 @14767 has 1 MA's), (Start: 37 @14791 has 32 MA's), (73, 14839), (Start: 107 @14959 has 89 MA's), (129, 15031), (189, 15181), (191, 15184), (196, 15190), (252, 15376), (269, 15436), (270, 15442), (289, 15508), (297, 15535), (300, 15550), (314, 15601), (315, 15604), (321, 15637), (329, 15670), (367, 15838), (404, 16021), (412, 16045), (422, 16093), (428, 16114), (429, 16117), (493, 16261), (516, 16318), (531, 16348), (547, 16387), (580, 16459), (601, 16489), (630, 16588), (642, 16618), (660, 16663), (672, 16696), (710, 16861), (715, 16882), (719, 16894), (734, 16975), (745, 17002), (756, 17065), (765, 17089), (792, 17119), (808, 17152), (830, 17185), (842, 17245), (846, 17272), (866, 17371), (867, 17377), (883, 17467), (886, 17488), (893, 17527), (903, 17575),

Gene: Groupthink\_28 Start: 16057, Stop: 19083, Start Num: 38

Candidate Starts for Groupthink\_28:

(30, 16003), (Start: 38 @16057 has 82 MA's), (55, 16171), (68, 16237), (69, 16240), (73, 16249), (86, 16285), (96, 16336), (124, 16408), (Start: 143 @16480 has 5 MA's), (190, 16600), (193, 16603), (214,

16672), (226, 16717), (258, 16810), (264, 16819), (279, 16864), (288, 16903), (295, 16927), (299, 16939), (308, 16972), (312, 16990), (316, 17011), (327, 17059), (329, 17065), (334, 17080), (337, 17089), (339, 17101), (341, 17110), (359, 17203), (380, 17290), (383, 17320), (384, 17323), (391, 17350), (393, 17362), (405, 17416), (410, 17437), (416, 17467), (427, 17503), (477, 17629), (491, 17683), (507, 17728), (525, 17776), (535, 17818), (538, 17827), (552, 17857), (582, 17929), (585, 17935), (606, 17956), (607, 17959), (610, 17971), (656, 18088), (658, 18097), (689, 18169), (690, 18172), (706, 18208), (718, 18259), (719, 18262), (721, 18271), (757, 18454), (776, 18520), (780, 18532), (800, 18574), (817, 18637), (836, 18694), (844, 18763), (851, 18799), (867, 18880), (892, 19015), (894, 19027),

Gene: Grub\_27 Start: 15971, Stop: 18997, Start Num: 38

Candidate Starts for Grub\_27:

(30, 15917), (Start: 38 @15971 has 82 MA's), (55, 16085), (68, 16151), (69, 16154), (73, 16163), (86, 16199), (96, 16250), (124, 16322), (Start: 143 @16394 has 5 MA's), (190, 16514), (193, 16517), (214, 16586), (226, 16631), (258, 16724), (264, 16733), (270, 16751), (279, 16778), (295, 16841), (299, 16853), (308, 16886), (312, 16904), (325, 16970), (327, 16973), (329, 16979), (334, 16994), (337, 17003), (339, 17015), (341, 17024), (359, 17117), (383, 17234), (384, 17237), (391, 17264), (393, 17276), (405, 17330), (410, 17351), (427, 17417), (436, 17444), (479, 17549), (491, 17597), (507, 17642), (525, 17690), (535, 17732), (538, 17741), (552, 17771), (553, 17774), (559, 17786), (582, 17843), (585, 17849), (606, 17870), (607, 17873), (658, 18011), (664, 18023), (689, 18083), (710, 18143), (718, 18173), (719, 18176), (721, 18185), (741, 18278), (757, 18368), (776, 18434), (780, 18446), (800, 18488), (817, 18551), (836, 18608), (844, 18677), (851, 18713), (867, 18794), (892, 18929),

Gene: Grum1\_27 Start: 15972, Stop: 18998, Start Num: 38

Candidate Starts for Grum1\_27:

(30, 15918), (Start: 38 @15972 has 82 MA's), (55, 16086), (68, 16152), (69, 16155), (73, 16164), (86, 16200), (96, 16251), (124, 16323), (Start: 143 @16395 has 5 MA's), (190, 16515), (193, 16518), (214, 16587), (226, 16632), (258, 16725), (264, 16734), (270, 16752), (279, 16779), (295, 16842), (299, 16854), (308, 16887), (312, 16905), (325, 16971), (327, 16974), (329, 16980), (334, 16995), (337, 17004), (339, 17016), (341, 17025), (359, 17118), (383, 17235), (384, 17238), (391, 17265), (393, 17277), (405, 17331), (410, 17352), (427, 17418), (440, 17457), (479, 17550), (491, 17598), (507, 17643), (525, 17691), (535, 17733), (538, 17742), (552, 17772), (553, 17775), (559, 17787), (582, 17844), (585, 17850), (606, 17871), (607, 17874), (658, 18012), (664, 18024), (689, 18084), (709, 18141), (741, 18279), (744, 18300), (749, 18324), (757, 18369), (762, 18387), (776, 18435), (780, 18447), (800, 18489), (817, 18552), (836, 18609), (844, 18678), (851, 18714), (867, 18795), (892, 18930),

Gene: Gruunaga\_29 Start: 16707, Stop: 18923, Start Num: 116

Candidate Starts for Gruunaga\_29:

(93, 16662), (Start: 116 @16707 has 41 MA's), (160, 16818), (223, 16974), (270, 17121), (274, 17133), (314, 17280), (315, 17283), (321, 17316), (343, 17406), (357, 17475), (376, 17550), (412, 17718), (590, 17976), (618, 18021), (680, 18129), (710, 18192), (721, 18234), (745, 18333), (749, 18354), (756, 18396), (791, 18447), (805, 18474), (839, 18555), (850, 18645),

Gene: GtownJaz\_27 Start: 15980, Stop: 19006, Start Num: 38

Candidate Starts for GtownJaz\_27:

(30, 15926), (Start: 38 @15980 has 82 MA's), (55, 16094), (68, 16160), (69, 16163), (73, 16172), (86, 16208), (96, 16259), (124, 16331), (Start: 143 @16403 has 5 MA's), (190, 16523), (193, 16526), (214, 16595), (226, 16640), (258, 16733), (264, 16742), (270, 16760), (279, 16787), (295, 16850), (299, 16862), (308, 16895), (312, 16913), (325, 16979), (327, 16982), (329, 16988), (334, 17003), (337, 17012), (339, 17024), (341, 17033), (355, 17111), (359, 17126), (383, 17243), (384, 17246), (391, 17273), (393, 17285), (405, 17339), (410, 17360), (427, 17426), (440, 17465), (479, 17558), (491,

17606), (507, 17651), (525, 17699), (535, 17741), (538, 17750), (552, 17780), (553, 17783), (559, 17795), (582, 17852), (585, 17858), (606, 17879), (607, 17882), (658, 18020), (664, 18032), (689, 18092), (709, 18149), (741, 18287), (744, 18308), (749, 18332), (757, 18377), (762, 18395), (776, 18443), (780, 18455), (800, 18497), (817, 18560), (836, 18617), (844, 18686), (851, 18722), (867, 18803), (892, 18938),

Gene: Gwendoluna\_26 Start: 17874, Stop: 20708, Start Num: 111

Candidate Starts for Gwendoluna\_26:

(Start: 111 @17874 has 200 MA's), (132, 17946), (257, 18189), (263, 18204), (278, 18249), (305, 18369), (310, 18387), (317, 18435), (326, 18480), (339, 18525), (340, 18528), (348, 18576), (386, 18759), (393, 18786), (413, 18870), (428, 18927), (435, 18945), (453, 18990), (469, 19026), (486, 19086), (503, 19134), (518, 19197), (519, 19200), (551, 19293), (562, 19317), (573, 19353), (583, 19380), (589, 19392), (597, 19410), (602, 19425), (622, 19488), (669, 19617), (684, 19662), (694, 19695), (700, 19707), (729, 19836), (747, 19932), (764, 20019), (765, 20022), (770, 20040), (825, 20244), (855, 20421), (875, 20532), (888, 20619), (895, 20658), (897, 20673),

Gene: Gyzlar\_26 Start: 17600, Stop: 20071, Start Num: 111

Candidate Starts for Gyzlar\_26:

(Start: 111 @17600 has 200 MA's), (125, 17639), (144, 17702), (Start: 155 @17732 has 22 MA's), (162, 17753), (176, 17774), (181, 17786), (194, 17804), (243, 17828), (262, 17894), (271, 17921), (315, 18092), (321, 18125), (339, 18191), (389, 18446), (393, 18467), (398, 18494), (410, 18533), (432, 18590), (451, 18620), (555, 18782), (564, 18803), (592, 18860), (644, 18980), (659, 19016), (671, 19046), (682, 19082), (707, 19148), (710, 19169), (721, 19211), (741, 19310), (773, 19451), (784, 19472), (842, 19703), (855, 19784), (875, 19895), (888, 19982), (895, 20021), (899, 20051),

Gene: HINdeR\_25 Start: 17367, Stop: 20738, Start Num: 17

Candidate Starts for HINdeR\_25:

(Start: 17 @17367 has 4 MA's), (36, 17529), (59, 17679), (77, 17754), (119, 17904), (131, 17955), (147, 18006), (205, 18141), (268, 18342), (279, 18375), (294, 18435), (295, 18438), (299, 18450), (304, 18477), (316, 18522), (321, 18546), (327, 18570), (341, 18621), (345, 18645), (383, 18831), (390, 18858), (393, 18873), (402, 18912), (405, 18927), (410, 18948), (419, 18990), (424, 19005), (426, 19011), (427, 19014), (456, 19098), (463, 19113), (477, 19140), (478, 19143), (487, 19176), (498, 19212), (507, 19239), (508, 19242), (511, 19251), (568, 19404), (573, 19416), (574, 19419), (581, 19437), (585, 19446), (588, 19452), (593, 19461), (599, 19479), (602, 19488), (607, 19512), (612, 19530), (633, 19593), (644, 19626), (656, 19659), (658, 19668), (659, 19671), (664, 19680), (665, 19683), (672, 19701), (681, 19734), (691, 19770), (705, 19800), (713, 19845), (724, 19890), (725, 19899), (726, 19902), (727, 19911), (729, 19920), (757, 20067), (762, 20085), (778, 20142), (783, 20160), (785, 20172), (790, 20184), (794, 20193), (800, 20214), (805, 20235), (809, 20247), (817, 20280), (821, 20292), (822, 20298), (830, 20322), (833, 20340), (834, 20343), (845, 20421), (855, 20484), (860, 20505), (865, 20526), (871, 20550), (882, 20616), (885, 20631), (886, 20637),

Gene: HamSlice\_24 Start: 15883, Stop: 18483, Start Num: 109

Candidate Starts for HamSlice\_24:

(Start: 109 @15883 has 113 MA's), (Start: 155 @16024 has 22 MA's), (Start: 163 @16042 has 10 MA's), (240, 16249), (252, 16288), (258, 16318), (283, 16402), (291, 16435), (299, 16462), (315, 16525), (329, 16588), (341, 16633), (348, 16675), (365, 16759), (457, 17026), (481, 17077), (499, 17122), (530, 17200), (545, 17239), (626, 17407), (636, 17428), (647, 17452), (673, 17518), (700, 17572), (710, 17620), (726, 17686), (757, 17851), (762, 17869), (807, 17995), (859, 18247), (860, 18250), (863, 18259), (875, 18319), (892, 18415), (899, 18463),

Gene: Hami1\_26 Start: 16746, Stop: 19217, Start Num: 111

Candidate Starts for Hami1\_26:

(Start: 111 @16746 has 200 MA's), (125, 16785), (144, 16848), (Start: 155 @16878 has 22 MA's), (162, 16899), (176, 16920), (181, 16932), (194, 16950), (262, 17040), (315, 17238), (321, 17271), (339, 17337), (389, 17592), (393, 17613), (398, 17640), (476, 17799), (500, 17835), (555, 17928), (564, 17949), (592, 18006), (644, 18126), (659, 18162), (671, 18192), (682, 18228), (707, 18294), (710, 18315), (741, 18456), (773, 18597), (784, 18618), (826, 18753), (855, 18930), (875, 19041), (888, 19128), (895, 19167), (897, 19182),

Gene: Hammer\_29 Start: 16722, Stop: 18938, Start Num: 116

Candidate Starts for Hammer\_29:

(93, 16677), (Start: 116 @16722 has 41 MA's), (160, 16833), (223, 16989), (270, 17136), (274, 17148), (314, 17295), (315, 17298), (321, 17331), (343, 17421), (357, 17490), (376, 17565), (412, 17733), (590, 17991), (618, 18036), (680, 18144), (710, 18207), (721, 18249), (745, 18348), (749, 18369), (756, 18411), (791, 18462), (805, 18489), (839, 18570), (850, 18660),

Gene: HanShotFirst\_24 Start: 16280, Stop: 18751, Start Num: 111

Candidate Starts for HanShotFirst\_24:

(Start: 111 @16280 has 200 MA's), (125, 16319), (144, 16382), (Start: 155 @16412 has 22 MA's), (162, 16433), (176, 16454), (181, 16466), (194, 16484), (243, 16508), (262, 16574), (282, 16646), (291, 16682), (315, 16772), (321, 16805), (339, 16871), (389, 17126), (393, 17147), (398, 17174), (403, 17189), (476, 17333), (500, 17369), (555, 17462), (564, 17483), (592, 17540), (644, 17660), (659, 17696), (671, 17726), (682, 17762), (707, 17828), (710, 17849), (741, 17990), (773, 18131), (784, 18152), (826, 18287), (855, 18464), (875, 18575), (888, 18662), (895, 18701), (897, 18716),

Gene: Hanray\_26 Start: 17594, Stop: 20503, Start Num: 52

Candidate Starts for Hanray\_26:

(Start: 52 @17594 has 33 MA's), (55, 17606), (68, 17666), (114, 17825), (130, 17888), (153, 17951), (165, 17993), (193, 18050), (207, 18089), (260, 18260), (264, 18266), (269, 18281), (294, 18371), (295, 18374), (299, 18386), (311, 18428), (321, 18482), (341, 18557), (344, 18578), (345, 18581), (348, 18599), (361, 18662), (379, 18728), (383, 18767), (390, 18794), (393, 18809), (399, 18839), (405, 18863), (410, 18884), (427, 18950), (440, 18989), (468, 19055), (479, 19082), (486, 19109), (507, 19175), (523, 19220), (546, 19295), (568, 19340), (575, 19361), (585, 19382), (586, 19385), (606, 19403), (607, 19406), (615, 19433), (624, 19460), (649, 19514), (718, 19706), (722, 19721), (727, 19751), (738, 19802), (756, 19889), (758, 19898), (771, 19949), (800, 20012), (805, 20033), (816, 20069), (830, 20105), (831, 20111), (844, 20189), (849, 20216), (860, 20276), (875, 20345), (879, 20375), (885, 20402), (894, 20441), (900, 20483),

Gene: Happiness\_25 Start: 15891, Stop: 18491, Start Num: 109

Candidate Starts for Happiness\_25:

(Start: 109 @15891 has 113 MA's), (Start: 155 @16032 has 22 MA's), (Start: 163 @16050 has 10 MA's), (240, 16257), (252, 16296), (258, 16326), (291, 16443), (299, 16470), (315, 16533), (329, 16596), (341, 16641), (348, 16683), (365, 16767), (457, 17034), (481, 17085), (499, 17130), (530, 17208), (542, 17241), (545, 17247), (608, 17361), (626, 17415), (647, 17460), (670, 17520), (685, 17538), (700, 17580), (710, 17628), (726, 17694), (757, 17859), (762, 17877), (807, 18003), (859, 18255), (860, 18258), (863, 18267), (874, 18324), (875, 18327), (883, 18372), (892, 18423), (899, 18471),

Gene: HarryHoudini\_28 Start: 17132, Stop: 19639, Start Num: 107

Candidate Starts for HarryHoudini\_28:

(Start: 107 @17132 has 89 MA's), (144, 17243), (167, 17300), (175, 17321), (188, 17345), (224, 17411), (256, 17486), (279, 17549), (286, 17582), (288, 17588), (334, 17768), (337, 17777), (341, 17798), (344, 17819), (345, 17822), (348, 17840), (359, 17891), (360, 17900), (383, 18008), (393, 18050), (394, 18059), (405, 18104), (410, 18125), (427, 18191), (434, 18209), (440, 18230), (442, 18239), (507, 18416), (512, 18431), (517, 18458), (538, 18515), (544, 18530), (546, 18536), (552,

18545), (555, 18551), (559, 18560), (568, 18581), (575, 18602), (607, 18647), (608, 18653), (620, 18686), (647, 18752), (658, 18785), (664, 18797), (689, 18857), (703, 18884), (718, 18947), (727, 18992), (737, 19040), (746, 19076), (786, 19172), (800, 19196), (846, 19340), (866, 19439), (902, 19625),

Gene: HarryOW\_25 Start: 16725, Stop: 19205, Start Num: 111

Candidate Starts for HarryOW\_25:

(Start: 111 @16725 has 200 MA's), (125, 16764), (144, 16827), (145, 16833), (Start: 155 @16857 has 22 MA's), (176, 16899), (285, 17106), (291, 17124), (315, 17214), (329, 17277), (337, 17301), (339, 17313), (348, 17364), (460, 17748), (526, 17850), (537, 17889), (560, 17916), (569, 17940), (671, 18168), (707, 18270), (710, 18291), (714, 18303), (721, 18333), (740, 18429), (741, 18432), (753, 18495), (818, 18714), (827, 18747), (875, 19029), (888, 19116), (895, 19155), (897, 19170),

Gene: HashRod\_28 Start: 16063, Stop: 19089, Start Num: 38

Candidate Starts for HashRod\_28:

(30, 16009), (Start: 38 @16063 has 82 MA's), (55, 16177), (68, 16243), (69, 16246), (73, 16255), (86, 16291), (96, 16342), (124, 16414), (Start: 143 @16486 has 5 MA's), (190, 16606), (193, 16609), (214, 16678), (226, 16723), (258, 16816), (264, 16825), (270, 16843), (279, 16870), (295, 16933), (299, 16945), (308, 16978), (312, 16996), (325, 17062), (327, 17065), (329, 17071), (334, 17086), (337, 17095), (339, 17107), (341, 17116), (355, 17194), (359, 17209), (383, 17326), (384, 17329), (391, 17356), (393, 17368), (405, 17422), (410, 17443), (427, 17509), (440, 17548), (479, 17641), (491, 17689), (507, 17734), (525, 17782), (535, 17824), (538, 17833), (552, 17863), (553, 17866), (559, 17878), (582, 17935), (585, 17941), (606, 17962), (607, 17965), (658, 18103), (664, 18115), (689, 18175), (709, 18232), (741, 18370), (744, 18391), (749, 18415), (757, 18460), (762, 18478), (776, 18526), (780, 18538), (800, 18580), (817, 18643), (836, 18700), (844, 18769), (851, 18805), (867, 18886), (892, 19021),

Gene: HaveUMetTed\_28 Start: 16050, Stop: 19076, Start Num: 38

Candidate Starts for HaveUMetTed\_28:

(30, 15996), (Start: 38 @16050 has 82 MA's), (55, 16164), (68, 16230), (69, 16233), (73, 16242), (86, 16278), (96, 16329), (124, 16401), (Start: 143 @16473 has 5 MA's), (190, 16593), (193, 16596), (214, 16665), (226, 16710), (258, 16803), (264, 16812), (279, 16857), (288, 16896), (295, 16920), (299, 16932), (308, 16965), (312, 16983), (316, 17004), (327, 17052), (329, 17058), (334, 17073), (337, 17082), (339, 17094), (341, 17103), (359, 17196), (380, 17283), (383, 17313), (384, 17316), (391, 17343), (393, 17355), (405, 17409), (410, 17430), (416, 17460), (427, 17496), (477, 17622), (491, 17676), (507, 17721), (525, 17769), (535, 17811), (538, 17820), (552, 17850), (582, 17922), (585, 17928), (606, 17949), (607, 17952), (610, 17964), (656, 18081), (658, 18090), (689, 18162), (690, 18165), (706, 18201), (718, 18252), (719, 18255), (721, 18264), (757, 18447), (776, 18513), (780, 18525), (800, 18567), (817, 18630), (836, 18687), (844, 18756), (851, 18792), (867, 18873), (892, 19008), (894, 19020),

Gene: Heathen\_25 Start: 15296, Stop: 18334, Start Num: 37

Candidate Starts for Heathen\_25:

(Start: 37 @15296 has 32 MA's), (66, 15470), (69, 15482), (81, 15515), (Start: 143 @15725 has 5 MA's), (193, 15848), (202, 15869), (258, 16055), (268, 16076), (279, 16109), (295, 16172), (299, 16184), (308, 16217), (312, 16235), (327, 16304), (329, 16310), (334, 16325), (337, 16334), (339, 16346), (341, 16355), (359, 16448), (383, 16565), (384, 16568), (391, 16595), (393, 16607), (405, 16661), (410, 16682), (414, 16703), (427, 16748), (440, 16787), (479, 16880), (491, 16928), (507, 16973), (512, 16988), (535, 17063), (538, 17072), (542, 17084), (552, 17102), (559, 17117), (582, 17174), (606, 17201), (607, 17204), (613, 17225), (664, 17354), (673, 17375), (689, 17414), (706, 17453), (710, 17474), (718, 17504), (719, 17507), (721, 17516), (726, 17540), (741, 17609), (744, 17630), (757, 17699), (762, 17717), (776, 17765), (780, 17777), (800, 17819), (803, 17831), (816, 17879), (851, 18050), (855, 18080), (863, 18110), (867, 18131), (892, 18266), (894, 18278), (899,



18314),

Gene: Heffalump\_28 Start: 18467, Stop: 21010, Start Num: 107

Candidate Starts for Heffalump\_28:

(Start: 107 @18467 has 89 MA's), (170, 18644), (172, 18647), (173, 18650), (247, 18818), (249, 18824), (256, 18845), (258, 18854), (268, 18875), (279, 18908), (286, 18941), (312, 19034), (322, 19082), (325, 19100), (337, 19133), (339, 19145), (340, 19148), (341, 19154), (344, 19175), (345, 19178), (383, 19364), (393, 19406), (394, 19415), (396, 19424), (408, 19472), (410, 19481), (427, 19547), (440, 19586), (479, 19679), (483, 19697), (507, 19772), (538, 19871), (544, 19886), (546, 19892), (552, 19901), (559, 19916), (568, 19937), (575, 19958), (586, 19982), (607, 20003), (608, 20009), (620, 20042), (623, 20054), (626, 20063), (664, 20153), (689, 20213), (703, 20240), (718, 20303), (727, 20348), (756, 20486), (804, 20576), (810, 20585), (845, 20696), (850, 20726), (866, 20810),

Gene: HelDan\_25 Start: 15548, Stop: 18586, Start Num: 37

Candidate Starts for HelDan\_25:

(Start: 37 @15548 has 32 MA's), (66, 15722), (69, 15734), (81, 15767), (Start: 143 @15977 has 5 MA's), (193, 16100), (202, 16121), (258, 16307), (268, 16328), (279, 16361), (295, 16424), (299, 16436), (308, 16469), (312, 16487), (327, 16556), (329, 16562), (334, 16577), (337, 16586), (339, 16598), (341, 16607), (359, 16700), (383, 16817), (384, 16820), (391, 16847), (393, 16859), (405, 16913), (410, 16934), (414, 16955), (427, 17000), (440, 17039), (479, 17132), (491, 17180), (507, 17225), (512, 17240), (535, 17315), (538, 17324), (542, 17336), (552, 17354), (559, 17369), (582, 17426), (606, 17453), (607, 17456), (613, 17477), (664, 17606), (673, 17627), (689, 17666), (706, 17705), (710, 17726), (718, 17756), (719, 17759), (721, 17768), (726, 17792), (741, 17861), (744, 17882), (757, 17951), (762, 17969), (776, 18017), (780, 18029), (800, 18071), (803, 18083), (816, 18131), (851, 18302), (855, 18332), (863, 18362), (867, 18383), (892, 18518), (894, 18530), (899, 18566),

Gene: Heliosoles\_27 Start: 16057, Stop: 19083, Start Num: 38

Candidate Starts for Heliosoles\_27:

(30, 16003), (Start: 38 @16057 has 82 MA's), (55, 16171), (68, 16237), (69, 16240), (73, 16249), (86, 16285), (96, 16336), (124, 16408), (Start: 143 @16480 has 5 MA's), (190, 16600), (193, 16603), (214, 16672), (226, 16717), (258, 16810), (264, 16819), (279, 16864), (288, 16903), (295, 16927), (299, 16939), (308, 16972), (312, 16990), (316, 17011), (327, 17059), (329, 17065), (334, 17080), (337, 17089), (339, 17101), (341, 17110), (359, 17203), (380, 17290), (383, 17320), (384, 17323), (391, 17350), (393, 17362), (405, 17416), (410, 17437), (416, 17467), (427, 17503), (477, 17629), (491, 17683), (507, 17728), (525, 17776), (535, 17818), (538, 17827), (552, 17857), (582, 17929), (585, 17935), (606, 17956), (607, 17959), (610, 17971), (656, 18088), (658, 18097), (689, 18169), (690, 18172), (706, 18208), (718, 18259), (719, 18262), (721, 18271), (757, 18454), (776, 18520), (780, 18532), (800, 18574), (817, 18637), (836, 18694), (844, 18763), (851, 18799), (867, 18880), (892, 19015), (894, 19027),

Gene: Helmet\_30 Start: 16733, Stop: 18937, Start Num: 116

Candidate Starts for Helmet\_30:

(60, 16574), (93, 16688), (Start: 116 @16733 has 41 MA's), (160, 16844), (223, 17000), (270, 17147), (274, 17159), (315, 17309), (321, 17342), (343, 17432), (357, 17501), (412, 17744), (499, 17882), (590, 18002), (680, 18155), (710, 18218), (721, 18260), (745, 18359), (749, 18380), (752, 18401), (756, 18422), (791, 18473), (800, 18485), (805, 18500), (839, 18581), (850, 18659),

Gene: Herbertwm\_23 Start: 15323, Stop: 17746, Start Num: 146

Candidate Starts for Herbertwm\_23:

(Start: 146 @15323 has 2 MA's), (Start: 155 @15341 has 22 MA's), (157, 15353), (168, 15374), (170, 15380), (206, 15452), (223, 15518), (227, 15530), (250, 15593), (263, 15641), (268, 15656), (279,

15689), (283, 15704), (289, 15731), (297, 15758), (307, 15794), (314, 15824), (315, 15827), (316, 15836), (337, 15914), (341, 15935), (342, 15947), (348, 15977), (372, 16073), (379, 16109), (385, 16160), (399, 16238), (426, 16343), (444, 16388), (502, 16526), (532, 16616), (596, 16766), (625, 16859), (643, 16901), (680, 16976), (710, 17039), (735, 17156), (745, 17180), (749, 17201), (752, 17222), (765, 17267), (791, 17294), (808, 17330), (861, 17528), (866, 17549), (894, 17690),

Gene: Hercules11\_27 Start: 15986, Stop: 19012, Start Num: 38

Candidate Starts for Hercules11\_27:

(30, 15932), (Start: 38 @15986 has 82 MA's), (55, 16100), (68, 16166), (69, 16169), (73, 16178), (86, 16214), (96, 16265), (124, 16337), (Start: 143 @16409 has 5 MA's), (190, 16529), (193, 16532), (214, 16601), (226, 16646), (258, 16739), (264, 16748), (270, 16766), (279, 16793), (295, 16856), (299, 16868), (308, 16901), (312, 16919), (325, 16985), (327, 16988), (329, 16994), (334, 17009), (337, 17018), (339, 17030), (341, 17039), (355, 17117), (359, 17132), (383, 17249), (384, 17252), (391, 17279), (393, 17291), (405, 17345), (410, 17366), (427, 17432), (440, 17471), (479, 17564), (491, 17612), (507, 17657), (525, 17705), (535, 17747), (538, 17756), (552, 17786), (553, 17789), (559, 17801), (582, 17858), (585, 17864), (606, 17885), (607, 17888), (658, 18026), (664, 18038), (689, 18098), (709, 18155), (741, 18293), (744, 18314), (749, 18338), (757, 18383), (762, 18401), (776, 18449), (780, 18461), (800, 18503), (817, 18566), (836, 18623), (844, 18692), (851, 18728), (867, 18809), (892, 18944),

Gene: Hermia\_26 Start: 17387, Stop: 19858, Start Num: 111

Candidate Starts for Hermia\_26:

(Start: 111 @17387 has 200 MA's), (125, 17426), (144, 17489), (Start: 155 @17519 has 22 MA's), (162, 17540), (176, 17561), (181, 17573), (194, 17591), (243, 17615), (262, 17681), (315, 17879), (321, 17912), (339, 17978), (389, 18233), (393, 18254), (398, 18281), (432, 18377), (451, 18407), (476, 18440), (500, 18476), (555, 18569), (564, 18590), (592, 18647), (644, 18767), (659, 18803), (671, 18833), (682, 18869), (707, 18935), (710, 18956), (721, 18998), (741, 19097), (773, 19238), (784, 19259), (826, 19394), (875, 19682), (888, 19769), (895, 19808),

Gene: HermioneGrange\_24 Start: 16299, Stop: 18779, Start Num: 111

Candidate Starts for HermioneGrange\_24:

(Start: 111 @16299 has 200 MA's), (125, 16338), (144, 16401), (Start: 155 @16431 has 22 MA's), (176, 16473), (285, 16680), (291, 16698), (315, 16788), (329, 16851), (337, 16875), (339, 16887), (348, 16938), (460, 17322), (526, 17424), (537, 17463), (560, 17490), (569, 17514), (630, 17643), (671, 17742), (707, 17844), (710, 17865), (714, 17877), (721, 17907), (741, 18006), (753, 18069), (777, 18159), (818, 18288), (827, 18321), (855, 18492), (875, 18603), (885, 18669), (888, 18690), (895, 18729), (899, 18759),

Gene: Hexamo\_29 Start: 16689, Stop: 18905, Start Num: 116

Candidate Starts for Hexamo\_29:

(93, 16644), (Start: 116 @16689 has 41 MA's), (160, 16800), (223, 16956), (270, 17103), (274, 17115), (314, 17262), (315, 17265), (321, 17298), (343, 17388), (357, 17457), (376, 17532), (412, 17700), (590, 17958), (618, 18003), (680, 18111), (710, 18174), (721, 18216), (745, 18315), (749, 18336), (756, 18378), (791, 18429), (805, 18456), (839, 18537), (850, 18627),

Gene: Holecx\_26 Start: 17594, Stop: 20503, Start Num: 52

Candidate Starts for Holecx\_26:

(Start: 52 @17594 has 33 MA's), (55, 17606), (68, 17666), (114, 17825), (130, 17888), (153, 17951), (165, 17993), (193, 18050), (207, 18089), (260, 18260), (264, 18266), (269, 18281), (294, 18371), (295, 18374), (299, 18386), (311, 18428), (321, 18482), (341, 18557), (344, 18578), (345, 18581), (348, 18599), (361, 18662), (379, 18728), (383, 18767), (390, 18794), (393, 18809), (399, 18839), (405, 18863), (408, 18875), (410, 18884), (427, 18950), (440, 18989), (468, 19055), (479, 19082), (486, 19109), (507, 19175), (523, 19220), (546, 19295), (568, 19340), (575, 19361), (585, 19382),

(586, 19385), (606, 19403), (607, 19406), (615, 19433), (624, 19460), (649, 19514), (718, 19706), (722, 19721), (727, 19751), (738, 19802), (756, 19889), (758, 19898), (771, 19949), (800, 20012), (805, 20033), (816, 20069), (830, 20105), (831, 20111), (844, 20189), (849, 20216), (860, 20276), (875, 20345), (879, 20375), (885, 20402), (894, 20441), (900, 20483),

Gene: Holli\_25 Start: 15675, Stop: 18275, Start Num: 109

Candidate Starts for Holli\_25:

(Start: 109 @15675 has 113 MA's), (Start: 155 @15816 has 22 MA's), (Start: 163 @15834 has 10 MA's), (240, 16041), (252, 16080), (258, 16110), (291, 16227), (299, 16254), (315, 16317), (329, 16380), (341, 16425), (348, 16467), (365, 16551), (457, 16818), (481, 16869), (499, 16914), (530, 16992), (545, 17031), (626, 17199), (636, 17220), (647, 17244), (673, 17310), (700, 17364), (710, 17412), (726, 17478), (757, 17643), (762, 17661), (807, 17787), (859, 18039), (860, 18042), (863, 18051), (875, 18111), (892, 18207), (899, 18255),

Gene: Homines\_24 Start: 16444, Stop: 19104, Start Num: 111

Candidate Starts for Homines\_24:

(Start: 111 @16444 has 200 MA's), (125, 16483), (144, 16546), (145, 16552), (Start: 155 @16576 has 22 MA's), (176, 16618), (315, 16927), (329, 16990), (341, 17035), (346, 17059), (361, 17134), (364, 17146), (451, 17467), (565, 17797), (584, 17848), (598, 17875), (671, 18079), (708, 18193), (710, 18202), (715, 18223), (721, 18244), (741, 18343), (750, 18385), (751, 18388), (788, 18517), (815, 18601), (827, 18646), (875, 18928), (888, 19015), (895, 19054), (899, 19084),

Gene: Hookmount\_26 Start: 16044, Stop: 19082, Start Num: 37

Candidate Starts for Hookmount\_26:

(Start: 37 @16044 has 32 MA's), (66, 16218), (69, 16230), (81, 16263), (Start: 143 @16470 has 5 MA's), (Start: 152 @16491 has 5 MA's), (190, 16590), (193, 16593), (258, 16803), (268, 16824), (279, 16857), (295, 16920), (299, 16932), (308, 16965), (312, 16983), (316, 17004), (327, 17052), (329, 17058), (334, 17073), (337, 17082), (339, 17094), (341, 17103), (359, 17196), (383, 17313), (384, 17316), (391, 17343), (393, 17355), (405, 17409), (410, 17430), (427, 17496), (440, 17535), (491, 17676), (507, 17721), (535, 17811), (538, 17820), (552, 17850), (575, 17907), (582, 17922), (606, 17949), (607, 17952), (612, 17970), (656, 18081), (689, 18162), (709, 18219), (720, 18261), (741, 18357), (744, 18378), (749, 18402), (757, 18447), (762, 18465), (776, 18513), (780, 18525), (800, 18567), (803, 18579), (816, 18627), (851, 18798), (863, 18858), (865, 18870), (872, 18897), (875, 18918), (892, 19014), (899, 19062),

Gene: Hoot\_29 Start: 16714, Stop: 18918, Start Num: 116

Candidate Starts for Hoot\_29:

(60, 16555), (93, 16669), (Start: 116 @16714 has 41 MA's), (160, 16825), (166, 16831), (212, 16939), (223, 16981), (246, 17047), (274, 17140), (283, 17167), (315, 17290), (321, 17323), (343, 17413), (357, 17482), (412, 17725), (499, 17863), (590, 17983), (680, 18136), (710, 18199), (721, 18241), (745, 18340), (749, 18361), (752, 18382), (756, 18403), (791, 18454), (800, 18466), (805, 18481), (839, 18562), (850, 18640),

Gene: Hope4ever\_24 Start: 16765, Stop: 19242, Start Num: 112

Candidate Starts for Hope4ever\_24:

(Start: 112 @16765 has 30 MA's), (Start: 117 @16780 has 5 MA's), (Start: 155 @16894 has 22 MA's), (176, 16936), (285, 17143), (291, 17161), (315, 17251), (329, 17314), (337, 17338), (339, 17350), (348, 17401), (378, 17527), (460, 17785), (526, 17887), (537, 17926), (555, 17941), (560, 17953), (569, 17977), (630, 18106), (671, 18205), (707, 18307), (710, 18328), (721, 18370), (741, 18469), (753, 18532), (818, 18751), (827, 18784), (875, 19066), (885, 19132), (888, 19153), (895, 19192), (897, 19207),

Gene: HortumSL17\_27 Start: 17590, Stop: 20499, Start Num: 52

Candidate Starts for HortumSL17\_27:

(Start: 52 @17590 has 33 MA's), (55, 17602), (68, 17662), (114, 17821), (130, 17884), (153, 17947), (165, 17989), (193, 18046), (260, 18256), (264, 18262), (269, 18277), (294, 18367), (295, 18370), (299, 18382), (311, 18424), (321, 18478), (341, 18553), (344, 18574), (345, 18577), (348, 18595), (361, 18658), (379, 18724), (383, 18763), (390, 18790), (393, 18805), (399, 18835), (405, 18859), (408, 18871), (410, 18880), (427, 18946), (440, 18985), (468, 19051), (479, 19078), (486, 19105), (507, 19171), (523, 19216), (546, 19291), (568, 19336), (575, 19357), (585, 19378), (586, 19381), (606, 19399), (607, 19402), (615, 19429), (649, 19510), (664, 19552), (718, 19702), (722, 19717), (727, 19747), (738, 19798), (756, 19885), (758, 19894), (771, 19945), (800, 20008), (805, 20029), (816, 20065), (830, 20101), (831, 20107), (844, 20185), (849, 20212), (860, 20272), (875, 20341), (879, 20371), (885, 20398), (894, 20437), (900, 20479),

Gene: Houdini22\_25 Start: 16030, Stop: 18489, Start Num: 155

Candidate Starts for Houdini22\_25:

(Start: 109 @15889 has 113 MA's), (Start: 155 @16030 has 22 MA's), (Start: 163 @16048 has 10 MA's), (240, 16255), (252, 16294), (258, 16324), (291, 16441), (299, 16468), (315, 16531), (329, 16594), (341, 16639), (348, 16681), (365, 16765), (457, 17032), (481, 17083), (499, 17128), (530, 17206), (542, 17239), (545, 17245), (557, 17266), (626, 17413), (636, 17434), (647, 17458), (673, 17524), (700, 17578), (710, 17626), (726, 17692), (757, 17857), (762, 17875), (807, 18001), (859, 18253), (860, 18256), (863, 18265), (875, 18325), (892, 18421), (899, 18469),

Gene: HuhtaEnerson15\_22 Start: 15244, Stop: 18582, Start Num: 1

Candidate Starts for HuhtaEnerson15\_22:

(Start: 1 @15244 has 30 MA's), (Start: 34 @15682 has 1 MA's), (120, 15994), (Start: 141 @16072 has 1 MA's), (154, 16102), (173, 16159), (211, 16243), (227, 16306), (229, 16312), (269, 16432), (294, 16522), (295, 16525), (315, 16600), (324, 16645), (329, 16663), (333, 16675), (341, 16708), (344, 16729), (384, 16921), (417, 17059), (429, 17107), (516, 17311), (522, 17323), (532, 17347), (563, 17410), (639, 17602), (652, 17632), (660, 17656), (664, 17668), (683, 17731), (710, 17854), (715, 17875), (721, 17896), (736, 17974), (745, 17995), (752, 18037), (756, 18058), (808, 18145), (829, 18175), (842, 18238), (845, 18256), (859, 18337), (863, 18349), (865, 18361), (867, 18370), (878, 18424), (891, 18508), (892, 18517), (896, 18547),

Gene: Hutc2\_26 Start: 17160, Stop: 19706, Start Num: 112

Candidate Starts for Hutc2\_26:

(Start: 112 @17160 has 30 MA's), (Start: 118 @17178 has 2 MA's), (187, 17352), (197, 17361), (223, 17436), (252, 17490), (267, 17544), (271, 17559), (272, 17562), (279, 17580), (295, 17643), (299, 17655), (315, 17718), (329, 17781), (334, 17796), (337, 17805), (341, 17826), (345, 17850), (348, 17865), (367, 17952), (369, 17955), (374, 17970), (378, 17991), (380, 18003), (389, 18069), (404, 18141), (412, 18165), (437, 18246), (441, 18255), (445, 18267), (467, 18309), (492, 18366), (513, 18420), (549, 18528), (567, 18567), (618, 18708), (656, 18804), (661, 18825), (675, 18858), (686, 18891), (687, 18894), (709, 18978), (721, 19023), (722, 19026), (746, 19140), (752, 19173), (791, 19245), (808, 19281), (839, 19353), (850, 19431), (860, 19485), (866, 19509), (889, 19620),

Gene: Huxley\_25 Start: 16090, Stop: 18549, Start Num: 155

Candidate Starts for Huxley\_25:

(Start: 109 @15949 has 113 MA's), (Start: 155 @16090 has 22 MA's), (Start: 163 @16108 has 10 MA's), (240, 16315), (252, 16354), (258, 16384), (291, 16501), (299, 16528), (315, 16591), (329, 16654), (341, 16699), (348, 16741), (365, 16825), (457, 17092), (481, 17143), (499, 17188), (530, 17266), (542, 17299), (545, 17305), (557, 17326), (626, 17473), (636, 17494), (647, 17518), (673, 17584), (700, 17638), (710, 17686), (726, 17752), (757, 17917), (762, 17935), (807, 18061), (859, 18313), (860, 18316), (863, 18325), (875, 18385), (892, 18481), (899, 18529),

Gene: ICleared\_25 Start: 16024, Stop: 18483, Start Num: 155

Candidate Starts for ICleared\_25:

(Start: 109 @15883 has 113 MA's), (Start: 155 @16024 has 22 MA's), (Start: 163 @16042 has 10 MA's), (240, 16249), (252, 16288), (258, 16318), (291, 16435), (299, 16462), (315, 16525), (329, 16588), (341, 16633), (348, 16675), (365, 16759), (457, 17026), (481, 17077), (499, 17122), (530, 17200), (542, 17233), (545, 17239), (626, 17407), (636, 17428), (647, 17452), (673, 17518), (700, 17572), (710, 17620), (726, 17686), (757, 17851), (762, 17869), (807, 17995), (859, 18247), (860, 18250), (863, 18259), (875, 18319), (892, 18415), (899, 18463),

Gene: ILeeKay\_26 Start: 16526, Stop: 19006, Start Num: 111

Candidate Starts for ILeeKay\_26:

(Start: 111 @16526 has 200 MA's), (125, 16565), (144, 16628), (Start: 155 @16658 has 22 MA's), (176, 16700), (285, 16907), (291, 16925), (315, 17015), (329, 17078), (337, 17102), (339, 17114), (348, 17165), (460, 17549), (526, 17651), (537, 17690), (560, 17717), (569, 17741), (671, 17969), (707, 18071), (710, 18092), (714, 18104), (721, 18134), (741, 18233), (753, 18296), (818, 18515), (827, 18548), (875, 18830), (888, 18917), (895, 18956), (897, 18971),

Gene: Iceman\_26 Start: 16174, Stop: 18774, Start Num: 109

Candidate Starts for Iceman\_26:

(Start: 109 @16174 has 113 MA's), (Start: 155 @16315 has 22 MA's), (Start: 163 @16333 has 10 MA's), (240, 16540), (252, 16579), (258, 16609), (291, 16726), (299, 16753), (315, 16816), (329, 16879), (341, 16924), (348, 16966), (365, 17050), (457, 17317), (481, 17368), (499, 17413), (530, 17491), (542, 17524), (545, 17530), (591, 17626), (606, 17635), (626, 17698), (636, 17719), (649, 17746), (659, 17779), (670, 17803), (673, 17809), (700, 17863), (710, 17911), (726, 17977), (757, 18142), (762, 18160), (807, 18286), (859, 18538), (860, 18541), (863, 18550), (875, 18610), (892, 18706), (899, 18754),

Gene: Ichabod\_25 Start: 16373, Stop: 19030, Start Num: 111

Candidate Starts for Ichabod\_25:

(Start: 111 @16373 has 200 MA's), (Start: 117 @16388 has 5 MA's), (144, 16472), (145, 16478), (Start: 155 @16502 has 22 MA's), (176, 16544), (315, 16853), (329, 16916), (341, 16961), (346, 16985), (351, 17006), (361, 17060), (364, 17072), (451, 17393), (565, 17723), (584, 17774), (598, 17801), (671, 18005), (708, 18119), (710, 18128), (715, 18149), (721, 18170), (741, 18269), (750, 18311), (751, 18314), (788, 18443), (815, 18527), (827, 18572), (875, 18854), (888, 18941), (895, 18980), (899, 19010),

Gene: Idleandcovert\_25 Start: 15495, Stop: 18530, Start Num: 37

Candidate Starts for Idleandcovert\_25:

(Start: 37 @15495 has 32 MA's), (66, 15669), (69, 15681), (81, 15714), (Start: 143 @15924 has 5 MA's), (190, 16044), (193, 16047), (258, 16251), (268, 16272), (277, 16302), (279, 16305), (295, 16368), (299, 16380), (308, 16413), (312, 16431), (327, 16500), (329, 16506), (334, 16521), (337, 16530), (339, 16542), (341, 16551), (359, 16644), (383, 16761), (384, 16764), (390, 16788), (391, 16791), (393, 16803), (405, 16857), (410, 16878), (414, 16899), (427, 16944), (436, 16971), (440, 16983), (491, 17124), (507, 17169), (512, 17184), (535, 17259), (538, 17268), (552, 17298), (559, 17313), (560, 17316), (568, 17334), (575, 17355), (578, 17358), (606, 17397), (607, 17400), (637, 17484), (664, 17550), (673, 17571), (689, 17610), (706, 17649), (710, 17670), (718, 17700), (719, 17703), (721, 17712), (726, 17736), (741, 17805), (744, 17826), (757, 17895), (762, 17913), (776, 17961), (780, 17973), (800, 18015), (803, 18027), (816, 18075), (851, 18246), (855, 18276), (863, 18306), (867, 18327), (892, 18462), (899, 18510),

Gene: IgnatiusPatJac\_23 Start: 16361, Stop: 18832, Start Num: 111

Candidate Starts for IgnatiusPatJac\_23:

(Start: 111 @16361 has 200 MA's), (125, 16400), (144, 16463), (Start: 155 @16493 has 22 MA's), (162, 16514), (176, 16535), (181, 16547), (194, 16565), (262, 16655), (315, 16853), (321, 16886),

(339, 16952), (389, 17207), (393, 17228), (398, 17255), (476, 17414), (500, 17450), (555, 17543), (564, 17564), (592, 17621), (644, 17741), (659, 17777), (671, 17807), (682, 17843), (707, 17909), (710, 17930), (741, 18071), (773, 18212), (784, 18233), (826, 18368), (855, 18545), (875, 18656), (885, 18722), (888, 18743), (895, 18782), (899, 18812),

Gene: Indra\_29 Start: 16734, Stop: 18938, Start Num: 116

Candidate Starts for Indra\_29:

(93, 16689), (Start: 116 @16734 has 41 MA's), (160, 16845), (223, 17001), (270, 17148), (274, 17160), (314, 17307), (315, 17310), (321, 17343), (343, 17433), (357, 17502), (376, 17577), (412, 17745), (590, 18003), (618, 18048), (680, 18156), (710, 18219), (721, 18261), (745, 18360), (749, 18381), (752, 18402), (756, 18423), (791, 18474), (800, 18486), (805, 18501), (839, 18582), (850, 18660),

Gene: Insomnia\_26 Start: 17215, Stop: 19761, Start Num: 112

Candidate Starts for Insomnia\_26:

(Start: 112 @17215 has 30 MA's), (Start: 118 @17233 has 2 MA's), (187, 17407), (197, 17416), (223, 17491), (252, 17545), (267, 17599), (271, 17614), (272, 17617), (279, 17635), (295, 17698), (299, 17710), (315, 17773), (329, 17836), (334, 17851), (337, 17860), (341, 17881), (345, 17905), (348, 17920), (367, 18007), (369, 18010), (374, 18025), (378, 18046), (380, 18058), (389, 18124), (404, 18196), (412, 18220), (437, 18301), (441, 18310), (445, 18322), (467, 18364), (492, 18421), (513, 18475), (549, 18583), (567, 18622), (618, 18763), (656, 18859), (661, 18880), (675, 18913), (686, 18946), (687, 18949), (709, 19033), (721, 19078), (722, 19081), (746, 19195), (752, 19228), (791, 19300), (808, 19336), (839, 19408), (850, 19486), (860, 19540), (866, 19564), (889, 19675),

Gene: Inyanga\_23 Start: 16138, Stop: 18609, Start Num: 111

Candidate Starts for Inyanga\_23:

(Start: 111 @16138 has 200 MA's), (125, 16177), (144, 16240), (Start: 155 @16270 has 22 MA's), (162, 16291), (176, 16312), (181, 16324), (194, 16342), (262, 16432), (315, 16630), (321, 16663), (339, 16729), (389, 16984), (393, 17005), (398, 17032), (476, 17191), (500, 17227), (555, 17320), (564, 17341), (592, 17398), (644, 17518), (659, 17554), (671, 17584), (682, 17620), (707, 17686), (710, 17707), (721, 17749), (741, 17848), (773, 17989), (784, 18010), (826, 18145), (855, 18322), (875, 18433), (885, 18499), (888, 18520), (895, 18559), (897, 18574),

Gene: Iracema64\_26 Start: 16196, Stop: 18796, Start Num: 109

Candidate Starts for Iracema64\_26:

(Start: 109 @16196 has 113 MA's), (Start: 155 @16337 has 22 MA's), (Start: 163 @16355 has 10 MA's), (222, 16511), (240, 16562), (258, 16631), (291, 16748), (299, 16775), (315, 16838), (341, 16946), (348, 16988), (365, 17072), (457, 17339), (481, 17390), (499, 17435), (530, 17513), (542, 17546), (545, 17552), (608, 17666), (626, 17720), (647, 17765), (670, 17825), (700, 17885), (726, 17999), (757, 18164), (762, 18182), (807, 18308), (859, 18560), (860, 18563), (863, 18572), (875, 18632), (892, 18728), (899, 18776),

Gene: IronMan\_28 Start: 18329, Stop: 20707, Start Num: 152

Candidate Starts for IronMan\_28:

(Start: 143 @18311 has 5 MA's), (Start: 152 @18329 has 5 MA's), (161, 18362), (164, 18368), (207, 18464), (220, 18506), (244, 18569), (246, 18572), (257, 18614), (274, 18662), (276, 18668), (278, 18677), (285, 18716), (296, 18752), (299, 18761), (315, 18824), (321, 18857), (334, 18902), (339, 18923), (341, 18932), (361, 19037), (392, 19178), (470, 19346), (471, 19352), (481, 19373), (482, 19376), (500, 19424), (505, 19430), (573, 19610), (664, 19820), (677, 19856), (693, 19907), (709, 19967), (718, 20000), (721, 20012), (727, 20045), (728, 20048), (753, 20186), (756, 20198), (786, 20240), (804, 20288), (806, 20294), (866, 20504),

Gene: Isca\_25 Start: 15423, Stop: 18467, Start Num: 37

Candidate Starts for Isca\_25:

(Start: 37 @15423 has 32 MA's), (66, 15597), (69, 15609), (Start: 143 @15852 has 5 MA's), (190, 15972), (193, 15975), (261, 16197), (279, 16242), (299, 16317), (308, 16350), (312, 16368), (315, 16380), (332, 16446), (339, 16479), (341, 16488), (348, 16530), (359, 16581), (383, 16698), (393, 16740), (405, 16794), (410, 16815), (424, 16872), (427, 16881), (477, 17007), (479, 17013), (486, 17040), (507, 17106), (512, 17121), (523, 17151), (525, 17154), (538, 17205), (542, 17217), (553, 17238), (559, 17250), (568, 17271), (582, 17307), (606, 17334), (617, 17367), (621, 17379), (637, 17421), (664, 17487), (689, 17547), (706, 17586), (718, 17637), (719, 17640), (721, 17649), (726, 17673), (741, 17742), (744, 17763), (757, 17832), (762, 17850), (776, 17898), (780, 17910), (800, 17952), (803, 17964), (816, 18012), (851, 18183), (863, 18243), (867, 18264), (892, 18399), (894, 18411), (899, 18447),

Gene: Isiphiwo\_29 Start: 16726, Stop: 18930, Start Num: 116

Candidate Starts for Isiphiwo\_29:

(Start: 116 @16726 has 41 MA's), (160, 16837), (166, 16843), (212, 16951), (223, 16993), (246, 17059), (274, 17152), (283, 17179), (315, 17302), (321, 17335), (343, 17425), (357, 17494), (412, 17737), (499, 17875), (590, 17995), (680, 18148), (710, 18211), (721, 18253), (745, 18352), (749, 18373), (752, 18394), (756, 18415), (791, 18466), (800, 18478), (805, 18493), (839, 18574), (850, 18652),

Gene: Iwokeuplikedis\_27 Start: 16605, Stop: 18896, Start Num: 146

Candidate Starts for Iwokeuplikedis\_27:

(126, 16563), (Start: 146 @16605 has 2 MA's), (Start: 155 @16623 has 22 MA's), (157, 16635), (168, 16656), (170, 16662), (212, 16758), (223, 16800), (244, 16863), (258, 16911), (266, 16932), (274, 16959), (299, 17046), (306, 17073), (315, 17109), (321, 17142), (328, 17166), (334, 17187), (337, 17196), (341, 17217), (345, 17241), (348, 17259), (391, 17457), (409, 17529), (410, 17535), (412, 17544), (422, 17592), (425, 17601), (468, 17667), (495, 17724), (594, 17913), (599, 17925), (609, 17958), (625, 18003), (646, 18054), (678, 18114), (680, 18120), (710, 18183), (745, 18324), (749, 18345), (752, 18366), (753, 18375), (756, 18387), (765, 18411), (808, 18474), (866, 18693),

Gene: JC27\_26 Start: 17262, Stop: 19742, Start Num: 111

Candidate Starts for JC27\_26:

(Start: 111 @17262 has 200 MA's), (125, 17301), (137, 17346), (144, 17364), (145, 17370), (Start: 155 @17394 has 22 MA's), (176, 17436), (285, 17643), (291, 17661), (315, 17751), (329, 17814), (339, 17850), (348, 17901), (460, 18285), (526, 18387), (537, 18426), (555, 18441), (560, 18453), (569, 18477), (671, 18705), (707, 18807), (710, 18828), (721, 18870), (741, 18969), (753, 19032), (818, 19251), (827, 19284), (875, 19566), (885, 19632), (888, 19653), (895, 19692), (897, 19707),

Gene: JF2\_25 Start: 15174, Stop: 18218, Start Num: 37

Candidate Starts for JF2\_25:

(Start: 37 @15174 has 32 MA's), (66, 15348), (69, 15360), (Start: 143 @15603 has 5 MA's), (190, 15723), (193, 15726), (261, 15948), (279, 15993), (299, 16068), (308, 16101), (312, 16119), (315, 16131), (332, 16197), (339, 16230), (341, 16239), (348, 16281), (359, 16332), (383, 16449), (393, 16491), (405, 16545), (410, 16566), (424, 16623), (427, 16632), (477, 16758), (479, 16764), (486, 16791), (507, 16857), (512, 16872), (523, 16902), (525, 16905), (538, 16956), (542, 16968), (553, 16989), (559, 17001), (568, 17022), (582, 17058), (606, 17085), (617, 17118), (621, 17130), (637, 17172), (664, 17238), (689, 17298), (706, 17337), (718, 17388), (719, 17391), (721, 17400), (726, 17424), (741, 17493), (744, 17514), (757, 17583), (762, 17601), (776, 17649), (780, 17661), (800, 17703), (803, 17715), (816, 17763), (851, 17934), (863, 17994), (867, 18015), (892, 18150), (894, 18162), (899, 18198),

Gene: JF4\_25 Start: 15174, Stop: 18218, Start Num: 37

Candidate Starts for JF4\_25:

(Start: 37 @15174 has 32 MA's), (66, 15348), (69, 15360), (Start: 143 @15603 has 5 MA's), (190, 15723), (193, 15726), (261, 15948), (279, 15993), (299, 16068), (308, 16101), (312, 16119), (315, 16131), (332, 16197), (339, 16230), (341, 16239), (348, 16281), (359, 16332), (383, 16449), (393, 16491), (405, 16545), (410, 16566), (424, 16623), (427, 16632), (477, 16758), (479, 16764), (486, 16791), (507, 16857), (512, 16872), (523, 16902), (525, 16905), (538, 16956), (542, 16968), (553, 16989), (559, 17001), (568, 17022), (582, 17058), (606, 17085), (617, 17118), (621, 17130), (637, 17172), (664, 17238), (689, 17298), (706, 17337), (718, 17388), (719, 17391), (721, 17400), (726, 17424), (741, 17493), (744, 17514), (757, 17583), (762, 17601), (776, 17649), (780, 17661), (800, 17703), (803, 17715), (816, 17763), (851, 17934), (863, 17994), (867, 18015), (892, 18150), (894, 18162), (899, 18198),

Gene: JHC117\_27 Start: 15977, Stop: 19003, Start Num: 38

Candidate Starts for JHC117\_27:

(30, 15923), (Start: 38 @15977 has 82 MA's), (55, 16091), (68, 16157), (69, 16160), (73, 16169), (86, 16205), (96, 16256), (124, 16328), (Start: 143 @16400 has 5 MA's), (190, 16520), (193, 16523), (214, 16592), (226, 16637), (258, 16730), (264, 16739), (270, 16757), (279, 16784), (295, 16847), (299, 16859), (308, 16892), (312, 16910), (325, 16976), (327, 16979), (329, 16985), (334, 17000), (337, 17009), (339, 17021), (341, 17030), (355, 17108), (359, 17123), (383, 17240), (384, 17243), (391, 17270), (393, 17282), (405, 17336), (410, 17357), (427, 17423), (440, 17462), (479, 17555), (491, 17603), (507, 17648), (525, 17696), (535, 17738), (538, 17747), (552, 17777), (553, 17780), (559, 17792), (582, 17849), (585, 17855), (606, 17876), (607, 17879), (658, 18017), (664, 18029), (689, 18089), (709, 18146), (741, 18284), (744, 18305), (749, 18329), (757, 18374), (762, 18392), (776, 18440), (780, 18452), (800, 18494), (817, 18557), (836, 18614), (844, 18683), (851, 18719), (867, 18800), (892, 18935),

Gene: JSwag\_28 Start: 15741, Stop: 18095, Start Num: 117

Candidate Starts for JSwag\_28:

(Start: 115 @15732 has 1 MA's), (Start: 117 @15741 has 5 MA's), (Start: 179 @15909 has 15 MA's), (269, 16149), (270, 16155), (290, 16224), (306, 16281), (341, 16425), (348, 16467), (358, 16515), (359, 16518), (382, 16629), (385, 16647), (412, 16752), (425, 16800), (484, 16905), (513, 16965), (536, 17019), (555, 17055), (569, 17079), (577, 17088), (608, 17151), (616, 17172), (622, 17187), (629, 17211), (635, 17223), (659, 17277), (667, 17298), (680, 17328), (732, 17499), (734, 17520), (756, 17604), (867, 17907), (892, 18030), (894, 18042),

Gene: Jaan\_29 Start: 18718, Stop: 21096, Start Num: 152

Candidate Starts for Jaan\_29:

(Start: 143 @18700 has 5 MA's), (Start: 152 @18718 has 5 MA's), (161, 18751), (164, 18757), (207, 18853), (220, 18895), (274, 19051), (278, 19066), (284, 19096), (285, 19105), (296, 19141), (299, 19150), (315, 19213), (321, 19246), (334, 19291), (339, 19312), (341, 19321), (361, 19426), (392, 19567), (470, 19735), (471, 19741), (500, 19813), (564, 19981), (573, 19999), (644, 20155), (664, 20209), (677, 20245), (693, 20296), (709, 20356), (718, 20389), (721, 20401), (727, 20434), (728, 20437), (753, 20575), (756, 20587), (786, 20629), (801, 20665), (804, 20677), (806, 20683), (866, 20893),

Gene: Jabiru\_22 Start: 15139, Stop: 17952, Start Num: 2

Candidate Starts for Jabiru\_22:

(Start: 2 @15139 has 8 MA's), (10, 15328), (82, 15676), (120, 15811), (121, 15817), (208, 15910), (229, 15961), (246, 15997), (273, 16087), (289, 16153), (295, 16174), (315, 16249), (321, 16282), (337, 16336), (342, 16369), (343, 16372), (345, 16381), (365, 16480), (376, 16513), (397, 16642), (450, 16807), (466, 16840), (501, 16873), (554, 16954), (561, 16966), (576, 16999), (630, 17077), (634, 17086), (677, 17152), (683, 17161), (710, 17224), (721, 17266), (734, 17338), (745, 17365), (748, 17380), (752, 17407), (756, 17428), (808, 17515), (829, 17545), (842, 17608), (859, 17707), (863, 17719), (865, 17731), (867, 17740), (892, 17887),



Gene: Jabith\_26 Start: 17215, Stop: 19761, Start Num: 112

Candidate Starts for Jabith\_26:

(Start: 112 @17215 has 30 MA's), (Start: 118 @17233 has 2 MA's), (187, 17407), (197, 17416), (223, 17491), (252, 17545), (267, 17599), (271, 17614), (272, 17617), (279, 17635), (295, 17698), (299, 17710), (315, 17773), (329, 17836), (334, 17851), (337, 17860), (341, 17881), (345, 17905), (348, 17920), (367, 18007), (369, 18010), (374, 18025), (378, 18046), (380, 18058), (389, 18124), (404, 18196), (412, 18220), (437, 18301), (441, 18310), (445, 18322), (467, 18364), (492, 18421), (513, 18475), (549, 18583), (567, 18622), (618, 18763), (656, 18859), (661, 18880), (675, 18913), (686, 18946), (687, 18949), (709, 19033), (721, 19078), (722, 19081), (746, 19195), (752, 19228), (791, 19300), (808, 19336), (839, 19408), (850, 19486), (860, 19540), (866, 19564), (889, 19675),

Gene: JackSparrow\_25 Start: 16702, Stop: 19182, Start Num: 111

Candidate Starts for JackSparrow\_25:

(Start: 111 @16702 has 200 MA's), (125, 16741), (144, 16804), (Start: 155 @16834 has 22 MA's), (176, 16876), (285, 17083), (291, 17101), (315, 17191), (329, 17254), (337, 17278), (339, 17290), (348, 17341), (460, 17725), (526, 17827), (537, 17866), (560, 17893), (569, 17917), (630, 18046), (671, 18145), (707, 18247), (710, 18268), (714, 18280), (721, 18310), (741, 18409), (753, 18472), (818, 18691), (827, 18724), (855, 18895), (875, 19006), (885, 19072), (888, 19093), (895, 19132), (899, 19162),

Gene: Jasper\_25 Start: 16203, Stop: 18683, Start Num: 111

Candidate Starts for Jasper\_25:

(Start: 111 @16203 has 200 MA's), (125, 16242), (144, 16305), (Start: 155 @16335 has 22 MA's), (176, 16377), (285, 16584), (291, 16602), (315, 16692), (329, 16755), (337, 16779), (339, 16791), (348, 16842), (460, 17226), (526, 17328), (537, 17367), (560, 17394), (569, 17418), (630, 17547), (671, 17646), (707, 17748), (710, 17769), (714, 17781), (721, 17811), (740, 17907), (741, 17910), (753, 17973), (818, 18192), (827, 18225), (875, 18507), (888, 18594), (895, 18633),

Gene: Jaykayelowell\_25 Start: 15881, Stop: 18481, Start Num: 109

Candidate Starts for Jaykayelowell\_25:

(Start: 109 @15881 has 113 MA's), (Start: 155 @16022 has 22 MA's), (Start: 163 @16040 has 10 MA's), (240, 16247), (252, 16286), (258, 16316), (291, 16433), (299, 16460), (315, 16523), (329, 16586), (341, 16631), (348, 16673), (365, 16757), (457, 17024), (481, 17075), (499, 17120), (530, 17198), (542, 17231), (545, 17237), (591, 17333), (606, 17342), (626, 17405), (636, 17426), (649, 17453), (670, 17510), (673, 17516), (700, 17570), (710, 17618), (726, 17684), (757, 17849), (762, 17867), (807, 17993), (859, 18245), (860, 18248), (863, 18257), (875, 18317), (892, 18413), (899, 18461),

Gene: Jeeves\_25 Start: 15770, Stop: 18166, Start Num: 152

Candidate Starts for Jeeves\_25:

(Start: 141 @15749 has 1 MA's), (Start: 152 @15770 has 5 MA's), (207, 15905), (220, 15947), (236, 15989), (240, 16001), (274, 16115), (285, 16169), (299, 16214), (315, 16277), (321, 16310), (344, 16406), (392, 16631), (464, 16790), (482, 16829), (485, 16844), (500, 16883), (573, 17069), (677, 17315), (693, 17366), (709, 17426), (718, 17459), (721, 17471), (727, 17504), (751, 17627), (753, 17645), (756, 17657), (765, 17681), (801, 17735), (804, 17747), (843, 17852), (851, 17894), (866, 17963), (879, 18038), (894, 18104), (899, 18140),

Gene: Jeffabunny\_29 Start: 16741, Stop: 18957, Start Num: 116

Candidate Starts for Jeffabunny\_29:

(93, 16696), (Start: 116 @16741 has 41 MA's), (160, 16852), (223, 17008), (270, 17155), (274, 17167), (314, 17314), (315, 17317), (321, 17350), (343, 17440), (357, 17509), (376, 17584), (412, 17752), (590, 18010), (618, 18055), (680, 18163), (710, 18226), (721, 18268), (745, 18367), (749, 18388),

(756, 18430), (791, 18481), (805, 18508), (839, 18589), (850, 18679),

Gene: JenCasNa\_27 Start: 15978, Stop: 19004, Start Num: 38

Candidate Starts for JenCasNa\_27:

(30, 15924), (Start: 38 @15978 has 82 MA's), (55, 16092), (68, 16158), (69, 16161), (73, 16170), (86, 16206), (96, 16257), (124, 16329), (Start: 143 @16401 has 5 MA's), (190, 16521), (193, 16524), (214, 16593), (226, 16638), (258, 16731), (264, 16740), (270, 16758), (279, 16785), (295, 16848), (299, 16860), (308, 16893), (312, 16911), (325, 16977), (327, 16980), (329, 16986), (334, 17001), (337, 17010), (339, 17022), (341, 17031), (355, 17109), (359, 17124), (383, 17241), (384, 17244), (391, 17271), (393, 17283), (405, 17337), (410, 17358), (427, 17424), (440, 17463), (479, 17556), (491, 17604), (507, 17649), (525, 17697), (535, 17739), (538, 17748), (552, 17778), (553, 17781), (559, 17793), (582, 17850), (585, 17856), (606, 17877), (607, 17880), (658, 18018), (664, 18030), (689, 18090), (709, 18147), (741, 18285), (744, 18306), (749, 18330), (757, 18375), (762, 18393), (776, 18441), (780, 18453), (800, 18495), (817, 18558), (836, 18615), (844, 18684), (851, 18720), (867, 18801), (892, 18936),

Gene: JeppNRM\_28 Start: 16055, Stop: 19081, Start Num: 38

Candidate Starts for JeppNRM\_28:

(30, 16001), (Start: 38 @16055 has 82 MA's), (55, 16169), (68, 16235), (69, 16238), (73, 16247), (86, 16283), (96, 16334), (124, 16406), (Start: 143 @16478 has 5 MA's), (190, 16598), (193, 16601), (226, 16715), (258, 16808), (264, 16817), (279, 16862), (288, 16901), (295, 16925), (299, 16937), (308, 16970), (312, 16988), (316, 17009), (327, 17057), (329, 17063), (334, 17078), (337, 17087), (339, 17099), (341, 17108), (359, 17201), (380, 17288), (383, 17318), (384, 17321), (391, 17348), (393, 17360), (405, 17414), (410, 17435), (416, 17465), (427, 17501), (477, 17627), (491, 17681), (507, 17726), (525, 17774), (535, 17816), (538, 17825), (552, 17855), (582, 17927), (585, 17933), (606, 17954), (607, 17957), (610, 17969), (656, 18086), (658, 18095), (689, 18167), (690, 18170), (706, 18206), (710, 18227), (718, 18257), (719, 18260), (721, 18269), (757, 18452), (776, 18518), (780, 18530), (800, 18572), (817, 18635), (836, 18692), (844, 18761), (851, 18797), (867, 18878), (892, 19013), (894, 19025),

Gene: Jerm\_28 Start: 17056, Stop: 19599, Start Num: 107

Candidate Starts for Jerm\_28:

(Start: 107 @17056 has 89 MA's), (172, 17236), (173, 17239), (188, 17269), (247, 17407), (249, 17413), (256, 17434), (258, 17443), (264, 17452), (268, 17464), (282, 17509), (286, 17530), (294, 17557), (299, 17572), (312, 17623), (321, 17668), (322, 17671), (325, 17689), (337, 17722), (339, 17734), (341, 17743), (344, 17764), (345, 17767), (383, 17953), (393, 17995), (394, 18004), (396, 18013), (410, 18070), (427, 18136), (440, 18175), (479, 18268), (488, 18304), (507, 18361), (529, 18427), (538, 18460), (544, 18475), (546, 18481), (552, 18490), (559, 18505), (568, 18526), (575, 18547), (585, 18568), (586, 18571), (606, 18589), (607, 18592), (623, 18643), (626, 18652), (649, 18700), (654, 18718), (664, 18742), (689, 18802), (703, 18829), (718, 18892), (727, 18937), (756, 19075), (804, 19165), (810, 19174), (830, 19198), (845, 19285), (850, 19315), (866, 19399),

Gene: Jerm2\_25 Start: 16571, Stop: 19051, Start Num: 111

Candidate Starts for Jerm2\_25:

(Start: 111 @16571 has 200 MA's), (125, 16610), (144, 16673), (Start: 155 @16703 has 22 MA's), (176, 16745), (285, 16952), (291, 16970), (315, 17060), (329, 17123), (337, 17147), (339, 17159), (348, 17210), (460, 17594), (526, 17696), (537, 17735), (555, 17750), (560, 17762), (569, 17786), (630, 17915), (671, 18014), (707, 18116), (710, 18137), (721, 18179), (741, 18278), (753, 18341), (777, 18431), (818, 18560), (827, 18593), (875, 18875), (885, 18941), (888, 18962), (895, 19001), (897, 19016),

Gene: JetBlade\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for JetBlade\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (545, 17238), (608, 17352), (626, 17406), (647, 17451), (670, 17511), (685, 17529), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: JewelBug\_29 Start: 16740, Stop: 18944, Start Num: 116

Candidate Starts for JewelBug\_29:

(60, 16581), (93, 16695), (Start: 116 @16740 has 41 MA's), (160, 16851), (166, 16857), (212, 16965), (223, 17007), (246, 17073), (274, 17166), (283, 17193), (315, 17316), (321, 17349), (343, 17439), (357, 17508), (412, 17751), (499, 17889), (590, 18009), (680, 18162), (710, 18225), (721, 18267), (745, 18366), (749, 18387), (752, 18408), (756, 18429), (791, 18480), (800, 18492), (805, 18507), (839, 18588), (850, 18666),

Gene: Jiawan\_26 Start: 17626, Stop: 20535, Start Num: 52

Candidate Starts for Jiawan\_26:

(Start: 52 @17626 has 33 MA's), (55, 17638), (68, 17698), (114, 17857), (130, 17920), (153, 17983), (165, 18025), (193, 18082), (207, 18121), (260, 18292), (264, 18298), (269, 18313), (294, 18403), (295, 18406), (299, 18418), (311, 18460), (321, 18514), (341, 18589), (344, 18610), (345, 18613), (348, 18631), (361, 18694), (379, 18760), (383, 18799), (390, 18826), (393, 18841), (399, 18871), (405, 18895), (408, 18907), (410, 18916), (427, 18982), (440, 19021), (468, 19087), (479, 19114), (486, 19141), (507, 19207), (523, 19252), (546, 19327), (568, 19372), (575, 19393), (585, 19414), (586, 19417), (606, 19435), (607, 19438), (615, 19465), (649, 19546), (718, 19738), (722, 19753), (727, 19783), (738, 19834), (756, 19921), (758, 19930), (771, 19981), (800, 20044), (805, 20065), (816, 20101), (830, 20137), (831, 20143), (844, 20221), (849, 20248), (860, 20308), (875, 20377), (879, 20407), (885, 20434), (894, 20473), (900, 20515),

Gene: Jobu08\_27 Start: 16051, Stop: 19077, Start Num: 38

Candidate Starts for Jobu08\_27:

(30, 15997), (Start: 38 @16051 has 82 MA's), (55, 16165), (68, 16231), (69, 16234), (73, 16243), (86, 16279), (96, 16330), (124, 16402), (Start: 143 @16474 has 5 MA's), (190, 16594), (193, 16597), (214, 16666), (226, 16711), (258, 16804), (264, 16813), (279, 16858), (295, 16921), (299, 16933), (308, 16966), (312, 16984), (325, 17050), (327, 17053), (329, 17059), (334, 17074), (337, 17083), (339, 17095), (341, 17104), (359, 17197), (380, 17284), (383, 17314), (384, 17317), (391, 17344), (393, 17356), (405, 17410), (410, 17431), (416, 17461), (427, 17497), (491, 17677), (507, 17722), (525, 17770), (535, 17812), (538, 17821), (552, 17851), (582, 17923), (606, 17950), (607, 17953), (610, 17965), (656, 18082), (658, 18091), (664, 18103), (689, 18163), (710, 18223), (718, 18253), (719, 18256), (721, 18265), (741, 18358), (757, 18448), (776, 18514), (780, 18526), (800, 18568), (817, 18631), (836, 18688), (844, 18757), (851, 18793), (867, 18874), (892, 19009),

Gene: JoongJeon\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for JoongJeon\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Jordennis\_29 Start: 16725, Stop: 18929, Start Num: 116

Candidate Starts for Jordennis\_29:

(60, 16566), (93, 16680), (Start: 116 @16725 has 41 MA's), (160, 16836), (212, 16950), (223, 16992), (263, 17115), (274, 17151), (283, 17178), (315, 17301), (321, 17334), (343, 17424), (357, 17493), (412, 17736), (499, 17874), (590, 17994), (680, 18147), (710, 18210), (721, 18252), (745, 18351), (749, 18372), (752, 18393), (756, 18414), (791, 18465), (800, 18477), (805, 18492), (839, 18573), (850, 18651),

Gene: Jorgensen\_24 Start: 16158, Stop: 18737, Start Num: 111

Candidate Starts for Jorgensen\_24:

(Start: 111 @16158 has 200 MA's), (125, 16197), (144, 16260), (Start: 155 @16290 has 22 MA's), (234, 16374), (286, 16545), (329, 16713), (341, 16758), (345, 16782), (348, 16800), (418, 17112), (483, 17268), (520, 17370), (533, 17403), (571, 17475), (592, 17514), (630, 17601), (671, 17700), (707, 17802), (710, 17823), (714, 17835), (721, 17865), (741, 17964), (753, 18027), (818, 18246), (827, 18279), (855, 18450), (875, 18561), (885, 18627), (888, 18648), (895, 18687), (897, 18702),

Gene: Joselito\_26 Start: 17163, Stop: 19709, Start Num: 112

Candidate Starts for Joselito\_26:

(Start: 112 @17163 has 30 MA's), (Start: 118 @17181 has 2 MA's), (187, 17355), (197, 17364), (223, 17439), (252, 17493), (267, 17547), (271, 17562), (272, 17565), (279, 17583), (295, 17646), (299, 17658), (315, 17721), (329, 17784), (334, 17799), (337, 17808), (341, 17829), (345, 17853), (348, 17868), (367, 17955), (369, 17958), (374, 17973), (378, 17994), (380, 18006), (389, 18072), (403, 18135), (404, 18144), (412, 18168), (437, 18249), (441, 18258), (445, 18270), (467, 18312), (492, 18369), (513, 18423), (549, 18531), (567, 18570), (618, 18711), (656, 18807), (661, 18828), (675, 18861), (686, 18894), (687, 18897), (709, 18981), (721, 19026), (722, 19029), (746, 19143), (752, 19176), (808, 19284), (839, 19356), (850, 19434), (860, 19488), (866, 19512), (889, 19623),

Gene: JoshKayV\_28 Start: 17026, Stop: 19569, Start Num: 107

Candidate Starts for JoshKayV\_28:

(Start: 107 @17026 has 89 MA's), (170, 17203), (172, 17206), (173, 17209), (188, 17239), (249, 17383), (256, 17404), (258, 17413), (268, 17434), (279, 17467), (286, 17500), (312, 17593), (321, 17638), (322, 17641), (325, 17659), (337, 17692), (339, 17704), (341, 17713), (344, 17734), (345, 17737), (383, 17923), (393, 17965), (394, 17974), (396, 17983), (410, 18040), (427, 18106), (440, 18145), (496, 18298), (546, 18451), (552, 18460), (555, 18466), (559, 18475), (568, 18496), (578, 18520), (586, 18541), (607, 18562), (620, 18601), (623, 18613), (664, 18712), (689, 18772), (703, 18799), (718, 18862), (727, 18907), (737, 18955), (756, 19045), (761, 19057), (801, 19126), (804, 19135), (810, 19144), (845, 19255), (850, 19285), (866, 19369),

Gene: Journey13\_24 Start: 15775, Stop: 18291, Start Num: 107

Candidate Starts for Journey13\_24:

(Start: 107 @15775 has 89 MA's), (144, 15886), (170, 15952), (172, 15955), (241, 16072), (264, 16156), (267, 16165), (279, 16201), (299, 16276), (312, 16327), (323, 16384), (327, 16396), (329, 16402), (332, 16405), (334, 16417), (339, 16438), (341, 16447), (361, 16552), (363, 16561), (372, 16585), (378, 16615), (383, 16657), (405, 16753), (410, 16774), (420, 16819), (427, 16840), (483, 16990), (503, 17047), (507, 17065), (512, 17080), (517, 17107), (525, 17113), (538, 17164), (546, 17185), (555, 17200), (559, 17209), (568, 17230), (585, 17272), (607, 17296), (620, 17335), (626, 17356), (628, 17362), (658, 17434), (689, 17506), (690, 17509), (703, 17533), (709, 17563), (718, 17596), (730, 17653), (737, 17689), (749, 17737), (761, 17791), (791, 17830), (795, 17842), (801, 17857), (804, 17866), (810, 17875), (840, 17956), (845, 17986), (850, 18016), (866, 18094),

Gene: Jovo\_22 Start: 15350, Stop: 18691, Start Num: 1

Candidate Starts for Jovo\_22:

(Start: 1 @15350 has 30 MA's), (Start: 34 @15788 has 1 MA's), (120, 16100), (Start: 141 @16178 has 1 MA's), (154, 16208), (173, 16265), (227, 16412), (229, 16418), (233, 16424), (270, 16550), (274, 16562), (315, 16712), (322, 16748), (329, 16778), (334, 16793), (341, 16823), (342, 16835), (347,

16859), (361, 16928), (379, 16994), (412, 17150), (428, 17219), (429, 17222), (441, 17249), (449, 17273), (514, 17411), (522, 17432), (540, 17477), (563, 17519), (639, 17711), (652, 17741), (660, 17765), (664, 17777), (672, 17798), (683, 17840), (705, 17927), (710, 17963), (715, 17984), (721, 18005), (736, 18083), (745, 18104), (749, 18125), (752, 18146), (756, 18167), (765, 18191), (808, 18254), (842, 18347), (845, 18365), (859, 18446), (863, 18458), (865, 18470), (867, 18479), (878, 18533), (891, 18617), (892, 18626),

Gene: Jsquared\_25 Start: 15543, Stop: 18056, Start Num: 107

Candidate Starts for Jsquared\_25:

(Start: 107 @15543 has 89 MA's), (144, 15654), (170, 15720), (172, 15723), (173, 15726), (256, 15912), (258, 15921), (264, 15930), (299, 16050), (312, 16101), (323, 16158), (327, 16170), (331, 16176), (334, 16191), (339, 16212), (341, 16221), (350, 16269), (383, 16431), (391, 16461), (393, 16473), (402, 16512), (405, 16527), (410, 16548), (424, 16605), (427, 16614), (436, 16641), (477, 16740), (507, 16839), (512, 16854), (525, 16887), (532, 16917), (538, 16938), (546, 16959), (568, 17004), (606, 17067), (607, 17070), (620, 17109), (623, 17121), (628, 17136), (664, 17220), (689, 17280), (703, 17307), (718, 17370), (722, 17385), (727, 17415), (749, 17511), (765, 17577), (804, 17640), (860, 17835), (861, 17838), (866, 17859),

Gene: JuliaChild\_26 Start: 16832, Stop: 19303, Start Num: 111

Candidate Starts for JuliaChild\_26:

(Start: 111 @16832 has 200 MA's), (125, 16871), (144, 16934), (Start: 155 @16964 has 22 MA's), (162, 16985), (176, 17006), (181, 17018), (194, 17036), (262, 17126), (315, 17324), (321, 17357), (339, 17423), (389, 17678), (393, 17699), (398, 17726), (476, 17885), (500, 17921), (555, 18014), (564, 18035), (592, 18092), (644, 18212), (659, 18248), (671, 18278), (682, 18314), (707, 18380), (710, 18401), (741, 18542), (773, 18683), (784, 18704), (826, 18839), (855, 19016), (875, 19127), (885, 19193), (888, 19214), (895, 19253), (897, 19268),

Gene: KADY\_28 Start: 16063, Stop: 19089, Start Num: 38

Candidate Starts for KADY\_28:

(30, 16009), (Start: 38 @16063 has 82 MA's), (55, 16177), (68, 16243), (69, 16246), (73, 16255), (86, 16291), (96, 16342), (124, 16414), (Start: 143 @16486 has 5 MA's), (190, 16606), (193, 16609), (214, 16678), (226, 16723), (258, 16816), (264, 16825), (270, 16843), (279, 16870), (295, 16933), (299, 16945), (308, 16978), (312, 16996), (325, 17062), (327, 17065), (329, 17071), (334, 17086), (337, 17095), (339, 17107), (341, 17116), (355, 17194), (359, 17209), (383, 17326), (384, 17329), (391, 17356), (393, 17368), (405, 17422), (410, 17443), (427, 17509), (440, 17548), (479, 17641), (491, 17689), (507, 17734), (525, 17782), (535, 17824), (538, 17833), (552, 17863), (553, 17866), (559, 17878), (582, 17935), (585, 17941), (606, 17962), (607, 17965), (658, 18103), (664, 18115), (689, 18175), (709, 18232), (741, 18370), (744, 18391), (749, 18415), (757, 18460), (762, 18478), (776, 18526), (780, 18538), (800, 18580), (817, 18643), (836, 18700), (844, 18769), (851, 18805), (867, 18886), (892, 19021),

Gene: KBG\_25 Start: 17265, Stop: 19736, Start Num: 111

Candidate Starts for KBG\_25:

(Start: 111 @17265 has 200 MA's), (125, 17304), (144, 17367), (Start: 155 @17397 has 22 MA's), (162, 17418), (176, 17439), (194, 17469), (243, 17493), (262, 17559), (315, 17757), (321, 17790), (339, 17856), (389, 18111), (393, 18132), (398, 18159), (476, 18318), (500, 18354), (555, 18447), (564, 18468), (569, 18483), (579, 18504), (580, 18507), (615, 18576), (627, 18612), (644, 18645), (659, 18681), (671, 18711), (682, 18747), (707, 18813), (710, 18834), (741, 18975), (773, 19116), (784, 19137), (826, 19272), (855, 19449), (875, 19560), (885, 19626), (888, 19647), (895, 19686), (897, 19701),

Gene: KFPoly\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for KFPoly\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: KSSJEB\_24 Start: 16162, Stop: 18630, Start Num: 111

Candidate Starts for KSSJEB\_24:

(Start: 111 @16162 has 200 MA's), (Start: 117 @16177 has 5 MA's), (Start: 155 @16291 has 22 MA's), (162, 16312), (176, 16333), (194, 16363), (243, 16387), (250, 16408), (262, 16453), (315, 16651), (321, 16684), (339, 16750), (389, 17005), (393, 17026), (398, 17053), (476, 17212), (500, 17248), (555, 17341), (564, 17362), (569, 17377), (579, 17398), (580, 17401), (615, 17470), (627, 17506), (644, 17539), (659, 17575), (671, 17605), (682, 17641), (707, 17707), (710, 17728), (721, 17770), (741, 17869), (773, 18010), (784, 18031), (826, 18166), (855, 18343), (875, 18454), (888, 18541), (895, 18580), (899, 18610),

Gene: Kachowdy\_25 Start: 15548, Stop: 18586, Start Num: 37

Candidate Starts for Kachowdy\_25:

(Start: 37 @15548 has 32 MA's), (66, 15722), (69, 15734), (81, 15767), (Start: 143 @15977 has 5 MA's), (193, 16100), (202, 16121), (258, 16307), (268, 16328), (279, 16361), (295, 16424), (299, 16436), (308, 16469), (312, 16487), (327, 16556), (329, 16562), (334, 16577), (337, 16586), (339, 16598), (341, 16607), (359, 16700), (383, 16817), (384, 16820), (391, 16847), (393, 16859), (405, 16913), (410, 16934), (414, 16955), (427, 17000), (440, 17039), (479, 17132), (491, 17180), (507, 17225), (512, 17240), (535, 17315), (538, 17324), (542, 17336), (552, 17354), (559, 17369), (582, 17426), (606, 17453), (607, 17456), (613, 17477), (664, 17606), (673, 17627), (689, 17666), (706, 17705), (710, 17726), (718, 17756), (719, 17759), (721, 17768), (726, 17792), (741, 17861), (744, 17882), (757, 17951), (762, 17969), (776, 18017), (780, 18029), (800, 18071), (803, 18083), (816, 18131), (851, 18302), (855, 18332), (863, 18362), (867, 18383), (892, 18518), (894, 18530), (899, 18566),

Gene: Kalb97\_28 Start: 16056, Stop: 19082, Start Num: 38

Candidate Starts for Kalb97\_28:

(30, 16002), (Start: 38 @16056 has 82 MA's), (55, 16170), (68, 16236), (69, 16239), (73, 16248), (86, 16284), (96, 16335), (124, 16407), (Start: 143 @16479 has 5 MA's), (190, 16599), (193, 16602), (214, 16671), (226, 16716), (258, 16809), (264, 16818), (279, 16863), (288, 16902), (295, 16926), (299, 16938), (308, 16971), (312, 16989), (316, 17010), (327, 17058), (329, 17064), (334, 17079), (337, 17088), (339, 17100), (341, 17109), (359, 17202), (380, 17289), (383, 17319), (384, 17322), (391, 17349), (393, 17361), (405, 17415), (410, 17436), (416, 17466), (427, 17502), (477, 17628), (491, 17682), (507, 17727), (525, 17775), (535, 17817), (538, 17826), (552, 17856), (582, 17928), (585, 17934), (606, 17955), (607, 17958), (610, 17970), (656, 18087), (658, 18096), (689, 18168), (690, 18171), (706, 18207), (718, 18258), (719, 18261), (721, 18270), (757, 18453), (776, 18519), (780, 18531), (800, 18573), (817, 18636), (836, 18693), (844, 18762), (851, 18798), (867, 18879), (892, 19014), (894, 19026),

Gene: Kalnoky\_28 Start: 16057, Stop: 19083, Start Num: 38

Candidate Starts for Kalnoky\_28:

(30, 16003), (Start: 38 @16057 has 82 MA's), (55, 16171), (68, 16237), (69, 16240), (73, 16249), (86, 16285), (96, 16336), (124, 16408), (Start: 143 @16480 has 5 MA's), (190, 16600), (193, 16603), (214, 16672), (226, 16717), (258, 16810), (264, 16819), (279, 16864), (288, 16903), (295, 16927), (299, 16939), (308, 16972), (312, 16990), (316, 17011), (327, 17059), (329, 17065), (334, 17080), (337, 17089), (339, 17101), (341, 17110), (359, 17203), (380, 17290), (383, 17320), (384, 17323), (391, 17350), (393, 17362), (405, 17416), (410, 17437), (416, 17467), (427, 17503), (477, 17629), (491,

17683), (507, 17728), (525, 17776), (535, 17818), (538, 17827), (552, 17857), (582, 17929), (585, 17935), (606, 17956), (607, 17959), (610, 17971), (656, 18088), (658, 18097), (689, 18169), (690, 18172), (706, 18208), (718, 18259), (719, 18262), (721, 18271), (757, 18454), (776, 18520), (780, 18532), (800, 18574), (817, 18637), (836, 18694), (844, 18763), (851, 18799), (867, 18880), (892, 19015), (894, 19027),

Gene: Kalpine\_29 Start: 18405, Stop: 20942, Start Num: 107

Candidate Starts for Kalpine\_29:

(Start: 107 @18405 has 89 MA's), (144, 18516), (172, 18585), (247, 18750), (249, 18756), (256, 18777), (258, 18786), (276, 18831), (279, 18840), (286, 18873), (294, 18900), (299, 18915), (311, 18957), (312, 18966), (322, 19014), (325, 19032), (334, 19056), (337, 19065), (341, 19086), (344, 19107), (345, 19110), (383, 19296), (393, 19338), (396, 19356), (408, 19404), (410, 19413), (427, 19479), (440, 19518), (489, 19650), (507, 19704), (525, 19752), (546, 19824), (555, 19839), (568, 19869), (586, 19914), (607, 19935), (620, 19974), (628, 20001), (649, 20043), (664, 20085), (689, 20145), (703, 20172), (718, 20235), (727, 20280), (730, 20292), (801, 20499), (804, 20508), (810, 20517), (845, 20628), (850, 20658), (865, 20739), (866, 20742),

Gene: Kampy\_25 Start: 15883, Stop: 18483, Start Num: 109

Candidate Starts for Kampy\_25:

(Start: 109 @15883 has 113 MA's), (Start: 155 @16024 has 22 MA's), (Start: 163 @16042 has 10 MA's), (240, 16249), (252, 16288), (258, 16318), (291, 16435), (299, 16462), (315, 16525), (329, 16588), (341, 16633), (348, 16675), (365, 16759), (457, 17026), (481, 17077), (499, 17122), (530, 17200), (545, 17239), (557, 17260), (626, 17407), (636, 17428), (647, 17452), (673, 17518), (700, 17572), (710, 17620), (726, 17686), (757, 17851), (762, 17869), (807, 17995), (859, 18247), (860, 18250), (863, 18259), (875, 18319), (892, 18415), (899, 18463),

Gene: Kanely\_25 Start: 16938, Stop: 19418, Start Num: 111

Candidate Starts for Kanely\_25:

(Start: 111 @16938 has 200 MA's), (125, 16977), (144, 17040), (145, 17046), (Start: 155 @17070 has 22 MA's), (176, 17112), (285, 17319), (291, 17337), (315, 17427), (329, 17490), (337, 17514), (339, 17526), (348, 17577), (460, 17961), (526, 18063), (537, 18102), (560, 18129), (569, 18153), (630, 18282), (671, 18381), (707, 18483), (710, 18504), (714, 18516), (721, 18546), (741, 18645), (753, 18708), (818, 18927), (827, 18960), (875, 19242), (885, 19308), (888, 19329), (895, 19368), (897, 19383),

Gene: Katalie136\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Katalie136\_25:

(Start: 109 @15885 has 113 MA's), (222, 16200), (229, 16227), (246, 16275), (263, 16332), (291, 16437), (295, 16452), (299, 16464), (315, 16527), (341, 16635), (344, 16656), (348, 16677), (481, 17079), (497, 17121), (499, 17124), (542, 17235), (545, 17241), (614, 17373), (626, 17409), (649, 17457), (700, 17574), (726, 17688), (757, 17853), (762, 17871), (802, 17985), (807, 17997), (835, 18087), (847, 18180), (860, 18252), (863, 18261), (875, 18321), (877, 18330), (892, 18417), (899, 18465),

Gene: KatherineG\_28 Start: 16045, Stop: 18231, Start Num: 179

Candidate Starts for KatherineG\_28:

(Start: 115 @15868 has 1 MA's), (Start: 117 @15877 has 5 MA's), (Start: 179 @16045 has 15 MA's), (269, 16285), (270, 16291), (290, 16360), (306, 16417), (339, 16552), (341, 16561), (348, 16603), (358, 16651), (359, 16654), (382, 16765), (385, 16783), (412, 16888), (425, 16936), (484, 17041), (513, 17101), (536, 17155), (555, 17191), (569, 17215), (577, 17224), (608, 17287), (616, 17308), (622, 17323), (629, 17347), (635, 17359), (659, 17413), (667, 17434), (680, 17464), (732, 17635), (734, 17656), (756, 17740), (867, 18043), (892, 18166), (894, 18178),

Gene: Kazan\_29 Start: 16741, Stop: 18945, Start Num: 116

Candidate Starts for Kazan\_29:

(60, 16582), (93, 16696), (Start: 116 @16741 has 41 MA's), (160, 16852), (166, 16858), (212, 16966), (223, 17008), (246, 17074), (274, 17167), (283, 17194), (315, 17317), (321, 17350), (343, 17440), (357, 17509), (412, 17752), (499, 17890), (590, 18010), (680, 18163), (710, 18226), (721, 18268), (745, 18367), (749, 18388), (752, 18409), (756, 18430), (791, 18481), (800, 18493), (805, 18508), (839, 18589), (850, 18667),

Gene: Kenmech\_27 Start: 17747, Stop: 20146, Start Num: 111

Candidate Starts for Kenmech\_27:

(Start: 111 @17747 has 200 MA's), (125, 17786), (144, 17849), (Start: 155 @17879 has 22 MA's), (162, 17900), (176, 17921), (181, 17933), (194, 17951), (250, 17996), (262, 18041), (315, 18239), (321, 18272), (339, 18338), (389, 18593), (393, 18614), (398, 18641), (410, 18680), (432, 18737), (451, 18767), (555, 18929), (627, 19082), (638, 19094), (643, 19109), (696, 19226), (712, 19271), (716, 19292), (717, 19295), (753, 19445), (757, 19460), (773, 19526), (793, 19568), (842, 19778), (855, 19859), (875, 19970), (888, 20057), (895, 20096), (897, 20111),

Gene: Kerberos\_29 Start: 16508, Stop: 19021, Start Num: 107

Candidate Starts for Kerberos\_29:

(Start: 107 @16508 has 89 MA's), (172, 16688), (173, 16691), (279, 16937), (294, 16997), (299, 17012), (307, 17042), (308, 17045), (325, 17129), (334, 17153), (340, 17177), (344, 17204), (345, 17207), (368, 17312), (383, 17393), (390, 17420), (393, 17435), (405, 17489), (410, 17510), (427, 17576), (434, 17594), (436, 17603), (477, 17702), (486, 17735), (488, 17744), (507, 17801), (512, 17816), (546, 17921), (559, 17945), (607, 18032), (610, 18044), (612, 18050), (623, 18083), (673, 18203), (718, 18332), (722, 18347), (727, 18377), (730, 18389), (737, 18425), (765, 18539), (776, 18551), (801, 18593), (861, 18800), (865, 18818), (866, 18821), (902, 19007),

Gene: Keziacharles14\_25 Start: 15713, Stop: 18619, Start Num: 52

Candidate Starts for Keziacharles14\_25:

(Start: 52 @15713 has 33 MA's), (55, 15725), (89, 15860), (130, 16007), (144, 16049), (153, 16070), (165, 16112), (190, 16166), (193, 16169), (260, 16379), (264, 16385), (284, 16451), (295, 16493), (299, 16505), (309, 16544), (321, 16601), (341, 16676), (344, 16697), (345, 16700), (348, 16718), (379, 16847), (383, 16886), (385, 16898), (390, 16913), (393, 16928), (399, 16958), (405, 16982), (410, 17003), (427, 17069), (440, 17108), (465, 17171), (479, 17201), (486, 17228), (491, 17249), (508, 17297), (525, 17342), (542, 17405), (548, 17417), (555, 17429), (568, 17459), (582, 17495), (585, 17501), (606, 17522), (607, 17525), (610, 17537), (630, 17594), (640, 17612), (645, 17627), (647, 17630), (664, 17675), (718, 17825), (727, 17870), (752, 17987), (757, 18011), (767, 18050), (800, 18131), (805, 18152), (831, 18227), (844, 18305), (849, 18332), (851, 18341), (879, 18491), (894, 18557),

Gene: Killigrew\_22 Start: 15859, Stop: 18330, Start Num: 113

Candidate Starts for Killigrew\_22:

(Start: 113 @15859 has 1 MA's), (Start: 117 @15874 has 5 MA's), (Start: 155 @15988 has 22 MA's), (176, 16030), (285, 16231), (291, 16249), (315, 16339), (329, 16402), (337, 16426), (339, 16438), (348, 16489), (378, 16615), (460, 16873), (526, 16975), (537, 17014), (555, 17029), (560, 17041), (569, 17065), (606, 17140), (671, 17293), (707, 17395), (710, 17416), (721, 17458), (740, 17554), (741, 17557), (753, 17620), (818, 17839), (827, 17872), (875, 18154), (885, 18220), (888, 18241), (895, 18280), (899, 18310),

Gene: Kimona\_22 Start: 13439, Stop: 16474, Start Num: 38

Candidate Starts for Kimona\_22:

(Start: 38 @13439 has 82 MA's), (66, 13607), (69, 13619), (86, 13670), (Start: 143 @13862 has 5 MA's), (193, 13985), (214, 14054), (228, 14105), (268, 14216), (279, 14249), (294, 14309), (299,



14324), (308, 14357), (332, 14453), (337, 14474), (338, 14480), (341, 14495), (348, 14537), (359, 14588), (361, 14600), (371, 14630), (383, 14705), (390, 14732), (393, 14747), (405, 14801), (410, 14822), (424, 14879), (427, 14888), (436, 14915), (437, 14918), (443, 14939), (456, 14972), (479, 15020), (506, 15104), (512, 15128), (515, 15146), (525, 15161), (538, 15212), (542, 15224), (544, 15227), (552, 15242), (553, 15245), (559, 15257), (568, 15278), (570, 15281), (582, 15314), (585, 15320), (606, 15341), (607, 15344), (613, 15365), (637, 15428), (664, 15494), (709, 15611), (726, 15680), (741, 15749), (749, 15794), (752, 15815), (757, 15839), (762, 15857), (776, 15905), (780, 15917), (800, 15959), (803, 15971), (816, 16019), (851, 16190), (865, 16262), (867, 16271), (880, 16343), (895, 16424), (899, 16454),

Gene: KingCyrus\_28 Start: 17023, Stop: 19566, Start Num: 107

Candidate Starts for KingCyrus\_28:

(Start: 107 @17023 has 89 MA's), (170, 17200), (172, 17203), (173, 17206), (245, 17371), (249, 17380), (256, 17401), (258, 17410), (268, 17431), (279, 17464), (286, 17497), (299, 17539), (312, 17590), (321, 17635), (322, 17638), (325, 17656), (337, 17689), (339, 17701), (341, 17710), (344, 17731), (345, 17734), (383, 17920), (393, 17962), (394, 17971), (396, 17980), (410, 18037), (427, 18103), (440, 18142), (479, 18235), (488, 18271), (507, 18328), (529, 18394), (538, 18427), (544, 18442), (546, 18448), (552, 18457), (559, 18472), (568, 18493), (575, 18514), (585, 18535), (586, 18538), (606, 18556), (607, 18559), (620, 18598), (623, 18610), (649, 18667), (654, 18685), (664, 18709), (689, 18769), (703, 18796), (718, 18859), (756, 19042), (801, 19123), (804, 19132), (810, 19141), (845, 19252), (850, 19282), (866, 19366),

Gene: Kingmustik0402\_25 Start: 15877, Stop: 18477, Start Num: 109

Candidate Starts for Kingmustik0402\_25:

(Start: 109 @15877 has 113 MA's), (Start: 155 @16018 has 22 MA's), (Start: 163 @16036 has 10 MA's), (240, 16243), (252, 16282), (258, 16312), (283, 16396), (291, 16429), (299, 16456), (315, 16519), (329, 16582), (341, 16627), (348, 16669), (365, 16753), (457, 17020), (481, 17071), (499, 17116), (530, 17194), (545, 17233), (626, 17401), (636, 17422), (647, 17446), (673, 17512), (700, 17566), (710, 17614), (726, 17680), (757, 17845), (762, 17863), (807, 17989), (859, 18241), (860, 18244), (863, 18253), (875, 18313), (892, 18409), (899, 18457),

Gene: Kinmap\_26 Start: 16407, Stop: 18590, Start Num: 146

Candidate Starts for Kinmap\_26:

(Start: 146 @16407 has 2 MA's), (Start: 155 @16425 has 22 MA's), (212, 16560), (263, 16725), (269, 16743), (315, 16911), (321, 16944), (337, 16998), (339, 17010), (343, 17034), (365, 17145), (415, 17328), (514, 17502), (521, 17520), (567, 17583), (643, 17760), (676, 17826), (680, 17835), (710, 17898), (734, 18012), (735, 18015), (745, 18039), (749, 18060), (753, 18090), (756, 18102), (861, 18369), (866, 18390), (875, 18435), (892, 18519),

Gene: Kipper29\_29 Start: 16735, Stop: 18939, Start Num: 116

Candidate Starts for Kipper29\_29:

(60, 16576), (93, 16690), (Start: 116 @16735 has 41 MA's), (160, 16846), (166, 16852), (212, 16960), (223, 17002), (246, 17068), (274, 17161), (283, 17188), (315, 17311), (321, 17344), (343, 17434), (357, 17503), (412, 17746), (499, 17884), (590, 18004), (680, 18157), (710, 18220), (721, 18262), (745, 18361), (749, 18382), (752, 18403), (756, 18424), (791, 18475), (800, 18487), (805, 18502), (839, 18583), (850, 18661),

Gene: KittenMittens\_24 Start: 13965, Stop: 16520, Start Num: 163

Candidate Starts for KittenMittens\_24:

(Start: 105 @13788 has 8 MA's), (Start: 163 @13965 has 10 MA's), (200, 14040), (203, 14052), (255, 14214), (261, 14235), (265, 14247), (274, 14277), (281, 14310), (292, 14355), (298, 14373), (301, 14388), (302, 14397), (309, 14418), (330, 14523), (339, 14565), (372, 14730), (404, 14892), (411, 14919), (489, 15096), (506, 15141), (528, 15216), (544, 15264), (545, 15267), (557, 15288), (558,

15291), (574, 15336), (615, 15411), (617, 15414), (623, 15435), (632, 15459), (659, 15525), (673, 15555), (685, 15567), (705, 15621), (709, 15654), (714, 15669), (726, 15723), (741, 15798), (754, 15876), (757, 15888), (762, 15906), (772, 15945), (779, 15957), (782, 15969), (799, 16011), (802, 16023), (807, 16035), (812, 16050), (819, 16071), (823, 16083), (863, 16296), (875, 16356), (883, 16401), (892, 16452), (899, 16500),

Gene: Koan\_24 Start: 16044, Stop: 18485, Start Num: 163

Candidate Starts for Koan\_24:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (283, 16404), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (591, 17337), (606, 17346), (626, 17409), (636, 17430), (649, 17457), (670, 17514), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Koduck\_26 Start: 15783, Stop: 18296, Start Num: 107

Candidate Starts for Koduck\_26:

(Start: 107 @15783 has 89 MA's), (170, 15960), (172, 15963), (173, 15966), (256, 16152), (258, 16161), (264, 16170), (299, 16290), (312, 16341), (327, 16410), (331, 16416), (334, 16431), (339, 16452), (341, 16461), (383, 16671), (393, 16713), (405, 16767), (410, 16788), (424, 16845), (427, 16854), (434, 16872), (436, 16881), (477, 16980), (491, 17034), (507, 17079), (512, 17094), (525, 17127), (542, 17190), (559, 17223), (568, 17244), (607, 17310), (608, 17316), (623, 17361), (626, 17370), (658, 17448), (689, 17520), (703, 17547), (718, 17610), (727, 17655), (730, 17667), (737, 17703), (749, 17751), (765, 17817), (804, 17880), (854, 18057), (860, 18075), (861, 18078), (866, 18099),

Gene: Koko\_29 Start: 16749, Stop: 19274, Start Num: 107

Candidate Starts for Koko\_29:

(Start: 107 @16749 has 89 MA's), (114, 16767), (144, 16860), (167, 16917), (215, 17025), (294, 17241), (311, 17298), (312, 17307), (337, 17406), (341, 17427), (345, 17451), (360, 17529), (361, 17532), (390, 17664), (393, 17679), (426, 17817), (427, 17820), (434, 17838), (436, 17847), (454, 17895), (512, 18060), (517, 18087), (546, 18165), (568, 18210), (606, 18273), (608, 18282), (617, 18306), (623, 18327), (701, 18510), (703, 18513), (718, 18576), (730, 18633), (737, 18669), (801, 18840), (845, 18969), (850, 18999),

Gene: Koreni\_24 Start: 15531, Stop: 18131, Start Num: 109

Candidate Starts for Koreni\_24:

(Start: 109 @15531 has 113 MA's), (Start: 155 @15672 has 22 MA's), (Start: 163 @15690 has 10 MA's), (240, 15897), (252, 15936), (258, 15966), (291, 16083), (299, 16110), (315, 16173), (329, 16236), (341, 16281), (348, 16323), (365, 16407), (457, 16674), (481, 16725), (499, 16770), (530, 16848), (542, 16881), (545, 16887), (591, 16983), (606, 16992), (626, 17055), (636, 17076), (647, 17100), (673, 17166), (700, 17220), (710, 17268), (726, 17334), (757, 17499), (762, 17517), (807, 17643), (859, 17895), (860, 17898), (863, 17907), (875, 17967), (892, 18063), (899, 18111),

Gene: Kratark\_25 Start: 15880, Stop: 18480, Start Num: 109

Candidate Starts for Kratark\_25:

(Start: 109 @15880 has 113 MA's), (Start: 155 @16021 has 22 MA's), (Start: 163 @16039 has 10 MA's), (240, 16246), (252, 16285), (258, 16315), (299, 16459), (315, 16522), (329, 16585), (341, 16630), (348, 16672), (365, 16756), (457, 17023), (481, 17074), (499, 17119), (530, 17197), (542, 17230), (545, 17236), (608, 17350), (626, 17404), (647, 17449), (670, 17509), (700, 17569), (726, 17683), (757, 17848), (762, 17866), (807, 17992), (859, 18244), (860, 18247), (863, 18256), (875, 18316), (892, 18412), (899, 18460),

Gene: Kremtemulon\_25 Start: 15933, Stop: 18533, Start Num: 109

Candidate Starts for Kremtemulon\_25:

(Start: 109 @15933 has 113 MA's), (Start: 155 @16074 has 22 MA's), (Start: 163 @16092 has 10 MA's), (240, 16299), (252, 16338), (258, 16368), (291, 16485), (299, 16512), (315, 16575), (329, 16638), (341, 16683), (348, 16725), (365, 16809), (457, 17076), (481, 17127), (499, 17172), (530, 17250), (545, 17289), (557, 17310), (591, 17385), (606, 17394), (626, 17457), (636, 17478), (649, 17505), (670, 17562), (673, 17568), (700, 17622), (710, 17670), (726, 17736), (757, 17901), (762, 17919), (807, 18045), (859, 18297), (860, 18300), (863, 18309), (875, 18369), (892, 18465), (899, 18513),

Gene: Kristoff\_26 Start: 15879, Stop: 18620, Start Num: 105

Candidate Starts for Kristoff\_26:

(Start: 105 @15879 has 8 MA's), (Start: 163 @16056 has 10 MA's), (171, 16077), (201, 16134), (213, 16182), (220, 16209), (232, 16248), (243, 16278), (255, 16320), (265, 16353), (268, 16362), (280, 16413), (281, 16416), (298, 16479), (301, 16494), (307, 16515), (309, 16524), (330, 16629), (339, 16671), (411, 17025), (489, 17193), (528, 17313), (542, 17358), (544, 17361), (545, 17364), (557, 17385), (558, 17388), (574, 17433), (626, 17541), (636, 17562), (642, 17574), (659, 17622), (674, 17655), (705, 17718), (721, 17796), (726, 17820), (741, 17895), (752, 17961), (757, 17985), (762, 18003), (782, 18069), (796, 18099), (802, 18123), (807, 18135), (812, 18150), (819, 18171), (823, 18183), (863, 18396), (871, 18432), (874, 18453), (875, 18456), (892, 18552), (899, 18600),

Gene: Kugel\_25 Start: 16511, Stop: 18991, Start Num: 111

Candidate Starts for Kugel\_25:

(Start: 111 @16511 has 200 MA's), (125, 16550), (144, 16613), (Start: 155 @16643 has 22 MA's), (176, 16685), (285, 16892), (291, 16910), (315, 17000), (329, 17063), (337, 17087), (339, 17099), (348, 17150), (460, 17534), (526, 17636), (537, 17675), (560, 17702), (569, 17726), (630, 17855), (671, 17954), (707, 18056), (710, 18077), (714, 18089), (721, 18119), (741, 18218), (753, 18281), (818, 18500), (827, 18533), (875, 18815), (888, 18902), (895, 18941), (897, 18956),

Gene: KyMonks1A\_26 Start: 16677, Stop: 19157, Start Num: 111

Candidate Starts for KyMonks1A\_26:

(Start: 111 @16677 has 200 MA's), (125, 16716), (144, 16779), (Start: 155 @16809 has 22 MA's), (176, 16851), (285, 17058), (291, 17076), (315, 17166), (329, 17229), (337, 17253), (339, 17265), (348, 17316), (460, 17700), (526, 17802), (537, 17841), (560, 17868), (569, 17892), (630, 18021), (671, 18120), (707, 18222), (710, 18243), (714, 18255), (721, 18285), (741, 18384), (753, 18447), (818, 18666), (827, 18699), (875, 18981), (888, 19068), (895, 19107), (897, 19122),

Gene: Kyee\_25 Start: 15886, Stop: 18486, Start Num: 109

Candidate Starts for Kyee\_25:

(Start: 109 @15886 has 113 MA's), (Start: 155 @16027 has 22 MA's), (Start: 163 @16045 has 10 MA's), (240, 16252), (252, 16291), (258, 16321), (291, 16438), (299, 16465), (315, 16528), (329, 16591), (341, 16636), (348, 16678), (365, 16762), (457, 17029), (481, 17080), (499, 17125), (530, 17203), (545, 17242), (608, 17356), (626, 17410), (647, 17455), (670, 17515), (685, 17533), (700, 17575), (710, 17623), (726, 17689), (757, 17854), (762, 17872), (807, 17998), (859, 18250), (860, 18253), (863, 18262), (875, 18322), (892, 18418), (899, 18466),

Gene: Kykar\_22 Start: 15947, Stop: 18526, Start Num: 111

Candidate Starts for Kykar\_22:

(Start: 111 @15947 has 200 MA's), (125, 15986), (144, 16049), (Start: 155 @16079 has 22 MA's), (277, 16298), (286, 16334), (329, 16502), (341, 16547), (345, 16571), (348, 16589), (418, 16901), (483, 17057), (520, 17159), (533, 17192), (571, 17264), (592, 17303), (630, 17390), (671, 17489), (707, 17591), (710, 17612), (714, 17624), (721, 17654), (741, 17753), (753, 17816), (818, 18035),

(827, 18068), (875, 18350), (888, 18437), (895, 18476), (897, 18491),

Gene: L5\_26 Start: 15794, Stop: 18307, Start Num: 107

Candidate Starts for L5\_26:

(Start: 107 @15794 has 89 MA's), (170, 15971), (172, 15974), (173, 15977), (279, 16226), (299, 16301), (321, 16397), (325, 16418), (337, 16451), (340, 16466), (341, 16472), (344, 16493), (360, 16574), (383, 16682), (390, 16709), (393, 16724), (405, 16778), (410, 16799), (427, 16865), (477, 16991), (491, 17045), (507, 17090), (512, 17105), (525, 17138), (542, 17201), (559, 17234), (568, 17255), (607, 17321), (608, 17327), (623, 17372), (626, 17381), (658, 17459), (689, 17531), (703, 17558), (718, 17621), (727, 17666), (730, 17678), (737, 17714), (749, 17762), (765, 17828), (804, 17891), (854, 18068), (860, 18086), (861, 18089), (866, 18110),

Gene: LBerry\_27 Start: 15979, Stop: 19005, Start Num: 38

Candidate Starts for LBerry\_27:

(30, 15925), (Start: 38 @15979 has 82 MA's), (55, 16093), (68, 16159), (69, 16162), (73, 16171), (86, 16207), (96, 16258), (124, 16330), (Start: 143 @16402 has 5 MA's), (190, 16522), (193, 16525), (214, 16594), (226, 16639), (258, 16732), (264, 16741), (270, 16759), (279, 16786), (295, 16849), (299, 16861), (308, 16894), (312, 16912), (325, 16978), (327, 16981), (329, 16987), (334, 17002), (337, 17011), (339, 17023), (341, 17032), (355, 17110), (359, 17125), (383, 17242), (384, 17245), (391, 17272), (393, 17284), (405, 17338), (410, 17359), (427, 17425), (440, 17464), (479, 17557), (491, 17605), (507, 17650), (525, 17698), (535, 17740), (538, 17749), (552, 17779), (553, 17782), (559, 17794), (582, 17851), (585, 17857), (606, 17878), (607, 17881), (658, 18019), (664, 18031), (689, 18091), (709, 18148), (741, 18286), (744, 18307), (749, 18331), (757, 18376), (762, 18394), (776, 18442), (780, 18454), (800, 18496), (836, 18616), (844, 18685), (851, 18721), (867, 18802), (892, 18937),

Gene: LHTSCC\_26 Start: 16337, Stop: 18796, Start Num: 155

Candidate Starts for LHTSCC\_26:

(Start: 109 @16196 has 113 MA's), (Start: 155 @16337 has 22 MA's), (Start: 163 @16355 has 10 MA's), (222, 16511), (240, 16562), (258, 16631), (291, 16748), (299, 16775), (315, 16838), (329, 16901), (341, 16946), (348, 16988), (365, 17072), (420, 17279), (457, 17339), (481, 17390), (499, 17435), (530, 17513), (542, 17546), (545, 17552), (626, 17720), (636, 17741), (647, 17765), (670, 17825), (673, 17831), (674, 17834), (700, 17885), (710, 17933), (726, 17999), (757, 18164), (762, 18182), (807, 18308), (859, 18560), (860, 18563), (863, 18572), (874, 18629), (875, 18632), (883, 18677), (892, 18728), (899, 18776),

Gene: LadyBird\_26 Start: 16593, Stop: 19130, Start Num: 107

Candidate Starts for LadyBird\_26:

(Start: 107 @16593 has 89 MA's), (172, 16773), (173, 16776), (202, 16824), (245, 16935), (249, 16944), (256, 16965), (258, 16974), (264, 16983), (279, 17028), (286, 17061), (312, 17154), (322, 17202), (325, 17220), (332, 17232), (337, 17253), (341, 17274), (344, 17295), (345, 17298), (383, 17484), (393, 17526), (394, 17535), (396, 17544), (410, 17601), (427, 17667), (440, 17706), (477, 17793), (507, 17892), (546, 18012), (552, 18021), (555, 18027), (559, 18036), (568, 18057), (578, 18081), (586, 18102), (607, 18123), (608, 18129), (620, 18162), (623, 18174), (649, 18231), (689, 18333), (703, 18360), (709, 18390), (718, 18423), (730, 18480), (742, 18522), (749, 18564), (801, 18687), (804, 18696), (810, 18705), (845, 18816), (850, 18846), (858, 18900), (866, 18930),

Gene: Lambert1\_26 Start: 16043, Stop: 19081, Start Num: 37

Candidate Starts for Lambert1\_26:

(Start: 37 @16043 has 32 MA's), (66, 16217), (69, 16229), (81, 16262), (Start: 143 @16469 has 5 MA's), (Start: 152 @16490 has 5 MA's), (190, 16589), (193, 16592), (258, 16802), (268, 16823), (279, 16856), (295, 16919), (299, 16931), (308, 16964), (312, 16982), (316, 17003), (327, 17051), (329, 17057), (334, 17072), (337, 17081), (339, 17093), (341, 17102), (359, 17195), (383, 17312), (384,

17315), (391, 17342), (393, 17354), (405, 17408), (410, 17429), (427, 17495), (440, 17534), (491, 17675), (507, 17720), (535, 17810), (538, 17819), (552, 17849), (575, 17906), (582, 17921), (606, 17948), (607, 17951), (612, 17969), (656, 18080), (689, 18161), (709, 18218), (720, 18260), (741, 18356), (744, 18377), (749, 18401), (757, 18446), (762, 18464), (776, 18512), (780, 18524), (800, 18566), (803, 18578), (816, 18626), (851, 18797), (863, 18857), (865, 18869), (872, 18896), (875, 18917), (892, 19013), (899, 19061),

Gene: Lamina13\_24 Start: 15957, Stop: 18428, Start Num: 111

Candidate Starts for Lamina13\_24:

(Start: 111 @15957 has 200 MA's), (125, 15996), (144, 16059), (145, 16065), (Start: 155 @16089 has 22 MA's), (162, 16110), (176, 16131), (194, 16161), (243, 16185), (262, 16251), (315, 16449), (321, 16482), (339, 16548), (389, 16803), (393, 16824), (398, 16851), (476, 17010), (500, 17046), (555, 17139), (564, 17160), (592, 17217), (644, 17337), (659, 17373), (671, 17403), (682, 17439), (707, 17505), (710, 17526), (741, 17667), (773, 17808), (784, 17829), (826, 17964), (875, 18252), (888, 18339), (895, 18378), (899, 18408),

Gene: Landor\_27 Start: 18370, Stop: 20748, Start Num: 152

Candidate Starts for Landor\_27:

(Start: 143 @18352 has 5 MA's), (Start: 152 @18370 has 5 MA's), (161, 18403), (164, 18409), (207, 18505), (220, 18547), (244, 18610), (246, 18613), (274, 18703), (277, 18715), (278, 18718), (284, 18748), (285, 18757), (296, 18793), (299, 18802), (315, 18865), (321, 18898), (334, 18943), (339, 18964), (341, 18973), (361, 19078), (392, 19219), (470, 19387), (471, 19393), (500, 19465), (564, 19633), (573, 19651), (644, 19807), (664, 19861), (677, 19897), (693, 19948), (709, 20008), (718, 20041), (721, 20053), (727, 20086), (728, 20089), (753, 20227), (756, 20239), (786, 20281), (801, 20317), (804, 20329), (806, 20335), (866, 20545),

Gene: LappelDuVide\_25 Start: 16023, Stop: 18482, Start Num: 155

Candidate Starts for LappelDuVide\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (545, 17238), (557, 17259), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: Larenn\_27 Start: 16894, Stop: 19434, Start Num: 107

Candidate Starts for Larenn\_27:

(Start: 107 @16894 has 89 MA's), (172, 17074), (247, 17239), (249, 17245), (256, 17266), (258, 17275), (279, 17329), (282, 17341), (286, 17362), (299, 17404), (316, 17476), (334, 17548), (337, 17557), (341, 17578), (344, 17599), (345, 17602), (348, 17620), (360, 17680), (368, 17707), (383, 17788), (393, 17830), (394, 17839), (396, 17848), (397, 17851), (405, 17884), (408, 17896), (410, 17905), (426, 17968), (427, 17971), (436, 17998), (440, 18010), (523, 18241), (538, 18295), (542, 18307), (546, 18316), (555, 18331), (568, 18361), (578, 18385), (581, 18394), (582, 18397), (606, 18424), (610, 18439), (620, 18466), (626, 18487), (628, 18493), (664, 18577), (689, 18637), (703, 18664), (718, 18727), (756, 18910), (761, 18922), (801, 18991), (804, 19000), (810, 19009), (845, 19120), (850, 19150), (858, 19204), (866, 19234), (902, 19420),

Gene: LarryKay\_27 Start: 16065, Stop: 19091, Start Num: 38

Candidate Starts for LarryKay\_27:

(30, 16011), (Start: 38 @16065 has 82 MA's), (55, 16179), (68, 16245), (69, 16248), (73, 16257), (86, 16293), (96, 16344), (124, 16416), (Start: 143 @16488 has 5 MA's), (190, 16608), (193, 16611), (214, 16680), (226, 16725), (258, 16818), (264, 16827), (270, 16845), (279, 16872), (295, 16935), (299, 16947), (308, 16980), (312, 16998), (325, 17064), (327, 17067), (329, 17073), (334, 17088), (337,

17097), (339, 17109), (341, 17118), (355, 17196), (359, 17211), (383, 17328), (384, 17331), (391, 17358), (393, 17370), (405, 17424), (410, 17445), (427, 17511), (440, 17550), (479, 17643), (491, 17691), (507, 17736), (525, 17784), (535, 17826), (538, 17835), (552, 17865), (553, 17868), (559, 17880), (582, 17937), (585, 17943), (606, 17964), (607, 17967), (658, 18105), (664, 18117), (689, 18177), (709, 18234), (741, 18372), (744, 18393), (749, 18417), (757, 18462), (762, 18480), (776, 18528), (780, 18540), (800, 18582), (817, 18645), (836, 18702), (844, 18771), (851, 18807), (867, 18888), (892, 19023),

Gene: LastResort\_28 Start: 15923, Stop: 18112, Start Num: 179

Candidate Starts for LastResort\_28:

(Start: 115 @15746 has 1 MA's), (Start: 117 @15755 has 5 MA's), (Start: 179 @15923 has 15 MA's), (269, 16166), (270, 16172), (290, 16241), (306, 16298), (341, 16442), (348, 16484), (358, 16532), (359, 16535), (382, 16646), (385, 16664), (412, 16769), (425, 16817), (484, 16922), (513, 16982), (536, 17036), (555, 17072), (569, 17096), (577, 17105), (608, 17168), (616, 17189), (622, 17204), (629, 17228), (635, 17240), (659, 17294), (667, 17315), (680, 17345), (732, 17516), (734, 17537), (756, 17621), (867, 17924), (892, 18047), (894, 18059),

Gene: Lemur\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for Lemur\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (283, 16401), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (542, 17232), (545, 17238), (626, 17406), (636, 17427), (647, 17451), (673, 17517), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: LeoAvram\_25 Start: 16041, Stop: 18482, Start Num: 163

Candidate Starts for LeoAvram\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (542, 17232), (545, 17238), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: Leogania\_28 Start: 18765, Stop: 21302, Start Num: 107

Candidate Starts for Leogania\_28:

(Start: 107 @18765 has 89 MA's), (172, 18945), (173, 18948), (202, 18996), (249, 19116), (256, 19137), (258, 19146), (268, 19167), (279, 19200), (286, 19233), (299, 19275), (311, 19317), (312, 19326), (322, 19374), (325, 19392), (337, 19425), (339, 19437), (341, 19446), (342, 19458), (344, 19467), (383, 19656), (390, 19683), (393, 19698), (405, 19752), (410, 19773), (427, 19839), (440, 19878), (477, 19965), (546, 20184), (555, 20199), (568, 20229), (575, 20250), (578, 20253), (582, 20265), (606, 20292), (620, 20334), (628, 20361), (649, 20403), (658, 20433), (689, 20505), (703, 20532), (718, 20595), (727, 20640), (730, 20652), (761, 20790), (801, 20859), (804, 20868), (810, 20877), (845, 20988), (850, 21018), (858, 21072), (866, 21102),

Gene: Lesedi\_23 Start: 16115, Stop: 18586, Start Num: 111

Candidate Starts for Lesedi\_23:

(Start: 111 @16115 has 200 MA's), (125, 16154), (144, 16217), (Start: 155 @16247 has 22 MA's), (162, 16268), (176, 16289), (181, 16301), (194, 16319), (250, 16364), (262, 16409), (315, 16607), (321, 16640), (339, 16706), (389, 16961), (393, 16982), (398, 17009), (476, 17168), (500, 17204), (555, 17297), (564, 17318), (592, 17375), (644, 17495), (659, 17531), (671, 17561), (682, 17597), (707, 17663), (710, 17684), (741, 17825), (773, 17966), (784, 17987), (826, 18122), (855, 18299),

(875, 18410), (888, 18497), (895, 18536), (897, 18551),

Gene: Lev2\_22 Start: 15062, Stop: 18403, Start Num: 1

Candidate Starts for Lev2\_22:

(Start: 1 @15062 has 30 MA's), (Start: 34 @15500 has 1 MA's), (120, 15812), (Start: 141 @15890 has 1 MA's), (154, 15920), (173, 15977), (227, 16124), (229, 16130), (233, 16136), (270, 16262), (274, 16274), (315, 16424), (322, 16460), (329, 16490), (334, 16505), (341, 16535), (342, 16547), (347, 16571), (361, 16640), (379, 16706), (412, 16862), (428, 16931), (429, 16934), (441, 16961), (449, 16985), (514, 17123), (522, 17144), (540, 17189), (563, 17231), (639, 17423), (652, 17453), (660, 17477), (664, 17489), (672, 17510), (683, 17552), (705, 17639), (710, 17675), (715, 17696), (721, 17717), (736, 17795), (745, 17816), (749, 17837), (752, 17858), (756, 17879), (765, 17903), (808, 17966), (842, 18059), (845, 18077), (859, 18158), (863, 18170), (865, 18182), (867, 18191), (878, 18245), (891, 18329), (892, 18338),

Gene: Leviathan\_28 Start: 17112, Stop: 19655, Start Num: 107

Candidate Starts for Leviathan\_28:

(Start: 107 @17112 has 89 MA's), (172, 17292), (173, 17295), (188, 17325), (247, 17463), (249, 17469), (256, 17490), (258, 17499), (264, 17508), (268, 17520), (282, 17565), (286, 17586), (299, 17628), (312, 17679), (321, 17724), (322, 17727), (325, 17745), (337, 17778), (339, 17790), (341, 17799), (344, 17820), (345, 17823), (383, 18009), (393, 18051), (394, 18060), (396, 18069), (410, 18126), (427, 18192), (440, 18231), (488, 18360), (507, 18417), (529, 18483), (538, 18516), (544, 18531), (546, 18537), (552, 18546), (559, 18561), (568, 18582), (575, 18603), (585, 18624), (586, 18627), (606, 18645), (607, 18648), (623, 18699), (649, 18756), (654, 18774), (664, 18798), (689, 18858), (703, 18885), (718, 18948), (727, 18993), (756, 19131), (804, 19221), (810, 19230), (830, 19254), (845, 19341), (850, 19371), (866, 19455),

Gene: Licorice\_26 Start: 17366, Stop: 19837, Start Num: 111

Candidate Starts for Licorice\_26:

(Start: 111 @17366 has 200 MA's), (125, 17405), (144, 17468), (Start: 155 @17498 has 22 MA's), (162, 17519), (176, 17540), (181, 17552), (194, 17570), (243, 17594), (262, 17660), (271, 17687), (315, 17858), (321, 17891), (339, 17957), (389, 18212), (393, 18233), (398, 18260), (410, 18299), (432, 18356), (451, 18386), (476, 18419), (500, 18455), (555, 18548), (564, 18569), (592, 18626), (644, 18746), (659, 18782), (671, 18812), (682, 18848), (707, 18914), (710, 18935), (721, 18977), (741, 19076), (773, 19217), (784, 19238), (842, 19469), (855, 19550), (875, 19661), (888, 19748), (895, 19787), (899, 19817),

Gene: LilBib\_25 Start: 17203, Stop: 20028, Start Num: 111

Candidate Starts for LilBib\_25:

(Start: 111 @17203 has 200 MA's), (132, 17275), (257, 17518), (263, 17533), (278, 17578), (305, 17698), (310, 17716), (317, 17764), (326, 17809), (339, 17854), (340, 17857), (348, 17905), (386, 18079), (393, 18106), (413, 18190), (428, 18247), (435, 18265), (453, 18310), (469, 18346), (486, 18406), (503, 18454), (518, 18517), (519, 18520), (551, 18613), (562, 18637), (573, 18673), (583, 18700), (589, 18712), (597, 18730), (602, 18745), (622, 18808), (669, 18937), (684, 18982), (694, 19015), (700, 19027), (729, 19156), (747, 19252), (764, 19339), (765, 19342), (770, 19360), (825, 19564), (855, 19741), (875, 19852), (888, 19939), (895, 19978), (897, 19993),

Gene: LilTurb\_28 Start: 17115, Stop: 19658, Start Num: 107

Candidate Starts for LilTurb\_28:

(Start: 107 @17115 has 89 MA's), (172, 17295), (173, 17298), (247, 17466), (249, 17472), (256, 17493), (258, 17502), (264, 17511), (268, 17523), (282, 17568), (286, 17589), (299, 17631), (312, 17682), (321, 17727), (322, 17730), (325, 17748), (337, 17781), (339, 17793), (341, 17802), (344, 17823), (345, 17826), (383, 18012), (393, 18054), (394, 18063), (396, 18072), (410, 18129), (427, 18195), (440, 18234), (479, 18327), (488, 18363), (507, 18420), (529, 18486), (538, 18519), (544,

18534), (546, 18540), (552, 18549), (559, 18564), (568, 18585), (575, 18606), (585, 18627), (586, 18630), (606, 18648), (607, 18651), (620, 18690), (623, 18702), (649, 18759), (654, 18777), (664, 18801), (689, 18861), (703, 18888), (718, 18951), (727, 18996), (756, 19134), (804, 19224), (810, 19233), (830, 19257), (845, 19344), (850, 19374), (866, 19458),

Gene: Lilbunny\_29 Start: 16715, Stop: 18931, Start Num: 116

Candidate Starts for Lilbunny\_29:

(93, 16670), (Start: 116 @16715 has 41 MA's), (160, 16826), (223, 16982), (270, 17129), (274, 17141), (314, 17288), (315, 17291), (321, 17324), (343, 17414), (357, 17483), (376, 17558), (412, 17726), (590, 17984), (618, 18029), (680, 18137), (710, 18200), (721, 18242), (745, 18341), (749, 18362), (756, 18404), (791, 18455), (805, 18482), (839, 18563), (850, 18653),

Gene: Lilith\_27 Start: 15972, Stop: 18998, Start Num: 38

Candidate Starts for Lilith\_27:

(30, 15918), (Start: 38 @15972 has 82 MA's), (55, 16086), (68, 16152), (69, 16155), (73, 16164), (86, 16200), (96, 16251), (124, 16323), (Start: 143 @16395 has 5 MA's), (190, 16515), (193, 16518), (214, 16587), (226, 16632), (258, 16725), (264, 16734), (270, 16752), (279, 16779), (295, 16842), (299, 16854), (308, 16887), (312, 16905), (325, 16971), (327, 16974), (329, 16980), (334, 16995), (337, 17004), (339, 17016), (341, 17025), (359, 17118), (383, 17235), (384, 17238), (391, 17265), (393, 17277), (405, 17331), (410, 17352), (427, 17418), (436, 17445), (479, 17550), (491, 17598), (507, 17643), (525, 17691), (535, 17733), (538, 17742), (552, 17772), (553, 17775), (559, 17787), (582, 17844), (585, 17850), (606, 17871), (607, 17874), (658, 18012), (664, 18024), (689, 18084), (710, 18144), (718, 18174), (719, 18177), (721, 18186), (741, 18279), (757, 18369), (776, 18435), (780, 18447), (800, 18489), (817, 18552), (836, 18609), (844, 18678), (851, 18714), (867, 18795), (892, 18930),

Gene: Lilleskat\_25 Start: 17590, Stop: 20499, Start Num: 52

Candidate Starts for Lilleskat\_25:

(Start: 52 @17590 has 33 MA's), (55, 17602), (68, 17662), (130, 17884), (153, 17947), (165, 17989), (193, 18046), (207, 18085), (260, 18256), (264, 18262), (269, 18277), (294, 18367), (295, 18370), (299, 18382), (311, 18424), (321, 18478), (341, 18553), (344, 18574), (345, 18577), (348, 18595), (361, 18658), (379, 18724), (383, 18763), (390, 18790), (393, 18805), (399, 18835), (405, 18859), (410, 18880), (427, 18946), (440, 18985), (468, 19051), (479, 19078), (486, 19105), (523, 19216), (546, 19291), (568, 19336), (575, 19357), (585, 19378), (586, 19381), (606, 19399), (607, 19402), (615, 19429), (624, 19456), (649, 19510), (718, 19702), (722, 19717), (727, 19747), (738, 19798), (756, 19885), (758, 19894), (771, 19945), (800, 20008), (805, 20029), (816, 20065), (830, 20101), (831, 20107), (844, 20185), (849, 20212), (860, 20272), (875, 20341), (879, 20371), (885, 20398), (894, 20437), (900, 20479),

Gene: LittleB\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for LittleB\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (649, 17457), (670, 17514), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: LittleCherry\_22 Start: 15245, Stop: 18583, Start Num: 1

Candidate Starts for LittleCherry\_22:

(Start: 1 @15245 has 30 MA's), (Start: 34 @15683 has 1 MA's), (120, 15995), (Start: 141 @16073 has 1 MA's), (154, 16103), (173, 16160), (211, 16244), (227, 16307), (229, 16313), (269, 16433), (294, 16523), (295, 16526), (315, 16601), (324, 16646), (329, 16664), (341, 16709), (344, 16730), (384,



16922), (417, 17060), (429, 17108), (459, 17186), (516, 17312), (522, 17324), (532, 17348), (563, 17411), (639, 17603), (652, 17633), (660, 17657), (664, 17669), (683, 17732), (710, 17855), (715, 17876), (721, 17897), (736, 17975), (745, 17996), (752, 18038), (756, 18059), (808, 18146), (829, 18176), (842, 18239), (845, 18257), (859, 18338), (863, 18350), (865, 18362), (867, 18371), (878, 18425), (891, 18509), (896, 18548),

Gene: LittleGuy\_25 Start: 15828, Stop: 18428, Start Num: 109

Candidate Starts for LittleGuy\_25:

(Start: 109 @15828 has 113 MA's), (Start: 155 @15969 has 22 MA's), (Start: 163 @15987 has 10 MA's), (240, 16194), (252, 16233), (258, 16263), (291, 16380), (299, 16407), (315, 16470), (329, 16533), (339, 16569), (341, 16578), (348, 16620), (420, 16911), (457, 16971), (481, 17022), (499, 17067), (542, 17178), (545, 17184), (557, 17205), (626, 17352), (636, 17373), (647, 17397), (670, 17457), (673, 17463), (674, 17466), (700, 17517), (710, 17565), (726, 17631), (757, 17796), (762, 17814), (807, 17940), (859, 18192), (860, 18195), (863, 18204), (875, 18264), (883, 18309), (892, 18360), (899, 18408),

Gene: LochMonster\_25 Start: 16001, Stop: 18460, Start Num: 155

Candidate Starts for LochMonster\_25:

(Start: 109 @15860 has 113 MA's), (Start: 155 @16001 has 22 MA's), (Start: 163 @16019 has 10 MA's), (222, 16175), (240, 16226), (252, 16265), (258, 16295), (291, 16412), (299, 16439), (315, 16502), (329, 16565), (341, 16610), (348, 16652), (365, 16736), (457, 17003), (481, 17054), (499, 17099), (530, 17177), (542, 17210), (545, 17216), (608, 17330), (626, 17384), (647, 17429), (670, 17489), (700, 17549), (726, 17663), (757, 17828), (762, 17846), (807, 17972), (859, 18224), (860, 18227), (863, 18236), (874, 18293), (875, 18296), (883, 18341), (892, 18392), (899, 18440),

Gene: Lockley\_24 Start: 16291, Stop: 18771, Start Num: 111

Candidate Starts for Lockley\_24:

(Start: 111 @16291 has 200 MA's), (125, 16330), (144, 16393), (Start: 155 @16423 has 22 MA's), (176, 16465), (285, 16672), (291, 16690), (315, 16780), (329, 16843), (337, 16867), (339, 16879), (348, 16930), (460, 17314), (526, 17416), (537, 17455), (560, 17482), (569, 17506), (630, 17635), (671, 17734), (707, 17836), (710, 17857), (721, 17899), (741, 17998), (753, 18061), (818, 18280), (827, 18313), (855, 18484), (875, 18595), (888, 18682), (895, 18721), (897, 18736),

Gene: Lökk\_29 Start: 18268, Stop: 20796, Start Num: 107

Candidate Starts for Lökk\_29:

(Start: 107 @18268 has 89 MA's), (144, 18379), (149, 18391), (172, 18448), (173, 18451), (256, 18640), (258, 18649), (279, 18703), (311, 18820), (312, 18829), (316, 18850), (321, 18874), (339, 18940), (341, 18949), (344, 18970), (345, 18973), (383, 19159), (393, 19201), (410, 19276), (427, 19342), (440, 19381), (479, 19474), (507, 19567), (538, 19666), (546, 19687), (568, 19732), (606, 19795), (620, 19837), (628, 19864), (658, 19936), (664, 19948), (701, 20032), (703, 20035), (718, 20098), (727, 20143), (730, 20155), (749, 20239), (761, 20293), (810, 20377), (830, 20401), (850, 20518), (866, 20596),

Gene: LoneWolf\_27 Start: 17261, Stop: 20305, Start Num: 34

Candidate Starts for LoneWolf\_27:

(8, 16988), (Start: 34 @17261 has 1 MA's), (Start: 52 @17390 has 33 MA's), (55, 17402), (63, 17438), (85, 17510), (94, 17558), (165, 17789), (190, 17843), (193, 17846), (230, 17972), (256, 18047), (258, 18056), (266, 18071), (279, 18110), (299, 18185), (303, 18206), (309, 18224), (312, 18236), (315, 18248), (321, 18281), (322, 18284), (325, 18302), (327, 18305), (334, 18326), (339, 18347), (341, 18356), (342, 18368), (352, 18416), (356, 18437), (361, 18461), (383, 18566), (384, 18569), (405, 18662), (410, 18683), (412, 18692), (414, 18704), (427, 18749), (440, 18788), (482, 18890), (507, 18974), (511, 18986), (515, 19007), (523, 19019), (546, 19094), (552, 19103), (568, 19139), (575, 19160), (585, 19181), (586, 19184), (606, 19202), (607, 19205), (615, 19232), (624, 19259), (718,

19505), (725, 19538), (737, 19598), (738, 19601), (752, 19667), (757, 19691), (762, 19709), (767, 19730), (800, 19811), (805, 19832), (822, 19886), (831, 19913), (844, 19991), (851, 20027), (859, 20075), (860, 20078), (864, 20090), (866, 20102), (879, 20177), (889, 20213), (894, 20243), (900, 20285),

Gene: Looper\_29 Start: 15923, Stop: 18109, Start Num: 179

Candidate Starts for Looper\_29:

(Start: 115 @15746 has 1 MA's), (Start: 117 @15755 has 5 MA's), (Start: 179 @15923 has 15 MA's), (269, 16163), (270, 16169), (290, 16238), (306, 16295), (341, 16439), (348, 16481), (358, 16529), (359, 16532), (382, 16643), (385, 16661), (412, 16766), (425, 16814), (484, 16919), (513, 16979), (536, 17033), (555, 17069), (569, 17093), (577, 17102), (608, 17165), (616, 17186), (622, 17201), (629, 17225), (635, 17237), (659, 17291), (667, 17312), (680, 17342), (732, 17513), (734, 17534), (756, 17618), (867, 17921), (892, 18044), (894, 18056),

Gene: Lopton\_25 Start: 17715, Stop: 20195, Start Num: 111

Candidate Starts for Lopton\_25:

(Start: 111 @17715 has 200 MA's), (125, 17754), (144, 17817), (Start: 155 @17847 has 22 MA's), (176, 17889), (285, 18096), (291, 18114), (315, 18204), (329, 18267), (337, 18291), (339, 18303), (348, 18354), (460, 18738), (526, 18840), (537, 18879), (555, 18894), (560, 18906), (569, 18930), (630, 19059), (671, 19158), (707, 19260), (710, 19281), (721, 19323), (741, 19422), (753, 19485), (777, 19575), (818, 19704), (827, 19737), (875, 20019), (885, 20085), (888, 20106), (895, 20145), (897, 20160),

Gene: Lorenzo\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Lorenzo\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Loser\_29 Start: 18399, Stop: 20897, Start Num: 107

Candidate Starts for Loser\_29:

(88, 18336), (Start: 107 @18399 has 89 MA's), (Start: 152 @18528 has 5 MA's), (167, 18567), (188, 18612), (249, 18714), (256, 18735), (264, 18753), (276, 18789), (299, 18873), (312, 18924), (327, 18993), (329, 18999), (334, 19014), (337, 19023), (339, 19035), (341, 19044), (383, 19254), (390, 19281), (393, 19296), (405, 19350), (410, 19371), (427, 19437), (440, 19476), (465, 19539), (507, 19662), (512, 19677), (538, 19761), (544, 19776), (552, 19791), (555, 19797), (559, 19806), (568, 19827), (575, 19848), (586, 19872), (607, 19893), (608, 19899), (620, 19932), (624, 19947), (628, 19959), (644, 19989), (649, 20001), (658, 20031), (664, 20043), (703, 20130), (710, 20163), (718, 20193), (725, 20226), (727, 20238), (801, 20457), (804, 20466), (810, 20475), (845, 20586), (850, 20616), (866, 20697), (894, 20838),

Gene: Louie6\_27 Start: 16066, Stop: 19092, Start Num: 38

Candidate Starts for Louie6\_27:

(30, 16012), (Start: 38 @16066 has 82 MA's), (55, 16180), (68, 16246), (69, 16249), (73, 16258), (86, 16294), (96, 16345), (124, 16417), (Start: 143 @16489 has 5 MA's), (190, 16609), (193, 16612), (214, 16681), (226, 16726), (258, 16819), (264, 16828), (270, 16846), (279, 16873), (295, 16936), (299, 16948), (308, 16981), (312, 16999), (325, 17065), (327, 17068), (329, 17074), (334, 17089), (337, 17098), (339, 17110), (341, 17119), (355, 17197), (359, 17212), (383, 17329), (384, 17332), (391, 17359), (393, 17371), (405, 17425), (410, 17446), (427, 17512), (440, 17551), (479, 17644), (491, 17692), (507, 17737), (525, 17785), (535, 17827), (538, 17836), (552, 17866), (553, 17869), (559,

17881), (582, 17938), (585, 17944), (606, 17965), (607, 17968), (658, 18106), (664, 18118), (689, 18178), (709, 18235), (741, 18373), (744, 18394), (749, 18418), (757, 18463), (762, 18481), (776, 18529), (780, 18541), (800, 18583), (817, 18646), (836, 18703), (844, 18772), (851, 18808), (867, 18889), (892, 19024),

Gene: Luchador\_27 Start: 16953, Stop: 19361, Start Num: 143

Candidate Starts for Luchador\_27:

(Start: 143 @16953 has 5 MA's), (Start: 152 @16971 has 5 MA's), (161, 17004), (207, 17106), (220, 17148), (236, 17190), (240, 17202), (274, 17316), (285, 17370), (299, 17415), (315, 17478), (321, 17511), (339, 17577), (344, 17607), (392, 17832), (482, 18030), (485, 18045), (500, 18078), (573, 18264), (644, 18420), (693, 18561), (709, 18621), (718, 18654), (721, 18666), (727, 18699), (729, 18708), (751, 18822), (753, 18840), (756, 18852), (765, 18876), (801, 18930), (804, 18942), (843, 19047), (866, 19158), (879, 19233), (894, 19299), (899, 19335),

Gene: Lucivia\_26 Start: 17212, Stop: 19758, Start Num: 112

Candidate Starts for Lucivia\_26:

(Start: 112 @17212 has 30 MA's), (Start: 118 @17230 has 2 MA's), (187, 17404), (197, 17413), (223, 17488), (252, 17542), (267, 17596), (271, 17611), (272, 17614), (279, 17632), (295, 17695), (299, 17707), (315, 17770), (329, 17833), (334, 17848), (337, 17857), (341, 17878), (345, 17902), (348, 17917), (367, 18004), (369, 18007), (374, 18022), (378, 18043), (380, 18055), (389, 18121), (404, 18193), (412, 18217), (437, 18298), (441, 18307), (445, 18319), (467, 18361), (492, 18418), (513, 18472), (549, 18580), (567, 18619), (618, 18760), (656, 18856), (661, 18877), (675, 18910), (686, 18943), (687, 18946), (709, 19030), (721, 19075), (722, 19078), (746, 19192), (752, 19225), (791, 19297), (808, 19333), (839, 19405), (850, 19483), (860, 19537), (866, 19561), (889, 19672),

Gene: Lucyedi\_27 Start: 16773, Stop: 19835, Start Num: 5

Candidate Starts for Lucyedi\_27:

(Start: 5 @16773 has 3 MA's), (16, 16947), (29, 17064), (57, 17241), (100, 17397), (108, 17403), (150, 17505), (195, 17601), (227, 17709), (229, 17715), (270, 17829), (289, 17895), (297, 17922), (315, 17991), (321, 18024), (322, 18027), (342, 18114), (343, 18117), (359, 18195), (375, 18255), (469, 18549), (495, 18579), (499, 18582), (568, 18735), (641, 18912), (646, 18924), (710, 19119), (715, 19140), (734, 19233), (745, 19260), (749, 19281), (752, 19302), (850, 19560), (861, 19617), (883, 19728),

Gene: LugYA\_29 Start: 15979, Stop: 19005, Start Num: 38

Candidate Starts for LugYA\_29:

(30, 15925), (Start: 38 @15979 has 82 MA's), (55, 16093), (68, 16159), (69, 16162), (73, 16171), (86, 16207), (96, 16258), (124, 16330), (Start: 143 @16402 has 5 MA's), (190, 16522), (193, 16525), (214, 16594), (226, 16639), (258, 16732), (264, 16741), (270, 16759), (279, 16786), (295, 16849), (299, 16861), (308, 16894), (312, 16912), (325, 16978), (327, 16981), (329, 16987), (334, 17002), (337, 17011), (339, 17023), (341, 17032), (355, 17110), (359, 17125), (383, 17242), (384, 17245), (391, 17272), (393, 17284), (405, 17338), (410, 17359), (427, 17425), (440, 17464), (479, 17557), (491, 17605), (507, 17650), (525, 17698), (535, 17740), (538, 17749), (552, 17779), (553, 17782), (559, 17794), (582, 17851), (585, 17857), (606, 17878), (607, 17881), (658, 18019), (664, 18031), (689, 18091), (709, 18148), (741, 18286), (744, 18307), (749, 18331), (757, 18376), (762, 18394), (776, 18442), (780, 18454), (800, 18496), (817, 18559), (836, 18616), (844, 18685), (851, 18721), (867, 18802), (892, 18937),

Gene: Lunsford\_26 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for Lunsford\_26:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530,

17199), (542, 17232), (545, 17238), (626, 17406), (636, 17427), (647, 17451), (673, 17517), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: MA5\_25 Start: 15111, Stop: 18149, Start Num: 37

Candidate Starts for MA5\_25:

(Start: 37 @15111 has 32 MA's), (66, 15285), (81, 15330), (Start: 143 @15540 has 5 MA's), (193, 15663), (258, 15870), (279, 15924), (299, 15999), (308, 16032), (312, 16050), (315, 16062), (332, 16128), (339, 16161), (341, 16170), (348, 16212), (359, 16263), (383, 16380), (393, 16422), (405, 16476), (410, 16497), (427, 16563), (436, 16590), (491, 16743), (512, 16803), (523, 16833), (535, 16878), (538, 16887), (552, 16917), (559, 16932), (568, 16953), (575, 16974), (578, 16977), (582, 16989), (606, 17016), (607, 17019), (613, 17040), (637, 17103), (664, 17169), (689, 17229), (706, 17268), (718, 17319), (719, 17322), (721, 17331), (726, 17355), (741, 17424), (744, 17445), (757, 17514), (762, 17532), (776, 17580), (780, 17592), (800, 17634), (803, 17646), (816, 17694), (851, 17865), (867, 17946), (892, 18081), (894, 18093), (899, 18129),

Gene: MK4\_25 Start: 15408, Stop: 18452, Start Num: 37

Candidate Starts for MK4\_25:

(Start: 37 @15408 has 32 MA's), (66, 15582), (69, 15594), (Start: 143 @15837 has 5 MA's), (190, 15957), (193, 15960), (261, 16182), (279, 16227), (299, 16302), (308, 16335), (312, 16353), (315, 16365), (332, 16431), (339, 16464), (341, 16473), (348, 16515), (359, 16566), (383, 16683), (393, 16725), (405, 16779), (410, 16800), (424, 16857), (427, 16866), (477, 16992), (479, 16998), (486, 17025), (507, 17091), (512, 17106), (523, 17136), (525, 17139), (538, 17190), (542, 17202), (553, 17223), (559, 17235), (568, 17256), (582, 17292), (606, 17319), (617, 17352), (621, 17364), (637, 17406), (664, 17472), (689, 17532), (706, 17571), (718, 17622), (719, 17625), (721, 17634), (726, 17658), (741, 17727), (744, 17748), (757, 17817), (762, 17835), (776, 17883), (780, 17895), (800, 17937), (803, 17949), (816, 17997), (851, 18168), (863, 18228), (867, 18249), (892, 18384), (894, 18396), (899, 18432),

Gene: MPlant7149\_23 Start: 15925, Stop: 18405, Start Num: 111

Candidate Starts for MPlant7149\_23:

(Start: 111 @15925 has 200 MA's), (125, 15964), (144, 16027), (Start: 155 @16057 has 22 MA's), (176, 16099), (285, 16306), (291, 16324), (315, 16414), (329, 16477), (337, 16501), (339, 16513), (348, 16564), (460, 16948), (526, 17050), (537, 17089), (555, 17104), (560, 17116), (569, 17140), (630, 17269), (671, 17368), (707, 17470), (710, 17491), (721, 17533), (741, 17632), (753, 17695), (777, 17785), (818, 17914), (827, 17947), (875, 18229), (885, 18295), (888, 18316), (895, 18355), (897, 18370),

Gene: MaCh\_26 Start: 17154, Stop: 19700, Start Num: 112

Candidate Starts for MaCh\_26:

(Start: 112 @17154 has 30 MA's), (Start: 118 @17172 has 2 MA's), (187, 17346), (197, 17355), (223, 17430), (252, 17484), (267, 17538), (271, 17553), (272, 17556), (279, 17574), (295, 17637), (299, 17649), (315, 17712), (329, 17775), (334, 17790), (337, 17799), (341, 17820), (345, 17844), (348, 17859), (367, 17946), (369, 17949), (374, 17964), (378, 17985), (380, 17997), (389, 18063), (404, 18135), (412, 18159), (437, 18240), (441, 18249), (445, 18261), (467, 18303), (492, 18360), (513, 18414), (549, 18522), (567, 18561), (618, 18702), (656, 18798), (661, 18819), (675, 18852), (686, 18885), (687, 18888), (709, 18972), (721, 19017), (722, 19020), (746, 19134), (752, 19167), (791, 19239), (808, 19275), (839, 19347), (850, 19425), (860, 19479), (866, 19503), (889, 19614),

Gene: Mabel\_26 Start: 17215, Stop: 19761, Start Num: 112

Candidate Starts for Mabel\_26:

(Start: 112 @17215 has 30 MA's), (Start: 118 @17233 has 2 MA's), (187, 17407), (197, 17416), (223, 17491), (252, 17545), (267, 17599), (271, 17614), (272, 17617), (279, 17635), (295, 17698), (299,

17710), (315, 17773), (329, 17836), (334, 17851), (337, 17860), (341, 17881), (345, 17905), (348, 17920), (367, 18007), (369, 18010), (374, 18025), (378, 18046), (380, 18058), (389, 18124), (404, 18196), (412, 18220), (437, 18301), (441, 18310), (445, 18322), (467, 18364), (492, 18421), (513, 18475), (549, 18583), (567, 18622), (618, 18763), (656, 18859), (661, 18880), (675, 18913), (686, 18946), (687, 18949), (709, 19033), (721, 19078), (722, 19081), (746, 19195), (752, 19228), (791, 19300), (808, 19336), (839, 19408), (850, 19486), (860, 19540), (866, 19564), (889, 19675),

Gene: MadMarie\_27 Start: 15981, Stop: 19007, Start Num: 38

Candidate Starts for MadMarie\_27:

(30, 15927), (Start: 38 @15981 has 82 MA's), (55, 16095), (68, 16161), (69, 16164), (73, 16173), (86, 16209), (96, 16260), (124, 16332), (Start: 143 @16404 has 5 MA's), (190, 16524), (193, 16527), (214, 16596), (226, 16641), (258, 16734), (264, 16743), (270, 16761), (279, 16788), (295, 16851), (299, 16863), (308, 16896), (312, 16914), (325, 16980), (327, 16983), (329, 16989), (334, 17004), (337, 17013), (339, 17025), (341, 17034), (359, 17127), (383, 17244), (384, 17247), (391, 17274), (393, 17286), (405, 17340), (410, 17361), (427, 17427), (436, 17454), (479, 17559), (491, 17607), (507, 17652), (525, 17700), (535, 17742), (538, 17751), (552, 17781), (553, 17784), (559, 17796), (582, 17853), (585, 17859), (606, 17880), (607, 17883), (658, 18021), (664, 18033), (689, 18093), (710, 18153), (718, 18183), (719, 18186), (721, 18195), (741, 18288), (757, 18378), (776, 18444), (780, 18456), (800, 18498), (817, 18561), (836, 18618), (844, 18687), (851, 18723), (867, 18804), (892, 18939),

Gene: Magnar\_24 Start: 16072, Stop: 18555, Start Num: 111

Candidate Starts for Magnar\_24:

(Start: 111 @16072 has 200 MA's), (125, 16111), (144, 16174), (Start: 155 @16204 has 22 MA's), (176, 16246), (285, 16453), (291, 16471), (315, 16561), (329, 16624), (337, 16648), (339, 16660), (348, 16711), (460, 17095), (526, 17197), (537, 17236), (560, 17263), (569, 17287), (650, 17491), (654, 17503), (659, 17518), (697, 17635), (712, 17680), (716, 17701), (717, 17704), (757, 17869), (773, 17935), (793, 17977), (842, 18187), (855, 18268), (875, 18379), (885, 18445), (888, 18466), (895, 18505), (897, 18520),

Gene: Magnito\_23 Start: 15836, Stop: 18307, Start Num: 111

Candidate Starts for Magnito\_23:

(Start: 111 @15836 has 200 MA's), (125, 15875), (144, 15938), (Start: 155 @15968 has 22 MA's), (162, 15989), (176, 16010), (181, 16022), (194, 16040), (262, 16130), (315, 16328), (321, 16361), (339, 16427), (389, 16682), (393, 16703), (398, 16730), (476, 16889), (500, 16925), (555, 17018), (564, 17039), (592, 17096), (644, 17216), (659, 17252), (671, 17282), (682, 17318), (707, 17384), (710, 17405), (741, 17546), (773, 17687), (784, 17708), (842, 17939), (855, 18020), (875, 18131), (888, 18218), (895, 18257), (899, 18287),

Gene: Mainiac\_27 Start: 15972, Stop: 18998, Start Num: 38

Candidate Starts for Mainiac\_27:

(30, 15918), (Start: 38 @15972 has 82 MA's), (55, 16086), (68, 16152), (69, 16155), (73, 16164), (86, 16200), (96, 16251), (124, 16323), (Start: 143 @16395 has 5 MA's), (190, 16515), (193, 16518), (214, 16587), (226, 16632), (258, 16725), (264, 16734), (270, 16752), (279, 16779), (295, 16842), (299, 16854), (308, 16887), (312, 16905), (325, 16971), (327, 16974), (329, 16980), (334, 16995), (337, 17004), (339, 17016), (341, 17025), (359, 17118), (383, 17235), (384, 17238), (391, 17265), (393, 17277), (405, 17331), (410, 17352), (427, 17418), (436, 17445), (479, 17550), (491, 17598), (507, 17643), (525, 17691), (535, 17733), (538, 17742), (552, 17772), (553, 17775), (559, 17787), (582, 17844), (585, 17850), (606, 17871), (607, 17874), (658, 18012), (664, 18024), (689, 18084), (710, 18144), (718, 18174), (719, 18177), (721, 18186), (741, 18279), (757, 18369), (776, 18435), (780, 18447), (800, 18489), (817, 18552), (836, 18609), (844, 18678), (851, 18714), (867, 18795), (892, 18930),

Gene: MajorMajor\_25 Start: 15528, Stop: 18041, Start Num: 107

Candidate Starts for MajorMajor\_25:

(Start: 107 @15528 has 89 MA's), (144, 15639), (170, 15705), (172, 15708), (173, 15711), (256, 15897), (258, 15906), (264, 15915), (299, 16035), (312, 16086), (323, 16143), (327, 16155), (331, 16161), (334, 16176), (339, 16197), (341, 16206), (350, 16254), (383, 16416), (391, 16446), (393, 16458), (402, 16497), (405, 16512), (410, 16533), (424, 16590), (427, 16599), (436, 16626), (477, 16725), (507, 16824), (512, 16839), (538, 16923), (546, 16944), (568, 16989), (606, 17052), (607, 17055), (623, 17106), (628, 17121), (689, 17265), (703, 17292), (718, 17355), (722, 17370), (727, 17400), (749, 17496), (765, 17562), (804, 17625), (860, 17820), (861, 17823), (866, 17844),

Gene: Makemake\_24 Start: 17552, Stop: 20023, Start Num: 111

Candidate Starts for Makemake\_24:

(Start: 111 @17552 has 200 MA's), (125, 17591), (144, 17654), (Start: 155 @17684 has 22 MA's), (162, 17705), (176, 17726), (194, 17756), (243, 17780), (262, 17846), (315, 18044), (321, 18077), (339, 18143), (389, 18398), (393, 18419), (398, 18446), (432, 18542), (451, 18572), (555, 18734), (564, 18755), (592, 18812), (644, 18932), (659, 18968), (671, 18998), (682, 19034), (707, 19100), (710, 19121), (721, 19163), (741, 19262), (773, 19403), (784, 19424), (826, 19559), (855, 19736), (875, 19847), (885, 19913), (888, 19934), (895, 19973), (897, 19988),

Gene: Malec\_27 Start: 16899, Stop: 19439, Start Num: 107

Candidate Starts for Malec\_27:

(Start: 107 @16899 has 89 MA's), (172, 17079), (247, 17244), (249, 17250), (256, 17271), (258, 17280), (279, 17334), (282, 17346), (286, 17367), (299, 17409), (316, 17481), (334, 17553), (337, 17562), (341, 17583), (344, 17604), (345, 17607), (348, 17625), (360, 17685), (368, 17712), (383, 17793), (393, 17835), (394, 17844), (396, 17853), (397, 17856), (405, 17889), (408, 17901), (410, 17910), (426, 17973), (427, 17976), (436, 18003), (440, 18015), (507, 18201), (523, 18246), (538, 18300), (542, 18312), (546, 18321), (555, 18336), (568, 18366), (578, 18390), (581, 18399), (582, 18402), (606, 18429), (610, 18444), (620, 18471), (626, 18492), (628, 18498), (664, 18582), (689, 18642), (703, 18669), (718, 18732), (756, 18915), (761, 18927), (801, 18996), (804, 19005), (810, 19014), (845, 19125), (850, 19155), (858, 19209), (866, 19239), (902, 19425),

Gene: Malinsilva\_29 Start: 15971, Stop: 18997, Start Num: 38

Candidate Starts for Malinsilva\_29:

(30, 15917), (Start: 38 @15971 has 82 MA's), (55, 16085), (68, 16151), (69, 16154), (73, 16163), (86, 16199), (96, 16250), (124, 16322), (Start: 143 @16394 has 5 MA's), (190, 16514), (193, 16517), (214, 16586), (226, 16631), (258, 16724), (264, 16733), (270, 16751), (279, 16778), (295, 16841), (299, 16853), (308, 16886), (312, 16904), (325, 16970), (327, 16973), (329, 16979), (334, 16994), (337, 17003), (339, 17015), (341, 17024), (359, 17117), (383, 17234), (384, 17237), (391, 17264), (393, 17276), (405, 17330), (410, 17351), (427, 17417), (436, 17444), (479, 17549), (491, 17597), (507, 17642), (525, 17690), (535, 17732), (538, 17741), (552, 17771), (553, 17774), (559, 17786), (582, 17843), (585, 17849), (606, 17870), (607, 17873), (658, 18011), (664, 18023), (689, 18083), (710, 18143), (718, 18173), (719, 18176), (721, 18185), (741, 18278), (757, 18368), (776, 18434), (780, 18446), (800, 18488), (817, 18551), (836, 18608), (844, 18677), (851, 18713), (867, 18794), (892, 18929),

Gene: Maminiaina\_27 Start: 17320, Stop: 20244, Start Num: 52

Candidate Starts for Maminiaina\_27:

(Start: 52 @17320 has 33 MA's), (55, 17332), (61, 17356), (63, 17368), (114, 17557), (130, 17620), (153, 17683), (165, 17725), (193, 17782), (197, 17788), (260, 17998), (264, 18004), (269, 18019), (284, 18070), (294, 18109), (299, 18124), (311, 18166), (312, 18175), (321, 18220), (327, 18244), (341, 18295), (344, 18316), (345, 18319), (348, 18337), (379, 18466), (383, 18505), (390, 18532), (393, 18547), (399, 18577), (405, 18601), (410, 18622), (427, 18688), (440, 18727), (479, 18820), (486, 18847), (507, 18913), (523, 18958), (546, 19033), (568, 19078), (575, 19099), (585, 19120),

(586, 19123), (604, 19132), (606, 19141), (607, 19144), (608, 19150), (650, 19258), (654, 19270), (685, 19336), (718, 19444), (727, 19489), (730, 19501), (737, 19537), (738, 19540), (749, 19585), (755, 19621), (758, 19636), (771, 19687), (800, 19750), (816, 19810), (831, 19852), (844, 19930), (849, 19957), (851, 19966), (860, 20017), (879, 20116), (885, 20143), (894, 20182), (900, 20224),

Gene: Manatee\_25 Start: 16575, Stop: 18575, Start Num: 111

Candidate Starts for Manatee\_25:

(Start: 111 @16575 has 200 MA's), (125, 16614), (144, 16677), (Start: 155 @16707 has 22 MA's), (162, 16728), (238, 16788), (266, 16884), (285, 16953), (289, 16965), (315, 17061), (321, 17094), (376, 17328), (482, 17616), (534, 17718), (543, 17730), (592, 17808), (611, 17850), (639, 17904), (644, 17916), (651, 17931), (657, 17949), (663, 17961), (688, 18039), (699, 18069), (723, 18165), (769, 18375), (820, 18525),

Gene: Manu\_28 Start: 16057, Stop: 19083, Start Num: 38

Candidate Starts for Manu\_28:

(30, 16003), (Start: 38 @16057 has 82 MA's), (55, 16171), (68, 16237), (69, 16240), (73, 16249), (86, 16285), (96, 16336), (124, 16408), (Start: 143 @16480 has 5 MA's), (190, 16600), (193, 16603), (214, 16672), (226, 16717), (258, 16810), (264, 16819), (279, 16864), (288, 16903), (295, 16927), (299, 16939), (308, 16972), (312, 16990), (316, 17011), (327, 17059), (329, 17065), (334, 17080), (337, 17089), (339, 17101), (341, 17110), (359, 17203), (380, 17290), (383, 17320), (384, 17323), (391, 17350), (393, 17362), (405, 17416), (410, 17437), (416, 17467), (427, 17503), (477, 17629), (491, 17683), (507, 17728), (525, 17776), (535, 17818), (538, 17827), (552, 17857), (582, 17929), (585, 17935), (606, 17956), (607, 17959), (610, 17971), (656, 18088), (658, 18097), (689, 18169), (690, 18172), (706, 18208), (718, 18259), (719, 18262), (721, 18271), (757, 18454), (776, 18520), (780, 18532), (800, 18574), (817, 18637), (836, 18694), (844, 18763), (851, 18799), (867, 18880), (892, 19015), (894, 19027),

Gene: MarQuardt\_27 Start: 15980, Stop: 19006, Start Num: 38

Candidate Starts for MarQuardt\_27:

(30, 15926), (Start: 38 @15980 has 82 MA's), (55, 16094), (68, 16160), (69, 16163), (73, 16172), (86, 16208), (96, 16259), (124, 16331), (Start: 143 @16403 has 5 MA's), (190, 16523), (193, 16526), (214, 16595), (226, 16640), (258, 16733), (264, 16742), (270, 16760), (279, 16787), (295, 16850), (299, 16862), (308, 16895), (312, 16913), (325, 16979), (327, 16982), (329, 16988), (334, 17003), (337, 17012), (339, 17024), (341, 17033), (355, 17111), (359, 17126), (383, 17243), (384, 17246), (391, 17273), (393, 17285), (405, 17339), (410, 17360), (427, 17426), (440, 17465), (479, 17558), (491, 17606), (507, 17651), (525, 17699), (535, 17741), (538, 17750), (552, 17780), (553, 17783), (559, 17795), (582, 17852), (585, 17858), (606, 17879), (607, 17882), (658, 18020), (664, 18032), (689, 18092), (709, 18149), (741, 18287), (744, 18308), (749, 18332), (757, 18377), (762, 18395), (776, 18443), (780, 18455), (800, 18497), (817, 18560), (836, 18617), (844, 18686), (851, 18722), (867, 18803), (892, 18938),

Gene: Marcell\_24 Start: 16585, Stop: 19065, Start Num: 111

Candidate Starts for Marcell\_24:

(Start: 111 @16585 has 200 MA's), (125, 16624), (144, 16687), (Start: 155 @16717 has 22 MA's), (176, 16759), (285, 16966), (291, 16984), (315, 17074), (329, 17137), (337, 17161), (339, 17173), (348, 17224), (460, 17608), (526, 17710), (537, 17749), (560, 17776), (569, 17800), (671, 18028), (707, 18130), (710, 18151), (721, 18193), (741, 18292), (753, 18355), (818, 18574), (827, 18607), (855, 18778), (875, 18889), (888, 18976), (895, 19015), (897, 19030),

Gene: Marchesa\_25 Start: 15546, Stop: 18584, Start Num: 37

Candidate Starts for Marchesa\_25:

(Start: 37 @15546 has 32 MA's), (66, 15720), (69, 15732), (81, 15765), (Start: 143 @15975 has 5 MA's), (193, 16098), (202, 16119), (258, 16305), (279, 16359), (295, 16422), (299, 16434), (308,

16467), (312, 16485), (327, 16554), (329, 16560), (334, 16575), (337, 16584), (339, 16596), (341, 16605), (359, 16698), (383, 16815), (384, 16818), (391, 16845), (393, 16857), (405, 16911), (410, 16932), (414, 16953), (427, 16998), (440, 17037), (491, 17178), (507, 17223), (512, 17238), (535, 17313), (538, 17322), (552, 17352), (559, 17367), (560, 17370), (568, 17388), (575, 17409), (578, 17412), (585, 17430), (606, 17451), (607, 17454), (637, 17538), (664, 17604), (673, 17625), (689, 17664), (706, 17703), (718, 17754), (719, 17757), (721, 17766), (726, 17790), (741, 17859), (744, 17880), (757, 17949), (762, 17967), (776, 18015), (780, 18027), (800, 18069), (803, 18081), (816, 18129), (851, 18300), (855, 18330), (863, 18360), (867, 18381), (892, 18516), (894, 18528), (899, 18564),

Gene: Marchy\_23 Start: 15902, Stop: 18370, Start Num: 111

Candidate Starts for Marchy\_23:

(Start: 111 @15902 has 200 MA's), (Start: 117 @15917 has 5 MA's), (Start: 155 @16031 has 22 MA's), (162, 16052), (176, 16073), (194, 16103), (262, 16193), (315, 16391), (321, 16424), (339, 16490), (389, 16745), (393, 16766), (398, 16793), (476, 16952), (500, 16988), (555, 17081), (564, 17102), (569, 17117), (579, 17138), (580, 17141), (615, 17210), (627, 17246), (644, 17279), (659, 17315), (671, 17345), (682, 17381), (707, 17447), (710, 17468), (741, 17609), (773, 17750), (784, 17771), (826, 17906), (855, 18083), (875, 18194), (885, 18260), (888, 18281), (895, 18320), (899, 18350),

Gene: Marge\_25 Start: 16805, Stop: 19465, Start Num: 111

Candidate Starts for Marge\_25:

(Start: 111 @16805 has 200 MA's), (125, 16844), (144, 16907), (145, 16913), (Start: 155 @16937 has 22 MA's), (176, 16979), (315, 17288), (329, 17351), (341, 17396), (346, 17420), (361, 17495), (364, 17507), (451, 17828), (565, 18158), (584, 18209), (598, 18236), (671, 18440), (708, 18554), (710, 18563), (715, 18584), (721, 18605), (741, 18704), (750, 18746), (751, 18749), (788, 18878), (815, 18962), (827, 19007), (875, 19289), (888, 19376), (895, 19415), (897, 19430),

Gene: Margo\_26 Start: 16069, Stop: 19107, Start Num: 37

Candidate Starts for Margo\_26:

(Start: 37 @16069 has 32 MA's), (66, 16243), (69, 16255), (81, 16288), (Start: 143 @16495 has 5 MA's), (Start: 152 @16516 has 5 MA's), (190, 16615), (193, 16618), (258, 16828), (264, 16837), (268, 16849), (279, 16882), (295, 16945), (299, 16957), (308, 16990), (312, 17008), (316, 17029), (327, 17077), (329, 17083), (334, 17098), (337, 17107), (339, 17119), (341, 17128), (359, 17221), (383, 17338), (384, 17341), (391, 17368), (393, 17380), (405, 17434), (410, 17455), (427, 17521), (440, 17560), (491, 17701), (507, 17746), (535, 17836), (538, 17845), (552, 17875), (575, 17932), (582, 17947), (606, 17974), (607, 17977), (612, 17995), (656, 18106), (689, 18187), (709, 18244), (720, 18286), (741, 18382), (744, 18403), (749, 18427), (757, 18472), (762, 18490), (776, 18538), (780, 18550), (800, 18592), (803, 18604), (816, 18652), (851, 18823), (863, 18883), (865, 18895), (872, 18922), (875, 18943), (892, 19039), (899, 19087),

Gene: Marie\_27 Start: 15978, Stop: 19004, Start Num: 38

Candidate Starts for Marie\_27:

(30, 15924), (Start: 38 @15978 has 82 MA's), (55, 16092), (68, 16158), (69, 16161), (73, 16170), (86, 16206), (96, 16257), (124, 16329), (Start: 143 @16401 has 5 MA's), (190, 16521), (193, 16524), (214, 16593), (226, 16638), (258, 16731), (264, 16740), (270, 16758), (279, 16785), (295, 16848), (299, 16860), (308, 16893), (312, 16911), (325, 16977), (327, 16980), (329, 16986), (334, 17001), (337, 17010), (339, 17022), (341, 17031), (355, 17109), (359, 17124), (383, 17241), (384, 17244), (391, 17271), (393, 17283), (405, 17337), (410, 17358), (427, 17424), (440, 17463), (479, 17556), (491, 17604), (507, 17649), (525, 17697), (535, 17739), (538, 17748), (552, 17778), (553, 17781), (559, 17793), (582, 17850), (585, 17856), (606, 17877), (607, 17880), (658, 18018), (664, 18030), (689, 18090), (709, 18147), (741, 18285), (744, 18306), (749, 18330), (757, 18375), (762, 18393), (776, 18441), (780, 18453), (800, 18495), (817, 18558), (836, 18615), (844, 18684), (851, 18720), (867,



18801), (892, 18936),

Gene: Marius\_28 Start: 16057, Stop: 19083, Start Num: 38

Candidate Starts for Marius\_28:

(30, 16003), (Start: 38 @16057 has 82 MA's), (55, 16171), (68, 16237), (69, 16240), (73, 16249), (86, 16285), (96, 16336), (124, 16408), (Start: 143 @16480 has 5 MA's), (190, 16600), (193, 16603), (214, 16672), (226, 16717), (258, 16810), (264, 16819), (279, 16864), (288, 16903), (295, 16927), (299, 16939), (308, 16972), (312, 16990), (316, 17011), (327, 17059), (329, 17065), (334, 17080), (337, 17089), (339, 17101), (341, 17110), (359, 17203), (380, 17290), (383, 17320), (384, 17323), (391, 17350), (393, 17362), (405, 17416), (410, 17437), (416, 17467), (427, 17503), (477, 17629), (491, 17683), (507, 17728), (525, 17776), (535, 17818), (538, 17827), (552, 17857), (582, 17929), (585, 17935), (606, 17956), (607, 17959), (610, 17971), (656, 18088), (658, 18097), (689, 18169), (690, 18172), (706, 18208), (718, 18259), (719, 18262), (721, 18271), (757, 18454), (776, 18520), (780, 18532), (800, 18574), (817, 18637), (836, 18694), (844, 18763), (851, 18799), (867, 18880), (892, 19015), (894, 19027),

Gene: Maroc7\_23 Start: 16098, Stop: 18569, Start Num: 111

Candidate Starts for Maroc7\_23:

(Start: 111 @16098 has 200 MA's), (125, 16137), (144, 16200), (Start: 155 @16230 has 22 MA's), (162, 16251), (176, 16272), (181, 16284), (194, 16302), (262, 16392), (315, 16590), (321, 16623), (339, 16689), (389, 16944), (393, 16965), (398, 16992), (476, 17151), (500, 17187), (555, 17280), (564, 17301), (592, 17358), (644, 17478), (659, 17514), (671, 17544), (682, 17580), (707, 17646), (710, 17667), (741, 17808), (773, 17949), (784, 17970), (826, 18105), (855, 18282), (875, 18393), (888, 18480), (895, 18519), (899, 18549),

Gene: Marsha\_24 Start: 16857, Stop: 19691, Start Num: 111

Candidate Starts for Marsha\_24:

(Start: 111 @16857 has 200 MA's), (132, 16929), (257, 17172), (263, 17187), (278, 17232), (305, 17352), (310, 17370), (317, 17418), (326, 17463), (339, 17508), (340, 17511), (348, 17559), (386, 17742), (393, 17769), (413, 17853), (428, 17910), (435, 17928), (453, 17973), (469, 18009), (486, 18069), (503, 18117), (518, 18180), (519, 18183), (562, 18300), (573, 18336), (583, 18363), (589, 18375), (597, 18393), (602, 18408), (622, 18471), (669, 18600), (684, 18645), (694, 18678), (700, 18690), (729, 18819), (747, 18915), (764, 19002), (765, 19005), (770, 19023), (825, 19227), (855, 19404), (875, 19515), (888, 19602), (895, 19641), (899, 19671),

Gene: MaryBeth\_24 Start: 16506, Stop: 18977, Start Num: 111

Candidate Starts for MaryBeth\_24:

(Start: 111 @16506 has 200 MA's), (125, 16545), (144, 16608), (Start: 155 @16638 has 22 MA's), (162, 16659), (176, 16680), (181, 16692), (194, 16710), (262, 16800), (315, 16998), (321, 17031), (339, 17097), (389, 17352), (393, 17373), (398, 17400), (476, 17559), (500, 17595), (555, 17688), (564, 17709), (592, 17766), (644, 17886), (659, 17922), (671, 17952), (682, 17988), (707, 18054), (710, 18075), (741, 18216), (773, 18357), (784, 18378), (826, 18513), (855, 18690), (875, 18801), (888, 18888), (895, 18927), (897, 18942),

Gene: MarysWell\_21 Start: 15213, Stop: 18551, Start Num: 1

Candidate Starts for MarysWell\_21:

(Start: 1 @15213 has 30 MA's), (Start: 34 @15651 has 1 MA's), (120, 15963), (129, 16005), (Start: 141 @16041 has 1 MA's), (154, 16071), (173, 16128), (211, 16212), (227, 16275), (229, 16281), (263, 16383), (269, 16401), (295, 16494), (315, 16569), (324, 16614), (329, 16632), (341, 16677), (344, 16698), (384, 16890), (397, 16950), (417, 17028), (429, 17076), (459, 17154), (516, 17280), (522, 17292), (532, 17316), (563, 17379), (639, 17571), (652, 17601), (660, 17625), (664, 17637), (683, 17700), (710, 17823), (715, 17844), (721, 17865), (736, 17943), (745, 17964), (752, 18006), (756, 18027), (781, 18063), (808, 18114), (829, 18144), (842, 18207), (845, 18225), (859, 18306), (863,

18318), (865, 18330), (867, 18339), (878, 18393), (891, 18477), (896, 18516),

Gene: Maverick\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Maverick\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Maxo\_25 Start: 15883, Stop: 18483, Start Num: 109

Candidate Starts for Maxo\_25:

(Start: 109 @15883 has 113 MA's), (Start: 155 @16024 has 22 MA's), (Start: 163 @16042 has 10 MA's), (240, 16249), (252, 16288), (258, 16318), (291, 16435), (299, 16462), (315, 16525), (329, 16588), (341, 16633), (348, 16675), (365, 16759), (457, 17026), (481, 17077), (499, 17122), (530, 17200), (545, 17239), (557, 17260), (626, 17407), (636, 17428), (647, 17452), (673, 17518), (700, 17572), (710, 17620), (726, 17686), (757, 17851), (762, 17869), (807, 17995), (859, 18247), (860, 18250), (863, 18259), (875, 18319), (892, 18415), (899, 18463),

Gene: Mazhar510\_25 Start: 15886, Stop: 18486, Start Num: 109

Candidate Starts for Mazhar510\_25:

(Start: 109 @15886 has 113 MA's), (Start: 155 @16027 has 22 MA's), (Start: 163 @16045 has 10 MA's), (222, 16201), (240, 16252), (252, 16291), (258, 16321), (291, 16438), (299, 16465), (315, 16528), (329, 16591), (341, 16636), (348, 16678), (365, 16762), (457, 17029), (481, 17080), (499, 17125), (530, 17203), (542, 17236), (545, 17242), (608, 17356), (626, 17410), (647, 17455), (670, 17515), (700, 17575), (726, 17689), (757, 17854), (762, 17872), (807, 17998), (859, 18250), (860, 18253), (863, 18262), (875, 18322), (892, 18418), (899, 18466),

Gene: McFly\_29 Start: 16735, Stop: 18939, Start Num: 116

Candidate Starts for McFly\_29:

(60, 16576), (93, 16690), (Start: 116 @16735 has 41 MA's), (160, 16846), (166, 16852), (212, 16960), (223, 17002), (246, 17068), (274, 17161), (283, 17188), (315, 17311), (321, 17344), (343, 17434), (357, 17503), (412, 17746), (499, 17884), (590, 18004), (680, 18157), (710, 18220), (721, 18262), (745, 18361), (749, 18382), (752, 18403), (756, 18424), (791, 18475), (800, 18487), (805, 18502), (839, 18583), (850, 18661),

Gene: McGuire\_25 Start: 16390, Stop: 18867, Start Num: 112

Candidate Starts for McGuire\_25:

(Start: 112 @16390 has 30 MA's), (Start: 117 @16405 has 5 MA's), (Start: 155 @16519 has 22 MA's), (176, 16561), (285, 16768), (291, 16786), (315, 16876), (329, 16939), (337, 16963), (339, 16975), (348, 17026), (460, 17410), (526, 17512), (537, 17551), (560, 17578), (569, 17602), (630, 17731), (671, 17830), (707, 17932), (710, 17953), (721, 17995), (741, 18094), (753, 18157), (777, 18247), (818, 18376), (827, 18409), (855, 18580), (875, 18691), (885, 18757), (888, 18778), (895, 18817), (897, 18832),

Gene: Medusa\_25 Start: 15886, Stop: 18486, Start Num: 109

Candidate Starts for Medusa\_25:

(Start: 109 @15886 has 113 MA's), (Start: 155 @16027 has 22 MA's), (Start: 163 @16045 has 10 MA's), (240, 16252), (252, 16291), (258, 16321), (291, 16438), (299, 16465), (315, 16528), (329, 16591), (341, 16636), (348, 16678), (365, 16762), (457, 17029), (481, 17080), (499, 17125), (530, 17203), (542, 17236), (545, 17242), (591, 17338), (606, 17347), (626, 17410), (636, 17431), (649, 17458), (670, 17515), (673, 17521), (700, 17575), (710, 17623), (726, 17689), (757, 17854), (762,

17872), (807, 17998), (859, 18250), (860, 18253), (863, 18262), (875, 18322), (892, 18418), (899, 18466),

Gene: MeeZee\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for MeeZee\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (608, 17355), (626, 17409), (647, 17454), (670, 17514), (685, 17532), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Melvin\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Melvin\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (674, 17523), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: MetalQZJ\_24 Start: 16506, Stop: 18977, Start Num: 111

Candidate Starts for MetalQZJ\_24:

(Start: 111 @16506 has 200 MA's), (125, 16545), (144, 16608), (Start: 155 @16638 has 22 MA's), (162, 16659), (176, 16680), (181, 16692), (194, 16710), (262, 16800), (315, 16998), (321, 17031), (339, 17097), (389, 17352), (393, 17373), (398, 17400), (476, 17559), (500, 17595), (555, 17688), (564, 17709), (592, 17766), (644, 17886), (659, 17922), (671, 17952), (682, 17988), (707, 18054), (710, 18075), (741, 18216), (773, 18357), (784, 18378), (826, 18513), (855, 18690), (875, 18801), (888, 18888), (895, 18927), (897, 18942),

Gene: Methuselah\_26 Start: 16062, Stop: 19088, Start Num: 38

Candidate Starts for Methuselah\_26:

(30, 16008), (Start: 38 @16062 has 82 MA's), (55, 16176), (68, 16242), (69, 16245), (73, 16254), (86, 16290), (96, 16341), (124, 16413), (Start: 143 @16485 has 5 MA's), (190, 16605), (193, 16608), (214, 16677), (226, 16722), (258, 16815), (264, 16824), (270, 16842), (279, 16869), (295, 16932), (299, 16944), (308, 16977), (312, 16995), (325, 17061), (327, 17064), (329, 17070), (334, 17085), (337, 17094), (339, 17106), (341, 17115), (355, 17193), (359, 17208), (383, 17325), (384, 17328), (391, 17355), (393, 17367), (405, 17421), (410, 17442), (427, 17508), (440, 17547), (479, 17640), (491, 17688), (507, 17733), (525, 17781), (535, 17823), (538, 17832), (552, 17862), (553, 17865), (559, 17877), (582, 17934), (585, 17940), (606, 17961), (607, 17964), (658, 18102), (664, 18114), (689, 18174), (709, 18231), (741, 18369), (744, 18390), (749, 18414), (757, 18459), (762, 18477), (776, 18525), (780, 18537), (800, 18579), (817, 18642), (836, 18699), (844, 18768), (851, 18804), (867, 18885), (892, 19020),

Gene: Micasa\_22 Start: 15213, Stop: 18557, Start Num: 1

Candidate Starts for Micasa\_22:

(Start: 1 @15213 has 30 MA's), (Start: 34 @15651 has 1 MA's), (120, 15963), (Start: 141 @16041 has 1 MA's), (154, 16071), (173, 16128), (211, 16212), (227, 16275), (229, 16281), (269, 16401), (295, 16494), (315, 16569), (324, 16614), (329, 16632), (341, 16677), (344, 16698), (384, 16890), (417, 17028), (429, 17076), (459, 17154), (461, 17157), (509, 17253), (516, 17280), (532, 17316), (535, 17328), (563, 17385), (639, 17577), (652, 17607), (660, 17631), (664, 17643), (683, 17706), (710, 17829), (715, 17850), (721, 17871), (736, 17949), (745, 17970), (752, 18012), (756, 18033), (808, 18120), (829, 18150), (842, 18213), (845, 18231), (859, 18312), (863, 18324), (865, 18336), (867,

18345), (878, 18399), (891, 18483), (896, 18522),

Gene: Michley\_24 Start: 16251, Stop: 18722, Start Num: 111

Candidate Starts for Michley\_24:

(Start: 111 @16251 has 200 MA's), (125, 16290), (144, 16353), (Start: 155 @16383 has 22 MA's), (162, 16404), (176, 16425), (194, 16455), (243, 16479), (262, 16545), (315, 16743), (321, 16776), (339, 16842), (389, 17097), (393, 17118), (398, 17145), (476, 17304), (500, 17340), (555, 17433), (564, 17454), (569, 17469), (579, 17490), (580, 17493), (615, 17562), (627, 17598), (644, 17631), (659, 17667), (671, 17697), (682, 17733), (707, 17799), (710, 17820), (741, 17961), (773, 18102), (784, 18123), (826, 18258), (855, 18435), (875, 18546), (885, 18612), (888, 18633), (895, 18672), (897, 18687),

Gene: Microwolf\_27 Start: 15980, Stop: 19006, Start Num: 38

Candidate Starts for Microwolf\_27:

(30, 15926), (Start: 38 @15980 has 82 MA's), (55, 16094), (68, 16160), (69, 16163), (73, 16172), (86, 16208), (96, 16259), (124, 16331), (Start: 143 @16403 has 5 MA's), (190, 16523), (193, 16526), (214, 16595), (226, 16640), (258, 16733), (264, 16742), (270, 16760), (279, 16787), (295, 16850), (299, 16862), (308, 16895), (312, 16913), (325, 16979), (327, 16982), (329, 16988), (334, 17003), (337, 17012), (339, 17024), (341, 17033), (359, 17126), (383, 17243), (384, 17246), (391, 17273), (393, 17285), (405, 17339), (410, 17360), (427, 17426), (436, 17453), (479, 17558), (491, 17606), (507, 17651), (525, 17699), (535, 17741), (538, 17750), (552, 17780), (553, 17783), (559, 17795), (582, 17852), (585, 17858), (606, 17879), (607, 17882), (658, 18020), (664, 18032), (689, 18092), (710, 18152), (718, 18182), (719, 18185), (721, 18194), (741, 18287), (757, 18377), (776, 18443), (780, 18455), (800, 18497), (817, 18560), (836, 18617), (844, 18686), (851, 18722), (867, 18803), (892, 18938),

Gene: MiculUcigas\_26 Start: 16672, Stop: 19179, Start Num: 107

Candidate Starts for MiculUcigas\_26:

(Start: 107 @16672 has 89 MA's), (144, 16783), (167, 16840), (256, 17026), (279, 17089), (286, 17122), (288, 17128), (334, 17308), (337, 17317), (341, 17338), (344, 17359), (345, 17362), (348, 17380), (360, 17440), (383, 17548), (393, 17590), (405, 17644), (410, 17665), (426, 17728), (427, 17731), (434, 17749), (440, 17770), (507, 17956), (512, 17971), (517, 17998), (538, 18055), (544, 18070), (546, 18076), (552, 18085), (555, 18091), (568, 18121), (575, 18142), (607, 18187), (608, 18193), (620, 18226), (628, 18253), (658, 18325), (664, 18337), (689, 18397), (703, 18424), (718, 18487), (727, 18532), (730, 18544), (737, 18580), (746, 18616), (752, 18649), (786, 18712), (800, 18736), (846, 18880), (866, 18979), (882, 19066), (902, 19165),

Gene: Midas2\_22 Start: 15213, Stop: 18551, Start Num: 1

Candidate Starts for Midas2\_22:

(Start: 1 @15213 has 30 MA's), (Start: 34 @15651 has 1 MA's), (120, 15963), (Start: 141 @16041 has 1 MA's), (154, 16071), (173, 16128), (227, 16275), (229, 16281), (269, 16401), (271, 16410), (294, 16491), (295, 16494), (315, 16569), (324, 16614), (329, 16632), (341, 16677), (344, 16698), (384, 16890), (417, 17028), (429, 17076), (459, 17154), (516, 17280), (522, 17292), (532, 17316), (563, 17379), (639, 17571), (652, 17601), (660, 17625), (664, 17637), (683, 17700), (710, 17823), (715, 17844), (721, 17865), (736, 17943), (745, 17964), (752, 18006), (756, 18027), (808, 18114), (829, 18144), (842, 18207), (845, 18225), (859, 18306), (863, 18318), (865, 18330), (867, 18339), (878, 18393), (891, 18477), (896, 18516),

Gene: Miko\_29 Start: 18238, Stop: 20766, Start Num: 107

Candidate Starts for Miko\_29:

(Start: 107 @18238 has 89 MA's), (144, 18349), (149, 18361), (172, 18418), (173, 18421), (256, 18610), (279, 18673), (299, 18748), (311, 18790), (312, 18799), (316, 18820), (321, 18844), (339, 18910), (341, 18919), (344, 18940), (345, 18943), (383, 19129), (393, 19171), (410, 19246), (427,

19312), (440, 19351), (507, 19537), (538, 19636), (546, 19657), (568, 19702), (581, 19735), (582, 19738), (606, 19765), (620, 19807), (628, 19834), (658, 19906), (664, 19918), (701, 20002), (703, 20005), (718, 20068), (727, 20113), (730, 20125), (749, 20209), (761, 20263), (810, 20347), (830, 20371), (850, 20488), (866, 20566),

Gene: Milcery\_22 Start: 15249, Stop: 18587, Start Num: 1

Candidate Starts for Milcery\_22:

(Start: 1 @15249 has 30 MA's), (Start: 34 @15687 has 1 MA's), (120, 15999), (Start: 141 @16077 has 1 MA's), (154, 16107), (173, 16164), (211, 16248), (227, 16311), (229, 16317), (269, 16437), (294, 16527), (295, 16530), (315, 16605), (324, 16650), (329, 16668), (341, 16713), (344, 16734), (384, 16926), (417, 17064), (429, 17112), (459, 17190), (516, 17316), (522, 17328), (532, 17352), (563, 17415), (639, 17607), (652, 17637), (660, 17661), (664, 17673), (683, 17736), (710, 17859), (715, 17880), (721, 17901), (736, 17979), (745, 18000), (752, 18042), (756, 18063), (808, 18150), (829, 18180), (842, 18243), (845, 18261), (859, 18342), (863, 18354), (865, 18366), (867, 18375), (878, 18429), (891, 18513), (892, 18522), (896, 18552),

Gene: Millski\_24 Start: 15888, Stop: 18488, Start Num: 109

Candidate Starts for Millski\_24:

(Start: 109 @15888 has 113 MA's), (Start: 155 @16029 has 22 MA's), (Start: 163 @16047 has 10 MA's), (240, 16254), (252, 16293), (258, 16323), (283, 16407), (291, 16440), (299, 16467), (315, 16530), (329, 16593), (341, 16638), (348, 16680), (365, 16764), (457, 17031), (481, 17082), (499, 17127), (530, 17205), (545, 17244), (626, 17412), (636, 17433), (647, 17457), (673, 17523), (700, 17577), (710, 17625), (726, 17691), (757, 17856), (762, 17874), (807, 18000), (859, 18252), (860, 18255), (863, 18264), (875, 18324), (892, 18420), (899, 18468),

Gene: MinecraftSteve\_29 Start: 15877, Stop: 18231, Start Num: 117

Candidate Starts for MinecraftSteve\_29:

(Start: 115 @15868 has 1 MA's), (Start: 117 @15877 has 5 MA's), (Start: 179 @16045 has 15 MA's), (269, 16285), (270, 16291), (290, 16360), (306, 16417), (341, 16561), (348, 16603), (358, 16651), (359, 16654), (382, 16765), (385, 16783), (412, 16888), (425, 16936), (484, 17041), (513, 17101), (536, 17155), (555, 17191), (569, 17215), (577, 17224), (608, 17287), (616, 17308), (622, 17323), (629, 17347), (635, 17359), (659, 17413), (667, 17434), (680, 17464), (732, 17635), (734, 17656), (756, 17740), (867, 18043), (892, 18166), (894, 18178),

Gene: Miramae\_25 Start: 15828, Stop: 18428, Start Num: 109

Candidate Starts for Miramae\_25:

(Start: 109 @15828 has 113 MA's), (Start: 174 @16011 has 1 MA's), (229, 16170), (246, 16218), (291, 16380), (296, 16398), (315, 16470), (341, 16578), (357, 16662), (420, 16911), (471, 16998), (481, 17022), (499, 17067), (542, 17178), (545, 17184), (614, 17316), (626, 17352), (636, 17373), (649, 17400), (670, 17457), (700, 17517), (726, 17631), (757, 17796), (762, 17814), (786, 17883), (807, 17940), (848, 18129), (860, 18195), (863, 18204), (875, 18264), (877, 18273), (883, 18309), (886, 18327), (892, 18360), (899, 18408),

Gene: Misomonster\_29 Start: 16062, Stop: 19088, Start Num: 38

Candidate Starts for Misomonster\_29:

