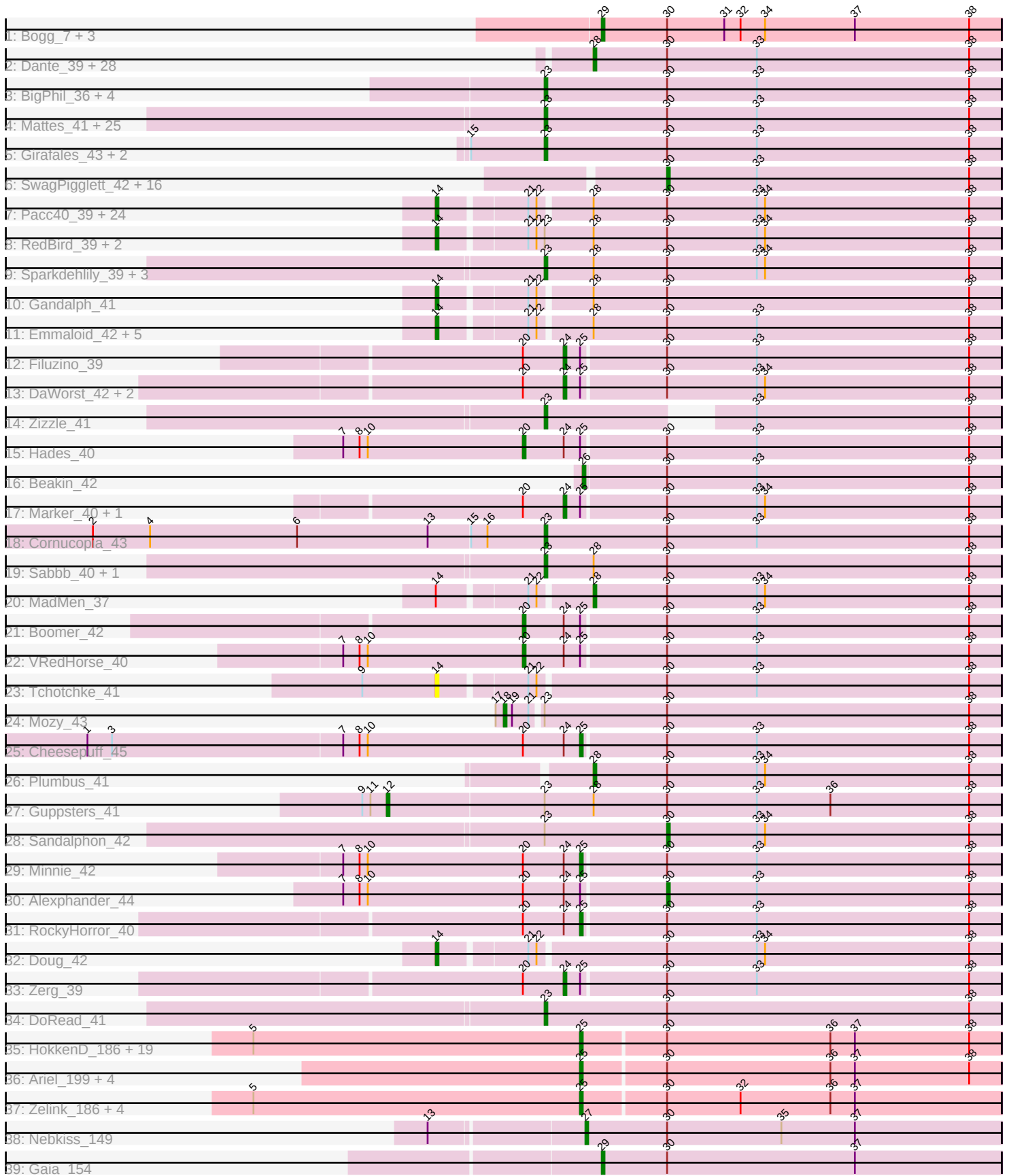


Pham 319109



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 319109 Report

This analysis was run 09/05/26 on database version 662.

Pham number 319109 has 182 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Bogg_7, Manda_6, Goku_7, Eureka_6
- Track 2 : Dante_39, Veteran_39, Ramsey_42, Daenerys_38, Inventum_38, Empress_40, KingMidas_41, Spoonbill_39, Leozinho_41, Job42_42, Nimbo_38, Scottish_40, OlympiaSaint_39, Royals2015_41, Stap_40, OwlsT2W_39, OldBen_39, JoeyJr_39, Deb65_39, GUmbie_39, Geralt_39, Radiance_40, IbOuu_41, PHappiness_39, Tootsieroll_43, Polka14_40, BlueCrab_39, Eish_40, Sassafras_40
- Track 3 : BigPhil_36, Rita_42, Cerasum_36, Velveteen_35, Sarma624_36
- Track 4 : Mattes_41, Clank_41, Girr_41, Zapner_48, James_41, Gorge_41, Ruby_40, Chevrolet_44, BuzzLyseyear_42, Philus_41, Kimberlium_42, Jabbawokkie_49, Wachhund_41, DRBy19_41, Doomslug_45, MisterCuddles_41, QuickMath_41, Ogopogo_41, BodEinwohner17_39, Chuckly_39, Saal_41, Spikelee_40, ArcusAngelus_41, MulchExplorer_42, Avani_44, Karhdo_37
- Track 5 : Girafales_43, Florinda_44, Quico_43
- Track 6 : SwagPiggett_42, Pippy_35, Doomphist_41, Poenanya_41, Martik_42, Jacob_41, Maravista_39, Koella_35, Crumble_35, NormanBulbieJr_42, Lizziana_41, Priscilla_40, ShiLan_41, BobaPhett_41, Burwell21_41, ShowerHandel_42, Cabrinians_41
- Track 7 : Pacc40_39, DirtMcgirt_40, GigiOuiOui_39, LastJedi_33, Starceвич_42, LilMoolah_41, Drago_41, Brocalys_34, Rockne_39, Whouxphf_41, Phasih_40, Madiba_38, LittleShirley_42, Nivrat_41, Aubs_40, Mantra_39, Krakatau_40, RitaG_40, Bubbles123_39, Lucia_39, Llij_39, Clifton_33, DotProduct_39, UncleRicky_42, Phatniss_40
- Track 8 : RedBird_39, Dorothy_39, Yorick_39
- Track 9 : Sparkdehlily_39, Kersh_38, Vivum_40, TDanisky_39
- Track 10 : Gandolph_41
- Track 11 : Emmaloid_42, EmiMonkey_39, Totinger_41, PhlipPhlop_40, Slim_42, Peridot_45
- Track 12 : Filuzino_39
- Track 13 : DaWorst_42, Hamulus_39, SiSi_39
- Track 14 : Zizzle_41
- Track 15 : Hades_40
- Track 16 : Beakin_42
- Track 17 : Marker_40, DaddyRickover_39
- Track 18 : Cornucopia_43
- Track 19 : Sabb_40, Pollywog_39
- Track 20 : MadMen_37
- Track 21 : Boomer_42

- Track 22 : VRedHorse_40
- Track 23 : Tchotchke_41
- Track 24 : Mozy_43
- Track 25 : Cheesepuff_45
- Track 26 : Plumbus_41
- Track 27 : Guppsters_41
- Track 28 : Sandalphon_42
- Track 29 : Minnie_42
- Track 30 : Alexphander_44
- Track 31 : RockyHorror_40
- Track 32 : Doug_42
- Track 33 : Zerg_39
- Track 34 : DoRead_41
- Track 35 : HokkenD_186, Redno2_185, Odette_195, Hannaconda_185, Dallas_192, Minerva_193, Schatzie_187, Beem_194, JuicyJay_187, EricMillard_189, Duke13_193, Wanda_190, ThreeRngTarjay_192, Bagrid_200, BAKA_199, Halley_193, Ejimix_182, Yeet_183, NihilNomen_194, Marleymoo_178
- Track 36 : Ariel_199, Courthouse_195, Klein_197, Kalah2_194, MiaZeal_200
- Track 37 : Zelink_186, Lucky2013_190, Hughesyang_191, Porcelain_193, Dove_177
- Track 38 : Nebkiss_149
- Track 39 : Gaia_154

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

The start number called the most often in the published annotations is 23, it was called in 41 of the 173 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ArcusAngelus_41, Avani_44, BigPhil_36, BodEinwohner17_39, BuzzLyseyear_42, Cerasum_36, Chevrolet_44, Chuckly_39, Clank_41, Cornucopia_43, DRBy19_41, DoRead_41, Doomslug_45, Florinda_44, Girafales_43, Girr_41, Gorge_41, Jabbawokkie_49, James_41, Karhdo_37, Kersh_38, Kimberlium_42, Mattes_41, MisterCuddles_41, MulchExplorer_42, Ogopogo_41, Philus_41, Pollywog_39, QuickMath_41, Quico_43, Rita_42, Ruby_40, Saal_41, Sabbb_40, Sarma624_36, Sparkdehlily_39, Spikelee_40, TDanisky_39, Velveteen_35, Vivum_40, Wachhund_41, Zapner_48, Zizzle_41,

