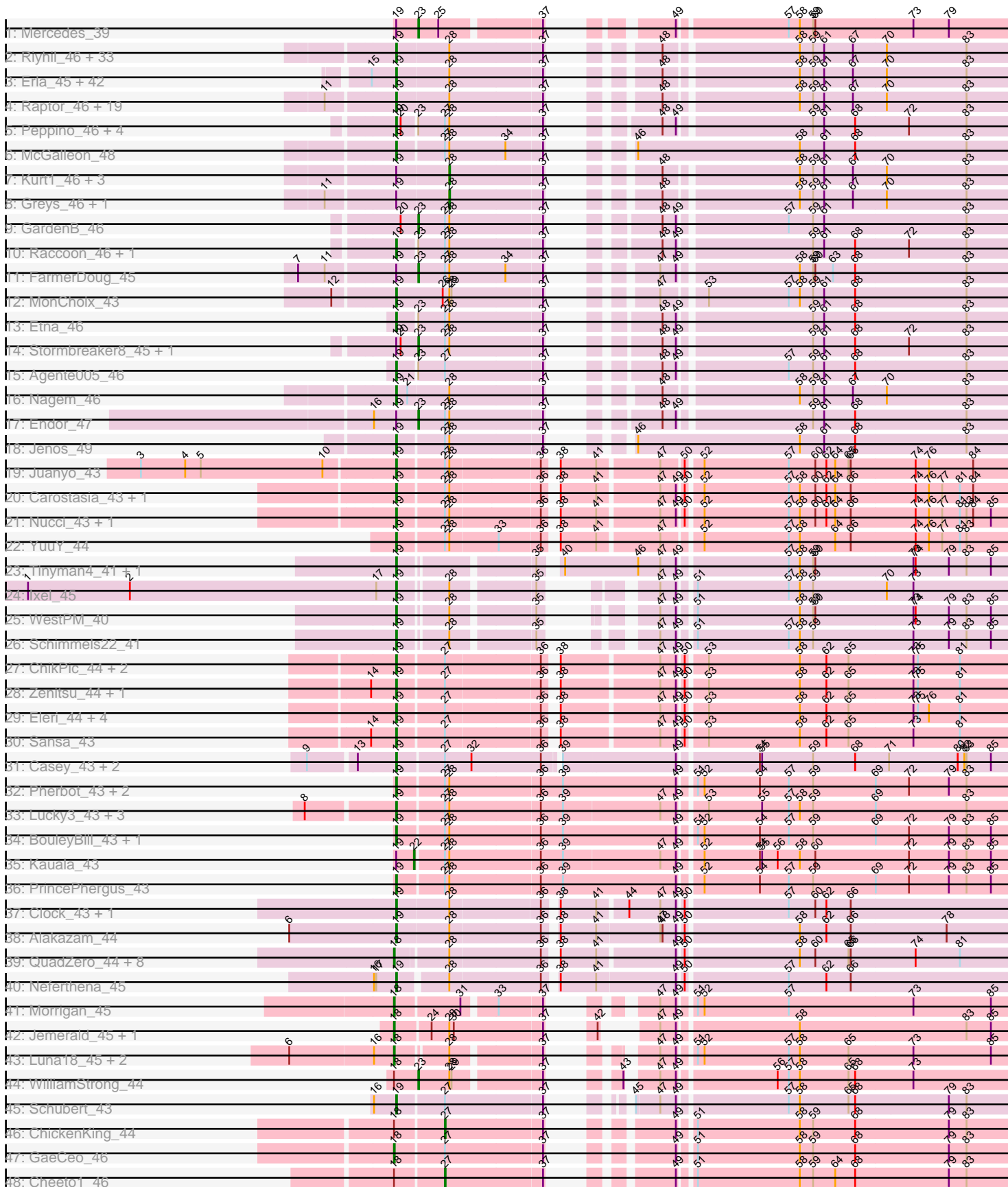


Pham 187910



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 187910 Report

This analysis was run 11/02/24 on database version 579.

Pham number 187910 has 182 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Mercedes_39
- Track 2 : Riyhil_46, Dothraki_46, NickSell_46, Martin_47, Bandik_46, Renzie_46, TatarkaPM_46, SJay_46, Ioannes_46, BeautPeep30_46, Peep_46, Inventa_46, Dave_46, Rapheph_46, ParleG_46, Alyxandracam_46, OldNelly_47, Stanktossa_46, Superfresh_46, MillyPhilly_46, Phireproof_46, Figueroism_46, Delphidian_46, Phiderman_46, MrWorldwide_46, Antoinette_46, AlexAdler_46, Phriends_46, Byron23_47, Pherferi_46, Shee_46, PhredFlintston_46, TinSulphur_47, MaeLinda_46
- Track 3 : Erla_45, Aubergine_45, TeddyBear_45, HankSprout_46, Garey24_46, Kale_45, Jerbirus_47, ManRay_45, StirfryIV_45, Winzigespinne_45, Papafritta_45, Benjalauen_46, Duocatuli_45, Espinosa_45, Baines_45, Pocket_45, Bonino_45, Chamuel_45, Rog141_45, Asta_45, SonOfLevi_46, HanSolo_45, Nattles_45, Gershwin_45, Ilzat_45, KannH_45, JeriBeth_47, Clancy_45, HungryHenry_45, Calix_45, Sedgewig_45, Christoph_45, Etta_45, Gelo_45, AranulaLuti_45, Janus167_45, StingRay_45, Oats_45, Tenda_45, Klimt_46, Chako_45, JasperRussell_45, Gubbabump_45
- Track 4 : Raptor_46, BonesMcCoy_46, Ludgate_46, Thorongil_46, Strathdee_46, Vispistious_46, Thompsone_46, Oxtober96_47, Convict_46, WildNOut_46, BigRedClifford_46, Blage_46, Knox_46, AxiPup_46, Teagan_46, Den3_46, Gargoyle_46, PuppyEggo_46, Lovelyunicorn_46, Velene_46
- Track 5 : Peppino_46, Redfield_46, Hamlet_46, Balsa_45, Schnapsidee_46
- Track 6 : McGalleon_48
- Track 7 : Kurt1_46, Robinson_46, SoilGremlin_47, Zada_47
- Track 8 : Greys_46, ShaiHulud_47
- Track 9 : GardenB_46
- Track 10 : Raccoon_46, Leafus_46
- Track 11 : FarmerDoug_45
- Track 12 : MonChoix_43
- Track 13 : Etna_46
- Track 14 : Stormbreaker8_45, BeeBee8_47
- Track 15 : Agente005_46
- Track 16 : Nagem_46
- Track 17 : Endor_47
- Track 18 : Jenos_49
- Track 19 : Juanyo_43
- Track 20 : Carostasia_43, Quartz_44
- Track 21 : Nucci_43, Mandalorian_43

- Track 22 : YuuY_44
- Track 23 : Tinyman4_41, HerculesXL_42
- Track 24 : Ixel_45
- Track 25 : WestPM_40
- Track 26 : Schimmels22_41
- Track 27 : ChikPic_44, Shamu_45, Finny_45
- Track 28 : Zenitsu_44, MCubed_44
- Track 29 : Eleri_44, ColaCorta_44, Andromedas_44, Glamour_44, Saratos_44
- Track 30 : Sansa_43
- Track 31 : Casey_43, Pikmin_43, Pajaza_43
- Track 32 : Pherbot_43, Bustleton_43, Sinatra_44
- Track 33 : Lucky3_43, SirVictor_44, Golden_43, Guetzie_44
- Track 34 : BouleyBill_43, Koji_43
- Track 35 : Kauala_43
- Track 36 : PrincePhergus_43
- Track 37 : Clock_43, Nebulous_42
- Track 38 : Alakazam_44
- Track 39 : QuadZero_44, LilTerminator_44, Hasitha_44, CaptainRex_44, Greenlvy_43, Fulton_44, Zayuliv_44, Librie_44, Zepp_44
- Track 40 : Neferthena_45
- Track 41 : Morigan_45
- Track 42 : Jemerald_45, Juicer_45
- Track 43 : Luna18_45, KatChan_45, Chepli_45
- Track 44 : WilliamStrong_44
- Track 45 : Schubert_43
- Track 46 : ChickenKing_44
- Track 47 : GaeCeo_46
- Track 48 : Cheeto1_46

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

The start number called the most often in the published annotations is 19, it was called in 148 of the 177 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agente005_46, Alakazam_44, AlexAdler_46, Alyxandracam_46, Andromedas_44, Antoinette_46, AranulaLuti_45, Asta_45, Aubergine_45, AxiPup_46, Baines_45, Balsa_45, Bandik_46, BeautPeep30_46, Benjalauren_46, BigRedClifford_46, Blage_46, BonesMcCoy_46, Bonino_45, BouleyBill_43, Bustleton_43, Byron23_47, Calix_45, Carostasia_43, Casey_43, Chako_45, Chamuel_45, ChikPic_44, Christoph_45, Clancy_45, Clock_43, ColaCorta_44, Convict_46, Dave_46, Delphidian_46, Den3_46, Dothraki_46, Duocatuli_45, Eleri_44, Erla_45, Espinosa_45, Etna_46, Etta_45, Figueroism_46, Finny_45, Garey24_46, Gargoyle_46, Gelo_45, Gershwin_45, Glamour_44, Golden_43, Gubbabump_45, Guetzie_44, Hamlet_46, HanSolo_45, HankSprout_46, HerculesXL_42, HungryHenry_45, Ilzat_45, Inventa_46, Ioannes_46, Ixel_45, Janus167_45, JasperRussell_45, Jenos_49, Jerbirus_47, JeriBeth_47, Juanyo_43, Kale_45, KannH_45, Klimt_46, Knox_46, Koji_43, Leafus_46, Lovelyunicorn_46, Lucky3_43, Ludgate_46, MCubed_44, MaeLinda_46, ManRay_45, Mandalorian_43, Martin_47, McGalleon_48, MillyPhilly_46, MonChoix_43, MrWorldwide_46, Nagem_46,

Nattles_45, Nebulous_42, Neferthena_45, NickSell_46, Nucci_43, Oats_45, OldNelly_47, Oxtober96_47, Pajaza_43, Papafritta_45, ParleG_46, Peep_46, Peppino_46, Pherbot_43, Pherferi_46, Phiderman_46, Phireproof_46, PhredFlintston_46, Phriends_46, Pikmin_43, Pocket_45, PrincePhergus_43, PuppyEggo_46, Quartz_44, Raccoon_46, Rappheph_46, Raptor_46, Redfield_46, Renzie_46, Riyhil_46, Rog141_45, SJay_46, Sansa_43, Saratos_44, Schimmels22_41, Schnapsidee_46, Schubert_43, Sedgewig_45, Shamu_45, Shee_46, Sinatra_44, SirVictor_44, SonOfLevi_46, Stanktossa_46, StingRay_45, StirfryIV_45, Strathdee_46, Superfresh_46, TatarkaPM_46, Teagan_46, TeddyBear_45, Tenda_45, Thompsone_46, Thorongil_46, TinSulphur_47, Tinyman4_41, Velene_46, Vispistious_46, WestPM_40, WildNOut_46, Winzigespinne_45, YuuY_44, Zenitsu_44,

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

- BeeBee8_47, Endor_47, FarmerDoug_45, Greys_46, Kauala_43, Kurt1_46, Mercedes_39, Robinson_46, ShaiHulud_47, SoilGremlin_47, Stormbreaker8_45, Zada_47,

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

- CaptainRex_44, Cheeto1_46, Chepli_45, ChickenKing_44, Fulton_44, GaeCeo_46, GardenB_46, Greenlvy_43, Hasitha_44, Jemerald_45, Juicer_45, KatChan_45, Librie_44, LilTerminator_44, Luna18_45, Morigan_45, QuadZero_44, WilliamStrong_44, Zayuliv_44, Zepp_44,

