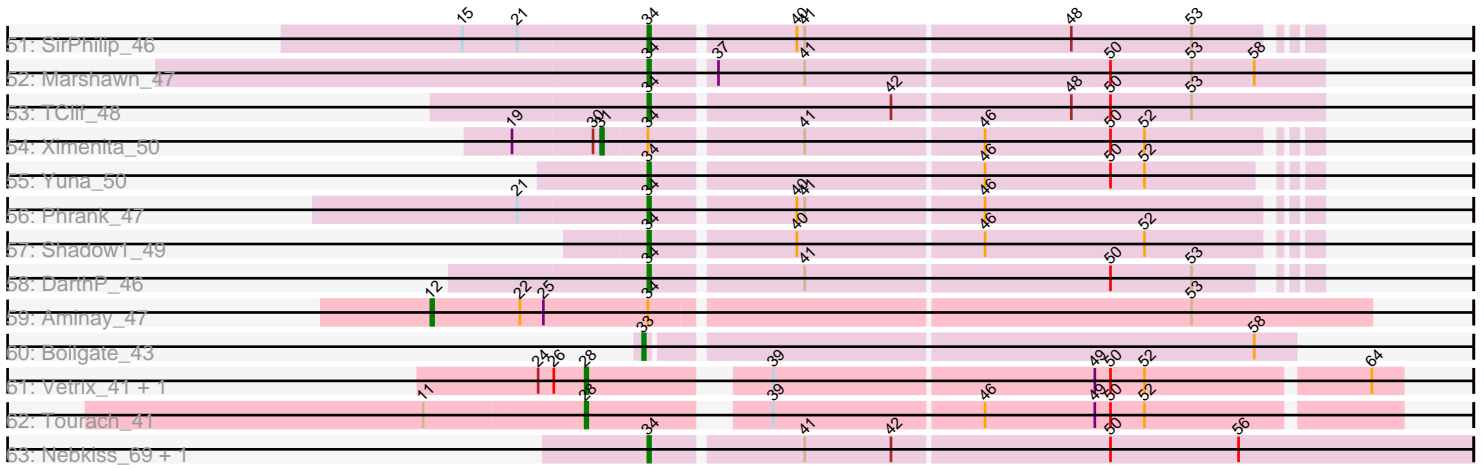


Pham 215914



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 215914 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215914 has 150 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Settecandela_41, Phrappuccino_41
- Track 2 : Nergal_41
- Track 3 : MalagasyRose_45
- Track 4 : ActinUp_44, Ramen_44, CaseJules_45, Hyperbowlee_44, Joy99_44, Blizzard_44, Atiba_44, Zabiza_39, Durfee_44, Piatt_44
- Track 5 : Padfoot_44, Jayhawk_45, Asayake_44, BEEST_44, Mynx_45, Padpat_45, ShiaSurprise_45
- Track 6 : Topper_44, Llorens_44, Dalmuri_44, Rosmarinus_44, CREW_44, TruffulaTree_44, Boiiii_44, BGlluviae_44, Belladonna_44, Jeckyll_44, Veliki_44, Rapunzel97_44, Homura_44, Inky_44, Spock_44, Lunahalos_44, Capricorn_44, HedwigODU_44, CallaLilly_46, YoureAdopted_43, Emerson_45, Jarvi_44, Twitch_44, Peel_44, Slimphazie_44
- Track 7 : BarrelRoll_44, Adephagia_44, JAWS_44, Tachez_44
- Track 8 : Devera_48, Ageofdapage_46, Murucutumbu_45
- Track 9 : Validus_48
- Track 10 : Illumine_47, LaterM_45, Stinson_45, Dole_47
- Track 11 : MacKat_39
- Track 12 : Geraldini_46, BaghaKamala_43, Pokerus_43
- Track 13 : Biglebops_39, Amelie_39, Nutello_39, LilPharaoh_39, Mdavu_40
- Track 14 : LindNT_44, Prithvi_45, TreyKay_45
- Track 15 : Bella96_45, Urkel_45, SamuelLPlaqson_45, DrHayes_45
- Track 16 : Apocalypse_47
- Track 17 : Dartin_46, McMater_46, Richo_46
- Track 18 : Bern_45
- Track 19 : Megsy_45, MeaningOfLife_45, Ganymede_45, Tiri_45, QuincyRose_43, CrimD_44
- Track 20 : Adonis_44, Anaya_46
- Track 21 : Beezoo_46
- Track 22 : Zavala_45
- Track 23 : Angelica_44, Deby_44
- Track 24 : Curiosium_47
- Track 25 : Niklas_46, Shaobing_46
- Track 26 : LastHope_47
- Track 27 : Sulley_44
- Track 28 : Chavito_47
- Track 29 : Clipper_48
- Track 30 : TiniBug_45

- Track 31 : Peanam_46
- Track 32 : Hurricane_47, Keshu_48
- Track 33 : Neighly_43
- Track 34 : Reptar3000_46, Bobquesha_50, Juliette_50, OmniCritical_47, Malthus_49
- Track 35 : Chancellor_48, Slarp_48, Cheetobro_48, Taquito_48, Mitti_48
- Track 36 : Eponine_50
- Track 37 : Fionnbharth_48
- Track 38 : Patt_45
- Track 39 : Y10_47, JF1_48, Y2_47
- Track 40 : MissDaisy_46
- Track 41 : Wintermute_48
- Track 42 : Ekdilam_43
- Track 43 : Bryler_47, Tierra_47, Cain_47
- Track 44 : Sunflower1121_50
- Track 45 : Applecrisp_46, Ellie_42, Amgine_44, Fefferhead_44
- Track 46 : November_46
- Track 47 : Krueger_50
- Track 48 : Amohnition_46
- Track 49 : Syra333_49
- Track 50 : PhelpsODU_46
- Track 51 : SirPhilip_46
- Track 52 : Marshawn_47
- Track 53 : TClif_48
- Track 54 : Ximenita_50
- Track 55 : Yuna_50
- Track 56 : Phrank_47
- Track 57 : Shadow1_49
- Track 58 : DarthP_46
- Track 59 : Aminay_47
- Track 60 : Boilgate_43
- Track 61 : Vetrix_41, DrSeegs_41
- Track 62 : Tourach_41
- Track 63 : Nebkiss_69, Gaia_69

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

The start number called the most often in the published annotations is 34, it was called in 59 of the 138 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Amelie_39, Amgine_44, Amohnition_46, Angelica_44, Applecrisp_46, Asayake_44, BEEST_44, Bella96_45, Bern_45, Biglebops_39, Bryler_47, Cain_47, Chavito_47, CrimD_44, Curiosium_47, DarthP_46, Dartin_46, Deby_44, Dole_47, DrHayes_45, Ekdilam_43, Ellie_42, Fefferhead_44, Gaia_69, Ganymede_45, Hurricane_47, Illumine_47, Jayhawk_45, Keshu_48, Krueger_50, LaterM_45, LilPharaoh_39, LindNT_44, Marshawn_47, McMater_46, Mdavu_40, MeaningOfLife_45, Megsy_45, Mynx_45, Nebkiss_69, Niklas_46, November_46, Nutello_39, Padfoot_44, Padpat_45, PhelpsODU_46, Phrank_47, Prithvi_45, QuincyRose_43, Richo_46, SamuelLPlaqson_45, Shadow1_49, Shaobing_46, ShiaSurprise_45, SirPhilip_46,

Stinson_45, Sunflower1121_50, Syra333_49, TClif_48, Tierra_47, TiniBug_45, Tiri_45, TreyKay_45, Urkel_45, Yuna_50, Zavala_45,

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

- ActinUp_44, Adephagia_44, Adonis_44, Ageofdapage_46, Aminay_47, Anaya_46, Apocalypse_47, Atiba_44, BGlluviae_44, BaghaKamala_43, BarrelRoll_44, Beezoo_46, Belladonna_44, Blizzard_44, Boiii_44, CREW_44, CallaLilly_46, Capricorn_44, CaseJules_45, Clipper_48, Dalmuri_44, Devera_48, Durfee_44, Emerson_45, Geraldini_46, HedwigODU_44, Homura_44, Hyperbowlee_44, Inky_44, JAWS_44, Jarvi_44, Jeckyll_44, Joy99_44, LastHope_47, Llorens_44, Lunahalos_44, MacKat_39, MalagasyRose_45, Murucutumbu_45, Peanam_46, Peel_44, Phrappuccino_41, Piatt_44, Pokerus_43, Ramen_44, Rapunzel97_44, Rosmarinus_44, Settecandela_41, Slimphazie_44, Spock_44, Sulley_44, Tachez_44, Topper_44, TruffulaTree_44, Twitch_44, Validus_48, Veliki_44, Ximenita_50, YoureAdopted_43, Zabiza_39,

