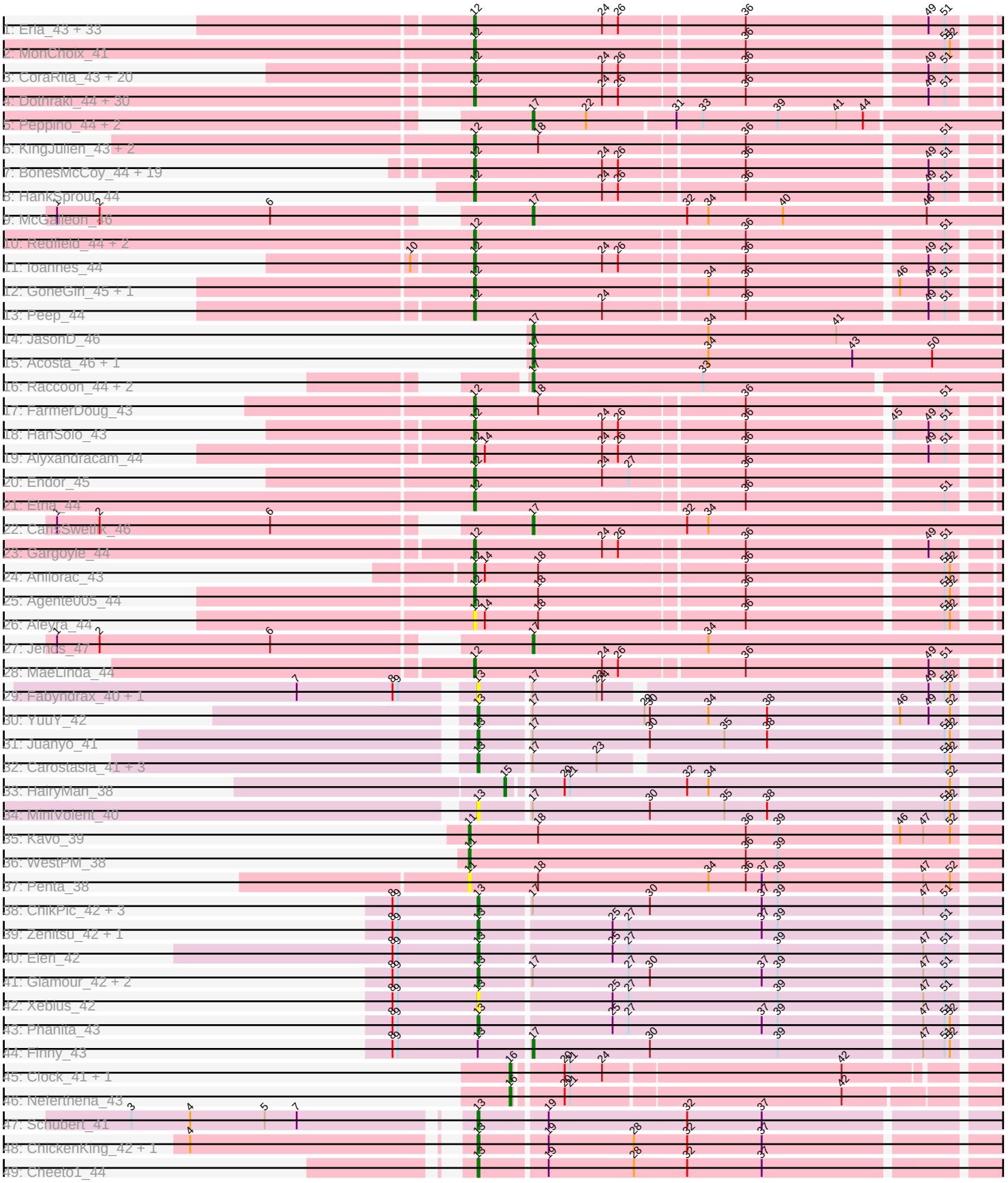
Pham 345428


1: Ella_43 + 33
2: MonCholx_41
3: CoraRita_43 + 20
4: Dothraki_44 + 30
5: Peppino_44 + 2
6: KingJulien_43 + 2
7: BonesMcCoy_44 + 19
8: HankSprout_44
9: McGalleon_46
10: Redfield_44 + 2
11: Ioannes_44
12: GoneGirl_45 + 1
13: Peep_44
14: JasonD_46
15: Acosta_46 + 1
16: Raccoon_44 + 2
17: FarmerDoug_43
18: HanSolo_43
19: Alyxandracam_44
20: Endor_45
21: Etna_44
22: CamSwetnk_46
23: Gargoyle_44
24: Amilorac_43
25: Agente005_44
26: Aleyra_44
27: Jends_47
28: MaeLinda_44
29: Fabyndrax_40 + 1
30: YuuY_42
31: Juanyo_41
32: Carostasia_41 + 3
33: HairyMan_38
34: MiniVolent_40
35: Kavo_39
36: WestPM_38
37: Penta_38
38: ChikPic_42 + 3
39: Zenitsu_42 + 1
40: Eleri_42
41: Glamour_42 + 2
42: Xebius_42
43: Phanita_43
44: Finny_43
45: Clock_41 + 1
46: Nefertnena_43
47: Schubert_41
48: ChickenKing_42 + 1
49: Cheeto1_44

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 345428 Report

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

Pham number 345428 has 173 members, 13 are drafts.

