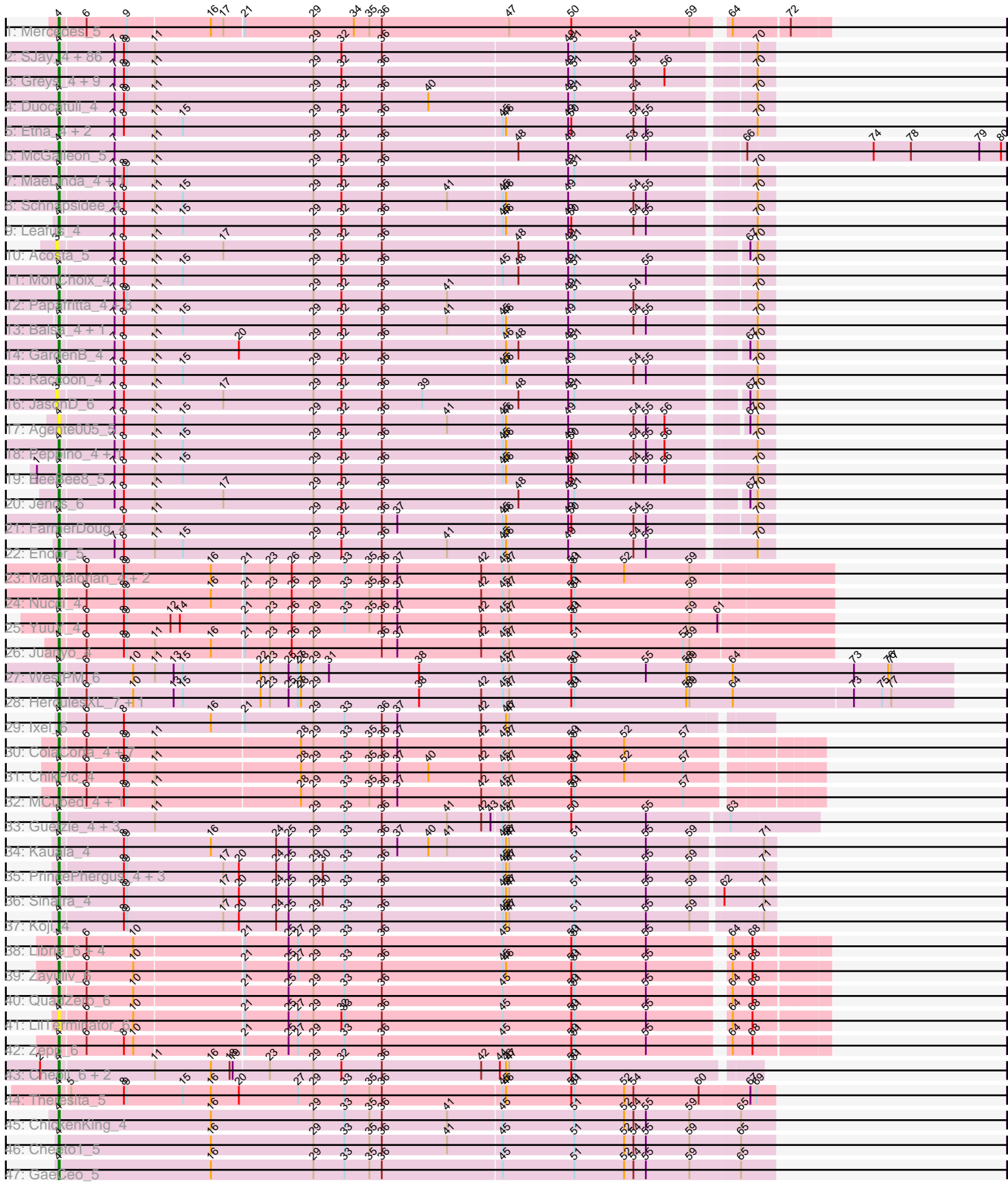


Pham 169765



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 169765 Report

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

Pham number 169765 has 173 members, 17 are drafts.

Phages represented in each track:

- Track 1 : Mercedes_5
- Track 2 : SJay_4, TinSulphur_4, Benjalauren_4, AlexAdler_4, Renzie_4, Dothraki_4, Rapheph_4, Lovelyunicorn_4, Delphidian_4, Peep_4, PhredFlintston_4, Jerbirus_4, Oats_4, AxiPup_4, HanSolo_4, Garey24_4, Oxtober96_4, Chako_4, Kale_4, KannH_4, Phireproof_4, Aubergine_4, Asta_4, Ludgate_4, Antoinette_4, Blage_4, AranulaLuti_4, Baines_4, Stanktossa_4, JasperRussell_4, Shee_4, Pherferi_4, Inventa_4, StirfryIV_4, HankSprout_4, MillyPhilly_4, Ilzat_4, Figueroism_4, Alyxandracam_4, ParleG_4, Teagan_4, Gelo_4, Janus167_4, Kurt1_4, Phriends_4, Calix_4, Robinson_4, Strathdee_4, Nattles_4, Espinosa_4, Tenda_4, Gubbabump_4, Winzigespinne_4, Martin_5, Bandik_4, Klimt_4, Vispistious_4, MrWorldwide_4, Erla_4, PuppyEggo_4, Gershwin_4, ManRay_4, BonesMcCoy_4, Byron23_3, Zada_4, Bonino_4, Nagem_4, ShaiHulud_4, Chamuel_4, JeriBeth_4, Rog141_4, Sedgewig_4, Superfresh_4, Thorongil_4, BigRedClifford_4, Pocket_4, BeautPeep30_4, Christoph_4, TeddyBear_4, SoilGremlin_4, OldNelly_4, SonOfLevi_4, TatarkaPM_4, Dave_4, NickSell_4, Phiderman_4, Etta_4
- Track 3 : Greys_4, Raptor_4, Convict_4, WildNOOut_4, Den3_4, Ioannes_4, Knox_4, Riyhil_4, Thompsone_4, Velene_4
- Track 4 : Duocatuli_4
- Track 5 : Etna_4, KingJulien_4, Stormbreaker8_4
- Track 6 : McGalleon_5
- Track 7 : MaeLinda_4, Gargoyle_4
- Track 8 : Schnapsidee_4
- Track 9 : Leafus_4
- Track 10 : Acosta_5
- Track 11 : MonChoix_4
- Track 12 : Papafritta_4, HungryHenry_4, Clancy_4, StingRay_4
- Track 13 : Balsa_4, Hamlet_4
- Track 14 : GardenB_4
- Track 15 : Raccoon_4
- Track 16 : JasonD_6
- Track 17 : Agente005_5
- Track 18 : Peppino_4, Redfield_4
- Track 19 : BeeBee8_5
- Track 20 : Jenos_6
- Track 21 : FarmerDoug_4
- Track 22 : Endor_5

