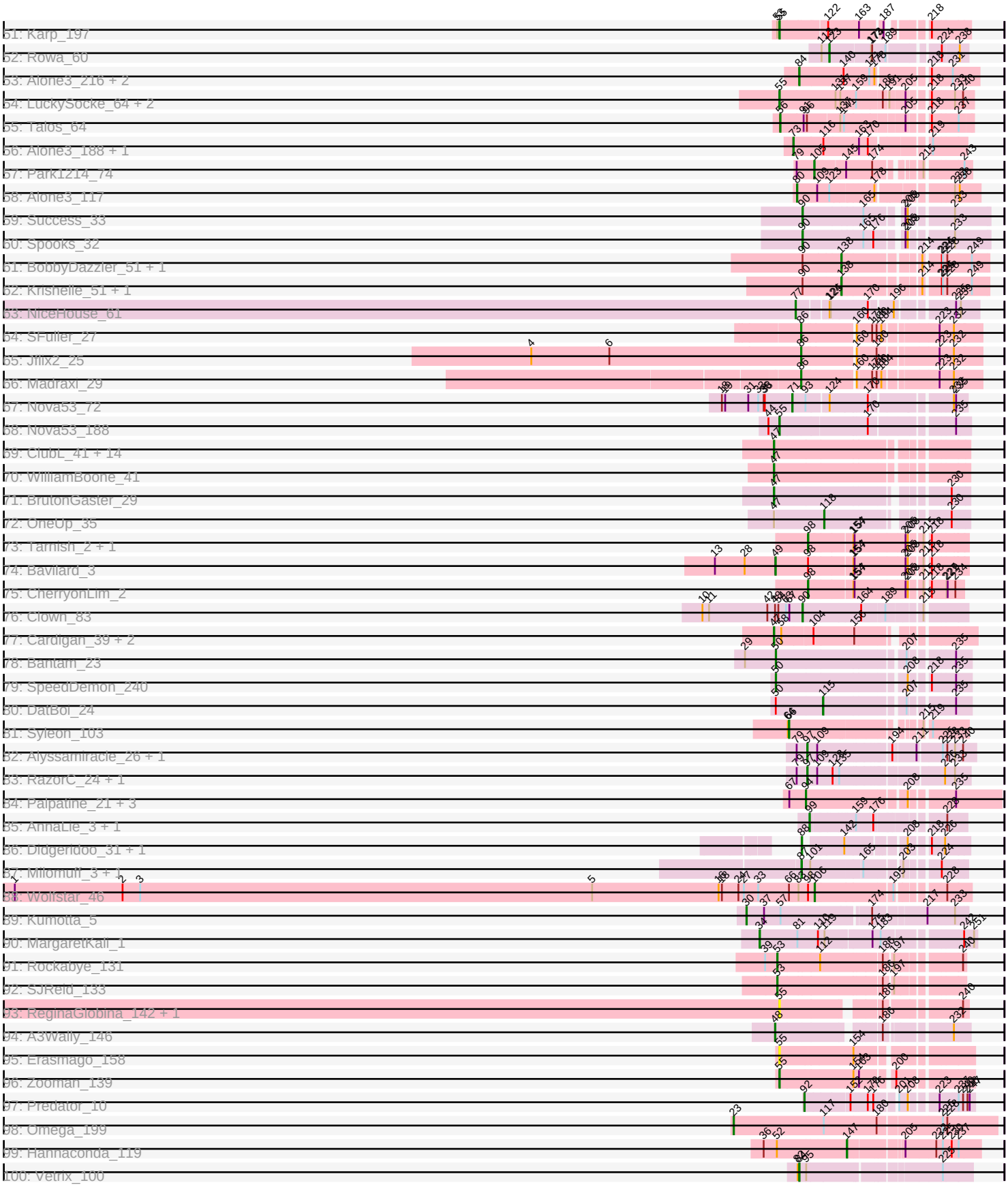
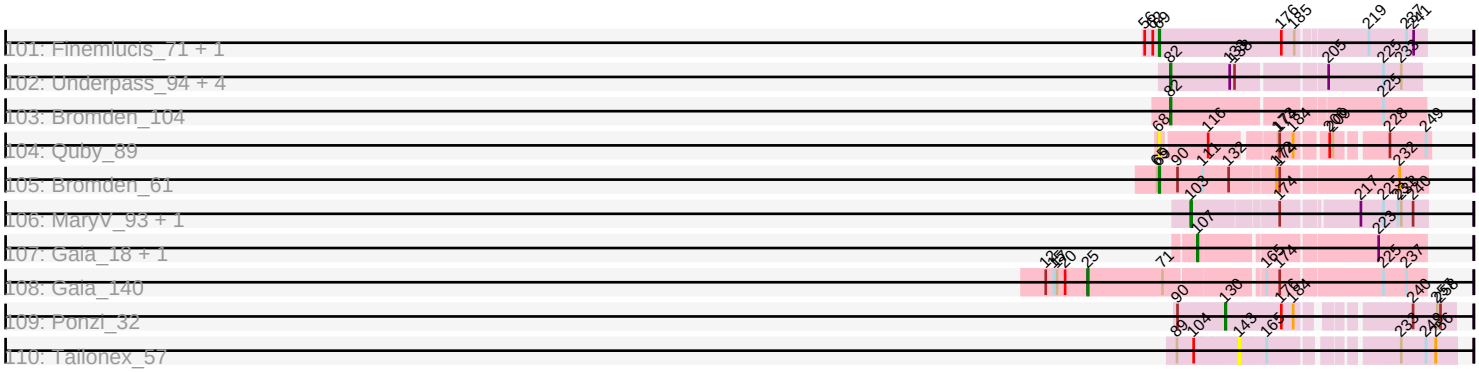
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1: Corvo_25 + 9
2: Beatrix_24 + 8
3: Gachnar_59
4: Wheeler_74
5: IgnatiusPatJac_59 + 1
6: Wheeler_80
7: CartmannCramer_58
8: Blesser_65
9: Seabiscuit_76
10: Salz_60 + 1
11: Strosahl_70 + 9
12: Nedarya_66
13: Nebulosus_68 + 1
14: LogiBear_66
15: MyraDee_58
16: NothingSpecial_59
17: Bradman_61 + 2
18: Koko_64
19: CloudWang3_63
20: Kovu_26
21: AdaS_75
22: MurphyJoseph_78
23: MidnightRain_85
24: Kayllssa_41
25: Tuck_30
26: Yang_45
27: AGrandMora_41
28: Schaffner_27
29: Adolin_42
30: Shawty_32
31: EGole_223
32: Daubenski_27
33: Anedea_217
34: WhereRU_178 + 2
35: StarPlatinum_46
36: Manuel_3
37: JPandJE_2
38: WRightOn_2
39: RosePhanie_70
40: LazerLemon_75
41: TunaTartare_189 + 1
42: SeresaTree_235
43: Forrest_254 + 1
44: DeluluLabubu_257
45: Limpid_229 + 1
46: DeluluLabubu_105
47: Kenrey_232
48: Forrest_150
49: Westy_204
50: TunaTartare_254

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51: Karp_197
52: Rowa_60
53: Alone3_216 + 2
54: LuckySocke_64 + 2
55: Talos_64
56: Alone3_188 + 1
57: Park1214_74
58: Alone3_117
59: Success_33
60: Spooks_32
61: BobbyDazzler_51 + 1
62: Krishelle_51 + 1
63: NiceHouse_61
64: SFuller_27
65: Jflix2_25
66: Madraxl_29
67: Nova53_72
68: Nova53_188
69: ClubL_41 + 14
70: WilliamBoone_41
71: BrutonGaster_29
72: OneUp_35
73: Tarnish_2 + 1
74: Bavillard_3
75: CherryonLim_2
76: Clown_83
77: Cardigan_39 + 2
78: Bantam_23
79: SpeedDemon_240
80: DatBoi_24
81: Syleon_103
82: Alyssamiracle_26 + 1
83: RazorC_24 + 1
84: Palpatine_21 + 3
85: AnnaLie_3 + 1
86: Dlugeridoo_31 + 1
87: Mlomum_3 + 1
88: Wolfstar_46
89: Kumotta_5
90: MargaretKail_1
91: Rockabye_131
92: SJReid_133
93: ReginaGlobina_142 + 1
94: A3Wally_146
95: Erasmago_158
96: Zooman_139
97: Predator_10
98: Omega_199
99: Hannaconda_119
100: Vetrix_100

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101: Finemlucis_71 + 1
102: Underpass_94 + 4
103: Bromden_104
104: Quby_89
105: Bromden_61
106: MaryV_93 + 1
107: Gaia_18 + 1
108: Gaia_140
109: Ponzi_32
110: Tallonex_57

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 347290 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347290 has 186 members, 17 are drafts.

Phages represented in each track:
• Track 1 : Corvo_25, Target_27, Noxious_27, GroundGoblin_26, Snazzy_23, Aldrich_26, Pinto_27, Hermia_27, Atkinbua_26, Zeeculate_24
• Track 2 : Beatrix_24, KikiBouba_27, SwissCheese_25, Trouble_25, ConceptII_26, Petruchio_25, Ashballer_24, GrecoEtereo_26, Ajay_25
• Track 3 : Gachnar_59
• Track 4 : Wheeler_74
• Track 5 : IgnatiusPatJac_59, Teodoridan_57
• Track 6 : Wheeler_80
• Track 7 : CartmannCramer_58
• Track 8 : Blesser_65
• Track 9 : Seabiscuit_76
• Track 10 : Salz_60, Ebony_61
• Track 11 : Strosahl_70, Battleship_72, JSwag_69, ReMo_68, MinecraftSteve_70, Anaysia_70, Switzerland_69, Remus_70, LastResort_68, ShayRa_70
• Track 12 : Nedarya_66
• Track 13 : Nebulosus_68, Epsocamisio_67
• Track 14 : LogiBear_66
• Track 15 : MyraDee_58
• Track 16 : NothingSpecial_59
• Track 17 : Bradman_61, MajorMajor_61, Quokka_60
• Track 18 : Koko_64
• Track 19 : CloudWang3_63
• Track 20 : Kovu_26
• Track 21 : AdaS_75
• Track 22 : MurphyJoseph_78
• Track 23 : MidnightRain_85
• Track 24 : Kaylissa_41
• Track 25 : Tuck_30
• Track 26 : Yang_45
• Track 27 : AGrandiflora_41
• Track 28 : Schaffner_27
• Track 29 : Adolin_42
• Track 30 : Shawty_32
• Track 31 : EGole_223
• Track 32 : Daubenski_27
• Track 33 : Anedea_217
• Track 34 : WhereRU_178, Persimmon_179, Davielle_179