Phages represented in each track:
• Track 1 : Erla_43, Raptor_44, Aubergine_43, Garey24_44, StingRay_43, Kale_43, Renzie_44, Winzigespinne_43, ManRay_43, Papafritta_43, TeddyBear_43, Klimt_44, Baines_43, Pocket_43, Dave_44, Bonino_43, Chamuel_43, Asta_43, Nattles_43, SonOfLevi_44, Gershwin_43, Superfresh_44, Espinosa_43, KellyGreen_45, Riyhil_44, Calix_43, Christoph_43, RosieMae_43, Antoinette_44, Gelo_43, Etta_43, Oats_43, Tenda_43, Gubbabump_43
• Track 2 : MonChoix_41
• Track 3 : CoraRita_43, Kouch_44, Greys_44, Jerbirus_45, Thorongil_44, StirfryIV_43, Benjalauren_44, Duocatuli_43, Exploradora_43, Rog141_43, AranulaLuti_43, Ilzat_43, KannH_43, JeriBeth_43, Clancy_43, Symere_43, HungryHenry_43, Sedgewig_43, Janus167_43, Chako_43, JasperRussell_43
• Track 4 : Dothraki_44, NickSell_44, Martin_45, Kurt1_44, Bandik_44, TatarkaPM_44, MillyPhilly_44, SJay_44, BeautPeep30_44, SoilGremlin_45, Inventa_44, SolidSnake_46, Rapheph_44, Robinson_44, ParleG_44, OldNelly_45, Stanktossa_44, Phireproof_44, Delphidian_44, Merida02_46, Phiderman_44, MrWorldwide_44, Zada_45, AlexAdler_44, Nagem_44, Phriends_44, Byron23_45, Pherferi_44, Shee_44, PhredFlintston_44, TinSulphur_45
• Track 5 : Peppino_44, Balsa_43, PhillyPhantom_44
• Track 6 : KingJulien_43, Stormbreaker8_43, Soror1_43
• Track 7 : BonesMcCoy_44, Strathdee_44, Vispistious_44, BigRedClifford_44, Oxtober96_45, Convict_44, Thompsone_44, WildNOut_44, Blage_44, Knox_44, AxiPup_44, Teagan_44, Figueroism_44, Ludgate_44, PuppyEggo_44, GoingMerry_44, Lovelyunicorn_44, Den3_44, ShaiHulud_44, Velene_44
• Track 8 : HankSprout_44
• Track 9 : McGalleon_46
• Track 10 : Redfield_44, BeeBee8_45, Schnapsidee_44
• Track 11 : Ioannes_44
• Track 12 : GoneGirl_45, GardenB_44
• Track 13 : Peep_44
• Track 14 : JasonD_46
• Track 15 : Acosta_46, HavenFinLeoSun_46
• Track 16 : Raccoon_44, Hamlet_44, Leafus_44
• Track 17 : FarmerDoug_43
• Track 18 : HanSolo_43
• Track 19 : Alyxandracam_44
• Track 20 : Endor_45
• Track 21 : Etna_44

• Track 22 : CarisSwetlik_46
• Track 23 : Gargoyle_44
• Track 24 : Anilorac_43
• Track 25 : Agente005_44
• Track 26 : Aleyra_44
• Track 27 : Jenos_47
• Track 28 : MaeLinda_44
• Track 29 : Fabyndrax_40, Cidela_40
• Track 30 : YuuY_42
• Track 31 : Juanyo_41
• Track 32 : Carostasia_41, Nucci_41, Quartz_42, Mandalorian_41
• Track 33 : HairyMan_38
• Track 34 : MiniVolent_40
• Track 35 : Kavo_39
• Track 36 : WestPM_38
• Track 37 : Penta_38
• Track 38 : ChikPic_42, Orpington_42, Shamu_43, Saratos_42
• Track 39 : Zenitsu_42, MCubed_42
• Track 40 : Eleri_42
• Track 41 : Glamour_42, ColaCorta_42, Andromedas_42
• Track 42 : Xebius_42
• Track 43 : Phanita_43
• Track 44 : Finny_43
• Track 45 : Clock_41, Nebulous_40
• Track 46 : Neferthena_43
• Track 47 : Schubert_41
• Track 48 : ChickenKing_42, GaeCeo_44
• Track 49 : Cheeto1_44

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

The start number called the most often in the published annotations is 12, it was called in 122 of the 160 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Agente005_44, AlexAdler_44, Aleyra_44, Alyxandracam_44, Anilorac_43, Antoinette_44, AranulaLuti_43, Asta_43, Aubergine_43, AxiPup_44, Baines_43, Bandik_44, BeautPeep30_44, BeeBee8_45, Benjalauren_44, BigRedClifford_44, Blage_44, BonesMcCoy_44, Bonino_43, Byron23_45, Calix_43, Chako_43, Chamuel_43, Christoph_43, Clancy_43, Convict_44, CoraRita_43, Dave_44, Delphidian_44, Den3_44, Dothraki_44, Duocatuli_43, Endor_45, Erla_43, Espinosa_43, Etna_44, Etta_43, Exploradora_43, FarmerDoug_43, Figueroism_44, GardenB_44, Garey24_44, Gargoyle_44, Gelo_43, Gershwin_43, GoingMerry_44, GoneGirl_45, Greys_44, Gubbabump_43, HanSolo_43, HankSprout_44, HungryHenry_43, Ilzat_43, Inventa_44, Ioannes_44, Janus167_43, JasperRussell_43, Jerbirus_45, JeriBeth_43, Kale_43, KannH_43, KellyGreen_45, KingJulien_43, Klimt_44, Knox_44, Kouch_44, Kurt1_44, Lovelyunicorn_44, Ludgate_44, MaeLinda_44, ManRay_43, Martin_45, Merida02_46, MillyPhilly_44, MonChoix_41, MrWorldwide_44, Nagem_44, Nattles_43, NickSell_44, Oats_43, OldNelly_45, Oxtober96_45, Papafritta_43, ParleG_44, Peep_44, Pherferi_44,

Phiderman_44, Phireproof_44, PhredFlintston_44, Phriends_44, Pocket_43, PuppyEggo_44, Rapheph_44, Raptor_44, Redfield_44, Renzie_44, Riyhil_44, Robinson_44, Rog141_43, RosieMae_43, SJay_44, Schnapsidee_44, Sedgewig_43, ShaiHulud_44, Shee_44, SoilGremlin_45, SolidSnake_46, SonOfLevi_44, Soror1_43, Stanktossa_44, StingRay_43, StirfryIV_43, Stormbreaker8_43, Strathdee_44, Superfresh_44, Symere_43, TatarkaPM_44, Teagan_44, TeddyBear_43, Tenda_43, Thompsone_44, Thorongil_44, TinSulphur_45, Velene_44, Vispistious_44, WildNOut_44, Winzigespinne_43, Zada_45,

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

Genes that do not have the "Most Annotated" start:
• Acosta_46, Andromedas_42, Balsa_43, CarisSwetlik_46, Carostasia_41, Cheeto1_44, ChickenKing_42, ChikPic_42, Cidela_40, Clock_41, ColaCorta_42, Eleri_42, Fabyndrax_40, Finny_43, GaeCeo_44, Glamour_42, HairyMan_38, Hamlet_44, HavenFinLeoSun_46, JasonD_46, Jenos_47, Juanyo_41, Kavo_39, Leafus_44, MCubed_42, Mandalorian_41, McGalleon_46, MiniVolent_40, Nebulous_40, Neferthena_43, Nucci_41, Orpington_42, Penta_38, Peppino_44, Phanita_43, PhillyPhantom_44, Quartz_42, Raccoon_44, Saratos_42, Schubert_41, Shamu_43, WestPM_38, Xebius_42, YuuY_42, Zenitsu_42,

