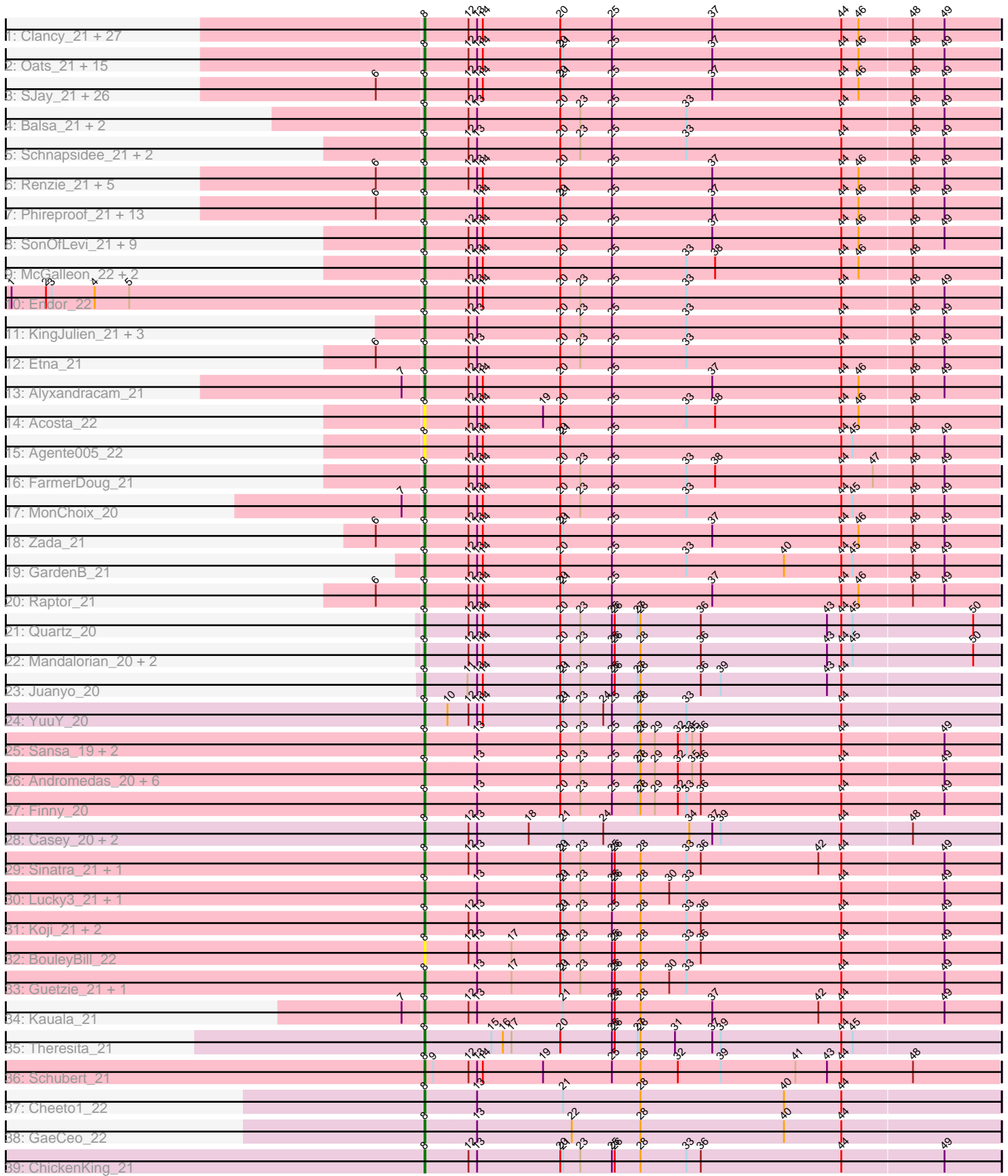


Pham 734



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 734 Report

This analysis was run 07/09/24 on database version 566.

Pham number 734 has 160 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Clancy_21, JasperRussell_21, StirfryIV_22, Jerbirus_22, AranulaLuti_21, Ilzat_21, HanSolo_21, KannH_21, Duocatuli_21, Velene_21, PuppyEggo_21, HankSprout_22, Rog141_21, Winzigespinne_21, Vispistious_21, JeriBeth_22, AxiPup_21, Superfresh_21, Papafritta_21, Chako_21, Gubbabump_21, ShaiHulud_21, MaeLinda_21, HungryHenry_21, Sedgewig_21, StingRay_21, Benjalauren_22, Thorongil_21
- Track 2 : Oats_21, Espinosa_21, Asta_21, Riyhil_21, Aubergine_21, Bonino_21, Tenda_21, Janus167_21, Pocket_21, Blage_21, Christoph_21, Kale_21, ManRay_21, TeddyBear_21, BigRedClifford_21, Gershwin_21
- Track 3 : SJay_21, SoilGremlin_21, Lovelyunicorn_21, Oxtober96_21, ParleG_21, Teagan_21, MillyPhilly_21, Ludgate_21, Gargoyle_21, Delphidian_22, Nagem_21, Knox_21, Phriends_21, Convict_21, Byron23_21, BonesMcCoy_21, WildNOut_21, Den3_21, Bandik_21, Greys_21, Figueroism_21, Strathdee_21, BeautPeep30_21, loannes_21, OldNelly_21, Thompsone_21, MrWorldwide_21
- Track 4 : Balsa_21, BeeBee8_22, Leafus_21
- Track 5 : Schnapsidee_21, Peppino_21, Redfield_21
- Track 6 : Renzie_21, Antoinette_21, AlexAdler_21, Peep_21, Dave_21, Robinson_21
- Track 7 : Phireproof_21, TinSulphur_21, Shee_21, Inventa_21, Kurt1_21, Rappheph_21, TatarkaPM_21, Pherferi_21, Dothraki_21, PhredFlintston_21, Stanktossa_21, NickSell_22, Martin_22, Phiderman_21
- Track 8 : SonOfLevi_21, Nattles_21, Garey24_21, Chamuel_21, Baines_21, Calix_21, Erla_21, Gelo_21, Klimt_21, Etta_21
- Track 9 : McGalleon_22, JasonD_25, Jenos_23
- Track 10 : Endor_22
- Track 11 : KingJulien_21, Hamlet_21, Raccoon_21, Stormbreaker8_21
- Track 12 : Etna_21
- Track 13 : Alyxandracam_21
- Track 14 : Acosta_22
- Track 15 : Agente005_22
- Track 16 : FarmerDoug_21
- Track 17 : MonChoix_20
- Track 18 : Zada_21
- Track 19 : GardenB_21
- Track 20 : Raptor_21
- Track 21 : Quartz_20
- Track 22 : Mandalorian_20, Nucci_20, Carostasia_20

- Track 23 : Juanyo_20
- Track 24 : YuuY_20
- Track 25 : Sansa_19, MCubed_20, Zenitsu_20
- Track 26 : Andromedas_20, ChikPic_20, Eleri_20, ColaCorta_20, Glamour_19, Saratos_20, Shamu_20
- Track 27 : Finny_20
- Track 28 : Casey_20, Pikmin_20, Pajaza_20
- Track 29 : Sinatra_21, PrincePhergus_21
- Track 30 : Lucky3_21, Golden_21
- Track 31 : Koji_21, Bustleton_21, Pherbot_21
- Track 32 : BouleyBill_22
- Track 33 : Guetzie_21, SirVictor_21
- Track 34 : Kauala_21
- Track 35 : Theresita_21
- Track 36 : Schubert_21
- Track 37 : Cheeto1_22
- Track 38 : GaeCeo_22
- Track 39 : ChickenKing_21