Summary by start number:

Start 18:

- Found in 19 of 182 (10.4%) of genes in pham
- Manual Annotations of this start: 15 of 177
- Called 84.2% of time when present
- Phage (with cluster) where this start called: CaptainRex_44 (EA5), Chepli_45 (EA6), Fulton_44 (EA5), GaeCeo_46 (EA9), Greenlvy_43 (EA5), Hasitha_44 (EA5), Jemerald_45 (EA6), Juicer_45 (EA6), KatChan_45 (EA6), Librie_44 (EA5), LilTerminator_44 (EA5), Luna18_45 (EA6), Morigan_45 (EA6), QuadZero_44 (EA5), Zayuliv_44 (EA5), Zepp_44 (EA5),

Start 19:

- Found in 162 of 182 (89.0%) of genes in pham
- Manual Annotations of this start: 148 of 177
- Called 92.6% of time when present
- Phage (with cluster) where this start called: Agente005_46 (EA1), Alakazam_44 (EA5), AlexAdler_46 (EA1), Alyxandracam_46 (EA1), Andromedas_44 (EA2), Antoinette_46 (EA1), AranulaLuti_45 (EA1), Asta_45 (EA1), Aubergine_45 (EA1), AxiPup_46 (EA1), Baines_45 (EA1), Balsa_45 (EA1), Bandik_46 (EA1), BeautPeep30_46 (EA1), Benjalauren_46 (EA1), BigRedClifford_46 (EA1), Blage_46 (EA1), BonesMcCoy_46 (EA1), Bonino_45 (EA1), BouleyBill_43 (EA4), Bustleton_43 (EA4), Byron23_47 (EA1), Calix_45 (EA1), Carostasia_43 (EA10), Casey_43 (EA3), Chako_45 (EA1), Chamuel_45 (EA1), ChikPic_44 (EA2), Christoph_45 (EA1), Clancy_45 (EA1), Clock_43 (EA5), ColaCorta_44 (EA2), Convict_46 (EA1), Dave_46 (EA1), Delphidian_46 (EA1), Den3_46 (EA1), Dothraki_46 (EA1), Duocatuli_45 (EA1), Eleri_44 (EA2), Erla_45 (EA1), Espinosa_45 (EA1), Etna_46 (EA1), Etta_45 (EA1), Figueroism_46 (EA1), Finny_45 (EA2), Garey24_46 (EA1), Gargoyle_46 (EA1), Gelo_45 (EA1), Gershwin_45 (EA1), Glamour_44 (EA2), Golden_43 (EA4),

Gubbabump_45 (EA1), Guetzie_44 (EA4), Hamlet_46 (EA1), HanSolo_45 (EA1), HankSprout_46 (EA1), HerculesXL_42 (EA11), HungryHenry_45 (EA1), Ilzat_45 (EA1), Inventa_46 (EA1), Ioannes_46 (EA1), Ixel_45 (EA11), Janus167_45 (EA1), JasperRussell_45 (EA1), Jenos_49 (EA1), Jerbirus_47 (EA1), JeriBeth_47 (EA1), Juanyo_43 (EA10), Kale_45 (EA1), KannH_45 (EA1), Klimt_46 (EA1), Knox_46 (EA1), Koji_43 (EA4), Leafus_46 (EA1), Lovelyunicorn_46 (EA1), Lucky3_43 (EA4), Ludgate_46 (EA1), MCubed_44 (EA2), MaeLinda_46 (EA1), ManRay_45 (EA1), Mandalorian_43 (EA10), Martin_47 (EA1), McGalleon_48 (EA1), MillyPhilly_46 (EA1), MonChoix_43 (EA1), MrWorldwide_46 (EA1), Nagem_46 (EA1), Nattles_45 (EA1), Nebulous_42 (EA5), Neferthena_45 (EA5), NickSell_46 (EA1), Nucci_43 (EA10), Oats_45 (EA1), OldNelly_47 (EA1), Oxtober96_47 (EA1), Pajaza_43 (EA3), PapaFritta_45 (EA1), ParleG_46 (EA1), Peep_46 (EA1), Peppino_46 (EA1), Pherbot_43 (EA4), Pherferi_46 (EA1), Phiderman_46 (EA1), Phireproof_46 (EA1), PhredFlintston_46 (EA1), Phriends_46 (EA1), Pikmin_43 (EA3), Pocket_45 (EA1), PrincePhergus_43 (EA4), PuppyEggo_46 (EA1), Quartz_44 (EA10), Raccoon_46 (EA1), Rapheph_46 (EA1), Raptor_46 (EA1), Redfield_46 (EA1), Renzie_46 (EA1), Riyhil_46 (EA1), Rog141_45 (EA1), SJay_46 (EA1), Sansa_43 (EA2), Saratos_44 (EA2), Schimmels22_41 (EA11), Schnapsidee_46 (EA1), Schubert_43 (EA8), Sedgewig_45 (EA1), Shamu_45 (EA2), Shee_46 (EA1), Sinatra_44 (EA4), SirVictor_44 (EA4), SonOfLevi_46 (EA1), Stanktossa_46 (EA1), StingRay_45 (EA1), StirfryIV_45 (EA1), Strathdee_46 (EA1), Superfresh_46 (EA1), TatarkaPM_46 (EA1), Teagan_46 (EA1), TeddyBear_45 (EA1), Tenda_45 (EA1), Thompsone_46 (EA1), Thorongil_46 (EA1), TinSulphur_47 (EA1), Tinyman4_41 (EA11), Velene_46 (EA1), Vispistious_46 (EA1), WestPM_40 (EA11), WildNOut_46 (EA1), Winzigespinne_45 (EA1), YuuY_44 (EA10), Zenitsu_44 (EA2),

Start 22:

- Found in 1 of 182 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 177
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kauala_43 (EA4),

Start 23:

- Found in 16 of 182 (8.8%) of genes in pham
- Manual Annotations of this start: 7 of 177
- Called 43.8% of time when present
- Phage (with cluster) where this start called: BeeBee8_47 (EA1), Endor_47 (EA1), FarmerDoug_45 (EA1), GardenB_46 (EA1), Mercedes_39 (EA), Stormbreaker8_45 (EA1), WilliamStrong_44 (EA6),

Start 27:

- Found in 51 of 182 (28.0%) of genes in pham
- Manual Annotations of this start: 2 of 177
- Called 3.9% of time when present
- Phage (with cluster) where this start called: Cheeto1_46 (EA9), ChickenKing_44 (EA9),

Start 28:

- Found in 159 of 182 (87.4%) of genes in pham
- Manual Annotations of this start: 4 of 177
- Called 3.8% of time when present
- Phage (with cluster) where this start called: Greys_46 (EA1), Kurt1_46 (EA1), Robinson_46 (EA1), ShaiHulud_47 (EA1), SoilGremlin_47 (EA1), Zada_47 (EA1),

Summary by clusters:

There are 11 clusters represented in this pham: EA11, EA10, EA, EA9, EA8, EA1, EA3, EA2, EA5, EA4, EA6,

Info for manual annotations of cluster EA:

- Start number 23 was manually annotated 1 time for cluster EA.

Info for manual annotations of cluster EA1:

- Start number 19 was manually annotated 108 times for cluster EA1.
- Start number 23 was manually annotated 5 times for cluster EA1.
- Start number 28 was manually annotated 4 times for cluster EA1.

Info for manual annotations of cluster EA10:

- Start number 19 was manually annotated 6 times for cluster EA10.

Info for manual annotations of cluster EA11:

- Start number 19 was manually annotated 5 times for cluster EA11.

Info for manual annotations of cluster EA2:

- Start number 19 was manually annotated 11 times for cluster EA2.

Info for manual annotations of cluster EA3:

- Start number 19 was manually annotated 3 times for cluster EA3.

Info for manual annotations of cluster EA4:

- Start number 19 was manually annotated 10 times for cluster EA4.
- Start number 22 was manually annotated 1 time for cluster EA4.

Info for manual annotations of cluster EA5:

- Start number 18 was manually annotated 8 times for cluster EA5.
- Start number 19 was manually annotated 4 times for cluster EA5.

Info for manual annotations of cluster EA6:

- Start number 18 was manually annotated 6 times for cluster EA6.
- Start number 23 was manually annotated 1 time for cluster EA6.

Info for manual annotations of cluster EA8:

- Start number 19 was manually annotated 1 time for cluster EA8.

Info for manual annotations of cluster EA9:

- Start number 18 was manually annotated 1 time for cluster EA9.
- Start number 27 was manually annotated 2 times for cluster EA9.

Gene Information:

Gene: Agente005_46 Start: 33776, Stop: 33048, Start Num: 19

Candidate Starts for Agente005_46:

(Start: 19 @33776 has 148 MA's), (Start: 23 @33752 has 7 MA's), (Start: 27 @33716 has 2 MA's), (37, 33587), (48, 33506), (49, 33488), (57, 33353), (59, 33320), (61, 33305), (68, 33263), (83, 33113),

Gene: Alakazam_44 Start: 33194, Stop: 32403, Start Num: 19

Candidate Starts for Alakazam_44:

(6, 33338), (Start: 19 @33194 has 148 MA's), (Start: 28 @33125 has 4 MA's), (36, 33005), (38, 32993), (41, 32945), (47, 32861), (48, 32858), (49, 32840), (50, 32834), (58, 32687), (62, 32651), (66, 32618), (78, 32489),

Gene: AlexAdler_46 Start: 33801, Stop: 33076, Start Num: 19

Candidate Starts for AlexAdler_46:

(Start: 19 @33801 has 148 MA's), (Start: 28 @33732 has 4 MA's), (37, 33609), (48, 33534), (58, 33366), (59, 33348), (61, 33333), (67, 33294), (70, 33249), (83, 33141),

Gene: Alyxandracam_46 Start: 33811, Stop: 33086, Start Num: 19

Candidate Starts for Alyxandracam_46:

(Start: 19 @33811 has 148 MA's), (Start: 28 @33742 has 4 MA's), (37, 33619), (48, 33544), (58, 33376), (59, 33358), (61, 33343), (67, 33304), (70, 33259), (83, 33151),

Gene: Andromedas_44 Start: 32738, Stop: 31959, Start Num: 19

Candidate Starts for Andromedas_44:

(Start: 19 @32738 has 148 MA's), (Start: 27 @32678 has 2 MA's), (36, 32555), (38, 32546), (47, 32420), (49, 32399), (50, 32393), (53, 32369), (58, 32246), (62, 32210), (65, 32180), (73, 32093), (75, 32087), (76, 32072), (81, 32030),

Gene: Antoinette_46 Start: 33801, Stop: 33076, Start Num: 19

Candidate Starts for Antoinette_46:

(Start: 19 @33801 has 148 MA's), (Start: 28 @33732 has 4 MA's), (37, 33609), (48, 33534), (58, 33366), (59, 33348), (61, 33333), (67, 33294), (70, 33249), (83, 33141),

Gene: AranulaLuti_45 Start: 33498, Stop: 32773, Start Num: 19

Candidate Starts for AranulaLuti_45:

(15, 33531), (Start: 19 @33498 has 148 MA's), (Start: 28 @33429 has 4 MA's), (37, 33306), (48, 33231), (58, 33063), (59, 33045), (61, 33030), (67, 32991), (70, 32946), (83, 32838),

Gene: Asta_45 Start: 33508, Stop: 32783, Start Num: 19

Candidate Starts for Asta_45:

(15, 33541), (Start: 19 @33508 has 148 MA's), (Start: 28 @33439 has 4 MA's), (37, 33316), (48, 33241), (58, 33073), (59, 33055), (61, 33040), (67, 33001), (70, 32956), (83, 32848),

