

1. HerbertWm_28	26	43	50	61	80	93	109	125	135	142	150	169	191	201	206	230	244	255	270	286	293	300	306	322	331	
2. FatCactus_28	36	44	54	69					131	141	156		183	191	201	206	230	244	251	270	286	293	300	306	322	331
3. Anthony_30	16	22	36	50	61	80	93	100	131	141	156	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331
4. PF_40	13	36	59		81	89		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
5. ExpelMarmos_27	36		59			89		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
6. Stepmig9_28	36		59		81	89		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
7. Astro_28	36		59		81	89		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
8. Dixon_28	36		59		81	89		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
9. Smeadley_28+1	36		59		81	89		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
10. Cartin_27	36		59		81	89		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
11. NearlyHeadless_28	36		59		81	89		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
12. Philis_28	36		59		81	89		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
13. Roary_28	36		59		81	89		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
14. Danforth_28	36		59		81	89		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
15. Santus_28	36	70	84	74	94			101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
16. Upyo_24						94		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
17. Trine_24						94		101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
18. Schmidt_27								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
19. Polly_25+30								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
20. Nymphadora_26+30								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
21. Bianca_26+1								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
22. Madavieve_26+30								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
23. BoyNamedJoe_25+1								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
24. WelcomeAynna_25+1								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
25. Agueybanah_27								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
26. PantherRoc_27								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
27. BaxterFox_35								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
28. Frezy_26								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
29. Derig_32+7								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
30. ChauMasorC_37								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
31. Bizzy_37+5								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
32. ShivaniShoa_38								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
33. BrandonK_23+39								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
34. Lennon_33+1								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
35. McKinley_30+2								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
36. Geodirt_35+1								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
37. Barsten_35								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
38. McCrothy_38+2								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
39. RiverRaido_37								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
40. Gaea_36+0								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
41. BobBob_35+1								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
42. Fitzgerald_35								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
43. FuegoCursivo_39								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
44. Bidwin_37+3								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
45. YorkOnyx_37								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
46. JKSyngoo_34								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
47. Sedona_35								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
48. AsherTheLean_37								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
49. Charming_38								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	
50. Paries_40								101	131	153	167	171	179	201	206	230	244	251	270	286	293	300	306	322	331	

Pham 280165

	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
61. Ailee_35	10	20	30				70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
62. Jaggerwosky_35	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
63. Angelicaps_36 + 1	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
64. Kaitabeans38	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
65. BaumdollSm_36	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
66. Fosterous36	10	20	30	51	51		70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
67. MoontowerMania_36	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
68. Camerico_31	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
69. CityPad_26	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
60. Heinz_25 + 1	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
61. Crossroads_20 + 3	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
62. Rumpelstiltskin_20	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
63. LinDesim_20 + 6	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
64. Loadne_30 + 1	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
65. DanBing_19	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
66. nos_20 + 3	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
67. Tourach_20	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
68. DHan_20	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
69. Verix_20	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
70. Netyap_30 + 5	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
71. Soap141_20 + 3	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
72. ZhongYanYuan_30 + 4	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
73. Rossett_20	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
74. Claus_20	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
75. Bazzie_20	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
76. Archie_20	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
77. BigCheese_20	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
78. GuoLiao_20	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
79. Lewan_20	10	20	30	51			70			100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300

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 280165 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280165 has 149 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Herbertwm_29
- Track 2 : FatCactus_29
- Track 3 : Anthony_30
- Track 4 : PP_40
- Track 5 : Expelliarmus_27
- Track 6 : Stephig9_28
- Track 7 : Astro_28
- Track 8 : Dixon_28
- Track 9 : Smeadley_28, Groundhog_27
- Track 10 : Caitlin_27
- Track 11 : NearlyHeadless_28
- Track 12 : Phillis_28
- Track 13 : Roary_28
- Track 14 : Danforth_27
- Track 15 : Saintus_28
- Track 16 : Upyo_24
- Track 17 : Trine_24
- Track 18 : Schmidt_27
- Track 19 : Polly_25, Suscepit_28, Trumpet_28, Zameen_28, Antonio_28, Neobush_28, Maridalia_27, Eudoria_28, Tayonia_28, Manasvini_28, Kita_28
- Track 20 : Nymphadora_26, BatStarr_26, TimTam_26, Bosnia_26, Herod_26, Hugley_26, Eviarto_26
- Track 21 : Bialota_26, Zirinka_26
- Track 22 : Madavieve_26, Madeline_26, Ohgeesy_26
- Track 23 : BoyNamedSue_27, AlumE_27
- Track 24 : WelcomeAyanna_25, ThankyouJordi_25
- Track 25 : Agueybana_27
- Track 26 : PantheRoc_27
- Track 27 : BaxterFox_26
- Track 28 : Yeezy_28
- Track 29 : Derg_32, LilHam_34, Ribeye_37, StorminNorm_36, Kwobi_38, Baddon_36, Tycho_36, SchottB_35
- Track 30 : ChadMasterC_37, Kewpiedoll_36, Stultus_35
- Track 31 : Bizzy_37, Saronaya_36, Kroos_37, Flatwoods_37, Tangerine_36, Gustavo_36
- Track 32 : Shivanishola_38
- Track 33 : Brandonk123_39

- Track 34 : Lennon_38, Sitar_38
- Track 35 : McKinley_40, Tangent_38, Vivi2_40
- Track 36 : Geodirt_35, Sanjuju_35
- Track 37 : Barsten_37
- Track 38 : McCrothy_38, Nordenberg_32, Love_41
- Track 39 : RiverRaider_37
- Track 40 : Gaea_36
- Track 41 : BobBob_35, Rofo_38
- Track 42 : Fitzgerald_35
- Track 43 : FuegoCuervo_39
- Track 44 : Bibwit_37, Galadriel_38, Kamashten_36, Thing3_36
- Track 45 : YorkOnyx_37
- Track 46 : JKSyngboy_34
- Track 47 : Sedona_38
- Track 48 : Ashertheman_37
- Track 49 : Charming_38
- Track 50 : Paries_40
- Track 51 : Ailee_35
- Track 52 : Jabberwocky_35
- Track 53 : Angelicage_36, Affeca_36
- Track 54 : Keitabear_38
- Track 55 : Baumdotcom_36
- Track 56 : Fosterous_36
- Track 57 : MoontowerMania_36
- Track 58 : Camerico_31
- Track 59 : LilyPad_26
- Track 60 : Heinz_26, Hibiscus_25
- Track 61 : Crossroads_20, Zakai_20, MkaliMitinis3_20, Finemlucis_20
- Track 62 : Rumpelstiltskin_20
- Track 63 : LilDestine_20, Wilder_20, Kahlid_20, Underpass_20, Lynnae_20, Gardann_20, Nicholasp3_20
- Track 64 : Loadrie_20, OverPar_20
- Track 65 : DanBing_19
- Track 66 : Itos_20, Breezona_20, Winky_20, Faith1_20
- Track 67 : Tourach_20
- Track 68 : DHan_20
- Track 69 : Vetrix_20
- Track 70 : Netyap_20, SoJulia_20, DrSeegs_20, BobsGarage_20, Gabriela_20, Miley16_20
- Track 71 : Soap141_20, Hafay_20, Wigglewiggle_20, Sarshaun_20
- Track 72 : ZhongYanYuan_19, Baoshan_19
- Track 73 : Rossetti_20
- Track 74 : Claus_20
- Track 75 : Bazzle_20
- Track 76 : Archie_20
- Track 77 : BigCheese_20
- Track 78 : GuuelaD_20
- Track 79 : Lewan_20

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

The start number called the most often in the published annotations is 10, it was called in 52 of the 131 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Affeca_36, Ailee_35, Angelicage_36, Ashertheman_37, Baddon_36, Barsten_37, Baumdotcom_36, Bibwit_37, Bizzy_37, BobBob_35, Brandonk123_39, ChadMasterC_37, Charming_38, Derg_32, Fitzgerald_35, Flatwoods_37, Fosterous_36, FuegoCuervo_39, Gaea_36, Galadriel_38, Geodirt_35, Gustavo_36, JKSyngboy_34, Jabberwocky_35, Kamashten_36, Keitabear_38, Kewpiedoll_36, Kroos_37, Kwobi_38, Lennon_38, LilHam_34, Love_41, McCrothy_38, McKinley_40, MoontowerMania_36, Nordenberg_32, Paries_40, Ribeye_37, RiverRaider_37, Rofo_38, Sanjuju_35, Saronaya_36, SchottB_35, Sedona_38, Shivanishola_38, Sitar_38, StorminNorm_36, Stultus_35, Tangent_38, Tangerine_36, Thing3_36, Tycho_36, Vivi2_40, YorkOnyx_37,

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

-

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

- Agueybana_27, AlumE_27, Anthony_30, Antonio_28, Archie_20, Astro_28, Baoshan_19, BatStarr_26, BaxterFox_26, Bazzle_20, Bialota_26, BigCheese_20, BobsGarage_20, Bosnia_26, BoyNamedSue_27, Breezona_20, Caitlin_27, Camerico_31, Claus_20, Crossroads_20, DHan_20, DanBing_19, Danforth_27, Dixon_28, DrSeegs_20, Eudoria_28, Eviarto_26, Expelliarmus_27, Faith1_20, FatCactus_29, Finemlucis_20, Gabriela_20, Gardann_20, Groundhog_27, GuuelaD_20, Hafay_20, Heinz_26, Herbertwm_29, Herod_26, Hibiscus_25, Hugley_26, Itos_20, Kahlid_20, Kita_28, Lewan_20, LilDestine_20, LilyPad_26, Loadrie_20, Lynnae_20, Madavieve_26, Madeline_26, Manasvini_28, Maridalia_27, Miley16_20, MkaliMitinis3_20, NearlyHeadless_28, Neobush_28, Netyap_20, Nicholasp3_20, Nymphadora_26, Ohgeesy_26, OverPar_20, PP_40, PantheRoc_27, Phillis_28, Polly_25, Roary_28, Rossetti_20, Rumpelstiltskin_20, Saintus_28, Sarshaun_20, Schmidt_27, Smeadley_28, SoJulia_20, Soap141_20, Stephig9_28, Suscepit_28, Tayonia_28, ThankyouJordi_25, TimTam_26, Tourach_20, Trine_24, Trumpet_28, Underpass_20, Upyo_24, Vetrix_20, WelcomeAyanna_25, Wigglewiggle_20, Wilder_20, Winky_20, Yeezy_28, Zakai_20, Zameen_28, ZhongYanYuan_19, Zirinka_26,

Summary by start number:

Start 1:

- Found in 2 of 149 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Herbertwm_29 (A2), PP_40 (A7),

Start 6:

- Found in 1 of 149 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilyPad_26 (DG1),

Start 8:

- Found in 35 of 149 (23.5%) of genes in pham
- Manual Annotations of this start: 5 of 131
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Breezona_20 (L2), Faith1_20 (L2), Itos_20 (L2), Rumpelstiltskin_20 (L2), Winky_20 (L2),

Start 9:

- Found in 41 of 149 (27.5%) of genes in pham
- Manual Annotations of this start: 25 of 131
- Called 87.8% of time when present
- Phage (with cluster) where this start called: Archie_20 (L2), Baoshan_19 (L2), Bazzle_20 (L2), BigCheese_20 (L2), BobsGarage_20 (L2), Claus_20 (L2), Crossroads_20 (L2), DHan_20 (L2), DanBing_19 (L2), DrSeegs_20 (L2), Finemlucis_20 (L2), Gabriela_20 (L2), Gardann_20 (L2), GuuelaD_20 (L2), Hafay_20 (L2), Kahlid_20 (L2), Lewan_20 (L2), LilDestine_20 (L2), Loadrie_20 (L2), Lynnae_20 (L2), Miley16_20 (L2), MkaliMitinis3_20 (L2), Netyap_20 (L2), Nicholasp3_20 (L2), OverPar_20 (L2), Rossetti_20 (L2), Sarshaun_20 (L2), SoJulia_20 (L2), Soap141_20 (L2), Tourach_20 (L2), Underpass_20 (L2), Vetrix_20 (L2), Wigglewiggle_20 (L2), Wilder_20 (L2), Zakai_20 (L2), ZhongYanYuan_19 (L2),

Start 10:

- Found in 54 of 149 (36.2%) of genes in pham
- Manual Annotations of this start: 52 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Affeca_36 (DE1), Ailee_35 (DE1), Angelicage_36 (DE1), Ashertheman_37 (DE1), Baddon_36 (DE1), Barsten_37 (DE1), Baumdotcom_36 (DE1), Bibwit_37 (DE1), Bizzy_37 (DE1), BobBob_35 (DE1), Brandonk123_39 (DE1), ChadMasterC_37 (DE1), Charming_38 (DE1), Derg_32 (DE1), Fitzgerald_35 (DE1), Flatwoods_37 (DE1), Fosterous_36 (DE1), FuegoCuervo_39 (DE1), Gaea_36 (DE1), Galadriel_38 (DE1), Geodirt_35 (DE1), Gustavo_36 (DE1), JKSyngboy_34 (DE1), Jabberwocky_35 (DE1), Kamashten_36 (DE1), Keitabear_38 (DE1), Kewpiedoll_36 (DE1), Kroos_37 (DE1), Kwobi_38 (DE1), Lennon_38 (DE1), LilHam_34 (DE1), Love_41 (DE1), McCrothy_38 (DE1), McKinley_40 (DE1), MoontowerMania_36 (DE1), Nordenberg_32 (DE1), Paries_40 (DE1), Ribeye_37 (DE1), RiverRaider_37 (DE1), Rofo_38 (DE1), Sanjuju_35 (DE1), Saronaya_36 (DE1), SchottB_35 (DE1), Sedona_38 (DE1), Shivanishola_38 (DE1), Sitar_38 (DE1), StorminNorm_36 (DE1), Stultus_35 (DE1), Tangent_38 (DE1), Tangerine_36 (DE1), Thing3_36 (DE1), Tycho_36 (DE1), Vivi2_40 (DE1), YorkOnyx_37 (DE1),

Start 13:

- Found in 14 of 149 (9.4%) of genes in pham
- Manual Annotations of this start: 12 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anthony_30 (A20), Astro_28 (A8), Caitlin_27 (A8), Danforth_27 (A8), Dixon_28 (A8), Expelliarmus_27 (A8), FatCactus_29 (A20), Groundhog_27 (A8), NearlyHeadless_28 (A8), Phillis_28 (A8), Roary_28 (A8), Saintus_28 (A8), Smeadley_28 (A8), Stephig9_28 (A8),

Start 40:

- Found in 2 of 149 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 131
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Trine_24 (CD), Upyo_24 (CD),

Start 42:

- Found in 2 of 149 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Heinz_26 (DY), Hibiscus_25 (DY),

Start 44:

- Found in 3 of 149 (2.0%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Camerico_31 (DF4),

Start 45:

- Found in 31 of 149 (20.8%) of genes in pham
- Manual Annotations of this start: 29 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agueybana_27 (CZ1), AlumE_27 (CZ1), Antonio_28 (CZ1), BatStarr_26 (CZ1), BaxterFox_26 (CZ3), Bialota_26 (CZ1), Bosnia_26 (CZ1), BoyNamedSue_27 (CZ1), Eudoria_28 (CZ1), Eviarto_26 (CZ1), Herod_26 (CZ1), Hugley_26 (CZ1), Kita_28 (CZ1), Madavieve_26 (CZ1), Madeline_26 (CZ1), Manasvini_28 (CZ1), Maridalia_27 (CZ1), Neobush_28 (CZ1), Nymphadora_26 (CZ1), Ohgeesy_26 (CZ), PantheRoc_27 (CZ3), Polly_25 (CZ1), Suscepit_28 (CZ1), Tayonia_28 (CZ1), ThankyouJordi_25 (CZ1), TimTam_26 (CZ1), Trumpet_28 (CZ1), WelcomeAyanna_25 (CZ1), Yeezy_28 (CZ3), Zameen_28 (CZ1), Zirinka_26 (CZ1),

Start 59:

- Found in 36 of 149 (24.2%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Schmidt_27 (CU4),

Summary by clusters:

There are 14 clusters represented in this pham: A20, CU4, CZ3, DE1, CZ1, CD, CZ, A2, L2, A7, DY, A8, DG1, DF4,

Info for manual annotations of cluster A2:

- Start number 1 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A20:

- Start number 13 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A7:

- Start number 1 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:

- Start number 13 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster CD:

- Start number 40 was manually annotated 2 times for cluster CD.

