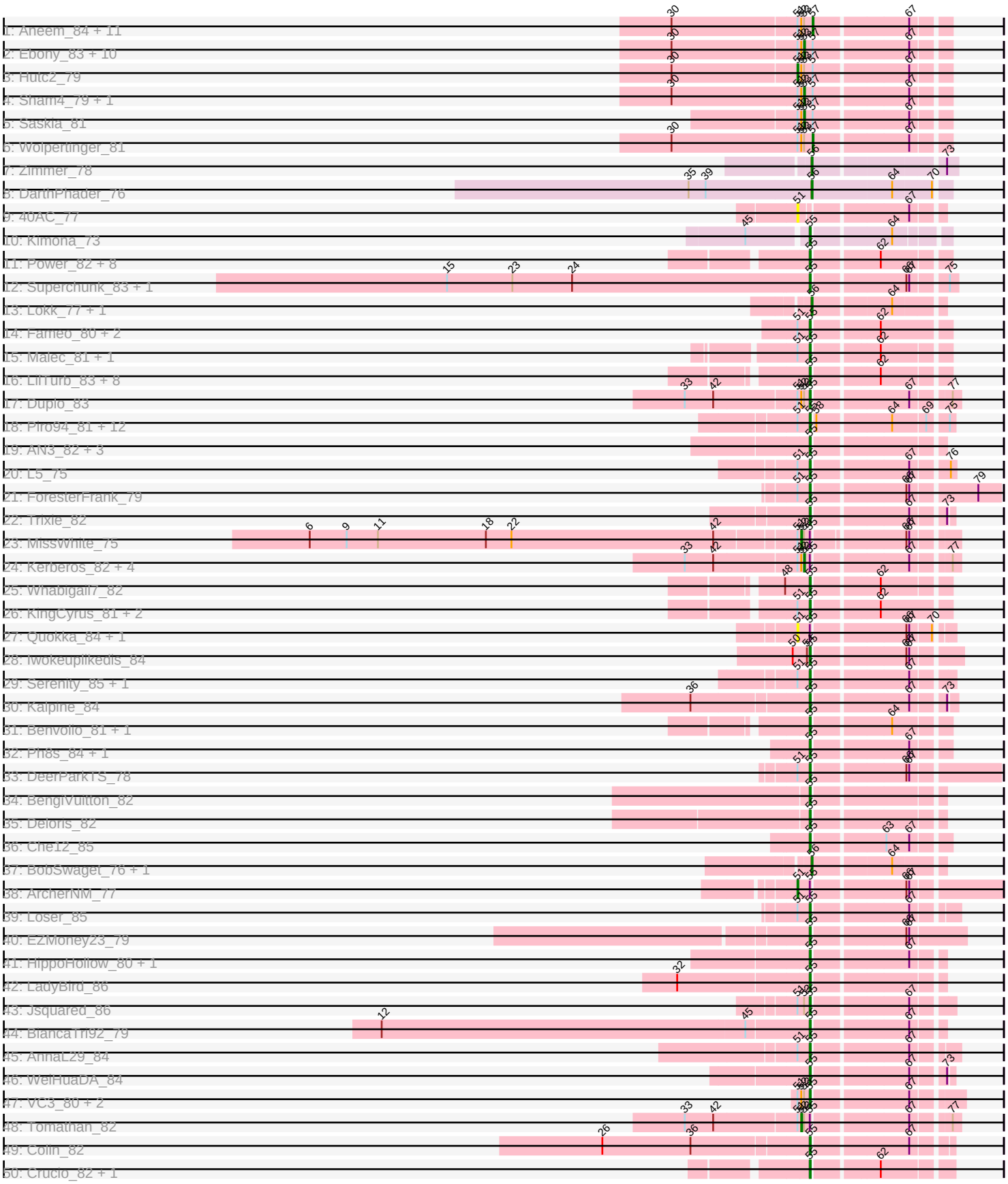
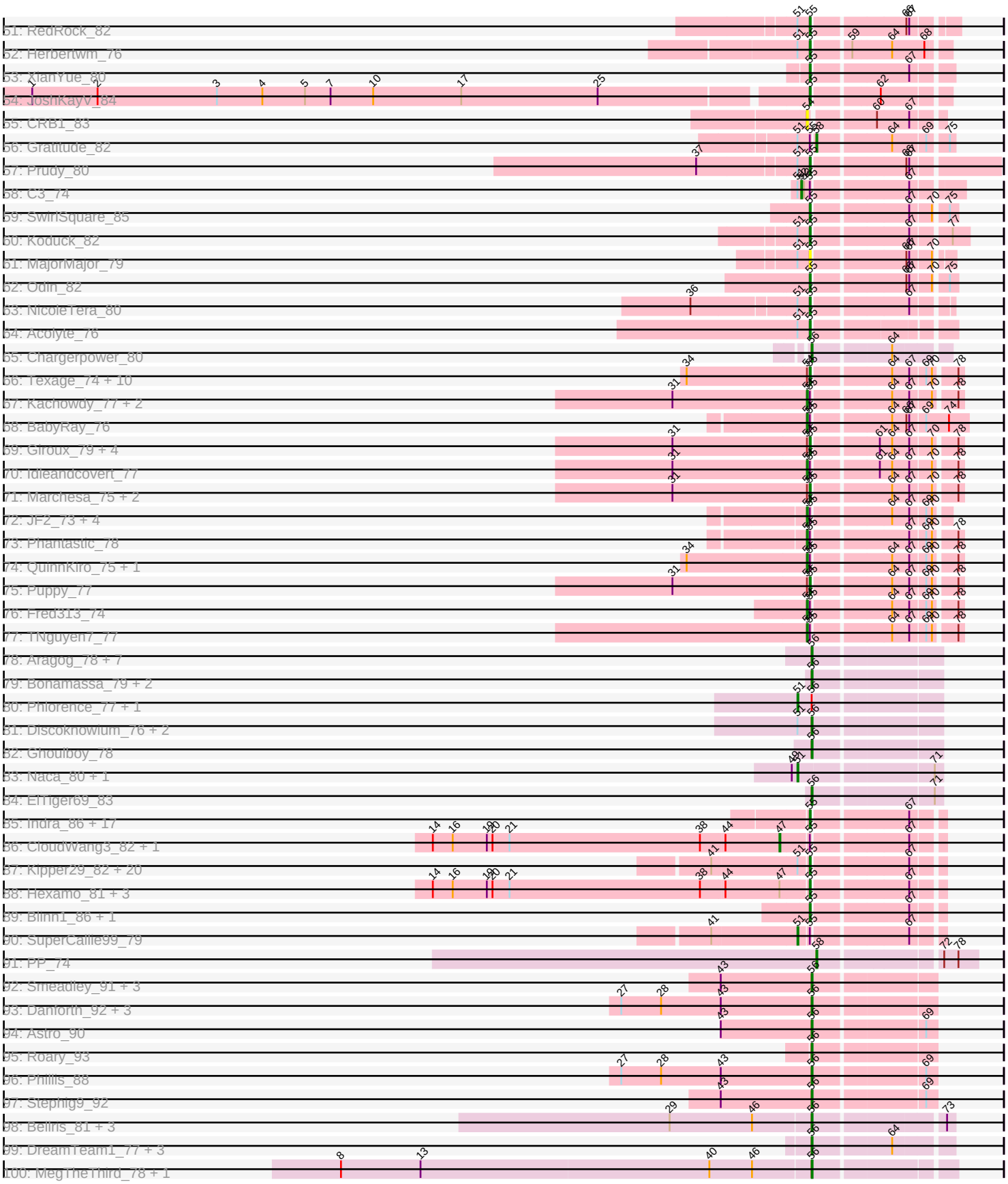
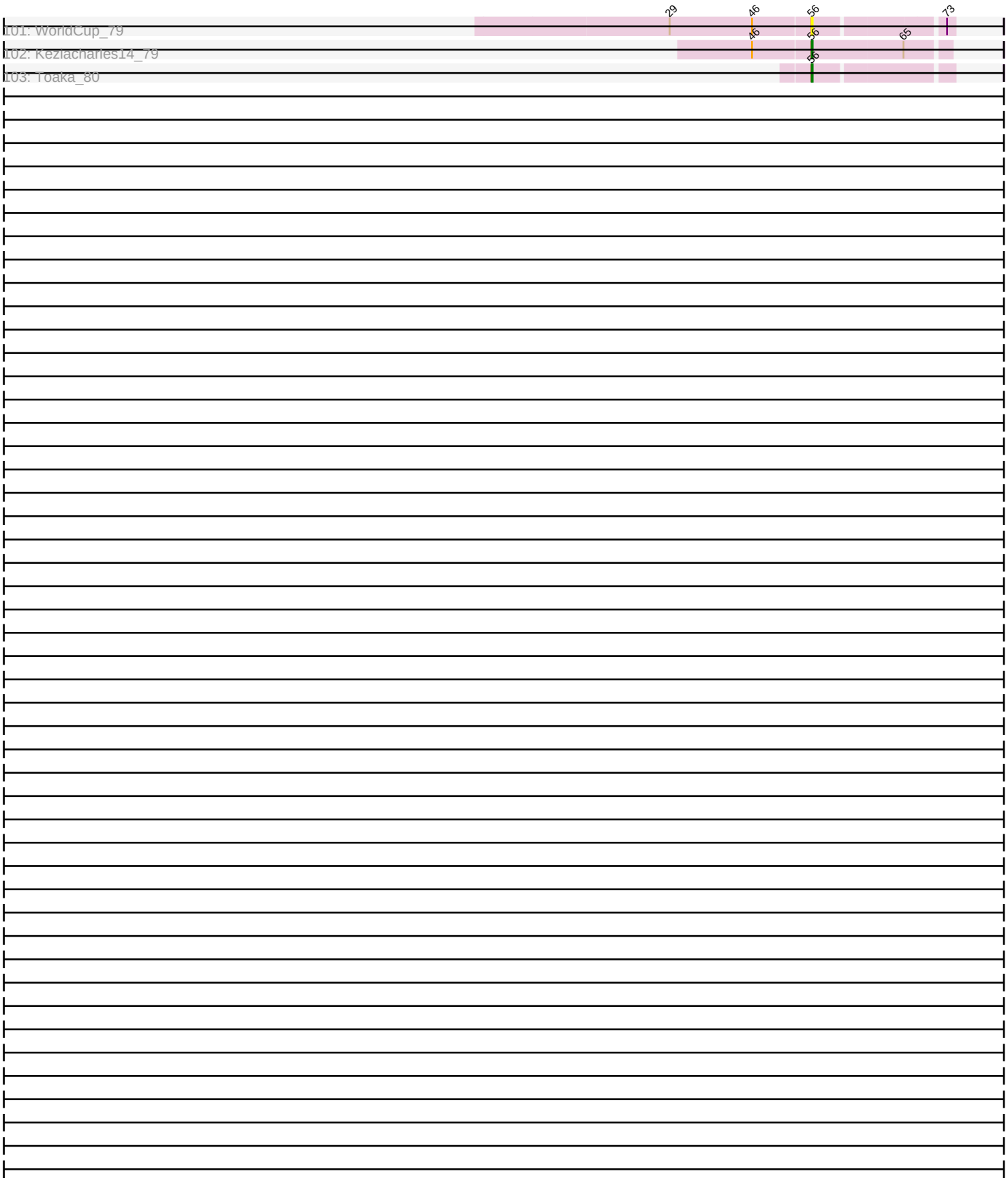
Pham 347201


1: Aneem_84 + 11
2: Ebony_83 + 10
3: Hutc2_79
4: Sham4_79 + 1
5: Saskia_81
6: Wolpertinger_81
7: Zimmer_78
8: DarthPhader_76
9: 40AC_77
10: Kimona_73
11: Power_82 + 8
12: Superchunk_83 + 1
13: Lokk_77 + 1
14: Fameo_80 + 2
15: Malec_81 + 1
16: LilTurb_83 + 8
17: Duplo_83
18: Piro94_81 + 12
19: AN3_82 + 3
20: L5_75
21: ForesterFrank_79
22: Trixie_82
23: MissWhite_75
24: Kerberos_82 + 4
25: Whabigail7_82
26: KingCyrus_81 + 2
27: Quokka_84 + 1
28: Iwokeuplikedis_84
29: Serenity_85 + 1
30: Kalpine_84
31: Benvolio_81 + 1
32: Phi8s_84 + 1
33: DeerParkTS_78
34: BengiVuitton_82
35: Delons_82
36: Che12_85
37: BobSwaget_76 + 1
38: ArcherNM_77
39: Loser_85
40: EZMoney23_79
41: HippoHollow_80 + 1
42: LadyBird_86
43: Jsquared_86
44: BiancaTh92_79
45: AnnaL29_84
46: WeiHuaDA_84
47: VC3_80 + 2
48: Tomathan_82
49: Colin_82
50: Crucio_82 + 1

Pham 347201


51: RedRock_82
52: Herbertwm_76
53: XianYue_80
54: JoshKayV_84
55: CRB1_83
56: Gratitude_82
57: Prudy_80
58: C3_74
59: SwimSquare_85
60: Koduck_82
61: MajorMajor_79
62: Odin_82
63: NicoleTera_80
64: Acolyte_76
65: Chargerpower_80
66: Texage_74 + 10
67: Kachowdy_77 + 2
68: BabyRay_76
69: Giroux_79 + 4
70: Idleandcovert_77
71: Marchesa_75 + 2
72: JF2_73 + 4
73: Phantastic_78
74: QuinnKiro_75 + 1
75: Puppy_77
76: Fred313_74
77: TNguyen7_77
78: Aragog_78 + 7
79: Bonamassa_79 + 2
80: Phlorence_77 + 1
81: Discoknowium_76 + 2
82: Ghouiboy_78
83: Naca_80 + 1
84: ElTiger69_83
85: Indra_86 + 17
86: CloudWang3_82 + 1
87: Kipper29_82 + 20
88: Hexamo_81 + 3
89: Blinn1_86 + 1
90: SuperCallie99_79
91: PP_74
92: Smeadley_91 + 3
93: Danforth_92 + 3
94: Astro_90
95: Roary_93
96: Phillis_88
97: Stephig9_92
98: Bellris_81 + 3
99: DreamTeam1_77 + 3
100: MegTheThird_78 + 1

Pham 347201


101: WorldCup_79
102: Keziacharles14_79
103: Yoaka_80
29
46
56
73
46
56
65
56

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 347201 Report

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

Pham number 347201 has 267 members, 20 are drafts.