Gene: Aubergine_45 Start: 33508, Stop: 32783, Start Num: 19

Candidate Starts for Aubergine_45:

(15, 33541), (Start: 19 @33508 has 148 MA's), (Start: 28 @33439 has 4 MA's), (37, 33316), (48, 33241), (58, 33073), (59, 33055), (61, 33040), (67, 33001), (70, 32956), (83, 32848),

Gene: AxiPup_46 Start: 33780, Stop: 33055, Start Num: 19

Candidate Starts for AxiPup_46:

(11, 33867), (Start: 19 @33780 has 148 MA's), (Start: 28 @33711 has 4 MA's), (37, 33588), (48, 33513), (58, 33345), (59, 33327), (61, 33312), (67, 33273), (70, 33228), (83, 33120),

Gene: Baines_45 Start: 33501, Stop: 32776, Start Num: 19

Candidate Starts for Baines_45:

(15, 33534), (Start: 19 @33501 has 148 MA's), (Start: 28 @33432 has 4 MA's), (37, 33309), (48, 33234), (58, 33066), (59, 33048), (61, 33033), (67, 32994), (70, 32949), (83, 32841),

Gene: Balsa_45 Start: 33763, Stop: 33035, Start Num: 19

Candidate Starts for Balsa_45:

(Start: 19 @33763 has 148 MA's), (20, 33757), (Start: 23 @33739 has 7 MA's), (Start: 27 @33703 has 2 MA's), (Start: 28 @33697 has 4 MA's), (37, 33574), (48, 33493), (49, 33475), (59, 33307), (61, 33292), (68, 33250), (72, 33178), (83, 33100),

Gene: Bandik_46 Start: 33806, Stop: 33081, Start Num: 19

Candidate Starts for Bandik_46:

(Start: 19 @33806 has 148 MA's), (Start: 28 @33737 has 4 MA's), (37, 33614), (48, 33539), (58, 33371), (59, 33353), (61, 33338), (67, 33299), (70, 33254), (83, 33146),

Gene: BeautPeep30_46 Start: 33812, Stop: 33087, Start Num: 19

Candidate Starts for BeautPeep30_46:

(Start: 19 @33812 has 148 MA's), (Start: 28 @33743 has 4 MA's), (37, 33620), (48, 33545), (58, 33377), (59, 33359), (61, 33344), (67, 33305), (70, 33260), (83, 33152),

Gene: BeeBee8_47 Start: 33910, Stop: 33206, Start Num: 23

Candidate Starts for BeeBee8_47:

(Start: 19 @33934 has 148 MA's), (20, 33928), (Start: 23 @33910 has 7 MA's), (Start: 27 @33874 has 2 MA's), (Start: 28 @33868 has 4 MA's), (37, 33745), (48, 33664), (49, 33646), (59, 33478), (61, 33463), (68, 33421), (72, 33349), (83, 33271),

Gene: Benjalauren_46 Start: 33514, Stop: 32789, Start Num: 19

Candidate Starts for Benjalauren_46:

(15, 33547), (Start: 19 @33514 has 148 MA's), (Start: 28 @33445 has 4 MA's), (37, 33322), (48, 33247), (58, 33079), (59, 33061), (61, 33046), (67, 33007), (70, 32962), (83, 32854),

Gene: BigRedClifford_46 Start: 33810, Stop: 33085, Start Num: 19

Candidate Starts for BigRedClifford_46:

(11, 33897), (Start: 19 @33810 has 148 MA's), (Start: 28 @33741 has 4 MA's), (37, 33618), (48, 33543), (58, 33375), (59, 33357), (61, 33342), (67, 33303), (70, 33258), (83, 33150),

Gene: Blage_46 Start: 33810, Stop: 33085, Start Num: 19

Candidate Starts for Blage_46:

(11, 33897), (Start: 19 @33810 has 148 MA's), (Start: 28 @33741 has 4 MA's), (37, 33618), (48, 33543), (58, 33375), (59, 33357), (61, 33342), (67, 33303), (70, 33258), (83, 33150),

Gene: BonesMcCoy_46 Start: 33810, Stop: 33085, Start Num: 19

Candidate Starts for BonesMcCoy_46:

(11, 33897), (Start: 19 @33810 has 148 MA's), (Start: 28 @33741 has 4 MA's), (37, 33618), (48, 33543), (58, 33375), (59, 33357), (61, 33342), (67, 33303), (70, 33258), (83, 33150),

Gene: Bonino_45 Start: 33487, Stop: 32762, Start Num: 19

Candidate Starts for Bonino_45:

(15, 33520), (Start: 19 @33487 has 148 MA's), (Start: 28 @33418 has 4 MA's), (37, 33295), (48, 33220), (58, 33052), (59, 33034), (61, 33019), (67, 32980), (70, 32935), (83, 32827),

Gene: BouleyBill_43 Start: 32763, Stop: 31951, Start Num: 19

Candidate Starts for BouleyBill_43:

(Start: 19 @32763 has 148 MA's), (Start: 27 @32703 has 2 MA's), (Start: 28 @32697 has 4 MA's), (36, 32577), (39, 32547), (49, 32394), (51, 32379), (52, 32370), (54, 32295), (57, 32256), (59, 32223), (69, 32139), (72, 32094), (79, 32040), (83, 32016), (85, 31983),

Gene: Bustleton_43 Start: 32557, Stop: 31745, Start Num: 19

Candidate Starts for Bustleton_43:

(Start: 19 @32557 has 148 MA's), (Start: 27 @32497 has 2 MA's), (Start: 28 @32491 has 4 MA's), (36, 32371), (39, 32341), (49, 32188), (51, 32173), (52, 32164), (54, 32089), (57, 32050), (59, 32017), (69, 31933), (72, 31888), (79, 31834), (83, 31810),

Gene: Byron23_47 Start: 33809, Stop: 33084, Start Num: 19

Candidate Starts for Byron23_47:

(Start: 19 @33809 has 148 MA's), (Start: 28 @33740 has 4 MA's), (37, 33617), (48, 33542), (58, 33374), (59, 33356), (61, 33341), (67, 33302), (70, 33257), (83, 33149),

Gene: Calix_45 Start: 33494, Stop: 32769, Start Num: 19

Candidate Starts for Calix_45:

(15, 33527), (Start: 19 @33494 has 148 MA's), (Start: 28 @33425 has 4 MA's), (37, 33302), (48, 33227), (58, 33059), (59, 33041), (61, 33026), (67, 32987), (70, 32942), (83, 32834),

Gene: CaptainRex_44 Start: 31206, Stop: 30424, Start Num: 18

Candidate Starts for CaptainRex_44:

(Start: 18 @31206 has 15 MA's), (Start: 28 @31140 has 4 MA's), (36, 31020), (38, 31011), (41, 30963), (49, 30864), (50, 30858), (58, 30711), (60, 30690), (65, 30645), (66, 30642), (74, 30555), (81, 30495),

Gene: Carostasia_43 Start: 32271, Stop: 31492, Start Num: 19

Candidate Starts for Carostasia_43:

(Start: 19 @32271 has 148 MA's), (Start: 27 @32211 has 2 MA's), (Start: 28 @32205 has 4 MA's), (36, 32088), (38, 32079), (41, 32031), (47, 31953), (49, 31932), (50, 31926), (52, 31908), (57, 31794), (58, 31779), (60, 31758), (62, 31743), (64, 31731), (66, 31710), (74, 31623), (76, 31605), (77, 31587), (81, 31563), (84, 31545),

Gene: Casey_43 Start: 32217, Stop: 31417, Start Num: 19

Candidate Starts for Casey_43:

(9, 32328), (13, 32268), (Start: 19 @32217 has 148 MA's), (Start: 27 @32157 has 2 MA's), (32, 32121), (36, 32028), (39, 32010), (49, 31860), (54, 31761), (55, 31758), (59, 31689), (68, 31632), (71, 31587), (80, 31494), (82, 31485), (83, 31482), (85, 31449),

Gene: Chako_45 Start: 33498, Stop: 32773, Start Num: 19

Candidate Starts for Chako_45:

(15, 33531), (Start: 19 @33498 has 148 MA's), (Start: 28 @33429 has 4 MA's), (37, 33306), (48, 33231), (58, 33063), (59, 33045), (61, 33030), (67, 32991), (70, 32946), (83, 32838),

Gene: Chamuel_45 Start: 33520, Stop: 32795, Start Num: 19

Candidate Starts for Chamuel_45:

(15, 33553), (Start: 19 @33520 has 148 MA's), (Start: 28 @33451 has 4 MA's), (37, 33328), (48, 33253), (58, 33085), (59, 33067), (61, 33052), (67, 33013), (70, 32968), (83, 32860),

Gene: Cheeto1_46 Start: 33211, Stop: 32546, Start Num: 27

Candidate Starts for Cheeto1_46:

(Start: 18 @33274 has 15 MA's), (Start: 27 @33211 has 2 MA's), (37, 33082), (49, 32989), (51, 32974), (58, 32836), (59, 32818), (64, 32788), (68, 32761), (79, 32635), (83, 32611),

Gene: Chepli_45 Start: 32099, Stop: 31398, Start Num: 18

Candidate Starts for Chepli_45:

(6, 32237), (16, 32126), (Start: 18 @32099 has 15 MA's), (Start: 28 @32036 has 4 MA's), (37, 31925), (47, 31862), (49, 31841), (51, 31826), (52, 31817), (57, 31703), (58, 31688), (65, 31622), (73, 31535), (85, 31430),

Gene: ChickenKing_44 Start: 33104, Stop: 32439, Start Num: 27

Candidate Starts for ChickenKing_44:

(Start: 18 @33167 has 15 MA's), (Start: 27 @33104 has 2 MA's), (37, 32975), (49, 32882), (51, 32867), (58, 32729), (59, 32711), (68, 32654), (79, 32528), (83, 32504),

Gene: ChikPic_44 Start: 32592, Stop: 31813, Start Num: 19

Candidate Starts for ChikPic_44:

(Start: 19 @32592 has 148 MA's), (Start: 27 @32532 has 2 MA's), (36, 32409), (38, 32400), (47, 32274), (49, 32253), (50, 32247), (53, 32223), (58, 32100), (62, 32064), (65, 32034), (73, 31947), (75, 31941), (81, 31884),

Gene: Christoph_45 Start: 33507, Stop: 32782, Start Num: 19

Candidate Starts for Christoph_45:

(15, 33540), (Start: 19 @33507 has 148 MA's), (Start: 28 @33438 has 4 MA's), (37, 33315), (48, 33240), (58, 33072), (59, 33054), (61, 33039), (67, 33000), (70, 32955), (83, 32847),

Gene: Clancy_45 Start: 33543, Stop: 32818, Start Num: 19

Candidate Starts for Clancy_45:

(15, 33576), (Start: 19 @33543 has 148 MA's), (Start: 28 @33474 has 4 MA's), (37, 33351), (48, 33276), (58, 33108), (59, 33090), (61, 33075), (67, 33036), (70, 32991), (83, 32883),

Gene: Clock_43 Start: 33933, Stop: 33151, Start Num: 19

Candidate Starts for Clock_43:

(Start: 19 @33933 has 148 MA's), (Start: 28 @33864 has 4 MA's), (36, 33747), (38, 33735), (41, 33687), (44, 33651), (47, 33609), (49, 33588), (50, 33582), (57, 33450), (60, 33414), (62, 33399), (66, 33366),

Gene: ColaCorta_44 Start: 32738, Stop: 31959, Start Num: 19

Candidate Starts for ColaCorta_44:

(Start: 19 @32738 has 148 MA's), (Start: 27 @32678 has 2 MA's), (36, 32555), (38, 32546), (47, 32420), (49, 32399), (50, 32393), (53, 32369), (58, 32246), (62, 32210), (65, 32180), (73, 32093), (75, 32087), (76, 32072), (81, 32030),