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

- Dorothy_39, Guppsters_41, Mozy_43, RedBird_39, Sandalphon_42, Yorick_39,

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

- Alexphander_44, Ariel_199, Aubs_40, BAKA_199, Bagrid_200, Beakin_42, Beem_194, BlueCrab_39, BobaPhett_41, Bogg_7, Boomer_42, Brocalys_34, Bubbles123_39, Burwell21_41, Cabrinians_41, Cheesepuff_45, Clifton_33, Courthouse_195, Crumble_35, DaWorst_42, DaddyRickover_39, Daenerys_38, Dallas_192, Dante_39, Deb65_39, DirtMcgirt_40, Doomphist_41, DotProduct_39, Doug_42, Dove_177, Drago_41, Duke13_193, Eish_40, Ejimix_182, EmiMonkey_39, Emmaloid_42, Empress_40, EricMillard_189, Eureka_6, Filuzino_39, Gumbie_39, Gaia_154, Gandalph_41, Geralt_39, GigiOuiOui_39, Goku_7, Hades_40, Halley_193,

Hamulus_39, Hannaconda_185, HokkenD_186, Hughesyang_191, IbOuu_41, Inventum_38, Jarcob_41, Job42_42, JoeyJr_39, JuicyJay_187, Kalah2_194, KingMidas_41, Klein_197, Koella_35, Krakatau_40, LastJedi_33, Leozinho_41, LilMoolah_41, LittleShirley_42, Lizziana_41, Llij_39, Lucia_39, Lucky2013_190, MadMen_37, Madiba_38, Manda_6, Mantra_39, Maravista_39, Marker_40, Marleymoo_178, Martik_42, MiaZeal_200, Minerva_193, Minnie_42, Nebkiss_149, NihilNomen_194, Nimbo_38, Nivrat_41, NormanBulbieJr_42, Odette_195, OldBen_39, OlympiaSaint_39, OwlsT2W_39, PHappiness_39, Pacc40_39, Peridot_45, Phasih_40, Phatniss_40, PhilipPhlop_40, Pippy_35, Plumbus_41, Poenanya_41, Polka14_40, Porcelain_193, Priscilla_40, Radiance_40, Ramsey_42, Redno2_185, RitaG_40, Rockne_39, RockyHorror_40, Royals2015_41, Sassafras_40, Schatzie_187, Scottish_40, ShiLan_41, ShowerHandel_42, SiSi_39, Slim_42, Spoonbill_39, Stap_40, Starcevich_42, SwagPigglett_42, Tchotchke_41, ThreeRngTarjay_192, Tootsie_43, Totinger_41, UncleRicky_42, VRedHorse_40, Veteran_39, Wanda_190, Whouxphf_41, Yeet_183, Zelink_186, Zerg_39,

Summary by start number:

Start 12:

- Found in 1 of 182 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Guppsters_41 (F1),

Start 14:

- Found in 38 of 182 (20.9%) of genes in pham
- Manual Annotations of this start: 34 of 173
- Called 97.4% of time when present
- Phage (with cluster) where this start called: Aubs_40 (F1), Brocalys_34 (F1), Bubbles123_39 (F1), Clifton_33 (F1), DirtMcGirt_40 (F1), Dorothy_39 (F1), DotProduct_39 (F1), Doug_42 (F1), Drago_41 (F1), EmiMonkey_39 (F1), Emmaloid_42 (F1), Gandolph_41 (F1), GigiOuiOui_39 (F1), Krakatau_40 (F1), LastJedi_33 (F1), LilMoolah_41 (F1), LittleShirley_42 (F1), Llij_39 (F1), Lucia_39 (F1), Madiba_38 (F1), Mantra_39 (F1), Nivrat_41 (F1), Pacc40_39 (F1), Peridot_45 (F1), Phasih_40 (F1), Phatniss_40 (F1), PhilipPhlop_40 (F1), RedBird_39 (F1), RitaG_40 (F1), Rockne_39 (F1), Slim_42 (F1), Starcevich_42 (F1), Tchotchke_41 (F1), Totinger_41 (F1), UncleRicky_42 (F1), Whouxphf_41 (F1), Yorick_39 (F1),

Start 18:

- Found in 1 of 182 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mozy_43 (F1),

Start 20:

- Found in 14 of 182 (7.7%) of genes in pham
- Manual Annotations of this start: 3 of 173
- Called 21.4% of time when present
- Phage (with cluster) where this start called: Boomer_42 (F1), Hades_40 (F1), VRedHorse_40 (F1),

Start 23:

- Found in 49 of 182 (26.9%) of genes in pham

- Manual Annotations of this start: 41 of 173
- Called 87.8% of time when present
- Phage (with cluster) where this start called: ArcusAngelus_41 (F1), Avani_44 (F2), BigPhil_36 (F1), BodEinwohner17_39 (F1), BuzzLyseyear_42 (F1), Cerasum_36 (F1), Chevrolet_44 (F1), Chuckly_39 (F1), Clank_41 (F), Cornucopia_43 (F1), DRBy19_41 (F1), DoRead_41 (F1), Doomslug_45 (F), Florinda_44 (F1), Girafales_43 (F1), Girr_41 (F1), Gorge_41 (F1), Jabbawokkie_49 (F2), James_41 (F1), Karhdo_37 (F1), Kersh_38 (F1), Kimberlium_42 (F1), Mattes_41 (F1), MisterCuddles_41 (F1), MulchExplorer_42 (F1), Ogopogo_41 (F1), Philus_41 (F1), Pollywog_39 (F1), QuickMath_41 (F1), Quico_43 (F1), Rita_42 (F1), Ruby_40 (F1), Saal_41 (F1), Sabb_40 (F1), Sarma624_36 (F1), Sparkdehlily_39 (F1), Spikelee_40 (F1), TDanisky_39 (F1), Velveteen_35 (F1), Vivum_40 (F1), Wachhund_41 (F1), Zapner_48 (F2), Zizzle_41 (F1),

Start 24:

- Found in 14 of 182 (7.7%) of genes in pham
- Manual Annotations of this start: 7 of 173
- Called 50.0% of time when present
- Phage (with cluster) where this start called: DaWorst_42 (F1), DaddyRickover_39 (F1), Filuzino_39 (F1), Hamulus_39 (F1), Marker_40 (F1), SiSi_39 (F1), Zerg_39 (F1),

Start 25:

- Found in 44 of 182 (24.2%) of genes in pham
- Manual Annotations of this start: 30 of 173
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Ariel_199 (J), BAKA_199 (J), Bagrid_200 (J), Beem_194 (J), CheesePuff_45 (F1), Courthouse_195 (J), Dallas_192 (J), Dove_177 (J), Duke13_193 (J), Ejimix_182 (J), EricMillard_189 (J), Halley_193 (J), Hannaconda_185 (J), HokkenD_186 (J), Hughesyang_191 (J), JuicyJay_187 (J), Kalah2_194 (J), Klein_197 (J), Lucky2013_190 (J), Marleymoo_178 (J), MiaZeal_200 (J), Minerva_193 (J), Minnie_42 (F1), NihilNomen_194 (J), Odette_195 (J), Porcelain_193 (J), Redno2_185 (J), RockyHorror_40 (F1), Schatzie_187 (J), ThreeRngTarjay_192 (J), Wanda_190 (J), Yeet_183 (J), Zelink_186 (J),

Start 26:

- Found in 1 of 182 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beakin_42 (F1),

Start 27:

- Found in 1 of 182 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nebkiss_149 (X),

Start 28:

- Found in 73 of 182 (40.1%) of genes in pham
- Manual Annotations of this start: 31 of 173
- Called 42.5% of time when present
- Phage (with cluster) where this start called: BlueCrab_39 (F1), Daenerys_38 (F1), Dante_39 (F1), Deb65_39 (F1), Eish_40 (F1), Empress_40 (F1), GUmbie_39 (F1), Geralt_39 (F1), IbOuu_41 (F1), Inventum_38 (F1), Job42_42 (F1), JoeyJr_39 (F1),

KingMidas_41 (F1), Leozinho_41 (F1), MadMen_37 (F1), Nimbo_38 (F1), OldBen_39 (F1), OlympiaSaint_39 (F1), OwlsT2W_39 (F1), PHappiness_39 (F1), Plumbus_41 (F1), Polka14_40 (F1), Radiance_40 (F1), Ramsey_42 (F1), Royals2015_41 (F1), Sassafras_40 (F1), Scottish_40 (F1), Spoonbill_39 (F1), Stap_40 (F1), Tootsieroll_43 (F1), Veteran_39 (F1),

Start 29:

- Found in 5 of 182 (2.7%) of genes in pham
- Manual Annotations of this start: 4 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bogg_7 (E), Eureka_6 (E), Gaia_154 (X), Goku_7 (E), Manda_6 (E),

Start 30:

- Found in 181 of 182 (99.5%) of genes in pham
- Manual Annotations of this start: 19 of 173
- Called 10.5% of time when present
- Phage (with cluster) where this start called: Alexphander_44 (F1), BobaPhett_41 (F1), Burwell21_41 (F1), Cabrinians_41 (F1), Crumble_35 (F1), Doomphist_41 (F1), Jarcob_41 (F1), Koella_35 (F1), Lizziana_41 (F1), Maravista_39 (F1), Martik_42 (F1), NormanBulbieJr_42 (F1), Pippy_35 (F1), Poenanya_41 (F1), Priscilla_40 (F1), Sandalphon_42 (F1), ShiLan_41 (F1), ShowerHandel_42 (F1), SwagPigglett_42 (F1),

Summary by clusters:

There are 6 clusters represented in this pham: F1, F2, E, F, J, X,

Info for manual annotations of cluster E:

- Start number 29 was manually annotated 3 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 12 was manually annotated 1 time for cluster F1.
- Start number 14 was manually annotated 34 times for cluster F1.
- Start number 18 was manually annotated 1 time for cluster F1.
- Start number 20 was manually annotated 3 times for cluster F1.
- Start number 23 was manually annotated 38 times for cluster F1.
- Start number 24 was manually annotated 7 times for cluster F1.
- Start number 25 was manually annotated 3 times for cluster F1.
- Start number 26 was manually annotated 1 time for cluster F1.
- Start number 28 was manually annotated 31 times for cluster F1.
- Start number 30 was manually annotated 19 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 23 was manually annotated 3 times for cluster F2.