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

The start number called the most often in the published annotations is 8, it was called in 145 of the 145 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acosta_22, Agente005_22, AlexAdler_21, Alyxandracam_21, Andromedas_20, Antoinette_21, AranulaLuti_21, Asta_21, Aubergine_21, AxiPup_21, Baines_21, Balsa_21, Bandik_21, BeautPeep30_21, BeeBee8_22, Benjalauren_22, BigRedClifford_21, Blage_21, BonesMcCoy_21, Bonino_21, BouleyBill_22, Bustleton_21, Byron23_21, Calix_21, Carostasia_20, Casey_20, Chako_21, Chamuel_21, Cheeto1_22, ChickenKing_21, ChikPic_20, Christoph_21, Clancy_21, ColaCorta_20, Convict_21, Dave_21, Delphidian_22, Den3_21, Dothraki_21, Duocatuli_21, Eleri_20, Endor_22, Erla_21, Espinosa_21, Etna_21, Etta_21, FarmerDoug_21, Figueroism_21, Finny_20, GaeCeo_22, GardenB_21, Garey24_21, Gargoyle_21, Gelo_21, Gershwin_21, Glamour_19, Golden_21, Greys_21, Gubbabump_21, Guetzie_21, Hamlet_21, HanSolo_21, HankSprout_22, HungryHenry_21, Ilzat_21, Inventa_21, Ioannes_21, Janus167_21, JasonD_25, JasperRussell_21, Jenos_23, Jerbirus_22, JeriBeth_22, Juanyo_20, Kale_21, KannH_21, Kauala_21, KingJulien_21, Klimt_21, Knox_21, Koji_21, Kurt1_21, Leafus_21, Lovelyunicorn_21, Lucky3_21, Ludgate_21, MCubed_20, MaeLinda_21, ManRay_21, Mandalorian_20, Martin_22, McGalleon_22, MillyPhilly_21, MonChoix_20, MrWorldwide_21, Nagem_21, Nattles_21, NickSell_22, Nucci_20, Oats_21, OldNelly_21, Oxtober96_21, Pajaza_20, Papafritta_21, ParleG_21, Peep_21, Peppino_21, Pherbot_21, Pherferi_21, Phiderman_21, Phireproof_21, PhredFlintston_21, Phriends_21, Pikmin_20, Pocket_21, PrincePhergus_21, PuppyEggo_21, Quartz_20, Raccoon_21, Rapheph_21, Raptor_21, Redfield_21, Renzie_21, Riyhil_21, Robinson_21, Rog141_21, SJay_21, Sansa_19, Saratos_20, Schnapsidee_21, Schubert_21, Sedgewig_21, ShaiHulud_21, Shamu_20, Shee_21, Sinatra_21, SirVictor_21, SoilGremlin_21, SonOfLevi_21, Stanktossa_21, StingRay_21, StirfryIV_22, Stormbreaker8_21, Strathdee_21, Superfresh_21,

TatarkaPM_21, Teagan_21, TeddyBear_21, Tenda_21, Theresita_21, Thompsone_21, Thorongil_21, TinSulphur_21, Velene_21, Vispistious_21, WildNOut_21, Winzigespinne_21, YuuY_20, Zada_21, Zenitsu_20,

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

-

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

-

Summary by start number:

Start 8:

- Found in 160 of 160 (100.0%) of genes in pham
- Manual Annotations of this start: 145 of 145
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acosta_22 (EA1), Agente005_22 (EA1), AlexAdler_21 (EA1), Alyxandracam_21 (EA1), Andromedas_20 (EA2), Antoinette_21 (EA1), AranulaLuti_21 (EA1), Asta_21 (EA1), Aubergine_21 (EA1), AxiPup_21 (EA1), Baines_21 (EA1), Balsa_21 (EA1), Bandik_21 (EA1), BeautPeep30_21 (EA1), BeeBee8_22 (EA1), Benjalauren_22 (EA1), BigRedClifford_21 (EA1), Blage_21 (EA1), BonesMcCoy_21 (EA1), Bonino_21 (EA1), BouleyBill_22 (EA4), Bustleton_21 (EA4), Byron23_21 (EA1), Calix_21 (EA1), Carostasia_20 (EA10), Casey_20 (EA3), Chako_21 (EA1), Chamuel_21 (EA1), Cheeto1_22 (EA9), ChickenKing_21 (EA9), ChikPic_20 (EA2), Christoph_21 (EA1), Clancy_21 (EA1), ColaCorta_20 (EA2), Convict_21 (EA1), Dave_21 (EA1), Delphidian_22 (EA1), Den3_21 (EA1), Dothraki_21 (EA1), Duocatuli_21 (EA1), Eleri_20 (EA2), Endor_22 (EA1), Erla_21 (EA1), Espinosa_21 (EA1), Etna_21 (EA1), Etta_21 (EA1), FarmerDoug_21 (EA1), Figueroism_21 (EA1), Finny_20 (EA2), GaeCeo_22 (EA9), GardenB_21 (EA1), Garey24_21 (EA1), Gargoyle_21 (EA1), Gelo_21 (EA1), Gershwin_21 (EA1), Glamour_19 (EA2), Golden_21 (EA4), Greys_21 (EA1), Gubbabump_21 (EA1), Guetzie_21 (EA4), Hamlet_21 (EA1), HanSolo_21 (EA1), HankSprout_22 (EA1), HungryHenry_21 (EA1), Ilzat_21 (EA1), Inventa_21 (EA1), Ioannes_21 (EA1), Janus167_21 (EA1), JasonD_25 (EA1), JasperRussell_21 (EA1), Jenos_23 (EA1), Jerbirus_22 (EA1), JeriBeth_22 (EA1), Juanyo_20 (EA10), Kale_21 (EA1), KannH_21 (EA1), Kauala_21 (EA4), KingJulien_21 (EA1), Klimt_21 (EA1), Knox_21 (EA1), Koji_21 (EA4), Kurt1_21 (EA1), Leafus_21 (EA1), Lovelyunicorn_21 (EA1), Lucky3_21 (EA4), Ludgate_21 (EA1), MCubed_20 (EA2), MaeLinda_21 (EA1), ManRay_21 (EA1), Mandalorian_20 (EA10), Martin_22 (EA1), McGalleon_22 (EA1), MillyPhilly_21 (EA1), MonChoix_20 (EA1), MrWorldwide_21 (EA1), Nagem_21 (EA1), Nattles_21 (EA1), NickSell_22 (EA1), Nucci_20 (EA10), Oats_21 (EA1), OldNelly_21 (EA1), Oxtober96_21 (EA1), Pajaza_20 (EA3), Papafritta_21 (EA1), ParleG_21 (EA1), Peep_21 (EA1), Peppino_21 (EA1), Pherbot_21 (EA4), Pherferi_21 (EA1), Phiderman_21 (EA1), Phireproof_21 (EA1), PhredFlintston_21 (EA1), Phriends_21 (EA1), Pikmin_20 (EA3), Pocket_21 (EA1), PrincePhergus_21 (EA4), PuppyEggo_21 (EA1), Quartz_20 (EA10), Raccoon_21 (EA1), Rapphep_21 (EA1), Raptor_21 (EA1), Redfield_21 (EA1), Renzie_21 (EA1), Riyhil_21 (EA1), Robinson_21 (EA1), Rog141_21 (EA1), SJay_21 (EA1), Sansa_19 (EA2), Saratos_20 (EA2), Schnapsidee_21 (EA1), Schubert_21 (EA8), Sedgewig_21 (EA1), ShaiHulud_21 (EA1), Shamu_20 (EA2), Shee_21 (EA1), Sinatra_21 (EA4), SirVictor_21 (EA4), SoilGremlin_21 (EA1), SonOfLevi_21 (EA1), Stanktossa_21 (EA1), StingRay_21 (EA1), StirfryIV_22 (EA1), Stormbreaker8_21 (EA1), Strathdee_21 (EA1), Superfresh_21 (EA1), TatarkaPM_21 (EA1), Teagan_21 (EA1), TeddyBear_21

