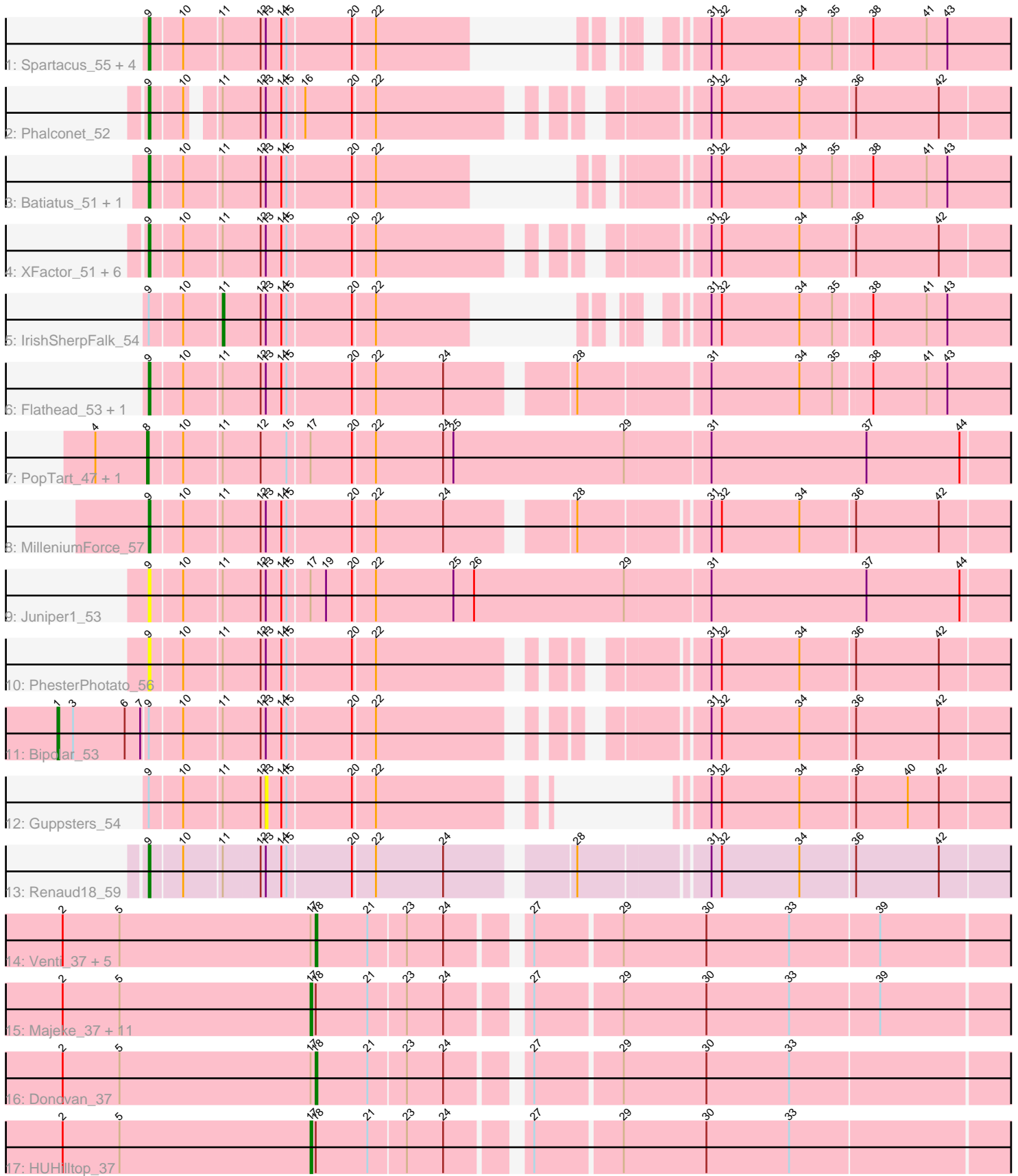


Pham 157966



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 157966 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157966 has 46 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Spartacus_55, Phanphagia_51, WillSterrel_54, Shauna1_52, SuperGrey_57
- Track 2 : Phalconet_52
- Track 3 : Batiatus_51, Filuzino_51
- Track 4 : XFactor_51, Sparkdehlily_61, Doug_56, DaWorst_55, Zerg_53, RockyHorror_54, TDanisky_61
- Track 5 : IrishSherpFalk_54
- Track 6 : Flathead_53, JalFarm20_65
- Track 7 : PopTart_47, SassyB_47
- Track 8 : MilleniumForce_57
- Track 9 : Juniper1_53
- Track 10 : PhesterPhotato_56
- Track 11 : Bipolar_53
- Track 12 : Guppsters_54
- Track 13 : Renaud18_59
- Track 14 : Venti_37, Dynamo_37, Langerak_37, Sonah_37, Phegasus_37, FirstPlacePfu_37
- Track 15 : Majeke_37, Necropolis_37, Jebeks_38, Fishburne_37, Arib1_37, Phineas_37, Zilizebeth_37, Techage_37, Kari_37, Vidya_37, Bartholomew_36, Mangethe_37
- Track 16 : Donovan_37
- Track 17 : HUHilltop_37

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

The start number called the most often in the published annotations is 9, it was called in 19 of the 41 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Batiatus_51, DaWorst_55, Doug_56, Filuzino_51, Flathead_53, JalFarm20_65, Juniper1_53, MilleniumForce_57, Phalconet_52, Phanphagia_51, PhesterPhotato_56, Renaud18_59, RockyHorror_54, Shauna1_52, Sparkdehlily_61, Spartacus_55, SuperGrey_57, TDanisky_61, WillSterrel_54, XFactor_51, Zerg_53,

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

- Bipolar_53, Guppsters_54, IrishSherpFalk_54,

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