Info for manual annotations of cluster J:

- Start number 25 was manually annotated 27 times for cluster J.

Info for manual annotations of cluster X:

- Start number 27 was manually annotated 1 time for cluster X.
- Start number 29 was manually annotated 1 time for cluster X.

Gene Information:

Gene: Alexphander_44 Start: 32015, Stop: 31893, Start Num: 30

Candidate Starts for Alexphander_44:

(7, 32132), (8, 32126), (10, 32123), (Start: 20 @32066 has 3 MA's), (Start: 24 @32051 has 7 MA's), (Start: 25 @32045 has 30 MA's), (Start: 30 @32015 has 19 MA's), (33, 31982), (38, 31904),

Gene: ArcusAngelus_41 Start: 32687, Stop: 32520, Start Num: 23

Candidate Starts for ArcusAngelus_41:

(Start: 23 @32687 has 41 MA's), (Start: 30 @32642 has 19 MA's), (33, 32609), (38, 32531),

Gene: Ariel_199 Start: 95043, Stop: 94891, Start Num: 25

Candidate Starts for Ariel_199:

(Start: 25 @95043 has 30 MA's), (Start: 30 @95013 has 19 MA's), (36, 94953), (37, 94944), (38, 94902),

Gene: Aubs_40 Start: 31370, Stop: 31170, Start Num: 14

Candidate Starts for Aubs_40:

(Start: 14 @31370 has 34 MA's), (21, 31340), (22, 31337), (Start: 28 @31319 has 31 MA's), (Start: 30 @31292 has 19 MA's), (33, 31259), (34, 31256), (38, 31181),

Gene: Avani_44 Start: 30455, Stop: 30288, Start Num: 23

Candidate Starts for Avani_44:

(Start: 23 @30455 has 41 MA's), (Start: 30 @30410 has 19 MA's), (33, 30377), (38, 30299),

Gene: BAKA_199 Start: 98499, Stop: 98347, Start Num: 25

Candidate Starts for BAKA_199:

(5, 98619), (Start: 25 @98499 has 30 MA's), (Start: 30 @98469 has 19 MA's), (36, 98409), (37, 98400), (38, 98358),

Gene: Bagrid_200 Start: 98804, Stop: 98652, Start Num: 25

Candidate Starts for Bagrid_200:

(5, 98924), (Start: 25 @98804 has 30 MA's), (Start: 30 @98774 has 19 MA's), (36, 98714), (37, 98705), (38, 98663),

Gene: Beakin_42 Start: 31202, Stop: 31050, Start Num: 26

Candidate Starts for Beakin_42:

(Start: 26 @31202 has 1 MA's), (Start: 30 @31172 has 19 MA's), (33, 31139), (38, 31061),

Gene: Beem_194 Start: 97507, Stop: 97355, Start Num: 25

Candidate Starts for Beem_194:

(5, 97627), (Start: 25 @97507 has 30 MA's), (Start: 30 @97477 has 19 MA's), (36, 97417), (37, 97408), (38, 97366),

Gene: BigPhil_36 Start: 27528, Stop: 27361, Start Num: 23

Candidate Starts for BigPhil_36:

(Start: 23 @27528 has 41 MA's), (Start: 30 @27483 has 19 MA's), (33, 27450), (38, 27372),

Gene: BlueCrab_39 Start: 31084, Stop: 30935, Start Num: 28

Candidate Starts for BlueCrab_39:

(Start: 28 @31084 has 31 MA's), (Start: 30 @31057 has 19 MA's), (33, 31024), (38, 30946),

Gene: BobaPhett_41 Start: 31438, Stop: 31316, Start Num: 30

Candidate Starts for BobaPhett_41:

(Start: 30 @31438 has 19 MA's), (33, 31405), (38, 31327),

Gene: BodEinwohner17_39 Start: 31322, Stop: 31155, Start Num: 23

Candidate Starts for BodEinwohner17_39:

(Start: 23 @31322 has 41 MA's), (Start: 30 @31277 has 19 MA's), (33, 31244), (38, 31166),

Gene: Bogg_7 Start: 1856, Stop: 1710, Start Num: 29

Candidate Starts for Bogg_7:

(Start: 29 @1856 has 4 MA's), (Start: 30 @1832 has 19 MA's), (31, 1811), (32, 1805), (34, 1796), (37, 1763), (38, 1721),

Gene: Boomer_42 Start: 31942, Stop: 31769, Start Num: 20

Candidate Starts for Boomer_42:

(Start: 20 @31942 has 3 MA's), (Start: 24 @31927 has 7 MA's), (Start: 25 @31921 has 30 MA's), (Start: 30 @31891 has 19 MA's), (33, 31858), (38, 31780),

Gene: Brocalys_34 Start: 26831, Stop: 26631, Start Num: 14

Candidate Starts for Brocalys_34:

(Start: 14 @26831 has 34 MA's), (21, 26801), (22, 26798), (Start: 28 @26780 has 31 MA's), (Start: 30 @26753 has 19 MA's), (33, 26720), (34, 26717), (38, 26642),

Gene: Bubbles123_39 Start: 32019, Stop: 31819, Start Num: 14

Candidate Starts for Bubbles123_39:

(Start: 14 @32019 has 34 MA's), (21, 31989), (22, 31986), (Start: 28 @31968 has 31 MA's), (Start: 30 @31941 has 19 MA's), (33, 31908), (34, 31905), (38, 31830),

Gene: Burwell21_41 Start: 31421, Stop: 31299, Start Num: 30

Candidate Starts for Burwell21_41:

(Start: 30 @31421 has 19 MA's), (33, 31388), (38, 31310),

Gene: BuzzLyseyear_42 Start: 31722, Stop: 31555, Start Num: 23

Candidate Starts for BuzzLyseyear_42:

(Start: 23 @31722 has 41 MA's), (Start: 30 @31677 has 19 MA's), (33, 31644), (38, 31566),

Gene: Cabrinians_41 Start: 31499, Stop: 31377, Start Num: 30

Candidate Starts for Cabrinians_41:

(Start: 30 @31499 has 19 MA's), (33, 31466), (38, 31388),

Gene: Cerasum_36 Start: 27528, Stop: 27361, Start Num: 23

Candidate Starts for Cerasum_36:

(Start: 23 @27528 has 41 MA's), (Start: 30 @27483 has 19 MA's), (33, 27450), (38, 27372),

Gene: Cheesepuff_45 Start: 32928, Stop: 32776, Start Num: 25

Candidate Starts for Cheesepuff_45:

(1, 33108), (3, 33099), (7, 33015), (8, 33009), (10, 33006), (Start: 20 @32949 has 3 MA's), (Start: 24 @32934 has 7 MA's), (Start: 25 @32928 has 30 MA's), (Start: 30 @32898 has 19 MA's), (33, 32865), (38, 32787),

Gene: Chevrolet_44 Start: 32688, Stop: 32521, Start Num: 23

Candidate Starts for Chevrolet_44:

(Start: 23 @32688 has 41 MA's), (Start: 30 @32643 has 19 MA's), (33, 32610), (38, 32532),

Gene: Chuckly_39 Start: 31104, Stop: 30937, Start Num: 23

Candidate Starts for Chuckly_39:

(Start: 23 @31104 has 41 MA's), (Start: 30 @31059 has 19 MA's), (33, 31026), (38, 30948),

Gene: Clank_41 Start: 31563, Stop: 31396, Start Num: 23

Candidate Starts for Clank_41:

(Start: 23 @31563 has 41 MA's), (Start: 30 @31518 has 19 MA's), (33, 31485), (38, 31407),

Gene: Clifton_33 Start: 27182, Stop: 26982, Start Num: 14

Candidate Starts for Clifton_33:

(Start: 14 @27182 has 34 MA's), (21, 27152), (22, 27149), (Start: 28 @27131 has 31 MA's), (Start: 30 @27104 has 19 MA's), (33, 27071), (34, 27068), (38, 26993),

Gene: Cornucopia_43 Start: 31545, Stop: 31378, Start Num: 23

Candidate Starts for Cornucopia_43:

(2, 31710), (4, 31689), (6, 31635), (13, 31587), (15, 31572), (16, 31566), (Start: 23 @31545 has 41 MA's), (Start: 30 @31500 has 19 MA's), (33, 31467), (38, 31389),

Gene: Courthouse_195 Start: 95492, Stop: 95340, Start Num: 25

Candidate Starts for Courthouse_195:

(Start: 25 @95492 has 30 MA's), (Start: 30 @95462 has 19 MA's), (36, 95402), (37, 95393), (38, 95351),

Gene: Crumble_35 Start: 27435, Stop: 27313, Start Num: 30

Candidate Starts for Crumble_35:

(Start: 30 @27435 has 19 MA's), (33, 27402), (38, 27324),

Gene: DRBy19_41 Start: 31392, Stop: 31225, Start Num: 23

Candidate Starts for DRBy19_41:

(Start: 23 @31392 has 41 MA's), (Start: 30 @31347 has 19 MA's), (33, 31314), (38, 31236),

Gene: DaWorst_42 Start: 31825, Stop: 31667, Start Num: 24

Candidate Starts for DaWorst_42:

(Start: 20 @31840 has 3 MA's), (Start: 24 @31825 has 7 MA's), (Start: 25 @31819 has 30 MA's), (Start: 30 @31789 has 19 MA's), (33, 31756), (34, 31753), (38, 31678),

Gene: DaddyRickover_39 Start: 31105, Stop: 30947, Start Num: 24

Candidate Starts for DaddyRickover_39:

(Start: 20 @31120 has 3 MA's), (Start: 24 @31105 has 7 MA's), (Start: 25 @31099 has 30 MA's), (Start: 30 @31069 has 19 MA's), (33, 31036), (34, 31033), (38, 30958),

Gene: Daenerys_38 Start: 30918, Stop: 30769, Start Num: 28

Candidate Starts for Daenerys_38:

(Start: 28 @30918 has 31 MA's), (Start: 30 @30891 has 19 MA's), (33, 30858), (38, 30780),

Gene: Dallas_192 Start: 96527, Stop: 96375, Start Num: 25

Candidate Starts for Dallas_192:

(5, 96647), (Start: 25 @96527 has 30 MA's), (Start: 30 @96497 has 19 MA's), (36, 96437), (37, 96428), (38, 96386),

Gene: Dante_39 Start: 31035, Stop: 30886, Start Num: 28

Candidate Starts for Dante_39:

(Start: 28 @31035 has 31 MA's), (Start: 30 @31008 has 19 MA's), (33, 30975), (38, 30897),

Gene: Deb65_39 Start: 30918, Stop: 30769, Start Num: 28

Candidate Starts for Deb65_39:

(Start: 28 @30918 has 31 MA's), (Start: 30 @30891 has 19 MA's), (33, 30858), (38, 30780),

Gene: DirtMcgirt_40 Start: 30869, Stop: 30669, Start Num: 14

Candidate Starts for DirtMcgirt_40:

(Start: 14 @30869 has 34 MA's), (21, 30839), (22, 30836), (Start: 28 @30818 has 31 MA's), (Start: 30 @30791 has 19 MA's), (33, 30758), (34, 30755), (38, 30680),

Gene: DoRead_41 Start: 31530, Stop: 31363, Start Num: 23

Candidate Starts for DoRead_41:

(Start: 23 @31530 has 41 MA's), (Start: 30 @31485 has 19 MA's), (38, 31374),

Gene: Doomphist_41 Start: 31369, Stop: 31247, Start Num: 30

Candidate Starts for Doomphist_41:

(Start: 30 @31369 has 19 MA's), (33, 31336), (38, 31258),

Gene: Doomslug_45 Start: 31125, Stop: 30958, Start Num: 23

Candidate Starts for Doomslug_45:

(Start: 23 @31125 has 41 MA's), (Start: 30 @31080 has 19 MA's), (33, 31047), (38, 30969),

Gene: Dorothy_39 Start: 31342, Stop: 31139, Start Num: 14

Candidate Starts for Dorothy_39:

(Start: 14 @31342 has 34 MA's), (21, 31312), (22, 31309), (Start: 23 @31306 has 41 MA's), (Start: 28 @31288 has 31 MA's), (Start: 30 @31261 has 19 MA's), (33, 31228), (34, 31225), (38, 31150),

Gene: DotProduct_39 Start: 31001, Stop: 30834, Start Num: 14

Candidate Starts for DotProduct_39:

(Start: 14 @31001 has 34 MA's), (21, 30971), (22, 30968), (Start: 28 @30950 has 31 MA's), (Start: 30 @30923 has 19 MA's), (33, 30890), (34, 30887), (38, 30845),

Gene: Doug_42 Start: 31891, Stop: 31691, Start Num: 14

Candidate Starts for Doug_42:

(Start: 14 @31891 has 34 MA's), (21, 31861), (22, 31858), (Start: 30 @31813 has 19 MA's), (33, 31780), (34, 31777), (38, 31702),

Gene: Dove_177 Start: 92787, Stop: 92635, Start Num: 25

Candidate Starts for Dove_177:

(5, 92907), (Start: 25 @92787 has 30 MA's), (Start: 30 @92757 has 19 MA's), (32, 92730), (36, 92697), (37, 92688),

Gene: Drago_41 Start: 30862, Stop: 30662, Start Num: 14

Candidate Starts for Drago_41:

(Start: 14 @30862 has 34 MA's), (21, 30832), (22, 30829), (Start: 28 @30811 has 31 MA's), (Start: 30 @30784 has 19 MA's), (33, 30751), (34, 30748), (38, 30673),

Gene: Duke13_193 Start: 96796, Stop: 96644, Start Num: 25

Candidate Starts for Duke13_193:

(5, 96916), (Start: 25 @96796 has 30 MA's), (Start: 30 @96766 has 19 MA's), (36, 96706), (37, 96697), (38, 96655),

Gene: Eish_40 Start: 31623, Stop: 31474, Start Num: 28

Candidate Starts for Eish_40:

(Start: 28 @31623 has 31 MA's), (Start: 30 @31596 has 19 MA's), (33, 31563), (38, 31485),

Gene: Ejimix_182 Start: 95865, Stop: 95713, Start Num: 25

Candidate Starts for Ejimix_182:

(5, 95985), (Start: 25 @95865 has 30 MA's), (Start: 30 @95835 has 19 MA's), (36, 95775), (37, 95766), (38, 95724),

Gene: EmiMonkey_39 Start: 32657, Stop: 32457, Start Num: 14

Candidate Starts for EmiMonkey_39:

(Start: 14 @32657 has 34 MA's), (21, 32627), (22, 32624), (Start: 28 @32606 has 31 MA's), (Start: 30 @32579 has 19 MA's), (33, 32546), (38, 32468),

Gene: Emmaloid_42 Start: 32735, Stop: 32535, Start Num: 14

Candidate Starts for Emmaloid_42:

(Start: 14 @32735 has 34 MA's), (21, 32705), (22, 32702), (Start: 28 @32684 has 31 MA's), (Start: 30 @32657 has 19 MA's), (33, 32624), (38, 32546),

Gene: Empress_40 Start: 32331, Stop: 32182, Start Num: 28

Candidate Starts for Empress_40:

(Start: 28 @32331 has 31 MA's), (Start: 30 @32304 has 19 MA's), (33, 32271), (38, 32193),

Gene: EricMillard_189 Start: 97575, Stop: 97423, Start Num: 25

Candidate Starts for EricMillard_189:

(5, 97695), (Start: 25 @97575 has 30 MA's), (Start: 30 @97545 has 19 MA's), (36, 97485), (37, 97476), (38, 97434),

Gene: Eureka_6 Start: 1686, Stop: 1540, Start Num: 29

Candidate Starts for Eureka_6:

(Start: 29 @1686 has 4 MA's), (Start: 30 @1662 has 19 MA's), (31, 1641), (32, 1635), (34, 1626), (37, 1593), (38, 1551),

Gene: Filuzino_39 Start: 30876, Stop: 30718, Start Num: 24

Candidate Starts for Filuzino_39:

(Start: 20 @30891 has 3 MA's), (Start: 24 @30876 has 7 MA's), (Start: 25 @30870 has 30 MA's), (Start: 30 @30840 has 19 MA's), (33, 30807), (38, 30729),

Gene: Florinda_44 Start: 31679, Stop: 31512, Start Num: 23

Candidate Starts for Florinda_44:

(15, 31706), (Start: 23 @31679 has 41 MA's), (Start: 30 @31634 has 19 MA's), (33, 31601), (38, 31523),

Gene: GUmbie_39 Start: 30937, Stop: 30788, Start Num: 28

Candidate Starts for GUmbie_39:

(Start: 28 @30937 has 31 MA's), (Start: 30 @30910 has 19 MA's), (33, 30877), (38, 30799),

Gene: Gaia_154 Start: 80338, Stop: 80192, Start Num: 29

Candidate Starts for Gaia_154:

(Start: 29 @80338 has 4 MA's), (Start: 30 @80314 has 19 MA's), (37, 80245),

Gene: Gandolph_41 Start: 31303, Stop: 31103, Start Num: 14

Candidate Starts for Gandalph_41:

(Start: 14 @31303 has 34 MA's), (21, 31273), (22, 31270), (Start: 28 @31252 has 31 MA's), (Start: 30 @31225 has 19 MA's), (38, 31114),

Gene: Geralt_39 Start: 30917, Stop: 30768, Start Num: 28

Candidate Starts for Geralt_39:

(Start: 28 @30917 has 31 MA's), (Start: 30 @30890 has 19 MA's), (33, 30857), (38, 30779),

Gene: GigiOuiOui_39 Start: 31144, Stop: 30977, Start Num: 14

Candidate Starts for GigiOuiOui_39:

(Start: 14 @31144 has 34 MA's), (21, 31114), (22, 31111), (Start: 28 @31093 has 31 MA's), (Start: 30 @31066 has 19 MA's), (33, 31033), (34, 31030), (38, 30988),

Gene: Girafales_43 Start: 31487, Stop: 31320, Start Num: 23

Candidate Starts for Girafales_43:

(15, 31514), (Start: 23 @31487 has 41 MA's), (Start: 30 @31442 has 19 MA's), (33, 31409), (38, 31331),

Gene: Girr_41 Start: 31972, Stop: 31805, Start Num: 23

Candidate Starts for Girr_41:

(Start: 23 @31972 has 41 MA's), (Start: 30 @31927 has 19 MA's), (33, 31894), (38, 31816),

Gene: Goku_7 Start: 1686, Stop: 1540, Start Num: 29

Candidate Starts for Goku_7:

(Start: 29 @1686 has 4 MA's), (Start: 30 @1662 has 19 MA's), (31, 1641), (32, 1635), (34, 1626), (37, 1593), (38, 1551),

Gene: Gorge_41 Start: 31526, Stop: 31359, Start Num: 23

Candidate Starts for Gorge_41:

(Start: 23 @31526 has 41 MA's), (Start: 30 @31481 has 19 MA's), (33, 31448), (38, 31370),

Gene: Guppsters_41 Start: 31587, Stop: 31363, Start Num: 12

Candidate Starts for Guppsters_41:

(9, 31596), (11, 31593), (Start: 12 @31587 has 1 MA's), (Start: 23 @31530 has 41 MA's), (Start: 28 @31512 has 31 MA's), (Start: 30 @31485 has 19 MA's), (33, 31452), (36, 31425), (38, 31374),

Gene: Hades_40 Start: 31272, Stop: 31099, Start Num: 20

Candidate Starts for Hades_40:

(7, 31338), (8, 31332), (10, 31329), (Start: 20 @31272 has 3 MA's), (Start: 24 @31257 has 7 MA's), (Start: 25 @31251 has 30 MA's), (Start: 30 @31221 has 19 MA's), (33, 31188), (38, 31110),

Gene: Halley_193 Start: 96033, Stop: 95881, Start Num: 25

Candidate Starts for Halley_193:

(5, 96153), (Start: 25 @96033 has 30 MA's), (Start: 30 @96003 has 19 MA's), (36, 95943), (37, 95934), (38, 95892),

Gene: Hamulus_39 Start: 31995, Stop: 31837, Start Num: 24

Candidate Starts for Hamulus_39:

(Start: 20 @32010 has 3 MA's), (Start: 24 @31995 has 7 MA's), (Start: 25 @31989 has 30 MA's), (Start: 30 @31959 has 19 MA's), (33, 31926), (34, 31923), (38, 31848),

Gene: Hannaconda_185 Start: 96466, Stop: 96314, Start Num: 25

Candidate Starts for Hannaconda_185:

(5, 96586), (Start: 25 @96466 has 30 MA's), (Start: 30 @96436 has 19 MA's), (36, 96376), (37, 96367), (38, 96325),

Gene: HokkenD_186 Start: 97961, Stop: 97809, Start Num: 25

Candidate Starts for HokkenD_186:

(5, 98081), (Start: 25 @97961 has 30 MA's), (Start: 30 @97931 has 19 MA's), (36, 97871), (37, 97862), (38, 97820),

Gene: Hughesyang_191 Start: 97201, Stop: 97049, Start Num: 25

Candidate Starts for Hughesyang_191:

(5, 97321), (Start: 25 @97201 has 30 MA's), (Start: 30 @97171 has 19 MA's), (32, 97144), (36, 97111), (37, 97102),

Gene: IbOuu_41 Start: 31492, Stop: 31343, Start Num: 28

Candidate Starts for IbOuu_41:

(Start: 28 @31492 has 31 MA's), (Start: 30 @31465 has 19 MA's), (33, 31432), (38, 31354),

Gene: Inventum_38 Start: 31598, Stop: 31449, Start Num: 28

Candidate Starts for Inventum_38:

(Start: 28 @31598 has 31 MA's), (Start: 30 @31571 has 19 MA's), (33, 31538), (38, 31460),

Gene: Jabbawokkie_49 Start: 31633, Stop: 31466, Start Num: 23

Candidate Starts for Jabbawokkie_49:

(Start: 23 @31633 has 41 MA's), (Start: 30 @31588 has 19 MA's), (33, 31555), (38, 31477),

Gene: James_41 Start: 31483, Stop: 31316, Start Num: 23

Candidate Starts for James_41:

(Start: 23 @31483 has 41 MA's), (Start: 30 @31438 has 19 MA's), (33, 31405), (38, 31327),

Gene: Jacob_41 Start: 31474, Stop: 31352, Start Num: 30

Candidate Starts for Jacob_41:

(Start: 30 @31474 has 19 MA's), (33, 31441), (38, 31363),

Gene: Job42_42 Start: 32914, Stop: 32765, Start Num: 28

Candidate Starts for Job42_42:

(Start: 28 @32914 has 31 MA's), (Start: 30 @32887 has 19 MA's), (33, 32854), (38, 32776),

Gene: JoeyJr_39 Start: 31086, Stop: 30937, Start Num: 28

Candidate Starts for JoeyJr_39:

(Start: 28 @31086 has 31 MA's), (Start: 30 @31059 has 19 MA's), (33, 31026), (38, 30948),

Gene: JuicyJay_187 Start: 97459, Stop: 97307, Start Num: 25

Candidate Starts for JuicyJay_187:

(5, 97579), (Start: 25 @97459 has 30 MA's), (Start: 30 @97429 has 19 MA's), (36, 97369), (37, 97360), (38, 97318),

Gene: Kalah2_194 Start: 98851, Stop: 98699, Start Num: 25

Candidate Starts for Kalah2_194:

(Start: 25 @98851 has 30 MA's), (Start: 30 @98821 has 19 MA's), (36, 98761), (37, 98752), (38, 98710),

Gene: Karhdo_37 Start: 31068, Stop: 30901, Start Num: 23

Candidate Starts for Karhdo_37:

(Start: 23 @31068 has 41 MA's), (Start: 30 @31023 has 19 MA's), (33, 30990), (38, 30912),

Gene: Kersh_38 Start: 32506, Stop: 32339, Start Num: 23

Candidate Starts for Kersh_38:

(Start: 23 @32506 has 41 MA's), (Start: 28 @32488 has 31 MA's), (Start: 30 @32461 has 19 MA's), (33, 32428), (34, 32425), (38, 32350),

Gene: Kimberlium_42 Start: 32322, Stop: 32155, Start Num: 23

Candidate Starts for Kimberlium_42:

(Start: 23 @32322 has 41 MA's), (Start: 30 @32277 has 19 MA's), (33, 32244), (38, 32166),

Gene: KingMidas_41 Start: 32780, Stop: 32631, Start Num: 28

Candidate Starts for KingMidas_41:

(Start: 28 @32780 has 31 MA's), (Start: 30 @32753 has 19 MA's), (33, 32720), (38, 32642),

Gene: Klein_197 Start: 96390, Stop: 96238, Start Num: 25

Candidate Starts for Klein_197:

(Start: 25 @96390 has 30 MA's), (Start: 30 @96360 has 19 MA's), (36, 96300), (37, 96291), (38, 96249),

Gene: Koella_35 Start: 27397, Stop: 27275, Start Num: 30

Candidate Starts for Koella_35:

(Start: 30 @27397 has 19 MA's), (33, 27364), (38, 27286),

Gene: Krakatau_40 Start: 31706, Stop: 31539, Start Num: 14

Candidate Starts for Krakatau_40:

(Start: 14 @31706 has 34 MA's), (21, 31676), (22, 31673), (Start: 28 @31655 has 31 MA's), (Start: 30 @31628 has 19 MA's), (33, 31595), (34, 31592), (38, 31550),

Gene: LastJedi_33 Start: 27225, Stop: 27025, Start Num: 14

Candidate Starts for LastJedi_33:

(Start: 14 @27225 has 34 MA's), (21, 27195), (22, 27192), (Start: 28 @27174 has 31 MA's), (Start: 30 @27147 has 19 MA's), (33, 27114), (34, 27111), (38, 27036),

Gene: Leozinho_41 Start: 31339, Stop: 31190, Start Num: 28

Candidate Starts for Leozinho_41:

(Start: 28 @31339 has 31 MA's), (Start: 30 @31312 has 19 MA's), (33, 31279), (38, 31201),

