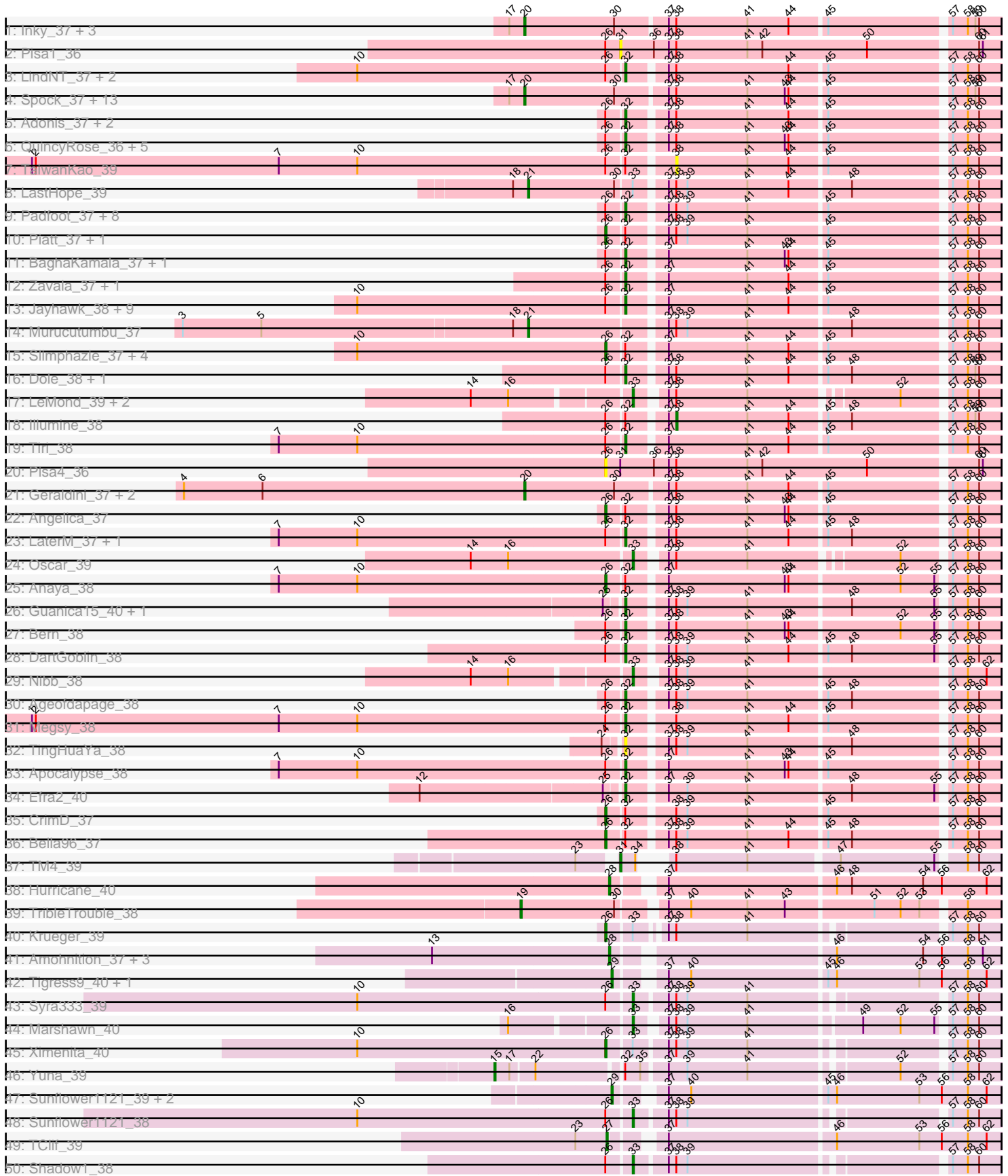


Pham 304845



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 304845 Report

This analysis was run 06/08/26 on database version 649.

Pham number 304845 has 117 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Inky_37, Jeckyll_37, Llorens_37, Jarvi_37
- Track 2 : Pisa1_36
- Track 3 : LindNT_37, TreyKay_37, Prithvi_37
- Track 4 : Spock_37, Peel_37, Joy99_37, Belladonna_37, Capricorn_37, BGIlluvia_37, CREW_37, CallaLilly_37, Topper_37, Dalmuri_37, Twitch_37, Rosmarinus_37, Lunahalos_37, Homura_37
- Track 5 : Adonis_37, JAWS_37, Ramen_37
- Track 6 : QuincyRose_36, Deby_37, Clipper_38, Sulley_37, Ganymede_38, MeaningOfLife_37
- Track 7 : TaiwanKao_39
- Track 8 : LastHope_39
- Track 9 : Padfoot_37, Asayake_37, BEEST_37, AlishaPH_37, ShiaSurprise_38, CaseJules_38, Blizzard_37, Durfee_37, Boiii_37
- Track 10 : Piatt_37, Hyperbowlee_37
- Track 11 : BaghaKamala_37, CheetoDust_37
- Track 12 : Zavala_37, Mynx_37
- Track 13 : Jayhawk_38, HedwigODU_37, Beezoo_37, ActinUp_37, Veliki_37, Rapunzel97_37, Atiba_37, Padpat_38, TruffulaTree_37, Zabiza_37
- Track 14 : Murucutumbu_37
- Track 15 : Slimphazie_37, Tachez_37, Emerson_38, BarrelRoll_37, Adephagia_37
- Track 16 : Dole_38, Devera_39
- Track 17 : LeMond_39, KiSi_39, Scarlett_39
- Track 18 : Illumine_38
- Track 19 : Tiri_38
- Track 20 : Pisa4_36
- Track 21 : Geraldini_37, Pokerus_36, YoureAdopted_36
- Track 22 : Angelica_37
- Track 23 : LaterM_37, Stinson_38
- Track 24 : Oscar_39
- Track 25 : Anaya_38
- Track 26 : Guanica15_40, Yunkel11_40
- Track 27 : Bern_38
- Track 28 : DartGoblin_38
- Track 29 : Nibb_38
- Track 30 : Ageofdapage_38
- Track 31 : Megsy_38
- Track 32 : TingHuaYa_38

- Track 33 : Apocalypse_38
- Track 34 : Efra2_40
- Track 35 : CrimD_37
- Track 36 : Bella96_37
- Track 37 : TM4_39
- Track 38 : Hurricane_40
- Track 39 : TribbleTrouble_38
- Track 40 : Krueger_39
- Track 41 : Amohndition_37, DarthP_37, November_36, Hammy_37
- Track 42 : Tigress9_40, Krueger_40
- Track 43 : Syra333_39
- Track 44 : Marshawn_40
- Track 45 : Ximenita_40
- Track 46 : Yuna_39
- Track 47 : Sunflower1121_39, Syra333_40, Shadow1_39
- Track 48 : Sunflower1121_38
- Track 49 : TClif_39
- Track 50 : Shadow1_38
- Track 51 : Tigress9_39
- Track 52 : Ximenita_41
- Track 53 : SirPhilip_37
- Track 54 : Lavahound_36
- Track 55 : Ekdilam_35