Phages represented in each track:
• Track 1 : Aneem_84, Bachome_81, MaCh_83, Jabith_82, Bud_78, Bowtie_80, Gilberta_80, Munch_83, Joselito_82, Mulciber_81, Orange_83, Petersenfast_79
• Track 2 : Ebony_83, Flaverint_84, TinyTimmy_81, Et2Brutus_82, Salz_78, Lucivia_84, Kimba_80, Snape_83, Mabel_83, Timothy_83, Fibonacci_82
• Track 3 : Hutc2_79
• Track 4 : Sham4_79, Insomnia_82
• Track 5 : Saskia_81
• Track 6 : Wolpertinger_81
• Track 7 : Zimmer_78
• Track 8 : DarthPhader_76
• Track 9 : 40AC_77
• Track 10 : Kimona_73
• Track 11 : Power_82, DudeLittle_80, SnapTap_82, Retro23_82, Georgie2_84, SweetiePie_82, FiringLine_82, QueenBeesly_82, SemperFi_82
• Track 12 : Superchunk_83, Caraxes_83
• Track 13 : Lokk_77, Rachaly_79
• Track 14 : Fameo_80, Heffalump_79, QueenB2_79
• Track 15 : Malec_81, Larenn_80
• Track 16 : LilTurb_83, Jerm_84, AbbyPaige_84, Anselm_83, Turbido_83, Agape74_84, Dignity_84, Smeagan_85, Leviathan_84
• Track 17 : Duplo_83
• Track 18 : Piro94_81, Drake55_83, HarryHoudini_82, NaSiaTalie_83, WideWale_83, Baehexic_81, Flare16_82, Equemioh13_82, MiculUcigas_82, Terrific_83, Sknot_82, Updawg_83, Centaur_82
• Track 19 : AN3_82, First_0083, VA6_82, 20ES_84
• Track 20 : L5_75
• Track 21 : ForesterFrank_79
• Track 22 : Trixie_82
• Track 23 : MissWhite_75
• Track 24 : Kerberos_82, DBQu4n_82, Travvers_82, Pomar16_82, StarStuff_82
• Track 25 : Whabigail7_82
• Track 26 : KingCyrus_81, EvilGenius_82, ChipMunk_83
• Track 27 : Quokka_84, Bradman_85
• Track 28 : Iwokeuplikedis_84
• Track 29 : Serenity_85, TipsytheTRex_81
• Track 30 : Kalpine_84
• Track 31 : Benvolio_81, Echild_84

• Track 32 : Ph8s_84, Adzzy_84
• Track 33 : DeerParkTS_78
• Track 34 : BengiVuitton_82
• Track 35 : Deloris_82
• Track 36 : Che12_85
• Track 37 : BobSwaget_76, Miko_77
• Track 38 : ArcherNM_77
• Track 39 : Loser_85
• Track 40 : EZMoney23_79
• Track 41 : HippoHollow_80, LionsBait_80
• Track 42 : LadyBird_86
• Track 43 : Jsquared_86
• Track 44 : BiancaTri92_79
• Track 45 : AnnaL29_84
• Track 46 : WeiHuaDA_84
• Track 47 : VC3_80, ANI8_81, AN9_81
• Track 48 : Tomathan_82
• Track 49 : Colin_82
• Track 50 : Crucio_82, Dalmatian_82
• Track 51 : RedRock_82
• Track 52 : Herbertwm_76
• Track 53 : XianYue_80
• Track 54 : JoshKayV_84
• Track 55 : CRB1_83
• Track 56 : Gratitude_82
• Track 57 : Prudy_80
• Track 58 : C3_74
• Track 59 : SwirlSquare_85
• Track 60 : Koduck_82
• Track 61 : MajorMajor_79
• Track 62 : Odin_82
• Track 63 : NicoleTera_80
• Track 64 : Acolyte_76
• Track 65 : Chargerpower_80
• Track 66 : Texage_74, EtoileNova_74, Popcicle_76, Pocahontas_75, Veracruz_73, Noella_77, ResDef_74, Lambert1_76, Hookmount_76, Margo_76, Todacoro_76
• Track 67 : Kachowdy_77, HelDan_76, Scout_75
• Track 68 : BabyRay_76
• Track 69 : Giroux_79, BlueBird_79, Bugatti_79, Pistachio_77, Clammy_78
• Track 70 : Idleandcovert_77
• Track 71 : Marchesa_75, DropBear_77, Zarafa_74
• Track 72 : JF2_73, Isca_73, JF4_73, B1_67, MA5_75
• Track 73 : Phantastic_78
• Track 74 : QuinnKiro_75, Norbert_72
• Track 75 : Puppy_77
• Track 76 : Fred313_74
• Track 77 : TNguyen7_77
• Track 78 : Aragog_78, PickleBack_79, ForGetIt_79, Micasa_79, Florence1_76, Florence4_77, Prinashe11_78, Tarynearal_78
• Track 79 : Bonamassa_79, Lev2_79, Twigg_79
• Track 80 : Phlorence_77, AgentM_78
• Track 81 : Discoknowium_76, Conspiracy_79, Tiger_77
• Track 82 : Ghoulboy_78

• Track 83 : Naca_80, PetterN_85
• Track 84 : ElTiger69_83
• Track 85 : Indra_86, BlessJoy_83, Zulu_84, Zaka_83, ToneTone_80, Artemis2UCLA_82, Yokurt_82, Koko_84, Roksolana_83, WunderPhul_83, Blue7_84, Lilbunny_82, Garak_84, Temprado_84, Helmet_85, Tucker_83, BennyP_83, Wiks_82
• Track 86 : CloudWang3_82, Hammer_82
• Track 87 : Kipper29_82, DaVinci_80, Cookiedough_82, DelvinSonDorr_78, McFly_82, Hoot_77, Kazan_83, Neeharika16_81, VohminGhazi_82, Jordennis_80, SuperAwesome_82, Isiphiwo_79, SmellyB_82, Imbriano_83, Candra_83, BABullseye_75, EricB_81, Newrala_81, Dorothea_82, Pmask_81, Chartreuse_81
• Track 88 : Hexamo_81, Rifter_82, Gruunaga_81, Gladiator_78
• Track 89 : Blinn1_86, Priamo_84
• Track 90 : SuperCallie99_79
• Track 91 : PP_74
• Track 92 : Smeadley_91, Groundhog_88, Caitlin_90, Expelliarmus_88
• Track 93 : Danforth_92, Dixon_90, Saintus_86, NearlyHeadless_92
• Track 94 : Astro_90
• Track 95 : Roary_93
• Track 96 : Phillis_88
• Track 97 : Stephig9_92
• Track 98 : Bellris_81, CogOmlette_79, Rahalelujah_81, Minispark_79
• Track 99 : DreamTeam1_77, Charm_77, SheaKeira_77, Klodlith_78
• Track 100 : MegTheThird_78, Celestialunch_77
• Track 101 : WorldCup_79
• Track 102 : Keziacharles14_79
• Track 103 : Toaka_80

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 146 of the 247 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• 20ES_84, AN3_82, AN9_81, ANI8_81, AbbyPaige_84, Acolyte_76, Adzzy_84, Agape74_84, AnnaL29_84, Anselm_83, Artemis2UCLA_82, BABullseye_75, Baehexic_81, BengiVuitton_82, BennyP_83, Benvolio_81, BiancaTri92_79, BlessJoy_83, Blinn1_86, Blue7_84, BlueBird_79, Bugatti_79, Candra_83, Caraxes_83, Centaur_82, Chartreuse_81, Che12_85, ChipMunk_83, Clammy_78, Colin_82, Cookiedough_82, Crucio_82, DaVinci_80, Dalmatian_82, DeerParkTS_78, Deloris_82, DelvinSonDorr_78, Dignity_84, Dorothea_82, Drake55_83, DropBear_77, DudeLittle_80, Duplo_83, EZMoney23_79, Echild_84, Equemioh13_82, EricB_81, EtoileNova_74, EvilGenius_82, Fameo_80, FiringLine_82, First_0083, Flare16_82, ForesterFrank_79, Garak_84, Georgie2_84, Giroux_79, Gladiator_78, Gruunaga_81, HarryHoudini_82, Heffalump_79, Helmet_85, Herbertwm_76, Hexamo_81, HippoHollow_80, Hookmount_76, Hoot_77, Imbriano_83, Indra_86, Isiphiwo_79, Iwokeuplikedis_84, Jerm_84, Jordennis_80, JoshKayV_84, Jsquared_86, Kalpine_84, Kazan_83, Kimona_73, KingCyrus_81, Kipper29_82, Koduck_82, Koko_84, L5_75, LadyBird_86, Lambert1_76, Larenn_80, Leviathan_84, LilTurb_83, Lilbunny_82, LionsBait_80, Loser_85, MajorMajor_79, Malec_81, Marchesa_75, Margo_76, McFly_82, MiculUcigas_82, NaSiaTalie_83, Neeharika16_81,

Newrala_81, NicoleTera_80, Noella_77, Odin_82, Ph8s_84, Piro94_81, Pistachio_77, Pmask_81, Pocahontas_75, Popcicle_76, Power_82, Priamo_84, Prudy_80, Puppy_77, QueenB2_79, QueenBeesly_82, RedRock_82, ResDef_74, Retro23_82, Rifter_82, Roksolana_83, SemperFi_82, Serenity_85, Sknot_82, Smeagan_85, SmellyB_82, SnapTap_82, SuperAwesome_82, Superchunk_83, SweetiePie_82, SwirlSquare_85, Temprado_84, Terrific_83, Texage_74, TipsytheTRex_81, Todacoro_76, ToneTone_80, Trixie_82, Tucker_83, Turbido_83, Updawg_83, VA6_82, VC3_80, Veracruz_73, VohminGhazi_82, WeiHuaDA_84, Whabigail7_82, WideWale_83, Wiks_82, WunderPhul_83, XianYue_80, Yokurt_82, Zaka_83, Zarafa_74, Zulu_84,

Genes that have the "Most Annotated" start but do not call it:
• ArcherNM_77, B1_67, BabyRay_76, Bradman_85, C3_74, CloudWang3_82, DBQu4n_82, Fred313_74, Gratitude_82, Hammer_82, HelDan_76, Idleandcovert_77, Isca_73, JF2_73, JF4_73, Kachowdy_77, Kerberos_82, MA5_75, MissWhite_75, Norbert_72, Phantastic_78, Pomar16_82, QuinnKiro_75, Quokka_84, Scout_75, StarStuff_82, SuperCallie99_79, TNguyen7_77, Tomathan_82, Travvers_82,

Genes that do not have the "Most Annotated" start:
• 40AC_77, AgentM_78, Aneem_84, Aragog_78, Astro_90, Bachome_81, Bellris_81, BobSwaget_76, Bonamassa_79, Bowtie_80, Bud_78, CRB1_83, Caitlin_90, Celestialunch_77, Chargerpower_80, Charm_77, CogOmlette_79, Conspiracy_79, Danforth_92, DarthPhader_76, Discoknowium_76, Dixon_90, DreamTeam1_77, Ebony_83, ElTiger69_83, Et2Brutus_82, Expelliarmus_88, Fibonacci_82, Flaverint_84, Florence1_76, Florence4_77, ForGetIt_79, Ghoulboy_78, Gilberta_80, Groundhog_88, Hutc2_79, Insomnia_82, Jabith_82, Joselito_82, Keziacharles14_79, Kimba_80, Klodlith_78, Lev2_79, Lokk_77, Lucivia_84, MaCh_83, Mabel_83, MegTheThird_78, Micasa_79, Miko_77, Minispark_79, Mulciber_81, Munch_83, Naca_80, NearlyHeadless_92, Orange_83, PP_74, Petersenfast_79, PetterN_85, Phillis_88, Phlorence_77, PickleBack_79, Prinashe11_78, Rachaly_79, Rahalelujah_81, Roary_93, Saintus_86, Salz_78, Saskia_81, Sham4_79, SheaKeira_77, Smeadley_91, Snape_83, Stephig9_92, Tarynearal_78, Tiger_77, Timothy_83, TinyTimmy_81, Toaka_80, Twigg_79, Wolpertinger_81, WorldCup_79, Zimmer_78,

Summary by start number:

Start 47:
• Found in 6 of 267 (2.2%) of genes in pham
• Manual Annotations of this start: 2 of 247
• Called 33.3% of time when present
• Phage (with cluster) where this start called: CloudWang3_82 (A6), Hammer_82 (A6),

Start 51:
• Found in 110 of 267 (41.2%) of genes in pham
• Manual Annotations of this start: 7 of 247
• Called 9.1% of time when present
• Phage (with cluster) where this start called: 40AC_77 (A17), AgentM_78 (A5), ArcherNM_77 (A2), Bradman_85 (A2), Hutc2_79 (A11), Naca_80 (A5), PetterN_85 (A5), Phlorence_77 (A5), Quokka_84 (A2), SuperCallie99_79 (A6),

Start 52:
• Found in 40 of 267 (15.0%) of genes in pham

• Manual Annotations of this start: 3 of 247
• Called 7.5% of time when present
• Phage (with cluster) where this start called: C3_74 (A2), MissWhite_75 (A2), Tomathan_82 (A2),

Start 53:
• Found in 41 of 267 (15.4%) of genes in pham
• Manual Annotations of this start: 18 of 247
• Called 46.3% of time when present
• Phage (with cluster) where this start called: DBQu4n_82 (A2), Ebony_83 (A11), Et2Brutus_82 (A11), Fibonacci_82 (A11), Flaverint_84 (A11), Insomnia_82 (A11), Kerberos_82 (A2), Kimba_80 (A11), Lucivia_84 (A11), Mabel_83 (A11), Pomar16_82 (A2), Salz_78 (A11), Saskia_81 (A11), Sham4_79 (A11), Snape_83 (A11), StarStuff_82 (A2), Timothy_83 (A11), TinyTimmy_81 (A11), Travvers_82 (A2),

Start 54:
• Found in 37 of 267 (13.9%) of genes in pham
• Manual Annotations of this start: 15 of 247
• Called 43.2% of time when present
• Phage (with cluster) where this start called: B1_67 (A3), BabyRay_76 (A3), CRB1_83 (A2), Fred313_74 (A3), HelDan_76 (A3), Idleandcovert_77 (A3), Isca_73 (A3), JF2_73 (A3), JF4_73 (A3), Kachowdy_77 (A3), MA5_75 (A3), Norbert_72 (A3), Phantastic_78 (A3), QuinnKiro_75 (A3), Scout_75 (A3), TNguyen7_77 (A3),

Start 55:
• Found in 184 of 267 (68.9%) of genes in pham
• Manual Annotations of this start: 146 of 247
• Called 83.7% of time when present
• Phage (with cluster) where this start called: 20ES_84 (A2), AN3_82 (A2), AN9_81 (A2), ANI8_81 (A2), AbbyPaige_84 (A2), Acolyte_76 (A2), Adzzy_84 (A2), Agape74_84 (A2), AnnaL29_84 (A2), Anselm_83 (A2), Artemis2UCLA_82 (A6), BABullseye_75 (A6), Baehexic_81 (A2), BengiVuitton_82 (A2), BennyP_83 (A6), Benvolio_81 (A2), BiancaTri92_79 (A2), BlessJoy_83 (A6), Blinn1_86 (A6), Blue7_84 (A6), BlueBird_79 (A3), Bugatti_79 (A3), Candra_83 (A6), Caraxes_83 (A2), Centaur_82 (A2), Chartreuse_81 (A6), Che12_85 (A2), ChipMunk_83 (A2), Clammy_78 (A3), Colin_82 (A2), Cookiedough_82 (A6), Crucio_82 (A2), DaVinci_80 (A6), Dalmatian_82 (A2), DeerParkTS_78 (A2), Deloris_82 (A2), DelvinSonDorr_78 (A6), Dignity_84 (A2), Dorothea_82 (A6), Drake55_83 (A2), DropBear_77 (A3), DudeLittle_80 (A2), Duplo_83 (A2), EZMoney23_79 (A2), Echild_84 (A2), Equemioh13_82 (A2), EricB_81 (A6), EtoileNova_74 (A3), EvilGenius_82 (A2), Fameo_80 (A2), FiringLine_82 (A2), First_0083 (A2), Flare16_82 (A2), ForesterFrank_79 (A2), Garak_84 (A6), Georgie2_84 (A2), Giroux_79 (A3), Gladiator_78 (A6), Gruunaga_81 (A6), HarryHoudini_82 (A2), Heffalump_79 (A2), Helmet_85 (A6), Herbertwm_76 (A2), Hexamo_81 (A6), HippoHollow_80 (A2), Hookmount_76 (A3), Hoot_77 (A6), Imbriano_83 (A6), Indra_86 (A6), Isiphiwo_79 (A6), Iwokeuplikedis_84 (A2), Jerm_84 (A2), Jordennis_80 (A6), JoshKayV_84 (A2), Jsquared_86 (A2), Kalpine_84 (A2), Kazan_83 (A6), Kimona_73 (A19), KingCyrus_81 (A2), Kipper29_82 (A6), Koduck_82 (A2), Koko_84 (A6), L5_75 (A2), LadyBird_86 (A2), Lambert1_76 (A3), Larenn_80 (A2), Leviathan_84 (A2), LilTurb_83 (A2), Lilbunny_82 (A6), LionsBait_80 (A2), Loser_85 (A2), MajorMajor_79 (A2), Malec_81 (A2), Marchesa_75 (A3), Margo_76 (A3), McFly_82 (A6), MiculUcigas_82 (A2), NaSiaTalie_83 (A2), Neeharika16_81 (A6), Newrala_81 (A6), NicoleTera_80 (A2), Noella_77 (A3), Odin_82 (A2), Ph8s_84 (A2), Piro94_81 (A2), Pistachio_77 (A3),

Pmask_81 (A6), Pocahontas_75 (A3), Popcicle_76 (A3), Power_82 (A2), Priamo_84 (A6), Prudy_80 (A2), Puppy_77 (A3), QueenB2_79 (A2), QueenBeesly_82 (A2), RedRock_82 (A2), ResDef_74 (A3), Retro23_82 (A2), Rifter_82 (A6), Roksolana_83 (A6), SemperFi_82 (A2), Serenity_85 (A2), Sknot_82 (A2), Smeagan_85 (A2), SmellyB_82 (A6), SnapTap_82 (A2), SuperAwesome_82 (A6), Superchunk_83 (A2), SweetiePie_82 (A2), SwirlSquare_85 (A2), Temprado_84 (A6), Terrific_83 (A2), Texage_74 (A3), TipsytheTRex_81 (A2), Todacoro_76 (A3), ToneTone_80 (A6), Trixie_82 (A2), Tucker_83 (A6), Turbido_83 (A2), Updawg_83 (A2), VA6_82 (A2), VC3_80 (A2), Veracruz_73 (A3), VohminGhazi_82 (A6), WeiHuaDA_84 (A2), Whabigail7_82 (A2), WideWale_83 (A2), Wiks_82 (A6), WunderPhul_83 (A6), XianYue_80 (A2), Yokurt_82 (A6), Zaka_83 (A6), Zarafa_74 (A3), Zulu_84 (A6),

Start 56:
• Found in 50 of 267 (18.7%) of genes in pham
• Manual Annotations of this start: 41 of 247
• Called 96.0% of time when present
• Phage (with cluster) where this start called: Aragog_78 (A5), Astro_90 (A8), Bellris_81 (A9), BobSwaget_76 (A2), Bonamassa_79 (A5), Caitlin_90 (A8), Celestialunch_77 (A9), Chargerpower_80 (A22), Charm_77 (A9), CogOmlette_79 (A9), Conspiracy_79 (A5), Danforth_92 (A8), DarthPhader_76 (A12), Discoknowium_76 (A5), Dixon_90 (A8), DreamTeam1_77 (A9), ElTiger69_83 (A5), Expelliarmus_88 (A8), Florence1_76 (A5), Florence4_77 (A5), ForGetIt_79 (A5), Ghoulboy_78 (A5), Groundhog_88 (A8), Keziacharles14_79 (A9), Klodlith_78 (A9), Lev2_79 (A5), Lokk_77 (A2), MegTheThird_78 (A9), Micasa_79 (A5), Miko_77 (A2), Minispark_79 (A9), NearlyHeadless_92 (A8), Phillis_88 (A8), PickleBack_79 (A5), Prinashe11_78 (A5), Rachaly_79 (A2), Rahalelujah_81 (A9), Roary_93 (A8), Saintus_86 (A8), SheaKeira_77 (A9), Smeadley_91 (A8), Stephig9_92 (A8), Tarynearal_78 (A5), Tiger_77 (A5), Toaka_80 (A9), Twigg_79 (A5), WorldCup_79 (A9), Zimmer_78 (A12),

Start 57:
• Found in 28 of 267 (10.5%) of genes in pham
• Manual Annotations of this start: 13 of 247
• Called 46.4% of time when present
• Phage (with cluster) where this start called: Aneem_84 (A11), Bachome_81 (A11), Bowtie_80 (A11), Bud_78 (A11), Gilberta_80 (A11), Jabith_82 (A11), Joselito_82 (A11), MaCh_83 (A11), Mulciber_81 (A11), Munch_83 (A11), Orange_83 (A11), Petersenfast_79 (A11), Wolpertinger_81 (A11),

Start 58:
• Found in 15 of 267 (5.6%) of genes in pham
• Manual Annotations of this start: 2 of 247
• Called 13.3% of time when present
• Phage (with cluster) where this start called: Gratitude_82 (A2), PP_74 (A7),

Summary by clusters:

There are 12 clusters represented in this pham: A22, A11, A12, A19, A17, A3, A2, A5, A7, A6, A9, A8,

Info for manual annotations of cluster A11:
•Start number 51 was manually annotated 1 time for cluster A11.
•Start number 53 was manually annotated 14 times for cluster A11.

•Start number 57 was manually annotated 13 times for cluster A11.

Info for manual annotations of cluster A12:
•Start number 56 was manually annotated 2 times for cluster A12.

Info for manual annotations of cluster A19:
•Start number 55 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:
•Start number 51 was manually annotated 1 time for cluster A2.
•Start number 52 was manually annotated 3 times for cluster A2.
•Start number 53 was manually annotated 4 times for cluster A2.
•Start number 55 was manually annotated 85 times for cluster A2.
•Start number 56 was manually annotated 4 times for cluster A2.
•Start number 58 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A22:
•Start number 56 was manually annotated 1 time for cluster A22.

Info for manual annotations of cluster A3:
•Start number 54 was manually annotated 15 times for cluster A3.
•Start number 55 was manually annotated 17 times for cluster A3.

Info for manual annotations of cluster A5:
•Start number 51 was manually annotated 4 times for cluster A5.
•Start number 56 was manually annotated 14 times for cluster A5.

Info for manual annotations of cluster A6:
•Start number 47 was manually annotated 2 times for cluster A6.
•Start number 51 was manually annotated 1 time for cluster A6.
•Start number 55 was manually annotated 43 times for cluster A6.

Info for manual annotations of cluster A7:
•Start number 58 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:
•Start number 56 was manually annotated 12 times for cluster A8.

Info for manual annotations of cluster A9:
•Start number 56 was manually annotated 8 times for cluster A9.

Gene Information:

Gene: 20ES_84 Start: 47398, Stop: 47276, Start Num: 55
Candidate Starts for 20ES_84:
(Start: 55 @47398 has 146 MA's),

Gene: 40AC_77 Start: 46818, Stop: 46687, Start Num: 51
Candidate Starts for 40AC_77:
(Start: 51 @46818 has 7 MA's), (67, 46716),

Gene: AN3_82 Start: 45603, Stop: 45481, Start Num: 55
Candidate Starts for AN3_82:
(Start: 55 @45603 has 146 MA's),

Gene: AN9_81 Start: 45854, Stop: 45714, Start Num: 55
Candidate Starts for AN9_81:
(Start: 51 @45866 has 7 MA's), (Start: 52 @45863 has 3 MA's), (Start: 53 @45860 has 18 MA's), (Start: 55 @45854 has 146 MA's), (67, 45761),

Gene: ANI8_81 Start: 45854, Stop: 45714, Start Num: 55
Candidate Starts for ANI8_81:
(Start: 51 @45866 has 7 MA's), (Start: 52 @45863 has 3 MA's), (Start: 53 @45860 has 18 MA's), (Start: 55 @45854 has 146 MA's), (67, 45761),

Gene: AbbyPaige_84 Start: 47670, Stop: 47542, Start Num: 55
Candidate Starts for AbbyPaige_84:
(Start: 55 @47670 has 146 MA's), (62, 47607),

Gene: Acolyte_76 Start: 46365, Stop: 46234, Start Num: 55
Candidate Starts for Acolyte_76:
(Start: 51 @46377 has 7 MA's), (Start: 55 @46365 has 146 MA's),

Gene: Adzzy_84 Start: 46503, Stop: 46375, Start Num: 55
Candidate Starts for Adzzy_84:
(Start: 55 @46503 has 146 MA's), (67, 46410),

Gene: Agape74_84 Start: 47646, Stop: 47518, Start Num: 55
Candidate Starts for Agape74_84:
(Start: 55 @47646 has 146 MA's), (62, 47583),

Gene: AgentM_78 Start: 46275, Stop: 46135, Start Num: 51
Candidate Starts for AgentM_78:
(Start: 51 @46275 has 7 MA's), (Start: 56 @46260 has 41 MA's),