Gene: Convict_46 Start: 33810, Stop: 33085, Start Num: 19

Candidate Starts for Convict_46:

(11, 33897), (Start: 19 @33810 has 148 MA's), (Start: 28 @33741 has 4 MA's), (37, 33618), (48, 33543), (58, 33375), (59, 33357), (61, 33342), (67, 33303), (70, 33258), (83, 33150),

Gene: Dave_46 Start: 33801, Stop: 33076, Start Num: 19

Candidate Starts for Dave_46:

(Start: 19 @33801 has 148 MA's), (Start: 28 @33732 has 4 MA's), (37, 33609), (48, 33534), (58, 33366), (59, 33348), (61, 33333), (67, 33294), (70, 33249), (83, 33141),

Gene: Delphidian_46 Start: 33809, Stop: 33084, Start Num: 19

Candidate Starts for Delphidian_46:

(Start: 19 @33809 has 148 MA's), (Start: 28 @33740 has 4 MA's), (37, 33617), (48, 33542), (58, 33374), (59, 33356), (61, 33341), (67, 33302), (70, 33257), (83, 33149),

Gene: Den3_46 Start: 33815, Stop: 33090, Start Num: 19

Candidate Starts for Den3_46:

(11, 33902), (Start: 19 @33815 has 148 MA's), (Start: 28 @33746 has 4 MA's), (37, 33623), (48, 33548), (58, 33380), (59, 33362), (61, 33347), (67, 33308), (70, 33263), (83, 33155),

Gene: Dothraki_46 Start: 33809, Stop: 33084, Start Num: 19

Candidate Starts for Dothraki_46:

(Start: 19 @33809 has 148 MA's), (Start: 28 @33740 has 4 MA's), (37, 33617), (48, 33542), (58, 33374), (59, 33356), (61, 33341), (67, 33302), (70, 33257), (83, 33149),

Gene: Duocatuli_45 Start: 33498, Stop: 32773, Start Num: 19

Candidate Starts for Duocatuli_45:

(15, 33531), (Start: 19 @33498 has 148 MA's), (Start: 28 @33429 has 4 MA's), (37, 33306), (48, 33231), (58, 33063), (59, 33045), (61, 33030), (67, 32991), (70, 32946), (83, 32838),

Gene: Eleri_44 Start: 32582, Stop: 31803, Start Num: 19

Candidate Starts for Eleri_44:

(Start: 19 @32582 has 148 MA's), (Start: 27 @32522 has 2 MA's), (36, 32399), (38, 32390), (47, 32264), (49, 32243), (50, 32237), (53, 32213), (58, 32090), (62, 32054), (65, 32024), (73, 31937), (75, 31931), (76, 31916), (81, 31874),

Gene: Endor_47 Start: 33982, Stop: 33278, Start Num: 23

Candidate Starts for Endor_47:

(16, 34036), (Start: 19 @34006 has 148 MA's), (Start: 23 @33982 has 7 MA's), (Start: 27 @33946 has 2 MA's), (Start: 28 @33940 has 4 MA's), (37, 33817), (48, 33736), (49, 33718), (59, 33550), (61, 33535), (68, 33493), (83, 33343),

Gene: Erla_45 Start: 33491, Stop: 32766, Start Num: 19

Candidate Starts for Erla_45:

(15, 33524), (Start: 19 @33491 has 148 MA's), (Start: 28 @33422 has 4 MA's), (37, 33299), (48, 33224), (58, 33056), (59, 33038), (61, 33023), (67, 32984), (70, 32939), (83, 32831),

Gene: Espinosa_45 Start: 33506, Stop: 32781, Start Num: 19

Candidate Starts for Espinosa_45:

(15, 33539), (Start: 19 @33506 has 148 MA's), (Start: 28 @33437 has 4 MA's), (37, 33314), (48, 33239), (58, 33071), (59, 33053), (61, 33038), (67, 32999), (70, 32954), (83, 32846),

Gene: Etna_46 Start: 33810, Stop: 33082, Start Num: 19

Candidate Starts for Etna_46:

(Start: 19 @33810 has 148 MA's), (Start: 23 @33786 has 7 MA's), (Start: 27 @33750 has 2 MA's), (Start: 28 @33744 has 4 MA's), (37, 33621), (48, 33540), (49, 33522), (59, 33354), (61, 33339), (68, 33297), (83, 33147),

Gene: Etta_45 Start: 33495, Stop: 32770, Start Num: 19

Candidate Starts for Etta_45:

(15, 33528), (Start: 19 @33495 has 148 MA's), (Start: 28 @33426 has 4 MA's), (37, 33303), (48, 33228), (58, 33060), (59, 33042), (61, 33027), (67, 32988), (70, 32943), (83, 32835),

Gene: FarmerDoug_45 Start: 33486, Stop: 32788, Start Num: 23

Candidate Starts for FarmerDoug_45:

(7, 33633), (11, 33597), (Start: 19 @33510 has 148 MA's), (Start: 23 @33486 has 7 MA's), (Start: 27 @33450 has 2 MA's), (Start: 28 @33444 has 4 MA's), (34, 33369), (37, 33321), (47, 33249), (49, 33228), (58, 33078), (59, 33060), (60, 33057), (63, 33033), (68, 33003), (83, 32853),

Gene: Figueroism_46 Start: 33800, Stop: 33075, Start Num: 19

Candidate Starts for Figueroism_46:

(Start: 19 @33800 has 148 MA's), (Start: 28 @33731 has 4 MA's), (37, 33608), (48, 33533), (58, 33365), (59, 33347), (61, 33332), (67, 33293), (70, 33248), (83, 33140),

Gene: Finny_45 Start: 32576, Stop: 31797, Start Num: 19

Candidate Starts for Finny_45:

(Start: 19 @32576 has 148 MA's), (Start: 27 @32516 has 2 MA's), (36, 32393), (38, 32384), (47, 32258), (49, 32237), (50, 32231), (53, 32207), (58, 32084), (62, 32048), (65, 32018), (73, 31931), (75, 31925), (81, 31868),

Gene: Fulton_44 Start: 31207, Stop: 30425, Start Num: 18

Candidate Starts for Fulton_44:

(Start: 18 @31207 has 15 MA's), (Start: 28 @31141 has 4 MA's), (36, 31021), (38, 31012), (41, 30964), (49, 30865), (50, 30859), (58, 30712), (60, 30691), (65, 30646), (66, 30643), (74, 30556), (81, 30496),

Gene: GaeCeo_46 Start: 33400, Stop: 32672, Start Num: 18

Candidate Starts for GaeCeo_46:

(Start: 18 @33400 has 15 MA's), (Start: 27 @33337 has 2 MA's), (37, 33208), (49, 33115), (51, 33100), (58, 32962), (59, 32944), (68, 32887), (79, 32761), (83, 32737),

Gene: GardenB_46 Start: 33727, Stop: 33023, Start Num: 23

Candidate Starts for GardenB_46:

(20, 33745), (Start: 23 @33727 has 7 MA's), (Start: 27 @33691 has 2 MA's), (Start: 28 @33685 has 4 MA's), (37, 33562), (48, 33481), (49, 33463), (57, 33328), (59, 33295), (61, 33280), (83, 33088),

Gene: Garey24_46 Start: 33474, Stop: 32749, Start Num: 19

Candidate Starts for Garey24_46:

(15, 33507), (Start: 19 @33474 has 148 MA's), (Start: 28 @33405 has 4 MA's), (37, 33282), (48, 33207), (58, 33039), (59, 33021), (61, 33006), (67, 32967), (70, 32922), (83, 32814),

Gene: Gargoyle_46 Start: 33815, Stop: 33090, Start Num: 19

Candidate Starts for Gargoyle_46:

(11, 33902), (Start: 19 @33815 has 148 MA's), (Start: 28 @33746 has 4 MA's), (37, 33623), (48, 33548), (58, 33380), (59, 33362), (61, 33347), (67, 33308), (70, 33263), (83, 33155),

Gene: Gelo_45 Start: 33501, Stop: 32776, Start Num: 19

Candidate Starts for Gelo_45:

(15, 33534), (Start: 19 @33501 has 148 MA's), (Start: 28 @33432 has 4 MA's), (37, 33309), (48, 33234), (58, 33066), (59, 33048), (61, 33033), (67, 32994), (70, 32949), (83, 32841),

Gene: Gershwin_45 Start: 33508, Stop: 32783, Start Num: 19

Candidate Starts for Gershwin_45:

(15, 33541), (Start: 19 @33508 has 148 MA's), (Start: 28 @33439 has 4 MA's), (37, 33316), (48, 33241), (58, 33073), (59, 33055), (61, 33040), (67, 33001), (70, 32956), (83, 32848),

Gene: Glamour_44 Start: 32730, Stop: 31951, Start Num: 19

Candidate Starts for Glamour_44:

(Start: 19 @32730 has 148 MA's), (Start: 27 @32670 has 2 MA's), (36, 32547), (38, 32538), (47, 32412), (49, 32391), (50, 32385), (53, 32361), (58, 32238), (62, 32202), (65, 32172), (73, 32085), (75, 32079), (76, 32064), (81, 32022),

Gene: Golden_43 Start: 32643, Stop: 31837, Start Num: 19

Candidate Starts for Golden_43:

(8, 32757), (Start: 19 @32643 has 148 MA's), (Start: 27 @32583 has 2 MA's), (Start: 28 @32577 has 4 MA's), (36, 32457), (39, 32430), (47, 32301), (49, 32280), (53, 32250), (55, 32178), (57, 32142), (58, 32127), (59, 32109), (69, 32025), (83, 31902),

Gene: Greenlvy_43 Start: 31562, Stop: 30780, Start Num: 18

Candidate Starts for Greenlvy_43:

(Start: 18 @31562 has 15 MA's), (Start: 28 @31496 has 4 MA's), (36, 31376), (38, 31367), (41, 31319), (49, 31220), (50, 31214), (58, 31067), (60, 31046), (65, 31001), (66, 30998), (74, 30911), (81, 30851),

Gene: Greys_46 Start: 33739, Stop: 33083, Start Num: 28

Candidate Starts for Greys_46:

(11, 33895), (Start: 19 @33808 has 148 MA's), (Start: 28 @33739 has 4 MA's), (37, 33616), (48, 33541), (58, 33373), (59, 33355), (61, 33340), (67, 33301), (70, 33256), (83, 33148),

Gene: Gubbabump_45 Start: 33488, Stop: 32763, Start Num: 19

Candidate Starts for Gubbabump_45:

(15, 33521), (Start: 19 @33488 has 148 MA's), (Start: 28 @33419 has 4 MA's), (37, 33296), (48, 33221), (58, 33053), (59, 33035), (61, 33020), (67, 32981), (70, 32936), (83, 32828),

Gene: Guetzie_44 Start: 32628, Stop: 31822, Start Num: 19

Candidate Starts for Guetzie_44:

(8, 32742), (Start: 19 @32628 has 148 MA's), (Start: 27 @32568 has 2 MA's), (Start: 28 @32562 has 4 MA's), (36, 32442), (39, 32415), (47, 32286), (49, 32265), (53, 32235), (55, 32163), (57, 32127), (58, 32112), (59, 32094), (69, 32010), (83, 31887),

Gene: Hamlet_46 Start: 33755, Stop: 33027, Start Num: 19

Candidate Starts for Hamlet_46:

(Start: 19 @33755 has 148 MA's), (20, 33749), (Start: 23 @33731 has 7 MA's), (Start: 27 @33695 has 2 MA's), (Start: 28 @33689 has 4 MA's), (37, 33566), (48, 33485), (49, 33467), (59, 33299), (61, 33284), (68, 33242), (72, 33170), (83, 33092),

