

Zoomed Pham 283572

1. AikoCarson_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
2. Agatha_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
3. Dre3_16 + 1	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
4. Bavliard_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
5. McDazzle_15 + 1	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
6. Nodigi_18	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
7. Cozz_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
8. Quasar_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
9. ChocoMun_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
10. Elliott_16 + 1	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
11. SteamedFlans_18	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
12. Feastonyeel_15 + 1	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
13. Amok_15	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
14. Mayweather_17	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
15. GIKK_19	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
16. CocoaPuff_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
17. Bubble_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
18. Vine_17	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
19. Elmal_17 + 1	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
20. SweatNite_18	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
21. Nina_17	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
22. Ona_18	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
23. CherryonLi_17	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
24. Lauer_15	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
25. ButtmiKdreams_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
26. Yummy_17 + 1	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
27. Tois_18	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
28. RSchmalz_17	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
29. Button_17	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
30. Hexbug_18	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
31. Chickentender_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
32. SheckWes_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
33. Zareel_18	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
34. Jamzy_19	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
35. Carsonalex_17	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
36. Balloona_15	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
37. Starburst_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
38. Biskit_17	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
39. Survivors_18	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
40. RanchParty_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
41. GoldHunter_17	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
42. SummitAcademy_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
43. PotPie_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
44. Munkgeer_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
45. HippoPoi_18	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
46. MAnor_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
47. Cleo_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
48. Typhonon_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
49. Nibbles_18	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358
50. Sopesplan_16	35	38	87	98	108	112	121	136	141	151	168	173	188	198	208	214	238	248	258	268	278	288	301	315	328	338	348	358

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51: Troje_16	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
52: RADical	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
53: RedBaron	35	38	150	87	89	100	104	119	138	141	163	188	198	200	212	232	239	241	246	252	257	260	267	280
54: Pons_16	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
55: Yucky_16	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
56: Socotra_17	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
57: BillDoor_18	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
58: Mavan_18	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
59: MScam_18	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
60: Emalyn_15	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
61: GTE2_14	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
62: Margaret	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
63: Wolfwood	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
64: Burnsey_18	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
65: Azira_18	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
66: Blondies_1	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
67: Fribss	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
68: Pirog	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
69: Wood	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
70: Malac	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
71: Murph	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
72: Winte	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
73: Capri	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
74: Pipp	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
75: Wisp	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
76: Mell	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
77: Gang	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
78: Frok	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
79: Petra	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
80: Zigg	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
81: Sag	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
82: Pim	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
83: Card	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
84: Wain	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
85: Blig	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
86: Willa	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
87: Chea	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
88: Arch	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
89: Fitt	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
90: Jara	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
91: Guad	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
92: Zila	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
93: Feni	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
94: JUU	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
95: Kapp	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
96: Lysi	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
97: Ut	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
98: PCo	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
99: Zar	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			
100: Fai	35	38	87	89	100	104	121	138	163	188	205	224	232	239	241	246	252	257	260	267	280			

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 283572 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283572 has 146 members, 26 are drafts.

Phages represented in each track:

- Track 1 : AikoCarson_15
- Track 2 : Agatha_16
- Track 3 : Dre3_16, Gibbous_16
- Track 4 : Bavidard_16
- Track 5 : McDazzle_15, ElJefes_15
- Track 6 : Nodigi_18
- Track 7 : Cozz_16
- Track 8 : Quasar_16
- Track 9 : ChocoMunchkin_16, AndPeggy_15, Yarn_15, CanesSauce_16, Caramellatte_16
- Track 10 : Elliott_16, PsychoKiller_16
- Track 11 : SteamedHams_18
- Track 12 : Feastonyeet_15, BigChungus_15
- Track 13 : Amok_15
- Track 14 : Mayweather_17
- Track 15 : GiKK_19
- Track 16 : CocoaPuff_15
- Track 17 : Bubble_16
- Track 18 : Vine_17
- Track 19 : Elinal_17, KayGee_16
- Track 20 : SweatNTears_18
- Track 21 : Nina_17
- Track 22 : Orla_18
- Track 23 : CherryonLim_17
- Track 24 : Lauer_15
- Track 25 : Buttrmilkdreams_16
- Track 26 : Yummy_17, Horseradish_17
- Track 27 : Tolls_18
- Track 28 : RSchmailzl_17
- Track 29 : Button_17
- Track 30 : Hexbug_18
- Track 31 : ChickenTender_18
- Track 32 : SheckWes_15
- Track 33 : Zareef_18
- Track 34 : Jamzy_19
- Track 35 : Carsonalex_17
- Track 36 : Balloona_15

- Track 37 : Starburst_17
- Track 38 : Biskit_17, SketchMex_15
- Track 39 : Survivors_18
- Track 40 : RanchParmCat_19
- Track 41 : GoldHunter_17
- Track 42 : SummitAcademy_15
- Track 43 : PotPie_16
- Track 44 : MunkgeeRoachy_16
- Track 45 : HippoPololi_18
- Track 46 : MAnor_16
- Track 47 : Cleo_16
- Track 48 : Typhonomachy_16
- Track 49 : Nibbles_18
- Track 50 : Sopespian_16
- Track 51 : Troje_16
- Track 52 : RADical_17
- Track 53 : RedBaron_17
- Track 54 : Pons_16
- Track 55 : Yucky_16
- Track 56 : Socotra_17, Axym_16
- Track 57 : BillDoor_18
- Track 58 : MaVan_18
- Track 59 : MScarn_18
- Track 60 : Emalyn_15
- Track 61 : GTE2_14
- Track 62 : Margaret_19
- Track 63 : Wolfwood_20
- Track 64 : Burnsey_16
- Track 65 : Azira_18
- Track 66 : Blondies_17
- Track 67 : Fribs8_17
- Track 68 : PhrostedPhlake_18
- Track 69 : Wocket_18
- Track 70 : Malachai_18, Begonia_18
- Track 71 : Murp_17
- Track 72 : MintFen_17, Melba_17, BlingBling_17, Barco_17
- Track 73 : CaptainKirk2_17, Delian_17, UmaThurman_17
- Track 74 : Pipp_17
- Track 75 : Wisp_16
- Track 76 : Mellie_16
- Track 77 : Gambino_19, Azula_19, MissRona_19, Blueberry_19
- Track 78 : Frokostdame_17
- Track 79 : Petra_19
- Track 80 : ZiggyZoo_16, Obliviate_16
- Track 81 : Samba_17
- Track 82 : PrincePatrick_17
- Track 83 : CarolAnn_17
- Track 84 : Walrus_18
- Track 85 : Blino_17
- Track 86 : William_17
- Track 87 : CheeseSpider_20
- Track 88 : Archis_18
- Track 89 : Hitter_17

- Track 90 : Jalammah_19
- Track 91 : Guacamole_17, JasperJr_17
- Track 92 : Zilla_17
- Track 93 : Fenry_16
- Track 94 : JuJu_17
- Track 95 : KappaFarmDelta_17
- Track 96 : Lysidious_18
- Track 97 : Utz_17
- Track 98 : PCoral7_17
- Track 99 : Zarbodnamra_17
- Track 100 : Fairfaxidum_17
- Track 101 : Toast_17
- Track 102 : BotCity_18, BENtherdunthat_18, Asapag_18
- Track 103 : Budski_18
- Track 104 : Malisha_19
- Track 105 : Periwinkle_20
- Track 106 : Lutum_18, Kenna_17
- Track 107 : Whitney_19
- Track 108 : CheeseTouch_18
- Track 109 : Leroy_18
- Track 110 : Horus_18
- Track 111 : Getalong_19
- Track 112 : LitninMcQueen_18, Phabuloso_18
- Track 113 : ShawBrad_18
- Track 114 : Frickyeah_18
- Track 115 : Kamaru_18, Holliday_18
- Track 116 : Phistory_19
- Track 117 : Spooky_18
- Track 118 : Squiddly_20

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

The start number called the most often in the published annotations is 4, it was called in 37 of the 120 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archis_18, Azula_19, Barco_17, Begonia_18, BlingBling_17, Blino_17, Blueberry_19, CaptainKirk2_17, CarolAnn_17, Delian_17, Fairfaxidum_17, Fenry_16, Gambino_19, Guacamole_17, Hitter_17, Jalammah_19, JasperJr_17, JuJu_17, KappaFarmDelta_17, Lysidious_18, Malachai_18, Melba_17, Mellie_16, MintFen_17, MissRona_19, Murp_17, Obliviate_16, PCoral7_17, PhrostedPhlake_18, PrincePatrick_17, Samba_17, UmaThurman_17, Utz_17, William_17, Wocket_18, Zarbodnamra_17, ZiggyZoo_16,

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

- CheeseSpider_20, Frokostdame_17, Petra_19, Pipp_17, Toast_17, Walrus_18, Wisp_16, Zilla_17,

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

- Agatha_16, AikoCarson_15, Amok_15, AndPeggy_15, Asapag_18, Axym_16, Azira_18, BENtherdunthat_18, Balloona_15, Bavilard_16, BigChungus_15, BillDoor_18, Biskit_17, Blondies_17, BotCity_18, Bubble_16, Budski_18, Burnsey_16, Button_17, Buttrmilkdreams_16, CanesSauce_16, CaramelLatte_16, Carsonalex_17, CheeseTouch_18, CherryonLim_17, ChickenTender_18, ChocoMunchkin_16, Cleo_16, CocoaPuff_15, Cozz_16, Dre3_16, ElJefes_15, Elinal_17, Elliott_16, Emalyn_15, Feastonyeet_15, Fribs8_17, Frickyeah_18, GTE2_14, Getalong_19, GiKK_19, Gibbous_16, GoldHunter_17, Hexbug_18, HippoPololi_18, Holliday_18, Horseradish_17, Horus_18, Jamzy_19, Kamaru_18, KayGee_16, Kenna_17, Lauer_15, Leroy_18, LitninMcQueen_18, Lutum_18, MAnor_16, MScarn_18, MaVan_18, Malisha_19, Margaret_19, Mayweather_17, McDazzle_15, MunkgeeRoachy_16, Nibbles_18, Nina_17, Nodigi_18, Orla_18, Periwinkle_20, Phabuloso_18, Phistory_19, Pons_16, PotPie_16, PsychoKiller_16, Quasar_16, RADical_17, RSchmailzl_17, RanchParmCat_19, RedBaron_17, ShawBrad_18, SheckWes_15, SketchMex_15, Socotra_17, Sopespian_16, Spooky_18, Squiddly_20, Starburst_17, SteamedHams_18, SummitAcademy_15, Survivors_18, SweatNTears_18, Tolls_18, Troje_16, Typhonmarchy_16, Vine_17, Whitney_19, Wolfwood_20, Yarn_15, Yucky_16, Yummy_17, Zareef_18,

Summary by start number:

Start 2:

- Found in 1 of 146 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 120
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pipp_17 (CV),

Start 3:

- Found in 5 of 146 (3.4%) of genes in pham
- Manual Annotations of this start: 1 of 120
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Toast_17 (CV),

Start 4:

- Found in 45 of 146 (30.8%) of genes in pham
- Manual Annotations of this start: 37 of 120
- Called 82.2% of time when present
- Phage (with cluster) where this start called: Archis_18 (CV), Azula_19 (CV), Barco_17 (CV), Begonia_18 (CV), BlingBling_17 (CV), Blino_17 (CV), Blueberry_19 (CV), CaptainKirk2_17 (CV), CarolAnn_17 (CV), Delian_17 (CV), Fairfaxidum_17 (CV), Fenry_16 (CV), Gambino_19 (CV), Guacamole_17 (CV), Hitter_17 (CV), Jalammah_19 (CV), JasperJr_17 (CV), JuJu_17 (CV), KappaFarmDelta_17 (CV), Lysidious_18 (CV), Malachai_18 (CV), Melba_17 (CV), Mellie_16 (CV), MintFen_17 (CV), MissRona_19 (CV), Murp_17 (CV), Obliviate_16 (CV), PCoral7_17 (CV), PhrostedPhlake_18 (CV), PrincePatrick_17 (CV), Samba_17 (CV), UmaThurman_17 (CV), Utz_17 (CV), William_17 (CV), Wocket_18 (CV), Zarbodnamra_17 (CV), ZiggyZoo_16 (CV),

Start 6:

- Found in 36 of 146 (24.7%) of genes in pham
- Manual Annotations of this start: 1 of 120
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Frokostdame_17 (CV),

Start 7:

- Found in 37 of 146 (25.3%) of genes in pham
- Manual Annotations of this start: 1 of 120
- Called 5.4% of time when present
- Phage (with cluster) where this start called: Walrus_18 (CV), Zilla_17 (CV),

Start 9:

- Found in 40 of 146 (27.4%) of genes in pham
- Manual Annotations of this start: 1 of 120
- Called 7.5% of time when present
- Phage (with cluster) where this start called: CheeseSpider_20 (CV), Petra_19 (CV), Wisp_16 (CV),

Start 14:

- Found in 1 of 146 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 120
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phistory_19 (DN1),

Start 15:

- Found in 1 of 146 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 120
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Periwinkle_20 (DN1),

Start 16:

- Found in 15 of 146 (10.3%) of genes in pham
- Manual Annotations of this start: 11 of 120
- Called 73.3% of time when present
- Phage (with cluster) where this start called: Asapag_18 (DN1), BENtherdunthat_18 (DN1), BotCity_18 (DN), CheeseTouch_18 (DN1), Holliday_18 (DN1), Kamaru_18 (DN1), Kenna_17 (DN1), Leroy_18 (DN1), LitninMcQueen_18 (DN1), Lutum_18 (DN1), Phabuloso_18 (DN1),

Start 17:

- Found in 24 of 146 (16.4%) of genes in pham
- Manual Annotations of this start: 5 of 120
- Called 20.8% of time when present
- Phage (with cluster) where this start called: Getalong_19 (DN1), Malisha_19 (DN), Spooky_18 (DN2), Squiddly_20 (DN2), Whitney_19 (DN1),

Start 21:

- Found in 50 of 146 (34.2%) of genes in pham
- Manual Annotations of this start: 33 of 120
- Called 94.0% of time when present
- Phage (with cluster) where this start called: Agatha_16 (CT), Axym_16 (CT), Azira_18 (CT), Bavidard_16 (CT), BigChungus_15 (CT), Bubble_16 (CT), Burnsey_16 (CT), Carsonalex_17 (CT), CherryonLim_17 (CT), ChickenTender_18 (CT), Cleo_16 (CT), CocoaPuff_15 (CT), Cozz_16 (CT), Dre3_16 (CT), Elinal_17 (CT), Elliott_16 (CT), Feastonyeet_15 (CT), Fribs8_17 (CT), Gibbous_16 (CT), GoldHunter_17 (CT), HippoPololi_18 (CT), KayGee_16 (CT), Lauer_15 (CT), MAnor_16 (CT), MaVan_18 (CT), Mayweather_17 (CT), MunkgeeRoachy_16 (CT), Nibbles_18 (CT), Nina_17

(CT), Pons_16 (CT), PotPie_16 (CT), PsychoKiller_16 (CT), Quasar_16 (CT), RADical_17 (CT), RSchmailzl_17 (CT), RedBaron_17 (CT), SheckWes_15 (CT), Socotra_17 (CT), Sopespian_16 (CT), Starburst_17 (CT), SummitAcademy_15 (CT), Survivors_18 (CT), Typhonmarchy_16 (CT), Vine_17 (CT), Wolfwood_20 (CT), Yucky_16 (CT), Zareef_18 (CT),

Start 23:

- Found in 22 of 146 (15.1%) of genes in pham
- Manual Annotations of this start: 1 of 120
- Called 13.6% of time when present
- Phage (with cluster) where this start called: Frickyeah_18 (DN1), Horus_18 (DN1), ShawBrad_18 (DN1),

Start 33:

- Found in 20 of 146 (13.7%) of genes in pham
- Manual Annotations of this start: 1 of 120
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Budski_18 (DN),

Start 35:

- Found in 51 of 146 (34.9%) of genes in pham
- No Manual Annotations of this start.
- Called 5.9% of time when present
- Phage (with cluster) where this start called: Balloona_15 (CT), ElJefes_15 (CT), McDazzle_15 (CT),

Start 64:

- Found in 29 of 146 (19.9%) of genes in pham
- Manual Annotations of this start: 23 of 120
- Called 89.7% of time when present
- Phage (with cluster) where this start called: AikoCarson_15 (CT), Amok_15 (CT), AndPeggy_15 (CT), BillDoor_18 (CT), Biskit_17 (CT), Buttrmilkdreams_16 (CT), CanesSauce_16 (CT), CaramelLatte_16 (CT), ChocoMunchkin_16 (CT), Emalyn_15 (CT), GiKK_19 (CT), Hexbug_18 (CT), Horseradish_17 (CT), Jamzy_19 (CT), MScarn_18 (CT), Margaret_19 (CT), Nodigi_18 (CT), Orla_18 (CT), RanchParmCat_19 (CT), SketchMex_15 (CT), SteamedHams_18 (CT), SweatNTears_18 (CT), Tolls_18 (CT), Troje_16 (CT), Yarn_15 (CT), Yummy_17 (CT),

Start 68:

- Found in 28 of 146 (19.2%) of genes in pham
- Manual Annotations of this start: 2 of 120
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Blondies_17 (CT), Button_17 (CT),

Start 87:

- Found in 52 of 146 (35.6%) of genes in pham
- No Manual Annotations of this start.
- Called 1.9% of time when present
- Phage (with cluster) where this start called: GTE2_14 (CT),

Summary by clusters:

There are 5 clusters represented in this pham: DN, DN2, DN1, CV, CT,

Info for manual annotations of cluster CT:

- Start number 21 was manually annotated 33 times for cluster CT.
- Start number 64 was manually annotated 23 times for cluster CT.
- Start number 68 was manually annotated 2 times for cluster CT.

Info for manual annotations of cluster CV:

- Start number 2 was manually annotated 1 time for cluster CV.
- Start number 3 was manually annotated 1 time for cluster CV.
- Start number 4 was manually annotated 37 times for cluster CV.
- Start number 6 was manually annotated 1 time for cluster CV.
- Start number 7 was manually annotated 1 time for cluster CV.
- Start number 9 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster DN:

- Start number 16 was manually annotated 1 time for cluster DN.
- Start number 17 was manually annotated 1 time for cluster DN.
- Start number 33 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 14 was manually annotated 1 time for cluster DN1.
- Start number 15 was manually annotated 1 time for cluster DN1.
- Start number 16 was manually annotated 10 times for cluster DN1.
- Start number 17 was manually annotated 2 times for cluster DN1.
- Start number 23 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 17 was manually annotated 2 times for cluster DN2.

Gene Information:

Gene: Agatha_16 Start: 9629, Stop: 14767, Start Num: 21

Candidate Starts for Agatha_16:

(Start: 17 @9605 has 5 MA's), (Start: 21 @9629 has 33 MA's), (24, 9656), (35, 9785), (38, 9860), (60, 10013), (61, 10016), (74, 10112), (77, 10121), (82, 10151), (84, 10157), (86, 10172), (87, 10175), (91, 10196), (97, 10268), (100, 10289), (109, 10355), (111, 10376), (127, 10493), (152, 10655), (156, 10694), (165, 10769), (179, 10928), (183, 10940), (186, 10967), (191, 11012), (192, 11024), (204, 11114), (206, 11132), (208, 11153), (211, 11183), (217, 11207), (219, 11219), (222, 11258), (226, 11291), (238, 11393), (239, 11396), (243, 11420), (253, 11513), (255, 11528), (259, 11567), (270, 11663), (279, 11705), (286, 11735), (287, 11738), (297, 11846), (298, 11849), (301, 11900), (315, 11975), (324, 12077), (332, 12122), (337, 12143), (338, 12146), (339, 12149), (351, 12224), (359, 12257), (362, 12278), (366, 12308), (373, 12356), (374, 12362), (378, 12389), (398, 12524), (411, 12641), (414, 12674), (415, 12695), (416, 12698), (427, 12764), (428, 12770), (429, 12785), (443, 12905), (445, 12914), (455, 12998), (496, 13319), (519, 13538), (525, 13574), (550, 13787), (575, 13979), (581, 14027), (583, 14048), (596, 14156), (605, 14222), (607, 14240), (618, 14345), (624, 14375), (625, 14384), (629, 14414), (640, 14480), (643, 14528), (650, 14588), (659, 14675), (667, 14738),

Gene: AikoCarson_15 Start: 9357, Stop: 14072, Start Num: 64

Candidate Starts for AikoCarson_15:

(Start: 64 @9357 has 23 MA's), (Start: 68 @9384 has 2 MA's), (87, 9513), (96, 9600), (99, 9615), (103, 9660), (105, 9672), (109, 9690), (112, 9717), (124, 9789), (128, 9831), (129, 9846), (131, 9849), (137, 9873), (140, 9891), (143, 9909), (149, 9954), (150, 9963), (155, 9990), (159, 10023), (168, 10083), (171, 10122), (173, 10161), (175, 10176), (186, 10245), (190, 10272), (203, 10368), (205, 10386), (214, 10449), (237, 10617), (238, 10623), (252, 10737), (253, 10743), (255, 10758), (283, 10947), (287, 10968), (290, 10986), (291, 10995), (301, 11130), (315, 11205), (317, 11241), (320, 11280), (321, 11283), (324, 11307), (328, 11337), (332, 11352), (338, 11376), (347, 11415), (351, 11454), (353, 11460), (378, 11619), (410, 11868), (411, 11871), (414, 11904), (415, 11925), (427, 11994), (428, 12000), (437, 12099), (445, 12144), (455, 12231), (476, 12366), (496, 12558), (503, 12627), (506, 12651), (522, 12792), (547, 13005), (550, 13026), (557, 13083), (590, 13386), (595, 13443), (596, 13461), (605, 13527), (612, 13599), (618, 13650), (623, 13674), (624, 13680), (625, 13689), (629, 13719), (640, 13785), (643, 13833), (650, 13893), (660, 13983), (667, 14043),

Gene: Amok_15 Start: 9357, Stop: 14069, Start Num: 64

Candidate Starts for Amok_15:

(Start: 64 @9357 has 23 MA's), (Start: 68 @9384 has 2 MA's), (87, 9513), (96, 9600), (99, 9615), (103, 9660), (105, 9672), (109, 9690), (112, 9717), (124, 9789), (128, 9831), (129, 9846), (131, 9849), (137, 9873), (140, 9891), (143, 9909), (147, 9930), (149, 9954), (150, 9963), (155, 9990), (159, 10023), (160, 10032), (171, 10122), (173, 10161), (175, 10176), (186, 10245), (190, 10272), (203, 10368), (205, 10386), (214, 10449), (237, 10617), (238, 10623), (252, 10737), (253, 10743), (255, 10758), (283, 10947), (287, 10968), (290, 10986), (291, 10995), (301, 11130), (310, 11184), (315, 11205), (317, 11241), (320, 11280), (321, 11283), (324, 11307), (328, 11337), (332, 11352), (338, 11376), (347, 11415), (351, 11454), (353, 11460), (373, 11586), (377, 11616), (378, 11619), (380, 11637), (381, 11640), (410, 11868), (411, 11871), (414, 11904), (415, 11925), (427, 11994), (428, 12000), (455, 12231), (476, 12366), (496, 12558), (503, 12627), (506, 12651), (522, 12792), (547, 13005), (550, 13026), (557, 13080), (590, 13383), (595, 13440), (596, 13458), (605, 13524), (612, 13596), (618, 13647), (624, 13677), (625, 13686), (629, 13716), (640, 13782), (643, 13830), (650, 13890), (660, 13980), (667, 14040),

Gene: AndPeggy_15 Start: 9645, Stop: 14432, Start Num: 64

Candidate Starts for AndPeggy_15:

(Start: 64 @9645 has 23 MA's), (Start: 68 @9672 has 2 MA's), (79, 9750), (87, 9801), (96, 9888), (99, 9903), (105, 9960), (109, 9978), (112, 10005), (113, 10008), (124, 10077), (129, 10134), (140, 10179), (143, 10197), (149, 10242), (155, 10278), (159, 10311), (166, 10359), (167, 10362), (171, 10410), (173, 10449), (175, 10464), (203, 10656), (205, 10674), (218, 10758), (237, 10905), (242, 10932), (252, 11025), (253, 11031), (255, 11046), (259, 11085), (260, 11097), (268, 11163), (283, 11235), (286, 11253), (287, 11256), (291, 11283), (317, 11529), (324, 11595), (332, 11640), (337, 11661), (338, 11664), (339, 11667), (347, 11703), (351, 11742), (353, 11748), (359, 11775), (377, 11904), (378, 11907), (380, 11925), (399, 12048), (401, 12063), (414, 12192), (415, 12213), (423, 12255), (427, 12282), (428, 12288), (442, 12420), (445, 12432), (455, 12519), (460, 12561), (465, 12597), (485, 12723), (489, 12762), (501, 12891), (508, 12948), (512, 12990), (522, 13083), (529, 13158), (537, 13221), (547, 13302), (550, 13323), (568, 13500), (569, 13506), (587, 13725), (595, 13803), (596, 13821), (598, 13827), (605, 13887), (607, 13905), (610, 13938), (618, 14010), (625, 14049), (629, 14079), (640, 14145), (643, 14193), (650, 14253), (660, 14343), (667, 14403),

Gene: Archis_18 Start: 10485, Stop: 16007, Start Num: 4

Candidate Starts for Archis_18:

(Start: 4 @10485 has 37 MA's), (Start: 6 @10500 has 1 MA's), (Start: 7 @10506 has 1 MA's), (Start: 9 @10536 has 1 MA's), (10, 10545), (11, 10548), (13, 10590), (30, 10701), (31, 10722), (36, 10842), (41, 10884), (51, 10950), (53, 10968), (56, 10989), (57, 10992), (59, 11010), (65, 11034), (75, 11118), (77, 11124), (84, 11160), (86, 11175), (88, 11184), (108, 11352), (111, 11379), (127, 11496), (153, 11667), (156, 11697), (176, 11901), (183, 11946), (186, 11973), (187, 11985), (200, 12075), (204, 12120), (207, 12147), (210, 12177), (222, 12264), (223, 12267), (227, 12306), (236, 12390), (243, 12426),

(247, 12468), (252, 12513), (253, 12519), (254, 12531), (255, 12534), (261, 12588), (265, 12627), (267, 12648), (268, 12651), (270, 12669), (271, 12678), (276, 12696), (281, 12717), (283, 12723), (287, 12744), (291, 12771), (296, 12849), (331, 13038), (340, 13062), (344, 13074), (345, 13077), (355, 13092), (358, 13107), (359, 13110), (366, 13161), (377, 13242), (378, 13245), (384, 13278), (387, 13308), (389, 13332), (430, 13665), (436, 13713), (438, 13758), (440, 13761), (441, 13776), (448, 13821), (450, 13830), (452, 13839), (458, 13890), (467, 13962), (471, 13980), (475, 14001), (485, 14100), (486, 14103), (490, 14136), (493, 14202), (495, 14220), (497, 14235), (500, 14268), (505, 14319), (510, 14370), (515, 14418), (532, 14613), (533, 14616), (545, 14688), (546, 14691), (553, 14757), (554, 14760), (555, 14778), (559, 14838), (564, 14895), (566, 14913), (571, 14994), (572, 14997), (573, 15012), (588, 15171), (594, 15225), (597, 15291), (603, 15345), (604, 15357), (605, 15363), (609, 15393), (618, 15486), (623, 15510), (626, 15528), (629, 15552), (630, 15558), (633, 15579), (640, 15618), (651, 15759), (659, 15822), (662, 15840), (668, 15897), (671, 15990),

Gene: Asapag_18 Start: 9881, Stop: 15508, Start Num: 16

Candidate Starts for Asapag_18:

(Start: 16 @9881 has 11 MA's), (Start: 23 @9926 has 1 MA's), (25, 9947), (29, 9968), (32, 10013), (Start: 33 @10028 has 1 MA's), (37, 10112), (43, 10154), (44, 10166), (53, 10229), (55, 10244), (57, 10253), (59, 10271), (60, 10277), (70, 10325), (91, 10460), (107, 10610), (111, 10640), (156, 10964), (169, 11060), (176, 11168), (182, 11210), (183, 11213), (184, 11219), (186, 11240), (196, 11321), (204, 11387), (207, 11414), (208, 11426), (210, 11444), (211, 11456), (217, 11480), (219, 11492), (222, 11531), (223, 11534), (224, 11543), (227, 11573), (240, 11678), (243, 11693), (246, 11723), (247, 11735), (252, 11780), (253, 11786), (255, 11801), (258, 11831), (260, 11852), (261, 11855), (268, 11918), (271, 11945), (272, 11948), (273, 11951), (274, 11957), (280, 11981), (281, 11984), (283, 11990), (285, 11996), (287, 12011), (290, 12029), (292, 12074), (299, 12158), (300, 12164), (304, 12191), (317, 12284), (318, 12293), (324, 12350), (325, 12362), (333, 12398), (334, 12404), (344, 12446), (346, 12458), (351, 12497), (353, 12503), (354, 12506), (357, 12524), (358, 12527), (359, 12530), (363, 12554), (373, 12629), (379, 12668), (383, 12692), (387, 12725), (397, 12836), (400, 12869), (404, 12932), (408, 12968), (412, 12998), (421, 13076), (422, 13079), (423, 13088), (426, 13112), (435, 13193), (436, 13199), (438, 13244), (440, 13247), (441, 13262), (448, 13307), (450, 13316), (452, 13325), (453, 13328), (465, 13433), (473, 13481), (474, 13484), (475, 13487), (485, 13586), (486, 13589), (488, 13601), (497, 13718), (500, 13751), (505, 13802), (509, 13832), (513, 13892), (523, 13973), (526, 13994), (528, 14027), (536, 14099), (538, 14108), (554, 14222), (556, 14252), (558, 14261), (560, 14300), (561, 14303), (563, 14333), (564, 14354), (580, 14552), (585, 14615), (586, 14621), (593, 14672), (608, 14858), (616, 14945), (621, 14972), (622, 14975), (634, 15050), (638, 15074), (641, 15113), (644, 15149), (648, 15170), (654, 15257), (658, 15299), (663, 15332), (664, 15344), (669, 15422), (672, 15488),

Gene: Axym_16 Start: 9629, Stop: 14767, Start Num: 21

Candidate Starts for Axym_16:

(Start: 17 @9605 has 5 MA's), (Start: 21 @9629 has 33 MA's), (24, 9656), (35, 9785), (38, 9860), (60, 10013), (61, 10016), (74, 10112), (77, 10121), (82, 10151), (84, 10157), (86, 10172), (87, 10175), (91, 10196), (97, 10268), (100, 10289), (109, 10355), (111, 10376), (127, 10493), (152, 10655), (156, 10694), (165, 10769), (179, 10928), (183, 10940), (186, 10967), (191, 11012), (192, 11024), (204, 11114), (206, 11132), (208, 11153), (211, 11183), (217, 11207), (219, 11219), (222, 11258), (226, 11291), (238, 11393), (239, 11396), (243, 11420), (253, 11513), (255, 11528), (259, 11567), (265, 11621), (270, 11663), (272, 11675), (279, 11705), (286, 11735), (287, 11738), (297, 11846), (298, 11849), (301, 11900), (315, 11975), (322, 12065), (324, 12077), (332, 12122), (337, 12143), (338, 12146), (339, 12149), (351, 12224), (359, 12257), (362, 12278), (366, 12308), (373, 12356), (374, 12362), (378, 12389), (398, 12524), (411, 12641), (414, 12674), (415, 12695), (416, 12698), (427, 12764), (428, 12770), (429, 12785), (443, 12905), (445, 12914), (455, 12998), (496, 13319), (519, 13538), (525, 13574), (550, 13787), (575, 13979), (581, 14027), (583, 14048), (596, 14156), (605, 14222), (607, 14240), (613, 14300), (618, 14345), (624, 14375), (625, 14384), (629, 14414), (640, 14480), (643, 14528), (650, 14588), (659, 14675), (667, 14738),

Gene: Azira_18 Start: 10619, Stop: 15748, Start Num: 21

Candidate Starts for Azira_18:

(18, 10598), (Start: 21 @10619 has 33 MA's), (24, 10646), (35, 10775), (41, 10871), (48, 10922), (58, 10979), (62, 11012), (63, 11015), (74, 11102), (78, 11114), (86, 11162), (87, 11165), (88, 11171), (93, 11225), (94, 11231), (100, 11279), (109, 11345), (111, 11366), (165, 11759), (166, 11762), (173, 11864), (183, 11930), (184, 11936), (186, 11957), (210, 12161), (213, 12179), (215, 12185), (217, 12197), (219, 12209), (222, 12248), (224, 12260), (229, 12296), (233, 12353), (237, 12377), (238, 12383), (253, 12503), (255, 12518), (259, 12557), (267, 12632), (272, 12665), (276, 12680), (277, 12686), (278, 12692), (287, 12728), (297, 12836), (304, 12908), (314, 12962), (324, 13067), (332, 13112), (338, 13136), (349, 13196), (350, 13208), (351, 13214), (357, 13241), (358, 13244), (359, 13247), (372, 13340), (373, 13346), (380, 13397), (389, 13466), (395, 13499), (398, 13514), (399, 13520), (404, 13577), (406, 13589), (410, 13628), (411, 13631), (413, 13652), (414, 13664), (415, 13685), (416, 13688), (423, 13727), (424, 13739), (427, 13754), (443, 13895), (455, 13991), (463, 14057), (466, 14078), (469, 14084), (496, 14321), (500, 14351), (503, 14390), (518, 14525), (522, 14555), (525, 14576), (544, 14735), (547, 14768), (575, 14981), (579, 14999), (581, 15005), (596, 15134), (605, 15200), (610, 15251), (618, 15323), (625, 15362), (629, 15392), (635, 15425), (640, 15458), (649, 15530), (653, 15602), (659, 15656), (661, 15662), (667, 15719),

Gene: Azula_19 Start: 10619, Stop: 16108, Start Num: 4

Candidate Starts for Azula_19:

(Start: 4 @10619 has 37 MA's), (Start: 6 @10634 has 1 MA's), (Start: 7 @10640 has 1 MA's), (Start: 9 @10670 has 1 MA's), (10, 10679), (11, 10682), (13, 10724), (30, 10835), (31, 10856), (36, 10976), (41, 11018), (51, 11084), (53, 11102), (56, 11123), (57, 11126), (59, 11144), (65, 11168), (75, 11252), (84, 11294), (86, 11309), (88, 11318), (108, 11486), (111, 11513), (127, 11630), (153, 11801), (156, 11831), (176, 12035), (183, 12080), (186, 12107), (187, 12119), (189, 12131), (200, 12209), (204, 12254), (207, 12281), (210, 12311), (222, 12398), (223, 12401), (227, 12440), (233, 12503), (234, 12512), (243, 12560), (247, 12602), (252, 12647), (253, 12653), (255, 12668), (261, 12722), (265, 12761), (267, 12782), (268, 12785), (270, 12803), (276, 12830), (281, 12851), (283, 12857), (287, 12878), (290, 12896), (291, 12905), (327, 13178), (345, 13232), (358, 13262), (359, 13265), (366, 13316), (377, 13397), (378, 13400), (384, 13433), (387, 13463), (389, 13487), (400, 13553), (430, 13820), (436, 13868), (437, 13901), (438, 13913), (440, 13916), (448, 13976), (450, 13985), (452, 13994), (458, 14045), (467, 14117), (471, 14135), (475, 14156), (485, 14255), (486, 14258), (490, 14291), (493, 14357), (495, 14375), (497, 14390), (500, 14423), (505, 14474), (510, 14525), (517, 14594), (532, 14768), (533, 14771), (545, 14843), (546, 14846), (553, 14912), (554, 14915), (555, 14933), (559, 14993), (564, 15050), (566, 15068), (571, 15149), (572, 15152), (573, 15167), (588, 15338), (594, 15392), (601, 15464), (602, 15473), (606, 15509), (614, 15569), (615, 15587), (619, 15605), (628, 15650), (632, 15683), (646, 15794), (651, 15863), (659, 15926), (662, 15944), (671, 16094),

Gene: BENtherdunthat_18 Start: 9881, Stop: 15508, Start Num: 16

Candidate Starts for BENtherdunthat_18:

(Start: 16 @9881 has 11 MA's), (Start: 23 @9926 has 1 MA's), (25, 9947), (29, 9968), (32, 10013), (Start: 33 @10028 has 1 MA's), (37, 10112), (43, 10154), (44, 10166), (53, 10229), (55, 10244), (57, 10253), (59, 10271), (60, 10277), (70, 10325), (91, 10460), (107, 10610), (111, 10640), (156, 10964), (169, 11060), (176, 11168), (182, 11210), (183, 11213), (184, 11219), (186, 11240), (196, 11321), (204, 11387), (207, 11414), (208, 11426), (210, 11444), (211, 11456), (217, 11480), (219, 11492), (222, 11531), (223, 11534), (224, 11543), (227, 11573), (240, 11678), (243, 11693), (246, 11723), (247, 11735), (252, 11780), (253, 11786), (255, 11801), (258, 11831), (260, 11852), (261, 11855), (268, 11918), (271, 11945), (272, 11948), (273, 11951), (274, 11957), (280, 11981), (281, 11984), (283, 11990), (285, 11996), (287, 12011), (290, 12029), (292, 12074), (299, 12158), (300, 12164), (304, 12191), (317, 12284), (318, 12293), (324, 12350), (325, 12362), (333, 12398), (334, 12404), (344, 12446), (346, 12458), (351, 12497), (353, 12503), (354, 12506), (357, 12524), (358, 12527),

(359, 12530), (363, 12554), (373, 12629), (379, 12668), (383, 12692), (387, 12725), (397, 12836), (400, 12869), (404, 12932), (408, 12968), (412, 12998), (421, 13076), (422, 13079), (423, 13088), (426, 13112), (435, 13193), (436, 13199), (438, 13244), (440, 13247), (441, 13262), (448, 13307), (450, 13316), (452, 13325), (453, 13328), (465, 13433), (473, 13481), (474, 13484), (475, 13487), (485, 13586), (486, 13589), (488, 13601), (497, 13718), (500, 13751), (505, 13802), (509, 13832), (513, 13892), (523, 13973), (526, 13994), (528, 14027), (536, 14099), (538, 14108), (554, 14222), (556, 14252), (558, 14261), (560, 14300), (561, 14303), (563, 14333), (564, 14354), (580, 14552), (585, 14615), (586, 14621), (593, 14672), (608, 14858), (616, 14945), (621, 14972), (622, 14975), (634, 15050), (638, 15074), (641, 15113), (644, 15149), (648, 15170), (654, 15257), (658, 15299), (663, 15332), (664, 15344), (669, 15422), (672, 15488),

Gene: Balloona_15 Start: 9534, Stop: 14471, Start Num: 35

Candidate Starts for Balloona_15:

(Start: 21 @9378 has 33 MA's), (35, 9534), (47, 9663), (50, 9693), (60, 9762), (63, 9774), (70, 9810), (74, 9861), (77, 9870), (84, 9906), (88, 9930), (94, 9990), (101, 10044), (104, 10083), (106, 10089), (109, 10104), (111, 10125), (136, 10296), (147, 10359), (152, 10404), (161, 10485), (176, 10644), (179, 10677), (183, 10689), (186, 10716), (192, 10773), (197, 10803), (199, 10815), (209, 10917), (210, 10920), (222, 11007), (229, 11055), (243, 11169), (253, 11262), (255, 11277), (257, 11298), (261, 11331), (263, 11361), (266, 11373), (270, 11412), (275, 11436), (276, 11439), (282, 11463), (287, 11487), (296, 11592), (307, 11670), (314, 11700), (315, 11703), (317, 11739), (321, 11781), (324, 11805), (326, 11820), (328, 11835), (332, 11850), (338, 11874), (347, 11913), (348, 11928), (349, 11934), (357, 11979), (359, 11985), (376, 12111), (382, 12141), (388, 12192), (393, 12228), (397, 12249), (398, 12252), (405, 12324), (411, 12369), (414, 12402), (415, 12423), (424, 12477), (434, 12552), (445, 12636), (455, 12723), (484, 12909), (496, 13041), (500, 13071), (514, 13209), (520, 13260), (525, 13290), (544, 13455), (547, 13485), (570, 13665), (576, 13716), (581, 13743), (583, 13764), (596, 13860), (602, 13908), (605, 13926), (618, 14049), (623, 14073), (625, 14088), (629, 14118), (633, 14145), (635, 14151), (640, 14184), (647, 14253), (649, 14256), (650, 14292), (660, 14382),