Summary by start number:

Start 11:
• Found in 3 of 173 (1.7%) of genes in pham
• Manual Annotations of this start: 2 of 160
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kavo_39 (EA11), Penta_38 (EA11), WestPM_38 (EA11),

Start 12:
• Found in 128 of 173 (74.0%) of genes in pham
• Manual Annotations of this start: 122 of 160
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Agente005_44 (EA1), AlexAdler_44 (EA1), Aleyra_44 (EA1), Alyxandracam_44 (EA1), Anilorac_43 (EA1), Antoinette_44 (EA1), AranulaLuti_43 (EA1), Asta_43 (EA1), Aubergine_43 (EA1), AxiPup_44 (EA1), Baines_43 (EA1), Bandik_44 (EA1), BeautPeep30_44 (EA1), BeeBee8_45 (EA1), Benjalauren_44 (EA1), BigRedClifford_44 (EA1), Blage_44 (EA1), BonesMcCoy_44 (EA1), Bonino_43 (EA1), Byron23_45 (EA1), Calix_43 (EA1), Chako_43 (EA1), Chamuel_43 (EA1), Christoph_43 (EA1), Clancy_43 (EA1), Convict_44 (EA1), CoraRita_43 (EA1), Dave_44 (EA1), Delphidian_44 (EA1), Den3_44 (EA1), Dothraki_44 (EA1), Duocatuli_43 (EA1), Endor_45 (EA1), Erla_43 (EA1), Espinosa_43 (EA1), Etna_44 (EA1), Etta_43 (EA1), Exploradora_43 (EA1), FarmerDoug_43 (EA1), Figueroism_44 (EA1), GardenB_44 (EA1), Garey24_44 (EA1), Gargoyle_44 (EA1), Gelo_43 (EA1), Gershwin_43 (EA1), GoingMerry_44 (EA1), GoneGirl_45 (EA1), Greys_44 (EA1), Gubbabump_43 (EA1), HanSolo_43 (EA1), HankSprout_44 (EA1), HungryHenry_43 (EA1), Ilzat_43 (EA1), Inventa_44 (EA1), Ioannes_44 (EA1), Janus167_43 (EA1), JasperRussell_43 (EA1), Jerbirus_45 (EA1), JeriBeth_43 (EA1), Kale_43 (EA1), KannH_43 (EA1), KellyGreen_45 (EA1), KingJulien_43 (EA1), Klimt_44 (EA1), Knox_44 (EA1), Kouch_44 (EA1), Kurt1_44 (EA1), Lovelyunicorn_44 (EA1), Ludgate_44 (EA1), MaeLinda_44 (EA1), ManRay_43

(EA1), Martin_45 (EA1), Merida02_46 (EA1), MillyPhilly_44 (EA1), MonChoix_41 (EA1), MrWorldwide_44 (EA1), Nagem_44 (EA1), Nattles_43 (EA1), NickSell_44 (EA1), Oats_43 (EA1), OldNelly_45 (EA1), Oxtober96_45 (EA1), Papafritta_43 (EA1), ParleG_44 (EA1), Peep_44 (EA1), Pherferi_44 (EA1), Phiderman_44 (EA1), Phireproof_44 (EA1), PhredFlintston_44 (EA1), Phriends_44 (EA1), Pocket_43 (EA1), PuppyEggo_44 (EA1), Rapheph_44 (EA1), Raptor_44 (EA1), Redfield_44 (EA1), Renzie_44 (EA1), Riyhil_44 (EA1), Robinson_44 (EA1), Rog141_43 (EA1), RosieMae_43 (EA1), SJay_44 (EA1), Schnapsidee_44 (EA1), Sedgewig_43 (EA1), ShaiHulud_44 (EA1), Shee_44 (EA1), SoilGremlin_45 (EA1), SolidSnake_46 (EA1), SonOfLevi_44 (EA1), Soror1_43 (EA1), Stanktossa_44 (EA1), StingRay_43 (EA1), StirfryIV_43 (EA1), Stormbreaker8_43 (EA1), Strathdee_44 (EA1), Superfresh_44 (EA1), Symere_43 (EA1), TatarkaPM_44 (EA1), Teagan_44 (EA1), TeddyBear_43 (EA1), Tenda_43 (EA1), Thompsone_44 (EA1), Thorongil_44 (EA1), TinSulphur_45 (EA1), Velene_44 (EA1), Vispistious_44 (EA1), WildNOut_44 (EA1), Winzigespinne_43 (EA1), Zada_45 (EA1),

Start 13:
• Found in 26 of 173 (15.0%) of genes in pham
• Manual Annotations of this start: 21 of 160
• Called 96.2% of time when present
• Phage (with cluster) where this start called: Andromedas_42 (EA2), Carostasia_41 (EA10), Cheeto1_44 (EA9), ChickenKing_42 (EA9), ChikPic_42 (EA2), Cidela_40 (EA10), ColaCorta_42 (EA2), Eleri_42 (EA2), Fabyndrax_40 (EA10), GaeCeo_44 (EA9), Glamour_42 (EA2), Juanyo_41 (EA10), MCubed_42 (EA2), Mandalorian_41 (EA10), MiniVolent_40 (EA10), Nucci_41 (EA10), Orpington_42 (EA2), Phanita_43 (EA2), Quartz_42 (EA10), Saratos_42 (EA2), Schubert_41 (EA8), Shamu_43 (EA2), Xebius_42 (EA2), YuuY_42 (EA10), Zenitsu_42 (EA2),

Start 15:
• Found in 1 of 173 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 160
• Called 100.0% of time when present
• Phage (with cluster) where this start called: HairyMan_38 (EA10),

Start 16:
• Found in 3 of 173 (1.7%) of genes in pham
• Manual Annotations of this start: 3 of 160
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Clock_41 (EA5), Nebulous_40 (EA5), Neferthena_43 (EA5),

Start 17:
• Found in 29 of 173 (16.8%) of genes in pham
• Manual Annotations of this start: 11 of 160
• Called 44.8% of time when present
• Phage (with cluster) where this start called: Acosta_46 (EA1), Balsa_43 (EA1), CarisSwetlik_46 (EA1), Finny_43 (EA2), Hamlet_44 (EA1), HavenFinLeoSun_46 (EA1), JasonD_46 (EA1), Jenos_47 (EA1), Leafus_44 (EA1), McGalleon_46 (EA1), Peppino_44 (EA1), PhillyPhantom_44 (EA1), Raccoon_44 (EA1),

Summary by clusters:

There are 7 clusters represented in this pham: EA11, EA10, EA9, EA8, EA1, EA2, EA5,

Info for manual annotations of cluster EA1:
•Start number 12 was manually annotated 122 times for cluster EA1.
•Start number 17 was manually annotated 10 times for cluster EA1.