• Track 35 : StarPlatinum_46
• Track 36 : Manuel_3
• Track 37 : JPandJE_2
• Track 38 : WRightOn_2
• Track 39 : RosePharie_70
• Track 40 : LazerLemon_75
• Track 41 : TunaTartare_189, Sham_181
• Track 42 : SeresaTree_235
• Track 43 : Forrest_254, Jada_255
• Track 44 : DeluluLabubu_257
• Track 45 : Limpid_229, Annadreamy_222
• Track 46 : DeluluLabubu_105
• Track 47 : Kenrey_232
• Track 48 : Forrest_150
• Track 49 : Westy_204
• Track 50 : TunaTartare_254
• Track 51 : Karp_197
• Track 52 : Rowa_60
• Track 53 : Alone3_216, Park1214_217, Talos_215
• Track 54 : LuckySocke_64, Fudan_62, Alone3_65
• Track 55 : Talos_64
• Track 56 : Alone3_188, Talos_188
• Track 57 : Park1214_74
• Track 58 : Alone3_117
• Track 59 : Success_33
• Track 60 : Spooks_32
• Track 61 : BobbyDazzler_51, Yoncess_50
• Track 62 : Krishelle_51, RER2_44
• Track 63 : NiceHouse_61
• Track 64 : SFuller_27
• Track 65 : Jflix2_25
• Track 66 : Madraxi_29
• Track 67 : Nova53_72
• Track 68 : Nova53_188
• Track 69 : ClubL_41, Geeche_40, Dusty_40, Miskis_39, Engineer_42, Abscondus_40, Toniann_41, Norvs_42, Smoothie_42, Cucurbita_43, PhinkBoden_41, Lozinak_41, Aphelion_41, Culver_41, Bachita_43
• Track 70 : WilliamBoone_41
• Track 71 : BrutonGaster_29
• Track 72 : OneUp_35
• Track 73 : Tarnish_2, Vine_3
• Track 74 : Bavilard_3
• Track 75 : CherryonLim_2
• Track 76 : Clown_83
• Track 77 : Cardigan_39, JonJames_40, Yvonnetastic_38
• Track 78 : Bantam_23
• Track 79 : SpeedDemon_240
• Track 80 : DatBoi_24
• Track 81 : Syleon_103
• Track 82 : Alyssamiracle_26, Genamy16_26
• Track 83 : RazorC_24, Zany_25
• Track 84 : Palpatine_21, FireRed_21, Porky_21, PhatBacter_21
• Track 85 : AnnaLie_3, BelmontSKP_3

• Track 86 : Didgeridoo_31, Finalfrontier_30
• Track 87 : Milomuff_3, Solea_3
• Track 88 : Wolfstar_46
• Track 89 : Kumotta_5
• Track 90 : MargaretKali_1
• Track 91 : Rockabye_131
• Track 92 : SJReid_133
• Track 93 : ReginaGlobina_142, LeoJr_143
• Track 94 : A3Wally_146
• Track 95 : Erasmago_158
• Track 96 : Zooman_139
• Track 97 : Predator_10
• Track 98 : Omega_199
• Track 99 : Hannaconda_119
• Track 100 : Vetrix_100
• Track 101 : Finemlucis_71, Gabriela_68
• Track 102 : Underpass_94, Nicholasp3_102, Gardann_101, Rumpelstiltskin_98, Kahlid_101
• Track 103 : Bromden_104
• Track 104 : Quby_89
• Track 105 : Bromden_61
• Track 106 : MaryV_93, Wildcat_93
• Track 107 : Gaia_18, Nebkiss_19
• Track 108 : Gaia_140
• Track 109 : Ponzi_32
• Track 110 : Tailonex_57

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

The start number called the most often in the published annotations is 55, it was called in 23 of the 169 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aldrich_26, Alone3_65, Anedea_217, Atkinbua_26, Corvo_25, Daubenski_27, Davielle_179, Erasmago_158, Forrest_150, Fudan_62, GroundGoblin_26, Hermia_27, Karp_197, LeoJr_143, LuckySocke_64, Nova53_188, Noxious_27, Persimmon_179, Pinto_27, ReginaGlobina_142, RosePharie_70, Snazzy_23, Target_27, WhereRU_178, Zeeculate_24, Zooman_139,

Genes that have the "Most Annotated" start but do not call it:
• Ajay_25, Ashballer_24, Beatrix_24, ConceptII_26, EGole_223, GrecoEtereo_26, KikiBouba_27, Petruchio_25, SwissCheese_25, Trouble_25, Westy_204,

Genes that do not have the "Most Annotated" start:
• A3Wally_146, AGrandiflora_41, Abscondus_40, AdaS_75, Adolin_42, Alone3_117, Alone3_188, Alone3_216, Alyssamiracle_26, Anaysia_70, AnnaLie_3, Annadreamy_222, Aphelion_41, Bachita_43, Bantam_23, Battleship_72, Bavilard_3, BelmontSKP_3, Blesser_65, BobbyDazzler_51, Bradman_61, Bromden_104, Bromden_61, BrutonGaster_29, Cardigan_39, CartmannCramer_58, CherryonLim_2, CloudWang3_63, Clown_83, ClubL_41, Cucurbita_43, Culver_41, DatBoi_24,

DeluluLabubu_105, DeluluLabubu_257, Didgeridoo_31, Dusty_40, Ebony_61, Engineer_42, Epsocamisio_67, Finalfrontier_30, Finemlucis_71, FireRed_21, Forrest_254, Gabriela_68, Gachnar_59, Gaia_140, Gaia_18, Gardann_101, Geeche_40, Genamy16_26, Hannaconda_119, IgnatiusPatJac_59, JPandJE_2, JSwag_69, Jada_255, Jflix2_25, JonJames_40, Kahlid_101, Kaylissa_41, Kenrey_232, Koko_64, Kovu_26, Krishelle_51, Kumotta_5, LastResort_68, LazerLemon_75, Limpid_229, LogiBear_66, Lozinak_41, Madraxi_29, MajorMajor_61, Manuel_3, MargaretKali_1, MaryV_93, MidnightRain_85, Milomuff_3, MinecraftSteve_70, Miskis_39, MurphyJoseph_78, MyraDee_58, Nebkiss_19, Nebulosus_68, Nedarya_66, NiceHouse_61, Nicholasp3_102, Norvs_42, NothingSpecial_59, Nova53_72, Omega_199, OneUp_35, Palpatine_21, Park1214_217, Park1214_74, PhatBacter_21, PhinkBoden_41, Ponzi_32, Porky_21, Predator_10, Quby_89, Quokka_60, RER2_44, RazorC_24, ReMo_68, Remus_70, Rockabye_131, Rowa_60, Rumpelstiltskin_98, SFuller_27, SJReid_133, Salz_60, Schaffner_27, Seabiscuit_76, SeresaTree_235, Sham_181, Shawty_32, ShayRa_70, Smoothie_42, Solea_3, SpeedDemon_240, Spooks_32, StarPlatinum_46, Strosahl_70, Success_33, Switzerland_69, Syleon_103, Tailonex_57, Talos_188, Talos_215, Talos_64, Tarnish_2, Teodoridan_57, Toniann_41, Tuck_30, TunaTartare_189, TunaTartare_254, Underpass_94, Vetrix_100, Vine_3, WRightOn_2, Wheeler_74, Wheeler_80, Wildcat_93, WilliamBoone_41, Wolfstar_46, Yang_45, Yoncess_50, Yvonnetastic_38, Zany_25,

Summary by start number:

Start 23:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Omega_199 (J),

Start 25:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gaia_140 (X),

Start 30:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kumotta_5 (FB),

Start 32:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Yang_45 (AZ1),

Start 34:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MargaretKali_1 (FB),

Start 35:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DeluluLabubu_105 (BK1),

Start 37:
• Found in 2 of 186 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 50.0% of time when present
• Phage (with cluster) where this start called: LazerLemon_75 (BH),

Start 43:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: EGole_223 (BE1),

Start 45:
• Found in 2 of 186 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AGrandiflora_41 (AZ1), Kaylissa_41 (AZ1),

Start 46:
• Found in 2 of 186 (1.1%) of genes in pham
• Manual Annotations of this start: 2 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Blesser_65 (A1), Wheeler_74 (A1),

Start 47:
• Found in 24 of 186 (12.9%) of genes in pham
• Manual Annotations of this start: 19 of 169
• Called 83.3% of time when present
• Phage (with cluster) where this start called: Abscondus_40 (CQ1), Aphelion_41 (CQ1), Bachita_43 (CQ1), BrutonGaster_29 (CQ2), Cardigan_39 (DD), ClubL_41 (CQ1), Cucurbita_43 (CQ1), Culver_41 (CQ1), Dusty_40 (CQ1), Engineer_42 (CQ1), Geeche_40 (CQ1), JonJames_40 (DD), Lozinak_41 (CQ1), Miskis_39 (CQ1), Norvs_42 (CQ1), PhinkBoden_41 (CQ1), Smoothie_42 (CQ1), Toniann_41 (CQ1), WilliamBoone_41 (CQ1), Yvonnetastic_38 (DD),

Start 48:
• Found in 2 of 186 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 50.0% of time when present
• Phage (with cluster) where this start called: A3Wally_146 (GD1),

Start 49:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Bavilard_3 (CT),

Start 50:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 2 of 169
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Bantam_23 (DL), SpeedDemon_240 (DL),

Start 51:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adolin_42 (AZ1),

Start 53:
• Found in 4 of 186 (2.2%) of genes in pham
• Manual Annotations of this start: 3 of 169
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Rockabye_131 (FC), SJReid_133 (FC), Westy_204 (BK1),

Start 55:
• Found in 37 of 186 (19.9%) of genes in pham
• Manual Annotations of this start: 23 of 169
• Called 70.3% of time when present
• Phage (with cluster) where this start called: Aldrich_26 (A1), Alone3_65 (BS), Anedea_217 (BE1), Atkinbua_26 (A1), Corvo_25 (A1), Daubenski_27 (BE1), Davielle_179 (BE1), Erasmago_158 (GD2), Forrest_150 (BK1), Fudan_62 (BS), GroundGoblin_26 (A1), Hermia_27 (A1), Karp_197 (BK1), LeoJr_143 (FC), LuckySocke_64 (BS), Nova53_188 (CG), Noxious_27 (A1), Persimmon_179 (BE1), Pinto_27 (A1), ReginaGlobina_142 (FC), RosePharie_70 (BF), Snazzy_23 (A1), Target_27 (A1), WhereRU_178 (BE1), Zeeculate_24 (A1), Zooman_139 (GD2),