Gene: Barco_17 Start: 10274, Stop: 15796, Start Num: 4

Candidate Starts for Barco_17:

(Start: 4 @10274 has 37 MA's), (Start: 6 @10289 has 1 MA's), (Start: 7 @10295 has 1 MA's), (Start: 9 @10325 has 1 MA's), (10, 10334), (11, 10337), (13, 10379), (30, 10490), (31, 10511), (36, 10631), (41, 10673), (51, 10739), (53, 10757), (56, 10778), (57, 10781), (59, 10799), (65, 10823), (75, 10907), (76, 10910), (84, 10949), (86, 10964), (88, 10973), (108, 11141), (111, 11168), (127, 11285), (153, 11456), (156, 11486), (176, 11690), (183, 11735), (186, 11762), (187, 11774), (200, 11864), (204, 11909), (207, 11936), (210, 11966), (222, 12053), (223, 12056), (227, 12095), (236, 12179), (243, 12215), (247, 12257), (252, 12302), (253, 12308), (254, 12320), (255, 12323), (261, 12377), (265, 12416), (267, 12437), (268, 12440), (270, 12458), (271, 12467), (276, 12485), (281, 12506), (283, 12512), (287, 12533), (291, 12560), (296, 12638), (331, 12827), (340, 12851), (344, 12863), (345, 12866), (355, 12881), (358, 12896), (359, 12899), (366, 12950), (377, 13031), (378, 13034), (384, 13067), (387, 13097), (389, 13121), (430, 13454), (436, 13502), (438, 13547), (440, 13550), (441, 13565), (448, 13610), (450, 13619), (452, 13628), (458, 13679), (467, 13751), (471, 13769), (475, 13790), (485, 13889), (486, 13892), (490, 13925), (493, 13991), (495, 14009), (497, 14024), (500, 14057), (505, 14108), (510, 14159), (515, 14207), (532, 14402), (533, 14405), (545, 14477), (546, 14480), (553, 14546), (554, 14549), (555, 14567), (559, 14627), (564, 14684), (566, 14702), (571, 14783), (572, 14786), (573, 14801), (594, 15014), (597, 15080), (603, 15134), (604, 15146), (605, 15152), (618, 15275), (623, 15299), (626, 15317), (629, 15341), (630, 15347), (633, 15368), (640, 15407), (651, 15548), (653, 15560), (659, 15611), (662, 15629), (671, 15779),

Gene: Bavilard_16 Start: 10158, Stop: 15257, Start Num: 21

Candidate Starts for Bavilard_16:

(Start: 21 @10158 has 33 MA's), (35, 10314), (47, 10443), (50, 10473), (56, 10515), (60, 10542), (70, 10590), (74, 10641), (77, 10650), (84, 10686), (88, 10710), (94, 10770), (101, 10824), (104, 10863), (106, 10869), (109, 10884), (111, 10905), (134, 11064), (136, 11076), (147, 11139), (152, 11184), (161, 11265), (176, 11424), (179, 11457), (183, 11469), (186, 11496), (192, 11553), (197, 11583), (199, 11595), (209, 11697), (210, 11700), (222, 11787), (228, 11832), (229, 11835), (243, 11949), (253, 12042), (255, 12057), (257, 12078), (261, 12111), (263, 12141), (266, 12153), (270, 12192), (275, 12216), (276, 12219), (282, 12243), (287, 12267), (296, 12372), (303, 12420), (307, 12450), (311, 12465), (314, 12480), (317, 12519), (321, 12561), (324, 12585), (326, 12600), (328, 12615), (332, 12630), (338, 12654), (347, 12693), (348, 12708), (349, 12714), (352, 12735), (357, 12759), (359, 12765), (376, 12891), (382, 12921), (386, 12957), (387, 12960), (393, 13008), (397, 13029), (398, 13032), (405, 13104), (411, 13149), (414, 13182), (415, 13203), (424, 13257), (434, 13332), (445, 13416), (455, 13503), (484, 13689), (496, 13821), (500, 13851), (514, 13989), (520, 14040), (525, 14070), (535, 14175), (544, 14226), (547, 14256), (570, 14436), (576, 14487), (581, 14529), (583, 14550), (596, 14646), (605, 14712), (618, 14835), (623, 14859), (625, 14874), (629, 14904), (633, 14931), (635, 14937), (640, 14970), (647, 15039), (649, 15042), (650, 15078), (660, 15168),

Gene: Begonia_18 Start: 10785, Stop: 16274, Start Num: 4

Candidate Starts for Begonia_18:

(Start: 4 @10785 has 37 MA's), (8, 10824), (Start: 9 @10836 has 1 MA's), (10, 10845), (11, 10848), (13, 10890), (30, 11001), (31, 11022), (36, 11142), (41, 11184), (51, 11250), (53, 11268), (55, 11283), (56, 11289), (57, 11292), (59, 11310), (65, 11334), (75, 11418), (84, 11460), (86, 11475), (88, 11484), (108, 11652), (111, 11679), (122, 11754), (127, 11796), (135, 11844), (153, 11967), (156, 11997), (176, 12201), (183, 12246), (186, 12273), (187, 12285), (200, 12375), (204, 12420), (207, 12447), (210, 12477), (222, 12564), (227, 12606), (243, 12726), (247, 12768), (252, 12813), (253, 12819), (254, 12831), (255, 12834), (261, 12888), (265, 12927), (267, 12948), (268, 12951), (270, 12969), (276, 12996), (283, 13023), (287, 13044), (291, 13071), (295, 13143), (327, 13344), (331, 13359), (340, 13383), (345, 13398), (358, 13428), (359, 13431), (366, 13482), (377, 13563), (378, 13566), (384, 13599), (387, 13629), (389, 13653), (400, 13719), (430, 13986), (436, 14034), (438, 14079), (440, 14082), (441, 14097), (448, 14142), (450, 14151), (452, 14160), (458, 14211), (467, 14283), (471, 14301), (475, 14322), (485, 14421), (486, 14424), (490, 14457), (493, 14523), (495, 14541), (497, 14556), (500, 14589), (505, 14640), (510, 14691), (532, 14934), (533, 14937), (546, 15012), (553, 15078), (554, 15081), (555, 15099), (559, 15159), (571, 15315), (572, 15318), (573, 15333), (594, 15552), (599, 15609), (601, 15624), (606, 15672), (611, 15717), (631, 15837), (632, 15846), (639, 15885), (646, 15957), (651, 16026), (653, 16038), (659, 16089), (662, 16107), (668, 16164), (671, 16257),

Gene: BigChungus_15 Start: 9403, Stop: 14511, Start Num: 21

Candidate Starts for BigChungus_15:

(Start: 21 @9403 has 33 MA's), (35, 9559), (47, 9688), (50, 9718), (60, 9787), (63, 9799), (70, 9835), (74, 9886), (77, 9895), (84, 9931), (88, 9955), (94, 10015), (101, 10069), (104, 10108), (106, 10114), (109, 10129), (111, 10150), (136, 10321), (147, 10384), (152, 10429), (161, 10510), (176, 10669), (179, 10702), (183, 10714), (186, 10741), (192, 10798), (197, 10828), (199, 10840), (209, 10942), (210, 10945), (222, 11032), (229, 11080), (243, 11194), (253, 11287), (255, 11302), (257, 11323), (261, 11356), (263, 11386), (266, 11398), (270, 11437), (275, 11461), (276, 11464), (282, 11488), (287, 11512), (296, 11617), (307, 11695), (314, 11725), (315, 11728), (317, 11764), (321, 11806), (324, 11830), (326, 11845), (328, 11860), (332, 11875), (338, 11899), (347, 11938), (348, 11953), (349, 11959), (357, 12004), (359, 12010), (376, 12136), (382, 12166), (386, 12202), (387, 12205), (393, 12253), (397, 12274), (398, 12277), (405, 12349), (411, 12394), (414, 12427), (415, 12448), (424, 12502), (434, 12577), (445, 12661), (455, 12748), (496, 13066), (500, 13096), (514, 13234), (520, 13285), (525, 13315), (544, 13480), (547, 13510), (570, 13690), (576, 13741), (581, 13783), (583, 13804), (596, 13900), (602, 13948), (605, 13966), (618, 14089), (623, 14113), (625, 14128), (629, 14158), (633, 14185), (635, 14191), (640, 14224), (647, 14293), (649, 14296), (650, 14332), (660, 14422),

Gene: BillDoor_18 Start: 9610, Stop: 14400, Start Num: 64

Candidate Starts for BillDoor_18:

(Start: 64 @9610 has 23 MA's), (Start: 68 @9637 has 2 MA's), (79, 9715), (87, 9766), (96, 9853), (99, 9868), (105, 9925), (109, 9943), (112, 9970), (113, 9973), (124, 10042), (129, 10099), (140, 10144), (143, 10162), (149, 10207), (155, 10243), (159, 10276), (166, 10324), (167, 10327), (171, 10375), (173, 10414), (175, 10429), (203, 10621), (205, 10639), (218, 10723), (237, 10870), (242, 10897), (252, 10990), (253, 10996), (255, 11011), (259, 11050), (260, 11062), (268, 11128), (283, 11200), (286, 11218), (287, 11221), (291, 11248), (301, 11383), (315, 11458), (317, 11494), (324, 11560), (332, 11605), (337, 11626), (338, 11629), (339, 11632), (347, 11668), (351, 11707), (353, 11713), (359, 11740), (377, 11869), (378, 11872), (380, 11890), (399, 12013), (401, 12028), (414, 12157), (415, 12178), (423, 12220), (427, 12247), (428, 12253), (442, 12385), (445, 12397), (455, 12484), (460, 12526), (465, 12562), (485, 12688), (489, 12727), (501, 12856), (508, 12913), (512, 12958), (522, 13051), (529, 13126), (537, 13189), (547, 13270), (550, 13291), (568, 13468), (569, 13474), (587, 13693), (595, 13771), (596, 13789), (598, 13795), (605, 13855), (607, 13873), (610, 13906), (618, 13978), (625, 14017), (629, 14047), (640, 14113), (643, 14161), (650, 14221), (660, 14311), (667, 14371),

Gene: Biskit_17 Start: 9616, Stop: 14415, Start Num: 64

Candidate Starts for Biskit_17:

(Start: 64 @9616 has 23 MA's), (Start: 68 @9643 has 2 MA's), (87, 9772), (99, 9874), (103, 9919), (105, 9931), (109, 9949), (112, 9976), (113, 9979), (115, 9994), (123, 10045), (124, 10048), (129, 10105), (131, 10108), (140, 10150), (143, 10168), (149, 10213), (155, 10249), (159, 10282), (163, 10315), (164, 10327), (171, 10381), (173, 10420), (175, 10435), (177, 10444), (181, 10471), (188, 10522), (194, 10564), (197, 10582), (199, 10591), (205, 10645), (214, 10708), (217, 10723), (224, 10786), (237, 10876), (242, 10903), (252, 10996), (253, 11002), (255, 11017), (259, 11056), (268, 11134), (273, 11167), (283, 11206), (286, 11224), (287, 11227), (291, 11254), (294, 11311), (296, 11332), (302, 11395), (307, 11431), (310, 11443), (315, 11464), (317, 11500), (321, 11542), (322, 11554), (324, 11566), (332, 11611), (333, 11614), (337, 11632), (338, 11635), (339, 11638), (351, 11713), (353, 11719), (359, 11746), (367, 11806), (370, 11821), (376, 11872), (377, 11875), (378, 11878), (380, 11896), (394, 11995), (397, 12010), (398, 12013), (414, 12163), (415, 12184), (423, 12226), (427, 12253), (428, 12259), (442, 12391), (445, 12403), (455, 12490), (460, 12532), (465, 12568), (478, 12643), (485, 12694), (489, 12733), (494, 12811), (501, 12862), (508, 12919), (522, 13057), (529, 13132), (547, 13276), (550, 13297), (568, 13474), (569, 13480), (596, 13804), (598, 13810), (605, 13870), (607, 13888), (610, 13921), (618, 13993), (625, 14032), (629, 14062), (640, 14128), (643, 14176), (650, 14236), (660, 14326), (667, 14386),

Gene: BlingBling_17 Start: 10274, Stop: 15796, Start Num: 4

Candidate Starts for BlingBling_17:

(Start: 4 @10274 has 37 MA's), (Start: 6 @10289 has 1 MA's), (Start: 7 @10295 has 1 MA's), (Start: 9 @10325 has 1 MA's), (10, 10334), (11, 10337), (13, 10379), (30, 10490), (31, 10511), (36, 10631), (41, 10673), (51, 10739), (53, 10757), (56, 10778), (57, 10781), (59, 10799), (65, 10823), (75, 10907), (76, 10910), (84, 10949), (86, 10964), (88, 10973), (108, 11141), (111, 11168), (127, 11285), (153, 11456), (156, 11486), (176, 11690), (183, 11735), (186, 11762), (187, 11774), (200, 11864), (204, 11909), (207, 11936), (210, 11966), (222, 12053), (223, 12056), (227, 12095), (236, 12179), (243, 12215), (247, 12257), (252, 12302), (253, 12308), (254, 12320), (255, 12323), (261, 12377), (265, 12416), (267, 12437), (268, 12440), (270, 12458), (271, 12467), (276, 12485), (281, 12506), (283, 12512), (287, 12533), (291, 12560), (296, 12638), (331, 12827), (340, 12851), (344, 12863), (345, 12866), (355, 12881), (358, 12896), (359, 12899), (366, 12950), (377, 13031), (378, 13034), (384, 13067), (387, 13097), (389, 13121), (430, 13454), (436, 13502), (438, 13547), (440, 13550), (441, 13565), (448, 13610), (450, 13619), (452, 13628), (458, 13679), (467, 13751), (471, 13769), (475, 13790), (485, 13889), (486, 13892), (490, 13925), (493, 13991), (495, 14009), (497, 14024), (500, 14057), (505, 14108), (510, 14159), (515, 14207), (532, 14402), (533, 14405), (545, 14477), (546, 14480),

(553, 14546), (554, 14549), (555, 14567), (559, 14627), (564, 14684), (566, 14702), (571, 14783), (572, 14786), (573, 14801), (594, 15014), (597, 15080), (603, 15134), (604, 15146), (605, 15152), (618, 15275), (623, 15299), (626, 15317), (629, 15341), (630, 15347), (633, 15368), (640, 15407), (651, 15548), (653, 15560), (659, 15611), (662, 15629), (671, 15779),

Gene: Blino_17 Start: 10173, Stop: 15764, Start Num: 4

Candidate Starts for Blino_17:

(Start: 4 @10173 has 37 MA's), (Start: 6 @10188 has 1 MA's), (Start: 9 @10224 has 1 MA's), (10, 10233), (11, 10236), (13, 10278), (30, 10389), (31, 10410), (36, 10530), (51, 10638), (53, 10656), (56, 10677), (57, 10680), (59, 10698), (77, 10812), (84, 10848), (86, 10863), (88, 10872), (108, 11040), (111, 11067), (127, 11184), (153, 11355), (156, 11385), (176, 11589), (183, 11634), (204, 11808), (207, 11835), (210, 11865), (222, 11952), (223, 11955), (227, 11994), (233, 12057), (243, 12114), (247, 12156), (252, 12201), (253, 12207), (254, 12219), (255, 12222), (261, 12276), (265, 12315), (267, 12336), (268, 12339), (270, 12357), (276, 12384), (281, 12405), (283, 12411), (287, 12432), (291, 12459), (293, 12507), (296, 12537), (318, 12693), (319, 12717), (321, 12726), (323, 12747), (341, 12828), (358, 12924), (359, 12927), (360, 12933), (365, 12975), (366, 12978), (369, 12999), (377, 13059), (378, 13062), (384, 13095), (387, 13125), (400, 13215), (430, 13482), (436, 13530), (438, 13575), (440, 13578), (441, 13593), (448, 13638), (450, 13647), (452, 13656), (458, 13707), (467, 13779), (471, 13797), (475, 13818), (485, 13917), (486, 13920), (490, 13953), (493, 14019), (495, 14037), (497, 14052), (500, 14085), (505, 14136), (510, 14187), (515, 14235), (532, 14430), (533, 14433), (545, 14505), (546, 14508), (553, 14574), (554, 14577), (555, 14595), (559, 14655), (566, 14730), (572, 14814), (573, 14829), (594, 15042), (599, 15099), (601, 15114), (606, 15162), (611, 15207), (631, 15327), (632, 15336), (639, 15375), (646, 15447), (651, 15516), (659, 15579), (662, 15597), (668, 15654), (671, 15747),

Gene: Blondies_17 Start: 9629, Stop: 14398, Start Num: 68

Candidate Starts for Blondies_17:

(Start: 64 @9602 has 23 MA's), (Start: 68 @9629 has 2 MA's), (70, 9635), (87, 9758), (99, 9860), (103, 9905), (105, 9917), (109, 9935), (112, 9962), (113, 9965), (115, 9980), (123, 10031), (124, 10034), (129, 10091), (131, 10094), (132, 10097), (140, 10136), (143, 10154), (149, 10199), (155, 10235), (159, 10268), (163, 10301), (164, 10313), (171, 10367), (173, 10406), (175, 10421), (177, 10430), (181, 10457), (188, 10508), (197, 10568), (199, 10577), (205, 10631), (214, 10694), (217, 10709), (224, 10772), (237, 10862), (242, 10889), (252, 10982), (253, 10988), (255, 11003), (259, 11042), (268, 11120), (273, 11153), (283, 11192), (286, 11210), (287, 11213), (291, 11240), (294, 11297), (296, 11318), (302, 11381), (310, 11429), (315, 11450), (317, 11486), (321, 11528), (324, 11552), (332, 11597), (333, 11600), (337, 11618), (338, 11621), (339, 11624), (351, 11699), (353, 11705), (359, 11732), (367, 11792), (376, 11858), (377, 11861), (378, 11864), (380, 11882), (394, 11981), (397, 11996), (398, 11999), (414, 12149), (415, 12170), (423, 12212), (427, 12239), (428, 12245), (442, 12377), (445, 12389), (455, 12476), (460, 12518), (465, 12554), (478, 12629), (485, 12680), (489, 12719), (501, 12848), (508, 12905), (522, 13043), (529, 13118), (547, 13262), (550, 13283), (568, 13457), (569, 13463), (596, 13787), (598, 13793), (605, 13853), (607, 13871), (610, 13904), (618, 13976), (625, 14015), (629, 14045), (640, 14111), (643, 14159), (650, 14219), (660, 14309), (667, 14369),

Gene: Blueberry_19 Start: 10619, Stop: 16108, Start Num: 4

Candidate Starts for Blueberry_19:

(Start: 4 @10619 has 37 MA's), (Start: 6 @10634 has 1 MA's), (Start: 7 @10640 has 1 MA's), (Start: 9 @10670 has 1 MA's), (10, 10679), (11, 10682), (13, 10724), (30, 10835), (31, 10856), (36, 10976), (41, 11018), (51, 11084), (53, 11102), (56, 11123), (57, 11126), (59, 11144), (65, 11168), (75, 11252), (84, 11294), (86, 11309), (88, 11318), (108, 11486), (111, 11513), (127, 11630), (153, 11801), (156, 11831), (176, 12035), (183, 12080), (186, 12107), (187, 12119), (189, 12131), (200, 12209), (204, 12254), (207, 12281), (210, 12311), (222, 12398), (223, 12401), (227, 12440), (233, 12503), (234, 12512), (243, 12560), (247, 12602), (252, 12647), (253, 12653), (255, 12668), (261, 12722), (265,

12761), (267, 12782), (268, 12785), (270, 12803), (276, 12830), (281, 12851), (283, 12857), (287, 12878), (290, 12896), (291, 12905), (327, 13178), (345, 13232), (358, 13262), (359, 13265), (366, 13316), (377, 13397), (378, 13400), (384, 13433), (387, 13463), (389, 13487), (400, 13553), (430, 13820), (436, 13868), (437, 13901), (438, 13913), (440, 13916), (448, 13976), (450, 13985), (452, 13994), (458, 14045), (467, 14117), (471, 14135), (475, 14156), (485, 14255), (486, 14258), (490, 14291), (493, 14357), (495, 14375), (497, 14390), (500, 14423), (505, 14474), (510, 14525), (517, 14594), (532, 14768), (533, 14771), (545, 14843), (546, 14846), (553, 14912), (554, 14915), (555, 14933), (559, 14993), (564, 15050), (566, 15068), (571, 15149), (572, 15152), (573, 15167), (588, 15338), (594, 15392), (601, 15464), (602, 15473), (606, 15509), (614, 15569), (615, 15587), (619, 15605), (628, 15650), (632, 15683), (646, 15794), (651, 15863), (659, 15926), (662, 15944), (671, 16094),

Gene: BotCity_18 Start: 9879, Stop: 15506, Start Num: 16

Candidate Starts for BotCity_18:

(Start: 16 @9879 has 11 MA's), (Start: 23 @9924 has 1 MA's), (25, 9945), (29, 9966), (32, 10011), (Start: 33 @10026 has 1 MA's), (37, 10110), (43, 10152), (44, 10164), (53, 10227), (55, 10242), (57, 10251), (59, 10269), (60, 10275), (70, 10323), (91, 10458), (107, 10608), (111, 10638), (156, 10962), (169, 11058), (176, 11166), (182, 11208), (183, 11211), (184, 11217), (186, 11238), (196, 11319), (204, 11385), (207, 11412), (208, 11424), (210, 11442), (211, 11454), (217, 11478), (219, 11490), (222, 11529), (223, 11532), (224, 11541), (227, 11571), (240, 11676), (243, 11691), (246, 11721), (247, 11733), (252, 11778), (253, 11784), (255, 11799), (258, 11829), (260, 11850), (261, 11853), (268, 11916), (271, 11943), (272, 11946), (273, 11949), (274, 11955), (280, 11979), (281, 11982), (283, 11988), (285, 11994), (287, 12009), (290, 12027), (292, 12072), (299, 12156), (300, 12162), (304, 12189), (317, 12282), (318, 12291), (324, 12348), (325, 12360), (333, 12396), (334, 12402), (344, 12444), (346, 12456), (351, 12495), (353, 12501), (354, 12504), (357, 12522), (358, 12525), (359, 12528), (363, 12552), (373, 12627), (379, 12666), (383, 12690), (387, 12723), (397, 12834), (400, 12867), (404, 12930), (408, 12966), (412, 12996), (421, 13074), (422, 13077), (423, 13086), (426, 13110), (435, 13191), (436, 13197), (438, 13242), (440, 13245), (441, 13260), (448, 13305), (450, 13314), (452, 13323), (453, 13326), (465, 13431), (473, 13479), (474, 13482), (475, 13485), (485, 13584), (486, 13587), (488, 13599), (497, 13716), (500, 13749), (505, 13800), (509, 13830), (513, 13890), (523, 13971), (526, 13992), (528, 14025), (536, 14097), (538, 14106), (554, 14220), (556, 14250), (558, 14259), (560, 14298), (561, 14301), (563, 14331), (564, 14352), (580, 14550), (585, 14613), (586, 14619), (593, 14670), (608, 14856), (616, 14943), (621, 14970), (622, 14973), (634, 15048), (638, 15072), (641, 15111), (644, 15147), (648, 15168), (654, 15255), (658, 15297), (663, 15330), (664, 15342), (669, 15420), (672, 15486),

Gene: Bubble_16 Start: 9629, Stop: 14767, Start Num: 21

Candidate Starts for Bubble_16:

(Start: 17 @9605 has 5 MA's), (Start: 21 @9629 has 33 MA's), (24, 9656), (35, 9785), (38, 9860), (60, 10013), (61, 10016), (74, 10112), (77, 10121), (82, 10151), (84, 10157), (86, 10172), (87, 10175), (91, 10196), (97, 10268), (100, 10289), (109, 10355), (111, 10376), (127, 10493), (152, 10655), (156, 10694), (165, 10769), (179, 10928), (183, 10940), (186, 10967), (191, 11012), (192, 11024), (204, 11114), (206, 11132), (208, 11153), (211, 11183), (217, 11207), (219, 11219), (222, 11258), (226, 11291), (238, 11393), (239, 11396), (243, 11420), (244, 11426), (253, 11513), (255, 11528), (259, 11567), (265, 11621), (279, 11705), (286, 11735), (287, 11738), (297, 11846), (298, 11849), (301, 11900), (315, 11975), (324, 12077), (332, 12122), (337, 12143), (338, 12146), (339, 12149), (351, 12224), (359, 12257), (362, 12278), (366, 12308), (373, 12356), (374, 12362), (378, 12389), (398, 12524), (411, 12641), (414, 12674), (415, 12695), (427, 12764), (428, 12770), (429, 12785), (443, 12905), (445, 12914), (455, 12998), (496, 13319), (519, 13538), (525, 13574), (550, 13787), (575, 13979), (581, 14027), (583, 14048), (596, 14156), (605, 14222), (607, 14240), (613, 14300), (618, 14345), (624, 14375), (625, 14384), (629, 14414), (640, 14480), (643, 14528), (650, 14588), (659, 14675), (667, 14738),

Gene: Budski_18 Start: 10015, Stop: 15501, Start Num: 33

Candidate Starts for Budski_18:

(Start: 16 @9868 has 11 MA's), (22, 9895), (Start: 23 @9913 has 1 MA's), (25, 9934), (29, 9955), (32, 10000), (Start: 33 @10015 has 1 MA's), (37, 10099), (43, 10141), (44, 10153), (53, 10216), (55, 10231), (57, 10240), (59, 10258), (60, 10264), (70, 10312), (91, 10447), (107, 10597), (111, 10627), (143, 10846), (153, 10921), (156, 10951), (176, 11155), (182, 11197), (183, 11200), (184, 11206), (186, 11227), (196, 11308), (204, 11374), (207, 11401), (208, 11413), (210, 11431), (211, 11443), (217, 11467), (219, 11479), (222, 11518), (223, 11521), (224, 11530), (227, 11560), (231, 11605), (240, 11665), (243, 11680), (246, 11710), (247, 11722), (252, 11767), (253, 11773), (255, 11788), (258, 11818), (260, 11839), (261, 11842), (268, 11905), (271, 11932), (272, 11935), (273, 11938), (274, 11944), (280, 11968), (281, 11971), (283, 11977), (285, 11983), (287, 11998), (290, 12016), (295, 12097), (299, 12145), (300, 12151), (304, 12178), (324, 12337), (325, 12349), (333, 12385), (346, 12445), (351, 12484), (353, 12490), (354, 12493), (358, 12514), (359, 12517), (373, 12616), (379, 12655), (383, 12679), (387, 12712), (390, 12757), (396, 12811), (403, 12898), (404, 12919), (408, 12955), (412, 12985), (421, 13063), (422, 13066), (423, 13075), (426, 13099), (435, 13180), (436, 13186), (438, 13231), (440, 13234), (441, 13249), (448, 13294), (450, 13303), (452, 13312), (453, 13315), (465, 13420), (473, 13468), (475, 13474), (485, 13573), (486, 13576), (488, 13588), (497, 13705), (500, 13738), (505, 13789), (507, 13801), (509, 13819), (513, 13879), (523, 13960), (526, 13981), (528, 14014), (534, 14077), (538, 14095), (554, 14209), (556, 14239), (558, 14248), (560, 14287), (561, 14290), (563, 14320), (564, 14341), (576, 14494), (580, 14545), (585, 14608), (586, 14614), (593, 14665), (608, 14851), (616, 14938), (621, 14965), (622, 14968), (634, 15043), (638, 15067), (641, 15106), (644, 15142), (648, 15163), (654, 15250), (658, 15292), (663, 15325), (664, 15337), (669, 15415), (672, 15481),

Gene: Burnsey_16 Start: 9630, Stop: 14768, Start Num: 21

Candidate Starts for Burnsey_16:

(Start: 17 @9606 has 5 MA's), (Start: 21 @9630 has 33 MA's), (24, 9657), (35, 9786), (38, 9861), (60, 10014), (61, 10017), (74, 10113), (77, 10122), (82, 10152), (84, 10158), (86, 10173), (87, 10176), (91, 10197), (100, 10290), (109, 10356), (111, 10377), (127, 10494), (152, 10656), (156, 10695), (165, 10770), (179, 10929), (183, 10941), (186, 10968), (191, 11013), (192, 11025), (204, 11115), (206, 11133), (208, 11154), (211, 11184), (217, 11208), (219, 11220), (222, 11259), (226, 11292), (238, 11394), (239, 11397), (243, 11421), (253, 11514), (255, 11529), (259, 11568), (270, 11664), (278, 11703), (279, 11706), (287, 11739), (297, 11847), (298, 11850), (301, 11901), (315, 11976), (324, 12078), (332, 12123), (337, 12144), (338, 12147), (339, 12150), (351, 12225), (359, 12258), (362, 12279), (366, 12309), (373, 12357), (374, 12363), (378, 12390), (398, 12525), (411, 12642), (414, 12675), (415, 12696), (416, 12699), (427, 12765), (428, 12771), (429, 12786), (443, 12906), (445, 12915), (455, 12999), (496, 13320), (519, 13539), (525, 13575), (550, 13788), (575, 13980), (581, 14028), (583, 14049), (596, 14157), (605, 14223), (607, 14241), (613, 14301), (618, 14346), (624, 14376), (625, 14385), (629, 14415), (640, 14481), (643, 14529), (650, 14589), (659, 14676), (667, 14739),

Gene: Button_17 Start: 9644, Stop: 13834, Start Num: 68

Candidate Starts for Button_17:

(Start: 64 @9617 has 23 MA's), (Start: 68 @9644 has 2 MA's), (101, 9890), (109, 9953), (116, 10010), (121, 10037), (125, 10079), (135, 10142), (138, 10157), (141, 10175), (144, 10193), (146, 10205), (149, 10238), (155, 10280), (157, 10295), (170, 10400), (171, 10424), (172, 10463), (178, 10487), (181, 10514), (185, 10544), (188, 10565), (196, 10619), (199, 10634), (215, 10763), (230, 10895), (232, 10904), (237, 10940), (255, 11081), (257, 11102), (261, 11135), (262, 11153), (264, 11171), (270, 11216), (283, 11270), (287, 11291), (303, 11354), (312, 11402), (314, 11414), (317, 11453), (343, 11507), (351, 11534), (353, 11540), (358, 11564), (359, 11567), (367, 11627), (372, 11660), (378, 11699), (380, 11717), (381, 11720), (387, 11762), (388, 11774), (392, 11807), (397, 11831), (401, 11855), (402, 11858), (413, 11972), (414, 11984), (417, 12014), (419, 12023), (420, 12029), (439, 12182), (449, 12242), (451, 12251), (452, 12257), (456, 12293), (482, 12425), (496, 12563),

(499, 12587), (520, 12785), (521, 12788), (540, 12950), (542, 12974), (544, 12977), (567, 13079), (592, 13184), (599, 13256), (602, 13280), (604, 13292), (607, 13316), (609, 13328), (617, 13412), (618, 13418), (626, 13460), (629, 13481), (635, 13514), (640, 13547), (642, 13568), (643, 13595), (650, 13655), (652, 13682), (653, 13691), (655, 13703), (667, 13805),

Gene: Buttrmlkdreams_16 Start: 9601, Stop: 14397, Start Num: 64

Candidate Starts for Buttrmlkdreams_16:

(Start: 64 @9601 has 23 MA's), (Start: 68 @9628 has 2 MA's), (70, 9634), (87, 9757), (99, 9859), (103, 9904), (105, 9916), (109, 9934), (112, 9961), (113, 9964), (115, 9979), (123, 10030), (124, 10033), (129, 10090), (131, 10093), (140, 10135), (143, 10153), (149, 10198), (155, 10234), (159, 10267), (163, 10300), (164, 10312), (171, 10366), (173, 10405), (175, 10420), (177, 10429), (181, 10456), (188, 10507), (197, 10567), (199, 10576), (205, 10630), (214, 10693), (217, 10708), (237, 10861), (242, 10888), (250, 10969), (252, 10981), (253, 10987), (255, 11002), (258, 11032), (259, 11041), (268, 11119), (273, 11152), (283, 11191), (286, 11209), (287, 11212), (291, 11239), (294, 11296), (296, 11317), (302, 11380), (310, 11428), (315, 11449), (317, 11485), (321, 11527), (324, 11551), (332, 11596), (333, 11599), (337, 11617), (338, 11620), (339, 11623), (351, 11698), (353, 11704), (359, 11731), (367, 11791), (376, 11857), (377, 11860), (378, 11863), (380, 11881), (394, 11980), (397, 11995), (398, 11998), (414, 12148), (415, 12169), (423, 12211), (427, 12238), (428, 12244), (445, 12388), (455, 12475), (460, 12517), (465, 12553), (478, 12628), (485, 12679), (489, 12718), (501, 12847), (508, 12904), (522, 13042), (529, 13117), (547, 13261), (550, 13282), (568, 13456), (569, 13462), (596, 13786), (598, 13792), (605, 13852), (610, 13903), (618, 13975), (625, 14014), (629, 14044), (640, 14110), (643, 14158), (650, 14218), (660, 14308), (667, 14368),

Gene: CanesSauce_16 Start: 9646, Stop: 14433, Start Num: 64

Candidate Starts for CanesSauce_16:

(Start: 64 @9646 has 23 MA's), (Start: 68 @9673 has 2 MA's), (79, 9751), (87, 9802), (96, 9889), (99, 9904), (105, 9961), (109, 9979), (112, 10006), (113, 10009), (124, 10078), (129, 10135), (140, 10180), (143, 10198), (149, 10243), (155, 10279), (159, 10312), (166, 10360), (167, 10363), (171, 10411), (173, 10450), (175, 10465), (203, 10657), (205, 10675), (218, 10759), (237, 10906), (242, 10933), (252, 11026), (253, 11032), (255, 11047), (259, 11086), (260, 11098), (268, 11164), (283, 11236), (286, 11254), (287, 11257), (291, 11284), (317, 11530), (324, 11596), (332, 11641), (337, 11662), (338, 11665), (339, 11668), (347, 11704), (351, 11743), (353, 11749), (359, 11776), (377, 11905), (378, 11908), (380, 11926), (399, 12049), (401, 12064), (414, 12193), (415, 12214), (423, 12256), (427, 12283), (428, 12289), (442, 12421), (445, 12433), (455, 12520), (460, 12562), (465, 12598), (485, 12724), (489, 12763), (501, 12892), (508, 12949), (512, 12991), (522, 13084), (529, 13159), (537, 13222), (547, 13303), (550, 13324), (568, 13501), (569, 13507), (587, 13726), (595, 13804), (596, 13822), (598, 13828), (605, 13888), (607, 13906), (610, 13939), (618, 14011), (625, 14050), (629, 14080), (640, 14146), (643, 14194), (650, 14254), (660, 14344), (667, 14404),

Gene: CaptainKirk2_17 Start: 10277, Stop: 15820, Start Num: 4

Candidate Starts for CaptainKirk2_17:

(Start: 4 @10277 has 37 MA's), (Start: 6 @10292 has 1 MA's), (Start: 7 @10298 has 1 MA's), (Start: 9 @10328 has 1 MA's), (10, 10337), (11, 10340), (13, 10382), (30, 10493), (31, 10514), (51, 10742), (53, 10760), (55, 10775), (56, 10781), (57, 10784), (59, 10802), (65, 10826), (75, 10910), (76, 10913), (84, 10952), (86, 10967), (88, 10976), (108, 11144), (111, 11171), (156, 11489), (176, 11693), (183, 11738), (184, 11744), (186, 11765), (187, 11777), (200, 11867), (204, 11912), (207, 11939), (210, 11969), (222, 12056), (223, 12059), (227, 12098), (243, 12218), (247, 12260), (252, 12305), (253, 12311), (255, 12326), (261, 12380), (265, 12419), (267, 12440), (268, 12443), (270, 12461), (271, 12470), (281, 12509), (283, 12515), (287, 12536), (291, 12563), (314, 12770), (327, 12836), (340, 12875), (345, 12890), (358, 12920), (359, 12923), (366, 12974), (377, 13055), (378, 13058), (384, 13091), (387, 13121), (389, 13145), (430, 13478), (436, 13526), (438, 13571), (440, 13574), (441, 13589), (448, 13634), (450, 13643), (452, 13652), (458, 13703), (467, 13775), (471, 13793), (475, 13814), (485, 13913), (486, 13916), (490, 13949), (493, 14015), (495, 14033), (497, 14048), (500,

14081), (505, 14132), (510, 14183), (515, 14231), (532, 14426), (533, 14429), (545, 14501), (546, 14504), (553, 14570), (554, 14573), (555, 14591), (559, 14651), (564, 14708), (566, 14726), (571, 14807), (572, 14810), (573, 14825), (588, 14984), (594, 15038), (597, 15104), (603, 15158), (604, 15170), (605, 15176), (618, 15299), (623, 15323), (626, 15341), (629, 15365), (630, 15371), (633, 15392), (640, 15431), (651, 15572), (653, 15584), (659, 15635), (662, 15653), (671, 15803),

Gene: CaramellLatte_16 Start: 9646, Stop: 14433, Start Num: 64

Candidate Starts for CaramellLatte_16:

(Start: 64 @9646 has 23 MA's), (Start: 68 @9673 has 2 MA's), (79, 9751), (87, 9802), (96, 9889), (99, 9904), (105, 9961), (109, 9979), (112, 10006), (113, 10009), (124, 10078), (129, 10135), (140, 10180), (143, 10198), (149, 10243), (155, 10279), (159, 10312), (166, 10360), (167, 10363), (171, 10411), (173, 10450), (175, 10465), (203, 10657), (205, 10675), (218, 10759), (237, 10906), (242, 10933), (252, 11026), (253, 11032), (255, 11047), (259, 11086), (260, 11098), (268, 11164), (283, 11236), (286, 11254), (287, 11257), (291, 11284), (317, 11530), (324, 11596), (332, 11641), (337, 11662), (338, 11665), (339, 11668), (347, 11704), (351, 11743), (353, 11749), (359, 11776), (377, 11905), (378, 11908), (380, 11926), (399, 12049), (401, 12064), (414, 12193), (415, 12214), (423, 12256), (427, 12283), (428, 12289), (442, 12421), (445, 12433), (455, 12520), (460, 12562), (465, 12598), (485, 12724), (489, 12763), (501, 12892), (508, 12949), (512, 12991), (522, 13084), (529, 13159), (537, 13222), (547, 13303), (550, 13324), (568, 13501), (569, 13507), (587, 13726), (595, 13804), (596, 13822), (598, 13828), (605, 13888), (607, 13906), (610, 13939), (618, 14011), (625, 14050), (629, 14080), (640, 14146), (643, 14194), (650, 14254), (660, 14344), (667, 14404),

Gene: CarolAnn_17 Start: 10172, Stop: 15763, Start Num: 4

Candidate Starts for CarolAnn_17:

(Start: 4 @10172 has 37 MA's), (Start: 6 @10187 has 1 MA's), (Start: 9 @10223 has 1 MA's), (10, 10232), (11, 10235), (13, 10277), (30, 10388), (31, 10409), (36, 10529), (51, 10637), (53, 10655), (56, 10676), (57, 10679), (59, 10697), (77, 10811), (84, 10847), (86, 10862), (88, 10871), (108, 11039), (111, 11066), (127, 11183), (153, 11354), (156, 11384), (176, 11588), (183, 11633), (204, 11807), (207, 11834), (210, 11864), (214, 11885), (222, 11951), (223, 11954), (227, 11993), (233, 12056), (243, 12113), (247, 12155), (252, 12200), (253, 12206), (254, 12218), (255, 12221), (261, 12275), (265, 12314), (267, 12335), (268, 12338), (270, 12356), (276, 12383), (281, 12404), (283, 12410), (287, 12431), (291, 12458), (293, 12506), (296, 12536), (318, 12692), (319, 12716), (321, 12725), (323, 12746), (341, 12827), (358, 12923), (359, 12926), (360, 12932), (365, 12974), (366, 12977), (369, 12998), (377, 13058), (378, 13061), (384, 13094), (387, 13124), (400, 13214), (430, 13481), (436, 13529), (438, 13574), (440, 13577), (441, 13592), (448, 13637), (450, 13646), (452, 13655), (458, 13706), (467, 13778), (471, 13796), (475, 13817), (485, 13916), (486, 13919), (490, 13952), (493, 14018), (495, 14036), (497, 14051), (500, 14084), (505, 14135), (510, 14186), (515, 14234), (532, 14429), (533, 14432), (545, 14504), (546, 14507), (553, 14573), (554, 14576), (555, 14594), (559, 14654), (566, 14729), (572, 14813), (573, 14828), (594, 15041), (599, 15098), (601, 15113), (606, 15161), (611, 15206), (631, 15326), (632, 15335), (639, 15374), (646, 15446), (651, 15515), (659, 15578), (662, 15596), (668, 15653), (671, 15746),

Gene: Carsonalex_17 Start: 9687, Stop: 14825, Start Num: 21

Candidate Starts for Carsonalex_17:

(Start: 17 @9663 has 5 MA's), (Start: 21 @9687 has 33 MA's), (24, 9714), (35, 9843), (38, 9918), (60, 10071), (61, 10074), (74, 10170), (77, 10179), (82, 10209), (84, 10215), (86, 10230), (87, 10233), (91, 10254), (97, 10326), (100, 10347), (109, 10413), (111, 10434), (127, 10551), (152, 10713), (156, 10752), (165, 10827), (186, 11025), (201, 11133), (208, 11211), (210, 11229), (213, 11247), (222, 11316), (224, 11328), (228, 11361), (242, 11472), (243, 11478), (253, 11571), (255, 11586), (270, 11721), (277, 11754), (287, 11796), (297, 11904), (301, 11958), (314, 12030), (315, 12033), (324, 12135), (332, 12180), (334, 12189), (337, 12201), (338, 12204), (339, 12207), (351, 12282), (352, 12285), (353, 12288), (356, 12300), (357, 12309), (359, 12315), (364, 12357), (366, 12366), (373, 12414), (378, 12447), (398, 12582), (411, 12699), (414, 12732), (415, 12753), (427, 12822), (428,

12828), (443, 12963), (445, 12972), (455, 13056), (496, 13377), (519, 13596), (525, 13632), (550, 13845), (575, 14037), (581, 14085), (583, 14106), (596, 14214), (605, 14280), (607, 14298), (613, 14358), (618, 14403), (624, 14433), (625, 14442), (629, 14472), (640, 14538), (643, 14586), (650, 14646), (659, 14733), (667, 14796),

Gene: CheeseSpider_20 Start: 10667, Stop: 16162, Start Num: 9

Candidate Starts for CheeseSpider_20:

(Start: 4 @10616 has 37 MA's), (5, 10628), (Start: 6 @10631 has 1 MA's), (Start: 9 @10667 has 1 MA's), (10, 10676), (11, 10679), (13, 10721), (30, 10832), (31, 10853), (51, 11081), (53, 11099), (56, 11120), (57, 11123), (59, 11141), (65, 11165), (75, 11249), (77, 11255), (84, 11291), (86, 11306), (88, 11315), (108, 11483), (111, 11510), (127, 11627), (153, 11798), (156, 11828), (176, 12032), (183, 12077), (186, 12104), (187, 12116), (200, 12206), (204, 12251), (207, 12278), (210, 12308), (222, 12395), (227, 12437), (229, 12443), (243, 12557), (247, 12599), (252, 12644), (253, 12650), (255, 12665), (261, 12719), (265, 12758), (267, 12779), (268, 12782), (270, 12800), (276, 12827), (283, 12854), (287, 12875), (291, 12902), (327, 13175), (340, 13214), (345, 13229), (358, 13259), (359, 13262), (366, 13313), (378, 13397), (384, 13430), (387, 13460), (389, 13484), (400, 13550), (421, 13739), (430, 13817), (436, 13865), (437, 13898), (438, 13910), (440, 13913), (441, 13928), (444, 13937), (448, 13973), (450, 13982), (452, 13991), (458, 14042), (467, 14114), (471, 14132), (475, 14153), (485, 14252), (486, 14255), (490, 14288), (493, 14354), (495, 14372), (497, 14387), (500, 14420), (505, 14471), (510, 14522), (532, 14765), (533, 14768), (539, 14801), (545, 14840), (546, 14843), (553, 14909), (554, 14912), (559, 14990), (564, 15047), (566, 15065), (571, 15146), (573, 15164), (594, 15377), (597, 15443), (604, 15509), (605, 15515), (618, 15638), (623, 15662), (626, 15680), (629, 15704), (630, 15710), (633, 15731), (640, 15770), (651, 15911), (659, 15974), (668, 16052),

Gene: CheeseTouch_18 Start: 9868, Stop: 15501, Start Num: 16

Candidate Starts for CheeseTouch_18:

(Start: 16 @9868 has 11 MA's), (Start: 23 @9913 has 1 MA's), (25, 9934), (29, 9955), (32, 10000), (Start: 33 @10015 has 1 MA's), (37, 10099), (43, 10141), (44, 10153), (53, 10216), (55, 10231), (57, 10240), (59, 10258), (60, 10264), (70, 10312), (91, 10447), (107, 10597), (111, 10627), (153, 10921), (156, 10951), (173, 11134), (176, 11155), (183, 11200), (184, 11206), (186, 11227), (196, 11308), (204, 11374), (207, 11401), (208, 11413), (210, 11431), (211, 11443), (217, 11467), (219, 11479), (222, 11518), (224, 11530), (227, 11560), (231, 11605), (240, 11665), (243, 11680), (246, 11710), (247, 11722), (252, 11767), (253, 11773), (254, 11785), (255, 11788), (257, 11809), (260, 11839), (261, 11842), (268, 11905), (271, 11932), (272, 11935), (273, 11938), (274, 11944), (280, 11968), (281, 11971), (283, 11977), (285, 11983), (287, 11998), (290, 12016), (295, 12097), (299, 12145), (300, 12151), (304, 12178), (324, 12337), (325, 12349), (333, 12385), (334, 12391), (344, 12433), (346, 12445), (351, 12484), (353, 12490), (354, 12493), (357, 12511), (358, 12514), (359, 12517), (363, 12541), (373, 12616), (379, 12655), (383, 12679), (387, 12712), (397, 12823), (400, 12856), (404, 12919), (408, 12955), (412, 12985), (421, 13063), (422, 13066), (423, 13075), (426, 13099), (436, 13186), (438, 13231), (440, 13234), (441, 13249), (448, 13294), (450, 13303), (452, 13312), (453, 13315), (465, 13420), (473, 13468), (475, 13474), (485, 13573), (486, 13576), (488, 13588), (497, 13705), (500, 13738), (505, 13789), (509, 13819), (513, 13879), (523, 13960), (526, 13981), (527, 13984), (528, 14014), (534, 14077), (536, 14086), (538, 14095), (554, 14209), (556, 14239), (560, 14287), (561, 14290), (563, 14320), (564, 14341), (580, 14539), (585, 14602), (586, 14608), (593, 14659), (608, 14851), (616, 14938), (621, 14965), (622, 14968), (634, 15043), (638, 15067), (641, 15106), (644, 15142), (648, 15163), (654, 15250), (658, 15292), (663, 15325), (664, 15337), (669, 15415), (672, 15481),

Gene: CherryonLim_17 Start: 10133, Stop: 15220, Start Num: 21

Candidate Starts for CherryonLim_17:

(Start: 21 @10133 has 33 MA's), (35, 10289), (47, 10418), (56, 10490), (60, 10517), (70, 10565), (71, 10574), (74, 10616), (76, 10622), (77, 10625), (84, 10661), (88, 10685), (92, 10712), (101, 10799),

(104, 10838), (106, 10844), (109, 10859), (111, 10880), (119, 10934), (136, 11051), (147, 11114), (152, 11159), (161, 11240), (176, 11402), (178, 11411), (179, 11435), (183, 11447), (186, 11474), (187, 11486), (192, 11531), (197, 11561), (199, 11573), (209, 11675), (210, 11678), (222, 11765), (225, 11792), (235, 11882), (239, 11903), (243, 11927), (249, 11978), (253, 12020), (255, 12035), (256, 12044), (257, 12056), (261, 12089), (266, 12131), (274, 12191), (275, 12194), (276, 12197), (277, 12203), (282, 12221), (287, 12245), (292, 12308), (294, 12329), (296, 12350), (303, 12398), (307, 12428), (313, 12455), (314, 12458), (321, 12539), (322, 12551), (324, 12563), (326, 12578), (332, 12608), (337, 12629), (338, 12632), (349, 12692), (352, 12713), (357, 12737), (359, 12743), (371, 12827), (376, 12869), (382, 12899), (387, 12938), (393, 12986), (397, 13007), (398, 13010), (399, 13016), (405, 13082), (411, 13127), (414, 13160), (415, 13181), (424, 13235), (443, 13385), (445, 13394), (455, 13481), (481, 13658), (496, 13799), (500, 13829), (514, 13967), (525, 14048), (544, 14201), (547, 14231), (574, 14441), (575, 14450), (576, 14456), (581, 14492), (596, 14609), (598, 14615), (602, 14657), (605, 14675), (618, 14798), (623, 14822), (625, 14837), (629, 14867), (633, 14894), (635, 14900), (640, 14933), (647, 15002), (649, 15005), (650, 15041), (656, 15113), (660, 15131),

Gene: ChickenTender_18 Start: 9679, Stop: 14817, Start Num: 21

Candidate Starts for ChickenTender_18:

(Start: 21 @9679 has 33 MA's), (24, 9706), (35, 9835), (38, 9910), (60, 10063), (61, 10066), (74, 10162), (77, 10171), (82, 10201), (84, 10207), (86, 10222), (87, 10225), (91, 10246), (97, 10318), (100, 10339), (109, 10405), (111, 10426), (127, 10543), (152, 10705), (156, 10744), (179, 10978), (183, 10990), (186, 11017), (204, 11164), (208, 11203), (217, 11257), (219, 11269), (222, 11308), (226, 11341), (238, 11443), (239, 11446), (243, 11470), (249, 11521), (253, 11563), (255, 11578), (259, 11617), (270, 11713), (279, 11755), (287, 11788), (297, 11896), (301, 11950), (315, 12025), (324, 12127), (332, 12172), (338, 12196), (339, 12199), (349, 12256), (351, 12274), (359, 12307), (362, 12328), (366, 12358), (373, 12406), (374, 12412), (378, 12439), (398, 12574), (411, 12691), (414, 12724), (415, 12745), (427, 12814), (428, 12820), (445, 12964), (455, 13048), (496, 13369), (519, 13588), (522, 13603), (525, 13624), (549, 13825), (550, 13837), (581, 14077), (583, 14098), (596, 14206), (605, 14272), (607, 14290), (618, 14395), (623, 14419), (624, 14425), (625, 14434), (629, 14464), (640, 14530), (643, 14578), (650, 14638), (659, 14725), (667, 14788),

Gene: ChocoMunchkin_16 Start: 9646, Stop: 14433, Start Num: 64

Candidate Starts for ChocoMunchkin_16:

(Start: 64 @9646 has 23 MA's), (Start: 68 @9673 has 2 MA's), (79, 9751), (87, 9802), (96, 9889), (99, 9904), (105, 9961), (109, 9979), (112, 10006), (113, 10009), (124, 10078), (129, 10135), (140, 10180), (143, 10198), (149, 10243), (155, 10279), (159, 10312), (166, 10360), (167, 10363), (171, 10411), (173, 10450), (175, 10465), (203, 10657), (205, 10675), (218, 10759), (237, 10906), (242, 10933), (252, 11026), (253, 11032), (255, 11047), (259, 11086), (260, 11098), (268, 11164), (283, 11236), (286, 11254), (287, 11257), (291, 11284), (317, 11530), (324, 11596), (332, 11641), (337, 11662), (338, 11665), (339, 11668), (347, 11704), (351, 11743), (353, 11749), (359, 11776), (377, 11905), (378, 11908), (380, 11926), (399, 12049), (401, 12064), (414, 12193), (415, 12214), (423, 12256), (427, 12283), (428, 12289), (442, 12421), (445, 12433), (455, 12520), (460, 12562), (465, 12598), (485, 12724), (489, 12763), (501, 12892), (508, 12949), (512, 12991), (522, 13084), (529, 13159), (537, 13222), (547, 13303), (550, 13324), (568, 13501), (569, 13507), (587, 13726), (595, 13804), (596, 13822), (598, 13828), (605, 13888), (607, 13906), (610, 13939), (618, 14011), (625, 14050), (629, 14080), (640, 14146), (643, 14194), (650, 14254), (660, 14344), (667, 14404),

Gene: Cleo_16 Start: 9909, Stop: 15023, Start Num: 21

Candidate Starts for Cleo_16:

(18, 9888), (Start: 21 @9909 has 33 MA's), (24, 9936), (35, 10065), (39, 10149), (41, 10161), (48, 10212), (54, 10245), (58, 10269), (62, 10302), (74, 10392), (86, 10452), (87, 10455), (94, 10521), (98, 10557), (100, 10569), (107, 10626), (109, 10635), (111, 10656), (158, 10995), (166, 11052), (173, 11154), (183, 11220), (184, 11226), (186, 11247), (204, 11394), (210, 11451), (213, 11469), (216,

11484), (219, 11499), (222, 11538), (233, 11643), (237, 11667), (238, 11673), (251, 11784), (253, 11793), (255, 11808), (259, 11847), (270, 11943), (276, 11970), (277, 11976), (278, 11982), (286, 12015), (287, 12018), (297, 12126), (299, 12165), (304, 12198), (308, 12228), (309, 12231), (314, 12252), (315, 12255), (324, 12357), (332, 12402), (338, 12426), (339, 12429), (357, 12531), (358, 12534), (359, 12537), (366, 12588), (373, 12636), (374, 12642), (380, 12687), (398, 12804), (399, 12810), (404, 12867), (411, 12921), (413, 12942), (414, 12954), (415, 12975), (416, 12978), (427, 13044), (428, 13050), (443, 13185), (454, 13251), (455, 13278), (465, 13356), (496, 13596), (500, 13626), (518, 13800), (522, 13830), (525, 13851), (535, 13959), (541, 13995), (547, 14043), (581, 14280), (595, 14391), (596, 14409), (605, 14475), (610, 14526), (618, 14598), (624, 14628), (625, 14637), (626, 14640), (629, 14667), (633, 14694), (640, 14733), (643, 14781), (650, 14841), (653, 14877), (659, 14931),

Gene: CocoaPuff_15 Start: 9378, Stop: 14465, Start Num: 21

Candidate Starts for CocoaPuff_15:

(Start: 21 @9378 has 33 MA's), (35, 9534), (47, 9663), (50, 9693), (60, 9762), (63, 9774), (70, 9810), (71, 9819), (74, 9861), (77, 9870), (84, 9906), (88, 9930), (94, 9990), (101, 10044), (104, 10083), (106, 10089), (109, 10104), (111, 10125), (134, 10284), (136, 10296), (147, 10359), (152, 10404), (161, 10485), (176, 10644), (179, 10677), (183, 10689), (186, 10716), (192, 10773), (197, 10803), (199, 10815), (209, 10917), (210, 10920), (222, 11007), (229, 11055), (243, 11169), (253, 11262), (255, 11277), (257, 11298), (261, 11331), (263, 11361), (266, 11373), (270, 11412), (275, 11436), (276, 11439), (282, 11463), (287, 11487), (296, 11592), (303, 11640), (307, 11670), (311, 11685), (314, 11700), (317, 11739), (321, 11781), (324, 11805), (326, 11820), (328, 11835), (332, 11850), (338, 11874), (347, 11913), (348, 11928), (349, 11934), (352, 11955), (357, 11979), (359, 11985), (376, 12111), (382, 12141), (387, 12180), (393, 12228), (397, 12249), (398, 12252), (405, 12324), (411, 12369), (414, 12402), (415, 12423), (424, 12477), (434, 12552), (445, 12636), (455, 12723), (496, 13041), (500, 13071), (514, 13209), (520, 13260), (525, 13290), (544, 13449), (547, 13479), (570, 13659), (576, 13710), (581, 13737), (583, 13758), (596, 13854), (602, 13902), (605, 13920), (618, 14043), (623, 14067), (625, 14082), (629, 14112), (633, 14139), (635, 14145), (640, 14178), (647, 14247), (649, 14250), (650, 14286), (660, 14376),

Gene: Cozz_16 Start: 9630, Stop: 14768, Start Num: 21

Candidate Starts for Cozz_16:

(Start: 17 @9606 has 5 MA's), (Start: 21 @9630 has 33 MA's), (24, 9657), (35, 9786), (38, 9861), (60, 10014), (61, 10017), (74, 10113), (77, 10122), (82, 10152), (84, 10158), (86, 10173), (87, 10176), (91, 10197), (97, 10269), (100, 10290), (109, 10356), (111, 10377), (127, 10494), (152, 10656), (156, 10695), (165, 10770), (179, 10929), (183, 10941), (186, 10968), (191, 11013), (192, 11025), (204, 11115), (206, 11133), (208, 11154), (211, 11184), (217, 11208), (219, 11220), (222, 11259), (226, 11292), (238, 11394), (239, 11397), (243, 11421), (253, 11514), (255, 11529), (259, 11568), (270, 11664), (278, 11703), (279, 11706), (287, 11739), (297, 11847), (298, 11850), (301, 11901), (315, 11976), (324, 12078), (332, 12123), (337, 12144), (338, 12147), (339, 12150), (351, 12225), (359, 12258), (362, 12279), (373, 12357), (374, 12363), (378, 12390), (398, 12525), (411, 12642), (414, 12675), (415, 12696), (427, 12765), (428, 12771), (429, 12786), (443, 12906), (445, 12915), (455, 12999), (496, 13320), (519, 13539), (525, 13575), (550, 13788), (575, 13980), (581, 14028), (583, 14049), (596, 14157), (605, 14223), (607, 14241), (613, 14301), (618, 14346), (624, 14376), (625, 14385), (629, 14415), (640, 14481), (643, 14529), (650, 14589), (659, 14676), (667, 14739),

Gene: Delian_17 Start: 10277, Stop: 15820, Start Num: 4

Candidate Starts for Delian_17:

(Start: 4 @10277 has 37 MA's), (Start: 6 @10292 has 1 MA's), (Start: 7 @10298 has 1 MA's), (Start: 9 @10328 has 1 MA's), (10, 10337), (11, 10340), (13, 10382), (30, 10493), (31, 10514), (51, 10742), (53, 10760), (55, 10775), (56, 10781), (57, 10784), (59, 10802), (65, 10826), (75, 10910), (76, 10913), (84, 10952), (86, 10967), (88, 10976), (108, 11144), (111, 11171), (156, 11489), (176, 11693), (183, 11738), (184, 11744), (186, 11765), (187, 11777), (200, 11867), (204, 11912), (207, 11939), (210,

11969), (222, 12056), (223, 12059), (227, 12098), (243, 12218), (247, 12260), (252, 12305), (253, 12311), (255, 12326), (261, 12380), (265, 12419), (267, 12440), (268, 12443), (270, 12461), (271, 12470), (281, 12509), (283, 12515), (287, 12536), (291, 12563), (314, 12770), (327, 12836), (340, 12875), (345, 12890), (358, 12920), (359, 12923), (366, 12974), (377, 13055), (378, 13058), (384, 13091), (387, 13121), (389, 13145), (430, 13478), (436, 13526), (438, 13571), (440, 13574), (441, 13589), (448, 13634), (450, 13643), (452, 13652), (458, 13703), (467, 13775), (471, 13793), (475, 13814), (485, 13913), (486, 13916), (490, 13949), (493, 14015), (495, 14033), (497, 14048), (500, 14081), (505, 14132), (510, 14183), (515, 14231), (532, 14426), (533, 14429), (545, 14501), (546, 14504), (553, 14570), (554, 14573), (555, 14591), (559, 14651), (564, 14708), (566, 14726), (571, 14807), (572, 14810), (573, 14825), (588, 14984), (594, 15038), (597, 15104), (603, 15158), (604, 15170), (605, 15176), (618, 15299), (623, 15323), (626, 15341), (629, 15365), (630, 15371), (633, 15392), (640, 15431), (651, 15572), (653, 15584), (659, 15635), (662, 15653), (671, 15803),

Gene: Dre3_16 Start: 9856, Stop: 14970, Start Num: 21

Candidate Starts for Dre3_16:

(18, 9835), (Start: 21 @9856 has 33 MA's), (24, 9883), (35, 10012), (39, 10096), (41, 10108), (48, 10159), (54, 10192), (58, 10216), (62, 10249), (74, 10339), (86, 10399), (87, 10402), (94, 10468), (98, 10504), (100, 10516), (107, 10573), (109, 10582), (111, 10603), (158, 10942), (166, 10999), (173, 11101), (183, 11167), (184, 11173), (186, 11194), (204, 11341), (210, 11398), (213, 11416), (216, 11431), (219, 11446), (222, 11485), (233, 11590), (237, 11614), (238, 11620), (251, 11731), (253, 11740), (255, 11755), (259, 11794), (270, 11890), (276, 11917), (277, 11923), (278, 11929), (286, 11962), (287, 11965), (297, 12073), (299, 12112), (304, 12145), (308, 12175), (309, 12178), (314, 12199), (315, 12202), (324, 12304), (332, 12349), (338, 12373), (339, 12376), (352, 12454), (357, 12478), (358, 12481), (359, 12484), (366, 12535), (373, 12583), (374, 12589), (380, 12634), (398, 12751), (399, 12757), (404, 12814), (411, 12868), (413, 12889), (414, 12901), (415, 12922), (416, 12925), (427, 12991), (428, 12997), (443, 13132), (454, 13198), (455, 13225), (465, 13303), (496, 13543), (500, 13573), (518, 13747), (522, 13777), (525, 13798), (535, 13906), (547, 13990), (581, 14227), (595, 14338), (596, 14356), (605, 14422), (610, 14473), (618, 14545), (625, 14584), (626, 14587), (629, 14614), (633, 14641), (640, 14680), (643, 14728), (650, 14788), (653, 14824), (659, 14878),

Gene: ElJefes_15 Start: 10009, Stop: 14943, Start Num: 35

Candidate Starts for ElJefes_15:

(Start: 21 @9853 has 33 MA's), (35, 10009), (43, 10114), (47, 10138), (53, 10189), (60, 10237), (70, 10285), (71, 10294), (74, 10336), (76, 10342), (77, 10345), (84, 10381), (88, 10405), (92, 10432), (101, 10519), (104, 10558), (106, 10564), (109, 10579), (111, 10600), (119, 10654), (136, 10771), (147, 10834), (152, 10879), (156, 10918), (161, 10960), (176, 11122), (178, 11131), (179, 11155), (183, 11167), (186, 11194), (187, 11206), (192, 11251), (197, 11281), (199, 11293), (209, 11395), (210, 11398), (222, 11485), (225, 11512), (231, 11572), (235, 11602), (239, 11623), (243, 11647), (249, 11698), (253, 11740), (255, 11755), (256, 11764), (257, 11776), (261, 11809), (266, 11851), (274, 11911), (275, 11914), (276, 11917), (282, 11941), (287, 11965), (296, 12070), (303, 12118), (314, 12178), (315, 12181), (317, 12217), (324, 12283), (326, 12298), (328, 12313), (332, 12328), (337, 12349), (338, 12352), (347, 12391), (348, 12406), (349, 12412), (352, 12433), (357, 12457), (359, 12463), (376, 12589), (382, 12619), (387, 12658), (393, 12706), (397, 12727), (398, 12730), (399, 12736), (405, 12802), (411, 12847), (414, 12880), (415, 12901), (424, 12955), (443, 13105), (445, 13114), (455, 13201), (481, 13378), (496, 13519), (500, 13549), (514, 13687), (525, 13768), (544, 13921), (547, 13951), (574, 14173), (575, 14182), (576, 14188), (581, 14215), (596, 14332), (598, 14338), (602, 14380), (605, 14398), (618, 14521), (623, 14545), (625, 14560), (629, 14590), (633, 14617), (635, 14623), (640, 14656), (647, 14725), (649, 14728), (650, 14764), (656, 14836), (660, 14854),

Gene: Elinal_17 Start: 9384, Stop: 14468, Start Num: 21

Candidate Starts for Elinal_17:

(Start: 21 @9384 has 33 MA's), (35, 9540), (47, 9669), (50, 9699), (60, 9768), (63, 9780), (71, 9825), (74, 9867), (77, 9876), (84, 9912), (88, 9936), (101, 10050), (104, 10089), (106, 10095), (107, 10101), (109, 10110), (111, 10131), (136, 10302), (147, 10365), (152, 10410), (161, 10491), (176, 10650), (179, 10683), (183, 10695), (186, 10722), (192, 10779), (197, 10809), (199, 10821), (209, 10923), (210, 10926), (222, 11013), (229, 11061), (243, 11175), (253, 11268), (255, 11283), (257, 11304), (261, 11337), (263, 11367), (266, 11379), (270, 11418), (275, 11442), (276, 11445), (282, 11469), (287, 11493), (296, 11598), (303, 11646), (307, 11676), (311, 11691), (314, 11706), (317, 11745), (321, 11787), (322, 11799), (324, 11811), (326, 11826), (328, 11841), (332, 11856), (338, 11880), (347, 11919), (348, 11934), (349, 11940), (352, 11961), (357, 11985), (359, 11991), (376, 12117), (382, 12147), (388, 12198), (393, 12234), (397, 12255), (398, 12258), (405, 12330), (411, 12375), (414, 12408), (415, 12429), (424, 12483), (434, 12558), (445, 12642), (455, 12729), (484, 12915), (496, 13047), (500, 13077), (514, 13215), (520, 13266), (525, 13296), (544, 13452), (547, 13482), (570, 13662), (576, 13713), (581, 13740), (583, 13761), (596, 13857), (602, 13905), (605, 13923), (618, 14046), (623, 14070), (625, 14085), (629, 14115), (633, 14142), (635, 14148), (640, 14181), (647, 14250), (649, 14253), (650, 14289), (660, 14379),

Gene: Elliott_16 Start: 9629, Stop: 14767, Start Num: 21

Candidate Starts for Elliott_16:

(Start: 17 @9605 has 5 MA's), (Start: 21 @9629 has 33 MA's), (24, 9656), (35, 9785), (38, 9860), (60, 10013), (61, 10016), (74, 10112), (77, 10121), (82, 10151), (84, 10157), (86, 10172), (87, 10175), (91, 10196), (97, 10268), (100, 10289), (109, 10355), (111, 10376), (127, 10493), (152, 10655), (156, 10694), (165, 10769), (179, 10928), (183, 10940), (186, 10967), (191, 11012), (192, 11024), (204, 11114), (206, 11132), (208, 11153), (211, 11183), (217, 11207), (219, 11219), (222, 11258), (226, 11291), (238, 11393), (239, 11396), (243, 11420), (253, 11513), (255, 11528), (259, 11567), (278, 11702), (279, 11705), (287, 11738), (297, 11846), (298, 11849), (301, 11900), (315, 11975), (324, 12077), (332, 12122), (337, 12143), (338, 12146), (339, 12149), (351, 12224), (359, 12257), (362, 12278), (366, 12308), (373, 12356), (374, 12362), (378, 12389), (398, 12524), (411, 12641), (414, 12674), (415, 12695), (427, 12764), (428, 12770), (429, 12785), (443, 12905), (445, 12914), (455, 12998), (496, 13319), (519, 13538), (525, 13574), (550, 13787), (575, 13979), (581, 14027), (583, 14048), (596, 14156), (605, 14222), (607, 14240), (618, 14345), (624, 14375), (625, 14384), (629, 14414), (640, 14480), (643, 14528), (650, 14588), (659, 14675), (667, 14738),

Gene: Emalyn_15 Start: 9356, Stop: 14068, Start Num: 64

Candidate Starts for Emalyn_15:

(Start: 64 @9356 has 23 MA's), (87, 9512), (96, 9599), (99, 9614), (103, 9659), (105, 9671), (109, 9689), (112, 9716), (124, 9788), (128, 9830), (129, 9845), (131, 9848), (137, 9872), (140, 9890), (143, 9908), (147, 9929), (149, 9953), (150, 9962), (155, 9989), (159, 10022), (160, 10031), (171, 10121), (173, 10160), (175, 10175), (186, 10244), (190, 10271), (203, 10367), (205, 10385), (214, 10448), (237, 10616), (238, 10622), (252, 10736), (253, 10742), (255, 10757), (283, 10946), (287, 10967), (290, 10985), (291, 10994), (301, 11129), (315, 11204), (317, 11240), (320, 11279), (321, 11282), (324, 11306), (328, 11336), (332, 11351), (338, 11375), (347, 11414), (351, 11453), (353, 11459), (378, 11618), (410, 11867), (411, 11870), (414, 11903), (415, 11924), (427, 11993), (428, 11999), (455, 12230), (476, 12365), (496, 12557), (503, 12626), (506, 12650), (522, 12791), (547, 13004), (550, 13025), (557, 13079), (590, 13382), (595, 13439), (596, 13457), (605, 13523), (612, 13595), (618, 13646), (623, 13670), (624, 13676), (625, 13685), (629, 13715), (640, 13781), (643, 13829), (650, 13889), (660, 13979), (667, 14039),

Gene: Fairfaxidum_17 Start: 10343, Stop: 15964, Start Num: 4

Candidate Starts for Fairfaxidum_17:

(Start: 3 @10307 has 1 MA's), (Start: 4 @10343 has 37 MA's), (Start: 7 @10364 has 1 MA's), (8, 10382), (11, 10406), (13, 10448), (28, 10547), (30, 10559), (31, 10580), (34, 10637), (37, 10709), (39, 10730), (43, 10751), (46, 10772), (47, 10775), (52, 10823), (53, 10826), (57, 10850), (59, 10868), (70, 10922), (77, 10982), (84, 11018), (85, 11024), (111, 11237), (139, 11423), (153, 11525), (154, 11540),

(156, 11555), (162, 11612), (183, 11804), (198, 11924), (207, 12005), (210, 12035), (217, 12071), (222, 12122), (227, 12164), (243, 12284), (249, 12335), (252, 12371), (253, 12377), (255, 12392), (261, 12446), (265, 12485), (268, 12509), (270, 12527), (277, 12560), (281, 12575), (283, 12581), (286, 12599), (287, 12602), (291, 12629), (292, 12665), (321, 12896), (325, 12932), (326, 12935), (333, 12968), (352, 13070), (359, 13103), (368, 13166), (373, 13202), (378, 13238), (382, 13262), (385, 13289), (397, 13370), (404, 13436), (407, 13454), (418, 13559), (423, 13592), (430, 13658), (431, 13667), (436, 13706), (437, 13739), (438, 13751), (440, 13754), (441, 13769), (444, 13778), (448, 13814), (450, 13823), (452, 13832), (463, 13928), (473, 13988), (474, 13991), (475, 13994), (477, 14015), (486, 14096), (491, 14138), (497, 14225), (500, 14258), (502, 14267), (505, 14309), (517, 14423), (532, 14597), (545, 14672), (546, 14675), (548, 14705), (549, 14708), (552, 14732), (553, 14741), (554, 14744), (559, 14822), (564, 14879), (573, 14996), (577, 15047), (594, 15185), (597, 15251), (604, 15317), (605, 15323), (607, 15341), (616, 15434), (618, 15446), (627, 15494), (629, 15512), (630, 15518), (633, 15539), (640, 15578), (651, 15719), (659, 15782), (668, 15857), (671, 15950),

Gene: Feastonyeet_15 Start: 9403, Stop: 14511, Start Num: 21

Candidate Starts for Feastonyeet_15:

(Start: 21 @9403 has 33 MA's), (35, 9559), (47, 9688), (50, 9718), (60, 9787), (63, 9799), (70, 9835), (74, 9886), (77, 9895), (84, 9931), (88, 9955), (94, 10015), (101, 10069), (104, 10108), (106, 10114), (109, 10129), (111, 10150), (136, 10321), (147, 10384), (152, 10429), (161, 10510), (176, 10669), (179, 10702), (183, 10714), (186, 10741), (192, 10798), (197, 10828), (199, 10840), (209, 10942), (210, 10945), (222, 11032), (229, 11080), (243, 11194), (253, 11287), (255, 11302), (257, 11323), (261, 11356), (263, 11386), (266, 11398), (270, 11437), (275, 11461), (276, 11464), (282, 11488), (287, 11512), (296, 11617), (307, 11695), (314, 11725), (315, 11728), (317, 11764), (321, 11806), (324, 11830), (326, 11845), (328, 11860), (332, 11875), (338, 11899), (347, 11938), (348, 11953), (349, 11959), (357, 12004), (359, 12010), (376, 12136), (382, 12166), (386, 12202), (387, 12205), (393, 12253), (397, 12274), (398, 12277), (405, 12349), (411, 12394), (414, 12427), (415, 12448), (424, 12502), (434, 12577), (445, 12661), (455, 12748), (496, 13066), (500, 13096), (514, 13234), (520, 13285), (525, 13315), (544, 13480), (547, 13510), (570, 13690), (576, 13741), (581, 13783), (583, 13804), (596, 13900), (602, 13948), (605, 13966), (618, 14089), (623, 14113), (625, 14128), (629, 14158), (633, 14185), (635, 14191), (640, 14224), (647, 14293), (649, 14296), (650, 14332), (660, 14422),

Gene: Fenry_16 Start: 10023, Stop: 15515, Start Num: 4

Candidate Starts for Fenry_16:

(Start: 4 @10023 has 37 MA's), (Start: 6 @10038 has 1 MA's), (Start: 7 @10044 has 1 MA's), (Start: 9 @10074 has 1 MA's), (10, 10083), (11, 10086), (13, 10128), (30, 10239), (31, 10260), (36, 10380), (51, 10488), (53, 10506), (55, 10521), (56, 10527), (57, 10530), (59, 10548), (65, 10572), (75, 10656), (77, 10662), (84, 10698), (86, 10713), (88, 10722), (108, 10890), (111, 10917), (143, 11130), (156, 11235), (176, 11439), (183, 11484), (186, 11511), (187, 11523), (200, 11613), (204, 11658), (207, 11685), (210, 11715), (222, 11802), (223, 11805), (227, 11844), (243, 11964), (247, 12006), (252, 12051), (253, 12057), (254, 12069), (255, 12072), (261, 12126), (265, 12165), (267, 12186), (268, 12189), (270, 12207), (281, 12255), (283, 12261), (287, 12282), (291, 12309), (295, 12381), (314, 12516), (329, 12588), (331, 12597), (335, 12609), (340, 12621), (345, 12636), (358, 12666), (359, 12669), (366, 12720), (377, 12801), (378, 12804), (384, 12837), (387, 12867), (389, 12891), (400, 12957), (425, 13173), (430, 13224), (436, 13272), (438, 13317), (440, 13320), (441, 13335), (448, 13380), (450, 13389), (452, 13398), (458, 13449), (467, 13521), (471, 13539), (475, 13560), (485, 13659), (486, 13662), (490, 13695), (493, 13761), (495, 13779), (497, 13794), (500, 13827), (505, 13878), (510, 13929), (532, 14172), (533, 14175), (545, 14247), (546, 14250), (553, 14316), (554, 14319), (555, 14337), (559, 14397), (571, 14553), (572, 14556), (573, 14571), (588, 14742), (594, 14796), (599, 14853), (601, 14868), (606, 14916), (611, 14961), (631, 15081), (632, 15090), (639, 15129), (646, 15201), (651, 15270), (653, 15282), (659, 15333), (662, 15351), (671, 15501),

Gene: Fribs8_17 Start: 10424, Stop: 15559, Start Num: 21

Candidate Starts for Fribs8_17:

(Start: 21 @10424 has 33 MA's), (24, 10451), (35, 10580), (41, 10676), (48, 10727), (54, 10760), (58, 10784), (62, 10817), (74, 10907), (86, 10967), (87, 10970), (93, 11030), (94, 11036), (100, 11084), (109, 11150), (111, 11171), (118, 11207), (166, 11567), (173, 11669), (179, 11723), (180, 11726), (183, 11735), (184, 11741), (186, 11762), (204, 11909), (210, 11966), (213, 11984), (217, 12002), (219, 12014), (222, 12053), (229, 12101), (233, 12158), (237, 12182), (238, 12188), (251, 12299), (253, 12308), (255, 12323), (259, 12362), (267, 12437), (276, 12485), (277, 12491), (287, 12533), (297, 12641), (299, 12680), (304, 12713), (324, 12872), (332, 12917), (338, 12941), (352, 13022), (357, 13046), (358, 13049), (359, 13052), (361, 13070), (366, 13103), (372, 13145), (378, 13184), (385, 13235), (398, 13319), (399, 13325), (404, 13382), (406, 13394), (411, 13436), (413, 13457), (414, 13469), (415, 13490), (416, 13493), (427, 13559), (429, 13580), (443, 13700), (454, 13766), (455, 13793), (461, 13838), (463, 13859), (466, 13880), (496, 14123), (500, 14153), (503, 14192), (518, 14327), (522, 14357), (525, 14378), (547, 14570), (575, 14783), (578, 14801), (581, 14816), (595, 14927), (596, 14945), (605, 15011), (610, 15062), (616, 15122), (618, 15134), (625, 15173), (626, 15176), (629, 15203), (635, 15236), (640, 15269), (659, 15467), (661, 15473), (667, 15530),

Gene: Frickyeah_18 Start: 9926, Stop: 15508, Start Num: 23

Candidate Starts for Frickyeah_18:

(Start: 16 @9881 has 11 MA's), (Start: 23 @9926 has 1 MA's), (25, 9947), (29, 9968), (32, 10013), (Start: 33 @10028 has 1 MA's), (37, 10112), (43, 10154), (44, 10166), (53, 10229), (55, 10244), (57, 10253), (59, 10271), (60, 10277), (70, 10325), (91, 10460), (107, 10610), (111, 10640), (156, 10964), (169, 11060), (176, 11168), (183, 11213), (184, 11219), (186, 11240), (196, 11321), (204, 11387), (207, 11414), (208, 11426), (210, 11444), (211, 11456), (217, 11480), (219, 11492), (222, 11531), (223, 11534), (224, 11543), (227, 11573), (231, 11618), (240, 11678), (243, 11693), (246, 11723), (247, 11735), (252, 11780), (253, 11786), (255, 11801), (258, 11831), (260, 11852), (261, 11855), (268, 11918), (271, 11945), (272, 11948), (273, 11951), (274, 11957), (280, 11981), (281, 11984), (283, 11990), (285, 11996), (287, 12011), (290, 12029), (292, 12074), (299, 12158), (300, 12164), (304, 12191), (317, 12284), (318, 12293), (324, 12350), (325, 12362), (333, 12398), (334, 12404), (344, 12446), (346, 12458), (351, 12497), (353, 12503), (354, 12506), (357, 12524), (358, 12527), (359, 12530), (363, 12554), (373, 12629), (379, 12668), (383, 12692), (387, 12725), (397, 12836), (400, 12869), (404, 12932), (408, 12968), (412, 12998), (421, 13076), (422, 13079), (423, 13088), (426, 13112), (435, 13193), (436, 13199), (438, 13244), (440, 13247), (441, 13262), (448, 13307), (450, 13316), (452, 13325), (453, 13328), (465, 13433), (473, 13481), (474, 13484), (475, 13487), (485, 13586), (486, 13589), (488, 13601), (497, 13718), (500, 13751), (505, 13802), (509, 13832), (513, 13892), (523, 13973), (526, 13994), (528, 14027), (536, 14099), (538, 14108), (554, 14222), (556, 14252), (558, 14261), (560, 14300), (561, 14303), (563, 14333), (564, 14354), (580, 14552), (585, 14615), (586, 14621), (593, 14672), (608, 14858), (616, 14945), (621, 14972), (622, 14975), (634, 15050), (638, 15074), (641, 15113), (644, 15149), (648, 15170), (654, 15257), (658, 15299), (663, 15332), (664, 15344), (669, 15422), (672, 15488),