- Track 23 : Mandalorian_4, Carostasia_4, Quartz_4
- Track 24 : Nucci_4
- Track 25 : YuuY_4
- Track 26 : Juanyo_4
- Track 27 : WestPM_6
- Track 28 : HerculesXL_7, Tinyman4_7
- Track 29 : Ixel_6
- Track 30 : ColaCorta_4, Eleri_4, Sansa_3, Shamu_4, Glamour_3, Finny_4, Saratos_4, Andromedas_4
- Track 31 : ChikPic_4
- Track 32 : MCubed_4, Zenitsu_4
- Track 33 : Guetzie_4, Lucky3_4, Golden_4, SirVictor_4
- Track 34 : Kauala_4
- Track 35 : PrincePhergus_4, Bustleton_4, Pherbot_4, BouleyBill_4
- Track 36 : Sinatra_4
- Track 37 : Koji_4
- Track 38 : Librie_6, Greenlvy_6, Fulton_6, Hasitha_6, CaptainRex_6
- Track 39 : Zayuliv_6
- Track 40 : QuadZero_6
- Track 41 : LilTerminator_6
- Track 42 : Zepp_6
- Track 43 : Chepli_6, KatChan_6, Luna18_6
- Track 44 : Theresita_5
- Track 45 : ChickenKing_4
- Track 46 : Cheeto1_5
- Track 47 : GaeCeo_5

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

The start number called the most often in the published annotations is 4, it was called in 156 of the 156 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agente005_5, AlexAdler_4, Alyxandracam_4, Andromedas_4, Antoinette_4, AranulaLuti_4, Asta_4, Aubergine_4, AxiPup_4, Baines_4, Balsa_4, Bandik_4, BeautPeep30_4, BeeBee8_5, Benjalauren_4, BigRedClifford_4, Blage_4, BonesMcCoy_4, Bonino_4, BouleyBill_4, Bustleton_4, Byron23_3, Calix_4, CaptainRex_6, Carostasia_4, Chako_4, Chamuel_4, Cheeto1_5, Chepli_6, ChickenKing_4, ChikPic_4, Christoph_4, Clancy_4, ColaCorta_4, Convict_4, Dave_4, Delphidian_4, Den3_4, Dothraki_4, Duocatuli_4, Eleri_4, Endor_5, Erla_4, Espinosa_4, Etna_4, Etta_4, FarmerDoug_4, Figueroism_4, Finny_4, Fulton_6, GaeCeo_5, GardenB_4, Garey24_4, Gargoyle_4, Gelo_4, Gershwin_4, Glamour_3, Golden_4, Greenlvy_6, Greys_4, Gubbabump_4, Guetzie_4, Hamlet_4, HanSolo_4, HankSprout_4, Hasitha_6, HerculesXL_7, HungryHenry_4, Ilzat_4, Inventa_4, Ioannes_4, Ixel_6, Janus167_4, JasperRussell_4, Jenos_6, Jerbirus_4, JeriBeth_4, Juanyo_4, Kale_4, KannH_4, KatChan_6, Kauala_4, KingJulien_4, Klimt_4, Knox_4, Koji_4, Kurt1_4, Leafus_4, Librie_6, LilTerminator_6, Lovelyunicorn_4, Lucky3_4, Ludgate_4, Luna18_6, MCubed_4, MaeLinda_4, ManRay_4, Mandalorian_4, Martin_5, McGalleon_5, Mercedes_5, MillyPhilly_4, MonChoix_4, MrWorldwide_4, Nagem_4, Nattles_4, NickSell_4, Nucci_4, Oats_4, OldNelly_4, Oxtober96_4,

Papafritta_4, ParleG_4, Peep_4, Peppino_4, Pherbot_4, Pherferi_4, Phiderman_4, Phireproof_4, PhredFlintston_4, Phriends_4, Pocket_4, PrincePhergus_4, PuppyEggo_4, QuadZero_6, Quartz_4, Raccoon_4, Rapheph_4, Raptor_4, Redfield_4, Renzie_4, Riyhil_4, Robinson_4, Rog141_4, SJay_4, Sansa_3, Saratos_4, Schnapsidee_4, Sedgewig_4, ShaiHulud_4, Shamu_4, Shee_4, Sinatra_4, SirVictor_4, SoilGremlin_4, SonOfLevi_4, Stanktossa_4, StingRay_4, StirfryIV_4, Stormbreaker8_4, Strathdee_4, Superfresh_4, TatarkaPM_4, Teagan_4, TeddyBear_4, Tenda_4, Theresita_5, Thompsone_4, Thorongil_4, TinSulphur_4, Tinyman4_7, Velene_4, Vispistious_4, WestPM_6, WildNOut_4, Winzigespinne_4, YuuY_4, Zada_4, Zayuliv_6, Zenitsu_4, Zepp_6,

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

-

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

- Acosta_5, JasonD_6,

Summary by start number:

Start 3:

- Found in 2 of 173 (1.2%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acosta_5 (EA1), JasonD_6 (EA1),

Start 4:

- Found in 171 of 173 (98.8%) of genes in pham
- Manual Annotations of this start: 156 of 156
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agente005_5 (EA1), AlexAdler_4 (EA1), Alyxandracam_4 (EA1), Andromedas_4 (EA2), Antoinette_4 (EA1), AranulaLuti_4 (EA1), Asta_4 (EA1), Aubergine_4 (EA1), AxiPup_4 (EA1), Baines_4 (EA1), Balsa_4 (EA1), Bandik_4 (EA1), BeautPeep30_4 (EA1), BeeBee8_5 (EA1), Benjalauren_4 (EA1), BigRedClifford_4 (EA1), Blage_4 (EA1), BonesMcCoy_4 (EA1), Bonino_4 (EA1), BouleyBill_4 (EA4), Bustleton_4 (EA4), Byron23_3 (EA1), Calix_4 (EA1), CaptainRex_6 (EA5), Carostasia_4 (EA10), Chako_4 (EA1), Chamuel_4 (EA1), Cheeto1_5 (EA9), Chepli_6 (EA6), ChickenKing_4 (EA9), ChikPic_4 (EA2), Christoph_4 (EA1), Clancy_4 (EA1), ColaCorta_4 (EA2), Convict_4 (EA1), Dave_4 (EA1), Delphidian_4 (EA1), Den3_4 (EA1), Dothraki_4 (EA1), Duocatuli_4 (EA1), Eleri_4 (EA2), Endor_5 (EA1), Erla_4 (EA1), Espinosa_4 (EA1), Etna_4 (EA1), Etta_4 (EA1), FarmerDoug_4 (EA1), Figueroism_4 (EA1), Finny_4 (EA2), Fulton_6 (EA5), GaeCeo_5 (EA9), GardenB_4 (EA1), Garey24_4 (EA1), Gargoyle_4 (EA1), Gelo_4 (EA1), Gershwin_4 (EA1), Glamour_3 (EA2), Golden_4 (EA4), Greenlvy_6 (EA5), Greys_4 (EA1), Gubbabump_4 (EA1), Guetzie_4 (EA4), Hamlet_4 (EA1), HanSolo_4 (EA1), HankSprout_4 (EA1), Hasitha_6 (EA5), HerculesXL_7 (EA11), HungryHenry_4 (EA1), Ilzat_4 (EA1), Inventa_4 (EA1), Ioannes_4 (EA1), Ixel_6 (EA11), Janus167_4 (EA1), JasperRussell_4 (EA1), Jenos_6 (EA1), Jerbirus_4 (EA1), JeriBeth_4 (EA1), Juanyo_4 (EA10), Kale_4 (EA1), KannH_4 (EA1), KatChan_6 (EA6), Kauala_4 (EA4), KingJulien_4 (EA1), Klimt_4 (EA1), Knox_4 (EA1), Koji_4 (EA4), Kurt1_4 (EA1), Leafus_4 (EA1), Librie_6 (EA5), LilTerminator_6 (EA5), Lovelyunicorn_4 (EA1), Lucky3_4 (EA4), Ludgate_4 (EA1), Luna18_6 (EA6), MCubed_4 (EA2), MaeLinda_4 (EA1), ManRay_4 (EA1), Mandalorian_4 (EA10), Martin_5 (EA1), McGalleon_5 (EA1), Mercedes_5 (EA), MillyPhilly_4 (EA1),

