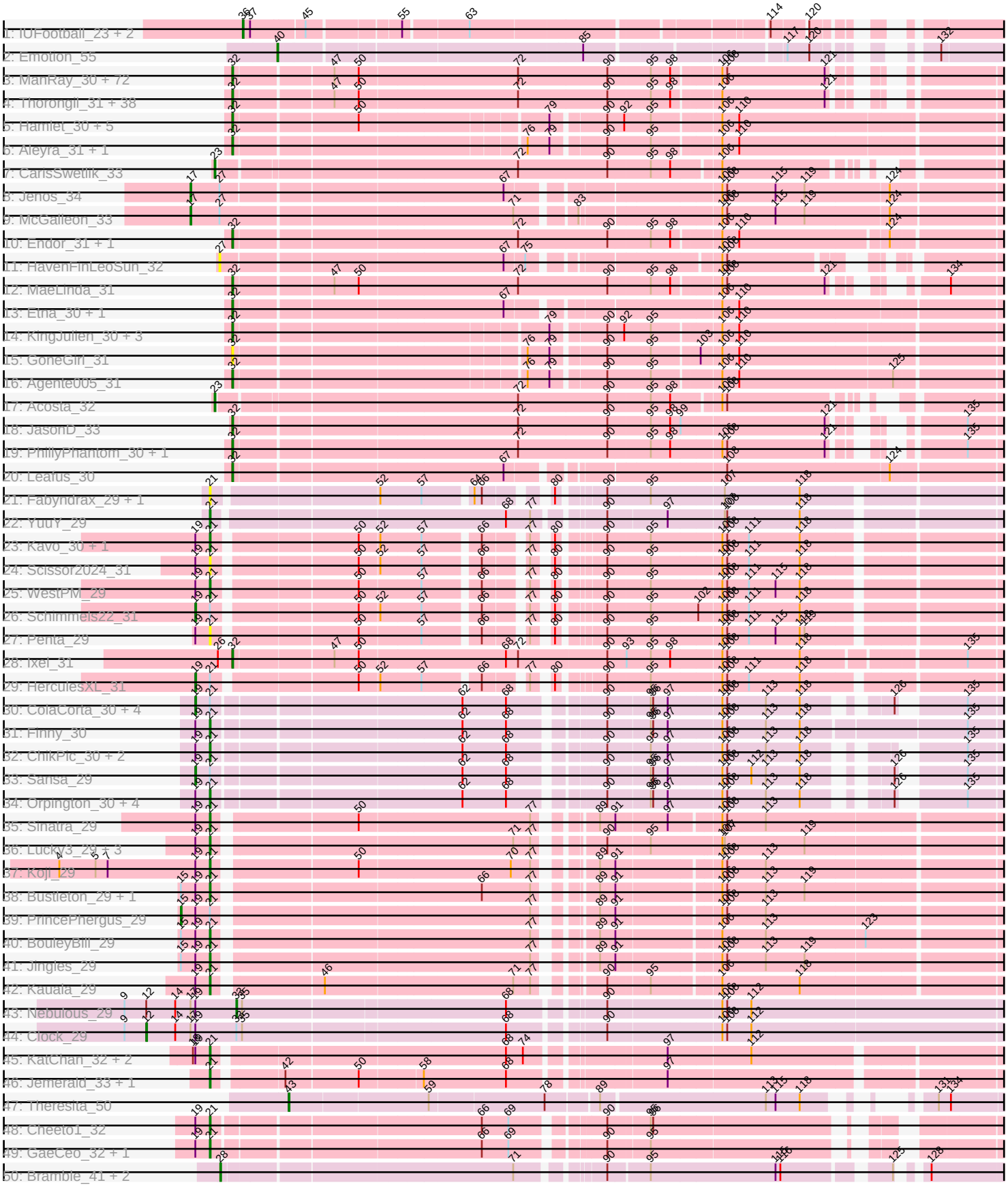
Pham 343638


1: IUFootball_23 + 2
2: Emotion_55
3: ManRay_30 + 72
4: Thorongil_31 + 38
5: Hamlet_30 + 5
6: Aleyra_31 + 1
7: CarlsSwetlik_33
8: Jenos_34
9: McGalleon_33
10: Endor_31 + 1
11: HavenFinLeoSun_32
12: MaeLinda_31
13: Etna_30 + 1
14: KingJulien_30 + 3
15: GoneGirl_31
16: Agente005_31
17: Acosta_32
18: JasonD_33
19: PhillyPhantom_30 + 1
20: Leatus_30
21: Fabyndrax_29 + 1
22: YuuY_29
23: Kavo_30 + 1
24: Scissor2024_31
25: WestPM_29
26: Schimmels22_31
27: Penta_29
28: Ixel_31
29: HerculesXL_31
30: ColaCorta_30 + 4
31: Finny_30
32: ChikPic_30 + 2
33: Sansa_29
34: Orpington_30 + 4
35: Sinatra_29
36: LuckY3_29 + 3
37: Koji_29
38: Bustleton_29 + 1
39: PrincePhergus_29
40: BouleyBill_29
41: Jingles_29
42: Kauala_29
43: Nebulous_29
44: Clock_29
45: KatChan_32 + 2
46: Jemerald_33 + 1
47: Theresita_50
48: Cheeto1_32
49: GaeCeo_32 + 1
50: Bramble_41 + 2

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51: TinyAlmy_41 + 1
52: RikSengupta_41
53: Kors_41
54: IAmGroot_68 + 1
55: Zeta1847_49
56: Cen1621_66
57: Sonali_99
58: Maruru_99
59: Sunshine23_100
60: CalWood4100_80 + 1
61: Bolt007_78
62: Nandito_79
63: Klevey_81
64: PorkBelly_50
65: Kharcho_26 + 1
66: Dankie_53
67: GrimEater_52
68: Lukepolites_73

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 343638 Report

This analysis was run 11/14/26 on database version 672.

Pham number 343638 has 218 members, 17 are drafts.

Phages represented in each track:
• Track 1 : IUFootball_23, Liebe_23, Maureen_23
• Track 2 : Emotion_55
• Track 3 : ManRay_30, SonOfLevi_30, Strathdee_31, Gargoyle_31, Asta_30, KannH_30, TeddyBear_30, Etta_30, BeautPeep30_31, BonesMcCoy_31, Phiderman_31, Christoph_30, Erla_30, MrWorldwide_31, Inventa_31, Phireproof_31, Espinosa_30, CoraRita_30, MillyPhilly_31, Nattles_30, HankSprout_31, StirfryIV_30, Jerbirus_31, Kurt1_31, Robinson_31, AranulaLuti_30, BigRedClifford_31, TatarkaPM_31, TinSulphur_31, Janus167_30, Gershwin_30, Clancy_30, GoingMerry_31, Kouch_30, ParleG_31, Dothraki_31, Aubergine_30, Pherferi_31, SolidSnake_32, Byron23_31, Rog141_30, Rapheph_31, HanSolo_30, Shee_31, KellyGreen_31, Blage_31, Calix_30, Winzigespinne_30, Stanktossa_31, Tenda_30, NickSell_31, Baines_30, Chamuel_30, Martin_32, Raptor_31, Convict_31, Kale_30, Chako_30, Duocatuli_30, Pocket_30, Bonino_30, Exploradora_30, Gelo_30, Klimt_30, Ioannes_31, PhredFlintston_31, Thompsone_31, Knox_31, Oats_30, Gubbabump_30, JasperRussell_30, Garey24_30, Figueroism_31
• Track 4 : Thorongil_31, Ludgate_31, Benjalauren_31, Velene_31, Oxtober96_31, Alyxandracam_31, Ilzat_30, Antoinette_31, HungryHenry_30, Symere_30, JeriBeth_30, AxiPup_31, Phriends_31, Teagan_31, Superfresh_31, RosieMae_30, Nagem_31, ShaiHulud_31, PuppyEggo_31, Vispistious_31, Peep_31, Delphidian_31, AlexAdler_31, Papafritta_30, OldNelly_31, Bandik_31, Dave_31, Sedgewig_30, SJay_31, Den3_31, WildNOut_31, Riyhil_31, StingRay_30, Lovelyunicorn_31, Greys_31, Merida02_32, Zada_31, SoilGremlin_31, Renzie_31
• Track 5 : Hamlet_30, Peppino_30, Balsa_30, Redfield_30, BeeBee8_31, Schnapsidee_30
• Track 6 : Aleyra_31, Anilorac_30
• Track 7 : CarisSwetlik_33
• Track 8 : Jenos_34
• Track 9 : McGalleon_33
• Track 10 : Endor_31, MonChoix_29
• Track 11 : HavenFinLeoSun_32
• Track 12 : MaeLinda_31
• Track 13 : Etna_30, FarmerDoug_30
• Track 14 : KingJulien_30, Stormbreaker8_30, Soror1_30, GardenB_30
• Track 15 : GoneGirl_31
• Track 16 : Agente005_31
• Track 17 : Acosta_32
• Track 18 : JasonD_33

• Track 19 : PhillyPhantom_30, Raccoon_30
• Track 20 : Leafus_30
• Track 21 : Fabyndrax_29, Cidela_29
• Track 22 : YuuY_29
• Track 23 : Kavo_30, Tinyman4_31
• Track 24 : Scissor2024_31
• Track 25 : WestPM_29
• Track 26 : Schimmels22_31
• Track 27 : Penta_29
• Track 28 : Ixel_31
• Track 29 : HerculesXL_31
• Track 30 : ColaCorta_30, Andromedas_30, Eleri_30, Glamour_29, PSirce_30
• Track 31 : Finny_30
• Track 32 : ChikPic_30, MCubed_30, Phanita_30
• Track 33 : Sansa_29
• Track 34 : Orpington_30, Xebius_30, Saratos_30, Zenitsu_30, Shamu_30
• Track 35 : Sinatra_29
• Track 36 : Lucky3_29, Guetzie_29, SirVictor_29, Golden_29
• Track 37 : Koji_29
• Track 38 : Bustleton_29, Pherbot_29
• Track 39 : PrincePhergus_29
• Track 40 : BouleyBill_29
• Track 41 : Jingles_29
• Track 42 : Kauala_29
• Track 43 : Nebulous_29
• Track 44 : Clock_29
• Track 45 : KatChan_32, Luna18_32, Chepli_32
• Track 46 : Jemerald_33, Juicer_33
• Track 47 : Theresita_50
• Track 48 : Cheeto1_32
• Track 49 : GaeCeo_32, ChickenKing_31
• Track 50 : Bramble_41, LordBart_41, Ajin_41
• Track 51 : TinyMiny_41, Sparcetus_41
• Track 52 : RikSengupta_41
• Track 53 : Kors_41
• Track 54 : IAmGroot_68, GardenState_69
• Track 55 : Zeta1847_49
• Track 56 : Cen1621_66
• Track 57 : Sonali_99
• Track 58 : Maruru_99
• Track 59 : Sunshine23_100
• Track 60 : CalWood4100_80, Lilmac1015_80
• Track 61 : Bolt007_78
• Track 62 : Nandito_79
• Track 63 : Klevey_81
• Track 64 : PorkBelly_50
• Track 65 : Kharcho_27, Ottawa_27
• Track 66 : Jankie_53
• Track 67 : GrimEater_52
• Track 68 : Lukepolites_73