Gene: Frokostdame_17 Start: 10288, Stop: 15762, Start Num: 6

Candidate Starts for Frokostdame_17:

(Start: 4 @10273 has 37 MA's), (5, 10285), (Start: 6 @10288 has 1 MA's), (Start: 7 @10294 has 1 MA's), (Start: 9 @10324 has 1 MA's), (10, 10333), (13, 10378), (30, 10489), (31, 10510), (36, 10630), (41, 10672), (51, 10738), (53, 10756), (56, 10777), (57, 10780), (59, 10798), (65, 10822), (75, 10906), (84, 10948), (86, 10963), (88, 10972), (108, 11140), (111, 11167), (127, 11284), (136, 11338), (143, 11380), (156, 11485), (176, 11689), (183, 11734), (184, 11740), (186, 11761), (187, 11773), (200, 11863), (204, 11908), (207, 11935), (210, 11965), (222, 12052), (223, 12055), (227, 12094), (233, 12157), (234, 12166), (243, 12214), (247, 12256), (253, 12307), (255, 12322), (261, 12376), (265, 12415), (267, 12436), (268, 12439), (270, 12457), (276, 12484), (281, 12505), (283, 12511), (287, 12532), (290, 12550), (291, 12559), (327, 12832), (335, 12859), (340, 12871), (345, 12886), (358, 12916), (359, 12919), (366, 12970), (372, 13012), (377, 13051), (378, 13054), (384, 13087), (387,

13117), (389, 13141), (400, 13207), (430, 13474), (436, 13522), (437, 13555), (438, 13567), (440, 13570), (441, 13585), (448, 13630), (450, 13639), (452, 13648), (458, 13699), (467, 13771), (471, 13789), (475, 13810), (485, 13909), (486, 13912), (490, 13945), (493, 14011), (495, 14029), (497, 14044), (500, 14077), (505, 14128), (510, 14179), (532, 14422), (533, 14425), (545, 14497), (546, 14500), (553, 14566), (554, 14569), (555, 14587), (559, 14647), (564, 14704), (566, 14722), (571, 14803), (572, 14806), (573, 14821), (588, 14992), (594, 15046), (601, 15118), (602, 15127), (606, 15163), (614, 15223), (615, 15241), (619, 15259), (628, 15304), (632, 15337), (646, 15448), (651, 15517), (659, 15580), (662, 15598), (671, 15748),

Gene: GTE2_14 Start: 9463, Stop: 14106, Start Num: 87

Candidate Starts for GTE2_14:

(Start: 64 @9307 has 23 MA's), (Start: 68 @9334 has 2 MA's), (79, 9412), (87, 9463), (96, 9550), (99, 9565), (105, 9622), (109, 9640), (112, 9667), (113, 9670), (124, 9739), (129, 9796), (140, 9841), (143, 9859), (149, 9904), (155, 9940), (159, 9973), (166, 10021), (167, 10024), (171, 10072), (173, 10111), (175, 10126), (203, 10318), (205, 10336), (218, 10420), (237, 10567), (242, 10594), (252, 10687), (253, 10693), (255, 10708), (259, 10747), (268, 10825), (283, 10897), (286, 10915), (287, 10918), (301, 11080), (315, 11155), (317, 11191), (324, 11257), (332, 11302), (337, 11323), (338, 11326), (339, 11329), (347, 11365), (351, 11404), (353, 11410), (357, 11431), (359, 11437), (367, 11497), (377, 11566), (378, 11569), (380, 11587), (399, 11710), (401, 11725), (414, 11854), (415, 11875), (422, 11908), (427, 11944), (428, 11950), (442, 12082), (445, 12094), (455, 12181), (478, 12334), (485, 12385), (489, 12424), (501, 12553), (508, 12610), (512, 12655), (522, 12748), (529, 12823), (537, 12886), (547, 12967), (550, 12988), (568, 13174), (569, 13180), (587, 13399), (595, 13477), (596, 13495), (598, 13501), (605, 13561), (607, 13579), (610, 13612), (618, 13684), (625, 13723), (629, 13753), (640, 13819), (643, 13867), (650, 13927), (660, 14017), (667, 14077),

Gene: Gambino_19 Start: 10619, Stop: 16108, Start Num: 4

Candidate Starts for Gambino_19:

(Start: 4 @10619 has 37 MA's), (Start: 6 @10634 has 1 MA's), (Start: 7 @10640 has 1 MA's), (Start: 9 @10670 has 1 MA's), (10, 10679), (11, 10682), (13, 10724), (30, 10835), (31, 10856), (36, 10976), (41, 11018), (51, 11084), (53, 11102), (56, 11123), (57, 11126), (59, 11144), (65, 11168), (75, 11252), (84, 11294), (86, 11309), (88, 11318), (108, 11486), (111, 11513), (127, 11630), (153, 11801), (156, 11831), (176, 12035), (183, 12080), (186, 12107), (187, 12119), (189, 12131), (200, 12209), (204, 12254), (207, 12281), (210, 12311), (222, 12398), (223, 12401), (227, 12440), (233, 12503), (234, 12512), (243, 12560), (247, 12602), (252, 12647), (253, 12653), (255, 12668), (261, 12722), (265, 12761), (267, 12782), (268, 12785), (270, 12803), (276, 12830), (281, 12851), (283, 12857), (287, 12878), (290, 12896), (291, 12905), (327, 13178), (345, 13232), (358, 13262), (359, 13265), (366, 13316), (377, 13397), (378, 13400), (384, 13433), (387, 13463), (389, 13487), (400, 13553), (430, 13820), (436, 13868), (437, 13901), (438, 13913), (440, 13916), (448, 13976), (450, 13985), (452, 13994), (458, 14045), (467, 14117), (471, 14135), (475, 14156), (485, 14255), (486, 14258), (490, 14291), (493, 14357), (495, 14375), (497, 14390), (500, 14423), (505, 14474), (510, 14525), (517, 14594), (532, 14768), (533, 14771), (545, 14843), (546, 14846), (553, 14912), (554, 14915), (555, 14933), (559, 14993), (564, 15050), (566, 15068), (571, 15149), (572, 15152), (573, 15167), (588, 15338), (594, 15392), (601, 15464), (602, 15473), (606, 15509), (614, 15569), (615, 15587), (619, 15605), (628, 15650), (632, 15683), (646, 15794), (651, 15863), (659, 15926), (662, 15944), (671, 16094),

Gene: Getalong_19 Start: 10672, Stop: 16305, Start Num: 17

Candidate Starts for Getalong_19:

(Start: 17 @10672 has 5 MA's), (Start: 23 @10717 has 1 MA's), (25, 10738), (29, 10759), (32, 10804), (Start: 33 @10819 has 1 MA's), (37, 10903), (43, 10945), (44, 10957), (53, 11020), (55, 11035), (57, 11044), (59, 11062), (60, 11068), (70, 11116), (91, 11251), (107, 11401), (111, 11431), (143, 11650), (153, 11725), (156, 11755), (176, 11959), (183, 12004), (184, 12010), (186, 12031), (189, 12055), (196, 12112), (204, 12178), (207, 12205), (208, 12217), (210, 12235), (211, 12247), (217, 12271),

(219, 12283), (222, 12322), (223, 12325), (224, 12334), (227, 12364), (231, 12409), (240, 12469), (243, 12484), (246, 12514), (247, 12526), (252, 12571), (253, 12577), (255, 12592), (258, 12622), (260, 12643), (261, 12646), (268, 12709), (271, 12736), (272, 12739), (273, 12742), (274, 12748), (280, 12772), (281, 12775), (283, 12781), (285, 12787), (287, 12802), (290, 12820), (292, 12865), (299, 12949), (300, 12955), (304, 12982), (317, 13075), (318, 13084), (324, 13141), (325, 13153), (333, 13189), (334, 13195), (344, 13237), (346, 13249), (351, 13288), (353, 13294), (354, 13297), (357, 13315), (358, 13318), (359, 13321), (373, 13420), (379, 13459), (383, 13483), (387, 13516), (397, 13627), (400, 13660), (404, 13723), (408, 13759), (412, 13789), (421, 13867), (422, 13870), (423, 13879), (426, 13903), (436, 13990), (438, 14035), (440, 14038), (441, 14053), (448, 14098), (450, 14107), (452, 14116), (453, 14119), (465, 14224), (473, 14272), (475, 14278), (485, 14377), (486, 14380), (488, 14392), (497, 14509), (500, 14542), (505, 14593), (509, 14623), (513, 14683), (523, 14764), (526, 14785), (527, 14788), (528, 14818), (534, 14881), (536, 14890), (538, 14899), (554, 15013), (556, 15043), (560, 15091), (561, 15094), (563, 15124), (564, 15145), (580, 15343), (585, 15406), (586, 15412), (593, 15463), (608, 15655), (616, 15742), (621, 15769), (622, 15772), (634, 15847), (638, 15871), (641, 15910), (644, 15946), (648, 15967), (654, 16054), (658, 16096), (663, 16129), (664, 16141), (672, 16285),

Gene: GiKK_19 Start: 9920, Stop: 14137, Start Num: 64

Candidate Starts for GiKK_19:

(Start: 64 @9920 has 23 MA's), (Start: 68 @9947 has 2 MA's), (101, 10193), (109, 10256), (116, 10313), (121, 10340), (125, 10382), (135, 10445), (138, 10460), (141, 10478), (144, 10496), (146, 10508), (149, 10541), (155, 10583), (157, 10598), (169, 10694), (170, 10703), (172, 10766), (174, 10781), (181, 10817), (188, 10868), (193, 10901), (194, 10910), (205, 10991), (212, 11057), (215, 11066), (216, 11075), (220, 11096), (235, 11231), (237, 11243), (255, 11384), (257, 11405), (261, 11438), (262, 11456), (264, 11474), (270, 11519), (283, 11573), (285, 11579), (287, 11594), (303, 11657), (312, 11705), (315, 11720), (317, 11756), (343, 11810), (351, 11837), (352, 11840), (353, 11843), (358, 11867), (359, 11870), (367, 11930), (377, 11999), (378, 12002), (380, 12020), (385, 12053), (391, 12104), (397, 12134), (401, 12158), (402, 12161), (414, 12287), (415, 12308), (417, 12317), (419, 12326), (420, 12332), (439, 12485), (451, 12554), (452, 12560), (456, 12596), (481, 12725), (496, 12866), (499, 12890), (503, 12935), (520, 13088), (521, 13091), (544, 13283), (547, 13313), (592, 13487), (599, 13559), (604, 13595), (607, 13619), (609, 13631), (612, 13673), (617, 13715), (618, 13721), (623, 13745), (626, 13763), (629, 13784), (633, 13811), (635, 13817), (640, 13850), (642, 13871), (643, 13898), (649, 13922), (650, 13958), (655, 14006), (667, 14108),

Gene: Gibbous_16 Start: 9856, Stop: 14970, Start Num: 21

Candidate Starts for Gibbous_16:

(18, 9835), (Start: 21 @9856 has 33 MA's), (24, 9883), (35, 10012), (39, 10096), (41, 10108), (48, 10159), (54, 10192), (58, 10216), (62, 10249), (74, 10339), (86, 10399), (87, 10402), (94, 10468), (98, 10504), (100, 10516), (107, 10573), (109, 10582), (111, 10603), (158, 10942), (166, 10999), (173, 11101), (183, 11167), (184, 11173), (186, 11194), (204, 11341), (210, 11398), (213, 11416), (216, 11431), (219, 11446), (222, 11485), (233, 11590), (237, 11614), (238, 11620), (251, 11731), (253, 11740), (255, 11755), (259, 11794), (270, 11890), (276, 11917), (277, 11923), (278, 11929), (286, 11962), (287, 11965), (297, 12073), (299, 12112), (304, 12145), (308, 12175), (309, 12178), (314, 12199), (315, 12202), (324, 12304), (332, 12349), (338, 12373), (339, 12376), (352, 12454), (357, 12478), (358, 12481), (359, 12484), (366, 12535), (373, 12583), (374, 12589), (380, 12634), (398, 12751), (399, 12757), (404, 12814), (411, 12868), (413, 12889), (414, 12901), (415, 12922), (416, 12925), (427, 12991), (428, 12997), (443, 13132), (454, 13198), (455, 13225), (465, 13303), (496, 13543), (500, 13573), (518, 13747), (522, 13777), (525, 13798), (535, 13906), (547, 13990), (581, 14227), (595, 14338), (596, 14356), (605, 14422), (610, 14473), (618, 14545), (625, 14584), (626, 14587), (629, 14614), (633, 14641), (640, 14680), (643, 14728), (650, 14788), (653, 14824), (659, 14878),

Gene: GoldHunter_17 Start: 9630, Stop: 14768, Start Num: 21

Candidate Starts for GoldHunter_17:

(Start: 17 @9606 has 5 MA's), (Start: 21 @9630 has 33 MA's), (24, 9657), (35, 9786), (38, 9861), (60, 10014), (61, 10017), (74, 10113), (77, 10122), (82, 10152), (84, 10158), (86, 10173), (87, 10176), (91, 10197), (97, 10269), (100, 10290), (109, 10356), (111, 10377), (127, 10494), (152, 10656), (156, 10695), (165, 10770), (179, 10929), (183, 10941), (186, 10968), (191, 11013), (192, 11025), (204, 11115), (206, 11133), (208, 11154), (211, 11184), (217, 11208), (219, 11220), (222, 11259), (226, 11292), (238, 11394), (239, 11397), (243, 11421), (253, 11514), (255, 11529), (259, 11568), (265, 11622), (270, 11664), (279, 11706), (286, 11736), (287, 11739), (297, 11847), (298, 11850), (301, 11901), (315, 11976), (322, 12066), (324, 12078), (332, 12123), (337, 12144), (338, 12147), (339, 12150), (351, 12225), (359, 12258), (362, 12279), (366, 12309), (373, 12357), (374, 12363), (378, 12390), (398, 12525), (411, 12642), (414, 12675), (415, 12696), (416, 12699), (427, 12765), (428, 12771), (429, 12786), (443, 12906), (445, 12915), (455, 12999), (496, 13320), (519, 13539), (525, 13575), (550, 13788), (575, 13980), (581, 14028), (583, 14049), (596, 14157), (605, 14223), (607, 14241), (613, 14301), (618, 14346), (624, 14376), (625, 14385), (629, 14415), (640, 14481), (643, 14529), (650, 14589), (659, 14676), (667, 14739),

Gene: Guacamole_17 Start: 10278, Stop: 15800, Start Num: 4

Candidate Starts for Guacamole_17:

(Start: 4 @10278 has 37 MA's), (Start: 6 @10293 has 1 MA's), (Start: 7 @10299 has 1 MA's), (Start: 9 @10329 has 1 MA's), (10, 10338), (11, 10341), (13, 10383), (30, 10494), (31, 10515), (36, 10635), (41, 10677), (51, 10743), (53, 10761), (56, 10782), (57, 10785), (59, 10803), (65, 10827), (75, 10911), (76, 10914), (84, 10953), (86, 10968), (88, 10977), (108, 11145), (111, 11172), (127, 11289), (135, 11337), (153, 11460), (156, 11490), (176, 11694), (183, 11739), (186, 11766), (187, 11778), (200, 11868), (204, 11913), (207, 11940), (210, 11970), (222, 12057), (223, 12060), (227, 12099), (236, 12183), (243, 12219), (247, 12261), (252, 12306), (253, 12312), (254, 12324), (255, 12327), (261, 12381), (265, 12420), (267, 12441), (268, 12444), (270, 12462), (271, 12471), (276, 12489), (281, 12510), (283, 12516), (287, 12537), (291, 12564), (296, 12642), (331, 12831), (340, 12855), (344, 12867), (345, 12870), (355, 12885), (358, 12900), (359, 12903), (366, 12954), (377, 13035), (378, 13038), (384, 13071), (387, 13101), (389, 13125), (409, 13284), (430, 13458), (436, 13506), (438, 13551), (440, 13554), (441, 13569), (448, 13614), (450, 13623), (452, 13632), (458, 13683), (467, 13755), (471, 13773), (475, 13794), (485, 13893), (486, 13896), (490, 13929), (493, 13995), (495, 14013), (497, 14028), (500, 14061), (505, 14112), (510, 14163), (515, 14211), (532, 14406), (533, 14409), (545, 14481), (546, 14484), (553, 14550), (554, 14553), (555, 14571), (559, 14631), (564, 14688), (566, 14706), (571, 14787), (572, 14790), (573, 14805), (594, 15018), (597, 15084), (603, 15138), (604, 15150), (605, 15156), (618, 15279), (623, 15303), (626, 15321), (629, 15345), (630, 15351), (633, 15372), (640, 15411), (651, 15552), (653, 15564), (659, 15615), (662, 15633), (671, 15783),

Gene: Hexbug_18 Start: 10603, Stop: 14823, Start Num: 64

Candidate Starts for Hexbug_18:

(Start: 64 @10603 has 23 MA's), (Start: 68 @10630 has 2 MA's), (109, 10939), (116, 10996), (120, 11020), (125, 11065), (126, 11068), (130, 11110), (135, 11128), (138, 11143), (141, 11161), (142, 11170), (149, 11224), (157, 11281), (167, 11362), (171, 11410), (172, 11449), (174, 11464), (178, 11473), (181, 11500), (185, 11530), (186, 11533), (188, 11551), (205, 11674), (212, 11740), (221, 11803), (232, 11890), (243, 11959), (254, 12064), (255, 12067), (257, 12088), (261, 12121), (262, 12139), (264, 12157), (267, 12181), (270, 12202), (271, 12211), (283, 12256), (284, 12259), (287, 12277), (312, 12388), (314, 12400), (315, 12403), (317, 12439), (331, 12481), (343, 12493), (351, 12520), (359, 12553), (370, 12628), (377, 12682), (378, 12685), (380, 12703), (387, 12748), (391, 12787), (392, 12793), (397, 12817), (400, 12838), (401, 12841), (402, 12844), (414, 12970), (415, 12991), (417, 13000), (419, 13009), (420, 13015), (439, 13168), (447, 13213), (451, 13237), (452, 13243), (456, 13279), (461, 13312), (464, 13336), (476, 13387), (482, 13432), (496, 13570), (500, 13600), (544, 13981), (592, 14173), (599, 14245), (604, 14281), (607, 14305), (609, 14317), (612, 14359), (618, 14407), (629, 14470), (635, 14503), (640, 14536), (642, 14557), (643, 14584), (649, 14608), (650, 14644), (652, 14671), (653, 14680), (655, 14692), (667, 14794),

Gene: HippoPololi_18 Start: 10513, Stop: 15630, Start Num: 21

Candidate Starts for HippoPololi_18:

(18, 10492), (Start: 21 @10513 has 33 MA's), (24, 10540), (35, 10669), (39, 10753), (45, 10792), (48, 10816), (58, 10873), (61, 10900), (62, 10906), (74, 10996), (86, 11056), (87, 11059), (94, 11125), (100, 11173), (109, 11239), (111, 11260), (158, 11599), (165, 11653), (166, 11656), (173, 11758), (180, 11815), (182, 11821), (183, 11824), (184, 11830), (186, 11851), (200, 11953), (210, 12055), (213, 12073), (222, 12142), (229, 12190), (233, 12247), (237, 12271), (238, 12277), (253, 12397), (255, 12412), (259, 12451), (267, 12526), (270, 12547), (276, 12574), (277, 12580), (286, 12619), (287, 12622), (297, 12730), (304, 12802), (314, 12856), (324, 12961), (332, 13006), (338, 13030), (352, 13111), (358, 13138), (359, 13141), (366, 13192), (373, 13240), (374, 13246), (380, 13291), (398, 13408), (399, 13414), (404, 13471), (411, 13525), (413, 13546), (414, 13558), (415, 13579), (416, 13582), (427, 13648), (428, 13654), (443, 13789), (445, 13798), (454, 13855), (455, 13882), (469, 13975), (496, 14203), (498, 14224), (500, 14233), (518, 14407), (522, 14437), (525, 14458), (547, 14650), (565, 14740), (581, 14887), (583, 14908), (596, 15016), (600, 15049), (605, 15082), (610, 15133), (618, 15205), (625, 15244), (626, 15247), (629, 15274), (635, 15307), (640, 15340), (642, 15361), (643, 15388), (653, 15484), (659, 15538),

Gene: Hitter_17 Start: 10274, Stop: 15796, Start Num: 4

Candidate Starts for Hitter_17:

(Start: 4 @10274 has 37 MA's), (Start: 6 @10289 has 1 MA's), (Start: 7 @10295 has 1 MA's), (Start: 9 @10325 has 1 MA's), (10, 10334), (11, 10337), (13, 10379), (30, 10490), (31, 10511), (51, 10739), (53, 10757), (55, 10772), (56, 10778), (57, 10781), (59, 10799), (65, 10823), (75, 10907), (77, 10913), (84, 10949), (86, 10964), (88, 10973), (108, 11141), (111, 11168), (127, 11285), (153, 11456), (156, 11486), (176, 11690), (183, 11735), (204, 11909), (207, 11936), (210, 11966), (222, 12053), (227, 12095), (236, 12179), (243, 12215), (247, 12257), (252, 12302), (253, 12308), (254, 12320), (255, 12323), (261, 12377), (265, 12416), (267, 12437), (268, 12440), (270, 12458), (271, 12467), (276, 12485), (281, 12506), (283, 12512), (287, 12533), (291, 12560), (296, 12638), (331, 12827), (340, 12851), (344, 12863), (345, 12866), (355, 12881), (358, 12896), (359, 12899), (366, 12950), (377, 13031), (378, 13034), (384, 13067), (387, 13097), (389, 13121), (430, 13454), (436, 13502), (438, 13547), (440, 13550), (441, 13565), (448, 13610), (450, 13619), (452, 13628), (458, 13679), (467, 13751), (471, 13769), (475, 13790), (485, 13889), (486, 13892), (490, 13925), (493, 13991), (495, 14009), (497, 14024), (500, 14057), (505, 14108), (510, 14159), (532, 14402), (533, 14405), (545, 14477), (546, 14480), (553, 14546), (554, 14549), (555, 14567), (559, 14627), (564, 14684), (566, 14702), (571, 14783), (572, 14786), (573, 14801), (594, 15014), (597, 15080), (598, 15086), (604, 15146), (605, 15152), (618, 15275), (623, 15299), (626, 15317), (629, 15341), (630, 15347), (633, 15368), (640, 15407), (651, 15548), (653, 15560), (659, 15611), (662, 15629), (671, 15779),

Gene: Holliday_18 Start: 9868, Stop: 15501, Start Num: 16

Candidate Starts for Holliday_18:

(Start: 16 @9868 has 11 MA's), (22, 9895), (Start: 23 @9913 has 1 MA's), (25, 9934), (29, 9955), (32, 10000), (Start: 33 @10015 has 1 MA's), (37, 10099), (43, 10141), (44, 10153), (53, 10216), (55, 10231), (57, 10240), (59, 10258), (60, 10264), (70, 10312), (91, 10447), (107, 10597), (111, 10627), (143, 10846), (153, 10921), (156, 10951), (176, 11155), (182, 11197), (183, 11200), (184, 11206), (186, 11227), (196, 11308), (204, 11374), (207, 11401), (208, 11413), (210, 11431), (211, 11443), (217, 11467), (219, 11479), (222, 11518), (223, 11521), (224, 11530), (227, 11560), (231, 11605), (240, 11665), (243, 11680), (246, 11710), (247, 11722), (252, 11767), (253, 11773), (255, 11788), (258, 11818), (260, 11839), (261, 11842), (268, 11905), (271, 11932), (272, 11935), (273, 11938), (274, 11944), (280, 11968), (281, 11971), (283, 11977), (285, 11983), (287, 11998), (290, 12016), (295, 12097), (299, 12145), (300, 12151), (304, 12178), (324, 12337), (325, 12349), (333, 12385), (346, 12445), (351, 12484), (353, 12490), (354, 12493), (358, 12514), (359, 12517), (373, 12616), (379, 12655), (383, 12679), (387, 12712), (390, 12757), (396, 12811), (403, 12898), (404, 12919), (408, 12955), (412, 12985), (421, 13063), (422, 13066), (423, 13075), (426, 13099), (435, 13180),

(436, 13186), (438, 13231), (440, 13234), (441, 13249), (448, 13294), (450, 13303), (452, 13312), (453, 13315), (465, 13420), (473, 13468), (475, 13474), (485, 13573), (486, 13576), (488, 13588), (497, 13705), (500, 13738), (505, 13789), (507, 13801), (509, 13819), (513, 13879), (523, 13960), (526, 13981), (528, 14014), (534, 14077), (538, 14095), (554, 14209), (556, 14239), (558, 14248), (560, 14287), (561, 14290), (563, 14320), (564, 14341), (576, 14494), (580, 14545), (585, 14608), (586, 14614), (593, 14665), (608, 14851), (616, 14938), (621, 14965), (622, 14968), (634, 15043), (638, 15067), (641, 15106), (644, 15142), (648, 15163), (654, 15250), (658, 15292), (663, 15325), (664, 15337), (669, 15415), (672, 15481),

Gene: Horseradish_17 Start: 9515, Stop: 14311, Start Num: 64

Candidate Starts for Horseradish_17:

(Start: 64 @9515 has 23 MA's), (Start: 68 @9542 has 2 MA's), (70, 9548), (87, 9671), (99, 9773), (103, 9818), (105, 9830), (109, 9848), (112, 9875), (113, 9878), (115, 9893), (123, 9944), (124, 9947), (129, 10004), (131, 10007), (132, 10010), (140, 10049), (143, 10067), (149, 10112), (155, 10148), (159, 10181), (163, 10214), (164, 10226), (171, 10280), (173, 10319), (175, 10334), (177, 10343), (181, 10370), (188, 10421), (197, 10481), (199, 10490), (205, 10544), (214, 10607), (217, 10622), (224, 10685), (237, 10775), (242, 10802), (252, 10895), (253, 10901), (255, 10916), (259, 10955), (268, 11033), (273, 11066), (283, 11105), (286, 11123), (287, 11126), (291, 11153), (294, 11210), (296, 11231), (310, 11342), (315, 11363), (317, 11399), (321, 11441), (322, 11453), (324, 11465), (332, 11510), (333, 11513), (337, 11531), (338, 11534), (339, 11537), (351, 11612), (359, 11645), (367, 11705), (376, 11771), (377, 11774), (378, 11777), (380, 11795), (394, 11894), (397, 11909), (398, 11912), (414, 12062), (415, 12083), (423, 12125), (427, 12152), (428, 12158), (442, 12290), (445, 12302), (455, 12389), (460, 12431), (465, 12467), (472, 12503), (478, 12542), (485, 12593), (489, 12632), (494, 12710), (501, 12761), (508, 12818), (522, 12956), (529, 13028), (547, 13172), (550, 13193), (568, 13370), (569, 13376), (596, 13700), (598, 13706), (605, 13766), (607, 13784), (610, 13817), (618, 13889), (625, 13928), (629, 13958), (640, 14024), (641, 14042), (643, 14072), (650, 14132), (660, 14222), (667, 14282),

Gene: Horus_18 Start: 9926, Stop: 15514, Start Num: 23

Candidate Starts for Horus_18:

(Start: 16 @9881 has 11 MA's), (Start: 23 @9926 has 1 MA's), (25, 9947), (29, 9968), (32, 10013), (Start: 33 @10028 has 1 MA's), (37, 10112), (43, 10154), (44, 10166), (53, 10229), (55, 10244), (57, 10253), (59, 10271), (60, 10277), (70, 10325), (91, 10460), (107, 10610), (111, 10640), (156, 10964), (169, 11060), (176, 11168), (182, 11210), (183, 11213), (184, 11219), (186, 11240), (196, 11321), (204, 11387), (207, 11414), (208, 11426), (210, 11444), (211, 11456), (217, 11480), (219, 11492), (222, 11531), (223, 11534), (224, 11543), (227, 11573), (240, 11678), (243, 11693), (246, 11723), (247, 11735), (252, 11780), (253, 11786), (255, 11801), (258, 11831), (260, 11852), (261, 11855), (268, 11918), (271, 11945), (272, 11948), (273, 11951), (274, 11957), (280, 11981), (281, 11984), (283, 11990), (285, 11996), (287, 12011), (290, 12029), (292, 12074), (299, 12158), (300, 12164), (304, 12191), (317, 12284), (318, 12293), (324, 12350), (325, 12362), (333, 12398), (344, 12446), (346, 12458), (351, 12497), (353, 12503), (354, 12506), (357, 12524), (358, 12527), (359, 12530), (363, 12554), (373, 12629), (383, 12692), (387, 12725), (391, 12800), (396, 12824), (397, 12836), (400, 12869), (404, 12932), (408, 12968), (412, 12998), (421, 13076), (422, 13079), (423, 13088), (436, 13199), (438, 13244), (440, 13247), (441, 13262), (448, 13307), (450, 13316), (452, 13325), (453, 13328), (465, 13433), (473, 13481), (475, 13487), (485, 13586), (486, 13589), (488, 13601), (497, 13718), (500, 13751), (505, 13802), (509, 13832), (513, 13892), (523, 13973), (526, 13994), (527, 13997), (528, 14027), (534, 14090), (536, 14099), (538, 14108), (554, 14222), (556, 14252), (560, 14300), (561, 14303), (563, 14333), (564, 14354), (580, 14552), (585, 14615), (586, 14621), (593, 14672), (608, 14864), (616, 14951), (621, 14978), (622, 14981), (634, 15056), (638, 15080), (641, 15119), (644, 15155), (648, 15176), (654, 15263), (658, 15305), (663, 15338), (664, 15350), (672, 15494),

Gene: Jalamah_19 Start: 11050, Stop: 16590, Start Num: 4

Candidate Starts for Jalammah_19:

(Start: 4 @11050 has 37 MA's), (Start: 9 @11101 has 1 MA's), (10, 11110), (11, 11113), (13, 11155), (30, 11266), (31, 11287), (36, 11407), (41, 11449), (51, 11515), (53, 11533), (56, 11554), (57, 11557), (59, 11575), (65, 11599), (75, 11683), (84, 11725), (86, 11740), (88, 11749), (108, 11917), (111, 11944), (127, 12061), (153, 12232), (156, 12262), (176, 12466), (183, 12511), (186, 12538), (187, 12550), (200, 12640), (204, 12685), (207, 12712), (210, 12742), (222, 12829), (223, 12832), (227, 12871), (236, 12955), (243, 12991), (247, 13033), (252, 13078), (253, 13084), (254, 13096), (255, 13099), (261, 13153), (265, 13192), (267, 13213), (268, 13216), (270, 13234), (276, 13261), (281, 13282), (283, 13288), (287, 13309), (291, 13336), (315, 13546), (331, 13624), (340, 13648), (344, 13660), (345, 13663), (355, 13678), (358, 13693), (359, 13696), (366, 13747), (377, 13828), (378, 13831), (384, 13864), (387, 13894), (389, 13918), (400, 13984), (430, 14251), (436, 14299), (438, 14344), (440, 14347), (441, 14362), (448, 14407), (450, 14416), (452, 14425), (458, 14476), (467, 14548), (471, 14566), (475, 14587), (485, 14686), (486, 14689), (490, 14722), (493, 14788), (495, 14806), (497, 14821), (500, 14854), (505, 14905), (510, 14956), (532, 15199), (533, 15202), (545, 15274), (546, 15277), (553, 15343), (554, 15346), (555, 15364), (559, 15424), (564, 15481), (566, 15499), (571, 15580), (572, 15583), (573, 15598), (588, 15757), (594, 15811), (597, 15877), (598, 15883), (604, 15943), (605, 15949), (609, 15979), (618, 16072), (623, 16096), (626, 16114), (629, 16138), (630, 16144), (633, 16165), (640, 16204), (651, 16345), (653, 16357), (659, 16408), (662, 16426), (671, 16576),

Gene: Jamzy_19 Start: 9930, Stop: 14147, Start Num: 64

Candidate Starts for Jamzy_19:

(Start: 64 @9930 has 23 MA's), (Start: 68 @9957 has 2 MA's), (101, 10203), (109, 10266), (116, 10323), (121, 10350), (125, 10392), (135, 10455), (138, 10470), (141, 10488), (144, 10506), (146, 10518), (149, 10551), (155, 10593), (157, 10608), (169, 10704), (170, 10713), (172, 10776), (174, 10791), (181, 10827), (188, 10878), (193, 10911), (194, 10920), (205, 11001), (212, 11067), (215, 11076), (216, 11085), (220, 11106), (235, 11241), (237, 11253), (255, 11394), (257, 11415), (261, 11448), (262, 11466), (264, 11484), (270, 11529), (283, 11583), (287, 11604), (303, 11667), (312, 11715), (315, 11730), (317, 11766), (343, 11820), (351, 11847), (353, 11853), (358, 11877), (359, 11880), (367, 11940), (372, 11973), (378, 12012), (380, 12030), (381, 12033), (387, 12075), (388, 12087), (392, 12120), (393, 12123), (397, 12144), (401, 12168), (402, 12171), (411, 12264), (413, 12285), (414, 12297), (415, 12318), (417, 12327), (419, 12336), (420, 12342), (439, 12495), (449, 12555), (451, 12564), (452, 12570), (456, 12606), (482, 12738), (496, 12876), (499, 12900), (520, 13098), (521, 13101), (540, 13263), (542, 13287), (544, 13290), (567, 13392), (592, 13497), (599, 13569), (602, 13593), (604, 13605), (607, 13629), (609, 13641), (617, 13725), (618, 13731), (626, 13773), (629, 13794), (635, 13827), (640, 13860), (642, 13881), (643, 13908), (650, 13968), (652, 13995), (653, 14004), (655, 14016), (667, 14118),

Gene: JasperJr_17 Start: 10278, Stop: 15800, Start Num: 4

Candidate Starts for JasperJr_17:

(Start: 4 @10278 has 37 MA's), (Start: 6 @10293 has 1 MA's), (Start: 7 @10299 has 1 MA's), (Start: 9 @10329 has 1 MA's), (10, 10338), (11, 10341), (13, 10383), (30, 10494), (31, 10515), (36, 10635), (41, 10677), (51, 10743), (53, 10761), (56, 10782), (57, 10785), (59, 10803), (65, 10827), (75, 10911), (76, 10914), (84, 10953), (86, 10968), (88, 10977), (108, 11145), (111, 11172), (127, 11289), (135, 11337), (153, 11460), (156, 11490), (176, 11694), (183, 11739), (186, 11766), (187, 11778), (200, 11868), (204, 11913), (207, 11940), (210, 11970), (222, 12057), (223, 12060), (227, 12099), (236, 12183), (243, 12219), (247, 12261), (252, 12306), (253, 12312), (254, 12324), (255, 12327), (261, 12381), (265, 12420), (267, 12441), (268, 12444), (270, 12462), (271, 12471), (276, 12489), (281, 12510), (283, 12516), (287, 12537), (291, 12564), (296, 12642), (331, 12831), (340, 12855), (344, 12867), (345, 12870), (355, 12885), (358, 12900), (359, 12903), (366, 12954), (377, 13035), (378, 13038), (384, 13071), (387, 13101), (389, 13125), (409, 13284), (430, 13458), (436, 13506), (438, 13551), (440, 13554), (441, 13569), (448, 13614), (450, 13623), (452, 13632), (458, 13683), (467, 13755), (471, 13773), (475, 13794), (485, 13893), (486, 13896), (490, 13929), (493, 13995), (495, 14013),

(497, 14028), (500, 14061), (505, 14112), (510, 14163), (515, 14211), (532, 14406), (533, 14409), (545, 14481), (546, 14484), (553, 14550), (554, 14553), (555, 14571), (559, 14631), (564, 14688), (566, 14706), (571, 14787), (572, 14790), (573, 14805), (594, 15018), (597, 15084), (603, 15138), (604, 15150), (605, 15156), (618, 15279), (623, 15303), (626, 15321), (629, 15345), (630, 15351), (633, 15372), (640, 15411), (651, 15552), (653, 15564), (659, 15615), (662, 15633), (671, 15783),

Gene: JuJu_17 Start: 10202, Stop: 15721, Start Num: 4

Candidate Starts for JuJu_17:

(Start: 4 @10202 has 37 MA's), (Start: 6 @10217 has 1 MA's), (Start: 7 @10223 has 1 MA's), (Start: 9 @10253 has 1 MA's), (10, 10262), (11, 10265), (13, 10307), (30, 10418), (31, 10439), (53, 10685), (56, 10706), (57, 10709), (59, 10727), (65, 10751), (75, 10835), (77, 10841), (84, 10877), (86, 10892), (88, 10901), (91, 10916), (94, 10961), (108, 11069), (111, 11096), (117, 11129), (156, 11414), (176, 11618), (183, 11663), (204, 11837), (207, 11864), (210, 11894), (222, 11981), (227, 12023), (234, 12095), (243, 12143), (247, 12185), (252, 12230), (253, 12236), (254, 12248), (255, 12251), (261, 12305), (265, 12344), (267, 12365), (268, 12368), (270, 12386), (271, 12395), (276, 12413), (281, 12434), (283, 12440), (287, 12461), (291, 12488), (296, 12566), (314, 12674), (327, 12740), (340, 12779), (358, 12824), (359, 12827), (366, 12878), (377, 12959), (378, 12962), (384, 12995), (387, 13025), (400, 13115), (408, 13196), (423, 13316), (430, 13382), (436, 13430), (438, 13475), (440, 13478), (441, 13493), (444, 13502), (448, 13538), (450, 13547), (452, 13556), (467, 13679), (475, 13718), (485, 13817), (486, 13820), (493, 13919), (495, 13937), (497, 13952), (500, 13985), (505, 14036), (510, 14087), (517, 14156), (532, 14330), (533, 14333), (543, 14399), (545, 14405), (546, 14408), (553, 14474), (554, 14477), (555, 14495), (559, 14555), (564, 14612), (566, 14630), (571, 14711), (573, 14729), (577, 14780), (588, 14888), (594, 14942), (597, 15008), (603, 15062), (604, 15074), (605, 15080), (609, 15110), (618, 15203), (623, 15227), (626, 15245), (629, 15269), (630, 15275), (633, 15296), (640, 15335), (651, 15476), (659, 15539), (662, 15557), (668, 15614), (671, 15707),

Gene: Kamaru_18 Start: 9868, Stop: 15501, Start Num: 16

Candidate Starts for Kamaru_18:

(Start: 16 @9868 has 11 MA's), (22, 9895), (Start: 23 @9913 has 1 MA's), (25, 9934), (29, 9955), (32, 10000), (Start: 33 @10015 has 1 MA's), (37, 10099), (43, 10141), (44, 10153), (53, 10216), (55, 10231), (57, 10240), (59, 10258), (60, 10264), (70, 10312), (91, 10447), (107, 10597), (111, 10627), (143, 10846), (153, 10921), (156, 10951), (176, 11155), (182, 11197), (183, 11200), (184, 11206), (186, 11227), (196, 11308), (204, 11374), (207, 11401), (208, 11413), (210, 11431), (211, 11443), (217, 11467), (219, 11479), (222, 11518), (223, 11521), (224, 11530), (227, 11560), (231, 11605), (240, 11665), (243, 11680), (246, 11710), (247, 11722), (252, 11767), (253, 11773), (255, 11788), (258, 11818), (260, 11839), (261, 11842), (268, 11905), (271, 11932), (272, 11935), (273, 11938), (274, 11944), (280, 11968), (281, 11971), (283, 11977), (285, 11983), (287, 11998), (290, 12016), (295, 12097), (299, 12145), (300, 12151), (304, 12178), (324, 12337), (325, 12349), (333, 12385), (346, 12445), (351, 12484), (353, 12490), (354, 12493), (358, 12514), (359, 12517), (373, 12616), (379, 12655), (383, 12679), (387, 12712), (390, 12757), (396, 12811), (403, 12898), (404, 12919), (408, 12955), (412, 12985), (421, 13063), (422, 13066), (423, 13075), (426, 13099), (435, 13180), (436, 13186), (438, 13231), (440, 13234), (441, 13249), (448, 13294), (450, 13303), (452, 13312), (453, 13315), (465, 13420), (473, 13468), (475, 13474), (485, 13573), (486, 13576), (488, 13588), (497, 13705), (500, 13738), (505, 13789), (507, 13801), (509, 13819), (513, 13879), (523, 13960), (526, 13981), (528, 14014), (534, 14077), (538, 14095), (554, 14209), (556, 14239), (558, 14248), (560, 14287), (561, 14290), (563, 14320), (564, 14341), (576, 14494), (580, 14545), (585, 14608), (586, 14614), (593, 14665), (608, 14851), (616, 14938), (621, 14965), (622, 14968), (634, 15043), (638, 15067), (641, 15106), (644, 15142), (648, 15163), (654, 15250), (658, 15292), (663, 15325), (664, 15337), (669, 15415), (672, 15481),

Gene: KappaFarmDelta_17 Start: 10424, Stop: 15964, Start Num: 4

Candidate Starts for KappaFarmDelta_17:

(Start: 4 @10424 has 37 MA's), (Start: 6 @10439 has 1 MA's), (Start: 7 @10445 has 1 MA's), (Start: 9 @10475 has 1 MA's), (10, 10484), (11, 10487), (13, 10529), (30, 10640), (31, 10661), (51, 10889), (53, 10907), (56, 10928), (57, 10931), (59, 10949), (65, 10973), (75, 11057), (77, 11063), (84, 11099), (86, 11114), (88, 11123), (108, 11291), (111, 11318), (127, 11435), (153, 11606), (156, 11636), (176, 11840), (183, 11885), (186, 11912), (204, 12059), (207, 12086), (210, 12116), (222, 12203), (223, 12206), (227, 12245), (229, 12251), (243, 12365), (247, 12407), (252, 12452), (253, 12458), (254, 12470), (255, 12473), (261, 12527), (265, 12566), (267, 12587), (268, 12590), (270, 12608), (276, 12635), (281, 12656), (283, 12662), (287, 12683), (291, 12710), (295, 12782), (327, 12983), (331, 12998), (340, 13022), (345, 13037), (358, 13067), (359, 13070), (366, 13121), (378, 13205), (384, 13238), (389, 13292), (421, 13547), (430, 13625), (436, 13673), (437, 13706), (438, 13718), (440, 13721), (441, 13736), (444, 13745), (448, 13781), (450, 13790), (452, 13799), (465, 13907), (473, 13955), (474, 13958), (475, 13961), (477, 13982), (486, 14063), (487, 14066), (497, 14192), (500, 14225), (504, 14273), (505, 14276), (508, 14291), (510, 14327), (532, 14570), (533, 14573), (545, 14645), (546, 14648), (553, 14714), (554, 14717), (555, 14735), (559, 14795), (564, 14852), (566, 14870), (571, 14951), (573, 14969), (594, 15182), (597, 15248), (604, 15314), (605, 15320), (609, 15350), (618, 15443), (623, 15467), (629, 15509), (633, 15536), (640, 15575), (651, 15716), (659, 15779), (662, 15797), (668, 15854),

Gene: KayGee_16 Start: 9384, Stop: 14468, Start Num: 21

Candidate Starts for KayGee_16:

(Start: 21 @9384 has 33 MA's), (35, 9540), (47, 9669), (50, 9699), (60, 9768), (63, 9780), (71, 9825), (74, 9867), (77, 9876), (84, 9912), (88, 9936), (101, 10050), (104, 10089), (106, 10095), (107, 10101), (109, 10110), (111, 10131), (136, 10302), (147, 10365), (152, 10410), (161, 10491), (176, 10650), (179, 10683), (183, 10695), (186, 10722), (192, 10779), (197, 10809), (199, 10821), (209, 10923), (210, 10926), (222, 11013), (229, 11061), (243, 11175), (253, 11268), (255, 11283), (257, 11304), (261, 11337), (263, 11367), (266, 11379), (270, 11418), (275, 11442), (276, 11445), (282, 11469), (287, 11493), (296, 11598), (303, 11646), (307, 11676), (311, 11691), (314, 11706), (317, 11745), (321, 11787), (322, 11799), (324, 11811), (326, 11826), (328, 11841), (332, 11856), (338, 11880), (347, 11919), (348, 11934), (349, 11940), (352, 11961), (357, 11985), (359, 11991), (376, 12117), (382, 12147), (388, 12198), (393, 12234), (397, 12255), (398, 12258), (405, 12330), (411, 12375), (414, 12408), (415, 12429), (424, 12483), (434, 12558), (445, 12642), (455, 12729), (484, 12915), (496, 13047), (500, 13077), (514, 13215), (520, 13266), (525, 13296), (544, 13452), (547, 13482), (570, 13662), (576, 13713), (581, 13740), (583, 13761), (596, 13857), (602, 13905), (605, 13923), (618, 14046), (623, 14070), (625, 14085), (629, 14115), (633, 14142), (635, 14148), (640, 14181), (647, 14250), (649, 14253), (650, 14289), (660, 14379),

Gene: Kenna_17 Start: 9881, Stop: 15508, Start Num: 16

Candidate Starts for Kenna_17:

(Start: 16 @9881 has 11 MA's), (22, 9908), (Start: 23 @9926 has 1 MA's), (25, 9947), (29, 9968), (32, 10013), (Start: 33 @10028 has 1 MA's), (37, 10112), (43, 10154), (44, 10166), (53, 10229), (55, 10244), (57, 10253), (59, 10271), (60, 10277), (70, 10325), (91, 10460), (107, 10610), (111, 10640), (156, 10964), (169, 11060), (176, 11168), (183, 11213), (184, 11219), (186, 11240), (189, 11264), (196, 11321), (204, 11387), (207, 11414), (208, 11426), (210, 11444), (211, 11456), (217, 11480), (219, 11492), (222, 11531), (223, 11534), (224, 11543), (227, 11573), (231, 11618), (240, 11678), (243, 11693), (246, 11723), (247, 11735), (252, 11780), (253, 11786), (255, 11801), (258, 11831), (260, 11852), (261, 11855), (268, 11918), (271, 11945), (272, 11948), (273, 11951), (274, 11957), (280, 11981), (281, 11984), (283, 11990), (285, 11996), (287, 12011), (290, 12029), (292, 12074), (299, 12158), (300, 12164), (304, 12191), (317, 12284), (318, 12293), (324, 12350), (325, 12362), (333, 12398), (334, 12404), (344, 12446), (346, 12458), (351, 12497), (353, 12503), (354, 12506), (357, 12524), (358, 12527), (359, 12530), (363, 12554), (373, 12629), (379, 12668), (383, 12692), (387, 12725), (397, 12836), (400, 12869), (404, 12932), (408, 12968), (412, 12998), (421, 13076), (422, 13079), (423, 13088), (426, 13112), (435, 13193), (436, 13199), (438, 13244), (440, 13247), (441, 13262), (448, 13307), (450, 13316), (452, 13325), (453, 13328), (465, 13433), (473, 13481),

(474, 13484), (475, 13487), (485, 13586), (486, 13589), (488, 13601), (497, 13718), (500, 13751), (505, 13802), (509, 13832), (513, 13892), (523, 13973), (526, 13994), (528, 14027), (536, 14099), (538, 14108), (554, 14222), (556, 14252), (558, 14261), (560, 14300), (561, 14303), (563, 14333), (564, 14354), (580, 14552), (585, 14615), (586, 14621), (593, 14672), (608, 14858), (616, 14945), (621, 14972), (622, 14975), (634, 15050), (638, 15074), (641, 15113), (644, 15149), (648, 15170), (654, 15257), (658, 15299), (663, 15332), (664, 15344), (669, 15422), (672, 15488),

Gene: Lauer_15 Start: 9433, Stop: 14517, Start Num: 21

Candidate Starts for Lauer_15:

(Start: 21 @9433 has 33 MA's), (35, 9589), (47, 9718), (50, 9748), (60, 9817), (63, 9829), (74, 9916), (77, 9925), (84, 9961), (88, 9985), (94, 10045), (101, 10099), (104, 10138), (106, 10144), (109, 10159), (111, 10180), (136, 10351), (147, 10414), (152, 10459), (161, 10540), (176, 10699), (179, 10732), (183, 10744), (186, 10771), (192, 10828), (197, 10858), (199, 10870), (209, 10972), (210, 10975), (222, 11062), (229, 11110), (243, 11224), (253, 11317), (255, 11332), (257, 11353), (261, 11386), (263, 11416), (266, 11428), (270, 11467), (275, 11491), (276, 11494), (282, 11518), (287, 11542), (296, 11647), (307, 11725), (314, 11755), (315, 11758), (317, 11794), (321, 11836), (324, 11860), (326, 11875), (328, 11890), (332, 11905), (338, 11929), (347, 11968), (348, 11983), (349, 11989), (352, 12010), (357, 12034), (359, 12040), (376, 12166), (382, 12196), (387, 12235), (393, 12283), (397, 12304), (398, 12307), (405, 12379), (411, 12424), (414, 12457), (415, 12478), (424, 12532), (434, 12607), (445, 12691), (455, 12778), (484, 12964), (496, 13096), (500, 13126), (514, 13264), (520, 13315), (525, 13345), (544, 13501), (547, 13531), (570, 13711), (576, 13762), (581, 13789), (583, 13810), (596, 13906), (602, 13954), (605, 13972), (618, 14095), (623, 14119), (625, 14134), (629, 14164), (633, 14191), (635, 14197), (640, 14230), (647, 14299), (649, 14302), (650, 14338), (660, 14428),

Gene: Leroy_18 Start: 9882, Stop: 15515, Start Num: 16

Candidate Starts for Leroy_18:

(Start: 16 @9882 has 11 MA's), (Start: 23 @9927 has 1 MA's), (25, 9948), (29, 9969), (32, 10014), (Start: 33 @10029 has 1 MA's), (37, 10113), (43, 10155), (44, 10167), (53, 10230), (55, 10245), (57, 10254), (59, 10272), (60, 10278), (70, 10326), (91, 10461), (107, 10611), (111, 10641), (153, 10935), (156, 10965), (176, 11169), (182, 11211), (183, 11214), (184, 11220), (186, 11241), (189, 11265), (196, 11322), (204, 11388), (207, 11415), (208, 11427), (210, 11445), (211, 11457), (217, 11481), (219, 11493), (222, 11532), (223, 11535), (224, 11544), (227, 11574), (229, 11580), (240, 11679), (243, 11694), (246, 11724), (247, 11736), (252, 11781), (253, 11787), (255, 11802), (258, 11832), (260, 11853), (261, 11856), (268, 11919), (271, 11946), (273, 11952), (280, 11982), (281, 11985), (283, 11991), (285, 11997), (287, 12012), (290, 12030), (295, 12111), (299, 12159), (300, 12165), (302, 12180), (304, 12192), (324, 12351), (325, 12363), (333, 12399), (334, 12405), (346, 12459), (351, 12498), (353, 12504), (354, 12507), (357, 12525), (358, 12528), (359, 12531), (363, 12555), (373, 12630), (383, 12693), (387, 12726), (390, 12771), (396, 12825), (397, 12837), (403, 12912), (404, 12933), (408, 12969), (412, 12999), (422, 13080), (423, 13089), (426, 13113), (436, 13200), (438, 13245), (440, 13248), (448, 13308), (450, 13317), (452, 13326), (465, 13434), (473, 13482), (475, 13488), (485, 13587), (486, 13590), (488, 13602), (497, 13719), (500, 13752), (505, 13803), (509, 13833), (513, 13893), (523, 13974), (526, 13995), (528, 14028), (536, 14100), (538, 14109), (554, 14223), (556, 14253), (558, 14262), (560, 14301), (561, 14304), (563, 14334), (564, 14355), (580, 14553), (585, 14616), (586, 14622), (593, 14673), (608, 14865), (616, 14952), (621, 14979), (622, 14982), (634, 15057), (638, 15081), (641, 15120), (644, 15156), (648, 15177), (654, 15264), (658, 15306), (663, 15339), (664, 15351), (672, 15495),

Gene: LitninMcQueen_18 Start: 9869, Stop: 15502, Start Num: 16

Candidate Starts for LitninMcQueen_18:

(Start: 16 @9869 has 11 MA's), (22, 9896), (Start: 23 @9914 has 1 MA's), (25, 9935), (29, 9956), (32, 10001), (Start: 33 @10016 has 1 MA's), (37, 10100), (43, 10142), (44, 10154), (53, 10217), (55, 10232), (57, 10241), (59, 10259), (60, 10265), (70, 10313), (91, 10448), (107, 10598), (111, 10628),

(143, 10847), (153, 10922), (156, 10952), (176, 11156), (182, 11198), (183, 11201), (184, 11207), (186, 11228), (196, 11309), (204, 11375), (207, 11402), (208, 11414), (210, 11432), (211, 11444), (217, 11468), (219, 11480), (222, 11519), (223, 11522), (224, 11531), (227, 11561), (231, 11606), (240, 11666), (243, 11681), (246, 11711), (247, 11723), (252, 11768), (253, 11774), (255, 11789), (258, 11819), (260, 11840), (261, 11843), (268, 11906), (271, 11933), (272, 11936), (273, 11939), (274, 11945), (280, 11969), (281, 11972), (283, 11978), (285, 11984), (287, 11999), (290, 12017), (295, 12098), (299, 12146), (300, 12152), (304, 12179), (324, 12338), (325, 12350), (333, 12386), (346, 12446), (351, 12485), (353, 12491), (354, 12494), (358, 12515), (359, 12518), (373, 12617), (379, 12656), (383, 12680), (387, 12713), (390, 12758), (396, 12812), (403, 12899), (404, 12920), (408, 12956), (412, 12986), (421, 13064), (422, 13067), (423, 13076), (426, 13100), (435, 13181), (436, 13187), (438, 13232), (440, 13235), (441, 13250), (448, 13295), (450, 13304), (452, 13313), (453, 13316), (465, 13421), (473, 13469), (475, 13475), (485, 13574), (486, 13577), (488, 13589), (497, 13706), (500, 13739), (505, 13790), (509, 13820), (513, 13880), (523, 13961), (526, 13982), (528, 14015), (534, 14078), (538, 14096), (554, 14210), (556, 14240), (558, 14249), (560, 14288), (561, 14291), (563, 14321), (564, 14342), (576, 14495), (580, 14546), (585, 14609), (586, 14615), (593, 14666), (608, 14852), (616, 14939), (621, 14966), (622, 14969), (634, 15044), (638, 15068), (641, 15107), (644, 15143), (648, 15164), (654, 15251), (658, 15293), (663, 15326), (664, 15338), (669, 15416), (672, 15482),

Gene: Lutum_18 Start: 9881, Stop: 15508, Start Num: 16

Candidate Starts for Lutum_18:

(Start: 16 @9881 has 11 MA's), (22, 9908), (Start: 23 @9926 has 1 MA's), (25, 9947), (29, 9968), (32, 10013), (Start: 33 @10028 has 1 MA's), (37, 10112), (43, 10154), (44, 10166), (53, 10229), (55, 10244), (57, 10253), (59, 10271), (60, 10277), (70, 10325), (91, 10460), (107, 10610), (111, 10640), (156, 10964), (169, 11060), (176, 11168), (183, 11213), (184, 11219), (186, 11240), (189, 11264), (196, 11321), (204, 11387), (207, 11414), (208, 11426), (210, 11444), (211, 11456), (217, 11480), (219, 11492), (222, 11531), (223, 11534), (224, 11543), (227, 11573), (231, 11618), (240, 11678), (243, 11693), (246, 11723), (247, 11735), (252, 11780), (253, 11786), (255, 11801), (258, 11831), (260, 11852), (261, 11855), (268, 11918), (271, 11945), (272, 11948), (273, 11951), (274, 11957), (280, 11981), (281, 11984), (283, 11990), (285, 11996), (287, 12011), (290, 12029), (292, 12074), (299, 12158), (300, 12164), (304, 12191), (317, 12284), (318, 12293), (324, 12350), (325, 12362), (333, 12398), (334, 12404), (344, 12446), (346, 12458), (351, 12497), (353, 12503), (354, 12506), (357, 12524), (358, 12527), (359, 12530), (363, 12554), (373, 12629), (379, 12668), (383, 12692), (387, 12725), (397, 12836), (400, 12869), (404, 12932), (408, 12968), (412, 12998), (421, 13076), (422, 13079), (423, 13088), (426, 13112), (435, 13193), (436, 13199), (438, 13244), (440, 13247), (441, 13262), (448, 13307), (450, 13316), (452, 13325), (453, 13328), (465, 13433), (473, 13481), (474, 13484), (475, 13487), (485, 13586), (486, 13589), (488, 13601), (497, 13718), (500, 13751), (505, 13802), (509, 13832), (513, 13892), (523, 13973), (526, 13994), (528, 14027), (536, 14099), (538, 14108), (554, 14222), (556, 14252), (558, 14261), (560, 14300), (561, 14303), (563, 14333), (564, 14354), (580, 14552), (585, 14615), (586, 14621), (593, 14672), (608, 14858), (616, 14945), (621, 14972), (622, 14975), (634, 15050), (638, 15074), (641, 15113), (644, 15149), (648, 15170), (654, 15257), (658, 15299), (663, 15332), (664, 15344), (669, 15422), (672, 15488),

Gene: Lysidious_18 Start: 10777, Stop: 16320, Start Num: 4

Candidate Starts for Lysidious_18:

(Start: 4 @10777 has 37 MA's), (Start: 9 @10828 has 1 MA's), (10, 10837), (11, 10840), (13, 10882), (30, 10993), (31, 11014), (36, 11134), (41, 11176), (51, 11242), (53, 11260), (56, 11281), (57, 11284), (59, 11302), (65, 11326), (75, 11410), (77, 11416), (84, 11452), (86, 11467), (88, 11476), (108, 11644), (111, 11671), (127, 11788), (153, 11959), (156, 11989), (176, 12193), (183, 12238), (186, 12265), (187, 12277), (200, 12367), (204, 12412), (207, 12439), (210, 12469), (222, 12556), (223, 12559), (227, 12598), (243, 12718), (247, 12760), (252, 12805), (253, 12811), (254, 12823), (255, 12826), (261, 12880), (265, 12919), (267, 12940), (268, 12943), (270, 12961), (271, 12970), (276, 12988), (281, 13009), (283, 13015), (287, 13036), (291, 13063), (314, 13270), (331, 13351), (340, 13375),

(344, 13387), (345, 13390), (355, 13405), (358, 13420), (359, 13423), (366, 13474), (377, 13555), (378, 13558), (384, 13591), (387, 13621), (389, 13645), (400, 13711), (430, 13978), (436, 14026), (438, 14071), (440, 14074), (441, 14089), (448, 14134), (450, 14143), (452, 14152), (458, 14203), (467, 14275), (471, 14293), (475, 14314), (485, 14413), (486, 14416), (490, 14449), (493, 14515), (495, 14533), (497, 14548), (500, 14581), (505, 14632), (510, 14683), (532, 14926), (533, 14929), (545, 15001), (546, 15004), (553, 15070), (554, 15073), (555, 15091), (559, 15151), (564, 15208), (566, 15226), (571, 15307), (572, 15310), (573, 15325), (588, 15484), (594, 15538), (597, 15604), (598, 15610), (604, 15670), (605, 15676), (618, 15799), (623, 15823), (626, 15841), (629, 15865), (630, 15871), (633, 15892), (640, 15931), (651, 16072), (653, 16084), (659, 16135), (662, 16153), (668, 16210), (671, 16303),

Gene: MAnor_16 Start: 9376, Stop: 14475, Start Num: 21

Candidate Starts for MAnor_16:

(Start: 21 @9376 has 33 MA's), (35, 9532), (43, 9637), (47, 9661), (53, 9712), (60, 9760), (70, 9808), (71, 9817), (74, 9859), (76, 9865), (77, 9868), (84, 9904), (88, 9928), (92, 9955), (101, 10042), (104, 10081), (106, 10087), (109, 10102), (111, 10123), (136, 10294), (147, 10357), (152, 10402), (156, 10441), (161, 10483), (176, 10645), (178, 10654), (179, 10678), (183, 10690), (186, 10717), (187, 10729), (192, 10774), (197, 10804), (199, 10816), (209, 10918), (210, 10921), (222, 11008), (225, 11035), (231, 11095), (235, 11125), (239, 11146), (243, 11170), (253, 11263), (255, 11278), (256, 11287), (257, 11299), (261, 11332), (266, 11374), (274, 11434), (275, 11437), (276, 11440), (277, 11446), (282, 11464), (287, 11488), (296, 11593), (314, 11701), (315, 11704), (317, 11740), (324, 11806), (326, 11821), (328, 11836), (332, 11851), (337, 11872), (338, 11875), (339, 11878), (347, 11914), (348, 11929), (349, 11935), (352, 11956), (357, 11980), (359, 11986), (376, 12112), (382, 12142), (387, 12181), (393, 12229), (397, 12250), (398, 12253), (399, 12259), (405, 12325), (411, 12370), (414, 12403), (415, 12424), (424, 12478), (443, 12628), (445, 12637), (455, 12724), (481, 12901), (496, 13042), (500, 13072), (514, 13210), (525, 13291), (544, 13444), (547, 13474), (574, 13696), (575, 13705), (576, 13711), (581, 13747), (596, 13864), (602, 13912), (605, 13930), (618, 14053), (623, 14077), (625, 14092), (629, 14122), (633, 14149), (635, 14155), (640, 14188), (647, 14257), (649, 14260), (650, 14296), (656, 14368), (657, 14371), (660, 14386),

Gene: MScarn_18 Start: 9601, Stop: 14400, Start Num: 64

Candidate Starts for MScarn_18:

(Start: 64 @9601 has 23 MA's), (Start: 68 @9628 has 2 MA's), (70, 9634), (87, 9757), (99, 9859), (103, 9904), (105, 9916), (109, 9934), (112, 9961), (113, 9964), (115, 9979), (123, 10030), (124, 10033), (129, 10090), (131, 10093), (140, 10135), (143, 10153), (149, 10198), (155, 10234), (159, 10267), (163, 10300), (164, 10312), (171, 10366), (173, 10405), (175, 10420), (177, 10429), (181, 10456), (188, 10507), (197, 10567), (199, 10576), (205, 10630), (214, 10693), (217, 10708), (237, 10861), (242, 10888), (252, 10981), (253, 10987), (255, 11002), (259, 11041), (268, 11119), (273, 11152), (283, 11191), (286, 11209), (287, 11212), (291, 11239), (294, 11296), (296, 11317), (310, 11428), (315, 11449), (317, 11485), (321, 11527), (322, 11539), (324, 11551), (332, 11596), (333, 11599), (337, 11617), (338, 11620), (339, 11623), (351, 11698), (359, 11731), (367, 11791), (376, 11857), (377, 11860), (378, 11863), (380, 11881), (394, 11980), (397, 11995), (398, 11998), (414, 12148), (415, 12169), (423, 12211), (427, 12238), (428, 12244), (445, 12388), (455, 12475), (460, 12517), (465, 12553), (478, 12628), (485, 12679), (489, 12718), (492, 12742), (501, 12847), (508, 12904), (522, 13042), (529, 13117), (547, 13261), (550, 13282), (568, 13459), (569, 13465), (596, 13789), (598, 13795), (605, 13855), (610, 13906), (618, 13978), (625, 14017), (629, 14047), (640, 14113), (643, 14161), (650, 14221), (660, 14311), (667, 14371),

Gene: MaVan_18 Start: 10619, Stop: 15748, Start Num: 21

Candidate Starts for MaVan_18:

(18, 10598), (Start: 21 @10619 has 33 MA's), (24, 10646), (35, 10775), (41, 10871), (48, 10922), (58, 10979), (62, 11012), (63, 11015), (74, 11102), (78, 11114), (86, 11162), (87, 11165), (88, 11171), (93, 11225), (94, 11231), (100, 11279), (109, 11345), (111, 11366), (165, 11759), (166, 11762), (173,

11864), (183, 11930), (184, 11936), (186, 11957), (210, 12161), (213, 12179), (217, 12197), (219, 12209), (222, 12248), (224, 12260), (229, 12296), (233, 12353), (237, 12377), (238, 12383), (253, 12503), (255, 12518), (259, 12557), (267, 12632), (272, 12665), (276, 12680), (277, 12686), (278, 12692), (287, 12728), (297, 12836), (304, 12908), (314, 12962), (316, 12968), (332, 13112), (338, 13136), (349, 13196), (350, 13208), (351, 13214), (357, 13241), (358, 13244), (359, 13247), (372, 13340), (373, 13346), (380, 13397), (389, 13466), (395, 13499), (398, 13514), (399, 13520), (404, 13577), (406, 13589), (410, 13628), (411, 13631), (413, 13652), (414, 13664), (415, 13685), (416, 13688), (423, 13727), (424, 13739), (427, 13754), (443, 13895), (455, 13991), (463, 14057), (466, 14078), (469, 14084), (496, 14321), (500, 14351), (503, 14390), (518, 14525), (522, 14555), (525, 14576), (544, 14735), (547, 14768), (575, 14981), (579, 14999), (581, 15005), (596, 15134), (605, 15200), (610, 15251), (618, 15323), (625, 15362), (629, 15392), (635, 15425), (640, 15458), (649, 15530), (653, 15602), (659, 15656), (661, 15662), (667, 15719),

Gene: Malachai_18 Start: 10785, Stop: 16274, Start Num: 4

Candidate Starts for Malachai_18:

(Start: 4 @10785 has 37 MA's), (8, 10824), (Start: 9 @10836 has 1 MA's), (10, 10845), (11, 10848), (13, 10890), (30, 11001), (31, 11022), (36, 11142), (41, 11184), (51, 11250), (53, 11268), (55, 11283), (56, 11289), (57, 11292), (59, 11310), (65, 11334), (75, 11418), (84, 11460), (86, 11475), (88, 11484), (108, 11652), (111, 11679), (122, 11754), (127, 11796), (135, 11844), (153, 11967), (156, 11997), (176, 12201), (183, 12246), (186, 12273), (187, 12285), (200, 12375), (204, 12420), (207, 12447), (210, 12477), (222, 12564), (227, 12606), (243, 12726), (247, 12768), (252, 12813), (253, 12819), (254, 12831), (255, 12834), (261, 12888), (265, 12927), (267, 12948), (268, 12951), (270, 12969), (276, 12996), (283, 13023), (287, 13044), (291, 13071), (295, 13143), (327, 13344), (331, 13359), (340, 13383), (345, 13398), (358, 13428), (359, 13431), (366, 13482), (377, 13563), (378, 13566), (384, 13599), (387, 13629), (389, 13653), (400, 13719), (430, 13986), (436, 14034), (438, 14079), (440, 14082), (441, 14097), (448, 14142), (450, 14151), (452, 14160), (458, 14211), (467, 14283), (471, 14301), (475, 14322), (485, 14421), (486, 14424), (490, 14457), (493, 14523), (495, 14541), (497, 14556), (500, 14589), (505, 14640), (510, 14691), (532, 14934), (533, 14937), (546, 15012), (553, 15078), (554, 15081), (555, 15099), (559, 15159), (571, 15315), (572, 15318), (573, 15333), (594, 15552), (599, 15609), (601, 15624), (606, 15672), (611, 15717), (631, 15837), (632, 15846), (639, 15885), (646, 15957), (651, 16026), (653, 16038), (659, 16089), (662, 16107), (668, 16164), (671, 16257),

Gene: Malisha_19 Start: 11668, Stop: 17280, Start Num: 17

Candidate Starts for Malisha_19:

(Start: 17 @11668 has 5 MA's), (20, 11686), (22, 11695), (Start: 23 @11713 has 1 MA's), (25, 11734), (27, 11746), (32, 11800), (Start: 33 @11815 has 1 MA's), (49, 11992), (53, 12016), (57, 12040), (59, 12058), (67, 12103), (76, 12169), (77, 12172), (88, 12232), (107, 12397), (111, 12427), (131, 12583), (153, 12721), (169, 12847), (176, 12955), (179, 12988), (183, 13000), (186, 13027), (204, 13174), (207, 13201), (210, 13231), (217, 13267), (222, 13318), (223, 13321), (224, 13330), (229, 13366), (234, 13432), (243, 13480), (245, 13495), (246, 13510), (251, 13564), (252, 13567), (253, 13573), (254, 13585), (255, 13588), (260, 13639), (261, 13642), (265, 13681), (283, 13777), (287, 13798), (307, 14002), (314, 14032), (321, 14113), (324, 14137), (325, 14149), (333, 14185), (346, 14245), (351, 14284), (354, 14293), (358, 14314), (359, 14317), (373, 14416), (379, 14455), (383, 14479), (387, 14512), (390, 14557), (396, 14611), (397, 14623), (403, 14698), (404, 14719), (408, 14755), (412, 14785), (422, 14866), (423, 14875), (426, 14899), (435, 14980), (436, 14986), (438, 15031), (440, 15034), (448, 15094), (450, 15103), (452, 15112), (465, 15220), (473, 15268), (475, 15274), (485, 15373), (486, 15376), (488, 15388), (497, 15505), (500, 15538), (504, 15586), (505, 15589), (509, 15619), (513, 15679), (523, 15760), (526, 15781), (527, 15784), (534, 15877), (536, 15886), (551, 15988), (554, 16009), (556, 16039), (558, 16048), (560, 16087), (561, 16090), (562, 16093), (563, 16120), (568, 16174), (576, 16291), (582, 16375), (584, 16387), (585, 16399), (586, 16405), (589, 16432), (593, 16456), (608, 16633), (616, 16720), (620, 16738), (621, 16747), (634, 16825), (636, 16840), (638, 16849), (644, 16924), (645, 16933), (648, 16945), (654, 17032), (658, 17074),

(663, 17107), (664, 17119), (669, 17194), (672, 17260),

Gene: Margaret_19 Start: 10311, Stop: 14516, Start Num: 64

Candidate Starts for Margaret_19:

(Start: 64 @10311 has 23 MA's), (Start: 68 @10338 has 2 MA's), (104, 10626), (109, 10647), (110, 10653), (114, 10686), (116, 10704), (120, 10728), (130, 10818), (133, 10827), (135, 10836), (141, 10869), (145, 10896), (147, 10905), (148, 10929), (170, 11082), (172, 11145), (174, 11160), (181, 11196), (185, 11226), (188, 11247), (194, 11289), (205, 11370), (215, 11445), (216, 11454), (220, 11475), (237, 11622), (255, 11763), (257, 11784), (261, 11817), (262, 11835), (265, 11856), (267, 11877), (270, 11898), (282, 11949), (283, 11952), (284, 11955), (287, 11973), (305, 12054), (312, 12084), (317, 12135), (343, 12189), (351, 12216), (359, 12249), (367, 12309), (377, 12378), (378, 12381), (391, 12483), (392, 12489), (397, 12513), (401, 12537), (402, 12540), (411, 12633), (414, 12666), (415, 12687), (417, 12696), (419, 12705), (420, 12711), (439, 12864), (451, 12933), (452, 12939), (456, 12975), (481, 13104), (496, 13245), (499, 13269), (503, 13314), (520, 13467), (521, 13470), (544, 13659), (547, 13689), (592, 13866), (599, 13938), (602, 13962), (604, 13974), (607, 13998), (609, 14010), (617, 14094), (618, 14100), (626, 14142), (629, 14163), (635, 14196), (640, 14229), (642, 14250), (643, 14277), (649, 14301), (650, 14337), (655, 14385), (667, 14487),

Gene: Mayweather_17 Start: 10006, Stop: 15090, Start Num: 21

Candidate Starts for Mayweather_17:

(Start: 21 @10006 has 33 MA's), (35, 10162), (47, 10291), (50, 10321), (60, 10390), (63, 10402), (66, 10417), (70, 10438), (71, 10447), (74, 10489), (77, 10498), (84, 10534), (88, 10558), (94, 10618), (101, 10672), (104, 10711), (106, 10717), (109, 10732), (111, 10753), (136, 10924), (147, 10987), (152, 11032), (161, 11113), (176, 11272), (179, 11305), (183, 11317), (186, 11344), (192, 11401), (197, 11431), (199, 11443), (209, 11545), (210, 11548), (222, 11635), (229, 11683), (243, 11797), (253, 11890), (255, 11905), (257, 11926), (261, 11959), (266, 12001), (270, 12040), (275, 12064), (276, 12067), (277, 12073), (282, 12091), (287, 12115), (296, 12220), (303, 12268), (314, 12328), (315, 12331), (317, 12367), (324, 12433), (326, 12448), (332, 12478), (337, 12499), (338, 12502), (347, 12541), (349, 12562), (352, 12583), (357, 12607), (359, 12613), (376, 12739), (382, 12769), (387, 12808), (393, 12856), (397, 12877), (398, 12880), (405, 12952), (411, 12997), (414, 13030), (415, 13051), (424, 13105), (434, 13180), (445, 13264), (455, 13351), (496, 13669), (500, 13699), (514, 13837), (520, 13888), (525, 13918), (544, 14071), (547, 14101), (574, 14311), (575, 14320), (576, 14326), (581, 14362), (596, 14479), (598, 14485), (602, 14527), (605, 14545), (618, 14668), (623, 14692), (625, 14707), (629, 14737), (633, 14764), (635, 14770), (640, 14803), (647, 14872), (649, 14875), (650, 14911), (656, 14983), (660, 15001),

Gene: McDazzle_15 Start: 10003, Stop: 14937, Start Num: 35

Candidate Starts for McDazzle_15:

(Start: 21 @9847 has 33 MA's), (35, 10003), (43, 10108), (47, 10132), (53, 10183), (60, 10231), (70, 10279), (71, 10288), (74, 10330), (76, 10336), (77, 10339), (84, 10375), (88, 10399), (92, 10426), (101, 10513), (104, 10552), (106, 10558), (109, 10573), (111, 10594), (119, 10648), (136, 10765), (147, 10828), (152, 10873), (156, 10912), (161, 10954), (176, 11116), (178, 11125), (179, 11149), (183, 11161), (186, 11188), (187, 11200), (192, 11245), (197, 11275), (199, 11287), (209, 11389), (210, 11392), (222, 11479), (225, 11506), (231, 11566), (235, 11596), (239, 11617), (243, 11641), (249, 11692), (253, 11734), (255, 11749), (256, 11758), (257, 11770), (261, 11803), (266, 11845), (274, 11905), (275, 11908), (276, 11911), (282, 11935), (287, 11959), (296, 12064), (303, 12112), (314, 12172), (315, 12175), (317, 12211), (324, 12277), (326, 12292), (328, 12307), (332, 12322), (337, 12343), (338, 12346), (347, 12385), (348, 12400), (349, 12406), (352, 12427), (357, 12451), (359, 12457), (376, 12583), (382, 12613), (387, 12652), (393, 12700), (397, 12721), (398, 12724), (399, 12730), (405, 12796), (411, 12841), (414, 12874), (415, 12895), (424, 12949), (443, 13099), (445, 13108), (455, 13195), (481, 13372), (496, 13513), (500, 13543), (514, 13681), (525, 13762), (544, 13915), (547, 13945), (574, 14167), (575, 14176), (576, 14182), (581, 14209), (596, 14326), (598, 14332), (602, 14374), (605, 14392), (618, 14515), (623, 14539), (625, 14554), (629, 14584), (633,

14611), (635, 14617), (640, 14650), (647, 14719), (649, 14722), (650, 14758), (656, 14830), (660, 14848),

Gene: Melba_17 Start: 10274, Stop: 15796, Start Num: 4

Candidate Starts for Melba_17:

(Start: 4 @10274 has 37 MA's), (Start: 6 @10289 has 1 MA's), (Start: 7 @10295 has 1 MA's), (Start: 9 @10325 has 1 MA's), (10, 10334), (11, 10337), (13, 10379), (30, 10490), (31, 10511), (36, 10631), (41, 10673), (51, 10739), (53, 10757), (56, 10778), (57, 10781), (59, 10799), (65, 10823), (75, 10907), (76, 10910), (84, 10949), (86, 10964), (88, 10973), (108, 11141), (111, 11168), (127, 11285), (153, 11456), (156, 11486), (176, 11690), (183, 11735), (186, 11762), (187, 11774), (200, 11864), (204, 11909), (207, 11936), (210, 11966), (222, 12053), (223, 12056), (227, 12095), (236, 12179), (243, 12215), (247, 12257), (252, 12302), (253, 12308), (254, 12320), (255, 12323), (261, 12377), (265, 12416), (267, 12437), (268, 12440), (270, 12458), (271, 12467), (276, 12485), (281, 12506), (283, 12512), (287, 12533), (291, 12560), (296, 12638), (331, 12827), (340, 12851), (344, 12863), (345, 12866), (355, 12881), (358, 12896), (359, 12899), (366, 12950), (377, 13031), (378, 13034), (384, 13067), (387, 13097), (389, 13121), (430, 13454), (436, 13502), (438, 13547), (440, 13550), (441, 13565), (448, 13610), (450, 13619), (452, 13628), (458, 13679), (467, 13751), (471, 13769), (475, 13790), (485, 13889), (486, 13892), (490, 13925), (493, 13991), (495, 14009), (497, 14024), (500, 14057), (505, 14108), (510, 14159), (515, 14207), (532, 14402), (533, 14405), (545, 14477), (546, 14480), (553, 14546), (554, 14549), (555, 14567), (559, 14627), (564, 14684), (566, 14702), (571, 14783), (572, 14786), (573, 14801), (594, 15014), (597, 15080), (603, 15134), (604, 15146), (605, 15152), (618, 15275), (623, 15299), (626, 15317), (629, 15341), (630, 15347), (633, 15368), (640, 15407), (651, 15548), (653, 15560), (659, 15611), (662, 15629), (671, 15779),

Gene: Mellie_16 Start: 10014, Stop: 15557, Start Num: 4

Candidate Starts for Mellie_16:

(Start: 4 @10014 has 37 MA's), (Start: 6 @10029 has 1 MA's), (Start: 7 @10035 has 1 MA's), (Start: 9 @10065 has 1 MA's), (10, 10074), (11, 10077), (13, 10119), (30, 10230), (31, 10251), (51, 10479), (53, 10497), (55, 10512), (56, 10518), (57, 10521), (59, 10539), (65, 10563), (75, 10647), (77, 10653), (84, 10689), (86, 10704), (88, 10713), (108, 10881), (111, 10908), (127, 11025), (153, 11196), (156, 11226), (176, 11430), (183, 11475), (186, 11502), (187, 11514), (200, 11604), (207, 11676), (210, 11706), (222, 11793), (223, 11796), (227, 11835), (243, 11955), (247, 11997), (252, 12042), (253, 12048), (254, 12060), (255, 12063), (261, 12117), (265, 12156), (267, 12177), (268, 12180), (270, 12198), (281, 12246), (283, 12252), (287, 12273), (291, 12300), (295, 12372), (314, 12507), (331, 12588), (340, 12612), (345, 12627), (358, 12657), (359, 12660), (366, 12711), (377, 12792), (378, 12795), (384, 12828), (387, 12858), (389, 12882), (400, 12948), (430, 13215), (433, 13233), (436, 13263), (438, 13308), (440, 13311), (441, 13326), (444, 13335), (448, 13371), (450, 13380), (452, 13389), (458, 13440), (467, 13512), (471, 13530), (475, 13551), (485, 13650), (486, 13653), (490, 13686), (493, 13752), (495, 13770), (497, 13785), (500, 13818), (505, 13869), (510, 13920), (532, 14163), (533, 14166), (545, 14238), (546, 14241), (553, 14307), (554, 14310), (555, 14328), (559, 14388), (564, 14445), (566, 14463), (571, 14544), (572, 14547), (573, 14562), (594, 14775), (597, 14841), (598, 14847), (604, 14907), (605, 14913), (618, 15036), (623, 15060), (626, 15078), (629, 15102), (630, 15108), (633, 15129), (640, 15168), (651, 15309), (653, 15321), (659, 15372), (662, 15390), (671, 15540),