Gene: Aneem_84 Start: 46539, Stop: 46411, Start Num: 57
Candidate Starts for Aneem_84:
(30, 46683), (Start: 51 @46554 has 7 MA's), (Start: 52 @46551 has 3 MA's), (Start: 53 @46548 has 18 MA's), (Start: 57 @46539 has 13 MA's), (67, 46446),

Gene: AnnaL29_84 Start: 47815, Stop: 47681, Start Num: 55
Candidate Starts for AnnaL29_84:
(Start: 51 @47827 has 7 MA's), (Start: 55 @47815 has 146 MA's), (67, 47722),

Gene: Anselm_83 Start: 47560, Stop: 47429, Start Num: 55
Candidate Starts for Anselm_83:
(Start: 55 @47560 has 146 MA's), (62, 47497),

Gene: Aragog_78 Start: 46278, Stop: 46153, Start Num: 56
Candidate Starts for Aragog_78:
(Start: 56 @46278 has 41 MA's),

Gene: ArcherNM_77 Start: 46958, Stop: 46764, Start Num: 51

Candidate Starts for ArcherNM_77:
(Start: 51 @46958 has 7 MA's), (Start: 55 @46946 has 146 MA's), (66, 46856), (67, 46853),

Gene: Artemis2UCLA_82 Start: 45219, Stop: 45097, Start Num: 55
Candidate Starts for Artemis2UCLA_82:
(Start: 55 @45219 has 146 MA's), (67, 45126),

Gene: Astro_90 Start: 47879, Stop: 47760, Start Num: 56
Candidate Starts for Astro_90:
(43, 47975), (Start: 56 @47879 has 41 MA's), (69, 47771),

Gene: B1_67 Start: 43400, Stop: 43269, Start Num: 54
Candidate Starts for B1_67:
(Start: 54 @43400 has 15 MA's), (Start: 55 @43397 has 146 MA's), (64, 43322), (67, 43304), (69, 43289), (70, 43283),

Gene: BABullseye_75 Start: 43608, Stop: 43486, Start Num: 55
Candidate Starts for BABullseye_75:
(41, 43704), (Start: 51 @43617 has 7 MA's), (Start: 55 @43608 has 146 MA's), (67, 43515),

Gene: BabyRay_76 Start: 45160, Stop: 45005, Start Num: 54
Candidate Starts for BabyRay_76:
(Start: 54 @45160 has 15 MA's), (Start: 55 @45157 has 146 MA's), (64, 45082), (66, 45067), (67, 45064), (69, 45049), (74, 45025),

Gene: Bachome_81 Start: 45419, Stop: 45291, Start Num: 57
Candidate Starts for Bachome_81:
(30, 45563), (Start: 51 @45434 has 7 MA's), (Start: 52 @45431 has 3 MA's), (Start: 53 @45428 has 18 MA's), (Start: 57 @45419 has 13 MA's), (67, 45326),

Gene: Baehexic_81 Start: 47034, Stop: 46903, Start Num: 55
Candidate Starts for Baehexic_81:
(Start: 51 @47046 has 7 MA's), (Start: 55 @47034 has 146 MA's), (Start: 58 @47031 has 2 MA's), (64, 46959), (69, 46926), (75, 46908),

Gene: Bellris_81 Start: 45555, Stop: 45424, Start Num: 56
Candidate Starts for Bellris_81:
(29, 45702), (46, 45615), (Start: 56 @45555 has 41 MA's), (73, 45432),

Gene: BengiVuitton_82 Start: 47211, Stop: 47089, Start Num: 55
Candidate Starts for BengiVuitton_82:
(Start: 55 @47211 has 146 MA's),

Gene: BennyP_83 Start: 45384, Stop: 45262, Start Num: 55
Candidate Starts for BennyP_83:
(Start: 55 @45384 has 146 MA's), (67, 45291),

Gene: Benvolio_81 Start: 47231, Stop: 47103, Start Num: 55
Candidate Starts for Benvolio_81:
(Start: 55 @47231 has 146 MA's), (64, 47156),

Gene: BiancaTri92_79 Start: 46873, Stop: 46751, Start Num: 55
Candidate Starts for BiancaTri92_79:

(12, 47317), (45, 46936), (Start: 55 @46873 has 146 MA's), (67, 46780),

Gene: BlessJoy_83 Start: 45740, Stop: 45618, Start Num: 55
Candidate Starts for BlessJoy_83:
(Start: 55 @45740 has 146 MA's), (67, 45647),

Gene: Blinn1_86 Start: 46263, Stop: 46141, Start Num: 55
Candidate Starts for Blinn1_86:
(Start: 55 @46263 has 146 MA's), (67, 46170),

Gene: Blue7_84 Start: 45438, Stop: 45316, Start Num: 55
Candidate Starts for Blue7_84:
(Start: 55 @45438 has 146 MA's), (67, 45345),

Gene: BlueBird_79 Start: 45381, Stop: 45241, Start Num: 55
Candidate Starts for BlueBird_79:
(31, 45525), (Start: 54 @45384 has 15 MA's), (Start: 55 @45381 has 146 MA's), (61, 45318), (64, 45306), (67, 45288), (70, 45267), (78, 45246),

Gene: BobSwaget_76 Start: 45037, Stop: 44915, Start Num: 56
Candidate Starts for BobSwaget_76:
(Start: 56 @45037 has 41 MA's), (64, 44962),

Gene: Bonamassa_79 Start: 46599, Stop: 46474, Start Num: 56
Candidate Starts for Bonamassa_79:
(Start: 56 @46599 has 41 MA's),

Gene: Bowtie_80 Start: 45146, Stop: 45018, Start Num: 57
Candidate Starts for Bowtie_80:
(30, 45290), (Start: 51 @45161 has 7 MA's), (Start: 52 @45158 has 3 MA's), (Start: 53 @45155 has 18 MA's), (Start: 57 @45146 has 13 MA's), (67, 45053),

Gene: Bradman_85 Start: 46551, Stop: 46411, Start Num: 51
Candidate Starts for Bradman_85:
(Start: 51 @46551 has 7 MA's), (Start: 55 @46539 has 146 MA's), (66, 46449), (67, 46446), (70, 46425),

Gene: Bud_78 Start: 44976, Stop: 44848, Start Num: 57
Candidate Starts for Bud_78:
(30, 45120), (Start: 51 @44991 has 7 MA's), (Start: 52 @44988 has 3 MA's), (Start: 53 @44985 has 18 MA's), (Start: 57 @44976 has 13 MA's), (67, 44883),

Gene: Bugatti_79 Start: 45381, Stop: 45241, Start Num: 55
Candidate Starts for Bugatti_79:
(31, 45525), (Start: 54 @45384 has 15 MA's), (Start: 55 @45381 has 146 MA's), (61, 45318), (64, 45306), (67, 45288), (70, 45267), (78, 45246),

Gene: C3_74 Start: 45863, Stop: 45714, Start Num: 52
Candidate Starts for C3_74:
(Start: 51 @45866 has 7 MA's), (Start: 52 @45863 has 3 MA's), (Start: 53 @45860 has 18 MA's), (Start: 55 @45854 has 146 MA's), (67, 45761),

Gene: CRB1_83 Start: 47654, Stop: 47532, Start Num: 54

Candidate Starts for CRB1_83:
(Start: 54 @47654 has 15 MA's), (60, 47594), (67, 47561),

Gene: Caitlin_90 Start: 47571, Stop: 47452, Start Num: 56
Candidate Starts for Caitlin_90:
(43, 47667), (Start: 56 @47571 has 41 MA's),

Gene: Candra_83 Start: 45303, Stop: 45181, Start Num: 55
Candidate Starts for Candra_83:
(41, 45399), (Start: 51 @45312 has 7 MA's), (Start: 55 @45303 has 146 MA's), (67, 45210),

Gene: Caraxes_83 Start: 46461, Stop: 46327, Start Num: 55
Candidate Starts for Caraxes_83:
(15, 46842), (23, 46773), (24, 46710), (Start: 55 @46461 has 146 MA's), (66, 46371), (67, 46368), (75, 46335),

Gene: Celestialunch_77 Start: 45334, Stop: 45200, Start Num: 56
Candidate Starts for Celestialunch_77:
(8, 45826), (13, 45742), (40, 45439), (46, 45394), (Start: 56 @45334 has 41 MA's),

Gene: Centaur_82 Start: 46912, Stop: 46781, Start Num: 55
Candidate Starts for Centaur_82:
(Start: 51 @46924 has 7 MA's), (Start: 55 @46912 has 146 MA's), (Start: 58 @46909 has 2 MA's), (64, 46837), (69, 46804), (75, 46786),

Gene: Chargerpower_80 Start: 45411, Stop: 45283, Start Num: 56
Candidate Starts for Chargerpower_80:
(Start: 56 @45411 has 41 MA's), (64, 45336),

Gene: Charm_77 Start: 45481, Stop: 45350, Start Num: 56
Candidate Starts for Charm_77:
(Start: 56 @45481 has 41 MA's), (64, 45406),

Gene: Chartreuse_81 Start: 44614, Stop: 44492, Start Num: 55
Candidate Starts for Chartreuse_81:
(41, 44710), (Start: 51 @44623 has 7 MA's), (Start: 55 @44614 has 146 MA's), (67, 44521),

Gene: Che12_85 Start: 46581, Stop: 46453, Start Num: 55
Candidate Starts for Che12_85:
(Start: 55 @46581 has 146 MA's), (63, 46512), (67, 46488),

Gene: ChipMunk_83 Start: 48579, Stop: 48448, Start Num: 55
Candidate Starts for ChipMunk_83:
(Start: 51 @48591 has 7 MA's), (Start: 55 @48579 has 146 MA's), (62, 48516),

Gene: Clammy_78 Start: 45381, Stop: 45241, Start Num: 55
Candidate Starts for Clammy_78:
(31, 45525), (Start: 54 @45384 has 15 MA's), (Start: 55 @45381 has 146 MA's), (61, 45318), (64, 45306), (67, 45288), (70, 45267), (78, 45246),

Gene: CloudWang3_82 Start: 45503, Stop: 45354, Start Num: 47
Candidate Starts for CloudWang3_82:

(14, 45866), (16, 45845), (19, 45809), (20, 45803), (21, 45785), (38, 45584), (44, 45560), (Start: 47 @45503 has 2 MA's), (Start: 55 @45476 has 146 MA's), (67, 45383),

Gene: CogOmlette_79 Start: 45552, Stop: 45421, Start Num: 56
Candidate Starts for CogOmlette_79:
(29, 45699), (46, 45612), (Start: 56 @45552 has 41 MA's), (73, 45429),

Gene: Colin_82 Start: 47996, Stop: 47868, Start Num: 55
Candidate Starts for Colin_82:
(26, 48206), (36, 48113), (Start: 55 @47996 has 146 MA's), (67, 47903),

Gene: Conspiracy_79 Start: 46500, Stop: 46375, Start Num: 56
Candidate Starts for Conspiracy_79:
(Start: 51 @46515 has 7 MA's), (Start: 56 @46500 has 41 MA's),

Gene: Cookiedough_82 Start: 45921, Stop: 45799, Start Num: 55
Candidate Starts for Cookiedough_82:
(41, 46017), (Start: 51 @45930 has 7 MA's), (Start: 55 @45921 has 146 MA's), (67, 45828),

Gene: Crucio_82 Start: 47466, Stop: 47335, Start Num: 55
Candidate Starts for Crucio_82:
(Start: 55 @47466 has 146 MA's), (62, 47403),

Gene: DBQu4n_82 Start: 46905, Stop: 46765, Start Num: 53
Candidate Starts for DBQu4n_82:
(33, 47025), (42, 46995), (Start: 51 @46911 has 7 MA's), (Start: 52 @46908 has 3 MA's), (Start: 53 @46905 has 18 MA's), (Start: 55 @46899 has 146 MA's), (67, 46806), (77, 46773),

Gene: DaVinci_80 Start: 44668, Stop: 44546, Start Num: 55
Candidate Starts for DaVinci_80:
(41, 44764), (Start: 51 @44677 has 7 MA's), (Start: 55 @44668 has 146 MA's), (67, 44575),

Gene: Dalmatian_82 Start: 47291, Stop: 47160, Start Num: 55
Candidate Starts for Dalmatian_82:
(Start: 55 @47291 has 146 MA's), (62, 47228),

Gene: Danforth_92 Start: 48033, Stop: 47914, Start Num: 56
Candidate Starts for Danforth_92:
(27, 48234), (28, 48192), (43, 48129), (Start: 56 @48033 has 41 MA's),

Gene: DarthPhader_76 Start: 46568, Stop: 46434, Start Num: 56
Candidate Starts for DarthPhader_76:
(35, 46697), (39, 46679), (Start: 56 @46568 has 41 MA's), (64, 46487), (70, 46448),

Gene: DeerParkTS_78 Start: 45959, Stop: 45780, Start Num: 55
Candidate Starts for DeerParkTS_78:
(Start: 51 @45971 has 7 MA's), (Start: 55 @45959 has 146 MA's), (66, 45869), (67, 45866),

Gene: Deloris_82 Start: 46907, Stop: 46785, Start Num: 55
Candidate Starts for Deloris_82:
(Start: 55 @46907 has 146 MA's),

Gene: DelvinSonDorr_78 Start: 45326, Stop: 45204, Start Num: 55

Candidate Starts for DelvinSonDorr_78:
(41, 45422), (Start: 51 @45335 has 7 MA's), (Start: 55 @45326 has 146 MA's), (67, 45233),