Gene: HanSolo_45 Start: 33498, Stop: 32773, Start Num: 19

Candidate Starts for HanSolo_45:

(15, 33531), (Start: 19 @33498 has 148 MA's), (Start: 28 @33429 has 4 MA's), (37, 33306), (48, 33231), (58, 33063), (59, 33045), (61, 33030), (67, 32991), (70, 32946), (83, 32838),

Gene: HankSprout_46 Start: 33375, Stop: 32650, Start Num: 19

Candidate Starts for HankSprout_46:

(15, 33408), (Start: 19 @33375 has 148 MA's), (Start: 28 @33306 has 4 MA's), (37, 33183), (48, 33108), (58, 32940), (59, 32922), (61, 32907), (67, 32868), (70, 32823), (83, 32715),

Gene: Hasitha_44 Start: 31219, Stop: 30437, Start Num: 18

Candidate Starts for Hasitha_44:

(Start: 18 @31219 has 15 MA's), (Start: 28 @31153 has 4 MA's), (36, 31033), (38, 31024), (41, 30976), (49, 30877), (50, 30871), (58, 30724), (60, 30703), (65, 30658), (66, 30655), (74, 30568), (81, 30508),

Gene: HerculesXL_42 Start: 31320, Stop: 30547, Start Num: 19

Candidate Starts for HerculesXL_42:

(Start: 19 @31320 has 148 MA's), (35, 31158), (40, 31140), (46, 31041), (47, 31011), (49, 30990), (57, 30852), (58, 30837), (59, 30819), (60, 30816), (73, 30684), (74, 30681), (79, 30636), (83, 30612), (85, 30579),

Gene: HungryHenry_45 Start: 33503, Stop: 32778, Start Num: 19

Candidate Starts for HungryHenry_45:

(15, 33536), (Start: 19 @33503 has 148 MA's), (Start: 28 @33434 has 4 MA's), (37, 33311), (48, 33236), (58, 33068), (59, 33050), (61, 33035), (67, 32996), (70, 32951), (83, 32843),

Gene: Ilzat_45 Start: 33514, Stop: 32789, Start Num: 19

Candidate Starts for Ilzat_45:

(15, 33547), (Start: 19 @33514 has 148 MA's), (Start: 28 @33445 has 4 MA's), (37, 33322), (48, 33247), (58, 33079), (59, 33061), (61, 33046), (67, 33007), (70, 32962), (83, 32854),

Gene: Inventa_46 Start: 33806, Stop: 33081, Start Num: 19

Candidate Starts for Inventa_46:

(Start: 19 @33806 has 148 MA's), (Start: 28 @33737 has 4 MA's), (37, 33614), (48, 33539), (58, 33371), (59, 33353), (61, 33338), (67, 33299), (70, 33254), (83, 33146),

Gene: loannes_46 Start: 33810, Stop: 33085, Start Num: 19

Candidate Starts for loannes_46:

(Start: 19 @33810 has 148 MA's), (Start: 28 @33741 has 4 MA's), (37, 33618), (48, 33543), (58, 33375), (59, 33357), (61, 33342), (67, 33303), (70, 33258), (83, 33150),

Gene: Ixel_45 Start: 32997, Stop: 32293, Start Num: 19

Candidate Starts for Ixel_45:

(1, 33495), (2, 33357), (17, 33024), (Start: 19 @32997 has 148 MA's), (Start: 28 @32937 has 4 MA's), (35, 32835), (47, 32757), (49, 32736), (51, 32721), (57, 32598), (58, 32583), (59, 32565), (70, 32466), (73, 32430),

Gene: Janus167_45 Start: 33495, Stop: 32770, Start Num: 19

Candidate Starts for Janus167_45:

(15, 33528), (Start: 19 @33495 has 148 MA's), (Start: 28 @33426 has 4 MA's), (37, 33303), (48, 33228), (58, 33060), (59, 33042), (61, 33027), (67, 32988), (70, 32943), (83, 32835),

Gene: JasperRussell_45 Start: 33498, Stop: 32773, Start Num: 19

Candidate Starts for JasperRussell_45:

(15, 33531), (Start: 19 @33498 has 148 MA's), (Start: 28 @33429 has 4 MA's), (37, 33306), (48, 33231), (58, 33063), (59, 33045), (61, 33030), (67, 32991), (70, 32946), (83, 32838),

Gene: Jemerald_45 Start: 33166, Stop: 32465, Start Num: 18

Candidate Starts for Jemerald_45:

(Start: 18 @33166 has 15 MA's), (24, 33121), (Start: 28 @33097 has 4 MA's), (30, 33091), (37, 32974), (42, 32959), (47, 32929), (49, 32908), (58, 32755), (83, 32530), (85, 32497),

Gene: Jenos_49 Start: 34633, Stop: 33893, Start Num: 19

Candidate Starts for Jenos_49:

(Start: 19 @34633 has 148 MA's), (Start: 27 @34573 has 2 MA's), (Start: 28 @34567 has 4 MA's), (37, 34444), (46, 34402), (58, 34183), (61, 34150), (68, 34108), (83, 33958),

Gene: Jerbirus_47 Start: 33498, Stop: 32773, Start Num: 19

Candidate Starts for Jerbirus_47:

(15, 33531), (Start: 19 @33498 has 148 MA's), (Start: 28 @33429 has 4 MA's), (37, 33306), (48, 33231), (58, 33063), (59, 33045), (61, 33030), (67, 32991), (70, 32946), (83, 32838),

Gene: JeriBeth_47 Start: 33361, Stop: 32636, Start Num: 19

Candidate Starts for JeriBeth_47:

(15, 33394), (Start: 19 @33361 has 148 MA's), (Start: 28 @33292 has 4 MA's), (37, 33169), (48, 33094), (58, 32926), (59, 32908), (61, 32893), (67, 32854), (70, 32809), (83, 32701),

Gene: Juanyo_43 Start: 32202, Stop: 31423, Start Num: 19

Candidate Starts for Juanyo_43:

(3, 32538), (4, 32478), (5, 32457), (10, 32292), (Start: 19 @32202 has 148 MA's), (Start: 27 @32142 has 2 MA's), (Start: 28 @32136 has 4 MA's), (36, 32019), (38, 32010), (41, 31962), (47, 31884), (50, 31857), (52, 31839), (57, 31725), (60, 31689), (62, 31674), (64, 31662), (65, 31644), (66, 31641), (74, 31554), (76, 31536), (84, 31476),

Gene: Juicer_45 Start: 33166, Stop: 32465, Start Num: 18

Candidate Starts for Juicer_45:

(Start: 18 @33166 has 15 MA's), (24, 33121), (Start: 28 @33097 has 4 MA's), (30, 33091), (37, 32974), (42, 32959), (47, 32929), (49, 32908), (58, 32755), (83, 32530), (85, 32497),

Gene: Kale_45 Start: 33510, Stop: 32785, Start Num: 19

Candidate Starts for Kale_45:

(15, 33543), (Start: 19 @33510 has 148 MA's), (Start: 28 @33441 has 4 MA's), (37, 33318), (48, 33243), (58, 33075), (59, 33057), (61, 33042), (67, 33003), (70, 32958), (83, 32850),

Gene: KannH_45 Start: 33498, Stop: 32773, Start Num: 19

Candidate Starts for KannH_45:

(15, 33531), (Start: 19 @33498 has 148 MA's), (Start: 28 @33429 has 4 MA's), (37, 33306), (48, 33231), (58, 33063), (59, 33045), (61, 33030), (67, 32991), (70, 32946), (83, 32838),

Gene: KatChan_45 Start: 32111, Stop: 31410, Start Num: 18

Candidate Starts for KatChan_45:

(6, 32249), (16, 32138), (Start: 18 @32111 has 15 MA's), (Start: 28 @32048 has 4 MA's), (37, 31937), (47, 31874), (49, 31853), (51, 31838), (52, 31829), (57, 31715), (58, 31700), (65, 31634), (73, 31547), (85, 31442),

Gene: Kauala_43 Start: 32902, Stop: 32117, Start Num: 22

Candidate Starts for Kauala_43:

(Start: 19 @32926 has 148 MA's), (Start: 22 @32902 has 1 MA's), (Start: 27 @32866 has 2 MA's), (Start: 28 @32860 has 4 MA's), (36, 32740), (39, 32710), (47, 32581), (49, 32560), (52, 32536), (54, 32461), (55, 32458), (56, 32437), (58, 32407), (60, 32386), (72, 32260), (79, 32206), (83, 32182), (85, 32149),

Gene: Klimt_46 Start: 33526, Stop: 32801, Start Num: 19

Candidate Starts for Klimt_46:

(15, 33559), (Start: 19 @33526 has 148 MA's), (Start: 28 @33457 has 4 MA's), (37, 33334), (48, 33259), (58, 33091), (59, 33073), (61, 33058), (67, 33019), (70, 32974), (83, 32866),

Gene: Knox_46 Start: 33810, Stop: 33085, Start Num: 19

Candidate Starts for Knox_46:

(11, 33897), (Start: 19 @33810 has 148 MA's), (Start: 28 @33741 has 4 MA's), (37, 33618), (48, 33543), (58, 33375), (59, 33357), (61, 33342), (67, 33303), (70, 33258), (83, 33150),

Gene: Koji_43 Start: 32928, Stop: 32116, Start Num: 19

Candidate Starts for Koji_43:

(Start: 19 @32928 has 148 MA's), (Start: 27 @32868 has 2 MA's), (Start: 28 @32862 has 4 MA's), (36, 32742), (39, 32712), (49, 32559), (51, 32544), (52, 32535), (54, 32460), (57, 32421), (59, 32388), (69, 32304), (72, 32259), (79, 32205), (83, 32181), (85, 32148),

Gene: Kurt1_46 Start: 33737, Stop: 33081, Start Num: 28

Candidate Starts for Kurt1_46:

(Start: 19 @33806 has 148 MA's), (Start: 28 @33737 has 4 MA's), (37, 33614), (48, 33539), (58, 33371), (59, 33353), (61, 33338), (67, 33299), (70, 33254), (83, 33146),

Gene: Leafus_46 Start: 33909, Stop: 33181, Start Num: 19

Candidate Starts for Leafus_46:

(Start: 19 @33909 has 148 MA's), (Start: 23 @33885 has 7 MA's), (Start: 27 @33849 has 2 MA's), (Start: 28 @33843 has 4 MA's), (37, 33720), (48, 33639), (49, 33621), (59, 33453), (61, 33438), (68, 33396), (72, 33324), (83, 33246),

Gene: Librie_44 Start: 31206, Stop: 30424, Start Num: 18

Candidate Starts for Librie_44:

(Start: 18 @31206 has 15 MA's), (Start: 28 @31140 has 4 MA's), (36, 31020), (38, 31011), (41, 30963), (49, 30864), (50, 30858), (58, 30711), (60, 30690), (65, 30645), (66, 30642), (74, 30555), (81, 30495),

Gene: LilTerminator_44 Start: 31228, Stop: 30446, Start Num: 18

Candidate Starts for LilTerminator_44:

(Start: 18 @31228 has 15 MA's), (Start: 28 @31162 has 4 MA's), (36, 31042), (38, 31033), (41, 30985), (49, 30886), (50, 30880), (58, 30733), (60, 30712), (65, 30667), (66, 30664), (74, 30577), (81, 30517),

Gene: Lovelyunicorn_46 Start: 33811, Stop: 33086, Start Num: 19

Candidate Starts for Lovelyunicorn_46:

(11, 33898), (Start: 19 @33811 has 148 MA's), (Start: 28 @33742 has 4 MA's), (37, 33619), (48, 33544), (58, 33376), (59, 33358), (61, 33343), (67, 33304), (70, 33259), (83, 33151),