Start 56:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Talos_64 (BS),

Start 57:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Wheeler_80 (A1),

Start 59:
• Found in 22 of 186 (11.8%) of genes in pham
• Manual Annotations of this start: 10 of 169
• Called 45.5% of time when present
• Phage (with cluster) where this start called: Ajay_25 (A1), Ashballer_24 (A1), Beatrix_24 (A1), ConceptII_26 (A1), GrecoEtereo_26 (A1), KikiBouba_27 (A1), Petruchio_25 (A1), Seabiscuit_76 (A1), SwissCheese_25 (A1), Trouble_25 (A1),

Start 66:
• Found in 2 of 186 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Syleon_103 (DU1),

Start 68:
• Found in 3 of 186 (1.6%) of genes in pham
• No Manual Annotations of this start.
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Quby_89 (L4),

Start 69:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 3 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bromden_61 (L4), Finemlucis_71 (L2), Gabriela_68 (L2),

Start 71:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 2 of 169
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Manuel_3 (BF), Nova53_72 (CG),

Start 72:
• Found in 2 of 186 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Kovu_26 (AL),

Start 73:
• Found in 4 of 186 (2.2%) of genes in pham
• Manual Annotations of this start: 2 of 169
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Alone3_188 (BS), Talos_188 (BS),

Start 75:
• Found in 2 of 186 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Shawty_32 (BB1),

Start 76:
• Found in 2 of 186 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Koko_64 (A6),

Start 77:
• Found in 7 of 186 (3.8%) of genes in pham
• Manual Annotations of this start: 5 of 169

• Called 71.4% of time when present
• Phage (with cluster) where this start called: Annadreamy_222 (BK1), Kenrey_232 (BK1), Limpid_229 (BK1), NiceHouse_61 (CE), StarPlatinum_46 (BE2),

Start 80:
• Found in 5 of 186 (2.7%) of genes in pham
• Manual Annotations of this start: 5 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alone3_117 (BS), DeluluLabubu_257 (BK1), Forrest_254 (BK1), Jada_255 (BK1), TunaTartare_254 (BK1),

Start 82:
• Found in 7 of 186 (3.8%) of genes in pham
• Manual Annotations of this start: 6 of 169
• Called 85.7% of time when present
• Phage (with cluster) where this start called: Bromden_104 (L4), Gardann_101 (L2), Kahlid_101 (L2), Nicholasp3_102 (L2), Rumpelstiltskin_98 (L2), Underpass_94 (L2),

Start 83:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 33.3% of time when present
• Phage (with cluster) where this start called: JPandJE_2 (BF),

Start 84:
• Found in 4 of 186 (2.2%) of genes in pham
• Manual Annotations of this start: 4 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alone3_216 (BS), Park1214_217 (BS), Talos_215 (BS), Vetrix_100 (L2),

Start 85:
• Found in 7 of 186 (3.8%) of genes in pham
• Manual Annotations of this start: 2 of 169
• Called 28.6% of time when present
• Phage (with cluster) where this start called: Sham_181 (BK1), TunaTartare_189 (BK1),

Start 86:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 3 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Jflix2_25 (CF), Madraxi_29 (CF), SFuller_27 (CF),

Start 87:
• Found in 5 of 186 (2.7%) of genes in pham
• Manual Annotations of this start: 2 of 169
• Called 80.0% of time when present
• Phage (with cluster) where this start called: CloudWang3_63 (A6), Milomuff_3 (EB), SeresaTree_235 (BK1), Solea_3 (EB),

Start 88:

• Found in 4 of 186 (2.2%) of genes in pham
• Manual Annotations of this start: 3 of 169
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Didgeridoo_31 (EB), Finalfrontier_30 (EB), Schaffner_27 (AZ1),

Start 90:
• Found in 10 of 186 (5.4%) of genes in pham
• Manual Annotations of this start: 3 of 169
• Called 30.0% of time when present
• Phage (with cluster) where this start called: Clown_83 (DC2), Spooks_32 (BT), Success_33 (BT),

Start 92:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Predator_10 (H1),

Start 94:
• Found in 4 of 186 (2.2%) of genes in pham
• Manual Annotations of this start: 4 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: FireRed_21 (E), Palpatine_21 (E), PhatBacter_21 (E), Porky_21 (E),

Start 95:
• Found in 4 of 186 (2.2%) of genes in pham
• Manual Annotations of this start: 3 of 169
• Called 75.0% of time when present
• Phage (with cluster) where this start called: AdaS_75 (AY), MidnightRain_85 (AY), MurphyJoseph_78 (AY),

Start 97:
• Found in 4 of 186 (2.2%) of genes in pham
• Manual Annotations of this start: 4 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alyssamiracle_26 (DV), Genamy16_26 (DV), RazorC_24 (DV), Zany_25 (DV),

Start 98:
• Found in 5 of 186 (2.7%) of genes in pham
• Manual Annotations of this start: 3 of 169
• Called 60.0% of time when present
• Phage (with cluster) where this start called: CherryonLim_2 (CT), Tarnish_2 (CT), Vine_3 (CT),

Start 99:
• Found in 2 of 186 (1.1%) of genes in pham
• Manual Annotations of this start: 2 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AnnaLie_3 (EB), BelmontSKP_3 (EB),

Start 101:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Tuck_30 (AZ1),

Start 103:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 3 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MaryV_93 (V), WRightOn_2 (BF), Wildcat_93 (V),

Start 105:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Park1214_74 (BS),

Start 106:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Wolfstar_46 (ED),

Start 107:
• Found in 2 of 186 (1.1%) of genes in pham
• Manual Annotations of this start: 2 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gaia_18 (X), Nebkiss_19 (X),

Start 115:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DatBoi_24 (DL),

Start 118:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: OneUp_35 (CQ2),

Start 120:
• Found in 1 of 186 (0.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: LogiBear_66 (A15),

Start 121:
• Found in 12 of 186 (6.5%) of genes in pham
• Manual Annotations of this start: 12 of 169
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Anaysia_70 (A15), Battleship_72 (A15), Epsocamisio_67 (A15), JSwag_69 (A15), LastResort_68 (A15), MinecraftSteve_70 (A15), Nebulosus_68 (A15), ReMo_68 (A15), Remus_70 (A15), ShayRa_70 (A15), Strosahl_70 (A15), Switzerland_69 (A15),

Start 123:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Rowa_60 (BL),

Start 129:
• Found in 5 of 186 (2.7%) of genes in pham
• Manual Annotations of this start: 3 of 169
• Called 80.0% of time when present
• Phage (with cluster) where this start called: CartmannCramer_58 (A1), Ebony_61 (A11), MyraDee_58 (A18), Salz_60 (A11),

Start 130:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ponzi_32 (singleton),

Start 137:
• Found in 6 of 186 (3.2%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 16.7% of time when present
• Phage (with cluster) where this start called: Nedarya_66 (A15),

Start 138:
• Found in 16 of 186 (8.6%) of genes in pham
• Manual Annotations of this start: 3 of 169
• Called 25.0% of time when present
• Phage (with cluster) where this start called: BobbyDazzler_51 (CA), Krishelle_51 (CA), RER2_44 (CA), Yoncess_50 (CA),

Start 140:
• Found in 6 of 186 (3.2%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Bradman_61 (A2), MajorMajor_61 (A2), Quokka_60 (A2),

Start 143:
• Found in 2 of 186 (1.1%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Tailonex_57 (singleton),

Start 144:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169

• Called 100.0% of time when present
• Phage (with cluster) where this start called: NothingSpecial_59 (A2),

Start 147:
• Found in 1 of 186 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Hannaconda_119 (J),

Start 149:
• Found in 3 of 186 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 169
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gachnar_59 (A1), IgnatiusPatJac_59 (A1), Teodoridan_57 (A1),

Summary by clusters:

There are 44 clusters represented in this pham: GD1, BF, BL, DD, BH, GD2, BT, FB, FC, BS, DV, DL, A15, A11, A18, A1, A2, A6, CQ2, CQ1, BB1, E, ED, CA, J, CG, CF, CE, AL, L4, L2, BK1, V, AY, X, singleton, EB, DC2, CT, H1, DU1, BE2, AZ1, BE1,

Info for manual annotations of cluster A1:
•Start number 46 was manually annotated 2 times for cluster A1.
•Start number 55 was manually annotated 10 times for cluster A1.
•Start number 57 was manually annotated 1 time for cluster A1.
•Start number 59 was manually annotated 10 times for cluster A1.
•Start number 149 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster A11:
•Start number 129 was manually annotated 2 times for cluster A11.

Info for manual annotations of cluster A15:
•Start number 121 was manually annotated 12 times for cluster A15.
•Start number 137 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A18:
•Start number 129 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:
•Start number 144 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A6:
•Start number 76 was manually annotated 1 time for cluster A6.
•Start number 87 was manually annotated 1 time for cluster A6.

Info for manual annotations of cluster AL:
•Start number 72 was manually annotated 1 time for cluster AL.

Info for manual annotations of cluster AY:
•Start number 95 was manually annotated 3 times for cluster AY.

Info for manual annotations of cluster AZ1:

•Start number 32 was manually annotated 1 time for cluster AZ1.
•Start number 45 was manually annotated 1 time for cluster AZ1.
•Start number 51 was manually annotated 1 time for cluster AZ1.
•Start number 88 was manually annotated 1 time for cluster AZ1.
•Start number 101 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster BB1:
•Start number 75 was manually annotated 1 time for cluster BB1.

Info for manual annotations of cluster BE1:
•Start number 43 was manually annotated 1 time for cluster BE1.
•Start number 55 was manually annotated 5 times for cluster BE1.

Info for manual annotations of cluster BE2:
•Start number 77 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster BF:
•Start number 55 was manually annotated 1 time for cluster BF.
•Start number 71 was manually annotated 1 time for cluster BF.
•Start number 83 was manually annotated 1 time for cluster BF.
•Start number 103 was manually annotated 1 time for cluster BF.

Info for manual annotations of cluster BH:
•Start number 37 was manually annotated 1 time for cluster BH.

Info for manual annotations of cluster BK1:
•Start number 35 was manually annotated 1 time for cluster BK1.
•Start number 53 was manually annotated 1 time for cluster BK1.
•Start number 55 was manually annotated 2 times for cluster BK1.
•Start number 77 was manually annotated 3 times for cluster BK1.
•Start number 80 was manually annotated 4 times for cluster BK1.
•Start number 85 was manually annotated 2 times for cluster BK1.

Info for manual annotations of cluster BL:
•Start number 123 was manually annotated 1 time for cluster BL.

Info for manual annotations of cluster BS:
•Start number 55 was manually annotated 3 times for cluster BS.
•Start number 56 was manually annotated 1 time for cluster BS.
•Start number 73 was manually annotated 2 times for cluster BS.
•Start number 80 was manually annotated 1 time for cluster BS.
•Start number 84 was manually annotated 3 times for cluster BS.
•Start number 105 was manually annotated 1 time for cluster BS.