(EA1), Tenda_21 (EA1), Theresita_21 (EA7), Thompsone_21 (EA1), Thorongil_21 (EA1), TinSulphur_21 (EA1), Velene_21 (EA1), Vispistious_21 (EA1), WildNOut_21 (EA1), Winzigespinne_21 (EA1), YuuY_20 (EA10), Zada_21 (EA1), Zenitsu_20 (EA2),

Summary by clusters:

There are 8 clusters represented in this pham: EA10, EA9, EA8, EA1, EA3, EA2, EA4, EA7,

Info for manual annotations of cluster EA1:

- Start number 8 was manually annotated 111 times for cluster EA1.

Info for manual annotations of cluster EA10:

- Start number 8 was manually annotated 5 times for cluster EA10.

Info for manual annotations of cluster EA2:

- Start number 8 was manually annotated 11 times for cluster EA2.

Info for manual annotations of cluster EA3:

- Start number 8 was manually annotated 3 times for cluster EA3.

Info for manual annotations of cluster EA4:

- Start number 8 was manually annotated 10 times for cluster EA4.

Info for manual annotations of cluster EA7:

- Start number 8 was manually annotated 1 time for cluster EA7.

Info for manual annotations of cluster EA8:

- Start number 8 was manually annotated 1 time for cluster EA8.

Info for manual annotations of cluster EA9:

- Start number 8 was manually annotated 3 times for cluster EA9.

Gene Information:

Gene: Acosta_22 Start: 15267, Stop: 15863, Start Num: 8

Candidate Starts for Acosta_22:

(Start: 8 @15267 has 145 MA's), (12, 15312), (13, 15321), (14, 15327), (19, 15390), (20, 15408), (25, 15462), (33, 15540), (38, 15570), (44, 15702), (46, 15720), (48, 15774),

Gene: Agente005_22 Start: 15562, Stop: 16158, Start Num: 8

Candidate Starts for Agente005_22:

(Start: 8 @15562 has 145 MA's), (12, 15607), (13, 15616), (14, 15622), (20, 15703), (21, 15706), (25, 15757), (44, 15997), (45, 16009), (48, 16069), (49, 16102),

Gene: AlexAdler_21 Start: 14998, Stop: 15594, Start Num: 8

Candidate Starts for AlexAdler_21:

(6, 14950), (Start: 8 @14998 has 145 MA's), (12, 15043), (13, 15052), (14, 15058), (20, 15139), (25, 15193), (37, 15298), (44, 15433), (46, 15451), (48, 15505), (49, 15538),

Gene: Alyxandracam_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Alyxandracam_21:

(7, 14989), (Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Andromedas_20 Start: 15226, Stop: 15822, Start Num: 8

Candidate Starts for Andromedas_20:

(Start: 8 @15226 has 145 MA's), (13, 15280), (20, 15367), (23, 15388), (25, 15421), (27, 15448), (28, 15451), (29, 15466), (32, 15490), (35, 15505), (36, 15514), (44, 15661), (49, 15766),

Gene: Antoinette_21 Start: 14998, Stop: 15594, Start Num: 8

Candidate Starts for Antoinette_21:

(6, 14950), (Start: 8 @14998 has 145 MA's), (12, 15043), (13, 15052), (14, 15058), (20, 15139), (25, 15193), (37, 15298), (44, 15433), (46, 15451), (48, 15505), (49, 15538),

Gene: AranulaLuti_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for AranulaLuti_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: Asta_21 Start: 15315, Stop: 15911, Start Num: 8

Candidate Starts for Asta_21:

(Start: 8 @15315 has 145 MA's), (12, 15360), (13, 15369), (14, 15375), (20, 15456), (21, 15459), (25, 15510), (37, 15615), (44, 15750), (46, 15768), (48, 15822), (49, 15855),

Gene: Aubergine_21 Start: 15315, Stop: 15911, Start Num: 8

Candidate Starts for Aubergine_21:

(Start: 8 @15315 has 145 MA's), (12, 15360), (13, 15369), (14, 15375), (20, 15456), (21, 15459), (25, 15510), (37, 15615), (44, 15750), (46, 15768), (48, 15822), (49, 15855),

Gene: AxiPup_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for AxiPup_21:

(Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Baines_21 Start: 15297, Stop: 15893, Start Num: 8

Candidate Starts for Baines_21:

(Start: 8 @15297 has 145 MA's), (12, 15342), (13, 15351), (14, 15357), (20, 15438), (25, 15492), (37, 15597), (44, 15732), (46, 15750), (48, 15804), (49, 15837),

Gene: Balsa_21 Start: 15416, Stop: 16012, Start Num: 8

Candidate Starts for Balsa_21:

(Start: 8 @15416 has 145 MA's), (12, 15461), (13, 15470), (20, 15557), (23, 15578), (25, 15611), (33, 15689), (44, 15851), (48, 15923), (49, 15956),

Gene: Bandik_21 Start: 15006, Stop: 15602, Start Num: 8

Candidate Starts for Bandik_21:

(6, 14958), (Start: 8 @15006 has 145 MA's), (12, 15051), (13, 15060), (14, 15066), (20, 15147), (21, 15150), (25, 15201), (37, 15306), (44, 15441), (46, 15459), (48, 15513), (49, 15546),

Gene: BeautPeep30_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for BeautPeep30_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (12, 15057), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: BeeBee8_22 Start: 15579, Stop: 16175, Start Num: 8

Candidate Starts for BeeBee8_22:

(Start: 8 @15579 has 145 MA's), (12, 15624), (13, 15633), (20, 15720), (23, 15741), (25, 15774), (33, 15852), (44, 16014), (48, 16086), (49, 16119),

Gene: Benjalauren_22 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for Benjalauren_22:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: BigRedClifford_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for BigRedClifford_21:

(Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (21, 15154), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Blage_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Blage_21:

(Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (21, 15154), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: BonesMcCoy_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for BonesMcCoy_21:

(6, 14962), (Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (21, 15154), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Bonino_21 Start: 15292, Stop: 15888, Start Num: 8

Candidate Starts for Bonino_21:

(Start: 8 @15292 has 145 MA's), (12, 15337), (13, 15346), (14, 15352), (20, 15433), (21, 15436), (25, 15487), (37, 15592), (44, 15727), (46, 15745), (48, 15799), (49, 15832),

Gene: BouleyBill_22 Start: 15384, Stop: 15983, Start Num: 8

Candidate Starts for BouleyBill_22:

(Start: 8 @15384 has 145 MA's), (12, 15429), (13, 15438), (17, 15474), (20, 15525), (21, 15528), (23, 15546), (25, 15579), (26, 15582), (28, 15609), (33, 15657), (36, 15672), (44, 15819), (49, 15924),

Gene: Bustleton_21 Start: 15374, Stop: 15973, Start Num: 8

Candidate Starts for Bustleton_21:

(Start: 8 @15374 has 145 MA's), (12, 15419), (13, 15428), (20, 15515), (21, 15518), (23, 15536), (25, 15569), (28, 15599), (33, 15647), (36, 15662), (44, 15809), (49, 15914),

Gene: Byron23_21 Start: 15015, Stop: 15611, Start Num: 8

Candidate Starts for Byron23_21:

(6, 14967), (Start: 8 @15015 has 145 MA's), (12, 15060), (13, 15069), (14, 15075), (20, 15156), (21, 15159), (25, 15210), (37, 15315), (44, 15450), (46, 15468), (48, 15522), (49, 15555),

Gene: Calix_21 Start: 15290, Stop: 15886, Start Num: 8

Candidate Starts for Calix_21:

(Start: 8 @15290 has 145 MA's), (12, 15335), (13, 15344), (14, 15350), (20, 15431), (25, 15485), (37, 15590), (44, 15725), (46, 15743), (48, 15797), (49, 15830),

Gene: Carostasia_20 Start: 15430, Stop: 16026, Start Num: 8

Candidate Starts for Carostasia_20:

(Start: 8 @15430 has 145 MA's), (12, 15475), (13, 15484), (14, 15490), (20, 15571), (23, 15592), (25, 15625), (26, 15628), (28, 15655), (36, 15718), (43, 15850), (44, 15865), (45, 15877), (50, 16000),

Gene: Casey_20 Start: 15387, Stop: 15983, Start Num: 8

Candidate Starts for Casey_20:

(Start: 8 @15387 has 145 MA's), (12, 15432), (13, 15441), (18, 15495), (21, 15531), (24, 15573), (34, 15663), (37, 15687), (39, 15696), (44, 15822), (48, 15894),

Gene: Chako_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for Chako_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: Chamuel_21 Start: 15292, Stop: 15888, Start Num: 8

Candidate Starts for Chamuel_21:

(Start: 8 @15292 has 145 MA's), (12, 15337), (13, 15346), (14, 15352), (20, 15433), (25, 15487), (37, 15592), (44, 15727), (46, 15745), (48, 15799), (49, 15832),

Gene: Cheeto1_22 Start: 15194, Stop: 15793, Start Num: 8

Candidate Starts for Cheeto1_22:

(Start: 8 @15194 has 145 MA's), (13, 15248), (21, 15338), (28, 15419), (40, 15569), (44, 15629),

Gene: ChickenKing_21 Start: 15096, Stop: 15695, Start Num: 8

Candidate Starts for ChickenKing_21:

(Start: 8 @15096 has 145 MA's), (12, 15141), (13, 15150), (20, 15237), (21, 15240), (23, 15258), (25, 15291), (26, 15294), (28, 15321), (33, 15369), (36, 15384), (44, 15531), (49, 15636),

Gene: ChikPic_20 Start: 15242, Stop: 15838, Start Num: 8

Candidate Starts for ChikPic_20:

(Start: 8 @15242 has 145 MA's), (13, 15296), (20, 15383), (23, 15404), (25, 15437), (27, 15464), (28, 15467), (29, 15482), (32, 15506), (35, 15521), (36, 15530), (44, 15677), (49, 15782),

Gene: Christoph_21 Start: 15313, Stop: 15909, Start Num: 8

Candidate Starts for Christoph_21:

(Start: 8 @15313 has 145 MA's), (12, 15358), (13, 15367), (14, 15373), (20, 15454), (21, 15457), (25, 15508), (37, 15613), (44, 15748), (46, 15766), (48, 15820), (49, 15853),

Gene: Clancy_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for Clancy_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: ColaCorta_20 Start: 15226, Stop: 15822, Start Num: 8

Candidate Starts for ColaCorta_20:

(Start: 8 @15226 has 145 MA's), (13, 15280), (20, 15367), (23, 15388), (25, 15421), (27, 15448), (28, 15451), (29, 15466), (32, 15490), (35, 15505), (36, 15514), (44, 15661), (49, 15766),

Gene: Convict_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Convict_21:

(6, 14962), (Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (21, 15154), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Dave_21 Start: 14998, Stop: 15594, Start Num: 8

Candidate Starts for Dave_21:

(6, 14950), (Start: 8 @14998 has 145 MA's), (12, 15043), (13, 15052), (14, 15058), (20, 15139), (25, 15193), (37, 15298), (44, 15433), (46, 15451), (48, 15505), (49, 15538),

Gene: Delphidian_22 Start: 15009, Stop: 15605, Start Num: 8

Candidate Starts for Delphidian_22:

(6, 14961), (Start: 8 @15009 has 145 MA's), (12, 15054), (13, 15063), (14, 15069), (20, 15150), (21, 15153), (25, 15204), (37, 15309), (44, 15444), (46, 15462), (48, 15516), (49, 15549),

Gene: Den3_21 Start: 15014, Stop: 15610, Start Num: 8

Candidate Starts for Den3_21:

(6, 14966), (Start: 8 @15014 has 145 MA's), (12, 15059), (13, 15068), (14, 15074), (20, 15155), (21, 15158), (25, 15209), (37, 15314), (44, 15449), (46, 15467), (48, 15521), (49, 15554),

Gene: Dothraki_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for Dothraki_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Duocatuli_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for Duocatuli_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: Eleri_20 Start: 15239, Stop: 15835, Start Num: 8

Candidate Starts for Eleri_20:

(Start: 8 @15239 has 145 MA's), (13, 15293), (20, 15380), (23, 15401), (25, 15434), (27, 15461), (28, 15464), (29, 15479), (32, 15503), (35, 15518), (36, 15527), (44, 15674), (49, 15779),

Gene: Endor_22 Start: 15544, Stop: 16140, Start Num: 8

Candidate Starts for Endor_22:

(1, 15115), (2, 15151), (3, 15157), (4, 15202), (5, 15238), (Start: 8 @15544 has 145 MA's), (12, 15589), (13, 15598), (14, 15604), (20, 15685), (23, 15706), (25, 15739), (33, 15817), (44, 15979), (48, 16051), (49, 16084),

Gene: Erla_21 Start: 15290, Stop: 15886, Start Num: 8

Candidate Starts for Erla_21:

(Start: 8 @15290 has 145 MA's), (12, 15335), (13, 15344), (14, 15350), (20, 15431), (25, 15485), (37, 15590), (44, 15725), (46, 15743), (48, 15797), (49, 15830),

Gene: Espinosa_21 Start: 15313, Stop: 15909, Start Num: 8

Candidate Starts for Espinosa_21:

(Start: 8 @15313 has 145 MA's), (12, 15358), (13, 15367), (14, 15373), (20, 15454), (21, 15457), (25, 15508), (37, 15613), (44, 15748), (46, 15766), (48, 15820), (49, 15853),

Gene: Etna_21 Start: 15407, Stop: 16003, Start Num: 8

Candidate Starts for Etna_21:

(6, 15359), (Start: 8 @15407 has 145 MA's), (12, 15452), (13, 15461), (20, 15548), (23, 15569), (25, 15602), (33, 15680), (44, 15842), (48, 15914), (49, 15947),

Gene: Etta_21 Start: 15294, Stop: 15890, Start Num: 8

Candidate Starts for Etta_21:

(Start: 8 @15294 has 145 MA's), (12, 15339), (13, 15348), (14, 15354), (20, 15435), (25, 15489), (37, 15594), (44, 15729), (46, 15747), (48, 15801), (49, 15834),

Gene: FarmerDoug_21 Start: 15114, Stop: 15710, Start Num: 8

Candidate Starts for FarmerDoug_21:

(Start: 8 @15114 has 145 MA's), (12, 15159), (13, 15168), (14, 15174), (20, 15255), (23, 15276), (25, 15309), (33, 15387), (38, 15417), (44, 15549), (47, 15582), (48, 15621), (49, 15654),

Gene: Figueroism_21 Start: 14994, Stop: 15590, Start Num: 8

Candidate Starts for Figueroism_21:

(6, 14946), (Start: 8 @14994 has 145 MA's), (12, 15039), (13, 15048), (14, 15054), (20, 15135), (21, 15138), (25, 15189), (37, 15294), (44, 15429), (46, 15447), (48, 15501), (49, 15534),

Gene: Finny_20 Start: 15226, Stop: 15822, Start Num: 8

Candidate Starts for Finny_20:

(Start: 8 @15226 has 145 MA's), (13, 15280), (20, 15367), (23, 15388), (25, 15421), (27, 15448), (28, 15451), (29, 15466), (32, 15490), (33, 15499), (36, 15514), (44, 15661), (49, 15766),

Gene: GaeCeo_22 Start: 15265, Stop: 15864, Start Num: 8

Candidate Starts for GaeCeo_22:

(Start: 8 @15265 has 145 MA's), (13, 15319), (22, 15418), (28, 15490), (40, 15640), (44, 15700),

Gene: GardenB_21 Start: 15404, Stop: 16000, Start Num: 8

Candidate Starts for GardenB_21:

(Start: 8 @15404 has 145 MA's), (12, 15449), (13, 15458), (14, 15464), (20, 15545), (25, 15599), (33, 15677), (40, 15779), (44, 15839), (45, 15851), (48, 15911), (49, 15944),

Gene: Garey24_21 Start: 15273, Stop: 15869, Start Num: 8

Candidate Starts for Garey24_21:

(Start: 8 @15273 has 145 MA's), (12, 15318), (13, 15327), (14, 15333), (20, 15414), (25, 15468), (37, 15573), (44, 15708), (46, 15726), (48, 15780), (49, 15813),

Gene: Gargoyle_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for Gargoyle_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (12, 15057), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Gelo_21 Start: 15294, Stop: 15890, Start Num: 8

Candidate Starts for Gelo_21:

(Start: 8 @15294 has 145 MA's), (12, 15339), (13, 15348), (14, 15354), (20, 15435), (25, 15489), (37, 15594), (44, 15729), (46, 15747), (48, 15801), (49, 15834),

Gene: Gershwin_21 Start: 15315, Stop: 15911, Start Num: 8

Candidate Starts for Gershwin_21:

(Start: 8 @15315 has 145 MA's), (12, 15360), (13, 15369), (14, 15375), (20, 15456), (21, 15459), (25, 15510), (37, 15615), (44, 15750), (46, 15768), (48, 15822), (49, 15855),

Gene: Glamour_19 Start: 15227, Stop: 15823, Start Num: 8

Candidate Starts for Glamour_19:

(Start: 8 @15227 has 145 MA's), (13, 15281), (20, 15368), (23, 15389), (25, 15422), (27, 15449), (28, 15452), (29, 15467), (32, 15491), (35, 15506), (36, 15515), (44, 15662), (49, 15767),

Gene: Golden_21 Start: 15460, Stop: 16059, Start Num: 8

Candidate Starts for Golden_21:

(Start: 8 @15460 has 145 MA's), (13, 15514), (20, 15601), (21, 15604), (23, 15622), (25, 15655), (26, 15658), (28, 15685), (30, 15715), (33, 15733), (44, 15895), (49, 16000),

Gene: Greys_21 Start: 15007, Stop: 15603, Start Num: 8

Candidate Starts for Greys_21:

(6, 14959), (Start: 8 @15007 has 145 MA's), (12, 15052), (13, 15061), (14, 15067), (20, 15148), (21, 15151), (25, 15202), (37, 15307), (44, 15442), (46, 15460), (48, 15514), (49, 15547),

Gene: Gubbabump_21 Start: 15304, Stop: 15900, Start Num: 8

Candidate Starts for Gubbabump_21:

(Start: 8 @15304 has 145 MA's), (12, 15349), (13, 15358), (14, 15364), (20, 15445), (25, 15499), (37, 15604), (44, 15739), (46, 15757), (48, 15811), (49, 15844),

Gene: Guetzie_21 Start: 15454, Stop: 16053, Start Num: 8

Candidate Starts for Guetzie_21:

(Start: 8 @15454 has 145 MA's), (13, 15508), (17, 15544), (20, 15595), (21, 15598), (23, 15616), (25, 15649), (26, 15652), (28, 15679), (30, 15709), (33, 15727), (44, 15889), (49, 15994),

Gene: Hamlet_21 Start: 15416, Stop: 16012, Start Num: 8

Candidate Starts for Hamlet_21:

(Start: 8 @15416 has 145 MA's), (12, 15461), (13, 15470), (20, 15557), (23, 15578), (25, 15611), (33, 15689), (44, 15851), (48, 15923), (49, 15956),

Gene: HanSolo_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for HanSolo_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: HankSprout_22 Start: 15182, Stop: 15778, Start Num: 8

Candidate Starts for HankSprout_22:

(Start: 8 @15182 has 145 MA's), (12, 15227), (13, 15236), (14, 15242), (20, 15323), (25, 15377), (37, 15482), (44, 15617), (46, 15635), (48, 15689), (49, 15722),

Gene: HungryHenry_21 Start: 15303, Stop: 15899, Start Num: 8

Candidate Starts for HungryHenry_21:

(Start: 8 @15303 has 145 MA's), (12, 15348), (13, 15357), (14, 15363), (20, 15444), (25, 15498), (37, 15603), (44, 15738), (46, 15756), (48, 15810), (49, 15843),

Gene: Ilzat_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for Ilzat_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: Inventa_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for Inventa_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Ioannes_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Ioannes_21:

(6, 14962), (Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (21, 15154), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Janus167_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for Janus167_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (21, 15446), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: JasonD_25 Start: 15428, Stop: 16024, Start Num: 8

Candidate Starts for JasonD_25:

(Start: 8 @15428 has 145 MA's), (12, 15473), (13, 15482), (14, 15488), (20, 15569), (25, 15623), (33, 15701), (38, 15731), (44, 15863), (46, 15881), (48, 15935),

Gene: JasperRussell_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for JasperRussell_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: Jenos_23 Start: 15755, Stop: 16351, Start Num: 8

Candidate Starts for Jenos_23:

(Start: 8 @15755 has 145 MA's), (12, 15800), (13, 15809), (14, 15815), (20, 15896), (25, 15950), (33, 16028), (38, 16058), (44, 16190), (46, 16208), (48, 16262),

Gene: Jerbirus_22 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for Jerbirus_22:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: JeriBeth_22 Start: 15149, Stop: 15745, Start Num: 8

Candidate Starts for JeriBeth_22:

(Start: 8 @15149 has 145 MA's), (12, 15194), (13, 15203), (14, 15209), (20, 15290), (25, 15344), (37, 15449), (44, 15584), (46, 15602), (48, 15656), (49, 15689),

Gene: Juanyo_20 Start: 15408, Stop: 16004, Start Num: 8

Candidate Starts for Juanyo_20:

(Start: 8 @15408 has 145 MA's), (11, 15453), (13, 15462), (14, 15468), (20, 15549), (21, 15552), (23, 15570), (25, 15603), (26, 15606), (27, 15630), (28, 15633), (36, 15696), (39, 15717), (43, 15828), (44, 15843),

