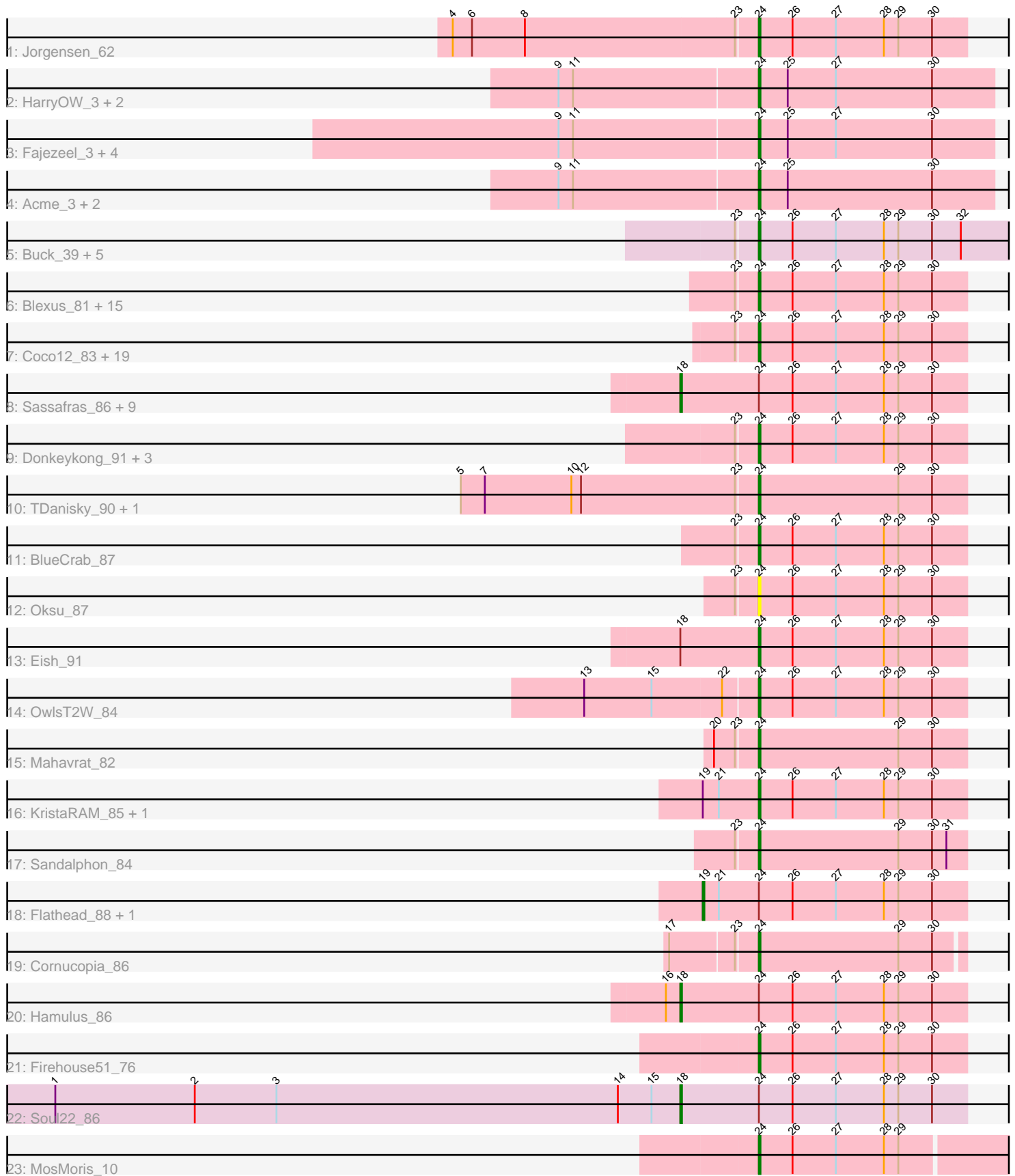


Pham 93691



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 93691 Report

This analysis was run 04/28/24 on database version 559.