MonChoix_4 (EA1), MrWorldwide_4 (EA1), Nagem_4 (EA1), Nattles_4 (EA1), NickSell_4 (EA1), Nucci_4 (EA10), Oats_4 (EA1), OldNelly_4 (EA1), Oxtober96_4 (EA1), Papafritta_4 (EA1), ParleG_4 (EA1), Peep_4 (EA1), Peppino_4 (EA1), Pherbot_4 (EA4), Pherferi_4 (EA1), Phiderman_4 (EA1), Phireproof_4 (EA1), PhredFlintston_4 (EA1), Phriends_4 (EA1), Pocket_4 (EA1), PrincePhergus_4 (EA4), PuppyEggo_4 (EA1), QuadZero_6 (EA5), Quartz_4 (EA10), Raccoon_4 (EA1), Rapheph_4 (EA1), Raptor_4 (EA1), Redfield_4 (EA1), Renzie_4 (EA1), Riyhil_4 (EA1), Robinson_4 (EA1), Rog141_4 (EA1), SJay_4 (EA1), Sansa_3 (EA2), Saratos_4 (EA2), Schnapsidee_4 (EA1), Sedgewig_4 (EA1), ShaiHulud_4 (EA1), Shamu_4 (EA2), Shee_4 (EA1), Sinatra_4 (EA4), SirVictor_4 (EA4), SoilGremlin_4 (EA1), SonOfLevi_4 (EA1), Stanktossa_4 (EA1), StingRay_4 (EA1), StirfryIV_4 (EA1), Stormbreaker8_4 (EA1), Strathdee_4 (EA1), Superfresh_4 (EA1), TatarkaPM_4 (EA1), Teagan_4 (EA1), TeddyBear_4 (EA1), Tenda_4 (EA1), Theresita_5 (EA7), Thompsone_4 (EA1), Thorongil_4 (EA1), TinSulphur_4 (EA1), Tinyman4_7 (EA11), Velene_4 (EA1), Vispistious_4 (EA1), WestPM_6 (EA11), WildNOut_4 (EA1), Winzigespinne_4 (EA1), YuuY_4 (EA10), Zada_4 (EA1), Zayuliv_6 (EA5), Zenitsu_4 (EA2), Zepp_6 (EA5),

Summary by clusters:

There are 10 clusters represented in this pham: EA11, EA10, EA, EA9, EA1, EA2, EA5, EA4, EA7, EA6,

Info for manual annotations of cluster EA:

- Start number 4 was manually annotated 1 time for cluster EA.

Info for manual annotations of cluster EA1:

- Start number 4 was manually annotated 111 times for cluster EA1.

Info for manual annotations of cluster EA10:

- Start number 4 was manually annotated 5 times for cluster EA10.

Info for manual annotations of cluster EA11:

- Start number 4 was manually annotated 4 times for cluster EA11.

Info for manual annotations of cluster EA2:

- Start number 4 was manually annotated 11 times for cluster EA2.

Info for manual annotations of cluster EA4:

- Start number 4 was manually annotated 10 times for cluster EA4.

Info for manual annotations of cluster EA5:

- Start number 4 was manually annotated 7 times for cluster EA5.

Info for manual annotations of cluster EA6:

- Start number 4 was manually annotated 3 times for cluster EA6.

Info for manual annotations of cluster EA7:

- Start number 4 was manually annotated 1 time for cluster EA7.

Info for manual annotations of cluster EA9:

- Start number 4 was manually annotated 3 times for cluster EA9.

Gene Information:

Gene: Acosta_5 Start: 3437, Stop: 4102, Start Num: 3

Candidate Starts for Acosta_5:

(3, 3437), (7, 3488), (8, 3497), (11, 3527), (17, 3593), (29, 3680), (32, 3707), (36, 3746), (48, 3875), (49, 3923), (51, 3929), (67, 4082), (70, 4088),

Gene: Agente005_5 Start: 3515, Stop: 4180, Start Num: 4

Candidate Starts for Agente005_5:

(Start: 4 @3515 has 156 MA's), (7, 3566), (8, 3575), (11, 3605), (15, 3632), (29, 3758), (32, 3785), (36, 3824), (41, 3887), (45, 3938), (46, 3941), (49, 4001), (54, 4064), (55, 4076), (56, 4094), (67, 4160), (70, 4166),

Gene: AlexAdler_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for AlexAdler_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Alyxandracam_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Alyxandracam_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Andromedas_4 Start: 3431, Stop: 4147, Start Num: 4

Candidate Starts for Andromedas_4:

(Start: 4 @3431 has 156 MA's), (6, 3455), (8, 3491), (9, 3494), (11, 3521), (28, 3659), (29, 3671), (33, 3701), (35, 3725), (36, 3737), (37, 3752), (42, 3833), (45, 3854), (47, 3860), (50, 3920), (51, 3923), (52, 3971), (57, 4028),

Gene: Antoinette_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Antoinette_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: AranulaLuti_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for AranulaLuti_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Asta_4 Start: 3358, Stop: 4026, Start Num: 4

Candidate Starts for Asta_4:

(Start: 4 @3358 has 156 MA's), (7, 3409), (8, 3418), (9, 3421), (11, 3448), (29, 3601), (32, 3628), (36, 3667), (49, 3844), (51, 3850), (54, 3907), (70, 4012),

Gene: Aubergine_4 Start: 3358, Stop: 4026, Start Num: 4

Candidate Starts for Aubergine_4:

(Start: 4 @3358 has 156 MA's), (7, 3409), (8, 3418), (9, 3421), (11, 3448), (29, 3601), (32, 3628), (36, 3667), (49, 3844), (51, 3850), (54, 3907), (70, 4012),

Gene: AxiPup_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for AxiPup_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Baines_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Baines_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Balsa_4 Start: 3363, Stop: 4034, Start Num: 4

Candidate Starts for Balsa_4:

(Start: 4 @3363 has 156 MA's), (7, 3414), (8, 3423), (11, 3453), (15, 3480), (29, 3606), (32, 3633), (36, 3672), (41, 3735), (45, 3786), (46, 3789), (49, 3849), (54, 3912), (55, 3924), (70, 4020),

Gene: Bandik_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Bandik_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: BeautPeep30_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for BeautPeep30_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: BeeBee8_5 Start: 3526, Stop: 4197, Start Num: 4

Candidate Starts for BeeBee8_5:

(1, 3505), (Start: 4 @3526 has 156 MA's), (7, 3577), (8, 3586), (11, 3616), (15, 3643), (29, 3769), (32, 3796), (36, 3835), (45, 3949), (46, 3952), (49, 4012), (50, 4015), (54, 4075), (55, 4087), (56, 4105), (70, 4183),

Gene: Benjalauren_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Benjalauren_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: BigRedClifford_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for BigRedClifford_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Blage_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Blage_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: BonesMcCoy_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for BonesMcCoy_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Bonino_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Bonino_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: BouleyBill_4 Start: 3370, Stop: 4044, Start Num: 4

Candidate Starts for BouleyBill_4:

(Start: 4 @3370 has 156 MA's), (8, 3430), (9, 3433), (17, 3526), (20, 3541), (24, 3577), (25, 3589), (29, 3613), (30, 3622), (33, 3643), (36, 3679), (45, 3793), (46, 3796), (47, 3799), (51, 3862), (55, 3931), (59, 3973), (71, 4033),