Gene: Dignity_84 Start: 47753, Stop: 47625, Start Num: 55
Candidate Starts for Dignity_84:
(Start: 55 @47753 has 146 MA's), (62, 47690),

Gene: Discoknowium_76 Start: 46017, Stop: 45892, Start Num: 56
Candidate Starts for Discoknowium_76:
(Start: 51 @46032 has 7 MA's), (Start: 56 @46017 has 41 MA's),

Gene: Dixon_90 Start: 47438, Stop: 47319, Start Num: 56
Candidate Starts for Dixon_90:
(27, 47639), (28, 47597), (43, 47534), (Start: 56 @47438 has 41 MA's),

Gene: Dorothea_82 Start: 45914, Stop: 45792, Start Num: 55
Candidate Starts for Dorothea_82:
(41, 46010), (Start: 51 @45923 has 7 MA's), (Start: 55 @45914 has 146 MA's), (67, 45821),

Gene: Drake55_83 Start: 47163, Stop: 47032, Start Num: 55
Candidate Starts for Drake55_83:
(Start: 51 @47175 has 7 MA's), (Start: 55 @47163 has 146 MA's), (Start: 58 @47160 has 2 MA's), (64, 47088), (69, 47055), (75, 47037),

Gene: DreamTeam1_77 Start: 45329, Stop: 45198, Start Num: 56
Candidate Starts for DreamTeam1_77:
(Start: 56 @45329 has 41 MA's), (64, 45254),

Gene: DropBear_77 Start: 45305, Stop: 45165, Start Num: 55
Candidate Starts for DropBear_77:
(31, 45449), (Start: 54 @45308 has 15 MA's), (Start: 55 @45305 has 146 MA's), (64, 45230), (67, 45212), (70, 45191), (78, 45170),

Gene: DudeLittle_80 Start: 47060, Stop: 46932, Start Num: 55
Candidate Starts for DudeLittle_80:
(Start: 55 @47060 has 146 MA's), (62, 46997),

Gene: Duplo_83 Start: 46956, Stop: 46822, Start Num: 55
Candidate Starts for Duplo_83:
(33, 47082), (42, 47052), (Start: 51 @46968 has 7 MA's), (Start: 52 @46965 has 3 MA's), (Start: 53 @46962 has 18 MA's), (Start: 55 @46956 has 146 MA's), (67, 46863), (77, 46830),

Gene: EZMoney23_79 Start: 46625, Stop: 46476, Start Num: 55
Candidate Starts for EZMoney23_79:
(Start: 55 @46625 has 146 MA's), (66, 46535), (67, 46532),

Gene: Ebony_83 Start: 46119, Stop: 45982, Start Num: 53
Candidate Starts for Ebony_83:
(30, 46254), (Start: 51 @46125 has 7 MA's), (Start: 52 @46122 has 3 MA's), (Start: 53 @46119 has 18 MA's), (Start: 57 @46110 has 13 MA's), (67, 46017),

Gene: Echild_84 Start: 47255, Stop: 47127, Start Num: 55
Candidate Starts for Echild_84:

(Start: 55 @47255 has 146 MA's), (64, 47180),

Gene: ElTiger69_83 Start: 46873, Stop: 46748, Start Num: 56
Candidate Starts for ElTiger69_83:
(Start: 56 @46873 has 41 MA's), (71, 46756),

Gene: Equemioh13_82 Start: 47141, Stop: 47010, Start Num: 55
Candidate Starts for Equemioh13_82:
(Start: 51 @47153 has 7 MA's), (Start: 55 @47141 has 146 MA's), (Start: 58 @47138 has 2 MA's), (64, 47066), (69, 47033), (75, 47015),

Gene: EricB_81 Start: 45260, Stop: 45138, Start Num: 55
Candidate Starts for EricB_81:
(41, 45356), (Start: 51 @45269 has 7 MA's), (Start: 55 @45260 has 146 MA's), (67, 45167),

Gene: Et2Brutus_82 Start: 46082, Stop: 45945, Start Num: 53
Candidate Starts for Et2Brutus_82:
(30, 46217), (Start: 51 @46088 has 7 MA's), (Start: 52 @46085 has 3 MA's), (Start: 53 @46082 has 18 MA's), (Start: 57 @46073 has 13 MA's), (67, 45980),

Gene: EtoileNova_74 Start: 45338, Stop: 45198, Start Num: 55
Candidate Starts for EtoileNova_74:
(34, 45467), (Start: 54 @45341 has 15 MA's), (Start: 55 @45338 has 146 MA's), (64, 45263), (67, 45245), (69, 45230), (70, 45224), (78, 45203),

Gene: EvilGenius_82 Start: 48580, Stop: 48449, Start Num: 55
Candidate Starts for EvilGenius_82:
(Start: 51 @48592 has 7 MA's), (Start: 55 @48580 has 146 MA's), (62, 48517),

Gene: Expelliarmus_88 Start: 47652, Stop: 47533, Start Num: 56
Candidate Starts for Expelliarmus_88:
(43, 47748), (Start: 56 @47652 has 41 MA's),

Gene: Fameo_80 Start: 47072, Stop: 46941, Start Num: 55
Candidate Starts for Fameo_80:
(Start: 51 @47084 has 7 MA's), (Start: 55 @47072 has 146 MA's), (62, 47009),

Gene: Fibonacci_82 Start: 46088, Stop: 45951, Start Num: 53
Candidate Starts for Fibonacci_82:
(30, 46223), (Start: 51 @46094 has 7 MA's), (Start: 52 @46091 has 3 MA's), (Start: 53 @46088 has 18 MA's), (Start: 57 @46079 has 13 MA's), (67, 45986),

Gene: FiringLine_82 Start: 47457, Stop: 47329, Start Num: 55
Candidate Starts for FiringLine_82:
(Start: 55 @47457 has 146 MA's), (62, 47394),

Gene: First_0083 Start: 47298, Stop: 47176, Start Num: 55
Candidate Starts for First_0083:
(Start: 55 @47298 has 146 MA's),

Gene: Flare16_82 Start: 46956, Stop: 46825, Start Num: 55
Candidate Starts for Flare16_82:

(Start: 51 @46968 has 7 MA's), (Start: 55 @46956 has 146 MA's), (Start: 58 @46953 has 2 MA's), (64, 46881), (69, 46848), (75, 46830),

Gene: Flaverint_84 Start: 46546, Stop: 46409, Start Num: 53
Candidate Starts for Flaverint_84:
(30, 46681), (Start: 51 @46552 has 7 MA's), (Start: 52 @46549 has 3 MA's), (Start: 53 @46546 has 18 MA's), (Start: 57 @46537 has 13 MA's), (67, 46444),

Gene: Florence1_76 Start: 46109, Stop: 45984, Start Num: 56
Candidate Starts for Florence1_76:
(Start: 56 @46109 has 41 MA's),

Gene: Florence4_77 Start: 46109, Stop: 45984, Start Num: 56
Candidate Starts for Florence4_77:
(Start: 56 @46109 has 41 MA's),

Gene: ForGetIt_79 Start: 46528, Stop: 46403, Start Num: 56
Candidate Starts for ForGetIt_79:
(Start: 56 @46528 has 41 MA's),

Gene: ForesterFrank_79 Start: 47178, Stop: 46999, Start Num: 55
Candidate Starts for ForesterFrank_79:
(Start: 51 @47190 has 7 MA's), (Start: 55 @47178 has 146 MA's), (66, 47088), (67, 47085), (79, 47022),

Gene: Fred313_74 Start: 45002, Stop: 44859, Start Num: 54
Candidate Starts for Fred313_74:
(Start: 54 @45002 has 15 MA's), (Start: 55 @44999 has 146 MA's), (64, 44924), (67, 44906), (69, 44891), (70, 44885), (78, 44864),

Gene: Garak_84 Start: 45681, Stop: 45559, Start Num: 55
Candidate Starts for Garak_84:
(Start: 55 @45681 has 146 MA's), (67, 45588),

Gene: Georgie2_84 Start: 47661, Stop: 47533, Start Num: 55
Candidate Starts for Georgie2_84:
(Start: 55 @47661 has 146 MA's), (62, 47598),

Gene: Ghoulboy_78 Start: 46484, Stop: 46359, Start Num: 56
Candidate Starts for Ghoulboy_78:
(Start: 56 @46484 has 41 MA's),

Gene: Gilberta_80 Start: 45413, Stop: 45285, Start Num: 57
Candidate Starts for Gilberta_80:
(30, 45557), (Start: 51 @45428 has 7 MA's), (Start: 52 @45425 has 3 MA's), (Start: 53 @45422 has 18 MA's), (Start: 57 @45413 has 13 MA's), (67, 45320),

Gene: Giroux_79 Start: 45380, Stop: 45240, Start Num: 55
Candidate Starts for Giroux_79:
(31, 45524), (Start: 54 @45383 has 15 MA's), (Start: 55 @45380 has 146 MA's), (61, 45317), (64, 45305), (67, 45287), (70, 45266), (78, 45245),

Gene: Gladiator_78 Start: 45132, Stop: 45010, Start Num: 55

Candidate Starts for Gladiator_78:
(14, 45522), (16, 45501), (19, 45465), (20, 45459), (21, 45441), (38, 45240), (44, 45216), (Start: 47 @45159 has 2 MA's), (Start: 55 @45132 has 146 MA's), (67, 45039),

Gene: Gratitude_82 Start: 47138, Stop: 47010, Start Num: 58
Candidate Starts for Gratitude_82:
(Start: 51 @47153 has 7 MA's), (Start: 55 @47141 has 146 MA's), (Start: 58 @47138 has 2 MA's), (64, 47066), (69, 47033), (75, 47015),

Gene: Groundhog_88 Start: 47708, Stop: 47589, Start Num: 56
Candidate Starts for Groundhog_88:
(43, 47804), (Start: 56 @47708 has 41 MA's),

Gene: Gruunaga_81 Start: 45087, Stop: 44965, Start Num: 55
Candidate Starts for Gruunaga_81:
(14, 45477), (16, 45456), (19, 45420), (20, 45414), (21, 45396), (38, 45195), (44, 45171), (Start: 47 @45114 has 2 MA's), (Start: 55 @45087 has 146 MA's), (67, 44994),

Gene: Hammer_82 Start: 44821, Stop: 44672, Start Num: 47
Candidate Starts for Hammer_82:
(14, 45184), (16, 45163), (19, 45127), (20, 45121), (21, 45103), (38, 44902), (44, 44878), (Start: 47 @44821 has 2 MA's), (Start: 55 @44794 has 146 MA's), (67, 44701),

Gene: HarryHoudini_82 Start: 47166, Stop: 47035, Start Num: 55
Candidate Starts for HarryHoudini_82:
(Start: 51 @47178 has 7 MA's), (Start: 55 @47166 has 146 MA's), (Start: 58 @47163 has 2 MA's), (64, 47091), (69, 47058), (75, 47040),

Gene: Heffalump_79 Start: 47540, Stop: 47409, Start Num: 55
Candidate Starts for Heffalump_79:
(Start: 51 @47552 has 7 MA's), (Start: 55 @47540 has 146 MA's), (62, 47477),

Gene: HelDan_76 Start: 45313, Stop: 45170, Start Num: 54
Candidate Starts for HelDan_76:
(31, 45454), (Start: 54 @45313 has 15 MA's), (Start: 55 @45310 has 146 MA's), (64, 45235), (67, 45217), (70, 45196), (78, 45175),

Gene: Helmet_85 Start: 45681, Stop: 45559, Start Num: 55
Candidate Starts for Helmet_85:
(Start: 55 @45681 has 146 MA's), (67, 45588),

Gene: Herbertwm_76 Start: 46096, Stop: 45971, Start Num: 55
Candidate Starts for Herbertwm_76:
(Start: 51 @46108 has 7 MA's), (Start: 55 @46096 has 146 MA's), (59, 46063), (64, 46024), (68, 45991),

Gene: Hexamo_81 Start: 44962, Stop: 44840, Start Num: 55
Candidate Starts for Hexamo_81:
(14, 45352), (16, 45331), (19, 45295), (20, 45289), (21, 45271), (38, 45070), (44, 45046), (Start: 47 @44989 has 2 MA's), (Start: 55 @44962 has 146 MA's), (67, 44869),

Gene: HippoHollow_80 Start: 48131, Stop: 48009, Start Num: 55
Candidate Starts for HippoHollow_80:

(Start: 55 @48131 has 146 MA's), (67, 48038),

Gene: Hookmount_76 Start: 45334, Stop: 45194, Start Num: 55
Candidate Starts for Hookmount_76:
(34, 45463), (Start: 54 @45337 has 15 MA's), (Start: 55 @45334 has 146 MA's), (64, 45259), (67, 45241), (69, 45226), (70, 45220), (78, 45199),

Gene: Hoot_77 Start: 43118, Stop: 42996, Start Num: 55
Candidate Starts for Hoot_77:
(41, 43214), (Start: 51 @43127 has 7 MA's), (Start: 55 @43118 has 146 MA's), (67, 43025),

Gene: Hutc2_79 Start: 44978, Stop: 44835, Start Num: 51
Candidate Starts for Hutc2_79:
(30, 45107), (Start: 51 @44978 has 7 MA's), (Start: 52 @44975 has 3 MA's), (Start: 53 @44972 has 18 MA's), (Start: 57 @44963 has 13 MA's), (67, 44870),