Pham number 93691 has 85 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Jorgensen_62
- Track 2 : HarryOW_3, GrecoEtereo_3, Kugel_2
- Track 3 : Fajezeel_3, Ciao_2, Pippin_3, Nerujay_2, Greg_3
- Track 4 : Acme_3, Scowl_3, Watermelon_3
- Track 5 : Buck_39, ChosenOne_40, Lilpickle_39, Elite2014_39, Rimmer_39, Youngblood_40
- Track 6 : Blexus_81, PhesterPhotato_89, Phalconet_83, Byougenkin_83, Batiatus_84, Florinda_95, Royals2015_91, Krakatau_78, DeadP_87, Taj_93, Quico_92, StAnnes_90, Job42_85, BuzzLyseyear_93, Spartacus_91, Girafales_92
- Track 7 : Coco12_83, Bubbles123_79, Sabbb_86, BigPhil_79, Kenuha5_80, Hannaconda_67, IrishSherpFalk_84, Cerasum_80, Guppsters_79, Whatsapiecost_77, Yorick_77, Kingsley_90, Velveteen_80, Bobi_89, SuperGrey_85, Pound_74, Gandolph_84, Sarma624_85, Emma_89, WillSterrel_83
- Track 8 : Sassafras_86, RedBird_85, Inventum_82, Dorothy_85, Madiba_86, Ms6_87, JoeyJr_88, Hegedechwinu_94, Leperchaun_86, Phanphagia_87
- Track 9 : Donkeykong_91, MilanaBonita_80, Akhila_81, Aubs_85
- Track 10 : TDanisky_90, Sparkdehlily_89
- Track 11 : BlueCrab_87
- Track 12 : Oksu_87
- Track 13 : Eish_91
- Track 14 : OwlsT2W_84
- Track 15 : Mahavrat_82
- Track 16 : KristaRAM_85, Stap_81
- Track 17 : Sandalphon_84
- Track 18 : Flathead_88, Ramsey_89
- Track 19 : Cornucopia_86
- Track 20 : Hamulus_86
- Track 21 : Firehouse51_76
- Track 22 : Soul22_86
- Track 23 : MosMoris_10

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

The start number called the most often in the published annotations is 24, it was called in 68 of the 81 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acme_3, Akhila_81, Aubs_85, Batiatus_84, BigPhil_79, Blexus_81, BlueCrab_87, Bobi_89, Bubbles123_79, Buck_39, BuzzLyseyear_93, Byougenkin_83, Cerasum_80, ChosenOne_40, Ciao_2, Coco12_83, Cornucopia_86, DeadP_87, Donkeykong_91, Eish_91, Elite2014_39, Emma_89, Fajezeel_3, Firehouse51_76, Florinda_95, Gandalph_84, Girafales_92, GrecoEtereo_3, Greg_3, Guppsters_79, Hannaconda_67, HarryOW_3, IrishSherpFalk_84, Job42_85, Jorgensen_62, Kenuha5_80, Kingsley_90, Krakatau_78, KristaRAM_85, Kugel_2, Lilpickle_39, Mahavrat_82, MilanaBonita_80, MosMoris_10, Nerujay_2, Oksu_87, OwlsT2W_84, Phalconet_83, PhesterPhotato_89, Pippin_3, Pound_74, Quico_92, Rimmer_39, Royals2015_91, Sabbb_86, Sandalphon_84, Sarma624_85, Scowl_3, Sparkdehlily_89, Spartacus_91, StAnnes_90, Stap_81, SuperGrey_85, TDanisky_90, Taj_93, Velveteen_80, Watermelon_3, Whatsapiecost_77, WillSterrel_83, Yorick_77, Youngblood_40,

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

- Dorothy_85, Flathead_88, Hamulus_86, Hegedechwinu_94, Inventum_82, JoeyJr_88, Leperchaun_86, Madiba_86, Ms6_87, Phanphagia_87, Ramsey_89, RedBird_85, Sassafras_86, Soul22_86,

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

-

Summary by start number:

Start 18:

- Found in 13 of 85 (15.3%) of genes in pham
- Manual Annotations of this start: 11 of 81
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Dorothy_85 (F1), Hamulus_86 (F1), Hegedechwinu_94 (F1), Inventum_82 (F1), JoeyJr_88 (F1), Leperchaun_86 (F1), Madiba_86 (F1), Ms6_87 (F1), Phanphagia_87 (F1), RedBird_85 (F1), Sassafras_86 (F1), Soul22_86 (F2),

Start 19:

- Found in 4 of 85 (4.7%) of genes in pham
- Manual Annotations of this start: 2 of 81
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Flathead_88 (F1), Ramsey_89 (F1),

Start 24:

- Found in 85 of 85 (100.0%) of genes in pham
- Manual Annotations of this start: 68 of 81
- Called 83.5% of time when present
- Phage (with cluster) where this start called: Acme_3 (A1), Akhila_81 (F1), Aubs_85 (F1), Batiatus_84 (F1), BigPhil_79 (F1), Blexus_81 (F1), BlueCrab_87 (F1), Bobi_89 (F1), Bubbles123_79 (F1), Buck_39 (E), BuzzLyseyear_93 (F1), Byougenkin_83 (F1), Cerasum_80 (F1), ChosenOne_40 (E), Ciao_2 (A1), Coco12_83 (F1), Cornucopia_86 (F1), DeadP_87 (F1), Donkeykong_91 (F1), Eish_91 (F1), Elite2014_39 (E), Emma_89 (F1), Fajezeel_3 (A1), Firehouse51_76 (F1),

Florinda_95 (F1), Gandolph_84 (F1), Girafales_92 (F1), GrecoEtereo_3 (A1), Greg_3 (A1), Guppsters_79 (F1), Hannaconda_67 (J), HarryOW_3 (A1), IrishSherpFalk_84 (F1), Job42_85 (F1), Jorgensen_62 (A1), Kenuha5_80 (F1), Kingsley_90 (F1), Krakatau_78 (F1), KristaRAM_85 (F1), Kugel_2 (A1), Lilpickle_39 (E), Mahavrat_82 (F1), MilanaBonita_80 (F1), MosMoris_10 (S), Nerujay_2 (A1), Oksu_87 (F1), OwlsT2W_84 (F1), Phalconet_83 (F1), PhesterPhotato_89 (F1), Pippin_3 (A1), Pound_74 (J), Quico_92 (F1), Rimmer_39 (E), Royals2015_91 (F1), Sabbb_86 (F1), Sandalphon_84 (F1), Sarma624_85 (F1), Scowl_3 (A1), Sparkdehlily_89 (F1), Spartacus_91 (F1), StAnnes_90 (F1), Stap_81 (F1), SuperGrey_85 (F1), TDanisky_90 (F1), Taj_93 (F1), Velveteen_80 (F1), Watermelon_3 (A1), Whatsapiecost_77 (F1), WillSterrel_83 (F1), Yorick_77 (F1), Youngblood_40 (E),

Summary by clusters:

There are 6 clusters represented in this pham: F1, F2, E, J, A1, S,

Info for manual annotations of cluster A1:

- Start number 24 was manually annotated 12 times for cluster A1.

Info for manual annotations of cluster E:

- Start number 24 was manually annotated 6 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 18 was manually annotated 10 times for cluster F1.
- Start number 19 was manually annotated 2 times for cluster F1.
- Start number 24 was manually annotated 47 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 18 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster J:

- Start number 24 was manually annotated 2 times for cluster J.

Info for manual annotations of cluster S:

- Start number 24 was manually annotated 1 time for cluster S.

Gene Information:

Gene: Acme_3 Start: 1086, Stop: 1232, Start Num: 24

Candidate Starts for Acme_3:

(9, 963), (11, 972), (Start: 24 @1086 has 68 MA's), (25, 1104), (30, 1194),

Gene: Akhila_81 Start: 49033, Stop: 49161, Start Num: 24

Candidate Starts for Akhila_81:

(23, 49021), (Start: 24 @49033 has 68 MA's), (26, 49054), (27, 49081), (28, 49111), (29, 49120), (30, 49141),

Gene: Aubs_85 Start: 50873, Stop: 51001, Start Num: 24

Candidate Starts for Aubs_85:

(23, 50861), (Start: 24 @50873 has 68 MA's), (26, 50894), (27, 50921), (28, 50951), (29, 50960), (30, 50981),

Gene: Batiatus_84 Start: 50031, Stop: 50159, Start Num: 24

Candidate Starts for Batiatus_84:

(23, 50019), (Start: 24 @50031 has 68 MA's), (26, 50052), (27, 50079), (28, 50109), (29, 50118), (30, 50139),

Gene: BigPhil_79 Start: 46356, Stop: 46484, Start Num: 24

Candidate Starts for BigPhil_79:

(23, 46344), (Start: 24 @46356 has 68 MA's), (26, 46377), (27, 46404), (28, 46434), (29, 46443), (30, 46464),

Gene: Blexus_81 Start: 50207, Stop: 50335, Start Num: 24

Candidate Starts for Blexus_81:

(23, 50195), (Start: 24 @50207 has 68 MA's), (26, 50228), (27, 50255), (28, 50285), (29, 50294), (30, 50315),

Gene: BlueCrab_87 Start: 51241, Stop: 51369, Start Num: 24

Candidate Starts for BlueCrab_87:

(23, 51229), (Start: 24 @51241 has 68 MA's), (26, 51262), (27, 51289), (28, 51319), (29, 51328), (30, 51349),

Gene: Bobi_89 Start: 51776, Stop: 51904, Start Num: 24

Candidate Starts for Bobi_89:

(23, 51764), (Start: 24 @51776 has 68 MA's), (26, 51797), (27, 51824), (28, 51854), (29, 51863), (30, 51884),

Gene: Bubbles123_79 Start: 49750, Stop: 49878, Start Num: 24

Candidate Starts for Bubbles123_79:

(23, 49738), (Start: 24 @49750 has 68 MA's), (26, 49771), (27, 49798), (28, 49828), (29, 49837), (30, 49858),

Gene: Buck_39 Start: 34337, Stop: 34173, Start Num: 24

Candidate Starts for Buck_39:

(23, 34349), (Start: 24 @34337 has 68 MA's), (26, 34316), (27, 34289), (28, 34259), (29, 34250), (30, 34229), (32, 34211),

Gene: BuzzLyseyear_93 Start: 52947, Stop: 53075, Start Num: 24

Candidate Starts for BuzzLyseyear_93:

(23, 52935), (Start: 24 @52947 has 68 MA's), (26, 52968), (27, 52995), (28, 53025), (29, 53034), (30, 53055),

Gene: Byougenkin_83 Start: 47631, Stop: 47759, Start Num: 24

Candidate Starts for Byougenkin_83:

(23, 47619), (Start: 24 @47631 has 68 MA's), (26, 47652), (27, 47679), (28, 47709), (29, 47718), (30, 47739),

Gene: Cerasum_80 Start: 46374, Stop: 46502, Start Num: 24

Candidate Starts for Cerasum_80:

(23, 46362), (Start: 24 @46374 has 68 MA's), (26, 46395), (27, 46422), (28, 46452), (29, 46461), (30, 46482),

Gene: ChosenOne_40 Start: 33606, Stop: 33442, Start Num: 24

Candidate Starts for ChosenOne_40:

(23, 33618), (Start: 24 @33606 has 68 MA's), (26, 33585), (27, 33558), (28, 33528), (29, 33519), (30, 33498), (32, 33480),

Gene: Ciao_2 Start: 903, Stop: 1049, Start Num: 24

Candidate Starts for Ciao_2:

(9, 780), (11, 789), (Start: 24 @903 has 68 MA's), (25, 921), (27, 951), (30, 1011),

Gene: Coco12_83 Start: 50431, Stop: 50559, Start Num: 24

Candidate Starts for Coco12_83:

(23, 50419), (Start: 24 @50431 has 68 MA's), (26, 50452), (27, 50479), (28, 50509), (29, 50518), (30, 50539),

Gene: Cornucopia_86 Start: 48902, Stop: 49027, Start Num: 24

Candidate Starts for Cornucopia_86:

(17, 48851), (23, 48890), (Start: 24 @48902 has 68 MA's), (29, 48989), (30, 49010),

Gene: DeadP_87 Start: 49455, Stop: 49583, Start Num: 24

Candidate Starts for DeadP_87:

(23, 49443), (Start: 24 @49455 has 68 MA's), (26, 49476), (27, 49503), (28, 49533), (29, 49542), (30, 49563),

Gene: Donkeykong_91 Start: 52478, Stop: 52606, Start Num: 24

Candidate Starts for Donkeykong_91:

(23, 52466), (Start: 24 @52478 has 68 MA's), (26, 52499), (27, 52526), (28, 52556), (29, 52565), (30, 52586),

Gene: Dorothy_85 Start: 51802, Stop: 51978, Start Num: 18

Candidate Starts for Dorothy_85:

(Start: 18 @51802 has 11 MA's), (Start: 24 @51850 has 68 MA's), (26, 51871), (27, 51898), (28, 51928), (29, 51937), (30, 51958),

Gene: Eish_91 Start: 51779, Stop: 51907, Start Num: 24

Candidate Starts for Eish_91:

(Start: 18 @51731 has 11 MA's), (Start: 24 @51779 has 68 MA's), (26, 51800), (27, 51827), (28, 51857), (29, 51866), (30, 51887),

Gene: Elite2014_39 Start: 33605, Stop: 33441, Start Num: 24

Candidate Starts for Elite2014_39:

(23, 33617), (Start: 24 @33605 has 68 MA's), (26, 33584), (27, 33557), (28, 33527), (29, 33518), (30, 33497), (32, 33479),

Gene: Emma_89 Start: 49477, Stop: 49605, Start Num: 24

Candidate Starts for Emma_89:

(23, 49465), (Start: 24 @49477 has 68 MA's), (26, 49498), (27, 49525), (28, 49555), (29, 49564), (30, 49585),