Info for manual annotations of cluster EA10:
•Start number 13 was manually annotated 6 times for cluster EA10.
•Start number 15 was manually annotated 1 time for cluster EA10.

Info for manual annotations of cluster EA11:
•Start number 11 was manually annotated 2 times for cluster EA11.

Info for manual annotations of cluster EA2:
•Start number 13 was manually annotated 11 times for cluster EA2.
•Start number 17 was manually annotated 1 time for cluster EA2.

Info for manual annotations of cluster EA5:
•Start number 16 was manually annotated 3 times for cluster EA5.

Info for manual annotations of cluster EA8:
•Start number 13 was manually annotated 1 time for cluster EA8.

Info for manual annotations of cluster EA9:
•Start number 13 was manually annotated 3 times for cluster EA9.

Gene Information:

Gene: Acosta_46 Start: 32413, Stop: 32150, Start Num: 17
Candidate Starts for Acosta_46:
(Start: 17 @32413 has 11 MA's), (34, 32314), (43, 32233), (50, 32188),

Gene: Agente005_44 Start: 32146, Stop: 31868, Start Num: 12
Candidate Starts for Agente005_44:
(Start: 12 @32146 has 122 MA's), (18, 32110), (36, 31999), (51, 31894), (52, 31891),

Gene: AlexAdler_44 Start: 32273, Stop: 31995, Start Num: 12
Candidate Starts for AlexAdler_44:
(Start: 12 @32273 has 122 MA's), (24, 32201), (26, 32192), (36, 32126), (49, 32030), (51, 32021),

Gene: Aleyra_44 Start: 32151, Stop: 31873, Start Num: 12
Candidate Starts for Aleyra_44:
(Start: 12 @32151 has 122 MA's), (14, 32145), (18, 32115), (36, 32004), (51, 31899), (52, 31896),

Gene: Alyxandracam_44 Start: 32283, Stop: 32005, Start Num: 12
Candidate Starts for Alyxandracam_44:
(Start: 12 @32283 has 122 MA's), (14, 32277), (24, 32211), (26, 32202), (36, 32136), (49, 32040), (51, 32031),

Gene: Andromedas_42 Start: 31517, Stop: 31239, Start Num: 13

Candidate Starts for Andromedas_42:
(8, 31565), (9, 31562), (Start: 13 @31517 has 21 MA's), (Start: 17 @31490 has 11 MA's), (27, 31436), (30, 31424), (37, 31361), (39, 31352), (47, 31277), (51, 31265),

Gene: Anilorac_43 Start: 32091, Stop: 31813, Start Num: 12
Candidate Starts for Anilorac_43:
(Start: 12 @32091 has 122 MA's), (14, 32085), (18, 32055), (36, 31944), (51, 31839), (52, 31836),

Gene: Antoinette_44 Start: 32273, Stop: 31995, Start Num: 12
Candidate Starts for Antoinette_44:
(Start: 12 @32273 has 122 MA's), (24, 32201), (26, 32192), (36, 32126), (49, 32030), (51, 32021),

Gene: AranulaLuti_43 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for AranulaLuti_43:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: Asta_43 Start: 31980, Stop: 31702, Start Num: 12
Candidate Starts for Asta_43:
(Start: 12 @31980 has 122 MA's), (24, 31908), (26, 31899), (36, 31833), (49, 31737), (51, 31728),

Gene: Aubergine_43 Start: 31980, Stop: 31702, Start Num: 12
Candidate Starts for Aubergine_43:
(Start: 12 @31980 has 122 MA's), (24, 31908), (26, 31899), (36, 31833), (49, 31737), (51, 31728),

Gene: AxiPup_44 Start: 32252, Stop: 31974, Start Num: 12
Candidate Starts for AxiPup_44:
(Start: 12 @32252 has 122 MA's), (24, 32180), (26, 32171), (36, 32105), (49, 32009), (51, 32000),

Gene: Baines_43 Start: 31973, Stop: 31695, Start Num: 12
Candidate Starts for Baines_43:
(Start: 12 @31973 has 122 MA's), (24, 31901), (26, 31892), (36, 31826), (49, 31730), (51, 31721),

Gene: Balsa_43 Start: 32133, Stop: 31876, Start Num: 17
Candidate Starts for Balsa_43:
(Start: 17 @32133 has 11 MA's), (22, 32103), (31, 32055), (33, 32040), (39, 31998), (41, 31965), (44, 31950),

Gene: Bandik_44 Start: 32278, Stop: 32000, Start Num: 12
Candidate Starts for Bandik_44:
(Start: 12 @32278 has 122 MA's), (24, 32206), (26, 32197), (36, 32131), (49, 32035), (51, 32026),

Gene: BeautPeep30_44 Start: 32284, Stop: 32006, Start Num: 12
Candidate Starts for BeautPeep30_44:
(Start: 12 @32284 has 122 MA's), (24, 32212), (26, 32203), (36, 32137), (49, 32041), (51, 32032),

Gene: BeeBee8_45 Start: 32304, Stop: 32026, Start Num: 12
Candidate Starts for BeeBee8_45:
(Start: 12 @32304 has 122 MA's), (36, 32157), (51, 32052),

Gene: Benjalauren_44 Start: 31983, Stop: 31705, Start Num: 12
Candidate Starts for Benjalauren_44:
(Start: 12 @31983 has 122 MA's), (24, 31911), (26, 31902), (36, 31836), (49, 31740), (51, 31731),

Gene: BigRedClifford_44 Start: 32282, Stop: 32004, Start Num: 12
Candidate Starts for BigRedClifford_44:
(Start: 12 @32282 has 122 MA's), (24, 32210), (26, 32201), (36, 32135), (49, 32039), (51, 32030),

Gene: Blage_44 Start: 32282, Stop: 32004, Start Num: 12
Candidate Starts for Blage_44:
(Start: 12 @32282 has 122 MA's), (24, 32210), (26, 32201), (36, 32135), (49, 32039), (51, 32030),

Gene: BonesMcCoy_44 Start: 32282, Stop: 32004, Start Num: 12
Candidate Starts for BonesMcCoy_44:
(Start: 12 @32282 has 122 MA's), (24, 32210), (26, 32201), (36, 32135), (49, 32039), (51, 32030),

Gene: Bonino_43 Start: 31959, Stop: 31681, Start Num: 12
Candidate Starts for Bonino_43:
(Start: 12 @31959 has 122 MA's), (24, 31887), (26, 31878), (36, 31812), (49, 31716), (51, 31707),

