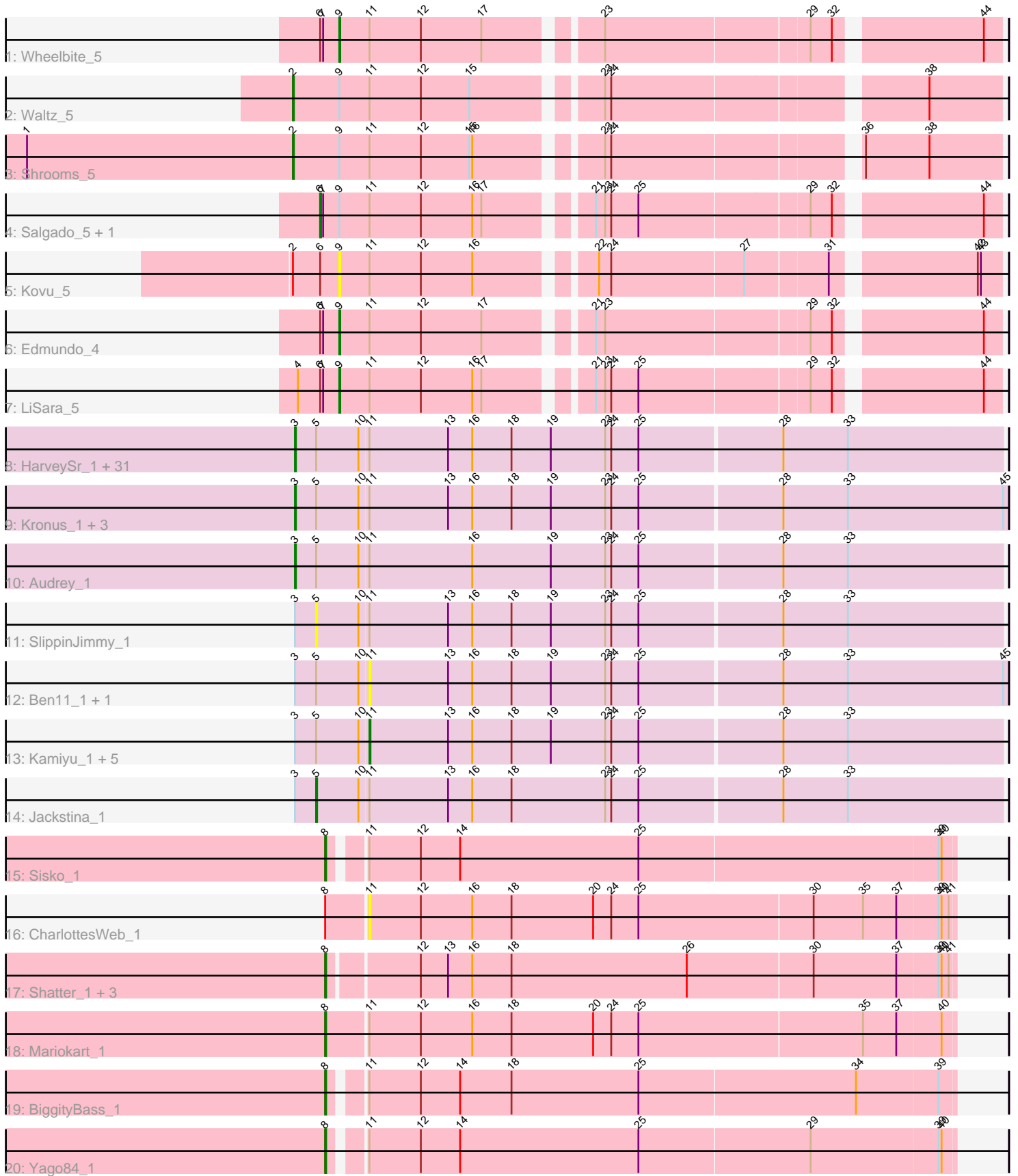


Pham 157858



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 157858 Report

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

Pham number 157858 has 64 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Wheelbite_5
- Track 2 : Waltz_5
- Track 3 : Shrooms_5
- Track 4 : Salgado_5, Laroye_5
- Track 5 : Kovu_5
- Track 6 : Edmundo_4
- Track 7 : LiSara_5
- Track 8 : HarveySr_1, Yinz_1, Gervas_1, OrangeOswald_1, Chandler_1, Athena_1, Baloo_1, Neos5_1, Akoma_1, Rita1961_1, Philly_1, Phlyer_1, MmasiCarm_1, Abinghost_1, Deenasa_1, Obutu_1, Devonte_1, RagingRooster_1, ChaChing_1, SynergyX_1, Compostia_1, LestyG_1, Marley1013_1, Nozo_1, Gadget_1, GlenHope_1, Heathcliff_1, Daisy_1, Corofin_1, Pipefish_1, RomaT_1, Briakila_1
- Track 9 : Kronus_1, Mortcellus_1, Casbah_1, Phayeta_1
- Track 10 : Audrey_1
- Track 11 : SlippinJimmy_1
- Track 12 : Ben11_1, Halfpint_1
- Track 13 : Kamiyu_1, Yahalom_1, Tydolla_1, Phaedrus_1, Bernardo_1, Morty007_1
- Track 14 : Jackstina_1
- Track 15 : Sisko_1
- Track 16 : CharlottesWeb_1
- Track 17 : Shatter_1, Fresco_1, Ligma_1, Axumite_1
- Track 18 : Mariokart_1
- Track 19 : BiggityBass_1
- Track 20 : Yago84_1

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

The start number called the most often in the published annotations is 3, it was called in 37 of the 57 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost_1, Akoma_1, Athena_1, Audrey_1, Baloo_1, Briakila_1, Casbah_1, ChaChing_1, Chandler_1, Compostia_1, Corofin_1, Daisy_1, Deenasa_1, Devonte_1, Gadget_1, Gervas_1, GlenHope_1, HarveySr_1, Heathcliff_1, Kronus_1,