Gene: Bustleton_4 Start: 3371, Stop: 4045, Start Num: 4

Candidate Starts for Bustleton_4:

(Start: 4 @3371 has 156 MA's), (8, 3431), (9, 3434), (17, 3527), (20, 3542), (24, 3578), (25, 3590), (29, 3614), (30, 3623), (33, 3644), (36, 3680), (45, 3794), (46, 3797), (47, 3800), (51, 3863), (55, 3932), (59, 3974), (71, 4034),

Gene: Byron23_3 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Byron23_3:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Calix_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Calix_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: CaptainRex_6 Start: 3752, Stop: 4465, Start Num: 4

Candidate Starts for CaptainRex_6:

(Start: 4 @3752 has 156 MA's), (6, 3776), (10, 3821), (21, 3923), (25, 3965), (27, 3974), (29, 3989), (33, 4019), (36, 4055), (45, 4172), (50, 4238), (51, 4241), (55, 4310), (64, 4379), (68, 4397),

Gene: Carostasia_4 Start: 3593, Stop: 4330, Start Num: 4

Candidate Starts for Carostasia_4:

(Start: 4 @3593 has 156 MA's), (6, 3617), (8, 3653), (9, 3656), (16, 3737), (21, 3767), (23, 3791), (26, 3812), (29, 3833), (33, 3863), (35, 3887), (36, 3899), (37, 3914), (42, 3995), (45, 4016), (47, 4022), (50, 4082), (51, 4085), (52, 4133), (59, 4196),

Gene: Chako_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Chako_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Chamuel_4 Start: 3358, Stop: 4026, Start Num: 4

Candidate Starts for Chamuel_4:

(Start: 4 @3358 has 156 MA's), (7, 3409), (8, 3418), (9, 3421), (11, 3448), (29, 3601), (32, 3628), (36, 3667), (49, 3844), (51, 3850), (54, 3907), (70, 4012),

Gene: Cheeto1_5 Start: 3455, Stop: 4141, Start Num: 4

Candidate Starts for Cheeto1_5:

(Start: 4 @3455 has 156 MA's), (16, 3602), (29, 3701), (33, 3731), (35, 3755), (36, 3767), (41, 3830), (45, 3881), (51, 3950), (52, 3998), (54, 4007), (55, 4019), (59, 4061), (65, 4109),

Gene: Chepli_6 Start: 3843, Stop: 4505, Start Num: 4

Candidate Starts for Chepli_6:

(2, 3825), (Start: 4 @3843 has 156 MA's), (11, 3933), (16, 3987), (18, 4005), (19, 4008), (23, 4041), (29, 4083), (32, 4110), (36, 4149), (42, 4245), (44, 4263), (46, 4269), (47, 4272), (50, 4332), (51,

4335),

Gene: ChickenKing_4 Start: 3281, Stop: 3967, Start Num: 4

Candidate Starts for ChickenKing_4:

(Start: 4 @3281 has 156 MA's), (16, 3428), (29, 3527), (33, 3557), (35, 3581), (36, 3593), (41, 3656), (45, 3707), (51, 3776), (52, 3824), (54, 3833), (55, 3845), (59, 3887), (65, 3935),

Gene: ChikPic_4 Start: 3432, Stop: 4148, Start Num: 4

Candidate Starts for ChikPic_4:

(Start: 4 @3432 has 156 MA's), (6, 3456), (8, 3492), (9, 3495), (11, 3522), (28, 3660), (29, 3672), (33, 3702), (35, 3726), (36, 3738), (37, 3753), (40, 3783), (42, 3834), (45, 3855), (47, 3861), (50, 3921), (51, 3924), (52, 3972), (57, 4029),

Gene: Christoph_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Christoph_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Clancy_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Clancy_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (41, 3728), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: ColaCorta_4 Start: 3431, Stop: 4147, Start Num: 4

Candidate Starts for ColaCorta_4:

(Start: 4 @3431 has 156 MA's), (6, 3455), (8, 3491), (9, 3494), (11, 3521), (28, 3659), (29, 3671), (33, 3701), (35, 3725), (36, 3737), (37, 3752), (42, 3833), (45, 3854), (47, 3860), (50, 3920), (51, 3923), (52, 3971), (57, 4028),

Gene: Convict_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Convict_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (56, 3935), (70, 4010),

Gene: Dave_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Dave_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Delphidian_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Delphidian_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Den3_4 Start: 3360, Stop: 4028, Start Num: 4

Candidate Starts for Den3_4:

(Start: 4 @3360 has 156 MA's), (7, 3411), (8, 3420), (9, 3423), (11, 3450), (29, 3603), (32, 3630), (36, 3669), (49, 3846), (51, 3852), (54, 3909), (56, 3939), (70, 4014),

Gene: Dothraki_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Dothraki_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Duocatuli_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Duocatuli_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (40, 3710), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Eleri_4 Start: 3432, Stop: 4148, Start Num: 4

Candidate Starts for Eleri_4:

(Start: 4 @3432 has 156 MA's), (6, 3456), (8, 3492), (9, 3495), (11, 3522), (28, 3660), (29, 3672), (33, 3702), (35, 3726), (36, 3738), (37, 3753), (42, 3834), (45, 3855), (47, 3861), (50, 3921), (51, 3924), (52, 3972), (57, 4029),

Gene: Endor_5 Start: 3772, Stop: 4443, Start Num: 4

Candidate Starts for Endor_5:

(Start: 4 @3772 has 156 MA's), (7, 3823), (8, 3832), (11, 3862), (15, 3889), (29, 4015), (32, 4042), (36, 4081), (41, 4144), (45, 4195), (46, 4198), (49, 4258), (54, 4321), (55, 4333), (70, 4429),

Gene: Erla_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Erla_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Espinosa_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Espinosa_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Etna_4 Start: 3351, Stop: 4022, Start Num: 4

Candidate Starts for Etna_4:

(Start: 4 @3351 has 156 MA's), (7, 3402), (8, 3411), (11, 3441), (15, 3468), (29, 3594), (32, 3621), (36, 3660), (45, 3774), (46, 3777), (49, 3837), (50, 3840), (54, 3900), (55, 3912), (70, 4008),

Gene: Etta_4 Start: 3360, Stop: 4028, Start Num: 4

Candidate Starts for Etta_4:

(Start: 4 @3360 has 156 MA's), (7, 3411), (8, 3420), (9, 3423), (11, 3450), (29, 3603), (32, 3630), (36, 3669), (49, 3846), (51, 3852), (54, 3909), (70, 4014),

Gene: FarmerDoug_4 Start: 3354, Stop: 4022, Start Num: 4

Candidate Starts for FarmerDoug_4:

(Start: 4 @3354 has 156 MA's), (8, 3414), (11, 3444), (29, 3597), (32, 3624), (36, 3663), (37, 3678), (45, 3777), (46, 3780), (49, 3840), (50, 3843), (54, 3903), (55, 3915), (70, 4008),

Gene: Figueroism_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Figueroism_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Finny_4 Start: 3432, Stop: 4148, Start Num: 4

Candidate Starts for Finny_4:

(Start: 4 @3432 has 156 MA's), (6, 3456), (8, 3492), (9, 3495), (11, 3522), (28, 3660), (29, 3672), (33, 3702), (35, 3726), (36, 3738), (37, 3753), (42, 3834), (45, 3855), (47, 3861), (50, 3921), (51, 3924), (52, 3972), (57, 4029),