Gene: Byron23_45 Start: 32281, Stop: 32003, Start Num: 12
Candidate Starts for Byron23_45:
(Start: 12 @32281 has 122 MA's), (24, 32209), (26, 32200), (36, 32134), (49, 32038), (51, 32029),

Gene: Calix_43 Start: 31966, Stop: 31688, Start Num: 12
Candidate Starts for Calix_43:
(Start: 12 @31966 has 122 MA's), (24, 31894), (26, 31885), (36, 31819), (49, 31723), (51, 31714),

Gene: CarisSwetlik_46 Start: 32697, Stop: 32434, Start Num: 17
Candidate Starts for CarisSwetlik_46:
(1, 32937), (2, 32913), (6, 32817), (Start: 17 @32697 has 11 MA's), (32, 32610), (34, 32598),

Gene: Carostasia_41 Start: 31061, Stop: 30786, Start Num: 13
Candidate Starts for Carostasia_41:
(Start: 13 @31061 has 21 MA's), (Start: 17 @31034 has 11 MA's), (23, 30998), (51, 30818), (52, 30815),

Gene: Chako_43 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for Chako_43:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: Chamuel_43 Start: 31992, Stop: 31714, Start Num: 12
Candidate Starts for Chamuel_43:
(Start: 12 @31992 has 122 MA's), (24, 31920), (26, 31911), (36, 31845), (49, 31749), (51, 31740),

Gene: Cheeto1_44 Start: 31744, Stop: 31463, Start Num: 13
Candidate Starts for Cheeto1_44:
(Start: 13 @31744 has 21 MA's), (19, 31708), (28, 31660), (32, 31630), (37, 31588),

Gene: ChickenKing_42 Start: 31637, Stop: 31356, Start Num: 13
Candidate Starts for ChickenKing_42:
(4, 31778), (Start: 13 @31637 has 21 MA's), (19, 31601), (28, 31553), (32, 31523), (37, 31481),

Gene: ChikPic_42 Start: 31371, Stop: 31093, Start Num: 13
Candidate Starts for ChikPic_42:
(8, 31419), (9, 31416), (Start: 13 @31371 has 21 MA's), (Start: 17 @31344 has 11 MA's), (30, 31278), (37, 31215), (39, 31206), (47, 31131), (51, 31119),

Gene: Christoph_43 Start: 31979, Stop: 31701, Start Num: 12
Candidate Starts for Christoph_43:
(Start: 12 @31979 has 122 MA's), (24, 31907), (26, 31898), (36, 31832), (49, 31736), (51, 31727),

Gene: Cidela_40 Start: 32105, Stop: 31836, Start Num: 13
Candidate Starts for Cidela_40:
(7, 32195), (8, 32141), (9, 32138), (Start: 13 @32105 has 21 MA's), (Start: 17 @32078 has 11 MA's), (23, 32042), (24, 32039), (49, 31871), (51, 31862), (52, 31859),

Gene: Clancy_43 Start: 32012, Stop: 31734, Start Num: 12
Candidate Starts for Clancy_43:
(Start: 12 @32012 has 122 MA's), (24, 31940), (26, 31931), (36, 31865), (49, 31769), (51, 31760),

Gene: Clock_41 Start: 32201, Stop: 31950, Start Num: 16
Candidate Starts for Clock_41:
(Start: 16 @32201 has 3 MA's), (20, 32177), (21, 32174), (24, 32156), (42, 32027),

Gene: ColaCorta_42 Start: 31517, Stop: 31239, Start Num: 13
Candidate Starts for ColaCorta_42:
(8, 31565), (9, 31562), (Start: 13 @31517 has 21 MA's), (Start: 17 @31490 has 11 MA's), (27, 31436), (30, 31424), (37, 31361), (39, 31352), (47, 31277), (51, 31265),

Gene: Convict_44 Start: 32282, Stop: 32004, Start Num: 12
Candidate Starts for Convict_44:
(Start: 12 @32282 has 122 MA's), (24, 32210), (26, 32201), (36, 32135), (49, 32039), (51, 32030),

Gene: CoraRita_43 Start: 31982, Stop: 31704, Start Num: 12
Candidate Starts for CoraRita_43:
(Start: 12 @31982 has 122 MA's), (24, 31910), (26, 31901), (36, 31835), (49, 31739), (51, 31730),

Gene: Dave_44 Start: 32273, Stop: 31995, Start Num: 12
Candidate Starts for Dave_44:
(Start: 12 @32273 has 122 MA's), (24, 32201), (26, 32192), (36, 32126), (49, 32030), (51, 32021),

Gene: Delphidian_44 Start: 32281, Stop: 32003, Start Num: 12
Candidate Starts for Delphidian_44:
(Start: 12 @32281 has 122 MA's), (24, 32209), (26, 32200), (36, 32134), (49, 32038), (51, 32029),

Gene: Den3_44 Start: 32287, Stop: 32009, Start Num: 12
Candidate Starts for Den3_44:
(Start: 12 @32287 has 122 MA's), (24, 32215), (26, 32206), (36, 32140), (49, 32044), (51, 32035),

Gene: Dothraki_44 Start: 32281, Stop: 32003, Start Num: 12
Candidate Starts for Dothraki_44:
(Start: 12 @32281 has 122 MA's), (24, 32209), (26, 32200), (36, 32134), (49, 32038), (51, 32029),

Gene: Duocatuli_43 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for Duocatuli_43:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: Eleri_42 Start: 31361, Stop: 31083, Start Num: 13
Candidate Starts for Eleri_42:

(8, 31409), (9, 31406), (Start: 13 @31361 has 21 MA's), (25, 31289), (27, 31280), (39, 31196), (47, 31121), (51, 31109),

Gene: Endor_45 Start: 32376, Stop: 32098, Start Num: 12
Candidate Starts for Endor_45:
(Start: 12 @32376 has 122 MA's), (24, 32304), (27, 32289), (36, 32229),

Gene: Erla_43 Start: 31963, Stop: 31685, Start Num: 12
Candidate Starts for Erla_43:
(Start: 12 @31963 has 122 MA's), (24, 31891), (26, 31882), (36, 31816), (49, 31720), (51, 31711),

Gene: Espinosa_43 Start: 31978, Stop: 31700, Start Num: 12
Candidate Starts for Espinosa_43:
(Start: 12 @31978 has 122 MA's), (24, 31906), (26, 31897), (36, 31831), (49, 31735), (51, 31726),