Gene: Lucky3_43 Start: 32643, Stop: 31837, Start Num: 19

Candidate Starts for Lucky3_43:

(8, 32757), (Start: 19 @32643 has 148 MA's), (Start: 27 @32583 has 2 MA's), (Start: 28 @32577 has 4 MA's), (36, 32457), (39, 32430), (47, 32301), (49, 32280), (53, 32250), (55, 32178), (57, 32142), (58, 32127), (59, 32109), (69, 32025), (83, 31902),

Gene: Ludgate_46 Start: 33809, Stop: 33084, Start Num: 19

Candidate Starts for Ludgate_46:

(11, 33896), (Start: 19 @33809 has 148 MA's), (Start: 28 @33740 has 4 MA's), (37, 33617), (48, 33542), (58, 33374), (59, 33356), (61, 33341), (67, 33302), (70, 33257), (83, 33149),

Gene: Luna18_45 Start: 32111, Stop: 31410, Start Num: 18

Candidate Starts for Luna18_45:

(6, 32249), (16, 32138), (Start: 18 @32111 has 15 MA's), (Start: 28 @32048 has 4 MA's), (37, 31937), (47, 31874), (49, 31853), (51, 31838), (52, 31829), (57, 31715), (58, 31700), (65, 31634), (73, 31547), (85, 31442),

Gene: MCubed_44 Start: 32607, Stop: 31828, Start Num: 19

Candidate Starts for MCubed_44:

(14, 32640), (Start: 19 @32607 has 148 MA's), (Start: 27 @32547 has 2 MA's), (36, 32424), (38, 32415), (47, 32289), (49, 32268), (50, 32262), (53, 32238), (58, 32115), (62, 32079), (65, 32049), (73, 31962), (75, 31956), (81, 31899),

Gene: MaeLinda_46 Start: 33810, Stop: 33085, Start Num: 19

Candidate Starts for MaeLinda_46:

(Start: 19 @33810 has 148 MA's), (Start: 28 @33741 has 4 MA's), (37, 33618), (48, 33543), (58, 33375), (59, 33357), (61, 33342), (67, 33303), (70, 33258), (83, 33150),

Gene: ManRay_45 Start: 33508, Stop: 32783, Start Num: 19

Candidate Starts for ManRay_45:

(15, 33541), (Start: 19 @33508 has 148 MA's), (Start: 28 @33439 has 4 MA's), (37, 33316), (48, 33241), (58, 33073), (59, 33055), (61, 33040), (67, 33001), (70, 32956), (83, 32848),

Gene: Mandalorian_43 Start: 32281, Stop: 31502, Start Num: 19

Candidate Starts for Mandalorian_43:

(Start: 19 @32281 has 148 MA's), (Start: 27 @32221 has 2 MA's), (Start: 28 @32215 has 4 MA's), (36, 32098), (38, 32089), (41, 32041), (47, 31963), (49, 31942), (50, 31936), (52, 31918), (57, 31804), (58, 31789), (60, 31768), (62, 31753), (64, 31741), (66, 31720), (74, 31633), (76, 31615), (77, 31597), (81, 31573), (83, 31564), (84, 31555), (85, 31531),

Gene: Martin_47 Start: 33815, Stop: 33090, Start Num: 19

Candidate Starts for Martin_47:

(Start: 19 @33815 has 148 MA's), (Start: 28 @33746 has 4 MA's), (37, 33623), (48, 33548), (58, 33380), (59, 33362), (61, 33347), (67, 33308), (70, 33263), (83, 33155),

Gene: McGalleon_48 Start: 34793, Stop: 34053, Start Num: 19

Candidate Starts for McGalleon_48:

(Start: 19 @34793 has 148 MA's), (Start: 27 @34733 has 2 MA's), (Start: 28 @34727 has 4 MA's), (34, 34652), (37, 34604), (46, 34562), (58, 34343), (61, 34310), (68, 34268), (83, 34118),

Gene: Mercedes_39 Start: 31146, Stop: 30457, Start Num: 23

Candidate Starts for Mercedes_39:

(Start: 19 @31176 has 148 MA's), (Start: 23 @31146 has 7 MA's), (25, 31119), (37, 30993), (49, 30900), (57, 30762), (58, 30747), (59, 30729), (60, 30726), (73, 30594), (79, 30546),

Gene: MillyPhilly_46 Start: 33803, Stop: 33078, Start Num: 19

Candidate Starts for MillyPhilly_46:

(Start: 19 @33803 has 148 MA's), (Start: 28 @33734 has 4 MA's), (37, 33611), (48, 33536), (58, 33368), (59, 33350), (61, 33335), (67, 33296), (70, 33251), (83, 33143),

Gene: MonChoix_43 Start: 33358, Stop: 32630, Start Num: 19

Candidate Starts for MonChoix_43:

(12, 33436), (Start: 19 @33358 has 148 MA's), (26, 33295), (Start: 28 @33286 has 4 MA's), (29, 33283), (37, 33163), (47, 33091), (53, 33043), (57, 32935), (58, 32920), (59, 32902), (61, 32887), (68, 32845), (83, 32695),

Gene: Morrigan_45 Start: 32063, Stop: 31353, Start Num: 18

Candidate Starts for Morrigan_45:

(Start: 18 @32063 has 15 MA's), (31, 31979), (33, 31940), (37, 31883), (47, 31817), (49, 31796), (51, 31781), (52, 31772), (57, 31658), (73, 31490), (85, 31385),

Gene: MrWorldwide_46 Start: 33813, Stop: 33088, Start Num: 19

Candidate Starts for MrWorldwide_46:

(Start: 19 @33813 has 148 MA's), (Start: 28 @33744 has 4 MA's), (37, 33621), (48, 33546), (58, 33378), (59, 33360), (61, 33345), (67, 33306), (70, 33261), (83, 33153),

Gene: Nagem_46 Start: 33806, Stop: 33081, Start Num: 19

Candidate Starts for Nagem_46:

(Start: 19 @33806 has 148 MA's), (21, 33791), (Start: 28 @33737 has 4 MA's), (37, 33614), (48, 33539), (58, 33371), (59, 33353), (61, 33338), (67, 33299), (70, 33254), (83, 33146),

Gene: Nattles_45 Start: 33495, Stop: 32770, Start Num: 19

Candidate Starts for Nattles_45:

(15, 33528), (Start: 19 @33495 has 148 MA's), (Start: 28 @33426 has 4 MA's), (37, 33303), (48, 33228), (58, 33060), (59, 33042), (61, 33027), (67, 32988), (70, 32943), (83, 32835),

Gene: Nebulous_42 Start: 34114, Stop: 33332, Start Num: 19

Candidate Starts for Nebulous_42:

(Start: 19 @34114 has 148 MA's), (Start: 28 @34045 has 4 MA's), (36, 33928), (38, 33916), (41, 33868), (44, 33832), (47, 33790), (49, 33769), (50, 33763), (57, 33631), (60, 33595), (62, 33580), (66, 33547),

Gene: Neferthema_45 Start: 33455, Stop: 32673, Start Num: 19

Candidate Starts for Neferthema_45:

(16, 33485), (17, 33482), (Start: 19 @33455 has 148 MA's), (Start: 28 @33395 has 4 MA's), (36, 33275), (38, 33263), (41, 33215), (49, 33110), (50, 33104), (57, 32972), (62, 32921), (66, 32888),

Gene: NickSell_46 Start: 33816, Stop: 33091, Start Num: 19

Candidate Starts for NickSell_46:

(Start: 19 @33816 has 148 MA's), (Start: 28 @33747 has 4 MA's), (37, 33624), (48, 33549), (58, 33381), (59, 33363), (61, 33348), (67, 33309), (70, 33264), (83, 33156),

Gene: Nucci_43 Start: 32264, Stop: 31485, Start Num: 19

Candidate Starts for Nucci_43:

(Start: 19 @32264 has 148 MA's), (Start: 27 @32204 has 2 MA's), (Start: 28 @32198 has 4 MA's), (36, 32081), (38, 32072), (41, 32024), (47, 31946), (49, 31925), (50, 31919), (52, 31901), (57, 31787), (58, 31772), (60, 31751), (62, 31736), (64, 31724), (66, 31703), (74, 31616), (76, 31598), (77, 31580), (81, 31556), (83, 31547), (84, 31538), (85, 31514),

Gene: Oats_45 Start: 33508, Stop: 32783, Start Num: 19

Candidate Starts for Oats_45:

(15, 33541), (Start: 19 @33508 has 148 MA's), (Start: 28 @33439 has 4 MA's), (37, 33316), (48, 33241), (58, 33073), (59, 33055), (61, 33040), (67, 33001), (70, 32956), (83, 32848),

Gene: OldNelly_47 Start: 33812, Stop: 33087, Start Num: 19

Candidate Starts for OldNelly_47:

(Start: 19 @33812 has 148 MA's), (Start: 28 @33743 has 4 MA's), (37, 33620), (48, 33545), (58, 33377), (59, 33359), (61, 33344), (67, 33305), (70, 33260), (83, 33152),

Gene: Oxtob96_47 Start: 33811, Stop: 33086, Start Num: 19

Candidate Starts for Oxtob96_47:

(11, 33898), (Start: 19 @33811 has 148 MA's), (Start: 28 @33742 has 4 MA's), (37, 33619), (48, 33544), (58, 33376), (59, 33358), (61, 33343), (67, 33304), (70, 33259), (83, 33151),

Gene: Pajaza_43 Start: 32217, Stop: 31417, Start Num: 19

Candidate Starts for Pajaza_43:

(9, 32328), (13, 32268), (Start: 19 @32217 has 148 MA's), (Start: 27 @32157 has 2 MA's), (32, 32121), (36, 32028), (39, 32010), (49, 31860), (54, 31761), (55, 31758), (59, 31689), (68, 31632), (71, 31587), (80, 31494), (82, 31485), (83, 31482), (85, 31449),

Gene: Papafritta_45 Start: 33519, Stop: 32794, Start Num: 19

Candidate Starts for Papafritta_45:

(15, 33552), (Start: 19 @33519 has 148 MA's), (Start: 28 @33450 has 4 MA's), (37, 33327), (48, 33252), (58, 33084), (59, 33066), (61, 33051), (67, 33012), (70, 32967), (83, 32859),

Gene: ParleG_46 Start: 33813, Stop: 33088, Start Num: 19

Candidate Starts for ParleG_46:

(Start: 19 @33813 has 148 MA's), (Start: 28 @33744 has 4 MA's), (37, 33621), (48, 33546), (58, 33378), (59, 33360), (61, 33345), (67, 33306), (70, 33261), (83, 33153),

Gene: Peep_46 Start: 33798, Stop: 33073, Start Num: 19

Candidate Starts for Peep_46:

(Start: 19 @33798 has 148 MA's), (Start: 28 @33729 has 4 MA's), (37, 33606), (48, 33531), (58, 33363), (59, 33345), (61, 33330), (67, 33291), (70, 33246), (83, 33138),

Gene: Peppino_46 Start: 33755, Stop: 33027, Start Num: 19

Candidate Starts for Peppino_46:

(Start: 19 @33755 has 148 MA's), (20, 33749), (Start: 23 @33731 has 7 MA's), (Start: 27 @33695 has 2 MA's), (Start: 28 @33689 has 4 MA's), (37, 33566), (48, 33485), (49, 33467), (59, 33299), (61, 33284), (68, 33242), (72, 33170), (83, 33092),

Gene: Pherbot_43 Start: 32544, Stop: 31732, Start Num: 19

Candidate Starts for Pherbot_43:

(Start: 19 @32544 has 148 MA's), (Start: 27 @32484 has 2 MA's), (Start: 28 @32478 has 4 MA's), (36, 32358), (39, 32328), (49, 32175), (51, 32160), (52, 32151), (54, 32076), (57, 32037), (59, 32004), (69, 31920), (72, 31875), (79, 31821), (83, 31797),