Info for manual annotations of cluster CU4:

- Start number 59 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CZ:

- Start number 45 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 45 was manually annotated 25 times for cluster CZ1.

Info for manual annotations of cluster CZ3:

- Start number 45 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster DE1:

- Start number 10 was manually annotated 52 times for cluster DE1.

Info for manual annotations of cluster DF4:

- Start number 44 was manually annotated 1 time for cluster DF4.

Info for manual annotations of cluster DG1:

- Start number 6 was manually annotated 1 time for cluster DG1.

Info for manual annotations of cluster DY:

- Start number 42 was manually annotated 1 time for cluster DY.

Info for manual annotations of cluster L2:

- Start number 8 was manually annotated 5 times for cluster L2.
- Start number 9 was manually annotated 25 times for cluster L2.

Gene Information:

Gene: Affeca_36 Start: 33574, Stop: 35496, Start Num: 10

Candidate Starts for Affeca_36:

(Start: 10 @33574 has 52 MA's), (28, 33709), (29, 33718), (32, 33751), (39, 33775), (51, 33844), (70, 33919), (104, 34111), (105, 34117), (108, 34138), (113, 34156), (116, 34168), (126, 34228), (130, 34282), (136, 34396), (155, 34483), (168, 34537), (180, 34603), (189, 34633), (193, 34645), (201, 34690), (202, 34702), (204, 34720), (213, 34747), (224, 34825), (228, 34852), (234, 34876), (249, 34999), (251, 35041), (265, 35125), (272, 35155), (292, 35236), (298, 35266), (309, 35338), (312, 35347),

Gene: Agueybana_27 Start: 22803, Stop: 24308, Start Num: 45

Candidate Starts for Agueybana_27:

(12, 22596), (19, 22665), (20, 22668), (24, 22692), (27, 22698), (Start: 45 @22803 has 29 MA's), (58, 22872), (62, 22884), (82, 22995), (84, 23001), (85, 23007), (87, 23013), (98, 23100), (106, 23136), (107, 23142), (109, 23151), (180, 23445), (196, 23499), (197, 23502), (201, 23523), (226, 23673), (242, 23757), (248, 23838), (249, 23841), (291, 24060), (299, 24108), (307, 24168), (316, 24201), (319, 24207), (327, 24279),

Gene: Ailee_35 Start: 33459, Stop: 35381, Start Num: 10

Candidate Starts for Ailee_35:

(Start: 10 @33459 has 52 MA's), (28, 33594), (32, 33636), (39, 33660), (70, 33804), (104, 33996), (105, 34002), (108, 34023), (113, 34041), (116, 34053), (126, 34113), (130, 34167), (136, 34281), (155, 34368), (168, 34422), (177, 34476), (180, 34488), (189, 34518), (193, 34530), (201, 34575), (202, 34587), (204, 34605), (213, 34632), (224, 34710), (228, 34737), (234, 34761), (249, 34884), (251, 34926), (265, 35010), (272, 35040), (292, 35121), (298, 35151), (309, 35223), (312, 35232),

Gene: AlumE_27 Start: 22802, Stop: 24307, Start Num: 45

Candidate Starts for AlumE_27:

(12, 22595), (19, 22664), (20, 22667), (24, 22691), (27, 22697), (Start: 45 @22802 has 29 MA's), (58, 22871), (62, 22883), (82, 22994), (84, 23000), (85, 23006), (87, 23012), (98, 23099), (106, 23135), (107, 23141), (109, 23150), (128, 23234), (180, 23444), (196, 23498), (197, 23501), (201, 23522), (210, 23567), (226, 23672), (242, 23756), (248, 23837), (249, 23840), (267, 23963), (291, 24059), (299, 24107), (301, 24122), (307, 24167), (316, 24200), (319, 24206), (327, 24278),

Gene: Angelicage_36 Start: 33992, Stop: 35914, Start Num: 10

Candidate Starts for Angelicage_36:

(Start: 10 @33992 has 52 MA's), (28, 34127), (29, 34136), (32, 34169), (39, 34193), (51, 34262), (70, 34337), (104, 34529), (105, 34535), (108, 34556), (113, 34574), (116, 34586), (126, 34646), (130, 34700), (136, 34814), (155, 34901), (168, 34955), (180, 35021), (189, 35051), (193, 35063), (201, 35108), (202, 35120), (204, 35138), (213, 35165), (224, 35243), (228, 35270), (234, 35294), (249, 35417), (251, 35459), (265, 35543), (272, 35573), (292, 35654), (298, 35684), (309, 35756), (312, 35765),

Gene: Anthony_30 Start: 21219, Stop: 22928, Start Num: 13

Candidate Starts for Anthony_30:

(Start: 13 @21219 has 12 MA's), (35, 21366), (39, 21381), (Start: 44 @21408 has 1 MA's), (54, 21456), (69, 21513), (134, 21867), (147, 21930), (156, 21966), (183, 22080), (201, 22158), (208, 22197), (216, 22224), (219, 22242), (236, 22332), (237, 22335), (239, 22350), (257, 22536), (270, 22596), (278, 22623), (284, 22638), (293, 22683), (296, 22701), (304, 22764), (306, 22770), (325, 22872),

Gene: Antonio_28 Start: 22923, Stop: 24428, Start Num: 45

Candidate Starts for Antonio_28:

(Start: 45 @22923 has 29 MA's), (58, 22992), (62, 23004), (82, 23115), (85, 23127), (87, 23133), (98, 23220), (106, 23256), (107, 23262), (109, 23271), (180, 23565), (196, 23619), (197, 23622), (201, 23643), (210, 23688), (226, 23793), (242, 23877), (248, 23958), (249, 23961), (267, 24084), (291, 24180), (299, 24228), (307, 24288), (316, 24321), (319, 24327), (327, 24399),

Gene: Archie_20 Start: 19444, Stop: 21240, Start Num: 9

Candidate Starts for Archie_20:

(Start: 8 @19441 has 5 MA's), (Start: 9 @19444 has 25 MA's), (18, 19540), (30, 19597), (31, 19621), (41, 19657), (50, 19717), (52, 19726), (56, 19750), (64, 19771), (73, 19828), (92, 19921), (95, 19945), (97, 19975), (110, 20029), (120, 20074), (129, 20125), (146, 20230), (158, 20284), (174, 20362), (176, 20371), (189, 20419), (190, 20422), (191, 20425), (197, 20449), (205, 20509), (208, 20518), (236, 20656), (237, 20659), (249, 20788), (251, 20827), (254, 20842), (268, 20902), (269, 20911), (276, 20938), (286, 20971), (290, 20986), (311, 21112), (317, 21136), (329, 21223),

Gene: Ashertheman_37 Start: 32252, Stop: 33973, Start Num: 10

Candidate Starts for Ashertheman_37:

(Start: 10 @32252 has 52 MA's), (28, 32387), (36, 32444), (39, 32453), (51, 32522), (103, 32783), (111, 32822), (123, 32882), (133, 32927), (150, 32987), (182, 33122), (184, 33128), (196, 33170), (199, 33185), (205, 33221), (212, 33242), (225, 33338), (226, 33341), (242, 33425), (246, 33458), (249, 33503), (250, 33506), (251, 33542), (257, 33578), (259, 33590), (266, 33626), (289, 33716),

Gene: Astro_28 Start: 21515, Stop: 23236, Start Num: 13

Candidate Starts for Astro_28:

(Start: 13 @21515 has 12 MA's), (35, 21659), (Start: 59 @21773 has 1 MA's), (81, 21863), (89, 21899), (93, 21920), (103, 21992), (107, 22016), (120, 22070), (122, 22088), (137, 22172), (158, 22268), (171, 22322), (179, 22370), (209, 22499), (215, 22517), (237, 22643), (257, 22847), (258, 22856), (279, 22937), (299, 23033), (318, 23132), (330, 23219),

Gene: Baddon_36 Start: 33049, Stop: 34770, Start Num: 10

Candidate Starts for Baddon_36:

(Start: 10 @33049 has 52 MA's), (25, 33172), (28, 33184), (39, 33250), (51, 33319), (Start: 59 @33355 has 1 MA's), (103, 33580), (111, 33619), (123, 33679), (133, 33724), (150, 33784), (182, 33919), (184, 33925), (196, 33967), (199, 33982), (205, 34018), (212, 34039), (226, 34138), (242, 34222), (246, 34255), (249, 34300), (250, 34303), (251, 34339), (257, 34375), (259, 34387), (266, 34423), (275, 34459), (289, 34513),

Gene: Baoshan_19 Start: 19053, Stop: 20849, Start Num: 9

Candidate Starts for Baoshan_19:

(Start: 9 @19053 has 25 MA's), (23, 19173), (28, 19194), (30, 19206), (31, 19230), (37, 19257), (50, 19326), (52, 19335), (Start: 59 @19368 has 1 MA's), (64, 19380), (70, 19410), (73, 19437), (95, 19554), (102, 19602), (110, 19638), (120, 19683), (129, 19734), (146, 19839), (151, 19857), (157, 19890), (158, 19893), (167, 19932), (174, 19971), (190, 20031), (191, 20034), (205, 20118), (236, 20265), (245, 20343), (251, 20436), (254, 20451), (268, 20511), (269, 20520), (276, 20547), (290, 20595), (293, 20610), (305, 20694), (306, 20697), (317, 20745), (320, 20760), (329, 20832),

Gene: Barsten_37 Start: 32600, Stop: 34321, Start Num: 10

Candidate Starts for Barsten_37:

(Start: 10 @32600 has 52 MA's), (28, 32735), (29, 32744), (32, 32777), (39, 32801), (51, 32870), (57, 32900), (70, 32945), (103, 33131), (111, 33170), (114, 33179), (127, 33251), (133, 33275), (153, 33347), (173, 33434), (182, 33470), (184, 33476), (196, 33518), (199, 33533), (201, 33542), (226, 33689), (242, 33773), (246, 33806), (250, 33854), (256, 33920), (257, 33926), (259, 33938), (264, 33968), (266, 33974), (275, 34010), (277, 34019), (289, 34064),

Gene: BatStarr_26 Start: 22926, Stop: 24431, Start Num: 45

Candidate Starts for BatStarr_26:

(3, 22611), (12, 22719), (19, 22788), (20, 22791), (24, 22815), (27, 22821), (Start: 45 @22926 has 29 MA's), (58, 22995), (62, 23007), (82, 23118), (84, 23124), (85, 23130), (87, 23136), (98, 23223), (106, 23259), (107, 23265), (109, 23274), (180, 23568), (196, 23622), (197, 23625), (201, 23646), (210, 23691), (226, 23796), (242, 23880), (248, 23961), (249, 23964), (291, 24183), (299, 24231), (307, 24291), (316, 24324), (319, 24330), (327, 24402),

Gene: Baumdotcom_36 Start: 31904, Stop: 33625, Start Num: 10

Candidate Starts for Baumdotcom_36:

(Start: 10 @31904 has 52 MA's), (25, 32027), (28, 32039), (39, 32105), (51, 32174), (103, 32435), (105, 32444), (111, 32474), (123, 32534), (133, 32579), (150, 32639), (182, 32774), (184, 32780), (196, 32822), (199, 32837), (205, 32873), (212, 32894), (226, 32993), (242, 33077), (246, 33110), (249, 33155), (250, 33158), (251, 33194), (257, 33230), (259, 33242), (266, 33278), (289, 33368),

Gene: BaxterFox_26 Start: 22126, Stop: 23631, Start Num: 45

Candidate Starts for BaxterFox_26:

(Start: 45 @22126 has 29 MA's), (55, 22183), (58, 22195), (62, 22207), (82, 22318), (84, 22324), (85, 22330), (87, 22336), (98, 22423), (106, 22459), (107, 22465), (109, 22474), (173, 22738), (180, 22768), (188, 22795), (196, 22822), (197, 22825), (201, 22846), (211, 22894), (215, 22906), (226, 22996), (242, 23080), (249, 23164), (267, 23287), (291, 23383), (299, 23431), (307, 23491), (316,

23524), (319, 23530), (327, 23602),

Gene: Bazzle_20 Start: 19193, Stop: 20989, Start Num: 9

Candidate Starts for Bazzle_20:

(Start: 8 @19190 has 5 MA's), (Start: 9 @19193 has 25 MA's), (30, 19346), (31, 19370), (41, 19406), (50, 19466), (52, 19475), (56, 19499), (64, 19520), (73, 19577), (92, 19670), (95, 19694), (97, 19724), (110, 19778), (120, 19823), (129, 19874), (146, 19979), (158, 20033), (174, 20111), (176, 20120), (189, 20168), (190, 20171), (191, 20174), (197, 20198), (205, 20258), (208, 20267), (236, 20405), (237, 20408), (249, 20537), (251, 20576), (254, 20591), (268, 20651), (269, 20660), (276, 20687), (286, 20720), (290, 20735), (311, 20861), (317, 20885), (329, 20972),

Gene: Bialota_26 Start: 22938, Stop: 24443, Start Num: 45

Candidate Starts for Bialota_26:

(3, 22623), (12, 22731), (19, 22800), (20, 22803), (24, 22827), (27, 22833), (Start: 45 @22938 has 29 MA's), (58, 23007), (62, 23019), (82, 23130), (84, 23136), (85, 23142), (87, 23148), (88, 23154), (98, 23235), (106, 23271), (107, 23277), (109, 23286), (180, 23580), (196, 23634), (197, 23637), (201, 23658), (210, 23703), (226, 23808), (242, 23892), (248, 23973), (249, 23976), (291, 24195), (299, 24243), (307, 24303), (316, 24336), (319, 24342), (327, 24414),

Gene: Bibwit_37 Start: 33393, Stop: 35315, Start Num: 10

Candidate Starts for Bibwit_37:

(Start: 10 @33393 has 52 MA's), (28, 33528), (29, 33537), (32, 33570), (39, 33594), (51, 33663), (70, 33738), (104, 33930), (105, 33936), (108, 33957), (113, 33975), (116, 33987), (126, 34047), (130, 34101), (136, 34215), (155, 34302), (168, 34356), (177, 34410), (180, 34422), (189, 34452), (193, 34464), (201, 34509), (202, 34521), (204, 34539), (213, 34566), (224, 34644), (228, 34671), (234, 34695), (249, 34818), (251, 34860), (265, 34944), (272, 34974), (282, 35001), (292, 35055), (298, 35085), (309, 35157), (312, 35166),

Gene: BigCheese_20 Start: 19228, Stop: 21024, Start Num: 9

Candidate Starts for BigCheese_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (191, 20209), (205, 20293), (208, 20302), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (276, 20722), (284, 20740), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: Bizzy_37 Start: 32196, Stop: 33917, Start Num: 10

Candidate Starts for Bizzy_37:

(Start: 10 @32196 has 52 MA's), (25, 32319), (28, 32331), (39, 32397), (51, 32466), (Start: 59 @32502 has 1 MA's), (70, 32541), (103, 32727), (111, 32766), (123, 32826), (133, 32871), (150, 32931), (182, 33066), (184, 33072), (196, 33114), (199, 33129), (205, 33165), (212, 33186), (226, 33285), (242, 33369), (246, 33402), (249, 33447), (250, 33450), (251, 33486), (257, 33522), (259, 33534), (266, 33570), (275, 33606), (289, 33660),

Gene: BobBob_35 Start: 32673, Stop: 34526, Start Num: 10

Candidate Starts for BobBob_35:

(Start: 10 @32673 has 52 MA's), (28, 32808), (29, 32817), (32, 32850), (39, 32874), (51, 32943), (57, 32973), (70, 33018), (104, 33210), (105, 33216), (108, 33237), (113, 33255), (116, 33267), (126, 33327), (131, 33393), (155, 33513), (164, 33546), (180, 33633), (189, 33663), (193, 33675), (201, 33720), (202, 33732), (204, 33750), (209, 33765), (216, 33789), (224, 33855), (228, 33882), (234, 33906), (249, 34029), (251, 34071), (265, 34155), (272, 34185), (282, 34212), (292, 34266), (298, 34296), (309, 34368), (312, 34377),

Gene: BobsGarage_20 Start: 19228, Stop: 21024, Start Num: 9

Candidate Starts for BobsGarage_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (191, 20209), (205, 20293), (208, 20302), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (284, 20740), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: Bosnia_26 Start: 22926, Stop: 24431, Start Num: 45

Candidate Starts for Bosnia_26:

(3, 22611), (12, 22719), (19, 22788), (20, 22791), (24, 22815), (27, 22821), (Start: 45 @22926 has 29 MA's), (58, 22995), (62, 23007), (82, 23118), (84, 23124), (85, 23130), (87, 23136), (98, 23223), (106, 23259), (107, 23265), (109, 23274), (180, 23568), (196, 23622), (197, 23625), (201, 23646), (210, 23691), (226, 23796), (242, 23880), (248, 23961), (249, 23964), (291, 24183), (299, 24231), (307, 24291), (316, 24324), (319, 24330), (327, 24402),

Gene: BoyNamedSue_27 Start: 22802, Stop: 24307, Start Num: 45

Candidate Starts for BoyNamedSue_27:

(12, 22595), (19, 22664), (20, 22667), (24, 22691), (27, 22697), (Start: 45 @22802 has 29 MA's), (58, 22871), (62, 22883), (82, 22994), (84, 23000), (85, 23006), (87, 23012), (98, 23099), (106, 23135), (107, 23141), (109, 23150), (128, 23234), (180, 23444), (196, 23498), (197, 23501), (201, 23522), (210, 23567), (226, 23672), (242, 23756), (248, 23837), (249, 23840), (267, 23963), (291, 24059), (299, 24107), (301, 24122), (307, 24167), (316, 24200), (319, 24206), (327, 24278),

Gene: Brandonk123_39 Start: 33739, Stop: 35661, Start Num: 10

Candidate Starts for Brandonk123_39:

(Start: 10 @33739 has 52 MA's), (28, 33874), (29, 33883), (32, 33916), (39, 33940), (51, 34009), (57, 34039), (70, 34084), (104, 34276), (105, 34282), (108, 34303), (113, 34321), (116, 34333), (126, 34393), (130, 34447), (136, 34561), (155, 34648), (168, 34702), (177, 34756), (180, 34768), (189, 34798), (193, 34810), (201, 34855), (202, 34867), (204, 34885), (213, 34912), (224, 34990), (228, 35017), (234, 35041), (249, 35164), (251, 35206), (265, 35290), (272, 35320), (282, 35347), (292, 35401), (298, 35431), (309, 35503), (312, 35512),

Gene: Breezona_20 Start: 19225, Stop: 21024, Start Num: 8

Candidate Starts for Breezona_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (191, 20209), (205, 20293), (208, 20302), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (284, 20740), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: Caitlin_27 Start: 21508, Stop: 23229, Start Num: 13

Candidate Starts for Caitlin_27:

(Start: 13 @21508 has 12 MA's), (35, 21652), (39, 21667), (Start: 59 @21766 has 1 MA's), (81, 21856), (89, 21892), (93, 21913), (103, 21985), (107, 22009), (120, 22063), (137, 22165), (158, 22261), (171, 22315), (179, 22363), (203, 22474), (215, 22510), (231, 22621), (237, 22636), (257, 22840), (258, 22849), (279, 22930), (299, 23026), (318, 23125), (330, 23212),

Gene: Camerico_31 Start: 38003, Stop: 39535, Start Num: 44

Candidate Starts for Camerico_31:

(Start: 44 @38003 has 1 MA's), (77, 38162), (80, 38186), (96, 38288), (115, 38372), (140, 38495), (143, 38510), (144, 38513), (160, 38579), (184, 38681), (187, 38690), (189, 38696), (206, 38777), (232, 38921), (243, 38999), (254, 39122), (273, 39212), (295, 39299), (320, 39440), (321, 39455),

Gene: ChadMasterC_37 Start: 33999, Stop: 35720, Start Num: 10

Candidate Starts for ChadMasterC_37:

(Start: 10 @33999 has 52 MA's), (28, 34134), (29, 34143), (32, 34176), (39, 34200), (51, 34269), (70, 34344), (103, 34530), (111, 34569), (114, 34578), (117, 34593), (127, 34650), (133, 34674), (153, 34746), (173, 34833), (182, 34869), (184, 34875), (196, 34917), (199, 34932), (201, 34941), (226, 35088), (242, 35172), (246, 35205), (250, 35253), (256, 35319), (257, 35325), (259, 35337), (264, 35367), (266, 35373), (275, 35409), (277, 35418), (289, 35463),

Gene: Charming_38 Start: 33240, Stop: 35162, Start Num: 10

Candidate Starts for Charming_38:

(Start: 10 @33240 has 52 MA's), (28, 33375), (32, 33417), (39, 33441), (51, 33510), (57, 33540), (70, 33585), (104, 33777), (105, 33783), (108, 33804), (113, 33822), (116, 33834), (126, 33894), (130, 33948), (136, 34062), (155, 34149), (168, 34203), (180, 34269), (189, 34299), (193, 34311), (201, 34356), (202, 34368), (204, 34386), (213, 34413), (224, 34491), (228, 34518), (234, 34542), (249, 34665), (251, 34707), (265, 34791), (272, 34821), (282, 34848), (292, 34902), (298, 34932), (309, 35004), (312, 35013),

Gene: Claus_20 Start: 19209, Stop: 21005, Start Num: 9

Candidate Starts for Claus_20:

(Start: 9 @19209 has 25 MA's), (23, 19329), (28, 19350), (30, 19362), (31, 19386), (37, 19413), (50, 19482), (52, 19491), (Start: 59 @19524 has 1 MA's), (64, 19536), (70, 19566), (73, 19593), (95, 19710), (102, 19758), (110, 19794), (120, 19839), (129, 19890), (146, 19995), (151, 20013), (157, 20046), (158, 20049), (167, 20088), (174, 20127), (190, 20187), (191, 20190), (205, 20274), (236, 20421), (245, 20499), (251, 20592), (254, 20607), (268, 20667), (269, 20676), (290, 20751), (293, 20766), (305, 20850), (306, 20853), (311, 20877), (317, 20901), (320, 20916), (329, 20988),

Gene: Crossroads_20 Start: 19228, Stop: 21024, Start Num: 9

Candidate Starts for Crossroads_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (190, 20206), (191, 20209), (205, 20293), (208, 20302), (216, 20329), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: DHan_20 Start: 19145, Stop: 20941, Start Num: 9

Candidate Starts for DHan_20:

(Start: 9 @19145 has 25 MA's), (23, 19265), (31, 19322), (37, 19349), (49, 19406), (50, 19418), (52, 19427), (64, 19472), (70, 19502), (73, 19529), (95, 19646), (102, 19694), (110, 19730), (120, 19775), (129, 19826), (146, 19931), (151, 19949), (157, 19982), (158, 19985), (167, 20024), (174, 20063), (190, 20123), (191, 20126), (205, 20210), (236, 20357), (245, 20435), (251, 20528), (254, 20543), (268, 20603), (269, 20612), (276, 20639), (290, 20687), (293, 20702), (305, 20786), (311, 20813), (317, 20837), (320, 20852), (329, 20924),

Gene: DanBing_19 Start: 19049, Stop: 20845, Start Num: 9

Candidate Starts for DanBing_19:

(Start: 9 @19049 has 25 MA's), (23, 19169), (28, 19190), (30, 19202), (31, 19226), (37, 19253), (50, 19322), (52, 19331), (Start: 59 @19364 has 1 MA's), (64, 19376), (70, 19406), (73, 19433), (95, 19550), (102, 19598), (110, 19634), (120, 19679), (129, 19730), (146, 19835), (151, 19853), (157,

19886), (158, 19889), (167, 19928), (174, 19967), (190, 20027), (191, 20030), (205, 20114), (236, 20261), (245, 20339), (251, 20432), (254, 20447), (268, 20507), (269, 20516), (276, 20543), (290, 20591), (293, 20606), (305, 20690), (306, 20693), (311, 20717), (317, 20741), (320, 20756), (329, 20828),

Gene: Danforth_27 Start: 21490, Stop: 23211, Start Num: 13

Candidate Starts for Danforth_27:

(Start: 13 @21490 has 12 MA's), (35, 21634), (Start: 59 @21748 has 1 MA's), (81, 21838), (89, 21874), (93, 21895), (103, 21967), (107, 21991), (120, 22045), (137, 22147), (158, 22243), (171, 22297), (179, 22345), (209, 22474), (215, 22492), (237, 22618), (257, 22822), (258, 22831), (279, 22912), (318, 23107),

Gene: Derg_32 Start: 31792, Stop: 33513, Start Num: 10

Candidate Starts for Derg_32:

(Start: 10 @31792 has 52 MA's), (25, 31915), (28, 31927), (39, 31993), (51, 32062), (Start: 59 @32098 has 1 MA's), (103, 32323), (111, 32362), (123, 32422), (133, 32467), (150, 32527), (182, 32662), (184, 32668), (196, 32710), (199, 32725), (205, 32761), (212, 32782), (226, 32881), (242, 32965), (246, 32998), (249, 33043), (250, 33046), (251, 33082), (257, 33118), (259, 33130), (266, 33166), (275, 33202), (289, 33256),

Gene: Dixon_28 Start: 21509, Stop: 23230, Start Num: 13

Candidate Starts for Dixon_28:

(Start: 13 @21509 has 12 MA's), (35, 21653), (39, 21668), (Start: 59 @21767 has 1 MA's), (89, 21893), (93, 21914), (103, 21986), (107, 22010), (120, 22064), (137, 22166), (158, 22262), (171, 22316), (179, 22364), (203, 22475), (215, 22511), (231, 22622), (237, 22637), (257, 22841), (258, 22850), (279, 22931), (299, 23027), (318, 23126),

Gene: DrSeegs_20 Start: 19228, Stop: 21024, Start Num: 9

Candidate Starts for DrSeegs_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (191, 20209), (205, 20293), (208, 20302), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (284, 20740), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: Eudoria_28 Start: 22923, Stop: 24428, Start Num: 45

Candidate Starts for Eudoria_28:

(Start: 45 @22923 has 29 MA's), (58, 22992), (62, 23004), (82, 23115), (85, 23127), (87, 23133), (98, 23220), (106, 23256), (107, 23262), (109, 23271), (180, 23565), (196, 23619), (197, 23622), (201, 23643), (210, 23688), (226, 23793), (242, 23877), (248, 23958), (249, 23961), (267, 24084), (291, 24180), (299, 24228), (307, 24288), (316, 24321), (319, 24327), (327, 24399),

Gene: Eviarto_26 Start: 22926, Stop: 24431, Start Num: 45

Candidate Starts for Eviarto_26:

(3, 22611), (12, 22719), (19, 22788), (20, 22791), (24, 22815), (27, 22821), (Start: 45 @22926 has 29 MA's), (58, 22995), (62, 23007), (82, 23118), (84, 23124), (85, 23130), (87, 23136), (98, 23223), (106, 23259), (107, 23265), (109, 23274), (180, 23568), (196, 23622), (197, 23625), (201, 23646), (210, 23691), (226, 23796), (242, 23880), (248, 23961), (249, 23964), (291, 24183), (299, 24231), (307, 24291), (316, 24324), (319, 24330), (327, 24402),

Gene: Expelliarmus_27 Start: 21476, Stop: 23197, Start Num: 13

Candidate Starts for Expelliarmus_27:

(Start: 13 @21476 has 12 MA's), (35, 21620), (39, 21635), (Start: 59 @21734 has 1 MA's), (81, 21824), (89, 21860), (103, 21953), (107, 21977), (120, 22031), (137, 22133), (158, 22229), (171, 22283), (179, 22331), (209, 22460), (215, 22478), (237, 22604), (257, 22808), (258, 22817), (279, 22898), (299, 22994), (318, 23093), (330, 23180),

Gene: Faith1_20 Start: 19225, Stop: 21024, Start Num: 8

Candidate Starts for Faith1_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (191, 20209), (205, 20293), (208, 20302), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (284, 20740), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: FatCactus_29 Start: 21131, Stop: 22840, Start Num: 13