- Arib1_37, Bartholomew_36, Donovan_37, Dynamo_37, FirstPlacePfu_37, Fishburne_37, HUHilltop_37, Jebeks_38, Kari_37, Langerak_37, Majeke_37, Mangethe_37, Necropolis_37, Phegasus_37, Phineas_37, PopTart_47, SassyB_47, Sonah_37, Techage_37, Venti_37, Vidya_37, Zilizebeth_37,

Summary by start number:

Start 1:

- Found in 1 of 46 (2.2%) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bipolar_53 (F1),

Start 8:

- Found in 2 of 46 (4.3%) of genes in pham
- Manual Annotations of this start: 2 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PopTart_47 (F1), SassyB_47 (F1),

Start 9:

- Found in 24 of 46 (52.2%) of genes in pham
- Manual Annotations of this start: 19 of 41
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Batiatus_51 (F1), DaWorst_55 (F1), Doug_56 (F1), Filuzino_51 (F1), Flathead_53 (F1), JalFarm20_65 (F1), Juniper1_53 (F1), MilleniumForce_57 (F1), Phalconet_52 (F1), Phanphagia_51 (F1), PhesterPhotato_56 (F1), Renaud18_59 (F4), RockyHorror_54 (F1), Shauna1_52 (F1), Sparkdehliily_61 (F1), Spartacus_55 (F1), SuperGrey_57 (F1), TDanisky_61 (F1), WillSterrel_54 (F1), XFactor_51 (F1), Zerg_53 (F1),

Start 11:

- Found in 26 of 46 (56.5%) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 3.8% of time when present
- Phage (with cluster) where this start called: IrishSherpFalk_54 (F1),

Start 13:

- Found in 24 of 46 (52.2%) of genes in pham
- No Manual Annotations of this start.
- Called 4.2% of time when present
- Phage (with cluster) where this start called: Guppsters_54 (F1),

Start 17:

- Found in 23 of 46 (50.0%) of genes in pham
- Manual Annotations of this start: 11 of 41
- Called 56.5% of time when present
- Phage (with cluster) where this start called: Arib1_37 (P1), Bartholomew_36 (P1), Fishburne_37 (P1), HUHilltop_37 (P1), Jebeks_38 (P1), Kari_37 (P1), Majeke_37 (P1), Mangethe_37 (P1), Necropolis_37 (P1), Phineas_37 (P1), Techage_37 (P1),

Vidya_37 (P1), Zilizebeth_37 (P1),

Start 18:

- Found in 20 of 46 (43.5%) of genes in pham
- Manual Annotations of this start: 7 of 41
- Called 35.0% of time when present
- Phage (with cluster) where this start called: Donovan_37 (P1), Dynamo_37 (P1), FirstPlacePfu_37 (P1), Langerak_37 (P1), Phegasus_37 (P1), Sonah_37 (P1), Venti_37 (P1),

Summary by clusters:

There are 3 clusters represented in this pham: F1, P1, F4,

Info for manual annotations of cluster F1:

- Start number 1 was manually annotated 1 time for cluster F1.
- Start number 8 was manually annotated 2 times for cluster F1.
- Start number 9 was manually annotated 18 times for cluster F1.
- Start number 11 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F4:

- Start number 9 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster P1:

- Start number 17 was manually annotated 11 times for cluster P1.
- Start number 18 was manually annotated 7 times for cluster P1.

Gene Information:

Gene: Arib1_37 Start: 29346, Stop: 29747, Start Num: 17

Candidate Starts for Arib1_37:

(2, 29202), (5, 29235), (Start: 17 @29346 has 11 MA's), (Start: 18 @29349 has 7 MA's), (21, 29379), (23, 29400), (24, 29421), (27, 29460), (29, 29508), (30, 29556), (33, 29604), (39, 29655),

Gene: Bartholomew_36 Start: 29343, Stop: 29744, Start Num: 17

Candidate Starts for Bartholomew_36:

(2, 29199), (5, 29232), (Start: 17 @29343 has 11 MA's), (Start: 18 @29346 has 7 MA's), (21, 29376), (23, 29397), (24, 29418), (27, 29457), (29, 29505), (30, 29553), (33, 29601), (39, 29652),

Gene: Batiatus_51 Start: 37273, Stop: 37695, Start Num: 9

Candidate Starts for Batiatus_51:

(Start: 9 @37273 has 19 MA's), (10, 37291), (Start: 11 @37312 has 1 MA's), (12, 37333), (13, 37336), (14, 37345), (15, 37348), (20, 37384), (22, 37396), (31, 37507), (32, 37513), (34, 37558), (35, 37576), (38, 37597), (41, 37627), (43, 37639),

Gene: Bipolar_53 Start: 37987, Stop: 38499, Start Num: 1

Candidate Starts for Bipolar_53:

(Start: 1 @37987 has 1 MA's), (3, 37996), (6, 38026), (7, 38035), (Start: 9 @38038 has 19 MA's), (10, 38056), (Start: 11 @38077 has 1 MA's), (12, 38098), (13, 38101), (14, 38110), (15, 38113), (20, 38149), (22, 38161), (31, 38311), (32, 38317), (34, 38362), (36, 38392), (42, 38440),

Gene: DaWorst_55 Start: 38273, Stop: 38734, Start Num: 9

Candidate Starts for DaWorst_55:

(Start: 9 @38273 has 19 MA's), (10, 38291), (Start: 11 @38312 has 1 MA's), (12, 38333), (13, 38336), (14, 38345), (15, 38348), (20, 38384), (22, 38396), (31, 38546), (32, 38552), (34, 38597), (36, 38627), (42, 38675),

Gene: Donovan_37 Start: 29365, Stop: 29763, Start Num: 18

Candidate Starts for Donovan_37:

(2, 29218), (5, 29251), (Start: 17 @29362 has 11 MA's), (Start: 18 @29365 has 7 MA's), (21, 29395), (23, 29416), (24, 29437), (27, 29476), (29, 29524), (30, 29572), (33, 29620),

Gene: Doug_56 Start: 38539, Stop: 39000, Start Num: 9

Candidate Starts for Doug_56:

(Start: 9 @38539 has 19 MA's), (10, 38557), (Start: 11 @38578 has 1 MA's), (12, 38599), (13, 38602), (14, 38611), (15, 38614), (20, 38650), (22, 38662), (31, 38812), (32, 38818), (34, 38863), (36, 38893), (42, 38941),

Gene: Dynamo_37 Start: 29754, Stop: 30152, Start Num: 18

Candidate Starts for Dynamo_37:

(2, 29607), (5, 29640), (Start: 17 @29751 has 11 MA's), (Start: 18 @29754 has 7 MA's), (21, 29784), (23, 29805), (24, 29826), (27, 29865), (29, 29913), (30, 29961), (33, 30009), (39, 30060),