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

The start number called the most often in the published annotations is 32, it was called in 129 of the 201 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Agente005_31, AlexAdler_31, Aleyra_31, Alyxandracam_31, Anilorac_30, Antoinette_31, AranulaLuti_30, Asta_30, Aubergine_30, AxiPup_31, Baines_30, Balsa_30, Bandik_31, BeautPeep30_31, BeeBee8_31, Benjalauren_31, BigRedClifford_31, Blage_31, BonesMcCoy_31, Bonino_30, Byron23_31, Calix_30, Chako_30, Chamuel_30, Christoph_30, Clancy_30, Convict_31, CoraRita_30, Dave_31, Delphidian_31, Den3_31, Dothraki_31, Duocatuli_30, Endor_31, Erla_30, Espinosa_30, Etna_30, Etta_30, Exploradora_30, FarmerDoug_30, Figueroism_31, GardenB_30, Garey24_30, Gargoyle_31, Gelo_30, Gershwin_30, GoingMerry_31, GoneGirl_31, Greys_31, Gubbabump_30, Hamlet_30, HanSolo_30, HankSprout_31, HungryHenry_30, Ilzat_30, Inventa_31, Ioannes_31, Ixel_31, Janus167_30, JasonD_33, JasperRussell_30, Jerbirus_31, JeriBeth_30, Kale_30, KannH_30, KellyGreen_31, KingJulien_30, Klimt_30, Knox_31, Kouch_30, Kurt1_31, Leafus_30, Lovelyunicorn_31, Ludgate_31, MaeLinda_31, ManRay_30, Martin_32, Merida02_32, MillyPhilly_31, MonChoix_29, MrWorldwide_31, Nagem_31, Nattles_30, NickSell_31, Oats_30, OldNelly_31, Oxtober96_31, Papafritta_30, ParleG_31, Peep_31, Peppino_30, Pherferi_31, Phiderman_31, PhillyPhantom_30, Phireproof_31, PhredFlintston_31, Phriends_31, Pocket_30, PuppyEggo_31, Raccoon_30, Rapheph_31, Raptor_31, Redfield_30, Renzie_31, Riyhil_31, Robinson_31, Rog141_30, RosieMae_30, SJay_31, Schnapsidee_30, Sedgewig_30, ShaiHulud_31, Shee_31, SoilGremlin_31, SolidSnake_32, SonOfLevi_30, Soror1_30, Stanktossa_31, StingRay_30, StirfryIV_30, Stormbreaker8_30, Strathdee_31, Superfresh_31, Symere_30, TatarkaPM_31, Teagan_31, TeddyBear_30, Tenda_30, Thompsone_31, Thorongil_31, TinSulphur_31, Velene_31, Vispistious_31, WildNOut_31, Winzigespinne_30, Zada_31,

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

Genes that do not have the "Most Annotated" start:
• Acosta_32, Ajin_41, Andromedas_30, Bolt007_78, BouleyBill_29, Bramble_41, Bustleton_29, CalWood4100_80, CarisSwetlik_33, Cen1621_66, Cheeto1_32, Chepli_32, ChickenKing_31, ChikPic_30, Cidela_29, Clock_29, ColaCorta_30, Eleri_30, Emotion_55, Fabyndrax_29, Finny_30, GaeCeo_32, GardenState_69, Glamour_29, Golden_29, GrimEater_52, Guetzie_29, HavenFinLeoSun_32, HerculesXL_31, IAmGroot_68, IUFootball_23, Jankie_53, Jemerald_33, Jenos_34, Jingles_29, Juicer_33, KatChan_32, Kauala_29, Kavo_30, Kharcho_27, Klevey_81, Koji_29, Kors_41, Liebe_23, Lilmac1015_80, LordBart_41, Lucky3_29, Lukepolites_73, Luna18_32, MCubed_30, Maruru_99, Maureen_23, McGalleon_33, Nandito_79, Nebulous_29, Orpington_30, Ottawa_27, PSirce_30, Penta_29, Phanita_30, Pherbot_29, PorkBelly_50, PrincePhergus_29, RikSengupta_41, Sansa_29, Saratos_30, Schimmels22_31, Scissor2024_31, Shamu_30, Sinatra_29, SirVictor_29, Sonali_99, Sparcetus_41, Sunshine23_100, Theresita_50, TinyMiny_41, Tinyman4_31, WestPM_29, Xebius_30, YuuY_29, Zenitsu_30, Zeta1847_49,

Summary by start number:

Start 12:
• Found in 2 of 218 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 201
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Clock_29 (EA5),

Start 15:
• Found in 5 of 218 (2.3%) of genes in pham
• Manual Annotations of this start: 1 of 201
• Called 20.0% of time when present
• Phage (with cluster) where this start called: PrincePhergus_29 (EA4),

Start 17:
• Found in 7 of 218 (3.2%) of genes in pham
• Manual Annotations of this start: 2 of 201
• Called 28.6% of time when present
• Phage (with cluster) where this start called: Jenos_34 (EA1), McGalleon_33 (EA1),

Start 19:
• Found in 42 of 218 (19.3%) of genes in pham
• Manual Annotations of this start: 8 of 201
• Called 19.0% of time when present
• Phage (with cluster) where this start called: Andromedas_30 (EA2), ColaCorta_30 (EA2), Eleri_30 (EA2), Glamour_29 (EA2), HerculesXL_31 (EA11), PSirce_30 (EA2), Sansa_29 (EA2), Schimmels22_31 (EA11),

Start 21:
• Found in 45 of 218 (20.6%) of genes in pham
• Manual Annotations of this start: 31 of 201
• Called 80.0% of time when present
• Phage (with cluster) where this start called: BouleyBill_29 (EA4), Bustleton_29 (EA4), Cheeto1_32 (EA9), Chepli_32 (EA6), ChickenKing_31 (EA9), ChikPic_30 (EA2), Cidela_29 (EA10), Fabyndrax_29 (EA10), Finny_30 (EA2), GaeCeo_32 (EA9), Golden_29 (EA4), Guetzie_29 (EA4), Jemerald_33 (EA6), Jingles_29 (EA4), Juicer_33 (EA6), KatChan_32 (EA6), Kauala_29 (EA4), Kavo_30 (EA11), Koji_29 (EA4), Lucky3_29 (EA4), Luna18_32 (EA6), MCubed_30 (EA2), Orpington_30 (EA2), Penta_29 (EA11), Phanita_30 (EA2), Pherbot_29 (EA4), Saratos_30 (EA2), Scissor2024_31 (EA11), Shamu_30 (EA2), Sinatra_29 (EA4), SirVictor_29 (EA4), Tinyman4_31 (EA11), WestPM_29 (EA11), Xebius_30 (EA2), YuuY_29 (EA10), Zenitsu_30 (EA2),

Start 23:
• Found in 2 of 218 (0.9%) of genes in pham
• Manual Annotations of this start: 2 of 201
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Acosta_32 (EA1), CarisSwetlik_33 (EA1),

Start 27:
• Found in 3 of 218 (1.4%) of genes in pham
• No Manual Annotations of this start.
• Called 33.3% of time when present

• Phage (with cluster) where this start called: HavenFinLeoSun_32 (EA1),

Start 28:
• Found in 7 of 218 (3.2%) of genes in pham
• Manual Annotations of this start: 7 of 201
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ajin_41 (EF), Bramble_41 (EF), Kors_41 (EF), LordBart_41 (EF), RikSengupta_41 (EF), Sparcetus_41 (EF), TinyMiny_41 (EF),

Start 30:
• Found in 3 of 218 (1.4%) of genes in pham
• Manual Annotations of this start: 1 of 201
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Sonali_99 (FG),

Start 31:
• Found in 1 of 218 (0.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: PorkBelly_50 (FJ),

Start 32:
• Found in 136 of 218 (62.4%) of genes in pham
• Manual Annotations of this start: 129 of 201
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Agente005_31 (EA1), AlexAdler_31 (EA1), Aleyra_31 (EA1), Alyxandracam_31 (EA1), Anilorac_30 (EA1), Antoinette_31 (EA1), AranulaLuti_30 (EA1), Asta_30 (EA1), Aubergine_30 (EA1), AxiPup_31 (EA1), Baines_30 (EA1), Balsa_30 (EA1), Bandik_31 (EA1), BeautPeep30_31 (EA1), BeeBee8_31 (EA1), Benjalauren_31 (EA1), BigRedClifford_31 (EA1), Blage_31 (EA1), BonesMcCoy_31 (EA1), Bonino_30 (EA1), Byron23_31 (EA1), Calix_30 (EA1), Chako_30 (EA1), Chamuel_30 (EA1), Christoph_30 (EA1), Clancy_30 (EA1), Convict_31 (EA1), CoraRita_30 (EA1), Dave_31 (EA1), Delphidian_31 (EA1), Den3_31 (EA1), Dothraki_31 (EA1), Duocatuli_30 (EA1), Endor_31 (EA1), Erla_30 (EA1), Espinosa_30 (EA1), Etna_30 (EA1), Etta_30 (EA1), Exploradora_30 (EA1), FarmerDoug_30 (EA1), Figueroism_31 (EA1), GardenB_30 (EA1), Garey24_30 (EA1), Gargoyle_31 (EA1), Gelo_30 (EA1), Gershwin_30 (EA1), GoingMerry_31 (EA1), GoneGirl_31 (EA1), Greys_31 (EA1), Gubbabump_30 (EA1), Hamlet_30 (EA1), HanSolo_30 (EA1), HankSprout_31 (EA1), HungryHenry_30 (EA1), Ilzat_30 (EA1), Inventa_31 (EA1), Ioannes_31 (EA1), Ixel_31 (EA11), Janus167_30 (EA1), JasonD_33 (EA1), JasperRussell_30 (EA1), Jerbirus_31 (EA1), JeriBeth_30 (EA1), Kale_30 (EA1), KannH_30 (EA1), KellyGreen_31 (EA1), KingJulien_30 (EA1), Klimt_30 (EA1), Knox_31 (EA1), Kouch_30 (EA1), Kurt1_31 (EA1), Leafus_30 (EA1), Lovelyunicorn_31 (EA1), Ludgate_31 (EA1), MaeLinda_31 (EA1), ManRay_30 (EA1), Martin_32 (EA1), Merida02_32 (EA1), MillyPhilly_31 (EA1), MonChoix_29 (EA1), MrWorldwide_31 (EA1), Nagem_31 (EA1), Nattles_30 (EA1), NickSell_31 (EA1), Oats_30 (EA1), OldNelly_31 (EA1), Oxtober96_31 (EA1), Papafritta_30 (EA1), ParleG_31 (EA1), Peep_31 (EA1), Peppino_30 (EA1), Pherferi_31 (EA1), Phiderman_31 (EA1), PhillyPhantom_30 (EA1), Phireproof_31 (EA1), PhredFlintston_31 (EA1), Phriends_31 (EA1), Pocket_30 (EA1), PuppyEggo_31 (EA1), Raccoon_30 (EA1), Rapheph_31 (EA1), Raptor_31 (EA1), Redfield_30 (EA1), Renzie_31 (EA1), Riyhil_31 (EA1), Robinson_31 (EA1), Rog141_30 (EA1), RosieMae_30 (EA1), SJay_31 (EA1), Schnapsidee_30 (EA1), Sedgewig_30 (EA1),