Candidate Starts for FatCactus_29:

(Start: 13 @21131 has 12 MA's), (35, 21278), (39, 21293), (Start: 44 @21320 has 1 MA's), (54, 21368), (Start: 59 @21392 has 1 MA's), (69, 21425), (134, 21779), (139, 21806), (141, 21815), (192, 22022), (201, 22070), (208, 22109), (216, 22136), (236, 22244), (237, 22247), (239, 22262), (257, 22448), (270, 22508), (278, 22535), (293, 22595),

Gene: Finemlucis_20 Start: 19236, Stop: 21032, Start Num: 9

Candidate Starts for Finemlucis_20:

(Start: 8 @19233 has 5 MA's), (Start: 9 @19236 has 25 MA's), (30, 19389), (31, 19413), (50, 19509), (52, 19518), (64, 19563), (70, 19593), (73, 19620), (92, 19713), (95, 19737), (110, 19821), (120, 19866), (146, 20022), (151, 20040), (154, 20055), (157, 20073), (158, 20076), (174, 20154), (189, 20211), (190, 20214), (191, 20217), (205, 20301), (208, 20310), (216, 20337), (236, 20448), (237, 20451), (251, 20619), (268, 20694), (269, 20703), (276, 20730), (286, 20763), (290, 20778), (293, 20793), (294, 20799), (305, 20877), (306, 20880), (317, 20928), (329, 21015),

Gene: Fitzgerald_35 Start: 33217, Stop: 34938, Start Num: 10

Candidate Starts for Fitzgerald_35:

(Start: 10 @33217 has 52 MA's), (28, 33352), (29, 33361), (32, 33394), (39, 33418), (51, 33487), (103, 33748), (111, 33787), (114, 33796), (117, 33811), (127, 33868), (133, 33892), (153, 33964), (173, 34051), (182, 34087), (184, 34093), (196, 34135), (199, 34150), (201, 34159), (226, 34306), (242, 34390), (246, 34423), (250, 34471), (256, 34537), (257, 34543), (259, 34555), (264, 34585), (266, 34591), (275, 34627), (277, 34636), (289, 34681),

Gene: Flatwoods_37 Start: 32153, Stop: 33874, Start Num: 10

Candidate Starts for Flatwoods_37:

(Start: 10 @32153 has 52 MA's), (25, 32276), (28, 32288), (39, 32354), (51, 32423), (Start: 59 @32459 has 1 MA's), (70, 32498), (103, 32684), (111, 32723), (123, 32783), (133, 32828), (150, 32888), (182, 33023), (184, 33029), (196, 33071), (199, 33086), (205, 33122), (212, 33143), (226, 33242), (242, 33326), (246, 33359), (249, 33404), (250, 33407), (251, 33443), (257, 33479), (259, 33491), (266, 33527), (275, 33563), (289, 33617),

Gene: Fosterous_36 Start: 33665, Stop: 35518, Start Num: 10

Candidate Starts for Fosterous_36:

(Start: 10 @33665 has 52 MA's), (28, 33800), (29, 33809), (32, 33842), (39, 33866), (51, 33935), (70, 34010), (104, 34202), (105, 34208), (108, 34229), (113, 34247), (116, 34259), (126, 34319), (132, 34400), (155, 34505), (156, 34508), (164, 34538), (177, 34613), (180, 34625), (189, 34655), (193, 34667), (201, 34712), (202, 34724), (204, 34742), (213, 34769), (224, 34847), (228, 34874), (234, 34898), (249, 35021), (251, 35063), (265, 35147), (272, 35177), (282, 35204), (292, 35258), (298,

35288), (309, 35360), (312, 35369),

Gene: FuegoCuervo_39 Start: 31604, Stop: 33325, Start Num: 10

Candidate Starts for FuegoCuervo_39:

(Start: 10 @31604 has 52 MA's), (28, 31739), (29, 31748), (32, 31781), (39, 31805), (51, 31874), (57, 31904), (103, 32135), (111, 32174), (114, 32183), (117, 32198), (127, 32255), (133, 32279), (153, 32351), (173, 32438), (182, 32474), (184, 32480), (195, 32516), (196, 32522), (199, 32537), (225, 32690), (226, 32693), (242, 32777), (246, 32810), (250, 32858), (256, 32924), (257, 32930), (259, 32942), (264, 32972), (266, 32978), (275, 33014), (277, 33023), (289, 33068), (312, 33197),

Gene: Gabriela_20 Start: 19228, Stop: 21024, Start Num: 9

Candidate Starts for Gabriela_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (191, 20209), (205, 20293), (208, 20302), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (284, 20740), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: Gaea_36 Start: 31801, Stop: 33522, Start Num: 10

Candidate Starts for Gaea_36:

(Start: 10 @31801 has 52 MA's), (25, 31924), (28, 31936), (39, 32002), (51, 32071), (Start: 59 @32107 has 1 MA's), (103, 32332), (111, 32371), (123, 32431), (133, 32476), (150, 32536), (182, 32671), (184, 32677), (196, 32719), (199, 32734), (205, 32770), (212, 32791), (226, 32890), (242, 32974), (246, 33007), (250, 33055), (251, 33091), (257, 33127), (259, 33139), (262, 33154), (266, 33175), (289, 33265),

Gene: Galadriel_38 Start: 34154, Stop: 36079, Start Num: 10

Candidate Starts for Galadriel_38:

(Start: 10 @34154 has 52 MA's), (28, 34289), (29, 34298), (32, 34331), (39, 34355), (51, 34424), (70, 34499), (104, 34691), (105, 34697), (108, 34718), (113, 34736), (116, 34748), (126, 34808), (130, 34862), (136, 34979), (155, 35066), (168, 35120), (177, 35174), (180, 35186), (189, 35216), (193, 35228), (201, 35273), (202, 35285), (204, 35303), (213, 35330), (224, 35408), (228, 35435), (234, 35459), (249, 35582), (251, 35624), (265, 35708), (272, 35738), (282, 35765), (292, 35819), (298, 35849), (309, 35921), (312, 35930),

Gene: Gardann_20 Start: 19233, Stop: 21029, Start Num: 9

Candidate Starts for Gardann_20:

(Start: 8 @19230 has 5 MA's), (Start: 9 @19233 has 25 MA's), (30, 19386), (31, 19410), (50, 19506), (52, 19515), (63, 19557), (64, 19560), (70, 19590), (73, 19617), (92, 19710), (95, 19734), (110, 19818), (120, 19863), (125, 19899), (146, 20019), (151, 20037), (154, 20052), (157, 20070), (158, 20073), (174, 20151), (189, 20208), (190, 20211), (191, 20214), (205, 20298), (208, 20307), (216, 20334), (236, 20445), (237, 20448), (251, 20616), (268, 20691), (269, 20700), (276, 20727), (286, 20760), (290, 20775), (293, 20790), (294, 20796), (305, 20874), (306, 20877), (317, 20925), (329, 21012),

Gene: Geodirt_35 Start: 33142, Stop: 34863, Start Num: 10

Candidate Starts for Geodirt_35:

(Start: 10 @33142 has 52 MA's), (28, 33277), (29, 33286), (32, 33319), (39, 33343), (51, 33412), (70, 33487), (103, 33673), (111, 33712), (114, 33721), (127, 33793), (133, 33817), (153, 33889), (173, 33976), (182, 34012), (184, 34018), (196, 34060), (199, 34075), (201, 34084), (226, 34231), (242, 34315), (246, 34348), (250, 34396), (256, 34462), (257, 34468), (259, 34480), (264, 34510), (266, 34516), (275, 34552), (277, 34561), (289, 34606),

Gene: Groundhog_27 Start: 21477, Stop: 23198, Start Num: 13

Candidate Starts for Groundhog_27:

(Start: 13 @21477 has 12 MA's), (35, 21621), (39, 21636), (Start: 59 @21735 has 1 MA's), (81, 21825), (89, 21861), (93, 21882), (103, 21954), (107, 21978), (120, 22032), (137, 22134), (158, 22230), (171, 22284), (179, 22332), (209, 22461), (215, 22479), (237, 22605), (257, 22809), (258, 22818), (279, 22899), (299, 22995), (318, 23094), (330, 23181),

Gene: Gustavo_36 Start: 31956, Stop: 33677, Start Num: 10

Candidate Starts for Gustavo_36:

(Start: 10 @31956 has 52 MA's), (25, 32079), (28, 32091), (39, 32157), (51, 32226), (Start: 59 @32262 has 1 MA's), (70, 32301), (103, 32487), (111, 32526), (123, 32586), (133, 32631), (150, 32691), (182, 32826), (184, 32832), (196, 32874), (199, 32889), (205, 32925), (212, 32946), (226, 33045), (242, 33129), (246, 33162), (249, 33207), (250, 33210), (251, 33246), (257, 33282), (259, 33294), (266, 33330), (275, 33366), (289, 33420),

Gene: GuuelaD_20 Start: 19262, Stop: 21058, Start Num: 9

Candidate Starts for GuuelaD_20:

(Start: 8 @19259 has 5 MA's), (Start: 9 @19262 has 25 MA's), (30, 19415), (31, 19439), (48, 19514), (50, 19535), (52, 19544), (73, 19646), (92, 19739), (95, 19763), (110, 19847), (120, 19892), (125, 19928), (129, 19943), (146, 20048), (154, 20081), (157, 20099), (158, 20102), (167, 20141), (174, 20180), (190, 20240), (191, 20243), (205, 20327), (208, 20336), (216, 20363), (236, 20474), (251, 20645), (268, 20720), (269, 20729), (276, 20756), (286, 20789), (290, 20804), (293, 20819), (294, 20825), (305, 20903), (306, 20906), (317, 20954), (329, 21041),

Gene: Hafay_20 Start: 19261, Stop: 21057, Start Num: 9

Candidate Starts for Hafay_20:

(Start: 8 @19258 has 5 MA's), (Start: 9 @19261 has 25 MA's), (30, 19414), (31, 19438), (50, 19534), (52, 19543), (63, 19585), (64, 19588), (70, 19618), (73, 19645), (92, 19738), (95, 19762), (110, 19846), (120, 19891), (125, 19927), (146, 20047), (151, 20065), (154, 20080), (157, 20098), (158, 20101), (174, 20179), (189, 20236), (190, 20239), (191, 20242), (205, 20326), (208, 20335), (216, 20362), (236, 20473), (237, 20476), (251, 20644), (268, 20719), (269, 20728), (276, 20755), (286, 20788), (290, 20803), (293, 20818), (294, 20824), (305, 20902), (306, 20905), (329, 21040),

Gene: Heinz_26 Start: 19746, Stop: 21263, Start Num: 42

Candidate Starts for Heinz_26:

(Start: 42 @19746 has 1 MA's), (64, 19845), (80, 19941), (84, 19956), (85, 19962), (98, 20055), (107, 20097), (109, 20106), (128, 20190), (133, 20211), (165, 20331), (173, 20370), (180, 20400), (188, 20427), (196, 20454), (201, 20478), (211, 20526), (214, 20535), (215, 20538), (225, 20625), (226, 20628), (242, 20712), (267, 20919), (291, 21015), (299, 21063), (303, 21099), (307, 21123), (319, 21162), (327, 21234), (330, 21249),

Gene: Herbertwm_29 Start: 21904, Stop: 23925, Start Num: 1

Candidate Starts for Herbertwm_29:

(Start: 1 @21904 has 2 MA's), (4, 22018), (11, 22090), (26, 22192), (43, 22273), (50, 22330), (61, 22378), (80, 22480), (93, 22540), (120, 22690), (122, 22708), (125, 22726), (135, 22783), (142, 22822), (156, 22885), (158, 22891), (159, 22894), (169, 22936), (209, 23122), (211, 23128), (216, 23146), (230, 23239), (244, 23323), (255, 23467), (270, 23557), (286, 23614), (293, 23650), (300, 23698), (304, 23728), (305, 23731), (322, 23818), (331, 23893),

Gene: Herod_26 Start: 22926, Stop: 24431, Start Num: 45

Candidate Starts for Herod_26:

(3, 22611), (12, 22719), (19, 22788), (20, 22791), (24, 22815), (27, 22821), (Start: 45 @22926 has 29 MA's), (58, 22995), (62, 23007), (82, 23118), (84, 23124), (85, 23130), (87, 23136), (98, 23223), (106,

23259), (107, 23265), (109, 23274), (180, 23568), (196, 23622), (197, 23625), (201, 23646), (210, 23691), (226, 23796), (242, 23880), (248, 23961), (249, 23964), (291, 24183), (299, 24231), (307, 24291), (316, 24324), (319, 24330), (327, 24402),

Gene: Hibiscus_25 Start: 19694, Stop: 21211, Start Num: 42

Candidate Starts for Hibiscus_25:

(Start: 42 @19694 has 1 MA's), (64, 19793), (80, 19889), (84, 19904), (85, 19910), (98, 20003), (107, 20045), (109, 20054), (128, 20138), (133, 20159), (165, 20279), (173, 20318), (180, 20348), (188, 20375), (196, 20402), (201, 20426), (211, 20474), (214, 20483), (215, 20486), (225, 20573), (226, 20576), (242, 20660), (267, 20867), (291, 20963), (299, 21011), (303, 21047), (307, 21071), (319, 21110), (327, 21182), (330, 21197),

Gene: Hugley_26 Start: 22926, Stop: 24431, Start Num: 45

Candidate Starts for Hugley_26:

(3, 22611), (12, 22719), (19, 22788), (20, 22791), (24, 22815), (27, 22821), (Start: 45 @22926 has 29 MA's), (58, 22995), (62, 23007), (82, 23118), (84, 23124), (85, 23130), (87, 23136), (98, 23223), (106, 23259), (107, 23265), (109, 23274), (180, 23568), (196, 23622), (197, 23625), (201, 23646), (210, 23691), (226, 23796), (242, 23880), (248, 23961), (249, 23964), (291, 24183), (299, 24231), (307, 24291), (316, 24324), (319, 24330), (327, 24402),

Gene: Itos_20 Start: 19225, Stop: 21024, Start Num: 8

Candidate Starts for Itos_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (191, 20209), (205, 20293), (208, 20302), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (284, 20740), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: JKSyngboy_34 Start: 32531, Stop: 34252, Start Num: 10

Candidate Starts for JKSyngboy_34:

(Start: 10 @32531 has 52 MA's), (25, 32654), (28, 32666), (39, 32732), (51, 32801), (Start: 59 @32837 has 1 MA's), (103, 33062), (111, 33101), (123, 33161), (133, 33206), (150, 33266), (178, 33392), (182, 33401), (184, 33407), (196, 33449), (199, 33464), (201, 33473), (205, 33500), (212, 33521), (226, 33620), (242, 33704), (257, 33857), (259, 33869), (262, 33884), (266, 33905), (289, 33995), (302, 34088),