Gene: Pherferi_46 Start: 33806, Stop: 33081, Start Num: 19

Candidate Starts for Pherferi_46:

(Start: 19 @33806 has 148 MA's), (Start: 28 @33737 has 4 MA's), (37, 33614), (48, 33539), (58, 33371), (59, 33353), (61, 33338), (67, 33299), (70, 33254), (83, 33146),

Gene: Phiderman_46 Start: 33803, Stop: 33078, Start Num: 19

Candidate Starts for Phiderman_46:

(Start: 19 @33803 has 148 MA's), (Start: 28 @33734 has 4 MA's), (37, 33611), (48, 33536), (58, 33368), (59, 33350), (61, 33335), (67, 33296), (70, 33251), (83, 33143),

Gene: Phireproof_46 Start: 33812, Stop: 33087, Start Num: 19

Candidate Starts for Phireproof_46:

(Start: 19 @33812 has 148 MA's), (Start: 28 @33743 has 4 MA's), (37, 33620), (48, 33545), (58, 33377), (59, 33359), (61, 33344), (67, 33305), (70, 33260), (83, 33152),

Gene: PhredFlintston_46 Start: 33806, Stop: 33081, Start Num: 19

Candidate Starts for PhredFlintston_46:

(Start: 19 @33806 has 148 MA's), (Start: 28 @33737 has 4 MA's), (37, 33614), (48, 33539), (58, 33371), (59, 33353), (61, 33338), (67, 33299), (70, 33254), (83, 33146),

Gene: Phriends_46 Start: 33812, Stop: 33087, Start Num: 19

Candidate Starts for Friends_46:

(Start: 19 @33812 has 148 MA's), (Start: 28 @33743 has 4 MA's), (37, 33620), (48, 33545), (58, 33377), (59, 33359), (61, 33344), (67, 33305), (70, 33260), (83, 33152),

Gene: Pikmin_43 Start: 32217, Stop: 31417, Start Num: 19

Candidate Starts for Pikmin_43:

(9, 32328), (13, 32268), (Start: 19 @32217 has 148 MA's), (Start: 27 @32157 has 2 MA's), (32, 32121), (36, 32028), (39, 32010), (49, 31860), (54, 31761), (55, 31758), (59, 31689), (68, 31632), (71, 31587), (80, 31494), (82, 31485), (83, 31482), (85, 31449),

Gene: Pocket_45 Start: 33535, Stop: 32810, Start Num: 19

Candidate Starts for Pocket_45:

(15, 33568), (Start: 19 @33535 has 148 MA's), (Start: 28 @33466 has 4 MA's), (37, 33343), (48, 33268), (58, 33100), (59, 33082), (61, 33067), (67, 33028), (70, 32983), (83, 32875),

Gene: PrincePhergus_43 Start: 32560, Stop: 31748, Start Num: 19

Candidate Starts for PrincePhergus_43:

(Start: 19 @32560 has 148 MA's), (Start: 27 @32500 has 2 MA's), (Start: 28 @32494 has 4 MA's), (36, 32374), (39, 32344), (49, 32191), (52, 32167), (54, 32092), (57, 32053), (59, 32020), (69, 31936), (72, 31891), (79, 31837), (83, 31813), (85, 31780),

Gene: PuppyEggo_46 Start: 33813, Stop: 33088, Start Num: 19

Candidate Starts for PuppyEggo_46:

(11, 33900), (Start: 19 @33813 has 148 MA's), (Start: 28 @33744 has 4 MA's), (37, 33621), (48, 33546), (58, 33378), (59, 33360), (61, 33345), (67, 33306), (70, 33261), (83, 33153),

Gene: QuadZero_44 Start: 31373, Stop: 30591, Start Num: 18

Candidate Starts for QuadZero_44:

(Start: 18 @31373 has 15 MA's), (Start: 28 @31307 has 4 MA's), (36, 31187), (38, 31178), (41, 31130), (49, 31031), (50, 31025), (58, 30878), (60, 30857), (65, 30812), (66, 30809), (74, 30722), (81, 30662),

Gene: Quartz_44 Start: 32394, Stop: 31615, Start Num: 19

Candidate Starts for Quartz_44:

(Start: 19 @32394 has 148 MA's), (Start: 27 @32334 has 2 MA's), (Start: 28 @32328 has 4 MA's), (36, 32211), (38, 32202), (41, 32154), (47, 32076), (49, 32055), (50, 32049), (52, 32031), (57, 31917), (58, 31902), (60, 31881), (62, 31866), (64, 31854), (66, 31833), (74, 31746), (76, 31728), (77, 31710), (81, 31686), (84, 31668),

Gene: Raccoon_46 Start: 33712, Stop: 32984, Start Num: 19

Candidate Starts for Raccoon_46:

(Start: 19 @33712 has 148 MA's), (Start: 23 @33688 has 7 MA's), (Start: 27 @33652 has 2 MA's), (Start: 28 @33646 has 4 MA's), (37, 33523), (48, 33442), (49, 33424), (59, 33256), (61, 33241), (68, 33199), (72, 33127), (83, 33049),

Gene: Rapheph_46 Start: 33806, Stop: 33081, Start Num: 19

Candidate Starts for Rapheph_46:

(Start: 19 @33806 has 148 MA's), (Start: 28 @33737 has 4 MA's), (37, 33614), (48, 33539), (58, 33371), (59, 33353), (61, 33338), (67, 33299), (70, 33254), (83, 33146),

Gene: Raptor_46 Start: 33813, Stop: 33088, Start Num: 19

Candidate Starts for Raptor_46:

(11, 33900), (Start: 19 @33813 has 148 MA's), (Start: 28 @33744 has 4 MA's), (37, 33621), (48, 33546), (58, 33378), (59, 33360), (61, 33345), (67, 33306), (70, 33261), (83, 33153),

Gene: Redfield_46 Start: 33763, Stop: 33035, Start Num: 19

Candidate Starts for Redfield_46:

(Start: 19 @33763 has 148 MA's), (20, 33757), (Start: 23 @33739 has 7 MA's), (Start: 27 @33703 has 2 MA's), (Start: 28 @33697 has 4 MA's), (37, 33574), (48, 33493), (49, 33475), (59, 33307), (61, 33292), (68, 33250), (72, 33178), (83, 33100),

Gene: Renzie_46 Start: 33801, Stop: 33076, Start Num: 19

Candidate Starts for Renzie_46:

(Start: 19 @33801 has 148 MA's), (Start: 28 @33732 has 4 MA's), (37, 33609), (48, 33534), (58, 33366), (59, 33348), (61, 33333), (67, 33294), (70, 33249), (83, 33141),

Gene: Riyhil_46 Start: 33816, Stop: 33091, Start Num: 19

Candidate Starts for Riyhil_46:

(Start: 19 @33816 has 148 MA's), (Start: 28 @33747 has 4 MA's), (37, 33624), (48, 33549), (58, 33381), (59, 33363), (61, 33348), (67, 33309), (70, 33264), (83, 33156),

Gene: Robinson_46 Start: 33735, Stop: 33079, Start Num: 28

Candidate Starts for Robinson_46:

(Start: 19 @33804 has 148 MA's), (Start: 28 @33735 has 4 MA's), (37, 33612), (48, 33537), (58, 33369), (59, 33351), (61, 33336), (67, 33297), (70, 33252), (83, 33144),

Gene: Rog141_45 Start: 33498, Stop: 32773, Start Num: 19

Candidate Starts for Rog141_45:

(15, 33531), (Start: 19 @33498 has 148 MA's), (Start: 28 @33429 has 4 MA's), (37, 33306), (48, 33231), (58, 33063), (59, 33045), (61, 33030), (67, 32991), (70, 32946), (83, 32838),

Gene: SJay_46 Start: 33807, Stop: 33082, Start Num: 19

Candidate Starts for SJay_46:

(Start: 19 @33807 has 148 MA's), (Start: 28 @33738 has 4 MA's), (37, 33615), (48, 33540), (58, 33372), (59, 33354), (61, 33339), (67, 33300), (70, 33255), (83, 33147),

Gene: Sansa_43 Start: 32812, Stop: 32033, Start Num: 19

Candidate Starts for Sansa_43:

(14, 32845), (Start: 19 @32812 has 148 MA's), (Start: 27 @32752 has 2 MA's), (36, 32629), (38, 32620), (47, 32494), (49, 32473), (50, 32467), (53, 32443), (58, 32320), (62, 32284), (65, 32254), (73, 32167), (81, 32104),

Gene: Saratos_44 Start: 32567, Stop: 31788, Start Num: 19

Candidate Starts for Saratos_44:

(Start: 19 @32567 has 148 MA's), (Start: 27 @32507 has 2 MA's), (36, 32384), (38, 32375), (47, 32249), (49, 32228), (50, 32222), (53, 32198), (58, 32075), (62, 32039), (65, 32009), (73, 31922), (75, 31916), (76, 31901), (81, 31859),

Gene: Schimmels22_41 Start: 31619, Stop: 30921, Start Num: 19

Candidate Starts for Schimmels22_41:

(Start: 19 @31619 has 148 MA's), (Start: 28 @31559 has 4 MA's), (35, 31457), (47, 31385), (49, 31364), (51, 31349), (57, 31226), (58, 31211), (59, 31193), (73, 31058), (79, 31010), (83, 30986), (85, 30953),

Gene: Schnapsidee_46 Start: 33770, Stop: 33042, Start Num: 19

Candidate Starts for Schnapsidee_46:

(Start: 19 @33770 has 148 MA's), (20, 33764), (Start: 23 @33746 has 7 MA's), (Start: 27 @33710 has 2 MA's), (Start: 28 @33704 has 4 MA's), (37, 33581), (48, 33500), (49, 33482), (59, 33314), (61, 33299), (68, 33257), (72, 33185), (83, 33107),

Gene: Schubert_43 Start: 32437, Stop: 31721, Start Num: 19

Candidate Starts for Schubert_43:

(16, 32467), (Start: 19 @32437 has 148 MA's), (Start: 27 @32377 has 2 MA's), (37, 32248), (45, 32215), (47, 32185), (49, 32164), (57, 32026), (58, 32011), (65, 31945), (68, 31936), (79, 31810), (83, 31786),

Gene: Sedgewig_45 Start: 33496, Stop: 32771, Start Num: 19

Candidate Starts for Sedgewig_45:

(15, 33529), (Start: 19 @33496 has 148 MA's), (Start: 28 @33427 has 4 MA's), (37, 33304), (48, 33229), (58, 33061), (59, 33043), (61, 33028), (67, 32989), (70, 32944), (83, 32836),

Gene: ShaiHulud_47 Start: 33753, Stop: 33097, Start Num: 28

Candidate Starts for ShaiHulud_47:

(11, 33909), (Start: 19 @33822 has 148 MA's), (Start: 28 @33753 has 4 MA's), (37, 33630), (48, 33555), (58, 33387), (59, 33369), (61, 33354), (67, 33315), (70, 33270), (83, 33162),

Gene: Shamu_45 Start: 32746, Stop: 31967, Start Num: 19

Candidate Starts for Shamu_45:

(Start: 19 @32746 has 148 MA's), (Start: 27 @32686 has 2 MA's), (36, 32563), (38, 32554), (47, 32428), (49, 32407), (50, 32401), (53, 32377), (58, 32254), (62, 32218), (65, 32188), (73, 32101), (75, 32095), (81, 32038),

Gene: Shee_46 Start: 33803, Stop: 33078, Start Num: 19

Candidate Starts for Shee_46:

(Start: 19 @33803 has 148 MA's), (Start: 28 @33734 has 4 MA's), (37, 33611), (48, 33536), (58, 33368), (59, 33350), (61, 33335), (67, 33296), (70, 33251), (83, 33143),