Info for manual annotations of cluster BT:
•Start number 90 was manually annotated 2 times for cluster BT.

Info for manual annotations of cluster CA:
•Start number 138 was manually annotated 3 times for cluster CA.

Info for manual annotations of cluster CE:
•Start number 77 was manually annotated 1 time for cluster CE.

Info for manual annotations of cluster CF:
•Start number 86 was manually annotated 3 times for cluster CF.

Info for manual annotations of cluster CG:
•Start number 55 was manually annotated 1 time for cluster CG.
•Start number 71 was manually annotated 1 time for cluster CG.

Info for manual annotations of cluster CQ1:
•Start number 47 was manually annotated 15 times for cluster CQ1.

Info for manual annotations of cluster CQ2:
•Start number 47 was manually annotated 1 time for cluster CQ2.
•Start number 118 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CT:
•Start number 49 was manually annotated 1 time for cluster CT.
•Start number 98 was manually annotated 3 times for cluster CT.

Info for manual annotations of cluster DC2:
•Start number 90 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DD:
•Start number 47 was manually annotated 3 times for cluster DD.

Info for manual annotations of cluster DL:
•Start number 50 was manually annotated 2 times for cluster DL.
•Start number 115 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster DU1:
•Start number 66 was manually annotated 1 time for cluster DU1.

Info for manual annotations of cluster DV:
•Start number 97 was manually annotated 4 times for cluster DV.

Info for manual annotations of cluster E:
•Start number 94 was manually annotated 4 times for cluster E.

Info for manual annotations of cluster EB:
•Start number 87 was manually annotated 1 time for cluster EB.
•Start number 88 was manually annotated 2 times for cluster EB.
•Start number 99 was manually annotated 2 times for cluster EB.

Info for manual annotations of cluster ED:
•Start number 106 was manually annotated 1 time for cluster ED.

Info for manual annotations of cluster FB:
•Start number 30 was manually annotated 1 time for cluster FB.
•Start number 34 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FC:
•Start number 53 was manually annotated 2 times for cluster FC.

Info for manual annotations of cluster GD1:

•Start number 48 was manually annotated 1 time for cluster GD1.

Info for manual annotations of cluster GD2:
•Start number 55 was manually annotated 1 time for cluster GD2.

Info for manual annotations of cluster H1:
•Start number 92 was manually annotated 1 time for cluster H1.

Info for manual annotations of cluster J:
•Start number 23 was manually annotated 1 time for cluster J.
•Start number 147 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster L2:
•Start number 69 was manually annotated 2 times for cluster L2.
•Start number 82 was manually annotated 5 times for cluster L2.
•Start number 84 was manually annotated 1 time for cluster L2.

Info for manual annotations of cluster L4:
•Start number 69 was manually annotated 1 time for cluster L4.
•Start number 82 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster V:
•Start number 103 was manually annotated 2 times for cluster V.

Info for manual annotations of cluster X:
•Start number 25 was manually annotated 1 time for cluster X.
•Start number 107 was manually annotated 2 times for cluster X.

Gene Information:

Gene: A3Wally_146 Start: 90094, Stop: 90525, Start Num: 48
Candidate Starts for A3Wally_146:
(Start: 48 @90094 has 1 MA's), (186, 90337), (232, 90481),

Gene: AGrandiflora_41 Start: 29625, Stop: 30068, Start Num: 45
Candidate Starts for AGrandiflora_41:
(Start: 23 @29544 has 1 MA's), (Start: 45 @29625 has 1 MA's), (165, 29847),

Gene: Abscondus_40 Start: 17135, Stop: 17593, Start Num: 47
Candidate Starts for Abscondus_40:
(Start: 47 @17135 has 19 MA's),

Gene: AdaS_75 Start: 42758, Stop: 43237, Start Num: 95
Candidate Starts for AdaS_75:
(Start: 95 @42758 has 3 MA's), (182, 42941), (204, 43004), (232, 43109), (250, 43160),

Gene: Adolin_42 Start: 29874, Stop: 30347, Start Num: 51
Candidate Starts for Adolin_42:
(9, 29637), (Start: 51 @29874 has 1 MA's), (Start: 129 @30018 has 3 MA's), (174, 30111), (218, 30219),

Gene: Ajay_25 Start: 18878, Stop: 19372, Start Num: 59
Candidate Starts for Ajay_25:
(Start: 55 @18872 has 23 MA's), (Start: 59 @18878 has 10 MA's), (150, 19034), (198, 19094), (244, 19274), (259, 19325),

Gene: Aldrich_26 Start: 19663, Stop: 20163, Start Num: 55
Candidate Starts for Aldrich_26:
(Start: 55 @19663 has 23 MA's), (Start: 59 @19669 has 10 MA's), (150, 19825), (198, 19885), (244, 20065), (259, 20116),

Gene: Alone3_216 Start: 111609, Stop: 111190, Start Num: 84
Candidate Starts for Alone3_216:
(Start: 84 @111609 has 4 MA's), (140, 111495), (171, 111435), (178, 111426), (218, 111309), (231, 111258),

Gene: Alone3_188 Start: 97401, Stop: 96985, Start Num: 73
Candidate Starts for Alone3_188:
(Start: 73 @97401 has 2 MA's), (116, 97320), (163, 97230), (170, 97206), (219, 97071),

Gene: Alone3_65 Start: 23323, Stop: 23781, Start Num: 55
Candidate Starts for Alone3_65:
(Start: 55 @23323 has 23 MA's), (131, 23473), (Start: 137 @23485 has 1 MA's), (159, 23518), (186, 23581), (191, 23593), (205, 23632), (218, 23674), (233, 23731), (240, 23752),

Gene: Alone3_117 Start: 62982, Stop: 63413, Start Num: 80
Candidate Starts for Alone3_117:
(Start: 80 @62982 has 5 MA's), (109, 63033), (Start: 123 @63066 has 1 MA's), (178, 63177), (233, 63345), (238, 63357),

Gene: Alyssamiracle_26 Start: 15136, Stop: 15546, Start Num: 97
Candidate Starts for Alyssamiracle_26:
(79, 15115), (Start: 97 @15136 has 4 MA's), (109, 15160), (194, 15343), (211, 15403), (225, 15460), (228, 15469), (233, 15490), (240, 15511),

Gene: Anaysia_70 Start: 39921, Stop: 39553, Start Num: 121
Candidate Starts for Anaysia_70:
(61, 40029), (70, 40011), (Start: 121 @39921 has 12 MA's), (214, 39711), (252, 39585), (258, 39567),

Gene: Anedea_217 Start: 106294, Stop: 106719, Start Num: 55
Candidate Starts for Anedea_217:
(Start: 55 @106294 has 23 MA's), (218, 106618), (221, 106627), (228, 106654), (230, 106666), (233, 106675), (247, 106711), (248, 106714),

Gene: AnnaLie_3 Start: 681, Stop: 1031, Start Num: 99
Candidate Starts for AnnaLie_3:
(Start: 99 @681 has 2 MA's), (159, 786), (176, 828), (228, 978),

Gene: Annadreamy_222 Start: 109759, Stop: 110133, Start Num: 77
Candidate Starts for Annadreamy_222:
(Start: 73 @109753 has 2 MA's), (Start: 77 @109759 has 5 MA's), (Start: 85 @109768 has 2 MA's), (208, 110005), (218, 110047), (225, 110074), (226, 110080),

Gene: Aphelion_41 Start: 17404, Stop: 17862, Start Num: 47

Candidate Starts for Aphelion_41:
(Start: 47 @17404 has 19 MA's),

Gene: Ashballer_24 Start: 18821, Stop: 19315, Start Num: 59
Candidate Starts for Ashballer_24:
(Start: 55 @18815 has 23 MA's), (Start: 59 @18821 has 10 MA's), (150, 18977), (198, 19037), (244, 19217), (259, 19268),

Gene: Atkinbua_26 Start: 18768, Stop: 19268, Start Num: 55
Candidate Starts for Atkinbua_26:
(Start: 55 @18768 has 23 MA's), (Start: 59 @18774 has 10 MA's), (150, 18930), (198, 18990), (244, 19170), (259, 19221),

Gene: Bachita_43 Start: 17837, Stop: 18295, Start Num: 47
Candidate Starts for Bachita_43:
(Start: 47 @17837 has 19 MA's),

Gene: Bantam_23 Start: 14778, Stop: 15239, Start Num: 50
Candidate Starts for Bantam_23:
(29, 14694), (Start: 50 @14778 has 2 MA's), (207, 15099), (235, 15198),

Gene: Battleship_72 Start: 40127, Stop: 39759, Start Num: 121
Candidate Starts for Battleship_72:
(61, 40235), (70, 40217), (Start: 121 @40127 has 12 MA's), (214, 39917), (252, 39791), (258, 39773),

Gene: Bavilard_3 Start: 956, Stop: 1408, Start Num: 49
Candidate Starts for Bavilard_3:
(13, 791), (28, 872), (Start: 49 @956 has 1 MA's), (Start: 98 @1043 has 3 MA's), (154, 1151), (157, 1154), (205, 1277), (208, 1283), (215, 1310), (218, 1319),

Gene: Beatrix_24 Start: 19780, Stop: 20274, Start Num: 59
Candidate Starts for Beatrix_24:
(Start: 55 @19774 has 23 MA's), (Start: 59 @19780 has 10 MA's), (150, 19936), (198, 19996), (244, 20176), (259, 20227),

Gene: BelmontSKP_3 Start: 681, Stop: 1031, Start Num: 99
Candidate Starts for BelmontSKP_3:
(Start: 99 @681 has 2 MA's), (159, 786), (176, 828), (228, 978),

Gene: Blesser_65 Start: 43215, Stop: 42592, Start Num: 46
Candidate Starts for Blesser_65:
(40, 43224), (Start: 46 @43215 has 2 MA's), (Start: 47 @43203 has 19 MA's), (177, 42936), (199, 42876), (232, 42717), (235, 42711), (253, 42657),

Gene: BobbyDazzler_51 Start: 36743, Stop: 36405, Start Num: 138
Candidate Starts for BobbyDazzler_51:
(Start: 90 @36845 has 3 MA's), (Start: 138 @36743 has 3 MA's), (214, 36566), (224, 36527), (225, 36524), (228, 36515), (249, 36449),

Gene: Bradman_61 Start: 38947, Stop: 38609, Start Num: 140
Candidate Starts for Bradman_61:
(60, 39106), (81, 39067), (140, 38947), (222, 38755),

Gene: Bromden_104 Start: 63270, Stop: 63686, Start Num: 82
Candidate Starts for Bromden_104:
(Start: 82 @63270 has 6 MA's), (225, 63612),