ShaiHulud_31 (EA1), Shee_31 (EA1), SoilGremlin_31 (EA1), SolidSnake_32 (EA1), SonOfLevi_30 (EA1), Soror1_30 (EA1), Stanktossa_31 (EA1), StingRay_30 (EA1), StirfryIV_30 (EA1), Stormbreaker8_30 (EA1), Strathdee_31 (EA1), Superfresh_31 (EA1), Symere_30 (EA1), TatarkaPM_31 (EA1), Teagan_31 (EA1), TeddyBear_30 (EA1), Tenda_30 (EA1), Thompsone_31 (EA1), Thorongil_31 (EA1), TinSulphur_31 (EA1), Velene_31 (EA1), Vispistious_31 (EA1), WildNOut_31 (EA1), Winzigespinne_30 (EA1), Zada_31 (EA1),

Start 33:
• Found in 5 of 218 (2.3%) of genes in pham
• Manual Annotations of this start: 1 of 201
• Called 20.0% of time when present
• Phage (with cluster) where this start called: Nebulous_29 (EA5),

Start 36:
• Found in 3 of 218 (1.4%) of genes in pham
• Manual Annotations of this start: 3 of 201
• Called 100.0% of time when present
• Phage (with cluster) where this start called: IUFootball_23 (AZ2), Liebe_23 (AZ2), Maureen_23 (AZ2),

Start 40:
• Found in 13 of 218 (6.0%) of genes in pham
• Manual Annotations of this start: 10 of 201
• Called 92.3% of time when present
• Phage (with cluster) where this start called: Bolt007_78 (FH), CalWood4100_80 (FH), Emotion_55 (AZ4), GrimEater_52 (FP), Jankie_53 (FP), Kharcho_27 (FM), Klevey_81 (FH), Lilmac1015_80 (FH), Maruru_99 (FG), Nandito_79 (FH), Ottawa_27 (FM), Sunshine23_100 (FG),

Start 41:
• Found in 1 of 218 (0.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Lukepolites_73 (singleton),

Start 43:
• Found in 1 of 218 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 201
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Theresita_50 (EA7),

Start 44:
• Found in 2 of 218 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 201
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Zeta1847_49 (EH),

Start 45:
• Found in 7 of 218 (3.2%) of genes in pham
• Manual Annotations of this start: 3 of 201
• Called 42.9% of time when present

• Phage (with cluster) where this start called: Cen1621_66 (EH), GardenState_69 (EH), IAmGroot_68 (EH),

Summary by clusters:

There are 19 clusters represented in this pham: FP, singleton, EA11, EA10, AZ4, EF, FM, EA9, FH, EH, FG, EA1, FJ, AZ2, EA2, EA5, EA4, EA7, EA6,

Info for manual annotations of cluster AZ2:
•Start number 36 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ4:
•Start number 40 was manually annotated 1 time for cluster AZ4.

Info for manual annotations of cluster EA1:
•Start number 17 was manually annotated 2 times for cluster EA1.
•Start number 23 was manually annotated 2 times for cluster EA1.
•Start number 32 was manually annotated 128 times for cluster EA1.

Info for manual annotations of cluster EA10:
•Start number 21 was manually annotated 1 time for cluster EA10.

Info for manual annotations of cluster EA11:
•Start number 19 was manually annotated 2 times for cluster EA11.
•Start number 21 was manually annotated 3 times for cluster EA11.
•Start number 32 was manually annotated 1 time for cluster EA11.

Info for manual annotations of cluster EA2:
•Start number 19 was manually annotated 6 times for cluster EA2.
•Start number 21 was manually annotated 8 times for cluster EA2.

Info for manual annotations of cluster EA4:
•Start number 15 was manually annotated 1 time for cluster EA4.
•Start number 21 was manually annotated 11 times for cluster EA4.

Info for manual annotations of cluster EA5:
•Start number 12 was manually annotated 1 time for cluster EA5.
•Start number 33 was manually annotated 1 time for cluster EA5.

Info for manual annotations of cluster EA6:
•Start number 21 was manually annotated 5 times for cluster EA6.

Info for manual annotations of cluster EA7:
•Start number 43 was manually annotated 1 time for cluster EA7.

Info for manual annotations of cluster EA9:
•Start number 21 was manually annotated 3 times for cluster EA9.

Info for manual annotations of cluster EF:
•Start number 28 was manually annotated 7 times for cluster EF.

Info for manual annotations of cluster EH:
•Start number 44 was manually annotated 1 time for cluster EH.

•Start number 45 was manually annotated 3 times for cluster EH.

Info for manual annotations of cluster FG:
•Start number 30 was manually annotated 1 time for cluster FG.
•Start number 40 was manually annotated 2 times for cluster FG.

Info for manual annotations of cluster FH:
•Start number 40 was manually annotated 3 times for cluster FH.

Info for manual annotations of cluster FM:
•Start number 40 was manually annotated 2 times for cluster FM.

Info for manual annotations of cluster FP:
•Start number 40 was manually annotated 2 times for cluster FP.

Gene Information:

Gene: Acosta_32 Start: 22079, Stop: 21225, Start Num: 23
Candidate Starts for Acosta_32:
(Start: 23 @22079 has 2 MA's), (72, 21731), (90, 21623), (95, 21572), (98, 21548), (106, 21494), (108, 21488),

Gene: Agente005_31 Start: 22035, Stop: 21148, Start Num: 32
Candidate Starts for Agente005_31:
(Start: 32 @22035 has 129 MA's), (76, 21705), (79, 21678), (90, 21618), (95, 21564), (106, 21486), (110, 21465), (125, 21279),

Gene: Ajin_41 Start: 25676, Stop: 26536, Start Num: 28
Candidate Starts for Ajin_41:
(Start: 28 @25676 has 7 MA's), (71, 26015), (90, 26102), (95, 26150), (115, 26303), (116, 26309), (125, 26423), (128, 26441),

Gene: AlexAdler_31 Start: 21787, Stop: 20945, Start Num: 32
Candidate Starts for AlexAdler_31:
(Start: 32 @21787 has 129 MA's), (47, 21673), (50, 21643), (72, 21454), (90, 21346), (95, 21295), (98, 21271), (106, 21217), (121, 21094),

Gene: Aleyra_31 Start: 22040, Stop: 21153, Start Num: 32
Candidate Starts for Aleyra_31:
(Start: 32 @22040 has 129 MA's), (76, 21710), (79, 21683), (90, 21623), (95, 21569), (106, 21491), (110, 21470),

Gene: Alyxandracam_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Alyxandracam_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (121, 21103),

Gene: Andromedas_30 Start: 21852, Stop: 20983, Start Num: 19
Candidate Starts for Andromedas_30:

(Start: 19 @21852 has 8 MA's), (Start: 21 @21834 has 31 MA's), (62, 21549), (68, 21495), (90, 21396), (95, 21348), (96, 21345), (97, 21327), (106, 21264), (108, 21258), (113, 21210), (118, 21168), (126, 21093), (135, 21030),

Gene: Anilorac_30 Start: 21879, Stop: 20992, Start Num: 32
Candidate Starts for Anilorac_30:
(Start: 32 @21879 has 129 MA's), (76, 21549), (79, 21522), (90, 21462), (95, 21408), (106, 21330), (110, 21309),

Gene: Antoinette_31 Start: 21784, Stop: 20942, Start Num: 32
Candidate Starts for Antoinette_31:
(Start: 32 @21784 has 129 MA's), (47, 21670), (50, 21640), (72, 21451), (90, 21343), (95, 21292), (98, 21268), (106, 21214), (121, 21091),

Gene: AranulaLuti_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for AranulaLuti_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: Asta_30 Start: 21611, Stop: 20769, Start Num: 32
Candidate Starts for Asta_30:
(Start: 32 @21611 has 129 MA's), (47, 21497), (50, 21467), (72, 21278), (90, 21170), (95, 21119), (98, 21095), (106, 21041), (108, 21035), (121, 20918),

Gene: Aubergine_30 Start: 21611, Stop: 20769, Start Num: 32
Candidate Starts for Aubergine_30:
(Start: 32 @21611 has 129 MA's), (47, 21497), (50, 21467), (72, 21278), (90, 21170), (95, 21119), (98, 21095), (106, 21041), (108, 21035), (121, 20918),

Gene: AxiPup_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for AxiPup_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (121, 21103),

Gene: Baines_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for Baines_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: Balsa_30 Start: 21873, Stop: 20986, Start Num: 32
Candidate Starts for Balsa_30:
(Start: 32 @21873 has 129 MA's), (50, 21729), (79, 21516), (90, 21456), (92, 21435), (95, 21402), (106, 21324), (110, 21303),

Gene: Bandik_31 Start: 21792, Stop: 20950, Start Num: 32
Candidate Starts for Bandik_31:
(Start: 32 @21792 has 129 MA's), (47, 21678), (50, 21648), (72, 21459), (90, 21351), (95, 21300), (98, 21276), (106, 21222), (121, 21099),

Gene: BeautPeep30_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for BeautPeep30_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: BeeBee8_31 Start: 22040, Stop: 21153, Start Num: 32
Candidate Starts for BeeBee8_31:
(Start: 32 @22040 has 129 MA's), (50, 21896), (79, 21683), (90, 21623), (92, 21602), (95, 21569), (106, 21491), (110, 21470),

Gene: Benjalauren_31 Start: 21608, Stop: 20766, Start Num: 32
Candidate Starts for Benjalauren_31:
(Start: 32 @21608 has 129 MA's), (47, 21494), (50, 21464), (72, 21275), (90, 21167), (95, 21116), (98, 21092), (106, 21038), (121, 20915),

Gene: BigRedClifford_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for BigRedClifford_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (108, 21220), (121, 21103),

Gene: Blage_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Blage_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (108, 21220), (121, 21103),