LestyG_1, Marley1013_1, MmasiCarm_1, Mortcellus_1, Neos5_1, Nozo_1, Obutu_1, OrangeOswald_1, Phayeta_1, Philly_1, Phlyer_1, Pipefish_1, RagingRooster_1, Rita1961_1, RomaT_1, SynergyX_1, Yinz_1,

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

- Ben11_1, Bernardo_1, Halfpint_1, Jackstina_1, Kamiyu_1, Morty007_1, Phaedrus_1, SlippinJimmy_1, Tydolla_1, Yahalom_1,

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

- Axumite_1, BiggityBass_1, CharlottesWeb_1, Edmundo_4, Fresco_1, Kovu_5, Laroye_5, LiSara_5, Ligma_1, Mariokart_1, Salgado_5, Shatter_1, Shrooms_5, Sisko_1, Waltz_5, Wheelbite_5, Yago84_1,

Summary by start number:

Start 2:

- Found in 3 of 64 (4.7%) of genes in pham
- Manual Annotations of this start: 2 of 57
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Shrooms_5 (AL), Waltz_5 (AL),

Start 3:

- Found in 47 of 64 (73.4%) of genes in pham
- Manual Annotations of this start: 37 of 57
- Called 78.7% of time when present
- Phage (with cluster) where this start called: Abinghost_1 (B3), Akoma_1 (B3), Athena_1 (B3), Audrey_1 (B3), Baloo_1 (B3), Briakila_1 (B3), Casbah_1 (B3), ChaChing_1 (B3), Chandler_1 (B3), Compostia_1 (B3), Corofin_1 (B3), Daisy_1 (B3), Deenasa_1 (B3), Devonte_1 (B3), Gadget_1 (B3), Gervas_1 (B3), GlenHope_1 (B3), HarveySr_1 (B3), Heathcliff_1 (B3), Kronus_1 (B3), LestyG_1 (B3), Marley1013_1 (B3), MmasiCarm_1 (B3), Mortcellus_1 (B3), Neos5_1 (B3), Nozo_1 (B3), Obutu_1 (B3), OrangeOswald_1 (B3), Phayeta_1 (B3), Philly_1 (B3), Phlyer_1 (B3), Pipefish_1 (B3), RagingRooster_1 (B3), Rita1961_1 (B3), RomaT_1 (B3), SynergyX_1 (B3), Yinz_1 (B3),