Gene: LilMoolah_41 Start: 31599, Stop: 31399, Start Num: 14

Candidate Starts for LilMoolah_41:

(Start: 14 @31599 has 34 MA's), (21, 31569), (22, 31566), (Start: 28 @31548 has 31 MA's), (Start: 30 @31521 has 19 MA's), (33, 31488), (34, 31485), (38, 31410),

Gene: LittleShirley_42 Start: 32652, Stop: 32485, Start Num: 14

Candidate Starts for LittleShirley_42:

(Start: 14 @32652 has 34 MA's), (21, 32622), (22, 32619), (Start: 28 @32601 has 31 MA's), (Start: 30 @32574 has 19 MA's), (33, 32541), (34, 32538), (38, 32496),

Gene: Lizziana_41 Start: 31396, Stop: 31274, Start Num: 30

Candidate Starts for Lizziana_41:

(Start: 30 @31396 has 19 MA's), (33, 31363), (38, 31285),

Gene: Llij_39 Start: 31026, Stop: 30826, Start Num: 14

Candidate Starts for Llij_39:

(Start: 14 @31026 has 34 MA's), (21, 30996), (22, 30993), (Start: 28 @30975 has 31 MA's), (Start: 30 @30948 has 19 MA's), (33, 30915), (34, 30912), (38, 30837),

Gene: Lucia_39 Start: 31157, Stop: 30957, Start Num: 14

Candidate Starts for Lucia_39:

(Start: 14 @31157 has 34 MA's), (21, 31127), (22, 31124), (Start: 28 @31106 has 31 MA's), (Start: 30 @31079 has 19 MA's), (33, 31046), (34, 31043), (38, 30968),

Gene: Lucky2013_190 Start: 93680, Stop: 93528, Start Num: 25

Candidate Starts for Lucky2013_190:

(5, 93800), (Start: 25 @93680 has 30 MA's), (Start: 30 @93650 has 19 MA's), (32, 93623), (36, 93590), (37, 93581),

Gene: MadMen_37 Start: 30611, Stop: 30462, Start Num: 28

Candidate Starts for MadMen_37:

(Start: 14 @30662 has 34 MA's), (21, 30632), (22, 30629), (Start: 28 @30611 has 31 MA's), (Start: 30 @30584 has 19 MA's), (33, 30551), (34, 30548), (38, 30473),

Gene: Madiba_38 Start: 29952, Stop: 29752, Start Num: 14

Candidate Starts for Madiba_38:

(Start: 14 @29952 has 34 MA's), (21, 29922), (22, 29919), (Start: 28 @29901 has 31 MA's), (Start: 30 @29874 has 19 MA's), (33, 29841), (34, 29838), (38, 29763),

Gene: Manda_6 Start: 1478, Stop: 1332, Start Num: 29

Candidate Starts for Manda_6:

(Start: 29 @1478 has 4 MA's), (Start: 30 @1454 has 19 MA's), (31, 1433), (32, 1427), (34, 1418), (37, 1385), (38, 1343),

Gene: Mantra_39 Start: 31110, Stop: 30943, Start Num: 14

Candidate Starts for Mantra_39:

(Start: 14 @31110 has 34 MA's), (21, 31080), (22, 31077), (Start: 28 @31059 has 31 MA's), (Start: 30 @31032 has 19 MA's), (33, 30999), (34, 30996), (38, 30954),

Gene: Maravista_39 Start: 30897, Stop: 30775, Start Num: 30

Candidate Starts for Maravista_39:

(Start: 30 @30897 has 19 MA's), (33, 30864), (38, 30786),

Gene: Marker_40 Start: 30904, Stop: 30746, Start Num: 24

Candidate Starts for Marker_40:

(Start: 20 @30919 has 3 MA's), (Start: 24 @30904 has 7 MA's), (Start: 25 @30898 has 30 MA's), (Start: 30 @30868 has 19 MA's), (33, 30835), (34, 30832), (38, 30757),

Gene: Marleymoo_178 Start: 95038, Stop: 94886, Start Num: 25

Candidate Starts for Marleymoo_178:

(5, 95158), (Start: 25 @95038 has 30 MA's), (Start: 30 @95008 has 19 MA's), (36, 94948), (37, 94939), (38, 94897),

Gene: Martik_42 Start: 31423, Stop: 31301, Start Num: 30

Candidate Starts for Martik_42:

(Start: 30 @31423 has 19 MA's), (33, 31390), (38, 31312),

Gene: Mattes_41 Start: 31483, Stop: 31316, Start Num: 23

Candidate Starts for Mattes_41:

(Start: 23 @31483 has 41 MA's), (Start: 30 @31438 has 19 MA's), (33, 31405), (38, 31327),

Gene: MiaZeal_200 Start: 95709, Stop: 95557, Start Num: 25

Candidate Starts for MiaZeal_200:

(Start: 25 @95709 has 30 MA's), (Start: 30 @95679 has 19 MA's), (36, 95619), (37, 95610), (38, 95568),

Gene: Minerva_193 Start: 96026, Stop: 95874, Start Num: 25

Candidate Starts for Minerva_193:

(5, 96146), (Start: 25 @96026 has 30 MA's), (Start: 30 @95996 has 19 MA's), (36, 95936), (37, 95927), (38, 95885),

Gene: Minnie_42 Start: 32289, Stop: 32137, Start Num: 25

Candidate Starts for Minnie_42:

(7, 32376), (8, 32370), (10, 32367), (Start: 20 @32310 has 3 MA's), (Start: 24 @32295 has 7 MA's), (Start: 25 @32289 has 30 MA's), (Start: 30 @32259 has 19 MA's), (33, 32226), (38, 32148),

Gene: MisterCuddles_41 Start: 31972, Stop: 31805, Start Num: 23

Candidate Starts for MisterCuddles_41:

(Start: 23 @31972 has 41 MA's), (Start: 30 @31927 has 19 MA's), (33, 31894), (38, 31816),

Gene: Mozy_43 Start: 32689, Stop: 32510, Start Num: 18

Candidate Starts for Mozy_43:

(17, 32692), (Start: 18 @32689 has 1 MA's), (19, 32686), (21, 32680), (Start: 23 @32677 has 41 MA's), (Start: 30 @32632 has 19 MA's), (38, 32521),

Gene: MulchExplorer_42 Start: 32321, Stop: 32154, Start Num: 23

Candidate Starts for MulchExplorer_42:

(Start: 23 @32321 has 41 MA's), (Start: 30 @32276 has 19 MA's), (33, 32243), (38, 32165),

Gene: Nebkiss_149 Start: 75124, Stop: 74972, Start Num: 27

Candidate Starts for Nebkiss_149:

(13, 75178), (Start: 27 @75124 has 1 MA's), (Start: 30 @75094 has 19 MA's), (35, 75052), (37, 75025),

Gene: NihilNomen_194 Start: 95587, Stop: 95435, Start Num: 25

Candidate Starts for NihilNomen_194:

(5, 95707), (Start: 25 @95587 has 30 MA's), (Start: 30 @95557 has 19 MA's), (36, 95497), (37, 95488), (38, 95446),

Gene: Nimbo_38 Start: 30921, Stop: 30772, Start Num: 28

Candidate Starts for Nimbo_38:

(Start: 28 @30921 has 31 MA's), (Start: 30 @30894 has 19 MA's), (33, 30861), (38, 30783),

Gene: Nivrat_41 Start: 31473, Stop: 31273, Start Num: 14

Candidate Starts for Nivrat_41:

(Start: 14 @31473 has 34 MA's), (21, 31443), (22, 31440), (Start: 28 @31422 has 31 MA's), (Start: 30 @31395 has 19 MA's), (33, 31362), (34, 31359), (38, 31284),

Gene: NormanBulbieJr_42 Start: 31410, Stop: 31288, Start Num: 30

Candidate Starts for NormanBulbieJr_42:

(Start: 30 @31410 has 19 MA's), (33, 31377), (38, 31299),

Gene: Odette_195 Start: 98656, Stop: 98504, Start Num: 25

Candidate Starts for Odette_195:

(5, 98776), (Start: 25 @98656 has 30 MA's), (Start: 30 @98626 has 19 MA's), (36, 98566), (37, 98557), (38, 98515),

Gene: Ogopogo_41 Start: 30648, Stop: 30481, Start Num: 23

Candidate Starts for Ogopogo_41:

(Start: 23 @30648 has 41 MA's), (Start: 30 @30603 has 19 MA's), (33, 30570), (38, 30492),

Gene: OldBen_39 Start: 30952, Stop: 30803, Start Num: 28

Candidate Starts for OldBen_39:

(Start: 28 @30952 has 31 MA's), (Start: 30 @30925 has 19 MA's), (33, 30892), (38, 30814),

Gene: OlympiaSaint_39 Start: 31367, Stop: 31218, Start Num: 28

Candidate Starts for OlympiaSaint_39:

(Start: 28 @31367 has 31 MA's), (Start: 30 @31340 has 19 MA's), (33, 31307), (38, 31229),

Gene: OwlsT2W_39 Start: 31342, Stop: 31193, Start Num: 28

Candidate Starts for OwlsT2W_39:

(Start: 28 @31342 has 31 MA's), (Start: 30 @31315 has 19 MA's), (33, 31282), (38, 31204),

Gene: PHappiness_39 Start: 30894, Stop: 30745, Start Num: 28

Candidate Starts for PHappiness_39:

(Start: 28 @30894 has 31 MA's), (Start: 30 @30867 has 19 MA's), (33, 30834), (38, 30756),

Gene: Pacc40_39 Start: 31217, Stop: 31017, Start Num: 14

Candidate Starts for Pacc40_39:

(Start: 14 @31217 has 34 MA's), (21, 31187), (22, 31184), (Start: 28 @31166 has 31 MA's), (Start: 30 @31139 has 19 MA's), (33, 31106), (34, 31103), (38, 31028),

Gene: Peridot_45 Start: 32854, Stop: 32654, Start Num: 14

Candidate Starts for Peridot_45:

(Start: 14 @32854 has 34 MA's), (21, 32824), (22, 32821), (Start: 28 @32803 has 31 MA's), (Start: 30 @32776 has 19 MA's), (33, 32743), (38, 32665),

Gene: Phasih_40 Start: 31569, Stop: 31402, Start Num: 14

Candidate Starts for Phasih_40:

(Start: 14 @31569 has 34 MA's), (21, 31539), (22, 31536), (Start: 28 @31518 has 31 MA's), (Start: 30 @31491 has 19 MA's), (33, 31458), (34, 31455), (38, 31413),

Gene: Phatniss_40 Start: 31543, Stop: 31343, Start Num: 14

Candidate Starts for Phatniss_40:

(Start: 14 @31543 has 34 MA's), (21, 31513), (22, 31510), (Start: 28 @31492 has 31 MA's), (Start: 30 @31465 has 19 MA's), (33, 31432), (34, 31429), (38, 31354),

Gene: Philus_41 Start: 31368, Stop: 31201, Start Num: 23

Candidate Starts for Philus_41:

(Start: 23 @31368 has 41 MA's), (Start: 30 @31323 has 19 MA's), (33, 31290), (38, 31212),

Gene: PhlipPhlop_40 Start: 32657, Stop: 32457, Start Num: 14

Candidate Starts for PhlipPhlop_40:

(Start: 14 @32657 has 34 MA's), (21, 32627), (22, 32624), (Start: 28 @32606 has 31 MA's), (Start: 30 @32579 has 19 MA's), (33, 32546), (38, 32468),

Gene: Pippy_35 Start: 27386, Stop: 27264, Start Num: 30

Candidate Starts for Pippy_35:

(Start: 30 @27386 has 19 MA's), (33, 27353), (38, 27275),

Gene: Plumbus_41 Start: 31071, Stop: 30922, Start Num: 28

Candidate Starts for Plumbus_41:

(Start: 28 @31071 has 31 MA's), (Start: 30 @31044 has 19 MA's), (33, 31011), (34, 31008), (38, 30933),

Gene: Poenanya_41 Start: 31369, Stop: 31247, Start Num: 30

Candidate Starts for Poenanya_41:

(Start: 30 @31369 has 19 MA's), (33, 31336), (38, 31258),

Gene: Polka14_40 Start: 31539, Stop: 31390, Start Num: 28

Candidate Starts for Polka14_40:

(Start: 28 @31539 has 31 MA's), (Start: 30 @31512 has 19 MA's), (33, 31479), (38, 31401),

Gene: Pollywog_39 Start: 31260, Stop: 31099, Start Num: 23

Candidate Starts for Pollywog_39:

(Start: 23 @31260 has 41 MA's), (Start: 28 @31248 has 31 MA's), (Start: 30 @31221 has 19 MA's), (38, 31110),

Gene: Porcelain_193 Start: 94626, Stop: 94474, Start Num: 25

Candidate Starts for Porcelain_193:

(5, 94746), (Start: 25 @94626 has 30 MA's), (Start: 30 @94596 has 19 MA's), (32, 94569), (36, 94536), (37, 94527),

Gene: Priscilla_40 Start: 31509, Stop: 31387, Start Num: 30

Candidate Starts for Priscilla_40:

(Start: 30 @31509 has 19 MA's), (33, 31476), (38, 31398),

Gene: QuickMath_41 Start: 32545, Stop: 32378, Start Num: 23

Candidate Starts for QuickMath_41:

(Start: 23 @32545 has 41 MA's), (Start: 30 @32500 has 19 MA's), (33, 32467), (38, 32389),

Gene: Quico_43 Start: 31487, Stop: 31320, Start Num: 23

Candidate Starts for Quico_43:

(15, 31514), (Start: 23 @31487 has 41 MA's), (Start: 30 @31442 has 19 MA's), (33, 31409), (38, 31331),

Gene: Radiance_40 Start: 31089, Stop: 30940, Start Num: 28

Candidate Starts for Radiance_40:

(Start: 28 @31089 has 31 MA's), (Start: 30 @31062 has 19 MA's), (33, 31029), (38, 30951),

Gene: Ramsey_42 Start: 31749, Stop: 31600, Start Num: 28

Candidate Starts for Ramsey_42:

(Start: 28 @31749 has 31 MA's), (Start: 30 @31722 has 19 MA's), (33, 31689), (38, 31611),

Gene: RedBird_39 Start: 31354, Stop: 31151, Start Num: 14

Candidate Starts for RedBird_39:

(Start: 14 @31354 has 34 MA's), (21, 31324), (22, 31321), (Start: 23 @31318 has 41 MA's), (Start: 28 @31300 has 31 MA's), (Start: 30 @31273 has 19 MA's), (33, 31240), (34, 31237), (38, 31162),

Gene: Redno2_185 Start: 93534, Stop: 93382, Start Num: 25

Candidate Starts for Redno2_185:

(5, 93654), (Start: 25 @93534 has 30 MA's), (Start: 30 @93504 has 19 MA's), (36, 93444), (37, 93435), (38, 93393),

Gene: Rita_42 Start: 31568, Stop: 31401, Start Num: 23

Candidate Starts for Rita_42:

(Start: 23 @31568 has 41 MA's), (Start: 30 @31523 has 19 MA's), (33, 31490), (38, 31412),

Gene: RitaG_40 Start: 31489, Stop: 31289, Start Num: 14

Candidate Starts for RitaG_40:

(Start: 14 @31489 has 34 MA's), (21, 31459), (22, 31456), (Start: 28 @31438 has 31 MA's), (Start: 30 @31411 has 19 MA's), (33, 31378), (34, 31375), (38, 31300),

Gene: Rockne_39 Start: 31026, Stop: 30826, Start Num: 14

Candidate Starts for Rockne_39:

(Start: 14 @31026 has 34 MA's), (21, 30996), (22, 30993), (Start: 28 @30975 has 31 MA's), (Start: 30 @30948 has 19 MA's), (33, 30915), (34, 30912), (38, 30837),

Gene: RockyHorror_40 Start: 30844, Stop: 30692, Start Num: 25

Candidate Starts for RockyHorror_40:

(Start: 20 @30865 has 3 MA's), (Start: 24 @30850 has 7 MA's), (Start: 25 @30844 has 30 MA's), (Start: 30 @30814 has 19 MA's), (33, 30781), (38, 30703),

Gene: Royals2015_41 Start: 31375, Stop: 31226, Start Num: 28

Candidate Starts for Royals2015_41:

(Start: 28 @31375 has 31 MA's), (Start: 30 @31348 has 19 MA's), (33, 31315), (38, 31237),

Gene: Ruby_40 Start: 31972, Stop: 31805, Start Num: 23

Candidate Starts for Ruby_40:

(Start: 23 @31972 has 41 MA's), (Start: 30 @31927 has 19 MA's), (33, 31894), (38, 31816),

Gene: Saal_41 Start: 31346, Stop: 31179, Start Num: 23

Candidate Starts for Saal_41:

(Start: 23 @31346 has 41 MA's), (Start: 30 @31301 has 19 MA's), (33, 31268), (38, 31190),

Gene: Sabbb_40 Start: 31695, Stop: 31528, Start Num: 23

Candidate Starts for Sabbb_40:

(Start: 23 @31695 has 41 MA's), (Start: 28 @31677 has 31 MA's), (Start: 30 @31650 has 19 MA's), (38, 31539),

Gene: Sandalphon_42 Start: 32031, Stop: 31909, Start Num: 30

Candidate Starts for Sandalphon_42:

(Start: 23 @32076 has 41 MA's), (Start: 30 @32031 has 19 MA's), (33, 31998), (34, 31995), (38, 31920),

Gene: Sarma624_36 Start: 27528, Stop: 27361, Start Num: 23

Candidate Starts for Sarma624_36:

(Start: 23 @27528 has 41 MA's), (Start: 30 @27483 has 19 MA's), (33, 27450), (38, 27372),

Gene: Sassafras_40 Start: 31598, Stop: 31449, Start Num: 28

Candidate Starts for Sassafras_40:

(Start: 28 @31598 has 31 MA's), (Start: 30 @31571 has 19 MA's), (33, 31538), (38, 31460),

Gene: Schatzie_187 Start: 96468, Stop: 96316, Start Num: 25

Candidate Starts for Schatzie_187:

(5, 96588), (Start: 25 @96468 has 30 MA's), (Start: 30 @96438 has 19 MA's), (36, 96378), (37, 96369), (38, 96327),

Gene: Scottish_40 Start: 32219, Stop: 32070, Start Num: 28

Candidate Starts for Scottish_40:

(Start: 28 @32219 has 31 MA's), (Start: 30 @32192 has 19 MA's), (33, 32159), (38, 32081),

Gene: ShiLan_41 Start: 31464, Stop: 31342, Start Num: 30

Candidate Starts for ShiLan_41:

(Start: 30 @31464 has 19 MA's), (33, 31431), (38, 31353),

Gene: ShowerHandel_42 Start: 31423, Stop: 31301, Start Num: 30

Candidate Starts for ShowerHandel_42:

(Start: 30 @31423 has 19 MA's), (33, 31390), (38, 31312),

Gene: SiSi_39 Start: 30984, Stop: 30826, Start Num: 24

Candidate Starts for SiSi_39:

(Start: 20 @30999 has 3 MA's), (Start: 24 @30984 has 7 MA's), (Start: 25 @30978 has 30 MA's), (Start: 30 @30948 has 19 MA's), (33, 30915), (34, 30912), (38, 30837),

Gene: Slim_42 Start: 32726, Stop: 32526, Start Num: 14

Candidate Starts for Slim_42:

(Start: 14 @32726 has 34 MA's), (21, 32696), (22, 32693), (Start: 28 @32675 has 31 MA's), (Start: 30 @32648 has 19 MA's), (33, 32615), (38, 32537),

Gene: Sparkdehlily_39 Start: 31291, Stop: 31124, Start Num: 23

Candidate Starts for Sparkdehlily_39:

(Start: 23 @31291 has 41 MA's), (Start: 28 @31273 has 31 MA's), (Start: 30 @31246 has 19 MA's), (33, 31213), (34, 31210), (38, 31135),

Gene: Spikelee_40 Start: 31180, Stop: 31013, Start Num: 23

Candidate Starts for Spikelee_40:

(Start: 23 @31180 has 41 MA's), (Start: 30 @31135 has 19 MA's), (33, 31102), (38, 31024),

Gene: Spoonbill_39 Start: 31178, Stop: 31029, Start Num: 28

Candidate Starts for Spoonbill_39:

(Start: 28 @31178 has 31 MA's), (Start: 30 @31151 has 19 MA's), (33, 31118), (38, 31040),

Gene: Stap_40 Start: 31069, Stop: 30920, Start Num: 28

Candidate Starts for Stap_40:

(Start: 28 @31069 has 31 MA's), (Start: 30 @31042 has 19 MA's), (33, 31009), (38, 30931),

Gene: Starcevich_42 Start: 32208, Stop: 32008, Start Num: 14

Candidate Starts for Starcevich_42:

(Start: 14 @32208 has 34 MA's), (21, 32178), (22, 32175), (Start: 28 @32157 has 31 MA's), (Start: 30 @32130 has 19 MA's), (33, 32097), (34, 32094), (38, 32019),

Gene: SwagPiggett_42 Start: 31234, Stop: 31112, Start Num: 30

Candidate Starts for SwagPiggett_42:

(Start: 30 @31234 has 19 MA's), (33, 31201), (38, 31123),

Gene: TDanisky_39 Start: 31291, Stop: 31124, Start Num: 23

Candidate Starts for TDanisky_39:

(Start: 23 @31291 has 41 MA's), (Start: 28 @31273 has 31 MA's), (Start: 30 @31246 has 19 MA's), (33, 31213), (34, 31210), (38, 31135),

Gene: Tchotchke_41 Start: 31089, Stop: 30889, Start Num: 14

Candidate Starts for Tchotchke_41:

(9, 31116), (Start: 14 @31089 has 34 MA's), (21, 31059), (22, 31056), (Start: 30 @31011 has 19 MA's), (33, 30978), (38, 30900),

Gene: ThreeRngTarjay_192 Start: 98306, Stop: 98154, Start Num: 25

Candidate Starts for ThreeRngTarjay_192:

(5, 98426), (Start: 25 @98306 has 30 MA's), (Start: 30 @98276 has 19 MA's), (36, 98216), (37, 98207), (38, 98165),

Gene: Tootsieroll_43 Start: 31327, Stop: 31178, Start Num: 28

Candidate Starts for Tootsieroll_43:

(Start: 28 @31327 has 31 MA's), (Start: 30 @31300 has 19 MA's), (33, 31267), (38, 31189),

Gene: Totinger_41 Start: 31337, Stop: 31137, Start Num: 14

Candidate Starts for Totinger_41:

(Start: 14 @31337 has 34 MA's), (21, 31307), (22, 31304), (Start: 28 @31286 has 31 MA's), (Start: 30 @31259 has 19 MA's), (33, 31226), (38, 31148),

Gene: UncleRicky_42 Start: 32359, Stop: 32159, Start Num: 14

Candidate Starts for UncleRicky_42:

(Start: 14 @32359 has 34 MA's), (21, 32329), (22, 32326), (Start: 28 @32308 has 31 MA's), (Start: 30 @32281 has 19 MA's), (33, 32248), (34, 32245), (38, 32170),

Gene: VRedHorse_40 Start: 31496, Stop: 31323, Start Num: 20

Candidate Starts for VRedHorse_40:

(7, 31562), (8, 31556), (10, 31553), (Start: 20 @31496 has 3 MA's), (Start: 24 @31481 has 7 MA's), (Start: 25 @31475 has 30 MA's), (Start: 30 @31445 has 19 MA's), (33, 31412), (38, 31334),

Gene: Velveteen_35 Start: 27528, Stop: 27361, Start Num: 23

Candidate Starts for Velveteen_35:

(Start: 23 @27528 has 41 MA's), (Start: 30 @27483 has 19 MA's), (33, 27450), (38, 27372),

Gene: Veteran_39 Start: 30937, Stop: 30788, Start Num: 28

Candidate Starts for Veteran_39:

(Start: 28 @30937 has 31 MA's), (Start: 30 @30910 has 19 MA's), (33, 30877), (38, 30799),

Gene: Vivum_40 Start: 31191, Stop: 31024, Start Num: 23

Candidate Starts for Vivum_40:

(Start: 23 @31191 has 41 MA's), (Start: 28 @31173 has 31 MA's), (Start: 30 @31146 has 19 MA's), (33, 31113), (34, 31110), (38, 31035),

Gene: Wachhund_41 Start: 31468, Stop: 31301, Start Num: 23

Candidate Starts for Wachhund_41:

(Start: 23 @31468 has 41 MA's), (Start: 30 @31423 has 19 MA's), (33, 31390), (38, 31312),

Gene: Wanda_190 Start: 94039, Stop: 93887, Start Num: 25

Candidate Starts for Wanda_190:

(5, 94159), (Start: 25 @94039 has 30 MA's), (Start: 30 @94009 has 19 MA's), (36, 93949), (37, 93940), (38, 93898),

Gene: Whouxphf_41 Start: 31533, Stop: 31333, Start Num: 14

Candidate Starts for Whouxphf_41:

(Start: 14 @31533 has 34 MA's), (21, 31503), (22, 31500), (Start: 28 @31482 has 31 MA's), (Start: 30 @31455 has 19 MA's), (33, 31422), (34, 31419), (38, 31344),

Gene: Yeet_183 Start: 95175, Stop: 95023, Start Num: 25

Candidate Starts for Yeet_183:

(5, 95295), (Start: 25 @95175 has 30 MA's), (Start: 30 @95145 has 19 MA's), (36, 95085), (37, 95076), (38, 95034),

Gene: Yorick_39 Start: 31548, Stop: 31345, Start Num: 14

Candidate Starts for Yorick_39:

(Start: 14 @31548 has 34 MA's), (21, 31518), (22, 31515), (Start: 23 @31512 has 41 MA's), (Start: 28 @31494 has 31 MA's), (Start: 30 @31467 has 19 MA's), (33, 31434), (34, 31431), (38, 31356),

Gene: Zapner_48 Start: 31634, Stop: 31467, Start Num: 23

Candidate Starts for Zapner_48:

(Start: 23 @31634 has 41 MA's), (Start: 30 @31589 has 19 MA's), (33, 31556), (38, 31478),

Gene: Zelink_186 Start: 95957, Stop: 95805, Start Num: 25

Candidate Starts for Zelink_186:

(5, 96077), (Start: 25 @95957 has 30 MA's), (Start: 30 @95927 has 19 MA's), (32, 95900), (36, 95867), (37, 95858),

Gene: Zerg_39 Start: 30959, Stop: 30801, Start Num: 24

Candidate Starts for Zerg_39:

(Start: 20 @30974 has 3 MA's), (Start: 24 @30959 has 7 MA's), (Start: 25 @30953 has 30 MA's), (Start: 30 @30923 has 19 MA's), (33, 30890), (38, 30812),

Gene: Zizzle_41 Start: 31392, Stop: 31243, Start Num: 23

Candidate Starts for Zizzle_41:

(Start: 23 @31392 has 41 MA's), (33, 31332), (38, 31254),