Gene: Bolt007_78 Start: 49680, Stop: 48901, Start Num: 40
Candidate Starts for Bolt007_78:
(25, 49755), (Start: 40 @49680 has 10 MA's), (56, 49521), (73, 49398), (81, 49347), (115, 49119), (132, 48990),

Gene: BonesMcCoy_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for BonesMcCoy_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (108, 21220), (121, 21103),

Gene: Bonino_30 Start: 21587, Stop: 20745, Start Num: 32
Candidate Starts for Bonino_30:
(Start: 32 @21587 has 129 MA's), (47, 21473), (50, 21443), (72, 21254), (90, 21146), (95, 21095), (98, 21071), (106, 21017), (108, 21011), (121, 20894),

Gene: BouleyBill_29 Start: 21683, Stop: 20790, Start Num: 21
Candidate Starts for BouleyBill_29:
(Start: 15 @21719 has 1 MA's), (Start: 19 @21701 has 8 MA's), (Start: 21 @21683 has 31 MA's), (77, 21317), (89, 21266), (91, 21248), (106, 21131), (113, 21077), (123, 20957),

Gene: Bramble_41 Start: 25636, Stop: 26496, Start Num: 28
Candidate Starts for Bramble_41:
(Start: 28 @25636 has 7 MA's), (71, 25975), (90, 26062), (95, 26110), (115, 26263), (116, 26269), (125, 26383), (128, 26401),

Gene: Bustleton_29 Start: 21683, Stop: 20790, Start Num: 21
Candidate Starts for Bustleton_29:
(Start: 15 @21719 has 1 MA's), (Start: 19 @21701 has 8 MA's), (Start: 21 @21683 has 31 MA's), (66, 21377), (77, 21317), (89, 21266), (91, 21248), (106, 21131), (108, 21125), (113, 21077), (119, 21029),

Gene: Byron23_31 Start: 21801, Stop: 20959, Start Num: 32
Candidate Starts for Byron23_31:

(Start: 32 @21801 has 129 MA's), (47, 21687), (50, 21657), (72, 21468), (90, 21360), (95, 21309), (98, 21285), (106, 21231), (108, 21225), (121, 21108),

Gene: CalWood4100_80 Start: 49859, Stop: 49071, Start Num: 40
Candidate Starts for CalWood4100_80:
(Start: 17 @49967 has 2 MA's), (Start: 33 @49910 has 1 MA's), (34, 49907), (Start: 40 @49859 has 10 MA's), (56, 49700), (73, 49577), (81, 49526), (115, 49295), (133, 49157),

Gene: Calix_30 Start: 21591, Stop: 20749, Start Num: 32
Candidate Starts for Calix_30:
(Start: 32 @21591 has 129 MA's), (47, 21477), (50, 21447), (72, 21258), (90, 21150), (95, 21099), (98, 21075), (106, 21021), (108, 21015), (121, 20898),

Gene: CarisSwetlik_33 Start: 22575, Stop: 21721, Start Num: 23
Candidate Starts for CarisSwetlik_33:
(Start: 23 @22575 has 2 MA's), (72, 22227), (90, 22119), (95, 22068), (98, 22044), (106, 21990),

Gene: Cen1621_66 Start: 44317, Stop: 45051, Start Num: 45
Candidate Starts for Cen1621_66:
(2, 43984), (10, 44113), (13, 44161), (39, 44272), (Start: 44 @44302 has 1 MA's), (Start: 45 @44317 has 3 MA's), (55, 44425), (101, 44752), (129, 44953),

Gene: Chako_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for Chako_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: Chamuel_30 Start: 21593, Stop: 20751, Start Num: 32
Candidate Starts for Chamuel_30:
(Start: 32 @21593 has 129 MA's), (47, 21479), (50, 21449), (72, 21260), (90, 21152), (95, 21101), (98, 21077), (106, 21023), (108, 21017), (121, 20900),

Gene: Cheeto1_32 Start: 22256, Stop: 21414, Start Num: 21
Candidate Starts for Cheeto1_32:
(Start: 19 @22274 has 8 MA's), (Start: 21 @22256 has 31 MA's), (66, 21947), (69, 21914), (90, 21818), (95, 21770), (96, 21767),

Gene: Chepli_32 Start: 21461, Stop: 20565, Start Num: 21
Candidate Starts for Chepli_32:
(18, 21482), (Start: 19 @21479 has 8 MA's), (Start: 21 @21461 has 31 MA's), (68, 21125), (74, 21104), (97, 20954), (112, 20855),

Gene: ChickenKing_31 Start: 22169, Stop: 21327, Start Num: 21
Candidate Starts for ChickenKing_31:
(Start: 19 @22187 has 8 MA's), (Start: 21 @22169 has 31 MA's), (66, 21860), (69, 21827), (90, 21731), (95, 21683),

Gene: ChikPic_30 Start: 21850, Stop: 20999, Start Num: 21
Candidate Starts for ChikPic_30:
(Start: 19 @21868 has 8 MA's), (Start: 21 @21850 has 31 MA's), (62, 21565), (68, 21511), (90, 21412), (95, 21364), (97, 21343), (106, 21280), (108, 21274), (113, 21226), (118, 21184), (135, 21046),

Gene: Christoph_30 Start: 21609, Stop: 20767, Start Num: 32

Candidate Starts for Christoph_30:
(Start: 32 @21609 has 129 MA's), (47, 21495), (50, 21465), (72, 21276), (90, 21168), (95, 21117), (98, 21093), (106, 21039), (108, 21033), (121, 20916),

Gene: Cidela_29 Start: 22469, Stop: 21609, Start Num: 21
Candidate Starts for Cidela_29:
(Start: 21 @22469 has 31 MA's), (52, 22280), (57, 22232), (64, 22181), (66, 22172), (80, 22115), (90, 22070), (95, 22019), (107, 21932), (118, 21839),

Gene: Clancy_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for Clancy_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: Clock_29 Start: 22434, Stop: 21424, Start Num: 12
Candidate Starts for Clock_29:
(9, 22461), (Start: 12 @22434 has 1 MA's), (14, 22398), (Start: 17 @22380 has 2 MA's), (Start: 19 @22374 has 8 MA's), (Start: 33 @22323 has 1 MA's), (35, 22317), (68, 22005), (90, 21903), (106, 21771), (108, 21765), (112, 21735),

Gene: ColaCorta_30 Start: 21852, Stop: 20983, Start Num: 19
Candidate Starts for ColaCorta_30:
(Start: 19 @21852 has 8 MA's), (Start: 21 @21834 has 31 MA's), (62, 21549), (68, 21495), (90, 21396), (95, 21348), (96, 21345), (97, 21327), (106, 21264), (108, 21258), (113, 21210), (118, 21168), (126, 21093), (135, 21030),

Gene: Convict_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Convict_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (108, 21220), (121, 21103),

Gene: CoraRita_30 Start: 21607, Stop: 20765, Start Num: 32
Candidate Starts for CoraRita_30:
(Start: 32 @21607 has 129 MA's), (47, 21493), (50, 21463), (72, 21274), (90, 21166), (95, 21115), (98, 21091), (106, 21037), (108, 21031), (121, 20914),

Gene: Dave_31 Start: 21784, Stop: 20942, Start Num: 32
Candidate Starts for Dave_31:
(Start: 32 @21784 has 129 MA's), (47, 21670), (50, 21640), (72, 21451), (90, 21343), (95, 21292), (98, 21268), (106, 21214), (121, 21091),

Gene: Delphidian_31 Start: 21795, Stop: 20953, Start Num: 32
Candidate Starts for Delphidian_31:
(Start: 32 @21795 has 129 MA's), (47, 21681), (50, 21651), (72, 21462), (90, 21354), (95, 21303), (98, 21279), (106, 21225), (121, 21102),

Gene: Den3_31 Start: 21800, Stop: 20958, Start Num: 32
Candidate Starts for Den3_31:
(Start: 32 @21800 has 129 MA's), (47, 21686), (50, 21656), (72, 21467), (90, 21359), (95, 21308), (98, 21284), (106, 21230), (121, 21107),

Gene: Dothraki_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for Dothraki_31:

(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: Duocatuli_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for Duocatuli_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: Eleri_30 Start: 21865, Stop: 20996, Start Num: 19
Candidate Starts for Eleri_30:
(Start: 19 @21865 has 8 MA's), (Start: 21 @21847 has 31 MA's), (62, 21562), (68, 21508), (90, 21409), (95, 21361), (96, 21358), (97, 21340), (106, 21277), (108, 21271), (113, 21223), (118, 21181), (126, 21106), (135, 21043),

Gene: Emotion_55 Start: 37527, Stop: 38288, Start Num: 40
Candidate Starts for Emotion_55:
(Start: 40 @37527 has 10 MA's), (85, 37878), (117, 38100), (120, 38127), (132, 38211),

Gene: Endor_31 Start: 22097, Stop: 21195, Start Num: 32
Candidate Starts for Endor_31:
(Start: 32 @22097 has 129 MA's), (72, 21764), (90, 21656), (95, 21605), (98, 21581), (106, 21527), (110, 21506), (124, 21329),

Gene: Erla_30 Start: 21591, Stop: 20749, Start Num: 32
Candidate Starts for Erla_30:
(Start: 32 @21591 has 129 MA's), (47, 21477), (50, 21447), (72, 21258), (90, 21150), (95, 21099), (98, 21075), (106, 21021), (108, 21015), (121, 20898),

Gene: Espinosa_30 Start: 21609, Stop: 20767, Start Num: 32
Candidate Starts for Espinosa_30:
(Start: 32 @21609 has 129 MA's), (47, 21495), (50, 21465), (72, 21276), (90, 21168), (95, 21117), (98, 21093), (106, 21039), (108, 21033), (121, 20916),

Gene: Etna_30 Start: 21878, Stop: 20988, Start Num: 32
Candidate Starts for Etna_30:
(Start: 32 @21878 has 129 MA's), (67, 21563), (106, 21329), (110, 21308),

Gene: Etta_30 Start: 21595, Stop: 20753, Start Num: 32
Candidate Starts for Etta_30:
(Start: 32 @21595 has 129 MA's), (47, 21481), (50, 21451), (72, 21262), (90, 21154), (95, 21103), (98, 21079), (106, 21025), (108, 21019), (121, 20902),

Gene: Exploradora_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for Exploradora_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: Fabyndrax_29 Start: 22469, Stop: 21609, Start Num: 21
Candidate Starts for Fabyndrax_29:
(Start: 21 @22469 has 31 MA's), (52, 22280), (57, 22232), (64, 22181), (66, 22172), (80, 22115), (90, 22070), (95, 22019), (107, 21932), (118, 21839),