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

- Bobquesha_50, Boilgate_43, Chancellor_48, Cheetobro_48, DrSeegs_41, Eponine_50, Fionnbharth_48, JF1_48, Juliette_50, Malthus_49, MissDaisy_46, Mitti_48, Neighly_43, Nergal_41, OmniCritical_47, Patt_45, Reptar3000_46, Slarp_48, Taquito_48, Tourach_41, Vetrrix_41, Wintermute_48, Y10_47, Y2_47,

Summary by start number:

Start 12:

- Found in 1 of 150 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 138
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aminay_47 (K7),

Start 21:

- Found in 18 of 150 (12.0%) of genes in pham
- Manual Annotations of this start: 5 of 138
- Called 27.8% of time when present
- Phage (with cluster) where this start called: Apocalypse_47 (K1), Peanam_46 (K1), Phrappuccino_41 (AA), Settecandela_41 (AA), Validus_48 (K1),

Start 23:

- Found in 59 of 150 (39.3%) of genes in pham
- Manual Annotations of this start: 14 of 138
- Called 23.7% of time when present
- Phage (with cluster) where this start called: ActinUp_44 (K1), Ageofdapage_46 (K1), Atiba_44 (K1), Beezoo_46 (K1), Blizzard_44 (K1), CaseJules_45 (K1), Devera_48 (K1), Durfee_44 (K1), Hyperbowlee_44 (K1), Joy99_44 (K1), Murucutumbu_45 (K1), Piatt_44 (K1), Ramen_44 (K1), Zabiza_39 (K1),

Start 28:

- Found in 3 of 150 (2.0%) of genes in pham
- Manual Annotations of this start: 3 of 138
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DrSeegs_41 (L2), Tourach_41 (L2), Vetrrix_41 (L2),

Start 30:

- Found in 53 of 150 (35.3%) of genes in pham
- Manual Annotations of this start: 7 of 138
- Called 13.2% of time when present
- Phage (with cluster) where this start called: Adephagia_44 (K1), Adonis_44 (K1), Anaya_46 (K1), BarrelRoll_44 (K1), JAWS_44 (K1), Sulley_44 (K1), Tachez_44 (K1),

Start 31:

- Found in 68 of 150 (45.3%) of genes in pham
- Manual Annotations of this start: 29 of 138
- Called 47.1% of time when present
- Phage (with cluster) where this start called: BGlluviae_44 (K1), BaghaKamala_43 (K1), Belladonna_44 (K1), Boiii_44 (K1), CREW_44 (K1), CallaLilly_46 (K1), Capricorn_44 (K1), Clipper_48 (K1), Dalmuri_44 (K1), Emerson_45 (K1), Geraldini_46 (K1), HedwigODU_44 (K1), Homura_44 (K1), Inky_44 (K1), Jarvi_44 (K1), Jeckyll_44 (K1), Llorens_44 (K1), Lunahalos_44 (K1), MacKat_39 (K1), Nergal_41 (AG), Peel_44 (K1), Pokerus_43 (K1), Rapunzel97_44 (K1), Rosmarinus_44 (K1), Slimphazie_44 (K1), Spock_44 (K1), Topper_44 (K1), TruffulaTree_44 (K1), Twitch_44 (K1), Veliki_44 (K1), Ximenita_50 (K6), YoureAdopted_43 (K1),

Start 32:

- Found in 1 of 150 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 138
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MalagasyRose_45 (AG),

Start 33:

- Found in 20 of 150 (13.3%) of genes in pham
- Manual Annotations of this start: 18 of 138
- Called 95.0% of time when present
- Phage (with cluster) where this start called: Bobquesha_50 (K4), Boilgate_43 (K8), Chancellor_48 (K4), Cheetobro_48 (K4), Eponine_50 (K4), Fionnbharth_48 (K4), JF1_48 (K4), Juliette_50 (K4), Malthus_49 (K4), MissDaisy_46 (K4), Mitti_48 (K4), OmniCritical_47 (K4), Patt_45 (K4), Reptar3000_46 (K4), Slarp_48 (K4), Taquito_48 (K4), Wintermute_48 (K4), Y10_47 (K4), Y2_47 (K4),

Start 34:

- Found in 126 of 150 (84.0%) of genes in pham
- Manual Annotations of this start: 59 of 138
- Called 52.4% of time when present
- Phage (with cluster) where this start called: Amelie_39 (K1), Amgine_44 (K6), Amohntion_46 (K6), Angelica_44 (K1), Applecrisp_46 (K6), Asayake_44 (K1), BEEST_44 (K1), Bella96_45 (K1), Bern_45 (K1), Binglebops_39 (K1), Bryler_47 (K6), Cain_47 (K6), Chavito_47 (K1), CrimD_44 (K1), Curiosium_47 (K1), DarthP_46 (K6), Dartin_46 (K1), Deby_44 (K1), Dole_47 (K1), DrHayes_45 (K1), Ekdilam_43 (K6), Ellie_42 (K6), Fefferhead_44 (K6), Gaia_69 (X), Ganymede_45 (K1), Hurricane_47 (K3), Illumine_47 (K1), Jayhawk_45 (K1), Keshu_48 (K3), Krueger_50 (K6), LaterM_45 (K1), LilPharaoh_39 (K1), LindNT_44 (K1), Marshawn_47 (K6), McMater_46 (K1), Mdavu_40 (K1), MeaningOfLife_45 (K1), Megsy_45 (K1), Mynx_45 (K1), Nebkiss_69 (X), Niklas_46 (K1), November_46 (K6), Nutello_39 (K1), Padfoot_44 (K1), Padpat_45 (K1), PhelpsODU_46 (K6), Phrank_47 (K6), Prithvi_45 (K1), QuincyRose_43 (K1), Richo_46 (K1), SamuelLPlaqson_45 (K1), Shadow1_49

(K6), Shaobing_46 (K1), ShiaSurprise_45 (K1), SirPhilip_46 (K6), Stinson_45 (K1), Sunflower1121_50 (K6), Syra333_49 (K6), TClif_48 (K6), Tierra_47 (K6), TiniBug_45 (K1), Tiri_45 (K1), TreyKay_45 (K1), Urkel_45 (K1), Yuna_50 (K6), Zavala_45 (K1),

Start 36:

- Found in 1 of 150 (0.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Neighly_43 (K3),

Start 41:

- Found in 106 of 150 (70.7%) of genes in pham
- Manual Annotations of this start: 1 of 138
- Called 0.9% of time when present
- Phage (with cluster) where this start called: LastHope_47 (K1),

Summary by clusters:

There are 10 clusters represented in this pham: AA, AG, K3, K1, L2, K6, K7, K4, X, K8,

Info for manual annotations of cluster AA:

- Start number 21 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AG:

- Start number 31 was manually annotated 1 time for cluster AG.
- Start number 32 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster K1:

- Start number 21 was manually annotated 3 times for cluster K1.
- Start number 23 was manually annotated 14 times for cluster K1.
- Start number 30 was manually annotated 7 times for cluster K1.
- Start number 31 was manually annotated 27 times for cluster K1.
- Start number 34 was manually annotated 36 times for cluster K1.
- Start number 41 was manually annotated 1 time for cluster K1.

Info for manual annotations of cluster K3:

- Start number 34 was manually annotated 2 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 33 was manually annotated 17 times for cluster K4.

Info for manual annotations of cluster K6:

- Start number 31 was manually annotated 1 time for cluster K6.
- Start number 34 was manually annotated 19 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 12 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 33 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster L2:

- Start number 28 was manually annotated 3 times for cluster L2.

Info for manual annotations of cluster X:

- Start number 34 was manually annotated 2 times for cluster X.