Gene: Etna_44 Start: 32180, Stop: 31902, Start Num: 12
Candidate Starts for Etna_44:
(Start: 12 @32180 has 122 MA's), (36, 32033), (51, 31928),

Gene: Etta_43 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for Etta_43:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: Exploradora_43 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for Exploradora_43:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: Fabyndrax_40 Start: 32117, Stop: 31848, Start Num: 13
Candidate Starts for Fabyndrax_40:
(7, 32207), (8, 32153), (9, 32150), (Start: 13 @32117 has 21 MA's), (Start: 17 @32090 has 11 MA's), (23, 32054), (24, 32051), (49, 31883), (51, 31874), (52, 31871),

Gene: FarmerDoug_43 Start: 31886, Stop: 31608, Start Num: 12
Candidate Starts for FarmerDoug_43:
(Start: 12 @31886 has 122 MA's), (18, 31850), (36, 31739), (51, 31634),

Gene: Figueroism_44 Start: 32272, Stop: 31994, Start Num: 12
Candidate Starts for Figueroism_44:
(Start: 12 @32272 has 122 MA's), (24, 32200), (26, 32191), (36, 32125), (49, 32029), (51, 32020),

Gene: Finny_43 Start: 31328, Stop: 31077, Start Num: 17
Candidate Starts for Finny_43:
(8, 31403), (9, 31400), (Start: 13 @31355 has 21 MA's), (Start: 17 @31328 has 11 MA's), (30, 31262), (39, 31190), (47, 31115), (51, 31103), (52, 31100),

Gene: GaeCeo_44 Start: 31870, Stop: 31589, Start Num: 13
Candidate Starts for GaeCeo_44:
(4, 32011), (Start: 13 @31870 has 21 MA's), (19, 31834), (28, 31786), (32, 31756), (37, 31714),

Gene: GardenB_44 Start: 32121, Stop: 31843, Start Num: 12
Candidate Starts for GardenB_44:
(Start: 12 @32121 has 122 MA's), (34, 31995), (36, 31974), (46, 31893), (49, 31878), (51, 31869),

Gene: Garey24_44 Start: 31946, Stop: 31668, Start Num: 12
Candidate Starts for Garey24_44:
(Start: 12 @31946 has 122 MA's), (24, 31874), (26, 31865), (36, 31799), (49, 31703), (51, 31694),

Gene: Gargoyle_44 Start: 32287, Stop: 32009, Start Num: 12
Candidate Starts for Gargoyle_44:
(Start: 12 @32287 has 122 MA's), (24, 32215), (26, 32206), (36, 32140), (49, 32044), (51, 32035),

Gene: Gelo_43 Start: 31973, Stop: 31695, Start Num: 12
Candidate Starts for Gelo_43:
(Start: 12 @31973 has 122 MA's), (24, 31901), (26, 31892), (36, 31826), (49, 31730), (51, 31721),

Gene: Gershwin_43 Start: 31980, Stop: 31702, Start Num: 12
Candidate Starts for Gershwin_43:
(Start: 12 @31980 has 122 MA's), (24, 31908), (26, 31899), (36, 31833), (49, 31737), (51, 31728),

Gene: Glamour_42 Start: 31509, Stop: 31231, Start Num: 13
Candidate Starts for Glamour_42:
(8, 31557), (9, 31554), (Start: 13 @31509 has 21 MA's), (Start: 17 @31482 has 11 MA's), (27, 31428), (30, 31416), (37, 31353), (39, 31344), (47, 31269), (51, 31257),

Gene: GoingMerry_44 Start: 32265, Stop: 31987, Start Num: 12
Candidate Starts for GoingMerry_44:
(Start: 12 @32265 has 122 MA's), (24, 32193), (26, 32184), (36, 32118), (49, 32022), (51, 32013),

Gene: GoneGirl_45 Start: 32114, Stop: 31836, Start Num: 12
Candidate Starts for GoneGirl_45:
(Start: 12 @32114 has 122 MA's), (34, 31988), (36, 31967), (46, 31886), (49, 31871), (51, 31862),

Gene: Greys_44 Start: 32280, Stop: 32002, Start Num: 12
Candidate Starts for Greys_44:
(Start: 12 @32280 has 122 MA's), (24, 32208), (26, 32199), (36, 32133), (49, 32037), (51, 32028),

Gene: Gubbabump_43 Start: 31960, Stop: 31682, Start Num: 12
Candidate Starts for Gubbabump_43:
(Start: 12 @31960 has 122 MA's), (24, 31888), (26, 31879), (36, 31813), (49, 31717), (51, 31708),

Gene: HairyMan_38 Start: 30605, Stop: 30336, Start Num: 15
Candidate Starts for HairyMan_38:
(Start: 15 @30605 has 1 MA's), (20, 30578), (21, 30575), (32, 30509), (34, 30497), (52, 30362),

Gene: Hamlet_44 Start: 32123, Stop: 31866, Start Num: 17
Candidate Starts for Hamlet_44:
(Start: 17 @32123 has 11 MA's), (33, 32027),

Gene: HanSolo_43 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for HanSolo_43:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (45, 31742), (49, 31724), (51, 31715),

Gene: HankSprout_44 Start: 31847, Stop: 31569, Start Num: 12
Candidate Starts for HankSprout_44:
(Start: 12 @31847 has 122 MA's), (24, 31775), (26, 31766), (36, 31700), (49, 31604), (51, 31595),

Gene: HavenFinLeoSun_46 Start: 32360, Stop: 32097, Start Num: 17
Candidate Starts for HavenFinLeoSun_46:
(Start: 17 @32360 has 11 MA's), (34, 32261), (43, 32180), (50, 32135),

Gene: HungryHenry_43 Start: 31972, Stop: 31694, Start Num: 12
Candidate Starts for HungryHenry_43:
(Start: 12 @31972 has 122 MA's), (24, 31900), (26, 31891), (36, 31825), (49, 31729), (51, 31720),

Gene: Ilzat_43 Start: 31983, Stop: 31705, Start Num: 12
Candidate Starts for Ilzat_43:
(Start: 12 @31983 has 122 MA's), (24, 31911), (26, 31902), (36, 31836), (49, 31740), (51, 31731),

Gene: Inventa_44 Start: 32278, Stop: 32000, Start Num: 12
Candidate Starts for Inventa_44:
(Start: 12 @32278 has 122 MA's), (24, 32206), (26, 32197), (36, 32131), (49, 32035), (51, 32026),