Gene: Bromden_61 Start: 43963, Stop: 44400, Start Num: 69
Candidate Starts for Bromden_61:
(65, 43960), (Start: 69 @43963 has 3 MA's), (Start: 90 @43996 has 3 MA's), (111, 44038), (132, 44083), (172, 44158), (174, 44164), (232, 44353),

Gene: BrutonGaster_29 Start: 14029, Stop: 14475, Start Num: 47
Candidate Starts for BrutonGaster_29:
(Start: 47 @14029 has 19 MA's), (230, 14428),

Gene: Cardigan_39 Start: 19023, Stop: 19475, Start Num: 47
Candidate Starts for Cardigan_39:
(Start: 47 @19023 has 19 MA's), (58, 19035), (104, 19110), (156, 19218),

Gene: CartmannCramer_58 Start: 42140, Stop: 41766, Start Num: 129
Candidate Starts for CartmannCramer_58:
(Start: 59 @42278 has 10 MA's), (74, 42245), (Start: 129 @42140 has 3 MA's), (224, 41912), (249, 41834),

Gene: CherryonLim_2 Start: 640, Stop: 990, Start Num: 98
Candidate Starts for CherryonLim_2:
(Start: 98 @640 has 3 MA's), (154, 748), (157, 751), (205, 874), (208, 880), (215, 907), (218, 916), (227, 949), (229, 952), (234, 970),

Gene: CloudWang3_63 Start: 38546, Stop: 38136, Start Num: 87
Candidate Starts for CloudWang3_63:
(Start: 76 @38564 has 1 MA's), (Start: 87 @38546 has 2 MA's), (150, 38423), (193, 38318), (212, 38258), (221, 38228), (232, 38183), (233, 38180), (240, 38159),

Gene: Clown_83 Start: 53992, Stop: 54378, Start Num: 90
Candidate Starts for Clown_83:
(10, 53719), (11, 53737), (42, 53896), (Start: 48 @53917 has 1 MA's), (54, 53926), (63, 53947), (67, 53956), (Start: 90 @53992 has 3 MA's), (164, 54142), (189, 54202), (215, 54277),

Gene: ClubL_41 Start: 17326, Stop: 17784, Start Num: 47
Candidate Starts for ClubL_41:
(Start: 47 @17326 has 19 MA's),

Gene: ConceptII_26 Start: 19302, Stop: 19796, Start Num: 59
Candidate Starts for ConceptII_26:
(Start: 55 @19296 has 23 MA's), (Start: 59 @19302 has 10 MA's), (150, 19458), (198, 19518), (244, 19698), (259, 19749),

Gene: Corvo_25 Start: 19271, Stop: 19771, Start Num: 55
Candidate Starts for Corvo_25:
(Start: 55 @19271 has 23 MA's), (Start: 59 @19277 has 10 MA's), (150, 19433), (198, 19493), (244, 19673), (259, 19724),

Gene: Cucurbita_43 Start: 18696, Stop: 19154, Start Num: 47
Candidate Starts for Cucurbita_43:

(Start: 47 @18696 has 19 MA's),

Gene: Culver_41 Start: 17135, Stop: 17593, Start Num: 47
Candidate Starts for Culver_41:
(Start: 47 @17135 has 19 MA's),

Gene: DatBoi_24 Start: 15695, Stop: 16030, Start Num: 115
Candidate Starts for DatBoi_24:
(Start: 50 @15569 has 2 MA's), (Start: 115 @15695 has 1 MA's), (207, 15890), (235, 15989),

Gene: Daubenski_27 Start: 12504, Stop: 12022, Start Num: 55
Candidate Starts for Daubenski_27:
(Start: 55 @12504 has 23 MA's), (134, 12348), (160, 12300), (170, 12270), (190, 12216), (197, 12201), (219, 12120), (233, 12066),

Gene: Davielle_179 Start: 95501, Stop: 95932, Start Num: 55
Candidate Starts for Davielle_179:
(Start: 55 @95501 has 23 MA's), (100, 95579), (163, 95705), (167, 95723), (215, 95834), (226, 95876),

Gene: DeluluLabubu_257 Start: 121131, Stop: 121556, Start Num: 80
Candidate Starts for DeluluLabubu_257:
(Start: 80 @121131 has 5 MA's), (Start: 138 @121248 has 3 MA's), (174, 121329), (180, 121338), (216, 121437), (218, 121455), (228, 121491), (246, 121545),

Gene: DeluluLabubu_105 Start: 68261, Stop: 68743, Start Num: 35
Candidate Starts for DeluluLabubu_105:
(Start: 35 @68261 has 1 MA's), (41, 68276), (148, 68492), (169, 68537), (185, 68570), (226, 68690), (233, 68714),

Gene: Didgeridoo_31 Start: 22465, Stop: 22809, Start Num: 88
Candidate Starts for Didgeridoo_31:
(Start: 88 @22465 has 3 MA's), (142, 22555), (208, 22678), (218, 22714), (226, 22747),

Gene: Dusty_40 Start: 17135, Stop: 17593, Start Num: 47
Candidate Starts for Dusty_40:
(Start: 47 @17135 has 19 MA's),

Gene: EGole_223 Start: 113552, Stop: 114001, Start Num: 43
Candidate Starts for EGole_223:
(Start: 43 @113552 has 1 MA's), (Start: 55 @113582 has 23 MA's), (163, 113783), (170, 113807), (190, 113852), (220, 113936), (235, 113981),

Gene: Ebony_61 Start: 38810, Stop: 38445, Start Num: 129
Candidate Starts for Ebony_61:
(60, 38942), (81, 38906), (104, 38864), (Start: 129 @38810 has 3 MA's), (151, 38771), (205, 38648), (218, 38606), (222, 38594), (261, 38459),

Gene: Engineer_42 Start: 17352, Stop: 17810, Start Num: 47
Candidate Starts for Engineer_42:
(Start: 47 @17352 has 19 MA's),

Gene: Epsocamisio_67 Start: 39456, Stop: 39088, Start Num: 121
Candidate Starts for Epsocamisio_67:

(70, 39546), (Start: 121 @39456 has 12 MA's), (214, 39246), (252, 39120), (258, 39102),

Gene: Erasmago_158 Start: 90400, Stop: 90855, Start Num: 55
Candidate Starts for Erasmago_158:
(Start: 55 @90400 has 23 MA's), (154, 90589),

Gene: Finalfrontier_30 Start: 22829, Stop: 23173, Start Num: 88
Candidate Starts for Finalfrontier_30:
(Start: 88 @22829 has 3 MA's), (142, 22919), (208, 23042), (218, 23078), (226, 23111),

Gene: Finemlucis_71 Start: 49120, Stop: 49566, Start Num: 69
Candidate Starts for Finemlucis_71:
(Start: 56 @49093 has 1 MA's), (62, 49108), (Start: 69 @49120 has 3 MA's), (176, 49336), (185, 49354), (219, 49468), (237, 49531), (241, 49543),

Gene: FireRed_21 Start: 12888, Stop: 13358, Start Num: 94
Candidate Starts for FireRed_21:
(67, 12843), (Start: 94 @12888 has 4 MA's), (208, 13140), (235, 13236),

Gene: Forrest_254 Start: 120939, Stop: 121364, Start Num: 80
Candidate Starts for Forrest_254:
(Start: 80 @120939 has 5 MA's), (Start: 138 @121056 has 3 MA's), (174, 121137), (180, 121146), (218, 121263), (228, 121299), (246, 121353),

Gene: Forrest_150 Start: 82816, Stop: 83256, Start Num: 55
Candidate Starts for Forrest_150:
(Start: 55 @82816 has 23 MA's), (169, 83032), (179, 83056), (223, 83179), (233, 83215),

Gene: Fudan_62 Start: 22684, Stop: 23142, Start Num: 55
Candidate Starts for Fudan_62:
(Start: 55 @22684 has 23 MA's), (131, 22834), (Start: 137 @22846 has 1 MA's), (159, 22879), (186, 22942), (191, 22954), (205, 22993), (218, 23035), (233, 23092), (240, 23113),

Gene: Gabriela_68 Start: 47246, Stop: 47692, Start Num: 69
Candidate Starts for Gabriela_68:
(Start: 56 @47219 has 1 MA's), (62, 47234), (Start: 69 @47246 has 3 MA's), (176, 47462), (185, 47480), (219, 47594), (237, 47657), (241, 47669),

Gene: Gachnar_59 Start: 40593, Stop: 40255, Start Num: 149
Candidate Starts for Gachnar_59:
(Start: 85 @40719 has 2 MA's), (110, 40671), (Start: 138 @40611 has 3 MA's), (Start: 149 @40593 has 1 MA's), (219, 40422), (224, 40401), (249, 40323),

Gene: Gaia_18 Start: 17322, Stop: 17690, Start Num: 107
Candidate Starts for Gaia_18:
(Start: 107 @17322 has 2 MA's), (223, 17610),

Gene: Gaia_140 Start: 75742, Stop: 76296, Start Num: 25
Candidate Starts for Gaia_140:
(12, 75664), (15, 75679), (17, 75685), (20, 75700), (Start: 25 @75742 has 1 MA's), (Start: 71 @75880 has 2 MA's), (165, 76036), (174, 76060), (225, 76222), (237, 76261),

Gene: Gardann_101 Start: 61924, Stop: 62331, Start Num: 82

Candidate Starts for Gardann_101:
(Start: 82 @61924 has 6 MA's), (133, 62029), (Start: 138 @62038 has 3 MA's), (205, 62173), (225, 62266), (233, 62296),

Gene: Geeche_40 Start: 17226, Stop: 17684, Start Num: 47
Candidate Starts for Geeche_40:
(Start: 47 @17226 has 19 MA's),

Gene: Genamy16_26 Start: 15136, Stop: 15546, Start Num: 97
Candidate Starts for Genamy16_26:
(79, 15115), (Start: 97 @15136 has 4 MA's), (109, 15160), (194, 15343), (211, 15403), (225, 15460), (228, 15469), (233, 15490), (240, 15511),

Gene: GrecoEtereo_26 Start: 19123, Stop: 19617, Start Num: 59
Candidate Starts for GrecoEtereo_26:
(Start: 55 @19117 has 23 MA's), (Start: 59 @19123 has 10 MA's), (150, 19279), (198, 19339), (244, 19519), (259, 19570),

Gene: GroundGoblin_26 Start: 19663, Stop: 20163, Start Num: 55
Candidate Starts for GroundGoblin_26:
(Start: 55 @19663 has 23 MA's), (Start: 59 @19669 has 10 MA's), (150, 19825), (198, 19885), (244, 20065), (259, 20116),

Gene: Hannaconda_119 Start: 67166, Stop: 67480, Start Num: 147
Candidate Starts for Hannaconda_119:
(36, 66944), (52, 66980), (Start: 147 @67166 has 1 MA's), (205, 67289), (222, 67367), (225, 67382), (230, 67403), (237, 67421),