Gene Information:

Gene: ActinUp_44 Start: 35120, Stop: 35401, Start Num: 23

Candidate Starts for ActinUp_44:

(Start: 23 @35120 has 14 MA's), (Start: 30 @35141 has 7 MA's), (Start: 31 @35144 has 29 MA's), (Start: 34 @35162 has 59 MA's), (37, 35183), (39, 35204), (Start: 41 @35216 has 1 MA's), (42, 35249), (48, 35315), (50, 35330), (56, 35378),

Gene: Adephagia_44 Start: 35138, Stop: 35398, Start Num: 30

Candidate Starts for Adephagia_44:

(Start: 23 @35117 has 14 MA's), (Start: 30 @35138 has 7 MA's), (Start: 31 @35141 has 29 MA's), (Start: 34 @35159 has 59 MA's), (37, 35180), (39, 35201), (Start: 41 @35213 has 1 MA's), (42, 35246), (48, 35312), (50, 35327), (56, 35375),

Gene: Adonis_44 Start: 35436, Stop: 35696, Start Num: 30

Candidate Starts for Adonis_44:

(Start: 23 @35415 has 14 MA's), (Start: 30 @35436 has 7 MA's), (Start: 31 @35439 has 29 MA's), (Start: 34 @35457 has 59 MA's), (37, 35478), (39, 35499), (Start: 41 @35511 has 1 MA's), (42, 35544), (48, 35610), (50, 35625), (61, 35685),

Gene: Ageofdapage_46 Start: 36088, Stop: 36369, Start Num: 23

Candidate Starts for Ageofdapage_46:

(Start: 23 @36088 has 14 MA's), (Start: 31 @36112 has 29 MA's), (Start: 34 @36130 has 59 MA's), (37, 36151), (39, 36172), (Start: 41 @36184 has 1 MA's), (42, 36217), (48, 36283), (50, 36298),

Gene: Amelie_39 Start: 34739, Stop: 34984, Start Num: 34

Candidate Starts for Amelie_39:

(Start: 34 @34739 has 59 MA's), (40, 34790), (42, 34826), (50, 34907), (53, 34937), (54, 34943),

Gene: Amgine_44 Start: 36236, Stop: 36478, Start Num: 34

Candidate Starts for Amgine_44:

(Start: 34 @36236 has 59 MA's), (48, 36389),

Gene: Aminay_47 Start: 36566, Stop: 36913, Start Num: 12

Candidate Starts for Aminay_47:

(Start: 12 @36566 has 1 MA's), (22, 36599), (25, 36608), (Start: 34 @36647 has 59 MA's), (53, 36845),

Gene: Amohnition_46 Start: 36255, Stop: 36491, Start Num: 34

Candidate Starts for Amohnition_46:

(9, 36156), (Start: 34 @36255 has 59 MA's), (48, 36408), (53, 36453), (59, 36480),

Gene: Anaya_46 Start: 35748, Stop: 36008, Start Num: 30

Candidate Starts for Anaya_46:

(Start: 23 @35727 has 14 MA's), (Start: 30 @35748 has 7 MA's), (Start: 31 @35751 has 29 MA's), (Start: 34 @35769 has 59 MA's), (37, 35790), (39, 35811), (Start: 41 @35823 has 1 MA's), (42, 35856), (48, 35922), (50, 35937), (61, 35997),

Gene: Angelica_44 Start: 35389, Stop: 35628, Start Num: 34

Candidate Starts for Angelica_44:

(Start: 23 @35347 has 14 MA's), (Start: 30 @35368 has 7 MA's), (Start: 31 @35371 has 29 MA's),
(Start: 34 @35389 has 59 MA's), (39, 35431), (Start: 41 @35443 has 1 MA's), (42, 35476), (48,
35542), (50, 35557), (56, 35605),

Gene: Apocalypse_47 Start: 36132, Stop: 36413, Start Num: 21

Candidate Starts for Apocalypse_47:

(Start: 21 @36132 has 5 MA's), (Start: 31 @36156 has 29 MA's), (Start: 34 @36174 has 59 MA's), (39,
36216), (Start: 41 @36228 has 1 MA's), (42, 36261), (48, 36327), (50, 36342), (56, 36390),

Gene: Applecrisp_46 Start: 35732, Stop: 35974, Start Num: 34

Candidate Starts for Applecrisp_46:

(Start: 34 @35732 has 59 MA's), (48, 35885),

Gene: Asayake_44 Start: 35474, Stop: 35713, Start Num: 34

Candidate Starts for Asayake_44:

(Start: 23 @35432 has 14 MA's), (Start: 30 @35453 has 7 MA's), (Start: 31 @35456 has 29 MA's),
(Start: 34 @35474 has 59 MA's), (37, 35495), (39, 35516), (Start: 41 @35528 has 1 MA's), (42,
35561), (48, 35627), (50, 35642), (56, 35690),

Gene: Atiba_44 Start: 35080, Stop: 35361, Start Num: 23

Candidate Starts for Atiba_44:

(Start: 23 @35080 has 14 MA's), (Start: 30 @35101 has 7 MA's), (Start: 31 @35104 has 29 MA's),
(Start: 34 @35122 has 59 MA's), (37, 35143), (39, 35164), (Start: 41 @35176 has 1 MA's), (42,
35209), (48, 35275), (50, 35290), (56, 35338),

Gene: BEEST_44 Start: 35474, Stop: 35713, Start Num: 34

Candidate Starts for BEEST_44:

(Start: 23 @35432 has 14 MA's), (Start: 30 @35453 has 7 MA's), (Start: 31 @35456 has 29 MA's),
(Start: 34 @35474 has 59 MA's), (37, 35495), (39, 35516), (Start: 41 @35528 has 1 MA's), (42,
35561), (48, 35627), (50, 35642), (56, 35690),

Gene: BGlluviae_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for BGlluviae_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's),
(Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42,
35364), (48, 35430), (50, 35445), (56, 35493),

Gene: BaghaKamala_43 Start: 34579, Stop: 34836, Start Num: 31

Candidate Starts for BaghaKamala_43:

(Start: 21 @34555 has 5 MA's), (Start: 31 @34579 has 29 MA's), (Start: 34 @34597 has 59 MA's), (39,
34639), (Start: 41 @34651 has 1 MA's), (42, 34684), (48, 34750), (50, 34765), (56, 34813),

Gene: BarrelRoll_44 Start: 35124, Stop: 35384, Start Num: 30

Candidate Starts for BarrelRoll_44:

(Start: 23 @35103 has 14 MA's), (Start: 30 @35124 has 7 MA's), (Start: 31 @35127 has 29 MA's),
(Start: 34 @35145 has 59 MA's), (37, 35166), (39, 35187), (Start: 41 @35199 has 1 MA's), (42,
35232), (48, 35298), (50, 35313), (56, 35361),

Gene: Beezoo_46 Start: 36078, Stop: 36359, Start Num: 23

Candidate Starts for Beezoo_46:

(Start: 23 @36078 has 14 MA's), (Start: 31 @36102 has 29 MA's), (Start: 34 @36120 has 59 MA's), (37, 36141), (39, 36162), (Start: 41 @36174 has 1 MA's), (42, 36207), (48, 36273), (50, 36288), (56, 36336),

Gene: Bella96_45 Start: 36011, Stop: 36250, Start Num: 34

Candidate Starts for Bella96_45:

(2, 35810), (3, 35816), (4, 35831), (10, 35915), (14, 35939), (Start: 34 @36011 has 59 MA's), (39, 36053), (Start: 41 @36065 has 1 MA's), (42, 36098), (48, 36164),

Gene: Belladonna_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for Belladonna_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's), (Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42, 35364), (48, 35430), (50, 35445), (56, 35493),

Gene: Bern_45 Start: 34192, Stop: 34431, Start Num: 34

Candidate Starts for Bern_45:

(1, 33979), (10, 34096), (Start: 21 @34144 has 5 MA's), (Start: 34 @34192 has 59 MA's), (39, 34234), (Start: 41 @34246 has 1 MA's), (42, 34279), (48, 34345), (50, 34360), (56, 34408),

Gene: Biglebops_39 Start: 34739, Stop: 34984, Start Num: 34

Candidate Starts for Biglebops_39:

(Start: 34 @34739 has 59 MA's), (40, 34790), (42, 34826), (50, 34907), (53, 34937), (54, 34943),

Gene: Blizzard_44 Start: 35432, Stop: 35713, Start Num: 23

Candidate Starts for Blizzard_44:

(Start: 23 @35432 has 14 MA's), (Start: 30 @35453 has 7 MA's), (Start: 31 @35456 has 29 MA's), (Start: 34 @35474 has 59 MA's), (37, 35495), (39, 35516), (Start: 41 @35528 has 1 MA's), (42, 35561), (48, 35627), (50, 35642), (56, 35690),

Gene: Bobquesha_50 Start: 35544, Stop: 35792, Start Num: 33

Candidate Starts for Bobquesha_50:

(10, 35448), (18, 35490), (Start: 33 @35544 has 18 MA's), (50, 35715), (51, 35718),

Gene: Boiiii_44 Start: 35458, Stop: 35715, Start Num: 31

Candidate Starts for Boiiii_44:

(Start: 23 @35434 has 14 MA's), (Start: 30 @35455 has 7 MA's), (Start: 31 @35458 has 29 MA's), (Start: 34 @35476 has 59 MA's), (37, 35497), (39, 35518), (Start: 41 @35530 has 1 MA's), (42, 35563), (48, 35629), (50, 35644), (56, 35692),

Gene: Boilgate_43 Start: 36328, Stop: 36564, Start Num: 33

Candidate Starts for Boilgate_43:

(Start: 33 @36328 has 18 MA's), (58, 36550),

Gene: Bryler_47 Start: 35116, Stop: 35352, Start Num: 34

Candidate Starts for Bryler_47:

(Start: 34 @35116 has 59 MA's), (40, 35167), (Start: 41 @35170 has 1 MA's), (46, 35236),

Gene: CREW_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for CREW_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's), (Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42, 35364), (48, 35430), (50, 35445), (56, 35493),

Gene: Cain_47 Start: 35104, Stop: 35340, Start Num: 34

Candidate Starts for Cain_47:

(Start: 34 @35104 has 59 MA's), (40, 35155), (Start: 41 @35158 has 1 MA's), (46, 35224),

Gene: CallaLilly_46 Start: 35182, Stop: 35439, Start Num: 31

Candidate Starts for CallaLilly_46:

(Start: 23 @35158 has 14 MA's), (Start: 30 @35179 has 7 MA's), (Start: 31 @35182 has 29 MA's),
(Start: 34 @35200 has 59 MA's), (37, 35221), (39, 35242), (Start: 41 @35254 has 1 MA's), (42,
35287), (48, 35353), (50, 35368), (56, 35416),

Gene: Capricorn_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for Capricorn_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's),
(Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42,
35364), (48, 35430), (50, 35445), (56, 35493),

Gene: CaseJules_45 Start: 35432, Stop: 35713, Start Num: 23

Candidate Starts for CaseJules_45:

(Start: 23 @35432 has 14 MA's), (Start: 30 @35453 has 7 MA's), (Start: 31 @35456 has 29 MA's),
(Start: 34 @35474 has 59 MA's), (37, 35495), (39, 35516), (Start: 41 @35528 has 1 MA's), (42,
35561), (48, 35627), (50, 35642), (56, 35690),

Gene: Chancellor_48 Start: 36169, Stop: 36417, Start Num: 33

Candidate Starts for Chancellor_48:

(10, 36073), (Start: 33 @36169 has 18 MA's), (50, 36340), (51, 36343),

Gene: Chavito_47 Start: 36519, Stop: 36767, Start Num: 34

Candidate Starts for Chavito_47:

(5, 36354), (Start: 21 @36471 has 5 MA's), (Start: 34 @36519 has 59 MA's), (Start: 41 @36573 has 1
MA's), (50, 36687), (53, 36717), (56, 36735),

Gene: Cheetobro_48 Start: 36166, Stop: 36414, Start Num: 33

Candidate Starts for Cheetobro_48:

(10, 36070), (Start: 33 @36166 has 18 MA's), (50, 36337), (51, 36340),

Gene: Clipper_48 Start: 35775, Stop: 36032, Start Num: 31

Candidate Starts for Clipper_48:

(Start: 31 @35775 has 29 MA's), (Start: 34 @35793 has 59 MA's), (39, 35835), (Start: 41 @35847 has
1 MA's), (42, 35880), (48, 35946), (50, 35961), (56, 36009),

Gene: CrimD_44 Start: 35400, Stop: 35639, Start Num: 34

Candidate Starts for CrimD_44:

(2, 35199), (3, 35205), (4, 35220), (10, 35304), (14, 35328), (Start: 21 @35352 has 5 MA's), (Start: 34
@35400 has 59 MA's), (39, 35442), (Start: 41 @35454 has 1 MA's), (42, 35487), (48, 35553), (50,
35568), (56, 35616),

Gene: Curiosium_47 Start: 34347, Stop: 34634, Start Num: 34

Candidate Starts for Curiosium_47:

(Start: 34 @34347 has 59 MA's), (Start: 41 @34401 has 1 MA's), (43, 34443), (45, 34452), (66, 34623),
(67, 34626),

Gene: Dalmuri_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for Dalmuri_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's), (Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42, 35364), (48, 35430), (50, 35445), (56, 35493),

Gene: DarthP_46 Start: 36145, Stop: 36378, Start Num: 34

Candidate Starts for DarthP_46:

(Start: 34 @36145 has 59 MA's), (Start: 41 @36199 has 1 MA's), (50, 36313), (53, 36343),

Gene: Dartin_46 Start: 35860, Stop: 36105, Start Num: 34

Candidate Starts for Dartin_46:

(Start: 34 @35860 has 59 MA's), (40, 35911), (Start: 41 @35914 has 1 MA's), (50, 36028), (53, 36058),

Gene: Deby_44 Start: 35405, Stop: 35644, Start Num: 34

Candidate Starts for Deby_44:

(Start: 23 @35363 has 14 MA's), (Start: 30 @35384 has 7 MA's), (Start: 31 @35387 has 29 MA's), (Start: 34 @35405 has 59 MA's), (39, 35447), (Start: 41 @35459 has 1 MA's), (42, 35492), (48, 35558), (50, 35573), (56, 35621),

Gene: Devera_48 Start: 35896, Stop: 36177, Start Num: 23

Candidate Starts for Devera_48:

(Start: 23 @35896 has 14 MA's), (Start: 31 @35920 has 29 MA's), (Start: 34 @35938 has 59 MA's), (37, 35959), (39, 35980), (Start: 41 @35992 has 1 MA's), (42, 36025), (48, 36091), (50, 36106),

Gene: Dole_47 Start: 35940, Stop: 36179, Start Num: 34

Candidate Starts for Dole_47:

(Start: 23 @35898 has 14 MA's), (Start: 31 @35922 has 29 MA's), (Start: 34 @35940 has 59 MA's), (37, 35961), (39, 35982), (Start: 41 @35994 has 1 MA's), (42, 36027), (48, 36093), (50, 36108),

Gene: DrHayes_45 Start: 36056, Stop: 36295, Start Num: 34

Candidate Starts for DrHayes_45:

(2, 35855), (3, 35861), (4, 35876), (10, 35960), (14, 35984), (Start: 34 @36056 has 59 MA's), (39, 36098), (Start: 41 @36110 has 1 MA's), (42, 36143), (48, 36209),

Gene: DrSeegs_41 Start: 34410, Stop: 34697, Start Num: 28

Candidate Starts for DrSeegs_41:

(24, 34392), (26, 34398), (Start: 28 @34410 has 3 MA's), (39, 34467), (49, 34587), (50, 34593), (52, 34605), (64, 34686),

Gene: Durfee_44 Start: 35432, Stop: 35713, Start Num: 23

Candidate Starts for Durfee_44:

(Start: 23 @35432 has 14 MA's), (Start: 30 @35453 has 7 MA's), (Start: 31 @35456 has 29 MA's), (Start: 34 @35474 has 59 MA's), (37, 35495), (39, 35516), (Start: 41 @35528 has 1 MA's), (42, 35561), (48, 35627), (50, 35642), (56, 35690),

Gene: Ekdilam_43 Start: 35707, Stop: 35940, Start Num: 34

Candidate Starts for Ekdilam_43:

(7, 35590), (9, 35608), (Start: 34 @35707 has 59 MA's),

Gene: Ellie_42 Start: 35424, Stop: 35666, Start Num: 34

Candidate Starts for Ellie_42:

(Start: 34 @35424 has 59 MA's), (48, 35577),

Gene: Emerson_45 Start: 35135, Stop: 35392, Start Num: 31

Candidate Starts for Emerson_45:

(Start: 23 @35111 has 14 MA's), (Start: 30 @35132 has 7 MA's), (Start: 31 @35135 has 29 MA's), (Start: 34 @35153 has 59 MA's), (37, 35174), (39, 35195), (Start: 41 @35207 has 1 MA's), (42, 35240), (48, 35306), (50, 35321), (56, 35369),

Gene: Eponine_50 Start: 36922, Stop: 37167, Start Num: 33

Candidate Starts for Eponine_50:

(10, 36826), (Start: 33 @36922 has 18 MA's), (51, 37096),

Gene: Fefferhead_44 Start: 35375, Stop: 35617, Start Num: 34

Candidate Starts for Fefferhead_44:

(Start: 34 @35375 has 59 MA's), (48, 35528),

Gene: Fionnbharth_48 Start: 36320, Stop: 36565, Start Num: 33

Candidate Starts for Fionnbharth_48:

(Start: 33 @36320 has 18 MA's), (51, 36494), (60, 36554),

Gene: Gaia_69 Start: 45400, Stop: 45705, Start Num: 34

Candidate Starts for Gaia_69:

(Start: 34 @45400 has 59 MA's), (Start: 41 @45454 has 1 MA's), (42, 45487), (50, 45568), (56, 45616),

Gene: Ganymede_45 Start: 35592, Stop: 35831, Start Num: 34

Candidate Starts for Ganymede_45:

(2, 35391), (3, 35397), (4, 35412), (10, 35496), (14, 35520), (Start: 21 @35544 has 5 MA's), (Start: 34 @35592 has 59 MA's), (39, 35634), (Start: 41 @35646 has 1 MA's), (42, 35679), (48, 35745), (50, 35760), (56, 35808),

Gene: Geraldini_46 Start: 36191, Stop: 36448, Start Num: 31

Candidate Starts for Geraldini_46:

(Start: 21 @36167 has 5 MA's), (Start: 31 @36191 has 29 MA's), (Start: 34 @36209 has 59 MA's), (39, 36251), (Start: 41 @36263 has 1 MA's), (42, 36296), (48, 36362), (50, 36377), (56, 36425),

Gene: HedwigODU_44 Start: 35144, Stop: 35401, Start Num: 31

Candidate Starts for HedwigODU_44:

(Start: 23 @35120 has 14 MA's), (Start: 30 @35141 has 7 MA's), (Start: 31 @35144 has 29 MA's), (Start: 34 @35162 has 59 MA's), (37, 35183), (39, 35204), (Start: 41 @35216 has 1 MA's), (42, 35249), (48, 35315), (50, 35330), (56, 35378),

Gene: Homura_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for Homura_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's), (Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42, 35364), (48, 35430), (50, 35445), (56, 35493),

Gene: Hurricane_47 Start: 35860, Stop: 36099, Start Num: 34

Candidate Starts for Hurricane_47:

(Start: 34 @35860 has 59 MA's), (46, 35980), (53, 36058), (59, 36085),

Gene: Hyperbowlee_44 Start: 35432, Stop: 35713, Start Num: 23

Candidate Starts for Hyperbowlee_44:

(Start: 23 @35432 has 14 MA's), (Start: 30 @35453 has 7 MA's), (Start: 31 @35456 has 29 MA's), (Start: 34 @35474 has 59 MA's), (37, 35495), (39, 35516), (Start: 41 @35528 has 1 MA's), (42,

35561), (48, 35627), (50, 35642), (56, 35690),

Gene: Illumine_47 Start: 35940, Stop: 36179, Start Num: 34

Candidate Starts for Illumine_47:

(Start: 23 @35898 has 14 MA's), (Start: 31 @35922 has 29 MA's), (Start: 34 @35940 has 59 MA's), (37, 35961), (39, 35982), (Start: 41 @35994 has 1 MA's), (42, 36027), (48, 36093), (50, 36108),

Gene: Inky_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for Inky_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's), (Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42, 35364), (48, 35430), (50, 35445), (56, 35493),

Gene: JAWS_44 Start: 35130, Stop: 35390, Start Num: 30

Candidate Starts for JAWS_44:

(Start: 23 @35109 has 14 MA's), (Start: 30 @35130 has 7 MA's), (Start: 31 @35133 has 29 MA's), (Start: 34 @35151 has 59 MA's), (37, 35172), (39, 35193), (Start: 41 @35205 has 1 MA's), (42, 35238), (48, 35304), (50, 35319), (56, 35367),

Gene: JF1_48 Start: 36237, Stop: 36485, Start Num: 33

Candidate Starts for JF1_48:

(Start: 33 @36237 has 18 MA's), (50, 36408), (51, 36411),

Gene: Jarvi_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for Jarvi_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's), (Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42, 35364), (48, 35430), (50, 35445), (56, 35493),

Gene: Jayhawk_45 Start: 35160, Stop: 35399, Start Num: 34

Candidate Starts for Jayhawk_45:

(Start: 23 @35118 has 14 MA's), (Start: 30 @35139 has 7 MA's), (Start: 31 @35142 has 29 MA's), (Start: 34 @35160 has 59 MA's), (37, 35181), (39, 35202), (Start: 41 @35214 has 1 MA's), (42, 35247), (48, 35313), (50, 35328), (56, 35376),

Gene: Jeckyll_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for Jeckyll_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's), (Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42, 35364), (48, 35430), (50, 35445), (56, 35493),

Gene: Joy99_44 Start: 35164, Stop: 35445, Start Num: 23

Candidate Starts for Joy99_44:

(Start: 23 @35164 has 14 MA's), (Start: 30 @35185 has 7 MA's), (Start: 31 @35188 has 29 MA's), (Start: 34 @35206 has 59 MA's), (37, 35227), (39, 35248), (Start: 41 @35260 has 1 MA's), (42, 35293), (48, 35359), (50, 35374), (56, 35422),

Gene: Juliette_50 Start: 36393, Stop: 36641, Start Num: 33

Candidate Starts for Juliette_50:

(10, 36297), (18, 36339), (Start: 33 @36393 has 18 MA's), (50, 36564), (51, 36567),

Gene: Keshu_48 Start: 35918, Stop: 36157, Start Num: 34

Candidate Starts for Keshu_48:

(Start: 34 @35918 has 59 MA's), (46, 36038), (53, 36116), (59, 36143),

Gene: Krueger_50 Start: 36110, Stop: 36346, Start Num: 34

Candidate Starts for Krueger_50:

(Start: 34 @36110 has 59 MA's), (40, 36161), (46, 36230), (48, 36263), (50, 36278), (52, 36290),

Gene: LastHope_47 Start: 34715, Stop: 34948, Start Num: 41

Candidate Starts for LastHope_47:

(Start: 34 @34661 has 59 MA's), (Start: 41 @34715 has 1 MA's), (45, 34766),

Gene: LaterM_45 Start: 36054, Stop: 36293, Start Num: 34

Candidate Starts for LaterM_45:

(Start: 23 @36012 has 14 MA's), (Start: 31 @36036 has 29 MA's), (Start: 34 @36054 has 59 MA's), (37, 36075), (39, 36096), (Start: 41 @36108 has 1 MA's), (42, 36141), (48, 36207), (50, 36222),

Gene: LilPharaoh_39 Start: 34467, Stop: 34712, Start Num: 34

Candidate Starts for LilPharaoh_39:

(Start: 34 @34467 has 59 MA's), (40, 34518), (42, 34554), (50, 34635), (53, 34665), (54, 34671),

Gene: LindNT_44 Start: 35343, Stop: 35582, Start Num: 34

Candidate Starts for LindNT_44:

(2, 35142), (3, 35148), (4, 35163), (10, 35247), (14, 35271), (Start: 34 @35343 has 59 MA's), (37, 35364), (39, 35385), (Start: 41 @35397 has 1 MA's), (42, 35430), (48, 35496), (50, 35511),

Gene: Llorens_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for Llorens_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's), (Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42, 35364), (48, 35430), (50, 35445), (56, 35493),

Gene: Lunahalos_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for Lunahalos_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's), (Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42, 35364), (48, 35430), (50, 35445), (56, 35493),

Gene: MacKat_39 Start: 30659, Stop: 30916, Start Num: 31

Candidate Starts for MacKat_39:

(6, 30554), (Start: 31 @30659 has 29 MA's), (Start: 34 @30677 has 59 MA's), (39, 30719), (Start: 41 @30731 has 1 MA's), (42, 30764), (48, 30830), (50, 30845), (56, 30893),