Gene: Idleandcovert_77 Start: 45384, Stop: 45241, Start Num: 54
Candidate Starts for Idleandcovert_77:
(31, 45525), (Start: 54 @45384 has 15 MA's), (Start: 55 @45381 has 146 MA's), (61, 45318), (64, 45306), (67, 45288), (70, 45267), (78, 45246),

Gene: Imbriano_83 Start: 46106, Stop: 45984, Start Num: 55
Candidate Starts for Imbriano_83:
(41, 46202), (Start: 51 @46115 has 7 MA's), (Start: 55 @46106 has 146 MA's), (67, 46013),

Gene: Indra_86 Start: 45682, Stop: 45560, Start Num: 55
Candidate Starts for Indra_86:
(Start: 55 @45682 has 146 MA's), (67, 45589),

Gene: Insomnia_82 Start: 46263, Stop: 46126, Start Num: 53
Candidate Starts for Insomnia_82:
(30, 46401), (Start: 51 @46269 has 7 MA's), (Start: 52 @46266 has 3 MA's), (Start: 53 @46263 has 18 MA's), (Start: 57 @46254 has 13 MA's), (67, 46161),

Gene: Isca_73 Start: 44704, Stop: 44573, Start Num: 54
Candidate Starts for Isca_73:
(Start: 54 @44704 has 15 MA's), (Start: 55 @44701 has 146 MA's), (64, 44626), (67, 44608), (69, 44593), (70, 44587),

Gene: Isiphiwo_79 Start: 45288, Stop: 45166, Start Num: 55
Candidate Starts for Isiphiwo_79:
(41, 45384), (Start: 51 @45297 has 7 MA's), (Start: 55 @45288 has 146 MA's), (67, 45195),

Gene: Iwokeuplikedis_84 Start: 47619, Stop: 47479, Start Num: 55
Candidate Starts for Iwokeuplikedis_84:
(50, 47637), (Start: 54 @47622 has 15 MA's), (Start: 55 @47619 has 146 MA's), (66, 47529), (67, 47526),

Gene: JF2_73 Start: 43400, Stop: 43269, Start Num: 54
Candidate Starts for JF2_73:
(Start: 54 @43400 has 15 MA's), (Start: 55 @43397 has 146 MA's), (64, 43322), (67, 43304), (69, 43289), (70, 43283),

Gene: JF4_73 Start: 43400, Stop: 43269, Start Num: 54
Candidate Starts for JF4_73:
(Start: 54 @43400 has 15 MA's), (Start: 55 @43397 has 146 MA's), (64, 43322), (67, 43304), (69, 43289), (70, 43283),

Gene: Jabith_82 Start: 46271, Stop: 46143, Start Num: 57
Candidate Starts for Jabith_82:
(30, 46415), (Start: 51 @46286 has 7 MA's), (Start: 52 @46283 has 3 MA's), (Start: 53 @46280 has 18 MA's), (Start: 57 @46271 has 13 MA's), (67, 46178),

Gene: Jerm_84 Start: 47718, Stop: 47590, Start Num: 55
Candidate Starts for Jerm_84:
(Start: 55 @47718 has 146 MA's), (62, 47655),

Gene: Jordennis_80 Start: 45500, Stop: 45378, Start Num: 55
Candidate Starts for Jordennis_80:
(41, 45596), (Start: 51 @45509 has 7 MA's), (Start: 55 @45500 has 146 MA's), (67, 45407),

Gene: Joselito_82 Start: 46291, Stop: 46163, Start Num: 57
Candidate Starts for Joselito_82:
(30, 46435), (Start: 51 @46306 has 7 MA's), (Start: 52 @46303 has 3 MA's), (Start: 53 @46300 has 18 MA's), (Start: 57 @46291 has 13 MA's), (67, 46198),

Gene: JoshKayV_84 Start: 47886, Stop: 47758, Start Num: 55
Candidate Starts for JoshKayV_84:
(1, 48690), (2, 48621), (3, 48495), (4, 48447), (5, 48402), (7, 48375), (10, 48330), (17, 48237), (25, 48093), (Start: 55 @47886 has 146 MA's), (62, 47823),

Gene: Jsquared_86 Start: 46782, Stop: 46651, Start Num: 55
Candidate Starts for Jsquared_86:
(Start: 51 @46794 has 7 MA's), (Start: 53 @46788 has 18 MA's), (Start: 55 @46782 has 146 MA's), (67, 46689),

Gene: Kachowdy_77 Start: 45349, Stop: 45206, Start Num: 54
Candidate Starts for Kachowdy_77:
(31, 45490), (Start: 54 @45349 has 15 MA's), (Start: 55 @45346 has 146 MA's), (64, 45271), (67, 45253), (70, 45232), (78, 45211),

Gene: Kalpine_84 Start: 47882, Stop: 47751, Start Num: 55
Candidate Starts for Kalpine_84:
(36, 47999), (Start: 55 @47882 has 146 MA's), (67, 47789), (73, 47759),

Gene: Kazan_83 Start: 45273, Stop: 45151, Start Num: 55
Candidate Starts for Kazan_83:
(41, 45369), (Start: 51 @45282 has 7 MA's), (Start: 55 @45273 has 146 MA's), (67, 45180),

Gene: Kerberos_82 Start: 46925, Stop: 46785, Start Num: 53
Candidate Starts for Kerberos_82:
(33, 47045), (42, 47015), (Start: 51 @46931 has 7 MA's), (Start: 52 @46928 has 3 MA's), (Start: 53 @46925 has 18 MA's), (Start: 55 @46919 has 146 MA's), (67, 46826), (77, 46793),

Gene: Keziacharles14_79 Start: 46638, Stop: 46501, Start Num: 56
Candidate Starts for Keziacharles14_79:

(46, 46698), (Start: 56 @46638 has 41 MA's), (65, 46545),

Gene: Kimba_80 Start: 45603, Stop: 45460, Start Num: 53
Candidate Starts for Kimba_80:
(30, 45738), (Start: 51 @45609 has 7 MA's), (Start: 52 @45606 has 3 MA's), (Start: 53 @45603 has 18 MA's), (Start: 57 @45594 has 13 MA's), (67, 45501),

Gene: Kimona_73 Start: 43945, Stop: 43820, Start Num: 55
Candidate Starts for Kimona_73:
(45, 44005), (Start: 55 @43945 has 146 MA's), (64, 43870),

Gene: KingCyrus_81 Start: 48593, Stop: 48462, Start Num: 55
Candidate Starts for KingCyrus_81:
(Start: 51 @48605 has 7 MA's), (Start: 55 @48593 has 146 MA's), (62, 48530),

Gene: Kipper29_82 Start: 45286, Stop: 45164, Start Num: 55
Candidate Starts for Kipper29_82:
(41, 45382), (Start: 51 @45295 has 7 MA's), (Start: 55 @45286 has 146 MA's), (67, 45193),

Gene: Klodlith_78 Start: 45551, Stop: 45420, Start Num: 56
Candidate Starts for Klodlith_78:
(Start: 56 @45551 has 41 MA's), (64, 45476),

Gene: Koduck_82 Start: 46124, Stop: 45978, Start Num: 55
Candidate Starts for Koduck_82:
(Start: 51 @46136 has 7 MA's), (Start: 55 @46124 has 146 MA's), (67, 46031), (77, 45995),

Gene: Koko_84 Start: 46071, Stop: 45949, Start Num: 55
Candidate Starts for Koko_84:
(Start: 55 @46071 has 146 MA's), (67, 45978),

Gene: L5_75 Start: 46015, Stop: 45884, Start Num: 55
Candidate Starts for L5_75:
(Start: 51 @46027 has 7 MA's), (Start: 55 @46015 has 146 MA's), (67, 45922), (76, 45889),

Gene: LadyBird_86 Start: 47796, Stop: 47674, Start Num: 55
Candidate Starts for LadyBird_86:
(32, 47931), (Start: 55 @47796 has 146 MA's),

Gene: Lambert1_76 Start: 45335, Stop: 45195, Start Num: 55
Candidate Starts for Lambert1_76:
(34, 45464), (Start: 54 @45338 has 15 MA's), (Start: 55 @45335 has 146 MA's), (64, 45260), (67, 45242), (69, 45227), (70, 45221), (78, 45200),

Gene: Larenn_80 Start: 47156, Stop: 47028, Start Num: 55
Candidate Starts for Larenn_80:
(Start: 51 @47168 has 7 MA's), (Start: 55 @47156 has 146 MA's), (62, 47093),

Gene: Lev2_79 Start: 46416, Stop: 46291, Start Num: 56
Candidate Starts for Lev2_79:
(Start: 56 @46416 has 41 MA's),

Gene: Leviathan_84 Start: 47802, Stop: 47674, Start Num: 55

Candidate Starts for Leviathan_84:
(Start: 55 @47802 has 146 MA's), (62, 47739),

Gene: LilTurb_83 Start: 47598, Stop: 47470, Start Num: 55
Candidate Starts for LilTurb_83:
(Start: 55 @47598 has 146 MA's), (62, 47535),

Gene: Lilbunny_82 Start: 45313, Stop: 45191, Start Num: 55
Candidate Starts for Lilbunny_82:
(Start: 55 @45313 has 146 MA's), (67, 45220),

Gene: LionsBait_80 Start: 48130, Stop: 48008, Start Num: 55
Candidate Starts for LionsBait_80:
(Start: 55 @48130 has 146 MA's), (67, 48037),

Gene: Lokk_77 Start: 45661, Stop: 45539, Start Num: 56
Candidate Starts for Lokk_77:
(Start: 56 @45661 has 41 MA's), (64, 45586),

Gene: Loser_85 Start: 48065, Stop: 47931, Start Num: 55
Candidate Starts for Loser_85:
(Start: 51 @48077 has 7 MA's), (Start: 55 @48065 has 146 MA's), (67, 47972),

Gene: Lucivia_84 Start: 46579, Stop: 46442, Start Num: 53
Candidate Starts for Lucivia_84:
(30, 46714), (Start: 51 @46585 has 7 MA's), (Start: 52 @46582 has 3 MA's), (Start: 53 @46579 has 18 MA's), (Start: 57 @46570 has 13 MA's), (67, 46477),

Gene: MA5_75 Start: 44608, Stop: 44477, Start Num: 54
Candidate Starts for MA5_75:
(Start: 54 @44608 has 15 MA's), (Start: 55 @44605 has 146 MA's), (64, 44530), (67, 44512), (69, 44497), (70, 44491),

Gene: MaCh_83 Start: 46534, Stop: 46406, Start Num: 57
Candidate Starts for MaCh_83:
(30, 46678), (Start: 51 @46549 has 7 MA's), (Start: 52 @46546 has 3 MA's), (Start: 53 @46543 has 18 MA's), (Start: 57 @46534 has 13 MA's), (67, 46441),

Gene: Mabel_83 Start: 46544, Stop: 46407, Start Num: 53
Candidate Starts for Mabel_83:
(30, 46679), (Start: 51 @46550 has 7 MA's), (Start: 52 @46547 has 3 MA's), (Start: 53 @46544 has 18 MA's), (Start: 57 @46535 has 13 MA's), (67, 46442),

Gene: MajorMajor_79 Start: 44831, Stop: 44703, Start Num: 55
Candidate Starts for MajorMajor_79:
(Start: 51 @44843 has 7 MA's), (Start: 55 @44831 has 146 MA's), (66, 44741), (67, 44738), (70, 44717),

Gene: Malec_81 Start: 47726, Stop: 47598, Start Num: 55
Candidate Starts for Malec_81:
(Start: 51 @47738 has 7 MA's), (Start: 55 @47726 has 146 MA's), (62, 47663),

Gene: Marchesa_75 Start: 45298, Stop: 45158, Start Num: 55

Candidate Starts for Marchesa_75:
(31, 45442), (Start: 54 @45301 has 15 MA's), (Start: 55 @45298 has 146 MA's), (64, 45223), (67, 45205), (70, 45184), (78, 45163),

Gene: Margo_76 Start: 45360, Stop: 45220, Start Num: 55
Candidate Starts for Margo_76:
(34, 45489), (Start: 54 @45363 has 15 MA's), (Start: 55 @45360 has 146 MA's), (64, 45285), (67, 45267), (69, 45252), (70, 45246), (78, 45225),

Gene: McFly_82 Start: 45622, Stop: 45500, Start Num: 55
Candidate Starts for McFly_82:
(41, 45718), (Start: 51 @45631 has 7 MA's), (Start: 55 @45622 has 146 MA's), (67, 45529),

Gene: MegTheThird_78 Start: 45552, Stop: 45418, Start Num: 56
Candidate Starts for MegTheThird_78:
(8, 46044), (13, 45960), (40, 45657), (46, 45612), (Start: 56 @45552 has 41 MA's),

Gene: Micasa_79 Start: 46508, Stop: 46383, Start Num: 56
Candidate Starts for Micasa_79:
(Start: 56 @46508 has 41 MA's),

Gene: MiculUcigas_82 Start: 46859, Stop: 46728, Start Num: 55
Candidate Starts for MiculUcigas_82:
(Start: 51 @46871 has 7 MA's), (Start: 55 @46859 has 146 MA's), (Start: 58 @46856 has 2 MA's), (64, 46784), (69, 46751), (75, 46733),

Gene: Miko_77 Start: 46423, Stop: 46301, Start Num: 56
Candidate Starts for Miko_77:
(Start: 56 @46423 has 41 MA's), (64, 46348),