Gene: Hermia_27 Start: 19855, Stop: 20355, Start Num: 55
Candidate Starts for Hermia_27:
(Start: 55 @19855 has 23 MA's), (Start: 59 @19861 has 10 MA's), (150, 20017), (198, 20077), (244, 20257), (259, 20308),

Gene: IgnatiusPatJac_59 Start: 40122, Stop: 39781, Start Num: 149
Candidate Starts for IgnatiusPatJac_59:
(Start: 85 @40248 has 2 MA's), (110, 40200), (Start: 138 @40140 has 3 MA's), (Start: 149 @40122 has 1 MA's), (219, 39951), (224, 39930), (249, 39852), (260, 39813),

Gene: JPandJE_2 Start: 2649, Stop: 3017, Start Num: 83
Candidate Starts for JPandJE_2:
(8, 2298), (Start: 83 @2649 has 1 MA's), (Start: 88 @2658 has 3 MA's), (139, 2760), (163, 2796), (170, 2820), (174, 2832), (202, 2883),

Gene: JSwag_69 Start: 39645, Stop: 39277, Start Num: 121
Candidate Starts for JSwag_69:
(61, 39753), (70, 39735), (Start: 121 @39645 has 12 MA's), (214, 39435), (252, 39309), (258, 39291),

Gene: Jada_255 Start: 120179, Stop: 120604, Start Num: 80
Candidate Starts for Jada_255:
(Start: 80 @120179 has 5 MA's), (Start: 138 @120296 has 3 MA's), (174, 120377), (180, 120386), (218, 120503), (228, 120539), (246, 120593),

Gene: Jflix2_25 Start: 25439, Stop: 25867, Start Num: 86

Candidate Starts for Jflix2_25:
(4, 24707), (6, 24917), (Start: 86 @25439 has 3 MA's), (160, 25574), (180, 25619), (223, 25760), (232, 25793),

Gene: JonJames_40 Start: 21238, Stop: 21690, Start Num: 47
Candidate Starts for JonJames_40:
(Start: 47 @21238 has 19 MA's), (58, 21250), (104, 21325), (156, 21433),

Gene: Kahlid_101 Start: 61842, Stop: 62249, Start Num: 82
Candidate Starts for Kahlid_101:
(Start: 82 @61842 has 6 MA's), (133, 61947), (Start: 138 @61956 has 3 MA's), (205, 62091), (225, 62184), (233, 62214),

Gene: Karp_197 Start: 102737, Stop: 102318, Start Num: 55
Candidate Starts for Karp_197:
(Start: 53 @102743 has 3 MA's), (Start: 55 @102737 has 23 MA's), (122, 102620), (163, 102542), (187, 102488), (218, 102416),

Gene: Kaylissa_41 Start: 29646, Stop: 30089, Start Num: 45
Candidate Starts for Kaylissa_41:
(Start: 23 @29565 has 1 MA's), (Start: 45 @29646 has 1 MA's), (165, 29868),

Gene: Kenrey_232 Start: 111193, Stop: 111606, Start Num: 77
Candidate Starts for Kenrey_232:
(Start: 77 @111193 has 5 MA's), (104, 111241), (214, 111484), (225, 111523), (245, 111580),

Gene: KikiBouba_27 Start: 19670, Stop: 20164, Start Num: 59
Candidate Starts for KikiBouba_27:
(Start: 55 @19664 has 23 MA's), (Start: 59 @19670 has 10 MA's), (150, 19826), (198, 19886), (244, 20066), (259, 20117),

Gene: Koko_64 Start: 38904, Stop: 38476, Start Num: 76
Candidate Starts for Koko_64:
(Start: 76 @38904 has 1 MA's), (Start: 87 @38886 has 2 MA's), (150, 38763), (193, 38658), (212, 38598), (221, 38568), (232, 38523), (233, 38520), (240, 38499),

Gene: Kovu_26 Start: 17736, Stop: 17326, Start Num: 72
Candidate Starts for Kovu_26:
(Start: 72 @17736 has 1 MA's), (Start: 75 @17733 has 1 MA's), (78, 17727), (Start: 83 @17721 has 1 MA's), (108, 17676), (111, 17667), (136, 17616), (162, 17574), (165, 17565), (184, 17520), (238, 17346),

Gene: Krishelle_51 Start: 37066, Stop: 36728, Start Num: 138
Candidate Starts for Krishelle_51:
(Start: 90 @37168 has 3 MA's), (Start: 138 @37066 has 3 MA's), (214, 36889), (224, 36850), (225, 36847), (228, 36838), (249, 36772),

Gene: Kumotta_5 Start: 4506, Stop: 5042, Start Num: 30
Candidate Starts for Kumotta_5:
(Start: 30 @4506 has 1 MA's), (Start: 37 @4554 has 1 MA's), (Start: 57 @4599 has 1 MA's), (174, 4821), (217, 4944), (233, 5010),

Gene: LastResort_68 Start: 39697, Stop: 39329, Start Num: 121

Candidate Starts for LastResort_68:
(61, 39805), (70, 39787), (Start: 121 @39697 has 12 MA's), (214, 39487), (252, 39361), (258, 39343),

Gene: LazerLemon_75 Start: 51475, Stop: 51948, Start Num: 37
Candidate Starts for LazerLemon_75:
(Start: 37 @51475 has 1 MA's), (Start: 47 @51496 has 19 MA's), (Start: 90 @51565 has 3 MA's), (126, 51634), (174, 51721), (192, 51760), (208, 51793), (217, 51844), (230, 51901),

Gene: LeoJr_143 Start: 97416, Stop: 97838, Start Num: 55
Candidate Starts for LeoJr_143:
(Start: 55 @97416 has 23 MA's), (186, 97650), (240, 97824),

Gene: Limpid_229 Start: 115072, Stop: 115446, Start Num: 77
Candidate Starts for Limpid_229:
(Start: 73 @115066 has 2 MA's), (Start: 77 @115072 has 5 MA's), (Start: 85 @115081 has 2 MA's), (208, 115318), (218, 115360), (225, 115387), (226, 115393),

Gene: LogiBear_66 Start: 39725, Stop: 39345, Start Num: 120
Candidate Starts for LogiBear_66:
(68, 39818), (120, 39725), (Start: 137 @39683 has 1 MA's), (214, 39506), (247, 39395), (252, 39380), (258, 39362),

Gene: Lozinak_41 Start: 17407, Stop: 17865, Start Num: 47
Candidate Starts for Lozinak_41:
(Start: 47 @17407 has 19 MA's),

Gene: LuckySocke_64 Start: 22633, Stop: 23091, Start Num: 55
Candidate Starts for LuckySocke_64:
(Start: 55 @22633 has 23 MA's), (131, 22783), (Start: 137 @22795 has 1 MA's), (159, 22828), (186, 22891), (191, 22903), (205, 22942), (218, 22984), (233, 23041), (240, 23062),

Gene: Madraxi_29 Start: 27630, Stop: 28058, Start Num: 86
Candidate Starts for Madraxi_29:
(Start: 86 @27630 has 3 MA's), (160, 27765), (174, 27801), (180, 27810), (184, 27822), (223, 27951), (232, 27984),

Gene: MajorMajor_61 Start: 38947, Stop: 38609, Start Num: 140
Candidate Starts for MajorMajor_61:
(60, 39106), (81, 39067), (140, 38947), (222, 38755),

Gene: Manuel_3 Start: 3413, Stop: 3811, Start Num: 71
Candidate Starts for Manuel_3:
(58, 3383), (Start: 71 @3413 has 2 MA's), (174, 3590),

Gene: MargaretKali_1 Start: 50, Stop: 577, Start Num: 34
Candidate Starts for MargaretKali_1:
(Start: 34 @50 has 1 MA's), (81, 152), (110, 206), (119, 221), (175, 341), (183, 359), (242, 542), (251, 569),

Gene: MaryV_93 Start: 56140, Stop: 56508, Start Num: 103
Candidate Starts for MaryV_93:
(Start: 103 @56140 has 3 MA's), (174, 56281), (217, 56398), (225, 56434), (231, 56458), (233, 56464), (240, 56485),

Gene: MidnightRain_85 Start: 46712, Stop: 47188, Start Num: 95
Candidate Starts for MidnightRain_85:
(Start: 95 @46712 has 3 MA's), (182, 46892), (204, 46955), (226, 47039), (240, 47084), (248, 47105), (250, 47111),

Gene: Milomuff_3 Start: 670, Stop: 1044, Start Num: 87
Candidate Starts for Milomuff_3:
(Start: 87 @670 has 2 MA's), (Start: 101 @694 has 1 MA's), (165, 826), (203, 910), (224, 979),

Gene: MinecraftSteve_70 Start: 39933, Stop: 39565, Start Num: 121
Candidate Starts for MinecraftSteve_70:
(61, 40041), (70, 40023), (Start: 121 @39933 has 12 MA's), (214, 39723), (252, 39597), (258, 39579),

Gene: Miskis_39 Start: 17170, Stop: 17628, Start Num: 47
Candidate Starts for Miskis_39:
(Start: 47 @17170 has 19 MA's),

Gene: MurphyJoseph_78 Start: 43888, Stop: 44364, Start Num: 95
Candidate Starts for MurphyJoseph_78:
(65, 43840), (Start: 95 @43888 has 3 MA's), (182, 44068), (204, 44131), (226, 44215), (240, 44260), (248, 44281), (250, 44287),

Gene: MyraDee_58 Start: 36584, Stop: 36225, Start Num: 129
Candidate Starts for MyraDee_58:
(60, 36716), (Start: 129 @36584 has 3 MA's), (162, 36524), (219, 36374), (242, 36293),

Gene: Nebkiss_19 Start: 17323, Stop: 17691, Start Num: 107
Candidate Starts for Nebkiss_19:
(Start: 107 @17323 has 2 MA's), (223, 17611),

Gene: Nebulosus_68 Start: 39693, Stop: 39325, Start Num: 121
Candidate Starts for Nebulosus_68:
(70, 39783), (Start: 121 @39693 has 12 MA's), (214, 39483), (252, 39357), (258, 39339),

Gene: Nedarya_66 Start: 39619, Stop: 39284, Start Num: 137
Candidate Starts for Nedarya_66:
(68, 39748), (Start: 137 @39619 has 1 MA's), (252, 39316), (254, 39313), (258, 39298),

Gene: NiceHouse_61 Start: 34862, Stop: 35269, Start Num: 77
Candidate Starts for NiceHouse_61:
(Start: 77 @34862 has 5 MA's), (124, 34934), (125, 34937), (170, 35027), (196, 35078), (235, 35207), (239, 35219),