Gene: FarmerDoug_30 Start: 21737, Stop: 20847, Start Num: 32

Candidate Starts for FarmerDoug_30:
(Start: 32 @21737 has 129 MA's), (67, 21422), (106, 21188), (110, 21167),

Gene: Figueroism_31 Start: 21783, Stop: 20941, Start Num: 32
Candidate Starts for Figueroism_31:
(Start: 32 @21783 has 129 MA's), (47, 21669), (50, 21639), (72, 21450), (90, 21342), (95, 21291), (98, 21267), (106, 21213), (108, 21207), (121, 21090),

Gene: Finny_30 Start: 21887, Stop: 20979, Start Num: 21
Candidate Starts for Finny_30:
(Start: 19 @21905 has 8 MA's), (Start: 21 @21887 has 31 MA's), (62, 21602), (68, 21548), (90, 21449), (95, 21401), (96, 21398), (97, 21380), (106, 21317), (108, 21311), (113, 21263), (118, 21221), (135, 21026),

Gene: GaeCeo_32 Start: 22405, Stop: 21563, Start Num: 21
Candidate Starts for GaeCeo_32:
(Start: 19 @22423 has 8 MA's), (Start: 21 @22405 has 31 MA's), (66, 22096), (69, 22063), (90, 21967), (95, 21919),

Gene: GardenB_30 Start: 21876, Stop: 20989, Start Num: 32
Candidate Starts for GardenB_30:
(Start: 32 @21876 has 129 MA's), (79, 21519), (90, 21459), (92, 21438), (95, 21405), (106, 21327), (110, 21306),

Gene: GardenState_69 Start: 42002, Stop: 42718, Start Num: 45
Candidate Starts for GardenState_69:
(Start: 45 @42002 has 3 MA's), (101, 42431),

Gene: Garey24_30 Start: 21574, Stop: 20732, Start Num: 32
Candidate Starts for Garey24_30:
(Start: 32 @21574 has 129 MA's), (47, 21460), (50, 21430), (72, 21241), (90, 21133), (95, 21082), (98, 21058), (106, 21004), (108, 20998), (121, 20881),

Gene: Gargoyle_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for Gargoyle_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: Gelo_30 Start: 21595, Stop: 20753, Start Num: 32
Candidate Starts for Gelo_30:
(Start: 32 @21595 has 129 MA's), (47, 21481), (50, 21451), (72, 21262), (90, 21154), (95, 21103), (98, 21079), (106, 21025), (108, 21019), (121, 20902),

Gene: Gershwin_30 Start: 21611, Stop: 20769, Start Num: 32
Candidate Starts for Gershwin_30:
(Start: 32 @21611 has 129 MA's), (47, 21497), (50, 21467), (72, 21278), (90, 21170), (95, 21119), (98, 21095), (106, 21041), (108, 21035), (121, 20918),

Gene: Glamour_29 Start: 21853, Stop: 20984, Start Num: 19
Candidate Starts for Glamour_29:
(Start: 19 @21853 has 8 MA's), (Start: 21 @21835 has 31 MA's), (62, 21550), (68, 21496), (90, 21397), (95, 21349), (96, 21346), (97, 21328), (106, 21265), (108, 21259), (113, 21211), (118, 21169), (126, 21094), (135, 21031),

Gene: GoingMerry_31 Start: 21806, Stop: 20964, Start Num: 32
Candidate Starts for GoingMerry_31:
(Start: 32 @21806 has 129 MA's), (47, 21692), (50, 21662), (72, 21473), (90, 21365), (95, 21314), (98, 21290), (106, 21236), (108, 21230), (121, 21113),

Gene: Golden_29 Start: 21794, Stop: 20895, Start Num: 21
Candidate Starts for Golden_29:
(Start: 19 @21812 has 8 MA's), (Start: 21 @21794 has 31 MA's), (71, 21449), (77, 21428), (90, 21368), (95, 21320), (106, 21236), (107, 21233), (119, 21134),

Gene: GoneGirl_31 Start: 21925, Stop: 21038, Start Num: 32
Candidate Starts for GoneGirl_31:
(Start: 32 @21925 has 129 MA's), (76, 21595), (79, 21568), (90, 21508), (95, 21454), (103, 21400), (106, 21376), (110, 21355),

Gene: Greys_31 Start: 21793, Stop: 20951, Start Num: 32
Candidate Starts for Greys_31:
(Start: 32 @21793 has 129 MA's), (47, 21679), (50, 21649), (72, 21460), (90, 21352), (95, 21301), (98, 21277), (106, 21223), (121, 21100),

Gene: GrimEater_52 Start: 36520, Stop: 37155, Start Num: 40
Candidate Starts for GrimEater_52:
(37, 36487), (Start: 40 @36520 has 10 MA's), (42, 36529), (51, 36625), (100, 36988),

Gene: Gubbabump_30 Start: 21600, Stop: 20758, Start Num: 32
Candidate Starts for Gubbabump_30:
(Start: 32 @21600 has 129 MA's), (47, 21486), (50, 21456), (72, 21267), (90, 21159), (95, 21108), (98, 21084), (106, 21030), (108, 21024), (121, 20907),

Gene: Guetzie_29 Start: 21782, Stop: 20883, Start Num: 21
Candidate Starts for Guetzie_29:
(Start: 19 @21800 has 8 MA's), (Start: 21 @21782 has 31 MA's), (71, 21437), (77, 21416), (90, 21356), (95, 21308), (106, 21224), (107, 21221), (119, 21122),

Gene: Hamlet_30 Start: 21873, Stop: 20986, Start Num: 32
Candidate Starts for Hamlet_30:
(Start: 32 @21873 has 129 MA's), (50, 21729), (79, 21516), (90, 21456), (92, 21435), (95, 21402), (106, 21324), (110, 21303),

Gene: HanSolo_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for HanSolo_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: HankSprout_31 Start: 21478, Stop: 20636, Start Num: 32
Candidate Starts for HankSprout_31:
(Start: 32 @21478 has 129 MA's), (47, 21364), (50, 21334), (72, 21145), (90, 21037), (95, 20986), (98, 20962), (106, 20908), (108, 20902), (121, 20785),

Gene: HavenFinLeoSun_32 Start: 22031, Stop: 21207, Start Num: 27
Candidate Starts for HavenFinLeoSun_32:
(27, 22031), (67, 21701), (75, 21677), (106, 21476), (108, 21470),

Gene: HerculesXL_31 Start: 20731, Stop: 19856, Start Num: 19
Candidate Starts for HerculesXL_31:
(Start: 19 @20731 has 8 MA's), (Start: 21 @20713 has 31 MA's), (50, 20551), (52, 20527), (57, 20479), (66, 20419), (77, 20377), (80, 20362), (90, 20317), (95, 20266), (106, 20182), (108, 20176), (111, 20149), (118, 20086),

Gene: HungryHenry_30 Start: 21609, Stop: 20767, Start Num: 32
Candidate Starts for HungryHenry_30:
(Start: 32 @21609 has 129 MA's), (47, 21495), (50, 21465), (72, 21276), (90, 21168), (95, 21117), (98, 21093), (106, 21039), (121, 20916),

Gene: IAmGroot_68 Start: 42211, Stop: 42927, Start Num: 45
Candidate Starts for IAmGroot_68:
(Start: 45 @42211 has 3 MA's), (101, 42640),

Gene: IUFootball_23 Start: 19676, Stop: 20467, Start Num: 36
Candidate Starts for IUFootball_23:
(Start: 36 @19676 has 3 MA's), (37, 19685), (Start: 45 @19748 has 3 MA's), (55, 19850), (63, 19925), (114, 20258), (120, 20297),

Gene: Ilzat_30 Start: 21608, Stop: 20766, Start Num: 32
Candidate Starts for Ilzat_30:
(Start: 32 @21608 has 129 MA's), (47, 21494), (50, 21464), (72, 21275), (90, 21167), (95, 21116), (98, 21092), (106, 21038), (121, 20915),

Gene: Inventa_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for Inventa_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: Ioannes_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Ioannes_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (108, 21220), (121, 21103),

Gene: Ixel_31 Start: 20664, Stop: 19759, Start Num: 32
Candidate Starts for Ixel_31:
(26, 20682), (Start: 32 @20664 has 129 MA's), (47, 20547), (50, 20517), (68, 20343), (72, 20328), (90, 20220), (93, 20199), (95, 20169), (98, 20145), (106, 20085), (108, 20079), (118, 19989), (135, 19806),

Gene: Jankie_53 Start: 36702, Stop: 37337, Start Num: 40
Candidate Starts for Jankie_53:
(1, 36393), (6, 36489), (8, 36507), (20, 36618), (29, 36633), (37, 36669), (Start: 40 @36702 has 10 MA's), (42, 36711), (51, 36807), (100, 37170),

Gene: Janus167_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for Janus167_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: JasonD_33 Start: 22235, Stop: 21387, Start Num: 32
Candidate Starts for JasonD_33:

(Start: 32 @22235 has 129 MA's), (72, 21902), (90, 21794), (95, 21743), (98, 21719), (99, 21707), (121, 21536), (135, 21434),

Gene: JasperRussell_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for JasperRussell_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: Jemerald_33 Start: 22738, Stop: 21842, Start Num: 21
Candidate Starts for Jemerald_33:
(Start: 21 @22738 has 31 MA's), (42, 22663), (50, 22576), (58, 22504), (68, 22402), (97, 22231),

Gene: Jenos_34 Start: 22908, Stop: 21967, Start Num: 17
Candidate Starts for Jenos_34:
(Start: 17 @22908 has 2 MA's), (27, 22872), (67, 22542), (106, 22308), (108, 22302), (115, 22242), (119, 22206), (124, 22104),

Gene: Jerbirus_31 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for Jerbirus_31:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: JeriBeth_30 Start: 21455, Stop: 20613, Start Num: 32
Candidate Starts for JeriBeth_30:
(Start: 32 @21455 has 129 MA's), (47, 21341), (50, 21311), (72, 21122), (90, 21014), (95, 20963), (98, 20939), (106, 20885), (121, 20762),

Gene: Jingles_29 Start: 21690, Stop: 20797, Start Num: 21
Candidate Starts for Jingles_29:
(Start: 15 @21726 has 1 MA's), (Start: 19 @21708 has 8 MA's), (Start: 21 @21690 has 31 MA's), (77, 21324), (89, 21273), (91, 21255), (106, 21138), (108, 21132), (113, 21084), (119, 21036),

Gene: Juicer_33 Start: 22738, Stop: 21842, Start Num: 21
Candidate Starts for Juicer_33:
(Start: 21 @22738 has 31 MA's), (42, 22663), (50, 22576), (58, 22504), (68, 22402), (97, 22231),

Gene: Kale_30 Start: 21613, Stop: 20771, Start Num: 32
Candidate Starts for Kale_30:
(Start: 32 @21613 has 129 MA's), (47, 21499), (50, 21469), (72, 21280), (90, 21172), (95, 21121), (98, 21097), (106, 21043), (108, 21037), (121, 20920),