Gene: Kale_21 Start: 15317, Stop: 15913, Start Num: 8

Candidate Starts for Kale_21:

(Start: 8 @15317 has 145 MA's), (12, 15362), (13, 15371), (14, 15377), (20, 15458), (21, 15461), (25, 15512), (37, 15617), (44, 15752), (46, 15770), (48, 15824), (49, 15857),

Gene: KannH_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for KannH_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: Kauala_21 Start: 15380, Stop: 15979, Start Num: 8

Candidate Starts for Kauala_21:

(7, 15359), (Start: 8 @15380 has 145 MA's), (12, 15425), (13, 15434), (21, 15524), (25, 15575), (26, 15578), (28, 15605), (37, 15680), (42, 15791), (44, 15815), (49, 15920),

Gene: KingJulien_21 Start: 15407, Stop: 16003, Start Num: 8

Candidate Starts for KingJulien_21:

(Start: 8 @15407 has 145 MA's), (12, 15452), (13, 15461), (20, 15548), (23, 15569), (25, 15602), (33, 15680), (44, 15842), (48, 15914), (49, 15947),

Gene: Klimt_21 Start: 15292, Stop: 15888, Start Num: 8

Candidate Starts for Klimt_21:

(Start: 8 @15292 has 145 MA's), (12, 15337), (13, 15346), (14, 15352), (20, 15433), (25, 15487), (37, 15592), (44, 15727), (46, 15745), (48, 15799), (49, 15832),

Gene: Knox_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Knox_21:

(6, 14962), (Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (21, 15154), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Koji_21 Start: 15507, Stop: 16106, Start Num: 8

Candidate Starts for Koji_21:

(Start: 8 @15507 has 145 MA's), (12, 15552), (13, 15561), (20, 15648), (21, 15651), (23, 15669), (25, 15702), (28, 15732), (33, 15780), (36, 15795), (44, 15942), (49, 16047),

Gene: Kurt1_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for Kurt1_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Leafus_21 Start: 15554, Stop: 16150, Start Num: 8

Candidate Starts for Leafus_21:

(Start: 8 @15554 has 145 MA's), (12, 15599), (13, 15608), (20, 15695), (23, 15716), (25, 15749), (33, 15827), (44, 15989), (48, 16061), (49, 16094),

Gene: Lovelyunicorn_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Lovelyunicorn_21:

(6, 14962), (Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (21, 15154), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Lucky3_21 Start: 15460, Stop: 16059, Start Num: 8

Candidate Starts for Lucky3_21:

(Start: 8 @15460 has 145 MA's), (13, 15514), (20, 15601), (21, 15604), (23, 15622), (25, 15655), (26, 15658), (28, 15685), (30, 15715), (33, 15733), (44, 15895), (49, 16000),

Gene: Ludgate_21 Start: 15006, Stop: 15602, Start Num: 8

Candidate Starts for Ludgate_21:

(6, 14958), (Start: 8 @15006 has 145 MA's), (12, 15051), (13, 15060), (14, 15066), (20, 15147), (21, 15150), (25, 15201), (37, 15306), (44, 15441), (46, 15459), (48, 15513), (49, 15546),

Gene: MCubed_20 Start: 15254, Stop: 15850, Start Num: 8

Candidate Starts for MCubed_20:

(Start: 8 @15254 has 145 MA's), (13, 15308), (20, 15395), (23, 15416), (25, 15449), (27, 15476), (28, 15479), (29, 15494), (32, 15518), (33, 15527), (35, 15533), (36, 15542), (44, 15689), (49, 15794),

Gene: MaeLinda_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for MaeLinda_21:

(Start: 8 @15012 has 145 MA's), (12, 15057), (13, 15066), (14, 15072), (20, 15153), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: ManRay_21 Start: 15315, Stop: 15911, Start Num: 8

Candidate Starts for ManRay_21:

(Start: 8 @15315 has 145 MA's), (12, 15360), (13, 15369), (14, 15375), (20, 15456), (21, 15459), (25, 15510), (37, 15615), (44, 15750), (46, 15768), (48, 15822), (49, 15855),

Gene: Mandalorian_20 Start: 15428, Stop: 16024, Start Num: 8

Candidate Starts for Mandalorian_20:

(Start: 8 @15428 has 145 MA's), (12, 15473), (13, 15482), (14, 15488), (20, 15569), (23, 15590), (25, 15623), (26, 15626), (28, 15653), (36, 15716), (43, 15848), (44, 15863), (45, 15875), (50, 15998),

Gene: Martin_22 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for Martin_22:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: McGalleon_22 Start: 15874, Stop: 16470, Start Num: 8

Candidate Starts for McGalleon_22:

(Start: 8 @15874 has 145 MA's), (12, 15919), (13, 15928), (14, 15934), (20, 16015), (25, 16069), (33, 16147), (38, 16177), (44, 16309), (46, 16327), (48, 16381),

Gene: MillyPhilly_21 Start: 15009, Stop: 15605, Start Num: 8

Candidate Starts for MillyPhilly_21:

(6, 14961), (Start: 8 @15009 has 145 MA's), (12, 15054), (13, 15063), (14, 15069), (20, 15150), (21, 15153), (25, 15204), (37, 15309), (44, 15444), (46, 15462), (48, 15516), (49, 15549),

Gene: MonChoix_20 Start: 15060, Stop: 15656, Start Num: 8

Candidate Starts for MonChoix_20:

(7, 15039), (Start: 8 @15060 has 145 MA's), (12, 15105), (13, 15114), (14, 15120), (20, 15201), (23, 15222), (25, 15255), (33, 15333), (44, 15495), (45, 15507), (48, 15567), (49, 15600),

Gene: MrWorldwide_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for MrWorldwide_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (12, 15057), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Nagem_21 Start: 15006, Stop: 15602, Start Num: 8

Candidate Starts for Nagem_21:

(6, 14958), (Start: 8 @15006 has 145 MA's), (12, 15051), (13, 15060), (14, 15066), (20, 15147), (21, 15150), (25, 15201), (37, 15306), (44, 15441), (46, 15459), (48, 15513), (49, 15546),

Gene: Nattles_21 Start: 15296, Stop: 15892, Start Num: 8

Candidate Starts for Nattles_21:

(Start: 8 @15296 has 145 MA's), (12, 15341), (13, 15350), (14, 15356), (20, 15437), (25, 15491), (37, 15596), (44, 15731), (46, 15749), (48, 15803), (49, 15836),

Gene: NickSell_22 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for NickSell_22:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Nucci_20 Start: 15417, Stop: 16013, Start Num: 8

Candidate Starts for Nucci_20:

(Start: 8 @15417 has 145 MA's), (12, 15462), (13, 15471), (14, 15477), (20, 15558), (23, 15579), (25, 15612), (26, 15615), (28, 15642), (36, 15705), (43, 15837), (44, 15852), (45, 15864), (50, 15987),

Gene: Oats_21 Start: 15315, Stop: 15911, Start Num: 8

Candidate Starts for Oats_21:

(Start: 8 @15315 has 145 MA's), (12, 15360), (13, 15369), (14, 15375), (20, 15456), (21, 15459), (25, 15510), (37, 15615), (44, 15750), (46, 15768), (48, 15822), (49, 15855),

Gene: OldNelly_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for OldNelly_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (12, 15057), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Oxtob96_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Oxtob96_21:

(6, 14962), (Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (21, 15154), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Pajaza_20 Start: 15387, Stop: 15983, Start Num: 8

Candidate Starts for Pajaza_20:

(Start: 8 @15387 has 145 MA's), (12, 15432), (13, 15441), (18, 15495), (21, 15531), (24, 15573), (34, 15663), (37, 15687), (39, 15696), (44, 15822), (48, 15894),

Gene: Papafritta_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for Papafritta_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: ParleG_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for ParleG_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (12, 15057), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Peep_21 Start: 14998, Stop: 15594, Start Num: 8

Candidate Starts for Peep_21:

(6, 14950), (Start: 8 @14998 has 145 MA's), (12, 15043), (13, 15052), (14, 15058), (20, 15139), (25, 15193), (37, 15298), (44, 15433), (46, 15451), (48, 15505), (49, 15538),

Gene: Peppino_21 Start: 15407, Stop: 16003, Start Num: 8

Candidate Starts for Peppino_21:

(Start: 8 @15407 has 145 MA's), (12, 15452), (13, 15461), (20, 15548), (23, 15569), (25, 15602), (33, 15680), (44, 15842), (48, 15914), (49, 15947),

Gene: Pherbot_21 Start: 15373, Stop: 15972, Start Num: 8

Candidate Starts for Pherbot_21:

(Start: 8 @15373 has 145 MA's), (12, 15418), (13, 15427), (20, 15514), (21, 15517), (23, 15535), (25, 15568), (28, 15598), (33, 15646), (36, 15661), (44, 15808), (49, 15913),

Gene: Pherferi_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for Pherferi_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Phiderman_21 Start: 15009, Stop: 15605, Start Num: 8

Candidate Starts for Phiderman_21:

(6, 14961), (Start: 8 @15009 has 145 MA's), (13, 15063), (14, 15069), (20, 15150), (21, 15153), (25, 15204), (37, 15309), (44, 15444), (46, 15462), (48, 15516), (49, 15549),

Gene: Phireproof_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for Phireproof_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: PhredFlintston_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for PhredFlintston_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Phriends_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for Phriends_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (12, 15057), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Pikmin_20 Start: 15387, Stop: 15983, Start Num: 8

Candidate Starts for Pikmin_20:

(Start: 8 @15387 has 145 MA's), (12, 15432), (13, 15441), (18, 15495), (21, 15531), (24, 15573), (34, 15663), (37, 15687), (39, 15696), (44, 15822), (48, 15894),

Gene: Pocket_21 Start: 15300, Stop: 15896, Start Num: 8

Candidate Starts for Pocket_21:

(Start: 8 @15300 has 145 MA's), (12, 15345), (13, 15354), (14, 15360), (20, 15441), (21, 15444), (25, 15495), (37, 15600), (44, 15735), (46, 15753), (48, 15807), (49, 15840),

Gene: PrincePhergus_21 Start: 15377, Stop: 15976, Start Num: 8

Candidate Starts for PrincePhergus_21:

(Start: 8 @15377 has 145 MA's), (12, 15422), (13, 15431), (20, 15518), (21, 15521), (23, 15539), (25, 15572), (26, 15575), (28, 15602), (33, 15650), (36, 15665), (42, 15788), (44, 15812), (49, 15917),

Gene: PuppyEggo_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for PuppyEggo_21:

(Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Quartz_20 Start: 15429, Stop: 16025, Start Num: 8

Candidate Starts for Quartz_20:

(Start: 8 @15429 has 145 MA's), (12, 15474), (13, 15483), (14, 15489), (20, 15570), (23, 15591), (25, 15624), (26, 15627), (27, 15651), (28, 15654), (36, 15717), (43, 15849), (44, 15864), (45, 15876), (50, 15999),

Gene: Raccoon_21 Start: 15413, Stop: 16009, Start Num: 8

Candidate Starts for Raccoon_21:

(Start: 8 @15413 has 145 MA's), (12, 15458), (13, 15467), (20, 15554), (23, 15575), (25, 15608), (33, 15686), (44, 15848), (48, 15920), (49, 15953),

Gene: Rapheph_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for Rapheph_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Raptor_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Raptor_21:

(6, 14962), (Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (21, 15154), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Redfield_21 Start: 15415, Stop: 16011, Start Num: 8

Candidate Starts for Redfield_21:

(Start: 8 @15415 has 145 MA's), (12, 15460), (13, 15469), (20, 15556), (23, 15577), (25, 15610), (33, 15688), (44, 15850), (48, 15922), (49, 15955),

Gene: Renzie_21 Start: 14998, Stop: 15594, Start Num: 8

Candidate Starts for Renzie_21:

(6, 14950), (Start: 8 @14998 has 145 MA's), (12, 15043), (13, 15052), (14, 15058), (20, 15139), (25, 15193), (37, 15298), (44, 15433), (46, 15451), (48, 15505), (49, 15538),

Gene: Riyhil_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for Riyhil_21:

(Start: 8 @15012 has 145 MA's), (12, 15057), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Robinson_21 Start: 15001, Stop: 15597, Start Num: 8

Candidate Starts for Robinson_21:

(6, 14953), (Start: 8 @15001 has 145 MA's), (12, 15046), (13, 15055), (14, 15061), (20, 15142), (25, 15196), (37, 15301), (44, 15436), (46, 15454), (48, 15508), (49, 15541),

Gene: Rog141_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for Rog141_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: SJay_21 Start: 15007, Stop: 15603, Start Num: 8

Candidate Starts for SJay_21:

(6, 14959), (Start: 8 @15007 has 145 MA's), (12, 15052), (13, 15061), (14, 15067), (20, 15148), (21, 15151), (25, 15202), (37, 15307), (44, 15442), (46, 15460), (48, 15514), (49, 15547),

Gene: Sansa_19 Start: 15250, Stop: 15846, Start Num: 8

Candidate Starts for Sansa_19:

(Start: 8 @15250 has 145 MA's), (13, 15304), (20, 15391), (23, 15412), (25, 15445), (27, 15472), (28, 15475), (29, 15490), (32, 15514), (33, 15523), (35, 15529), (36, 15538), (44, 15685), (49, 15790),

Gene: Saratos_20 Start: 15227, Stop: 15823, Start Num: 8

Candidate Starts for Saratos_20:

(Start: 8 @15227 has 145 MA's), (13, 15281), (20, 15368), (23, 15389), (25, 15422), (27, 15449), (28, 15452), (29, 15467), (32, 15491), (35, 15506), (36, 15515), (44, 15662), (49, 15767),

Gene: Schnapsidee_21 Start: 15406, Stop: 16002, Start Num: 8

Candidate Starts for Schnapsidee_21:

(Start: 8 @15406 has 145 MA's), (12, 15451), (13, 15460), (20, 15547), (23, 15568), (25, 15601), (33, 15679), (44, 15841), (48, 15913), (49, 15946),

Gene: Schubert_21 Start: 15568, Stop: 16167, Start Num: 8

Candidate Starts for Schubert_21:

(Start: 8 @15568 has 145 MA's), (9, 15577), (12, 15613), (13, 15622), (14, 15628), (19, 15691), (25, 15763), (28, 15793), (32, 15832), (39, 15877), (41, 15955), (43, 15988), (44, 16003), (48, 16078),

Gene: Sedgewig_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for Sedgewig_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: ShaiHulud_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for ShaiHulud_21:

(Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Shamu_20 Start: 15239, Stop: 15835, Start Num: 8

Candidate Starts for Shamu_20:

(Start: 8 @15239 has 145 MA's), (13, 15293), (20, 15380), (23, 15401), (25, 15434), (27, 15461), (28, 15464), (29, 15479), (32, 15503), (35, 15518), (36, 15527), (44, 15674), (49, 15779),