Gene: Ioannes_44 Start: 32282, Stop: 32004, Start Num: 12
Candidate Starts for Ioannes_44:
(10, 32315), (Start: 12 @32282 has 122 MA's), (24, 32210), (26, 32201), (36, 32135), (49, 32039), (51, 32030),

Gene: Janus167_43 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for Janus167_43:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: JasonD_46 Start: 32341, Stop: 32078, Start Num: 17
Candidate Starts for JasonD_46:
(Start: 17 @32341 has 11 MA's), (34, 32242), (41, 32170),

Gene: JasperRussell_43 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for JasperRussell_43:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: Jenos_47 Start: 32980, Stop: 32717, Start Num: 17
Candidate Starts for Jenos_47:
(1, 33220), (2, 33196), (6, 33100), (Start: 17 @32980 has 11 MA's), (34, 32881),

Gene: Jerbirus_45 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for Jerbirus_45:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: JeriBeth_43 Start: 31830, Stop: 31552, Start Num: 12
Candidate Starts for JeriBeth_43:
(Start: 12 @31830 has 122 MA's), (24, 31758), (26, 31749), (36, 31683), (49, 31587), (51, 31578),

Gene: Juanyo_41 Start: 30992, Stop: 30714, Start Num: 13
Candidate Starts for Juanyo_41:
(Start: 13 @30992 has 21 MA's), (Start: 17 @30965 has 11 MA's), (30, 30899), (35, 30857), (38, 30833), (51, 30740), (52, 30737),

Gene: Kale_43 Start: 31982, Stop: 31704, Start Num: 12
Candidate Starts for Kale_43:

(Start: 12 @31982 has 122 MA's), (24, 31910), (26, 31901), (36, 31835), (49, 31739), (51, 31730),

Gene: KannH_43 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for KannH_43:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: Kavo_39 Start: 29602, Stop: 29312, Start Num: 11
Candidate Starts for Kavo_39:
(Start: 11 @29602 has 2 MA's), (18, 29563), (36, 29446), (39, 29428), (46, 29365), (47, 29353), (52, 29338),

Gene: KellyGreen_45 Start: 31964, Stop: 31686, Start Num: 12
Candidate Starts for KellyGreen_45:
(Start: 12 @31964 has 122 MA's), (24, 31892), (26, 31883), (36, 31817), (49, 31721), (51, 31712),

Gene: KingJulien_43 Start: 32016, Stop: 31738, Start Num: 12
Candidate Starts for KingJulien_43:
(Start: 12 @32016 has 122 MA's), (18, 31980), (36, 31869), (51, 31764),

Gene: Klimt_44 Start: 31998, Stop: 31720, Start Num: 12
Candidate Starts for Klimt_44:
(Start: 12 @31998 has 122 MA's), (24, 31926), (26, 31917), (36, 31851), (49, 31755), (51, 31746),

Gene: Knox_44 Start: 32282, Stop: 32004, Start Num: 12
Candidate Starts for Knox_44:
(Start: 12 @32282 has 122 MA's), (24, 32210), (26, 32201), (36, 32135), (49, 32039), (51, 32030),

Gene: Kouch_44 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for Kouch_44:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: Kurt1_44 Start: 32278, Stop: 32000, Start Num: 12
Candidate Starts for Kurt1_44:
(Start: 12 @32278 has 122 MA's), (24, 32206), (26, 32197), (36, 32131), (49, 32035), (51, 32026),

Gene: Leafus_44 Start: 32277, Stop: 32020, Start Num: 17
Candidate Starts for Leafus_44:
(Start: 17 @32277 has 11 MA's), (33, 32181),

Gene: Lovelyunicorn_44 Start: 32283, Stop: 32005, Start Num: 12
Candidate Starts for Lovelyunicorn_44:
(Start: 12 @32283 has 122 MA's), (24, 32211), (26, 32202), (36, 32136), (49, 32040), (51, 32031),

Gene: Ludgate_44 Start: 32281, Stop: 32003, Start Num: 12
Candidate Starts for Ludgate_44:
(Start: 12 @32281 has 122 MA's), (24, 32209), (26, 32200), (36, 32134), (49, 32038), (51, 32029),

Gene: MCubed_42 Start: 31386, Stop: 31108, Start Num: 13
Candidate Starts for MCubed_42:
(8, 31434), (9, 31431), (Start: 13 @31386 has 21 MA's), (25, 31314), (27, 31305), (37, 31230), (39, 31221), (51, 31134),

Gene: MaeLinda_44 Start: 32282, Stop: 32004, Start Num: 12

Candidate Starts for MaeLinda_44:
(Start: 12 @32282 has 122 MA's), (24, 32210), (26, 32201), (36, 32135), (49, 32039), (51, 32030),

Gene: ManRay_43 Start: 31980, Stop: 31702, Start Num: 12
Candidate Starts for ManRay_43:
(Start: 12 @31980 has 122 MA's), (24, 31908), (26, 31899), (36, 31833), (49, 31737), (51, 31728),

Gene: Mandalorian_41 Start: 31071, Stop: 30796, Start Num: 13
Candidate Starts for Mandalorian_41:
(Start: 13 @31071 has 21 MA's), (Start: 17 @31044 has 11 MA's), (23, 31008), (51, 30828), (52, 30825),

Gene: Martin_45 Start: 32287, Stop: 32009, Start Num: 12
Candidate Starts for Martin_45:
(Start: 12 @32287 has 122 MA's), (24, 32215), (26, 32206), (36, 32140), (49, 32044), (51, 32035),

Gene: McGalleon_46 Start: 33191, Stop: 32928, Start Num: 17
Candidate Starts for McGalleon_46:
(1, 33431), (2, 33407), (6, 33311), (Start: 17 @33191 has 11 MA's), (32, 33104), (34, 33092), (40, 33050), (48, 32969),

Gene: Merida02_46 Start: 32281, Stop: 32003, Start Num: 12
Candidate Starts for Merida02_46:
(Start: 12 @32281 has 122 MA's), (24, 32209), (26, 32200), (36, 32134), (49, 32038), (51, 32029),

Gene: MillyPhilly_44 Start: 32275, Stop: 31997, Start Num: 12
Candidate Starts for MillyPhilly_44:
(Start: 12 @32275 has 122 MA's), (24, 32203), (26, 32194), (36, 32128), (49, 32032), (51, 32023),

Gene: MiniVolent_40 Start: 30954, Stop: 30676, Start Num: 13
Candidate Starts for MiniVolent_40:
(Start: 13 @30954 has 21 MA's), (Start: 17 @30927 has 11 MA's), (30, 30861), (35, 30819), (38, 30795), (51, 30702), (52, 30699),