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

The start number called the most often in the published annotations is 32, it was called in 49 of the 113 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp_37, Adonis_37, Ageofdapage_38, AlishaPH_37, Apocalypse_38, Asayake_37, Atiba_37, BEEST_37, BaghaKamala_37, Beezoo_37, Bern_38, Blizzard_37, Boiiii_37, CaseJules_38, CheetoDust_37, Clipper_38, DartGoblin_38, Deby_37, Devera_39, Dole_38, Durfee_37, Efra2_40, Ganymede_38, Guanica15_40, HedwigODU_37, JAWS_37, Jayhawk_38, LaterM_37, LindNT_37, MeaningOfLife_37, Megsy_38, Mynx_37, Padfoot_37, Padpat_38, Prithvi_37, QuincyRose_36, Ramen_37, Rapunzel97_37, ShiaSurprise_38, SirPhilip_37, Stinson_38, Sulley_37, TingHuaYa_38, Tiri_38, TreyKay_37, TruffulaTree_37, Veliki_37, Yunkel11_40, Zabiza_37, Zavala_37,

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

- Adephagia_37, Anaya_38, Angelica_37, BarrelRoll_37, Bella96_37, CrimD_37, Emerson_38, Hyperbowlee_37, Illumine_38, Piatt_37, Slimphazie_37, Tachez_37, TaiwanKao_39, Yuna_39,

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

- Amohndition_37, BGlluviae_37, Belladonna_37, CREW_37, CallaLilly_37, Capricorn_37, Dalmuri_37, DarthP_37, Ekdilam_35, Geraldini_37, Hammy_37, Homura_37, Hurricane_40, Inky_37, Jarvi_37, Jeckyll_37, Joy99_37, KiSi_39, Krueger_39, Krueger_40, LastHope_39, Lavahound_36, LeMond_39, Llorens_37,

Lunahalos_37, Marshawn_40, Murucutumbu_37, Nibb_38, November_36, Oscar_39, Peel_37, Pisa1_36, Pisa4_36, Pokerus_36, Rosmarinus_37, Scarlett_39, Shadow1_38, Shadow1_39, Spock_37, Sunflower1121_38, Sunflower1121_39, Syra333_39, Syra333_40, TClif_39, TM4_39, Tigress9_39, Tigress9_40, Topper_37, TripleTrouble_38, Twitch_37, Ximenita_40, Ximenita_41, YoureAdopted_36,

Summary by start number:

Start 15:

- Found in 1 of 117 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yuna_39 (K6),

Start 19:

- Found in 1 of 117 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TripleTrouble_38 (K3),

Start 20:

- Found in 21 of 117 (17.9%) of genes in pham
- Manual Annotations of this start: 21 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BGlluviae_37 (K1), Belladonna_37 (K1), CREW_37 (K1), CallaLilly_37 (K1), Capricorn_37 (K1), Dalmuri_37 (K1), Geraldini_37 (K1), Homura_37 (K1), Inky_37 (K1), Jarvi_37 (K1), Jeckyll_37 (K1), Joy99_37 (K1), Llorens_37 (K1), Lunahalos_37 (K1), Peel_37 (K1), Pokerus_36 (K1), Rosmarinus_37 (K1), Spock_37 (K1), Topper_37 (K1), Twitch_37 (K1), YoureAdopted_36 (K1),

Start 21:

- Found in 2 of 117 (1.7%) of genes in pham
- Manual Annotations of this start: 2 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LastHope_39 (K1), Murucutumbu_37 (K1),

Start 26:

- Found in 66 of 117 (56.4%) of genes in pham
- Manual Annotations of this start: 13 of 113
- Called 21.2% of time when present
- Phage (with cluster) where this start called: Adephagia_37 (K1), Anaya_38 (K1), Angelica_37 (K1), BarrelRoll_37 (K1), Bella96_37 (K1), CrimD_37 (K1), Emerson_38 (K1), Hyperbowlee_37 (K1), Krueger_39 (K6), Piatt_37 (K1), Pisa4_36 (K1), Slimphazie_37 (K1), Tachez_37 (K1), Ximenita_40 (K6),

Start 27:

- Found in 1 of 117 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TClif_39 (K6),

Start 28:

- Found in 6 of 117 (5.1%) of genes in pham
- Manual Annotations of this start: 6 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amohnition_37 (K6), DarthP_37 (K6), Ekdilam_35 (K6), Hammy_37 (K6), Hurricane_40 (K3), November_36 (K6),

Start 29:

- Found in 6 of 117 (5.1%) of genes in pham
- Manual Annotations of this start: 6 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Krueger_40 (K6), Shadow1_39 (K6), Sunflower1121_39 (K6), Syra333_40 (K6), Tigress9_40 (K6), Ximenita_41 (K6),

Start 31:

- Found in 3 of 117 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 113
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Pisa1_36 (K1), TM4_39 (K2),

Start 32:

- Found in 64 of 117 (54.7%) of genes in pham
- Manual Annotations of this start: 49 of 113
- Called 78.1% of time when present
- Phage (with cluster) where this start called: ActinUp_37 (K1), Adonis_37 (K1), Ageofdapage_38 (K1), AlishaPH_37 (K1), Apocalypse_38 (K1), Asayake_37 (K1), Atiba_37 (K1), BEEST_37 (K1), BaghaKamala_37 (K1), Beezoo_37 (K1), Bern_38 (K1), Blizzard_37 (K1), Boiiii_37 (K1), CaseJules_38 (K1), CheetoDust_37 (K1), Clipper_38 (K1), DartGoblin_38 (K1), Deby_37 (K1), Devera_39 (K1), Dole_38 (K1), Durfee_37 (K1), Efra2_40 (K1), Ganymede_38 (K1), Guanica15_40 (K1), HedwigODU_37 (K1), JAWS_37 (K1), Jayhawk_38 (K1), LaterM_37 (K1), LindNT_37 (K1), MeaningOfLife_37 (K1), Megsy_38 (K1), Mynx_37 (K1), Padfoot_37 (K1), Padpat_38 (K1), Prithvi_37 (K1), QuincyRose_36 (K1), Ramen_37 (K1), Rapunzel97_37 (K1), ShiaSurprise_38 (K1), SirPhilip_37 (K6), Stinson_38 (K1), Sulley_37 (K1), TingHuaYa_38 (K1), Tiri_38 (K1), TreyKay_37 (K1), TruffulaTree_37 (K1), Veliki_37 (K1), Yunkel11_40 (K1), Zabiza_37 (K1), Zavala_37 (K1),

Start 33:

- Found in 14 of 117 (12.0%) of genes in pham
- Manual Annotations of this start: 11 of 113
- Called 78.6% of time when present
- Phage (with cluster) where this start called: KiSi_39 (K1), Lavahound_36 (K6), LeMond_39 (K1), Marshawn_40 (K6), Nibb_38 (K1), Oscar_39 (K1), Scarlett_39 (K1), Shadow1_38 (K6), Sunflower1121_38 (K6), Syra333_39 (K6), Tigress9_39 (K6),

Start 38:

- Found in 79 of 117 (67.5%) of genes in pham
- Manual Annotations of this start: 1 of 113
- Called 2.5% of time when present
- Phage (with cluster) where this start called: Illumine_38 (K1), TaiwanKao_39 (K1),

Summary by clusters:

There are 4 clusters represented in this pham: K3, K2, K1, K6,

Info for manual annotations of cluster K1:

- Start number 20 was manually annotated 21 times for cluster K1.
- Start number 21 was manually annotated 2 times for cluster K1.
- Start number 26 was manually annotated 11 times for cluster K1.
- Start number 32 was manually annotated 48 times for cluster K1.
- Start number 33 was manually annotated 5 times for cluster K1.
- Start number 38 was manually annotated 1 time for cluster K1.