Gene: MintFen_17 Start: 10274, Stop: 15796, Start Num: 4

Candidate Starts for MintFen_17:

(Start: 4 @10274 has 37 MA's), (Start: 6 @10289 has 1 MA's), (Start: 7 @10295 has 1 MA's), (Start: 9 @10325 has 1 MA's), (10, 10334), (11, 10337), (13, 10379), (30, 10490), (31, 10511), (36, 10631), (41, 10673), (51, 10739), (53, 10757), (56, 10778), (57, 10781), (59, 10799), (65, 10823), (75, 10907), (76, 10910), (84, 10949), (86, 10964), (88, 10973), (108, 11141), (111, 11168), (127, 11285), (153, 11456), (156, 11486), (176, 11690), (183, 11735), (186, 11762), (187, 11774), (200, 11864), (204, 11909), (207, 11936), (210, 11966), (222, 12053), (223, 12056), (227, 12095), (236, 12179), (243, 12215),

(247, 12257), (252, 12302), (253, 12308), (254, 12320), (255, 12323), (261, 12377), (265, 12416), (267, 12437), (268, 12440), (270, 12458), (271, 12467), (276, 12485), (281, 12506), (283, 12512), (287, 12533), (291, 12560), (296, 12638), (331, 12827), (340, 12851), (344, 12863), (345, 12866), (355, 12881), (358, 12896), (359, 12899), (366, 12950), (377, 13031), (378, 13034), (384, 13067), (387, 13097), (389, 13121), (430, 13454), (436, 13502), (438, 13547), (440, 13550), (441, 13565), (448, 13610), (450, 13619), (452, 13628), (458, 13679), (467, 13751), (471, 13769), (475, 13790), (485, 13889), (486, 13892), (490, 13925), (493, 13991), (495, 14009), (497, 14024), (500, 14057), (505, 14108), (510, 14159), (515, 14207), (532, 14402), (533, 14405), (545, 14477), (546, 14480), (553, 14546), (554, 14549), (555, 14567), (559, 14627), (564, 14684), (566, 14702), (571, 14783), (572, 14786), (573, 14801), (594, 15014), (597, 15080), (603, 15134), (604, 15146), (605, 15152), (618, 15275), (623, 15299), (626, 15317), (629, 15341), (630, 15347), (633, 15368), (640, 15407), (651, 15548), (653, 15560), (659, 15611), (662, 15629), (671, 15779),

Gene: MissRona_19 Start: 10619, Stop: 16108, Start Num: 4

Candidate Starts for MissRona_19:

(Start: 4 @10619 has 37 MA's), (Start: 6 @10634 has 1 MA's), (Start: 7 @10640 has 1 MA's), (Start: 9 @10670 has 1 MA's), (10, 10679), (11, 10682), (13, 10724), (30, 10835), (31, 10856), (36, 10976), (41, 11018), (51, 11084), (53, 11102), (56, 11123), (57, 11126), (59, 11144), (65, 11168), (75, 11252), (84, 11294), (86, 11309), (88, 11318), (108, 11486), (111, 11513), (127, 11630), (153, 11801), (156, 11831), (176, 12035), (183, 12080), (186, 12107), (187, 12119), (189, 12131), (200, 12209), (204, 12254), (207, 12281), (210, 12311), (222, 12398), (223, 12401), (227, 12440), (233, 12503), (234, 12512), (243, 12560), (247, 12602), (252, 12647), (253, 12653), (255, 12668), (261, 12722), (265, 12761), (267, 12782), (268, 12785), (270, 12803), (276, 12830), (281, 12851), (283, 12857), (287, 12878), (290, 12896), (291, 12905), (327, 13178), (345, 13232), (358, 13262), (359, 13265), (366, 13316), (377, 13397), (378, 13400), (384, 13433), (387, 13463), (389, 13487), (400, 13553), (430, 13820), (436, 13868), (437, 13901), (438, 13913), (440, 13916), (448, 13976), (450, 13985), (452, 13994), (458, 14045), (467, 14117), (471, 14135), (475, 14156), (485, 14255), (486, 14258), (490, 14291), (493, 14357), (495, 14375), (497, 14390), (500, 14423), (505, 14474), (510, 14525), (517, 14594), (532, 14768), (533, 14771), (545, 14843), (546, 14846), (553, 14912), (554, 14915), (555, 14933), (559, 14993), (564, 15050), (566, 15068), (571, 15149), (572, 15152), (573, 15167), (588, 15338), (594, 15392), (601, 15464), (602, 15473), (606, 15509), (614, 15569), (615, 15587), (619, 15605), (628, 15650), (632, 15683), (646, 15794), (651, 15863), (659, 15926), (662, 15944), (671, 16094),

Gene: MunkgeeRoachy_16 Start: 9677, Stop: 14815, Start Num: 21

Candidate Starts for MunkgeeRoachy_16:

(Start: 17 @9653 has 5 MA's), (Start: 21 @9677 has 33 MA's), (24, 9704), (35, 9833), (38, 9908), (60, 10061), (61, 10064), (74, 10160), (77, 10169), (82, 10199), (84, 10205), (86, 10220), (87, 10223), (91, 10244), (97, 10316), (100, 10337), (109, 10403), (111, 10424), (127, 10541), (152, 10703), (156, 10742), (165, 10817), (179, 10976), (183, 10988), (186, 11015), (191, 11060), (192, 11072), (206, 11180), (208, 11201), (211, 11231), (217, 11255), (219, 11267), (222, 11306), (226, 11339), (238, 11441), (239, 11444), (242, 11462), (243, 11468), (253, 11561), (255, 11576), (259, 11615), (265, 11669), (270, 11711), (279, 11753), (286, 11783), (287, 11786), (297, 11894), (298, 11897), (301, 11948), (315, 12023), (322, 12113), (324, 12125), (332, 12170), (337, 12191), (338, 12194), (339, 12197), (351, 12272), (359, 12305), (362, 12326), (366, 12356), (373, 12404), (374, 12410), (378, 12437), (398, 12572), (411, 12689), (414, 12722), (415, 12743), (416, 12746), (427, 12812), (428, 12818), (429, 12833), (443, 12953), (445, 12962), (455, 13046), (496, 13367), (519, 13586), (525, 13622), (550, 13835), (575, 14027), (581, 14075), (583, 14096), (596, 14204), (605, 14270), (607, 14288), (618, 14393), (624, 14423), (625, 14432), (629, 14462), (640, 14528), (643, 14576), (650, 14636), (659, 14723), (667, 14786),

Gene: Murp_17 Start: 10264, Stop: 15864, Start Num: 4

Candidate Starts for Murp_17:

(Start: 4 @10264 has 37 MA's), (Start: 6 @10279 has 1 MA's), (Start: 7 @10285 has 1 MA's), (Start: 9 @10315 has 1 MA's), (10, 10324), (11, 10327), (13, 10369), (30, 10480), (31, 10501), (36, 10621), (42, 10669), (51, 10729), (53, 10747), (56, 10768), (57, 10771), (59, 10789), (75, 10897), (77, 10903), (84, 10939), (86, 10954), (88, 10963), (108, 11131), (111, 11158), (127, 11275), (153, 11446), (156, 11476), (169, 11572), (176, 11680), (183, 11725), (186, 11752), (187, 11764), (200, 11854), (204, 11899), (207, 11926), (210, 11956), (222, 12043), (227, 12085), (229, 12091), (243, 12205), (247, 12247), (252, 12292), (253, 12298), (255, 12313), (261, 12367), (265, 12406), (267, 12427), (268, 12430), (270, 12448), (271, 12457), (276, 12475), (281, 12496), (283, 12502), (287, 12523), (291, 12550), (293, 12598), (296, 12628), (327, 12802), (340, 12841), (345, 12856), (358, 12886), (359, 12889), (366, 12940), (377, 13021), (378, 13024), (384, 13057), (387, 13087), (389, 13111), (399, 13165), (400, 13177), (421, 13366), (430, 13444), (435, 13486), (438, 13537), (440, 13540), (441, 13555), (445, 13567), (448, 13600), (450, 13609), (462, 13723), (468, 13777), (470, 13795), (479, 13879), (480, 13885), (483, 13921), (511, 14245), (516, 14293), (517, 14305), (524, 14368), (529, 14437), (530, 14467), (531, 14470), (532, 14479), (533, 14482), (539, 14515), (545, 14554), (546, 14557), (553, 14623), (554, 14626), (555, 14644), (559, 14704), (564, 14761), (566, 14779), (571, 14860), (573, 14878), (594, 15079), (597, 15145), (604, 15211), (605, 15217), (618, 15343), (623, 15367), (626, 15385), (629, 15409), (630, 15415), (633, 15436), (640, 15475), (651, 15616), (659, 15679), (662, 15697), (668, 15757), (671, 15850),

Gene: Nibbles_18 Start: 10619, Stop: 15748, Start Num: 21

Candidate Starts for Nibbles_18:

(18, 10598), (Start: 21 @10619 has 33 MA's), (24, 10646), (35, 10775), (41, 10871), (48, 10922), (58, 10979), (62, 11012), (63, 11015), (74, 11102), (78, 11114), (86, 11162), (87, 11165), (88, 11171), (93, 11225), (94, 11231), (100, 11279), (109, 11345), (111, 11366), (165, 11759), (166, 11762), (173, 11864), (183, 11930), (184, 11936), (186, 11957), (210, 12161), (213, 12179), (215, 12185), (217, 12197), (219, 12209), (222, 12248), (224, 12260), (229, 12296), (233, 12353), (237, 12377), (253, 12503), (255, 12518), (259, 12557), (267, 12632), (272, 12665), (276, 12680), (277, 12686), (278, 12692), (287, 12728), (297, 12836), (304, 12908), (314, 12962), (332, 13112), (338, 13136), (349, 13196), (350, 13208), (351, 13214), (357, 13241), (358, 13244), (359, 13247), (372, 13340), (373, 13346), (380, 13397), (389, 13466), (395, 13499), (398, 13514), (399, 13520), (404, 13577), (406, 13589), (410, 13628), (411, 13631), (413, 13652), (414, 13664), (415, 13685), (416, 13688), (423, 13727), (424, 13739), (427, 13754), (443, 13895), (455, 13991), (463, 14057), (466, 14078), (469, 14084), (496, 14321), (500, 14351), (503, 14390), (518, 14525), (522, 14555), (525, 14576), (544, 14735), (547, 14768), (575, 14981), (579, 14999), (581, 15005), (596, 15134), (605, 15200), (610, 15251), (618, 15323), (625, 15362), (629, 15392), (635, 15425), (640, 15458), (649, 15530), (653, 15602), (659, 15656), (661, 15662), (667, 15719),

Gene: Nina_17 Start: 10662, Stop: 15809, Start Num: 21

Candidate Starts for Nina_17:

(Start: 17 @10638 has 5 MA's), (Start: 21 @10662 has 33 MA's), (24, 10689), (35, 10818), (39, 10911), (40, 10914), (52, 11004), (56, 11028), (65, 11073), (66, 11082), (74, 11154), (76, 11160), (77, 11163), (81, 11190), (83, 11196), (86, 11214), (87, 11217), (91, 11238), (97, 11310), (100, 11331), (109, 11397), (111, 11418), (127, 11535), (152, 11697), (156, 11736), (165, 11811), (179, 11970), (183, 11982), (186, 12009), (191, 12054), (192, 12066), (204, 12156), (206, 12174), (208, 12195), (211, 12225), (217, 12249), (219, 12261), (222, 12300), (226, 12333), (238, 12435), (239, 12438), (243, 12462), (253, 12555), (255, 12570), (259, 12609), (265, 12663), (270, 12705), (272, 12717), (279, 12747), (286, 12777), (287, 12780), (297, 12888), (298, 12891), (301, 12942), (302, 12948), (315, 13017), (322, 13107), (324, 13119), (332, 13164), (337, 13185), (338, 13188), (339, 13191), (351, 13266), (359, 13299), (362, 13320), (366, 13350), (373, 13398), (374, 13404), (378, 13431), (398, 13566), (411, 13683), (414, 13716), (415, 13737), (427, 13806), (428, 13812), (429, 13827), (443, 13947), (445, 13956), (455, 14040), (496, 14361), (498, 14382), (519, 14580), (525, 14616), (550, 14829), (575, 15021), (581, 15069), (583, 15090), (596, 15198), (605, 15264), (607, 15282), (618, 15387), (624, 15417), (625, 15426), (629, 15456), (640, 15522), (643, 15570), (650, 15630), (659,

15717), (667, 15780),

Gene: Nodigi_18 Start: 10594, Stop: 14802, Start Num: 64

Candidate Starts for Nodigi_18:

(Start: 64 @10594 has 23 MA's), (Start: 68 @10621 has 2 MA's), (109, 10930), (116, 10987), (120, 11011), (125, 11056), (130, 11101), (135, 11119), (138, 11134), (141, 11152), (142, 11161), (149, 11215), (157, 11272), (167, 11353), (171, 11401), (172, 11440), (174, 11455), (178, 11464), (181, 11491), (185, 11521), (188, 11542), (205, 11665), (212, 11731), (221, 11794), (232, 11881), (243, 11950), (255, 12058), (257, 12079), (261, 12112), (262, 12130), (264, 12148), (267, 12172), (271, 12202), (283, 12247), (284, 12250), (287, 12268), (312, 12379), (314, 12391), (315, 12394), (317, 12430), (331, 12472), (343, 12484), (351, 12511), (359, 12544), (370, 12619), (377, 12673), (378, 12676), (380, 12694), (387, 12739), (392, 12784), (401, 12832), (402, 12835), (414, 12961), (417, 12991), (419, 13000), (420, 13006), (439, 13159), (447, 13204), (451, 13228), (452, 13234), (456, 13270), (464, 13327), (476, 13378), (482, 13423), (496, 13561), (500, 13591), (520, 13783), (544, 13960), (592, 14152), (599, 14224), (604, 14260), (607, 14284), (609, 14296), (612, 14338), (618, 14386), (629, 14449), (633, 14476), (635, 14482), (640, 14515), (642, 14536), (643, 14563), (649, 14587), (650, 14623), (652, 14650), (653, 14659), (655, 14671), (667, 14773),

Gene: Obliviate_16 Start: 10043, Stop: 15586, Start Num: 4

Candidate Starts for Obliviate_16:

(Start: 4 @10043 has 37 MA's), (Start: 6 @10058 has 1 MA's), (Start: 7 @10064 has 1 MA's), (Start: 9 @10094 has 1 MA's), (10, 10103), (11, 10106), (13, 10148), (30, 10259), (31, 10280), (51, 10508), (53, 10526), (55, 10541), (56, 10547), (57, 10550), (59, 10568), (65, 10592), (75, 10676), (77, 10682), (84, 10718), (86, 10733), (88, 10742), (108, 10910), (111, 10937), (127, 11054), (136, 11108), (153, 11225), (156, 11255), (176, 11459), (183, 11504), (186, 11531), (187, 11543), (200, 11633), (204, 11678), (207, 11705), (210, 11735), (222, 11822), (223, 11825), (227, 11864), (243, 11984), (247, 12026), (252, 12071), (253, 12077), (254, 12089), (255, 12092), (261, 12146), (265, 12185), (267, 12206), (268, 12209), (270, 12227), (276, 12254), (281, 12275), (283, 12281), (287, 12302), (291, 12329), (295, 12401), (314, 12536), (331, 12617), (340, 12641), (345, 12656), (358, 12686), (359, 12689), (366, 12740), (377, 12821), (378, 12824), (384, 12857), (387, 12887), (389, 12911), (400, 12977), (430, 13244), (433, 13262), (436, 13292), (438, 13337), (440, 13340), (441, 13355), (444, 13364), (448, 13400), (450, 13409), (452, 13418), (458, 13469), (467, 13541), (471, 13559), (475, 13580), (485, 13679), (486, 13682), (490, 13715), (493, 13781), (495, 13799), (497, 13814), (500, 13847), (505, 13898), (510, 13949), (532, 14192), (533, 14195), (545, 14267), (546, 14270), (553, 14336), (554, 14339), (555, 14357), (559, 14417), (564, 14474), (566, 14492), (571, 14573), (572, 14576), (573, 14591), (588, 14750), (594, 14804), (597, 14870), (598, 14876), (604, 14936), (605, 14942), (610, 14993), (618, 15065), (623, 15089), (626, 15107), (629, 15131), (630, 15137), (633, 15158), (640, 15197), (651, 15338), (653, 15350), (659, 15401), (662, 15419), (671, 15569),

Gene: Orla_18 Start: 10598, Stop: 14806, Start Num: 64

Candidate Starts for Orla_18:

(Start: 64 @10598 has 23 MA's), (Start: 68 @10625 has 2 MA's), (109, 10934), (116, 10991), (120, 11015), (125, 11060), (130, 11105), (135, 11123), (138, 11138), (141, 11156), (142, 11165), (149, 11219), (157, 11276), (167, 11357), (171, 11405), (172, 11444), (174, 11459), (178, 11468), (181, 11495), (185, 11525), (188, 11546), (205, 11669), (212, 11735), (221, 11798), (232, 11885), (243, 11954), (255, 12062), (257, 12083), (261, 12116), (262, 12134), (264, 12152), (267, 12176), (271, 12206), (283, 12251), (284, 12254), (287, 12272), (312, 12383), (314, 12395), (317, 12434), (331, 12476), (343, 12488), (345, 12500), (351, 12515), (359, 12548), (370, 12623), (377, 12677), (378, 12680), (380, 12698), (387, 12743), (391, 12782), (392, 12788), (397, 12812), (400, 12833), (401, 12836), (402, 12839), (414, 12965), (415, 12986), (417, 12995), (419, 13004), (420, 13010), (439, 13163), (447, 13208), (451, 13232), (452, 13238), (456, 13274), (461, 13307), (464, 13331), (476, 13382), (482, 13427), (496, 13565), (500, 13595), (520, 13787), (544, 13964), (592, 14156), (599, 14228), (604, 14264), (607, 14288), (609, 14300), (612, 14342), (618, 14390), (629, 14453), (633,

14480), (635, 14486), (640, 14519), (642, 14540), (643, 14567), (649, 14591), (650, 14627), (652, 14654), (653, 14663), (655, 14675), (667, 14777),

Gene: PCoral7_17 Start: 10271, Stop: 15886, Start Num: 4

Candidate Starts for PCoral7_17:

(Start: 3 @10235 has 1 MA's), (Start: 4 @10271 has 37 MA's), (Start: 7 @10292 has 1 MA's), (10, 10331), (13, 10376), (26, 10466), (28, 10475), (30, 10487), (31, 10508), (34, 10565), (37, 10637), (39, 10658), (46, 10700), (47, 10703), (49, 10730), (52, 10751), (53, 10754), (56, 10775), (59, 10796), (69, 10847), (70, 10850), (77, 10910), (102, 11093), (111, 11165), (139, 11351), (153, 11453), (154, 11468), (156, 11483), (162, 11540), (183, 11732), (198, 11852), (207, 11933), (210, 11963), (217, 11999), (222, 12050), (238, 12185), (239, 12188), (243, 12212), (249, 12263), (252, 12299), (253, 12305), (255, 12320), (261, 12374), (265, 12413), (268, 12437), (270, 12455), (281, 12503), (283, 12509), (286, 12527), (287, 12530), (289, 12545), (291, 12557), (293, 12605), (314, 12743), (321, 12824), (324, 12848), (325, 12860), (326, 12863), (333, 12896), (352, 12998), (357, 13025), (358, 13028), (359, 13031), (360, 13037), (366, 13082), (368, 13094), (370, 13106), (373, 13130), (375, 13145), (377, 13160), (378, 13163), (382, 13187), (385, 13214), (397, 13295), (407, 13379), (418, 13484), (423, 13517), (430, 13583), (431, 13592), (436, 13631), (437, 13664), (438, 13676), (440, 13679), (441, 13694), (444, 13703), (448, 13739), (450, 13748), (452, 13757), (473, 13913), (474, 13916), (475, 13919), (477, 13940), (486, 14021), (491, 14063), (497, 14150), (500, 14183), (502, 14192), (505, 14234), (517, 14348), (531, 14513), (545, 14597), (546, 14600), (548, 14630), (549, 14633), (553, 14666), (554, 14669), (559, 14747), (564, 14804), (573, 14921), (577, 14972), (591, 15074), (594, 15107), (597, 15173), (604, 15239), (605, 15245), (607, 15263), (610, 15296), (618, 15368), (626, 15410), (627, 15416), (629, 15434), (630, 15440), (633, 15461), (640, 15500), (651, 15641), (659, 15704), (668, 15779), (671, 15872),

Gene: Periwinkle_20 Start: 10340, Stop: 15973, Start Num: 15

Candidate Starts for Periwinkle_20:

(12, 10313), (Start: 15 @10340 has 1 MA's), (Start: 23 @10385 has 1 MA's), (25, 10406), (29, 10427), (32, 10472), (Start: 33 @10487 has 1 MA's), (37, 10571), (43, 10613), (44, 10625), (53, 10688), (55, 10703), (57, 10712), (59, 10730), (60, 10736), (70, 10784), (75, 10838), (91, 10919), (106, 11063), (107, 11069), (111, 11099), (143, 11318), (153, 11393), (156, 11423), (173, 11606), (176, 11627), (183, 11672), (184, 11678), (186, 11699), (196, 11780), (204, 11846), (207, 11873), (208, 11885), (210, 11903), (211, 11915), (217, 11939), (219, 11951), (222, 11990), (223, 11993), (224, 12002), (227, 12032), (231, 12077), (240, 12137), (243, 12152), (246, 12182), (247, 12194), (252, 12239), (253, 12245), (254, 12257), (255, 12260), (257, 12281), (260, 12311), (261, 12314), (268, 12377), (271, 12404), (272, 12407), (273, 12410), (274, 12416), (280, 12440), (281, 12443), (283, 12449), (285, 12455), (287, 12470), (290, 12488), (295, 12569), (299, 12617), (300, 12623), (304, 12650), (324, 12809), (325, 12821), (333, 12857), (346, 12917), (351, 12956), (353, 12962), (354, 12965), (358, 12986), (359, 12989), (373, 13088), (379, 13127), (383, 13151), (387, 13184), (390, 13229), (396, 13283), (403, 13370), (404, 13391), (408, 13427), (412, 13457), (422, 13538), (423, 13547), (426, 13571), (435, 13652), (436, 13658), (438, 13703), (440, 13706), (448, 13766), (450, 13775), (452, 13784), (465, 13892), (473, 13940), (475, 13946), (485, 14045), (486, 14048), (488, 14060), (497, 14177), (500, 14210), (505, 14261), (509, 14291), (513, 14351), (523, 14432), (526, 14453), (528, 14486), (534, 14549), (536, 14558), (538, 14567), (554, 14681), (556, 14711), (558, 14720), (560, 14759), (561, 14762), (563, 14792), (564, 14813), (580, 15017), (585, 15080), (586, 15086), (593, 15137), (608, 15323), (616, 15410), (621, 15437), (622, 15440), (634, 15515), (638, 15539), (641, 15578), (644, 15614), (648, 15635), (654, 15722), (658, 15764), (663, 15797), (664, 15809), (669, 15887), (672, 15953),

Gene: Petra_19 Start: 10705, Stop: 16197, Start Num: 9

Candidate Starts for Petra_19:

(Start: 4 @10654 has 37 MA's), (Start: 6 @10669 has 1 MA's), (Start: 7 @10675 has 1 MA's), (Start: 9 @10705 has 1 MA's), (10, 10714), (11, 10717), (13, 10759), (30, 10870), (31, 10891), (51, 11119), (53,

11137), (56, 11158), (57, 11161), (59, 11179), (65, 11203), (75, 11287), (84, 11329), (86, 11344), (88, 11353), (108, 11521), (111, 11548), (127, 11665), (153, 11836), (156, 11866), (176, 12070), (183, 12115), (204, 12289), (207, 12316), (210, 12346), (222, 12433), (227, 12475), (229, 12481), (243, 12595), (245, 12610), (247, 12637), (252, 12682), (253, 12688), (255, 12703), (261, 12757), (265, 12796), (267, 12817), (268, 12820), (270, 12838), (276, 12865), (281, 12886), (283, 12892), (287, 12913), (291, 12940), (327, 13213), (340, 13252), (345, 13267), (358, 13297), (359, 13300), (366, 13351), (377, 13432), (378, 13435), (384, 13468), (387, 13498), (400, 13588), (430, 13855), (436, 13903), (438, 13948), (440, 13951), (441, 13966), (444, 13975), (448, 14011), (450, 14020), (452, 14029), (458, 14080), (467, 14152), (471, 14170), (475, 14191), (485, 14290), (486, 14293), (490, 14326), (493, 14392), (495, 14410), (497, 14425), (500, 14458), (505, 14509), (510, 14560), (532, 14803), (533, 14806), (545, 14878), (546, 14881), (553, 14947), (554, 14950), (555, 14968), (559, 15028), (564, 15085), (566, 15103), (571, 15184), (572, 15187), (573, 15202), (588, 15361), (594, 15415), (597, 15481), (604, 15547), (605, 15553), (618, 15676), (623, 15700), (626, 15718), (629, 15742), (630, 15748), (633, 15769), (640, 15808), (651, 15949), (653, 15961), (659, 16012), (662, 16030), (668, 16087), (671, 16180),

Gene: Phabuloso_18 Start: 9869, Stop: 15502, Start Num: 16

Candidate Starts for Phabuloso_18:

(Start: 16 @9869 has 11 MA's), (22, 9896), (Start: 23 @9914 has 1 MA's), (25, 9935), (29, 9956), (32, 10001), (Start: 33 @10016 has 1 MA's), (37, 10100), (43, 10142), (44, 10154), (53, 10217), (55, 10232), (57, 10241), (59, 10259), (60, 10265), (70, 10313), (91, 10448), (107, 10598), (111, 10628), (143, 10847), (153, 10922), (156, 10952), (176, 11156), (182, 11198), (183, 11201), (184, 11207), (186, 11228), (196, 11309), (204, 11375), (207, 11402), (208, 11414), (210, 11432), (211, 11444), (217, 11468), (219, 11480), (222, 11519), (223, 11522), (224, 11531), (227, 11561), (231, 11606), (240, 11666), (243, 11681), (246, 11711), (247, 11723), (252, 11768), (253, 11774), (255, 11789), (258, 11819), (260, 11840), (261, 11843), (268, 11906), (271, 11933), (272, 11936), (273, 11939), (274, 11945), (280, 11969), (281, 11972), (283, 11978), (285, 11984), (287, 11999), (290, 12017), (295, 12098), (299, 12146), (300, 12152), (304, 12179), (324, 12338), (325, 12350), (333, 12386), (346, 12446), (351, 12485), (353, 12491), (354, 12494), (358, 12515), (359, 12518), (373, 12617), (379, 12656), (383, 12680), (387, 12713), (390, 12758), (396, 12812), (403, 12899), (404, 12920), (408, 12956), (412, 12986), (421, 13064), (422, 13067), (423, 13076), (426, 13100), (435, 13181), (436, 13187), (438, 13232), (440, 13235), (441, 13250), (448, 13295), (450, 13304), (452, 13313), (453, 13316), (465, 13421), (473, 13469), (475, 13475), (485, 13574), (486, 13577), (488, 13589), (497, 13706), (500, 13739), (505, 13790), (509, 13820), (513, 13880), (523, 13961), (526, 13982), (528, 14015), (534, 14078), (538, 14096), (554, 14210), (556, 14240), (558, 14249), (560, 14288), (561, 14291), (563, 14321), (564, 14342), (576, 14495), (580, 14546), (585, 14609), (586, 14615), (593, 14666), (608, 14852), (616, 14939), (621, 14966), (622, 14969), (634, 15044), (638, 15068), (641, 15107), (644, 15143), (648, 15164), (654, 15251), (658, 15293), (663, 15326), (664, 15338), (669, 15416), (672, 15482),

Gene: Phistory_19 Start: 10653, Stop: 16280, Start Num: 14

Candidate Starts for Phistory_19:

(Start: 14 @10653 has 1 MA's), (19, 10659), (Start: 23 @10698 has 1 MA's), (32, 10785), (37, 10884), (43, 10926), (44, 10938), (53, 11001), (55, 11016), (57, 11025), (59, 11043), (60, 11049), (70, 11097), (80, 11172), (91, 11232), (107, 11382), (111, 11412), (153, 11706), (156, 11736), (173, 11919), (176, 11940), (182, 11982), (183, 11985), (184, 11991), (186, 12012), (187, 12024), (195, 12084), (198, 12105), (204, 12159), (207, 12186), (208, 12198), (210, 12216), (211, 12228), (217, 12252), (219, 12264), (222, 12303), (223, 12306), (224, 12315), (228, 12348), (234, 12417), (238, 12438), (243, 12465), (244, 12471), (247, 12507), (248, 12510), (252, 12552), (253, 12558), (254, 12570), (255, 12573), (260, 12624), (261, 12627), (268, 12690), (269, 12699), (271, 12717), (272, 12720), (274, 12729), (283, 12762), (287, 12783), (288, 12789), (289, 12798), (292, 12846), (296, 12888), (299, 12930), (304, 12963), (313, 13014), (314, 13017), (317, 13056), (318, 13065), (324, 13122), (325, 13134), (333, 13170), (346, 13230), (351, 13269), (353, 13275), (358, 13299), (359, 13302), (361,

13320), (373, 13401), (383, 13464), (387, 13497), (391, 13572), (396, 13596), (397, 13608), (400, 13641), (404, 13704), (408, 13740), (412, 13770), (421, 13848), (422, 13851), (423, 13860), (426, 13884), (436, 13971), (438, 14016), (440, 14019), (441, 14034), (448, 14079), (450, 14088), (452, 14097), (453, 14100), (465, 14205), (473, 14253), (475, 14259), (485, 14358), (486, 14361), (488, 14373), (497, 14490), (500, 14523), (505, 14574), (509, 14604), (513, 14664), (523, 14745), (526, 14766), (527, 14769), (534, 14862), (538, 14880), (554, 14994), (556, 15024), (558, 15033), (560, 15072), (561, 15075), (563, 15105), (564, 15126), (580, 15324), (585, 15387), (586, 15393), (589, 15420), (593, 15444), (608, 15630), (616, 15717), (621, 15744), (622, 15747), (634, 15822), (638, 15846), (641, 15885), (644, 15921), (648, 15942), (654, 16029), (658, 16071), (663, 16104), (664, 16116), (669, 16194), (672, 16260),

Gene: PhrostedPhlake_18 Start: 10632, Stop: 16172, Start Num: 4

Candidate Starts for PhrostedPhlake_18:

(Start: 4 @10632 has 37 MA's), (Start: 6 @10647 has 1 MA's), (Start: 7 @10653 has 1 MA's), (Start: 9 @10683 has 1 MA's), (10, 10692), (13, 10737), (30, 10848), (31, 10869), (51, 11097), (53, 11115), (56, 11136), (57, 11139), (59, 11157), (65, 11181), (75, 11265), (77, 11271), (84, 11307), (86, 11322), (88, 11331), (94, 11391), (108, 11499), (111, 11526), (127, 11643), (136, 11697), (143, 11739), (153, 11814), (156, 11844), (176, 12048), (183, 12093), (204, 12267), (207, 12294), (210, 12324), (222, 12411), (227, 12453), (233, 12516), (243, 12573), (247, 12615), (252, 12660), (253, 12666), (255, 12681), (261, 12735), (265, 12774), (267, 12795), (268, 12798), (270, 12816), (276, 12843), (281, 12864), (283, 12870), (287, 12891), (291, 12918), (340, 13230), (345, 13245), (358, 13275), (359, 13278), (366, 13329), (377, 13410), (378, 13413), (384, 13446), (387, 13476), (400, 13566), (430, 13833), (436, 13881), (437, 13914), (438, 13926), (440, 13929), (441, 13944), (444, 13953), (448, 13989), (450, 13998), (452, 14007), (465, 14115), (473, 14163), (474, 14166), (475, 14169), (486, 14271), (487, 14274), (497, 14400), (500, 14433), (504, 14481), (505, 14484), (510, 14535), (517, 14604), (532, 14778), (533, 14781), (545, 14853), (546, 14856), (553, 14922), (554, 14925), (555, 14943), (559, 15003), (564, 15060), (566, 15078), (571, 15159), (572, 15162), (573, 15177), (588, 15336), (594, 15390), (597, 15456), (604, 15522), (605, 15528), (609, 15558), (618, 15651), (623, 15675), (626, 15693), (629, 15717), (630, 15723), (633, 15744), (640, 15783), (651, 15924), (659, 15987), (662, 16005), (671, 16155),

Gene: Pipp_17 Start: 10133, Stop: 15790, Start Num: 2

Candidate Starts for Pipp_17:

(1, 10094), (Start: 2 @10133 has 1 MA's), (Start: 4 @10247 has 37 MA's), (Start: 6 @10262 has 1 MA's), (Start: 7 @10268 has 1 MA's), (Start: 9 @10298 has 1 MA's), (10, 10307), (11, 10310), (13, 10352), (30, 10463), (31, 10484), (53, 10730), (56, 10751), (57, 10754), (59, 10772), (65, 10796), (75, 10880), (77, 10886), (84, 10922), (86, 10937), (88, 10946), (91, 10961), (94, 11006), (108, 11114), (111, 11141), (117, 11174), (127, 11258), (156, 11459), (176, 11663), (184, 11714), (186, 11735), (187, 11747), (200, 11837), (204, 11882), (207, 11909), (210, 11939), (222, 12026), (223, 12029), (227, 12068), (234, 12140), (243, 12188), (247, 12230), (252, 12275), (253, 12281), (254, 12293), (255, 12296), (261, 12350), (265, 12389), (267, 12410), (268, 12413), (270, 12431), (276, 12458), (281, 12479), (283, 12485), (287, 12506), (314, 12740), (327, 12806), (340, 12845), (345, 12860), (358, 12890), (359, 12893), (366, 12944), (377, 13025), (378, 13028), (384, 13061), (387, 13091), (400, 13181), (423, 13382), (430, 13448), (436, 13496), (438, 13541), (440, 13544), (441, 13559), (444, 13568), (448, 13604), (450, 13613), (452, 13622), (467, 13745), (475, 13784), (485, 13883), (486, 13886), (493, 13985), (495, 14003), (497, 14018), (500, 14051), (505, 14102), (510, 14153), (517, 14222), (532, 14396), (533, 14399), (543, 14465), (545, 14471), (546, 14474), (553, 14540), (554, 14543), (555, 14561), (559, 14621), (564, 14678), (566, 14696), (571, 14777), (573, 14795), (577, 14846), (588, 14954), (594, 15008), (597, 15074), (603, 15128), (604, 15140), (605, 15146), (609, 15176), (618, 15269), (623, 15293), (626, 15311), (629, 15335), (630, 15341), (633, 15362), (640, 15401), (651, 15542), (659, 15605), (662, 15623), (668, 15680), (671, 15773),

Gene: Pons_16 Start: 9384, Stop: 14465, Start Num: 21

Candidate Starts for Pons_16:

(Start: 21 @9384 has 33 MA's), (35, 9540), (47, 9669), (50, 9699), (60, 9768), (63, 9780), (66, 9795), (70, 9816), (71, 9825), (74, 9867), (77, 9876), (84, 9912), (88, 9936), (94, 9996), (101, 10050), (104, 10089), (106, 10095), (109, 10110), (111, 10131), (119, 10185), (136, 10302), (147, 10365), (152, 10410), (156, 10449), (161, 10491), (176, 10650), (179, 10683), (183, 10695), (186, 10722), (192, 10779), (197, 10809), (199, 10821), (209, 10923), (210, 10926), (222, 11013), (229, 11061), (243, 11175), (249, 11226), (253, 11268), (255, 11283), (256, 11292), (257, 11304), (261, 11337), (266, 11379), (274, 11439), (275, 11442), (276, 11445), (277, 11451), (282, 11469), (287, 11493), (296, 11598), (303, 11646), (314, 11706), (315, 11709), (317, 11745), (326, 11826), (332, 11856), (337, 11877), (338, 11880), (339, 11883), (352, 11961), (357, 11985), (359, 11991), (376, 12117), (382, 12147), (387, 12186), (393, 12234), (397, 12255), (398, 12258), (399, 12264), (405, 12330), (411, 12375), (414, 12408), (415, 12429), (424, 12483), (443, 12633), (445, 12642), (455, 12729), (496, 13047), (500, 13077), (514, 13215), (525, 13296), (544, 13446), (547, 13476), (574, 13686), (575, 13695), (576, 13701), (581, 13737), (596, 13854), (598, 13860), (602, 13902), (605, 13920), (618, 14043), (623, 14067), (625, 14082), (629, 14112), (633, 14139), (635, 14145), (640, 14178), (647, 14247), (649, 14250), (650, 14286), (656, 14358), (660, 14376),

Gene: PotPie_16 Start: 10237, Stop: 15330, Start Num: 21

Candidate Starts for PotPie_16:

(Start: 21 @10237 has 33 MA's), (35, 10393), (47, 10522), (50, 10552), (60, 10621), (63, 10633), (70, 10669), (71, 10678), (74, 10720), (77, 10729), (84, 10765), (88, 10789), (101, 10903), (104, 10942), (109, 10963), (111, 10984), (136, 11155), (147, 11218), (152, 11263), (161, 11344), (176, 11503), (179, 11536), (183, 11548), (186, 11575), (192, 11632), (197, 11662), (199, 11674), (209, 11776), (210, 11779), (222, 11866), (229, 11914), (243, 12028), (253, 12121), (255, 12136), (257, 12157), (261, 12190), (263, 12220), (266, 12232), (270, 12271), (275, 12295), (276, 12298), (282, 12322), (287, 12346), (296, 12451), (307, 12529), (314, 12559), (315, 12562), (317, 12598), (321, 12640), (324, 12664), (326, 12679), (328, 12694), (332, 12709), (338, 12733), (347, 12772), (348, 12787), (349, 12793), (357, 12838), (359, 12844), (376, 12970), (382, 13000), (388, 13051), (393, 13087), (397, 13108), (398, 13111), (405, 13183), (411, 13228), (414, 13261), (415, 13282), (424, 13336), (434, 13411), (445, 13495), (455, 13582), (496, 13900), (500, 13930), (514, 14068), (520, 14119), (525, 14149), (544, 14314), (547, 14344), (570, 14524), (576, 14575), (581, 14602), (583, 14623), (596, 14719), (602, 14767), (605, 14785), (618, 14908), (623, 14932), (625, 14947), (629, 14977), (633, 15004), (635, 15010), (640, 15043), (647, 15112), (649, 15115), (650, 15151), (660, 15241),

Gene: PrincePatrick_17 Start: 10339, Stop: 15960, Start Num: 4

Candidate Starts for PrincePatrick_17:

(Start: 3 @10303 has 1 MA's), (Start: 4 @10339 has 37 MA's), (Start: 7 @10360 has 1 MA's), (10, 10399), (13, 10444), (26, 10534), (28, 10543), (30, 10555), (31, 10576), (34, 10633), (37, 10705), (39, 10726), (46, 10768), (47, 10771), (49, 10798), (52, 10819), (53, 10822), (56, 10843), (59, 10864), (69, 10915), (70, 10918), (77, 10978), (102, 11161), (111, 11233), (139, 11419), (153, 11521), (154, 11536), (156, 11551), (162, 11608), (183, 11800), (198, 11920), (207, 12001), (210, 12031), (217, 12067), (222, 12118), (227, 12160), (234, 12232), (241, 12268), (243, 12280), (249, 12331), (253, 12373), (255, 12388), (261, 12442), (265, 12481), (268, 12505), (270, 12523), (281, 12571), (283, 12577), (286, 12595), (287, 12598), (289, 12613), (291, 12625), (293, 12673), (296, 12703), (306, 12778), (321, 12892), (324, 12916), (325, 12928), (326, 12931), (333, 12964), (352, 13066), (359, 13099), (366, 13150), (368, 13162), (370, 13174), (373, 13198), (378, 13234), (382, 13258), (385, 13285), (397, 13366), (407, 13450), (418, 13555), (423, 13588), (430, 13654), (431, 13663), (436, 13702), (437, 13735), (438, 13747), (440, 13750), (441, 13765), (444, 13774), (448, 13810), (450, 13819), (452, 13828), (457, 13870), (473, 13984), (474, 13987), (475, 13990), (477, 14011), (486, 14092), (491, 14134), (497, 14221), (500, 14254), (502, 14263), (505, 14305), (517, 14419), (545, 14668), (546, 14671), (548, 14701), (549, 14704), (552, 14728), (553, 14737), (554, 14740), (559, 14818), (564, 14875), (573, 14992), (577, 15043), (594, 15181), (597, 15247), (604, 15313), (605, 15319), (607, 15337), (616, 15430), (618, 15442), (627, 15490), (629, 15508), (630, 15514), (633,

15535), (640, 15574), (651, 15715), (659, 15778), (668, 15853), (671, 15946),

Gene: PsychoKiller_16 Start: 9629, Stop: 14767, Start Num: 21

Candidate Starts for PsychoKiller_16:

(Start: 17 @9605 has 5 MA's), (Start: 21 @9629 has 33 MA's), (24, 9656), (35, 9785), (38, 9860), (60, 10013), (61, 10016), (74, 10112), (77, 10121), (82, 10151), (84, 10157), (86, 10172), (87, 10175), (91, 10196), (97, 10268), (100, 10289), (109, 10355), (111, 10376), (127, 10493), (152, 10655), (156, 10694), (165, 10769), (179, 10928), (183, 10940), (186, 10967), (191, 11012), (192, 11024), (204, 11114), (206, 11132), (208, 11153), (211, 11183), (217, 11207), (219, 11219), (222, 11258), (226, 11291), (238, 11393), (239, 11396), (243, 11420), (253, 11513), (255, 11528), (259, 11567), (278, 11702), (279, 11705), (287, 11738), (297, 11846), (298, 11849), (301, 11900), (315, 11975), (324, 12077), (332, 12122), (337, 12143), (338, 12146), (339, 12149), (351, 12224), (359, 12257), (362, 12278), (366, 12308), (373, 12356), (374, 12362), (378, 12389), (398, 12524), (411, 12641), (414, 12674), (415, 12695), (427, 12764), (428, 12770), (429, 12785), (443, 12905), (445, 12914), (455, 12998), (496, 13319), (519, 13538), (525, 13574), (550, 13787), (575, 13979), (581, 14027), (583, 14048), (596, 14156), (605, 14222), (607, 14240), (618, 14345), (624, 14375), (625, 14384), (629, 14414), (640, 14480), (643, 14528), (650, 14588), (659, 14675), (667, 14738),

Gene: Quasar_16 Start: 10238, Stop: 15376, Start Num: 21

Candidate Starts for Quasar_16:

(Start: 17 @10214 has 5 MA's), (Start: 21 @10238 has 33 MA's), (24, 10265), (35, 10394), (38, 10469), (60, 10622), (61, 10625), (74, 10721), (77, 10730), (82, 10760), (84, 10766), (86, 10781), (87, 10784), (91, 10805), (97, 10877), (100, 10898), (109, 10964), (111, 10985), (127, 11102), (152, 11264), (156, 11303), (165, 11378), (179, 11537), (183, 11549), (186, 11576), (191, 11621), (192, 11633), (204, 11723), (206, 11741), (208, 11762), (211, 11792), (217, 11816), (219, 11828), (222, 11867), (226, 11900), (238, 12002), (239, 12005), (243, 12029), (244, 12035), (253, 12122), (255, 12137), (259, 12176), (279, 12314), (286, 12344), (287, 12347), (297, 12455), (298, 12458), (301, 12509), (315, 12584), (324, 12686), (332, 12731), (337, 12752), (338, 12755), (339, 12758), (351, 12833), (359, 12866), (362, 12887), (366, 12917), (373, 12965), (374, 12971), (378, 12998), (398, 13133), (411, 13250), (414, 13283), (415, 13304), (416, 13307), (427, 13373), (428, 13379), (429, 13394), (443, 13514), (445, 13523), (455, 13607), (496, 13928), (519, 14147), (525, 14183), (550, 14396), (575, 14588), (581, 14636), (583, 14657), (596, 14765), (605, 14831), (607, 14849), (618, 14954), (624, 14984), (625, 14993), (629, 15023), (640, 15089), (643, 15137), (650, 15197), (659, 15284), (667, 15347),

Gene: RADical_17 Start: 9630, Stop: 14768, Start Num: 21

Candidate Starts for RADical_17:

(Start: 17 @9606 has 5 MA's), (Start: 21 @9630 has 33 MA's), (24, 9657), (35, 9786), (38, 9861), (60, 10014), (61, 10017), (74, 10113), (77, 10122), (82, 10152), (84, 10158), (86, 10173), (87, 10176), (90, 10191), (91, 10197), (97, 10269), (100, 10290), (109, 10356), (111, 10377), (127, 10494), (152, 10656), (156, 10695), (165, 10770), (179, 10929), (183, 10941), (186, 10968), (191, 11013), (192, 11025), (204, 11115), (206, 11133), (208, 11154), (211, 11184), (217, 11208), (219, 11220), (222, 11259), (226, 11292), (238, 11394), (239, 11397), (243, 11421), (253, 11514), (255, 11529), (259, 11568), (270, 11664), (272, 11676), (279, 11706), (287, 11739), (297, 11847), (298, 11850), (301, 11901), (315, 11976), (324, 12078), (332, 12123), (337, 12144), (338, 12147), (339, 12150), (351, 12225), (359, 12258), (362, 12279), (373, 12357), (374, 12363), (378, 12390), (398, 12525), (411, 12642), (414, 12675), (415, 12696), (427, 12765), (428, 12771), (429, 12786), (443, 12906), (445, 12915), (455, 12999), (496, 13320), (519, 13539), (525, 13575), (550, 13788), (575, 13980), (581, 14028), (583, 14049), (596, 14157), (605, 14223), (607, 14241), (613, 14301), (618, 14346), (624, 14376), (625, 14385), (629, 14415), (640, 14481), (643, 14529), (650, 14589), (659, 14676), (667, 14739),

Gene: RSchmailzl_17 Start: 9773, Stop: 14911, Start Num: 21

Candidate Starts for RSchmailzl_17:

(Start: 17 @9749 has 5 MA's), (Start: 21 @9773 has 33 MA's), (24, 9800), (35, 9929), (38, 10004), (60, 10157), (61, 10160), (74, 10256), (77, 10265), (82, 10295), (84, 10301), (86, 10316), (87, 10319), (91, 10340), (97, 10412), (100, 10433), (109, 10499), (111, 10520), (127, 10637), (152, 10799), (156, 10838), (165, 10913), (179, 11072), (183, 11084), (186, 11111), (191, 11156), (192, 11168), (204, 11258), (206, 11276), (208, 11297), (211, 11327), (217, 11351), (219, 11363), (222, 11402), (226, 11435), (228, 11447), (238, 11537), (239, 11540), (243, 11564), (244, 11570), (253, 11657), (255, 11672), (259, 11711), (265, 11765), (270, 11807), (272, 11819), (277, 11840), (287, 11882), (297, 11990), (302, 12050), (315, 12119), (322, 12209), (324, 12221), (332, 12266), (337, 12287), (338, 12290), (339, 12293), (351, 12368), (356, 12386), (359, 12401), (366, 12452), (373, 12500), (374, 12506), (378, 12533), (398, 12668), (411, 12785), (414, 12818), (415, 12839), (416, 12842), (427, 12908), (428, 12914), (429, 12929), (443, 13049), (445, 13058), (455, 13142), (496, 13463), (519, 13682), (525, 13718), (550, 13931), (575, 14123), (581, 14171), (583, 14192), (596, 14300), (605, 14366), (607, 14384), (618, 14489), (624, 14519), (625, 14528), (629, 14558), (640, 14624), (643, 14672), (650, 14732), (659, 14819), (667, 14882),

Gene: RanchParmCat_19 Start: 10311, Stop: 14516, Start Num: 64

Candidate Starts for RanchParmCat_19:

(Start: 64 @10311 has 23 MA's), (Start: 68 @10338 has 2 MA's), (104, 10626), (109, 10647), (110, 10653), (114, 10686), (116, 10704), (120, 10728), (130, 10818), (133, 10827), (135, 10836), (141, 10869), (145, 10896), (147, 10905), (148, 10929), (170, 11082), (172, 11145), (174, 11160), (181, 11196), (185, 11226), (188, 11247), (194, 11289), (205, 11370), (215, 11445), (216, 11454), (220, 11475), (237, 11622), (255, 11763), (257, 11784), (260, 11814), (261, 11817), (262, 11835), (265, 11856), (267, 11877), (270, 11898), (282, 11949), (283, 11952), (284, 11955), (287, 11973), (305, 12054), (312, 12084), (317, 12135), (343, 12189), (351, 12216), (359, 12249), (367, 12309), (377, 12378), (378, 12381), (391, 12483), (392, 12489), (401, 12537), (402, 12540), (411, 12633), (414, 12666), (415, 12687), (417, 12696), (419, 12705), (420, 12711), (439, 12864), (451, 12933), (452, 12939), (456, 12975), (481, 13104), (496, 13245), (499, 13269), (503, 13314), (520, 13467), (521, 13470), (544, 13659), (547, 13689), (592, 13866), (599, 13938), (602, 13962), (604, 13974), (607, 13998), (609, 14010), (617, 14094), (618, 14100), (626, 14142), (629, 14163), (635, 14196), (640, 14229), (642, 14250), (643, 14277), (649, 14301), (650, 14337), (655, 14385), (667, 14487),

Gene: RedBaron_17 Start: 9673, Stop: 14811, Start Num: 21

Candidate Starts for RedBaron_17:

(Start: 17 @9649 has 5 MA's), (Start: 21 @9673 has 33 MA's), (24, 9700), (35, 9829), (38, 9904), (60, 10057), (61, 10060), (74, 10156), (77, 10165), (82, 10195), (84, 10201), (86, 10216), (87, 10219), (91, 10240), (97, 10312), (100, 10333), (109, 10399), (111, 10420), (127, 10537), (152, 10699), (156, 10738), (165, 10813), (186, 11011), (201, 11119), (208, 11197), (210, 11215), (213, 11233), (222, 11302), (223, 11305), (224, 11314), (228, 11347), (242, 11458), (243, 11464), (253, 11557), (255, 11572), (270, 11707), (277, 11740), (287, 11782), (297, 11890), (301, 11944), (314, 12016), (315, 12019), (324, 12121), (332, 12166), (334, 12175), (337, 12187), (338, 12190), (339, 12193), (351, 12268), (352, 12271), (353, 12274), (356, 12286), (357, 12295), (359, 12301), (364, 12343), (366, 12352), (373, 12400), (378, 12433), (398, 12568), (411, 12685), (414, 12718), (415, 12739), (427, 12808), (428, 12814), (443, 12949), (445, 12958), (455, 13042), (496, 13363), (519, 13582), (525, 13618), (575, 14023), (581, 14071), (583, 14092), (596, 14200), (605, 14266), (607, 14284), (618, 14389), (624, 14419), (625, 14428), (629, 14458), (640, 14524), (643, 14572), (650, 14632), (659, 14719), (667, 14782),

Gene: Samba_17 Start: 10382, Stop: 15874, Start Num: 4

Candidate Starts for Samba_17:

(Start: 4 @10382 has 37 MA's), (Start: 6 @10397 has 1 MA's), (Start: 7 @10403 has 1 MA's), (Start: 9 @10433 has 1 MA's), (10, 10442), (11, 10445), (13, 10487), (30, 10598), (31, 10619), (36, 10739), (41, 10781), (51, 10847), (53, 10865), (55, 10880), (56, 10886), (57, 10889), (59, 10907), (65, 10931), (75,

11015), (84, 11057), (86, 11072), (88, 11081), (108, 11249), (111, 11276), (127, 11393), (153, 11564), (156, 11594), (176, 11798), (183, 11843), (186, 11870), (187, 11882), (200, 11972), (204, 12017), (207, 12044), (210, 12074), (222, 12161), (227, 12203), (233, 12266), (234, 12275), (243, 12323), (247, 12365), (252, 12410), (253, 12416), (254, 12428), (255, 12431), (261, 12485), (265, 12524), (267, 12545), (268, 12548), (270, 12566), (271, 12575), (281, 12614), (283, 12620), (286, 12638), (287, 12641), (291, 12668), (327, 12941), (335, 12968), (340, 12980), (344, 12992), (345, 12995), (358, 13025), (359, 13028), (366, 13079), (377, 13160), (378, 13163), (384, 13196), (387, 13226), (389, 13250), (400, 13316), (430, 13583), (436, 13631), (438, 13676), (440, 13679), (441, 13694), (448, 13739), (450, 13748), (452, 13757), (458, 13808), (467, 13880), (471, 13898), (475, 13919), (485, 14018), (486, 14021), (490, 14054), (493, 14120), (495, 14138), (497, 14153), (500, 14186), (505, 14237), (510, 14288), (532, 14531), (533, 14534), (545, 14606), (546, 14609), (553, 14675), (554, 14678), (555, 14696), (559, 14756), (571, 14912), (572, 14915), (573, 14930), (588, 15101), (594, 15155), (599, 15212), (601, 15227), (606, 15275), (611, 15320), (631, 15440), (632, 15449), (639, 15488), (646, 15560), (651, 15629), (659, 15692), (662, 15710), (671, 15860),

Gene: ShawBrad_18 Start: 9931, Stop: 15516, Start Num: 23

Candidate Starts for ShawBrad_18:

(Start: 16 @9886 has 11 MA's), (Start: 23 @9931 has 1 MA's), (25, 9952), (29, 9973), (32, 10018), (Start: 33 @10033 has 1 MA's), (37, 10117), (43, 10159), (44, 10171), (53, 10234), (55, 10249), (57, 10258), (59, 10276), (60, 10282), (70, 10330), (91, 10465), (107, 10615), (111, 10645), (153, 10939), (156, 10969), (176, 11173), (182, 11215), (183, 11218), (184, 11224), (186, 11245), (196, 11326), (204, 11392), (207, 11419), (208, 11431), (210, 11449), (211, 11461), (217, 11485), (219, 11497), (222, 11536), (223, 11539), (224, 11548), (227, 11578), (231, 11623), (240, 11683), (243, 11698), (246, 11728), (247, 11740), (252, 11785), (253, 11791), (254, 11803), (255, 11806), (257, 11827), (260, 11857), (261, 11860), (268, 11923), (271, 11950), (272, 11953), (273, 11956), (274, 11962), (280, 11986), (281, 11989), (283, 11995), (285, 12001), (287, 12016), (290, 12034), (295, 12115), (299, 12163), (300, 12169), (304, 12196), (317, 12289), (319, 12322), (324, 12352), (336, 12415), (342, 12433), (346, 12460), (373, 12631), (383, 12694), (387, 12727), (391, 12802), (396, 12826), (397, 12838), (400, 12871), (404, 12934), (408, 12970), (412, 13000), (421, 13078), (422, 13081), (423, 13090), (436, 13201), (438, 13246), (440, 13249), (441, 13264), (448, 13309), (450, 13318), (452, 13327), (453, 13330), (465, 13435), (473, 13483), (475, 13489), (485, 13588), (486, 13591), (488, 13603), (497, 13720), (500, 13753), (505, 13804), (509, 13834), (513, 13894), (523, 13975), (526, 13996), (528, 14029), (534, 14092), (538, 14110), (554, 14224), (556, 14254), (558, 14263), (560, 14302), (561, 14305), (563, 14335), (564, 14356), (580, 14554), (585, 14617), (586, 14623), (593, 14674), (608, 14866), (616, 14953), (621, 14980), (622, 14983), (634, 15058), (638, 15082), (641, 15121), (644, 15157), (648, 15178), (654, 15265), (658, 15307), (663, 15340), (664, 15352), (672, 15496),

Gene: SheckWes_15 Start: 9372, Stop: 14465, Start Num: 21

Candidate Starts for SheckWes_15:

(Start: 21 @9372 has 33 MA's), (35, 9528), (43, 9633), (47, 9657), (53, 9708), (55, 9723), (60, 9756), (70, 9804), (71, 9813), (74, 9855), (76, 9861), (77, 9864), (84, 9900), (88, 9924), (92, 9951), (101, 10038), (104, 10077), (106, 10083), (109, 10098), (111, 10119), (119, 10173), (136, 10290), (147, 10353), (152, 10398), (156, 10437), (161, 10479), (176, 10641), (178, 10650), (179, 10674), (183, 10686), (186, 10713), (187, 10725), (192, 10770), (197, 10800), (199, 10812), (209, 10914), (210, 10917), (222, 11004), (225, 11031), (231, 11091), (235, 11121), (239, 11142), (243, 11166), (249, 11217), (253, 11259), (255, 11274), (256, 11283), (257, 11295), (261, 11328), (266, 11370), (274, 11430), (275, 11433), (276, 11436), (277, 11442), (282, 11460), (287, 11484), (294, 11568), (296, 11589), (303, 11637), (314, 11697), (315, 11700), (317, 11736), (324, 11802), (326, 11817), (332, 11847), (337, 11868), (338, 11871), (339, 11874), (352, 11952), (357, 11976), (359, 11982), (376, 12108), (382, 12138), (387, 12177), (393, 12225), (397, 12246), (398, 12249), (399, 12255), (405, 12321), (411, 12366), (414, 12399), (415, 12420), (424, 12474), (443, 12624), (445, 12633), (455, 12720), (481, 12897), (496, 13038), (500, 13068), (514, 13206), (525, 13287), (544, 13440), (547,

13470), (574, 13686), (575, 13695), (576, 13701), (581, 13737), (596, 13854), (598, 13860), (602, 13902), (605, 13920), (618, 14043), (623, 14067), (625, 14082), (629, 14112), (633, 14139), (635, 14145), (640, 14178), (647, 14247), (649, 14250), (650, 14286), (656, 14358), (657, 14361), (660, 14376),

Gene: SketchMex_15 Start: 9616, Stop: 14415, Start Num: 64

Candidate Starts for SketchMex_15:

(Start: 64 @9616 has 23 MA's), (Start: 68 @9643 has 2 MA's), (87, 9772), (99, 9874), (103, 9919), (105, 9931), (109, 9949), (112, 9976), (113, 9979), (115, 9994), (123, 10045), (124, 10048), (129, 10105), (131, 10108), (140, 10150), (143, 10168), (149, 10213), (155, 10249), (159, 10282), (163, 10315), (164, 10327), (171, 10381), (173, 10420), (175, 10435), (177, 10444), (181, 10471), (188, 10522), (194, 10564), (197, 10582), (199, 10591), (205, 10645), (214, 10708), (217, 10723), (224, 10786), (237, 10876), (242, 10903), (252, 10996), (253, 11002), (255, 11017), (259, 11056), (268, 11134), (273, 11167), (283, 11206), (286, 11224), (287, 11227), (291, 11254), (294, 11311), (296, 11332), (302, 11395), (307, 11431), (310, 11443), (315, 11464), (317, 11500), (321, 11542), (322, 11554), (324, 11566), (332, 11611), (333, 11614), (337, 11632), (338, 11635), (339, 11638), (351, 11713), (353, 11719), (359, 11746), (367, 11806), (370, 11821), (376, 11872), (377, 11875), (378, 11878), (380, 11896), (394, 11995), (397, 12010), (398, 12013), (414, 12163), (415, 12184), (423, 12226), (427, 12253), (428, 12259), (442, 12391), (445, 12403), (455, 12490), (460, 12532), (465, 12568), (478, 12643), (485, 12694), (489, 12733), (494, 12811), (501, 12862), (508, 12919), (522, 13057), (529, 13132), (547, 13276), (550, 13297), (568, 13474), (569, 13480), (596, 13804), (598, 13810), (605, 13870), (607, 13888), (610, 13921), (618, 13993), (625, 14032), (629, 14062), (640, 14128), (643, 14176), (650, 14236), (660, 14326), (667, 14386),

Gene: Socotra_17 Start: 9629, Stop: 14767, Start Num: 21

Candidate Starts for Socotra_17:

(Start: 17 @9605 has 5 MA's), (Start: 21 @9629 has 33 MA's), (24, 9656), (35, 9785), (38, 9860), (60, 10013), (61, 10016), (74, 10112), (77, 10121), (82, 10151), (84, 10157), (86, 10172), (87, 10175), (91, 10196), (97, 10268), (100, 10289), (109, 10355), (111, 10376), (127, 10493), (152, 10655), (156, 10694), (165, 10769), (179, 10928), (183, 10940), (186, 10967), (191, 11012), (192, 11024), (204, 11114), (206, 11132), (208, 11153), (211, 11183), (217, 11207), (219, 11219), (222, 11258), (226, 11291), (238, 11393), (239, 11396), (243, 11420), (253, 11513), (255, 11528), (259, 11567), (265, 11621), (270, 11663), (272, 11675), (279, 11705), (286, 11735), (287, 11738), (297, 11846), (298, 11849), (301, 11900), (315, 11975), (322, 12065), (324, 12077), (332, 12122), (337, 12143), (338, 12146), (339, 12149), (351, 12224), (359, 12257), (362, 12278), (366, 12308), (373, 12356), (374, 12362), (378, 12389), (398, 12524), (411, 12641), (414, 12674), (415, 12695), (416, 12698), (427, 12764), (428, 12770), (429, 12785), (443, 12905), (445, 12914), (455, 12998), (496, 13319), (519, 13538), (525, 13574), (550, 13787), (575, 13979), (581, 14027), (583, 14048), (596, 14156), (605, 14222), (607, 14240), (613, 14300), (618, 14345), (624, 14375), (625, 14384), (629, 14414), (640, 14480), (643, 14528), (650, 14588), (659, 14675), (667, 14738),

Gene: Sopespian_16 Start: 9630, Stop: 14768, Start Num: 21

Candidate Starts for Sopespian_16:

(Start: 17 @9606 has 5 MA's), (Start: 21 @9630 has 33 MA's), (24, 9657), (35, 9786), (38, 9861), (60, 10014), (61, 10017), (74, 10113), (77, 10122), (82, 10152), (84, 10158), (86, 10173), (87, 10176), (91, 10197), (97, 10269), (100, 10290), (109, 10356), (111, 10377), (127, 10494), (152, 10656), (156, 10695), (165, 10770), (179, 10929), (183, 10941), (186, 10968), (191, 11013), (192, 11025), (204, 11115), (206, 11133), (208, 11154), (211, 11184), (217, 11208), (219, 11220), (222, 11259), (226, 11292), (238, 11394), (239, 11397), (243, 11421), (253, 11514), (255, 11529), (259, 11568), (278, 11703), (279, 11706), (287, 11739), (297, 11847), (298, 11850), (301, 11901), (315, 11976), (322, 12066), (324, 12078), (332, 12123), (337, 12144), (338, 12147), (339, 12150), (351, 12225), (359, 12258), (362, 12279), (366, 12309), (373, 12357), (374, 12363), (378, 12390), (398, 12525), (411, 12642), (414, 12675), (415, 12696), (427, 12765), (428, 12771), (429, 12786), (443, 12906), (445,

12915), (455, 12999), (496, 13320), (519, 13539), (525, 13575), (550, 13788), (575, 13980), (581, 14028), (583, 14049), (596, 14157), (605, 14223), (607, 14241), (618, 14346), (624, 14376), (625, 14385), (629, 14415), (640, 14481), (643, 14529), (650, 14589), (659, 14676), (667, 14739),

Gene: Spooky_18 Start: 9874, Stop: 15489, Start Num: 17

Candidate Starts for Spooky_18:

(Start: 17 @9874 has 5 MA's), (Start: 23 @9919 has 1 MA's), (25, 9940), (29, 9961), (32, 10006), (57, 10246), (72, 10339), (73, 10351), (76, 10375), (77, 10378), (88, 10438), (90, 10447), (91, 10453), (97, 10525), (107, 10603), (109, 10612), (111, 10633), (169, 11053), (176, 11161), (179, 11194), (183, 11206), (186, 11233), (204, 11380), (207, 11407), (210, 11437), (217, 11473), (222, 11524), (223, 11527), (224, 11536), (229, 11572), (234, 11638), (243, 11686), (251, 11770), (252, 11773), (253, 11779), (254, 11791), (255, 11794), (260, 11845), (261, 11848), (265, 11887), (283, 11983), (287, 12004), (307, 12208), (314, 12238), (321, 12319), (324, 12343), (325, 12355), (333, 12391), (346, 12451), (351, 12490), (353, 12496), (354, 12499), (358, 12520), (359, 12523), (373, 12622), (379, 12661), (383, 12685), (387, 12718), (390, 12763), (396, 12817), (397, 12829), (403, 12904), (404, 12925), (408, 12961), (412, 12991), (422, 13072), (423, 13081), (426, 13105), (435, 13186), (436, 13192), (438, 13237), (440, 13240), (441, 13255), (448, 13300), (450, 13309), (452, 13318), (465, 13426), (471, 13459), (473, 13474), (475, 13480), (485, 13579), (486, 13582), (487, 13585), (488, 13594), (497, 13711), (500, 13744), (504, 13792), (505, 13795), (509, 13825), (513, 13885), (523, 13966), (526, 13987), (527, 13990), (534, 14083), (536, 14092), (551, 14194), (554, 14215), (556, 14245), (558, 14254), (560, 14293), (561, 14296), (562, 14299), (563, 14326), (568, 14380), (576, 14497), (582, 14581), (584, 14593), (585, 14605), (586, 14611), (589, 14638), (593, 14662), (608, 14839), (616, 14926), (620, 14944), (621, 14953), (634, 15031), (637, 15049), (645, 15139), (648, 15151), (654, 15238), (658, 15280), (663, 15313), (664, 15325), (672, 15469),

Gene: Squiddly_20 Start: 11289, Stop: 16901, Start Num: 17

Candidate Starts for Squiddly_20:

(Start: 17 @11289 has 5 MA's), (20, 11307), (22, 11316), (Start: 23 @11334 has 1 MA's), (25, 11355), (27, 11367), (32, 11421), (Start: 33 @11436 has 1 MA's), (48, 11604), (49, 11613), (53, 11637), (57, 11661), (59, 11679), (67, 11724), (76, 11790), (77, 11793), (88, 11853), (107, 12018), (111, 12048), (131, 12204), (153, 12342), (154, 12357), (169, 12468), (176, 12576), (182, 12618), (183, 12621), (184, 12627), (186, 12648), (187, 12660), (204, 12795), (207, 12822), (210, 12852), (213, 12870), (222, 12939), (224, 12951), (234, 13053), (243, 13101), (247, 13143), (252, 13188), (253, 13194), (254, 13206), (255, 13209), (257, 13230), (260, 13260), (261, 13263), (264, 13299), (265, 13302), (277, 13377), (283, 13398), (287, 13419), (294, 13503), (303, 13593), (321, 13734), (325, 13770), (332, 13803), (333, 13806), (337, 13824), (346, 13866), (351, 13905), (353, 13911), (354, 13914), (358, 13935), (359, 13938), (373, 14037), (379, 14076), (387, 14133), (391, 14208), (397, 14244), (404, 14340), (408, 14376), (412, 14406), (421, 14484), (422, 14487), (423, 14496), (426, 14520), (429, 14544), (432, 14577), (435, 14601), (436, 14607), (437, 14640), (438, 14652), (440, 14655), (441, 14670), (446, 14688), (448, 14715), (450, 14724), (452, 14733), (453, 14736), (465, 14841), (473, 14889), (475, 14895), (486, 14997), (488, 15009), (497, 15126), (500, 15159), (505, 15210), (507, 15222), (509, 15240), (513, 15300), (523, 15381), (526, 15402), (534, 15498), (538, 15516), (541, 15540), (551, 15609), (554, 15630), (556, 15660), (558, 15669), (560, 15708), (561, 15711), (562, 15714), (563, 15741), (568, 15795), (576, 15912), (582, 15996), (584, 16008), (585, 16020), (586, 16026), (589, 16053), (593, 16077), (608, 16254), (616, 16341), (620, 16359), (621, 16368), (634, 16446), (636, 16461), (638, 16470), (644, 16545), (645, 16554), (648, 16566), (654, 16653), (658, 16695), (663, 16728), (664, 16740), (669, 16815), (672, 16881),

Gene: Starburst_17 Start: 9629, Stop: 14767, Start Num: 21

Candidate Starts for Starburst_17:

(Start: 17 @9605 has 5 MA's), (Start: 21 @9629 has 33 MA's), (24, 9656), (35, 9785), (38, 9860), (60, 10013), (61, 10016), (74, 10112), (77, 10121), (82, 10151), (84, 10157), (86, 10172), (87, 10175), (91, 10196), (97, 10268), (100, 10289), (109, 10355), (111, 10376), (127, 10493), (152, 10655), (156,

10694), (165, 10769), (179, 10928), (183, 10940), (186, 10967), (191, 11012), (192, 11024), (204, 11114), (206, 11132), (208, 11153), (211, 11183), (217, 11207), (219, 11219), (222, 11258), (226, 11291), (238, 11393), (239, 11396), (243, 11420), (244, 11426), (253, 11513), (255, 11528), (259, 11567), (279, 11705), (286, 11735), (287, 11738), (297, 11846), (298, 11849), (301, 11900), (315, 11975), (324, 12077), (332, 12122), (337, 12143), (338, 12146), (339, 12149), (351, 12224), (359, 12257), (362, 12278), (366, 12308), (373, 12356), (374, 12362), (378, 12389), (398, 12524), (411, 12641), (414, 12674), (415, 12695), (427, 12764), (428, 12770), (429, 12785), (443, 12905), (445, 12914), (455, 12998), (496, 13319), (519, 13538), (525, 13574), (550, 13787), (575, 13979), (581, 14027), (583, 14048), (596, 14156), (605, 14222), (607, 14240), (613, 14300), (618, 14345), (624, 14375), (625, 14384), (629, 14414), (640, 14480), (643, 14528), (650, 14588), (659, 14675), (667, 14738),

Gene: SteamedHams_18 Start: 9646, Stop: 14433, Start Num: 64

Candidate Starts for SteamedHams_18:

(Start: 64 @9646 has 23 MA's), (Start: 68 @9673 has 2 MA's), (79, 9751), (87, 9802), (96, 9889), (99, 9904), (105, 9961), (109, 9979), (112, 10006), (113, 10009), (124, 10078), (129, 10135), (140, 10180), (143, 10198), (149, 10243), (155, 10279), (159, 10312), (166, 10360), (167, 10363), (171, 10411), (173, 10450), (175, 10465), (196, 10606), (203, 10657), (205, 10675), (211, 10729), (237, 10906), (242, 10933), (252, 11026), (253, 11032), (255, 11047), (259, 11086), (260, 11098), (268, 11164), (283, 11236), (286, 11254), (287, 11257), (291, 11284), (317, 11530), (324, 11596), (332, 11641), (337, 11662), (338, 11665), (339, 11668), (347, 11704), (351, 11743), (353, 11749), (359, 11776), (377, 11905), (378, 11908), (380, 11926), (399, 12049), (401, 12064), (414, 12193), (415, 12214), (423, 12256), (427, 12283), (428, 12289), (442, 12421), (445, 12433), (455, 12520), (460, 12562), (465, 12598), (485, 12724), (489, 12763), (501, 12892), (508, 12949), (512, 12991), (522, 13084), (529, 13159), (537, 13222), (547, 13303), (550, 13324), (568, 13501), (569, 13507), (587, 13726), (595, 13804), (596, 13822), (598, 13828), (605, 13888), (607, 13906), (610, 13939), (618, 14011), (625, 14050), (629, 14080), (640, 14146), (643, 14194), (650, 14254), (660, 14344), (667, 14404),

Gene: SummitAcademy_15 Start: 9452, Stop: 14545, Start Num: 21

Candidate Starts for SummitAcademy_15:

(Start: 21 @9452 has 33 MA's), (35, 9608), (47, 9737), (50, 9767), (60, 9836), (63, 9848), (70, 9884), (74, 9935), (77, 9944), (84, 9980), (88, 10004), (94, 10064), (101, 10118), (104, 10157), (106, 10163), (109, 10178), (111, 10199), (136, 10370), (147, 10433), (152, 10478), (161, 10559), (176, 10718), (179, 10751), (183, 10763), (186, 10790), (192, 10847), (197, 10877), (199, 10889), (209, 10991), (210, 10994), (222, 11081), (229, 11129), (243, 11243), (253, 11336), (255, 11351), (257, 11372), (261, 11405), (263, 11435), (266, 11447), (270, 11486), (275, 11510), (276, 11513), (282, 11537), (287, 11561), (296, 11666), (307, 11744), (314, 11774), (315, 11777), (317, 11813), (321, 11855), (324, 11879), (326, 11894), (328, 11909), (332, 11924), (338, 11948), (347, 11987), (348, 12002), (349, 12008), (352, 12029), (357, 12053), (359, 12059), (376, 12185), (382, 12215), (388, 12266), (393, 12302), (397, 12323), (398, 12326), (405, 12398), (411, 12443), (414, 12476), (415, 12497), (424, 12551), (434, 12626), (445, 12710), (455, 12797), (496, 13115), (500, 13145), (514, 13283), (520, 13334), (525, 13364), (544, 13529), (547, 13559), (570, 13739), (576, 13790), (581, 13817), (583, 13838), (596, 13934), (602, 13982), (605, 14000), (618, 14123), (623, 14147), (625, 14162), (629, 14192), (633, 14219), (635, 14225), (640, 14258), (647, 14327), (649, 14330), (650, 14366), (660, 14456),

Gene: Survivors_18 Start: 10474, Stop: 15597, Start Num: 21

Candidate Starts for Survivors_18:

(18, 10453), (Start: 21 @10474 has 33 MA's), (24, 10501), (35, 10630), (41, 10726), (48, 10777), (58, 10834), (62, 10867), (63, 10870), (74, 10957), (78, 10969), (86, 11017), (87, 11020), (88, 11026), (93, 11080), (94, 11086), (100, 11134), (109, 11200), (111, 11221), (165, 11614), (166, 11617), (173, 11719), (183, 11785), (184, 11791), (186, 11812), (210, 12016), (213, 12034), (215, 12040), (217, 12052), (219, 12064), (222, 12103), (224, 12115), (229, 12151), (233, 12208), (237, 12232), (238,

12238), (253, 12358), (255, 12373), (259, 12412), (267, 12487), (272, 12520), (276, 12535), (277, 12541), (278, 12547), (287, 12583), (297, 12691), (304, 12763), (314, 12817), (332, 12967), (338, 12991), (349, 13051), (350, 13063), (351, 13069), (357, 13096), (358, 13099), (359, 13102), (372, 13195), (373, 13201), (380, 13252), (389, 13321), (395, 13354), (398, 13369), (399, 13375), (404, 13432), (406, 13444), (410, 13483), (411, 13486), (413, 13507), (414, 13519), (415, 13540), (416, 13543), (423, 13582), (424, 13594), (427, 13609), (443, 13750), (455, 13846), (463, 13912), (466, 13933), (469, 13939), (496, 14176), (500, 14206), (503, 14245), (518, 14380), (522, 14410), (525, 14431), (541, 14569), (547, 14617), (579, 14848), (581, 14854), (596, 14983), (605, 15049), (610, 15100), (618, 15172), (625, 15211), (629, 15241), (635, 15274), (640, 15307), (649, 15379), (653, 15451), (659, 15505), (661, 15511), (667, 15568),

Gene: SweatNTears_18 Start: 10127, Stop: 14926, Start Num: 64

Candidate Starts for SweatNTears_18:

(Start: 64 @10127 has 23 MA's), (Start: 68 @10154 has 2 MA's), (70, 10160), (87, 10283), (99, 10385), (103, 10430), (105, 10442), (109, 10460), (112, 10487), (113, 10490), (115, 10505), (123, 10556), (124, 10559), (129, 10616), (131, 10619), (140, 10661), (143, 10679), (149, 10724), (155, 10760), (159, 10793), (163, 10826), (164, 10838), (171, 10892), (173, 10931), (175, 10946), (177, 10955), (181, 10982), (188, 11033), (197, 11093), (199, 11102), (205, 11156), (214, 11219), (217, 11234), (224, 11297), (237, 11387), (242, 11414), (250, 11495), (252, 11507), (253, 11513), (255, 11528), (258, 11558), (259, 11567), (268, 11645), (273, 11678), (283, 11717), (286, 11735), (287, 11738), (291, 11765), (294, 11822), (296, 11843), (310, 11954), (315, 11975), (317, 12011), (321, 12053), (322, 12065), (324, 12077), (332, 12122), (333, 12125), (337, 12143), (338, 12146), (339, 12149), (351, 12224), (359, 12257), (367, 12317), (376, 12383), (377, 12386), (378, 12389), (380, 12407), (394, 12506), (397, 12521), (398, 12524), (414, 12674), (415, 12695), (423, 12737), (427, 12764), (428, 12770), (442, 12902), (445, 12914), (455, 13001), (460, 13043), (465, 13079), (478, 13154), (485, 13205), (489, 13244), (492, 13268), (501, 13373), (508, 13430), (522, 13568), (529, 13643), (547, 13787), (550, 13808), (568, 13985), (569, 13991), (596, 14315), (598, 14321), (605, 14381), (607, 14399), (610, 14432), (618, 14504), (625, 14543), (629, 14573), (640, 14639), (643, 14687), (650, 14747), (660, 14837), (667, 14897),

Gene: Toast_17 Start: 10235, Stop: 15886, Start Num: 3

Candidate Starts for Toast_17:

(Start: 3 @10235 has 1 MA's), (Start: 4 @10271 has 37 MA's), (Start: 7 @10292 has 1 MA's), (10, 10331), (13, 10376), (26, 10466), (28, 10475), (30, 10487), (31, 10508), (34, 10565), (37, 10637), (39, 10658), (46, 10700), (47, 10703), (49, 10730), (52, 10751), (53, 10754), (56, 10775), (59, 10796), (69, 10847), (70, 10850), (77, 10910), (102, 11093), (111, 11165), (139, 11351), (153, 11453), (154, 11468), (156, 11483), (162, 11540), (183, 11732), (198, 11852), (207, 11933), (210, 11963), (217, 11999), (222, 12050), (238, 12185), (239, 12188), (243, 12212), (249, 12263), (252, 12299), (253, 12305), (255, 12320), (261, 12374), (265, 12413), (268, 12437), (270, 12455), (281, 12503), (283, 12509), (286, 12527), (287, 12530), (289, 12545), (291, 12557), (293, 12605), (314, 12743), (321, 12824), (324, 12848), (325, 12860), (326, 12863), (333, 12896), (352, 12998), (357, 13025), (358, 13028), (359, 13031), (360, 13037), (366, 13082), (368, 13094), (370, 13106), (373, 13130), (375, 13145), (377, 13160), (378, 13163), (382, 13187), (385, 13214), (397, 13295), (407, 13379), (418, 13484), (423, 13517), (430, 13583), (431, 13592), (436, 13631), (437, 13664), (438, 13676), (440, 13679), (441, 13694), (444, 13703), (448, 13739), (450, 13748), (452, 13757), (473, 13913), (474, 13916), (475, 13919), (477, 13940), (486, 14021), (491, 14063), (497, 14150), (500, 14183), (502, 14192), (505, 14234), (517, 14348), (531, 14513), (545, 14597), (546, 14600), (548, 14630), (549, 14633), (553, 14666), (554, 14669), (559, 14747), (564, 14804), (573, 14921), (577, 14972), (591, 15074), (594, 15107), (597, 15173), (604, 15239), (605, 15245), (607, 15263), (610, 15296), (618, 15368), (626, 15410), (627, 15416), (629, 15434), (630, 15440), (633, 15461), (640, 15500), (651, 15641), (659, 15704), (668, 15779), (671, 15872),