Start 5:

- Found in 47 of 64 (73.4%) of genes in pham
- Manual Annotations of this start: 1 of 57
- Called 4.3% of time when present
- Phage (with cluster) where this start called: Jackstina_1 (B3), SlippinJimmy_1 (B3),

Start 6:

- Found in 6 of 64 (9.4%) of genes in pham
- Manual Annotations of this start: 2 of 57
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Laroye_5 (AL), Salgado_5 (AL),

Start 8:

- Found in 9 of 64 (14.1%) of genes in pham
- Manual Annotations of this start: 6 of 57
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Axumite_1 (DR), BiggityBass_1 (DR), Fresco_1 (DR), Ligma_1 (DR), Mariokart_1 (DR), Shatter_1 (DR), Sisko_1 (DR),

Yago84_1 (DR),

Start 9:

- Found in 8 of 64 (12.5%) of genes in pham
- Manual Annotations of this start: 3 of 57
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Edmundo_4 (AL), Kovu_5 (AL), LiSara_5 (AL), Wheelbite_5 (AL),

Start 11:

- Found in 60 of 64 (93.8%) of genes in pham
- Manual Annotations of this start: 6 of 57
- Called 15.0% of time when present
- Phage (with cluster) where this start called: Ben11_1 (B3), Bernardo_1 (B3), CharlottesWeb_1 (DR), Halfpint_1 (B3), Kamiyu_1 (B3), Morty007_1 (B3), Phaedrus_1 (B3), Tydolla_1 (B3), Yahalom_1 (B3),

Summary by clusters:

There are 3 clusters represented in this pham: DR, AL, B3,

Info for manual annotations of cluster AL:

- Start number 2 was manually annotated 2 times for cluster AL.
- Start number 6 was manually annotated 2 times for cluster AL.
- Start number 9 was manually annotated 3 times for cluster AL.

Info for manual annotations of cluster B3:

- Start number 3 was manually annotated 37 times for cluster B3.
- Start number 5 was manually annotated 1 time for cluster B3.
- Start number 11 was manually annotated 6 times for cluster B3.

Info for manual annotations of cluster DR:

- Start number 8 was manually annotated 6 times for cluster DR.

Gene Information:

Gene: Abinghost_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Abinghost_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Akoma_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Akoma_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Athena_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Athena_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Audrey_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Audrey_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (16, 175), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Axumite_1 Start: 1, Stop: 606, Start Num: 8

Candidate Starts for Axumite_1:

(Start: 8 @1 has 6 MA's), (12, 85), (13, 112), (16, 136), (18, 175), (26, 349), (30, 472), (37, 553), (39, 592), (40, 595), (41, 601),

Gene: Baloo_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Baloo_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Ben11_1 Start: 73, Stop: 699, Start Num: 11

Candidate Starts for Ben11_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541), (45, 694),

Gene: Bernardo_1 Start: 73, Stop: 693, Start Num: 11

Candidate Starts for Bernardo_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: BiggityBass_1 Start: 1, Stop: 600, Start Num: 8

Candidate Starts for BiggityBass_1:

(Start: 8 @1 has 6 MA's), (Start: 11 @28 has 6 MA's), (12, 79), (14, 118), (18, 169), (25, 295), (34, 508), (39, 586),

Gene: Briakila_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Briakila_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Casbah_1 Start: 1, Stop: 699, Start Num: 3

Candidate Starts for Casbah_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541), (45, 694),

Gene: ChaChing_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for ChaChing_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Chandler_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Chandler_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: CharlottesWeb_1 Start: 40, Stop: 612, Start Num: 11

Candidate Starts for CharlottesWeb_1:

(Start: 8 @1 has 6 MA's), (Start: 11 @40 has 6 MA's), (12, 91), (16, 142), (18, 181), (20, 262), (24, 280), (25, 307), (30, 478), (35, 526), (37, 559), (39, 598), (40, 601), (41, 607),