(30, 16008), (Start: 38 @16062 has 82 MA's), (55, 16176), (68, 16242), (69, 16245), (73, 16254), (86, 16290), (96, 16341), (124, 16413), (Start: 143 @16485 has 5 MA's), (190, 16605), (193, 16608), (214, 16677), (226, 16722), (258, 16815), (264, 16824), (270, 16842), (279, 16869), (295, 16932), (299, 16944), (308, 16977), (312, 16995), (325, 17061), (327, 17064), (329, 17070), (334, 17085), (337, 17094), (339, 17106), (341, 17115), (355, 17193), (359, 17208), (383, 17325), (384, 17328), (391, 17355), (393, 17367), (405, 17421), (410, 17442), (427, 17508), (440, 17547), (479, 17640), (491, 17688), (507, 17733), (525, 17781), (535, 17823), (538, 17832), (552, 17862), (553, 17865), (559, 17877), (582, 17934), (585, 17940), (606, 17961), (607, 17964), (658, 18102), (664, 18114), (689,

18174), (709, 18231), (741, 18369), (744, 18390), (749, 18414), (757, 18459), (762, 18477), (776, 18525), (780, 18537), (800, 18579), (817, 18642), (836, 18699), (844, 18768), (851, 18804), (867, 18885), (892, 19020),

Gene: MissWhite\_26 Start: 15738, Stop: 18245, Start Num: 107

Candidate Starts for MissWhite\_26:

(Start: 107 @15738 has 89 MA's), (144, 15849), (170, 15915), (172, 15918), (259, 16095), (264, 16110), (267, 16119), (284, 16176), (299, 16230), (312, 16281), (327, 16350), (329, 16356), (334, 16371), (337, 16380), (339, 16392), (341, 16401), (361, 16506), (372, 16539), (383, 16611), (405, 16707), (410, 16728), (420, 16773), (427, 16794), (436, 16821), (477, 16920), (503, 17001), (507, 17019), (512, 17034), (517, 17061), (525, 17067), (538, 17118), (542, 17130), (546, 17139), (555, 17154), (568, 17184), (606, 17247), (607, 17250), (628, 17316), (649, 17358), (658, 17388), (664, 17400), (689, 17460), (690, 17463), (703, 17487), (709, 17517), (718, 17550), (730, 17607), (749, 17691), (792, 17787), (795, 17796), (839, 17892), (845, 17940), (850, 17970), (866, 18048),

Gene: Mkhuseleli\_25 Start: 16421, Stop: 18892, Start Num: 111

Candidate Starts for Mkhuseleli\_25:

(Start: 111 @16421 has 200 MA's), (125, 16460), (144, 16523), (Start: 155 @16553 has 22 MA's), (162, 16574), (176, 16595), (181, 16607), (194, 16625), (262, 16715), (315, 16913), (321, 16946), (339, 17012), (389, 17267), (393, 17288), (398, 17315), (476, 17474), (500, 17510), (555, 17603), (564, 17624), (592, 17681), (644, 17801), (659, 17837), (671, 17867), (682, 17903), (707, 17969), (710, 17990), (721, 18032), (741, 18131), (773, 18272), (784, 18293), (826, 18428), (842, 18524), (855, 18605), (875, 18716), (888, 18803), (895, 18842), (897, 18857),

Gene: Molly\_25 Start: 16128, Stop: 18608, Start Num: 111

Candidate Starts for Molly\_25:

(Start: 111 @16128 has 200 MA's), (125, 16167), (144, 16230), (Start: 155 @16260 has 22 MA's), (176, 16302), (285, 16509), (291, 16527), (315, 16617), (329, 16680), (337, 16704), (339, 16716), (348, 16767), (460, 17151), (526, 17253), (537, 17292), (555, 17307), (560, 17319), (569, 17343), (630, 17472), (671, 17571), (707, 17673), (710, 17694), (721, 17736), (741, 17835), (753, 17898), (777, 17988), (818, 18117), (827, 18150), (875, 18432), (885, 18498), (888, 18519), (895, 18558), (897, 18573),

Gene: Monet\_26 Start: 17622, Stop: 20093, Start Num: 111

Candidate Starts for Monet\_26:

(Start: 111 @17622 has 200 MA's), (125, 17661), (144, 17724), (Start: 155 @17754 has 22 MA's), (162, 17775), (176, 17796), (181, 17808), (194, 17826), (262, 17916), (315, 18114), (321, 18147), (339, 18213), (389, 18468), (393, 18489), (398, 18516), (410, 18555), (432, 18612), (451, 18642), (476, 18675), (500, 18711), (555, 18804), (564, 18825), (592, 18882), (644, 19002), (659, 19038), (671, 19068), (682, 19104), (707, 19170), (710, 19191), (721, 19233), (740, 19329), (741, 19332), (753, 19395), (773, 19473), (784, 19494), (842, 19725), (855, 19806), (875, 19917), (888, 20004), (895, 20043), (899, 20073),

Gene: MoneyMay\_27 Start: 15978, Stop: 19004, Start Num: 38

Candidate Starts for MoneyMay\_27:

(30, 15924), (Start: 38 @15978 has 82 MA's), (55, 16092), (68, 16158), (69, 16161), (73, 16170), (86, 16206), (96, 16257), (124, 16329), (Start: 143 @16401 has 5 MA's), (190, 16521), (193, 16524), (214, 16593), (226, 16638), (258, 16731), (264, 16740), (270, 16758), (279, 16785), (295, 16848), (299, 16860), (308, 16893), (312, 16911), (325, 16977), (327, 16980), (329, 16986), (334, 17001), (337, 17010), (339, 17022), (341, 17031), (355, 17109), (359, 17124), (383, 17241), (384, 17244), (391, 17271), (393, 17283), (405, 17337), (410, 17358), (427, 17424), (440, 17463), (479, 17556), (491, 17604), (507, 17649), (525, 17697), (535, 17739), (538, 17748), (552, 17778), (553, 17781), (559, 17793), (582, 17850), (585, 17856), (606, 17877), (607, 17880), (658, 18018), (664, 18030), (689,

18090), (709, 18147), (741, 18285), (744, 18306), (749, 18330), (757, 18375), (762, 18393), (776, 18441), (780, 18453), (800, 18495), (817, 18558), (836, 18615), (844, 18684), (851, 18720), (867, 18801), (892, 18936),

Gene: Moose\_23 Start: 16363, Stop: 18834, Start Num: 111

Candidate Starts for Moose\_23:

(Start: 111 @16363 has 200 MA's), (125, 16402), (144, 16465), (Start: 155 @16495 has 22 MA's), (162, 16516), (176, 16537), (181, 16549), (194, 16567), (262, 16657), (315, 16855), (321, 16888), (339, 16954), (389, 17209), (393, 17230), (398, 17257), (476, 17416), (500, 17452), (555, 17545), (564, 17566), (592, 17623), (644, 17743), (659, 17779), (671, 17809), (682, 17845), (707, 17911), (710, 17932), (741, 18073), (773, 18214), (784, 18235), (842, 18466), (855, 18547), (875, 18658), (881, 18700), (888, 18745), (895, 18784), (897, 18799),

Gene: Morpher26\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Morpher26\_25:

(Start: 109 @15885 has 113 MA's), (222, 16200), (229, 16227), (246, 16275), (263, 16332), (291, 16437), (295, 16452), (299, 16464), (315, 16527), (341, 16635), (344, 16656), (348, 16677), (481, 17079), (497, 17121), (499, 17124), (542, 17235), (545, 17241), (614, 17373), (626, 17409), (649, 17457), (700, 17574), (726, 17688), (757, 17853), (762, 17871), (802, 17985), (807, 17997), (835, 18087), (847, 18180), (860, 18252), (863, 18261), (875, 18321), (877, 18330), (892, 18417), (899, 18465),

Gene: Morrow\_25 Start: 15888, Stop: 18488, Start Num: 109

Candidate Starts for Morrow\_25:

(Start: 109 @15888 has 113 MA's), (Start: 155 @16029 has 22 MA's), (Start: 163 @16047 has 10 MA's), (240, 16254), (252, 16293), (258, 16323), (291, 16440), (299, 16467), (315, 16530), (329, 16593), (341, 16638), (348, 16680), (365, 16764), (420, 16971), (457, 17031), (481, 17082), (499, 17127), (530, 17205), (542, 17238), (545, 17244), (626, 17412), (636, 17433), (647, 17457), (670, 17517), (673, 17523), (674, 17526), (700, 17577), (710, 17625), (726, 17691), (757, 17856), (762, 17874), (807, 18000), (859, 18252), (860, 18255), (863, 18264), (875, 18324), (892, 18420), (899, 18468),

Gene: MrGordo\_24 Start: 16064, Stop: 18535, Start Num: 111

Candidate Starts for MrGordo\_24:

(Start: 111 @16064 has 200 MA's), (125, 16103), (144, 16166), (Start: 155 @16196 has 22 MA's), (162, 16217), (176, 16238), (194, 16268), (243, 16292), (262, 16358), (315, 16556), (321, 16589), (339, 16655), (389, 16910), (393, 16931), (398, 16958), (476, 17117), (500, 17153), (555, 17246), (564, 17267), (569, 17282), (579, 17303), (580, 17306), (615, 17375), (627, 17411), (644, 17444), (659, 17480), (671, 17510), (682, 17546), (707, 17612), (710, 17633), (741, 17774), (773, 17915), (784, 17936), (826, 18071), (855, 18248), (875, 18359), (888, 18446), (895, 18485), (897, 18500),

Gene: Mryolo\_23 Start: 16114, Stop: 18594, Start Num: 111

Candidate Starts for Mryolo\_23:

(Start: 111 @16114 has 200 MA's), (125, 16153), (144, 16216), (Start: 155 @16246 has 22 MA's), (176, 16288), (285, 16495), (291, 16513), (315, 16603), (329, 16666), (337, 16690), (339, 16702), (348, 16753), (460, 17137), (526, 17239), (537, 17278), (560, 17305), (569, 17329), (630, 17458), (671, 17557), (707, 17659), (710, 17680), (714, 17692), (721, 17722), (741, 17821), (753, 17884), (818, 18103), (827, 18136), (855, 18307), (875, 18418), (881, 18460), (888, 18505), (895, 18544), (897, 18559),

Gene: MuchMore\_29 Start: 15971, Stop: 18997, Start Num: 38

Candidate Starts for MuchMore\_29:

(30, 15917), (Start: 38 @15971 has 82 MA's), (55, 16085), (68, 16151), (69, 16154), (73, 16163), (86, 16199), (96, 16250), (124, 16322), (Start: 143 @16394 has 5 MA's), (190, 16514), (193, 16517), (214, 16586), (226, 16631), (258, 16724), (264, 16733), (270, 16751), (279, 16778), (295, 16841), (299, 16853), (308, 16886), (312, 16904), (325, 16970), (327, 16973), (329, 16979), (334, 16994), (337, 17003), (339, 17015), (341, 17024), (359, 17117), (383, 17234), (384, 17237), (391, 17264), (393, 17276), (405, 17330), (410, 17351), (427, 17417), (436, 17444), (479, 17549), (491, 17597), (507, 17642), (525, 17690), (535, 17732), (538, 17741), (552, 17771), (553, 17774), (559, 17786), (582, 17843), (585, 17849), (606, 17870), (607, 17873), (658, 18011), (664, 18023), (689, 18083), (710, 18143), (718, 18173), (719, 18176), (721, 18185), (741, 18278), (757, 18368), (776, 18434), (780, 18446), (800, 18488), (817, 18551), (836, 18608), (844, 18677), (851, 18713), (867, 18794), (892, 18929),

Gene: Mulciber\_26 Start: 17157, Stop: 19703, Start Num: 112

Candidate Starts for Mulciber\_26:

(Start: 112 @17157 has 30 MA's), (Start: 118 @17175 has 2 MA's), (187, 17349), (197, 17358), (223, 17433), (252, 17487), (267, 17541), (271, 17556), (272, 17559), (279, 17577), (295, 17640), (299, 17652), (315, 17715), (329, 17778), (334, 17793), (337, 17802), (341, 17823), (345, 17847), (348, 17862), (367, 17949), (369, 17952), (374, 17967), (378, 17988), (380, 18000), (389, 18066), (404, 18138), (412, 18162), (437, 18243), (441, 18252), (445, 18264), (467, 18306), (492, 18363), (513, 18417), (549, 18525), (567, 18564), (618, 18705), (656, 18801), (661, 18822), (675, 18855), (686, 18888), (687, 18891), (709, 18975), (721, 19020), (722, 19023), (746, 19137), (752, 19170), (791, 19242), (808, 19278), (839, 19350), (850, 19428), (860, 19482), (866, 19506), (889, 19617),

Gene: Mule\_24 Start: 16401, Stop: 18881, Start Num: 111

Candidate Starts for Mule\_24:

(Start: 111 @16401 has 200 MA's), (125, 16440), (144, 16503), (Start: 155 @16533 has 22 MA's), (176, 16575), (285, 16782), (291, 16800), (315, 16890), (329, 16953), (337, 16977), (339, 16989), (348, 17040), (460, 17424), (526, 17526), (537, 17565), (560, 17592), (569, 17616), (630, 17745), (671, 17844), (707, 17946), (710, 17967), (721, 18009), (741, 18108), (753, 18171), (818, 18390), (827, 18423), (875, 18705), (888, 18792), (895, 18831), (897, 18846),

Gene: Munch\_26 Start: 17163, Stop: 19709, Start Num: 112

Candidate Starts for Munch\_26:

(Start: 112 @17163 has 30 MA's), (Start: 118 @17181 has 2 MA's), (187, 17355), (197, 17364), (223, 17439), (252, 17493), (267, 17547), (271, 17562), (272, 17565), (279, 17583), (295, 17646), (299, 17658), (315, 17721), (329, 17784), (334, 17799), (337, 17808), (341, 17829), (345, 17853), (348, 17868), (367, 17955), (369, 17958), (374, 17973), (378, 17994), (380, 18006), (389, 18072), (403, 18135), (404, 18144), (412, 18168), (437, 18249), (441, 18258), (445, 18270), (467, 18312), (492, 18369), (513, 18423), (549, 18531), (567, 18570), (618, 18711), (656, 18807), (661, 18828), (675, 18861), (686, 18894), (687, 18897), (709, 18981), (721, 19026), (722, 19029), (746, 19143), (752, 19176), (791, 19248), (808, 19284), (839, 19356), (850, 19434), (860, 19488), (866, 19512), (889, 19623),

Gene: Mundrea\_25 Start: 15850, Stop: 18450, Start Num: 109

Candidate Starts for Mundrea\_25:

(Start: 109 @15850 has 113 MA's), (229, 16192), (246, 16240), (263, 16297), (291, 16402), (295, 16417), (315, 16492), (341, 16600), (344, 16621), (348, 16642), (471, 17020), (477, 17032), (481, 17044), (499, 17089), (504, 17098), (542, 17200), (545, 17206), (557, 17227), (649, 17422), (663, 17461), (719, 17620), (724, 17641), (726, 17653), (729, 17671), (757, 17818), (762, 17836), (807, 17962), (835, 18052), (847, 18145), (860, 18217), (863, 18226), (875, 18286), (877, 18295), (883, 18331), (892, 18382), (899, 18430),

Gene: Museum\_26 Start: 16420, Stop: 18891, Start Num: 111



Candidate Starts for Museum\_26:

(Start: 111 @16420 has 200 MA's), (125, 16459), (144, 16522), (Start: 155 @16552 has 22 MA's), (162, 16573), (176, 16594), (181, 16606), (194, 16624), (243, 16648), (262, 16714), (315, 16912), (321, 16945), (339, 17011), (389, 17266), (393, 17287), (398, 17314), (476, 17473), (500, 17509), (555, 17602), (564, 17623), (592, 17680), (644, 17800), (659, 17836), (671, 17866), (682, 17902), (707, 17968), (710, 17989), (741, 18130), (773, 18271), (784, 18292), (826, 18427), (855, 18604), (875, 18715), (885, 18781), (888, 18802), (895, 18841), (897, 18856),

Gene: MyraDee\_23 Start: 14094, Stop: 16709, Start Num: 117

Candidate Starts for MyraDee\_23:

(Start: 117 @14094 has 5 MA's), (134, 14151), (140, 14175), (183, 14274), (199, 14292), (229, 14394), (233, 14400), (246, 14445), (250, 14454), (289, 14592), (299, 14625), (315, 14688), (329, 14751), (334, 14766), (341, 14796), (343, 14811), (348, 14838), (367, 14925), (376, 14955), (385, 15018), (404, 15099), (410, 15114), (412, 15123), (415, 15141), (535, 15507), (541, 15528), (651, 15813), (656, 15825), (668, 15858), (710, 15963), (721, 16005), (735, 16080), (743, 16095), (745, 16104), (752, 16146), (803, 16245), (838, 16335), (852, 16434), (853, 16437), (856, 16458), (862, 16485), (879, 16581), (882, 16593), (887, 16608), (892, 16638),

Gene: Myxus\_27 Start: 17590, Stop: 20499, Start Num: 52

Candidate Starts for Myxus\_27:

(Start: 52 @17590 has 33 MA's), (55, 17602), (68, 17662), (114, 17821), (130, 17884), (153, 17947), (165, 17989), (193, 18046), (260, 18256), (264, 18262), (269, 18277), (294, 18367), (295, 18370), (299, 18382), (311, 18424), (321, 18478), (341, 18553), (344, 18574), (345, 18577), (348, 18595), (361, 18658), (379, 18724), (383, 18763), (390, 18790), (393, 18805), (399, 18835), (405, 18859), (408, 18871), (410, 18880), (427, 18946), (440, 18985), (468, 19051), (479, 19078), (486, 19105), (507, 19171), (523, 19216), (546, 19291), (568, 19336), (575, 19357), (585, 19378), (586, 19381), (606, 19399), (607, 19402), (615, 19429), (649, 19510), (664, 19552), (718, 19702), (722, 19717), (727, 19747), (738, 19798), (756, 19885), (758, 19894), (771, 19945), (800, 20008), (805, 20029), (816, 20065), (830, 20101), (831, 20107), (844, 20185), (849, 20212), (860, 20272), (875, 20341), (879, 20371), (885, 20398), (894, 20437), (900, 20479),

Gene: NEHalo\_24 Start: 16149, Stop: 18629, Start Num: 111

Candidate Starts for NEHalo\_24:

(Start: 111 @16149 has 200 MA's), (125, 16188), (144, 16251), (Start: 155 @16281 has 22 MA's), (176, 16323), (285, 16530), (291, 16548), (315, 16638), (329, 16701), (337, 16725), (339, 16737), (348, 16788), (460, 17172), (526, 17274), (537, 17313), (555, 17328), (560, 17340), (569, 17364), (630, 17493), (671, 17592), (707, 17694), (710, 17715), (721, 17757), (741, 17856), (753, 17919), (777, 18009), (818, 18138), (827, 18171), (875, 18453), (885, 18519), (888, 18540), (895, 18579), (897, 18594),

Gene: NaSiaTalie\_26 Start: 16670, Stop: 19177, Start Num: 107

Candidate Starts for NaSiaTalie\_26:

(Start: 107 @16670 has 89 MA's), (144, 16781), (167, 16838), (256, 17024), (279, 17087), (286, 17120), (288, 17126), (334, 17306), (337, 17315), (340, 17330), (341, 17336), (344, 17357), (345, 17360), (348, 17378), (360, 17438), (383, 17546), (393, 17588), (405, 17642), (410, 17663), (426, 17726), (427, 17729), (434, 17747), (440, 17768), (507, 17954), (512, 17969), (517, 17996), (538, 18053), (544, 18068), (546, 18074), (552, 18083), (555, 18089), (568, 18119), (575, 18140), (607, 18185), (608, 18191), (620, 18224), (628, 18251), (658, 18323), (664, 18335), (689, 18395), (703, 18422), (718, 18485), (727, 18530), (737, 18578), (746, 18614), (752, 18647), (786, 18710), (800, 18734), (846, 18878), (866, 18977), (882, 19064), (902, 19163),

Gene: Naca\_22 Start: 15172, Stop: 18438, Start Num: 1

Candidate Starts for Naca\_22:

(Start: 1 @15172 has 30 MA's), (13, 15409), (18, 15511), (20, 15520), (35, 15613), (39, 15640), (82, 15715), (120, 15850), (135, 15904), (154, 15958), (211, 16099), (217, 16123), (227, 16162), (250, 16225), (251, 16228), (269, 16288), (277, 16315), (295, 16381), (320, 16480), (329, 16519), (341, 16564), (345, 16588), (361, 16669), (412, 16891), (417, 16915), (429, 16963), (453, 17020), (455, 17026), (484, 17098), (516, 17167), (540, 17224), (550, 17242), (563, 17266), (601, 17338), (660, 17512), (664, 17524), (683, 17587), (705, 17674), (710, 17710), (715, 17731), (721, 17752), (745, 17851), (752, 17893), (756, 17914), (808, 18001), (829, 18031), (830, 18034), (842, 18094), (859, 18193), (863, 18205), (865, 18217), (867, 18226), (892, 18373),

Gene: Naira\_25 Start: 17895, Stop: 20510, Start Num: 111

Candidate Starts for Naira\_25:

(Start: 111 @17895 has 200 MA's), (125, 17934), (144, 17997), (145, 18003), (Start: 155 @18027 has 22 MA's), (250, 18135), (299, 18306), (314, 18366), (315, 18369), (342, 18492), (348, 18522), (361, 18585), (412, 18804), (437, 18876), (459, 18924), (482, 18969), (562, 19194), (565, 19203), (579, 19239), (598, 19281), (671, 19485), (708, 19599), (710, 19608), (715, 19629), (721, 19650), (741, 19749), (750, 19791), (751, 19794), (788, 19923), (815, 20007), (827, 20052), (875, 20334), (885, 20400), (888, 20421), (895, 20460), (897, 20475),

Gene: Naji\_29 Start: 16508, Stop: 19021, Start Num: 107

Candidate Starts for Naji\_29:

(Start: 107 @16508 has 89 MA's), (172, 16688), (173, 16691), (277, 16934), (279, 16937), (294, 16997), (299, 17012), (307, 17042), (308, 17045), (325, 17129), (334, 17153), (340, 17177), (344, 17204), (345, 17207), (371, 17318), (383, 17393), (390, 17420), (393, 17435), (405, 17489), (410, 17510), (427, 17576), (434, 17594), (436, 17603), (477, 17702), (486, 17735), (488, 17744), (507, 17801), (512, 17816), (546, 17921), (607, 18032), (610, 18044), (612, 18050), (623, 18083), (624, 18086), (673, 18203), (718, 18332), (722, 18347), (727, 18377), (730, 18389), (737, 18425), (765, 18539), (776, 18551), (801, 18593), (861, 18800), (865, 18818), (866, 18821), (902, 19007),

Gene: NearlyHeadless\_22 Start: 14564, Stop: 17641, Start Num: 9

Candidate Starts for NearlyHeadless\_22:

(Start: 9 @14564 has 11 MA's), (15, 14648), (Start: 34 @14816 has 1 MA's), (Start: 37 @14840 has 32 MA's), (73, 14888), (Start: 107 @15008 has 89 MA's), (129, 15080), (189, 15230), (191, 15233), (196, 15239), (252, 15425), (256, 15446), (269, 15485), (289, 15557), (297, 15584), (300, 15599), (314, 15650), (315, 15653), (329, 15719), (367, 15887), (412, 16094), (422, 16142), (428, 16163), (429, 16166), (493, 16310), (516, 16367), (531, 16397), (547, 16436), (580, 16508), (601, 16538), (630, 16637), (642, 16667), (660, 16712), (710, 16910), (715, 16931), (719, 16943), (734, 17024), (745, 17051), (752, 17093), (756, 17114), (765, 17138), (792, 17168), (808, 17201), (830, 17234), (842, 17294), (846, 17321), (866, 17420), (883, 17516), (886, 17537), (893, 17576), (903, 17624),

Gene: Nebs\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for Nebs\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (542, 17232), (545, 17238), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: Nebulosus\_28 Start: 15746, Stop: 18109, Start Num: 115

Candidate Starts for Nebulosus\_28:

(Start: 115 @15746 has 1 MA's), (Start: 117 @15755 has 5 MA's), (Start: 179 @15923 has 15 MA's), (269, 16163), (270, 16169), (290, 16238), (306, 16295), (341, 16439), (348, 16481), (358, 16529), (359, 16532), (382, 16643), (385, 16661), (412, 16766), (425, 16814), (484, 16919), (513, 16979),

(536, 17033), (555, 17069), (569, 17093), (577, 17102), (608, 17165), (616, 17186), (622, 17201), (629, 17225), (635, 17237), (659, 17291), (667, 17312), (680, 17342), (732, 17513), (734, 17534), (756, 17618), (867, 17921), (892, 18044), (894, 18056),

Gene: Nedarya\_27 Start: 16578, Stop: 18761, Start Num: 179

Candidate Starts for Nedarya\_27:

(Start: 115 @16404 has 1 MA's), (Start: 117 @16413 has 5 MA's), (133, 16467), (Start: 179 @16578 has 15 MA's), (256, 16782), (261, 16797), (269, 16821), (270, 16827), (295, 16914), (296, 16917), (306, 16953), (315, 16989), (321, 17022), (329, 17052), (334, 17067), (339, 17088), (345, 17121), (359, 17190), (382, 17301), (384, 17310), (419, 17442), (422, 17451), (484, 17565), (536, 17679), (608, 17811), (619, 17838), (622, 17847), (648, 17904), (667, 17958), (680, 17988), (698, 18033), (732, 18159), (892, 18693), (894, 18705),

Gene: Neeharika16\_29 Start: 16728, Stop: 18932, Start Num: 116

Candidate Starts for Neeharika16\_29:

(60, 16569), (93, 16683), (Start: 116 @16728 has 41 MA's), (160, 16839), (166, 16845), (212, 16953), (223, 16995), (246, 17061), (274, 17154), (283, 17181), (315, 17304), (321, 17337), (343, 17427), (357, 17496), (412, 17739), (499, 17877), (590, 17997), (680, 18150), (710, 18213), (721, 18255), (745, 18354), (749, 18375), (752, 18396), (756, 18417), (791, 18468), (800, 18480), (805, 18495), (839, 18576), (850, 18654),

Gene: Nemo27\_25 Start: 16025, Stop: 18484, Start Num: 155

Candidate Starts for Nemo27\_25:

(Start: 109 @15884 has 113 MA's), (Start: 155 @16025 has 22 MA's), (Start: 163 @16043 has 10 MA's), (240, 16250), (252, 16289), (258, 16319), (291, 16436), (299, 16463), (315, 16526), (329, 16589), (341, 16634), (348, 16676), (365, 16760), (457, 17027), (481, 17078), (499, 17123), (530, 17201), (542, 17234), (545, 17240), (557, 17261), (626, 17408), (636, 17429), (647, 17453), (673, 17519), (700, 17573), (710, 17621), (726, 17687), (757, 17852), (762, 17870), (807, 17996), (859, 18248), (860, 18251), (863, 18260), (875, 18320), (892, 18416), (899, 18464),

Gene: Nerujay\_25 Start: 16817, Stop: 19297, Start Num: 111

Candidate Starts for Nerujay\_25:

(Start: 111 @16817 has 200 MA's), (125, 16856), (144, 16919), (Start: 155 @16949 has 22 MA's), (176, 16991), (285, 17198), (291, 17216), (315, 17306), (329, 17369), (337, 17393), (339, 17405), (348, 17456), (460, 17840), (526, 17942), (537, 17981), (560, 18008), (569, 18032), (630, 18161), (671, 18260), (707, 18362), (710, 18383), (714, 18395), (721, 18425), (741, 18524), (753, 18587), (818, 18806), (827, 18839), (875, 19121), (888, 19208), (895, 19247), (897, 19262),

Gene: Newrala\_29 Start: 16728, Stop: 18932, Start Num: 116

Candidate Starts for Newrala\_29:

(60, 16569), (93, 16683), (Start: 116 @16728 has 41 MA's), (160, 16839), (166, 16845), (212, 16953), (223, 16995), (246, 17061), (274, 17154), (283, 17181), (315, 17304), (321, 17337), (343, 17427), (357, 17496), (412, 17739), (499, 17877), (590, 17997), (680, 18150), (710, 18213), (721, 18255), (745, 18354), (749, 18375), (752, 18396), (756, 18417), (791, 18468), (800, 18480), (805, 18495), (839, 18576), (850, 18654),

Gene: Nhonho\_24 Start: 16571, Stop: 19048, Start Num: 111

Candidate Starts for Nhonho\_24:

(Start: 111 @16571 has 200 MA's), (125, 16610), (137, 16655), (144, 16673), (145, 16679), (Start: 155 @16703 has 22 MA's), (285, 16949), (291, 16967), (315, 17057), (329, 17120), (337, 17144), (339, 17156), (348, 17207), (371, 17300), (526, 17693), (537, 17732), (555, 17747), (560, 17759), (569, 17783), (606, 17858), (630, 17912), (671, 18011), (707, 18113), (710, 18134), (714, 18146), (721, 18176), (741, 18275), (753, 18338), (777, 18428), (818, 18557), (827, 18590), (875, 18872), (888,

18959), (895, 18998), (899, 19028),

Gene: NicoleTera\_30 Start: 18435, Stop: 20942, Start Num: 107

Candidate Starts for NicoleTera\_30:

(Start: 107 @18435 has 89 MA's), (144, 18546), (Start: 152 @18564 has 5 MA's), (167, 18603), (175, 18624), (188, 18648), (256, 18777), (266, 18801), (276, 18831), (299, 18915), (312, 18966), (323, 19023), (327, 19035), (329, 19041), (334, 19056), (337, 19065), (339, 19077), (341, 19086), (383, 19296), (390, 19323), (393, 19338), (405, 19392), (410, 19413), (427, 19479), (440, 19518), (465, 19581), (491, 19659), (507, 19704), (538, 19803), (544, 19818), (546, 19824), (552, 19833), (559, 19848), (568, 19869), (575, 19890), (578, 19893), (606, 19932), (610, 19947), (620, 19974), (628, 20001), (644, 20031), (649, 20043), (664, 20085), (689, 20145), (703, 20172), (718, 20235), (730, 20292), (737, 20328), (752, 20397), (761, 20430), (801, 20499), (804, 20508), (810, 20517), (845, 20628), (850, 20658), (866, 20742),

Gene: Niza\_26 Start: 17422, Stop: 19890, Start Num: 111

Candidate Starts for Niza\_26:

(Start: 111 @17422 has 200 MA's), (Start: 117 @17437 has 5 MA's), (Start: 155 @17551 has 22 MA's), (162, 17572), (176, 17593), (194, 17623), (243, 17647), (250, 17668), (262, 17713), (271, 17740), (315, 17911), (321, 17944), (339, 18010), (389, 18265), (393, 18286), (398, 18313), (476, 18472), (500, 18508), (555, 18601), (564, 18622), (592, 18679), (644, 18799), (659, 18835), (671, 18865), (682, 18901), (707, 18967), (710, 18988), (741, 19129), (773, 19270), (784, 19291), (826, 19426), (855, 19603), (875, 19714), (888, 19801), (895, 19840), (897, 19855),

Gene: Noella\_26 Start: 16044, Stop: 19082, Start Num: 37

Candidate Starts for Noella\_26:

(Start: 37 @16044 has 32 MA's), (66, 16218), (69, 16230), (81, 16263), (Start: 143 @16470 has 5 MA's), (Start: 152 @16491 has 5 MA's), (190, 16590), (193, 16593), (258, 16803), (268, 16824), (279, 16857), (295, 16920), (299, 16932), (308, 16965), (312, 16983), (316, 17004), (327, 17052), (329, 17058), (334, 17073), (337, 17082), (339, 17094), (341, 17103), (359, 17196), (383, 17313), (384, 17316), (391, 17343), (393, 17355), (405, 17409), (410, 17430), (427, 17496), (440, 17535), (491, 17676), (507, 17721), (535, 17811), (538, 17820), (552, 17850), (575, 17907), (582, 17922), (606, 17949), (607, 17952), (612, 17970), (656, 18081), (689, 18162), (709, 18219), (720, 18261), (741, 18357), (744, 18378), (749, 18402), (757, 18447), (762, 18465), (776, 18513), (780, 18525), (800, 18567), (803, 18579), (816, 18627), (851, 18798), (863, 18858), (865, 18870), (872, 18897), (875, 18918), (892, 19014), (899, 19062),

Gene: Noelle\_25 Start: 15938, Stop: 18538, Start Num: 109

Candidate Starts for Noelle\_25:

(Start: 109 @15938 has 113 MA's), (246, 16328), (283, 16457), (291, 16490), (295, 16505), (299, 16517), (315, 16580), (341, 16688), (351, 16739), (370, 16823), (471, 17108), (477, 17120), (481, 17132), (499, 17177), (530, 17255), (542, 17288), (545, 17294), (614, 17426), (626, 17462), (649, 17510), (700, 17627), (710, 17675), (719, 17708), (726, 17741), (729, 17759), (757, 17906), (762, 17924), (807, 18050), (835, 18140), (860, 18305), (863, 18314), (875, 18374), (877, 18383), (883, 18419), (886, 18437), (892, 18470), (899, 18518),

Gene: Norbert\_25 Start: 16043, Stop: 19081, Start Num: 37

Candidate Starts for Norbert\_25:

(Start: 37 @16043 has 32 MA's), (66, 16217), (69, 16229), (81, 16262), (Start: 143 @16469 has 5 MA's), (Start: 152 @16490 has 5 MA's), (190, 16589), (193, 16592), (258, 16802), (268, 16823), (279, 16856), (295, 16919), (299, 16931), (308, 16964), (312, 16982), (316, 17003), (327, 17051), (329, 17057), (334, 17072), (337, 17081), (339, 17093), (341, 17102), (359, 17195), (383, 17312), (384, 17315), (391, 17342), (393, 17354), (405, 17408), (410, 17429), (427, 17495), (440, 17534), (491, 17675), (507, 17720), (535, 17810), (538, 17819), (552, 17849), (575, 17906), (582, 17921), (606,

17948), (607, 17951), (612, 17969), (656, 18080), (689, 18161), (709, 18218), (720, 18260), (741, 18356), (744, 18377), (749, 18401), (757, 18446), (762, 18464), (776, 18512), (780, 18524), (800, 18566), (803, 18578), (816, 18626), (851, 18797), (863, 18857), (865, 18869), (872, 18896), (875, 18917), (892, 19013), (899, 19061),

Gene: NorthStar\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for NorthStar\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (674, 17523), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Norz\_26 Start: 17066, Stop: 19726, Start Num: 111

Candidate Starts for Norz\_26:

(Start: 111 @17066 has 200 MA's), (125, 17105), (144, 17168), (145, 17174), (Start: 155 @17198 has 22 MA's), (176, 17240), (295, 17474), (315, 17549), (329, 17612), (341, 17657), (346, 17681), (361, 17756), (364, 17768), (451, 18089), (565, 18419), (584, 18470), (598, 18497), (671, 18701), (710, 18824), (715, 18845), (721, 18866), (741, 18965), (750, 19007), (788, 19139), (815, 19223), (827, 19268), (875, 19550), (885, 19616), (888, 19637), (895, 19676), (897, 19691),

Gene: NotAPhaseMom\_25 Start: 16030, Stop: 18489, Start Num: 155

Candidate Starts for NotAPhaseMom\_25:

(Start: 109 @15889 has 113 MA's), (Start: 155 @16030 has 22 MA's), (Start: 163 @16048 has 10 MA's), (240, 16255), (252, 16294), (258, 16324), (291, 16441), (299, 16468), (315, 16531), (329, 16594), (341, 16639), (348, 16681), (365, 16765), (457, 17032), (481, 17083), (499, 17128), (530, 17206), (542, 17239), (545, 17245), (557, 17266), (626, 17413), (636, 17434), (647, 17458), (673, 17524), (700, 17578), (710, 17626), (726, 17692), (757, 17857), (762, 17875), (807, 18001), (859, 18253), (860, 18256), (863, 18265), (875, 18325), (892, 18421), (899, 18469),

Gene: NothingSpecial\_28 Start: 18636, Stop: 21167, Start Num: 107

Candidate Starts for NothingSpecial\_28:

(Start: 107 @18636 has 89 MA's), (172, 18816), (173, 18819), (245, 18987), (256, 19014), (264, 19029), (275, 19062), (279, 19074), (294, 19134), (299, 19149), (321, 19245), (322, 19248), (341, 19320), (344, 19341), (345, 19344), (377, 19485), (383, 19530), (390, 19557), (393, 19572), (405, 19626), (410, 19647), (427, 19713), (440, 19752), (510, 19947), (514, 19965), (523, 19983), (568, 20103), (574, 20118), (585, 20145), (586, 20148), (607, 20169), (710, 20439), (711, 20442), (718, 20469), (722, 20484), (727, 20514), (737, 20562), (749, 20610), (761, 20664), (810, 20748), (830, 20772), (850, 20889), (866, 20967),

Gene: Nyxis\_25 Start: 15969, Stop: 18428, Start Num: 155

Candidate Starts for Nyxis\_25:

(Start: 109 @15828 has 113 MA's), (Start: 155 @15969 has 22 MA's), (Start: 163 @15987 has 10 MA's), (240, 16194), (252, 16233), (258, 16263), (291, 16380), (299, 16407), (315, 16470), (329, 16533), (341, 16578), (348, 16620), (365, 16704), (457, 16971), (481, 17022), (499, 17067), (530, 17145), (545, 17184), (557, 17205), (626, 17352), (636, 17373), (647, 17397), (670, 17457), (673, 17463), (674, 17466), (700, 17517), (710, 17565), (726, 17631), (757, 17796), (762, 17814), (807, 17940), (859, 18192), (860, 18195), (863, 18204), (875, 18264), (892, 18360), (899, 18408),

Gene: OKCentral2016\_25 Start: 15565, Stop: 18123, Start Num: 163

Candidate Starts for OKCentral2016\_25:

(50, 15157), (Start: 105 @15388 has 8 MA's), (Start: 163 @15565 has 10 MA's), (171, 15586), (181, 15610), (186, 15616), (200, 15640), (201, 15643), (203, 15652), (214, 15691), (219, 15700), (220, 15706), (225, 15730), (243, 15775), (255, 15817), (265, 15850), (268, 15859), (281, 15913), (295, 15967), (298, 15976), (302, 16000), (309, 16021), (330, 16126), (339, 16168), (401, 16480), (402, 16483), (404, 16495), (489, 16696), (528, 16816), (542, 16861), (544, 16864), (545, 16867), (557, 16888), (558, 16891), (574, 16936), (626, 17044), (636, 17065), (659, 17125), (674, 17158), (705, 17221), (721, 17299), (726, 17323), (741, 17398), (752, 17464), (757, 17488), (762, 17506), (770, 17542), (782, 17572), (799, 17614), (802, 17626), (807, 17638), (819, 17674), (823, 17686), (863, 17899), (865, 17911), (871, 17935), (875, 17959), (892, 18055), (899, 18103),

Gene: OKaNui\_26 Start: 15938, Stop: 18538, Start Num: 109

Candidate Starts for OKaNui\_26:

(Start: 109 @15938 has 113 MA's), (Start: 155 @16079 has 22 MA's), (Start: 163 @16097 has 10 MA's), (240, 16304), (252, 16343), (258, 16373), (291, 16490), (299, 16517), (315, 16580), (329, 16643), (341, 16688), (348, 16730), (365, 16814), (457, 17081), (481, 17132), (499, 17177), (530, 17255), (545, 17294), (626, 17462), (636, 17483), (647, 17507), (673, 17573), (700, 17627), (710, 17675), (726, 17741), (757, 17906), (762, 17924), (807, 18050), (859, 18302), (860, 18305), (863, 18314), (875, 18374), (892, 18470), (899, 18518),

Gene: Obama12\_26 Start: 16339, Stop: 18798, Start Num: 155

Candidate Starts for Obama12\_26:

(Start: 109 @16198 has 113 MA's), (Start: 155 @16339 has 22 MA's), (Start: 163 @16357 has 10 MA's), (222, 16513), (240, 16564), (258, 16633), (291, 16750), (299, 16777), (315, 16840), (329, 16903), (341, 16948), (348, 16990), (365, 17074), (420, 17281), (457, 17341), (481, 17392), (499, 17437), (530, 17515), (542, 17548), (545, 17554), (626, 17722), (636, 17743), (647, 17767), (670, 17827), (673, 17833), (674, 17836), (700, 17887), (710, 17935), (726, 18001), (757, 18166), (762, 18184), (807, 18310), (859, 18562), (860, 18565), (863, 18574), (874, 18631), (875, 18634), (883, 18679), (892, 18730), (899, 18778),

Gene: Odin\_25 Start: 15403, Stop: 17928, Start Num: 102

Candidate Starts for Odin\_25:

(Start: 102 @15403 has 1 MA's), (110, 15421), (144, 15526), (170, 15592), (172, 15595), (173, 15598), (264, 15802), (279, 15847), (299, 15922), (311, 15964), (312, 15973), (321, 16018), (325, 16039), (337, 16072), (341, 16093), (344, 16114), (345, 16117), (383, 16303), (390, 16330), (393, 16345), (405, 16399), (410, 16420), (427, 16486), (512, 16726), (517, 16753), (538, 16810), (546, 16831), (560, 16858), (568, 16876), (606, 16939), (607, 16942), (620, 16981), (658, 17080), (689, 17152), (703, 17179), (709, 17209), (718, 17242), (749, 17383), (765, 17449), (804, 17512), (861, 17710), (866, 17731), (879, 17806), (889, 17842),

Gene: Ohfah\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for Ohfah\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (542, 17232), (545, 17238), (557, 17259), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (883, 18363), (892, 18414), (899, 18462),

Gene: Ohno789\_24 Start: 16219, Stop: 18690, Start Num: 111

Candidate Starts for Ohno789\_24:

(Start: 111 @16219 has 200 MA's), (125, 16258), (144, 16321), (Start: 155 @16351 has 22 MA's), (162, 16372), (176, 16393), (181, 16405), (194, 16423), (262, 16513), (315, 16711), (321, 16744),

(339, 16810), (389, 17065), (393, 17086), (398, 17113), (476, 17272), (500, 17308), (555, 17401), (564, 17422), (592, 17479), (644, 17599), (659, 17635), (671, 17665), (682, 17701), (707, 17767), (710, 17788), (741, 17929), (773, 18070), (784, 18091), (826, 18226), (855, 18403), (875, 18514), (888, 18601), (895, 18640), (897, 18655),

Gene: OlanP\_27 Start: 16237, Stop: 19263, Start Num: 38

Candidate Starts for OlanP\_27:

(30, 16183), (Start: 38 @16237 has 82 MA's), (55, 16351), (68, 16417), (69, 16420), (73, 16429), (86, 16465), (96, 16516), (124, 16588), (Start: 143 @16660 has 5 MA's), (190, 16780), (193, 16783), (214, 16852), (226, 16897), (258, 16990), (264, 16999), (279, 17044), (288, 17083), (295, 17107), (299, 17119), (308, 17152), (312, 17170), (316, 17191), (327, 17239), (329, 17245), (334, 17260), (337, 17269), (339, 17281), (341, 17290), (359, 17383), (380, 17470), (383, 17500), (384, 17503), (391, 17530), (393, 17542), (405, 17596), (410, 17617), (416, 17647), (427, 17683), (443, 17734), (477, 17809), (491, 17863), (507, 17908), (525, 17956), (535, 17998), (538, 18007), (552, 18037), (582, 18109), (585, 18115), (606, 18136), (607, 18139), (610, 18151), (654, 18265), (656, 18268), (689, 18349), (710, 18409), (718, 18439), (719, 18442), (721, 18451), (757, 18634), (776, 18700), (780, 18712), (800, 18754), (817, 18817), (836, 18874), (844, 18943), (851, 18979), (867, 19060), (892, 19195), (894, 19207),

Gene: Ollie\_27 Start: 15849, Stop: 18875, Start Num: 38

Candidate Starts for Ollie\_27:

(30, 15795), (Start: 38 @15849 has 82 MA's), (55, 15963), (68, 16029), (69, 16032), (73, 16041), (86, 16077), (96, 16128), (124, 16200), (Start: 143 @16272 has 5 MA's), (190, 16392), (193, 16395), (214, 16464), (226, 16509), (258, 16602), (264, 16611), (270, 16629), (279, 16656), (295, 16719), (299, 16731), (308, 16764), (312, 16782), (325, 16848), (327, 16851), (329, 16857), (334, 16872), (337, 16881), (339, 16893), (341, 16902), (355, 16980), (359, 16995), (383, 17112), (384, 17115), (391, 17142), (393, 17154), (405, 17208), (410, 17229), (427, 17295), (440, 17334), (479, 17427), (491, 17475), (507, 17520), (525, 17568), (535, 17610), (538, 17619), (552, 17649), (553, 17652), (559, 17664), (574, 17700), (582, 17721), (585, 17727), (606, 17748), (607, 17751), (658, 17889), (664, 17901), (689, 17961), (706, 18000), (741, 18156), (744, 18177), (749, 18201), (757, 18246), (762, 18264), (776, 18312), (780, 18324), (800, 18366), (817, 18429), (836, 18486), (844, 18555), (851, 18591), (867, 18672), (892, 18807),

Gene: Onglai\_26 Start: 15924, Stop: 18833, Start Num: 52

Candidate Starts for Onglai\_26:

(Start: 52 @15924 has 33 MA's), (55, 15936), (68, 15996), (114, 16155), (130, 16218), (153, 16281), (165, 16323), (193, 16380), (207, 16419), (260, 16590), (264, 16596), (269, 16611), (294, 16701), (295, 16704), (299, 16716), (311, 16758), (321, 16812), (341, 16887), (344, 16908), (345, 16911), (348, 16929), (361, 16992), (379, 17058), (383, 17097), (390, 17124), (393, 17139), (399, 17169), (405, 17193), (410, 17214), (427, 17280), (440, 17319), (468, 17385), (479, 17412), (486, 17439), (507, 17505), (523, 17550), (546, 17625), (568, 17670), (575, 17691), (585, 17712), (586, 17715), (606, 17733), (607, 17736), (615, 17763), (649, 17844), (718, 18036), (722, 18051), (727, 18081), (738, 18132), (756, 18219), (758, 18228), (771, 18279), (800, 18342), (805, 18363), (816, 18399), (830, 18435), (831, 18441), (844, 18519), (849, 18546), (860, 18606), (875, 18675), (879, 18705), (885, 18732), (894, 18771), (900, 18813),

Gene: Oofda\_29 Start: 15894, Stop: 18083, Start Num: 179

Candidate Starts for Oofda\_29:

(Start: 115 @15717 has 1 MA's), (Start: 117 @15726 has 5 MA's), (Start: 179 @15894 has 15 MA's), (269, 16137), (270, 16143), (290, 16212), (306, 16269), (341, 16413), (348, 16455), (358, 16503), (359, 16506), (382, 16617), (385, 16635), (412, 16740), (425, 16788), (484, 16893), (513, 16953), (536, 17007), (555, 17043), (569, 17067), (577, 17076), (608, 17139), (616, 17160), (622, 17175), (629, 17199), (635, 17211), (659, 17265), (667, 17286), (680, 17316), (732, 17487), (734, 17508),

(756, 17592), (867, 17895), (892, 18018), (894, 18030),

Gene: Oogway\_23 Start: 16332, Stop: 18812, Start Num: 111

Candidate Starts for Oogway\_23:

(Start: 111 @16332 has 200 MA's), (125, 16371), (144, 16434), (Start: 155 @16464 has 22 MA's), (176, 16506), (285, 16713), (291, 16731), (315, 16821), (329, 16884), (337, 16908), (339, 16920), (348, 16971), (460, 17355), (526, 17457), (537, 17496), (560, 17523), (569, 17547), (671, 17775), (707, 17877), (710, 17898), (721, 17940), (741, 18039), (753, 18102), (818, 18321), (827, 18354), (875, 18636), (888, 18723), (895, 18762),

Gene: Orange\_26 Start: 17163, Stop: 19709, Start Num: 112

Candidate Starts for Orange\_26:

(Start: 112 @17163 has 30 MA's), (Start: 118 @17181 has 2 MA's), (187, 17355), (197, 17364), (223, 17439), (252, 17493), (267, 17547), (271, 17562), (272, 17565), (279, 17583), (295, 17646), (299, 17658), (315, 17721), (329, 17784), (334, 17799), (337, 17808), (341, 17829), (345, 17853), (348, 17868), (367, 17955), (369, 17958), (374, 17973), (378, 17994), (380, 18006), (389, 18072), (404, 18144), (412, 18168), (437, 18249), (441, 18258), (445, 18270), (467, 18312), (492, 18369), (513, 18423), (549, 18531), (567, 18570), (618, 18711), (656, 18807), (661, 18828), (675, 18861), (686, 18894), (687, 18897), (709, 18981), (721, 19026), (722, 19029), (746, 19143), (752, 19176), (791, 19248), (808, 19284), (839, 19356), (850, 19434), (860, 19488), (866, 19512), (889, 19623),

Gene: P28Green\_27 Start: 15980, Stop: 19006, Start Num: 38

Candidate Starts for P28Green\_27:

(30, 15926), (Start: 38 @15980 has 82 MA's), (55, 16094), (68, 16160), (69, 16163), (73, 16172), (86, 16208), (96, 16259), (124, 16331), (Start: 143 @16403 has 5 MA's), (190, 16523), (193, 16526), (214, 16595), (226, 16640), (258, 16733), (264, 16742), (270, 16760), (279, 16787), (295, 16850), (299, 16862), (308, 16895), (312, 16913), (325, 16979), (327, 16982), (329, 16988), (334, 17003), (337, 17012), (339, 17024), (341, 17033), (359, 17126), (383, 17243), (384, 17246), (391, 17273), (393, 17285), (405, 17339), (410, 17360), (427, 17426), (436, 17453), (440, 17465), (479, 17558), (491, 17606), (507, 17651), (525, 17699), (535, 17741), (538, 17750), (552, 17780), (553, 17783), (559, 17795), (582, 17852), (585, 17858), (606, 17879), (607, 17882), (658, 18020), (689, 18092), (710, 18152), (718, 18182), (719, 18185), (721, 18194), (757, 18377), (776, 18443), (780, 18455), (800, 18497), (817, 18560), (836, 18617), (844, 18686), (851, 18722), (867, 18803), (892, 18938), (894, 18950),

Gene: PGHhamlin\_29 Start: 15971, Stop: 18997, Start Num: 38

Candidate Starts for PGHhamlin\_29:

(30, 15917), (Start: 38 @15971 has 82 MA's), (55, 16085), (68, 16151), (69, 16154), (73, 16163), (86, 16199), (96, 16250), (124, 16322), (Start: 143 @16394 has 5 MA's), (190, 16514), (193, 16517), (214, 16586), (226, 16631), (258, 16724), (264, 16733), (270, 16751), (279, 16778), (295, 16841), (299, 16853), (308, 16886), (312, 16904), (325, 16970), (327, 16973), (329, 16979), (334, 16994), (337, 17003), (339, 17015), (341, 17024), (359, 17117), (383, 17234), (384, 17237), (391, 17264), (393, 17276), (405, 17330), (410, 17351), (427, 17417), (436, 17444), (479, 17549), (491, 17597), (507, 17642), (525, 17690), (535, 17732), (538, 17741), (552, 17771), (553, 17774), (559, 17786), (582, 17843), (585, 17849), (606, 17870), (607, 17873), (658, 18011), (664, 18023), (689, 18083), (710, 18143), (718, 18173), (719, 18176), (721, 18185), (741, 18278), (757, 18368), (776, 18434), (780, 18446), (800, 18488), (817, 18551), (836, 18608), (844, 18677), (851, 18713), (867, 18794), (892, 18929),

Gene: PP\_35 Start: 21773, Stop: 24784, Start Num: 32

Candidate Starts for PP\_35:

(Start: 32 @21773 has 1 MA's), (48, 21896), (49, 21902), (70, 22010), (71, 22013), (74, 22022), (80, 22034), (98, 22115), (132, 22229), (139, 22253), (169, 22325), (178, 22346), (180, 22355), (185,



22361), (242, 22526), (246, 22547), (263, 22604), (276, 22643), (282, 22673), (285, 22691), (290, 22706), (291, 22709), (295, 22724), (300, 22745), (315, 22799), (329, 22862), (339, 22898), (341, 22907), (344, 22928), (348, 22949), (387, 23138), (411, 23216), (423, 23249), (453, 23297), (480, 23348), (481, 23351), (499, 23396), (572, 23567), (608, 23615), (623, 23660), (647, 23714), (654, 23735), (666, 23768), (700, 23834), (705, 23846), (713, 23891), (721, 23924), (725, 23945), (726, 23948), (746, 24056), (756, 24110), (757, 24113), (762, 24131), (774, 24188), (787, 24218), (810, 24293), (814, 24314), (826, 24353), (837, 24407), (845, 24467), (851, 24500), (864, 24563), (865, 24572), (882, 24662), (885, 24677), (894, 24728),

Gene: PSullivan\_26 Start: 16832, Stop: 19303, Start Num: 111

Candidate Starts for PSullivan\_26:

(Start: 111 @16832 has 200 MA's), (125, 16871), (144, 16934), (Start: 155 @16964 has 22 MA's), (162, 16985), (176, 17006), (181, 17018), (194, 17036), (262, 17126), (315, 17324), (321, 17357), (339, 17423), (389, 17678), (393, 17699), (398, 17726), (476, 17885), (500, 17921), (555, 18014), (564, 18035), (592, 18092), (644, 18212), (659, 18248), (671, 18278), (682, 18314), (707, 18380), (710, 18401), (741, 18542), (773, 18683), (784, 18704), (826, 18839), (855, 19016), (875, 19127), (885, 19193), (888, 19214), (895, 19253), (897, 19268),

Gene: PacerPaul\_24 Start: 16642, Stop: 19113, Start Num: 111

Candidate Starts for PacerPaul\_24:

(Start: 111 @16642 has 200 MA's), (125, 16681), (144, 16744), (Start: 155 @16774 has 22 MA's), (162, 16795), (176, 16816), (194, 16846), (243, 16870), (262, 16936), (315, 17134), (321, 17167), (339, 17233), (389, 17488), (393, 17509), (398, 17536), (476, 17695), (500, 17731), (555, 17824), (564, 17845), (569, 17860), (579, 17881), (580, 17884), (615, 17953), (627, 17989), (644, 18022), (659, 18058), (671, 18088), (682, 18124), (707, 18190), (710, 18211), (741, 18352), (773, 18493), (784, 18514), (826, 18649), (855, 18826), (875, 18937), (885, 19003), (888, 19024), (895, 19063), (897, 19078),

Gene: PackMan\_27 Start: 17590, Stop: 20499, Start Num: 52

Candidate Starts for PackMan\_27:

(Start: 52 @17590 has 33 MA's), (55, 17602), (68, 17662), (114, 17821), (130, 17884), (153, 17947), (165, 17989), (193, 18046), (260, 18256), (264, 18262), (269, 18277), (294, 18367), (295, 18370), (299, 18382), (311, 18424), (321, 18478), (341, 18553), (344, 18574), (345, 18577), (348, 18595), (361, 18658), (379, 18724), (383, 18763), (390, 18790), (393, 18805), (399, 18835), (405, 18859), (408, 18871), (410, 18880), (427, 18946), (440, 18985), (468, 19051), (479, 19078), (486, 19105), (507, 19171), (523, 19216), (546, 19291), (568, 19336), (575, 19357), (585, 19378), (586, 19381), (606, 19399), (607, 19402), (615, 19429), (649, 19510), (664, 19552), (718, 19702), (722, 19717), (727, 19747), (738, 19798), (756, 19885), (758, 19894), (771, 19945), (800, 20008), (805, 20029), (816, 20065), (830, 20101), (831, 20107), (844, 20185), (849, 20212), (860, 20272), (875, 20341), (879, 20371), (885, 20398), (894, 20437), (900, 20479),

Gene: PainterBoy\_27 Start: 16773, Stop: 19835, Start Num: 5

Candidate Starts for PainterBoy\_27:

(Start: 5 @16773 has 3 MA's), (16, 16947), (29, 17064), (57, 17241), (100, 17397), (108, 17403), (150, 17505), (195, 17601), (227, 17709), (229, 17715), (270, 17829), (289, 17895), (297, 17922), (315, 17991), (321, 18024), (322, 18027), (342, 18114), (343, 18117), (359, 18195), (375, 18255), (384, 18315), (469, 18549), (495, 18579), (499, 18582), (568, 18735), (641, 18912), (646, 18924), (710, 19119), (715, 19140), (734, 19233), (745, 19260), (749, 19281), (752, 19302), (847, 19542), (850, 19560), (861, 19617), (883, 19728),

Gene: Palestino\_24 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Palestino\_24:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (608, 17355), (626, 17409), (647, 17454), (670, 17514), (685, 17532), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Panamaxus\_25 Start: 16043, Stop: 19081, Start Num: 37

Candidate Starts for Panamaxus\_25:

(Start: 37 @16043 has 32 MA's), (66, 16217), (69, 16229), (81, 16262), (Start: 143 @16469 has 5 MA's), (Start: 152 @16490 has 5 MA's), (190, 16589), (193, 16592), (258, 16802), (268, 16823), (279, 16856), (295, 16919), (299, 16931), (308, 16964), (312, 16982), (316, 17003), (327, 17051), (329, 17057), (334, 17072), (337, 17081), (339, 17093), (341, 17102), (359, 17195), (383, 17312), (384, 17315), (391, 17342), (393, 17354), (405, 17408), (410, 17429), (427, 17495), (440, 17534), (491, 17675), (507, 17720), (535, 17810), (538, 17819), (552, 17849), (575, 17906), (582, 17921), (606, 17948), (607, 17951), (612, 17969), (656, 18080), (689, 18161), (709, 18218), (720, 18260), (741, 18356), (744, 18377), (749, 18401), (757, 18446), (762, 18464), (776, 18512), (780, 18524), (800, 18566), (803, 18578), (816, 18626), (851, 18797), (863, 18857), (865, 18869), (872, 18896), (875, 18917), (892, 19013), (899, 19061),

Gene: Papez\_26 Start: 18048, Stop: 20528, Start Num: 111

Candidate Starts for Papez\_26:

(Start: 111 @18048 has 200 MA's), (125, 18087), (144, 18150), (Start: 155 @18180 has 22 MA's), (176, 18222), (285, 18429), (291, 18447), (315, 18537), (329, 18600), (337, 18624), (339, 18636), (348, 18687), (460, 19071), (526, 19173), (537, 19212), (560, 19239), (569, 19263), (671, 19491), (707, 19593), (710, 19614), (714, 19626), (721, 19656), (741, 19755), (753, 19818), (818, 20037), (827, 20070), (875, 20352), (888, 20439), (895, 20478), (899, 20508),

Gene: Paphu\_23 Start: 15792, Stop: 18626, Start Num: 111

Candidate Starts for Paphu\_23:

(Start: 111 @15792 has 200 MA's), (132, 15864), (257, 16107), (263, 16122), (278, 16167), (305, 16287), (310, 16305), (317, 16353), (326, 16398), (339, 16443), (340, 16446), (348, 16494), (386, 16677), (393, 16704), (413, 16788), (428, 16845), (435, 16863), (453, 16908), (469, 16944), (486, 17004), (503, 17052), (518, 17115), (519, 17118), (562, 17235), (573, 17271), (583, 17298), (589, 17310), (597, 17328), (602, 17343), (622, 17406), (669, 17535), (684, 17580), (694, 17613), (700, 17625), (729, 17754), (747, 17850), (764, 17937), (765, 17940), (770, 17958), (825, 18162), (855, 18339), (875, 18450), (888, 18537), (895, 18576), (897, 18591),

Gene: Paraselene\_23 Start: 16163, Stop: 18997, Start Num: 111

Candidate Starts for Paraselene\_23:

(Start: 111 @16163 has 200 MA's), (132, 16235), (257, 16478), (263, 16493), (278, 16538), (305, 16658), (310, 16676), (317, 16724), (326, 16769), (339, 16814), (340, 16817), (348, 16865), (386, 17048), (393, 17075), (413, 17159), (428, 17216), (435, 17234), (453, 17279), (469, 17315), (482, 17357), (486, 17375), (503, 17423), (518, 17486), (519, 17489), (562, 17606), (573, 17642), (583, 17669), (589, 17681), (597, 17699), (602, 17714), (622, 17777), (669, 17906), (684, 17951), (694, 17984), (700, 17996), (729, 18125), (747, 18221), (764, 18308), (765, 18311), (770, 18329), (825, 18533), (855, 18710), (875, 18821), (883, 18875), (888, 18908), (895, 18947), (897, 18962),

Gene: Pari\_25 Start: 16564, Stop: 18564, Start Num: 111

Candidate Starts for Pari\_25:

(Start: 111 @16564 has 200 MA's), (125, 16603), (144, 16666), (Start: 155 @16696 has 22 MA's), (162, 16717), (238, 16777), (266, 16873), (285, 16942), (289, 16954), (315, 17050), (321, 17083), (376, 17317), (482, 17605), (534, 17707), (543, 17719), (592, 17797), (611, 17839), (639, 17893),

(644, 17905), (651, 17920), (657, 17938), (663, 17950), (688, 18028), (699, 18058), (723, 18154), (769, 18364), (820, 18514),

Gene: Parliament\_23 Start: 16450, Stop: 18921, Start Num: 111

Candidate Starts for Parliament\_23:

(Start: 111 @16450 has 200 MA's), (125, 16489), (144, 16552), (Start: 155 @16582 has 22 MA's), (162, 16603), (176, 16624), (194, 16654), (243, 16678), (262, 16744), (315, 16942), (321, 16975), (339, 17041), (389, 17296), (393, 17317), (398, 17344), (476, 17503), (500, 17539), (555, 17632), (564, 17653), (592, 17710), (644, 17830), (659, 17866), (671, 17896), (682, 17932), (707, 17998), (710, 18019), (741, 18160), (773, 18301), (784, 18322), (826, 18457), (855, 18634), (875, 18745), (885, 18811), (888, 18832), (895, 18871), (899, 18901),

Gene: PascalRango\_23 Start: 16002, Stop: 18614, Start Num: 111

Candidate Starts for PascalRango\_23:

(Start: 111 @16002 has 200 MA's), (Start: 117 @16017 has 5 MA's), (144, 16101), (145, 16107), (Start: 155 @16131 has 22 MA's), (250, 16239), (299, 16410), (314, 16470), (315, 16473), (342, 16596), (348, 16626), (361, 16689), (412, 16908), (437, 16980), (459, 17028), (482, 17073), (562, 17298), (565, 17307), (579, 17343), (584, 17358), (598, 17385), (671, 17589), (708, 17703), (710, 17712), (715, 17733), (721, 17754), (741, 17853), (746, 17874), (750, 17895), (751, 17898), (788, 18027), (815, 18111), (827, 18156), (875, 18438), (885, 18504), (888, 18525), (895, 18564), (897, 18579),

Gene: PattyP\_26 Start: 16629, Stop: 19100, Start Num: 111

Candidate Starts for PattyP\_26:

(Start: 111 @16629 has 200 MA's), (125, 16668), (144, 16731), (Start: 155 @16761 has 22 MA's), (162, 16782), (176, 16803), (181, 16815), (194, 16833), (243, 16857), (262, 16923), (315, 17121), (321, 17154), (339, 17220), (389, 17475), (393, 17496), (398, 17523), (476, 17682), (500, 17718), (555, 17811), (564, 17832), (592, 17889), (644, 18009), (659, 18045), (671, 18075), (682, 18111), (707, 18177), (710, 18198), (741, 18339), (773, 18480), (784, 18501), (826, 18636), (855, 18813), (875, 18924), (885, 18990), (888, 19011), (895, 19050), (897, 19065),

Gene: Pawn\_27 Start: 16057, Stop: 19083, Start Num: 38

Candidate Starts for Pawn\_27:

(30, 16003), (Start: 38 @16057 has 82 MA's), (55, 16171), (68, 16237), (69, 16240), (73, 16249), (86, 16285), (96, 16336), (124, 16408), (Start: 143 @16480 has 5 MA's), (190, 16600), (193, 16603), (214, 16672), (226, 16717), (258, 16810), (264, 16819), (279, 16864), (288, 16903), (295, 16927), (299, 16939), (308, 16972), (312, 16990), (316, 17011), (327, 17059), (329, 17065), (334, 17080), (337, 17089), (339, 17101), (341, 17110), (359, 17203), (380, 17290), (383, 17320), (384, 17323), (391, 17350), (393, 17362), (405, 17416), (410, 17437), (416, 17467), (427, 17503), (477, 17629), (491, 17683), (507, 17728), (525, 17776), (535, 17818), (538, 17827), (552, 17857), (582, 17929), (585, 17935), (606, 17956), (607, 17959), (610, 17971), (656, 18088), (658, 18097), (689, 18169), (690, 18172), (706, 18208), (718, 18259), (719, 18262), (721, 18271), (757, 18454), (776, 18520), (780, 18532), (800, 18574), (817, 18637), (836, 18694), (844, 18763), (851, 18799), (867, 18880), (892, 19015), (894, 19027),

Gene: Payneful\_24 Start: 15902, Stop: 18370, Start Num: 111

Candidate Starts for Payneful\_24:

(Start: 111 @15902 has 200 MA's), (Start: 117 @15917 has 5 MA's), (Start: 155 @16031 has 22 MA's), (162, 16052), (176, 16073), (194, 16103), (262, 16193), (315, 16391), (321, 16424), (339, 16490), (389, 16745), (393, 16766), (398, 16793), (476, 16952), (500, 16988), (555, 17081), (564, 17102), (569, 17117), (579, 17138), (580, 17141), (615, 17210), (627, 17246), (644, 17279), (659, 17315), (671, 17345), (682, 17381), (707, 17447), (710, 17468), (741, 17609), (773, 17750), (784, 17771), (826, 17906), (855, 18083), (875, 18194), (885, 18260), (888, 18281), (895, 18320), (899,

18350),

Gene: PeaceMeal1\_24 Start: 13789, Stop: 16521, Start Num: 105

Candidate Starts for PeaceMeal1\_24:

(Start: 105 @13789 has 8 MA's), (Start: 163 @13966 has 10 MA's), (200, 14041), (203, 14053), (255, 14215), (261, 14236), (265, 14248), (274, 14278), (281, 14311), (292, 14356), (298, 14374), (301, 14389), (302, 14398), (309, 14419), (330, 14524), (339, 14566), (372, 14731), (404, 14893), (411, 14920), (489, 15097), (506, 15142), (528, 15217), (544, 15265), (545, 15268), (557, 15289), (558, 15292), (574, 15337), (615, 15412), (617, 15415), (623, 15436), (632, 15460), (659, 15526), (673, 15556), (685, 15568), (709, 15655), (714, 15670), (726, 15724), (741, 15799), (754, 15877), (757, 15889), (762, 15907), (772, 15946), (779, 15958), (782, 15970), (799, 16012), (802, 16024), (807, 16036), (812, 16051), (819, 16072), (823, 16084), (863, 16297), (875, 16357), (883, 16402), (892, 16453), (899, 16501),

Gene: Peaches\_25 Start: 15884, Stop: 18484, Start Num: 109

Candidate Starts for Peaches\_25:

(Start: 109 @15884 has 113 MA's), (Start: 155 @16025 has 22 MA's), (Start: 163 @16043 has 10 MA's), (240, 16250), (252, 16289), (258, 16319), (291, 16436), (299, 16463), (315, 16526), (329, 16589), (341, 16634), (348, 16676), (365, 16760), (457, 17027), (481, 17078), (499, 17123), (530, 17201), (542, 17234), (545, 17240), (591, 17336), (606, 17345), (626, 17408), (636, 17429), (649, 17456), (670, 17513), (673, 17519), (700, 17573), (710, 17621), (726, 17687), (757, 17852), (762, 17870), (807, 17996), (859, 18248), (860, 18251), (863, 18260), (875, 18320), (892, 18416), (899, 18464),

Gene: Pelly\_25 Start: 16859, Stop: 19519, Start Num: 111

Candidate Starts for Pelly\_25:

(Start: 111 @16859 has 200 MA's), (125, 16898), (144, 16961), (145, 16967), (Start: 155 @16991 has 22 MA's), (176, 17033), (315, 17342), (329, 17405), (341, 17450), (346, 17474), (361, 17549), (364, 17561), (451, 17882), (565, 18212), (584, 18263), (598, 18290), (671, 18494), (708, 18608), (710, 18617), (715, 18638), (721, 18659), (741, 18758), (750, 18800), (751, 18803), (788, 18932), (815, 19016), (827, 19061), (875, 19343), (888, 19430), (895, 19469), (897, 19484),

Gene: Pembroke\_27 Start: 15980, Stop: 19006, Start Num: 38

Candidate Starts for Pembroke\_27:

(30, 15926), (Start: 38 @15980 has 82 MA's), (55, 16094), (68, 16160), (69, 16163), (73, 16172), (86, 16208), (96, 16259), (124, 16331), (Start: 143 @16403 has 5 MA's), (190, 16523), (193, 16526), (214, 16595), (226, 16640), (258, 16733), (264, 16742), (270, 16760), (279, 16787), (295, 16850), (299, 16862), (308, 16895), (312, 16913), (325, 16979), (327, 16982), (329, 16988), (334, 17003), (337, 17012), (339, 17024), (341, 17033), (359, 17126), (383, 17243), (384, 17246), (391, 17273), (393, 17285), (405, 17339), (410, 17360), (427, 17426), (436, 17453), (479, 17558), (491, 17606), (507, 17651), (525, 17699), (535, 17741), (538, 17750), (552, 17780), (553, 17783), (559, 17795), (582, 17852), (585, 17858), (606, 17879), (607, 17882), (658, 18020), (664, 18032), (689, 18092), (710, 18152), (718, 18182), (719, 18185), (721, 18194), (741, 18287), (757, 18377), (776, 18443), (780, 18455), (800, 18497), (817, 18560), (836, 18617), (844, 18686), (851, 18722), (867, 18803), (892, 18938),

Gene: Penny1\_27 Start: 15979, Stop: 19005, Start Num: 38

Candidate Starts for Penny1\_27:

(30, 15925), (Start: 38 @15979 has 82 MA's), (55, 16093), (68, 16159), (69, 16162), (73, 16171), (86, 16207), (96, 16258), (124, 16330), (Start: 143 @16402 has 5 MA's), (190, 16522), (193, 16525), (214, 16594), (226, 16639), (258, 16732), (264, 16741), (270, 16759), (279, 16786), (295, 16849), (299, 16861), (308, 16894), (312, 16912), (325, 16978), (327, 16981), (329, 16987), (334, 17002), (337, 17011), (339, 17023), (341, 17032), (355, 17110), (359, 17125), (383, 17242), (384, 17245), (391,

17272), (393, 17284), (405, 17338), (410, 17359), (427, 17425), (440, 17464), (479, 17557), (491, 17605), (507, 17650), (525, 17698), (535, 17740), (538, 17749), (552, 17779), (553, 17782), (559, 17794), (582, 17851), (585, 17857), (606, 17878), (607, 17881), (658, 18019), (664, 18031), (689, 18091), (709, 18148), (741, 18286), (744, 18307), (749, 18331), (757, 18376), (762, 18394), (776, 18442), (780, 18454), (800, 18496), (817, 18559), (836, 18616), (844, 18685), (851, 18721), (867, 18802), (892, 18937),

Gene: Pepe\_25 Start: 16870, Stop: 19701, Start Num: 111

Candidate Starts for Pepe\_25:

(Start: 111 @16870 has 200 MA's), (Start: 117 @16885 has 5 MA's), (257, 17182), (278, 17242), (305, 17362), (310, 17380), (326, 17473), (339, 17518), (340, 17521), (348, 17569), (386, 17752), (393, 17779), (413, 17863), (428, 17920), (435, 17938), (439, 17947), (469, 18019), (475, 18037), (486, 18079), (487, 18082), (503, 18127), (518, 18190), (519, 18193), (562, 18310), (573, 18346), (583, 18373), (589, 18385), (597, 18403), (602, 18418), (622, 18481), (669, 18610), (684, 18655), (694, 18688), (700, 18700), (729, 18829), (747, 18925), (764, 19012), (765, 19015), (770, 19033), (825, 19237), (855, 19414), (875, 19525), (888, 19612), (895, 19651), (897, 19666),

Gene: Perplexer\_25 Start: 15879, Stop: 18479, Start Num: 109

Candidate Starts for Perplexer\_25:

(Start: 109 @15879 has 113 MA's), (229, 16221), (246, 16269), (263, 16326), (291, 16431), (295, 16446), (299, 16458), (315, 16521), (341, 16629), (344, 16650), (348, 16671), (457, 17022), (481, 17073), (499, 17118), (542, 17229), (545, 17235), (591, 17331), (614, 17367), (626, 17403), (649, 17451), (700, 17568), (726, 17682), (757, 17847), (762, 17865), (802, 17979), (807, 17991), (835, 18081), (847, 18174), (860, 18246), (863, 18255), (875, 18315), (877, 18324), (886, 18378), (892, 18411), (899, 18459),

Gene: Perseus\_25 Start: 16486, Stop: 18966, Start Num: 111

Candidate Starts for Perseus\_25:

(Start: 111 @16486 has 200 MA's), (125, 16525), (144, 16588), (Start: 155 @16618 has 22 MA's), (176, 16660), (285, 16867), (291, 16885), (315, 16975), (329, 17038), (337, 17062), (339, 17074), (348, 17125), (460, 17509), (526, 17611), (537, 17650), (555, 17665), (569, 17701), (630, 17830), (671, 17929), (707, 18031), (710, 18052), (714, 18064), (721, 18094), (741, 18193), (753, 18256), (818, 18475), (827, 18508), (875, 18790), (888, 18877), (895, 18916),

Gene: PeterPeter\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for PeterPeter\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Petersenfast\_25 Start: 17178, Stop: 19706, Start Num: 118

Candidate Starts for Petersenfast\_25:

(Start: 112 @17160 has 30 MA's), (Start: 118 @17178 has 2 MA's), (187, 17352), (197, 17361), (223, 17436), (252, 17490), (267, 17544), (271, 17559), (272, 17562), (279, 17580), (295, 17643), (299, 17655), (315, 17718), (329, 17781), (334, 17796), (337, 17805), (341, 17826), (345, 17850), (348, 17865), (367, 17952), (369, 17955), (374, 17970), (378, 17991), (380, 18003), (389, 18069), (404, 18141), (412, 18165), (437, 18246), (441, 18255), (445, 18267), (467, 18309), (492, 18366), (513, 18420), (549, 18528), (567, 18567), (618, 18708), (656, 18804), (661, 18825), (675, 18858), (686, 18891), (687, 18894), (709, 18978), (721, 19023), (722, 19026), (746, 19140), (752, 19173), (791, 19245), (808, 19281), (839, 19353), (850, 19431), (860, 19485), (866, 19509), (889, 19620),

Gene: Peterson\_27 Start: 18069, Stop: 20729, Start Num: 111

Candidate Starts for Peterson\_27:

(Start: 111 @18069 has 200 MA's), (125, 18108), (144, 18171), (145, 18177), (Start: 155 @18201 has 22 MA's), (176, 18243), (315, 18552), (341, 18660), (346, 18684), (361, 18759), (364, 18771), (451, 19092), (565, 19422), (584, 19473), (598, 19500), (671, 19704), (708, 19818), (710, 19827), (715, 19848), (721, 19869), (741, 19968), (750, 20010), (751, 20013), (788, 20142), (815, 20226), (827, 20271), (875, 20553), (888, 20640), (895, 20679), (897, 20694),

Gene: PetiteSangusue\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for PetiteSangusue\_25:

(Start: 109 @15885 has 113 MA's), (229, 16227), (246, 16275), (263, 16332), (291, 16437), (295, 16452), (299, 16464), (315, 16527), (341, 16635), (344, 16656), (348, 16677), (457, 17028), (481, 17079), (499, 17124), (542, 17235), (545, 17241), (591, 17337), (614, 17373), (626, 17409), (649, 17457), (700, 17574), (726, 17688), (757, 17853), (762, 17871), (802, 17985), (807, 17997), (835, 18087), (847, 18180), (860, 18252), (863, 18261), (875, 18321), (877, 18330), (892, 18417), (899, 18465),

Gene: Petp2012\_26 Start: 17297, Stop: 19771, Start Num: 111

Candidate Starts for Petp2012\_26:

(Start: 111 @17297 has 200 MA's), (125, 17336), (144, 17399), (Start: 155 @17429 has 22 MA's), (162, 17450), (266, 17606), (289, 17687), (315, 17783), (321, 17816), (339, 17882), (412, 18218), (441, 18290), (531, 18437), (560, 18482), (569, 18506), (630, 18635), (671, 18734), (707, 18836), (710, 18857), (721, 18899), (741, 18998), (753, 19061), (777, 19151), (818, 19280), (827, 19313), (875, 19595), (885, 19661), (888, 19682), (895, 19721), (897, 19736),

Gene: Petrucchio\_24 Start: 16327, Stop: 18795, Start Num: 111

Candidate Starts for Petrucchio\_24:

(Start: 111 @16327 has 200 MA's), (125, 16366), (144, 16429), (Start: 155 @16459 has 22 MA's), (162, 16480), (176, 16501), (181, 16513), (194, 16531), (250, 16576), (262, 16621), (315, 16816), (321, 16849), (339, 16915), (389, 17170), (393, 17191), (398, 17218), (410, 17257), (432, 17314), (451, 17344), (476, 17377), (500, 17413), (555, 17506), (564, 17527), (592, 17584), (644, 17704), (659, 17740), (671, 17770), (682, 17806), (707, 17872), (710, 17893), (741, 18034), (773, 18175), (784, 18196), (826, 18331), (875, 18619), (888, 18706), (895, 18745),

Gene: PetterN\_23 Start: 15059, Stop: 17872, Start Num: 2

Candidate Starts for PetterN\_23:

(Start: 2 @15059 has 8 MA's), (10, 15248), (120, 15731), (121, 15737), (208, 15830), (229, 15881), (246, 15917), (273, 16007), (289, 16073), (295, 16094), (315, 16169), (321, 16202), (337, 16256), (342, 16289), (343, 16292), (345, 16301), (365, 16400), (371, 16409), (376, 16433), (397, 16562), (426, 16676), (445, 16718), (450, 16727), (501, 16793), (561, 16886), (576, 16919), (634, 17006), (655, 17039), (664, 17051), (683, 17081), (710, 17144), (721, 17186), (734, 17258), (745, 17285), (748, 17300), (752, 17327), (756, 17348), (808, 17435), (829, 17465), (830, 17468), (842, 17528), (859, 17627), (863, 17639), (865, 17651), (867, 17660), (892, 17807),

Gene: Ph8s\_27 Start: 15361, Stop: 17886, Start Num: 103

Candidate Starts for Ph8s\_27:

(Start: 103 @15361 has 4 MA's), (110, 15379), (144, 15484), (170, 15550), (172, 15553), (173, 15556), (188, 15586), (279, 15805), (287, 15841), (299, 15880), (312, 15931), (321, 15976), (325, 15997), (337, 16030), (340, 16045), (341, 16051), (344, 16072), (383, 16261), (390, 16288), (393, 16303), (405, 16357), (410, 16378), (427, 16444), (507, 16669), (512, 16684), (517, 16711), (527, 16726), (542, 16780), (546, 16789), (560, 16816), (568, 16834), (582, 16870), (606, 16897), (607, 16900), (620, 16939), (623, 16951), (658, 17038), (689, 17110), (703, 17137), (718, 17200), (727, 17245),

(765, 17407), (804, 17470), (846, 17596), (861, 17668), (865, 17686), (866, 17689), (879, 17764), (889, 17800),

Gene: Phacado\_25 Start: 15884, Stop: 18484, Start Num: 109

Candidate Starts for Phacado\_25:

(Start: 109 @15884 has 113 MA's), (Start: 155 @16025 has 22 MA's), (Start: 163 @16043 has 10 MA's), (240, 16250), (252, 16289), (258, 16319), (291, 16436), (299, 16463), (315, 16526), (329, 16589), (341, 16634), (348, 16676), (365, 16760), (457, 17027), (481, 17078), (499, 17123), (530, 17201), (542, 17234), (545, 17240), (557, 17261), (626, 17408), (636, 17429), (647, 17453), (673, 17519), (700, 17573), (710, 17621), (726, 17687), (757, 17852), (762, 17870), (807, 17996), (859, 18248), (860, 18251), (863, 18260), (875, 18320), (892, 18416), (899, 18464),

Gene: Phaded\_29 Start: 18699, Stop: 21095, Start Num: 143

Candidate Starts for Phaded\_29:

(Start: 143 @18699 has 5 MA's), (Start: 152 @18717 has 5 MA's), (161, 18750), (164, 18756), (207, 18852), (220, 18894), (244, 18957), (246, 18960), (274, 19050), (278, 19065), (284, 19095), (285, 19104), (296, 19140), (299, 19149), (315, 19212), (321, 19245), (334, 19290), (339, 19311), (341, 19320), (361, 19425), (392, 19566), (470, 19734), (471, 19740), (500, 19812), (564, 19980), (573, 19998), (644, 20154), (664, 20208), (677, 20244), (693, 20295), (709, 20355), (718, 20388), (721, 20400), (727, 20433), (728, 20436), (753, 20574), (756, 20586), (786, 20628), (801, 20664), (804, 20676), (806, 20682), (866, 20892),

Gene: Phaeder\_27 Start: 17590, Stop: 20499, Start Num: 52

Candidate Starts for Phaeder\_27:

(Start: 52 @17590 has 33 MA's), (55, 17602), (68, 17662), (114, 17821), (130, 17884), (153, 17947), (165, 17989), (193, 18046), (260, 18256), (264, 18262), (269, 18277), (294, 18367), (295, 18370), (299, 18382), (311, 18424), (321, 18478), (341, 18553), (344, 18574), (345, 18577), (348, 18595), (361, 18658), (379, 18724), (383, 18763), (390, 18790), (393, 18805), (399, 18835), (405, 18859), (408, 18871), (410, 18880), (427, 18946), (440, 18985), (468, 19051), (479, 19078), (486, 19105), (507, 19171), (523, 19216), (546, 19291), (568, 19336), (575, 19357), (585, 19378), (586, 19381), (606, 19399), (607, 19402), (615, 19429), (649, 19510), (664, 19552), (718, 19702), (722, 19717), (727, 19747), (738, 19798), (756, 19885), (758, 19894), (771, 19945), (800, 20008), (805, 20029), (816, 20065), (830, 20101), (831, 20107), (844, 20185), (849, 20212), (860, 20272), (875, 20341), (879, 20371), (885, 20398), (894, 20437), (900, 20479),

Gene: Phantastic\_25 Start: 15463, Stop: 18498, Start Num: 37

Candidate Starts for Phantastic\_25:

(Start: 37 @15463 has 32 MA's), (66, 15637), (69, 15649), (81, 15682), (Start: 143 @15892 has 5 MA's), (Start: 174 @15979 has 1 MA's), (190, 16012), (193, 16015), (258, 16219), (264, 16228), (268, 16240), (279, 16273), (292, 16327), (295, 16336), (299, 16348), (308, 16381), (312, 16399), (315, 16411), (332, 16477), (339, 16510), (341, 16519), (359, 16612), (383, 16729), (393, 16771), (405, 16825), (410, 16846), (427, 16912), (491, 17092), (512, 17152), (523, 17182), (535, 17227), (538, 17236), (552, 17266), (559, 17281), (568, 17302), (582, 17338), (606, 17365), (607, 17368), (613, 17389), (637, 17452), (664, 17518), (689, 17578), (706, 17617), (710, 17638), (718, 17668), (719, 17671), (721, 17680), (726, 17704), (741, 17773), (744, 17794), (757, 17863), (762, 17881), (776, 17929), (780, 17941), (800, 17983), (803, 17995), (816, 18043), (817, 18046), (851, 18214), (863, 18274), (865, 18286), (867, 18295), (892, 18430), (899, 18478),

Gene: Pharaoh\_26 Start: 17176, Stop: 20193, Start Num: 27

Candidate Starts for Pharaoh\_26:

(22, 17146), (Start: 27 @17176 has 5 MA's), (Start: 52 @17353 has 33 MA's), (53, 17356), (55, 17365), (89, 17500), (Start: 118 @17596 has 2 MA's), (130, 17647), (153, 17710), (165, 17752), (190, 17806), (193, 17809), (230, 17938), (260, 18025), (269, 18046), (276, 18067), (292, 18130), (294, 18136),

(299, 18151), (307, 18181), (311, 18193), (312, 18202), (320, 18238), (327, 18271), (341, 18322), (344, 18343), (345, 18346), (383, 18532), (393, 18574), (396, 18592), (405, 18628), (410, 18649), (427, 18715), (434, 18733), (436, 18742), (440, 18754), (453, 18787), (465, 18817), (483, 18865), (507, 18940), (546, 19060), (560, 19087), (568, 19105), (574, 19120), (582, 19141), (606, 19168), (613, 19192), (637, 19255), (702, 19408), (706, 19420), (718, 19471), (727, 19516), (749, 19612), (797, 19741), (800, 19750), (832, 19831), (846, 19903), (866, 19990), (879, 20065), (885, 20092), (894, 20131),

Gene: Phelipe\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Phelipe\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (271, 16356), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: PherrisBueller\_25 Start: 16235, Stop: 18706, Start Num: 111

Candidate Starts for PherrisBueller\_25:

(Start: 111 @16235 has 200 MA's), (125, 16274), (144, 16337), (Start: 155 @16367 has 22 MA's), (162, 16388), (176, 16409), (194, 16439), (243, 16463), (262, 16529), (315, 16727), (321, 16760), (339, 16826), (389, 17081), (393, 17102), (398, 17129), (476, 17288), (500, 17324), (555, 17417), (564, 17438), (592, 17495), (644, 17615), (659, 17651), (671, 17681), (682, 17717), (707, 17783), (710, 17804), (741, 17945), (773, 18086), (784, 18107), (826, 18242), (855, 18419), (875, 18530), (888, 18617), (895, 18656), (899, 18686),

Gene: Phighter1804\_25 Start: 15863, Stop: 18463, Start Num: 109

Candidate Starts for Phighter1804\_25:

(Start: 109 @15863 has 113 MA's), (Start: 155 @16004 has 22 MA's), (Start: 163 @16022 has 10 MA's), (240, 16229), (258, 16298), (291, 16415), (299, 16442), (315, 16505), (329, 16568), (341, 16613), (348, 16655), (365, 16739), (420, 16946), (457, 17006), (481, 17057), (499, 17102), (530, 17180), (542, 17213), (545, 17219), (608, 17333), (626, 17387), (647, 17432), (670, 17492), (700, 17552), (726, 17666), (729, 17684), (757, 17831), (762, 17849), (807, 17975), (859, 18227), (860, 18230), (863, 18239), (874, 18296), (875, 18299), (883, 18344), (892, 18395), (899, 18443),

Gene: Phillis\_22 Start: 14522, Stop: 17599, Start Num: 9

Candidate Starts for Phillis\_22:

(Start: 9 @14522 has 11 MA's), (15, 14606), (Start: 34 @14774 has 1 MA's), (Start: 37 @14798 has 32 MA's), (73, 14846), (Start: 107 @14966 has 89 MA's), (Start: 118 @14993 has 2 MA's), (129, 15038), (189, 15188), (191, 15191), (196, 15197), (252, 15383), (269, 15443), (297, 15542), (300, 15557), (314, 15608), (315, 15611), (321, 15644), (329, 15677), (367, 15845), (404, 16028), (412, 16052), (422, 16100), (428, 16121), (429, 16124), (493, 16268), (516, 16325), (531, 16355), (547, 16394), (580, 16466), (601, 16496), (630, 16595), (642, 16625), (660, 16670), (672, 16703), (710, 16868), (715, 16889), (719, 16901), (734, 16982), (745, 17009), (756, 17072), (765, 17096), (792, 17126), (808, 17159), (830, 17192), (842, 17252), (846, 17279), (866, 17378), (867, 17384), (883, 17474), (886, 17495), (893, 17534), (903, 17582),

Gene: PhishRPhriends\_26 Start: 15241, Stop: 18267, Start Num: 38

Candidate Starts for PhishRPhriends\_26:

(30, 15187), (Start: 38 @15241 has 82 MA's), (55, 15355), (68, 15421), (69, 15424), (73, 15433), (86, 15469), (96, 15520), (124, 15592), (Start: 143 @15664 has 5 MA's), (190, 15784), (193, 15787), (214, 15856), (226, 15901), (258, 15994), (264, 16003), (279, 16048), (288, 16087), (295, 16111), (299, 16123), (308, 16156), (312, 16174), (316, 16195), (327, 16243), (329, 16249), (334, 16264), (337,



16273), (339, 16285), (341, 16294), (359, 16387), (380, 16474), (383, 16504), (384, 16507), (391, 16534), (393, 16546), (405, 16600), (410, 16621), (416, 16651), (427, 16687), (477, 16813), (491, 16867), (507, 16912), (523, 16957), (525, 16960), (535, 17002), (538, 17011), (552, 17041), (582, 17113), (585, 17119), (606, 17140), (607, 17143), (610, 17155), (656, 17272), (658, 17281), (689, 17353), (690, 17356), (706, 17392), (718, 17443), (719, 17446), (721, 17455), (757, 17638), (776, 17704), (780, 17716), (800, 17758), (817, 17821), (836, 17878), (844, 17947), (851, 17983), (867, 18064), (892, 18199), (894, 18211),

Gene: Phlei\_21 Start: 17431, Stop: 20733, Start Num: 4

Candidate Starts for Phlei\_21:

(4, 17431), (6, 17455), (12, 17557), (21, 17701), (29, 17746), (43, 17836), (63, 17962), (64, 17968), (89, 18067), (123, 18178), (187, 18352), (195, 18364), (210, 18403), (218, 18439), (252, 18547), (269, 18607), (277, 18634), (283, 18652), (285, 18667), (315, 18775), (323, 18820), (328, 18832), (334, 18853), (341, 18883), (367, 19009), (385, 19102), (410, 19198), (421, 19252), (422, 19255), (423, 19258), (432, 19285), (446, 19309), (452, 19321), (524, 19468), (613, 19711), (641, 19786), (650, 19810), (692, 19927), (705, 19957), (710, 19993), (714, 20005), (715, 20014), (718, 20023), (734, 20107), (745, 20134), (752, 20176), (756, 20197), (841, 20386), (844, 20413), (861, 20512), (865, 20530), (866, 20533), (879, 20608),

Gene: Phlorence\_22 Start: 15349, Stop: 18690, Start Num: 1

Candidate Starts for Phlorence\_22:

(Start: 1 @15349 has 30 MA's), (Start: 34 @15787 has 1 MA's), (120, 16099), (Start: 141 @16177 has 1 MA's), (154, 16207), (173, 16264), (227, 16411), (229, 16417), (233, 16423), (270, 16549), (274, 16561), (315, 16711), (322, 16747), (329, 16777), (334, 16792), (341, 16822), (342, 16834), (347, 16858), (361, 16927), (379, 16993), (412, 17149), (428, 17218), (429, 17221), (441, 17248), (449, 17272), (514, 17410), (522, 17431), (540, 17476), (563, 17518), (639, 17710), (652, 17740), (660, 17764), (664, 17776), (672, 17797), (683, 17839), (705, 17926), (710, 17962), (715, 17983), (721, 18004), (736, 18082), (745, 18103), (749, 18124), (752, 18145), (756, 18166), (765, 18190), (808, 18253), (842, 18346), (845, 18364), (859, 18445), (863, 18457), (865, 18469), (867, 18478), (878, 18532), (891, 18616), (892, 18625),

Gene: Phoebe\_27 Start: 15977, Stop: 19003, Start Num: 38

Candidate Starts for Phoebe\_27:

(30, 15923), (Start: 38 @15977 has 82 MA's), (55, 16091), (68, 16157), (69, 16160), (73, 16169), (86, 16205), (96, 16256), (124, 16328), (Start: 143 @16400 has 5 MA's), (190, 16520), (193, 16523), (214, 16592), (226, 16637), (258, 16730), (264, 16739), (270, 16757), (279, 16784), (295, 16847), (299, 16859), (308, 16892), (312, 16910), (325, 16976), (327, 16979), (329, 16985), (334, 17000), (337, 17009), (339, 17021), (341, 17030), (359, 17123), (383, 17240), (384, 17243), (391, 17270), (393, 17282), (405, 17336), (410, 17357), (427, 17423), (436, 17450), (479, 17555), (491, 17603), (507, 17648), (525, 17696), (535, 17738), (538, 17747), (552, 17777), (553, 17780), (559, 17792), (582, 17849), (585, 17855), (606, 17876), (607, 17879), (658, 18017), (664, 18029), (689, 18089), (710, 18149), (718, 18179), (719, 18182), (721, 18191), (741, 18284), (757, 18374), (776, 18440), (780, 18452), (800, 18494), (817, 18557), (836, 18614), (844, 18683), (851, 18719), (867, 18800), (892, 18935),

Gene: Phonnegut\_27 Start: 17623, Stop: 20532, Start Num: 52

Candidate Starts for Phonnegut\_27:

(Start: 52 @17623 has 33 MA's), (55, 17635), (68, 17695), (114, 17854), (130, 17917), (153, 17980), (165, 18022), (193, 18079), (207, 18118), (260, 18289), (264, 18295), (269, 18310), (294, 18400), (295, 18403), (299, 18415), (311, 18457), (321, 18511), (341, 18586), (344, 18607), (345, 18610), (348, 18628), (361, 18691), (379, 18757), (383, 18796), (390, 18823), (393, 18838), (399, 18868), (405, 18892), (408, 18904), (410, 18913), (427, 18979), (440, 19018), (468, 19084), (479, 19111), (486, 19138), (523, 19249), (546, 19324), (568, 19369), (575, 19390), (585, 19411), (586, 19414),

(606, 19432), (607, 19435), (615, 19462), (624, 19489), (649, 19543), (718, 19735), (722, 19750), (727, 19780), (738, 19831), (756, 19918), (758, 19927), (771, 19978), (800, 20041), (805, 20062), (816, 20098), (830, 20134), (831, 20140), (844, 20218), (849, 20245), (860, 20305), (875, 20374), (879, 20404), (885, 20431), (894, 20470), (900, 20512),

Gene: Phontbonne\_25 Start: 15829, Stop: 18429, Start Num: 109

Candidate Starts for Phontbonne\_25:

(Start: 109 @15829 has 113 MA's), (Start: 155 @15970 has 22 MA's), (Start: 163 @15988 has 10 MA's), (240, 16195), (252, 16234), (258, 16264), (291, 16381), (299, 16408), (315, 16471), (329, 16534), (341, 16579), (348, 16621), (365, 16705), (420, 16912), (457, 16972), (481, 17023), (499, 17068), (530, 17146), (542, 17179), (545, 17185), (626, 17353), (636, 17374), (647, 17398), (670, 17458), (673, 17464), (674, 17467), (700, 17518), (710, 17566), (726, 17632), (757, 17797), (762, 17815), (807, 17941), (859, 18193), (860, 18196), (863, 18205), (875, 18265), (892, 18361), (899, 18409),

Gene: Phoxy\_27 Start: 16063, Stop: 19089, Start Num: 38

Candidate Starts for Phoxy\_27:

(30, 16009), (Start: 38 @16063 has 82 MA's), (55, 16177), (68, 16243), (69, 16246), (73, 16255), (86, 16291), (96, 16342), (124, 16414), (Start: 143 @16486 has 5 MA's), (190, 16606), (193, 16609), (214, 16678), (226, 16723), (258, 16816), (264, 16825), (270, 16843), (279, 16870), (295, 16933), (299, 16945), (308, 16978), (312, 16996), (325, 17062), (327, 17065), (329, 17071), (334, 17086), (337, 17095), (339, 17107), (341, 17116), (355, 17194), (359, 17209), (383, 17326), (384, 17329), (391, 17356), (393, 17368), (405, 17422), (410, 17443), (427, 17509), (440, 17548), (479, 17641), (491, 17689), (507, 17734), (535, 17824), (538, 17833), (552, 17863), (575, 17920), (582, 17935), (606, 17962), (607, 17965), (658, 18103), (664, 18115), (689, 18175), (709, 18232), (741, 18370), (744, 18391), (749, 18415), (757, 18460), (762, 18478), (776, 18526), (780, 18538), (800, 18580), (817, 18643), (836, 18700), (844, 18769), (851, 18805), (867, 18886), (892, 19021),

Gene: Phranny\_28 Start: 16049, Stop: 19075, Start Num: 38

Candidate Starts for Phranny\_28:

(30, 15995), (Start: 38 @16049 has 82 MA's), (55, 16163), (68, 16229), (69, 16232), (73, 16241), (86, 16277), (96, 16328), (124, 16400), (Start: 143 @16472 has 5 MA's), (190, 16592), (193, 16595), (214, 16664), (226, 16709), (258, 16802), (264, 16811), (279, 16856), (288, 16895), (295, 16919), (299, 16931), (308, 16964), (312, 16982), (316, 17003), (327, 17051), (329, 17057), (334, 17072), (337, 17081), (339, 17093), (341, 17102), (359, 17195), (380, 17282), (383, 17312), (384, 17315), (391, 17342), (393, 17354), (405, 17408), (410, 17429), (416, 17459), (427, 17495), (477, 17621), (491, 17675), (507, 17720), (525, 17768), (535, 17810), (538, 17819), (552, 17849), (582, 17921), (585, 17927), (606, 17948), (607, 17951), (610, 17963), (656, 18080), (658, 18089), (689, 18161), (690, 18164), (706, 18200), (718, 18251), (719, 18254), (721, 18263), (757, 18446), (776, 18512), (780, 18524), (800, 18566), (817, 18629), (836, 18686), (844, 18755), (851, 18791), (867, 18872), (892, 19007), (894, 19019),

Gene: PhrostyMug\_24 Start: 16398, Stop: 18878, Start Num: 111

Candidate Starts for PhrostyMug\_24:

(Start: 111 @16398 has 200 MA's), (125, 16437), (144, 16500), (Start: 155 @16530 has 22 MA's), (176, 16572), (285, 16779), (291, 16797), (315, 16887), (329, 16950), (337, 16974), (339, 16986), (348, 17037), (460, 17421), (526, 17523), (537, 17562), (560, 17589), (569, 17613), (630, 17742), (671, 17841), (707, 17943), (710, 17964), (721, 18006), (741, 18105), (753, 18168), (818, 18387), (827, 18420), (875, 18702), (888, 18789), (895, 18828), (897, 18843),

Gene: PickleBack\_22 Start: 15063, Stop: 18404, Start Num: 1

Candidate Starts for PickleBack\_22:

(Start: 1 @15063 has 30 MA's), (Start: 34 @15501 has 1 MA's), (120, 15813), (Start: 141 @15891 has 1 MA's), (154, 15921), (173, 15978), (227, 16125), (229, 16131), (233, 16137), (270, 16263), (274, 16275), (315, 16425), (322, 16461), (329, 16491), (334, 16506), (341, 16536), (342, 16548), (347, 16572), (361, 16641), (379, 16707), (412, 16863), (428, 16932), (429, 16935), (441, 16962), (449, 16986), (514, 17124), (522, 17145), (540, 17190), (563, 17232), (639, 17424), (652, 17454), (660, 17478), (664, 17490), (672, 17511), (683, 17553), (705, 17640), (710, 17676), (715, 17697), (721, 17718), (736, 17796), (745, 17817), (749, 17838), (752, 17859), (756, 17880), (765, 17904), (808, 17967), (842, 18060), (845, 18078), (859, 18159), (863, 18171), (865, 18183), (867, 18192), (878, 18246), (891, 18330), (892, 18339),

Gene: PinkPlastic\_23 Start: 16163, Stop: 18640, Start Num: 111

Candidate Starts for PinkPlastic\_23:

(Start: 111 @16163 has 200 MA's), (125, 16202), (144, 16265), (Start: 152 @16283 has 5 MA's), (Start: 155 @16295 has 22 MA's), (162, 16316), (237, 16376), (266, 16472), (285, 16541), (289, 16553), (315, 16649), (321, 16682), (460, 17183), (526, 17285), (537, 17324), (555, 17339), (560, 17351), (569, 17375), (630, 17504), (671, 17603), (707, 17705), (710, 17726), (721, 17768), (741, 17867), (753, 17930), (777, 18020), (818, 18149), (827, 18182), (875, 18464), (885, 18530), (888, 18551), (895, 18590), (897, 18605),

Gene: Pinto\_26 Start: 16466, Stop: 18934, Start Num: 111

Candidate Starts for Pinto\_26:

(Start: 111 @16466 has 200 MA's), (Start: 117 @16481 has 5 MA's), (Start: 155 @16595 has 22 MA's), (162, 16616), (176, 16637), (194, 16667), (243, 16691), (250, 16712), (262, 16757), (315, 16955), (321, 16988), (339, 17054), (389, 17309), (393, 17330), (398, 17357), (476, 17516), (500, 17552), (555, 17645), (564, 17666), (569, 17681), (579, 17702), (580, 17705), (615, 17774), (627, 17810), (644, 17843), (659, 17879), (671, 17909), (682, 17945), (707, 18011), (710, 18032), (741, 18173), (773, 18314), (784, 18335), (826, 18470), (855, 18647), (875, 18758), (885, 18824), (888, 18845), (895, 18884),

Gene: Pioneer\_27 Start: 17623, Stop: 20532, Start Num: 52

Candidate Starts for Pioneer\_27:

(Start: 52 @17623 has 33 MA's), (55, 17635), (68, 17695), (114, 17854), (130, 17917), (153, 17980), (165, 18022), (193, 18079), (207, 18118), (260, 18289), (264, 18295), (269, 18310), (294, 18400), (295, 18403), (299, 18415), (311, 18457), (321, 18511), (341, 18586), (344, 18607), (345, 18610), (348, 18628), (361, 18691), (379, 18757), (383, 18796), (390, 18823), (393, 18838), (399, 18868), (405, 18892), (408, 18904), (410, 18913), (427, 18979), (440, 19018), (468, 19084), (479, 19111), (486, 19138), (523, 19249), (546, 19324), (568, 19369), (575, 19390), (585, 19411), (586, 19414), (606, 19432), (607, 19435), (615, 19462), (624, 19489), (649, 19543), (718, 19735), (722, 19750), (727, 19780), (738, 19831), (756, 19918), (758, 19927), (771, 19978), (800, 20041), (805, 20062), (816, 20098), (830, 20134), (831, 20140), (844, 20218), (849, 20245), (860, 20305), (875, 20374), (879, 20404), (885, 20431), (894, 20470), (900, 20512),

Gene: Pipcraft\_25 Start: 16026, Stop: 18485, Start Num: 155

Candidate Starts for Pipcraft\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Pippin\_26 Start: 16733, Stop: 19204, Start Num: 111

Candidate Starts for Pippin\_26:

(Start: 111 @16733 has 200 MA's), (125, 16772), (144, 16835), (Start: 155 @16865 has 22 MA's), (162, 16886), (176, 16907), (181, 16919), (194, 16937), (243, 16961), (282, 17099), (291, 17135), (315, 17225), (321, 17258), (339, 17324), (389, 17579), (393, 17600), (398, 17627), (403, 17642), (432, 17723), (476, 17786), (500, 17822), (555, 17915), (564, 17936), (569, 17951), (579, 17972), (580, 17975), (615, 18044), (627, 18080), (644, 18113), (659, 18149), (671, 18179), (682, 18215), (707, 18281), (710, 18302), (741, 18443), (773, 18584), (784, 18605), (826, 18740), (855, 18917), (875, 19028), (885, 19094), (888, 19115), (895, 19154), (897, 19169),

Gene: Piro94\_27 Start: 17131, Stop: 19638, Start Num: 107

Candidate Starts for Piro94\_27:

(Start: 107 @17131 has 89 MA's), (144, 17242), (167, 17299), (256, 17485), (279, 17548), (286, 17581), (288, 17587), (334, 17767), (337, 17776), (340, 17791), (341, 17797), (344, 17818), (345, 17821), (348, 17839), (360, 17899), (383, 18007), (393, 18049), (394, 18058), (396, 18067), (405, 18103), (410, 18124), (426, 18187), (427, 18190), (434, 18208), (440, 18229), (507, 18415), (512, 18430), (517, 18457), (538, 18514), (544, 18529), (546, 18535), (552, 18544), (555, 18550), (568, 18580), (575, 18601), (607, 18646), (608, 18652), (620, 18685), (628, 18712), (658, 18784), (664, 18796), (689, 18856), (703, 18883), (718, 18946), (727, 18991), (737, 19039), (746, 19075), (752, 19108), (786, 19171), (800, 19195), (846, 19339), (866, 19438), (882, 19525), (902, 19624),

Gene: Pistachio\_26 Start: 15042, Stop: 18077, Start Num: 37

Candidate Starts for Pistachio\_26:

(Start: 37 @15042 has 32 MA's), (66, 15216), (69, 15228), (81, 15261), (Start: 143 @15471 has 5 MA's), (190, 15591), (193, 15594), (258, 15798), (268, 15819), (277, 15849), (279, 15852), (295, 15915), (299, 15927), (308, 15960), (312, 15978), (327, 16047), (329, 16053), (334, 16068), (337, 16077), (339, 16089), (341, 16098), (359, 16191), (383, 16308), (384, 16311), (390, 16335), (391, 16338), (393, 16350), (405, 16404), (410, 16425), (414, 16446), (427, 16491), (436, 16518), (440, 16530), (491, 16671), (507, 16716), (512, 16731), (535, 16806), (538, 16815), (552, 16845), (559, 16860), (560, 16863), (568, 16881), (575, 16902), (578, 16905), (606, 16944), (607, 16947), (637, 17031), (664, 17097), (673, 17118), (689, 17157), (706, 17196), (710, 17217), (718, 17247), (719, 17250), (721, 17259), (726, 17283), (741, 17352), (744, 17373), (757, 17442), (762, 17460), (776, 17508), (780, 17520), (800, 17562), (803, 17574), (816, 17622), (851, 17793), (855, 17823), (863, 17853), (867, 17874), (892, 18009), (899, 18057),

Gene: Pita2\_26 Start: 16832, Stop: 19303, Start Num: 111

Candidate Starts for Pita2\_26:

(Start: 111 @16832 has 200 MA's), (125, 16871), (144, 16934), (Start: 155 @16964 has 22 MA's), (162, 16985), (176, 17006), (181, 17018), (194, 17036), (262, 17126), (315, 17324), (321, 17357), (339, 17423), (389, 17678), (393, 17699), (398, 17726), (476, 17885), (500, 17921), (555, 18014), (564, 18035), (592, 18092), (644, 18212), (659, 18248), (671, 18278), (682, 18314), (707, 18380), (710, 18401), (741, 18542), (773, 18683), (784, 18704), (826, 18839), (855, 19016), (875, 19127), (885, 19193), (888, 19214), (895, 19253), (897, 19268),

Gene: Pmask\_29 Start: 16729, Stop: 18933, Start Num: 116

Candidate Starts for Pmask\_29:

(60, 16570), (93, 16684), (Start: 116 @16729 has 41 MA's), (160, 16840), (166, 16846), (212, 16954), (223, 16996), (263, 17119), (274, 17155), (283, 17182), (315, 17305), (321, 17338), (343, 17428), (357, 17497), (412, 17740), (499, 17878), (590, 17998), (680, 18151), (710, 18214), (721, 18256), (745, 18355), (749, 18376), (752, 18397), (756, 18418), (791, 18469), (800, 18481), (805, 18496), (839, 18577), (850, 18655),

Gene: Pocahontas\_26 Start: 16040, Stop: 19078, Start Num: 37

Candidate Starts for Pocahontas\_26:

(Start: 37 @16040 has 32 MA's), (66, 16214), (69, 16226), (81, 16259), (Start: 143 @16466 has 5 MA's), (Start: 152 @16487 has 5 MA's), (190, 16586), (193, 16589), (258, 16799), (268, 16820), (279, 16853), (295, 16916), (299, 16928), (308, 16961), (312, 16979), (316, 17000), (327, 17048), (329, 17054), (334, 17069), (337, 17078), (339, 17090), (341, 17099), (359, 17192), (383, 17309), (384, 17312), (391, 17339), (393, 17351), (405, 17405), (410, 17426), (427, 17492), (440, 17531), (491, 17672), (507, 17717), (535, 17807), (538, 17816), (552, 17846), (575, 17903), (582, 17918), (606, 17945), (607, 17948), (612, 17966), (656, 18077), (689, 18158), (709, 18215), (720, 18257), (741, 18353), (744, 18374), (749, 18398), (757, 18443), (762, 18461), (776, 18509), (780, 18521), (800, 18563), (803, 18575), (816, 18623), (851, 18794), (863, 18854), (865, 18866), (872, 18893), (875, 18914), (892, 19010), (899, 19058),

Gene: Polymorphads\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for Polymorphads\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (420, 16965), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (542, 17232), (545, 17238), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: Pomar16\_29 Start: 16549, Stop: 19062, Start Num: 107

Candidate Starts for Pomar16\_29:

(Start: 107 @16549 has 89 MA's), (172, 16729), (173, 16732), (279, 16978), (294, 17038), (299, 17053), (307, 17083), (308, 17086), (325, 17170), (334, 17194), (340, 17218), (344, 17245), (345, 17248), (368, 17353), (383, 17434), (390, 17461), (393, 17476), (405, 17530), (410, 17551), (427, 17617), (434, 17635), (436, 17644), (477, 17743), (486, 17776), (488, 17785), (507, 17842), (512, 17857), (546, 17962), (559, 17986), (607, 18073), (610, 18085), (612, 18091), (623, 18124), (649, 18181), (673, 18244), (718, 18373), (722, 18388), (727, 18418), (730, 18430), (737, 18466), (765, 18580), (776, 18592), (801, 18634), (861, 18841), (865, 18859), (866, 18862), (902, 19048),

Gene: Poompha\_24 Start: 13787, Stop: 16519, Start Num: 105

Candidate Starts for Poompha\_24:

(Start: 105 @13787 has 8 MA's), (Start: 163 @13964 has 10 MA's), (200, 14039), (203, 14051), (255, 14213), (261, 14234), (265, 14246), (274, 14276), (281, 14309), (292, 14354), (298, 14372), (301, 14387), (302, 14396), (309, 14417), (330, 14522), (339, 14564), (372, 14729), (404, 14891), (411, 14918), (489, 15095), (506, 15140), (528, 15215), (544, 15263), (545, 15266), (557, 15287), (558, 15290), (574, 15335), (615, 15410), (617, 15413), (623, 15434), (632, 15458), (659, 15524), (673, 15554), (685, 15566), (705, 15620), (709, 15653), (714, 15668), (726, 15722), (741, 15797), (754, 15875), (757, 15887), (762, 15905), (772, 15944), (779, 15956), (782, 15968), (799, 16010), (802, 16022), (807, 16034), (812, 16049), (819, 16070), (823, 16082), (863, 16295), (875, 16355), (883, 16400), (892, 16451), (899, 16499),

Gene: Popcicle\_26 Start: 16040, Stop: 19078, Start Num: 37

Candidate Starts for Popcicle\_26:

(Start: 37 @16040 has 32 MA's), (66, 16214), (69, 16226), (81, 16259), (Start: 143 @16466 has 5 MA's), (Start: 152 @16487 has 5 MA's), (190, 16586), (193, 16589), (258, 16799), (268, 16820), (279, 16853), (295, 16916), (299, 16928), (308, 16961), (312, 16979), (316, 17000), (327, 17048), (329, 17054), (334, 17069), (337, 17078), (339, 17090), (341, 17099), (359, 17192), (383, 17309), (384, 17312), (391, 17339), (393, 17351), (405, 17405), (410, 17426), (427, 17492), (440, 17531), (491, 17672), (507, 17717), (535, 17807), (538, 17816), (552, 17846), (575, 17903), (582, 17918), (606, 17945), (607, 17948), (612, 17966), (656, 18077), (689, 18158), (709, 18215), (720, 18257), (741, 18353), (744, 18374), (749, 18398), (757, 18443), (762, 18461), (776, 18509), (780, 18521), (800,

18563), (803, 18575), (816, 18623), (851, 18794), (863, 18854), (865, 18866), (872, 18893), (875, 18914), (892, 19010), (899, 19058),

Gene: PotatoSplit\_28 Start: 15979, Stop: 19005, Start Num: 38

Candidate Starts for PotatoSplit\_28:

(30, 15925), (Start: 38 @15979 has 82 MA's), (55, 16093), (68, 16159), (69, 16162), (73, 16171), (86, 16207), (96, 16258), (124, 16330), (Start: 143 @16402 has 5 MA's), (190, 16522), (193, 16525), (214, 16594), (226, 16639), (258, 16732), (264, 16741), (270, 16759), (279, 16786), (295, 16849), (299, 16861), (308, 16894), (312, 16912), (325, 16978), (327, 16981), (329, 16987), (334, 17002), (337, 17011), (339, 17023), (341, 17032), (355, 17110), (359, 17125), (383, 17242), (384, 17245), (391, 17272), (393, 17284), (405, 17338), (410, 17359), (427, 17425), (440, 17464), (479, 17557), (491, 17605), (507, 17650), (525, 17698), (535, 17740), (538, 17749), (552, 17779), (553, 17782), (559, 17794), (582, 17851), (585, 17857), (606, 17878), (607, 17881), (658, 18019), (664, 18031), (689, 18091), (709, 18148), (741, 18286), (744, 18307), (749, 18331), (757, 18376), (762, 18394), (776, 18442), (780, 18454), (800, 18496), (817, 18559), (836, 18616), (844, 18685), (851, 18721), (867, 18802), (892, 18937),

Gene: Power\_26 Start: 16547, Stop: 19084, Start Num: 107

Candidate Starts for Power\_26:

(Start: 107 @16547 has 89 MA's), (170, 16724), (172, 16727), (173, 16730), (188, 16760), (249, 16898), (256, 16919), (258, 16928), (268, 16949), (279, 16982), (294, 17042), (299, 17057), (312, 17108), (322, 17156), (325, 17174), (337, 17207), (339, 17219), (340, 17222), (341, 17228), (344, 17249), (345, 17252), (362, 17339), (383, 17438), (393, 17480), (394, 17489), (396, 17498), (408, 17546), (410, 17555), (427, 17621), (440, 17660), (507, 17846), (512, 17861), (525, 17894), (538, 17945), (546, 17966), (555, 17981), (559, 17990), (566, 18005), (606, 18074), (664, 18227), (718, 18377), (727, 18422), (730, 18434), (737, 18470), (804, 18650), (810, 18659), (845, 18770), (850, 18800), (866, 18884),

Gene: Priamo\_29 Start: 16751, Stop: 18982, Start Num: 116

Candidate Starts for Priamo\_29:

(60, 16595), (93, 16706), (Start: 116 @16751 has 41 MA's), (160, 16862), (166, 16868), (223, 17018), (274, 17177), (283, 17204), (314, 17324), (315, 17327), (321, 17360), (343, 17450), (357, 17519), (399, 17720), (412, 17765), (556, 17969), (590, 18023), (662, 18146), (710, 18245), (713, 18254), (718, 18275), (727, 18320), (731, 18332), (805, 18539), (810, 18557), (843, 18659), (845, 18668), (850, 18698),

Gene: Priya\_27 Start: 17621, Stop: 20530, Start Num: 52

Candidate Starts for Priya\_27:

(Start: 52 @17621 has 33 MA's), (55, 17633), (68, 17693), (130, 17915), (153, 17978), (165, 18020), (190, 18074), (193, 18077), (207, 18116), (260, 18287), (264, 18293), (269, 18308), (294, 18398), (295, 18401), (299, 18413), (311, 18455), (321, 18509), (325, 18530), (341, 18584), (344, 18605), (345, 18608), (348, 18626), (361, 18689), (379, 18755), (383, 18794), (390, 18821), (393, 18836), (399, 18866), (405, 18890), (408, 18902), (410, 18911), (427, 18977), (440, 19016), (468, 19082), (479, 19109), (486, 19136), (523, 19247), (546, 19322), (559, 19346), (568, 19367), (575, 19388), (585, 19409), (586, 19412), (606, 19430), (607, 19433), (615, 19460), (640, 19520), (651, 19550), (664, 19583), (676, 19613), (685, 19625), (718, 19733), (722, 19748), (727, 19778), (738, 19829), (756, 19916), (758, 19925), (771, 19976), (800, 20039), (805, 20060), (816, 20096), (830, 20132), (831, 20138), (844, 20216), (849, 20243), (875, 20372), (879, 20402), (885, 20429), (894, 20468), (900, 20510),

Gene: ProMouse\_23 Start: 16852, Stop: 19323, Start Num: 111

Candidate Starts for ProMouse\_23:

(Start: 111 @16852 has 200 MA's), (125, 16891), (144, 16954), (Start: 155 @16984 has 22 MA's), (162, 17005), (176, 17026), (194, 17056), (239, 17068), (243, 17080), (262, 17146), (315, 17344), (321, 17377), (339, 17443), (389, 17698), (393, 17719), (398, 17746), (476, 17905), (500, 17941), (555, 18034), (564, 18055), (569, 18070), (579, 18091), (580, 18094), (615, 18163), (627, 18199), (644, 18232), (659, 18268), (671, 18298), (682, 18334), (707, 18400), (710, 18421), (721, 18463), (741, 18562), (773, 18703), (784, 18724), (826, 18859), (855, 19036), (875, 19147), (888, 19234), (895, 19273), (897, 19288),

Gene: Pukovnik\_28 Start: 18254, Stop: 20650, Start Num: 143

Candidate Starts for Pukovnik\_28:

(Start: 143 @18254 has 5 MA's), (Start: 152 @18272 has 5 MA's), (161, 18305), (164, 18311), (207, 18407), (220, 18449), (274, 18605), (277, 18617), (278, 18620), (284, 18650), (285, 18659), (296, 18695), (299, 18704), (315, 18767), (321, 18800), (334, 18845), (339, 18866), (341, 18875), (361, 18980), (392, 19121), (470, 19289), (473, 19301), (500, 19367), (505, 19373), (517, 19424), (564, 19535), (573, 19553), (644, 19709), (664, 19763), (677, 19799), (693, 19850), (709, 19910), (718, 19943), (721, 19955), (727, 19988), (728, 19991), (753, 20129), (756, 20141), (786, 20183), (801, 20219), (804, 20231), (806, 20237), (866, 20447),

Gene: Pumbaa\_25 Start: 15860, Stop: 18460, Start Num: 109

Candidate Starts for Pumbaa\_25:

(Start: 109 @15860 has 113 MA's), (Start: 155 @16001 has 22 MA's), (Start: 163 @16019 has 10 MA's), (240, 16226), (252, 16265), (258, 16295), (291, 16412), (299, 16439), (315, 16502), (329, 16565), (341, 16610), (348, 16652), (365, 16736), (457, 17003), (481, 17054), (499, 17099), (530, 17177), (545, 17216), (608, 17330), (626, 17384), (647, 17429), (670, 17489), (685, 17507), (700, 17549), (710, 17597), (726, 17663), (757, 17828), (762, 17846), (807, 17972), (859, 18224), (860, 18227), (863, 18236), (875, 18296), (892, 18392), (899, 18440),

Gene: Puppy\_26 Start: 15114, Stop: 18149, Start Num: 37

Candidate Starts for Puppy\_26:

(Start: 37 @15114 has 32 MA's), (66, 15288), (69, 15300), (81, 15333), (Start: 143 @15543 has 5 MA's), (190, 15663), (193, 15666), (258, 15870), (268, 15891), (277, 15921), (279, 15924), (295, 15987), (299, 15999), (308, 16032), (312, 16050), (327, 16119), (329, 16125), (334, 16140), (337, 16149), (339, 16161), (341, 16170), (359, 16263), (383, 16380), (384, 16383), (390, 16407), (391, 16410), (393, 16422), (405, 16476), (410, 16497), (414, 16518), (427, 16563), (436, 16590), (440, 16602), (491, 16743), (507, 16788), (512, 16803), (535, 16878), (538, 16887), (552, 16917), (559, 16932), (560, 16935), (568, 16953), (575, 16974), (578, 16977), (606, 17016), (607, 17019), (637, 17103), (664, 17169), (673, 17190), (689, 17229), (706, 17268), (710, 17289), (718, 17319), (719, 17322), (721, 17331), (726, 17355), (741, 17424), (744, 17445), (757, 17514), (762, 17532), (776, 17580), (780, 17592), (800, 17634), (803, 17646), (816, 17694), (851, 17865), (855, 17895), (863, 17925), (867, 17946), (892, 18081), (899, 18129),

Gene: PurpleHaze\_27 Start: 16056, Stop: 19082, Start Num: 38

Candidate Starts for PurpleHaze\_27:

(30, 16002), (Start: 38 @16056 has 82 MA's), (55, 16170), (68, 16236), (69, 16239), (73, 16248), (86, 16284), (96, 16335), (124, 16407), (Start: 143 @16479 has 5 MA's), (190, 16599), (193, 16602), (214, 16671), (226, 16716), (258, 16809), (264, 16818), (279, 16863), (288, 16902), (295, 16926), (299, 16938), (308, 16971), (312, 16989), (316, 17010), (327, 17058), (329, 17064), (334, 17079), (337, 17088), (339, 17100), (341, 17109), (359, 17202), (380, 17289), (383, 17319), (384, 17322), (391, 17349), (393, 17361), (405, 17415), (410, 17436), (416, 17466), (427, 17502), (477, 17628), (491, 17682), (507, 17727), (525, 17775), (535, 17817), (538, 17826), (552, 17856), (582, 17928), (585, 17934), (606, 17955), (607, 17958), (610, 17970), (656, 18087), (658, 18096), (689, 18168), (690, 18171), (706, 18207), (718, 18258), (719, 18261), (721, 18270), (757, 18453), (776, 18519), (780, 18531), (800, 18573), (817, 18636), (836, 18693), (844, 18762), (851, 18798), (867, 18879), (892,

19014), (894, 19026),

Gene: QTRlifeCrisis\_24 Start: 16800, Stop: 19460, Start Num: 111

Candidate Starts for QTRlifeCrisis\_24:

(Start: 111 @16800 has 200 MA's), (125, 16839), (144, 16902), (145, 16908), (Start: 155 @16932 has 22 MA's), (176, 16974), (315, 17283), (329, 17346), (341, 17391), (346, 17415), (361, 17490), (364, 17502), (402, 17676), (451, 17823), (565, 18153), (584, 18204), (598, 18231), (671, 18435), (708, 18549), (710, 18558), (715, 18579), (721, 18600), (741, 18699), (750, 18741), (751, 18744), (788, 18873), (815, 18957), (827, 19002), (875, 19284), (888, 19371), (895, 19410), (897, 19425),

Gene: Qobbit\_27 Start: 17620, Stop: 20529, Start Num: 52

Candidate Starts for Qobbit\_27:

(Start: 52 @17620 has 33 MA's), (55, 17632), (68, 17692), (114, 17851), (130, 17914), (153, 17977), (165, 18019), (193, 18076), (207, 18115), (260, 18286), (264, 18292), (269, 18307), (294, 18397), (295, 18400), (299, 18412), (311, 18454), (321, 18508), (341, 18583), (344, 18604), (345, 18607), (348, 18625), (361, 18688), (379, 18754), (383, 18793), (390, 18820), (393, 18835), (399, 18865), (405, 18889), (408, 18901), (410, 18910), (427, 18976), (440, 19015), (468, 19081), (479, 19108), (486, 19135), (523, 19246), (546, 19321), (568, 19366), (575, 19387), (585, 19408), (586, 19411), (606, 19429), (607, 19432), (615, 19459), (624, 19486), (649, 19540), (718, 19732), (722, 19747), (727, 19777), (738, 19828), (756, 19915), (758, 19924), (771, 19975), (800, 20038), (805, 20059), (816, 20095), (830, 20131), (831, 20137), (844, 20215), (849, 20242), (860, 20302), (875, 20371), (879, 20401), (885, 20428), (894, 20467), (900, 20509),

Gene: QueenB2\_26 Start: 16665, Stop: 19202, Start Num: 107

Candidate Starts for QueenB2\_26:

(Start: 107 @16665 has 89 MA's), (170, 16842), (172, 16845), (173, 16848), (247, 17010), (249, 17016), (256, 17037), (258, 17046), (268, 17067), (279, 17100), (286, 17133), (312, 17226), (322, 17274), (325, 17292), (337, 17325), (339, 17337), (340, 17340), (341, 17346), (344, 17367), (345, 17370), (383, 17556), (393, 17598), (394, 17607), (408, 17664), (410, 17673), (427, 17739), (440, 17778), (479, 17871), (483, 17889), (507, 17964), (538, 18063), (544, 18078), (546, 18084), (552, 18093), (559, 18108), (568, 18129), (575, 18150), (586, 18174), (607, 18195), (608, 18201), (620, 18234), (623, 18246), (626, 18255), (664, 18345), (689, 18405), (703, 18432), (718, 18495), (727, 18540), (756, 18678), (804, 18768), (810, 18777), (845, 18888), (850, 18918), (866, 19002),

Gene: QueenBeesly\_26 Start: 16547, Stop: 19084, Start Num: 107

Candidate Starts for QueenBeesly\_26:

(Start: 107 @16547 has 89 MA's), (170, 16724), (172, 16727), (173, 16730), (188, 16760), (249, 16898), (256, 16919), (258, 16928), (268, 16949), (279, 16982), (294, 17042), (299, 17057), (312, 17108), (322, 17156), (325, 17174), (337, 17207), (339, 17219), (340, 17222), (341, 17228), (344, 17249), (345, 17252), (362, 17339), (383, 17438), (393, 17480), (394, 17489), (396, 17498), (408, 17546), (410, 17555), (427, 17621), (440, 17660), (507, 17846), (512, 17861), (525, 17894), (538, 17945), (546, 17966), (555, 17981), (559, 17990), (566, 18005), (606, 18074), (664, 18227), (673, 18248), (718, 18377), (727, 18422), (730, 18434), (737, 18470), (804, 18650), (810, 18659), (845, 18770), (850, 18800), (866, 18884),

Gene: QuinnKiro\_25 Start: 16043, Stop: 19081, Start Num: 37

Candidate Starts for QuinnKiro\_25:

(Start: 37 @16043 has 32 MA's), (66, 16217), (69, 16229), (81, 16262), (Start: 143 @16469 has 5 MA's), (Start: 152 @16490 has 5 MA's), (190, 16589), (193, 16592), (258, 16802), (264, 16811), (268, 16823), (279, 16856), (295, 16919), (299, 16931), (308, 16964), (312, 16982), (316, 17003), (327, 17051), (329, 17057), (334, 17072), (337, 17081), (339, 17093), (341, 17102), (359, 17195), (383, 17312), (384, 17315), (391, 17342), (393, 17354), (405, 17408), (410, 17429), (427, 17495), (440, 17534), (491, 17675), (507, 17720), (535, 17810), (538, 17819), (552, 17849), (575, 17906), (582,



17921), (606, 17948), (607, 17951), (612, 17969), (656, 18080), (689, 18161), (709, 18218), (720, 18260), (741, 18356), (744, 18377), (749, 18401), (757, 18446), (762, 18464), (776, 18512), (780, 18524), (800, 18566), (803, 18578), (816, 18626), (851, 18797), (863, 18857), (865, 18869), (872, 18896), (875, 18917), (892, 19013), (899, 19061),

Gene: Quokka\_24 Start: 15528, Stop: 18041, Start Num: 107

Candidate Starts for Quokka\_24:

(Start: 107 @15528 has 89 MA's), (144, 15639), (170, 15705), (172, 15708), (173, 15711), (256, 15897), (258, 15906), (264, 15915), (299, 16035), (312, 16086), (323, 16143), (327, 16155), (331, 16161), (334, 16176), (339, 16197), (341, 16206), (350, 16254), (383, 16416), (391, 16446), (393, 16458), (402, 16497), (405, 16512), (410, 16533), (424, 16590), (427, 16599), (436, 16626), (477, 16725), (507, 16824), (512, 16839), (538, 16923), (546, 16944), (568, 16989), (606, 17052), (607, 17055), (623, 17106), (628, 17121), (689, 17265), (703, 17292), (718, 17355), (722, 17370), (727, 17400), (749, 17496), (765, 17562), (804, 17625), (860, 17820), (861, 17823), (866, 17844),