Info for manual annotations of cluster K2:

- Start number 31 was manually annotated 1 time for cluster K2.

Info for manual annotations of cluster K3:

- Start number 19 was manually annotated 1 time for cluster K3.
- Start number 28 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster K6:

- Start number 15 was manually annotated 1 time for cluster K6.
- Start number 26 was manually annotated 2 times for cluster K6.
- Start number 27 was manually annotated 1 time for cluster K6.
- Start number 28 was manually annotated 5 times for cluster K6.
- Start number 29 was manually annotated 6 times for cluster K6.
- Start number 32 was manually annotated 1 time for cluster K6.
- Start number 33 was manually annotated 6 times for cluster K6.

Gene Information:

Gene: ActinUp_37 Start: 30191, Stop: 30469, Start Num: 32

Candidate Starts for ActinUp_37:

(10, 29981), (Start: 26 @30179 has 13 MA's), (Start: 32 @30191 has 49 MA's), (37, 30218), (41, 30281), (44, 30314), (45, 30341), (57, 30431), (58, 30443), (60, 30452),

Gene: Adephagia_37 Start: 30176, Stop: 30466, Start Num: 26

Candidate Starts for Adephagia_37:

(10, 29978), (Start: 26 @30176 has 13 MA's), (Start: 32 @30188 has 49 MA's), (37, 30215), (41, 30278), (44, 30311), (45, 30338), (57, 30428), (58, 30440), (60, 30449),

Gene: Adonis_37 Start: 30203, Stop: 30481, Start Num: 32

Candidate Starts for Adonis_37:

(Start: 26 @30191 has 13 MA's), (Start: 32 @30203 has 49 MA's), (37, 30230), (Start: 38 @30236 has 1 MA's), (41, 30293), (44, 30326), (45, 30353), (57, 30443), (58, 30455), (60, 30464),

Gene: Ageofdapage_38 Start: 30149, Stop: 30427, Start Num: 32

Candidate Starts for Ageofdapage_38:

(Start: 26 @30137 has 13 MA's), (Start: 32 @30149 has 49 MA's), (37, 30176), (Start: 38 @30182 has 1 MA's), (39, 30191), (41, 30239), (45, 30299), (48, 30317), (57, 30389), (58, 30401), (60, 30410),

Gene: AlishaPH_37 Start: 30181, Stop: 30459, Start Num: 32

Candidate Starts for AlishaPH_37:

(Start: 26 @30169 has 13 MA's), (Start: 32 @30181 has 49 MA's), (37, 30208), (Start: 38 @30214 has 1 MA's), (39, 30223), (41, 30271), (45, 30331), (57, 30421), (58, 30433), (60, 30442),

Gene: Amohnition_37 Start: 30719, Stop: 31009, Start Num: 28

Candidate Starts for Amohnition_37:

(13, 30578), (Start: 28 @30719 has 6 MA's), (46, 30878), (54, 30947), (56, 30962), (58, 30983), (61, 30995),

Gene: Anaya_38 Start: 30204, Stop: 30494, Start Num: 26

Candidate Starts for Anaya_38:

(7, 29943), (10, 30006), (Start: 26 @30204 has 13 MA's), (Start: 32 @30216 has 49 MA's), (37, 30243), (43, 30336), (44, 30339), (52, 30423), (55, 30450), (57, 30456), (58, 30468), (60, 30477),

Gene: Angelica_37 Start: 30126, Stop: 30416, Start Num: 26

Candidate Starts for Angelica_37:

(Start: 26 @30126 has 13 MA's), (Start: 32 @30138 has 49 MA's), (37, 30165), (Start: 38 @30171 has 1 MA's), (41, 30228), (43, 30258), (44, 30261), (45, 30288), (57, 30378), (58, 30390), (60, 30399),

Gene: Apocalypse_38 Start: 30159, Stop: 30437, Start Num: 32

Candidate Starts for Apocalypse_38:

(7, 29886), (10, 29949), (Start: 26 @30147 has 13 MA's), (Start: 32 @30159 has 49 MA's), (37, 30186), (41, 30249), (43, 30279), (44, 30282), (45, 30309), (57, 30399), (58, 30411), (60, 30420),

Gene: Asayake_37 Start: 30222, Stop: 30500, Start Num: 32

Candidate Starts for Asayake_37:

(Start: 26 @30210 has 13 MA's), (Start: 32 @30222 has 49 MA's), (37, 30249), (Start: 38 @30255 has 1 MA's), (39, 30264), (41, 30312), (45, 30372), (57, 30462), (58, 30474), (60, 30483),

Gene: Atiba_37 Start: 30151, Stop: 30429, Start Num: 32

Candidate Starts for Atiba_37:

(10, 29941), (Start: 26 @30139 has 13 MA's), (Start: 32 @30151 has 49 MA's), (37, 30178), (41, 30241), (44, 30274), (45, 30301), (57, 30391), (58, 30403), (60, 30412),

Gene: BEEST_37 Start: 30222, Stop: 30500, Start Num: 32

Candidate Starts for BEEST_37:

(Start: 26 @30210 has 13 MA's), (Start: 32 @30222 has 49 MA's), (37, 30249), (Start: 38 @30255 has 1 MA's), (39, 30264), (41, 30312), (45, 30372), (57, 30462), (58, 30474), (60, 30483),

Gene: BGlluviae_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for BGlluviae_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (43, 30426), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: BaghaKamala_37 Start: 30151, Stop: 30429, Start Num: 32

Candidate Starts for BaghaKamala_37:

(Start: 26 @30139 has 13 MA's), (Start: 32 @30151 has 49 MA's), (37, 30178), (41, 30241), (43, 30271), (44, 30274), (45, 30301), (57, 30391), (58, 30403), (60, 30412),

Gene: BarrelRoll_37 Start: 30162, Stop: 30452, Start Num: 26

Candidate Starts for BarrelRoll_37:

(10, 29964), (Start: 26 @30162 has 13 MA's), (Start: 32 @30174 has 49 MA's), (37, 30201), (41, 30264), (44, 30297), (45, 30324), (57, 30414), (58, 30426), (60, 30435),