Gene: Nicholasp3_102 Start: 61924, Stop: 62331, Start Num: 82
Candidate Starts for Nicholasp3_102:
(Start: 82 @61924 has 6 MA's), (133, 62029), (Start: 138 @62038 has 3 MA's), (205, 62173), (225, 62266), (233, 62296),

Gene: Norvs_42 Start: 17409, Stop: 17867, Start Num: 47
Candidate Starts for Norvs_42:
(Start: 47 @17409 has 19 MA's),

Gene: NothingSpecial_59 Start: 39991, Stop: 39656, Start Num: 144
Candidate Starts for NothingSpecial_59:
(Start: 72 @40126 has 1 MA's), (81, 40114), (Start: 144 @39991 has 1 MA's), (222, 39802), (260, 39670),

Gene: Nova53_72 Start: 59567, Stop: 59971, Start Num: 71
Candidate Starts for Nova53_72:
(18, 59375), (19, 59384), (31, 59447), (33, 59474), (36, 59489), (38, 59492), (Start: 71 @59567 has 2 MA's), (93, 59603), (124, 59657), (170, 59753), (232, 59936), (235, 59942),

Gene: Nova53_188 Start: 99250, Stop: 99705, Start Num: 55
Candidate Starts for Nova53_188:
(44, 99220), (Start: 55 @99250 has 23 MA's), (170, 99475), (235, 99667),

Gene: Noxious_27 Start: 19855, Stop: 20355, Start Num: 55
Candidate Starts for Noxious_27:
(Start: 55 @19855 has 23 MA's), (Start: 59 @19861 has 10 MA's), (150, 20017), (198, 20077), (244, 20257), (259, 20308),

Gene: Omega_199 Start: 97671, Stop: 98360, Start Num: 23
Candidate Starts for Omega_199:
(Start: 23 @97671 has 1 MA's), (117, 97917), (180, 98058), (225, 98217), (228, 98226),

Gene: OneUp_35 Start: 15247, Stop: 15564, Start Num: 118
Candidate Starts for OneUp_35:
(Start: 47 @15118 has 19 MA's), (Start: 118 @15247 has 1 MA's), (230, 15517),

Gene: Palpatine_21 Start: 12883, Stop: 13353, Start Num: 94
Candidate Starts for Palpatine_21:
(67, 12838), (Start: 94 @12883 has 4 MA's), (208, 13135), (235, 13231),

Gene: Park1214_217 Start: 111129, Stop: 110710, Start Num: 84
Candidate Starts for Park1214_217:
(Start: 84 @111129 has 4 MA's), (140, 111015), (171, 110955), (178, 110946), (218, 110829), (231, 110778),

Gene: Park1214_74 Start: 28007, Stop: 28336, Start Num: 105
Candidate Starts for Park1214_74:
(79, 27965), (Start: 105 @28007 has 1 MA's), (145, 28079), (174, 28142), (215, 28226), (243, 28316),

Gene: Persimmon_179 Start: 94749, Stop: 95180, Start Num: 55
Candidate Starts for Persimmon_179:
(Start: 55 @94749 has 23 MA's), (100, 94827), (163, 94953), (167, 94971), (215, 95082), (226, 95124),

Gene: Petruchio_25 Start: 18798, Stop: 19292, Start Num: 59
Candidate Starts for Petruchio_25:
(Start: 55 @18792 has 23 MA's), (Start: 59 @18798 has 10 MA's), (150, 18954), (198, 19014), (244, 19194), (259, 19245),

Gene: PhatBacter_21 Start: 12888, Stop: 13358, Start Num: 94
Candidate Starts for PhatBacter_21:
(67, 12843), (Start: 94 @12888 has 4 MA's), (208, 13140), (235, 13236),

Gene: PhinkBoden_41 Start: 17790, Stop: 18248, Start Num: 47
Candidate Starts for PhinkBoden_41:
(Start: 47 @17790 has 19 MA's),

Gene: Pinto_27 Start: 18931, Stop: 19431, Start Num: 55
Candidate Starts for Pinto_27:
(Start: 55 @18931 has 23 MA's), (Start: 59 @18937 has 10 MA's), (150, 19093), (198, 19153), (244, 19333), (259, 19384),

Gene: Ponzi_32 Start: 17880, Stop: 17527, Start Num: 130
Candidate Starts for Ponzi_32:
(Start: 90 @17964 has 3 MA's), (Start: 130 @17880 has 1 MA's), (176, 17781), (184, 17763), (240, 17604), (257, 17559), (258, 17553),

Gene: Porky_21 Start: 12697, Stop: 13167, Start Num: 94
Candidate Starts for Porky_21:
(67, 12652), (Start: 94 @12697 has 4 MA's), (208, 12949), (235, 13045),

Gene: Predator_10 Start: 6815, Stop: 7189, Start Num: 92
Candidate Starts for Predator_10:
(Start: 92 @6815 has 1 MA's), (152, 6929), (170, 6965), (176, 6980), (201, 7025), (208, 7046), (223, 7103), (237, 7145), (240, 7157), (246, 7169), (247, 7175),

Gene: Quby_89 Start: 56408, Stop: 56815, Start Num: 68
Candidate Starts for Quby_89:
(68, 56408), (116, 56486), (173, 56591), (174, 56594), (184, 56615), (206, 56660), (209, 56666), (228, 56741), (249, 56807),

Gene: Quokka_60 Start: 38947, Stop: 38609, Start Num: 140
Candidate Starts for Quokka_60:
(60, 39106), (81, 39067), (140, 38947), (222, 38755),

Gene: RER2_44 Start: 33569, Stop: 33231, Start Num: 138
Candidate Starts for RER2_44:
(Start: 90 @33671 has 3 MA's), (Start: 138 @33569 has 3 MA's), (214, 33392), (224, 33353), (225, 33350), (228, 33341), (249, 33275),

Gene: RazorC_24 Start: 15136, Stop: 15528, Start Num: 97
Candidate Starts for RazorC_24:
(79, 15115), (Start: 97 @15136 has 4 MA's), (109, 15160), (128, 15202), (135, 15220), (226, 15463), (233, 15487),

Gene: ReMo_68 Start: 39694, Stop: 39326, Start Num: 121
Candidate Starts for ReMo_68:
(61, 39802), (70, 39784), (Start: 121 @39694 has 12 MA's), (214, 39484), (252, 39358), (258, 39340),

Gene: ReginaGlobina_142 Start: 97638, Stop: 98060, Start Num: 55
Candidate Starts for ReginaGlobina_142:
(Start: 55 @97638 has 23 MA's), (186, 97872), (240, 98046),

Gene: Remus_70 Start: 39685, Stop: 39317, Start Num: 121
Candidate Starts for Remus_70:
(61, 39793), (70, 39775), (Start: 121 @39685 has 12 MA's), (214, 39475), (252, 39349), (258, 39331),

Gene: Rockabye_131 Start: 87818, Stop: 88264, Start Num: 53
Candidate Starts for Rockabye_131:
(39, 87785), (Start: 53 @87818 has 3 MA's), (112, 87929), (186, 88088), (197, 88106), (240, 88256),

Gene: RosePharie_70 Start: 35737, Stop: 36186, Start Num: 55
Candidate Starts for RosePharie_70:
(Start: 55 @35737 has 23 MA's), (146, 35896), (168, 35941), (176, 35956), (188, 35980), (205, 36025), (214, 36055), (215, 36058), (223, 36088), (237, 36133),

Gene: Rowa_60 Start: 40584, Stop: 40913, Start Num: 123
Candidate Starts for Rowa_60:
(113, 40563), (Start: 123 @40584 has 1 MA's), (173, 40692), (174, 40695), (189, 40731), (224, 40848), (238, 40890),

Gene: Rumpelstiltskin_98 Start: 61717, Stop: 62124, Start Num: 82
Candidate Starts for Rumpelstiltskin_98:
(Start: 82 @61717 has 6 MA's), (133, 61822), (Start: 138 @61831 has 3 MA's), (205, 61966), (225, 62059), (233, 62089),

Gene: SFuller_27 Start: 26032, Stop: 26460, Start Num: 86
Candidate Starts for SFuller_27:
(Start: 86 @26032 has 3 MA's), (160, 26167), (174, 26203), (180, 26212), (184, 26224), (223, 26353), (232, 26386),

Gene: SJReid_133 Start: 86260, Stop: 86706, Start Num: 53
Candidate Starts for SJReid_133:
(Start: 53 @86260 has 3 MA's), (186, 86530), (197, 86548),

Gene: Salz_60 Start: 38758, Stop: 38393, Start Num: 129
Candidate Starts for Salz_60:
(60, 38890), (81, 38854), (104, 38812), (Start: 129 @38758 has 3 MA's), (151, 38719), (205, 38596), (218, 38554), (222, 38542), (261, 38407),

Gene: Schaffner_27 Start: 23138, Stop: 23539, Start Num: 88
Candidate Starts for Schaffner_27:
(7, 22853), (14, 22994), (Start: 88 @23138 has 3 MA's), (158, 23255), (174, 23300), (202, 23369), (203, 23372), (213, 23414), (218, 23444), (221, 23453), (226, 23477),

Gene: Seabiscuit_76 Start: 46023, Stop: 45430, Start Num: 59
Candidate Starts for Seabiscuit_76:
(26, 46128), (Start: 57 @46026 has 1 MA's), (Start: 59 @46023 has 10 MA's), (114, 45912), (155, 45831), (255, 45501), (262, 45459),

Gene: SeresaTree_235 Start: 114238, Stop: 114606, Start Num: 87
Candidate Starts for SeresaTree_235:
(Start: 87 @114238 has 2 MA's), (127, 114316), (164, 114370), (166, 114376), (181, 114415), (183, 114418), (226, 114550), (237, 114583),

Gene: Sham_181 Start: 98652, Stop: 99035, Start Num: 85
Candidate Starts for Sham_181:
(Start: 77 @98640 has 5 MA's), (Start: 85 @98652 has 2 MA's), (188, 98844), (210, 98907), (233, 99000), (245, 99027),

Gene: Shawty_32 Start: 26307, Stop: 26723, Start Num: 75
Candidate Starts for Shawty_32:
(Start: 75 @26307 has 1 MA's), (Start: 123 @26400 has 1 MA's), (143, 26439), (226, 26661), (236, 26688),

Gene: ShayRa_70 Start: 39881, Stop: 39513, Start Num: 121
Candidate Starts for ShayRa_70:
(61, 39989), (70, 39971), (Start: 121 @39881 has 12 MA's), (214, 39671), (252, 39545), (258, 39527),

Gene: Smoothie_42 Start: 17407, Stop: 17865, Start Num: 47
Candidate Starts for Smoothie_42:
(Start: 47 @17407 has 19 MA's),