Gene: MalagasyRose_45 Start: 33899, Stop: 34168, Start Num: 32

Candidate Starts for MalagasyRose_45:

(Start: 32 @33899 has 1 MA's), (Start: 34 @33908 has 59 MA's), (38, 33947), (Start: 41 @33962 has 1 MA's), (43, 34004), (47, 34040), (55, 34106),

Gene: Malthus_49 Start: 36081, Stop: 36329, Start Num: 33

Candidate Starts for Malthus_49:

(10, 35985), (18, 36027), (Start: 33 @36081 has 18 MA's), (50, 36252), (51, 36255),

Gene: Marshawn_47 Start: 36184, Stop: 36432, Start Num: 34

Candidate Starts for Marshawn_47:

(Start: 34 @36184 has 59 MA's), (37, 36205), (Start: 41 @36238 has 1 MA's), (50, 36352), (53, 36382), (58, 36406),

Gene: McMater_46 Start: 35860, Stop: 36105, Start Num: 34

Candidate Starts for McMater_46:

(Start: 34 @35860 has 59 MA's), (40, 35911), (Start: 41 @35914 has 1 MA's), (50, 36028), (53, 36058),

Gene: Mdavu_40 Start: 34728, Stop: 34973, Start Num: 34

Candidate Starts for Mdavu_40:

(Start: 34 @34728 has 59 MA's), (40, 34779), (42, 34815), (50, 34896), (53, 34926), (54, 34932),

Gene: MeaningOfLife_45 Start: 36086, Stop: 36325, Start Num: 34

Candidate Starts for MeaningOfLife_45:

(2, 35885), (3, 35891), (4, 35906), (10, 35990), (14, 36014), (Start: 21 @36038 has 5 MA's), (Start: 34 @36086 has 59 MA's), (39, 36128), (Start: 41 @36140 has 1 MA's), (42, 36173), (48, 36239), (50, 36254), (56, 36302),

Gene: Megsy_45 Start: 35402, Stop: 35641, Start Num: 34

Candidate Starts for Megsy_45:

(2, 35201), (3, 35207), (4, 35222), (10, 35306), (14, 35330), (Start: 21 @35354 has 5 MA's), (Start: 34 @35402 has 59 MA's), (39, 35444), (Start: 41 @35456 has 1 MA's), (42, 35489), (48, 35555), (50, 35570), (56, 35618),

Gene: MissDaisy_46 Start: 35556, Stop: 35804, Start Num: 33

Candidate Starts for MissDaisy_46:

(16, 35493), (27, 35529), (29, 35535), (Start: 33 @35556 has 18 MA's), (50, 35727), (51, 35730),

Gene: Mitti_48 Start: 36257, Stop: 36505, Start Num: 33

Candidate Starts for Mitti_48:

(10, 36161), (Start: 33 @36257 has 18 MA's), (50, 36428), (51, 36431),

Gene: Murucutumbu_45 Start: 36105, Stop: 36386, Start Num: 23

Candidate Starts for Murucutumbu_45:

(Start: 23 @36105 has 14 MA's), (Start: 31 @36129 has 29 MA's), (Start: 34 @36147 has 59 MA's), (37, 36168), (39, 36189), (Start: 41 @36201 has 1 MA's), (42, 36234), (48, 36300), (50, 36315),

Gene: Mynx_45 Start: 35478, Stop: 35717, Start Num: 34

Candidate Starts for Mynx_45:

(Start: 23 @35436 has 14 MA's), (Start: 30 @35457 has 7 MA's), (Start: 31 @35460 has 29 MA's), (Start: 34 @35478 has 59 MA's), (37, 35499), (39, 35520), (Start: 41 @35532 has 1 MA's), (42, 35565), (48, 35631), (50, 35646), (56, 35694),

Gene: Nebkiss_69 Start: 44011, Stop: 44316, Start Num: 34

Candidate Starts for Nebkiss_69:

(Start: 34 @44011 has 59 MA's), (Start: 41 @44065 has 1 MA's), (42, 44098), (50, 44179), (56, 44227),

Gene: Neighly_43 Start: 34451, Stop: 34732, Start Num: 36

Candidate Starts for Neighly_43:

(20, 34385), (36, 34451), (45, 34544), (49, 34601), (50, 34607), (52, 34619), (63, 34700), (65, 34712),

Gene: Nergal_41 Start: 33794, Stop: 34084, Start Num: 31

Candidate Starts for Nergal_41:

(Start: 31 @33794 has 29 MA's), (Start: 33 @33809 has 18 MA's), (Start: 41 @33866 has 1 MA's), (42, 33899), (44, 33911), (45, 33917), (46, 33932), (51, 33983), (53, 34010), (57, 34028),

Gene: Niklas_46 Start: 35918, Stop: 36166, Start Num: 34

Candidate Starts for Niklas_46:

(Start: 34 @35918 has 59 MA's), (Start: 41 @35972 has 1 MA's), (50, 36086), (53, 36116), (56, 36134),

Gene: November_46 Start: 35863, Stop: 36099, Start Num: 34

Candidate Starts for November_46:

(9, 35764), (Start: 34 @35863 has 59 MA's), (48, 36016), (53, 36061), (59, 36088),

Gene: Nutello_39 Start: 34739, Stop: 34984, Start Num: 34

Candidate Starts for Nutello_39:

(Start: 34 @34739 has 59 MA's), (40, 34790), (42, 34826), (50, 34907), (53, 34937), (54, 34943),

Gene: OmniCritical_47 Start: 36066, Stop: 36314, Start Num: 33

Candidate Starts for OmniCritical_47:

(10, 35970), (18, 36012), (Start: 33 @36066 has 18 MA's), (50, 36237), (51, 36240),

Gene: Padfoot_44 Start: 35474, Stop: 35713, Start Num: 34

Candidate Starts for Padfoot_44:

(Start: 23 @35432 has 14 MA's), (Start: 30 @35453 has 7 MA's), (Start: 31 @35456 has 29 MA's), (Start: 34 @35474 has 59 MA's), (37, 35495), (39, 35516), (Start: 41 @35528 has 1 MA's), (42, 35561), (48, 35627), (50, 35642), (56, 35690),

Gene: Padpat_45 Start: 35153, Stop: 35392, Start Num: 34

Candidate Starts for Padpat_45:

(Start: 23 @35111 has 14 MA's), (Start: 30 @35132 has 7 MA's), (Start: 31 @35135 has 29 MA's), (Start: 34 @35153 has 59 MA's), (37, 35174), (39, 35195), (Start: 41 @35207 has 1 MA's), (42, 35240), (48, 35306), (50, 35321), (56, 35369),

Gene: Patt_45 Start: 35280, Stop: 35528, Start Num: 33

Candidate Starts for Patt_45:

(16, 35217), (27, 35253), (29, 35259), (Start: 33 @35280 has 18 MA's), (50, 35451), (51, 35454),

Gene: Peanam_46 Start: 35828, Stop: 36124, Start Num: 21

Candidate Starts for Peanam_46:

(13, 35798), (Start: 21 @35828 has 5 MA's), (Start: 34 @35876 has 59 MA's), (Start: 41 @35930 has 1 MA's), (50, 36044), (53, 36074), (56, 36092),

Gene: Peel_44 Start: 35261, Stop: 35518, Start Num: 31

Candidate Starts for Peel_44:

(Start: 23 @35237 has 14 MA's), (Start: 30 @35258 has 7 MA's), (Start: 31 @35261 has 29 MA's), (Start: 34 @35279 has 59 MA's), (37, 35300), (39, 35321), (Start: 41 @35333 has 1 MA's), (42, 35366), (48, 35432), (50, 35447), (56, 35495),

Gene: PhelpsODU_46 Start: 35137, Stop: 35373, Start Num: 34

Candidate Starts for PhelpsODU_46:

(8, 35029), (Start: 34 @35137 has 59 MA's), (40, 35188), (Start: 41 @35191 has 1 MA's), (46, 35257), (48, 35290),

Gene: Phrank_47 Start: 35094, Stop: 35330, Start Num: 34

Candidate Starts for Phrank_47:

(Start: 21 @35046 has 5 MA's), (Start: 34 @35094 has 59 MA's), (40, 35145), (Start: 41 @35148 has 1 MA's), (46, 35214),