Gene: Rachaly\_29 Start: 18265, Stop: 20793, Start Num: 107

Candidate Starts for Rachaly\_29:

(Start: 107 @18265 has 89 MA's), (144, 18376), (149, 18388), (172, 18445), (173, 18448), (256, 18637), (258, 18646), (279, 18700), (311, 18817), (312, 18826), (316, 18847), (321, 18871), (339, 18937), (341, 18946), (344, 18967), (345, 18970), (383, 19156), (393, 19198), (410, 19273), (416, 19303), (427, 19339), (440, 19378), (507, 19564), (538, 19663), (546, 19684), (548, 19687), (559, 19708), (568, 19729), (581, 19762), (582, 19765), (606, 19792), (620, 19834), (628, 19861), (658, 19933), (664, 19945), (701, 20029), (703, 20032), (718, 20095), (727, 20140), (730, 20152), (749, 20236), (761, 20290), (810, 20374), (830, 20398), (850, 20515), (866, 20593),

Gene: Rahalelujah\_25 Start: 15668, Stop: 18586, Start Num: 52

Candidate Starts for Rahalelujah\_25:

(Start: 52 @15668 has 33 MA's), (55, 15680), (94, 15839), (106, 15881), (114, 15902), (153, 16028), (165, 16070), (190, 16124), (193, 16127), (230, 16253), (256, 16328), (258, 16337), (260, 16340), (266, 16352), (309, 16505), (312, 16517), (315, 16529), (316, 16538), (321, 16562), (325, 16583), (327, 16586), (334, 16607), (339, 16628), (341, 16637), (342, 16649), (352, 16697), (361, 16742), (383, 16847), (397, 16910), (404, 16940), (405, 16943), (410, 16964), (412, 16973), (414, 16985), (420, 17009), (427, 17030), (440, 17069), (507, 17255), (511, 17267), (523, 17300), (546, 17375), (552, 17384), (568, 17420), (575, 17441), (585, 17462), (586, 17465), (604, 17474), (606, 17483), (607, 17486), (615, 17513), (624, 17540), (650, 17600), (685, 17678), (718, 17786), (727, 17831), (738, 17882), (755, 17963), (756, 17969), (758, 17978), (771, 18029), (800, 18092), (805, 18113), (816, 18152), (831, 18194), (844, 18272), (849, 18299), (860, 18359), (866, 18383), (879, 18458), (894, 18524), (900, 18566),

Gene: Raid\_25 Start: 16078, Stop: 18909, Start Num: 112

Candidate Starts for Raid\_25:

(Start: 112 @16078 has 30 MA's), (Start: 117 @16093 has 5 MA's), (257, 16390), (263, 16405), (278, 16450), (305, 16570), (310, 16588), (317, 16636), (326, 16681), (339, 16726), (340, 16729), (348, 16777), (386, 16960), (393, 16987), (413, 17071), (428, 17128), (435, 17146), (453, 17191), (469, 17227), (482, 17269), (486, 17287), (503, 17335), (518, 17398), (519, 17401), (562, 17518), (573, 17554), (583, 17581), (589, 17593), (597, 17611), (602, 17626), (622, 17689), (669, 17818), (684, 17863), (694, 17896), (700, 17908), (729, 18037), (747, 18133), (764, 18220), (765, 18223), (770, 18241), (788, 18310), (825, 18445), (855, 18622), (875, 18733), (888, 18820), (895, 18859), (897, 18874),

Gene: Rajelicia\_24 Start: 16599, Stop: 18599, Start Num: 111

Candidate Starts for Rajelicia\_24:

(Start: 111 @16599 has 200 MA's), (125, 16638), (144, 16701), (Start: 155 @16731 has 22 MA's), (162, 16752), (238, 16812), (266, 16908), (278, 16947), (285, 16977), (289, 16989), (315, 17085), (321, 17118), (376, 17352), (433, 17577), (482, 17640), (534, 17742), (543, 17754), (592, 17832), (611, 17874), (639, 17928), (644, 17940), (651, 17955), (657, 17973), (663, 17985), (688, 18063), (699, 18093), (710, 18138), (723, 18189), (769, 18399), (820, 18549),

Gene: ReMo\_28 Start: 15923, Stop: 18109, Start Num: 179

Candidate Starts for ReMo\_28:

(Start: 115 @15746 has 1 MA's), (Start: 117 @15755 has 5 MA's), (Start: 179 @15923 has 15 MA's), (269, 16163), (270, 16169), (290, 16238), (306, 16295), (341, 16439), (348, 16481), (358, 16529), (359, 16532), (382, 16643), (385, 16661), (412, 16766), (425, 16814), (484, 16919), (513, 16979), (536, 17033), (555, 17069), (569, 17093), (577, 17102), (608, 17165), (616, 17186), (622, 17201), (629, 17225), (635, 17237), (659, 17291), (667, 17312), (680, 17342), (732, 17513), (734, 17534), (756, 17618), (867, 17921), (892, 18044), (894, 18056),

Gene: Reba\_28 Start: 15722, Stop: 18748, Start Num: 38

Candidate Starts for Reba\_28:

(30, 15668), (Start: 38 @15722 has 82 MA's), (55, 15836), (68, 15902), (69, 15905), (73, 15914), (86, 15950), (96, 16001), (124, 16073), (Start: 143 @16145 has 5 MA's), (190, 16265), (193, 16268), (214, 16337), (226, 16382), (258, 16475), (264, 16484), (279, 16529), (288, 16568), (295, 16592), (299, 16604), (308, 16637), (312, 16655), (316, 16676), (327, 16724), (329, 16730), (334, 16745), (337, 16754), (339, 16766), (341, 16775), (359, 16868), (380, 16955), (383, 16985), (384, 16988), (391, 17015), (393, 17027), (405, 17081), (410, 17102), (416, 17132), (427, 17168), (477, 17294), (491, 17348), (507, 17393), (525, 17441), (535, 17483), (538, 17492), (552, 17522), (582, 17594), (585, 17600), (606, 17621), (607, 17624), (610, 17636), (656, 17753), (658, 17762), (689, 17834), (690, 17837), (706, 17873), (718, 17924), (719, 17927), (721, 17936), (757, 18119), (776, 18185), (780, 18197), (800, 18239), (817, 18302), (836, 18359), (844, 18428), (851, 18464), (867, 18545), (892, 18680), (894, 18692),

Gene: Rebeuca\_26 Start: 15880, Stop: 18621, Start Num: 105

Candidate Starts for Rebeuca\_26:

(Start: 105 @15880 has 8 MA's), (Start: 163 @16057 has 10 MA's), (171, 16078), (201, 16135), (213, 16183), (219, 16204), (220, 16210), (225, 16234), (232, 16249), (243, 16279), (265, 16354), (268, 16363), (280, 16414), (281, 16417), (298, 16480), (301, 16495), (307, 16516), (309, 16525), (330, 16630), (339, 16672), (411, 17026), (489, 17194), (528, 17314), (542, 17359), (544, 17362), (545, 17365), (557, 17386), (558, 17389), (574, 17434), (626, 17542), (636, 17563), (642, 17575), (659, 17623), (674, 17656), (705, 17719), (721, 17797), (726, 17821), (741, 17896), (752, 17962), (757, 17986), (762, 18004), (782, 18070), (796, 18100), (802, 18124), (807, 18136), (812, 18151), (819, 18172), (823, 18184), (863, 18397), (871, 18433), (874, 18454), (875, 18457), (892, 18553), (899, 18601),

Gene: RedRock\_29 Start: 18558, Stop: 21056, Start Num: 107

Candidate Starts for RedRock\_29:

(Start: 107 @18558 has 89 MA's), (Start: 152 @18687 has 5 MA's), (167, 18726), (188, 18771), (249, 18873), (256, 18894), (264, 18912), (299, 19032), (312, 19083), (327, 19152), (329, 19158), (334, 19173), (337, 19182), (339, 19194), (341, 19203), (383, 19413), (390, 19440), (393, 19455), (405, 19509), (410, 19530), (427, 19596), (440, 19635), (465, 19698), (507, 19821), (512, 19836), (544, 19935), (552, 19950), (555, 19956), (559, 19965), (568, 19986), (575, 20007), (582, 20022), (586, 20031), (607, 20052), (608, 20058), (620, 20091), (628, 20118), (644, 20148), (649, 20160), (658, 20190), (664, 20202), (703, 20289), (710, 20322), (718, 20352), (725, 20385), (727, 20397), (801, 20616), (804, 20625), (810, 20634), (845, 20745), (850, 20775), (866, 20856), (894, 20997),

Gene: Refuge\_29 Start: 18955, Stop: 22065, Start Num: 27

Candidate Starts for Refuge\_29:

(7, 18709), (22, 18925), (Start: 27 @18955 has 5 MA's), (Start: 52 @19132 has 33 MA's), (55, 19144), (63, 19180), (130, 19411), (153, 19474), (165, 19516), (190, 19570), (193, 19573), (230, 19699), (256, 19774), (258, 19783), (260, 19786), (266, 19798), (279, 19837), (312, 19963), (321, 20008), (322, 20011), (325, 20029), (327, 20032), (334, 20053), (337, 20062), (341, 20083), (342, 20095), (352, 20143), (356, 20164), (358, 20173), (361, 20188), (395, 20350), (406, 20392), (410, 20410), (412, 20419), (414, 20431), (427, 20476), (438, 20509), (440, 20515), (465, 20578), (507, 20701), (542, 20812), (546, 20821), (548, 20824), (568, 20866), (574, 20881), (586, 20911), (606, 20929), (608, 20938), (610, 20944), (626, 20992), (628, 20998), (658, 21070), (689, 21142), (690, 21145), (710, 21202), (718, 21232), (721, 21244), (726, 21268), (727, 21277), (752, 21409), (757, 21433), (766, 21469), (768, 21478), (786, 21520), (800, 21553), (822, 21634), (824, 21643), (851, 21790), (859, 21838), (860, 21841), (866, 21865), (892, 21994), (894, 22006),

Gene: Relief\_25 Start: 15883, Stop: 18483, Start Num: 109

Candidate Starts for Relief\_25:

(Start: 109 @15883 has 113 MA's), (Start: 155 @16024 has 22 MA's), (Start: 163 @16042 has 10 MA's), (240, 16249), (252, 16288), (258, 16318), (291, 16435), (299, 16462), (315, 16525), (329, 16588), (341, 16633), (348, 16675), (365, 16759), (457, 17026), (481, 17077), (499, 17122), (530, 17200), (545, 17239), (626, 17407), (636, 17428), (647, 17452), (673, 17518), (700, 17572), (710, 17620), (726, 17686), (757, 17851), (762, 17869), (807, 17995), (859, 18247), (860, 18250), (863, 18259), (875, 18319), (892, 18415), (899, 18463),

Gene: Remus\_28 Start: 15884, Stop: 18073, Start Num: 179

Candidate Starts for Remus\_28:

(Start: 115 @15707 has 1 MA's), (Start: 117 @15716 has 5 MA's), (Start: 179 @15884 has 15 MA's), (269, 16127), (270, 16133), (290, 16202), (306, 16259), (341, 16403), (348, 16445), (358, 16493), (359, 16496), (382, 16607), (385, 16625), (412, 16730), (425, 16778), (484, 16883), (513, 16943), (536, 16997), (555, 17033), (569, 17057), (577, 17066), (608, 17129), (616, 17150), (622, 17165), (629, 17189), (635, 17201), (659, 17255), (667, 17276), (680, 17306), (732, 17477), (734, 17498), (756, 17582), (867, 17885), (892, 18008), (894, 18020),

Gene: ResDef\_26 Start: 16043, Stop: 19081, Start Num: 37

Candidate Starts for ResDef\_26:

(Start: 37 @16043 has 32 MA's), (66, 16217), (69, 16229), (81, 16262), (Start: 143 @16469 has 5 MA's), (Start: 152 @16490 has 5 MA's), (190, 16589), (193, 16592), (258, 16802), (268, 16823), (279, 16856), (295, 16919), (299, 16931), (308, 16964), (312, 16982), (316, 17003), (327, 17051), (329, 17057), (334, 17072), (337, 17081), (339, 17093), (341, 17102), (359, 17195), (383, 17312), (384, 17315), (391, 17342), (393, 17354), (405, 17408), (410, 17429), (427, 17495), (440, 17534), (491, 17675), (507, 17720), (535, 17810), (538, 17819), (552, 17849), (575, 17906), (582, 17921), (606, 17948), (607, 17951), (612, 17969), (656, 18080), (689, 18161), (709, 18218), (720, 18260), (741, 18356), (744, 18377), (749, 18401), (757, 18446), (762, 18464), (776, 18512), (780, 18524), (800, 18566), (803, 18578), (816, 18626), (851, 18797), (863, 18857), (865, 18869), (872, 18896), (875, 18917), (892, 19013), (899, 19061),

Gene: Retro23\_26 Start: 16689, Stop: 19232, Start Num: 107

Candidate Starts for Retro23\_26:

(Start: 107 @16689 has 89 MA's), (170, 16866), (172, 16869), (173, 16872), (247, 17040), (249, 17046), (256, 17067), (258, 17076), (268, 17097), (279, 17130), (286, 17163), (312, 17256), (322, 17304), (325, 17322), (334, 17346), (337, 17355), (339, 17367), (340, 17370), (341, 17376), (344, 17397), (345, 17400), (362, 17487), (383, 17586), (393, 17628), (396, 17646), (402, 17667), (408, 17694), (410, 17703), (427, 17769), (440, 17808), (507, 17994), (512, 18009), (525, 18042), (538, 18093), (546, 18114), (555, 18129), (559, 18138), (566, 18153), (606, 18222), (664, 18375), (673, 18396), (718, 18525), (722, 18540), (727, 18570), (730, 18582), (737, 18618), (804, 18798), (810,

18807), (845, 18918), (850, 18948), (866, 19032),

Gene: RhynO\_26 Start: 16026, Stop: 18581, Start Num: 163

Candidate Starts for RhynO\_26:

(Start: 105 @15849 has 8 MA's), (Start: 163 @16026 has 10 MA's), (171, 16047), (201, 16104), (227, 16200), (232, 16209), (265, 16314), (273, 16341), (281, 16377), (301, 16455), (302, 16464), (309, 16485), (315, 16512), (330, 16590), (339, 16632), (372, 16797), (402, 16947), (404, 16959), (489, 17154), (528, 17274), (542, 17319), (544, 17322), (545, 17325), (557, 17346), (558, 17349), (574, 17394), (591, 17430), (608, 17448), (615, 17469), (626, 17502), (674, 17616), (705, 17679), (721, 17757), (726, 17781), (741, 17856), (752, 17922), (757, 17946), (762, 17964), (796, 18060), (802, 18084), (807, 18096), (812, 18111), (819, 18132), (823, 18144), (863, 18357), (871, 18393), (874, 18414), (875, 18417), (892, 18513), (899, 18561),

Gene: Rhynn\_24 Start: 16407, Stop: 18887, Start Num: 111

Candidate Starts for Rhynn\_24:

(Start: 111 @16407 has 200 MA's), (125, 16446), (144, 16509), (Start: 155 @16539 has 22 MA's), (176, 16581), (285, 16788), (291, 16806), (315, 16896), (329, 16959), (337, 16983), (339, 16995), (348, 17046), (460, 17430), (526, 17532), (537, 17571), (560, 17598), (569, 17622), (671, 17850), (707, 17952), (709, 17970), (710, 17973), (721, 18015), (741, 18114), (753, 18177), (818, 18396), (827, 18429), (875, 18711), (885, 18777), (888, 18798), (895, 18837), (897, 18852),

Gene: RidgeCB\_24 Start: 16182, Stop: 18662, Start Num: 111

Candidate Starts for RidgeCB\_24:

(Start: 111 @16182 has 200 MA's), (125, 16221), (144, 16284), (Start: 155 @16314 has 22 MA's), (176, 16356), (285, 16563), (291, 16581), (315, 16671), (329, 16734), (337, 16758), (339, 16770), (348, 16821), (460, 17205), (526, 17307), (537, 17346), (560, 17373), (569, 17397), (630, 17526), (671, 17625), (707, 17727), (710, 17748), (714, 17760), (721, 17790), (741, 17889), (753, 17952), (818, 18171), (827, 18204), (875, 18486), (881, 18528), (888, 18573), (895, 18612), (897, 18627),

Gene: Rifter\_29 Start: 16706, Stop: 18922, Start Num: 116

Candidate Starts for Rifter\_29:

(93, 16661), (Start: 116 @16706 has 41 MA's), (160, 16817), (166, 16823), (223, 16973), (270, 17120), (274, 17132), (314, 17279), (315, 17282), (321, 17315), (343, 17405), (357, 17474), (376, 17549), (412, 17717), (590, 17975), (618, 18020), (680, 18128), (710, 18191), (721, 18233), (745, 18332), (749, 18353), (756, 18395), (791, 18446), (805, 18473), (839, 18554), (850, 18644),

Gene: Ringer\_24 Start: 16730, Stop: 19561, Start Num: 112

Candidate Starts for Ringer\_24:

(Start: 112 @16730 has 30 MA's), (Start: 117 @16745 has 5 MA's), (257, 17042), (263, 17057), (278, 17102), (305, 17222), (310, 17240), (317, 17288), (326, 17333), (339, 17378), (340, 17381), (348, 17429), (386, 17612), (393, 17639), (413, 17723), (428, 17780), (435, 17798), (453, 17843), (469, 17879), (486, 17939), (503, 17987), (518, 18050), (519, 18053), (562, 18170), (573, 18206), (583, 18233), (589, 18245), (597, 18263), (602, 18278), (622, 18341), (669, 18470), (684, 18515), (694, 18548), (700, 18560), (729, 18689), (747, 18785), (764, 18872), (765, 18875), (770, 18893), (825, 19097), (855, 19274), (875, 19385), (888, 19472), (895, 19511), (899, 19541),

Gene: Roary\_22 Start: 14513, Stop: 17590, Start Num: 9

Candidate Starts for Roary\_22:

(Start: 9 @14513 has 11 MA's), (15, 14597), (Start: 34 @14765 has 1 MA's), (Start: 37 @14789 has 32 MA's), (73, 14837), (Start: 107 @14957 has 89 MA's), (129, 15029), (189, 15179), (191, 15182), (196, 15188), (252, 15374), (269, 15434), (270, 15440), (289, 15506), (297, 15533), (300, 15548), (314, 15599), (315, 15602), (321, 15635), (329, 15668), (367, 15836), (404, 16019), (412, 16043), (422, 16091), (428, 16112), (429, 16115), (493, 16259), (516, 16316), (531, 16346), (547, 16385), (580,

16457), (601, 16487), (630, 16586), (642, 16616), (660, 16661), (710, 16859), (715, 16880), (719, 16892), (734, 16973), (745, 17000), (756, 17063), (765, 17087), (792, 17117), (808, 17150), (830, 17183), (842, 17243), (846, 17270), (866, 17369), (867, 17375), (883, 17465), (886, 17486), (893, 17525), (903, 17573),

Gene: Rockstar\_25 Start: 15416, Stop: 18460, Start Num: 37

Candidate Starts for Rockstar\_25:

(Start: 37 @15416 has 32 MA's), (66, 15590), (69, 15602), (Start: 143 @15845 has 5 MA's), (190, 15965), (193, 15968), (261, 16190), (279, 16235), (299, 16310), (308, 16343), (312, 16361), (315, 16373), (332, 16439), (339, 16472), (341, 16481), (348, 16523), (359, 16574), (383, 16691), (393, 16733), (405, 16787), (410, 16808), (424, 16865), (427, 16874), (477, 17000), (479, 17006), (486, 17033), (507, 17099), (512, 17114), (523, 17144), (525, 17147), (538, 17198), (542, 17210), (553, 17231), (559, 17243), (568, 17264), (582, 17300), (606, 17327), (617, 17360), (621, 17372), (637, 17414), (664, 17480), (689, 17540), (706, 17579), (718, 17630), (719, 17633), (721, 17642), (726, 17666), (741, 17735), (744, 17756), (757, 17825), (762, 17843), (776, 17891), (780, 17903), (800, 17945), (803, 17957), (816, 18005), (851, 18176), (863, 18236), (867, 18257), (892, 18392), (894, 18404), (899, 18440),

Gene: Rohr\_25 Start: 16604, Stop: 19084, Start Num: 111

Candidate Starts for Rohr\_25:

(Start: 111 @16604 has 200 MA's), (125, 16643), (144, 16706), (Start: 155 @16736 has 22 MA's), (176, 16778), (285, 16985), (291, 17003), (315, 17093), (329, 17156), (337, 17180), (339, 17192), (348, 17243), (460, 17627), (526, 17729), (537, 17768), (555, 17783), (560, 17795), (569, 17819), (630, 17948), (671, 18047), (707, 18149), (710, 18170), (721, 18212), (741, 18311), (753, 18374), (777, 18464), (818, 18593), (827, 18626), (875, 18908), (885, 18974), (888, 18995), (895, 19034), (897, 19049),

Gene: Roksolana\_29 Start: 16734, Stop: 18950, Start Num: 116

Candidate Starts for Roksolana\_29:

(93, 16689), (Start: 116 @16734 has 41 MA's), (160, 16845), (223, 17001), (270, 17148), (274, 17160), (314, 17307), (315, 17310), (321, 17343), (343, 17433), (357, 17502), (376, 17577), (412, 17745), (590, 18003), (618, 18048), (680, 18156), (710, 18219), (721, 18261), (745, 18360), (749, 18381), (756, 18423), (791, 18474), (805, 18501), (839, 18582), (850, 18672),

Gene: Romney\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Romney\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (591, 17337), (606, 17346), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Roosevelt\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Roosevelt\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (591, 17337), (606, 17346), (626, 17409), (636, 17430), (649, 17457), (670, 17514), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Rosa24\_24 Start: 16016, Stop: 18457, Start Num: 163

Candidate Starts for Rosa24\_24:

(Start: 109 @15857 has 113 MA's), (Start: 155 @15998 has 22 MA's), (Start: 163 @16016 has 10 MA's), (222, 16172), (240, 16223), (252, 16262), (258, 16292), (291, 16409), (299, 16436), (315, 16499), (329, 16562), (341, 16607), (348, 16649), (365, 16733), (457, 17000), (481, 17051), (499, 17096), (530, 17174), (542, 17207), (545, 17213), (608, 17327), (626, 17381), (647, 17426), (670, 17486), (700, 17546), (726, 17660), (757, 17825), (762, 17843), (807, 17969), (859, 18221), (860, 18224), (863, 18233), (874, 18290), (875, 18293), (883, 18338), (892, 18389), (899, 18437),

Gene: Rosalind\_28 Start: 16045, Stop: 18231, Start Num: 179

Candidate Starts for Rosalind\_28:

(Start: 115 @15868 has 1 MA's), (Start: 117 @15877 has 5 MA's), (Start: 179 @16045 has 15 MA's), (269, 16285), (270, 16291), (290, 16360), (306, 16417), (341, 16561), (348, 16603), (358, 16651), (359, 16654), (382, 16765), (385, 16783), (412, 16888), (425, 16936), (484, 17041), (513, 17101), (536, 17155), (555, 17191), (569, 17215), (577, 17224), (608, 17287), (616, 17308), (622, 17323), (629, 17347), (635, 17359), (659, 17413), (667, 17434), (680, 17464), (732, 17635), (734, 17656), (756, 17740), (867, 18043), (892, 18166), (894, 18178),

Gene: Rowdy\_29 Start: 15937, Stop: 18492, Start Num: 163

Candidate Starts for Rowdy\_29:

(Start: 105 @15760 has 8 MA's), (Start: 163 @15937 has 10 MA's), (171, 15958), (201, 16015), (227, 16111), (232, 16120), (265, 16225), (273, 16252), (281, 16288), (301, 16366), (302, 16375), (309, 16396), (315, 16423), (330, 16501), (339, 16543), (372, 16708), (402, 16858), (404, 16870), (489, 17065), (528, 17185), (542, 17230), (544, 17233), (545, 17236), (557, 17257), (558, 17260), (574, 17305), (591, 17341), (608, 17359), (615, 17380), (626, 17413), (674, 17527), (705, 17590), (721, 17668), (726, 17692), (741, 17767), (752, 17833), (757, 17857), (762, 17875), (796, 17971), (802, 17995), (807, 18007), (812, 18022), (819, 18043), (823, 18055), (863, 18268), (871, 18304), (874, 18325), (875, 18328), (892, 18424), (899, 18472),

Gene: Rubeus\_25 Start: 16439, Stop: 18922, Start Num: 111

Candidate Starts for Rubeus\_25:

(Start: 111 @16439 has 200 MA's), (125, 16478), (144, 16541), (Start: 155 @16571 has 22 MA's), (162, 16592), (176, 16613), (194, 16643), (243, 16667), (262, 16733), (315, 16931), (321, 16964), (339, 17030), (389, 17285), (393, 17306), (398, 17333), (476, 17492), (500, 17528), (555, 17621), (564, 17642), (592, 17699), (644, 17819), (659, 17855), (671, 17885), (682, 17921), (707, 17987), (710, 18008), (721, 18050), (741, 18149), (753, 18212), (777, 18302), (818, 18431), (827, 18464), (875, 18746), (885, 18812), (888, 18833), (895, 18872), (899, 18902),

Gene: Rufus\_25 Start: 16775, Stop: 19246, Start Num: 111

Candidate Starts for Rufus\_25:

(Start: 111 @16775 has 200 MA's), (125, 16814), (144, 16877), (Start: 155 @16907 has 22 MA's), (162, 16928), (176, 16949), (181, 16961), (194, 16979), (262, 17069), (315, 17267), (321, 17300), (339, 17366), (389, 17621), (393, 17642), (398, 17669), (476, 17828), (500, 17864), (555, 17957), (564, 17978), (592, 18035), (644, 18155), (659, 18191), (671, 18221), (682, 18257), (707, 18323), (710, 18344), (741, 18485), (773, 18626), (784, 18647), (826, 18782), (855, 18959), (875, 19070), (885, 19136), (888, 19157), (895, 19196), (897, 19211),

Gene: Ruin\_25 Start: 15881, Stop: 18481, Start Num: 109

Candidate Starts for Ruin\_25:

(Start: 109 @15881 has 113 MA's), (Start: 155 @16022 has 22 MA's), (240, 16247), (252, 16286), (258, 16316), (291, 16433), (299, 16460), (315, 16523), (329, 16586), (341, 16631), (348, 16673), (365, 16757), (457, 17024), (481, 17075), (499, 17120), (530, 17198), (545, 17237), (626, 17405), (636, 17426), (647, 17450), (673, 17516), (700, 17570), (710, 17618), (726, 17684), (757, 17849),

(762, 17867), (807, 17993), (859, 18245), (860, 18248), (863, 18257), (875, 18317), (892, 18413), (899, 18461),

Gene: Rummer\_27 Start: 16063, Stop: 19089, Start Num: 38

Candidate Starts for Rummer\_27:

(30, 16009), (Start: 38 @16063 has 82 MA's), (55, 16177), (68, 16243), (69, 16246), (73, 16255), (86, 16291), (96, 16342), (124, 16414), (Start: 143 @16486 has 5 MA's), (190, 16606), (193, 16609), (214, 16678), (226, 16723), (258, 16816), (264, 16825), (270, 16843), (279, 16870), (295, 16933), (299, 16945), (308, 16978), (312, 16996), (325, 17062), (327, 17065), (329, 17071), (334, 17086), (337, 17095), (339, 17107), (341, 17116), (355, 17194), (359, 17209), (383, 17326), (384, 17329), (391, 17356), (393, 17368), (405, 17422), (410, 17443), (427, 17509), (440, 17548), (479, 17641), (491, 17689), (507, 17734), (525, 17782), (535, 17824), (538, 17833), (552, 17863), (553, 17866), (559, 17878), (582, 17935), (585, 17941), (606, 17962), (607, 17965), (658, 18103), (664, 18115), (689, 18175), (709, 18232), (741, 18370), (744, 18391), (749, 18415), (757, 18460), (762, 18478), (776, 18526), (780, 18538), (800, 18580), (817, 18643), (836, 18700), (844, 18769), (851, 18805), (859, 18853), (867, 18886), (892, 19021),

Gene: Ruotula\_23 Start: 16616, Stop: 19450, Start Num: 111

Candidate Starts for Ruotula\_23:

(Start: 111 @16616 has 200 MA's), (132, 16688), (257, 16931), (263, 16946), (278, 16991), (305, 17111), (310, 17129), (317, 17177), (326, 17222), (339, 17267), (340, 17270), (348, 17318), (386, 17501), (393, 17528), (413, 17612), (428, 17669), (435, 17687), (453, 17732), (469, 17768), (482, 17810), (486, 17828), (503, 17876), (518, 17939), (519, 17942), (562, 18059), (573, 18095), (583, 18122), (589, 18134), (597, 18152), (602, 18167), (622, 18230), (669, 18359), (684, 18404), (694, 18437), (700, 18449), (734, 18623), (747, 18674), (764, 18761), (765, 18764), (770, 18782), (825, 18986), (855, 19163), (875, 19274), (888, 19361), (895, 19400), (897, 19415),

Gene: Rutherferd\_26 Start: 17013, Stop: 19493, Start Num: 111

Candidate Starts for Rutherferd\_26:

(Start: 111 @17013 has 200 MA's), (125, 17052), (144, 17115), (Start: 155 @17145 has 22 MA's), (176, 17187), (285, 17394), (291, 17412), (315, 17502), (329, 17565), (337, 17589), (339, 17601), (348, 17652), (460, 18036), (526, 18138), (537, 18177), (560, 18204), (569, 18228), (671, 18456), (707, 18558), (710, 18579), (714, 18591), (721, 18621), (740, 18717), (741, 18720), (753, 18783), (818, 19002), (827, 19035), (875, 19317), (888, 19404), (895, 19443), (897, 19458),

Gene: RyeScarlet\_28 Start: 17594, Stop: 20503, Start Num: 52

Candidate Starts for RyeScarlet\_28:

(Start: 52 @17594 has 33 MA's), (55, 17606), (68, 17666), (114, 17825), (130, 17888), (153, 17951), (165, 17993), (193, 18050), (207, 18089), (260, 18260), (264, 18266), (269, 18281), (294, 18371), (295, 18374), (299, 18386), (311, 18428), (321, 18482), (341, 18557), (344, 18578), (345, 18581), (348, 18599), (361, 18662), (379, 18728), (383, 18767), (390, 18794), (393, 18809), (399, 18839), (405, 18863), (410, 18884), (427, 18950), (440, 18989), (468, 19055), (479, 19082), (486, 19109), (507, 19175), (523, 19220), (546, 19295), (568, 19340), (575, 19361), (585, 19382), (586, 19385), (606, 19403), (607, 19406), (615, 19433), (624, 19460), (649, 19514), (718, 19706), (722, 19721), (727, 19751), (738, 19802), (756, 19889), (758, 19898), (771, 19949), (800, 20012), (805, 20033), (816, 20069), (830, 20105), (831, 20111), (844, 20189), (849, 20216), (860, 20276), (875, 20345), (879, 20375), (885, 20402), (894, 20441), (900, 20483),

Gene: STLscum\_25 Start: 16819, Stop: 19653, Start Num: 111

Candidate Starts for STLscum\_25:

(Start: 111 @16819 has 200 MA's), (132, 16891), (257, 17134), (263, 17149), (278, 17194), (305, 17314), (310, 17332), (326, 17425), (339, 17470), (340, 17473), (348, 17521), (386, 17704), (393, 17731), (413, 17815), (428, 17872), (435, 17890), (439, 17899), (469, 17971), (475, 17989), (486,

18031), (487, 18034), (503, 18079), (518, 18142), (519, 18145), (562, 18262), (573, 18298), (583, 18325), (589, 18337), (597, 18355), (602, 18370), (622, 18433), (669, 18562), (684, 18607), (694, 18640), (700, 18652), (724, 18751), (734, 18826), (747, 18877), (764, 18964), (765, 18967), (770, 18985), (825, 19189), (855, 19366), (875, 19477), (881, 19519), (888, 19564), (895, 19603), (897, 19618),

Gene: Sabertooth\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for Sabertooth\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (545, 17238), (557, 17259), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: Sabia\_27 Start: 15972, Stop: 18998, Start Num: 38

Candidate Starts for Sabia\_27:

(30, 15918), (Start: 38 @15972 has 82 MA's), (55, 16086), (68, 16152), (69, 16155), (73, 16164), (86, 16200), (96, 16251), (124, 16323), (Start: 143 @16395 has 5 MA's), (190, 16515), (193, 16518), (214, 16587), (226, 16632), (258, 16725), (264, 16734), (270, 16752), (279, 16779), (295, 16842), (299, 16854), (308, 16887), (312, 16905), (325, 16971), (327, 16974), (329, 16980), (334, 16995), (337, 17004), (339, 17016), (341, 17025), (359, 17118), (383, 17235), (384, 17238), (391, 17265), (393, 17277), (405, 17331), (410, 17352), (427, 17418), (436, 17445), (479, 17550), (491, 17598), (507, 17643), (525, 17691), (535, 17733), (538, 17742), (552, 17772), (553, 17775), (559, 17787), (582, 17844), (585, 17850), (606, 17871), (607, 17874), (658, 18012), (664, 18024), (689, 18084), (710, 18144), (718, 18174), (719, 18177), (721, 18186), (741, 18279), (757, 18369), (776, 18435), (780, 18447), (800, 18489), (817, 18552), (836, 18609), (844, 18678), (851, 18714), (867, 18795), (892, 18930),

Gene: Sabinator\_27 Start: 15977, Stop: 19003, Start Num: 38

Candidate Starts for Sabinator\_27:

(30, 15923), (Start: 38 @15977 has 82 MA's), (55, 16091), (68, 16157), (69, 16160), (73, 16169), (86, 16205), (96, 16256), (124, 16328), (Start: 143 @16400 has 5 MA's), (190, 16520), (193, 16523), (214, 16592), (226, 16637), (258, 16730), (264, 16739), (270, 16757), (279, 16784), (295, 16847), (299, 16859), (308, 16892), (312, 16910), (325, 16976), (327, 16979), (329, 16985), (334, 17000), (337, 17009), (339, 17021), (341, 17030), (355, 17108), (359, 17123), (383, 17240), (384, 17243), (391, 17270), (393, 17282), (405, 17336), (410, 17357), (427, 17423), (440, 17462), (479, 17555), (491, 17603), (507, 17648), (525, 17696), (535, 17738), (538, 17747), (552, 17777), (553, 17780), (559, 17792), (582, 17849), (585, 17855), (606, 17876), (607, 17879), (658, 18017), (664, 18029), (689, 18089), (709, 18146), (741, 18284), (744, 18305), (749, 18329), (757, 18374), (762, 18392), (776, 18440), (780, 18452), (800, 18494), (817, 18557), (836, 18614), (844, 18683), (851, 18719), (867, 18800), (892, 18935),

Gene: Sachima\_25 Start: 17590, Stop: 20499, Start Num: 52

Candidate Starts for Sachima\_25:

(Start: 52 @17590 has 33 MA's), (55, 17602), (68, 17662), (130, 17884), (153, 17947), (165, 17989), (193, 18046), (207, 18085), (260, 18256), (264, 18262), (269, 18277), (294, 18367), (295, 18370), (299, 18382), (311, 18424), (321, 18478), (341, 18553), (344, 18574), (345, 18577), (348, 18595), (361, 18658), (379, 18724), (383, 18763), (390, 18790), (393, 18805), (399, 18835), (405, 18859), (410, 18880), (427, 18946), (440, 18985), (468, 19051), (479, 19078), (486, 19105), (507, 19171), (523, 19216), (546, 19291), (568, 19336), (575, 19357), (585, 19378), (586, 19381), (606, 19399), (607, 19402), (615, 19429), (624, 19456), (649, 19510), (718, 19702), (722, 19717), (727, 19747), (738, 19798), (756, 19885), (758, 19894), (771, 19945), (800, 20008), (805, 20029), (816, 20065),



(830, 20101), (831, 20107), (844, 20185), (849, 20212), (860, 20272), (875, 20341), (879, 20371), (885, 20398), (894, 20437), (900, 20479),

Gene: Sagefire\_25 Start: 17215, Stop: 19686, Start Num: 111

Candidate Starts for Sagefire\_25:

(Start: 111 @17215 has 200 MA's), (125, 17254), (144, 17317), (Start: 155 @17347 has 22 MA's), (162, 17368), (176, 17389), (181, 17401), (194, 17419), (262, 17509), (315, 17707), (321, 17740), (339, 17806), (389, 18061), (393, 18082), (398, 18109), (476, 18268), (500, 18304), (555, 18397), (564, 18418), (592, 18475), (644, 18595), (659, 18631), (671, 18661), (682, 18697), (707, 18763), (710, 18784), (741, 18925), (773, 19066), (784, 19087), (826, 19222), (855, 19399), (875, 19510), (881, 19552), (888, 19597), (895, 19636), (897, 19651),

Gene: Saintus\_22 Start: 14528, Stop: 17605, Start Num: 9

Candidate Starts for Saintus\_22:

(Start: 9 @14528 has 11 MA's), (15, 14612), (Start: 34 @14780 has 1 MA's), (Start: 37 @14804 has 32 MA's), (73, 14852), (Start: 107 @14972 has 89 MA's), (129, 15044), (189, 15194), (191, 15197), (196, 15203), (252, 15389), (269, 15449), (270, 15455), (289, 15521), (297, 15548), (300, 15563), (314, 15614), (315, 15617), (329, 15683), (367, 15851), (398, 16010), (404, 16034), (412, 16058), (422, 16106), (428, 16127), (429, 16130), (493, 16274), (516, 16331), (531, 16361), (547, 16400), (580, 16472), (601, 16502), (630, 16601), (642, 16631), (660, 16676), (710, 16874), (715, 16895), (719, 16907), (734, 16988), (745, 17015), (752, 17057), (756, 17078), (765, 17102), (792, 17132), (808, 17165), (830, 17198), (842, 17258), (846, 17285), (866, 17384), (883, 17480), (886, 17501), (893, 17540), (903, 17588),

Gene: Salz\_26 Start: 17154, Stop: 19700, Start Num: 112

Candidate Starts for Salz\_26:

(Start: 112 @17154 has 30 MA's), (Start: 118 @17172 has 2 MA's), (187, 17346), (197, 17355), (223, 17430), (252, 17484), (267, 17538), (271, 17553), (272, 17556), (279, 17574), (295, 17637), (299, 17649), (315, 17712), (329, 17775), (334, 17790), (337, 17799), (341, 17820), (345, 17844), (348, 17859), (367, 17946), (369, 17949), (374, 17964), (378, 17985), (380, 17997), (389, 18063), (404, 18135), (412, 18159), (437, 18240), (441, 18249), (445, 18261), (467, 18303), (492, 18360), (513, 18414), (549, 18522), (567, 18561), (618, 18702), (656, 18798), (661, 18819), (675, 18852), (686, 18885), (687, 18888), (709, 18972), (721, 19017), (722, 19020), (746, 19134), (752, 19167), (791, 19239), (808, 19275), (839, 19347), (850, 19425), (860, 19479), (866, 19503), (889, 19614),

Gene: Sandaddy\_23 Start: 16328, Stop: 18799, Start Num: 111

Candidate Starts for Sandaddy\_23:

(Start: 111 @16328 has 200 MA's), (125, 16367), (144, 16430), (Start: 155 @16460 has 22 MA's), (162, 16481), (176, 16502), (181, 16514), (194, 16532), (262, 16622), (315, 16820), (321, 16853), (339, 16919), (389, 17174), (393, 17195), (398, 17222), (476, 17381), (500, 17417), (555, 17510), (564, 17531), (592, 17588), (644, 17708), (659, 17744), (671, 17774), (682, 17810), (707, 17876), (710, 17897), (741, 18038), (773, 18179), (784, 18200), (855, 18512), (875, 18623), (881, 18665), (888, 18710), (895, 18749), (897, 18764),

Gene: Sanya\_23 Start: 16990, Stop: 19461, Start Num: 111

Candidate Starts for Sanya\_23:

(Start: 111 @16990 has 200 MA's), (125, 17029), (144, 17092), (Start: 155 @17122 has 22 MA's), (162, 17143), (176, 17164), (181, 17176), (194, 17194), (262, 17284), (315, 17482), (321, 17515), (339, 17581), (389, 17836), (393, 17857), (398, 17884), (476, 18043), (500, 18079), (555, 18172), (564, 18193), (592, 18250), (644, 18370), (659, 18406), (671, 18436), (682, 18472), (707, 18538), (710, 18559), (741, 18700), (773, 18841), (784, 18862), (826, 18997), (855, 19174), (875, 19285), (885, 19351), (888, 19372), (895, 19411), (897, 19426),

Gene: SarFire\_24 Start: 16468, Stop: 18939, Start Num: 111

Candidate Starts for SarFire\_24:

(Start: 111 @16468 has 200 MA's), (125, 16507), (144, 16570), (Start: 155 @16600 has 22 MA's), (162, 16621), (176, 16642), (194, 16672), (243, 16696), (250, 16717), (262, 16762), (315, 16960), (321, 16993), (339, 17059), (389, 17314), (393, 17335), (398, 17362), (403, 17377), (410, 17401), (451, 17488), (476, 17521), (500, 17557), (555, 17650), (564, 17671), (569, 17686), (579, 17707), (580, 17710), (615, 17779), (627, 17815), (644, 17848), (659, 17884), (671, 17914), (682, 17950), (707, 18016), (710, 18037), (741, 18178), (773, 18319), (784, 18340), (826, 18475), (842, 18571), (855, 18652), (875, 18763), (888, 18850), (895, 18889), (897, 18904),

Gene: SaturnRing\_25 Start: 15495, Stop: 18530, Start Num: 37

Candidate Starts for SaturnRing\_25:

(Start: 37 @15495 has 32 MA's), (66, 15669), (69, 15681), (81, 15714), (Start: 143 @15924 has 5 MA's), (190, 16044), (193, 16047), (258, 16251), (268, 16272), (277, 16302), (279, 16305), (295, 16368), (299, 16380), (308, 16413), (312, 16431), (327, 16500), (329, 16506), (334, 16521), (337, 16530), (339, 16542), (341, 16551), (359, 16644), (383, 16761), (384, 16764), (390, 16788), (391, 16791), (393, 16803), (405, 16857), (410, 16878), (414, 16899), (427, 16944), (436, 16971), (440, 16983), (491, 17124), (507, 17169), (512, 17184), (535, 17259), (538, 17268), (552, 17298), (559, 17313), (560, 17316), (568, 17334), (575, 17355), (578, 17358), (606, 17397), (607, 17400), (637, 17484), (664, 17550), (673, 17571), (689, 17610), (706, 17649), (710, 17670), (718, 17700), (719, 17703), (721, 17712), (726, 17736), (741, 17805), (744, 17826), (757, 17895), (762, 17913), (776, 17961), (780, 17973), (800, 18015), (803, 18027), (816, 18075), (851, 18246), (855, 18276), (863, 18306), (867, 18327), (892, 18462), (899, 18510),

Gene: Scamp\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Scamp\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (674, 17523), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Scherzo\_27 Start: 17623, Stop: 20532, Start Num: 52

Candidate Starts for Scherzo\_27:

(Start: 52 @17623 has 33 MA's), (55, 17635), (68, 17695), (130, 17917), (153, 17980), (165, 18022), (193, 18079), (207, 18118), (260, 18289), (264, 18295), (269, 18310), (294, 18400), (295, 18403), (299, 18415), (311, 18457), (321, 18511), (341, 18586), (344, 18607), (345, 18610), (348, 18628), (361, 18691), (379, 18757), (383, 18796), (390, 18823), (393, 18838), (399, 18868), (405, 18892), (410, 18913), (427, 18979), (440, 19018), (468, 19084), (479, 19111), (486, 19138), (507, 19204), (523, 19249), (546, 19324), (568, 19369), (575, 19390), (585, 19411), (586, 19414), (606, 19432), (607, 19435), (615, 19462), (624, 19489), (649, 19543), (718, 19735), (722, 19750), (727, 19780), (738, 19831), (756, 19918), (758, 19927), (771, 19978), (800, 20041), (805, 20062), (816, 20098), (830, 20134), (831, 20140), (844, 20218), (849, 20245), (860, 20305), (875, 20374), (879, 20404), (885, 20431), (894, 20470), (900, 20512),

Gene: Scorpia\_23 Start: 15062, Stop: 17875, Start Num: 2

Candidate Starts for Scorpia\_23:

(Start: 2 @15062 has 8 MA's), (10, 15251), (82, 15599), (120, 15734), (121, 15740), (208, 15833), (229, 15884), (246, 15920), (273, 16010), (289, 16076), (295, 16097), (315, 16172), (321, 16205), (337, 16259), (342, 16292), (343, 16295), (345, 16304), (365, 16403), (376, 16436), (397, 16565), (426, 16679), (450, 16730), (501, 16796), (561, 16889), (576, 16922), (634, 17009), (655, 17042), (664, 17054), (683, 17084), (710, 17147), (721, 17189), (734, 17261), (745, 17288), (748, 17303),

(752, 17330), (756, 17351), (808, 17438), (829, 17468), (830, 17471), (842, 17531), (859, 17630), (863, 17642), (865, 17654), (867, 17663), (889, 17792), (892, 17810),

Gene: Scout\_25 Start: 14795, Stop: 17833, Start Num: 37

Candidate Starts for Scout\_25:

(Start: 37 @14795 has 32 MA's), (66, 14969), (69, 14981), (81, 15014), (Start: 143 @15224 has 5 MA's), (193, 15347), (202, 15368), (258, 15554), (268, 15575), (279, 15608), (295, 15671), (299, 15683), (308, 15716), (312, 15734), (327, 15803), (329, 15809), (334, 15824), (337, 15833), (339, 15845), (341, 15854), (359, 15947), (383, 16064), (384, 16067), (391, 16094), (393, 16106), (405, 16160), (410, 16181), (414, 16202), (427, 16247), (440, 16286), (479, 16379), (491, 16427), (507, 16472), (512, 16487), (535, 16562), (538, 16571), (552, 16601), (559, 16616), (582, 16673), (606, 16700), (607, 16703), (613, 16724), (664, 16853), (673, 16874), (689, 16913), (706, 16952), (710, 16973), (718, 17003), (719, 17006), (721, 17015), (726, 17039), (741, 17108), (744, 17129), (757, 17198), (762, 17216), (776, 17264), (780, 17276), (800, 17318), (803, 17330), (816, 17378), (851, 17549), (855, 17579), (863, 17609), (867, 17630), (892, 17765), (894, 17777), (899, 17813),

Gene: Scowl\_25 Start: 16861, Stop: 19521, Start Num: 111

Candidate Starts for Scowl\_25:

(Start: 111 @16861 has 200 MA's), (125, 16900), (144, 16963), (145, 16969), (Start: 155 @16993 has 22 MA's), (176, 17035), (315, 17344), (329, 17407), (341, 17452), (346, 17476), (361, 17551), (364, 17563), (451, 17884), (565, 18214), (584, 18265), (598, 18292), (671, 18496), (708, 18610), (710, 18619), (715, 18640), (721, 18661), (741, 18760), (750, 18802), (751, 18805), (788, 18934), (815, 19018), (827, 19063), (875, 19345), (881, 19387), (884, 19405), (888, 19432), (895, 19471), (897, 19486),

Gene: Seabiscuit\_26 Start: 16399, Stop: 18867, Start Num: 111

Candidate Starts for Seabiscuit\_26:

(Start: 111 @16399 has 200 MA's), (Start: 117 @16414 has 5 MA's), (Start: 155 @16528 has 22 MA's), (162, 16549), (176, 16570), (194, 16600), (243, 16624), (250, 16645), (262, 16690), (315, 16888), (321, 16921), (339, 16987), (389, 17242), (393, 17263), (398, 17290), (476, 17449), (500, 17485), (555, 17578), (564, 17599), (569, 17614), (579, 17635), (580, 17638), (615, 17707), (627, 17743), (644, 17776), (659, 17812), (671, 17842), (682, 17878), (707, 17944), (710, 17965), (721, 18007), (741, 18106), (773, 18247), (784, 18268), (826, 18403), (855, 18580), (875, 18691), (888, 18778), (895, 18817), (899, 18847),

Gene: Seanderson\_25 Start: 16848, Stop: 19319, Start Num: 111

Candidate Starts for Seanderson\_25:

(Start: 111 @16848 has 200 MA's), (125, 16887), (144, 16950), (Start: 155 @16980 has 22 MA's), (162, 17001), (176, 17022), (194, 17052), (243, 17076), (262, 17142), (315, 17340), (321, 17373), (339, 17439), (389, 17694), (393, 17715), (398, 17742), (410, 17781), (432, 17838), (451, 17868), (555, 18030), (564, 18051), (592, 18108), (644, 18228), (659, 18264), (671, 18294), (682, 18330), (707, 18396), (710, 18417), (741, 18558), (773, 18699), (784, 18720), (826, 18855), (855, 19032), (875, 19143), (885, 19209), (888, 19230), (895, 19269), (897, 19284),

Gene: SemperFi\_28 Start: 16964, Stop: 19501, Start Num: 107

Candidate Starts for SemperFi\_28:

(Start: 107 @16964 has 89 MA's), (170, 17141), (172, 17144), (173, 17147), (188, 17177), (249, 17315), (256, 17336), (258, 17345), (268, 17366), (279, 17399), (294, 17459), (299, 17474), (312, 17525), (322, 17573), (325, 17591), (337, 17624), (339, 17636), (340, 17639), (341, 17645), (344, 17666), (345, 17669), (362, 17756), (383, 17855), (393, 17897), (394, 17906), (396, 17915), (408, 17963), (410, 17972), (427, 18038), (440, 18077), (507, 18263), (512, 18278), (525, 18311), (538, 18362), (546, 18383), (555, 18398), (559, 18407), (566, 18422), (606, 18491), (664, 18644), (673, 18665), (718, 18794), (727, 18839), (730, 18851), (737, 18887), (804, 19067), (810, 19076), (845,

19187), (850, 19217), (866, 19301),

Gene: SenorClean\_24 Start: 16026, Stop: 18485, Start Num: 155

Candidate Starts for SenorClean\_24:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (283, 16404), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Serenity\_25 Start: 15579, Stop: 18095, Start Num: 107

Candidate Starts for Serenity\_25:

(Start: 107 @15579 has 89 MA's), (144, 15690), (170, 15756), (172, 15759), (173, 15762), (202, 15810), (256, 15948), (258, 15957), (264, 15966), (299, 16086), (312, 16137), (323, 16194), (327, 16206), (331, 16212), (334, 16227), (339, 16248), (341, 16257), (350, 16305), (383, 16467), (391, 16497), (393, 16509), (402, 16548), (405, 16563), (410, 16584), (424, 16641), (426, 16647), (427, 16650), (436, 16677), (477, 16776), (507, 16875), (512, 16890), (532, 16953), (538, 16974), (546, 16995), (568, 17040), (606, 17103), (607, 17106), (620, 17145), (628, 17172), (644, 17202), (649, 17214), (664, 17256), (689, 17316), (703, 17343), (718, 17406), (730, 17463), (749, 17547), (765, 17613), (804, 17676), (860, 17871), (861, 17874), (866, 17895), (899, 18072), (902, 18081),

Gene: Severus\_24 Start: 13964, Stop: 16519, Start Num: 163

Candidate Starts for Severus\_24:

(Start: 105 @13787 has 8 MA's), (Start: 163 @13964 has 10 MA's), (200, 14039), (203, 14051), (255, 14213), (261, 14234), (265, 14246), (274, 14276), (281, 14309), (292, 14354), (298, 14372), (301, 14387), (302, 14396), (309, 14417), (330, 14522), (339, 14564), (372, 14729), (404, 14891), (411, 14918), (489, 15095), (506, 15140), (528, 15215), (544, 15263), (545, 15266), (557, 15287), (558, 15290), (574, 15335), (615, 15410), (617, 15413), (623, 15434), (632, 15458), (659, 15524), (673, 15554), (685, 15566), (709, 15653), (714, 15668), (726, 15722), (741, 15797), (754, 15875), (757, 15887), (772, 15944), (779, 15956), (782, 15968), (799, 16010), (802, 16022), (807, 16034), (812, 16049), (819, 16070), (823, 16082), (863, 16295), (875, 16355), (883, 16400), (892, 16451), (899, 16499),

Gene: Shaka\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Shaka\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (222, 16200), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (608, 17355), (626, 17409), (647, 17454), (670, 17514), (700, 17574), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (874, 18318), (875, 18321), (883, 18366), (892, 18417), (899, 18465),

Gene: Sham4\_26 Start: 17160, Stop: 19706, Start Num: 112

Candidate Starts for Sham4\_26:

(Start: 112 @17160 has 30 MA's), (Start: 118 @17178 has 2 MA's), (187, 17352), (197, 17361), (223, 17436), (252, 17490), (267, 17544), (271, 17559), (272, 17562), (279, 17580), (295, 17643), (299, 17655), (315, 17718), (329, 17781), (334, 17796), (337, 17805), (341, 17826), (345, 17850), (348, 17865), (367, 17952), (369, 17955), (374, 17970), (378, 17991), (380, 18003), (389, 18069), (404, 18141), (412, 18165), (437, 18246), (441, 18255), (445, 18267), (467, 18309), (492, 18366), (513, 18420), (549, 18528), (567, 18567), (618, 18708), (656, 18804), (661, 18825), (675, 18858), (686, 18891), (687, 18894), (709, 18978), (721, 19023), (722, 19026), (746, 19140), (752, 19173), (791, 19245), (808, 19281), (839, 19353), (850, 19431), (860, 19485), (866, 19509), (889, 19620),

Gene: Shapes\_29 Start: 15937, Stop: 18492, Start Num: 163

Candidate Starts for Shapes\_29:

(Start: 105 @15760 has 8 MA's), (Start: 163 @15937 has 10 MA's), (171, 15958), (201, 16015), (227, 16111), (232, 16120), (265, 16225), (273, 16252), (281, 16288), (301, 16366), (302, 16375), (309, 16396), (315, 16423), (330, 16501), (339, 16543), (372, 16708), (402, 16858), (404, 16870), (489, 17065), (528, 17185), (542, 17230), (544, 17233), (545, 17236), (557, 17257), (558, 17260), (574, 17305), (591, 17341), (608, 17359), (615, 17380), (626, 17413), (674, 17527), (705, 17590), (721, 17668), (726, 17692), (741, 17767), (752, 17833), (757, 17857), (762, 17875), (796, 17971), (802, 17995), (807, 18007), (812, 18022), (819, 18043), (823, 18055), (863, 18268), (871, 18304), (874, 18325), (875, 18328), (892, 18424), (899, 18472),

Gene: ShayRa\_29 Start: 16045, Stop: 18231, Start Num: 179

Candidate Starts for ShayRa\_29:

(Start: 115 @15868 has 1 MA's), (Start: 117 @15877 has 5 MA's), (Start: 179 @16045 has 15 MA's), (269, 16285), (270, 16291), (290, 16360), (306, 16417), (341, 16561), (348, 16603), (358, 16651), (359, 16654), (382, 16765), (385, 16783), (412, 16888), (425, 16936), (484, 17041), (513, 17101), (536, 17155), (555, 17191), (569, 17215), (577, 17224), (608, 17287), (616, 17308), (622, 17323), (629, 17347), (635, 17359), (659, 17413), (667, 17434), (680, 17464), (732, 17635), (734, 17656), (756, 17740), (867, 18043), (892, 18166), (894, 18178),

Gene: SheaKeira\_26 Start: 15769, Stop: 18678, Start Num: 52

Candidate Starts for SheaKeira\_26:

(24, 15580), (42, 15682), (Start: 52 @15769 has 33 MA's), (55, 15781), (86, 15892), (87, 15901), (92, 15925), (94, 15934), (99, 15955), (101, 15964), (114, 15997), (128, 16051), (165, 16165), (190, 16219), (193, 16222), (230, 16348), (256, 16423), (258, 16432), (277, 16483), (282, 16498), (295, 16549), (299, 16561), (307, 16591), (312, 16612), (321, 16657), (322, 16660), (325, 16678), (327, 16681), (334, 16702), (341, 16732), (342, 16744), (351, 16783), (352, 16792), (359, 16825), (361, 16837), (383, 16942), (404, 17035), (405, 17038), (410, 17059), (412, 17068), (414, 17080), (420, 17104), (423, 17113), (424, 17116), (427, 17125), (434, 17143), (436, 17152), (443, 17176), (479, 17257), (489, 17296), (511, 17362), (546, 17470), (560, 17497), (568, 17515), (575, 17536), (585, 17557), (586, 17560), (606, 17578), (607, 17581), (615, 17608), (624, 17635), (640, 17668), (650, 17695), (718, 17881), (727, 17926), (730, 17938), (738, 17977), (749, 18022), (752, 18043), (757, 18067), (762, 18085), (767, 18106), (771, 18124), (800, 18187), (805, 18208), (829, 18280), (831, 18289), (844, 18367), (851, 18403), (864, 18466), (866, 18478), (879, 18553), (894, 18619), (900, 18661),

Gene: Sheen\_27 Start: 17618, Stop: 20998, Start Num: 17

Candidate Starts for Sheen\_27:

(Start: 17 @17618 has 4 MA's), (77, 18005), (91, 18062), (97, 18089), (124, 18170), (127, 18194), (131, 18206), (147, 18257), (182, 18353), (209, 18404), (266, 18587), (268, 18593), (279, 18626), (282, 18638), (307, 18731), (312, 18752), (315, 18764), (350, 18920), (354, 18944), (371, 19007), (383, 19082), (393, 19124), (405, 19178), (410, 19199), (424, 19256), (426, 19262), (427, 19265), (456, 19349), (463, 19364), (477, 19391), (479, 19397), (507, 19490), (511, 19502), (512, 19505), (568, 19655), (574, 19670), (581, 19688), (593, 19712), (599, 19730), (600, 19733), (602, 19739), (633, 19844), (654, 19907), (656, 19910), (676, 19967), (679, 19973), (691, 20021), (705, 20051), (721, 20129), (724, 20141), (725, 20150), (744, 20249), (757, 20318), (762, 20336), (783, 20420), (785, 20432), (790, 20444), (805, 20495), (811, 20516), (824, 20567), (833, 20600), (845, 20681), (851, 20714), (855, 20744), (865, 20786), (871, 20810), (882, 20876), (885, 20891), (886, 20897), (895, 20948),

Gene: SheldonCooper\_26 Start: 16197, Stop: 18797, Start Num: 109

Candidate Starts for SheldonCooper\_26:

(Start: 109 @16197 has 113 MA's), (Start: 155 @16338 has 22 MA's), (Start: 163 @16356 has 10 MA's), (222, 16512), (240, 16563), (258, 16632), (291, 16749), (299, 16776), (315, 16839), (329, 16902), (341, 16947), (348, 16989), (365, 17073), (420, 17280), (457, 17340), (481, 17391), (499, 17436), (530, 17514), (542, 17547), (545, 17553), (626, 17721), (636, 17742), (647, 17766), (670, 17826), (673, 17832), (674, 17835), (700, 17886), (710, 17934), (726, 18000), (757, 18165), (762, 18183), (807, 18309), (859, 18561), (860, 18564), (863, 18573), (874, 18630), (875, 18633), (883, 18678), (892, 18729), (899, 18777),

Gene: ShortQueendom\_23 Start: 16288, Stop: 18759, Start Num: 111

Candidate Starts for ShortQueendom\_23:

(Start: 111 @16288 has 200 MA's), (125, 16327), (144, 16390), (Start: 155 @16420 has 22 MA's), (162, 16441), (176, 16462), (181, 16474), (194, 16492), (262, 16582), (315, 16780), (321, 16813), (339, 16879), (389, 17134), (393, 17155), (398, 17182), (476, 17341), (500, 17377), (555, 17470), (564, 17491), (592, 17548), (627, 17635), (644, 17668), (659, 17704), (671, 17734), (682, 17770), (707, 17836), (710, 17857), (741, 17998), (773, 18139), (784, 18160), (826, 18295), (855, 18472), (875, 18583), (881, 18625), (888, 18670), (895, 18709), (897, 18724),

Gene: Shygu2\_25 Start: 15876, Stop: 18476, Start Num: 109

Candidate Starts for Shygu2\_25:

(Start: 109 @15876 has 113 MA's), (222, 16191), (229, 16218), (246, 16266), (263, 16323), (291, 16428), (295, 16443), (315, 16518), (341, 16626), (344, 16647), (348, 16668), (457, 17019), (481, 17070), (497, 17112), (499, 17115), (542, 17226), (545, 17232), (614, 17364), (626, 17400), (649, 17448), (700, 17565), (726, 17679), (757, 17844), (762, 17862), (802, 17976), (807, 17988), (835, 18078), (847, 18171), (860, 18243), (863, 18252), (875, 18312), (877, 18321), (892, 18408), (899, 18456),

Gene: Sibs6\_26 Start: 16924, Stop: 19404, Start Num: 111

Candidate Starts for Sibs6\_26:

(Start: 111 @16924 has 200 MA's), (125, 16963), (144, 17026), (Start: 155 @17056 has 22 MA's), (176, 17098), (285, 17305), (291, 17323), (315, 17413), (329, 17476), (337, 17500), (339, 17512), (348, 17563), (460, 17947), (526, 18049), (537, 18088), (555, 18103), (560, 18115), (569, 18139), (630, 18268), (671, 18367), (707, 18469), (710, 18490), (721, 18532), (741, 18631), (753, 18694), (777, 18784), (818, 18913), (827, 18946), (875, 19228), (885, 19294), (888, 19315), (895, 19354), (899, 19384),

Gene: SkiPole\_26 Start: 16553, Stop: 19165, Start Num: 111

Candidate Starts for SkiPole\_26:

(Start: 111 @16553 has 200 MA's), (125, 16592), (144, 16655), (145, 16661), (Start: 155 @16685 has 22 MA's), (176, 16727), (202, 16778), (285, 17066), (291, 17084), (315, 17174), (329, 17237), (337, 17261), (339, 17273), (348, 17324), (460, 17708), (526, 17810), (537, 17849), (555, 17864), (560, 17876), (569, 17900), (606, 17975), (630, 18029), (671, 18128), (707, 18230), (710, 18251), (713, 18260), (721, 18293), (733, 18368), (741, 18392), (753, 18455), (784, 18566), (801, 18608), (818, 18674), (827, 18707), (875, 18989), (888, 19076), (895, 19115), (897, 19130),

Gene: Skipitt\_25 Start: 16023, Stop: 18482, Start Num: 155

Candidate Starts for Skipitt\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (542, 17232), (545, 17238), (591, 17334), (606, 17343), (626, 17406), (636, 17427), (649, 17454), (670, 17511), (673, 17517), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: Sknot\_27 Start: 16673, Stop: 19180, Start Num: 107

Candidate Starts for Sknot\_27:

(Start: 107 @16673 has 89 MA's), (144, 16784), (167, 16841), (245, 16997), (256, 17027), (279, 17090), (286, 17123), (288, 17129), (334, 17309), (337, 17318), (341, 17339), (344, 17360), (345, 17363), (348, 17381), (360, 17441), (383, 17549), (393, 17591), (405, 17645), (410, 17666), (426, 17729), (427, 17732), (434, 17750), (440, 17771), (507, 17957), (512, 17972), (517, 17999), (538, 18056), (544, 18071), (546, 18077), (552, 18086), (555, 18092), (568, 18122), (575, 18143), (607, 18188), (608, 18194), (620, 18227), (628, 18254), (658, 18326), (664, 18338), (689, 18398), (703, 18425), (718, 18488), (727, 18533), (730, 18545), (737, 18581), (746, 18617), (752, 18650), (786, 18713), (800, 18737), (846, 18881), (866, 18980), (882, 19067), (902, 19166),

Gene: Slagathor\_25 Start: 16276, Stop: 18747, Start Num: 111

Candidate Starts for Slagathor\_25:

(Start: 111 @16276 has 200 MA's), (125, 16315), (144, 16378), (Start: 155 @16408 has 22 MA's), (162, 16429), (176, 16450), (181, 16462), (194, 16480), (243, 16504), (262, 16570), (315, 16768), (321, 16801), (339, 16867), (389, 17122), (393, 17143), (398, 17170), (476, 17329), (500, 17365), (555, 17458), (564, 17479), (592, 17536), (644, 17656), (659, 17692), (671, 17722), (682, 17758), (707, 17824), (710, 17845), (741, 17986), (773, 18127), (784, 18148), (826, 18283), (855, 18460), (875, 18571), (885, 18637), (888, 18658), (895, 18697), (897, 18712),

Gene: Smairt\_25 Start: 17108, Stop: 19579, Start Num: 111

Candidate Starts for Smairt\_25:

(Start: 111 @17108 has 200 MA's), (125, 17147), (144, 17210), (Start: 155 @17240 has 22 MA's), (162, 17261), (176, 17282), (181, 17294), (194, 17312), (262, 17402), (315, 17600), (321, 17633), (339, 17699), (389, 17954), (393, 17975), (398, 18002), (476, 18161), (500, 18197), (555, 18290), (564, 18311), (592, 18368), (644, 18488), (659, 18524), (671, 18554), (682, 18590), (707, 18656), (710, 18677), (741, 18818), (773, 18959), (784, 18980), (826, 19115), (855, 19292), (875, 19403), (888, 19490), (895, 19529), (899, 19559),

Gene: Smeadley\_22 Start: 14546, Stop: 17623, Start Num: 9

Candidate Starts for Smeadley\_22:

(Start: 9 @14546 has 11 MA's), (15, 14630), (Start: 34 @14798 has 1 MA's), (Start: 37 @14822 has 32 MA's), (73, 14870), (Start: 107 @14990 has 89 MA's), (129, 15062), (189, 15212), (191, 15215), (196, 15221), (252, 15407), (269, 15467), (270, 15473), (289, 15539), (297, 15566), (300, 15581), (314, 15632), (315, 15635), (321, 15668), (329, 15701), (367, 15869), (404, 16052), (412, 16076), (422, 16124), (428, 16145), (429, 16148), (493, 16292), (516, 16349), (531, 16379), (547, 16418), (580, 16490), (601, 16520), (630, 16619), (642, 16649), (660, 16694), (710, 16892), (715, 16913), (719, 16925), (745, 17033), (756, 17096), (765, 17120), (792, 17150), (808, 17183), (830, 17216), (842, 17276), (846, 17303), (866, 17402), (867, 17408), (883, 17498), (886, 17519), (893, 17558), (903, 17606),

Gene: Smeagan\_28 Start: 17115, Stop: 19658, Start Num: 107

Candidate Starts for Smeagan\_28:

(Start: 107 @17115 has 89 MA's), (172, 17295), (173, 17298), (188, 17328), (247, 17466), (249, 17472), (256, 17493), (258, 17502), (264, 17511), (268, 17523), (282, 17568), (286, 17589), (299, 17631), (312, 17682), (321, 17727), (322, 17730), (325, 17748), (337, 17781), (339, 17793), (341, 17802), (344, 17823), (345, 17826), (362, 17913), (383, 18012), (393, 18054), (394, 18063), (396, 18072), (410, 18129), (427, 18195), (440, 18234), (488, 18363), (507, 18420), (529, 18486), (538, 18519), (544, 18534), (546, 18540), (552, 18549), (559, 18564), (568, 18585), (575, 18606), (585, 18627), (586, 18630), (606, 18648), (607, 18651), (623, 18702), (649, 18759), (654, 18777), (664, 18801), (689, 18861), (703, 18888), (718, 18951), (727, 18996), (756, 19134), (804, 19224), (810, 19233), (830, 19257), (845, 19344), (850, 19374), (866, 19458),

Gene: Smeagol\_26 Start: 17697, Stop: 20180, Start Num: 111

Candidate Starts for Smeagol\_26:

(Start: 111 @17697 has 200 MA's), (125, 17736), (144, 17799), (Start: 155 @17829 has 22 MA's), (176, 17871), (285, 18078), (315, 18186), (329, 18249), (337, 18273), (339, 18285), (348, 18336), (460, 18720), (526, 18822), (537, 18861), (560, 18888), (569, 18912), (650, 19116), (654, 19128), (659, 19143), (697, 19260), (712, 19305), (716, 19326), (717, 19329), (757, 19494), (773, 19560), (793, 19602), (818, 19689), (828, 19722), (875, 20004), (888, 20091), (895, 20130), (897, 20145),

Gene: SmellyB\_29 Start: 16735, Stop: 18939, Start Num: 116

Candidate Starts for SmellyB\_29:

(60, 16576), (93, 16690), (Start: 116 @16735 has 41 MA's), (160, 16846), (166, 16852), (212, 16960), (223, 17002), (246, 17068), (274, 17161), (283, 17188), (315, 17311), (321, 17344), (343, 17434), (357, 17503), (412, 17746), (499, 17884), (590, 18004), (680, 18157), (710, 18220), (721, 18262), (745, 18361), (749, 18382), (752, 18403), (756, 18424), (791, 18475), (800, 18487), (805, 18502), (839, 18583), (850, 18661),

Gene: SnapTap\_26 Start: 16547, Stop: 19084, Start Num: 107

Candidate Starts for SnapTap\_26:

(Start: 107 @16547 has 89 MA's), (170, 16724), (172, 16727), (173, 16730), (188, 16760), (249, 16898), (256, 16919), (258, 16928), (268, 16949), (279, 16982), (294, 17042), (299, 17057), (312, 17108), (322, 17156), (325, 17174), (337, 17207), (339, 17219), (340, 17222), (341, 17228), (344, 17249), (345, 17252), (362, 17339), (383, 17438), (393, 17480), (394, 17489), (396, 17498), (408, 17546), (410, 17555), (427, 17621), (440, 17660), (487, 17783), (507, 17846), (512, 17861), (525, 17894), (538, 17945), (546, 17966), (555, 17981), (559, 17990), (566, 18005), (606, 18074), (664, 18227), (718, 18377), (727, 18422), (730, 18434), (737, 18470), (804, 18650), (810, 18659), (845, 18770), (850, 18800), (866, 18884),

Gene: Snape\_26 Start: 17160, Stop: 19706, Start Num: 112

Candidate Starts for Snape\_26:

(Start: 112 @17160 has 30 MA's), (Start: 118 @17178 has 2 MA's), (187, 17352), (197, 17361), (223, 17436), (252, 17490), (267, 17544), (271, 17559), (272, 17562), (279, 17580), (295, 17643), (299, 17655), (315, 17718), (329, 17781), (334, 17796), (337, 17805), (341, 17826), (345, 17850), (348, 17865), (367, 17952), (369, 17955), (374, 17970), (378, 17991), (380, 18003), (389, 18069), (403, 18132), (404, 18141), (412, 18165), (437, 18246), (441, 18255), (445, 18267), (467, 18309), (492, 18366), (513, 18420), (549, 18528), (567, 18567), (618, 18708), (656, 18804), (661, 18825), (675, 18858), (686, 18891), (687, 18894), (709, 18978), (721, 19023), (722, 19026), (746, 19140), (752, 19173), (791, 19245), (808, 19281), (839, 19353), (850, 19431), (860, 19485), (866, 19509), (889, 19620),

Gene: Snazzy\_22 Start: 15797, Stop: 18268, Start Num: 111

Candidate Starts for Snazzy\_22:

(Start: 111 @15797 has 200 MA's), (125, 15836), (144, 15899), (Start: 155 @15929 has 22 MA's), (162, 15950), (176, 15971), (181, 15983), (194, 16001), (262, 16091), (315, 16289), (321, 16322), (339, 16388), (389, 16643), (393, 16664), (398, 16691), (476, 16850), (500, 16886), (555, 16979), (564, 17000), (592, 17057), (644, 17177), (659, 17213), (671, 17243), (682, 17279), (707, 17345), (710, 17366), (741, 17507), (773, 17648), (784, 17669), (826, 17804), (855, 17981), (875, 18092), (888, 18179), (895, 18218),

Gene: Snickers\_27 Start: 15953, Stop: 18979, Start Num: 38

Candidate Starts for Snickers\_27:

(30, 15899), (Start: 38 @15953 has 82 MA's), (55, 16067), (68, 16133), (69, 16136), (73, 16145), (86, 16181), (96, 16232), (124, 16304), (Start: 143 @16376 has 5 MA's), (190, 16496), (193, 16499), (214,



16568), (226, 16613), (258, 16706), (264, 16715), (270, 16733), (279, 16760), (295, 16823), (299, 16835), (308, 16868), (312, 16886), (325, 16952), (327, 16955), (329, 16961), (334, 16976), (337, 16985), (339, 16997), (341, 17006), (355, 17084), (359, 17099), (383, 17216), (384, 17219), (391, 17246), (393, 17258), (405, 17312), (410, 17333), (427, 17399), (440, 17438), (479, 17531), (491, 17579), (507, 17624), (525, 17672), (535, 17714), (538, 17723), (552, 17753), (553, 17756), (559, 17768), (582, 17825), (585, 17831), (606, 17852), (607, 17855), (658, 17993), (664, 18005), (689, 18065), (710, 18125), (718, 18155), (719, 18158), (721, 18167), (741, 18260), (757, 18350), (776, 18416), (780, 18428), (800, 18470), (817, 18533), (836, 18590), (844, 18659), (851, 18695), (867, 18776), (892, 18911),

Gene: SoYo\_27 Start: 15890, Stop: 18916, Start Num: 38

Candidate Starts for SoYo\_27:

(30, 15836), (Start: 38 @15890 has 82 MA's), (55, 16004), (68, 16070), (69, 16073), (73, 16082), (86, 16118), (96, 16169), (124, 16241), (Start: 143 @16313 has 5 MA's), (190, 16433), (193, 16436), (214, 16505), (226, 16550), (258, 16643), (264, 16652), (270, 16670), (279, 16697), (295, 16760), (299, 16772), (308, 16805), (312, 16823), (325, 16889), (327, 16892), (329, 16898), (334, 16913), (337, 16922), (339, 16934), (341, 16943), (355, 17021), (359, 17036), (383, 17153), (384, 17156), (391, 17183), (393, 17195), (405, 17249), (410, 17270), (427, 17336), (440, 17375), (479, 17468), (491, 17516), (507, 17561), (525, 17609), (535, 17651), (538, 17660), (552, 17690), (553, 17693), (559, 17705), (582, 17762), (585, 17768), (606, 17789), (607, 17792), (658, 17930), (664, 17942), (689, 18002), (709, 18059), (741, 18197), (744, 18218), (749, 18242), (757, 18287), (762, 18305), (776, 18353), (780, 18365), (800, 18407), (817, 18470), (836, 18527), (844, 18596), (851, 18632), (867, 18713), (892, 18848),

Gene: SoilDragon\_27 Start: 15667, Stop: 18693, Start Num: 38

Candidate Starts for SoilDragon\_27:

(30, 15613), (Start: 38 @15667 has 82 MA's), (55, 15781), (68, 15847), (69, 15850), (73, 15859), (86, 15895), (96, 15946), (124, 16018), (Start: 143 @16090 has 5 MA's), (190, 16210), (193, 16213), (214, 16282), (226, 16327), (258, 16420), (264, 16429), (279, 16474), (295, 16537), (299, 16549), (308, 16582), (312, 16600), (325, 16666), (327, 16669), (329, 16675), (334, 16690), (337, 16699), (339, 16711), (341, 16720), (359, 16813), (380, 16900), (383, 16930), (384, 16933), (391, 16960), (393, 16972), (405, 17026), (410, 17047), (416, 17077), (427, 17113), (491, 17293), (507, 17338), (525, 17386), (535, 17428), (538, 17437), (552, 17467), (582, 17539), (606, 17566), (607, 17569), (610, 17581), (656, 17698), (658, 17707), (664, 17719), (689, 17779), (710, 17839), (718, 17869), (719, 17872), (721, 17881), (741, 17974), (757, 18064), (776, 18130), (780, 18142), (800, 18184), (817, 18247), (836, 18304), (844, 18373), (851, 18409), (867, 18490), (892, 18625),

Gene: Solon\_24 Start: 16959, Stop: 19430, Start Num: 111

Candidate Starts for Solon\_24:

(Start: 111 @16959 has 200 MA's), (125, 16998), (144, 17061), (Start: 155 @17091 has 22 MA's), (162, 17112), (176, 17133), (181, 17145), (194, 17163), (262, 17253), (315, 17451), (321, 17484), (339, 17550), (389, 17805), (393, 17826), (398, 17853), (476, 18012), (500, 18048), (555, 18141), (564, 18162), (592, 18219), (644, 18339), (659, 18375), (671, 18405), (682, 18441), (707, 18507), (710, 18528), (741, 18669), (773, 18810), (784, 18831), (826, 18966), (855, 19143), (875, 19254), (885, 19320), (888, 19341), (895, 19380), (897, 19395),

Gene: SororFago\_25 Start: 15738, Stop: 18149, Start Num: 141

Candidate Starts for SororFago\_25:

(Start: 141 @15738 has 1 MA's), (Start: 152 @15759 has 5 MA's), (161, 15792), (207, 15894), (220, 15936), (236, 15978), (252, 16029), (278, 16119), (299, 16203), (315, 16266), (321, 16299), (332, 16332), (337, 16353), (341, 16374), (348, 16416), (361, 16479), (392, 16620), (470, 16788), (471, 16794), (482, 16818), (506, 16878), (573, 17052), (693, 17349), (709, 17409), (718, 17442), (721, 17454), (727, 17487), (729, 17496), (739, 17547), (753, 17628), (756, 17640), (765, 17664), (801,

17718), (804, 17730), (843, 17835), (866, 17946), (879, 18021), (894, 18087), (899, 18123),

Gene: Sorpresa\_24 Start: 16328, Stop: 18799, Start Num: 111

Candidate Starts for Sorpresa\_24:

(Start: 111 @16328 has 200 MA's), (125, 16367), (144, 16430), (Start: 155 @16460 has 22 MA's), (162, 16481), (176, 16502), (181, 16514), (194, 16532), (262, 16622), (315, 16820), (321, 16853), (339, 16919), (389, 17174), (393, 17195), (398, 17222), (476, 17381), (500, 17417), (555, 17510), (564, 17531), (592, 17588), (644, 17708), (659, 17744), (671, 17774), (682, 17810), (707, 17876), (710, 17897), (741, 18038), (773, 18179), (784, 18200), (855, 18512), (875, 18623), (881, 18665), (888, 18710), (895, 18749), (897, 18764),

Gene: Soshari\_29 Start: 16062, Stop: 19088, Start Num: 38

Candidate Starts for Soshari\_29:

(30, 16008), (Start: 38 @16062 has 82 MA's), (55, 16176), (68, 16242), (69, 16245), (73, 16254), (86, 16290), (96, 16341), (124, 16413), (Start: 143 @16485 has 5 MA's), (190, 16605), (193, 16608), (214, 16677), (226, 16722), (258, 16815), (264, 16824), (270, 16842), (279, 16869), (295, 16932), (299, 16944), (308, 16977), (312, 16995), (325, 17061), (327, 17064), (329, 17070), (334, 17085), (337, 17094), (339, 17106), (341, 17115), (355, 17193), (359, 17208), (383, 17325), (384, 17328), (391, 17355), (393, 17367), (405, 17421), (410, 17442), (427, 17508), (440, 17547), (479, 17640), (491, 17688), (507, 17733), (525, 17781), (535, 17823), (538, 17832), (552, 17862), (553, 17865), (559, 17877), (582, 17934), (585, 17940), (606, 17961), (607, 17964), (658, 18102), (664, 18114), (689, 18174), (709, 18231), (741, 18369), (744, 18390), (749, 18414), (757, 18459), (762, 18477), (776, 18525), (780, 18537), (800, 18579), (817, 18642), (836, 18699), (844, 18768), (851, 18804), (867, 18885), (892, 19020),

Gene: Soups\_28 Start: 16045, Stop: 18231, Start Num: 179

Candidate Starts for Soups\_28:

(Start: 115 @15868 has 1 MA's), (Start: 117 @15877 has 5 MA's), (Start: 179 @16045 has 15 MA's), (269, 16285), (270, 16291), (290, 16360), (306, 16417), (341, 16561), (348, 16603), (358, 16651), (359, 16654), (382, 16765), (385, 16783), (412, 16888), (425, 16936), (484, 17041), (513, 17101), (536, 17155), (555, 17191), (569, 17215), (577, 17224), (608, 17287), (616, 17308), (622, 17323), (629, 17347), (635, 17359), (659, 17413), (667, 17434), (680, 17464), (732, 17635), (734, 17656), (756, 17740), (867, 18043), (892, 18166), (894, 18178),

Gene: Sparxx\_25 Start: 15883, Stop: 18483, Start Num: 109

Candidate Starts for Sparxx\_25:

(Start: 109 @15883 has 113 MA's), (Start: 155 @16024 has 22 MA's), (Start: 163 @16042 has 10 MA's), (240, 16249), (252, 16288), (258, 16318), (291, 16435), (299, 16462), (315, 16525), (329, 16588), (341, 16633), (348, 16675), (365, 16759), (457, 17026), (481, 17077), (499, 17122), (530, 17200), (545, 17239), (557, 17260), (626, 17407), (636, 17428), (647, 17452), (670, 17512), (673, 17518), (674, 17521), (700, 17572), (710, 17620), (726, 17686), (757, 17851), (762, 17869), (807, 17995), (859, 18247), (860, 18250), (863, 18259), (875, 18319), (892, 18415), (899, 18463),

Gene: Spike509\_27 Start: 16063, Stop: 19089, Start Num: 38

Candidate Starts for Spike509\_27:

(30, 16009), (Start: 38 @16063 has 82 MA's), (55, 16177), (68, 16243), (69, 16246), (73, 16255), (86, 16291), (96, 16342), (124, 16414), (Start: 143 @16486 has 5 MA's), (190, 16606), (193, 16609), (214, 16678), (226, 16723), (258, 16816), (264, 16825), (270, 16843), (279, 16870), (295, 16933), (299, 16945), (308, 16978), (312, 16996), (325, 17062), (327, 17065), (329, 17071), (334, 17086), (337, 17095), (339, 17107), (341, 17116), (355, 17194), (359, 17209), (383, 17326), (384, 17329), (391, 17356), (393, 17368), (405, 17422), (410, 17443), (427, 17509), (440, 17548), (479, 17641), (491, 17689), (507, 17734), (535, 17824), (538, 17833), (552, 17863), (575, 17920), (582, 17935), (606, 17962), (607, 17965), (658, 18103), (664, 18115), (689, 18175), (709, 18232), (741, 18370), (744,

18391), (749, 18415), (757, 18460), (762, 18478), (776, 18526), (780, 18538), (800, 18580), (817, 18643), (836, 18700), (844, 18769), (851, 18805), (867, 18886), (892, 19021),

Gene: SpikeBT\_26 Start: 17264, Stop: 19735, Start Num: 111

Candidate Starts for SpikeBT\_26:

(Start: 111 @17264 has 200 MA's), (125, 17303), (144, 17366), (Start: 155 @17396 has 22 MA's), (162, 17417), (176, 17438), (181, 17450), (194, 17468), (262, 17558), (315, 17756), (321, 17789), (339, 17855), (389, 18110), (393, 18131), (398, 18158), (476, 18317), (500, 18353), (555, 18446), (564, 18467), (592, 18524), (627, 18611), (644, 18644), (659, 18680), (671, 18710), (682, 18746), (707, 18812), (710, 18833), (741, 18974), (773, 19115), (784, 19136), (826, 19271), (855, 19448), (875, 19559), (881, 19601), (888, 19646), (895, 19685), (897, 19700),

Gene: Spino\_25 Start: 16026, Stop: 18485, Start Num: 155

Candidate Starts for Spino\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Spouty\_27 Start: 17620, Stop: 20529, Start Num: 52

Candidate Starts for Spouty\_27:

(Start: 52 @17620 has 33 MA's), (55, 17632), (68, 17692), (130, 17914), (153, 17977), (165, 18019), (190, 18073), (193, 18076), (207, 18115), (260, 18286), (264, 18292), (269, 18307), (294, 18397), (295, 18400), (299, 18412), (311, 18454), (321, 18508), (325, 18529), (341, 18583), (344, 18604), (345, 18607), (348, 18625), (361, 18688), (379, 18754), (383, 18793), (390, 18820), (393, 18835), (399, 18865), (405, 18889), (408, 18901), (410, 18910), (427, 18976), (440, 19015), (468, 19081), (479, 19108), (486, 19135), (523, 19246), (546, 19321), (559, 19345), (568, 19366), (575, 19387), (585, 19408), (586, 19411), (606, 19429), (607, 19432), (615, 19459), (640, 19519), (651, 19549), (664, 19582), (676, 19612), (685, 19624), (718, 19732), (722, 19747), (727, 19777), (738, 19828), (756, 19915), (758, 19924), (771, 19975), (800, 20038), (805, 20059), (816, 20095), (830, 20131), (831, 20137), (844, 20215), (849, 20242), (875, 20371), (879, 20401), (885, 20428), (894, 20467), (900, 20509),

Gene: Squee\_25 Start: 17091, Stop: 19706, Start Num: 111

Candidate Starts for Squee\_25:

(Start: 111 @17091 has 200 MA's), (125, 17130), (144, 17193), (145, 17199), (Start: 155 @17223 has 22 MA's), (250, 17331), (299, 17502), (314, 17562), (315, 17565), (342, 17688), (348, 17718), (361, 17781), (412, 18000), (437, 18072), (459, 18120), (482, 18165), (562, 18390), (565, 18399), (579, 18435), (598, 18477), (671, 18681), (708, 18795), (710, 18804), (715, 18825), (721, 18846), (741, 18945), (750, 18987), (751, 18990), (788, 19119), (815, 19203), (827, 19248), (875, 19530), (885, 19596), (888, 19617), (895, 19656), (897, 19671),

Gene: Stagni\_27 Start: 15981, Stop: 19007, Start Num: 38

Candidate Starts for Stagni\_27:

(30, 15927), (Start: 38 @15981 has 82 MA's), (55, 16095), (68, 16161), (69, 16164), (73, 16173), (86, 16209), (96, 16260), (124, 16332), (Start: 143 @16404 has 5 MA's), (190, 16524), (193, 16527), (214, 16596), (226, 16641), (258, 16734), (264, 16743), (270, 16761), (279, 16788), (295, 16851), (299, 16863), (308, 16896), (312, 16914), (325, 16980), (327, 16983), (329, 16989), (334, 17004), (337, 17013), (339, 17025), (341, 17034), (359, 17127), (383, 17244), (384, 17247), (391, 17274), (393, 17286), (405, 17340), (410, 17361), (427, 17427), (436, 17454), (479, 17559), (491, 17607), (507, 17652), (525, 17700), (535, 17742), (538, 17751), (552, 17781), (553, 17784), (559, 17796), (582,

17853), (585, 17859), (606, 17880), (607, 17883), (658, 18021), (664, 18033), (689, 18093), (710, 18153), (718, 18183), (719, 18186), (721, 18195), (741, 18288), (757, 18378), (776, 18444), (780, 18456), (800, 18498), (817, 18561), (836, 18618), (844, 18687), (851, 18723), (867, 18804), (892, 18939),

Gene: StarStuff\_29 Start: 16508, Stop: 19021, Start Num: 107

Candidate Starts for StarStuff\_29:

(Start: 107 @16508 has 89 MA's), (172, 16688), (173, 16691), (279, 16937), (294, 16997), (299, 17012), (307, 17042), (308, 17045), (325, 17129), (334, 17153), (340, 17177), (344, 17204), (345, 17207), (383, 17393), (390, 17420), (393, 17435), (405, 17489), (410, 17510), (427, 17576), (434, 17594), (436, 17603), (477, 17702), (486, 17735), (488, 17744), (507, 17801), (512, 17816), (546, 17921), (607, 18032), (610, 18044), (612, 18050), (623, 18083), (673, 18203), (718, 18332), (722, 18347), (727, 18377), (730, 18389), (737, 18425), (765, 18539), (776, 18551), (801, 18593), (861, 18800), (865, 18818), (866, 18821), (902, 19007),

Gene: Stasia\_26 Start: 16324, Stop: 18924, Start Num: 109

Candidate Starts for Stasia\_26:

(Start: 109 @16324 has 113 MA's), (Start: 155 @16465 has 22 MA's), (252, 16729), (258, 16759), (269, 16789), (274, 16804), (285, 16858), (291, 16876), (299, 16903), (315, 16966), (341, 17074), (471, 17494), (481, 17518), (499, 17563), (504, 17572), (626, 17848), (674, 17962), (700, 18013), (710, 18061), (719, 18094), (726, 18127), (729, 18145), (757, 18292), (762, 18310), (807, 18436), (835, 18526), (847, 18619), (860, 18691), (863, 18700), (868, 18724), (875, 18760), (877, 18769), (883, 18805), (892, 18856), (899, 18904),

Gene: Steamy\_27 Start: 17182, Stop: 20196, Start Num: 27

Candidate Starts for Steamy\_27:

(19, 17137), (Start: 27 @17182 has 5 MA's), (47, 17305), (Start: 52 @17359 has 33 MA's), (53, 17362), (55, 17371), (89, 17506), (94, 17527), (Start: 118 @17602 has 2 MA's), (138, 17674), (153, 17716), (190, 17812), (193, 17815), (230, 17941), (260, 18028), (268, 18046), (269, 18049), (294, 18139), (295, 18142), (299, 18154), (307, 18184), (312, 18205), (327, 18274), (341, 18325), (344, 18346), (360, 18427), (379, 18496), (383, 18535), (393, 18577), (396, 18595), (405, 18631), (410, 18652), (427, 18718), (430, 18727), (434, 18736), (436, 18745), (453, 18790), (465, 18820), (483, 18868), (507, 18943), (525, 18991), (546, 19063), (568, 19108), (574, 19123), (582, 19144), (606, 19171), (613, 19195), (617, 19204), (664, 19324), (689, 19384), (702, 19411), (718, 19474), (727, 19519), (749, 19615), (760, 19669), (786, 19720), (797, 19744), (800, 19753), (826, 19816), (846, 19906), (847, 19909), (866, 19993), (894, 20134),

Gene: StepMih\_27 Start: 15972, Stop: 18998, Start Num: 38

Candidate Starts for StepMih\_27:

(30, 15918), (Start: 38 @15972 has 82 MA's), (55, 16086), (68, 16152), (69, 16155), (73, 16164), (86, 16200), (96, 16251), (124, 16323), (Start: 143 @16395 has 5 MA's), (190, 16515), (193, 16518), (214, 16587), (226, 16632), (258, 16725), (264, 16734), (270, 16752), (279, 16779), (295, 16842), (299, 16854), (308, 16887), (312, 16905), (325, 16971), (327, 16974), (329, 16980), (334, 16995), (337, 17004), (339, 17016), (341, 17025), (359, 17118), (383, 17235), (384, 17238), (391, 17265), (393, 17277), (405, 17331), (410, 17352), (427, 17418), (436, 17445), (479, 17550), (491, 17598), (507, 17643), (525, 17691), (535, 17733), (538, 17742), (552, 17772), (553, 17775), (559, 17787), (582, 17844), (585, 17850), (606, 17871), (607, 17874), (658, 18012), (664, 18024), (689, 18084), (710, 18144), (718, 18174), (719, 18177), (721, 18186), (741, 18279), (757, 18369), (776, 18435), (780, 18447), (800, 18489), (817, 18552), (836, 18609), (844, 18678), (851, 18714), (867, 18795), (892, 18930),

Gene: Stephig9\_22 Start: 14527, Stop: 17604, Start Num: 9

Candidate Starts for Stephig9\_22:

(Start: 9 @14527 has 11 MA's), (15, 14611), (Start: 34 @14779 has 1 MA's), (Start: 37 @14803 has 32 MA's), (73, 14851), (Start: 107 @14971 has 89 MA's), (129, 15043), (189, 15193), (191, 15196), (196, 15202), (252, 15388), (269, 15448), (270, 15454), (289, 15520), (297, 15547), (300, 15562), (314, 15613), (315, 15616), (321, 15649), (329, 15682), (367, 15850), (404, 16033), (412, 16057), (422, 16105), (428, 16126), (429, 16129), (493, 16273), (516, 16330), (531, 16360), (547, 16399), (580, 16471), (601, 16501), (630, 16600), (642, 16630), (660, 16675), (672, 16708), (710, 16873), (715, 16894), (719, 16906), (734, 16987), (745, 17014), (756, 17077), (765, 17101), (792, 17131), (808, 17164), (830, 17197), (842, 17257), (846, 17284), (866, 17383), (867, 17389), (883, 17479), (886, 17500), (893, 17539), (903, 17587),

Gene: StewieG\_23 Start: 16171, Stop: 18642, Start Num: 111

Candidate Starts for StewieG\_23:

(Start: 111 @16171 has 200 MA's), (125, 16210), (144, 16273), (Start: 155 @16303 has 22 MA's), (162, 16324), (176, 16345), (194, 16375), (243, 16399), (262, 16465), (315, 16663), (321, 16696), (339, 16762), (389, 17017), (393, 17038), (398, 17065), (476, 17224), (500, 17260), (555, 17353), (564, 17374), (592, 17431), (644, 17551), (659, 17587), (671, 17617), (682, 17653), (707, 17719), (710, 17740), (741, 17881), (773, 18022), (784, 18043), (826, 18178), (855, 18355), (875, 18466), (885, 18532), (888, 18553), (895, 18592), (897, 18607),

Gene: Stink\_26 Start: 16165, Stop: 18765, Start Num: 109

Candidate Starts for Stink\_26:

(Start: 109 @16165 has 113 MA's), (Start: 174 @16348 has 1 MA's), (229, 16507), (246, 16555), (291, 16717), (296, 16735), (315, 16807), (341, 16915), (357, 16999), (420, 17248), (471, 17335), (481, 17359), (499, 17404), (542, 17515), (545, 17521), (614, 17653), (626, 17689), (636, 17710), (649, 17737), (670, 17794), (700, 17854), (726, 17968), (757, 18133), (762, 18151), (786, 18220), (807, 18277), (848, 18466), (860, 18532), (863, 18541), (875, 18601), (877, 18610), (883, 18646), (886, 18664), (892, 18697), (899, 18745),

Gene: StrongArm\_23 Start: 17348, Stop: 19819, Start Num: 111

Candidate Starts for StrongArm\_23:

(Start: 111 @17348 has 200 MA's), (125, 17387), (144, 17450), (Start: 155 @17480 has 22 MA's), (162, 17501), (176, 17522), (181, 17534), (194, 17552), (243, 17576), (250, 17597), (262, 17642), (315, 17840), (321, 17873), (339, 17939), (389, 18194), (393, 18215), (398, 18242), (476, 18401), (500, 18437), (555, 18530), (564, 18551), (592, 18608), (644, 18728), (659, 18764), (671, 18794), (682, 18830), (707, 18896), (710, 18917), (741, 19058), (773, 19199), (784, 19220), (826, 19355), (855, 19532), (875, 19643), (888, 19730), (895, 19769), (899, 19799),

Gene: Strosahl\_28 Start: 15884, Stop: 18073, Start Num: 179

Candidate Starts for Strosahl\_28:

(Start: 115 @15707 has 1 MA's), (Start: 117 @15716 has 5 MA's), (Start: 179 @15884 has 15 MA's), (269, 16127), (270, 16133), (290, 16202), (306, 16259), (341, 16403), (348, 16445), (358, 16493), (359, 16496), (382, 16607), (385, 16625), (412, 16730), (425, 16778), (484, 16883), (513, 16943), (536, 16997), (555, 17033), (569, 17057), (577, 17066), (608, 17129), (616, 17150), (622, 17165), (629, 17189), (635, 17201), (659, 17255), (667, 17276), (680, 17306), (732, 17477), (734, 17498), (756, 17582), (867, 17885), (892, 18008), (894, 18020),

Gene: Sumter\_23 Start: 15910, Stop: 18390, Start Num: 111

Candidate Starts for Sumter\_23:

(Start: 111 @15910 has 200 MA's), (125, 15949), (144, 16012), (Start: 155 @16042 has 22 MA's), (176, 16084), (285, 16291), (291, 16309), (315, 16399), (329, 16462), (337, 16486), (339, 16498), (348, 16549), (460, 16933), (526, 17035), (537, 17074), (560, 17101), (569, 17125), (671, 17353), (707, 17455), (710, 17476), (714, 17488), (721, 17518), (741, 17617), (753, 17680), (818, 17899), (827, 17932), (875, 18214), (888, 18301), (895, 18340), (897, 18355),

Gene: Sunhee\_24 Start: 15812, Stop: 18205, Start Num: 152

Candidate Starts for Sunhee\_24:

(Start: 143 @15794 has 5 MA's), (Start: 152 @15812 has 5 MA's), (161, 15845), (207, 15947), (220, 15989), (240, 16043), (274, 16157), (285, 16211), (299, 16256), (315, 16319), (321, 16352), (344, 16448), (392, 16673), (464, 16832), (482, 16871), (485, 16886), (500, 16925), (544, 17051), (573, 17111), (644, 17267), (668, 17333), (677, 17357), (693, 17408), (709, 17468), (718, 17501), (727, 17546), (729, 17555), (741, 17612), (753, 17687), (756, 17699), (765, 17723), (801, 17777), (806, 17795), (851, 17936), (866, 18005), (894, 18146),

Gene: Sunshine924\_23 Start: 15894, Stop: 18374, Start Num: 111

Candidate Starts for Sunshine924\_23:

(Start: 111 @15894 has 200 MA's), (125, 15933), (144, 15996), (Start: 155 @16026 has 22 MA's), (176, 16068), (285, 16275), (291, 16293), (315, 16383), (329, 16446), (337, 16470), (339, 16482), (348, 16533), (460, 16917), (526, 17019), (537, 17058), (560, 17085), (569, 17109), (630, 17238), (671, 17337), (707, 17439), (710, 17460), (714, 17472), (721, 17502), (741, 17601), (753, 17664), (818, 17883), (827, 17916), (875, 18198), (888, 18285), (895, 18324), (897, 18339),

Gene: SuperAwesome\_29 Start: 16728, Stop: 18932, Start Num: 116

Candidate Starts for SuperAwesome\_29:

(60, 16569), (93, 16683), (Start: 116 @16728 has 41 MA's), (160, 16839), (166, 16845), (212, 16953), (223, 16995), (246, 17061), (274, 17154), (283, 17181), (315, 17304), (321, 17337), (343, 17427), (357, 17496), (412, 17739), (499, 17877), (590, 17997), (680, 18150), (710, 18213), (721, 18255), (745, 18354), (749, 18375), (752, 18396), (756, 18417), (791, 18468), (800, 18480), (805, 18495), (839, 18576), (850, 18654),

Gene: SuperCallie99\_29 Start: 16727, Stop: 18931, Start Num: 116

Candidate Starts for SuperCallie99\_29:

(60, 16568), (93, 16682), (Start: 116 @16727 has 41 MA's), (160, 16838), (166, 16844), (212, 16952), (223, 16994), (263, 17117), (274, 17153), (283, 17180), (315, 17303), (321, 17336), (343, 17426), (357, 17495), (412, 17738), (499, 17876), (590, 17996), (680, 18149), (710, 18212), (721, 18254), (745, 18353), (749, 18374), (752, 18395), (756, 18416), (791, 18467), (800, 18479), (805, 18494), (839, 18575), (850, 18653),

Gene: Superchunk\_25 Start: 15270, Stop: 17795, Start Num: 103

Candidate Starts for Superchunk\_25:

(Start: 103 @15270 has 4 MA's), (110, 15288), (144, 15393), (170, 15459), (172, 15462), (173, 15465), (237, 15585), (264, 15666), (279, 15711), (299, 15786), (311, 15828), (321, 15882), (325, 15903), (337, 15936), (341, 15957), (344, 15978), (345, 15981), (383, 16167), (390, 16194), (393, 16209), (405, 16263), (410, 16284), (427, 16350), (507, 16575), (512, 16590), (517, 16617), (523, 16620), (546, 16695), (559, 16719), (560, 16722), (568, 16740), (606, 16803), (607, 16806), (620, 16845), (623, 16857), (658, 16944), (664, 16956), (689, 17016), (690, 17019), (703, 17043), (709, 17073), (718, 17106), (749, 17247), (765, 17313), (804, 17376), (861, 17574), (866, 17595), (879, 17670), (889, 17706), (901, 17781),

Gene: SweetiePie\_26 Start: 16547, Stop: 19084, Start Num: 107

Candidate Starts for SweetiePie\_26:

(Start: 107 @16547 has 89 MA's), (170, 16724), (172, 16727), (173, 16730), (188, 16760), (249, 16898), (256, 16919), (258, 16928), (268, 16949), (279, 16982), (294, 17042), (299, 17057), (312, 17108), (322, 17156), (325, 17174), (337, 17207), (339, 17219), (340, 17222), (341, 17228), (344, 17249), (345, 17252), (362, 17339), (383, 17438), (393, 17480), (394, 17489), (396, 17498), (408, 17546), (410, 17555), (427, 17621), (440, 17660), (507, 17846), (512, 17861), (525, 17894), (538, 17945), (546, 17966), (555, 17981), (559, 17990), (566, 18005), (606, 18074), (664, 18227), (673,

18248), (718, 18377), (727, 18422), (730, 18434), (737, 18470), (804, 18650), (810, 18659), (845, 18770), (850, 18800), (866, 18884),

Gene: SwirlSquare\_28 Start: 15461, Stop: 17965, Start Num: 110

Candidate Starts for SwirlSquare\_28:

(Start: 103 @15443 has 4 MA's), (110, 15461), (144, 15566), (172, 15635), (173, 15638), (256, 15821), (279, 15884), (286, 15917), (299, 15959), (325, 16076), (337, 16109), (340, 16124), (341, 16130), (344, 16151), (345, 16154), (383, 16340), (390, 16367), (393, 16382), (405, 16436), (410, 16457), (427, 16523), (507, 16748), (512, 16763), (525, 16796), (542, 16859), (546, 16868), (559, 16892), (560, 16895), (568, 16913), (582, 16949), (606, 16976), (607, 16979), (620, 17018), (623, 17030), (624, 17033), (658, 17117), (689, 17189), (703, 17216), (709, 17246), (718, 17279), (737, 17372), (765, 17486), (804, 17549), (861, 17747), (866, 17768), (879, 17843),

Gene: Swirley\_22 Start: 15214, Stop: 18558, Start Num: 1

Candidate Starts for Swirley\_22:

(Start: 1 @15214 has 30 MA's), (Start: 34 @15652 has 1 MA's), (120, 15964), (Start: 141 @16042 has 1 MA's), (154, 16072), (173, 16129), (211, 16213), (227, 16276), (229, 16282), (269, 16402), (294, 16492), (295, 16495), (315, 16570), (324, 16615), (329, 16633), (333, 16645), (341, 16678), (344, 16699), (384, 16891), (417, 17029), (429, 17077), (459, 17155), (461, 17158), (509, 17254), (516, 17281), (532, 17317), (535, 17329), (563, 17386), (639, 17578), (652, 17608), (660, 17632), (664, 17644), (683, 17707), (710, 17830), (715, 17851), (721, 17872), (736, 17950), (745, 17971), (752, 18013), (756, 18034), (808, 18121), (829, 18151), (842, 18214), (845, 18232), (859, 18313), (863, 18325), (865, 18337), (867, 18346), (878, 18400), (891, 18484), (896, 18523),

Gene: SwissCheese\_24 Start: 16366, Stop: 18837, Start Num: 111

Candidate Starts for SwissCheese\_24:

(Start: 111 @16366 has 200 MA's), (125, 16405), (144, 16468), (Start: 155 @16498 has 22 MA's), (162, 16519), (176, 16540), (181, 16552), (194, 16570), (262, 16660), (315, 16858), (321, 16891), (339, 16957), (389, 17212), (393, 17233), (398, 17260), (476, 17419), (500, 17455), (555, 17548), (564, 17569), (592, 17626), (644, 17746), (659, 17782), (671, 17812), (682, 17848), (707, 17914), (710, 17935), (741, 18076), (773, 18217), (784, 18238), (826, 18373), (855, 18550), (875, 18661), (881, 18703), (888, 18748), (895, 18787),

Gene: Switzer\_25 Start: 16505, Stop: 18973, Start Num: 111

Candidate Starts for Switzer\_25:

(Start: 111 @16505 has 200 MA's), (Start: 117 @16520 has 5 MA's), (Start: 155 @16634 has 22 MA's), (162, 16655), (176, 16676), (194, 16706), (243, 16730), (250, 16751), (262, 16796), (315, 16994), (321, 17027), (339, 17093), (389, 17348), (393, 17369), (398, 17396), (476, 17555), (500, 17591), (555, 17684), (564, 17705), (569, 17720), (579, 17741), (580, 17744), (615, 17813), (627, 17849), (644, 17882), (659, 17918), (671, 17948), (682, 17984), (707, 18050), (710, 18071), (721, 18113), (741, 18212), (773, 18353), (784, 18374), (826, 18509), (855, 18686), (875, 18797), (888, 18884), (895, 18923), (899, 18953),

Gene: Switzerland\_28 Start: 16038, Stop: 18224, Start Num: 179

Candidate Starts for Switzerland\_28:

(Start: 115 @15861 has 1 MA's), (Start: 117 @15870 has 5 MA's), (Start: 179 @16038 has 15 MA's), (269, 16278), (270, 16284), (290, 16353), (306, 16410), (341, 16554), (348, 16596), (358, 16644), (359, 16647), (382, 16758), (385, 16776), (412, 16881), (425, 16929), (484, 17034), (513, 17094), (536, 17148), (555, 17184), (569, 17208), (577, 17217), (608, 17280), (616, 17301), (622, 17316), (629, 17340), (635, 17352), (659, 17406), (667, 17427), (680, 17457), (732, 17628), (734, 17649), (756, 17733), (867, 18036), (892, 18159), (894, 18171),

Gene: Swole\_26 Start: 16832, Stop: 19303, Start Num: 111

Candidate Starts for Swole\_26:

(Start: 111 @16832 has 200 MA's), (125, 16871), (144, 16934), (Start: 155 @16964 has 22 MA's), (162, 16985), (176, 17006), (181, 17018), (194, 17036), (262, 17126), (315, 17324), (321, 17357), (339, 17423), (389, 17678), (393, 17699), (398, 17726), (476, 17885), (500, 17921), (555, 18014), (564, 18035), (592, 18092), (644, 18212), (659, 18248), (671, 18278), (682, 18314), (707, 18380), (710, 18401), (741, 18542), (773, 18683), (784, 18704), (826, 18839), (855, 19016), (875, 19127), (885, 19193), (888, 19214), (895, 19253), (897, 19268),

Gene: SydNat\_22 Start: 15349, Stop: 18762, Start Num: 1

Candidate Starts for SydNat\_22:

(Start: 1 @15349 has 30 MA's), (3, 15409), (12, 15562), (14, 15601), (Start: 34 @15787 has 1 MA's), (73, 16015), (78, 16027), (83, 16039), (120, 16171), (Start: 141 @16249 has 1 MA's), (154, 16279), (173, 16336), (227, 16483), (229, 16489), (233, 16495), (270, 16621), (274, 16633), (315, 16783), (322, 16819), (329, 16849), (334, 16864), (341, 16894), (342, 16906), (347, 16930), (361, 16999), (379, 17065), (412, 17221), (428, 17290), (429, 17293), (441, 17320), (449, 17344), (514, 17482), (522, 17503), (540, 17548), (563, 17590), (639, 17782), (652, 17812), (660, 17836), (664, 17848), (672, 17869), (683, 17911), (705, 17998), (710, 18034), (715, 18055), (721, 18076), (736, 18154), (745, 18175), (749, 18196), (752, 18217), (756, 18238), (765, 18262), (808, 18325), (842, 18418), (845, 18436), (859, 18517), (863, 18529), (865, 18541), (867, 18550), (878, 18604), (891, 18688), (892, 18697),

Gene: TNguyen7\_25 Start: 15465, Stop: 18500, Start Num: 37

Candidate Starts for TNguyen7\_25:

(Start: 37 @15465 has 32 MA's), (66, 15639), (69, 15651), (81, 15684), (Start: 143 @15894 has 5 MA's), (190, 16014), (193, 16017), (258, 16221), (268, 16242), (277, 16272), (279, 16275), (295, 16338), (299, 16350), (308, 16383), (312, 16401), (327, 16470), (329, 16476), (334, 16491), (337, 16500), (339, 16512), (341, 16521), (359, 16614), (383, 16731), (384, 16734), (390, 16758), (391, 16761), (393, 16773), (405, 16827), (410, 16848), (414, 16869), (427, 16914), (436, 16941), (440, 16953), (491, 17094), (507, 17139), (512, 17154), (535, 17229), (538, 17238), (552, 17268), (559, 17283), (560, 17286), (568, 17304), (575, 17325), (578, 17328), (606, 17367), (607, 17370), (637, 17454), (664, 17520), (673, 17541), (689, 17580), (706, 17619), (710, 17640), (718, 17670), (719, 17673), (721, 17682), (726, 17706), (741, 17775), (744, 17796), (757, 17865), (762, 17883), (776, 17931), (780, 17943), (800, 17985), (803, 17997), (816, 18045), (851, 18216), (855, 18246), (863, 18276), (867, 18297), (892, 18432), (899, 18480),

Gene: Taquarus\_25 Start: 15888, Stop: 18488, Start Num: 109

Candidate Starts for Taquarus\_25:

(Start: 109 @15888 has 113 MA's), (Start: 155 @16029 has 22 MA's), (Start: 163 @16047 has 10 MA's), (240, 16254), (252, 16293), (258, 16323), (291, 16440), (299, 16467), (315, 16530), (329, 16593), (341, 16638), (348, 16680), (365, 16764), (457, 17031), (481, 17082), (499, 17127), (530, 17205), (545, 17244), (626, 17412), (636, 17433), (647, 17457), (673, 17523), (700, 17577), (710, 17625), (726, 17691), (757, 17856), (762, 17874), (807, 18000), (859, 18252), (860, 18255), (863, 18264), (875, 18324), (892, 18420), (899, 18468),

Gene: Target\_26 Start: 17225, Stop: 19837, Start Num: 111

Candidate Starts for Target\_26:

(106, 17213), (Start: 111 @17225 has 200 MA's), (125, 17264), (144, 17327), (145, 17333), (Start: 155 @17357 has 22 MA's), (176, 17399), (202, 17450), (285, 17738), (291, 17756), (315, 17846), (329, 17909), (337, 17933), (339, 17945), (348, 17996), (460, 18380), (526, 18482), (537, 18521), (555, 18536), (560, 18548), (569, 18572), (671, 18800), (707, 18902), (710, 18923), (721, 18965), (741, 19064), (753, 19127), (818, 19346), (827, 19379), (875, 19661), (888, 19748), (895, 19787),

Gene: TarsusIV\_26 Start: 16638, Stop: 19166, Start Num: 107



Candidate Starts for TarsusIV\_26:

(Start: 107 @16638 has 89 MA's), (122, 16677), (125, 16683), (151, 16764), (Start: 155 @16779 has 22 MA's), (172, 16818), (202, 16863), (249, 16989), (256, 17010), (258, 17019), (268, 17040), (279, 17073), (299, 17148), (309, 17187), (311, 17190), (312, 17199), (316, 17220), (320, 17235), (322, 17247), (325, 17265), (337, 17298), (341, 17319), (344, 17340), (345, 17343), (383, 17529), (393, 17571), (394, 17580), (405, 17625), (410, 17646), (427, 17712), (440, 17751), (479, 17844), (507, 17937), (511, 17949), (559, 18081), (574, 18117), (585, 18144), (606, 18165), (607, 18168), (664, 18318), (673, 18339), (718, 18468), (722, 18483), (725, 18501), (737, 18561), (749, 18609), (795, 18714), (810, 18747), (830, 18771), (850, 18888), (866, 18966), (895, 19113),

Gene: Tarynearal\_21 Start: 15242, Stop: 18580, Start Num: 1

Candidate Starts for Tarynearal\_21:

(Start: 1 @15242 has 30 MA's), (Start: 34 @15680 has 1 MA's), (120, 15992), (Start: 141 @16070 has 1 MA's), (154, 16100), (173, 16157), (211, 16241), (227, 16304), (229, 16310), (269, 16430), (294, 16520), (295, 16523), (315, 16598), (324, 16643), (329, 16661), (341, 16706), (344, 16727), (384, 16919), (417, 17057), (429, 17105), (459, 17183), (516, 17309), (522, 17321), (532, 17345), (563, 17408), (639, 17600), (652, 17630), (660, 17654), (664, 17666), (683, 17729), (710, 17852), (715, 17873), (721, 17894), (736, 17972), (745, 17993), (752, 18035), (756, 18056), (808, 18143), (829, 18173), (842, 18236), (845, 18254), (859, 18335), (863, 18347), (865, 18359), (867, 18368), (878, 18422), (891, 18506), (896, 18545),

Gene: Tasp14\_25 Start: 16593, Stop: 19064, Start Num: 111

Candidate Starts for Tasp14\_25:

(Start: 111 @16593 has 200 MA's), (125, 16632), (144, 16695), (Start: 155 @16725 has 22 MA's), (162, 16746), (176, 16767), (194, 16797), (243, 16821), (262, 16887), (315, 17085), (321, 17118), (339, 17184), (389, 17439), (393, 17460), (398, 17487), (476, 17646), (500, 17682), (555, 17775), (564, 17796), (592, 17853), (644, 17973), (659, 18009), (671, 18039), (682, 18075), (707, 18141), (710, 18162), (741, 18303), (773, 18444), (784, 18465), (826, 18600), (855, 18777), (875, 18888), (885, 18954), (888, 18975), (895, 19014), (899, 19044),

Gene: Taurus\_27 Start: 15978, Stop: 19004, Start Num: 38

Candidate Starts for Taurus\_27:

(30, 15924), (Start: 38 @15978 has 82 MA's), (55, 16092), (68, 16158), (69, 16161), (73, 16170), (86, 16206), (96, 16257), (124, 16329), (Start: 143 @16401 has 5 MA's), (190, 16521), (193, 16524), (214, 16593), (226, 16638), (258, 16731), (264, 16740), (270, 16758), (279, 16785), (295, 16848), (299, 16860), (308, 16893), (312, 16911), (325, 16977), (327, 16980), (329, 16986), (334, 17001), (337, 17010), (339, 17022), (341, 17031), (355, 17109), (359, 17124), (383, 17241), (384, 17244), (391, 17271), (393, 17283), (405, 17337), (410, 17358), (427, 17424), (440, 17463), (479, 17556), (491, 17604), (507, 17649), (525, 17697), (535, 17739), (538, 17748), (552, 17778), (553, 17781), (559, 17793), (582, 17850), (585, 17856), (606, 17877), (607, 17880), (658, 18018), (664, 18030), (689, 18090), (709, 18147), (741, 18285), (744, 18306), (749, 18330), (757, 18375), (762, 18393), (776, 18441), (780, 18453), (800, 18495), (817, 18558), (836, 18615), (844, 18684), (851, 18720), (867, 18801), (892, 18936),

Gene: Temprado\_30 Start: 16733, Stop: 18937, Start Num: 116

Candidate Starts for Temprado\_30:

(60, 16574), (93, 16688), (Start: 116 @16733 has 41 MA's), (160, 16844), (223, 17000), (270, 17147), (274, 17159), (315, 17309), (321, 17342), (343, 17432), (357, 17501), (412, 17744), (499, 17882), (590, 18002), (680, 18155), (710, 18218), (721, 18260), (745, 18359), (749, 18380), (752, 18401), (756, 18422), (791, 18473), (800, 18485), (805, 18500), (839, 18581), (850, 18659),

Gene: Teodoridan\_22 Start: 15736, Stop: 18207, Start Num: 111

Candidate Starts for Teodoridan\_22:

(Start: 111 @15736 has 200 MA's), (125, 15775), (144, 15838), (Start: 155 @15868 has 22 MA's), (162, 15889), (176, 15910), (181, 15922), (194, 15940), (262, 16030), (315, 16228), (321, 16261), (339, 16327), (389, 16582), (393, 16603), (398, 16630), (476, 16789), (500, 16825), (555, 16918), (564, 16939), (592, 16996), (644, 17116), (659, 17152), (671, 17182), (682, 17218), (707, 17284), (710, 17305), (741, 17446), (773, 17587), (784, 17608), (826, 17743), (855, 17920), (875, 18031), (888, 18118), (895, 18157), (897, 18172),

Gene: Texage\_25 Start: 16044, Stop: 19082, Start Num: 37

Candidate Starts for Texage\_25:

(Start: 37 @16044 has 32 MA's), (66, 16218), (69, 16230), (81, 16263), (Start: 143 @16470 has 5 MA's), (Start: 152 @16491 has 5 MA's), (190, 16590), (193, 16593), (258, 16803), (268, 16824), (279, 16857), (295, 16920), (299, 16932), (308, 16965), (312, 16983), (316, 17004), (327, 17052), (329, 17058), (334, 17073), (337, 17082), (339, 17094), (341, 17103), (359, 17196), (383, 17313), (384, 17316), (391, 17343), (393, 17355), (405, 17409), (410, 17430), (427, 17496), (440, 17535), (491, 17676), (507, 17721), (535, 17811), (538, 17820), (552, 17850), (575, 17907), (582, 17922), (606, 17949), (607, 17952), (612, 17970), (656, 18081), (689, 18162), (709, 18219), (720, 18261), (741, 18357), (744, 18378), (749, 18402), (757, 18447), (762, 18465), (776, 18513), (780, 18525), (800, 18567), (803, 18579), (816, 18627), (851, 18798), (863, 18858), (865, 18870), (872, 18897), (875, 18918), (892, 19014), (899, 19062),

Gene: Thanksgivukkah\_25 Start: 15889, Stop: 18489, Start Num: 109

Candidate Starts for Thanksgivukkah\_25:

(Start: 109 @15889 has 113 MA's), (Start: 155 @16030 has 22 MA's), (Start: 163 @16048 has 10 MA's), (240, 16255), (252, 16294), (258, 16324), (291, 16441), (299, 16468), (315, 16531), (329, 16594), (341, 16639), (348, 16681), (365, 16765), (457, 17032), (481, 17083), (499, 17128), (530, 17206), (542, 17239), (545, 17245), (557, 17266), (626, 17413), (636, 17434), (647, 17458), (673, 17524), (700, 17578), (710, 17626), (726, 17692), (757, 17857), (762, 17875), (807, 18001), (859, 18253), (860, 18256), (863, 18265), (875, 18325), (892, 18421), (899, 18469),

Gene: Theia\_20 Start: 15180, Stop: 18518, Start Num: 1

Candidate Starts for Theia\_20:

(Start: 1 @15180 has 30 MA's), (Start: 34 @15618 has 1 MA's), (120, 15930), (129, 15972), (Start: 141 @16008 has 1 MA's), (154, 16038), (173, 16095), (211, 16179), (227, 16242), (229, 16248), (263, 16350), (269, 16368), (295, 16461), (315, 16536), (324, 16581), (329, 16599), (341, 16644), (344, 16665), (384, 16857), (397, 16917), (417, 16995), (429, 17043), (459, 17121), (516, 17247), (522, 17259), (532, 17283), (563, 17346), (639, 17538), (652, 17568), (660, 17592), (664, 17604), (683, 17667), (710, 17790), (715, 17811), (721, 17832), (736, 17910), (745, 17931), (752, 17973), (756, 17994), (781, 18030), (808, 18081), (829, 18111), (842, 18174), (845, 18192), (859, 18273), (863, 18285), (865, 18297), (867, 18306), (878, 18360), (891, 18444), (896, 18483),

Gene: TheloniousMonk\_26 Start: 17647, Stop: 20478, Start Num: 112

Candidate Starts for TheloniousMonk\_26:

(Start: 112 @17647 has 30 MA's), (Start: 117 @17662 has 5 MA's), (132, 17716), (257, 17959), (263, 17974), (278, 18019), (305, 18139), (310, 18157), (317, 18205), (326, 18250), (339, 18295), (340, 18298), (348, 18346), (386, 18529), (393, 18556), (413, 18640), (428, 18697), (435, 18715), (453, 18760), (469, 18796), (486, 18856), (503, 18904), (518, 18967), (519, 18970), (562, 19087), (573, 19123), (583, 19150), (589, 19162), (597, 19180), (602, 19195), (622, 19258), (669, 19387), (684, 19432), (694, 19465), (700, 19477), (747, 19702), (764, 19789), (765, 19792), (770, 19810), (825, 20014), (855, 20191), (875, 20302), (888, 20389), (895, 20428), (897, 20443),

Gene: Thor\_24 Start: 16468, Stop: 18939, Start Num: 111

Candidate Starts for Thor\_24:

(Start: 111 @16468 has 200 MA's), (125, 16507), (144, 16570), (Start: 155 @16600 has 22 MA's), (162, 16621), (176, 16642), (194, 16672), (243, 16696), (250, 16717), (262, 16762), (315, 16960), (321, 16993), (339, 17059), (389, 17314), (393, 17335), (398, 17362), (403, 17377), (410, 17401), (451, 17488), (476, 17521), (500, 17557), (555, 17650), (564, 17671), (569, 17686), (579, 17707), (580, 17710), (615, 17779), (627, 17815), (644, 17848), (659, 17884), (671, 17914), (682, 17950), (707, 18016), (710, 18037), (741, 18178), (773, 18319), (784, 18340), (826, 18475), (842, 18571), (855, 18652), (875, 18763), (888, 18850), (895, 18889), (897, 18904),

Gene: Tiffany\_27 Start: 15873, Stop: 18899, Start Num: 38

Candidate Starts for Tiffany\_27:

(30, 15819), (Start: 38 @15873 has 82 MA's), (55, 15987), (68, 16053), (69, 16056), (73, 16065), (86, 16101), (96, 16152), (124, 16224), (Start: 143 @16296 has 5 MA's), (190, 16416), (193, 16419), (214, 16488), (226, 16533), (258, 16626), (264, 16635), (270, 16653), (279, 16680), (295, 16743), (299, 16755), (308, 16788), (312, 16806), (325, 16872), (327, 16875), (329, 16881), (334, 16896), (337, 16905), (339, 16917), (341, 16926), (355, 17004), (359, 17019), (383, 17136), (384, 17139), (391, 17166), (393, 17178), (405, 17232), (410, 17253), (427, 17319), (440, 17358), (479, 17451), (491, 17499), (507, 17544), (525, 17592), (535, 17634), (538, 17643), (552, 17673), (553, 17676), (559, 17688), (582, 17745), (585, 17751), (606, 17772), (607, 17775), (658, 17913), (664, 17925), (689, 17985), (709, 18042), (741, 18180), (744, 18201), (749, 18225), (757, 18270), (762, 18288), (776, 18336), (780, 18348), (800, 18390), (817, 18453), (836, 18510), (844, 18579), (851, 18615), (867, 18696), (892, 18831),

Gene: Tiger\_22 Start: 15067, Stop: 18402, Start Num: 1

Candidate Starts for Tiger\_22:

(Start: 1 @15067 has 30 MA's), (Start: 34 @15505 has 1 MA's), (120, 15817), (Start: 141 @15895 has 1 MA's), (154, 15925), (173, 15982), (211, 16066), (227, 16129), (229, 16135), (269, 16255), (294, 16345), (295, 16348), (315, 16423), (329, 16486), (341, 16531), (344, 16552), (384, 16744), (410, 16849), (417, 16882), (429, 16930), (459, 17008), (461, 17011), (509, 17107), (516, 17134), (532, 17170), (563, 17230), (639, 17422), (652, 17452), (660, 17476), (664, 17488), (683, 17551), (710, 17674), (715, 17695), (721, 17716), (736, 17794), (745, 17815), (752, 17857), (756, 17878), (808, 17965), (829, 17995), (842, 18058), (845, 18076), (859, 18157), (863, 18169), (865, 18181), (867, 18190), (878, 18244), (891, 18328), (892, 18337), (896, 18367),

Gene: Timothy\_26 Start: 17157, Stop: 19703, Start Num: 112

Candidate Starts for Timothy\_26:

(Start: 112 @17157 has 30 MA's), (Start: 118 @17175 has 2 MA's), (187, 17349), (197, 17358), (223, 17433), (267, 17541), (271, 17556), (272, 17559), (279, 17577), (295, 17640), (299, 17652), (315, 17715), (329, 17778), (334, 17793), (337, 17802), (341, 17823), (345, 17847), (348, 17862), (367, 17949), (369, 17952), (374, 17967), (378, 17988), (380, 18000), (389, 18066), (397, 18108), (403, 18129), (404, 18138), (412, 18162), (437, 18243), (441, 18252), (445, 18264), (467, 18306), (492, 18363), (513, 18417), (549, 18525), (567, 18564), (618, 18705), (656, 18801), (661, 18822), (675, 18855), (686, 18888), (687, 18891), (709, 18975), (721, 19020), (722, 19023), (746, 19137), (752, 19170), (791, 19242), (808, 19278), (839, 19350), (850, 19428), (860, 19482), (866, 19506), (889, 19617),

Gene: Timshel\_26 Start: 17496, Stop: 20864, Start Num: 17

Candidate Starts for Timshel\_26:

(Start: 17 @17496 has 4 MA's), (31, 17625), (40, 17679), (47, 17721), (77, 17883), (119, 18033), (147, 18135), (205, 18270), (268, 18468), (286, 18534), (294, 18561), (295, 18564), (299, 18576), (315, 18639), (316, 18648), (321, 18672), (329, 18702), (341, 18747), (345, 18771), (378, 18915), (383, 18957), (390, 18984), (393, 18999), (402, 19038), (405, 19053), (410, 19074), (424, 19131), (427, 19140), (430, 19149), (456, 19224), (483, 19290), (508, 19368), (527, 19422), (546, 19485), (555, 19500), (568, 19530), (573, 19542), (574, 19545), (581, 19563), (585, 19572), (593, 19587), (599,

19605), (607, 19638), (612, 19656), (633, 19719), (656, 19785), (658, 19794), (659, 19797), (664, 19806), (665, 19809), (668, 19818), (672, 19827), (681, 19860), (685, 19872), (691, 19896), (705, 19926), (721, 20004), (724, 20016), (725, 20025), (726, 20028), (727, 20037), (729, 20046), (744, 20124), (749, 20148), (757, 20193), (762, 20211), (778, 20268), (783, 20286), (790, 20310), (794, 20319), (800, 20340), (805, 20361), (809, 20373), (813, 20394), (824, 20433), (833, 20466), (845, 20547), (851, 20580), (860, 20631), (865, 20652), (871, 20676), (882, 20742), (885, 20757), (886, 20763),

Gene: TinaFeyge\_25 Start: 16023, Stop: 18482, Start Num: 155

Candidate Starts for TinaFeyge\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (211, 16155), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (545, 17238), (557, 17259), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: TinyPebbles\_27 Start: 16062, Stop: 19088, Start Num: 38

Candidate Starts for TinyPebbles\_27:

(30, 16008), (Start: 38 @16062 has 82 MA's), (55, 16176), (68, 16242), (69, 16245), (73, 16254), (86, 16290), (96, 16341), (124, 16413), (Start: 143 @16485 has 5 MA's), (190, 16605), (193, 16608), (214, 16677), (226, 16722), (258, 16815), (264, 16824), (270, 16842), (279, 16869), (295, 16932), (299, 16944), (308, 16977), (312, 16995), (325, 17061), (327, 17064), (329, 17070), (334, 17085), (337, 17094), (339, 17106), (341, 17115), (355, 17193), (359, 17208), (383, 17325), (384, 17328), (391, 17355), (393, 17367), (405, 17421), (410, 17442), (427, 17508), (440, 17547), (479, 17640), (491, 17688), (507, 17733), (525, 17781), (535, 17823), (538, 17832), (552, 17862), (553, 17865), (559, 17877), (582, 17934), (585, 17940), (606, 17961), (607, 17964), (658, 18102), (664, 18114), (689, 18174), (709, 18231), (741, 18369), (744, 18390), (749, 18414), (757, 18459), (762, 18477), (776, 18525), (780, 18537), (800, 18579), (817, 18642), (836, 18699), (844, 18768), (851, 18804), (867, 18885), (892, 19020),