Gene: Snazzy_23 Start: 18265, Stop: 18765, Start Num: 55
Candidate Starts for Snazzy_23:
(Start: 55 @18265 has 23 MA's), (Start: 59 @18271 has 10 MA's), (150, 18427), (198, 18487), (244, 18667), (259, 18718),

Gene: Solea_3 Start: 670, Stop: 1044, Start Num: 87
Candidate Starts for Solea_3:
(Start: 87 @670 has 2 MA's), (Start: 101 @694 has 1 MA's), (165, 826), (203, 910), (224, 979),

Gene: SpeedDemon_240 Start: 15094, Stop: 15555, Start Num: 50
Candidate Starts for SpeedDemon_240:
(Start: 50 @15094 has 2 MA's), (208, 15418), (218, 15454), (235, 15514),

Gene: Spooks_32 Start: 20834, Stop: 20397, Start Num: 90
Candidate Starts for Spooks_32:
(Start: 90 @20834 has 3 MA's), (165, 20675), (176, 20648), (205, 20594), (208, 20588), (233, 20489),

Gene: StarPlatinum_46 Start: 22656, Stop: 23042, Start Num: 77
Candidate Starts for StarPlatinum_46:
(Start: 77 @22656 has 5 MA's), (161, 22809), (208, 22911), (218, 22953), (226, 22986), (232, 23007), (240, 23031),

Gene: Strosahl_70 Start: 39685, Stop: 39317, Start Num: 121
Candidate Starts for Strosahl_70:
(61, 39793), (70, 39775), (Start: 121 @39685 has 12 MA's), (214, 39475), (252, 39349), (258, 39331),

Gene: Success_33 Start: 20053, Stop: 19616, Start Num: 90
Candidate Starts for Success_33:
(Start: 90 @20053 has 3 MA's), (165, 19894), (205, 19813), (208, 19807), (233, 19708),

Gene: SwissCheese_25 Start: 18840, Stop: 19334, Start Num: 59
Candidate Starts for SwissCheese_25:
(Start: 55 @18834 has 23 MA's), (Start: 59 @18840 has 10 MA's), (150, 18996), (198, 19056), (244, 19236), (259, 19287),

Gene: Switzerland_69 Start: 40020, Stop: 39652, Start Num: 121
Candidate Starts for Switzerland_69:
(61, 40128), (70, 40110), (Start: 121 @40020 has 12 MA's), (214, 39810), (252, 39684), (258, 39666),

Gene: Syleon_103 Start: 59026, Stop: 59409, Start Num: 66
Candidate Starts for Syleon_103:
(64, 59023), (Start: 66 @59026 has 1 MA's), (215, 59308), (219, 59320),

Gene: Tailonex_57 Start: 40296, Stop: 39958, Start Num: 143
Candidate Starts for Tailonex_57:
(89, 40407), (104, 40377), (143, 40296), (165, 40248), (233, 40059), (249, 40014), (256, 39996),

Gene: Talos_64 Start: 22480, Stop: 22926, Start Num: 56
Candidate Starts for Talos_64:
(Start: 56 @22480 has 1 MA's), (91, 22543), (96, 22552), (Start: 137 @22636 has 1 MA's), (141, 22642), (205, 22783), (218, 22825), (237, 22891),

Gene: Talos_188 Start: 95931, Stop: 95515, Start Num: 73
Candidate Starts for Talos_188:
(Start: 73 @95931 has 2 MA's), (116, 95850), (163, 95760), (170, 95736), (219, 95601),

Gene: Talos_215 Start: 109729, Stop: 109310, Start Num: 84
Candidate Starts for Talos_215:
(Start: 84 @109729 has 4 MA's), (140, 109615), (171, 109555), (178, 109546), (218, 109429), (231, 109378),

Gene: Target_27 Start: 19834, Stop: 20334, Start Num: 55
Candidate Starts for Target_27:
(Start: 55 @19834 has 23 MA's), (Start: 59 @19840 has 10 MA's), (150, 19996), (198, 20056), (244, 20236), (259, 20287),

Gene: Tarnish_2 Start: 640, Stop: 1005, Start Num: 98
Candidate Starts for Tarnish_2:
(Start: 98 @640 has 3 MA's), (154, 748), (157, 751), (205, 874), (208, 880), (215, 907), (218, 916),

Gene: Teodoridan_57 Start: 39474, Stop: 39133, Start Num: 149
Candidate Starts for Teodoridan_57:
(Start: 85 @39600 has 2 MA's), (110, 39552), (Start: 138 @39492 has 3 MA's), (Start: 149 @39474 has 1 MA's), (219, 39303), (224, 39282), (249, 39204), (260, 39165),

Gene: Toniann_41 Start: 17352, Stop: 17810, Start Num: 47
Candidate Starts for Toniann_41:
(Start: 47 @17352 has 19 MA's),

Gene: Trouble_25 Start: 19144, Stop: 19638, Start Num: 59
Candidate Starts for Trouble_25:
(Start: 55 @19138 has 23 MA's), (Start: 59 @19144 has 10 MA's), (150, 19300), (198, 19360), (244, 19540), (259, 19591),

Gene: Tuck_30 Start: 24609, Stop: 25010, Start Num: 101
Candidate Starts for Tuck_30:
(Start: 101 @24609 has 1 MA's), (158, 24726), (174, 24771), (205, 24849), (218, 24915), (221, 24924),

Gene: TunaTartare_189 Start: 100701, Stop: 101084, Start Num: 85
Candidate Starts for TunaTartare_189:
(Start: 77 @100689 has 5 MA's), (Start: 85 @100701 has 2 MA's), (188, 100893), (210, 100956), (233, 101049), (245, 101076),

Gene: TunaTartare_254 Start: 124119, Stop: 124544, Start Num: 80
Candidate Starts for TunaTartare_254:
(Start: 80 @124119 has 5 MA's), (Start: 138 @124236 has 3 MA's), (174, 124317), (180, 124326), (218, 124443), (223, 124464), (228, 124479), (246, 124533),

Gene: Underpass_94 Start: 56960, Stop: 57367, Start Num: 82
Candidate Starts for Underpass_94:
(Start: 82 @56960 has 6 MA's), (133, 57065), (Start: 138 @57074 has 3 MA's), (205, 57209), (225, 57302), (233, 57332),

Gene: Vetrix_100 Start: 61960, Stop: 62376, Start Num: 84
Candidate Starts for Vetrix_100:
(Start: 82 @61957 has 6 MA's), (Start: 84 @61960 has 4 MA's), (Start: 95 @61978 has 3 MA's), (225, 62299),

Gene: Vine_3 Start: 1265, Stop: 1630, Start Num: 98
Candidate Starts for Vine_3:
(Start: 98 @1265 has 3 MA's), (154, 1373), (157, 1376), (205, 1499), (208, 1505), (215, 1532), (218, 1541),

Gene: WRightOn_2 Start: 2629, Stop: 2976, Start Num: 103
Candidate Starts for WRightOn_2:
(102, 2626), (Start: 103 @2629 has 3 MA's), (139, 2707), (153, 2731), (170, 2776), (174, 2788), (224, 2905), (226, 2914), (246, 2968),

Gene: Westy_204 Start: 103797, Stop: 103372, Start Num: 53
Candidate Starts for Westy_204:
(Start: 53 @103797 has 3 MA's), (Start: 55 @103791 has 23 MA's), (122, 103674), (163, 103596), (187, 103542), (218, 103470),

Gene: Wheeler_74 Start: 46185, Stop: 45562, Start Num: 46
Candidate Starts for Wheeler_74:
(21, 46296), (22, 46287), (40, 46194), (Start: 46 @46185 has 2 MA's), (Start: 47 @46173 has 19 MA's), (199, 45846), (232, 45687), (235, 45681), (253, 45627),

Gene: Wheeler_80 Start: 48775, Stop: 48179, Start Num: 57
Candidate Starts for Wheeler_80:
(26, 48877), (Start: 57 @48775 has 1 MA's), (Start: 59 @48772 has 10 MA's), (114, 48661), (155, 48580), (255, 48250), (262, 48208),

Gene: WhereRU_178 Start: 95501, Stop: 95932, Start Num: 55
Candidate Starts for WhereRU_178:
(Start: 55 @95501 has 23 MA's), (100, 95579), (163, 95705), (167, 95723), (215, 95834), (226, 95876),

Gene: Wildcat_93 Start: 56150, Stop: 56518, Start Num: 103
Candidate Starts for Wildcat_93:
(Start: 103 @56150 has 3 MA's), (174, 56291), (217, 56408), (225, 56444), (231, 56468), (233, 56474), (240, 56495),

Gene: WilliamBoone_41 Start: 16716, Stop: 17174, Start Num: 47
Candidate Starts for WilliamBoone_41:
(Start: 47 @16716 has 19 MA's),

Gene: Wolfstar_46 Start: 22950, Stop: 22588, Start Num: 106
Candidate Starts for Wolfstar_46:
(1, 25128), (2, 24834), (3, 24786), (5, 23553), (16, 23208), (18, 23199), (24, 23154), (27, 23139), (33, 23100), (Start: 66 @23016 has 1 MA's), (Start: 83 @22992 has 1 MA's), (Start: 98 @22968 has 3 MA's), (Start: 106 @22950 has 1 MA's), (195, 22752), (228, 22653),

Gene: Yang_45 Start: 32671, Stop: 33198, Start Num: 32
Candidate Starts for Yang_45:
(Start: 32 @32671 has 1 MA's), (157, 32941), (174, 32983), (219, 33112), (237, 33175),

Gene: Yoncess_50 Start: 36451, Stop: 36113, Start Num: 138
Candidate Starts for Yoncess_50:
(Start: 90 @36553 has 3 MA's), (Start: 138 @36451 has 3 MA's), (214, 36274), (224, 36235), (225, 36232), (228, 36223), (249, 36157),

Gene: Yvonnetastic_38 Start: 18787, Stop: 19239, Start Num: 47
Candidate Starts for Yvonnetastic_38:
(Start: 47 @18787 has 19 MA's), (58, 18799), (104, 18874), (156, 18982),

Gene: Zany_25 Start: 17287, Stop: 17679, Start Num: 97
Candidate Starts for Zany_25:
(79, 17266), (Start: 97 @17287 has 4 MA's), (109, 17311), (128, 17353), (135, 17371), (226, 17614), (233, 17638),

Gene: Zeeculate_24 Start: 19013, Stop: 19513, Start Num: 55
Candidate Starts for Zeeculate_24:
(Start: 55 @19013 has 23 MA's), (Start: 59 @19019 has 10 MA's), (150, 19175), (198, 19235), (244, 19415), (259, 19466),

Gene: Zooman_139 Start: 88579, Stop: 89034, Start Num: 55
Candidate Starts for Zooman_139:
(Start: 55 @88579 has 23 MA's), (154, 88768), (163, 88783), (200, 88858),