Gene: Jabberwocky_35 Start: 33678, Stop: 35399, Start Num: 10

Candidate Starts for Jabberwocky_35:

(Start: 10 @33678 has 52 MA's), (28, 33813), (32, 33855), (39, 33879), (70, 34023), (103, 34209), (111, 34248), (114, 34257), (127, 34329), (133, 34353), (153, 34425), (173, 34512), (182, 34548), (184, 34554), (196, 34596), (199, 34611), (201, 34620), (226, 34767), (242, 34851), (246, 34884), (250, 34932), (256, 34998), (257, 35004), (259, 35016), (264, 35046), (266, 35052), (275, 35088), (277, 35097), (289, 35142),

Gene: Kahlid_20 Start: 19233, Stop: 21029, Start Num: 9

Candidate Starts for Kahlid_20:

(Start: 8 @19230 has 5 MA's), (Start: 9 @19233 has 25 MA's), (30, 19386), (31, 19410), (50, 19506), (52, 19515), (63, 19557), (64, 19560), (70, 19590), (73, 19617), (92, 19710), (95, 19734), (110, 19818), (120, 19863), (125, 19899), (146, 20019), (151, 20037), (154, 20052), (157, 20070), (158, 20073), (174, 20151), (189, 20208), (190, 20211), (191, 20214), (205, 20298), (208, 20307), (216, 20334), (236, 20445), (237, 20448), (251, 20616), (268, 20691), (269, 20700), (276, 20727), (286, 20760), (290, 20775), (293, 20790), (294, 20796), (305, 20874), (306, 20877), (317, 20925), (329, 21012),

Gene: Kamashten_36 Start: 33130, Stop: 35052, Start Num: 10

Candidate Starts for Kamashten_36:

(Start: 10 @33130 has 52 MA's), (28, 33265), (29, 33274), (32, 33307), (39, 33331), (51, 33400), (70, 33475), (104, 33667), (105, 33673), (108, 33694), (113, 33712), (116, 33724), (126, 33784), (130, 33838), (136, 33952), (155, 34039), (168, 34093), (177, 34147), (180, 34159), (189, 34189), (193, 34201), (201, 34246), (202, 34258), (204, 34276), (213, 34303), (224, 34381), (228, 34408), (234, 34432), (249, 34555), (251, 34597), (265, 34681), (272, 34711), (282, 34738), (292, 34792), (298, 34822), (309, 34894), (312, 34903),

Gene: Keitabear_38 Start: 35100, Stop: 37022, Start Num: 10

Candidate Starts for Keitabear_38:

(Start: 10 @35100 has 52 MA's), (28, 35235), (32, 35277), (39, 35301), (51, 35370), (70, 35445), (104, 35637), (105, 35643), (108, 35664), (113, 35682), (116, 35694), (126, 35754), (130, 35808), (136, 35922), (155, 36009), (168, 36063), (180, 36129), (189, 36159), (193, 36171), (201, 36216), (202, 36228), (204, 36246), (213, 36273), (224, 36351), (228, 36378), (234, 36402), (249, 36525), (251, 36567), (265, 36651), (272, 36681), (292, 36762), (298, 36792), (309, 36864), (312, 36873),

Gene: Kewpiedoll_36 Start: 32537, Stop: 34258, Start Num: 10

Candidate Starts for Kewpiedoll_36:

(Start: 10 @32537 has 52 MA's), (28, 32672), (29, 32681), (32, 32714), (39, 32738), (51, 32807), (70, 32882), (103, 33068), (111, 33107), (114, 33116), (117, 33131), (127, 33188), (133, 33212), (153, 33284), (173, 33371), (182, 33407), (184, 33413), (196, 33455), (199, 33470), (201, 33479), (226, 33626), (242, 33710), (246, 33743), (250, 33791), (256, 33857), (257, 33863), (259, 33875), (264, 33905), (266, 33911), (275, 33947), (277, 33956), (289, 34001),

Gene: Kita_28 Start: 22923, Stop: 24428, Start Num: 45

Candidate Starts for Kita_28:

(Start: 45 @22923 has 29 MA's), (58, 22992), (62, 23004), (82, 23115), (85, 23127), (87, 23133), (98, 23220), (106, 23256), (107, 23262), (109, 23271), (180, 23565), (196, 23619), (197, 23622), (201, 23643), (210, 23688), (226, 23793), (242, 23877), (248, 23958), (249, 23961), (267, 24084), (291, 24180), (299, 24228), (307, 24288), (316, 24321), (319, 24327), (327, 24399),

Gene: Kroos_37 Start: 32709, Stop: 34430, Start Num: 10

Candidate Starts for Kroos_37:

(Start: 10 @32709 has 52 MA's), (25, 32832), (28, 32844), (39, 32910), (51, 32979), (Start: 59 @33015 has 1 MA's), (70, 33054), (103, 33240), (111, 33279), (123, 33339), (133, 33384), (150, 33444), (182, 33579), (184, 33585), (196, 33627), (199, 33642), (205, 33678), (212, 33699), (226, 33798), (242, 33882), (246, 33915), (249, 33960), (250, 33963), (251, 33999), (257, 34035), (259, 34047), (266, 34083), (275, 34119), (289, 34173),

Gene: Kwobi_38 Start: 32695, Stop: 34416, Start Num: 10

Candidate Starts for Kwobi_38:

(Start: 10 @32695 has 52 MA's), (25, 32818), (28, 32830), (39, 32896), (51, 32965), (Start: 59 @33001 has 1 MA's), (103, 33226), (111, 33265), (123, 33325), (133, 33370), (150, 33430), (182, 33565), (184, 33571), (196, 33613), (199, 33628), (205, 33664), (212, 33685), (226, 33784), (242, 33868), (246, 33901), (249, 33946), (250, 33949), (251, 33985), (257, 34021), (259, 34033), (266, 34069), (275, 34105), (289, 34159),

Gene: Lennon_38 Start: 34887, Stop: 36809, Start Num: 10

Candidate Starts for Lennon_38:

(Start: 10 @34887 has 52 MA's), (28, 35022), (29, 35031), (32, 35064), (39, 35088), (51, 35157), (70, 35232), (104, 35424), (105, 35430), (108, 35451), (113, 35469), (116, 35481), (126, 35541), (130,

35595), (136, 35709), (155, 35796), (168, 35850), (177, 35904), (180, 35916), (189, 35946), (193, 35958), (201, 36003), (202, 36015), (204, 36033), (213, 36060), (224, 36138), (228, 36165), (234, 36189), (249, 36312), (251, 36354), (265, 36438), (272, 36468), (292, 36549), (298, 36579), (309, 36651), (312, 36660),

Gene: Lewan_20 Start: 19228, Stop: 21024, Start Num: 9

Candidate Starts for Lewan_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (125, 19894), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (190, 20206), (191, 20209), (200, 20257), (205, 20293), (208, 20302), (216, 20329), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: LilDestine_20 Start: 19227, Stop: 21023, Start Num: 9

Candidate Starts for LilDestine_20:

(Start: 8 @19224 has 5 MA's), (Start: 9 @19227 has 25 MA's), (30, 19380), (31, 19404), (50, 19500), (52, 19509), (63, 19551), (64, 19554), (70, 19584), (73, 19611), (92, 19704), (95, 19728), (110, 19812), (120, 19857), (125, 19893), (146, 20013), (151, 20031), (154, 20046), (157, 20064), (158, 20067), (174, 20145), (189, 20202), (190, 20205), (191, 20208), (205, 20292), (208, 20301), (216, 20328), (236, 20439), (237, 20442), (251, 20610), (268, 20685), (269, 20694), (276, 20721), (286, 20754), (290, 20769), (293, 20784), (294, 20790), (305, 20868), (306, 20871), (317, 20919), (329, 21006),

Gene: LilHam_34 Start: 31298, Stop: 33019, Start Num: 10

Candidate Starts for LilHam_34:

(Start: 10 @31298 has 52 MA's), (25, 31421), (28, 31433), (39, 31499), (51, 31568), (Start: 59 @31604 has 1 MA's), (103, 31829), (111, 31868), (123, 31928), (133, 31973), (150, 32033), (182, 32168), (184, 32174), (196, 32216), (199, 32231), (205, 32267), (212, 32288), (226, 32387), (242, 32471), (246, 32504), (249, 32549), (250, 32552), (251, 32588), (257, 32624), (259, 32636), (266, 32672), (275, 32708), (289, 32762),

Gene: LilyPad_26 Start: 21924, Stop: 23648, Start Num: 6

Candidate Starts for LilyPad_26:

(Start: 6 @21924 has 1 MA's), (14, 21999), (15, 22005), (17, 22014), (21, 22056), (47, 22188), (66, 22266), (67, 22272), (72, 22308), (92, 22392), (101, 22467), (106, 22488), (112, 22512), (123, 22566), (138, 22620), (152, 22674), (153, 22683), (154, 22686), (186, 22821), (187, 22824), (207, 22908), (220, 22959), (221, 22962), (223, 22980), (226, 23016), (238, 23055), (246, 23133), (256, 23247), (264, 23292), (280, 23346), (283, 23355), (285, 23361), (308, 23505), (313, 23523),

Gene: Loadrie_20 Start: 19260, Stop: 21056, Start Num: 9

Candidate Starts for Loadrie_20:

(Start: 8 @19257 has 5 MA's), (Start: 9 @19260 has 25 MA's), (30, 19413), (31, 19437), (50, 19533), (52, 19542), (64, 19587), (70, 19617), (73, 19644), (92, 19737), (95, 19761), (110, 19845), (120, 19890), (151, 20064), (154, 20079), (157, 20097), (158, 20100), (174, 20178), (189, 20235), (191, 20241), (205, 20325), (208, 20334), (236, 20472), (237, 20475), (251, 20643), (268, 20718), (269, 20727), (276, 20754), (286, 20787), (290, 20802), (293, 20817), (294, 20823), (305, 20901), (306, 20904), (329, 21039),

Gene: Love_41 Start: 34670, Stop: 36595, Start Num: 10

Candidate Starts for Love_41:

(Start: 10 @34670 has 52 MA's), (28, 34805), (29, 34814), (32, 34847), (39, 34871), (51, 34940), (70, 35015), (104, 35207), (105, 35213), (108, 35234), (113, 35252), (116, 35264), (126, 35324), (130,

35378), (136, 35495), (155, 35582), (168, 35636), (180, 35702), (189, 35732), (193, 35744), (201, 35789), (202, 35801), (204, 35819), (213, 35846), (224, 35924), (228, 35951), (234, 35975), (249, 36098), (251, 36140), (265, 36224), (272, 36254), (282, 36281), (292, 36335), (298, 36365), (309, 36437), (312, 36446),

Gene: Lynnae_20 Start: 19216, Stop: 21012, Start Num: 9

Candidate Starts for Lynnae_20:

(Start: 8 @19213 has 5 MA's), (Start: 9 @19216 has 25 MA's), (30, 19369), (31, 19393), (50, 19489), (52, 19498), (63, 19540), (64, 19543), (70, 19573), (73, 19600), (92, 19693), (95, 19717), (110, 19801), (120, 19846), (125, 19882), (146, 20002), (151, 20020), (154, 20035), (157, 20053), (158, 20056), (174, 20134), (189, 20191), (190, 20194), (191, 20197), (205, 20281), (208, 20290), (216, 20317), (236, 20428), (237, 20431), (251, 20599), (268, 20674), (269, 20683), (276, 20710), (286, 20743), (290, 20758), (293, 20773), (294, 20779), (305, 20857), (306, 20860), (317, 20908), (329, 20995),

Gene: Madavieve_26 Start: 23206, Stop: 24711, Start Num: 45

Candidate Starts for Madavieve_26:

(3, 22891), (12, 22999), (19, 23068), (20, 23071), (24, 23095), (27, 23101), (Start: 45 @23206 has 29 MA's), (58, 23275), (62, 23287), (82, 23398), (84, 23404), (85, 23410), (87, 23416), (98, 23503), (106, 23539), (107, 23545), (109, 23554), (180, 23848), (196, 23902), (197, 23905), (201, 23926), (210, 23971), (226, 24076), (242, 24160), (248, 24241), (249, 24244), (291, 24463), (299, 24511), (307, 24571), (316, 24604), (319, 24610), (327, 24682),

Gene: Madeline_26 Start: 23224, Stop: 24729, Start Num: 45

Candidate Starts for Madeline_26:

(3, 22909), (12, 23017), (19, 23086), (20, 23089), (24, 23113), (27, 23119), (Start: 45 @23224 has 29 MA's), (58, 23293), (62, 23305), (82, 23416), (84, 23422), (85, 23428), (87, 23434), (98, 23521), (106, 23557), (107, 23563), (109, 23572), (180, 23866), (196, 23920), (197, 23923), (201, 23944), (210, 23989), (226, 24094), (242, 24178), (248, 24259), (249, 24262), (291, 24481), (299, 24529), (307, 24589), (316, 24622), (319, 24628), (327, 24700),

Gene: Manasvini_28 Start: 22923, Stop: 24428, Start Num: 45

Candidate Starts for Manasvini_28:

(Start: 45 @22923 has 29 MA's), (58, 22992), (62, 23004), (82, 23115), (85, 23127), (87, 23133), (98, 23220), (106, 23256), (107, 23262), (109, 23271), (180, 23565), (196, 23619), (197, 23622), (201, 23643), (210, 23688), (226, 23793), (242, 23877), (248, 23958), (249, 23961), (267, 24084), (291, 24180), (299, 24228), (307, 24288), (316, 24321), (319, 24327), (327, 24399),

Gene: Maridalia_27 Start: 22923, Stop: 24428, Start Num: 45

Candidate Starts for Maridalia_27:

(Start: 45 @22923 has 29 MA's), (58, 22992), (62, 23004), (82, 23115), (85, 23127), (87, 23133), (98, 23220), (106, 23256), (107, 23262), (109, 23271), (180, 23565), (196, 23619), (197, 23622), (201, 23643), (210, 23688), (226, 23793), (242, 23877), (248, 23958), (249, 23961), (267, 24084), (291, 24180), (299, 24228), (307, 24288), (316, 24321), (319, 24327), (327, 24399),

Gene: McCrothy_38 Start: 34478, Stop: 36403, Start Num: 10

Candidate Starts for McCrothy_38:

(Start: 10 @34478 has 52 MA's), (28, 34613), (29, 34622), (32, 34655), (39, 34679), (51, 34748), (70, 34823), (104, 35015), (105, 35021), (108, 35042), (113, 35060), (116, 35072), (126, 35132), (130, 35186), (136, 35303), (155, 35390), (168, 35444), (180, 35510), (189, 35540), (193, 35552), (201, 35597), (202, 35609), (204, 35627), (213, 35654), (224, 35732), (228, 35759), (234, 35783), (249, 35906), (251, 35948), (265, 36032), (272, 36062), (282, 36089), (292, 36143), (298, 36173), (309, 36245), (312, 36254),