Gene: Minispark_79 Start: 45549, Stop: 45418, Start Num: 56
Candidate Starts for Minispark_79:
(29, 45696), (46, 45609), (Start: 56 @45549 has 41 MA's), (73, 45426),

Gene: MissWhite_75 Start: 43780, Stop: 43640, Start Num: 52
Candidate Starts for MissWhite_75:
(6, 44287), (9, 44248), (11, 44215), (18, 44101), (22, 44074), (42, 43861), (Start: 51 @43783 has 7 MA's), (Start: 52 @43780 has 3 MA's), (Start: 53 @43777 has 18 MA's), (Start: 55 @43771 has 146 MA's), (66, 43684), (67, 43681),

Gene: Mulciber_81 Start: 46076, Stop: 45948, Start Num: 57
Candidate Starts for Mulciber_81:
(30, 46220), (Start: 51 @46091 has 7 MA's), (Start: 52 @46088 has 3 MA's), (Start: 53 @46085 has 18 MA's), (Start: 57 @46076 has 13 MA's), (67, 45983),

Gene: Munch_83 Start: 46539, Stop: 46411, Start Num: 57
Candidate Starts for Munch_83:
(30, 46683), (Start: 51 @46554 has 7 MA's), (Start: 52 @46551 has 3 MA's), (Start: 53 @46548 has 18 MA's), (Start: 57 @46539 has 13 MA's), (67, 46446),

Gene: NaSiaTalie_83 Start: 47146, Stop: 47015, Start Num: 55
Candidate Starts for NaSiaTalie_83:

(Start: 51 @47158 has 7 MA's), (Start: 55 @47146 has 146 MA's), (Start: 58 @47143 has 2 MA's), (64, 47071), (69, 47038), (75, 47020),

Gene: Naca_80 Start: 46930, Stop: 46790, Start Num: 51
Candidate Starts for Naca_80:
(49, 46936), (Start: 51 @46930 has 7 MA's), (71, 46798),

Gene: NearlyHeadless_92 Start: 47770, Stop: 47651, Start Num: 56
Candidate Starts for NearlyHeadless_92:
(27, 47971), (28, 47929), (43, 47866), (Start: 56 @47770 has 41 MA's),

Gene: Neeharika16_81 Start: 45372, Stop: 45250, Start Num: 55
Candidate Starts for Neeharika16_81:
(41, 45468), (Start: 51 @45381 has 7 MA's), (Start: 55 @45372 has 146 MA's), (67, 45279),

Gene: Newrala_81 Start: 45708, Stop: 45586, Start Num: 55
Candidate Starts for Newrala_81:
(41, 45804), (Start: 51 @45717 has 7 MA's), (Start: 55 @45708 has 146 MA's), (67, 45615),

Gene: NicoleTera_80 Start: 47083, Stop: 46955, Start Num: 55
Candidate Starts for NicoleTera_80:
(36, 47200), (Start: 51 @47095 has 7 MA's), (Start: 55 @47083 has 146 MA's), (67, 46990),

Gene: Noella_77 Start: 45336, Stop: 45196, Start Num: 55
Candidate Starts for Noella_77:
(34, 45465), (Start: 54 @45339 has 15 MA's), (Start: 55 @45336 has 146 MA's), (64, 45261), (67, 45243), (69, 45228), (70, 45222), (78, 45201),

Gene: Norbert_72 Start: 45336, Stop: 45193, Start Num: 54
Candidate Starts for Norbert_72:
(34, 45462), (Start: 54 @45336 has 15 MA's), (Start: 55 @45333 has 146 MA's), (64, 45258), (67, 45240), (69, 45225), (70, 45219), (78, 45198),

Gene: Odin_82 Start: 46934, Stop: 46800, Start Num: 55
Candidate Starts for Odin_82:
(Start: 55 @46934 has 146 MA's), (66, 46844), (67, 46841), (70, 46820), (75, 46808),

Gene: Orange_83 Start: 46089, Stop: 45961, Start Num: 57
Candidate Starts for Orange_83:
(30, 46233), (Start: 51 @46104 has 7 MA's), (Start: 52 @46101 has 3 MA's), (Start: 53 @46098 has 18 MA's), (Start: 57 @46089 has 13 MA's), (67, 45996),

Gene: PP_74 Start: 49167, Stop: 49015, Start Num: 58
Candidate Starts for PP_74:
(Start: 58 @49167 has 2 MA's), (72, 49050), (78, 49035),

Gene: Petersenfast_79 Start: 44970, Stop: 44842, Start Num: 57
Candidate Starts for Petersenfast_79:
(30, 45114), (Start: 51 @44985 has 7 MA's), (Start: 52 @44982 has 3 MA's), (Start: 53 @44979 has 18 MA's), (Start: 57 @44970 has 13 MA's), (67, 44877),

Gene: PetterN_85 Start: 46717, Stop: 46577, Start Num: 51
Candidate Starts for PetterN_85:

(49, 46723), (Start: 51 @46717 has 7 MA's), (71, 46585),

Gene: Ph8s_84 Start: 46716, Stop: 46588, Start Num: 55
Candidate Starts for Ph8s_84:
(Start: 55 @46716 has 146 MA's), (67, 46623),

Gene: Phantastic_78 Start: 45028, Stop: 44885, Start Num: 54
Candidate Starts for Phantastic_78:
(Start: 54 @45028 has 15 MA's), (Start: 55 @45025 has 146 MA's), (67, 44932), (69, 44917), (70, 44911), (78, 44890),

Gene: Phillis_88 Start: 46783, Stop: 46664, Start Num: 56
Candidate Starts for Phillis_88:
(27, 46984), (28, 46942), (43, 46879), (Start: 56 @46783 has 41 MA's), (69, 46675),

Gene: Phlorence_77 Start: 46175, Stop: 46035, Start Num: 51
Candidate Starts for Phlorence_77:
(Start: 51 @46175 has 7 MA's), (Start: 56 @46160 has 41 MA's),

Gene: PickleBack_79 Start: 46335, Stop: 46210, Start Num: 56
Candidate Starts for PickleBack_79:
(Start: 56 @46335 has 41 MA's),

Gene: Piro94_81 Start: 47094, Stop: 46963, Start Num: 55
Candidate Starts for Piro94_81:
(Start: 51 @47106 has 7 MA's), (Start: 55 @47094 has 146 MA's), (Start: 58 @47091 has 2 MA's), (64, 47019), (69, 46986), (75, 46968),

Gene: Pistachio_77 Start: 44928, Stop: 44788, Start Num: 55
Candidate Starts for Pistachio_77:
(31, 45072), (Start: 54 @44931 has 15 MA's), (Start: 55 @44928 has 146 MA's), (61, 44865), (64, 44853), (67, 44835), (70, 44814), (78, 44793),

Gene: Pmask_81 Start: 45909, Stop: 45787, Start Num: 55
Candidate Starts for Pmask_81:
(41, 46005), (Start: 51 @45918 has 7 MA's), (Start: 55 @45909 has 146 MA's), (67, 45816),

Gene: Pocahontas_75 Start: 45331, Stop: 45191, Start Num: 55
Candidate Starts for Pocahontas_75:
(34, 45460), (Start: 54 @45334 has 15 MA's), (Start: 55 @45331 has 146 MA's), (64, 45256), (67, 45238), (69, 45223), (70, 45217), (78, 45196),

Gene: Pomar16_82 Start: 46998, Stop: 46858, Start Num: 53
Candidate Starts for Pomar16_82:
(33, 47118), (42, 47088), (Start: 51 @47004 has 7 MA's), (Start: 52 @47001 has 3 MA's), (Start: 53 @46998 has 18 MA's), (Start: 55 @46992 has 146 MA's), (67, 46899), (77, 46866),

Gene: Popcicle_76 Start: 45331, Stop: 45191, Start Num: 55
Candidate Starts for Popcicle_76:
(34, 45460), (Start: 54 @45334 has 15 MA's), (Start: 55 @45331 has 146 MA's), (64, 45256), (67, 45238), (69, 45223), (70, 45217), (78, 45196),

Gene: Power_82 Start: 47660, Stop: 47532, Start Num: 55

Candidate Starts for Power_82:
(Start: 55 @47660 has 146 MA's), (62, 47597),

Gene: Priamo_84 Start: 45609, Stop: 45487, Start Num: 55
Candidate Starts for Priamo_84:
(Start: 55 @45609 has 146 MA's), (67, 45516),

Gene: Prinashe11_78 Start: 46347, Stop: 46222, Start Num: 56
Candidate Starts for Prinashe11_78:
(Start: 56 @46347 has 41 MA's),

Gene: Prudy_80 Start: 47444, Stop: 47265, Start Num: 55
Candidate Starts for Prudy_80:
(37, 47555), (Start: 51 @47456 has 7 MA's), (Start: 55 @47444 has 146 MA's), (66, 47354), (67, 47351),

Gene: Puppy_77 Start: 44998, Stop: 44858, Start Num: 55
Candidate Starts for Puppy_77:
(31, 45142), (Start: 54 @45001 has 15 MA's), (Start: 55 @44998 has 146 MA's), (64, 44923), (67, 44905), (69, 44890), (70, 44884), (78, 44863),

Gene: QueenB2_79 Start: 46753, Stop: 46622, Start Num: 55
Candidate Starts for QueenB2_79:
(Start: 51 @46765 has 7 MA's), (Start: 55 @46753 has 146 MA's), (62, 46690),

Gene: QueenBeesly_82 Start: 47457, Stop: 47329, Start Num: 55
Candidate Starts for QueenBeesly_82:
(Start: 55 @47457 has 146 MA's), (62, 47394),

Gene: QuinnKiro_75 Start: 45337, Stop: 45194, Start Num: 54
Candidate Starts for QuinnKiro_75:
(34, 45463), (Start: 54 @45337 has 15 MA's), (Start: 55 @45334 has 146 MA's), (64, 45259), (67, 45241), (69, 45226), (70, 45220), (78, 45199),

Gene: Quokka_84 Start: 46552, Stop: 46412, Start Num: 51
Candidate Starts for Quokka_84:
(Start: 51 @46552 has 7 MA's), (Start: 55 @46540 has 146 MA's), (66, 46450), (67, 46447), (70, 46426),

Gene: Rachaly_79 Start: 46569, Stop: 46447, Start Num: 56
Candidate Starts for Rachaly_79:
(Start: 56 @46569 has 41 MA's), (64, 46494),

Gene: Rahalelujah_81 Start: 45564, Stop: 45433, Start Num: 56
Candidate Starts for Rahalelujah_81:
(29, 45711), (46, 45624), (Start: 56 @45564 has 41 MA's), (73, 45441),

Gene: RedRock_82 Start: 47718, Stop: 47584, Start Num: 55
Candidate Starts for RedRock_82:
(Start: 51 @47730 has 7 MA's), (Start: 55 @47718 has 146 MA's), (66, 47628), (67, 47625),

Gene: ResDef_74 Start: 45337, Stop: 45197, Start Num: 55
Candidate Starts for ResDef_74:

(34, 45466), (Start: 54 @45340 has 15 MA's), (Start: 55 @45337 has 146 MA's), (64, 45262), (67, 45244), (69, 45229), (70, 45223), (78, 45202),

Gene: Retro23_82 Start: 47184, Stop: 47053, Start Num: 55
Candidate Starts for Retro23_82:
(Start: 55 @47184 has 146 MA's), (62, 47121),

Gene: Rifter_82 Start: 44589, Stop: 44467, Start Num: 55
Candidate Starts for Rifter_82:
(14, 44979), (16, 44958), (19, 44922), (20, 44916), (21, 44898), (38, 44697), (44, 44673), (Start: 47 @44616 has 2 MA's), (Start: 55 @44589 has 146 MA's), (67, 44496),

Gene: Roary_93 Start: 47910, Stop: 47791, Start Num: 56
Candidate Starts for Roary_93:
(Start: 56 @47910 has 41 MA's),

Gene: Roksolana_83 Start: 45577, Stop: 45455, Start Num: 55
Candidate Starts for Roksolana_83:
(Start: 55 @45577 has 146 MA's), (67, 45484),

Gene: Saintus_86 Start: 44635, Stop: 44516, Start Num: 56
Candidate Starts for Saintus_86:
(27, 44836), (28, 44794), (43, 44731), (Start: 56 @44635 has 41 MA's),

Gene: Salz_78 Start: 44894, Stop: 44757, Start Num: 53
Candidate Starts for Salz_78:
(30, 45029), (Start: 51 @44900 has 7 MA's), (Start: 52 @44897 has 3 MA's), (Start: 53 @44894 has 18 MA's), (Start: 57 @44885 has 13 MA's), (67, 44792),

Gene: Saskia_81 Start: 45442, Stop: 45305, Start Num: 53
Candidate Starts for Saskia_81:
(Start: 51 @45448 has 7 MA's), (Start: 52 @45445 has 3 MA's), (Start: 53 @45442 has 18 MA's), (Start: 57 @45433 has 13 MA's), (67, 45340),

Gene: Scout_75 Start: 44560, Stop: 44417, Start Num: 54
Candidate Starts for Scout_75:
(31, 44701), (Start: 54 @44560 has 15 MA's), (Start: 55 @44557 has 146 MA's), (64, 44482), (67, 44464), (70, 44443), (78, 44422),