Gene: KannH_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for KannH_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: KatChan_32 Start: 21467, Stop: 20571, Start Num: 21
Candidate Starts for KatChan_32:
(18, 21488), (Start: 19 @21485 has 8 MA's), (Start: 21 @21467 has 31 MA's), (68, 21131), (74, 21110), (97, 20960), (112, 20861),

Gene: Kauala_29 Start: 21686, Stop: 20793, Start Num: 21
Candidate Starts for Kauala_29:

(Start: 19 @21704 has 8 MA's), (Start: 21 @21686 has 31 MA's), (46, 21566), (71, 21341), (77, 21320), (90, 21260), (95, 21212), (106, 21134), (118, 21038),

Gene: Kavo_30 Start: 20550, Stop: 19693, Start Num: 21
Candidate Starts for Kavo_30:
(Start: 19 @20568 has 8 MA's), (Start: 21 @20550 has 31 MA's), (50, 20388), (52, 20364), (57, 20316), (66, 20256), (77, 20214), (80, 20199), (90, 20154), (95, 20103), (106, 20019), (108, 20013), (111, 19986), (118, 19923),

Gene: KellyGreen_31 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for KellyGreen_31:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: Kharcho_27 Start: 10163, Stop: 10948, Start Num: 40
Candidate Starts for Kharcho_27:
(Start: 40 @10163 has 10 MA's), (48, 10238), (73, 10445), (81, 10496), (84, 10517), (115, 10727),

Gene: KingJulien_30 Start: 21869, Stop: 20982, Start Num: 32
Candidate Starts for KingJulien_30:
(Start: 32 @21869 has 129 MA's), (79, 21512), (90, 21452), (92, 21431), (95, 21398), (106, 21320), (110, 21299),

Gene: Klevey_81 Start: 49956, Stop: 49168, Start Num: 40
Candidate Starts for Klevey_81:
(Start: 17 @50064 has 2 MA's), (Start: 33 @50007 has 1 MA's), (34, 50004), (Start: 40 @49956 has 10 MA's), (56, 49797), (73, 49674), (81, 49623), (115, 49392),

Gene: Klimt_30 Start: 21593, Stop: 20751, Start Num: 32
Candidate Starts for Klimt_30:
(Start: 32 @21593 has 129 MA's), (47, 21479), (50, 21449), (72, 21260), (90, 21152), (95, 21101), (98, 21077), (106, 21023), (108, 21017), (121, 20900),

Gene: Knox_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Knox_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (108, 21220), (121, 21103),

Gene: Koji_29 Start: 21812, Stop: 20919, Start Num: 21
Candidate Starts for Koji_29:
(4, 21998), (5, 21953), (7, 21938), (Start: 19 @21830 has 8 MA's), (Start: 21 @21812 has 31 MA's), (50, 21650), (70, 21470), (77, 21446), (89, 21395), (91, 21377), (106, 21260), (108, 21254), (113, 21206),

Gene: Kors_41 Start: 25717, Stop: 26583, Start Num: 28
Candidate Starts for Kors_41:
(3, 25516), (11, 25624), (16, 25675), (Start: 28 @25717 has 7 MA's), (38, 25768), (69, 26056), (71, 26062), (90, 26149), (95, 26197), (115, 26350), (116, 26356), (125, 26470), (128, 26488),

Gene: Kouch_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for Kouch_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: Kurt1_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for Kurt1_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: Leafus_30 Start: 22011, Stop: 21124, Start Num: 32
Candidate Starts for Leafus_30:
(Start: 32 @22011 has 129 MA's), (67, 21696), (108, 21459), (124, 21261),

Gene: Liebe_23 Start: 19676, Stop: 20467, Start Num: 36
Candidate Starts for Liebe_23:
(Start: 36 @19676 has 3 MA's), (37, 19685), (Start: 45 @19748 has 3 MA's), (55, 19850), (63, 19925), (114, 20258), (120, 20297),

Gene: Lilmac1015_80 Start: 49859, Stop: 49071, Start Num: 40
Candidate Starts for Lilmac1015_80:
(Start: 17 @49967 has 2 MA's), (Start: 33 @49910 has 1 MA's), (34, 49907), (Start: 40 @49859 has 10 MA's), (56, 49700), (73, 49577), (81, 49526), (115, 49295), (133, 49157),

Gene: LordBart_41 Start: 25632, Stop: 26492, Start Num: 28
Candidate Starts for LordBart_41:
(Start: 28 @25632 has 7 MA's), (71, 25971), (90, 26058), (95, 26106), (115, 26259), (116, 26265), (125, 26379), (128, 26397),

Gene: Lovelyunicorn_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Lovelyunicorn_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (121, 21103),

Gene: Lucky3_29 Start: 21794, Stop: 20895, Start Num: 21
Candidate Starts for Lucky3_29:
(Start: 19 @21812 has 8 MA's), (Start: 21 @21794 has 31 MA's), (71, 21449), (77, 21428), (90, 21368), (95, 21320), (106, 21236), (107, 21233), (119, 21134),

Gene: Ludgate_31 Start: 21792, Stop: 20950, Start Num: 32
Candidate Starts for Ludgate_31:
(Start: 32 @21792 has 129 MA's), (47, 21678), (50, 21648), (72, 21459), (90, 21351), (95, 21300), (98, 21276), (106, 21222), (121, 21099),

Gene: Lukepolites_73 Start: 47056, Stop: 46286, Start Num: 41
Candidate Starts for Lukepolites_73:
(22, 47143), (35, 47107), (41, 47056), (47, 47002), (65, 46831), (86, 46702), (90, 46678), (94, 46654), (104, 46570), (132, 46372), (134, 46360), (136, 46324),

Gene: Luna18_32 Start: 21467, Stop: 20571, Start Num: 21
Candidate Starts for Luna18_32:
(18, 21488), (Start: 19 @21485 has 8 MA's), (Start: 21 @21467 has 31 MA's), (68, 21131), (74, 21110), (97, 20960), (112, 20861),

Gene: MCubed_30 Start: 21857, Stop: 21006, Start Num: 21
Candidate Starts for MCubed_30:

(Start: 19 @21875 has 8 MA's), (Start: 21 @21857 has 31 MA's), (62, 21572), (68, 21518), (90, 21419), (95, 21371), (97, 21350), (106, 21287), (108, 21281), (113, 21233), (118, 21191), (135, 21053),

Gene: MaeLinda_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for MaeLinda_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105), (134, 21024),

Gene: ManRay_30 Start: 21611, Stop: 20769, Start Num: 32
Candidate Starts for ManRay_30:
(Start: 32 @21611 has 129 MA's), (47, 21497), (50, 21467), (72, 21278), (90, 21170), (95, 21119), (98, 21095), (106, 21041), (108, 21035), (121, 20918),

Gene: Martin_32 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for Martin_32:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: Maruru_99 Start: 60098, Stop: 59316, Start Num: 40
Candidate Starts for Maruru_99:
(24, 60170), (26, 60167), (Start: 30 @60161 has 1 MA's), (Start: 40 @60098 has 10 MA's), (48, 60023), (49, 60020), (73, 59813), (81, 59762), (110, 59576), (115, 59531), (116, 59525), (130, 59405),

Gene: Maureen_23 Start: 19676, Stop: 20467, Start Num: 36
Candidate Starts for Maureen_23:
(Start: 36 @19676 has 3 MA's), (37, 19685), (Start: 45 @19748 has 3 MA's), (55, 19850), (63, 19925), (114, 20258), (120, 20297),

Gene: McGalleon_33 Start: 23130, Stop: 22183, Start Num: 17
Candidate Starts for McGalleon_33:
(Start: 17 @23130 has 2 MA's), (27, 23094), (71, 22749), (83, 22686), (106, 22524), (108, 22518), (115, 22458), (119, 22422), (124, 22320),

Gene: Merida02_32 Start: 21795, Stop: 20953, Start Num: 32
Candidate Starts for Merida02_32:
(Start: 32 @21795 has 129 MA's), (47, 21681), (50, 21651), (72, 21462), (90, 21354), (95, 21303), (98, 21279), (106, 21225), (121, 21102),

Gene: MillyPhilly_31 Start: 21795, Stop: 20953, Start Num: 32
Candidate Starts for MillyPhilly_31:
(Start: 32 @21795 has 129 MA's), (47, 21681), (50, 21651), (72, 21462), (90, 21354), (95, 21303), (98, 21279), (106, 21225), (108, 21219), (121, 21102),

Gene: MonChoix_29 Start: 21781, Stop: 20879, Start Num: 32
Candidate Starts for MonChoix_29:
(Start: 32 @21781 has 129 MA's), (72, 21448), (90, 21340), (95, 21289), (98, 21265), (106, 21211), (110, 21190), (124, 21013),

Gene: MrWorldwide_31 Start: 21799, Stop: 20957, Start Num: 32
Candidate Starts for MrWorldwide_31:
(Start: 32 @21799 has 129 MA's), (47, 21685), (50, 21655), (72, 21466), (90, 21358), (95, 21307), (98, 21283), (106, 21229), (108, 21223), (121, 21106),

Gene: Nagem_31 Start: 21792, Stop: 20950, Start Num: 32
Candidate Starts for Nagem_31:
(Start: 32 @21792 has 129 MA's), (47, 21678), (50, 21648), (72, 21459), (90, 21351), (95, 21300), (98, 21276), (106, 21222), (121, 21099),

Gene: Nandito_79 Start: 50159, Stop: 49368, Start Num: 40
Candidate Starts for Nandito_79:
(Start: 40 @50159 has 10 MA's), (60, 49976), (81, 49820), (115, 49589), (132, 49457),

Gene: Nattles_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for Nattles_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: Nebulous_29 Start: 22504, Stop: 21605, Start Num: 33
Candidate Starts for Nebulous_29:
(9, 22642), (Start: 12 @22615 has 1 MA's), (14, 22579), (Start: 17 @22561 has 2 MA's), (Start: 19 @22555 has 8 MA's), (Start: 33 @22504 has 1 MA's), (35, 22498), (68, 22186), (90, 22084), (106, 21952), (108, 21946), (112, 21916),

Gene: NickSell_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for NickSell_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: Oats_30 Start: 21611, Stop: 20769, Start Num: 32
Candidate Starts for Oats_30:
(Start: 32 @21611 has 129 MA's), (47, 21497), (50, 21467), (72, 21278), (90, 21170), (95, 21119), (98, 21095), (106, 21041), (108, 21035), (121, 20918),

Gene: OldNelly_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for OldNelly_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (121, 21105),