Gene: Fajezeel_3 Start: 1054, Stop: 1200, Start Num: 24

Candidate Starts for Fajezeel_3:

(9, 931), (11, 940), (Start: 24 @1054 has 68 MA's), (25, 1072), (27, 1102), (30, 1162),

Gene: Firehouse51_76 Start: 49570, Stop: 49698, Start Num: 24

Candidate Starts for Firehouse51_76:

(Start: 24 @49570 has 68 MA's), (26, 49591), (27, 49618), (28, 49648), (29, 49657), (30, 49678),

Gene: Flathead_88 Start: 50578, Stop: 50739, Start Num: 19

Candidate Starts for Flathead_88:

(Start: 19 @50578 has 2 MA's), (21, 50587), (Start: 24 @50611 has 68 MA's), (26, 50632), (27, 50659), (28, 50689), (29, 50698), (30, 50719),

Gene: Florinda_95 Start: 51872, Stop: 52000, Start Num: 24

Candidate Starts for Florinda_95:

(23, 51860), (Start: 24 @51872 has 68 MA's), (26, 51893), (27, 51920), (28, 51950), (29, 51959), (30, 51980),

Gene: Gandolph_84 Start: 47442, Stop: 47570, Start Num: 24

Candidate Starts for Gandolph_84:

(23, 47430), (Start: 24 @47442 has 68 MA's), (26, 47463), (27, 47490), (28, 47520), (29, 47529), (30, 47550),

Gene: Girafales_92 Start: 51477, Stop: 51605, Start Num: 24

Candidate Starts for Girafales_92:

(23, 51465), (Start: 24 @51477 has 68 MA's), (26, 51498), (27, 51525), (28, 51555), (29, 51564), (30, 51585),

Gene: GrecoEtereo_3 Start: 1054, Stop: 1200, Start Num: 24

Candidate Starts for GrecoEtereo_3:

(9, 931), (11, 940), (Start: 24 @1054 has 68 MA's), (25, 1072), (27, 1102), (30, 1162),

Gene: Greg_3 Start: 1054, Stop: 1200, Start Num: 24

Candidate Starts for Greg_3:

(9, 931), (11, 940), (Start: 24 @1054 has 68 MA's), (25, 1072), (27, 1102), (30, 1162),

Gene: Guppsters_79 Start: 47704, Stop: 47832, Start Num: 24

Candidate Starts for Guppsters_79:

(23, 47692), (Start: 24 @47704 has 68 MA's), (26, 47725), (27, 47752), (28, 47782), (29, 47791), (30, 47812),

Gene: Hamulus_86 Start: 50072, Stop: 50248, Start Num: 18

Candidate Starts for Hamulus_86:

(16, 50063), (Start: 18 @50072 has 11 MA's), (Start: 24 @50120 has 68 MA's), (26, 50141), (27, 50168), (28, 50198), (29, 50207), (30, 50228),

Gene: Hannaconda_67 Start: 44867, Stop: 44739, Start Num: 24

Candidate Starts for Hannaconda_67:

(23, 44879), (Start: 24 @44867 has 68 MA's), (26, 44846), (27, 44819), (28, 44789), (29, 44780), (30, 44759),

Gene: HarryOW_3 Start: 1054, Stop: 1200, Start Num: 24

Candidate Starts for HarryOW_3:

(9, 931), (11, 940), (Start: 24 @1054 has 68 MA's), (25, 1072), (27, 1102), (30, 1162),

Gene: Hegedechwinu_94 Start: 51118, Stop: 51294, Start Num: 18

Candidate Starts for Hegedechwinu_94:

(Start: 18 @51118 has 11 MA's), (Start: 24 @51166 has 68 MA's), (26, 51187), (27, 51214), (28, 51244), (29, 51253), (30, 51274),

Gene: Inventum_82 Start: 49987, Stop: 50163, Start Num: 18

Candidate Starts for Inventum_82:

(Start: 18 @49987 has 11 MA's), (Start: 24 @50035 has 68 MA's), (26, 50056), (27, 50083), (28, 50113), (29, 50122), (30, 50143),

Gene: IrishSherpFalk_84 Start: 50398, Stop: 50526, Start Num: 24

Candidate Starts for IrishSherpFalk_84:

(23, 50386), (Start: 24 @50398 has 68 MA's), (26, 50419), (27, 50446), (28, 50476), (29, 50485), (30, 50506),

Gene: Job42_85 Start: 52699, Stop: 52827, Start Num: 24

Candidate Starts for Job42_85:

(23, 52687), (Start: 24 @52699 has 68 MA's), (26, 52720), (27, 52747), (28, 52777), (29, 52786), (30, 52807),

Gene: JoeyJr_88 Start: 51896, Stop: 52072, Start Num: 18

Candidate Starts for JoeyJr_88:

(Start: 18 @51896 has 11 MA's), (Start: 24 @51944 has 68 MA's), (26, 51965), (27, 51992), (28, 52022), (29, 52031), (30, 52052),

Gene: Jorgensen_62 Start: 40451, Stop: 40323, Start Num: 24

Candidate Starts for Jorgensen_62:

(4, 40637), (6, 40625), (8, 40592), (23, 40463), (Start: 24 @40451 has 68 MA's), (26, 40430), (27, 40403), (28, 40373), (29, 40364), (30, 40343),

Gene: Kenuha5_80 Start: 50523, Stop: 50651, Start Num: 24

Candidate Starts for Kenuha5_80:

(23, 50511), (Start: 24 @50523 has 68 MA's), (26, 50544), (27, 50571), (28, 50601), (29, 50610), (30, 50631),

Gene: Kingsley_90 Start: 53038, Stop: 53166, Start Num: 24

Candidate Starts for Kingsley_90:

(23, 53026), (Start: 24 @53038 has 68 MA's), (26, 53059), (27, 53086), (28, 53116), (29, 53125), (30, 53146),

Gene: Krakatau_78 Start: 46008, Stop: 46136, Start Num: 24

Candidate Starts for Krakatau_78:

(23, 45996), (Start: 24 @46008 has 68 MA's), (26, 46029), (27, 46056), (28, 46086), (29, 46095), (30, 46116),

Gene: KristaRAM_85 Start: 49682, Stop: 49810, Start Num: 24

Candidate Starts for KristaRAM_85:

(Start: 19 @49649 has 2 MA's), (21, 49658), (Start: 24 @49682 has 68 MA's), (26, 49703), (27, 49730), (28, 49760), (29, 49769), (30, 49790),

Gene: Kugel_2 Start: 901, Stop: 1017, Start Num: 24

Candidate Starts for Kugel_2:

(9, 778), (11, 787), (Start: 24 @901 has 68 MA's), (25, 919), (27, 949), (30, 1009),

Gene: Leperchaun_86 Start: 51130, Stop: 51306, Start Num: 18

Candidate Starts for Leperchaun_86:

(Start: 18 @51130 has 11 MA's), (Start: 24 @51178 has 68 MA's), (26, 51199), (27, 51226), (28, 51256), (29, 51265), (30, 51286),

Gene: Lilpickle_39 Start: 33605, Stop: 33441, Start Num: 24

Candidate Starts for Lilpickle_39:

(23, 33617), (Start: 24 @33605 has 68 MA's), (26, 33584), (27, 33557), (28, 33527), (29, 33518), (30, 33497), (32, 33479),

Gene: Madiba_86 Start: 50249, Stop: 50425, Start Num: 18

Candidate Starts for Madiba_86:

(Start: 18 @50249 has 11 MA's), (Start: 24 @50297 has 68 MA's), (26, 50318), (27, 50345), (28, 50375), (29, 50384), (30, 50405),

Gene: Mahavrat_82 Start: 48166, Stop: 48294, Start Num: 24

Candidate Starts for Mahavrat_82:

(20, 48142), (23, 48154), (Start: 24 @48166 has 68 MA's), (29, 48253), (30, 48274),

Gene: MilanaBonita_80 Start: 49033, Stop: 49161, Start Num: 24

Candidate Starts for MilanaBonita_80:

(23, 49021), (Start: 24 @49033 has 68 MA's), (26, 49054), (27, 49081), (28, 49111), (29, 49120), (30, 49141),

Gene: MosMoris_10 Start: 2898, Stop: 3053, Start Num: 24

Candidate Starts for MosMoris_10:

(Start: 24 @2898 has 68 MA's), (26, 2919), (27, 2946), (28, 2976), (29, 2985),

Gene: Ms6_87 Start: 47119, Stop: 47295, Start Num: 18

Candidate Starts for Ms6_87:

(Start: 18 @47119 has 11 MA's), (Start: 24 @47167 has 68 MA's), (26, 47188), (27, 47215), (28, 47245), (29, 47254), (30, 47275),

Gene: Nerujay_2 Start: 903, Stop: 1049, Start Num: 24

Candidate Starts for Nerujay_2:

(9, 780), (11, 789), (Start: 24 @903 has 68 MA's), (25, 921), (27, 951), (30, 1011),