Gene: Beezoo_37 Start: 30198, Stop: 30476, Start Num: 32

Candidate Starts for Beezoo_37:

(10, 29988), (Start: 26 @30186 has 13 MA's), (Start: 32 @30198 has 49 MA's), (37, 30225), (41, 30288), (44, 30321), (45, 30348), (57, 30438), (58, 30450), (60, 30459),

Gene: Bella96_37 Start: 30079, Stop: 30369, Start Num: 26

Candidate Starts for Bella96_37:

(Start: 26 @30079 has 13 MA's), (Start: 32 @30091 has 49 MA's), (37, 30118), (Start: 38 @30124 has 1 MA's), (39, 30133), (41, 30181), (44, 30214), (45, 30241), (48, 30259), (57, 30331), (58, 30343), (60, 30352),

Gene: Belladonna_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for Belladonna_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (43, 30426), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: Bern_38 Start: 30130, Stop: 30408, Start Num: 32

Candidate Starts for Bern_38:

(Start: 26 @30118 has 13 MA's), (Start: 32 @30130 has 49 MA's), (37, 30157), (Start: 38 @30163 has 1 MA's), (41, 30220), (43, 30250), (44, 30253), (52, 30337), (55, 30364), (57, 30370), (58, 30382), (60, 30391),

Gene: Blizzard_37 Start: 30222, Stop: 30500, Start Num: 32

Candidate Starts for Blizzard_37:

(Start: 26 @30210 has 13 MA's), (Start: 32 @30222 has 49 MA's), (37, 30249), (Start: 38 @30255 has 1 MA's), (39, 30264), (41, 30312), (45, 30372), (57, 30462), (58, 30474), (60, 30483),

Gene: Boiiii_37 Start: 30224, Stop: 30502, Start Num: 32

Candidate Starts for Boiiii_37:

(Start: 26 @30212 has 13 MA's), (Start: 32 @30224 has 49 MA's), (37, 30251), (Start: 38 @30257 has 1 MA's), (39, 30266), (41, 30314), (45, 30374), (57, 30464), (58, 30476), (60, 30485),

Gene: CREW_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for CREW_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (43, 30426), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: CallaLilly_37 Start: 30145, Stop: 30507, Start Num: 20

Candidate Starts for CallaLilly_37:

(17, 30133), (Start: 20 @30145 has 21 MA's), (30, 30217), (37, 30256), (Start: 38 @30262 has 1 MA's), (41, 30319), (43, 30349), (44, 30352), (45, 30379), (57, 30469), (58, 30481), (59, 30487), (60, 30490),

Gene: Capricorn_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for Capricorn_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (43, 30426), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: CaseJules_38 Start: 30222, Stop: 30500, Start Num: 32

Candidate Starts for CaseJules_38:

(Start: 26 @30210 has 13 MA's), (Start: 32 @30222 has 49 MA's), (37, 30249), (Start: 38 @30255 has 1 MA's), (39, 30264), (41, 30312), (45, 30372), (57, 30462), (58, 30474), (60, 30483),

Gene: CheetoDust_37 Start: 30199, Stop: 30477, Start Num: 32

Candidate Starts for CheetoDust_37:

(Start: 26 @30187 has 13 MA's), (Start: 32 @30199 has 49 MA's), (37, 30226), (41, 30289), (43, 30319), (44, 30322), (45, 30349), (57, 30439), (58, 30451), (60, 30460),

Gene: Clipper_38 Start: 30199, Stop: 30477, Start Num: 32

Candidate Starts for Clipper_38:

(Start: 26 @30187 has 13 MA's), (Start: 32 @30199 has 49 MA's), (37, 30226), (Start: 38 @30232 has 1 MA's), (41, 30289), (43, 30319), (44, 30322), (45, 30349), (57, 30439), (58, 30451), (60, 30460),

Gene: CrimD_37 Start: 30145, Stop: 30435, Start Num: 26

Candidate Starts for CrimD_37:

(Start: 26 @30145 has 13 MA's), (Start: 32 @30157 has 49 MA's), (Start: 38 @30190 has 1 MA's), (39, 30199), (41, 30247), (45, 30307), (57, 30397), (58, 30409), (60, 30418),

Gene: Dalmuri_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for Dalmuri_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (43, 30426), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: DartGoblin_38 Start: 30086, Stop: 30364, Start Num: 32

Candidate Starts for DartGoblin_38:

(Start: 26 @30074 has 13 MA's), (Start: 32 @30086 has 49 MA's), (37, 30113), (Start: 38 @30119 has 1 MA's), (39, 30128), (41, 30176), (44, 30209), (45, 30236), (48, 30254), (55, 30320), (57, 30326), (58, 30338), (60, 30347),

Gene: DarthP_37 Start: 30641, Stop: 30931, Start Num: 28

Candidate Starts for DarthP_37:

(13, 30500), (Start: 28 @30641 has 6 MA's), (46, 30800), (54, 30869), (56, 30884), (58, 30905), (61, 30917),

Gene: Deby_37 Start: 30156, Stop: 30434, Start Num: 32

Candidate Starts for Deby_37:

(Start: 26 @30144 has 13 MA's), (Start: 32 @30156 has 49 MA's), (37, 30183), (Start: 38 @30189 has 1 MA's), (41, 30246), (43, 30276), (44, 30279), (45, 30306), (57, 30396), (58, 30408), (60, 30417),

Gene: Devera_39 Start: 30347, Stop: 30625, Start Num: 32

Candidate Starts for Devera_39:

(Start: 26 @30335 has 13 MA's), (Start: 32 @30347 has 49 MA's), (37, 30374), (Start: 38 @30380 has 1 MA's), (41, 30437), (44, 30470), (45, 30497), (48, 30515), (57, 30587), (58, 30599), (59, 30605), (60, 30608),

Gene: Dole_38 Start: 30349, Stop: 30627, Start Num: 32

Candidate Starts for Dole_38:

(Start: 26 @30337 has 13 MA's), (Start: 32 @30349 has 49 MA's), (37, 30376), (Start: 38 @30382 has 1 MA's), (41, 30439), (44, 30472), (45, 30499), (48, 30517), (57, 30589), (58, 30601), (59, 30607), (60, 30610),

Gene: Durfee_37 Start: 30222, Stop: 30500, Start Num: 32

Candidate Starts for Durfee_37:

(Start: 26 @30210 has 13 MA's), (Start: 32 @30222 has 49 MA's), (37, 30249), (Start: 38 @30255 has 1 MA's), (39, 30264), (41, 30312), (45, 30372), (57, 30462), (58, 30474), (60, 30483),

Gene: Efra2_40 Start: 30002, Stop: 30280, Start Num: 32

Candidate Starts for Efra2_40:

(12, 29849), (25, 29990), (Start: 32 @30002 has 49 MA's), (37, 30029), (39, 30044), (41, 30092), (48, 30170), (55, 30236), (57, 30242), (58, 30254), (60, 30263),

Gene: Ekdilam_35 Start: 30396, Stop: 30680, Start Num: 28

Candidate Starts for Ekdilam_35:

(13, 30255), (Start: 28 @30396 has 6 MA's), (39, 30435), (46, 30549), (54, 30618), (58, 30654), (61, 30666),

Gene: Emerson_38 Start: 30170, Stop: 30460, Start Num: 26

Candidate Starts for Emerson_38:

(10, 29972), (Start: 26 @30170 has 13 MA's), (Start: 32 @30182 has 49 MA's), (37, 30209), (41, 30272), (44, 30305), (45, 30332), (57, 30422), (58, 30434), (60, 30443),

Gene: Ganymede_38 Start: 30211, Stop: 30489, Start Num: 32

Candidate Starts for Ganymede_38:

(Start: 26 @30199 has 13 MA's), (Start: 32 @30211 has 49 MA's), (37, 30238), (Start: 38 @30244 has 1 MA's), (41, 30301), (43, 30331), (44, 30334), (45, 30361), (57, 30451), (58, 30463), (60, 30472),

Gene: Geraldini_37 Start: 30198, Stop: 30560, Start Num: 20

Candidate Starts for Geraldini_37:

(4, 29925), (6, 29988), (Start: 20 @30198 has 21 MA's), (30, 30270), (37, 30309), (Start: 38 @30315 has 1 MA's), (41, 30372), (44, 30405), (45, 30432), (57, 30522), (58, 30534), (60, 30543),

Gene: Guanica15_40 Start: 29958, Stop: 30236, Start Num: 32

Candidate Starts for Guanica15_40:

(25, 29946), (Start: 32 @29958 has 49 MA's), (37, 29985), (Start: 38 @29991 has 1 MA's), (39, 30000), (41, 30048), (48, 30126), (55, 30192), (57, 30198), (58, 30210), (60, 30219),

Gene: Hammy_37 Start: 30632, Stop: 30922, Start Num: 28

Candidate Starts for Hammy_37:

(13, 30491), (Start: 28 @30632 has 6 MA's), (46, 30791), (54, 30860), (56, 30875), (58, 30896), (61, 30908),

Gene: HedwigODU_37 Start: 30191, Stop: 30469, Start Num: 32

Candidate Starts for HedwigODU_37:

(10, 29981), (Start: 26 @30179 has 13 MA's), (Start: 32 @30191 has 49 MA's), (37, 30218), (41, 30281), (44, 30314), (45, 30341), (57, 30431), (58, 30443), (60, 30452),

Gene: Homura_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for Homura_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (43, 30426), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: Hurricane_40 Start: 31387, Stop: 31677, Start Num: 28

Candidate Starts for Hurricane_40:

(Start: 28 @31387 has 6 MA's), (37, 31417), (46, 31546), (48, 31558), (54, 31615), (56, 31630), (62, 31666),

Gene: Hyperbowlee_37 Start: 30210, Stop: 30500, Start Num: 26

Candidate Starts for Hyperbowlee_37:

(Start: 26 @30210 has 13 MA's), (Start: 32 @30222 has 49 MA's), (37, 30249), (Start: 38 @30255 has 1 MA's), (39, 30264), (41, 30312), (45, 30372), (57, 30462), (58, 30474), (60, 30483),

Gene: Illumine_38 Start: 30382, Stop: 30627, Start Num: 38

Candidate Starts for Illumine_38:

(Start: 26 @30337 has 13 MA's), (Start: 32 @30349 has 49 MA's), (37, 30376), (Start: 38 @30382 has 1 MA's), (41, 30439), (44, 30472), (45, 30499), (48, 30517), (57, 30589), (58, 30601), (59, 30607), (60, 30610),

Gene: Inky_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for Inky_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: JAWS_37 Start: 30175, Stop: 30453, Start Num: 32

Candidate Starts for JAWS_37:

(Start: 26 @30163 has 13 MA's), (Start: 32 @30175 has 49 MA's), (37, 30202), (Start: 38 @30208 has 1 MA's), (41, 30265), (44, 30298), (45, 30325), (57, 30415), (58, 30427), (60, 30436),

Gene: Jarvi_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for Jarvi_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: Jayhawk_38 Start: 30189, Stop: 30467, Start Num: 32

Candidate Starts for Jayhawk_38:

(10, 29979), (Start: 26 @30177 has 13 MA's), (Start: 32 @30189 has 49 MA's), (37, 30216), (41, 30279), (44, 30312), (45, 30339), (57, 30429), (58, 30441), (60, 30450),

Gene: Jeckyll_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for Jeckyll_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: Joy99_37 Start: 30151, Stop: 30513, Start Num: 20

Candidate Starts for Joy99_37:

(17, 30139), (Start: 20 @30151 has 21 MA's), (30, 30223), (37, 30262), (Start: 38 @30268 has 1 MA's), (41, 30325), (43, 30355), (44, 30358), (45, 30385), (57, 30475), (58, 30487), (59, 30493), (60, 30496),

Gene: KiSi_39 Start: 30122, Stop: 30382, Start Num: 33

Candidate Starts for KiSi_39:

(14, 30005), (16, 30035), (Start: 33 @30122 has 11 MA's), (37, 30140), (Start: 38 @30146 has 1 MA's), (41, 30203), (52, 30311), (57, 30344), (58, 30356), (60, 30365),

Gene: Krueger_39 Start: 29701, Stop: 29979, Start Num: 26

Candidate Starts for Krueger_39:

(Start: 26 @29701 has 13 MA's), (Start: 33 @29719 has 11 MA's), (37, 29737), (Start: 38 @29743 has 1 MA's), (41, 29800), (57, 29941), (58, 29953), (60, 29962),

Gene: Krueger_40 Start: 29976, Stop: 30263, Start Num: 29

Candidate Starts for Krueger_40:

(Start: 29 @29976 has 6 MA's), (37, 30003), (40, 30021), (45, 30126), (46, 30132), (53, 30198), (56, 30216), (58, 30237), (62, 30252),

Gene: LastHope_39 Start: 29713, Stop: 30066, Start Num: 21

Candidate Starts for LastHope_39:

(18, 29701), (Start: 21 @29713 has 2 MA's), (30, 29782), (Start: 33 @29794 has 11 MA's), (37, 29815), (Start: 38 @29821 has 1 MA's), (39, 29830), (41, 29878), (44, 29911), (48, 29956), (57, 30028), (58, 30040), (60, 30049),

Gene: LaterM_37 Start: 30136, Stop: 30414, Start Num: 32

Candidate Starts for LaterM_37:

(7, 29863), (10, 29926), (Start: 26 @30124 has 13 MA's), (Start: 32 @30136 has 49 MA's), (37, 30163), (Start: 38 @30169 has 1 MA's), (41, 30226), (44, 30259), (45, 30286), (48, 30304), (57, 30376), (58, 30388), (60, 30397),

Gene: Lavahound_36 Start: 30324, Stop: 30593, Start Num: 33

Candidate Starts for Lavahound_36:

(Start: 33 @30324 has 11 MA's), (Start: 38 @30348 has 1 MA's), (41, 30405), (57, 30555), (58, 30567), (60, 30576),