Gene: Tolls_18 Start: 9649, Stop: 14436, Start Num: 64

Candidate Starts for Tolls_18:

(Start: 64 @9649 has 23 MA's), (Start: 68 @9676 has 2 MA's), (79, 9754), (87, 9805), (96, 9892), (99, 9907), (105, 9964), (109, 9982), (112, 10009), (113, 10012), (124, 10081), (129, 10138), (140, 10183), (143, 10201), (149, 10246), (151, 10261), (155, 10282), (159, 10315), (166, 10363), (167, 10366), (171, 10414), (173, 10453), (175, 10468), (203, 10660), (205, 10678), (218, 10762), (237, 10909), (242, 10936), (252, 11029), (253, 11035), (255, 11050), (259, 11089), (260, 11101), (268, 11167), (283, 11239), (286, 11257), (287, 11260), (291, 11287), (317, 11533), (324, 11599), (332, 11644), (337, 11665), (338, 11668), (339, 11671), (347, 11707), (351, 11746), (353, 11752), (359, 11779), (377, 11908), (378, 11911), (380, 11929), (399, 12052), (401, 12067), (414, 12196), (415, 12217), (423, 12259), (427, 12286), (428, 12292), (442, 12424), (445, 12436), (455, 12523), (460, 12565), (465, 12601), (485, 12727), (489, 12766), (501, 12895), (508, 12952), (512, 12994), (522, 13087), (529, 13162), (537, 13225), (547, 13306), (550, 13327), (568, 13504), (569, 13510), (587, 13729), (595, 13807), (596, 13825), (598, 13831), (605, 13891), (607, 13909), (610, 13942), (618, 14014), (625, 14053), (629, 14083), (640, 14149), (643, 14197), (650, 14257), (660, 14347), (667, 14407),

Gene: Troje_16 Start: 9601, Stop: 14397, Start Num: 64

Candidate Starts for Troje_16:

(Start: 64 @9601 has 23 MA's), (Start: 68 @9628 has 2 MA's), (70, 9634), (87, 9757), (99, 9859), (103, 9904), (105, 9916), (109, 9934), (112, 9961), (113, 9964), (115, 9979), (123, 10030), (124, 10033), (129, 10090), (131, 10093), (140, 10135), (143, 10153), (149, 10198), (155, 10234), (159, 10267), (163, 10300), (164, 10312), (171, 10366), (173, 10405), (175, 10420), (177, 10429), (181, 10456), (188, 10507), (197, 10567), (199, 10576), (205, 10630), (214, 10693), (217, 10708), (237, 10861), (242, 10888), (250, 10969), (252, 10981), (253, 10987), (255, 11002), (259, 11041), (268, 11119), (273, 11152), (283, 11191), (286, 11209), (287, 11212), (291, 11239), (294, 11296), (296, 11317), (302, 11380), (310, 11428), (315, 11449), (317, 11485), (321, 11527), (324, 11551), (332, 11596), (333, 11599), (337, 11617), (338, 11620), (339, 11623), (351, 11698), (353, 11704), (359, 11731), (367, 11791), (376, 11857), (377, 11860), (378, 11863), (380, 11881), (394, 11980), (397, 11995), (398, 11998), (414, 12148), (415, 12169), (423, 12211), (427, 12238), (428, 12244), (445, 12388), (455, 12475), (460, 12517), (465, 12553), (478, 12628), (485, 12679), (489, 12718), (494, 12796), (501, 12847), (508, 12904), (522, 13042), (529, 13114), (547, 13258), (550, 13279), (568, 13456), (569, 13462), (596, 13786), (598, 13792), (605, 13852), (607, 13870), (610, 13903), (618, 13975), (625, 14014), (629, 14044), (640, 14110), (641, 14128), (643, 14158), (650, 14218), (660, 14308), (667, 14368),

Gene: Typhonomachy_16 Start: 9629, Stop: 14767, Start Num: 21

Candidate Starts for Typhonomachy_16:

(Start: 17 @9605 has 5 MA's), (Start: 21 @9629 has 33 MA's), (24, 9656), (35, 9785), (38, 9860), (60, 10013), (61, 10016), (74, 10112), (77, 10121), (82, 10151), (84, 10157), (86, 10172), (87, 10175), (91, 10196), (97, 10268), (100, 10289), (109, 10355), (111, 10376), (127, 10493), (152, 10655), (156, 10694), (165, 10769), (179, 10928), (183, 10940), (186, 10967), (191, 11012), (192, 11024), (204, 11114), (206, 11132), (208, 11153), (211, 11183), (217, 11207), (219, 11219), (222, 11258), (226, 11291), (228, 11303), (238, 11393), (239, 11396), (243, 11420), (253, 11513), (255, 11528), (259, 11567), (265, 11621), (270, 11663), (279, 11705), (286, 11735), (287, 11738), (297, 11846), (298, 11849), (301, 11900), (315, 11975), (322, 12065), (324, 12077), (330, 12116), (332, 12122), (337, 12143), (338, 12146), (339, 12149), (351, 12224), (359, 12257), (362, 12278), (366, 12308), (373, 12356), (374, 12362), (378, 12389), (398, 12524), (411, 12641), (414, 12674), (415, 12695), (427, 12764), (428, 12770), (429, 12785), (443, 12905), (445, 12914), (455, 12998), (496, 13319), (519, 13538), (525, 13574), (550, 13787), (575, 13979), (581, 14027), (583, 14048), (596, 14156), (605, 14222), (607, 14240), (618, 14345), (624, 14375), (625, 14384), (629, 14414), (640, 14480), (643, 14528), (650, 14588), (659, 14675), (667, 14738),

Gene: UmaThurman_17 Start: 10381, Stop: 15924, Start Num: 4

Candidate Starts for UmaThurman_17:

(Start: 4 @10381 has 37 MA's), (Start: 6 @10396 has 1 MA's), (Start: 7 @10402 has 1 MA's), (Start: 9 @10432 has 1 MA's), (10, 10441), (11, 10444), (13, 10486), (30, 10597), (31, 10618), (51, 10846), (53, 10864), (55, 10879), (56, 10885), (57, 10888), (59, 10906), (65, 10930), (75, 11014), (76, 11017), (84, 11056), (86, 11071), (88, 11080), (108, 11248), (111, 11275), (156, 11593), (176, 11797), (183, 11842), (184, 11848), (186, 11869), (187, 11881), (200, 11971), (204, 12016), (207, 12043), (210, 12073), (222, 12160), (223, 12163), (227, 12202), (243, 12322), (247, 12364), (252, 12409), (253, 12415), (255, 12430), (261, 12484), (265, 12523), (267, 12544), (268, 12547), (270, 12565), (271, 12574), (281, 12613), (283, 12619), (287, 12640), (291, 12667), (314, 12874), (327, 12940), (340, 12979), (345, 12994), (358, 13024), (359, 13027), (366, 13078), (377, 13159), (378, 13162), (384, 13195), (387, 13225), (389, 13249), (430, 13582), (436, 13630), (438, 13675), (440, 13678), (441, 13693), (448, 13738), (450, 13747), (452, 13756), (458, 13807), (467, 13879), (471, 13897), (475, 13918), (485, 14017), (486, 14020), (490, 14053), (493, 14119), (495, 14137), (497, 14152), (500, 14185), (505, 14236), (510, 14287), (515, 14335), (532, 14530), (533, 14533), (545, 14605), (546, 14608), (553, 14674), (554, 14677), (555, 14695), (559, 14755), (564, 14812), (566, 14830), (571, 14911), (572, 14914), (573, 14929), (588, 15088), (594, 15142), (597, 15208), (603, 15262), (604, 15274), (605, 15280), (618, 15403), (623, 15427), (626, 15445), (629, 15469), (630, 15475), (633, 15496), (640, 15535), (651, 15676), (653, 15688), (659, 15739), (662, 15757), (671, 15907),

Gene: Utz_17 Start: 10248, Stop: 15791, Start Num: 4

Candidate Starts for Utz_17:

(Start: 4 @10248 has 37 MA's), (Start: 6 @10263 has 1 MA's), (Start: 7 @10269 has 1 MA's), (Start: 9 @10299 has 1 MA's), (10, 10308), (11, 10311), (13, 10353), (30, 10464), (31, 10485), (36, 10605), (41, 10647), (51, 10713), (53, 10731), (56, 10752), (57, 10755), (59, 10773), (65, 10797), (75, 10881), (76, 10884), (84, 10923), (86, 10938), (88, 10947), (108, 11115), (111, 11142), (127, 11259), (153, 11430), (156, 11460), (176, 11664), (183, 11709), (186, 11736), (187, 11748), (200, 11838), (207, 11910), (210, 11940), (222, 12027), (223, 12030), (227, 12069), (243, 12189), (247, 12231), (252, 12276), (253, 12282), (254, 12294), (255, 12297), (261, 12351), (265, 12390), (267, 12411), (268, 12414), (270, 12432), (281, 12480), (283, 12486), (287, 12507), (291, 12534), (327, 12807), (340, 12846), (345, 12861), (358, 12891), (359, 12894), (366, 12945), (377, 13026), (378, 13029), (384, 13062), (387, 13092), (389, 13116), (400, 13182), (430, 13449), (433, 13467), (436, 13497), (438, 13542), (440, 13545), (441, 13560), (444, 13569), (448, 13605), (450, 13614), (452, 13623), (458, 13674), (467, 13746), (471, 13764), (475, 13785), (485, 13884), (486, 13887), (490, 13920), (493, 13986), (495, 14004), (497, 14019), (500, 14052), (505, 14103), (510, 14154), (532, 14397), (533, 14400), (545, 14472), (546, 14475), (553, 14541), (554, 14544), (555, 14562), (559, 14622), (564, 14679), (566, 14697), (571, 14778), (572, 14781), (573, 14796), (594, 15009), (597, 15075), (604, 15141), (605, 15147), (618, 15270), (623, 15294), (626, 15312), (629, 15336), (630, 15342), (633, 15363), (640, 15402), (651, 15543), (659, 15606), (662, 15624), (665, 15651), (668, 15681), (671, 15774),

Gene: Vine_17 Start: 10381, Stop: 15480, Start Num: 21

Candidate Starts for Vine_17:

(Start: 21 @10381 has 33 MA's), (35, 10537), (47, 10666), (50, 10696), (60, 10765), (63, 10777), (70, 10813), (71, 10822), (74, 10864), (77, 10873), (84, 10909), (88, 10933), (94, 10993), (101, 11047), (104, 11086), (109, 11107), (111, 11128), (134, 11287), (136, 11299), (147, 11362), (152, 11407), (161, 11488), (176, 11647), (179, 11680), (183, 11692), (186, 11719), (192, 11776), (197, 11806), (199, 11818), (209, 11920), (210, 11923), (222, 12010), (228, 12055), (229, 12058), (243, 12172), (253, 12265), (255, 12280), (257, 12301), (261, 12334), (263, 12364), (266, 12376), (270, 12415), (275, 12439), (276, 12442), (282, 12466), (287, 12490), (296, 12595), (307, 12673), (314, 12703), (315, 12706), (317, 12742), (321, 12784), (324, 12808), (326, 12823), (328, 12838), (332, 12853), (338, 12877), (347, 12916), (348, 12931), (349, 12937), (352, 12958), (357, 12982), (359, 12988), (376, 13114), (382, 13144), (388, 13195), (393, 13231), (397, 13252), (398, 13255), (405, 13327), (411, 13372), (414, 13405), (415, 13426), (424, 13480), (434, 13555), (445, 13639), (455, 13726), (484, 13912), (496, 14044), (500, 14074), (514, 14212), (520, 14263), (525, 14293), (535, 14398), (544, 14449), (547, 14479), (570, 14659), (576, 14710), (581, 14752), (583, 14773), (596, 14869),

(602, 14917), (605, 14935), (618, 15058), (623, 15082), (625, 15097), (629, 15127), (633, 15154), (635, 15160), (640, 15193), (647, 15262), (649, 15265), (650, 15301), (660, 15391),

Gene: Walrus_18 Start: 10497, Stop: 16019, Start Num: 7

Candidate Starts for Walrus_18:

(Start: 4 @10476 has 37 MA's), (Start: 6 @10491 has 1 MA's), (Start: 7 @10497 has 1 MA's), (Start: 9 @10527 has 1 MA's), (10, 10536), (11, 10539), (13, 10581), (30, 10692), (31, 10713), (36, 10833), (51, 10941), (53, 10959), (57, 10983), (59, 11001), (65, 11025), (75, 11109), (77, 11115), (84, 11151), (86, 11166), (88, 11175), (91, 11190), (94, 11235), (95, 11256), (108, 11343), (111, 11370), (117, 11403), (127, 11487), (136, 11541), (143, 11583), (153, 11658), (156, 11688), (176, 11892), (183, 11937), (204, 12111), (207, 12138), (210, 12168), (222, 12255), (223, 12258), (227, 12297), (229, 12303), (233, 12360), (243, 12417), (247, 12459), (252, 12504), (253, 12510), (255, 12525), (261, 12579), (265, 12618), (267, 12639), (268, 12642), (270, 12660), (276, 12687), (281, 12708), (283, 12714), (287, 12735), (295, 12834), (327, 13035), (331, 13050), (340, 13074), (345, 13089), (358, 13119), (359, 13122), (366, 13173), (377, 13254), (378, 13257), (384, 13290), (387, 13320), (389, 13344), (400, 13410), (430, 13677), (436, 13725), (438, 13770), (440, 13773), (441, 13788), (446, 13806), (448, 13833), (450, 13842), (452, 13851), (458, 13902), (467, 13974), (471, 13992), (475, 14013), (485, 14112), (486, 14115), (490, 14148), (493, 14214), (495, 14232), (497, 14247), (500, 14280), (505, 14331), (510, 14382), (532, 14625), (533, 14628), (545, 14700), (546, 14703), (553, 14769), (554, 14772), (555, 14790), (559, 14850), (564, 14907), (566, 14925), (571, 15006), (572, 15009), (573, 15024), (588, 15183), (594, 15237), (597, 15303), (598, 15309), (604, 15369), (605, 15375), (618, 15498), (623, 15522), (626, 15540), (629, 15564), (630, 15570), (633, 15591), (640, 15630), (651, 15771), (653, 15783), (659, 15834), (662, 15852), (670, 15981), (671, 16002),

Gene: Whitney_19 Start: 10672, Stop: 16305, Start Num: 17

Candidate Starts for Whitney_19:

(Start: 17 @10672 has 5 MA's), (Start: 23 @10717 has 1 MA's), (25, 10738), (29, 10759), (32, 10804), (Start: 33 @10819 has 1 MA's), (37, 10903), (43, 10945), (44, 10957), (53, 11020), (55, 11035), (57, 11044), (59, 11062), (60, 11068), (70, 11116), (91, 11251), (107, 11401), (111, 11431), (143, 11650), (153, 11725), (156, 11755), (176, 11959), (183, 12004), (184, 12010), (186, 12031), (189, 12055), (196, 12112), (204, 12178), (207, 12205), (208, 12217), (210, 12235), (211, 12247), (217, 12271), (219, 12283), (222, 12322), (223, 12325), (224, 12334), (227, 12364), (231, 12409), (240, 12469), (243, 12484), (246, 12514), (247, 12526), (252, 12571), (253, 12577), (255, 12592), (258, 12622), (260, 12643), (261, 12646), (268, 12709), (271, 12736), (272, 12739), (273, 12742), (274, 12748), (280, 12772), (281, 12775), (283, 12781), (285, 12787), (287, 12802), (290, 12820), (292, 12865), (299, 12949), (300, 12955), (304, 12982), (317, 13075), (318, 13084), (324, 13141), (325, 13153), (333, 13189), (334, 13195), (344, 13237), (346, 13249), (351, 13288), (353, 13294), (354, 13297), (357, 13315), (358, 13318), (359, 13321), (363, 13345), (373, 13420), (379, 13459), (383, 13483), (387, 13516), (397, 13627), (400, 13660), (404, 13723), (408, 13759), (412, 13789), (421, 13867), (422, 13870), (423, 13879), (426, 13903), (436, 13990), (438, 14035), (440, 14038), (441, 14053), (448, 14098), (450, 14107), (452, 14116), (453, 14119), (465, 14224), (473, 14272), (475, 14278), (485, 14377), (486, 14380), (488, 14392), (497, 14509), (500, 14542), (505, 14593), (509, 14623), (513, 14683), (523, 14764), (526, 14785), (527, 14788), (528, 14818), (534, 14881), (536, 14890), (538, 14899), (554, 15013), (556, 15043), (560, 15091), (561, 15094), (563, 15124), (564, 15145), (580, 15343), (585, 15406), (586, 15412), (593, 15463), (608, 15655), (616, 15742), (621, 15769), (622, 15772), (634, 15847), (638, 15871), (641, 15910), (644, 15946), (648, 15967), (654, 16054), (658, 16096), (663, 16129), (664, 16141), (672, 16285),

Gene: William_17 Start: 10217, Stop: 15835, Start Num: 4

Candidate Starts for William_17:

(Start: 3 @10181 has 1 MA's), (Start: 4 @10217 has 37 MA's), (Start: 7 @10238 has 1 MA's), (11, 10280), (13, 10322), (26, 10412), (28, 10421), (30, 10433), (31, 10454), (35, 10520), (37, 10583), (39, 10604), (46, 10646), (47, 10649), (49, 10676), (52, 10697), (53, 10700), (56, 10721), (59, 10742), (69,

10793), (70, 10796), (77, 10856), (102, 11039), (111, 11111), (139, 11297), (153, 11399), (154, 11414), (156, 11429), (162, 11486), (183, 11678), (198, 11798), (207, 11879), (210, 11909), (217, 11945), (222, 11996), (238, 12131), (239, 12134), (243, 12158), (249, 12209), (252, 12245), (253, 12251), (255, 12266), (261, 12320), (265, 12359), (268, 12383), (270, 12401), (281, 12449), (283, 12455), (286, 12473), (287, 12476), (289, 12491), (291, 12503), (293, 12551), (314, 12689), (321, 12770), (324, 12794), (325, 12806), (326, 12809), (333, 12842), (352, 12944), (357, 12971), (358, 12974), (359, 12977), (360, 12983), (368, 13040), (370, 13052), (373, 13076), (375, 13091), (377, 13106), (378, 13109), (382, 13133), (385, 13160), (397, 13241), (407, 13325), (418, 13430), (423, 13463), (430, 13529), (431, 13538), (436, 13577), (437, 13610), (438, 13622), (440, 13625), (441, 13640), (444, 13649), (448, 13685), (450, 13694), (452, 13703), (473, 13859), (474, 13862), (475, 13865), (477, 13886), (486, 13967), (491, 14009), (497, 14096), (500, 14129), (502, 14138), (505, 14180), (517, 14294), (545, 14543), (546, 14546), (548, 14576), (549, 14579), (552, 14603), (553, 14612), (554, 14615), (559, 14693), (564, 14750), (573, 14867), (577, 14918), (594, 15056), (597, 15122), (604, 15188), (605, 15194), (607, 15212), (616, 15305), (618, 15317), (627, 15365), (629, 15383), (630, 15389), (633, 15410), (640, 15449), (651, 15590), (659, 15653), (668, 15728), (671, 15821),

Gene: Wisp_16 Start: 10065, Stop: 15509, Start Num: 9

Candidate Starts for Wisp_16:

(Start: 4 @10014 has 37 MA's), (Start: 6 @10029 has 1 MA's), (Start: 7 @10035 has 1 MA's), (Start: 9 @10065 has 1 MA's), (10, 10074), (11, 10077), (13, 10119), (30, 10230), (31, 10251), (36, 10371), (41, 10413), (47, 10446), (51, 10479), (53, 10497), (55, 10512), (56, 10518), (57, 10521), (59, 10539), (65, 10563), (75, 10647), (84, 10689), (86, 10704), (88, 10713), (108, 10881), (111, 10908), (127, 11025), (153, 11196), (156, 11226), (176, 11430), (183, 11475), (186, 11502), (187, 11514), (200, 11604), (204, 11649), (207, 11676), (210, 11706), (222, 11793), (223, 11796), (227, 11835), (233, 11898), (243, 11955), (247, 11997), (252, 12042), (253, 12048), (254, 12060), (255, 12063), (261, 12117), (265, 12156), (267, 12177), (268, 12180), (270, 12198), (276, 12225), (281, 12246), (283, 12252), (286, 12270), (287, 12273), (288, 12279), (291, 12300), (327, 12573), (335, 12600), (340, 12612), (345, 12627), (358, 12657), (359, 12660), (377, 12792), (378, 12795), (384, 12828), (387, 12858), (389, 12882), (400, 12948), (430, 13215), (436, 13263), (438, 13308), (440, 13311), (441, 13326), (448, 13371), (450, 13380), (452, 13389), (458, 13440), (467, 13512), (471, 13530), (475, 13551), (485, 13650), (486, 13653), (490, 13686), (493, 13752), (495, 13770), (497, 13785), (500, 13818), (505, 13869), (510, 13920), (532, 14163), (533, 14166), (545, 14238), (546, 14241), (553, 14307), (554, 14310), (555, 14328), (559, 14388), (571, 14544), (572, 14547), (573, 14562), (588, 14733), (594, 14787), (599, 14844), (601, 14859), (606, 14907), (611, 14952), (631, 15072), (632, 15081), (639, 15120), (646, 15192), (651, 15261), (653, 15273), (659, 15324), (662, 15342), (668, 15399), (671, 15492),

Gene: Wocket_18 Start: 10497, Stop: 15983, Start Num: 4

Candidate Starts for Wocket_18:

(Start: 4 @10497 has 37 MA's), (Start: 6 @10512 has 1 MA's), (Start: 9 @10548 has 1 MA's), (10, 10557), (11, 10560), (13, 10602), (30, 10713), (31, 10734), (36, 10854), (51, 10962), (53, 10980), (56, 11001), (57, 11004), (59, 11022), (65, 11046), (70, 11076), (75, 11130), (77, 11136), (84, 11172), (86, 11187), (88, 11196), (108, 11364), (111, 11391), (136, 11562), (143, 11604), (153, 11679), (156, 11709), (176, 11913), (183, 11958), (184, 11964), (186, 11985), (187, 11997), (200, 12087), (204, 12132), (207, 12159), (210, 12189), (222, 12276), (227, 12318), (234, 12390), (243, 12438), (247, 12480), (252, 12525), (253, 12531), (255, 12546), (261, 12600), (265, 12639), (267, 12660), (268, 12663), (270, 12681), (276, 12708), (281, 12729), (283, 12735), (287, 12756), (291, 12783), (340, 13095), (345, 13110), (358, 13140), (359, 13143), (366, 13194), (377, 13275), (378, 13278), (384, 13311), (387, 13341), (389, 13365), (400, 13431), (430, 13698), (435, 13740), (436, 13746), (437, 13779), (438, 13791), (440, 13794), (441, 13809), (446, 13827), (448, 13854), (450, 13863), (452, 13872), (465, 13980), (473, 14028), (474, 14031), (475, 14034), (477, 14055), (486, 14136), (487, 14139), (497, 14265), (500, 14298), (504, 14346), (505, 14349), (508, 14364), (510, 14400), (533,

14646), (545, 14718), (546, 14721), (553, 14787), (554, 14790), (555, 14808), (559, 14868), (571, 15024), (573, 15042), (588, 15207), (594, 15261), (599, 15318), (601, 15333), (606, 15381), (611, 15426), (631, 15546), (632, 15555), (639, 15594), (646, 15666), (651, 15735), (659, 15798), (662, 15816), (666, 15846),

Gene: Wolfwood_20 Start: 10618, Stop: 15741, Start Num: 21

Candidate Starts for Wolfwood_20:

(18, 10597), (Start: 21 @10618 has 33 MA's), (24, 10645), (35, 10774), (41, 10870), (48, 10921), (58, 10978), (62, 11011), (63, 11014), (74, 11101), (78, 11113), (86, 11161), (87, 11164), (88, 11170), (89, 11173), (93, 11224), (94, 11230), (100, 11278), (109, 11344), (111, 11365), (165, 11758), (166, 11761), (173, 11863), (180, 11920), (182, 11926), (183, 11929), (184, 11935), (186, 11956), (200, 12058), (202, 12085), (210, 12160), (213, 12178), (217, 12196), (219, 12208), (222, 12247), (229, 12295), (233, 12352), (237, 12376), (238, 12382), (253, 12502), (255, 12517), (259, 12556), (267, 12631), (272, 12664), (276, 12679), (277, 12685), (278, 12691), (287, 12727), (297, 12835), (304, 12907), (314, 12961), (324, 13066), (332, 13111), (338, 13135), (349, 13195), (350, 13207), (351, 13213), (357, 13240), (358, 13243), (359, 13246), (372, 13339), (373, 13345), (380, 13396), (389, 13465), (395, 13498), (398, 13513), (399, 13519), (404, 13576), (406, 13588), (410, 13627), (411, 13630), (413, 13651), (414, 13663), (415, 13684), (416, 13687), (423, 13726), (424, 13738), (427, 13753), (443, 13894), (455, 13990), (463, 14056), (466, 14077), (469, 14083), (496, 14320), (500, 14350), (518, 14524), (522, 14554), (525, 14575), (541, 14713), (547, 14761), (579, 14992), (581, 14998), (596, 15127), (605, 15193), (610, 15244), (618, 15316), (625, 15355), (629, 15385), (635, 15418), (640, 15451), (653, 15595), (659, 15649), (661, 15655), (667, 15712),

Gene: Yarn_15 Start: 9639, Stop: 14426, Start Num: 64

Candidate Starts for Yarn_15:

(Start: 64 @9639 has 23 MA's), (Start: 68 @9666 has 2 MA's), (79, 9744), (87, 9795), (96, 9882), (99, 9897), (105, 9954), (109, 9972), (112, 9999), (113, 10002), (124, 10071), (129, 10128), (140, 10173), (143, 10191), (149, 10236), (155, 10272), (159, 10305), (166, 10353), (167, 10356), (171, 10404), (173, 10443), (175, 10458), (203, 10650), (205, 10668), (218, 10752), (237, 10899), (242, 10926), (252, 11019), (253, 11025), (255, 11040), (259, 11079), (260, 11091), (268, 11157), (283, 11229), (286, 11247), (287, 11250), (291, 11277), (317, 11523), (324, 11589), (332, 11634), (337, 11655), (338, 11658), (339, 11661), (347, 11697), (351, 11736), (353, 11742), (359, 11769), (377, 11898), (378, 11901), (380, 11919), (399, 12042), (401, 12057), (414, 12186), (415, 12207), (423, 12249), (427, 12276), (428, 12282), (442, 12414), (445, 12426), (455, 12513), (460, 12555), (465, 12591), (485, 12717), (489, 12756), (501, 12885), (508, 12942), (512, 12984), (522, 13077), (529, 13152), (537, 13215), (547, 13296), (550, 13317), (568, 13494), (569, 13500), (587, 13719), (595, 13797), (596, 13815), (598, 13821), (605, 13881), (607, 13899), (610, 13932), (618, 14004), (625, 14043), (629, 14073), (640, 14139), (643, 14187), (650, 14247), (660, 14337), (667, 14397),

Gene: Yucky_16 Start: 10241, Stop: 15340, Start Num: 21

Candidate Starts for Yucky_16:

(Start: 21 @10241 has 33 MA's), (35, 10397), (50, 10556), (60, 10625), (70, 10673), (74, 10724), (77, 10733), (84, 10769), (88, 10793), (94, 10853), (101, 10907), (104, 10946), (106, 10952), (109, 10967), (111, 10988), (134, 11147), (136, 11159), (147, 11222), (152, 11267), (161, 11348), (176, 11507), (179, 11540), (183, 11552), (186, 11579), (192, 11636), (197, 11666), (199, 11678), (209, 11780), (210, 11783), (222, 11870), (228, 11915), (229, 11918), (243, 12032), (253, 12125), (255, 12140), (257, 12161), (261, 12194), (263, 12224), (266, 12236), (270, 12275), (275, 12299), (276, 12302), (282, 12326), (287, 12350), (296, 12455), (303, 12503), (307, 12533), (311, 12548), (314, 12563), (317, 12602), (321, 12644), (324, 12668), (326, 12683), (328, 12698), (332, 12713), (338, 12737), (347, 12776), (348, 12791), (349, 12797), (352, 12818), (357, 12842), (359, 12848), (376, 12974), (382, 13004), (386, 13040), (387, 13043), (393, 13091), (397, 13112), (398, 13115), (405, 13187), (411, 13232), (414, 13265), (415, 13286), (424, 13340), (434, 13415), (445, 13499), (455, 13586), (484, 13772), (496, 13904), (500, 13934), (514, 14072), (520, 14123), (525, 14153), (535, 14258),

(544, 14309), (547, 14339), (570, 14519), (576, 14570), (581, 14612), (583, 14633), (596, 14729), (602, 14777), (605, 14795), (618, 14918), (623, 14942), (625, 14957), (629, 14987), (633, 15014), (635, 15020), (640, 15053), (647, 15122), (649, 15125), (650, 15161), (660, 15251),

Gene: Yummy_17 Start: 9515, Stop: 14311, Start Num: 64

Candidate Starts for Yummy_17:

(Start: 64 @9515 has 23 MA's), (Start: 68 @9542 has 2 MA's), (70, 9548), (87, 9671), (99, 9773), (103, 9818), (105, 9830), (109, 9848), (112, 9875), (113, 9878), (115, 9893), (123, 9944), (124, 9947), (129, 10004), (131, 10007), (132, 10010), (140, 10049), (143, 10067), (149, 10112), (155, 10148), (159, 10181), (163, 10214), (164, 10226), (171, 10280), (173, 10319), (175, 10334), (177, 10343), (181, 10370), (188, 10421), (197, 10481), (199, 10490), (205, 10544), (214, 10607), (217, 10622), (224, 10685), (237, 10775), (242, 10802), (252, 10895), (253, 10901), (255, 10916), (259, 10955), (268, 11033), (273, 11066), (283, 11105), (286, 11123), (287, 11126), (291, 11153), (294, 11210), (296, 11231), (310, 11342), (315, 11363), (317, 11399), (321, 11441), (322, 11453), (324, 11465), (332, 11510), (333, 11513), (337, 11531), (338, 11534), (339, 11537), (351, 11612), (359, 11645), (367, 11705), (376, 11771), (377, 11774), (378, 11777), (380, 11795), (394, 11894), (397, 11909), (398, 11912), (414, 12062), (415, 12083), (423, 12125), (427, 12152), (428, 12158), (442, 12290), (445, 12302), (455, 12389), (460, 12431), (465, 12467), (472, 12503), (478, 12542), (485, 12593), (489, 12632), (494, 12710), (501, 12761), (508, 12818), (522, 12956), (529, 13028), (547, 13172), (550, 13193), (568, 13370), (569, 13376), (596, 13700), (598, 13706), (605, 13766), (607, 13784), (610, 13817), (618, 13889), (625, 13928), (629, 13958), (640, 14024), (641, 14042), (643, 14072), (650, 14132), (660, 14222), (667, 14282),

Gene: Zarbodnamra_17 Start: 10273, Stop: 15795, Start Num: 4

Candidate Starts for Zarbodnamra_17:

(Start: 4 @10273 has 37 MA's), (Start: 6 @10288 has 1 MA's), (Start: 7 @10294 has 1 MA's), (Start: 9 @10324 has 1 MA's), (10, 10333), (11, 10336), (13, 10378), (30, 10489), (31, 10510), (51, 10738), (53, 10756), (55, 10771), (56, 10777), (57, 10780), (59, 10798), (65, 10822), (75, 10906), (76, 10909), (84, 10948), (86, 10963), (88, 10972), (108, 11140), (111, 11167), (153, 11455), (156, 11485), (176, 11689), (183, 11734), (186, 11761), (187, 11773), (200, 11863), (204, 11908), (207, 11935), (210, 11965), (222, 12052), (223, 12055), (227, 12094), (236, 12178), (243, 12214), (247, 12256), (252, 12301), (253, 12307), (254, 12319), (255, 12322), (261, 12376), (265, 12415), (267, 12436), (268, 12439), (270, 12457), (271, 12466), (276, 12484), (281, 12505), (283, 12511), (287, 12532), (291, 12559), (296, 12637), (331, 12826), (340, 12850), (344, 12862), (345, 12865), (355, 12880), (358, 12895), (359, 12898), (366, 12949), (377, 13030), (378, 13033), (384, 13066), (387, 13096), (389, 13120), (430, 13453), (436, 13501), (438, 13546), (440, 13549), (441, 13564), (448, 13609), (450, 13618), (452, 13627), (458, 13678), (467, 13750), (471, 13768), (475, 13789), (485, 13888), (486, 13891), (490, 13924), (493, 13990), (495, 14008), (497, 14023), (500, 14056), (505, 14107), (510, 14158), (532, 14401), (533, 14404), (545, 14476), (546, 14479), (553, 14545), (554, 14548), (555, 14566), (559, 14626), (564, 14683), (566, 14701), (571, 14782), (572, 14785), (573, 14800), (588, 14959), (594, 15013), (597, 15079), (598, 15085), (604, 15145), (605, 15151), (618, 15274), (623, 15298), (626, 15316), (629, 15340), (630, 15346), (633, 15367), (640, 15406), (651, 15547), (653, 15559), (659, 15610), (662, 15628), (671, 15778),

Gene: Zareef_18 Start: 10620, Stop: 15749, Start Num: 21

Candidate Starts for Zareef_18:

(18, 10599), (Start: 21 @10620 has 33 MA's), (24, 10647), (35, 10776), (41, 10872), (48, 10923), (58, 10980), (62, 11013), (63, 11016), (74, 11103), (78, 11115), (86, 11163), (87, 11166), (88, 11172), (89, 11175), (93, 11226), (94, 11232), (100, 11280), (109, 11346), (111, 11367), (165, 11760), (166, 11763), (173, 11865), (180, 11922), (182, 11928), (183, 11931), (184, 11937), (186, 11958), (200, 12060), (202, 12087), (210, 12162), (213, 12180), (217, 12198), (219, 12210), (222, 12249), (229, 12297), (233, 12354), (237, 12378), (238, 12384), (253, 12504), (255, 12519), (259, 12558), (267, 12633), (272, 12666), (276, 12681), (277, 12687), (278, 12693), (287, 12729), (297, 12837), (304,

12909), (314, 12963), (324, 13068), (332, 13113), (338, 13137), (345, 13167), (349, 13197), (350, 13209), (351, 13215), (357, 13242), (359, 13248), (372, 13341), (373, 13347), (380, 13398), (389, 13467), (395, 13500), (398, 13515), (399, 13521), (404, 13578), (411, 13632), (413, 13653), (414, 13665), (415, 13686), (416, 13689), (427, 13755), (443, 13896), (455, 13992), (459, 14025), (463, 14058), (466, 14079), (469, 14085), (496, 14322), (500, 14352), (518, 14526), (522, 14556), (525, 14577), (547, 14769), (549, 14778), (565, 14859), (579, 15000), (581, 15006), (596, 15135), (605, 15201), (610, 15252), (618, 15324), (625, 15363), (626, 15366), (629, 15393), (635, 15426), (640, 15459), (649, 15531), (653, 15603), (659, 15657), (661, 15663), (667, 15720),

Gene: ZiggyZoo_16 Start: 10043, Stop: 15586, Start Num: 4

Candidate Starts for ZiggyZoo_16:

(Start: 4 @10043 has 37 MA's), (Start: 6 @10058 has 1 MA's), (Start: 7 @10064 has 1 MA's), (Start: 9 @10094 has 1 MA's), (10, 10103), (11, 10106), (13, 10148), (30, 10259), (31, 10280), (51, 10508), (53, 10526), (55, 10541), (56, 10547), (57, 10550), (59, 10568), (65, 10592), (75, 10676), (77, 10682), (84, 10718), (86, 10733), (88, 10742), (108, 10910), (111, 10937), (127, 11054), (136, 11108), (153, 11225), (156, 11255), (176, 11459), (183, 11504), (186, 11531), (187, 11543), (200, 11633), (204, 11678), (207, 11705), (210, 11735), (222, 11822), (223, 11825), (227, 11864), (243, 11984), (247, 12026), (252, 12071), (253, 12077), (254, 12089), (255, 12092), (261, 12146), (265, 12185), (267, 12206), (268, 12209), (270, 12227), (276, 12254), (281, 12275), (283, 12281), (287, 12302), (291, 12329), (295, 12401), (314, 12536), (331, 12617), (340, 12641), (345, 12656), (358, 12686), (359, 12689), (366, 12740), (377, 12821), (378, 12824), (384, 12857), (387, 12887), (389, 12911), (400, 12977), (430, 13244), (433, 13262), (436, 13292), (438, 13337), (440, 13340), (441, 13355), (444, 13364), (448, 13400), (450, 13409), (452, 13418), (458, 13469), (467, 13541), (471, 13559), (475, 13580), (485, 13679), (486, 13682), (490, 13715), (493, 13781), (495, 13799), (497, 13814), (500, 13847), (505, 13898), (510, 13949), (532, 14192), (533, 14195), (545, 14267), (546, 14270), (553, 14336), (554, 14339), (555, 14357), (559, 14417), (564, 14474), (566, 14492), (571, 14573), (572, 14576), (573, 14591), (588, 14750), (594, 14804), (597, 14870), (598, 14876), (604, 14936), (605, 14942), (610, 14993), (618, 15065), (623, 15089), (626, 15107), (629, 15131), (630, 15137), (633, 15158), (640, 15197), (651, 15338), (653, 15350), (659, 15401), (662, 15419), (671, 15569),

Gene: Zilla_17 Start: 10345, Stop: 15813, Start Num: 7

Candidate Starts for Zilla_17:

(Start: 4 @10324 has 37 MA's), (Start: 6 @10339 has 1 MA's), (Start: 7 @10345 has 1 MA's), (Start: 9 @10375 has 1 MA's), (10, 10384), (11, 10387), (13, 10429), (30, 10540), (31, 10561), (36, 10681), (41, 10723), (51, 10789), (53, 10807), (56, 10828), (57, 10831), (59, 10849), (65, 10873), (75, 10957), (84, 10999), (86, 11014), (88, 11023), (108, 11191), (111, 11218), (127, 11335), (153, 11506), (156, 11536), (176, 11740), (183, 11785), (186, 11812), (187, 11824), (189, 11836), (200, 11914), (204, 11959), (207, 11986), (210, 12016), (222, 12103), (223, 12106), (227, 12145), (243, 12265), (247, 12307), (253, 12358), (255, 12373), (261, 12427), (265, 12466), (267, 12487), (268, 12490), (270, 12508), (276, 12535), (281, 12556), (283, 12562), (287, 12583), (290, 12601), (291, 12610), (327, 12883), (345, 12937), (358, 12967), (359, 12970), (366, 13021), (377, 13102), (378, 13105), (384, 13138), (387, 13168), (389, 13192), (400, 13258), (430, 13525), (436, 13573), (437, 13606), (438, 13618), (440, 13621), (448, 13681), (450, 13690), (452, 13699), (458, 13750), (467, 13822), (471, 13840), (475, 13861), (485, 13960), (486, 13963), (490, 13996), (493, 14062), (495, 14080), (497, 14095), (500, 14128), (505, 14179), (510, 14230), (517, 14299), (532, 14473), (533, 14476), (545, 14548), (546, 14551), (553, 14617), (554, 14620), (555, 14638), (559, 14698), (564, 14755), (566, 14773), (571, 14854), (572, 14857), (573, 14872), (588, 15043), (594, 15097), (601, 15169), (602, 15178), (606, 15214), (614, 15274), (615, 15292), (619, 15310), (628, 15355), (632, 15388), (646, 15499), (651, 15568), (659, 15631), (662, 15649), (671, 15799),