Gene: Compostia_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Compostia_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Corofin_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Corofin_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Daisy_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Daisy_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Deenasa_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Deenasa_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Devonte_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Devonte_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Edmundo_4 Start: 3516, Stop: 4121, Start Num: 9

Candidate Starts for Edmundo_4:

(Start: 6 @3498 has 2 MA's), (7, 3501), (Start: 9 @3516 has 3 MA's), (Start: 11 @3546 has 6 MA's), (12, 3597), (17, 3657), (21, 3747), (23, 3756), (29, 3951), (32, 3972), (44, 4104),

Gene: Fresco_1 Start: 1, Stop: 606, Start Num: 8

Candidate Starts for Fresco_1:

(Start: 8 @1 has 6 MA's), (12, 85), (13, 112), (16, 136), (18, 175), (26, 349), (30, 472), (37, 553), (39, 592), (40, 595), (41, 601),

Gene: Gadget_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Gadget_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Gervas_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Gervas_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: GlenHope_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for GlenHope_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Halfpint_1 Start: 73, Stop: 699, Start Num: 11

Candidate Starts for Halfpint_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541), (45, 694),

Gene: HarveySr_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for HarveySr_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Heathcliff_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Heathcliff_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Jackstina_1 Start: 22, Stop: 693, Start Num: 5

Candidate Starts for Jackstina_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Kamiyu_1 Start: 73, Stop: 693, Start Num: 11

Candidate Starts for Kamiyu_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Kovu_5 Start: 3470, Stop: 4075, Start Num: 9

Candidate Starts for Kovu_5:

(Start: 2 @3425 has 2 MA's), (Start: 6 @3452 has 2 MA's), (Start: 9 @3470 has 3 MA's), (Start: 11 @3500 has 6 MA's), (12, 3551), (16, 3602), (22, 3704), (24, 3716), (27, 3845), (31, 3923), (42, 4052), (43, 4055),

Gene: Kronus_1 Start: 1, Stop: 699, Start Num: 3

Candidate Starts for Kronus_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541), (45, 694),

Gene: Laroye_5 Start: 3276, Stop: 3899, Start Num: 6

Candidate Starts for Laroye_5:

(Start: 6 @3276 has 2 MA's), (7, 3279), (Start: 9 @3294 has 3 MA's), (Start: 11 @3324 has 6 MA's), (12, 3375), (16, 3426), (17, 3435), (21, 3525), (23, 3534), (24, 3540), (25, 3567), (29, 3729), (32, 3750), (44, 3882),

Gene: LestyG_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for LestyG_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: LiSara_5 Start: 3325, Stop: 3930, Start Num: 9

Candidate Starts for LiSara_5:

(4, 3286), (Start: 6 @3307 has 2 MA's), (7, 3310), (Start: 9 @3325 has 3 MA's), (Start: 11 @3355 has 6 MA's), (12, 3406), (16, 3457), (17, 3466), (21, 3556), (23, 3565), (24, 3571), (25, 3598), (29, 3760), (32, 3781), (44, 3913),

Gene: Ligma_1 Start: 1, Stop: 606, Start Num: 8

Candidate Starts for Ligma_1:

(Start: 8 @1 has 6 MA's), (12, 85), (13, 112), (16, 136), (18, 175), (26, 349), (30, 472), (37, 553), (39, 592), (40, 595), (41, 601),

Gene: Mariokart_1 Start: 1, Stop: 612, Start Num: 8

Candidate Starts for Mariokart_1:

(Start: 8 @1 has 6 MA's), (Start: 11 @40 has 6 MA's), (12, 91), (16, 142), (18, 181), (20, 262), (24, 280), (25, 307), (35, 526), (37, 559), (40, 601),

Gene: Marley1013_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Marley1013_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: MmasiCarm_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for MmasiCarm_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Mortcellus_1 Start: 1, Stop: 699, Start Num: 3

Candidate Starts for Mortcellus_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541), (45, 694),