Gene: Phrappuccino_41 Start: 23047, Stop: 23388, Start Num: 21

Candidate Starts for Phrappuccino_41:

(Start: 21 @23047 has 5 MA's), (Start: 34 @23095 has 59 MA's), (35, 23110), (Start: 41 @23149 has 1 MA's), (50, 23266), (56, 23314), (62, 23344),

Gene: Piatt_44 Start: 35432, Stop: 35713, Start Num: 23

Candidate Starts for Piatt_44:

(Start: 23 @35432 has 14 MA's), (Start: 30 @35453 has 7 MA's), (Start: 31 @35456 has 29 MA's), (Start: 34 @35474 has 59 MA's), (37, 35495), (39, 35516), (Start: 41 @35528 has 1 MA's), (42, 35561), (48, 35627), (50, 35642), (56, 35690),

Gene: Pokerus_43 Start: 35182, Stop: 35439, Start Num: 31

Candidate Starts for Pokerus_43:

(Start: 21 @35158 has 5 MA's), (Start: 31 @35182 has 29 MA's), (Start: 34 @35200 has 59 MA's), (39, 35242), (Start: 41 @35254 has 1 MA's), (42, 35287), (48, 35353), (50, 35368), (56, 35416),

Gene: Prithvi_45 Start: 35343, Stop: 35582, Start Num: 34

Candidate Starts for Prithvi_45:

(2, 35142), (3, 35148), (4, 35163), (10, 35247), (14, 35271), (Start: 34 @35343 has 59 MA's), (37, 35364), (39, 35385), (Start: 41 @35397 has 1 MA's), (42, 35430), (48, 35496), (50, 35511),

Gene: QuincyRose_43 Start: 35592, Stop: 35831, Start Num: 34

Candidate Starts for QuincyRose_43:

(2, 35391), (3, 35397), (4, 35412), (10, 35496), (14, 35520), (Start: 21 @35544 has 5 MA's), (Start: 34 @35592 has 59 MA's), (39, 35634), (Start: 41 @35646 has 1 MA's), (42, 35679), (48, 35745), (50, 35760), (56, 35808),

Gene: Ramen_44 Start: 35122, Stop: 35403, Start Num: 23

Candidate Starts for Ramen_44:

(Start: 23 @35122 has 14 MA's), (Start: 30 @35143 has 7 MA's), (Start: 31 @35146 has 29 MA's), (Start: 34 @35164 has 59 MA's), (37, 35185), (39, 35206), (Start: 41 @35218 has 1 MA's), (42, 35251), (48, 35317), (50, 35332), (56, 35380),

Gene: Rapunzel97_44 Start: 35142, Stop: 35399, Start Num: 31

Candidate Starts for Rapunzel97_44:

(Start: 23 @35118 has 14 MA's), (Start: 30 @35139 has 7 MA's), (Start: 31 @35142 has 29 MA's), (Start: 34 @35160 has 59 MA's), (37, 35181), (39, 35202), (Start: 41 @35214 has 1 MA's), (42, 35247), (48, 35313), (50, 35328), (56, 35376),

Gene: Reptar3000_46 Start: 35271, Stop: 35519, Start Num: 33

Candidate Starts for Reptar3000_46:

(10, 35175), (18, 35217), (Start: 33 @35271 has 18 MA's), (50, 35442), (51, 35445),

Gene: Richo_46 Start: 35860, Stop: 36105, Start Num: 34

Candidate Starts for Richo_46:

(Start: 34 @35860 has 59 MA's), (40, 35911), (Start: 41 @35914 has 1 MA's), (50, 36028), (53, 36058),

Gene: Rosmarinus_44 Start: 35247, Stop: 35504, Start Num: 31

Candidate Starts for Rosmarinus_44:

(Start: 23 @35223 has 14 MA's), (Start: 30 @35244 has 7 MA's), (Start: 31 @35247 has 29 MA's), (Start: 34 @35265 has 59 MA's), (37, 35286), (39, 35307), (Start: 41 @35319 has 1 MA's), (42, 35352), (48, 35418), (50, 35433), (56, 35481),

Gene: SamuelLPlaqson_45 Start: 36056, Stop: 36295, Start Num: 34

Candidate Starts for SamuelLPlaqson_45:

(2, 35855), (3, 35861), (4, 35876), (10, 35960), (14, 35984), (Start: 34 @36056 has 59 MA's), (39, 36098), (Start: 41 @36110 has 1 MA's), (42, 36143), (48, 36209),

Gene: Settecandela_41 Start: 23047, Stop: 23388, Start Num: 21

Candidate Starts for Settecandela_41:

(Start: 21 @23047 has 5 MA's), (Start: 34 @23095 has 59 MA's), (35, 23110), (Start: 41 @23149 has 1 MA's), (50, 23266), (56, 23314), (62, 23344),

Gene: Shadow1_49 Start: 36255, Stop: 36491, Start Num: 34

Candidate Starts for Shadow1_49:

(Start: 34 @36255 has 59 MA's), (40, 36306), (46, 36375), (52, 36435),

Gene: Shaobing_46 Start: 35893, Stop: 36141, Start Num: 34

Candidate Starts for Shaobing_46:

(Start: 34 @35893 has 59 MA's), (Start: 41 @35947 has 1 MA's), (50, 36061), (53, 36091), (56, 36109),

Gene: ShiaSurprise_45 Start: 35474, Stop: 35713, Start Num: 34

Candidate Starts for ShiaSurprise_45:

(Start: 23 @35432 has 14 MA's), (Start: 30 @35453 has 7 MA's), (Start: 31 @35456 has 29 MA's), (Start: 34 @35474 has 59 MA's), (37, 35495), (39, 35516), (Start: 41 @35528 has 1 MA's), (42, 35561), (48, 35627), (50, 35642), (56, 35690),

Gene: SirPhilip_46 Start: 36474, Stop: 36710, Start Num: 34

Candidate Starts for SirPhilip_46:

(15, 36405), (Start: 21 @36426 has 5 MA's), (Start: 34 @36474 has 59 MA's), (40, 36525), (Start: 41 @36528 has 1 MA's), (48, 36627), (53, 36672),

Gene: Slarp_48 Start: 36169, Stop: 36417, Start Num: 33

Candidate Starts for Slarp_48:

(10, 36073), (Start: 33 @36169 has 18 MA's), (50, 36340), (51, 36343),

Gene: Slimphazie_44 Start: 35142, Stop: 35399, Start Num: 31

Candidate Starts for Slimphazie_44:

(Start: 23 @35118 has 14 MA's), (Start: 30 @35139 has 7 MA's), (Start: 31 @35142 has 29 MA's), (Start: 34 @35160 has 59 MA's), (37, 35181), (39, 35202), (Start: 41 @35214 has 1 MA's), (42, 35247), (48, 35313), (50, 35328), (56, 35376),

Gene: Spock_44 Start: 35260, Stop: 35517, Start Num: 31

Candidate Starts for Spock_44:

(Start: 23 @35236 has 14 MA's), (Start: 30 @35257 has 7 MA's), (Start: 31 @35260 has 29 MA's), (Start: 34 @35278 has 59 MA's), (37, 35299), (39, 35320), (Start: 41 @35332 has 1 MA's), (42, 35365), (48, 35431), (50, 35446), (56, 35494),

Gene: Stinson_45 Start: 35667, Stop: 35906, Start Num: 34

Candidate Starts for Stinson_45:

(Start: 23 @35625 has 14 MA's), (Start: 31 @35649 has 29 MA's), (Start: 34 @35667 has 59 MA's), (37, 35688), (39, 35709), (Start: 41 @35721 has 1 MA's), (42, 35754), (48, 35820), (50, 35835),

Gene: Sulley_44 Start: 35383, Stop: 35643, Start Num: 30

Candidate Starts for Sulley_44:

(Start: 23 @35362 has 14 MA's), (Start: 30 @35383 has 7 MA's), (Start: 31 @35386 has 29 MA's), (Start: 34 @35404 has 59 MA's), (39, 35446), (Start: 41 @35458 has 1 MA's), (42, 35491), (48, 35557), (50, 35572), (56, 35620),

Gene: Sunflower1121_50 Start: 36356, Stop: 36592, Start Num: 34

Candidate Starts for Sunflower1121_50:

(Start: 34 @36356 has 59 MA's), (40, 36407), (46, 36476), (50, 36524), (52, 36536),