Gene: Orpington_30 Start: 21847, Stop: 20996, Start Num: 21
Candidate Starts for Orpington_30:
(Start: 19 @21865 has 8 MA's), (Start: 21 @21847 has 31 MA's), (62, 21562), (68, 21508), (90, 21409), (95, 21361), (96, 21358), (97, 21340), (106, 21277), (108, 21271), (113, 21223), (118, 21181), (126, 21106), (135, 21043),

Gene: Ottawa_27 Start: 10163, Stop: 10948, Start Num: 40
Candidate Starts for Ottawa_27:
(Start: 40 @10163 has 10 MA's), (48, 10238), (73, 10445), (81, 10496), (84, 10517), (115, 10727),

Gene: Oxtober96_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Oxtober96_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (121, 21103),

Gene: PSirce_30 Start: 21868, Stop: 20999, Start Num: 19
Candidate Starts for PSirce_30:

(Start: 19 @21868 has 8 MA's), (Start: 21 @21850 has 31 MA's), (62, 21565), (68, 21511), (90, 21412), (95, 21364), (96, 21361), (97, 21343), (106, 21280), (108, 21274), (113, 21226), (118, 21184), (126, 21109), (135, 21046),

Gene: Papafritta_30 Start: 21607, Stop: 20765, Start Num: 32
Candidate Starts for Papafritta_30:
(Start: 32 @21607 has 129 MA's), (47, 21493), (50, 21463), (72, 21274), (90, 21166), (95, 21115), (98, 21091), (106, 21037), (121, 20914),

Gene: ParleG_31 Start: 21799, Stop: 20957, Start Num: 32
Candidate Starts for ParleG_31:
(Start: 32 @21799 has 129 MA's), (47, 21685), (50, 21655), (72, 21466), (90, 21358), (95, 21307), (98, 21283), (106, 21229), (108, 21223), (121, 21106),

Gene: Peep_31 Start: 21784, Stop: 20942, Start Num: 32
Candidate Starts for Peep_31:
(Start: 32 @21784 has 129 MA's), (47, 21670), (50, 21640), (72, 21451), (90, 21343), (95, 21292), (98, 21268), (106, 21214), (121, 21091),

Gene: Penta_29 Start: 20407, Stop: 19550, Start Num: 21
Candidate Starts for Penta_29:
(Start: 19 @20425 has 8 MA's), (Start: 21 @20407 has 31 MA's), (50, 20245), (57, 20173), (66, 20113), (77, 20071), (80, 20056), (90, 20011), (95, 19960), (106, 19876), (108, 19870), (111, 19843), (115, 19810), (118, 19780), (119, 19774),

Gene: Peppino_30 Start: 21865, Stop: 20978, Start Num: 32
Candidate Starts for Peppino_30:
(Start: 32 @21865 has 129 MA's), (50, 21721), (79, 21508), (90, 21448), (92, 21427), (95, 21394), (106, 21316), (110, 21295),

Gene: Phanita_30 Start: 21830, Stop: 20979, Start Num: 21
Candidate Starts for Phanita_30:
(Start: 19 @21848 has 8 MA's), (Start: 21 @21830 has 31 MA's), (62, 21545), (68, 21491), (90, 21392), (95, 21344), (97, 21323), (106, 21260), (108, 21254), (113, 21206), (118, 21164), (135, 21026),

Gene: Pherbot_29 Start: 21682, Stop: 20789, Start Num: 21
Candidate Starts for Pherbot_29:
(Start: 15 @21718 has 1 MA's), (Start: 19 @21700 has 8 MA's), (Start: 21 @21682 has 31 MA's), (66, 21376), (77, 21316), (89, 21265), (91, 21247), (106, 21130), (108, 21124), (113, 21076), (119, 21028),

Gene: Pherferi_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for Pherferi_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: Phiderman_31 Start: 21795, Stop: 20953, Start Num: 32
Candidate Starts for Phiderman_31:
(Start: 32 @21795 has 129 MA's), (47, 21681), (50, 21651), (72, 21462), (90, 21354), (95, 21303), (98, 21279), (106, 21225), (108, 21219), (121, 21102),

Gene: PhillyPhantom_30 Start: 21846, Stop: 20998, Start Num: 32
Candidate Starts for PhillyPhantom_30:

(Start: 32 @21846 has 129 MA's), (72, 21513), (90, 21405), (95, 21354), (98, 21330), (106, 21270), (108, 21264), (121, 21147), (135, 21045),

Gene: Phireproof_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for Phireproof_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: PhredFlintston_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for PhredFlintston_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: Phriends_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for Phriends_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (121, 21105),

Gene: Pocket_30 Start: 21596, Stop: 20754, Start Num: 32
Candidate Starts for Pocket_30:
(Start: 32 @21596 has 129 MA's), (47, 21482), (50, 21452), (72, 21263), (90, 21155), (95, 21104), (98, 21080), (106, 21026), (108, 21020), (121, 20903),

Gene: PorkBelly_50 Start: 38512, Stop: 37673, Start Num: 31
Candidate Starts for PorkBelly_50:
(31, 38512), (42, 38440), (54, 38320), (61, 38263), (77, 38149), (82, 38116), (87, 38095), (105, 37954), (117, 37861), (121, 37819), (122, 37810), (130, 37771), (131, 37768),

Gene: PrincePhergus_29 Start: 21721, Stop: 20792, Start Num: 15
Candidate Starts for PrincePhergus_29:
(Start: 15 @21721 has 1 MA's), (Start: 19 @21703 has 8 MA's), (Start: 21 @21685 has 31 MA's), (77, 21319), (89, 21268), (91, 21250), (106, 21133), (108, 21127), (113, 21079),

Gene: PuppyEggo_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for PuppyEggo_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (121, 21103),

Gene: Raccoon_30 Start: 21834, Stop: 20986, Start Num: 32
Candidate Starts for Raccoon_30:
(Start: 32 @21834 has 129 MA's), (72, 21501), (90, 21393), (95, 21342), (98, 21318), (106, 21258), (108, 21252), (121, 21135), (135, 21033),

Gene: Rapheph_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for Rapheph_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: Raptor_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Raptor_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (108, 21220), (121, 21103),

Gene: Redfield_30 Start: 21872, Stop: 20985, Start Num: 32
Candidate Starts for Redfield_30:
(Start: 32 @21872 has 129 MA's), (50, 21728), (79, 21515), (90, 21455), (92, 21434), (95, 21401), (106, 21323), (110, 21302),

Gene: Renzie_31 Start: 21784, Stop: 20942, Start Num: 32
Candidate Starts for Renzie_31:
(Start: 32 @21784 has 129 MA's), (47, 21670), (50, 21640), (72, 21451), (90, 21343), (95, 21292), (98, 21268), (106, 21214), (121, 21091),

Gene: RikSengupta_41 Start: 25754, Stop: 26620, Start Num: 28
Candidate Starts for RikSengupta_41:
(3, 25553), (11, 25661), (16, 25712), (Start: 28 @25754 has 7 MA's), (38, 25805), (69, 26093), (71, 26099), (90, 26186), (95, 26234), (109, 26330), (115, 26387), (116, 26393), (125, 26507), (127, 26519), (128, 26525),

Gene: Riyhil_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for Riyhil_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (121, 21105),

Gene: Robinson_31 Start: 21790, Stop: 20948, Start Num: 32
Candidate Starts for Robinson_31:
(Start: 32 @21790 has 129 MA's), (47, 21676), (50, 21646), (72, 21457), (90, 21349), (95, 21298), (98, 21274), (106, 21220), (108, 21214), (121, 21097),

Gene: Rog141_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for Rog141_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: RosieMae_30 Start: 21608, Stop: 20766, Start Num: 32
Candidate Starts for RosieMae_30:
(Start: 32 @21608 has 129 MA's), (47, 21494), (50, 21464), (72, 21275), (90, 21167), (95, 21116), (98, 21092), (106, 21038), (121, 20915),

Gene: SJay_31 Start: 21793, Stop: 20951, Start Num: 32
Candidate Starts for SJay_31:
(Start: 32 @21793 has 129 MA's), (47, 21679), (50, 21649), (72, 21460), (90, 21352), (95, 21301), (98, 21277), (106, 21223), (121, 21100),

Gene: Sansa_29 Start: 21875, Stop: 21006, Start Num: 19
Candidate Starts for Sansa_29:
(Start: 19 @21875 has 8 MA's), (Start: 21 @21857 has 31 MA's), (62, 21572), (68, 21518), (90, 21419), (95, 21371), (96, 21368), (97, 21350), (106, 21287), (108, 21281), (112, 21251), (113, 21233), (118, 21191), (126, 21116), (135, 21053),

Gene: Saratos_30 Start: 21832, Stop: 20981, Start Num: 21
Candidate Starts for Saratos_30:
(Start: 19 @21850 has 8 MA's), (Start: 21 @21832 has 31 MA's), (62, 21547), (68, 21493), (90, 21394), (95, 21346), (96, 21343), (97, 21325), (106, 21262), (108, 21256), (113, 21208), (118, 21166), (126, 21091), (135, 21028),

Gene: Schimmels22_31 Start: 21105, Stop: 20230, Start Num: 19
Candidate Starts for Schimmels22_31:
(Start: 19 @21105 has 8 MA's), (Start: 21 @21087 has 31 MA's), (50, 20925), (52, 20901), (57, 20853), (66, 20793), (77, 20751), (80, 20736), (90, 20691), (95, 20640), (102, 20583), (106, 20556), (108, 20550), (111, 20523), (118, 20460),

Gene: Schnapsidee_30 Start: 21866, Stop: 20979, Start Num: 32
Candidate Starts for Schnapsidee_30:
(Start: 32 @21866 has 129 MA's), (50, 21722), (79, 21509), (90, 21449), (92, 21428), (95, 21395), (106, 21317), (110, 21296),

Gene: Scissor2024_31 Start: 20723, Stop: 19866, Start Num: 21
Candidate Starts for Scissor2024_31:
(Start: 19 @20741 has 8 MA's), (Start: 21 @20723 has 31 MA's), (50, 20561), (52, 20537), (57, 20489), (66, 20429), (77, 20387), (80, 20372), (90, 20327), (95, 20276), (106, 20192), (108, 20186), (111, 20159), (118, 20096),

Gene: Sedgewig_30 Start: 21590, Stop: 20748, Start Num: 32
Candidate Starts for Sedgewig_30:
(Start: 32 @21590 has 129 MA's), (47, 21476), (50, 21446), (72, 21257), (90, 21149), (95, 21098), (98, 21074), (106, 21020), (121, 20897),

Gene: ShaiHulud_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for ShaiHulud_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (121, 21103),

Gene: Shamu_30 Start: 21847, Stop: 20996, Start Num: 21
Candidate Starts for Shamu_30:
(Start: 19 @21865 has 8 MA's), (Start: 21 @21847 has 31 MA's), (62, 21562), (68, 21508), (90, 21409), (95, 21361), (96, 21358), (97, 21340), (106, 21277), (108, 21271), (113, 21223), (118, 21181), (126, 21106), (135, 21043),