Gene: SemperFi_82 Start: 47345, Stop: 47217, Start Num: 55
Candidate Starts for SemperFi_82:
(Start: 55 @47345 has 146 MA's), (62, 47282),

Gene: Serenity_85 Start: 46580, Stop: 46449, Start Num: 55
Candidate Starts for Serenity_85:
(Start: 51 @46592 has 7 MA's), (Start: 55 @46580 has 146 MA's), (67, 46487),

Gene: Sham4_79 Start: 44977, Stop: 44840, Start Num: 53
Candidate Starts for Sham4_79:
(30, 45115), (Start: 51 @44983 has 7 MA's), (Start: 52 @44980 has 3 MA's), (Start: 53 @44977 has 18 MA's), (Start: 57 @44968 has 13 MA's), (67, 44875),

Gene: SheaKeira_77 Start: 45357, Stop: 45226, Start Num: 56

Candidate Starts for SheaKeira_77:
(Start: 56 @45357 has 41 MA's), (64, 45282),

Gene: Sknot_82 Start: 46953, Stop: 46822, Start Num: 55
Candidate Starts for Sknot_82:
(Start: 51 @46965 has 7 MA's), (Start: 55 @46953 has 146 MA's), (Start: 58 @46950 has 2 MA's), (64, 46878), (69, 46845), (75, 46827),

Gene: Smeadley_91 Start: 47774, Stop: 47655, Start Num: 56
Candidate Starts for Smeadley_91:
(43, 47870), (Start: 56 @47774 has 41 MA's),

Gene: Smeagan_85 Start: 47893, Stop: 47765, Start Num: 55
Candidate Starts for Smeagan_85:
(Start: 55 @47893 has 146 MA's), (62, 47830),

Gene: SmellyB_82 Start: 45267, Stop: 45145, Start Num: 55
Candidate Starts for SmellyB_82:
(41, 45363), (Start: 51 @45276 has 7 MA's), (Start: 55 @45267 has 146 MA's), (67, 45174),

Gene: SnapTap_82 Start: 47316, Stop: 47188, Start Num: 55
Candidate Starts for SnapTap_82:
(Start: 55 @47316 has 146 MA's), (62, 47253),

Gene: Snape_83 Start: 46087, Stop: 45950, Start Num: 53
Candidate Starts for Snape_83:
(30, 46222), (Start: 51 @46093 has 7 MA's), (Start: 52 @46090 has 3 MA's), (Start: 53 @46087 has 18 MA's), (Start: 57 @46078 has 13 MA's), (67, 45985),

Gene: StarStuff_82 Start: 46960, Stop: 46820, Start Num: 53
Candidate Starts for StarStuff_82:
(33, 47080), (42, 47050), (Start: 51 @46966 has 7 MA's), (Start: 52 @46963 has 3 MA's), (Start: 53 @46960 has 18 MA's), (Start: 55 @46954 has 146 MA's), (67, 46861), (77, 46828),

Gene: Stephig9_92 Start: 48125, Stop: 48006, Start Num: 56
Candidate Starts for Stephig9_92:
(43, 48221), (Start: 56 @48125 has 41 MA's), (69, 48017),

Gene: SuperAwesome_82 Start: 45948, Stop: 45826, Start Num: 55
Candidate Starts for SuperAwesome_82:
(41, 46044), (Start: 51 @45957 has 7 MA's), (Start: 55 @45948 has 146 MA's), (67, 45855),

Gene: SuperCallie99_79 Start: 45798, Stop: 45667, Start Num: 51
Candidate Starts for SuperCallie99_79:
(41, 45885), (Start: 51 @45798 has 7 MA's), (Start: 55 @45789 has 146 MA's), (67, 45696),

Gene: Superchunk_83 Start: 46461, Stop: 46327, Start Num: 55
Candidate Starts for Superchunk_83:
(15, 46842), (23, 46773), (24, 46710), (Start: 55 @46461 has 146 MA's), (66, 46371), (67, 46368), (75, 46335),

Gene: SweetiePie_82 Start: 47449, Stop: 47321, Start Num: 55
Candidate Starts for SweetiePie_82:

(Start: 55 @47449 has 146 MA's), (62, 47386),

Gene: SwirlSquare_85 Start: 46176, Stop: 46042, Start Num: 55
Candidate Starts for SwirlSquare_85:
(Start: 55 @46176 has 146 MA's), (67, 46083), (70, 46062), (75, 46050),

Gene: TNguyen7_77 Start: 45342, Stop: 45199, Start Num: 54
Candidate Starts for TNguyen7_77:
(Start: 54 @45342 has 15 MA's), (Start: 55 @45339 has 146 MA's), (64, 45264), (67, 45246), (69, 45231), (70, 45225), (78, 45204),

Gene: Tarynearal_78 Start: 46291, Stop: 46166, Start Num: 56
Candidate Starts for Tarynearal_78:
(Start: 56 @46291 has 41 MA's),

Gene: Temprado_84 Start: 45681, Stop: 45559, Start Num: 55
Candidate Starts for Temprado_84:
(Start: 55 @45681 has 146 MA's), (67, 45588),

Gene: Terrific_83 Start: 46927, Stop: 46796, Start Num: 55
Candidate Starts for Terrific_83:
(Start: 51 @46939 has 7 MA's), (Start: 55 @46927 has 146 MA's), (Start: 58 @46924 has 2 MA's), (64, 46852), (69, 46819), (75, 46801),

Gene: Texage_74 Start: 45335, Stop: 45195, Start Num: 55
Candidate Starts for Texage_74:
(34, 45464), (Start: 54 @45338 has 15 MA's), (Start: 55 @45335 has 146 MA's), (64, 45260), (67, 45242), (69, 45227), (70, 45221), (78, 45200),

Gene: Tiger_77 Start: 46081, Stop: 45956, Start Num: 56
Candidate Starts for Tiger_77:
(Start: 51 @46096 has 7 MA's), (Start: 56 @46081 has 41 MA's),

Gene: Timothy_83 Start: 46064, Stop: 45927, Start Num: 53
Candidate Starts for Timothy_83:
(30, 46199), (Start: 51 @46070 has 7 MA's), (Start: 52 @46067 has 3 MA's), (Start: 53 @46064 has 18 MA's), (Start: 57 @46055 has 13 MA's), (67, 45962),

Gene: TinyTimmy_81 Start: 45793, Stop: 45656, Start Num: 53
Candidate Starts for TinyTimmy_81:
(30, 45928), (Start: 51 @45799 has 7 MA's), (Start: 52 @45796 has 3 MA's), (Start: 53 @45793 has 18 MA's), (Start: 57 @45784 has 13 MA's), (67, 45691),

Gene: TipsytheTRex_81 Start: 46582, Stop: 46451, Start Num: 55
Candidate Starts for TipsytheTRex_81:
(Start: 51 @46594 has 7 MA's), (Start: 55 @46582 has 146 MA's), (67, 46489),

Gene: Toaka_80 Start: 45921, Stop: 45787, Start Num: 56
Candidate Starts for Toaka_80:
(Start: 56 @45921 has 41 MA's),

Gene: Todacoro_76 Start: 45334, Stop: 45194, Start Num: 55
Candidate Starts for Todacoro_76:

(34, 45463), (Start: 54 @45337 has 15 MA's), (Start: 55 @45334 has 146 MA's), (64, 45259), (67, 45241), (69, 45226), (70, 45220), (78, 45199),

Gene: Tomathan_82 Start: 47041, Stop: 46898, Start Num: 52
Candidate Starts for Tomathan_82:
(33, 47158), (42, 47128), (Start: 51 @47044 has 7 MA's), (Start: 52 @47041 has 3 MA's), (Start: 53 @47038 has 18 MA's), (Start: 55 @47032 has 146 MA's), (67, 46939), (77, 46906),

Gene: ToneTone_80 Start: 45241, Stop: 45119, Start Num: 55
Candidate Starts for ToneTone_80:
(Start: 55 @45241 has 146 MA's), (67, 45148),

Gene: Travvers_82 Start: 46955, Stop: 46815, Start Num: 53
Candidate Starts for Travvers_82:
(33, 47075), (42, 47045), (Start: 51 @46961 has 7 MA's), (Start: 52 @46958 has 3 MA's), (Start: 53 @46955 has 18 MA's), (Start: 55 @46949 has 146 MA's), (67, 46856), (77, 46823),

Gene: Trixie_82 Start: 47910, Stop: 47782, Start Num: 55
Candidate Starts for Trixie_82:
(Start: 55 @47910 has 146 MA's), (67, 47817), (73, 47787),

Gene: Tucker_83 Start: 45444, Stop: 45322, Start Num: 55
Candidate Starts for Tucker_83:
(Start: 55 @45444 has 146 MA's), (67, 45351),

Gene: Turbido_83 Start: 47614, Stop: 47486, Start Num: 55
Candidate Starts for Turbido_83:
(Start: 55 @47614 has 146 MA's), (62, 47551),

Gene: Twigg_79 Start: 46536, Stop: 46411, Start Num: 56
Candidate Starts for Twigg_79:
(Start: 56 @46536 has 41 MA's),

Gene: Updawg_83 Start: 47141, Stop: 47010, Start Num: 55
Candidate Starts for Updawg_83:
(Start: 51 @47153 has 7 MA's), (Start: 55 @47141 has 146 MA's), (Start: 58 @47138 has 2 MA's), (64, 47066), (69, 47033), (75, 47015),

Gene: VA6_82 Start: 47174, Stop: 47052, Start Num: 55
Candidate Starts for VA6_82:
(Start: 55 @47174 has 146 MA's),

Gene: VC3_80 Start: 45854, Stop: 45714, Start Num: 55
Candidate Starts for VC3_80:
(Start: 51 @45866 has 7 MA's), (Start: 52 @45863 has 3 MA's), (Start: 53 @45860 has 18 MA's), (Start: 55 @45854 has 146 MA's), (67, 45761),

Gene: Veracruz_73 Start: 45335, Stop: 45195, Start Num: 55
Candidate Starts for Veracruz_73:
(34, 45464), (Start: 54 @45338 has 15 MA's), (Start: 55 @45335 has 146 MA's), (64, 45260), (67, 45242), (69, 45227), (70, 45221), (78, 45200),

Gene: VohminGhazi_82 Start: 45268, Stop: 45146, Start Num: 55

Candidate Starts for VohminGhazi_82:
(41, 45364), (Start: 51 @45277 has 7 MA's), (Start: 55 @45268 has 146 MA's), (67, 45175),

Gene: WeiHuaDA_84 Start: 48169, Stop: 48041, Start Num: 55
Candidate Starts for WeiHuaDA_84:
(Start: 55 @48169 has 146 MA's), (67, 48076), (73, 48046),

Gene: Whabigail7_82 Start: 47612, Stop: 47484, Start Num: 55
Candidate Starts for Whabigail7_82:
(48, 47636), (Start: 55 @47612 has 146 MA's), (62, 47549),

Gene: WideWale_83 Start: 47141, Stop: 47010, Start Num: 55
Candidate Starts for WideWale_83:
(Start: 51 @47153 has 7 MA's), (Start: 55 @47141 has 146 MA's), (Start: 58 @47138 has 2 MA's), (64, 47066), (69, 47033), (75, 47015),

Gene: Wiks_82 Start: 45312, Stop: 45190, Start Num: 55
Candidate Starts for Wiks_82:
(Start: 55 @45312 has 146 MA's), (67, 45219),

Gene: Wolpertinger_81 Start: 46087, Stop: 45959, Start Num: 57
Candidate Starts for Wolpertinger_81:
(30, 46234), (Start: 51 @46102 has 7 MA's), (Start: 52 @46099 has 3 MA's), (Start: 53 @46096 has 18 MA's), (Start: 57 @46087 has 13 MA's), (67, 45994),

Gene: WorldCup_79 Start: 45562, Stop: 45431, Start Num: 56
Candidate Starts for WorldCup_79:
(29, 45709), (46, 45622), (Start: 56 @45562 has 41 MA's), (73, 45439),

Gene: WunderPhul_83 Start: 45310, Stop: 45188, Start Num: 55
Candidate Starts for WunderPhul_83:
(Start: 55 @45310 has 146 MA's), (67, 45217),

Gene: XianYue_80 Start: 47246, Stop: 47115, Start Num: 55
Candidate Starts for XianYue_80:
(Start: 55 @47246 has 146 MA's), (67, 47153),

Gene: Yokurt_82 Start: 45312, Stop: 45190, Start Num: 55
Candidate Starts for Yokurt_82:
(Start: 55 @45312 has 146 MA's), (67, 45219),

Gene: Zaka_83 Start: 45312, Stop: 45190, Start Num: 55
Candidate Starts for Zaka_83:
(Start: 55 @45312 has 146 MA's), (67, 45219),

Gene: Zarafa_74 Start: 45318, Stop: 45178, Start Num: 55
Candidate Starts for Zarafa_74:
(31, 45462), (Start: 54 @45321 has 15 MA's), (Start: 55 @45318 has 146 MA's), (64, 45243), (67, 45225), (70, 45204), (78, 45183),

Gene: Zimmer_78 Start: 46792, Stop: 46658, Start Num: 56
Candidate Starts for Zimmer_78:
(Start: 56 @46792 has 41 MA's), (73, 46669),

Gene: Zulu_84 Start: 45690, Stop: 45568, Start Num: 55
Candidate Starts for Zulu_84:
(Start: 55 @45690 has 146 MA's), (67, 45597),