Gene: Shee_21 Start: 15009, Stop: 15605, Start Num: 8

Candidate Starts for Shee_21:

(6, 14961), (Start: 8 @15009 has 145 MA's), (13, 15063), (14, 15069), (20, 15150), (21, 15153), (25, 15204), (37, 15309), (44, 15444), (46, 15462), (48, 15516), (49, 15549),

Gene: Sinatra_21 Start: 15374, Stop: 15973, Start Num: 8

Candidate Starts for Sinatra_21:

(Start: 8 @15374 has 145 MA's), (12, 15419), (13, 15428), (20, 15515), (21, 15518), (23, 15536), (25, 15569), (26, 15572), (28, 15599), (33, 15647), (36, 15662), (42, 15785), (44, 15809), (49, 15914),

Gene: SirVictor_21 Start: 15454, Stop: 16053, Start Num: 8

Candidate Starts for SirVictor_21:

(Start: 8 @15454 has 145 MA's), (13, 15508), (17, 15544), (20, 15595), (21, 15598), (23, 15616), (25, 15649), (26, 15652), (28, 15679), (30, 15709), (33, 15727), (44, 15889), (49, 15994),

Gene: SoilGremlin_21 Start: 15009, Stop: 15605, Start Num: 8

Candidate Starts for SoilGremlin_21:

(6, 14961), (Start: 8 @15009 has 145 MA's), (12, 15054), (13, 15063), (14, 15069), (20, 15150), (21, 15153), (25, 15204), (37, 15309), (44, 15444), (46, 15462), (48, 15516), (49, 15549),

Gene: SonOfLevi_21 Start: 15292, Stop: 15888, Start Num: 8

Candidate Starts for SonOfLevi_21:

(Start: 8 @15292 has 145 MA's), (12, 15337), (13, 15346), (14, 15352), (20, 15433), (25, 15487), (37, 15592), (44, 15727), (46, 15745), (48, 15799), (49, 15832),

Gene: Stanktossa_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for Stanktossa_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: StingRay_21 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for StingRay_21:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: StirfryIV_22 Start: 15302, Stop: 15898, Start Num: 8

Candidate Starts for StirfryIV_22:

(Start: 8 @15302 has 145 MA's), (12, 15347), (13, 15356), (14, 15362), (20, 15443), (25, 15497), (37, 15602), (44, 15737), (46, 15755), (48, 15809), (49, 15842),

Gene: Stormbreaker8_21 Start: 15407, Stop: 16003, Start Num: 8

Candidate Starts for Stormbreaker8_21:

(Start: 8 @15407 has 145 MA's), (12, 15452), (13, 15461), (20, 15548), (23, 15569), (25, 15602), (33, 15680), (44, 15842), (48, 15914), (49, 15947),

Gene: Strathdee_21 Start: 15011, Stop: 15607, Start Num: 8

Candidate Starts for Strathdee_21:

(6, 14963), (Start: 8 @15011 has 145 MA's), (12, 15056), (13, 15065), (14, 15071), (20, 15152), (21, 15155), (25, 15206), (37, 15311), (44, 15446), (46, 15464), (48, 15518), (49, 15551),

Gene: Superfresh_21 Start: 14998, Stop: 15594, Start Num: 8

Candidate Starts for Superfresh_21:

(Start: 8 @14998 has 145 MA's), (12, 15043), (13, 15052), (14, 15058), (20, 15139), (25, 15193), (37, 15298), (44, 15433), (46, 15451), (48, 15505), (49, 15538),

Gene: TatarkaPM_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for TatarkaPM_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Teagan_21 Start: 15006, Stop: 15602, Start Num: 8

Candidate Starts for Teagan_21:

(6, 14958), (Start: 8 @15006 has 145 MA's), (12, 15051), (13, 15060), (14, 15066), (20, 15147), (21, 15150), (25, 15201), (37, 15306), (44, 15441), (46, 15459), (48, 15513), (49, 15546),

Gene: TeddyBear_21 Start: 15315, Stop: 15911, Start Num: 8

Candidate Starts for TeddyBear_21:

(Start: 8 @15315 has 145 MA's), (12, 15360), (13, 15369), (14, 15375), (20, 15456), (21, 15459), (25, 15510), (37, 15615), (44, 15750), (46, 15768), (48, 15822), (49, 15855),

Gene: Tenda_21 Start: 15313, Stop: 15909, Start Num: 8

Candidate Starts for Tenda_21:

(Start: 8 @15313 has 145 MA's), (12, 15358), (13, 15367), (14, 15373), (20, 15454), (21, 15457), (25, 15508), (37, 15613), (44, 15748), (46, 15766), (48, 15820), (49, 15853),

Gene: Theresita_21 Start: 14980, Stop: 15576, Start Num: 8

Candidate Starts for Theresita_21:

(Start: 8 @14980 has 145 MA's), (15, 15049), (16, 15061), (17, 15070), (20, 15121), (25, 15175), (26, 15178), (27, 15202), (28, 15205), (31, 15241), (37, 15280), (39, 15289), (44, 15415), (45, 15427),

Gene: Thompsone_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Thompsone_21:

(6, 14962), (Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (21, 15154), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Thorongil_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Thorongil_21:

(Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: TinSulphur_21 Start: 15012, Stop: 15608, Start Num: 8

Candidate Starts for TinSulphur_21:

(6, 14964), (Start: 8 @15012 has 145 MA's), (13, 15066), (14, 15072), (20, 15153), (21, 15156), (25, 15207), (37, 15312), (44, 15447), (46, 15465), (48, 15519), (49, 15552),

Gene: Velene_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Velene_21:

(Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Vispitious_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for Vispitious_21:

(Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: WildNOut_21 Start: 15010, Stop: 15606, Start Num: 8

Candidate Starts for WildNOut_21:

(6, 14962), (Start: 8 @15010 has 145 MA's), (12, 15055), (13, 15064), (14, 15070), (20, 15151), (21, 15154), (25, 15205), (37, 15310), (44, 15445), (46, 15463), (48, 15517), (49, 15550),

Gene: Winzigespinne_21 Start: 15301, Stop: 15897, Start Num: 8

Candidate Starts for Winzigespinne_21:

(Start: 8 @15301 has 145 MA's), (12, 15346), (13, 15355), (14, 15361), (20, 15442), (25, 15496), (37, 15601), (44, 15736), (46, 15754), (48, 15808), (49, 15841),

Gene: YuuY_20 Start: 15423, Stop: 16019, Start Num: 8

Candidate Starts for YuuY_20:

(Start: 8 @15423 has 145 MA's), (10, 15447), (12, 15468), (13, 15477), (14, 15483), (20, 15564), (21, 15567), (23, 15585), (24, 15609), (25, 15618), (27, 15645), (28, 15648), (33, 15696), (44, 15858),

Gene: Zada_21 Start: 15001, Stop: 15597, Start Num: 8

Candidate Starts for Zada_21:

(6, 14953), (Start: 8 @15001 has 145 MA's), (12, 15046), (13, 15055), (14, 15061), (20, 15142), (21, 15145), (25, 15196), (37, 15301), (44, 15436), (46, 15454), (48, 15508), (49, 15541),

Gene: Zenitsu_20 Start: 15254, Stop: 15850, Start Num: 8

Candidate Starts for Zenitsu_20:

(Start: 8 @15254 has 145 MA's), (13, 15308), (20, 15395), (23, 15416), (25, 15449), (27, 15476), (28, 15479), (29, 15494), (32, 15518), (33, 15527), (35, 15533), (36, 15542), (44, 15689), (49, 15794),