Gene: Shee_31 Start: 21795, Stop: 20953, Start Num: 32
Candidate Starts for Shee_31:
(Start: 32 @21795 has 129 MA's), (47, 21681), (50, 21651), (72, 21462), (90, 21354), (95, 21303), (98, 21279), (106, 21225), (108, 21219), (121, 21102),

Gene: Sinatra_29 Start: 21682, Stop: 20789, Start Num: 21
Candidate Starts for Sinatra_29:
(Start: 19 @21700 has 8 MA's), (Start: 21 @21682 has 31 MA's), (50, 21520), (77, 21316), (89, 21265), (91, 21247), (97, 21187), (106, 21130), (108, 21124), (113, 21076),

Gene: SirVictor_29 Start: 21782, Stop: 20883, Start Num: 21
Candidate Starts for SirVictor_29:
(Start: 19 @21800 has 8 MA's), (Start: 21 @21782 has 31 MA's), (71, 21437), (77, 21416), (90, 21356), (95, 21308), (106, 21224), (107, 21221), (119, 21122),

Gene: SoilGremlin_31 Start: 21795, Stop: 20953, Start Num: 32
Candidate Starts for SoilGremlin_31:
(Start: 32 @21795 has 129 MA's), (47, 21681), (50, 21651), (72, 21462), (90, 21354), (95, 21303), (98, 21279), (106, 21225), (121, 21102),

Gene: SolidSnake_32 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for SolidSnake_32:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: SonOfLevi_30 Start: 21593, Stop: 20751, Start Num: 32
Candidate Starts for SonOfLevi_30:
(Start: 32 @21593 has 129 MA's), (47, 21479), (50, 21449), (72, 21260), (90, 21152), (95, 21101), (98, 21077), (106, 21023), (108, 21017), (121, 20900),

Gene: Sonali_99 Start: 61044, Stop: 60199, Start Num: 30
Candidate Starts for Sonali_99:
(24, 61053), (Start: 30 @61044 has 1 MA's), (Start: 40 @60981 has 10 MA's), (48, 60906), (49, 60903), (73, 60696), (81, 60645), (110, 60459), (115, 60414), (130, 60288),

Gene: Soror1_30 Start: 21878, Stop: 20991, Start Num: 32
Candidate Starts for Soror1_30:
(Start: 32 @21878 has 129 MA's), (79, 21521), (90, 21461), (92, 21440), (95, 21407), (106, 21329), (110, 21308),

Gene: Sparcetus_41 Start: 25633, Stop: 26499, Start Num: 28
Candidate Starts for Sparcetus_41:
(3, 25432), (11, 25540), (16, 25591), (Start: 28 @25633 has 7 MA's), (38, 25684), (71, 25978), (90, 26065), (95, 26113), (115, 26266), (116, 26272), (125, 26386), (128, 26404),

Gene: Stanktossa_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for Stanktossa_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: StingRay_30 Start: 21608, Stop: 20766, Start Num: 32
Candidate Starts for StingRay_30:
(Start: 32 @21608 has 129 MA's), (47, 21494), (50, 21464), (72, 21275), (90, 21167), (95, 21116), (98, 21092), (106, 21038), (121, 20915),

Gene: StirfryIV_30 Start: 21598, Stop: 20756, Start Num: 32
Candidate Starts for StirfryIV_30:
(Start: 32 @21598 has 129 MA's), (47, 21484), (50, 21454), (72, 21265), (90, 21157), (95, 21106), (98, 21082), (106, 21028), (108, 21022), (121, 20905),

Gene: Stormbreaker8_30 Start: 21869, Stop: 20982, Start Num: 32
Candidate Starts for Stormbreaker8_30:
(Start: 32 @21869 has 129 MA's), (79, 21512), (90, 21452), (92, 21431), (95, 21398), (106, 21320), (110, 21299),

Gene: Strathdee_31 Start: 21797, Stop: 20955, Start Num: 32
Candidate Starts for Strathdee_31:
(Start: 32 @21797 has 129 MA's), (47, 21683), (50, 21653), (72, 21464), (90, 21356), (95, 21305), (98, 21281), (106, 21227), (108, 21221), (121, 21104),

Gene: Sunshine23_100 Start: 60790, Stop: 60005, Start Num: 40
Candidate Starts for Sunshine23_100:

(24, 60862), (Start: 30 @60853 has 1 MA's), (Start: 40 @60790 has 10 MA's), (49, 60712), (53, 60673), (73, 60505), (81, 60454), (110, 60265), (115, 60220), (130, 60094),

Gene: Superfresh_31 Start: 21784, Stop: 20942, Start Num: 32
Candidate Starts for Superfresh_31:
(Start: 32 @21784 has 129 MA's), (47, 21670), (50, 21640), (72, 21451), (90, 21343), (95, 21292), (98, 21268), (106, 21214), (121, 21091),

Gene: Symere_30 Start: 21588, Stop: 20746, Start Num: 32
Candidate Starts for Symere_30:
(Start: 32 @21588 has 129 MA's), (47, 21474), (50, 21444), (72, 21255), (90, 21147), (95, 21096), (98, 21072), (106, 21018), (121, 20895),

Gene: TatarkaPM_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for TatarkaPM_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: Teagan_31 Start: 21792, Stop: 20950, Start Num: 32
Candidate Starts for Teagan_31:
(Start: 32 @21792 has 129 MA's), (47, 21678), (50, 21648), (72, 21459), (90, 21351), (95, 21300), (98, 21276), (106, 21222), (121, 21099),

Gene: TeddyBear_30 Start: 21611, Stop: 20769, Start Num: 32
Candidate Starts for TeddyBear_30:
(Start: 32 @21611 has 129 MA's), (47, 21497), (50, 21467), (72, 21278), (90, 21170), (95, 21119), (98, 21095), (106, 21041), (108, 21035), (121, 20918),

Gene: Tenda_30 Start: 21609, Stop: 20767, Start Num: 32
Candidate Starts for Tenda_30:
(Start: 32 @21609 has 129 MA's), (47, 21495), (50, 21465), (72, 21276), (90, 21168), (95, 21117), (98, 21093), (106, 21039), (108, 21033), (121, 20916),

Gene: Theresita_50 Start: 33880, Stop: 33122, Start Num: 43
Candidate Starts for Theresita_50:
(Start: 43 @33880 has 1 MA's), (59, 33712), (78, 33574), (89, 33514), (113, 33319), (115, 33307), (118, 33277), (131, 33208), (134, 33193),

Gene: Thompsone_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Thompsone_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (108, 21220), (121, 21103),

Gene: Thorongil_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Thorongil_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (121, 21103),

Gene: TinSulphur_31 Start: 21798, Stop: 20956, Start Num: 32
Candidate Starts for TinSulphur_31:
(Start: 32 @21798 has 129 MA's), (47, 21684), (50, 21654), (72, 21465), (90, 21357), (95, 21306), (98, 21282), (106, 21228), (108, 21222), (121, 21105),

Gene: TinyMiny_41 Start: 25652, Stop: 26518, Start Num: 28
Candidate Starts for TinyMiny_41:
(3, 25451), (11, 25559), (16, 25610), (Start: 28 @25652 has 7 MA's), (38, 25703), (71, 25997), (90, 26084), (95, 26132), (115, 26285), (116, 26291), (125, 26405), (128, 26423),

Gene: Tinyman4_31 Start: 20713, Stop: 19856, Start Num: 21
Candidate Starts for Tinyman4_31:
(Start: 19 @20731 has 8 MA's), (Start: 21 @20713 has 31 MA's), (50, 20551), (52, 20527), (57, 20479), (66, 20419), (77, 20377), (80, 20362), (90, 20317), (95, 20266), (106, 20182), (108, 20176), (111, 20149), (118, 20086),

Gene: Velene_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Velene_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (121, 21103),

Gene: Vispistious_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for Vispistious_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (121, 21103),

Gene: WestPM_29 Start: 20570, Stop: 19713, Start Num: 21
Candidate Starts for WestPM_29:
(Start: 19 @20588 has 8 MA's), (Start: 21 @20570 has 31 MA's), (50, 20408), (57, 20336), (66, 20276), (77, 20234), (80, 20219), (90, 20174), (95, 20123), (106, 20039), (108, 20033), (111, 20006), (115, 19973), (118, 19943),

Gene: WildNOut_31 Start: 21796, Stop: 20954, Start Num: 32
Candidate Starts for WildNOut_31:
(Start: 32 @21796 has 129 MA's), (47, 21682), (50, 21652), (72, 21463), (90, 21355), (95, 21304), (98, 21280), (106, 21226), (121, 21103),

Gene: Winzigespinne_30 Start: 21597, Stop: 20755, Start Num: 32
Candidate Starts for Winzigespinne_30:
(Start: 32 @21597 has 129 MA's), (47, 21483), (50, 21453), (72, 21264), (90, 21156), (95, 21105), (98, 21081), (106, 21027), (108, 21021), (121, 20904),

Gene: Xebius_30 Start: 21835, Stop: 20984, Start Num: 21
Candidate Starts for Xebius_30:
(Start: 19 @21853 has 8 MA's), (Start: 21 @21835 has 31 MA's), (62, 21550), (68, 21496), (90, 21397), (95, 21349), (96, 21346), (97, 21328), (106, 21265), (108, 21259), (113, 21211), (118, 21169), (126, 21094), (135, 21031),

Gene: YuuY_29 Start: 21987, Stop: 21088, Start Num: 21
Candidate Starts for YuuY_29:
(Start: 21 @21987 has 31 MA's), (68, 21648), (77, 21618), (90, 21546), (97, 21477), (107, 21411), (108, 21408), (118, 21318),

Gene: Zada_31 Start: 21777, Stop: 20935, Start Num: 32
Candidate Starts for Zada_31:
(Start: 32 @21777 has 129 MA's), (47, 21663), (50, 21633), (72, 21444), (90, 21336), (95, 21285), (98, 21261), (106, 21207), (121, 21084),

Gene: Zenitsu_30 Start: 21862, Stop: 21011, Start Num: 21
Candidate Starts for Zenitsu_30:
(Start: 19 @21880 has 8 MA's), (Start: 21 @21862 has 31 MA's), (62, 21577), (68, 21523), (90, 21424), (95, 21376), (96, 21373), (97, 21355), (106, 21292), (108, 21286), (113, 21238), (118, 21196), (126, 21121), (135, 21058),

Gene: Zeta1847_49 Start: 35401, Stop: 36153, Start Num: 44
Candidate Starts for Zeta1847_49:
(Start: 44 @35401 has 1 MA's), (Start: 45 @35416 has 3 MA's), (88, 35752),