Gene: McKinley_40 Start: 34696, Stop: 36618, Start Num: 10

Candidate Starts for McKinley_40:

(Start: 10 @34696 has 52 MA's), (28, 34831), (29, 34840), (32, 34873), (39, 34897), (51, 34966), (57, 34996), (70, 35041), (104, 35233), (105, 35239), (108, 35260), (113, 35278), (116, 35290), (126, 35350), (130, 35404), (136, 35518), (155, 35605), (168, 35659), (180, 35725), (189, 35755), (193, 35767), (201, 35812), (202, 35824), (204, 35842), (213, 35869), (224, 35947), (228, 35974), (234, 35998), (249, 36121), (251, 36163), (265, 36247), (272, 36277), (282, 36304), (292, 36358), (298, 36388), (309, 36460), (312, 36469),

Gene: Miley16_20 Start: 19228, Stop: 21024, Start Num: 9

Candidate Starts for Miley16_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (191, 20209), (205, 20293), (208, 20302), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (284, 20740), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: MkaliMitinis3_20 Start: 19228, Stop: 21024, Start Num: 9

Candidate Starts for MkaliMitinis3_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (190, 20206), (191, 20209), (205, 20293), (208, 20302), (216, 20329), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: MoontowerMania_36 Start: 32904, Stop: 34625, Start Num: 10

Candidate Starts for MoontowerMania_36:

(Start: 10 @32904 has 52 MA's), (28, 33039), (29, 33048), (32, 33081), (39, 33105), (51, 33174), (57, 33204), (70, 33249), (103, 33435), (111, 33474), (114, 33483), (117, 33498), (127, 33555), (133, 33579), (153, 33651), (173, 33738), (182, 33774), (184, 33780), (196, 33822), (199, 33837), (225, 33990), (226, 33993), (233, 34020), (242, 34077), (246, 34110), (250, 34158), (256, 34224), (257, 34230), (259, 34242), (264, 34272), (266, 34278), (275, 34314), (277, 34323), (289, 34368), (312, 34497),

Gene: NearlyHeadless_28 Start: 21529, Stop: 23250, Start Num: 13

Candidate Starts for NearlyHeadless_28:

(Start: 13 @21529 has 12 MA's), (35, 21673), (39, 21688), (Start: 59 @21787 has 1 MA's), (81, 21877), (89, 21913), (93, 21934), (103, 22006), (107, 22030), (120, 22084), (137, 22186), (158, 22282), (171, 22336), (179, 22384), (209, 22513), (215, 22531), (237, 22657), (257, 22861), (258, 22870), (278, 22948), (279, 22951), (299, 23047), (318, 23146), (330, 23233),

Gene: Neobush_28 Start: 22923, Stop: 24428, Start Num: 45

Candidate Starts for Neobush_28:

(Start: 45 @22923 has 29 MA's), (58, 22992), (62, 23004), (82, 23115), (85, 23127), (87, 23133), (98, 23220), (106, 23256), (107, 23262), (109, 23271), (180, 23565), (196, 23619), (197, 23622), (201, 23643), (210, 23688), (226, 23793), (242, 23877), (248, 23958), (249, 23961), (267, 24084), (291, 24180), (299, 24228), (307, 24288), (316, 24321), (319, 24327), (327, 24399),

Gene: Netyap_20 Start: 19228, Stop: 21024, Start Num: 9

Candidate Starts for Netyap_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (191, 20209), (205, 20293), (208, 20302), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (284, 20740), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: Nicholasp3_20 Start: 19233, Stop: 21029, Start Num: 9

Candidate Starts for Nicholasp3_20:

(Start: 8 @19230 has 5 MA's), (Start: 9 @19233 has 25 MA's), (30, 19386), (31, 19410), (50, 19506), (52, 19515), (63, 19557), (64, 19560), (70, 19590), (73, 19617), (92, 19710), (95, 19734), (110, 19818), (120, 19863), (125, 19899), (146, 20019), (151, 20037), (154, 20052), (157, 20070), (158, 20073), (174, 20151), (189, 20208), (190, 20211), (191, 20214), (205, 20298), (208, 20307), (216, 20334), (236, 20445), (237, 20448), (251, 20616), (268, 20691), (269, 20700), (276, 20727), (286, 20760), (290, 20775), (293, 20790), (294, 20796), (305, 20874), (306, 20877), (317, 20925), (329, 21012),

Gene: Nordenberg_32 Start: 32866, Stop: 34788, Start Num: 10

Candidate Starts for Nordenberg_32:

(Start: 10 @32866 has 52 MA's), (28, 33001), (29, 33010), (32, 33043), (39, 33067), (51, 33136), (70, 33211), (104, 33403), (105, 33409), (108, 33430), (113, 33448), (116, 33460), (126, 33520), (130, 33574), (136, 33688), (155, 33775), (168, 33829), (180, 33895), (189, 33925), (193, 33937), (201, 33982), (202, 33994), (204, 34012), (213, 34039), (224, 34117), (228, 34144), (234, 34168), (249, 34291), (251, 34333), (265, 34417), (272, 34447), (282, 34474), (292, 34528), (298, 34558), (309, 34630), (312, 34639),

Gene: Nymphadora_26 Start: 22926, Stop: 24431, Start Num: 45

Candidate Starts for Nymphadora_26:

(3, 22611), (12, 22719), (19, 22788), (20, 22791), (24, 22815), (27, 22821), (Start: 45 @22926 has 29 MA's), (58, 22995), (62, 23007), (82, 23118), (84, 23124), (85, 23130), (87, 23136), (98, 23223), (106, 23259), (107, 23265), (109, 23274), (180, 23568), (196, 23622), (197, 23625), (201, 23646), (210, 23691), (226, 23796), (242, 23880), (248, 23961), (249, 23964), (291, 24183), (299, 24231), (307, 24291), (316, 24324), (319, 24330), (327, 24402),

Gene: Ohgeesy_26 Start: 22549, Stop: 24054, Start Num: 45

Candidate Starts for Ohgeesy_26:

(3, 22234), (12, 22342), (19, 22411), (20, 22414), (24, 22438), (27, 22444), (Start: 45 @22549 has 29 MA's), (58, 22618), (62, 22630), (82, 22741), (84, 22747), (85, 22753), (87, 22759), (98, 22846), (106, 22882), (107, 22888), (109, 22897), (180, 23191), (196, 23245), (197, 23248), (201, 23269), (210, 23314), (226, 23419), (242, 23503), (248, 23584), (249, 23587), (291, 23806), (299, 23854), (307, 23914), (316, 23947), (319, 23953), (327, 24025),

Gene: OverPar_20 Start: 19260, Stop: 21056, Start Num: 9

Candidate Starts for OverPar_20:

(Start: 8 @19257 has 5 MA's), (Start: 9 @19260 has 25 MA's), (30, 19413), (31, 19437), (50, 19533), (52, 19542), (64, 19587), (70, 19617), (73, 19644), (92, 19737), (95, 19761), (110, 19845), (120, 19890), (151, 20064), (154, 20079), (157, 20097), (158, 20100), (174, 20178), (189, 20235), (191, 20241), (205, 20325), (208, 20334), (236, 20472), (237, 20475), (251, 20643), (268, 20718), (269, 20727), (276, 20754), (286, 20787), (290, 20802), (293, 20817), (294, 20823), (305, 20901), (306, 20904), (329, 21039),

Gene: PP_40 Start: 28396, Stop: 30327, Start Num: 1

Candidate Starts for PP_40:

(Start: 1 @28396 has 2 MA's), (2, 28447), (5, 28516), (7, 28543), (12, 28585), (16, 28618), (22, 28666), (38, 28756), (43, 28765), (46, 28792), (50, 28813), (68, 28864), (71, 28885), (75, 28906), (76, 28909), (93, 28972), (100, 29038), (120, 29122), (148, 29281), (154, 29305), (159, 29326), (167, 29359), (174, 29398), (176, 29407), (214, 29569), (217, 29581), (218, 29593), (236, 29689), (257, 29893), (270, 29956), (274, 29971), (287, 30022), (293, 30043), (300, 30091), (318, 30178), (325, 30232), (326, 30238), (328, 30265),

Gene: PantheRoc_27 Start: 22121, Stop: 23626, Start Num: 45

Candidate Starts for PantheRoc_27:

(12, 21914), (19, 21983), (20, 21986), (24, 22010), (27, 22016), (Start: 45 @22121 has 29 MA's), (58, 22190), (62, 22202), (82, 22313), (85, 22325), (87, 22331), (98, 22418), (106, 22454), (107, 22460), (109, 22469), (180, 22763), (196, 22817), (197, 22820), (201, 22841), (210, 22886), (226, 22991), (242, 23075), (248, 23156), (249, 23159), (291, 23378), (299, 23426), (307, 23486), (316, 23519), (319, 23525), (327, 23597),

Gene: Paries_40 Start: 34332, Stop: 36257, Start Num: 10

Candidate Starts for Paries_40:

(Start: 10 @34332 has 52 MA's), (28, 34467), (29, 34476), (32, 34509), (39, 34533), (51, 34602), (70, 34677), (104, 34869), (105, 34875), (108, 34896), (113, 34914), (116, 34926), (126, 34986), (130, 35040), (136, 35157), (155, 35244), (168, 35298), (177, 35352), (180, 35364), (189, 35394), (193, 35406), (201, 35451), (202, 35463), (204, 35481), (213, 35508), (224, 35586), (228, 35613), (234, 35637), (249, 35760), (251, 35802), (265, 35886), (272, 35916), (282, 35943), (292, 35997), (298, 36027), (309, 36099), (312, 36108),

Gene: Phillis_28 Start: 21576, Stop: 23297, Start Num: 13

Candidate Starts for Phillis_28:

(Start: 13 @21576 has 12 MA's), (34, 21711), (35, 21720), (39, 21735), (Start: 59 @21834 has 1 MA's), (81, 21924), (89, 21960), (93, 21981), (103, 22053), (107, 22077), (120, 22131), (122, 22149), (125, 22167), (137, 22233), (158, 22329), (171, 22383), (203, 22542), (215, 22578), (237, 22704), (257, 22908), (258, 22917), (279, 22998), (299, 23094), (318, 23193),

Gene: Polly_25 Start: 22366, Stop: 23871, Start Num: 45

Candidate Starts for Polly_25:

(Start: 45 @22366 has 29 MA's), (58, 22435), (62, 22447), (82, 22558), (85, 22570), (87, 22576), (98, 22663), (106, 22699), (107, 22705), (109, 22714), (180, 23008), (196, 23062), (197, 23065), (201, 23086), (210, 23131), (226, 23236), (242, 23320), (248, 23401), (249, 23404), (267, 23527), (291, 23623), (299, 23671), (307, 23731), (316, 23764), (319, 23770), (327, 23842),

Gene: Ribeye_37 Start: 33113, Stop: 34834, Start Num: 10

Candidate Starts for Ribeye_37:

(Start: 10 @33113 has 52 MA's), (25, 33236), (28, 33248), (39, 33314), (51, 33383), (Start: 59 @33419 has 1 MA's), (103, 33644), (111, 33683), (123, 33743), (133, 33788), (150, 33848), (182, 33983), (184, 33989), (196, 34031), (199, 34046), (205, 34082), (212, 34103), (226, 34202), (242, 34286), (246, 34319), (249, 34364), (250, 34367), (251, 34403), (257, 34439), (259, 34451), (266, 34487), (275, 34523), (289, 34577),

Gene: RiverRaider_37 Start: 31407, Stop: 33125, Start Num: 10

Candidate Starts for RiverRaider_37:

(Start: 10 @31407 has 52 MA's), (28, 31542), (39, 31608), (51, 31677), (Start: 59 @31713 has 1 MA's), (70, 31752), (92, 31866), (103, 31938), (111, 31977), (114, 31986), (126, 32052), (127, 32058), (180, 32271), (182, 32277), (184, 32283), (196, 32325), (199, 32340), (201, 32349), (226, 32493), (233, 32520), (242, 32577), (247, 32634), (249, 32655), (251, 32694), (257, 32730), (259, 32742), (262, 32757), (264, 32772), (289, 32868),

Gene: Roary_28 Start: 21475, Stop: 23196, Start Num: 13

Candidate Starts for Roary_28:

(Start: 13 @21475 has 12 MA's), (35, 21619), (39, 21634), (Start: 59 @21733 has 1 MA's), (89, 21859), (93, 21880), (103, 21952), (107, 21976), (120, 22030), (137, 22132), (158, 22228), (171, 22282), (179, 22330), (215, 22477), (237, 22603), (257, 22807), (258, 22816), (279, 22897), (299, 22993), (318, 23092), (330, 23179),

Gene: Rofo_38 Start: 33730, Stop: 35583, Start Num: 10

Candidate Starts for Rofo_38:

(Start: 10 @33730 has 52 MA's), (28, 33865), (29, 33874), (32, 33907), (39, 33931), (51, 34000), (57, 34030), (70, 34075), (104, 34267), (105, 34273), (108, 34294), (113, 34312), (116, 34324), (126, 34384), (131, 34450), (155, 34570), (164, 34603), (180, 34690), (189, 34720), (193, 34732), (201, 34777), (202, 34789), (204, 34807), (209, 34822), (216, 34846), (224, 34912), (228, 34939), (234, 34963), (249, 35086), (251, 35128), (265, 35212), (272, 35242), (282, 35269), (292, 35323), (298, 35353), (309, 35425), (312, 35434),

Gene: Rossetti_20 Start: 19247, Stop: 21043, Start Num: 9

Candidate Starts for Rossetti_20:

(Start: 8 @19244 has 5 MA's), (Start: 9 @19247 has 25 MA's), (18, 19343), (23, 19367), (28, 19388), (30, 19400), (31, 19424), (37, 19451), (50, 19520), (52, 19529), (70, 19604), (73, 19631), (92, 19724), (95, 19748), (110, 19832), (120, 19877), (146, 20033), (151, 20051), (154, 20066), (157, 20084), (158, 20087), (174, 20165), (189, 20222), (190, 20225), (191, 20228), (205, 20312), (208, 20321), (236, 20459), (237, 20462), (245, 20537), (251, 20630), (268, 20705), (269, 20714), (286, 20774), (290, 20789), (293, 20804), (294, 20810), (305, 20888), (306, 20891), (317, 20939), (323, 20990), (329, 21026),

Gene: Rumpelstiltskin_20 Start: 19231, Stop: 21030, Start Num: 8

Candidate Starts for Rumpelstiltskin_20:

(Start: 8 @19231 has 5 MA's), (Start: 9 @19234 has 25 MA's), (30, 19387), (31, 19411), (50, 19507), (52, 19516), (64, 19561), (70, 19591), (73, 19618), (92, 19711), (95, 19735), (110, 19819), (120, 19864), (146, 20020), (151, 20038), (154, 20053), (157, 20071), (158, 20074), (174, 20152), (189, 20209), (190, 20212), (191, 20215), (205, 20299), (208, 20308), (216, 20335), (236, 20446), (237, 20449), (251, 20617), (268, 20692), (269, 20701), (276, 20728), (286, 20761), (290, 20776), (293, 20791), (294, 20797), (305, 20875), (306, 20878), (317, 20926), (329, 21013),

Gene: Saintus_28 Start: 21494, Stop: 23215, Start Num: 13

Candidate Starts for Saintus_28:

(Start: 13 @21494 has 12 MA's), (35, 21638), (39, 21653), (Start: 59 @21752 has 1 MA's), (81, 21842), (89, 21878), (93, 21899), (103, 21971), (107, 21995), (120, 22049), (137, 22151), (158, 22247), (171, 22301), (179, 22349), (209, 22478), (215, 22496), (237, 22622), (257, 22826), (258, 22835), (279, 22916), (299, 23012), (318, 23111), (330, 23198),

Gene: Sanjuju_35 Start: 33293, Stop: 35014, Start Num: 10

Candidate Starts for Sanjuju_35:

(Start: 10 @33293 has 52 MA's), (28, 33428), (29, 33437), (32, 33470), (39, 33494), (51, 33563), (70, 33638), (103, 33824), (111, 33863), (114, 33872), (127, 33944), (133, 33968), (153, 34040), (173, 34127), (182, 34163), (184, 34169), (196, 34211), (199, 34226), (201, 34235), (226, 34382), (242, 34466), (246, 34499), (250, 34547), (256, 34613), (257, 34619), (259, 34631), (264, 34661), (266, 34667), (275, 34703), (277, 34712), (289, 34757),

Gene: Saronaya_36 Start: 31956, Stop: 33677, Start Num: 10

Candidate Starts for Saronaya_36:

(Start: 10 @31956 has 52 MA's), (25, 32079), (28, 32091), (39, 32157), (51, 32226), (Start: 59 @32262 has 1 MA's), (70, 32301), (103, 32487), (111, 32526), (123, 32586), (133, 32631), (150, 32691), (182, 32826), (184, 32832), (196, 32874), (199, 32889), (205, 32925), (212, 32946), (226, 33045), (242, 33129), (246, 33162), (249, 33207), (250, 33210), (251, 33246), (257, 33282), (259, 33294), (266, 33330), (275, 33366), (289, 33420),

Gene: Sarshaun_20 Start: 19261, Stop: 21057, Start Num: 9

Candidate Starts for Sarshaun_20:

(Start: 8 @19258 has 5 MA's), (Start: 9 @19261 has 25 MA's), (30, 19414), (31, 19438), (50, 19534), (52, 19543), (63, 19585), (64, 19588), (70, 19618), (73, 19645), (92, 19738), (95, 19762), (110, 19846), (120, 19891), (125, 19927), (146, 20047), (151, 20065), (154, 20080), (157, 20098), (158, 20101), (174, 20179), (189, 20236), (190, 20239), (191, 20242), (205, 20326), (208, 20335), (216, 20362), (236, 20473), (237, 20476), (251, 20644), (268, 20719), (269, 20728), (276, 20755), (286, 20788), (290, 20803), (293, 20818), (294, 20824), (305, 20902), (306, 20905), (329, 21040),

Gene: Schmidt_27 Start: 20153, Stop: 21607, Start Num: 59

Candidate Starts for Schmidt_27:

(Start: 59 @20153 has 1 MA's), (64, 20165), (73, 20222), (78, 20240), (90, 20294), (97, 20360), (99, 20369), (115, 20420), (139, 20525), (141, 20534), (145, 20552), (149, 20567), (154, 20588), (161, 20618), (170, 20660), (172, 20672), (173, 20684), (175, 20693), (185, 20732), (194, 20762), (198, 20783), (201, 20807), (222, 20906), (227, 20963), (229, 20966), (252, 21170), (263, 21242), (271, 21275), (279, 21302), (284, 21314), (288, 21338), (291, 21353), (297, 21386), (322, 21524),

Gene: SchottB_35 Start: 32971, Stop: 34692, Start Num: 10

Candidate Starts for SchottB_35:

(Start: 10 @32971 has 52 MA's), (25, 33094), (28, 33106), (39, 33172), (51, 33241), (Start: 59 @33277 has 1 MA's), (103, 33502), (111, 33541), (123, 33601), (133, 33646), (150, 33706), (182, 33841), (184, 33847), (196, 33889), (199, 33904), (205, 33940), (212, 33961), (226, 34060), (242, 34144), (246, 34177), (249, 34222), (250, 34225), (251, 34261), (257, 34297), (259, 34309), (266, 34345), (275, 34381), (289, 34435),

Gene: Sedona_38 Start: 34836, Stop: 36758, Start Num: 10

Candidate Starts for Sedona_38:

(Start: 10 @34836 has 52 MA's), (28, 34971), (29, 34980), (32, 35013), (39, 35037), (51, 35106), (70, 35181), (104, 35373), (105, 35379), (108, 35400), (113, 35418), (116, 35430), (126, 35490), (130, 35544), (136, 35658), (155, 35745), (168, 35799), (180, 35865), (189, 35895), (193, 35907), (201, 35952), (202, 35964), (204, 35982), (213, 36009), (224, 36087), (228, 36114), (234, 36138), (249, 36261), (251, 36303), (265, 36387), (272, 36417), (282, 36444), (292, 36498), (298, 36528), (309, 36600), (312, 36609),

Gene: Shivanishola_38 Start: 33192, Stop: 35114, Start Num: 10

Candidate Starts for Shivanishola_38:

(Start: 10 @33192 has 52 MA's), (28, 33327), (29, 33336), (32, 33369), (39, 33393), (51, 33462), (57, 33492), (70, 33537), (104, 33729), (105, 33735), (108, 33756), (113, 33774), (116, 33786), (126, 33846), (130, 33900), (136, 34014), (155, 34101), (168, 34155), (180, 34221), (189, 34251), (193, 34263), (201, 34308), (202, 34320), (204, 34338), (213, 34365), (224, 34443), (228, 34470), (234, 34494), (249, 34617), (251, 34659), (265, 34743), (272, 34773), (292, 34854), (298, 34884), (309, 34956), (312, 34965),

Gene: Sitar_38 Start: 34887, Stop: 36809, Start Num: 10

Candidate Starts for Sitar_38:

(Start: 10 @34887 has 52 MA's), (28, 35022), (29, 35031), (32, 35064), (39, 35088), (51, 35157), (70, 35232), (104, 35424), (105, 35430), (108, 35451), (113, 35469), (116, 35481), (126, 35541), (130,

35595), (136, 35709), (155, 35796), (168, 35850), (177, 35904), (180, 35916), (189, 35946), (193, 35958), (201, 36003), (202, 36015), (204, 36033), (213, 36060), (224, 36138), (228, 36165), (234, 36189), (249, 36312), (251, 36354), (265, 36438), (272, 36468), (292, 36549), (298, 36579), (309, 36651), (312, 36660),

Gene: Smeadley_28 Start: 21508, Stop: 23229, Start Num: 13

Candidate Starts for Smeadley_28:

(Start: 13 @21508 has 12 MA's), (35, 21652), (39, 21667), (Start: 59 @21766 has 1 MA's), (81, 21856), (89, 21892), (93, 21913), (103, 21985), (107, 22009), (120, 22063), (137, 22165), (158, 22261), (171, 22315), (179, 22363), (209, 22492), (215, 22510), (237, 22636), (257, 22840), (258, 22849), (279, 22930), (299, 23026), (318, 23125), (330, 23212),

Gene: SoJulia_20 Start: 19227, Stop: 21023, Start Num: 9

Candidate Starts for SoJulia_20:

(Start: 8 @19224 has 5 MA's), (Start: 9 @19227 has 25 MA's), (30, 19380), (31, 19404), (50, 19500), (52, 19509), (64, 19554), (70, 19584), (73, 19611), (92, 19704), (95, 19728), (110, 19812), (120, 19857), (146, 20013), (151, 20031), (154, 20046), (157, 20064), (158, 20067), (174, 20145), (189, 20202), (191, 20208), (205, 20292), (208, 20301), (236, 20439), (237, 20442), (251, 20610), (268, 20685), (269, 20694), (276, 20721), (284, 20739), (286, 20754), (290, 20769), (293, 20784), (294, 20790), (305, 20868), (306, 20871), (317, 20919), (329, 21006),

Gene: Soap141_20 Start: 19261, Stop: 21057, Start Num: 9

Candidate Starts for Soap141_20:

(Start: 8 @19258 has 5 MA's), (Start: 9 @19261 has 25 MA's), (30, 19414), (31, 19438), (50, 19534), (52, 19543), (63, 19585), (64, 19588), (70, 19618), (73, 19645), (92, 19738), (95, 19762), (110, 19846), (120, 19891), (125, 19927), (146, 20047), (151, 20065), (154, 20080), (157, 20098), (158, 20101), (174, 20179), (189, 20236), (190, 20239), (191, 20242), (205, 20326), (208, 20335), (216, 20362), (236, 20473), (237, 20476), (251, 20644), (268, 20719), (269, 20728), (276, 20755), (286, 20788), (290, 20803), (293, 20818), (294, 20824), (305, 20902), (306, 20905), (329, 21040),

Gene: Stephig9_28 Start: 21490, Stop: 23211, Start Num: 13

Candidate Starts for Stephig9_28:

(Start: 13 @21490 has 12 MA's), (35, 21634), (Start: 59 @21748 has 1 MA's), (89, 21874), (93, 21895), (103, 21967), (107, 21991), (120, 22045), (137, 22147), (158, 22243), (171, 22297), (179, 22345), (209, 22474), (215, 22492), (237, 22618), (257, 22822), (258, 22831), (279, 22912), (299, 23008), (318, 23107),

Gene: StorminNorm_36 Start: 31838, Stop: 33559, Start Num: 10

Candidate Starts for StorminNorm_36:

(Start: 10 @31838 has 52 MA's), (25, 31961), (28, 31973), (39, 32039), (51, 32108), (Start: 59 @32144 has 1 MA's), (103, 32369), (111, 32408), (123, 32468), (133, 32513), (150, 32573), (182, 32708), (184, 32714), (196, 32756), (199, 32771), (205, 32807), (212, 32828), (226, 32927), (242, 33011), (246, 33044), (249, 33089), (250, 33092), (251, 33128), (257, 33164), (259, 33176), (266, 33212), (275, 33248), (289, 33302),

Gene: Stultus_35 Start: 32209, Stop: 33930, Start Num: 10

Candidate Starts for Stultus_35:

(Start: 10 @32209 has 52 MA's), (28, 32344), (29, 32353), (32, 32386), (39, 32410), (51, 32479), (70, 32554), (103, 32740), (111, 32779), (114, 32788), (117, 32803), (127, 32860), (133, 32884), (153, 32956), (173, 33043), (182, 33079), (184, 33085), (196, 33127), (199, 33142), (201, 33151), (226, 33298), (242, 33382), (246, 33415), (250, 33463), (256, 33529), (257, 33535), (259, 33547), (264, 33577), (266, 33583), (275, 33619), (277, 33628), (289, 33673),

Gene: Suscepit_28 Start: 22923, Stop: 24428, Start Num: 45

Candidate Starts for Suscepit_28:

(Start: 45 @22923 has 29 MA's), (58, 22992), (62, 23004), (82, 23115), (85, 23127), (87, 23133), (98, 23220), (106, 23256), (107, 23262), (109, 23271), (180, 23565), (196, 23619), (197, 23622), (201, 23643), (210, 23688), (226, 23793), (242, 23877), (248, 23958), (249, 23961), (267, 24084), (291, 24180), (299, 24228), (307, 24288), (316, 24321), (319, 24327), (327, 24399),

Gene: Tangent_38 Start: 33252, Stop: 35174, Start Num: 10

Candidate Starts for Tangent_38:

(Start: 10 @33252 has 52 MA's), (28, 33387), (29, 33396), (32, 33429), (39, 33453), (51, 33522), (57, 33552), (70, 33597), (104, 33789), (105, 33795), (108, 33816), (113, 33834), (116, 33846), (126, 33906), (130, 33960), (136, 34074), (155, 34161), (168, 34215), (180, 34281), (189, 34311), (193, 34323), (201, 34368), (202, 34380), (204, 34398), (213, 34425), (224, 34503), (228, 34530), (234, 34554), (249, 34677), (251, 34719), (265, 34803), (272, 34833), (282, 34860), (292, 34914), (298, 34944), (309, 35016), (312, 35025),

Gene: Tangerine_36 Start: 31841, Stop: 33562, Start Num: 10

Candidate Starts for Tangerine_36:

(Start: 10 @31841 has 52 MA's), (25, 31964), (28, 31976), (39, 32042), (51, 32111), (Start: 59 @32147 has 1 MA's), (70, 32186), (103, 32372), (111, 32411), (123, 32471), (133, 32516), (150, 32576), (182, 32711), (184, 32717), (196, 32759), (199, 32774), (205, 32810), (212, 32831), (226, 32930), (242, 33014), (246, 33047), (249, 33092), (250, 33095), (251, 33131), (257, 33167), (259, 33179), (266, 33215), (275, 33251), (289, 33305),

Gene: Tayonia_28 Start: 22923, Stop: 24428, Start Num: 45

Candidate Starts for Tayonia_28:

(Start: 45 @22923 has 29 MA's), (58, 22992), (62, 23004), (82, 23115), (85, 23127), (87, 23133), (98, 23220), (106, 23256), (107, 23262), (109, 23271), (180, 23565), (196, 23619), (197, 23622), (201, 23643), (210, 23688), (226, 23793), (242, 23877), (248, 23958), (249, 23961), (267, 24084), (291, 24180), (299, 24228), (307, 24288), (316, 24321), (319, 24327), (327, 24399),

Gene: ThankyouJordi_25 Start: 22901, Stop: 24409, Start Num: 45

Candidate Starts for ThankyouJordi_25:

(3, 22586), (12, 22694), (19, 22763), (20, 22766), (24, 22790), (27, 22796), (Start: 45 @22901 has 29 MA's), (60, 22979), (62, 22982), (79, 23072), (86, 23108), (87, 23111), (106, 23234), (107, 23240), (109, 23249), (166, 23480), (178, 23543), (180, 23546), (188, 23573), (196, 23600), (197, 23603), (215, 23684), (226, 23774), (249, 23942), (257, 24017), (260, 24032), (291, 24161), (303, 24245), (319, 24308), (327, 24380),

Gene: Thing3_36 Start: 33130, Stop: 35052, Start Num: 10

Candidate Starts for Thing3_36:

(Start: 10 @33130 has 52 MA's), (28, 33265), (29, 33274), (32, 33307), (39, 33331), (51, 33400), (70, 33475), (104, 33667), (105, 33673), (108, 33694), (113, 33712), (116, 33724), (126, 33784), (130, 33838), (136, 33952), (155, 34039), (168, 34093), (177, 34147), (180, 34159), (189, 34189), (193, 34201), (201, 34246), (202, 34258), (204, 34276), (213, 34303), (224, 34381), (228, 34408), (234, 34432), (249, 34555), (251, 34597), (265, 34681), (272, 34711), (282, 34738), (292, 34792), (298, 34822), (309, 34894), (312, 34903),

Gene: TimTam_26 Start: 22926, Stop: 24431, Start Num: 45

Candidate Starts for TimTam_26:

(3, 22611), (12, 22719), (19, 22788), (20, 22791), (24, 22815), (27, 22821), (Start: 45 @22926 has 29 MA's), (58, 22995), (62, 23007), (82, 23118), (84, 23124), (85, 23130), (87, 23136), (98, 23223), (106, 23259), (107, 23265), (109, 23274), (180, 23568), (196, 23622), (197, 23625), (201, 23646), (210,

23691), (226, 23796), (242, 23880), (248, 23961), (249, 23964), (291, 24183), (299, 24231), (307, 24291), (316, 24324), (319, 24330), (327, 24402),

Gene: Tourach_20 Start: 19226, Stop: 21022, Start Num: 9

Candidate Starts for Tourach_20:

(Start: 9 @19226 has 25 MA's), (30, 19379), (31, 19403), (53, 19511), (64, 19553), (70, 19583), (73, 19610), (91, 19700), (92, 19703), (95, 19727), (110, 19811), (120, 19856), (129, 19907), (146, 20012), (154, 20045), (158, 20066), (174, 20144), (191, 20207), (205, 20291), (208, 20300), (236, 20438), (245, 20516), (251, 20609), (254, 20624), (268, 20684), (269, 20693), (276, 20720), (281, 20729), (286, 20753), (290, 20768), (293, 20783), (294, 20789), (296, 20801), (317, 20918), (328, 20993), (329, 21005),

Gene: Trine_24 Start: 19054, Stop: 20592, Start Num: 40

Candidate Starts for Trine_24:

(Start: 40 @19054 has 2 MA's), (64, 19165), (65, 19174), (78, 19240), (80, 19261), (83, 19273), (94, 19327), (109, 19426), (117, 19453), (162, 19648), (188, 19750), (196, 19777), (226, 19951), (241, 20017), (242, 20035), (246, 20068), (257, 20191), (259, 20203), (267, 20239), (280, 20287), (285, 20302), (310, 20455), (312, 20461), (314, 20473), (315, 20482),

Gene: Trumpet_28 Start: 22923, Stop: 24428, Start Num: 45

Candidate Starts for Trumpet_28:

(Start: 45 @22923 has 29 MA's), (58, 22992), (62, 23004), (82, 23115), (85, 23127), (87, 23133), (98, 23220), (106, 23256), (107, 23262), (109, 23271), (180, 23565), (196, 23619), (197, 23622), (201, 23643), (210, 23688), (226, 23793), (242, 23877), (248, 23958), (249, 23961), (267, 24084), (291, 24180), (299, 24228), (307, 24288), (316, 24321), (319, 24327), (327, 24399),

Gene: Tycho_36 Start: 31930, Stop: 33651, Start Num: 10

Candidate Starts for Tycho_36:

(Start: 10 @31930 has 52 MA's), (25, 32053), (28, 32065), (39, 32131), (51, 32200), (Start: 59 @32236 has 1 MA's), (103, 32461), (111, 32500), (123, 32560), (133, 32605), (150, 32665), (182, 32800), (184, 32806), (196, 32848), (199, 32863), (205, 32899), (212, 32920), (226, 33019), (242, 33103), (246, 33136), (249, 33181), (250, 33184), (251, 33220), (257, 33256), (259, 33268), (266, 33304), (275, 33340), (289, 33394),

Gene: Underpass_20 Start: 19233, Stop: 21029, Start Num: 9

Candidate Starts for Underpass_20:

(Start: 8 @19230 has 5 MA's), (Start: 9 @19233 has 25 MA's), (30, 19386), (31, 19410), (50, 19506), (52, 19515), (63, 19557), (64, 19560), (70, 19590), (73, 19617), (92, 19710), (95, 19734), (110, 19818), (120, 19863), (125, 19899), (146, 20019), (151, 20037), (154, 20052), (157, 20070), (158, 20073), (174, 20151), (189, 20208), (190, 20211), (191, 20214), (205, 20298), (208, 20307), (216, 20334), (236, 20445), (237, 20448), (251, 20616), (268, 20691), (269, 20700), (276, 20727), (286, 20760), (290, 20775), (293, 20790), (294, 20796), (305, 20874), (306, 20877), (317, 20925), (329, 21012),

Gene: Upyo_24 Start: 19301, Stop: 20836, Start Num: 40

Candidate Starts for Upyo_24:

(33, 19277), (Start: 40 @19301 has 2 MA's), (64, 19412), (74, 19475), (94, 19574), (117, 19700), (118, 19706), (119, 19712), (121, 19730), (124, 19745), (126, 19751), (127, 19757), (146, 19826), (152, 19844), (163, 19898), (181, 19976), (190, 20003), (202, 20063), (205, 20081), (226, 20201), (235, 20234), (240, 20261), (249, 20369), (253, 20426), (256, 20441), (261, 20465), (308, 20699), (324, 20786),

Gene: Vetrix_20 Start: 19234, Stop: 21030, Start Num: 9

Candidate Starts for Vetrix_20:

(Start: 8 @19231 has 5 MA's), (Start: 9 @19234 has 25 MA's), (30, 19387), (31, 19411), (50, 19507), (52, 19516), (64, 19561), (65, 19570), (70, 19591), (73, 19618), (92, 19711), (95, 19735), (110, 19819), (120, 19864), (146, 20020), (151, 20038), (154, 20053), (157, 20071), (158, 20074), (174, 20152), (189, 20209), (190, 20212), (191, 20215), (205, 20299), (208, 20308), (216, 20335), (236, 20446), (237, 20449), (251, 20617), (254, 20632), (268, 20692), (269, 20701), (276, 20728), (286, 20761), (290, 20776), (293, 20791), (294, 20797), (305, 20875), (306, 20878), (317, 20926), (329, 21013),

Gene: Vivi2_40 Start: 34410, Stop: 36332, Start Num: 10

Candidate Starts for Vivi2_40:

(Start: 10 @34410 has 52 MA's), (28, 34545), (29, 34554), (32, 34587), (39, 34611), (51, 34680), (57, 34710), (70, 34755), (104, 34947), (105, 34953), (108, 34974), (113, 34992), (116, 35004), (126, 35064), (130, 35118), (136, 35232), (155, 35319), (168, 35373), (180, 35439), (189, 35469), (193, 35481), (201, 35526), (202, 35538), (204, 35556), (213, 35583), (224, 35661), (228, 35688), (234, 35712), (249, 35835), (251, 35877), (265, 35961), (272, 35991), (282, 36018), (292, 36072), (298, 36102), (309, 36174), (312, 36183),

Gene: WelcomeAyanna_25 Start: 22901, Stop: 24409, Start Num: 45

Candidate Starts for WelcomeAyanna_25:

(3, 22586), (12, 22694), (19, 22763), (20, 22766), (24, 22790), (27, 22796), (Start: 45 @22901 has 29 MA's), (60, 22979), (62, 22982), (79, 23072), (86, 23108), (87, 23111), (106, 23234), (107, 23240), (109, 23249), (166, 23480), (178, 23543), (180, 23546), (188, 23573), (196, 23600), (197, 23603), (215, 23684), (226, 23774), (249, 23942), (257, 24017), (260, 24032), (291, 24161), (303, 24245), (319, 24308), (327, 24380),

Gene: Wigglewigggle_20 Start: 19260, Stop: 21056, Start Num: 9

Candidate Starts for Wigglewigggle_20:

(Start: 8 @19257 has 5 MA's), (Start: 9 @19260 has 25 MA's), (30, 19413), (31, 19437), (50, 19533), (52, 19542), (63, 19584), (64, 19587), (70, 19617), (73, 19644), (92, 19737), (95, 19761), (110, 19845), (120, 19890), (125, 19926), (146, 20046), (151, 20064), (154, 20079), (157, 20097), (158, 20100), (174, 20178), (189, 20235), (190, 20238), (191, 20241), (205, 20325), (208, 20334), (216, 20361), (236, 20472), (237, 20475), (251, 20643), (268, 20718), (269, 20727), (276, 20754), (286, 20787), (290, 20802), (293, 20817), (294, 20823), (305, 20901), (306, 20904), (329, 21039),

Gene: Wilder_20 Start: 19233, Stop: 21029, Start Num: 9

Candidate Starts for Wilder_20:

(Start: 8 @19230 has 5 MA's), (Start: 9 @19233 has 25 MA's), (30, 19386), (31, 19410), (50, 19506), (52, 19515), (63, 19557), (64, 19560), (70, 19590), (73, 19617), (92, 19710), (95, 19734), (110, 19818), (120, 19863), (125, 19899), (146, 20019), (151, 20037), (154, 20052), (157, 20070), (158, 20073), (174, 20151), (189, 20208), (190, 20211), (191, 20214), (205, 20298), (208, 20307), (216, 20334), (236, 20445), (237, 20448), (251, 20616), (268, 20691), (269, 20700), (276, 20727), (286, 20760), (290, 20775), (293, 20790), (294, 20796), (305, 20874), (306, 20877), (317, 20925), (329, 21012),

Gene: Winky_20 Start: 19225, Stop: 21024, Start Num: 8

Candidate Starts for Winky_20:

(Start: 8 @19225 has 5 MA's), (Start: 9 @19228 has 25 MA's), (30, 19381), (31, 19405), (50, 19501), (52, 19510), (64, 19555), (70, 19585), (73, 19612), (92, 19705), (95, 19729), (110, 19813), (120, 19858), (146, 20014), (151, 20032), (154, 20047), (157, 20065), (158, 20068), (174, 20146), (189, 20203), (191, 20209), (205, 20293), (208, 20302), (236, 20440), (237, 20443), (251, 20611), (268, 20686), (269, 20695), (276, 20722), (284, 20740), (286, 20755), (290, 20770), (293, 20785), (294, 20791), (305, 20869), (306, 20872), (317, 20920), (329, 21007),

Gene: Yeezy_28 Start: 22145, Stop: 23650, Start Num: 45

Candidate Starts for Yeezy_28:

(12, 21938), (19, 22007), (20, 22010), (24, 22034), (27, 22040), (Start: 45 @22145 has 29 MA's), (58, 22214), (62, 22226), (82, 22337), (85, 22349), (87, 22355), (98, 22442), (106, 22478), (107, 22484), (109, 22493), (180, 22787), (196, 22841), (197, 22844), (201, 22865), (210, 22910), (226, 23015), (242, 23099), (248, 23180), (249, 23183), (267, 23306), (291, 23402), (299, 23450), (301, 23465), (307, 23510), (316, 23543), (319, 23549), (327, 23621),

Gene: YorkOnyx_37 Start: 32189, Stop: 33910, Start Num: 10

Candidate Starts for YorkOnyx_37:

(Start: 10 @32189 has 52 MA's), (25, 32312), (28, 32324), (39, 32390), (51, 32459), (Start: 59 @32495 has 1 MA's), (70, 32534), (103, 32720), (111, 32759), (123, 32819), (133, 32864), (150, 32924), (182, 33059), (184, 33065), (196, 33107), (199, 33122), (205, 33158), (212, 33179), (226, 33278), (242, 33362), (246, 33395), (249, 33440), (250, 33443), (257, 33515), (259, 33527), (266, 33563), (275, 33599), (289, 33653),

Gene: Zakai_20 Start: 19222, Stop: 21018, Start Num: 9

Candidate Starts for Zakai_20:

(Start: 8 @19219 has 5 MA's), (Start: 9 @19222 has 25 MA's), (30, 19375), (31, 19399), (50, 19495), (52, 19504), (64, 19549), (70, 19579), (73, 19606), (92, 19699), (95, 19723), (110, 19807), (120, 19852), (146, 20008), (151, 20026), (154, 20041), (157, 20059), (158, 20062), (174, 20140), (189, 20197), (190, 20200), (191, 20203), (205, 20287), (208, 20296), (216, 20323), (236, 20434), (237, 20437), (251, 20605), (268, 20680), (269, 20689), (276, 20716), (286, 20749), (290, 20764), (293, 20779), (294, 20785), (305, 20863), (306, 20866), (317, 20914), (329, 21001),

Gene: Zameen_28 Start: 22923, Stop: 24428, Start Num: 45

Candidate Starts for Zameen_28:

(Start: 45 @22923 has 29 MA's), (58, 22992), (62, 23004), (82, 23115), (85, 23127), (87, 23133), (98, 23220), (106, 23256), (107, 23262), (109, 23271), (180, 23565), (196, 23619), (197, 23622), (201, 23643), (210, 23688), (226, 23793), (242, 23877), (248, 23958), (249, 23961), (267, 24084), (291, 24180), (299, 24228), (307, 24288), (316, 24321), (319, 24327), (327, 24399),

Gene: ZhongYanYuan_19 Start: 19053, Stop: 20849, Start Num: 9

Candidate Starts for ZhongYanYuan_19:

(Start: 9 @19053 has 25 MA's), (23, 19173), (28, 19194), (30, 19206), (31, 19230), (37, 19257), (50, 19326), (52, 19335), (Start: 59 @19368 has 1 MA's), (64, 19380), (70, 19410), (73, 19437), (95, 19554), (102, 19602), (110, 19638), (120, 19683), (129, 19734), (146, 19839), (151, 19857), (157, 19890), (158, 19893), (167, 19932), (174, 19971), (190, 20031), (191, 20034), (205, 20118), (236, 20265), (245, 20343), (251, 20436), (254, 20451), (268, 20511), (269, 20520), (276, 20547), (290, 20595), (293, 20610), (305, 20694), (306, 20697), (317, 20745), (320, 20760), (329, 20832),

Gene: Zirinka_26 Start: 22938, Stop: 24443, Start Num: 45

Candidate Starts for Zirinka_26:

(3, 22623), (12, 22731), (19, 22800), (20, 22803), (24, 22827), (27, 22833), (Start: 45 @22938 has 29 MA's), (58, 23007), (62, 23019), (82, 23130), (84, 23136), (85, 23142), (87, 23148), (88, 23154), (98, 23235), (106, 23271), (107, 23277), (109, 23286), (180, 23580), (196, 23634), (197, 23637), (201, 23658), (210, 23703), (226, 23808), (242, 23892), (248, 23973), (249, 23976), (291, 24195), (299, 24243), (307, 24303), (316, 24336), (319, 24342), (327, 24414),