Gene: Filuzino_51 Start: 36320, Stop: 36742, Start Num: 9

Candidate Starts for Filuzino_51:

(Start: 9 @36320 has 19 MA's), (10, 36338), (Start: 11 @36359 has 1 MA's), (12, 36380), (13, 36383), (14, 36392), (15, 36395), (20, 36431), (22, 36443), (31, 36554), (32, 36560), (34, 36605), (35, 36623), (38, 36644), (41, 36674), (43, 36686),

Gene: FirstPlacePfu_37 Start: 29378, Stop: 29776, Start Num: 18

Candidate Starts for FirstPlacePfu_37:

(2, 29231), (5, 29264), (Start: 17 @29375 has 11 MA's), (Start: 18 @29378 has 7 MA's), (21, 29408), (23, 29429), (24, 29450), (27, 29489), (29, 29537), (30, 29585), (33, 29633), (39, 29684),

Gene: Fishburne_37 Start: 29343, Stop: 29744, Start Num: 17

Candidate Starts for Fishburne_37:

(2, 29199), (5, 29232), (Start: 17 @29343 has 11 MA's), (Start: 18 @29346 has 7 MA's), (21, 29376), (23, 29397), (24, 29418), (27, 29457), (29, 29505), (30, 29553), (33, 29601), (39, 29652),

Gene: Flathead_53 Start: 37749, Stop: 38234, Start Num: 9

Candidate Starts for Flathead_53:

(Start: 9 @37749 has 19 MA's), (10, 37767), (Start: 11 @37788 has 1 MA's), (12, 37809), (13, 37812), (14, 37821), (15, 37824), (20, 37860), (22, 37872), (24, 37911), (28, 37974), (31, 38046), (34, 38097), (35, 38115), (38, 38136), (41, 38166), (43, 38178),

Gene: Guppsters_54 Start: 36911, Stop: 37258, Start Num: 13

Candidate Starts for Guppsters_54:

(Start: 9 @36848 has 19 MA's), (10, 36866), (Start: 11 @36887 has 1 MA's), (12, 36908), (13, 36911), (14, 36920), (15, 36923), (20, 36959), (22, 36971), (31, 37070), (32, 37076), (34, 37121), (36, 37151), (40, 37181), (42, 37199),

Gene: HUHilltop_37 Start: 29373, Stop: 29774, Start Num: 17

Candidate Starts for HUHilltop_37:

(2, 29229), (5, 29262), (Start: 17 @29373 has 11 MA's), (Start: 18 @29376 has 7 MA's), (21, 29406), (23, 29427), (24, 29448), (27, 29487), (29, 29535), (30, 29583), (33, 29631),

Gene: IrishSherpFalk_54 Start: 38745, Stop: 39116, Start Num: 11

Candidate Starts for IrishSherpFalk_54:

(Start: 9 @38706 has 19 MA's), (10, 38724), (Start: 11 @38745 has 1 MA's), (12, 38766), (13, 38769), (14, 38778), (15, 38781), (20, 38817), (22, 38829), (31, 38928), (32, 38934), (34, 38979), (35, 38997), (38, 39018), (41, 39048), (43, 39060),

Gene: JalFarm20_65 Start: 40779, Stop: 41264, Start Num: 9

Candidate Starts for JalFarm20_65:

(Start: 9 @40779 has 19 MA's), (10, 40797), (Start: 11 @40818 has 1 MA's), (12, 40839), (13, 40842), (14, 40851), (15, 40854), (20, 40890), (22, 40902), (24, 40941), (28, 41004), (31, 41076), (34, 41127), (35, 41145), (38, 41166), (41, 41196), (43, 41208),

Gene: Jebeks_38 Start: 29328, Stop: 29729, Start Num: 17

Candidate Starts for Jebeks_38:

(2, 29184), (5, 29217), (Start: 17 @29328 has 11 MA's), (Start: 18 @29331 has 7 MA's), (21, 29361), (23, 29382), (24, 29403), (27, 29442), (29, 29490), (30, 29538), (33, 29586), (39, 29637),

Gene: Juniper1_53 Start: 36864, Stop: 37370, Start Num: 9

Candidate Starts for Juniper1_53:

(Start: 9 @36864 has 19 MA's), (10, 36882), (Start: 11 @36903 has 1 MA's), (12, 36924), (13, 36927), (14, 36936), (15, 36939), (Start: 17 @36951 has 11 MA's), (19, 36960), (20, 36975), (22, 36987), (25, 37032), (26, 37044), (29, 37131), (31, 37179), (37, 37269), (44, 37323),

Gene: Kari_37 Start: 29340, Stop: 29741, Start Num: 17

Candidate Starts for Kari_37:

(2, 29196), (5, 29229), (Start: 17 @29340 has 11 MA's), (Start: 18 @29343 has 7 MA's), (21, 29373), (23, 29394), (24, 29415), (27, 29454), (29, 29502), (30, 29550), (33, 29598), (39, 29649),

Gene: Langerak_37 Start: 29359, Stop: 29757, Start Num: 18

Candidate Starts for Langerak_37:

(2, 29212), (5, 29245), (Start: 17 @29356 has 11 MA's), (Start: 18 @29359 has 7 MA's), (21, 29389), (23, 29410), (24, 29431), (27, 29470), (29, 29518), (30, 29566), (33, 29614), (39, 29665),

Gene: Majeke_37 Start: 29381, Stop: 29782, Start Num: 17

Candidate Starts for Majeke_37:

(2, 29237), (5, 29270), (Start: 17 @29381 has 11 MA's), (Start: 18 @29384 has 7 MA's), (21, 29414), (23, 29435), (24, 29456), (27, 29495), (29, 29543), (30, 29591), (33, 29639), (39, 29690),

Gene: Mangethe_37 Start: 29381, Stop: 29782, Start Num: 17

Candidate Starts for Mangethe_37:

(2, 29237), (5, 29270), (Start: 17 @29381 has 11 MA's), (Start: 18 @29384 has 7 MA's), (21, 29414), (23, 29435), (24, 29456), (27, 29495), (29, 29543), (30, 29591), (33, 29639), (39, 29690),

Gene: MilleniumForce_57 Start: 39630, Stop: 40112, Start Num: 9

Candidate Starts for MilleniumForce_57:

(Start: 9 @39630 has 19 MA's), (10, 39648), (Start: 11 @39669 has 1 MA's), (12, 39690), (13, 39693), (14, 39702), (15, 39705), (20, 39741), (22, 39753), (24, 39792), (28, 39855), (31, 39924), (32, 39930), (34, 39975), (36, 40005), (42, 40053),

Gene: Necropolis_37 Start: 29340, Stop: 29741, Start Num: 17

Candidate Starts for Necropolis_37:

(2, 29196), (5, 29229), (Start: 17 @29340 has 11 MA's), (Start: 18 @29343 has 7 MA's), (21, 29373), (23, 29394), (24, 29415), (27, 29454), (29, 29502), (30, 29550), (33, 29598), (39, 29649),

Gene: Phalconet_52 Start: 36835, Stop: 37287, Start Num: 9

Candidate Starts for Phalconet_52:

(Start: 9 @36835 has 19 MA's), (10, 36853), (Start: 11 @36865 has 1 MA's), (12, 36886), (13, 36889), (14, 36898), (15, 36901), (16, 36910), (20, 36937), (22, 36949), (31, 37099), (32, 37105), (34, 37150), (36, 37180), (42, 37228),

Gene: Phanphagia_51 Start: 37739, Stop: 38149, Start Num: 9

Candidate Starts for Phanphagia_51:

(Start: 9 @37739 has 19 MA's), (10, 37757), (Start: 11 @37778 has 1 MA's), (12, 37799), (13, 37802), (14, 37811), (15, 37814), (20, 37850), (22, 37862), (31, 37961), (32, 37967), (34, 38012), (35, 38030), (38, 38051), (41, 38081), (43, 38093),

Gene: Phegasus_37 Start: 29351, Stop: 29749, Start Num: 18

Candidate Starts for Phegasus_37:

(2, 29204), (5, 29237), (Start: 17 @29348 has 11 MA's), (Start: 18 @29351 has 7 MA's), (21, 29381), (23, 29402), (24, 29423), (27, 29462), (29, 29510), (30, 29558), (33, 29606), (39, 29657),