Gene: Fulton_6 Start: 3755, Stop: 4468, Start Num: 4

Candidate Starts for Fulton_6:

(Start: 4 @3755 has 156 MA's), (6, 3779), (10, 3824), (21, 3926), (25, 3968), (27, 3977), (29, 3992), (33, 4022), (36, 4058), (45, 4175), (50, 4241), (51, 4244), (55, 4313), (64, 4382), (68, 4400),

Gene: GaeCeo_5 Start: 3454, Stop: 4140, Start Num: 4

Candidate Starts for GaeCeo_5:

(Start: 4 @3454 has 156 MA's), (16, 3601), (29, 3700), (33, 3730), (35, 3754), (36, 3766), (45, 3880), (51, 3949), (52, 3997), (54, 4006), (55, 4018), (59, 4060), (65, 4108),

Gene: GardenB_4 Start: 3356, Stop: 4021, Start Num: 4

Candidate Starts for GardenB_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (11, 3446), (20, 3527), (29, 3599), (32, 3626), (36, 3665), (46, 3782), (48, 3794), (49, 3842), (51, 3848), (67, 4001), (70, 4007),

Gene: Garey24_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Garey24_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Gargoyle_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Gargoyle_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (70, 4010),

Gene: Gelo_4 Start: 3360, Stop: 4028, Start Num: 4

Candidate Starts for Gelo_4:

(Start: 4 @3360 has 156 MA's), (7, 3411), (8, 3420), (9, 3423), (11, 3450), (29, 3603), (32, 3630), (36, 3669), (49, 3846), (51, 3852), (54, 3909), (70, 4014),

Gene: Gershwin_4 Start: 3358, Stop: 4026, Start Num: 4

Candidate Starts for Gershwin_4:

(Start: 4 @3358 has 156 MA's), (7, 3409), (8, 3418), (9, 3421), (11, 3448), (29, 3601), (32, 3628), (36, 3667), (49, 3844), (51, 3850), (54, 3907), (70, 4012),

Gene: Glamour_3 Start: 3432, Stop: 4148, Start Num: 4

Candidate Starts for Glamour_3:

(Start: 4 @3432 has 156 MA's), (6, 3456), (8, 3492), (9, 3495), (11, 3522), (28, 3660), (29, 3672), (33, 3702), (35, 3726), (36, 3738), (37, 3753), (42, 3834), (45, 3855), (47, 3861), (50, 3921), (51, 3924), (52, 3972), (57, 4029),

Gene: Golden_4 Start: 3365, Stop: 4084, Start Num: 4

Candidate Starts for Golden_4:

(Start: 4 @3365 has 156 MA's), (11, 3455), (29, 3608), (33, 3638), (36, 3674), (41, 3737), (42, 3770), (43, 3779), (45, 3788), (47, 3794), (50, 3854), (55, 3926), (63, 4001),

Gene: Greenlvy_6 Start: 3755, Stop: 4468, Start Num: 4

Candidate Starts for Greenlvy_6:

(Start: 4 @3755 has 156 MA's), (6, 3779), (10, 3824), (21, 3926), (25, 3968), (27, 3977), (29, 3992), (33, 4022), (36, 4058), (45, 4175), (50, 4241), (51, 4244), (55, 4313), (64, 4382), (68, 4400),

Gene: Greys_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Greys_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (56, 3935), (70, 4010),

Gene: Gubbabump_4 Start: 3358, Stop: 4026, Start Num: 4

Candidate Starts for Gubbabump_4:

(Start: 4 @3358 has 156 MA's), (7, 3409), (8, 3418), (9, 3421), (11, 3448), (29, 3601), (32, 3628), (36, 3667), (49, 3844), (51, 3850), (54, 3907), (70, 4012),

Gene: Guetzie_4 Start: 3365, Stop: 4084, Start Num: 4

Candidate Starts for Guetzie_4:

(Start: 4 @3365 has 156 MA's), (11, 3455), (29, 3608), (33, 3638), (36, 3674), (41, 3737), (42, 3770), (43, 3779), (45, 3788), (47, 3794), (50, 3854), (55, 3926), (63, 4001),

Gene: Hamlet_4 Start: 3363, Stop: 4034, Start Num: 4

Candidate Starts for Hamlet_4:

(Start: 4 @3363 has 156 MA's), (7, 3414), (8, 3423), (11, 3453), (15, 3480), (29, 3606), (32, 3633), (36, 3672), (41, 3735), (45, 3786), (46, 3789), (49, 3849), (54, 3912), (55, 3924), (70, 4020),

Gene: HanSolo_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for HanSolo_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: HankSprout_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for HankSprout_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Hasitha_6 Start: 3752, Stop: 4465, Start Num: 4

Candidate Starts for Hasitha_6:

(Start: 4 @3752 has 156 MA's), (6, 3776), (10, 3821), (21, 3923), (25, 3965), (27, 3974), (29, 3989), (33, 4019), (36, 4055), (45, 4172), (50, 4238), (51, 4241), (55, 4310), (64, 4379), (68, 4397),

Gene: HerculesXL_7 Start: 4017, Stop: 4871, Start Num: 4

Candidate Starts for HerculesXL_7:

(Start: 4 @4017 has 156 MA's), (6, 4041), (10, 4086), (13, 4125), (15, 4134), (22, 4206), (23, 4215), (25, 4233), (27, 4242), (28, 4245), (29, 4257), (38, 4359), (42, 4419), (45, 4440), (47, 4446), (50, 4506), (51, 4509), (58, 4617), (59, 4620), (64, 4662), (73, 4776), (75, 4803), (77, 4812),

Gene: HungryHenry_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for HungryHenry_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (41, 3728), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Ilzat_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Ilzat_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Inventa_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Inventa_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: loannes_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for loannes_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (56, 3935), (70, 4010),

Gene: Ixel_6 Start: 3792, Stop: 4463, Start Num: 4

Candidate Starts for Ixel_6:

(Start: 4 @3792 has 156 MA's), (6, 3816), (8, 3852), (16, 3936), (21, 3966), (29, 4032), (33, 4062), (36, 4098), (37, 4113), (42, 4194), (46, 4218), (47, 4221),

Gene: Janus167_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Janus167_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: JasonD_6 Start: 3595, Stop: 4260, Start Num: 3

Candidate Starts for JasonD_6:

(3, 3595), (7, 3646), (8, 3655), (11, 3685), (17, 3751), (29, 3838), (32, 3865), (36, 3904), (39, 3943), (48, 4033), (49, 4081), (51, 4087), (67, 4240), (70, 4246),

Gene: JasperRussell_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for JasperRussell_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Jenos_6 Start: 3925, Stop: 4590, Start Num: 4

Candidate Starts for Jenos_6:

(Start: 4 @3925 has 156 MA's), (7, 3976), (8, 3985), (11, 4015), (17, 4081), (29, 4168), (32, 4195), (36, 4234), (48, 4363), (49, 4411), (51, 4417), (67, 4570), (70, 4576),

Gene: Jerbirus_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Jerbirus_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: JeriBeth_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for JeriBeth_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Juanyo_4 Start: 3595, Stop: 4332, Start Num: 4

Candidate Starts for Juanyo_4:

(Start: 4 @3595 has 156 MA's), (6, 3619), (8, 3655), (9, 3658), (11, 3685), (16, 3739), (21, 3769), (23, 3793), (26, 3814), (29, 3835), (36, 3901), (37, 3916), (42, 3997), (45, 4018), (47, 4024), (51, 4087), (57, 4192), (59, 4198),