Gene: Syra333_49 Start: 36023, Stop: 36259, Start Num: 34

Candidate Starts for Syra333_49:

(Start: 34 @36023 has 59 MA's), (40, 36074), (46, 36143), (52, 36203),

Gene: TClif_48 Start: 36322, Stop: 36570, Start Num: 34

Candidate Starts for TClif_48:

(Start: 34 @36322 has 59 MA's), (42, 36409), (48, 36475), (50, 36490), (53, 36520),

Gene: Tachez_44 Start: 35101, Stop: 35361, Start Num: 30

Candidate Starts for Tachez_44:

(Start: 23 @35080 has 14 MA's), (Start: 30 @35101 has 7 MA's), (Start: 31 @35104 has 29 MA's), (Start: 34 @35122 has 59 MA's), (37, 35143), (39, 35164), (Start: 41 @35176 has 1 MA's), (42, 35209), (48, 35275), (50, 35290), (56, 35338),

Gene: Taquito_48 Start: 36416, Stop: 36664, Start Num: 33

Candidate Starts for Taquito_48:

(10, 36320), (Start: 33 @36416 has 18 MA's), (50, 36587), (51, 36590),

Gene: Tierra_47 Start: 35905, Stop: 36141, Start Num: 34

Candidate Starts for Tierra_47:

(Start: 34 @35905 has 59 MA's), (40, 35956), (Start: 41 @35959 has 1 MA's), (46, 36025),

Gene: TiniBug_45 Start: 36052, Stop: 36291, Start Num: 34

Candidate Starts for TiniBug_45:

(2, 35851), (3, 35857), (4, 35872), (10, 35956), (14, 35980), (Start: 34 @36052 has 59 MA's), (39, 36094), (Start: 41 @36106 has 1 MA's), (48, 36205), (50, 36220),

Gene: Tiri_45 Start: 35452, Stop: 35691, Start Num: 34

Candidate Starts for Tiri_45:

(2, 35251), (3, 35257), (4, 35272), (10, 35356), (14, 35380), (Start: 21 @35404 has 5 MA's), (Start: 34 @35452 has 59 MA's), (39, 35494), (Start: 41 @35506 has 1 MA's), (42, 35539), (48, 35605), (50, 35620), (56, 35668),

Gene: Topper_44 Start: 35259, Stop: 35516, Start Num: 31

Candidate Starts for Topper_44:

(Start: 23 @35235 has 14 MA's), (Start: 30 @35256 has 7 MA's), (Start: 31 @35259 has 29 MA's), (Start: 34 @35277 has 59 MA's), (37, 35298), (39, 35319), (Start: 41 @35331 has 1 MA's), (42, 35364), (48, 35430), (50, 35445), (56, 35493),

Gene: Tourach_41 Start: 34425, Stop: 34712, Start Num: 28

Candidate Starts for Tourach_41:

(11, 34365), (Start: 28 @34425 has 3 MA's), (39, 34482), (46, 34560), (49, 34602), (50, 34608), (52, 34620),

Gene: TreyKay_45 Start: 35343, Stop: 35582, Start Num: 34

Candidate Starts for TreyKay_45:

(2, 35142), (3, 35148), (4, 35163), (10, 35247), (14, 35271), (Start: 34 @35343 has 59 MA's), (37, 35364), (39, 35385), (Start: 41 @35397 has 1 MA's), (42, 35430), (48, 35496), (50, 35511),

Gene: TruffulaTree_44 Start: 35138, Stop: 35395, Start Num: 31

Candidate Starts for TruffulaTree_44:

(Start: 23 @35114 has 14 MA's), (Start: 30 @35135 has 7 MA's), (Start: 31 @35138 has 29 MA's), (Start: 34 @35156 has 59 MA's), (37, 35177), (39, 35198), (Start: 41 @35210 has 1 MA's), (42, 35243), (48, 35309), (50, 35324), (56, 35372),

Gene: Twitch_44 Start: 35261, Stop: 35518, Start Num: 31

Candidate Starts for Twitch_44:

(Start: 23 @35237 has 14 MA's), (Start: 30 @35258 has 7 MA's), (Start: 31 @35261 has 29 MA's), (Start: 34 @35279 has 59 MA's), (37, 35300), (39, 35321), (Start: 41 @35333 has 1 MA's), (42, 35366), (48, 35432), (50, 35447), (56, 35495),

Gene: Urkel_45 Start: 36056, Stop: 36295, Start Num: 34

Candidate Starts for Urkel_45:

(2, 35855), (3, 35861), (4, 35876), (10, 35960), (14, 35984), (Start: 34 @36056 has 59 MA's), (39, 36098), (Start: 41 @36110 has 1 MA's), (42, 36143), (48, 36209),

Gene: Validus_48 Start: 35897, Stop: 36190, Start Num: 21

Candidate Starts for Validus_48:

(Start: 21 @35897 has 5 MA's), (Start: 34 @35945 has 59 MA's), (40, 35996), (Start: 41 @35999 has 1 MA's), (50, 36113), (53, 36143), (58, 36167),

Gene: Veliki_44 Start: 35178, Stop: 35435, Start Num: 31

Candidate Starts for Veliki_44:

(Start: 23 @35154 has 14 MA's), (Start: 30 @35175 has 7 MA's), (Start: 31 @35178 has 29 MA's), (Start: 34 @35196 has 59 MA's), (37, 35217), (39, 35238), (Start: 41 @35250 has 1 MA's), (42, 35283), (48, 35349), (50, 35364), (56, 35412),

Gene: Vetric_41 Start: 34417, Stop: 34704, Start Num: 28

Candidate Starts for Vetric_41:

(24, 34399), (26, 34405), (Start: 28 @34417 has 3 MA's), (39, 34474), (49, 34594), (50, 34600), (52, 34612), (64, 34693),

Gene: Wintermute_48 Start: 36318, Stop: 36566, Start Num: 33

Candidate Starts for Wintermute_48:

(10, 36222), (17, 36258), (Start: 33 @36318 has 18 MA's), (50, 36489), (51, 36492),

Gene: Ximenita_50 Start: 36194, Stop: 36445, Start Num: 31

Candidate Starts for Ximenita_50:

(19, 36161), (Start: 30 @36191 has 7 MA's), (Start: 31 @36194 has 29 MA's), (Start: 34 @36209 has 59 MA's), (Start: 41 @36263 has 1 MA's), (46, 36329), (50, 36377), (52, 36389),

Gene: Y10_47 Start: 36237, Stop: 36485, Start Num: 33

Candidate Starts for Y10_47:

(Start: 33 @36237 has 18 MA's), (50, 36408), (51, 36411),

Gene: Y2_47 Start: 36237, Stop: 36485, Start Num: 33

Candidate Starts for Y2_47:

(Start: 33 @36237 has 18 MA's), (50, 36408), (51, 36411),

Gene: YoureAdopted_43 Start: 35343, Stop: 35600, Start Num: 31

Candidate Starts for YoureAdopted_43:

(Start: 23 @35319 has 14 MA's), (Start: 30 @35340 has 7 MA's), (Start: 31 @35343 has 29 MA's),
(Start: 34 @35361 has 59 MA's), (37, 35382), (39, 35403), (Start: 41 @35415 has 1 MA's), (42,
35448), (48, 35514), (50, 35529), (56, 35577),

Gene: Yuna_50 Start: 36971, Stop: 37204, Start Num: 34

Candidate Starts for Yuna_50:

(Start: 34 @36971 has 59 MA's), (46, 37091), (50, 37139), (52, 37151),

Gene: Zabiza_39 Start: 31425, Stop: 31706, Start Num: 23

Candidate Starts for Zabiza_39:

(Start: 23 @31425 has 14 MA's), (Start: 30 @31446 has 7 MA's), (Start: 31 @31449 has 29 MA's),
(Start: 34 @31467 has 59 MA's), (37, 31488), (39, 31509), (Start: 41 @31521 has 1 MA's), (42,
31554), (48, 31620), (50, 31635), (56, 31683),

Gene: Zavala_45 Start: 35438, Stop: 35677, Start Num: 34

Candidate Starts for Zavala_45:

(Start: 30 @35417 has 7 MA's), (Start: 31 @35420 has 29 MA's), (Start: 34 @35438 has 59 MA's), (37,
35459), (39, 35480), (Start: 41 @35492 has 1 MA's), (42, 35525), (48, 35591), (50, 35606), (56,
35654),