Gene: Morty007_1 Start: 73, Stop: 693, Start Num: 11

Candidate Starts for Morty007_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Neos5_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Neos5_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Nozo_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Nozo_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Obutu_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Obutu_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: OrangeOswald_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for OrangeOswald_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Phaedrus_1 Start: 73, Stop: 693, Start Num: 11

Candidate Starts for Phaedrus_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Phayeta_1 Start: 1, Stop: 699, Start Num: 3

Candidate Starts for Phayeta_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541), (45, 694),

Gene: Philly_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Philly_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Phlyer_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Phlyer_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Pipefish_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Pipefish_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: RagingRooster_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for RagingRooster_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Rita1961_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Rita1961_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: RomaT_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for RomaT_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Salgado_5 Start: 3284, Stop: 3907, Start Num: 6

Candidate Starts for Salgado_5:

(Start: 6 @3284 has 2 MA's), (7, 3287), (Start: 9 @3302 has 3 MA's), (Start: 11 @3332 has 6 MA's), (12, 3383), (16, 3434), (17, 3443), (21, 3533), (23, 3542), (24, 3548), (25, 3575), (29, 3737), (32, 3758), (44, 3890),

Gene: Shatter_1 Start: 1, Stop: 606, Start Num: 8

Candidate Starts for Shatter_1:

(Start: 8 @1 has 6 MA's), (12, 85), (13, 112), (16, 136), (18, 175), (26, 349), (30, 472), (37, 553), (39, 592), (40, 595), (41, 601),

Gene: Shrooms_5 Start: 3310, Stop: 3960, Start Num: 2

Candidate Starts for Shrooms_5:

(1, 3046), (Start: 2 @3310 has 2 MA's), (Start: 9 @3355 has 3 MA's), (Start: 11 @3385 has 6 MA's), (12, 3436), (15, 3484), (16, 3487), (23, 3595), (24, 3601), (36, 3826), (38, 3889),

Gene: Sisko_1 Start: 1, Stop: 600, Start Num: 8

Candidate Starts for Sisko_1:

(Start: 8 @1 has 6 MA's), (Start: 11 @28 has 6 MA's), (12, 79), (14, 118), (25, 295), (39, 586), (40, 589),

Gene: SlippinJimmy_1 Start: 22, Stop: 693, Start Num: 5

Candidate Starts for SlippinJimmy_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: SynergyX_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for SynergyX_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Tydolla_1 Start: 73, Stop: 693, Start Num: 11

Candidate Starts for Tydolla_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Waltz_5 Start: 3398, Stop: 4048, Start Num: 2

Candidate Starts for Waltz_5:

(Start: 2 @3398 has 2 MA's), (Start: 9 @3443 has 3 MA's), (Start: 11 @3473 has 6 MA's), (12, 3524), (15, 3572), (23, 3683), (24, 3689), (38, 3977),

Gene: Wheelbite_5 Start: 3393, Stop: 3998, Start Num: 9

Candidate Starts for Wheelbite_5:

(Start: 6 @3375 has 2 MA's), (7, 3378), (Start: 9 @3393 has 3 MA's), (Start: 11 @3423 has 6 MA's), (12, 3474), (17, 3534), (23, 3633), (29, 3828), (32, 3849), (44, 3981),

Gene: Yago84_1 Start: 1, Stop: 600, Start Num: 8

Candidate Starts for Yago84_1:

(Start: 8 @1 has 6 MA's), (Start: 11 @28 has 6 MA's), (12, 79), (14, 118), (25, 295), (29, 463), (39, 586), (40, 589),

Gene: Yahalom_1 Start: 73, Stop: 693, Start Num: 11

Candidate Starts for Yahalom_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),

Gene: Yinz_1 Start: 1, Stop: 693, Start Num: 3

Candidate Starts for Yinz_1:

(Start: 3 @1 has 37 MA's), (Start: 5 @22 has 1 MA's), (10, 64), (Start: 11 @73 has 6 MA's), (13, 151), (16, 175), (18, 214), (19, 253), (23, 307), (24, 313), (25, 340), (28, 478), (33, 541),