Gene: Kale_4 Start: 3360, Stop: 4028, Start Num: 4

Candidate Starts for Kale_4:

(Start: 4 @3360 has 156 MA's), (7, 3411), (8, 3420), (9, 3423), (11, 3450), (29, 3603), (32, 3630), (36, 3669), (49, 3846), (51, 3852), (54, 3909), (70, 4014),

Gene: KannH_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for KannH_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: KatChan_6 Start: 3849, Stop: 4511, Start Num: 4

Candidate Starts for KatChan_6:

(2, 3831), (Start: 4 @3849 has 156 MA's), (11, 3939), (16, 3993), (18, 4011), (19, 4014), (23, 4047), (29, 4089), (32, 4116), (36, 4155), (42, 4251), (44, 4269), (46, 4275), (47, 4278), (50, 4338), (51, 4341),

Gene: Kauala_4 Start: 3370, Stop: 4044, Start Num: 4

Candidate Starts for Kauala_4:

(Start: 4 @3370 has 156 MA's), (8, 3430), (9, 3433), (16, 3514), (24, 3577), (25, 3589), (29, 3613), (33, 3643), (36, 3679), (37, 3694), (40, 3724), (41, 3742), (45, 3793), (46, 3796), (47, 3799), (51, 3862), (55, 3931), (59, 3973), (71, 4033),

Gene: KingJulien_4 Start: 3351, Stop: 4022, Start Num: 4

Candidate Starts for KingJulien_4:

(Start: 4 @3351 has 156 MA's), (7, 3402), (8, 3411), (11, 3441), (15, 3468), (29, 3594), (32, 3621), (36, 3660), (45, 3774), (46, 3777), (49, 3837), (50, 3840), (54, 3900), (55, 3912), (70, 4008),

Gene: Klimt_4 Start: 3358, Stop: 4026, Start Num: 4

Candidate Starts for Klimt_4:

(Start: 4 @3358 has 156 MA's), (7, 3409), (8, 3418), (9, 3421), (11, 3448), (29, 3601), (32, 3628), (36, 3667), (49, 3844), (51, 3850), (54, 3907), (70, 4012),

Gene: Knox_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Knox_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (56, 3935), (70, 4010),

Gene: Koji_4 Start: 3370, Stop: 4044, Start Num: 4

Candidate Starts for Koji_4:

(Start: 4 @3370 has 156 MA's), (8, 3430), (9, 3433), (17, 3526), (20, 3541), (24, 3577), (25, 3589), (29, 3613), (33, 3643), (36, 3679), (45, 3793), (46, 3796), (47, 3799), (51, 3862), (55, 3931), (59, 3973), (71, 4033),

Gene: Kurt1_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Kurt1_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Leafus_4 Start: 3501, Stop: 4172, Start Num: 4

Candidate Starts for Leafus_4:

(Start: 4 @3501 has 156 MA's), (7, 3552), (8, 3561), (11, 3591), (15, 3618), (29, 3744), (32, 3771), (36, 3810), (45, 3924), (46, 3927), (49, 3987), (50, 3990), (54, 4050), (55, 4062), (70, 4158),

Gene: Librie_6 Start: 3752, Stop: 4465, Start Num: 4

Candidate Starts for Librie_6:

(Start: 4 @3752 has 156 MA's), (6, 3776), (10, 3821), (21, 3923), (25, 3965), (27, 3974), (29, 3989), (33, 4019), (36, 4055), (45, 4172), (50, 4238), (51, 4241), (55, 4310), (64, 4379), (68, 4397),

Gene: LilTerminator_6 Start: 3764, Stop: 4477, Start Num: 4

Candidate Starts for LilTerminator_6:

(Start: 4 @3764 has 156 MA's), (6, 3788), (10, 3833), (21, 3935), (25, 3977), (27, 3986), (29, 4001), (32, 4028), (33, 4031), (36, 4067), (45, 4184), (50, 4250), (51, 4253), (55, 4322), (64, 4391), (68, 4409),

Gene: Lovelyunicorn_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Lovelyunicorn_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Lucky3_4 Start: 3365, Stop: 4084, Start Num: 4

Candidate Starts for Lucky3_4:

(Start: 4 @3365 has 156 MA's), (11, 3455), (29, 3608), (33, 3638), (36, 3674), (41, 3737), (42, 3770), (43, 3779), (45, 3788), (47, 3794), (50, 3854), (55, 3926), (63, 4001),

Gene: Ludgate_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Ludgate_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Luna18_6 Start: 3849, Stop: 4511, Start Num: 4

Candidate Starts for Luna18_6:

(2, 3831), (Start: 4 @3849 has 156 MA's), (11, 3939), (16, 3993), (18, 4011), (19, 4014), (23, 4047), (29, 4089), (32, 4116), (36, 4155), (42, 4251), (44, 4269), (46, 4275), (47, 4278), (50, 4338), (51, 4341),

Gene: MCubed_4 Start: 3432, Stop: 4148, Start Num: 4

Candidate Starts for MCubed_4:

(Start: 4 @3432 has 156 MA's), (6, 3456), (8, 3492), (9, 3495), (11, 3522), (28, 3660), (29, 3672), (33, 3702), (35, 3726), (36, 3738), (37, 3753), (42, 3834), (45, 3855), (47, 3861), (50, 3921), (51, 3924), (57, 4029),

Gene: MaeLinda_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for MaeLinda_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (70, 4010),

Gene: ManRay_4 Start: 3358, Stop: 4026, Start Num: 4

Candidate Starts for ManRay_4:

(Start: 4 @3358 has 156 MA's), (7, 3409), (8, 3418), (9, 3421), (11, 3448), (29, 3601), (32, 3628), (36, 3667), (49, 3844), (51, 3850), (54, 3907), (70, 4012),

Gene: Mandalorian_4 Start: 3593, Stop: 4330, Start Num: 4

Candidate Starts for Mandalorian_4:

(Start: 4 @3593 has 156 MA's), (6, 3617), (8, 3653), (9, 3656), (16, 3737), (21, 3767), (23, 3791), (26, 3812), (29, 3833), (33, 3863), (35, 3887), (36, 3899), (37, 3914), (42, 3995), (45, 4016), (47, 4022), (50, 4082), (51, 4085), (52, 4133), (59, 4196),

Gene: Martin_5 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Martin_5:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: McGalleon_5 Start: 3765, Stop: 4661, Start Num: 4

Candidate Starts for McGalleon_5:

(Start: 4 @3765 has 156 MA's), (7, 3816), (11, 3855), (29, 4008), (32, 4035), (36, 4074), (48, 4203), (49, 4251), (53, 4311), (55, 4326), (66, 4413), (74, 4533), (78, 4569), (79, 4635), (80, 4656),

Gene: Mercedes_5 Start: 3514, Stop: 4227, Start Num: 4

Candidate Starts for Mercedes_5:

(Start: 4 @3514 has 156 MA's), (6, 3538), (9, 3577), (16, 3655), (17, 3667), (21, 3685), (29, 3751), (34, 3790), (35, 3805), (36, 3817), (47, 3940), (50, 4000), (59, 4114), (64, 4141), (72, 4192),

Gene: MillyPhilly_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for MillyPhilly_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: MonChoix_4 Start: 3373, Stop: 4041, Start Num: 4

Candidate Starts for MonChoix_4:

(Start: 4 @3373 has 156 MA's), (7, 3424), (8, 3433), (11, 3463), (15, 3490), (29, 3616), (32, 3643), (36, 3682), (45, 3796), (48, 3811), (49, 3859), (51, 3865), (55, 3934), (70, 4027),

Gene: MrWorldwide_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for MrWorldwide_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Nagem_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Nagem_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Nattles_4 Start: 3362, Stop: 4030, Start Num: 4

Candidate Starts for Nattles_4:

(Start: 4 @3362 has 156 MA's), (7, 3413), (8, 3422), (9, 3425), (11, 3452), (29, 3605), (32, 3632), (36, 3671), (49, 3848), (51, 3854), (54, 3911), (70, 4016),

Gene: NickSell_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for NickSell_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Nucci_4 Start: 3584, Stop: 4321, Start Num: 4

Candidate Starts for Nucci_4:

(Start: 4 @3584 has 156 MA's), (6, 3608), (8, 3644), (9, 3647), (16, 3728), (21, 3758), (23, 3782), (26, 3803), (29, 3824), (33, 3854), (35, 3878), (36, 3890), (37, 3905), (42, 3986), (45, 4007), (47, 4013), (50, 4073), (51, 4076), (59, 4187),

Gene: Oats_4 Start: 3358, Stop: 4026, Start Num: 4

Candidate Starts for Oats_4:

(Start: 4 @3358 has 156 MA's), (7, 3409), (8, 3418), (9, 3421), (11, 3448), (29, 3601), (32, 3628), (36, 3667), (49, 3844), (51, 3850), (54, 3907), (70, 4012),

Gene: OldNelly_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for OldNelly_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Oxtober96_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Oxtober96_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Papafritta_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Papafritta_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (41, 3728), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: ParleG_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for ParleG_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Peep_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Peep_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Peppino_4 Start: 3351, Stop: 4022, Start Num: 4

Candidate Starts for Peppino_4:

(Start: 4 @3351 has 156 MA's), (7, 3402), (8, 3411), (11, 3441), (15, 3468), (29, 3594), (32, 3621), (36, 3660), (45, 3774), (46, 3777), (49, 3837), (50, 3840), (54, 3900), (55, 3912), (56, 3930), (70, 4008),

Gene: Pherbot_4 Start: 3370, Stop: 4044, Start Num: 4

Candidate Starts for Pherbot_4:

(Start: 4 @3370 has 156 MA's), (8, 3430), (9, 3433), (17, 3526), (20, 3541), (24, 3577), (25, 3589), (29, 3613), (30, 3622), (33, 3643), (36, 3679), (45, 3793), (46, 3796), (47, 3799), (51, 3862), (55, 3931), (59, 3973), (71, 4033),

Gene: Pherferi_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Pherferi_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Phiderman_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Phiderman_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Phireproof_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Phireproof_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: PhredFlintston_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for PhredFlintston_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Phriends_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Phriends_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Pocket_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Pocket_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: PrincePhergus_4 Start: 3371, Stop: 4045, Start Num: 4

Candidate Starts for PrincePhergus_4:

(Start: 4 @3371 has 156 MA's), (8, 3431), (9, 3434), (17, 3527), (20, 3542), (24, 3578), (25, 3590), (29, 3614), (30, 3623), (33, 3644), (36, 3680), (45, 3794), (46, 3797), (47, 3800), (51, 3863), (55, 3932), (59, 3974), (71, 4034),

Gene: PuppyEggo_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for PuppyEggo_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: QuadZero_6 Start: 3764, Stop: 4477, Start Num: 4

Candidate Starts for QuadZero_6:

(Start: 4 @3764 has 156 MA's), (6, 3788), (10, 3833), (21, 3935), (25, 3977), (29, 4001), (33, 4031), (36, 4067), (45, 4184), (50, 4250), (51, 4253), (55, 4322), (64, 4391), (68, 4409),

Gene: Quartz_4 Start: 3593, Stop: 4330, Start Num: 4

Candidate Starts for Quartz_4:

(Start: 4 @3593 has 156 MA's), (6, 3617), (8, 3653), (9, 3656), (16, 3737), (21, 3767), (23, 3791), (26, 3812), (29, 3833), (33, 3863), (35, 3887), (36, 3899), (37, 3914), (42, 3995), (45, 4016), (47, 4022), (50, 4082), (51, 4085), (52, 4133), (59, 4196),

Gene: Raccoon_4 Start: 3360, Stop: 4031, Start Num: 4

Candidate Starts for Raccoon_4:

(Start: 4 @3360 has 156 MA's), (7, 3411), (8, 3420), (11, 3450), (15, 3477), (29, 3603), (32, 3630), (36, 3669), (45, 3783), (46, 3786), (49, 3846), (54, 3909), (55, 3921), (70, 4017),

Gene: Rapheph_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Rapheph_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Raptor_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Raptor_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (56, 3935), (70, 4010),

Gene: Redfield_4 Start: 3359, Stop: 4030, Start Num: 4

Candidate Starts for Redfield_4:

(Start: 4 @3359 has 156 MA's), (7, 3410), (8, 3419), (11, 3449), (15, 3476), (29, 3602), (32, 3629), (36, 3668), (45, 3782), (46, 3785), (49, 3845), (50, 3848), (54, 3908), (55, 3920), (56, 3938), (70, 4016),

Gene: Renzie_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Renzie_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Riyhil_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Riyhil_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (56, 3935), (70, 4010),

Gene: Robinson_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Robinson_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Rog141_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Rog141_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: SJay_4 Start: 3357, Stop: 4025, Start Num: 4

Candidate Starts for SJay_4:

(Start: 4 @3357 has 156 MA's), (7, 3408), (8, 3417), (9, 3420), (11, 3447), (29, 3600), (32, 3627), (36, 3666), (49, 3843), (51, 3849), (54, 3906), (70, 4011),

Gene: Sansa_3 Start: 3431, Stop: 4147, Start Num: 4

Candidate Starts for Sansa_3:

(Start: 4 @3431 has 156 MA's), (6, 3455), (8, 3491), (9, 3494), (11, 3521), (28, 3659), (29, 3671), (33, 3701), (35, 3725), (36, 3737), (37, 3752), (42, 3833), (45, 3854), (47, 3860), (50, 3920), (51, 3923), (52, 3971), (57, 4028),

Gene: Saratos_4 Start: 3432, Stop: 4148, Start Num: 4

Candidate Starts for Saratos_4:

(Start: 4 @3432 has 156 MA's), (6, 3456), (8, 3492), (9, 3495), (11, 3522), (28, 3660), (29, 3672), (33, 3702), (35, 3726), (36, 3738), (37, 3753), (42, 3834), (45, 3855), (47, 3861), (50, 3921), (51, 3924), (52, 3972), (57, 4029),

Gene: Schnapsidee_4 Start: 3350, Stop: 4021, Start Num: 4

Candidate Starts for Schnapsidee_4:

(Start: 4 @3350 has 156 MA's), (7, 3401), (8, 3410), (11, 3440), (15, 3467), (29, 3593), (32, 3620), (36, 3659), (41, 3722), (45, 3773), (46, 3776), (49, 3836), (54, 3899), (55, 3911), (70, 4007),

Gene: Sedgewig_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Sedgewig_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: ShaiHulud_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for ShaiHulud_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Shamu_4 Start: 3432, Stop: 4148, Start Num: 4

Candidate Starts for Shamu_4:

(Start: 4 @3432 has 156 MA's), (6, 3456), (8, 3492), (9, 3495), (11, 3522), (28, 3660), (29, 3672), (33, 3702), (35, 3726), (36, 3738), (37, 3753), (42, 3834), (45, 3855), (47, 3861), (50, 3921), (51, 3924), (52, 3972), (57, 4029),

Gene: Shee_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Shee_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Sinatra_4 Start: 3371, Stop: 4045, Start Num: 4

Candidate Starts for Sinatra_4:

(Start: 4 @3371 has 156 MA's), (8, 3431), (9, 3434), (17, 3527), (20, 3542), (24, 3578), (25, 3590), (29, 3614), (30, 3623), (33, 3644), (36, 3680), (45, 3794), (46, 3797), (47, 3800), (51, 3863), (55, 3932), (59, 3974), (62, 3998), (71, 4034),

Gene: SirVictor_4 Start: 3365, Stop: 4084, Start Num: 4

Candidate Starts for SirVictor_4:

(Start: 4 @3365 has 156 MA's), (11, 3455), (29, 3608), (33, 3638), (36, 3674), (41, 3737), (42, 3770), (43, 3779), (45, 3788), (47, 3794), (50, 3854), (55, 3926), (63, 4001),

Gene: SoilGremlin_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for SoilGremlin_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: SonOfLevi_4 Start: 3358, Stop: 4026, Start Num: 4

Candidate Starts for SonOfLevi_4:

(Start: 4 @3358 has 156 MA's), (7, 3409), (8, 3418), (9, 3421), (11, 3448), (29, 3601), (32, 3628), (36, 3667), (49, 3844), (51, 3850), (54, 3907), (70, 4012),

Gene: Stanktossa_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Stanktossa_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: StingRay_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for StingRay_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (41, 3728), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: StirfryIV_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for StirfryIV_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Stormbreaker8_4 Start: 3351, Stop: 4022, Start Num: 4

Candidate Starts for Stormbreaker8_4:

(Start: 4 @3351 has 156 MA's), (7, 3402), (8, 3411), (11, 3441), (15, 3468), (29, 3594), (32, 3621), (36, 3660), (45, 3774), (46, 3777), (49, 3837), (50, 3840), (54, 3900), (55, 3912), (70, 4008),

Gene: Strathdee_4 Start: 3358, Stop: 4026, Start Num: 4

Candidate Starts for Strathdee_4:

(Start: 4 @3358 has 156 MA's), (7, 3409), (8, 3418), (9, 3421), (11, 3448), (29, 3601), (32, 3628), (36, 3667), (49, 3844), (51, 3850), (54, 3907), (70, 4012),

Gene: Superfresh_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Superfresh_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: TatarkaPM_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for TatarkaPM_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Teagan_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Teagan_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: TeddyBear_4 Start: 3358, Stop: 4026, Start Num: 4

Candidate Starts for TeddyBear_4:

(Start: 4 @3358 has 156 MA's), (7, 3409), (8, 3418), (9, 3421), (11, 3448), (29, 3601), (32, 3628), (36, 3667), (49, 3844), (51, 3850), (54, 3907), (70, 4012),

Gene: Tenda_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Tenda_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Theresita_5 Start: 3367, Stop: 4050, Start Num: 4

Candidate Starts for Theresita_5:

(Start: 4 @3367 has 156 MA's), (5, 3376), (8, 3427), (9, 3430), (15, 3484), (16, 3511), (20, 3538), (27, 3595), (29, 3610), (33, 3640), (35, 3664), (36, 3676), (45, 3790), (46, 3793), (50, 3856), (51, 3859), (52, 3907), (54, 3916), (60, 3979), (67, 4027), (69, 4033),

Gene: Thompsone_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Thompsone_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (56, 3935), (70, 4010),

Gene: Thorongil_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Thorongil_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: TinSulphur_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for TinSulphur_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Tinyman4_7 Start: 4017, Stop: 4871, Start Num: 4

Candidate Starts for Tinyman4_7:

(Start: 4 @4017 has 156 MA's), (6, 4041), (10, 4086), (13, 4125), (15, 4134), (22, 4206), (23, 4215), (25, 4233), (27, 4242), (28, 4245), (29, 4257), (38, 4359), (42, 4419), (45, 4440), (47, 4446), (50,

4506), (51, 4509), (58, 4617), (59, 4620), (64, 4662), (73, 4776), (75, 4803), (77, 4812),

Gene: Velene_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Velene_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (56, 3935), (70, 4010),

Gene: Vispistious_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Vispistious_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: WestPM_6 Start: 3856, Stop: 4713, Start Num: 4

Candidate Starts for WestPM_6:

(Start: 4 @3856 has 156 MA's), (6, 3880), (10, 3925), (11, 3946), (13, 3964), (15, 3973), (22, 4045), (23, 4054), (25, 4072), (27, 4081), (28, 4084), (29, 4096), (31, 4111), (38, 4198), (45, 4279), (47, 4285), (50, 4345), (51, 4348), (55, 4417), (58, 4456), (59, 4459), (64, 4501), (73, 4618), (76, 4651), (77, 4654),

Gene: WildNOut_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for WildNOut_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (56, 3935), (70, 4010),

Gene: Winzigespinne_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Winzigespinne_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: YuuY_4 Start: 3572, Stop: 4309, Start Num: 4

Candidate Starts for YuuY_4:

(Start: 4 @3572 has 156 MA's), (6, 3596), (8, 3632), (9, 3635), (12, 3677), (14, 3686), (21, 3746), (23, 3770), (26, 3791), (29, 3812), (33, 3842), (35, 3866), (36, 3878), (37, 3893), (42, 3974), (45, 3995), (47, 4001), (50, 4061), (51, 4064), (59, 4175), (61, 4202),

Gene: Zada_4 Start: 3356, Stop: 4024, Start Num: 4

Candidate Starts for Zada_4:

(Start: 4 @3356 has 156 MA's), (7, 3407), (8, 3416), (9, 3419), (11, 3446), (29, 3599), (32, 3626), (36, 3665), (49, 3842), (51, 3848), (54, 3905), (70, 4010),

Gene: Zayuliv_6 Start: 3755, Stop: 4468, Start Num: 4

Candidate Starts for Zayuliv_6:

(Start: 4 @3755 has 156 MA's), (6, 3779), (10, 3824), (21, 3926), (25, 3968), (27, 3977), (29, 3992), (33, 4022), (36, 4058), (45, 4175), (46, 4178), (50, 4241), (51, 4244), (55, 4313), (64, 4382), (68, 4400),

Gene: Zenitsu_4 Start: 3432, Stop: 4148, Start Num: 4

Candidate Starts for Zenitsu_4:

(Start: 4 @3432 has 156 MA's), (6, 3456), (8, 3492), (9, 3495), (11, 3522), (28, 3660), (29, 3672), (33, 3702), (35, 3726), (36, 3738), (37, 3753), (42, 3834), (45, 3855), (47, 3861), (50, 3921), (51, 3924), (57, 4029),

Gene: Zepp_6 Start: 3755, Stop: 4468, Start Num: 4

Candidate Starts for Zepp_6:

(Start: 4 @3755 has 156 MA's), (6, 3779), (8, 3815), (10, 3824), (21, 3926), (25, 3968), (27, 3977), (29, 3992), (33, 4022), (36, 4058), (45, 4175), (50, 4241), (51, 4244), (55, 4313), (64, 4382), (68, 4400),