Gene: PhesterPhotato_56 Start: 37823, Stop: 38284, Start Num: 9

Candidate Starts for PhesterPhotato_56:

(Start: 9 @37823 has 19 MA's), (10, 37841), (Start: 11 @37862 has 1 MA's), (12, 37883), (13, 37886), (14, 37895), (15, 37898), (20, 37934), (22, 37946), (31, 38096), (32, 38102), (34, 38147), (36, 38177), (42, 38225),

Gene: Phineas_37 Start: 29711, Stop: 30112, Start Num: 17

Candidate Starts for Phineas_37:

(2, 29567), (5, 29600), (Start: 17 @29711 has 11 MA's), (Start: 18 @29714 has 7 MA's), (21, 29744), (23, 29765), (24, 29786), (27, 29825), (29, 29873), (30, 29921), (33, 29969), (39, 30020),

Gene: PopTart_47 Start: 36238, Stop: 36744, Start Num: 8

Candidate Starts for PopTart_47:

(4, 36208), (Start: 8 @36238 has 2 MA's), (10, 36256), (Start: 11 @36277 has 1 MA's), (12, 36298), (15, 36313), (Start: 17 @36325 has 11 MA's), (20, 36349), (22, 36361), (24, 36400), (25, 36406), (29, 36505), (31, 36553), (37, 36643), (44, 36697),

Gene: Renaud18_59 Start: 38442, Stop: 38924, Start Num: 9

Candidate Starts for Renaud18_59:

(Start: 9 @38442 has 19 MA's), (10, 38460), (Start: 11 @38481 has 1 MA's), (12, 38502), (13, 38505), (14, 38514), (15, 38517), (20, 38553), (22, 38565), (24, 38604), (28, 38667), (31, 38736), (32, 38742), (34, 38787), (36, 38817), (42, 38865),

Gene: RockyHorror_54 Start: 37296, Stop: 37757, Start Num: 9

Candidate Starts for RockyHorror_54:

(Start: 9 @37296 has 19 MA's), (10, 37314), (Start: 11 @37335 has 1 MA's), (12, 37356), (13, 37359), (14, 37368), (15, 37371), (20, 37407), (22, 37419), (31, 37569), (32, 37575), (34, 37620), (36, 37650), (42, 37698),

Gene: SassyB_47 Start: 36238, Stop: 36744, Start Num: 8

Candidate Starts for SassyB_47:

(4, 36208), (Start: 8 @36238 has 2 MA's), (10, 36256), (Start: 11 @36277 has 1 MA's), (12, 36298), (15, 36313), (Start: 17 @36325 has 11 MA's), (20, 36349), (22, 36361), (24, 36400), (25, 36406), (29, 36505), (31, 36553), (37, 36643), (44, 36697),

Gene: Shauna1_52 Start: 37720, Stop: 38130, Start Num: 9

Candidate Starts for Shauna1_52:

(Start: 9 @37720 has 19 MA's), (10, 37738), (Start: 11 @37759 has 1 MA's), (12, 37780), (13, 37783), (14, 37792), (15, 37795), (20, 37831), (22, 37843), (31, 37942), (32, 37948), (34, 37993), (35, 38011), (38, 38032), (41, 38062), (43, 38074),

Gene: Sonah_37 Start: 29332, Stop: 29730, Start Num: 18

Candidate Starts for Sonah_37:

(2, 29185), (5, 29218), (Start: 17 @29329 has 11 MA's), (Start: 18 @29332 has 7 MA's), (21, 29362), (23, 29383), (24, 29404), (27, 29443), (29, 29491), (30, 29539), (33, 29587), (39, 29638),

Gene: Sparkdehlily_61 Start: 39036, Stop: 39497, Start Num: 9

Candidate Starts for Sparkdehlily_61:

(Start: 9 @39036 has 19 MA's), (10, 39054), (Start: 11 @39075 has 1 MA's), (12, 39096), (13, 39099), (14, 39108), (15, 39111), (20, 39147), (22, 39159), (31, 39309), (32, 39315), (34, 39360), (36, 39390), (42, 39438),

Gene: Spartacus_55 Start: 37623, Stop: 38033, Start Num: 9

Candidate Starts for Spartacus_55:

(Start: 9 @37623 has 19 MA's), (10, 37641), (Start: 11 @37662 has 1 MA's), (12, 37683), (13, 37686), (14, 37695), (15, 37698), (20, 37734), (22, 37746), (31, 37845), (32, 37851), (34, 37896), (35, 37914), (38, 37935), (41, 37965), (43, 37977),

Gene: SuperGrey_57 Start: 39146, Stop: 39556, Start Num: 9

Candidate Starts for SuperGrey_57:

(Start: 9 @39146 has 19 MA's), (10, 39164), (Start: 11 @39185 has 1 MA's), (12, 39206), (13, 39209), (14, 39218), (15, 39221), (20, 39257), (22, 39269), (31, 39368), (32, 39374), (34, 39419), (35, 39437), (38, 39458), (41, 39488), (43, 39500),

Gene: TDanisky_61 Start: 39036, Stop: 39497, Start Num: 9

Candidate Starts for TDanisky_61:

(Start: 9 @39036 has 19 MA's), (10, 39054), (Start: 11 @39075 has 1 MA's), (12, 39096), (13, 39099), (14, 39108), (15, 39111), (20, 39147), (22, 39159), (31, 39309), (32, 39315), (34, 39360), (36, 39390), (42, 39438),

Gene: Techage_37 Start: 29366, Stop: 29767, Start Num: 17

Candidate Starts for Techage_37:

(2, 29222), (5, 29255), (Start: 17 @29366 has 11 MA's), (Start: 18 @29369 has 7 MA's), (21, 29399), (23, 29420), (24, 29441), (27, 29480), (29, 29528), (30, 29576), (33, 29624), (39, 29675),

Gene: Venti_37 Start: 29346, Stop: 29744, Start Num: 18

Candidate Starts for Venti_37:

(2, 29199), (5, 29232), (Start: 17 @29343 has 11 MA's), (Start: 18 @29346 has 7 MA's), (21, 29376), (23, 29397), (24, 29418), (27, 29457), (29, 29505), (30, 29553), (33, 29601), (39, 29652),

Gene: Vidya_37 Start: 29376, Stop: 29777, Start Num: 17

Candidate Starts for Vidya_37:

(2, 29232), (5, 29265), (Start: 17 @29376 has 11 MA's), (Start: 18 @29379 has 7 MA's), (21, 29409), (23, 29430), (24, 29451), (27, 29490), (29, 29538), (30, 29586), (33, 29634), (39, 29685),

Gene: WillSterrel_54 Start: 38739, Stop: 39149, Start Num: 9

Candidate Starts for WillSterrel_54:

(Start: 9 @38739 has 19 MA's), (10, 38757), (Start: 11 @38778 has 1 MA's), (12, 38799), (13, 38802), (14, 38811), (15, 38814), (20, 38850), (22, 38862), (31, 38961), (32, 38967), (34, 39012), (35, 39030), (38, 39051), (41, 39081), (43, 39093),

Gene: XFactor_51 Start: 36239, Stop: 36700, Start Num: 9

Candidate Starts for XFactor_51:

(Start: 9 @36239 has 19 MA's), (10, 36257), (Start: 11 @36278 has 1 MA's), (12, 36299), (13, 36302), (14, 36311), (15, 36314), (20, 36350), (22, 36362), (31, 36512), (32, 36518), (34, 36563), (36, 36593), (42, 36641),

Gene: Zerg_53 Start: 37405, Stop: 37866, Start Num: 9

Candidate Starts for Zerg_53:

(Start: 9 @37405 has 19 MA's), (10, 37423), (Start: 11 @37444 has 1 MA's), (12, 37465), (13, 37468), (14, 37477), (15, 37480), (20, 37516), (22, 37528), (31, 37678), (32, 37684), (34, 37729), (36, 37759), (42, 37807),

Gene: Zilizebeth_37 Start: 29375, Stop: 29776, Start Num: 17

Candidate Starts for Zilizebeth_37:

(2, 29231), (5, 29264), (Start: 17 @29375 has 11 MA's), (Start: 18 @29378 has 7 MA's), (21, 29408), (23, 29429), (24, 29450), (27, 29489), (29, 29537), (30, 29585), (33, 29633), (39, 29684),