Gene: TinyTimmy\_26 Start: 17200, Stop: 19746, Start Num: 112

Candidate Starts for TinyTimmy\_26:

(Start: 112 @17200 has 30 MA's), (Start: 118 @17218 has 2 MA's), (187, 17392), (197, 17401), (223, 17476), (252, 17530), (267, 17584), (271, 17599), (272, 17602), (279, 17620), (295, 17683), (299, 17695), (315, 17758), (329, 17821), (334, 17836), (337, 17845), (341, 17866), (345, 17890), (348, 17905), (367, 17992), (369, 17995), (374, 18010), (378, 18031), (380, 18043), (389, 18109), (397, 18151), (403, 18172), (404, 18181), (412, 18205), (437, 18286), (441, 18295), (445, 18307), (467, 18349), (492, 18406), (513, 18460), (549, 18568), (567, 18607), (618, 18748), (656, 18844), (661, 18865), (675, 18898), (686, 18931), (687, 18934), (709, 19018), (721, 19063), (722, 19066), (746, 19180), (752, 19213), (791, 19285), (808, 19321), (839, 19393), (850, 19471), (860, 19525), (866, 19549), (889, 19660),

Gene: Tinybot\_24 Start: 16003, Stop: 18462, Start Num: 155

Candidate Starts for Tinybot\_24:

(Start: 109 @15862 has 113 MA's), (Start: 155 @16003 has 22 MA's), (Start: 163 @16021 has 10 MA's), (222, 16177), (240, 16228), (252, 16267), (258, 16297), (291, 16414), (299, 16441), (315, 16504), (329, 16567), (341, 16612), (348, 16654), (365, 16738), (411, 16921), (457, 17005), (481, 17056), (499, 17101), (530, 17179), (542, 17212), (545, 17218), (608, 17332), (626, 17386), (647, 17431), (670, 17491), (700, 17551), (726, 17665), (757, 17830), (762, 17848), (807, 17974), (859, 18226), (860, 18229), (863, 18238), (874, 18295), (875, 18298), (883, 18343), (892, 18394), (899, 18442),

Gene: TopsytheTRex\_25 Start: 15744, Stop: 18260, Start Num: 107

Candidate Starts for TopsytheTRex\_25:

(Start: 107 @15744 has 89 MA's), (144, 15855), (170, 15921), (172, 15924), (173, 15927), (256, 16113), (258, 16122), (264, 16131), (299, 16251), (312, 16302), (323, 16359), (327, 16371), (331, 16377), (334, 16392), (339, 16413), (341, 16422), (350, 16470), (383, 16632), (391, 16662), (393, 16674), (402, 16713), (405, 16728), (410, 16749), (424, 16806), (427, 16815), (436, 16842), (477, 16941), (507, 17040), (512, 17055), (538, 17139), (546, 17160), (568, 17205), (606, 17268), (607, 17271), (620, 17310), (623, 17322), (628, 17337), (664, 17421), (689, 17481), (703, 17508), (718, 17571), (722, 17586), (727, 17616), (749, 17712), (765, 17778), (804, 17841), (860, 18036), (861, 18039), (866, 18060), (899, 18237), (902, 18246),

Gene: TiroTheta9\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for TiroTheta9\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (420, 16965), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (542, 17232), (545, 17238), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (674, 17520), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: Toaka\_25 Start: 15938, Stop: 18865, Start Num: 52

Candidate Starts for Toaka\_25:

(Start: 52 @15938 has 33 MA's), (55, 15950), (62, 15980), (94, 16109), (165, 16340), (190, 16394), (230, 16523), (260, 16610), (264, 16616), (266, 16622), (299, 16736), (303, 16757), (308, 16769), (312, 16787), (321, 16832), (325, 16853), (327, 16856), (334, 16877), (339, 16898), (341, 16907), (342, 16919), (343, 16922), (352, 16967), (359, 17000), (361, 17012), (383, 17117), (405, 17213), (410, 17234), (412, 17243), (414, 17255), (420, 17279), (424, 17291), (427, 17300), (430, 17309), (440, 17339), (465, 17402), (479, 17432), (486, 17459), (546, 17645), (568, 17690), (575, 17711), (582, 17726), (585, 17732), (606, 17753), (607, 17756), (624, 17810), (649, 17864), (654, 17882), (664, 17906), (689, 17966), (718, 18056), (721, 18068), (726, 18092), (727, 18101), (741, 18167), (752, 18233), (757, 18257), (800, 18377), (831, 18470), (844, 18548), (849, 18575), (851, 18584), (857, 18623), (859, 18632), (860, 18635), (879, 18734), (892, 18788), (894, 18800), (900, 18842),

Gene: Todacoro\_26 Start: 16043, Stop: 19081, Start Num: 37

Candidate Starts for Todacoro\_26:

(Start: 37 @16043 has 32 MA's), (66, 16217), (69, 16229), (81, 16262), (Start: 143 @16469 has 5 MA's), (Start: 152 @16490 has 5 MA's), (190, 16589), (193, 16592), (258, 16802), (264, 16811), (268, 16823), (279, 16856), (295, 16919), (299, 16931), (308, 16964), (312, 16982), (316, 17003), (327, 17051), (329, 17057), (334, 17072), (337, 17081), (339, 17093), (341, 17102), (359, 17195), (383, 17312), (384, 17315), (391, 17342), (393, 17354), (405, 17408), (410, 17429), (427, 17495), (440, 17534), (491, 17675), (507, 17720), (535, 17810), (538, 17819), (552, 17849), (575, 17906), (582, 17921), (606, 17948), (607, 17951), (612, 17969), (656, 18080), (689, 18161), (709, 18218), (720, 18260), (741, 18356), (744, 18377), (749, 18401), (757, 18446), (762, 18464), (776, 18512), (780, 18524), (800, 18566), (803, 18578), (816, 18626), (851, 18797), (863, 18857), (865, 18869), (872, 18896), (875, 18917), (892, 19013), (899, 19061),

Gene: Tomathan\_29 Start: 16508, Stop: 19021, Start Num: 107

Candidate Starts for Tomathan\_29:

(Start: 107 @16508 has 89 MA's), (172, 16688), (173, 16691), (279, 16937), (294, 16997), (299, 17012), (307, 17042), (308, 17045), (325, 17129), (334, 17153), (340, 17177), (344, 17204), (345, 17207), (368, 17312), (383, 17393), (390, 17420), (393, 17435), (405, 17489), (410, 17510), (427,

17576), (434, 17594), (436, 17603), (477, 17702), (486, 17735), (488, 17744), (507, 17801), (512, 17816), (546, 17921), (559, 17945), (607, 18032), (610, 18044), (612, 18050), (623, 18083), (673, 18203), (718, 18332), (722, 18347), (727, 18377), (730, 18389), (737, 18425), (765, 18539), (776, 18551), (801, 18593), (861, 18800), (865, 18818), (866, 18821), (902, 19007),

Gene: ToneTone\_27 Start: 16647, Stop: 18863, Start Num: 116

Candidate Starts for ToneTone\_27:

(93, 16602), (Start: 116 @16647 has 41 MA's), (160, 16758), (223, 16914), (270, 17061), (274, 17073), (314, 17220), (315, 17223), (321, 17256), (343, 17346), (357, 17415), (376, 17490), (412, 17658), (590, 17916), (618, 17961), (680, 18069), (710, 18132), (721, 18174), (745, 18273), (749, 18294), (756, 18336), (791, 18387), (805, 18414), (839, 18495), (850, 18585),

Gene: Topanga\_25 Start: 16006, Stop: 18558, Start Num: 163

Candidate Starts for Topanga\_25:

(Start: 105 @15829 has 8 MA's), (Start: 163 @16006 has 10 MA's), (171, 16027), (181, 16051), (200, 16081), (201, 16084), (203, 16093), (214, 16132), (220, 16147), (225, 16171), (243, 16216), (255, 16258), (265, 16291), (268, 16300), (281, 16354), (295, 16408), (298, 16417), (302, 16441), (309, 16462), (330, 16567), (339, 16609), (489, 17131), (528, 17251), (542, 17296), (544, 17299), (545, 17302), (558, 17326), (574, 17371), (591, 17407), (615, 17446), (626, 17479), (674, 17593), (721, 17734), (726, 17758), (741, 17833), (752, 17899), (757, 17923), (762, 17941), (782, 18007), (802, 18061), (807, 18073), (812, 18088), (819, 18109), (823, 18121), (863, 18334), (871, 18370), (874, 18391), (875, 18394), (892, 18490), (899, 18538),

Gene: Topgun\_24 Start: 16077, Stop: 18692, Start Num: 111

Candidate Starts for Topgun\_24:

(Start: 111 @16077 has 200 MA's), (125, 16116), (144, 16179), (145, 16185), (Start: 155 @16209 has 22 MA's), (250, 16317), (299, 16488), (314, 16548), (315, 16551), (342, 16674), (348, 16704), (361, 16767), (412, 16986), (437, 17058), (459, 17106), (482, 17151), (562, 17376), (565, 17385), (579, 17421), (584, 17436), (598, 17463), (671, 17667), (708, 17781), (710, 17790), (715, 17811), (721, 17832), (741, 17931), (750, 17973), (751, 17976), (788, 18105), (815, 18189), (827, 18234), (855, 18405), (875, 18516), (888, 18603), (895, 18642), (897, 18657),

Gene: Toro\_28 Start: 17560, Stop: 20943, Start Num: 17

Candidate Starts for Toro\_28:

(Start: 17 @17560 has 4 MA's), (77, 17947), (91, 18004), (127, 18136), (131, 18148), (147, 18199), (209, 18346), (266, 18529), (268, 18535), (279, 18568), (282, 18580), (307, 18673), (312, 18694), (315, 18706), (350, 18862), (354, 18886), (371, 18949), (383, 19024), (393, 19066), (405, 19120), (410, 19141), (424, 19198), (426, 19204), (427, 19207), (456, 19291), (463, 19306), (477, 19333), (479, 19339), (507, 19432), (511, 19444), (512, 19447), (568, 19597), (574, 19612), (581, 19630), (593, 19654), (599, 19672), (600, 19675), (633, 19786), (654, 19849), (656, 19852), (676, 19909), (679, 19915), (691, 19963), (705, 19993), (721, 20071), (724, 20083), (725, 20092), (729, 20113), (744, 20191), (757, 20260), (762, 20278), (773, 20329), (783, 20365), (785, 20377), (798, 20410), (805, 20440), (811, 20461), (824, 20512), (833, 20545), (845, 20626), (851, 20659), (855, 20689), (865, 20731), (871, 20755), (882, 20821), (885, 20836), (886, 20842), (895, 20893),

Gene: Tote\_26 Start: 16832, Stop: 19303, Start Num: 111

Candidate Starts for Tote\_26:

(Start: 111 @16832 has 200 MA's), (125, 16871), (144, 16934), (Start: 155 @16964 has 22 MA's), (162, 16985), (176, 17006), (181, 17018), (194, 17036), (262, 17126), (315, 17324), (321, 17357), (339, 17423), (389, 17678), (393, 17699), (398, 17726), (476, 17885), (500, 17921), (555, 18014), (564, 18035), (592, 18092), (644, 18212), (659, 18248), (671, 18278), (682, 18314), (707, 18380), (710, 18401), (741, 18542), (773, 18683), (784, 18704), (826, 18839), (855, 19016), (875, 19127), (885, 19193), (888, 19214), (895, 19253), (897, 19268),

Gene: Traft412\_26 Start: 17302, Stop: 19782, Start Num: 111

Candidate Starts for Traft412\_26:

(Start: 111 @17302 has 200 MA's), (125, 17341), (137, 17386), (144, 17404), (145, 17410), (Start: 155 @17434 has 22 MA's), (176, 17476), (285, 17683), (291, 17701), (315, 17791), (329, 17854), (339, 17890), (348, 17941), (460, 18325), (526, 18427), (537, 18466), (555, 18481), (560, 18493), (569, 18517), (671, 18745), (707, 18847), (710, 18868), (721, 18910), (741, 19009), (753, 19072), (818, 19291), (827, 19324), (875, 19606), (885, 19672), (888, 19693), (895, 19732), (897, 19747),

Gene: Travvers\_29 Start: 16508, Stop: 19021, Start Num: 107

Candidate Starts for Travvers\_29:

(Start: 107 @16508 has 89 MA's), (172, 16688), (173, 16691), (277, 16934), (279, 16937), (294, 16997), (299, 17012), (307, 17042), (308, 17045), (325, 17129), (334, 17153), (340, 17177), (344, 17204), (345, 17207), (371, 17318), (383, 17393), (390, 17420), (393, 17435), (405, 17489), (410, 17510), (427, 17576), (434, 17594), (436, 17603), (477, 17702), (486, 17735), (488, 17744), (507, 17801), (512, 17816), (546, 17921), (607, 18032), (610, 18044), (612, 18050), (623, 18083), (624, 18086), (673, 18203), (718, 18332), (722, 18347), (727, 18377), (730, 18389), (737, 18425), (765, 18539), (776, 18551), (801, 18593), (861, 18800), (865, 18818), (866, 18821), (902, 19007),

Gene: Treddle\_26 Start: 17623, Stop: 20094, Start Num: 111

Candidate Starts for Treddle\_26:

(Start: 111 @17623 has 200 MA's), (125, 17662), (144, 17725), (Start: 155 @17755 has 22 MA's), (162, 17776), (176, 17797), (181, 17809), (194, 17827), (262, 17917), (315, 18115), (321, 18148), (339, 18214), (389, 18469), (393, 18490), (398, 18517), (410, 18556), (432, 18613), (451, 18643), (476, 18676), (500, 18712), (555, 18805), (564, 18826), (592, 18883), (644, 19003), (659, 19039), (671, 19069), (682, 19105), (707, 19171), (710, 19192), (721, 19234), (741, 19333), (773, 19474), (784, 19495), (842, 19726), (855, 19807), (875, 19918), (888, 20005), (895, 20044), (899, 20074),

Gene: Trike\_23 Start: 13972, Stop: 16527, Start Num: 163

Candidate Starts for Trike\_23:

(Start: 105 @13795 has 8 MA's), (Start: 163 @13972 has 10 MA's), (171, 13993), (200, 14047), (203, 14059), (255, 14221), (261, 14242), (265, 14254), (274, 14284), (281, 14317), (292, 14362), (298, 14380), (301, 14395), (302, 14404), (309, 14425), (330, 14530), (339, 14572), (372, 14737), (404, 14899), (489, 15103), (506, 15148), (528, 15223), (544, 15271), (545, 15274), (557, 15295), (558, 15298), (574, 15343), (615, 15418), (617, 15421), (623, 15442), (632, 15466), (659, 15532), (673, 15562), (685, 15574), (709, 15661), (714, 15676), (726, 15730), (741, 15805), (754, 15883), (757, 15895), (762, 15913), (772, 15952), (779, 15964), (782, 15976), (799, 16018), (802, 16030), (807, 16042), (812, 16057), (819, 16078), (823, 16090), (863, 16303), (875, 16363), (883, 16408), (892, 16459), (899, 16507),

Gene: Tripl3t\_25 Start: 17314, Stop: 19713, Start Num: 111

Candidate Starts for Tripl3t\_25:

(Start: 111 @17314 has 200 MA's), (125, 17353), (144, 17416), (Start: 155 @17446 has 22 MA's), (162, 17467), (176, 17488), (181, 17500), (194, 17518), (250, 17563), (262, 17608), (315, 17806), (321, 17839), (339, 17905), (389, 18160), (393, 18181), (398, 18208), (410, 18247), (432, 18304), (451, 18334), (555, 18496), (627, 18649), (638, 18661), (643, 18676), (696, 18793), (712, 18838), (716, 18859), (717, 18862), (753, 19012), (757, 19027), (773, 19093), (793, 19135), (842, 19345), (855, 19426), (875, 19537), (888, 19624), (895, 19663), (899, 19693),

Gene: Trixie\_29 Start: 18274, Stop: 20811, Start Num: 107

Candidate Starts for Trixie\_29:

(Start: 107 @18274 has 89 MA's), (144, 18385), (172, 18454), (247, 18619), (249, 18625), (256, 18646), (258, 18655), (276, 18700), (279, 18709), (286, 18742), (299, 18784), (311, 18826), (312,

18835), (316, 18856), (322, 18883), (325, 18901), (341, 18955), (344, 18976), (345, 18979), (383, 19165), (393, 19207), (396, 19225), (408, 19273), (410, 19282), (427, 19348), (436, 19375), (440, 19387), (465, 19450), (472, 19465), (489, 19519), (507, 19573), (525, 19621), (542, 19684), (546, 19693), (568, 19738), (574, 19753), (585, 19780), (586, 19783), (607, 19804), (608, 19810), (613, 19825), (649, 19912), (673, 19975), (685, 19996), (718, 20104), (722, 20119), (727, 20149), (730, 20161), (737, 20197), (756, 20287), (801, 20368), (804, 20377), (810, 20386), (845, 20497), (850, 20527), (865, 20608), (866, 20611),

Gene: Trooper\_26 Start: 16433, Stop: 18964, Start Num: 107

Candidate Starts for Trooper\_26:

(Start: 107 @16433 has 89 MA's), (122, 16472), (125, 16478), (170, 16610), (172, 16613), (175, 16622), (188, 16646), (249, 16790), (256, 16811), (258, 16820), (266, 16835), (268, 16841), (279, 16874), (286, 16907), (299, 16949), (311, 16991), (312, 17000), (322, 17048), (325, 17066), (337, 17099), (341, 17120), (344, 17141), (345, 17144), (383, 17330), (393, 17372), (394, 17381), (410, 17447), (427, 17513), (440, 17552), (507, 17738), (512, 17753), (525, 17786), (559, 17882), (568, 17903), (585, 17945), (606, 17966), (607, 17969), (658, 18107), (664, 18119), (673, 18140), (710, 18239), (711, 18242), (718, 18269), (722, 18284), (727, 18314), (737, 18362), (749, 18410), (761, 18464), (795, 18515), (810, 18548), (830, 18572), (850, 18689), (864, 18755), (866, 18767),

Gene: Trouble\_24 Start: 16670, Stop: 19141, Start Num: 111

Candidate Starts for Trouble\_24:

(Start: 111 @16670 has 200 MA's), (125, 16709), (144, 16772), (Start: 155 @16802 has 22 MA's), (162, 16823), (176, 16844), (181, 16856), (194, 16874), (250, 16919), (262, 16964), (315, 17162), (321, 17195), (339, 17261), (389, 17516), (393, 17537), (398, 17564), (476, 17723), (500, 17759), (555, 17852), (564, 17873), (592, 17930), (644, 18050), (659, 18086), (671, 18116), (682, 18152), (707, 18218), (710, 18239), (741, 18380), (773, 18521), (784, 18542), (826, 18677), (855, 18854), (875, 18965), (888, 19052), (895, 19091),

Gene: TroyPia\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for TroyPia\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Tubs\_27 Start: 17590, Stop: 20499, Start Num: 52

Candidate Starts for Tubs\_27:

(Start: 52 @17590 has 33 MA's), (55, 17602), (68, 17662), (114, 17821), (130, 17884), (153, 17947), (165, 17989), (193, 18046), (260, 18256), (264, 18262), (269, 18277), (294, 18367), (295, 18370), (299, 18382), (311, 18424), (321, 18478), (341, 18553), (344, 18574), (345, 18577), (348, 18595), (361, 18658), (379, 18724), (383, 18763), (390, 18790), (393, 18805), (399, 18835), (405, 18859), (408, 18871), (410, 18880), (427, 18946), (440, 18985), (468, 19051), (479, 19078), (486, 19105), (507, 19171), (523, 19216), (546, 19291), (568, 19336), (575, 19357), (585, 19378), (586, 19381), (606, 19399), (607, 19402), (615, 19429), (649, 19510), (664, 19552), (718, 19702), (722, 19717), (727, 19747), (738, 19798), (756, 19885), (758, 19894), (771, 19945), (800, 20008), (805, 20029), (816, 20065), (830, 20101), (831, 20107), (844, 20185), (849, 20212), (860, 20272), (875, 20341), (879, 20371), (885, 20398), (894, 20437), (900, 20479),

Gene: Tucker\_29 Start: 16733, Stop: 18949, Start Num: 116

Candidate Starts for Tucker\_29:



(93, 16688), (Start: 116 @16733 has 41 MA's), (160, 16844), (223, 17000), (270, 17147), (274, 17159), (314, 17306), (315, 17309), (321, 17342), (343, 17432), (357, 17501), (376, 17576), (412, 17744), (590, 18002), (618, 18047), (680, 18155), (710, 18218), (721, 18260), (745, 18359), (749, 18380), (756, 18422), (791, 18473), (805, 18500), (839, 18581), (850, 18671),

Gene: Turbido\_28 Start: 17118, Stop: 19661, Start Num: 107

Candidate Starts for Turbido\_28:

(Start: 107 @17118 has 89 MA's), (172, 17298), (173, 17301), (188, 17331), (247, 17469), (249, 17475), (256, 17496), (258, 17505), (264, 17514), (268, 17526), (282, 17571), (286, 17592), (299, 17634), (312, 17685), (321, 17730), (322, 17733), (325, 17751), (337, 17784), (339, 17796), (341, 17805), (344, 17826), (345, 17829), (383, 18015), (393, 18057), (394, 18066), (396, 18075), (410, 18132), (427, 18198), (440, 18237), (479, 18330), (488, 18366), (507, 18423), (529, 18489), (538, 18522), (544, 18537), (546, 18543), (552, 18552), (559, 18567), (568, 18588), (575, 18609), (585, 18630), (586, 18633), (606, 18651), (607, 18654), (623, 18705), (649, 18762), (654, 18780), (664, 18804), (689, 18864), (703, 18891), (718, 18954), (727, 18999), (756, 19137), (804, 19227), (810, 19236), (830, 19260), (845, 19347), (850, 19377), (866, 19461),

Gene: Turj99\_23 Start: 16107, Stop: 18578, Start Num: 111

Candidate Starts for Turj99\_23:

(Start: 111 @16107 has 200 MA's), (125, 16146), (144, 16209), (Start: 155 @16239 has 22 MA's), (162, 16260), (176, 16281), (181, 16293), (194, 16311), (262, 16401), (315, 16599), (321, 16632), (339, 16698), (389, 16953), (393, 16974), (398, 17001), (476, 17160), (500, 17196), (555, 17289), (564, 17310), (592, 17367), (644, 17487), (659, 17523), (671, 17553), (682, 17589), (707, 17655), (710, 17676), (741, 17817), (773, 17958), (784, 17979), (842, 18210), (855, 18291), (875, 18402), (888, 18489), (895, 18528), (899, 18558),

Gene: Twigg\_22 Start: 15215, Stop: 18553, Start Num: 1

Candidate Starts for Twigg\_22:

(Start: 1 @15215 has 30 MA's), (Start: 34 @15653 has 1 MA's), (120, 15965), (Start: 141 @16043 has 1 MA's), (154, 16073), (173, 16130), (211, 16214), (227, 16277), (229, 16283), (269, 16403), (294, 16493), (295, 16496), (315, 16571), (324, 16616), (329, 16634), (341, 16679), (344, 16700), (384, 16892), (417, 17030), (429, 17078), (459, 17156), (516, 17282), (522, 17294), (532, 17318), (563, 17381), (639, 17573), (652, 17603), (660, 17627), (664, 17639), (683, 17702), (710, 17825), (715, 17846), (721, 17867), (736, 17945), (745, 17966), (752, 18008), (756, 18029), (808, 18116), (829, 18146), (842, 18209), (845, 18227), (859, 18308), (863, 18320), (865, 18332), (867, 18341), (878, 18395), (891, 18479), (896, 18518),

Gene: Twister\_25 Start: 15728, Stop: 18457, Start Num: 105

Candidate Starts for Twister\_25:

(Start: 105 @15728 has 8 MA's), (Start: 163 @15905 has 10 MA's), (171, 15926), (181, 15950), (200, 15980), (201, 15983), (203, 15992), (214, 16031), (220, 16046), (225, 16070), (243, 16115), (255, 16157), (265, 16190), (268, 16199), (281, 16253), (295, 16307), (298, 16316), (302, 16340), (309, 16361), (330, 16466), (339, 16508), (489, 17030), (528, 17150), (542, 17195), (544, 17198), (545, 17201), (558, 17225), (574, 17270), (591, 17306), (615, 17345), (626, 17378), (674, 17492), (721, 17633), (726, 17657), (741, 17732), (752, 17798), (757, 17822), (762, 17840), (782, 17906), (802, 17960), (807, 17972), (812, 17987), (819, 18008), (823, 18020), (863, 18233), (871, 18269), (874, 18290), (875, 18293), (892, 18389), (899, 18437),

Gene: TwoPeat\_25 Start: 16622, Stop: 19102, Start Num: 111

Candidate Starts for TwoPeat\_25:

(Start: 111 @16622 has 200 MA's), (125, 16661), (144, 16724), (Start: 155 @16754 has 22 MA's), (176, 16796), (285, 17003), (291, 17021), (315, 17111), (329, 17174), (337, 17198), (339, 17210), (348, 17261), (460, 17645), (526, 17747), (537, 17786), (560, 17813), (569, 17837), (630, 17966),

(671, 18065), (707, 18167), (710, 18188), (714, 18200), (721, 18230), (741, 18329), (753, 18392), (777, 18482), (818, 18611), (827, 18644), (855, 18815), (875, 18926), (885, 18992), (888, 19013), (895, 19052), (899, 19082),

Gene: TygerBlood\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for TygerBlood\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (626, 17409), (636, 17430), (647, 17454), (670, 17514), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: U2\_24 Start: 16511, Stop: 18979, Start Num: 111

Candidate Starts for U2\_24:

(Start: 111 @16511 has 200 MA's), (Start: 117 @16526 has 5 MA's), (Start: 155 @16640 has 22 MA's), (162, 16661), (176, 16682), (194, 16712), (243, 16736), (250, 16757), (262, 16802), (315, 17000), (321, 17033), (339, 17099), (389, 17354), (393, 17375), (398, 17402), (476, 17561), (500, 17597), (555, 17690), (564, 17711), (569, 17726), (579, 17747), (580, 17750), (615, 17819), (627, 17855), (644, 17888), (659, 17924), (671, 17954), (682, 17990), (707, 18056), (710, 18077), (721, 18119), (741, 18218), (773, 18359), (784, 18380), (826, 18515), (855, 18692), (875, 18803), (888, 18890), (895, 18929), (899, 18959),

Gene: Ugenie5\_24 Start: 17623, Stop: 20532, Start Num: 52

Candidate Starts for Ugenie5\_24:

(Start: 52 @17623 has 33 MA's), (55, 17635), (68, 17695), (130, 17917), (153, 17980), (165, 18022), (193, 18079), (207, 18118), (260, 18289), (264, 18295), (269, 18310), (294, 18400), (295, 18403), (299, 18415), (311, 18457), (321, 18511), (341, 18586), (344, 18607), (345, 18610), (348, 18628), (361, 18691), (379, 18757), (383, 18796), (390, 18823), (393, 18838), (399, 18868), (405, 18892), (410, 18913), (427, 18979), (440, 19018), (468, 19084), (479, 19111), (486, 19138), (507, 19204), (523, 19249), (546, 19324), (568, 19369), (575, 19390), (585, 19411), (586, 19414), (606, 19432), (607, 19435), (615, 19462), (624, 19489), (649, 19543), (718, 19735), (722, 19750), (727, 19780), (738, 19831), (756, 19918), (758, 19927), (771, 19978), (800, 20041), (805, 20062), (816, 20098), (830, 20134), (831, 20140), (844, 20218), (849, 20245), (860, 20305), (875, 20374), (879, 20404), (885, 20431), (894, 20470), (900, 20512),

Gene: Ulysses\_24 Start: 15606, Stop: 18206, Start Num: 109

Candidate Starts for Ulysses\_24:

(Start: 109 @15606 has 113 MA's), (Start: 155 @15747 has 22 MA's), (Start: 163 @15765 has 10 MA's), (222, 15921), (240, 15972), (252, 16011), (258, 16041), (291, 16158), (299, 16185), (315, 16248), (329, 16311), (341, 16356), (348, 16398), (365, 16482), (457, 16749), (481, 16800), (499, 16845), (530, 16923), (542, 16956), (545, 16962), (608, 17076), (626, 17130), (647, 17175), (670, 17235), (700, 17295), (726, 17409), (757, 17574), (762, 17592), (807, 17718), (859, 17970), (860, 17973), (863, 17982), (875, 18042), (892, 18138), (899, 18186),

Gene: UnionJack\_22 Start: 14796, Stop: 17609, Start Num: 2

Candidate Starts for UnionJack\_22:

(Start: 2 @14796 has 8 MA's), (10, 14985), (120, 15468), (121, 15474), (229, 15618), (246, 15654), (273, 15744), (289, 15810), (295, 15831), (312, 15894), (315, 15906), (321, 15939), (337, 15993), (342, 16026), (345, 16038), (365, 16137), (376, 16170), (397, 16299), (426, 16413), (450, 16464), (501, 16530), (554, 16611), (561, 16623), (576, 16656), (630, 16734), (634, 16743), (677, 16809), (683, 16818), (710, 16881), (721, 16923), (734, 16995), (745, 17022), (748, 17037), (752, 17064), (756, 17085), (808, 17172), (829, 17202), (842, 17265), (859, 17364), (863, 17376), (865, 17388),

(867, 17397), (892, 17544),

Gene: Updawg\_28 Start: 17115, Stop: 19622, Start Num: 107

Candidate Starts for Updawg\_28:

(Start: 107 @17115 has 89 MA's), (144, 17226), (167, 17283), (256, 17469), (279, 17532), (286, 17565), (288, 17571), (334, 17751), (337, 17760), (341, 17781), (344, 17802), (345, 17805), (348, 17823), (360, 17883), (383, 17991), (393, 18033), (405, 18087), (410, 18108), (426, 18171), (427, 18174), (434, 18192), (440, 18213), (507, 18399), (512, 18414), (517, 18441), (538, 18498), (544, 18513), (546, 18519), (552, 18528), (555, 18534), (568, 18564), (575, 18585), (607, 18630), (608, 18636), (620, 18669), (628, 18696), (658, 18768), (664, 18780), (689, 18840), (703, 18867), (718, 18930), (727, 18975), (730, 18987), (737, 19023), (746, 19059), (752, 19092), (786, 19155), (800, 19179), (846, 19323), (866, 19422), (882, 19509), (902, 19608),

Gene: VA6\_26 Start: 16626, Stop: 19163, Start Num: 107

Candidate Starts for VA6\_26:

(Start: 107 @16626 has 89 MA's), (172, 16806), (173, 16809), (202, 16857), (245, 16968), (249, 16977), (256, 16998), (258, 17007), (268, 17028), (279, 17061), (286, 17094), (312, 17187), (322, 17235), (325, 17253), (332, 17265), (337, 17286), (341, 17307), (344, 17328), (345, 17331), (383, 17517), (393, 17559), (394, 17568), (410, 17634), (427, 17700), (436, 17727), (440, 17739), (477, 17826), (507, 17925), (546, 18045), (552, 18054), (555, 18060), (559, 18069), (568, 18090), (578, 18114), (586, 18135), (607, 18156), (608, 18162), (620, 18195), (623, 18207), (649, 18264), (689, 18366), (703, 18393), (718, 18456), (804, 18729), (810, 18738), (845, 18849), (850, 18879), (866, 18963),

Gene: VC3\_29 Start: 16651, Stop: 19164, Start Num: 107

Candidate Starts for VC3\_29:

(Start: 107 @16651 has 89 MA's), (172, 16831), (173, 16834), (233, 16945), (279, 17080), (294, 17140), (299, 17155), (307, 17185), (308, 17188), (325, 17272), (334, 17296), (340, 17320), (344, 17347), (345, 17350), (371, 17461), (383, 17536), (390, 17563), (393, 17578), (405, 17632), (410, 17653), (427, 17719), (434, 17737), (436, 17746), (477, 17845), (486, 17878), (488, 17887), (507, 17944), (512, 17959), (546, 18064), (607, 18175), (610, 18187), (612, 18193), (623, 18226), (673, 18346), (718, 18475), (722, 18490), (727, 18520), (730, 18532), (737, 18568), (765, 18682), (776, 18694), (801, 18736), (861, 18943), (865, 18961), (866, 18964), (902, 19150),

Gene: Vanisoa\_25 Start: 15668, Stop: 18586, Start Num: 52

Candidate Starts for Vanisoa\_25:

(Start: 52 @15668 has 33 MA's), (55, 15680), (94, 15839), (114, 15902), (165, 16070), (190, 16124), (193, 16127), (230, 16253), (256, 16328), (258, 16337), (260, 16340), (264, 16346), (266, 16352), (299, 16466), (303, 16487), (312, 16517), (315, 16529), (321, 16562), (325, 16583), (327, 16586), (334, 16607), (339, 16628), (341, 16637), (342, 16649), (352, 16697), (359, 16730), (361, 16742), (383, 16847), (385, 16859), (397, 16910), (405, 16943), (409, 16958), (410, 16964), (412, 16973), (414, 16985), (420, 17009), (424, 17021), (427, 17030), (486, 17189), (489, 17201), (507, 17255), (546, 17375), (568, 17420), (575, 17441), (585, 17462), (586, 17465), (606, 17483), (607, 17486), (615, 17513), (624, 17540), (650, 17600), (664, 17636), (685, 17678), (718, 17786), (738, 17882), (756, 17969), (758, 17978), (771, 18029), (786, 18059), (800, 18092), (805, 18113), (816, 18152), (831, 18194), (844, 18272), (849, 18299), (860, 18359), (879, 18458), (892, 18512), (894, 18524), (900, 18566),

Gene: Veracruz\_25 Start: 16043, Stop: 19081, Start Num: 37

Candidate Starts for Veracruz\_25:

(Start: 37 @16043 has 32 MA's), (66, 16217), (69, 16229), (81, 16262), (Start: 143 @16469 has 5 MA's), (Start: 152 @16490 has 5 MA's), (190, 16589), (193, 16592), (258, 16802), (264, 16811), (268, 16823), (279, 16856), (295, 16919), (299, 16931), (308, 16964), (312, 16982), (316, 17003), (327,

17051), (329, 17057), (334, 17072), (337, 17081), (339, 17093), (341, 17102), (359, 17195), (383, 17312), (384, 17315), (391, 17342), (393, 17354), (405, 17408), (410, 17429), (427, 17495), (440, 17534), (491, 17675), (507, 17720), (535, 17810), (538, 17819), (552, 17849), (575, 17906), (582, 17921), (606, 17948), (607, 17951), (612, 17969), (656, 18080), (689, 18161), (709, 18218), (720, 18260), (741, 18356), (744, 18377), (749, 18401), (757, 18446), (762, 18464), (776, 18512), (780, 18524), (800, 18566), (803, 18578), (816, 18626), (851, 18797), (863, 18857), (865, 18869), (872, 18896), (875, 18917), (892, 19013), (899, 19061),

Gene: Violet\_23 Start: 16915, Stop: 19386, Start Num: 111

Candidate Starts for Violet\_23:

(Start: 111 @16915 has 200 MA's), (125, 16954), (144, 17017), (Start: 155 @17047 has 22 MA's), (162, 17068), (176, 17089), (181, 17101), (194, 17119), (262, 17209), (315, 17407), (321, 17440), (339, 17506), (389, 17761), (393, 17782), (398, 17809), (476, 17968), (500, 18004), (555, 18097), (564, 18118), (592, 18175), (644, 18295), (659, 18331), (671, 18361), (682, 18397), (707, 18463), (710, 18484), (741, 18625), (773, 18766), (784, 18787), (826, 18922), (855, 19099), (875, 19210), (888, 19297), (895, 19336), (899, 19366),

Gene: Vix\_27 Start: 16061, Stop: 19087, Start Num: 38

Candidate Starts for Vix\_27:

(30, 16007), (Start: 38 @16061 has 82 MA's), (55, 16175), (68, 16241), (69, 16244), (73, 16253), (86, 16289), (96, 16340), (124, 16412), (Start: 143 @16484 has 5 MA's), (190, 16604), (193, 16607), (214, 16676), (226, 16721), (258, 16814), (264, 16823), (270, 16841), (279, 16868), (295, 16931), (299, 16943), (308, 16976), (312, 16994), (325, 17060), (327, 17063), (329, 17069), (334, 17084), (337, 17093), (339, 17105), (341, 17114), (355, 17192), (359, 17207), (383, 17324), (384, 17327), (391, 17354), (393, 17366), (405, 17420), (410, 17441), (427, 17507), (440, 17546), (479, 17639), (491, 17687), (507, 17732), (525, 17780), (535, 17822), (538, 17831), (552, 17861), (553, 17864), (559, 17876), (582, 17933), (585, 17939), (606, 17960), (607, 17963), (658, 18101), (664, 18113), (689, 18173), (709, 18230), (741, 18368), (744, 18389), (749, 18413), (757, 18458), (762, 18476), (776, 18524), (780, 18536), (800, 18578), (817, 18641), (836, 18698), (844, 18767), (851, 18803), (867, 18884), (892, 19019),

Gene: VohminGhazi\_29 Start: 16735, Stop: 18939, Start Num: 116

Candidate Starts for VohminGhazi\_29:

(60, 16576), (93, 16690), (Start: 116 @16735 has 41 MA's), (160, 16846), (166, 16852), (212, 16960), (223, 17002), (246, 17068), (274, 17161), (283, 17188), (315, 17311), (321, 17344), (343, 17434), (357, 17503), (412, 17746), (499, 17884), (590, 18004), (680, 18157), (710, 18220), (721, 18262), (745, 18361), (749, 18382), (752, 18403), (756, 18424), (791, 18475), (800, 18487), (805, 18502), (839, 18583), (850, 18661),

Gene: Waits\_28 Start: 15890, Stop: 18079, Start Num: 179

Candidate Starts for Waits\_28:

(Start: 115 @15713 has 1 MA's), (Start: 117 @15722 has 5 MA's), (Start: 179 @15890 has 15 MA's), (269, 16133), (270, 16139), (290, 16208), (306, 16265), (341, 16409), (348, 16451), (358, 16499), (359, 16502), (382, 16613), (385, 16631), (412, 16736), (425, 16784), (484, 16889), (513, 16949), (536, 17003), (555, 17039), (569, 17063), (577, 17072), (608, 17135), (616, 17156), (622, 17171), (629, 17195), (635, 17207), (659, 17261), (667, 17282), (680, 17312), (732, 17483), (734, 17504), (756, 17588), (867, 17891), (892, 18014), (894, 18026),

Gene: WalterMcMickey\_25 Start: 15905, Stop: 18457, Start Num: 163

Candidate Starts for WalterMcMickey\_25:

(Start: 105 @15728 has 8 MA's), (Start: 163 @15905 has 10 MA's), (171, 15926), (181, 15950), (200, 15980), (201, 15983), (203, 15992), (214, 16031), (220, 16046), (225, 16070), (243, 16115), (255, 16157), (265, 16190), (268, 16199), (281, 16253), (295, 16307), (298, 16316), (302, 16340), (309,

16361), (330, 16466), (339, 16508), (489, 17030), (528, 17150), (542, 17195), (544, 17198), (545, 17201), (558, 17225), (574, 17270), (591, 17306), (615, 17345), (626, 17378), (674, 17492), (721, 17633), (726, 17657), (741, 17732), (752, 17798), (757, 17822), (762, 17840), (782, 17906), (802, 17960), (807, 17972), (812, 17987), (819, 18008), (823, 18020), (863, 18233), (871, 18269), (874, 18290), (875, 18293), (892, 18389), (899, 18437),

Gene: Wander\_25 Start: 15885, Stop: 18485, Start Num: 109

Candidate Starts for Wander\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (557, 17262), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Warrior24\_29 Start: 15894, Stop: 18083, Start Num: 179

Candidate Starts for Warrior24\_29:

(Start: 115 @15717 has 1 MA's), (Start: 117 @15726 has 5 MA's), (Start: 179 @15894 has 15 MA's), (269, 16137), (270, 16143), (290, 16212), (306, 16269), (341, 16413), (348, 16455), (353, 16476), (358, 16503), (359, 16506), (382, 16617), (385, 16635), (412, 16740), (425, 16788), (484, 16893), (513, 16953), (536, 17007), (555, 17043), (569, 17067), (577, 17076), (608, 17139), (616, 17160), (622, 17175), (629, 17199), (635, 17211), (659, 17265), (667, 17286), (680, 17316), (732, 17487), (734, 17508), (756, 17592), (867, 17895), (892, 18018), (894, 18030),

Gene: Watermelon\_26 Start: 17220, Stop: 19700, Start Num: 111

Candidate Starts for Watermelon\_26:

(Start: 111 @17220 has 200 MA's), (125, 17259), (144, 17322), (Start: 155 @17352 has 22 MA's), (176, 17394), (285, 17601), (291, 17619), (315, 17709), (329, 17772), (337, 17796), (339, 17808), (348, 17859), (460, 18243), (526, 18345), (537, 18384), (560, 18411), (569, 18435), (630, 18564), (671, 18663), (707, 18765), (710, 18786), (721, 18828), (741, 18927), (753, 18990), (818, 19209), (827, 19242), (855, 19413), (875, 19524), (888, 19611), (895, 19650), (897, 19665),

Gene: Watson\_27 Start: 15971, Stop: 18997, Start Num: 38

Candidate Starts for Watson\_27:

(30, 15917), (Start: 38 @15971 has 82 MA's), (55, 16085), (68, 16151), (69, 16154), (73, 16163), (86, 16199), (96, 16250), (124, 16322), (Start: 143 @16394 has 5 MA's), (190, 16514), (193, 16517), (214, 16586), (226, 16631), (258, 16724), (264, 16733), (270, 16751), (279, 16778), (295, 16841), (299, 16853), (308, 16886), (312, 16904), (325, 16970), (327, 16973), (329, 16979), (334, 16994), (337, 17003), (339, 17015), (341, 17024), (359, 17117), (383, 17234), (384, 17237), (391, 17264), (393, 17276), (405, 17330), (410, 17351), (427, 17417), (436, 17444), (479, 17549), (491, 17597), (507, 17642), (525, 17690), (535, 17732), (538, 17741), (552, 17771), (553, 17774), (559, 17786), (582, 17843), (585, 17849), (606, 17870), (607, 17873), (658, 18011), (664, 18023), (689, 18083), (710, 18143), (718, 18173), (719, 18176), (721, 18185), (741, 18278), (757, 18368), (776, 18434), (780, 18446), (800, 18488), (817, 18551), (836, 18608), (844, 18677), (851, 18713), (867, 18794), (892, 18929),

Gene: WeiHuaDA\_32 Start: 18881, Stop: 21418, Start Num: 107

Candidate Starts for WeiHuaDA\_32:

(Start: 107 @18881 has 89 MA's), (144, 18992), (172, 19061), (247, 19226), (249, 19232), (256, 19253), (258, 19262), (268, 19283), (279, 19316), (281, 19325), (286, 19349), (294, 19376), (299, 19391), (311, 19433), (312, 19442), (322, 19490), (325, 19508), (334, 19532), (344, 19583), (345, 19586), (383, 19772), (393, 19814), (408, 19880), (410, 19889), (427, 19955), (440, 19994), (479, 20087), (507, 20180), (512, 20195), (546, 20300), (568, 20345), (585, 20387), (586, 20390), (607,

20411), (608, 20417), (613, 20432), (658, 20549), (673, 20582), (685, 20603), (718, 20711), (722, 20726), (727, 20756), (730, 20768), (737, 20804), (801, 20975), (804, 20984), (810, 20993), (845, 21104), (850, 21134), (865, 21215), (866, 21218),

Gene: Whabigail7\_28 Start: 17106, Stop: 19649, Start Num: 107

Candidate Starts for Whabigail7\_28:

(Start: 107 @17106 has 89 MA's), (172, 17286), (173, 17289), (247, 17457), (249, 17463), (256, 17484), (258, 17493), (264, 17502), (268, 17514), (282, 17559), (286, 17580), (299, 17622), (312, 17673), (321, 17718), (322, 17721), (325, 17739), (337, 17772), (339, 17784), (341, 17793), (344, 17814), (345, 17817), (383, 18003), (393, 18045), (394, 18054), (396, 18063), (410, 18120), (427, 18186), (440, 18225), (479, 18318), (488, 18354), (507, 18411), (529, 18477), (538, 18510), (544, 18525), (546, 18531), (552, 18540), (559, 18555), (568, 18576), (575, 18597), (585, 18618), (586, 18621), (606, 18639), (607, 18642), (623, 18693), (649, 18750), (654, 18768), (664, 18792), (689, 18852), (703, 18879), (718, 18942), (727, 18987), (756, 19125), (804, 19215), (810, 19224), (830, 19248), (845, 19335), (850, 19365), (866, 19449),

Gene: Wheeler\_24 Start: 16677, Stop: 19154, Start Num: 112

Candidate Starts for Wheeler\_24:

(Start: 112 @16677 has 30 MA's), (Start: 117 @16692 has 5 MA's), (144, 16776), (145, 16782), (Start: 155 @16806 has 22 MA's), (176, 16848), (285, 17055), (291, 17073), (315, 17163), (329, 17226), (337, 17250), (339, 17262), (348, 17313), (460, 17697), (526, 17799), (537, 17838), (560, 17865), (569, 17889), (671, 18117), (707, 18219), (710, 18240), (714, 18252), (721, 18282), (741, 18381), (753, 18444), (818, 18663), (827, 18696), (875, 18978), (888, 19065), (895, 19104), (897, 19119),

Gene: WideWale\_28 Start: 17115, Stop: 19622, Start Num: 107

Candidate Starts for WideWale\_28:

(Start: 107 @17115 has 89 MA's), (144, 17226), (167, 17283), (256, 17469), (279, 17532), (286, 17565), (288, 17571), (334, 17751), (337, 17760), (341, 17781), (344, 17802), (345, 17805), (348, 17823), (360, 17883), (383, 17991), (393, 18033), (405, 18087), (410, 18108), (426, 18171), (427, 18174), (434, 18192), (440, 18213), (507, 18399), (512, 18414), (517, 18441), (538, 18498), (544, 18513), (546, 18519), (552, 18528), (555, 18534), (568, 18564), (575, 18585), (607, 18630), (608, 18636), (620, 18669), (628, 18696), (658, 18768), (664, 18780), (689, 18840), (703, 18867), (718, 18930), (727, 18975), (730, 18987), (737, 19023), (746, 19059), (752, 19092), (786, 19155), (800, 19179), (846, 19323), (866, 19422), (882, 19509), (902, 19608),

Gene: Wiks\_29 Start: 16715, Stop: 18931, Start Num: 116

Candidate Starts for Wiks\_29:

(93, 16670), (Start: 116 @16715 has 41 MA's), (160, 16826), (223, 16982), (270, 17129), (274, 17141), (314, 17288), (315, 17291), (321, 17324), (343, 17414), (357, 17483), (376, 17558), (412, 17726), (590, 17984), (618, 18029), (680, 18137), (710, 18200), (721, 18242), (745, 18341), (749, 18362), (756, 18404), (791, 18455), (805, 18482), (839, 18563), (850, 18653),

Gene: Wilbur\_25 Start: 16026, Stop: 18485, Start Num: 155

Candidate Starts for Wilbur\_25:

(Start: 109 @15885 has 113 MA's), (Start: 155 @16026 has 22 MA's), (Start: 163 @16044 has 10 MA's), (240, 16251), (252, 16290), (258, 16320), (291, 16437), (299, 16464), (315, 16527), (329, 16590), (341, 16635), (348, 16677), (365, 16761), (457, 17028), (481, 17079), (499, 17124), (530, 17202), (542, 17235), (545, 17241), (591, 17337), (606, 17346), (626, 17409), (636, 17430), (647, 17454), (673, 17520), (700, 17574), (710, 17622), (726, 17688), (757, 17853), (762, 17871), (807, 17997), (859, 18249), (860, 18252), (863, 18261), (875, 18321), (892, 18417), (899, 18465),

Gene: Wile\_25 Start: 15892, Stop: 18492, Start Num: 109

Candidate Starts for Wile\_25:

(Start: 109 @15892 has 113 MA's), (246, 16282), (283, 16411), (291, 16444), (299, 16471), (315, 16534), (341, 16642), (370, 16777), (420, 16975), (471, 17062), (481, 17086), (499, 17131), (542, 17242), (545, 17248), (626, 17416), (649, 17464), (670, 17521), (700, 17581), (710, 17629), (719, 17662), (726, 17695), (729, 17713), (757, 17860), (762, 17878), (807, 18004), (835, 18094), (848, 18193), (860, 18259), (863, 18268), (875, 18328), (877, 18337), (883, 18373), (886, 18391), (892, 18424), (899, 18472),

Gene: Wilkins\_24 Start: 16077, Stop: 18692, Start Num: 111

Candidate Starts for Wilkins\_24:

(Start: 111 @16077 has 200 MA's), (125, 16116), (144, 16179), (145, 16185), (Start: 155 @16209 has 22 MA's), (250, 16317), (299, 16488), (314, 16548), (315, 16551), (342, 16674), (348, 16704), (361, 16767), (412, 16986), (437, 17058), (459, 17106), (482, 17151), (562, 17376), (565, 17385), (579, 17421), (584, 17436), (598, 17463), (671, 17667), (708, 17781), (710, 17790), (715, 17811), (721, 17832), (741, 17931), (750, 17973), (751, 17976), (788, 18105), (815, 18189), (827, 18234), (855, 18405), (875, 18516), (888, 18603), (895, 18642), (897, 18657),

Gene: Wizard007\_25 Start: 15887, Stop: 18487, Start Num: 109

Candidate Starts for Wizard007\_25:

(Start: 109 @15887 has 113 MA's), (Start: 155 @16028 has 22 MA's), (Start: 163 @16046 has 10 MA's), (240, 16253), (252, 16292), (258, 16322), (291, 16439), (299, 16466), (315, 16529), (329, 16592), (341, 16637), (348, 16679), (365, 16763), (457, 17030), (481, 17081), (499, 17126), (530, 17204), (545, 17243), (557, 17264), (626, 17411), (636, 17432), (647, 17456), (670, 17516), (673, 17522), (674, 17525), (700, 17576), (710, 17624), (726, 17690), (757, 17855), (762, 17873), (807, 17999), (859, 18251), (860, 18254), (863, 18263), (875, 18323), (892, 18419), (899, 18467),

Gene: Wooldri\_29 Start: 15890, Stop: 18916, Start Num: 38

Candidate Starts for Wooldri\_29:

(30, 15836), (Start: 38 @15890 has 82 MA's), (55, 16004), (68, 16070), (69, 16073), (73, 16082), (86, 16118), (96, 16169), (124, 16241), (Start: 143 @16313 has 5 MA's), (190, 16433), (193, 16436), (214, 16505), (226, 16550), (258, 16643), (264, 16652), (270, 16670), (279, 16697), (295, 16760), (299, 16772), (308, 16805), (312, 16823), (325, 16889), (327, 16892), (329, 16898), (334, 16913), (337, 16922), (339, 16934), (341, 16943), (355, 17021), (359, 17036), (383, 17153), (384, 17156), (391, 17183), (393, 17195), (405, 17249), (410, 17270), (427, 17336), (440, 17375), (479, 17468), (491, 17516), (507, 17561), (525, 17609), (535, 17651), (538, 17660), (552, 17690), (553, 17693), (559, 17705), (582, 17762), (585, 17768), (606, 17789), (607, 17792), (658, 17930), (664, 17942), (689, 18002), (709, 18059), (741, 18197), (744, 18218), (749, 18242), (757, 18287), (762, 18305), (776, 18353), (780, 18365), (800, 18407), (817, 18470), (836, 18527), (844, 18596), (851, 18632), (867, 18713), (892, 18848),

Gene: WunderPhul\_29 Start: 16715, Stop: 18931, Start Num: 116

Candidate Starts for WunderPhul\_29:

(93, 16670), (Start: 116 @16715 has 41 MA's), (160, 16826), (223, 16982), (270, 17129), (274, 17141), (314, 17288), (315, 17291), (321, 17324), (343, 17414), (357, 17483), (376, 17558), (412, 17726), (590, 17984), (618, 18029), (680, 18137), (710, 18200), (721, 18242), (745, 18341), (749, 18362), (756, 18404), (791, 18455), (805, 18482), (839, 18563), (850, 18653),

Gene: Xena\_25 Start: 15879, Stop: 18479, Start Num: 109

Candidate Starts for Xena\_25:

(Start: 109 @15879 has 113 MA's), (246, 16269), (283, 16398), (291, 16431), (299, 16458), (315, 16521), (341, 16629), (370, 16764), (420, 16962), (471, 17049), (481, 17073), (499, 17118), (542, 17229), (545, 17235), (626, 17403), (649, 17451), (670, 17508), (700, 17568), (710, 17616), (719, 17649), (726, 17682), (729, 17700), (757, 17847), (762, 17865), (807, 17991), (835, 18081), (848, 18180), (860, 18246), (863, 18255), (875, 18315), (877, 18324), (883, 18360), (886, 18378), (892,

18411), (899, 18459),

Gene: XianYue\_26 Start: 16577, Stop: 19105, Start Num: 107

Candidate Starts for XianYue\_26:

(Start: 107 @16577 has 89 MA's), (170, 16754), (172, 16757), (173, 16760), (202, 16808), (249, 16928), (256, 16949), (258, 16958), (264, 16967), (279, 17012), (286, 17045), (294, 17072), (299, 17087), (311, 17129), (312, 17138), (316, 17159), (322, 17186), (325, 17204), (337, 17237), (341, 17258), (344, 17279), (345, 17282), (383, 17468), (393, 17510), (394, 17519), (405, 17564), (410, 17585), (427, 17651), (440, 17690), (486, 17810), (490, 17828), (507, 17876), (511, 17888), (512, 17891), (546, 17996), (555, 18011), (559, 18020), (574, 18056), (585, 18083), (586, 18086), (606, 18104), (607, 18107), (711, 18380), (718, 18407), (722, 18422), (727, 18452), (730, 18464), (737, 18500), (749, 18548), (761, 18602), (795, 18653), (810, 18686), (830, 18710), (850, 18827), (866, 18905), (902, 19091),

Gene: Yecey3\_26 Start: 15697, Stop: 18618, Start Num: 52

Candidate Starts for Yecey3\_26:

(Start: 34 @15568 has 1 MA's), (Start: 52 @15697 has 33 MA's), (55, 15709), (94, 15868), (106, 15910), (114, 15931), (165, 16099), (190, 16153), (193, 16156), (230, 16285), (256, 16360), (258, 16369), (260, 16372), (264, 16378), (266, 16384), (282, 16435), (299, 16498), (303, 16519), (307, 16528), (309, 16537), (312, 16549), (321, 16594), (322, 16597), (325, 16615), (327, 16618), (334, 16639), (341, 16669), (342, 16681), (352, 16729), (359, 16762), (361, 16774), (383, 16879), (395, 16936), (396, 16939), (405, 16975), (410, 16996), (412, 17005), (414, 17017), (427, 17062), (440, 17101), (465, 17164), (489, 17233), (523, 17332), (544, 17401), (546, 17407), (568, 17452), (574, 17467), (575, 17473), (606, 17515), (607, 17518), (615, 17545), (624, 17572), (676, 17698), (685, 17710), (718, 17818), (725, 17851), (727, 17863), (730, 17875), (737, 17911), (738, 17914), (752, 17980), (756, 18001), (757, 18004), (759, 18013), (767, 18043), (800, 18124), (805, 18145), (822, 18199), (831, 18226), (843, 18298), (844, 18304), (860, 18391), (864, 18403), (866, 18415), (879, 18490), (889, 18526), (894, 18556),

Gene: YoSam321\_25 Start: 15882, Stop: 18482, Start Num: 109

Candidate Starts for YoSam321\_25:

(Start: 109 @15882 has 113 MA's), (Start: 155 @16023 has 22 MA's), (Start: 163 @16041 has 10 MA's), (240, 16248), (252, 16287), (258, 16317), (291, 16434), (299, 16461), (315, 16524), (329, 16587), (341, 16632), (348, 16674), (365, 16758), (457, 17025), (481, 17076), (499, 17121), (530, 17199), (545, 17238), (626, 17406), (636, 17427), (647, 17451), (670, 17511), (673, 17517), (700, 17571), (710, 17619), (726, 17685), (757, 17850), (762, 17868), (807, 17994), (859, 18246), (860, 18249), (863, 18258), (875, 18318), (892, 18414), (899, 18462),

Gene: Yokurt\_29 Start: 16715, Stop: 18931, Start Num: 116

Candidate Starts for Yokurt\_29:

(93, 16670), (Start: 116 @16715 has 41 MA's), (160, 16826), (223, 16982), (270, 17129), (274, 17141), (314, 17288), (315, 17291), (321, 17324), (343, 17414), (357, 17483), (376, 17558), (412, 17726), (590, 17984), (618, 18029), (680, 18137), (710, 18200), (721, 18242), (745, 18341), (749, 18362), (756, 18404), (791, 18455), (805, 18482), (839, 18563), (850, 18653),

Gene: Zaka\_29 Start: 16715, Stop: 18931, Start Num: 116

Candidate Starts for Zaka\_29:

(93, 16670), (Start: 116 @16715 has 41 MA's), (160, 16826), (223, 16982), (270, 17129), (274, 17141), (314, 17288), (315, 17291), (321, 17324), (343, 17414), (357, 17483), (376, 17558), (412, 17726), (590, 17984), (618, 18029), (680, 18137), (710, 18200), (721, 18242), (745, 18341), (749, 18362), (756, 18404), (791, 18455), (805, 18482), (839, 18563), (850, 18653),

Gene: Zeeculate\_23 Start: 16356, Stop: 19016, Start Num: 111



Candidate Starts for Zeeculate\_23:

(Start: 111 @16356 has 200 MA's), (125, 16395), (144, 16458), (Start: 155 @16488 has 22 MA's), (176, 16530), (258, 16641), (270, 16674), (315, 16839), (329, 16902), (341, 16947), (346, 16971), (361, 17046), (364, 17058), (451, 17379), (565, 17709), (584, 17760), (598, 17787), (671, 17991), (708, 18105), (710, 18114), (715, 18135), (721, 18156), (741, 18255), (750, 18297), (751, 18300), (788, 18429), (815, 18513), (827, 18558), (875, 18840), (888, 18927), (895, 18966),

Gene: Zephyr\_24 Start: 16453, Stop: 18933, Start Num: 111

Candidate Starts for Zephyr\_24:

(Start: 111 @16453 has 200 MA's), (125, 16492), (144, 16555), (Start: 155 @16585 has 22 MA's), (176, 16627), (285, 16834), (291, 16852), (315, 16942), (329, 17005), (337, 17029), (339, 17041), (348, 17092), (460, 17476), (526, 17578), (537, 17617), (555, 17632), (560, 17644), (569, 17668), (630, 17797), (671, 17896), (707, 17998), (710, 18019), (721, 18061), (741, 18160), (753, 18223), (777, 18313), (818, 18442), (827, 18475), (875, 18757), (885, 18823), (888, 18844), (895, 18883), (897, 18898),

Gene: Zetzy\_26 Start: 15513, Stop: 18539, Start Num: 38

Candidate Starts for Zetzy\_26:

(30, 15459), (Start: 38 @15513 has 82 MA's), (55, 15627), (68, 15693), (69, 15696), (73, 15705), (86, 15741), (96, 15792), (124, 15864), (Start: 143 @15936 has 5 MA's), (190, 16056), (193, 16059), (214, 16128), (226, 16173), (258, 16266), (264, 16275), (270, 16293), (279, 16320), (295, 16383), (299, 16395), (308, 16428), (312, 16446), (325, 16512), (327, 16515), (329, 16521), (334, 16536), (339, 16557), (341, 16566), (359, 16659), (383, 16776), (384, 16779), (391, 16806), (393, 16818), (405, 16872), (410, 16893), (427, 16959), (440, 16998), (479, 17091), (491, 17139), (507, 17184), (512, 17199), (535, 17274), (538, 17283), (559, 17328), (575, 17370), (606, 17412), (617, 17445), (658, 17553), (689, 17625), (710, 17685), (718, 17715), (719, 17718), (721, 17727), (757, 17910), (776, 17976), (780, 17988), (800, 18030), (817, 18093), (836, 18150), (844, 18219), (851, 18255), (867, 18336), (892, 18471), (894, 18483),

Gene: Zeuska\_25 Start: 16887, Stop: 19367, Start Num: 111

Candidate Starts for Zeuska\_25:

(Start: 111 @16887 has 200 MA's), (125, 16926), (144, 16989), (Start: 155 @17019 has 22 MA's), (176, 17061), (285, 17268), (291, 17286), (315, 17376), (329, 17439), (337, 17463), (339, 17475), (348, 17526), (460, 17910), (526, 18012), (537, 18051), (560, 18078), (569, 18102), (630, 18231), (671, 18330), (707, 18432), (710, 18453), (714, 18465), (721, 18495), (741, 18594), (753, 18657), (818, 18876), (827, 18909), (875, 19191), (888, 19278), (895, 19317), (897, 19332),

Gene: Zimmer\_28 Start: 18207, Stop: 21335, Start Num: 27

Candidate Starts for Zimmer\_28:

(7, 17961), (22, 18177), (Start: 27 @18207 has 5 MA's), (Start: 52 @18384 has 33 MA's), (55, 18396), (89, 18534), (130, 18681), (153, 18744), (165, 18786), (190, 18840), (193, 18843), (256, 19044), (258, 19053), (260, 19056), (279, 19107), (286, 19140), (297, 19176), (312, 19233), (321, 19278), (322, 19281), (325, 19299), (327, 19302), (334, 19323), (341, 19353), (351, 19404), (352, 19413), (395, 19620), (402, 19644), (405, 19659), (406, 19662), (410, 19680), (412, 19689), (414, 19701), (426, 19743), (427, 19746), (438, 19779), (440, 19785), (465, 19848), (507, 19971), (546, 20091), (566, 20130), (568, 20136), (574, 20151), (585, 20178), (586, 20181), (606, 20199), (608, 20208), (610, 20214), (626, 20262), (658, 20340), (689, 20412), (690, 20415), (695, 20427), (718, 20502), (721, 20514), (726, 20538), (727, 20547), (757, 20703), (766, 20739), (768, 20748), (800, 20823), (822, 20904), (823, 20907), (824, 20913), (851, 21060), (859, 21108), (860, 21111), (866, 21135), (894, 21276),

Gene: Zolita\_21 Start: 15350, Stop: 18763, Start Num: 1

Candidate Starts for Zolita\_21:

(Start: 1 @15350 has 30 MA's), (3, 15410), (12, 15563), (14, 15602), (Start: 34 @15788 has 1 MA's), (73, 16016), (78, 16028), (83, 16040), (120, 16172), (Start: 141 @16250 has 1 MA's), (154, 16280), (173, 16337), (227, 16484), (229, 16490), (233, 16496), (270, 16622), (274, 16634), (315, 16784), (322, 16820), (329, 16850), (334, 16865), (341, 16895), (342, 16907), (347, 16931), (361, 17000), (379, 17066), (412, 17222), (428, 17291), (429, 17294), (441, 17321), (449, 17345), (514, 17483), (522, 17504), (540, 17549), (563, 17591), (639, 17783), (652, 17813), (660, 17837), (664, 17849), (672, 17870), (683, 17912), (705, 17999), (710, 18035), (715, 18056), (721, 18077), (736, 18155), (745, 18176), (749, 18197), (752, 18218), (756, 18239), (765, 18263), (808, 18326), (842, 18419), (845, 18437), (859, 18518), (863, 18530), (865, 18542), (867, 18551), (878, 18605), (891, 18689), (892, 18698),

Gene: Zulu\_29 Start: 16714, Stop: 18930, Start Num: 116

Candidate Starts for Zulu\_29:

(93, 16669), (Start: 116 @16714 has 41 MA's), (160, 16825), (223, 16981), (270, 17128), (274, 17140), (314, 17287), (315, 17290), (321, 17323), (343, 17413), (357, 17482), (376, 17557), (412, 17725), (590, 17983), (618, 18028), (680, 18136), (710, 18199), (721, 18241), (745, 18340), (749, 18361), (756, 18403), (791, 18454), (805, 18481), (839, 18562), (850, 18652),