Gene: LeMond_39 Start: 30193, Stop: 30453, Start Num: 33

Candidate Starts for LeMond_39:

(14, 30076), (16, 30106), (Start: 33 @30193 has 11 MA's), (37, 30211), (Start: 38 @30217 has 1 MA's), (41, 30274), (52, 30382), (57, 30415), (58, 30427), (60, 30436),

Gene: LindNT_37 Start: 30152, Stop: 30430, Start Num: 32

Candidate Starts for LindNT_37:

(10, 29942), (Start: 26 @30140 has 13 MA's), (Start: 32 @30152 has 49 MA's), (37, 30179), (Start: 38 @30185 has 1 MA's), (44, 30275), (45, 30302), (57, 30392), (58, 30404), (60, 30413),

Gene: Llorens_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for Llorens_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: Lunahalos_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for Lunahalos_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (43, 30426), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: Marshawn_40 Start: 30498, Stop: 30764, Start Num: 33

Candidate Starts for Marshawn_40:

(16, 30411), (Start: 33 @30498 has 11 MA's), (37, 30516), (Start: 38 @30522 has 1 MA's), (39, 30531), (41, 30579), (49, 30663), (52, 30693), (55, 30720), (57, 30726), (58, 30738), (60, 30747),

Gene: MeaningOfLife_37 Start: 30167, Stop: 30445, Start Num: 32

Candidate Starts for MeaningOfLife_37:

(Start: 26 @30155 has 13 MA's), (Start: 32 @30167 has 49 MA's), (37, 30194), (Start: 38 @30200 has 1 MA's), (41, 30257), (43, 30287), (44, 30290), (45, 30317), (57, 30407), (58, 30419), (60, 30428),

Gene: Megsy_38 Start: 30155, Stop: 30433, Start Num: 32

Candidate Starts for Megsy_38:

(1, 29684), (2, 29687), (7, 29882), (10, 29945), (Start: 26 @30143 has 13 MA's), (Start: 32 @30155 has 49 MA's), (Start: 38 @30188 has 1 MA's), (41, 30245), (44, 30278), (45, 30305), (57, 30395), (58, 30407), (60, 30416),

Gene: Murucutumbu_37 Start: 30155, Stop: 30508, Start Num: 21

Candidate Starts for Murucutumbu_37:

(3, 29882), (5, 29945), (18, 30143), (Start: 21 @30155 has 2 MA's), (37, 30257), (Start: 38 @30263 has 1 MA's), (39, 30272), (41, 30320), (48, 30398), (57, 30470), (58, 30482), (60, 30491),

Gene: Mynx_37 Start: 30204, Stop: 30482, Start Num: 32

Candidate Starts for Mynx_37:

(Start: 26 @30192 has 13 MA's), (Start: 32 @30204 has 49 MA's), (37, 30231), (41, 30294), (44, 30327), (45, 30354), (57, 30444), (58, 30456), (60, 30465),

Gene: Nibb_38 Start: 29650, Stop: 29919, Start Num: 33

Candidate Starts for Nibb_38:

(14, 29533), (16, 29563), (Start: 33 @29650 has 11 MA's), (37, 29668), (Start: 38 @29674 has 1 MA's), (39, 29683), (41, 29731), (57, 29881), (58, 29893), (62, 29908),

Gene: November_36 Start: 30560, Stop: 30850, Start Num: 28

Candidate Starts for November_36:

(13, 30419), (Start: 28 @30560 has 6 MA's), (46, 30719), (54, 30788), (56, 30803), (58, 30824), (61, 30836),

Gene: Oscar_39 Start: 30204, Stop: 30464, Start Num: 33

Candidate Starts for Oscar_39:

(14, 30078), (16, 30108), (Start: 33 @30204 has 11 MA's), (37, 30222), (Start: 38 @30228 has 1 MA's), (41, 30285), (52, 30393), (57, 30426), (58, 30438), (60, 30447),

Gene: Padfoot_37 Start: 30222, Stop: 30500, Start Num: 32

Candidate Starts for Padfoot_37:

(Start: 26 @30210 has 13 MA's), (Start: 32 @30222 has 49 MA's), (37, 30249), (Start: 38 @30255 has 1 MA's), (39, 30264), (41, 30312), (45, 30372), (57, 30462), (58, 30474), (60, 30483),

Gene: Padpat_38 Start: 30182, Stop: 30460, Start Num: 32

Candidate Starts for Padpat_38:

(10, 29972), (Start: 26 @30170 has 13 MA's), (Start: 32 @30182 has 49 MA's), (37, 30209), (41, 30272), (44, 30305), (45, 30332), (57, 30422), (58, 30434), (60, 30443),

Gene: Peel_37 Start: 30224, Stop: 30586, Start Num: 20

Candidate Starts for Peel_37:

(17, 30212), (Start: 20 @30224 has 21 MA's), (30, 30296), (37, 30335), (Start: 38 @30341 has 1 MA's), (41, 30398), (43, 30428), (44, 30431), (45, 30458), (57, 30548), (58, 30560), (59, 30566), (60, 30569),

Gene: Piatt_37 Start: 30210, Stop: 30500, Start Num: 26

Candidate Starts for Piatt_37:

(Start: 26 @30210 has 13 MA's), (Start: 32 @30222 has 49 MA's), (37, 30249), (Start: 38 @30255 has 1 MA's), (39, 30264), (41, 30312), (45, 30372), (57, 30462), (58, 30474), (60, 30483),

Gene: Pisa1_36 Start: 30216, Stop: 30512, Start Num: 31

Candidate Starts for Pisa1_36:

(Start: 26 @30204 has 13 MA's), (Start: 31 @30216 has 1 MA's), (36, 30243), (37, 30255), (Start: 38 @30261 has 1 MA's), (41, 30318), (42, 30330), (50, 30414), (60, 30495), (61, 30498),

Gene: Pisa4_36 Start: 30204, Stop: 30512, Start Num: 26

Candidate Starts for Pisa4_36:

(Start: 26 @30204 has 13 MA's), (Start: 31 @30216 has 1 MA's), (36, 30243), (37, 30255), (Start: 38 @30261 has 1 MA's), (41, 30318), (42, 30330), (50, 30414), (60, 30495), (61, 30498),

Gene: Pokerus_36 Start: 30138, Stop: 30500, Start Num: 20

Candidate Starts for Pokerus_36:

(4, 29865), (6, 29928), (Start: 20 @30138 has 21 MA's), (30, 30210), (37, 30249), (Start: 38 @30255 has 1 MA's), (41, 30312), (44, 30345), (45, 30372), (57, 30462), (58, 30474), (60, 30483),

Gene: Prithvi_37 Start: 30152, Stop: 30430, Start Num: 32

Candidate Starts for Prithvi_37:

(10, 29942), (Start: 26 @30140 has 13 MA's), (Start: 32 @30152 has 49 MA's), (37, 30179), (Start: 38 @30185 has 1 MA's), (44, 30275), (45, 30302), (57, 30392), (58, 30404), (60, 30413),