Gene: Oksu_87 Start: 51253, Stop: 51381, Start Num: 24

Candidate Starts for Oksu_87:

(23, 51241), (Start: 24 @51253 has 68 MA's), (26, 51274), (27, 51301), (28, 51331), (29, 51340), (30, 51361),

Gene: OwlsT2W_84 Start: 49272, Stop: 49400, Start Num: 24

Candidate Starts for OwlsT2W_84:

(13, 49167), (15, 49209), (22, 49251), (Start: 24 @49272 has 68 MA's), (26, 49293), (27, 49320), (28, 49350), (29, 49359), (30, 49380),

Gene: Phalconet_83 Start: 49375, Stop: 49503, Start Num: 24

Candidate Starts for Phalconet_83:

(23, 49363), (Start: 24 @49375 has 68 MA's), (26, 49396), (27, 49423), (28, 49453), (29, 49462), (30, 49483),

Gene: Phanphagia_87 Start: 51229, Stop: 51405, Start Num: 18

Candidate Starts for Phanphagia_87:

(Start: 18 @51229 has 11 MA's), (Start: 24 @51277 has 68 MA's), (26, 51298), (27, 51325), (28, 51355), (29, 51364), (30, 51385),

Gene: PhesterPhotato_89 Start: 50543, Stop: 50671, Start Num: 24

Candidate Starts for PhesterPhotato_89:

(23, 50531), (Start: 24 @50543 has 68 MA's), (26, 50564), (27, 50591), (28, 50621), (29, 50630), (30, 50651),

Gene: Pippin_3 Start: 1054, Stop: 1200, Start Num: 24

Candidate Starts for Pippin_3:

(9, 931), (11, 940), (Start: 24 @1054 has 68 MA's), (25, 1072), (27, 1102), (30, 1162),

Gene: Pound_74 Start: 52611, Stop: 52486, Start Num: 24

Candidate Starts for Pound_74:

(23, 52623), (Start: 24 @52611 has 68 MA's), (26, 52590), (27, 52563), (28, 52533), (29, 52524), (30, 52503),

Gene: Quico_92 Start: 51692, Stop: 51820, Start Num: 24

Candidate Starts for Quico_92:

(23, 51680), (Start: 24 @51692 has 68 MA's), (26, 51713), (27, 51740), (28, 51770), (29, 51779), (30, 51800),

Gene: Ramsey_89 Start: 51924, Stop: 52085, Start Num: 19

Candidate Starts for Ramsey_89:

(Start: 19 @51924 has 2 MA's), (21, 51933), (Start: 24 @51957 has 68 MA's), (26, 51978), (27, 52005), (28, 52035), (29, 52044), (30, 52065),

Gene: RedBird_85 Start: 51672, Stop: 51848, Start Num: 18

Candidate Starts for RedBird_85:

(Start: 18 @51672 has 11 MA's), (Start: 24 @51720 has 68 MA's), (26, 51741), (27, 51768), (28, 51798), (29, 51807), (30, 51828),

Gene: Rimmer_39 Start: 33947, Stop: 33783, Start Num: 24

Candidate Starts for Rimmer_39:

(23, 33959), (Start: 24 @33947 has 68 MA's), (26, 33926), (27, 33899), (28, 33869), (29, 33860), (30, 33839), (32, 33821),

Gene: Royals2015_91 Start: 50040, Stop: 50168, Start Num: 24

Candidate Starts for Royals2015_91:

(23, 50028), (Start: 24 @50040 has 68 MA's), (26, 50061), (27, 50088), (28, 50118), (29, 50127), (30, 50148),

Gene: Sabbb_86 Start: 47896, Stop: 48024, Start Num: 24

Candidate Starts for Sabbb_86:

(23, 47884), (Start: 24 @47896 has 68 MA's), (26, 47917), (27, 47944), (28, 47974), (29, 47983), (30, 48004),

Gene: Sandalphon_84 Start: 51116, Stop: 51244, Start Num: 24

Candidate Starts for Sandalphon_84:

(23, 51104), (Start: 24 @51116 has 68 MA's), (29, 51203), (30, 51224), (31, 51233),

Gene: Sarma624_85 Start: 47050, Stop: 47178, Start Num: 24

Candidate Starts for Sarma624_85:

(23, 47038), (Start: 24 @47050 has 68 MA's), (26, 47071), (27, 47098), (28, 47128), (29, 47137), (30, 47158),

Gene: Sassafras_86 Start: 49986, Stop: 50162, Start Num: 18

Candidate Starts for Sassafras_86:

(Start: 18 @49986 has 11 MA's), (Start: 24 @50034 has 68 MA's), (26, 50055), (27, 50082), (28, 50112), (29, 50121), (30, 50142),

Gene: Scowl_3 Start: 1291, Stop: 1437, Start Num: 24

Candidate Starts for Scowl_3:

(9, 1168), (11, 1177), (Start: 24 @1291 has 68 MA's), (25, 1309), (30, 1399),

Gene: Soul22_86 Start: 48337, Stop: 48513, Start Num: 18

Candidate Starts for Soul22_86:

(1, 47947), (2, 48034), (3, 48085), (14, 48298), (15, 48319), (Start: 18 @48337 has 11 MA's), (Start: 24 @48385 has 68 MA's), (26, 48406), (27, 48433), (28, 48463), (29, 48472), (30, 48493),

Gene: Sparkdehlily_89 Start: 48395, Stop: 48523, Start Num: 24

Candidate Starts for Sparkdehlily_89:

(5, 48212), (7, 48227), (10, 48281), (12, 48287), (23, 48383), (Start: 24 @48395 has 68 MA's), (29, 48482), (30, 48503),

Gene: Spartacus_91 Start: 52843, Stop: 52971, Start Num: 24

Candidate Starts for Spartacus_91:

(23, 52831), (Start: 24 @52843 has 68 MA's), (26, 52864), (27, 52891), (28, 52921), (29, 52930), (30, 52951),

Gene: StAnnes_90 Start: 52051, Stop: 52179, Start Num: 24

Candidate Starts for StAnnes_90:

(23, 52039), (Start: 24 @52051 has 68 MA's), (26, 52072), (27, 52099), (28, 52129), (29, 52138), (30, 52159),

Gene: Stap_81 Start: 47683, Stop: 47811, Start Num: 24

Candidate Starts for Stap_81:

(Start: 19 @47650 has 2 MA's), (21, 47659), (Start: 24 @47683 has 68 MA's), (26, 47704), (27, 47731), (28, 47761), (29, 47770), (30, 47791),

Gene: SuperGrey_85 Start: 52190, Stop: 52318, Start Num: 24

Candidate Starts for SuperGrey_85:

(23, 52178), (Start: 24 @52190 has 68 MA's), (26, 52211), (27, 52238), (28, 52268), (29, 52277), (30, 52298),

Gene: TDanisky_90 Start: 48395, Stop: 48523, Start Num: 24

Candidate Starts for TDanisky_90:

(5, 48212), (7, 48227), (10, 48281), (12, 48287), (23, 48383), (Start: 24 @48395 has 68 MA's), (29, 48482), (30, 48503),

Gene: Taj_93 Start: 52292, Stop: 52420, Start Num: 24

Candidate Starts for Taj_93:

(23, 52280), (Start: 24 @52292 has 68 MA's), (26, 52313), (27, 52340), (28, 52370), (29, 52379), (30, 52400),

Gene: Velveteen_80 Start: 47050, Stop: 47178, Start Num: 24

Candidate Starts for Velveteen_80:

(23, 47038), (Start: 24 @47050 has 68 MA's), (26, 47071), (27, 47098), (28, 47128), (29, 47137), (30, 47158),

Gene: Watermelon_3 Start: 1041, Stop: 1187, Start Num: 24

Candidate Starts for Watermelon_3:

(9, 918), (11, 927), (Start: 24 @1041 has 68 MA's), (25, 1059), (30, 1149),

Gene: Whatsapiecost_77 Start: 45163, Stop: 45291, Start Num: 24

Candidate Starts for Whatsapiecost_77:

(23, 45151), (Start: 24 @45163 has 68 MA's), (26, 45184), (27, 45211), (28, 45241), (29, 45250), (30, 45271),

Gene: WillSterrel_83 Start: 50431, Stop: 50559, Start Num: 24

Candidate Starts for WillSterrel_83:

(23, 50419), (Start: 24 @50431 has 68 MA's), (26, 50452), (27, 50479), (28, 50509), (29, 50518), (30, 50539),

Gene: Yorick_77 Start: 50084, Stop: 50212, Start Num: 24

Candidate Starts for Yorick_77:

(23, 50072), (Start: 24 @50084 has 68 MA's), (26, 50105), (27, 50132), (28, 50162), (29, 50171), (30, 50192),

Gene: Youngblood_40 Start: 34558, Stop: 34394, Start Num: 24

Candidate Starts for Youngblood_40:

(23, 34570), (Start: 24 @34558 has 68 MA's), (26, 34537), (27, 34510), (28, 34480), (29, 34471), (30, 34450), (32, 34432),