Gene: Sinatra_44 Start: 32555, Stop: 31743, Start Num: 19

Candidate Starts for Sinatra_44:

(Start: 19 @32555 has 148 MA's), (Start: 27 @32495 has 2 MA's), (Start: 28 @32489 has 4 MA's), (36, 32369), (39, 32339), (49, 32186), (51, 32171), (52, 32162), (54, 32087), (57, 32048), (59, 32015), (69, 31931), (72, 31886), (79, 31832), (83, 31808),

Gene: SirVictor_44 Start: 32628, Stop: 31822, Start Num: 19

Candidate Starts for SirVictor_44:

(8, 32742), (Start: 19 @32628 has 148 MA's), (Start: 27 @32568 has 2 MA's), (Start: 28 @32562 has 4 MA's), (36, 32442), (39, 32415), (47, 32286), (49, 32265), (53, 32235), (55, 32163), (57, 32127), (58, 32112), (59, 32094), (69, 32010), (83, 31887),

Gene: SoilGremlin_47 Start: 33740, Stop: 33084, Start Num: 28

Candidate Starts for SoilGremlin_47:

(Start: 19 @33809 has 148 MA's), (Start: 28 @33740 has 4 MA's), (37, 33617), (48, 33542), (58, 33374), (59, 33356), (61, 33341), (67, 33302), (70, 33257), (83, 33149),

Gene: SonOfLevi_46 Start: 33526, Stop: 32801, Start Num: 19

Candidate Starts for SonOfLevi_46:

(15, 33559), (Start: 19 @33526 has 148 MA's), (Start: 28 @33457 has 4 MA's), (37, 33334), (48, 33259), (58, 33091), (59, 33073), (61, 33058), (67, 33019), (70, 32974), (83, 32866),

Gene: Stanktossa_46 Start: 33806, Stop: 33081, Start Num: 19

Candidate Starts for Stanktossa_46:

(Start: 19 @33806 has 148 MA's), (Start: 28 @33737 has 4 MA's), (37, 33614), (48, 33539), (58, 33371), (59, 33353), (61, 33338), (67, 33299), (70, 33254), (83, 33146),

Gene: StingRay_45 Start: 33511, Stop: 32786, Start Num: 19

Candidate Starts for StingRay_45:

(15, 33544), (Start: 19 @33511 has 148 MA's), (Start: 28 @33442 has 4 MA's), (37, 33319), (48, 33244), (58, 33076), (59, 33058), (61, 33043), (67, 33004), (70, 32959), (83, 32851),

Gene: StirfryIV_45 Start: 33507, Stop: 32782, Start Num: 19

Candidate Starts for StirfryIV_45:

(15, 33540), (Start: 19 @33507 has 148 MA's), (Start: 28 @33438 has 4 MA's), (37, 33315), (48, 33240), (58, 33072), (59, 33054), (61, 33039), (67, 33000), (70, 32955), (83, 32847),

Gene: Stormbreaker8_45 Start: 33622, Stop: 32918, Start Num: 23

Candidate Starts for Stormbreaker8_45:

(Start: 19 @33646 has 148 MA's), (20, 33640), (Start: 23 @33622 has 7 MA's), (Start: 27 @33586 has 2 MA's), (Start: 28 @33580 has 4 MA's), (37, 33457), (48, 33376), (49, 33358), (59, 33190), (61, 33175), (68, 33133), (72, 33061), (83, 32983),

Gene: Strathdee_46 Start: 33812, Stop: 33087, Start Num: 19

Candidate Starts for Strathdee_46:

(11, 33899), (Start: 19 @33812 has 148 MA's), (Start: 28 @33743 has 4 MA's), (37, 33620), (48, 33545), (58, 33377), (59, 33359), (61, 33344), (67, 33305), (70, 33260), (83, 33152),

Gene: Superfresh_46 Start: 33801, Stop: 33076, Start Num: 19

Candidate Starts for Superfresh_46:

(Start: 19 @33801 has 148 MA's), (Start: 28 @33732 has 4 MA's), (37, 33609), (48, 33534), (58, 33366), (59, 33348), (61, 33333), (67, 33294), (70, 33249), (83, 33141),

Gene: TatarkaPM_46 Start: 33816, Stop: 33091, Start Num: 19

Candidate Starts for TatarkaPM_46:

(Start: 19 @33816 has 148 MA's), (Start: 28 @33747 has 4 MA's), (37, 33624), (48, 33549), (58, 33381), (59, 33363), (61, 33348), (67, 33309), (70, 33264), (83, 33156),

Gene: Teagan_46 Start: 33806, Stop: 33081, Start Num: 19

Candidate Starts for Teagan_46:

(11, 33893), (Start: 19 @33806 has 148 MA's), (Start: 28 @33737 has 4 MA's), (37, 33614), (48, 33539), (58, 33371), (59, 33353), (61, 33338), (67, 33299), (70, 33254), (83, 33146),

Gene: TeddyBear_45 Start: 33508, Stop: 32783, Start Num: 19

Candidate Starts for TeddyBear_45:

(15, 33541), (Start: 19 @33508 has 148 MA's), (Start: 28 @33439 has 4 MA's), (37, 33316), (48, 33241), (58, 33073), (59, 33055), (61, 33040), (67, 33001), (70, 32956), (83, 32848),

Gene: Tenda_45 Start: 33506, Stop: 32781, Start Num: 19

Candidate Starts for Tenda_45:

(15, 33539), (Start: 19 @33506 has 148 MA's), (Start: 28 @33437 has 4 MA's), (37, 33314), (48, 33239), (58, 33071), (59, 33053), (61, 33038), (67, 32999), (70, 32954), (83, 32846),

Gene: Thompsone_46 Start: 33813, Stop: 33088, Start Num: 19

Candidate Starts for Thompsone_46:

(11, 33900), (Start: 19 @33813 has 148 MA's), (Start: 28 @33744 has 4 MA's), (37, 33621), (48, 33546), (58, 33378), (59, 33360), (61, 33345), (67, 33306), (70, 33261), (83, 33153),

Gene: Thorongil_46 Start: 33327, Stop: 32602, Start Num: 19

Candidate Starts for Thorongil_46:

(11, 33414), (Start: 19 @33327 has 148 MA's), (Start: 28 @33258 has 4 MA's), (37, 33135), (48, 33060), (58, 32892), (59, 32874), (61, 32859), (67, 32820), (70, 32775), (83, 32667),

Gene: TinSulphur_47 Start: 33812, Stop: 33087, Start Num: 19

Candidate Starts for TinSulphur_47:

(Start: 19 @33812 has 148 MA's), (Start: 28 @33743 has 4 MA's), (37, 33620), (48, 33545), (58, 33377), (59, 33359), (61, 33344), (67, 33305), (70, 33260), (83, 33152),

Gene: Tinyman4_41 Start: 31320, Stop: 30547, Start Num: 19

Candidate Starts for Tinyman4_41:

(Start: 19 @31320 has 148 MA's), (35, 31158), (40, 31140), (46, 31041), (47, 31011), (49, 30990), (57, 30852), (58, 30837), (59, 30819), (60, 30816), (73, 30684), (74, 30681), (79, 30636), (83, 30612), (85, 30579),

Gene: Velene_46 Start: 33811, Stop: 33086, Start Num: 19

Candidate Starts for Velene_46:

(11, 33898), (Start: 19 @33811 has 148 MA's), (Start: 28 @33742 has 4 MA's), (37, 33619), (48, 33544), (58, 33376), (59, 33358), (61, 33343), (67, 33304), (70, 33259), (83, 33151),

Gene: Vispitious_46 Start: 33813, Stop: 33088, Start Num: 19

Candidate Starts for Vispitious_46:

(11, 33900), (Start: 19 @33813 has 148 MA's), (Start: 28 @33744 has 4 MA's), (37, 33621), (48, 33546), (58, 33378), (59, 33360), (61, 33345), (67, 33306), (70, 33261), (83, 33153),

Gene: WestPM_40 Start: 31386, Stop: 30691, Start Num: 19

Candidate Starts for WestPM_40:

(Start: 19 @31386 has 148 MA's), (Start: 28 @31326 has 4 MA's), (35, 31224), (47, 31155), (49, 31134), (51, 31119), (58, 30981), (59, 30963), (60, 30960), (73, 30828), (74, 30825), (79, 30780), (83, 30756), (85, 30723),

Gene: WildNOut_46 Start: 33809, Stop: 33084, Start Num: 19

Candidate Starts for WildNOut_46:

(11, 33896), (Start: 19 @33809 has 148 MA's), (Start: 28 @33740 has 4 MA's), (37, 33617), (48, 33542), (58, 33374), (59, 33356), (61, 33341), (67, 33302), (70, 33257), (83, 33149),

Gene: WilliamStrong_44 Start: 32618, Stop: 31935, Start Num: 23

Candidate Starts for WilliamStrong_44:

(Start: 18 @32645 has 15 MA's), (Start: 23 @32618 has 7 MA's), (Start: 28 @32576 has 4 MA's), (29, 32573), (37, 32465), (43, 32429), (47, 32399), (49, 32378), (56, 32255), (57, 32240), (58, 32225), (65, 32159), (68, 32150), (73, 32072),

Gene: Winzigespinne_45 Start: 33494, Stop: 32769, Start Num: 19

Candidate Starts for Winzigespinne_45:

(15, 33527), (Start: 19 @33494 has 148 MA's), (Start: 28 @33425 has 4 MA's), (37, 33302), (48, 33227), (58, 33059), (59, 33041), (61, 33026), (67, 32987), (70, 32942), (83, 32834),

Gene: YuuY_44 Start: 32861, Stop: 32082, Start Num: 19

Candidate Starts for YuuY_44:

(Start: 19 @32861 has 148 MA's), (Start: 27 @32801 has 2 MA's), (Start: 28 @32795 has 4 MA's), (33, 32732), (36, 32678), (38, 32669), (41, 32621), (47, 32543), (52, 32498), (57, 32384), (58, 32369), (64, 32321), (66, 32300), (74, 32213), (76, 32195), (77, 32177), (81, 32153), (83, 32144),

Gene: Zada_47 Start: 33713, Stop: 33057, Start Num: 28

Candidate Starts for Zada_47:

(Start: 19 @33782 has 148 MA's), (Start: 28 @33713 has 4 MA's), (37, 33590), (48, 33515), (58, 33347), (59, 33329), (61, 33314), (67, 33275), (70, 33230), (83, 33122),

Gene: Zayuliv_44 Start: 31844, Stop: 31062, Start Num: 18

Candidate Starts for Zayuliv_44:

(Start: 18 @31844 has 15 MA's), (Start: 28 @31778 has 4 MA's), (36, 31658), (38, 31649), (41, 31601), (49, 31502), (50, 31496), (58, 31349), (60, 31328), (65, 31283), (66, 31280), (74, 31193), (81, 31133),

Gene: Zenitsu_44 Start: 32612, Stop: 31833, Start Num: 19

Candidate Starts for Zenitsu_44:

(14, 32645), (Start: 19 @32612 has 148 MA's), (Start: 27 @32552 has 2 MA's), (36, 32429), (38, 32420), (47, 32294), (49, 32273), (50, 32267), (53, 32243), (58, 32120), (62, 32084), (65, 32054), (73, 31967), (75, 31961), (81, 31904),

Gene: Zepp_44 Start: 31278, Stop: 30496, Start Num: 18

Candidate Starts for Zepp_44:

(Start: 18 @31278 has 15 MA's), (Start: 28 @31212 has 4 MA's), (36, 31092), (38, 31083), (41, 31035), (49, 30936), (50, 30930), (58, 30783), (60, 30762), (65, 30717), (66, 30714), (74, 30627), (81, 30567),