Gene: QuincyRose_36 Start: 30211, Stop: 30489, Start Num: 32

Candidate Starts for QuincyRose_36:

(Start: 26 @30199 has 13 MA's), (Start: 32 @30211 has 49 MA's), (37, 30238), (Start: 38 @30244 has 1 MA's), (41, 30301), (43, 30331), (44, 30334), (45, 30361), (57, 30451), (58, 30463), (60, 30472),

Gene: Ramen_37 Start: 30187, Stop: 30465, Start Num: 32

Candidate Starts for Ramen_37:

(Start: 26 @30175 has 13 MA's), (Start: 32 @30187 has 49 MA's), (37, 30214), (Start: 38 @30220 has 1 MA's), (41, 30277), (44, 30310), (45, 30337), (57, 30427), (58, 30439), (60, 30448),

Gene: Rapunzel97_37 Start: 30189, Stop: 30467, Start Num: 32

Candidate Starts for Rapunzel97_37:

(10, 29979), (Start: 26 @30177 has 13 MA's), (Start: 32 @30189 has 49 MA's), (37, 30216), (41, 30279), (44, 30312), (45, 30339), (57, 30429), (58, 30441), (60, 30450),

Gene: Rosmarinus_37 Start: 30210, Stop: 30572, Start Num: 20

Candidate Starts for Rosmarinus_37:

(17, 30198), (Start: 20 @30210 has 21 MA's), (30, 30282), (37, 30321), (Start: 38 @30327 has 1 MA's), (41, 30384), (43, 30414), (44, 30417), (45, 30444), (57, 30534), (58, 30546), (59, 30552), (60, 30555),

Gene: Scarlett_39 Start: 30195, Stop: 30455, Start Num: 33

Candidate Starts for Scarlett_39:

(14, 30078), (16, 30108), (Start: 33 @30195 has 11 MA's), (37, 30213), (Start: 38 @30219 has 1 MA's), (41, 30276), (52, 30384), (57, 30417), (58, 30429), (60, 30438),

Gene: Shadow1_38 Start: 29622, Stop: 29888, Start Num: 33

Candidate Starts for Shadow1_38:

(Start: 26 @29604 has 13 MA's), (Start: 33 @29622 has 11 MA's), (37, 29646), (Start: 38 @29652 has 1 MA's), (39, 29661), (57, 29850), (58, 29862), (60, 29871),

Gene: Shadow1_39 Start: 29885, Stop: 30172, Start Num: 29

Candidate Starts for Shadow1_39:

(Start: 29 @29885 has 6 MA's), (37, 29912), (40, 29930), (45, 30035), (46, 30041), (53, 30107), (56, 30125), (58, 30146), (62, 30161),

Gene: ShiaSurprise_38 Start: 30222, Stop: 30500, Start Num: 32

Candidate Starts for ShiaSurprise_38:

(Start: 26 @30210 has 13 MA's), (Start: 32 @30222 has 49 MA's), (37, 30249), (Start: 38 @30255 has 1 MA's), (39, 30264), (41, 30312), (45, 30372), (57, 30462), (58, 30474), (60, 30483),

Gene: SirPhilip_37 Start: 29126, Stop: 29404, Start Num: 32

Candidate Starts for SirPhilip_37:

(Start: 32 @29126 has 49 MA's), (37, 29153), (Start: 38 @29159 has 1 MA's), (41, 29216), (52, 29333), (55, 29360), (57, 29366), (60, 29387),

Gene: Slimphazie_37 Start: 30177, Stop: 30467, Start Num: 26

Candidate Starts for Slimphazie_37:

(10, 29979), (Start: 26 @30177 has 13 MA's), (Start: 32 @30189 has 49 MA's), (37, 30216), (41, 30279), (44, 30312), (45, 30339), (57, 30429), (58, 30441), (60, 30450),

Gene: Spock_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for Spock_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (43, 30426), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: Stinson_38 Start: 30424, Stop: 30702, Start Num: 32

Candidate Starts for Stinson_38:

(7, 30151), (10, 30214), (Start: 26 @30412 has 13 MA's), (Start: 32 @30424 has 49 MA's), (37, 30451), (Start: 38 @30457 has 1 MA's), (41, 30514), (44, 30547), (45, 30574), (48, 30592), (57, 30664), (58, 30676), (60, 30685),

Gene: Sulley_37 Start: 30155, Stop: 30433, Start Num: 32

Candidate Starts for Sulley_37:

(Start: 26 @30143 has 13 MA's), (Start: 32 @30155 has 49 MA's), (37, 30182), (Start: 38 @30188 has 1 MA's), (41, 30245), (43, 30275), (44, 30278), (45, 30305), (57, 30395), (58, 30407), (60, 30416),

Gene: Sunflower1121_39 Start: 29978, Stop: 30265, Start Num: 29

Candidate Starts for Sunflower1121_39:

(Start: 29 @29978 has 6 MA's), (37, 30005), (40, 30023), (45, 30128), (46, 30134), (53, 30200), (56, 30218), (58, 30239), (62, 30254),

Gene: Sunflower1121_38 Start: 29715, Stop: 29981, Start Num: 33

Candidate Starts for Sunflower1121_38:

(10, 29499), (Start: 26 @29697 has 13 MA's), (Start: 33 @29715 has 11 MA's), (37, 29739), (Start: 38 @29745 has 1 MA's), (39, 29754), (57, 29943), (58, 29955), (60, 29964),

Gene: Syra333_39 Start: 29641, Stop: 29907, Start Num: 33

Candidate Starts for Syra333_39:

(10, 29425), (Start: 26 @29623 has 13 MA's), (Start: 33 @29641 has 11 MA's), (37, 29665), (Start: 38 @29671 has 1 MA's), (39, 29680), (41, 29728), (57, 29869), (58, 29881), (60, 29890),

Gene: Syra333_40 Start: 29904, Stop: 30191, Start Num: 29

Candidate Starts for Syra333_40:

(Start: 29 @29904 has 6 MA's), (37, 29931), (40, 29949), (45, 30054), (46, 30060), (53, 30126), (56, 30144), (58, 30165), (62, 30180),

Gene: TClif_39 Start: 30095, Stop: 30385, Start Num: 27

Candidate Starts for TClif_39:

(23, 30071), (Start: 27 @30095 has 1 MA's), (37, 30125), (46, 30254), (53, 30320), (56, 30338), (58, 30359), (62, 30374),

Gene: TM4_39 Start: 29584, Stop: 29844, Start Num: 31

Candidate Starts for TM4_39:

(23, 29560), (Start: 31 @29584 has 1 MA's), (34, 29596), (Start: 38 @29602 has 1 MA's), (41, 29659), (47, 29725), (55, 29800), (58, 29818), (60, 29827),

Gene: Tachez_37 Start: 30139, Stop: 30429, Start Num: 26

Candidate Starts for Tachez_37:

(10, 29941), (Start: 26 @30139 has 13 MA's), (Start: 32 @30151 has 49 MA's), (37, 30178), (41, 30241), (44, 30274), (45, 30301), (57, 30391), (58, 30403), (60, 30412),

Gene: TaiwanKao_39 Start: 30185, Stop: 30430, Start Num: 38

Candidate Starts for TaiwanKao_39:

(1, 29681), (2, 29684), (7, 29879), (10, 29942), (Start: 26 @30140 has 13 MA's), (Start: 32 @30152 has 49 MA's), (Start: 38 @30185 has 1 MA's), (41, 30242), (44, 30275), (45, 30302), (57, 30392), (58, 30404), (60, 30413),

Gene: Tigress9_40 Start: 29976, Stop: 30263, Start Num: 29

Candidate Starts for Tigress9_40:

(Start: 29 @29976 has 6 MA's), (37, 30003), (40, 30021), (45, 30126), (46, 30132), (53, 30198), (56, 30216), (58, 30237), (62, 30252),

Gene: Tigress9_39 Start: 29719, Stop: 29979, Start Num: 33

Candidate Starts for Tigress9_39:

(Start: 26 @29701 has 13 MA's), (Start: 33 @29719 has 11 MA's), (37, 29737), (Start: 38 @29743 has 1 MA's), (41, 29800), (57, 29941), (58, 29953), (60, 29962),

Gene: TingHuaYa_38 Start: 29567, Stop: 29845, Start Num: 32

Candidate Starts for TingHuaYa_38:

(24, 29555), (Start: 32 @29567 has 49 MA's), (37, 29594), (Start: 38 @29600 has 1 MA's), (39, 29609), (41, 29657), (48, 29735), (57, 29807), (58, 29819), (60, 29828),

Gene: Tiri_38 Start: 30203, Stop: 30481, Start Num: 32

Candidate Starts for Tiri_38:

(7, 29930), (10, 29993), (Start: 26 @30191 has 13 MA's), (Start: 32 @30203 has 49 MA's), (37, 30230), (41, 30293), (44, 30326), (45, 30353), (57, 30443), (58, 30455), (60, 30464),

Gene: Topper_37 Start: 30222, Stop: 30584, Start Num: 20

Candidate Starts for Topper_37:

(17, 30210), (Start: 20 @30222 has 21 MA's), (30, 30294), (37, 30333), (Start: 38 @30339 has 1 MA's), (41, 30396), (43, 30426), (44, 30429), (45, 30456), (57, 30546), (58, 30558), (59, 30564), (60, 30567),

Gene: TreyKay_37 Start: 30152, Stop: 30430, Start Num: 32

Candidate Starts for TreyKay_37:

(10, 29942), (Start: 26 @30140 has 13 MA's), (Start: 32 @30152 has 49 MA's), (37, 30179), (Start: 38 @30185 has 1 MA's), (44, 30275), (45, 30302), (57, 30392), (58, 30404), (60, 30413),

Gene: TribbleTrouble_38 Start: 31008, Stop: 31364, Start Num: 19

Candidate Starts for TribbleTrouble_38:

(Start: 19 @31008 has 1 MA's), (30, 31083), (37, 31113), (40, 31131), (41, 31176), (43, 31206), (51, 31272), (52, 31293), (53, 31308), (58, 31338),

Gene: TruffulaTree_37 Start: 30185, Stop: 30463, Start Num: 32

Candidate Starts for TruffulaTree_37:

(10, 29975), (Start: 26 @30173 has 13 MA's), (Start: 32 @30185 has 49 MA's), (37, 30212), (41, 30275), (44, 30308), (45, 30335), (57, 30425), (58, 30437), (60, 30446),

Gene: Twitch_37 Start: 30224, Stop: 30586, Start Num: 20

Candidate Starts for Twitch_37:

(17, 30212), (Start: 20 @30224 has 21 MA's), (30, 30296), (37, 30335), (Start: 38 @30341 has 1 MA's), (41, 30398), (43, 30428), (44, 30431), (45, 30458), (57, 30548), (58, 30560), (59, 30566), (60, 30569),

Gene: Veliki_37 Start: 30225, Stop: 30503, Start Num: 32

Candidate Starts for Veliki_37:

(10, 30015), (Start: 26 @30213 has 13 MA's), (Start: 32 @30225 has 49 MA's), (37, 30252), (41, 30315), (44, 30348), (45, 30375), (57, 30465), (58, 30477), (60, 30486),

Gene: Ximenita_40 Start: 29808, Stop: 30092, Start Num: 26

Candidate Starts for Ximenita_40:

(10, 29610), (Start: 26 @29808 has 13 MA's), (Start: 33 @29826 has 11 MA's), (37, 29850), (Start: 38 @29856 has 1 MA's), (39, 29865), (41, 29913), (57, 30054), (58, 30066), (60, 30075),

Gene: Ximenita_41 Start: 30089, Stop: 30376, Start Num: 29

Candidate Starts for Ximenita_41:

(8, 29852), (9, 29870), (11, 29903), (Start: 29 @30089 has 6 MA's), (37, 30116), (40, 30134), (46, 30245), (53, 30311), (56, 30329), (58, 30350), (62, 30365),

Gene: YoureAdopted_36 Start: 30156, Stop: 30518, Start Num: 20

Candidate Starts for YoureAdopted_36:

(4, 29883), (6, 29946), (Start: 20 @30156 has 21 MA's), (30, 30228), (37, 30267), (Start: 38 @30273 has 1 MA's), (41, 30330), (44, 30363), (45, 30390), (57, 30480), (58, 30492), (60, 30501),

Gene: Yuna_39 Start: 30171, Stop: 30536, Start Num: 15

Candidate Starts for Yuna_39:

(Start: 15 @30171 has 1 MA's), (17, 30183), (22, 30201), (Start: 32 @30264 has 49 MA's), (35, 30276), (37, 30294), (39, 30309), (41, 30357), (52, 30465), (57, 30498), (58, 30510), (60, 30519),

Gene: Yunkel11_40 Start: 29957, Stop: 30235, Start Num: 32

Candidate Starts for Yunkel11_40:

(25, 29945), (Start: 32 @29957 has 49 MA's), (37, 29984), (Start: 38 @29990 has 1 MA's), (39, 29999), (41, 30047), (48, 30125), (55, 30191), (57, 30197), (58, 30209), (60, 30218),

Gene: Zabiza_37 Start: 30189, Stop: 30467, Start Num: 32

Candidate Starts for Zabiza_37:

(10, 29979), (Start: 26 @30177 has 13 MA's), (Start: 32 @30189 has 49 MA's), (37, 30216), (41, 30279), (44, 30312), (45, 30339), (57, 30429), (58, 30441), (60, 30450),

Gene: Zavala_37 Start: 30163, Stop: 30441, Start Num: 32

Candidate Starts for Zavala_37:

(Start: 26 @30151 has 13 MA's), (Start: 32 @30163 has 49 MA's), (37, 30190), (41, 30253), (44, 30286), (45, 30313), (57, 30403), (58, 30415), (60, 30424),