Gene: MonChoix_41 Start: 31728, Stop: 31450, Start Num: 12
Candidate Starts for MonChoix_41:
(Start: 12 @31728 has 122 MA's), (36, 31581), (51, 31476), (52, 31473),

Gene: MrWorldwide_44 Start: 32285, Stop: 32007, Start Num: 12
Candidate Starts for MrWorldwide_44:
(Start: 12 @32285 has 122 MA's), (24, 32213), (26, 32204), (36, 32138), (49, 32042), (51, 32033),

Gene: Nagem_44 Start: 32278, Stop: 32000, Start Num: 12
Candidate Starts for Nagem_44:
(Start: 12 @32278 has 122 MA's), (24, 32206), (26, 32197), (36, 32131), (49, 32035), (51, 32026),

Gene: Nattles_43 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for Nattles_43:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: Nebulous_40 Start: 32382, Stop: 32131, Start Num: 16
Candidate Starts for Nebulous_40:
(Start: 16 @32382 has 3 MA's), (20, 32358), (21, 32355), (24, 32337), (42, 32208),

Gene: Neferthena_43 Start: 31723, Stop: 31472, Start Num: 16
Candidate Starts for Neferthena_43:
(Start: 16 @31723 has 3 MA's), (20, 31699), (21, 31696), (42, 31549),

Gene: NickSell_44 Start: 32288, Stop: 32010, Start Num: 12
Candidate Starts for NickSell_44:
(Start: 12 @32288 has 122 MA's), (24, 32216), (26, 32207), (36, 32141), (49, 32045), (51, 32036),

Gene: Nucci_41 Start: 31054, Stop: 30779, Start Num: 13
Candidate Starts for Nucci_41:
(Start: 13 @31054 has 21 MA's), (Start: 17 @31027 has 11 MA's), (23, 30991), (51, 30811), (52, 30808),

Gene: Oats_43 Start: 31980, Stop: 31702, Start Num: 12
Candidate Starts for Oats_43:
(Start: 12 @31980 has 122 MA's), (24, 31908), (26, 31899), (36, 31833), (49, 31737), (51, 31728),

Gene: OldNelly_45 Start: 32284, Stop: 32006, Start Num: 12
Candidate Starts for OldNelly_45:
(Start: 12 @32284 has 122 MA's), (24, 32212), (26, 32203), (36, 32137), (49, 32041), (51, 32032),

Gene: Orpington_42 Start: 31525, Stop: 31247, Start Num: 13
Candidate Starts for Orpington_42:
(8, 31573), (9, 31570), (Start: 13 @31525 has 21 MA's), (Start: 17 @31498 has 11 MA's), (30, 31432), (37, 31369), (39, 31360), (47, 31285), (51, 31273),

Gene: Oxtober96_45 Start: 32283, Stop: 32005, Start Num: 12
Candidate Starts for Oxtober96_45:
(Start: 12 @32283 has 122 MA's), (24, 32211), (26, 32202), (36, 32136), (49, 32040), (51, 32031),

Gene: Papafritta_43 Start: 31988, Stop: 31710, Start Num: 12
Candidate Starts for Papafritta_43:
(Start: 12 @31988 has 122 MA's), (24, 31916), (26, 31907), (36, 31841), (49, 31745), (51, 31736),

Gene: ParleG_44 Start: 32285, Stop: 32007, Start Num: 12
Candidate Starts for ParleG_44:
(Start: 12 @32285 has 122 MA's), (24, 32213), (26, 32204), (36, 32138), (49, 32042), (51, 32033),

Gene: Peep_44 Start: 32270, Stop: 31992, Start Num: 12
Candidate Starts for Peep_44:
(Start: 12 @32270 has 122 MA's), (24, 32198), (36, 32123), (49, 32027), (51, 32018),

Gene: Penta_38 Start: 29461, Stop: 29171, Start Num: 11
Candidate Starts for Penta_38:
(Start: 11 @29461 has 2 MA's), (18, 29422), (34, 29326), (36, 29305), (37, 29296), (39, 29287), (47, 29212), (52, 29197),

Gene: Peppino_44 Start: 32125, Stop: 31868, Start Num: 17
Candidate Starts for Peppino_44:
(Start: 17 @32125 has 11 MA's), (22, 32095), (31, 32047), (33, 32032), (39, 31990), (41, 31957), (44, 31942),

Gene: Phanita_43 Start: 31298, Stop: 31020, Start Num: 13
Candidate Starts for Phanita_43:
(8, 31346), (9, 31343), (Start: 13 @31298 has 21 MA's), (25, 31226), (27, 31217), (37, 31142), (39, 31133), (47, 31058), (51, 31046), (52, 31043),

Gene: Pherferi_44 Start: 32278, Stop: 32000, Start Num: 12
Candidate Starts for Pherferi_44:
(Start: 12 @32278 has 122 MA's), (24, 32206), (26, 32197), (36, 32131), (49, 32035), (51, 32026),

Gene: Phiderman_44 Start: 32275, Stop: 31997, Start Num: 12
Candidate Starts for Phiderman_44:
(Start: 12 @32275 has 122 MA's), (24, 32203), (26, 32194), (36, 32128), (49, 32032), (51, 32023),

Gene: PhillyPhantom_44 Start: 32115, Stop: 31858, Start Num: 17
Candidate Starts for PhillyPhantom_44:
(Start: 17 @32115 has 11 MA's), (22, 32085), (31, 32037), (33, 32022), (39, 31980), (41, 31947), (44, 31932),

Gene: Phireproof_44 Start: 32284, Stop: 32006, Start Num: 12
Candidate Starts for Phireproof_44:
(Start: 12 @32284 has 122 MA's), (24, 32212), (26, 32203), (36, 32137), (49, 32041), (51, 32032),

Gene: PhredFlintston_44 Start: 32278, Stop: 32000, Start Num: 12
Candidate Starts for PhredFlintston_44:
(Start: 12 @32278 has 122 MA's), (24, 32206), (26, 32197), (36, 32131), (49, 32035), (51, 32026),

Gene: Phriends_44 Start: 32284, Stop: 32006, Start Num: 12
Candidate Starts for Phriends_44:
(Start: 12 @32284 has 122 MA's), (24, 32212), (26, 32203), (36, 32137), (49, 32041), (51, 32032),

Gene: Pocket_43 Start: 32007, Stop: 31729, Start Num: 12
Candidate Starts for Pocket_43:
(Start: 12 @32007 has 122 MA's), (24, 31935), (26, 31926), (36, 31860), (49, 31764), (51, 31755),

Gene: PuppyEggo_44 Start: 32285, Stop: 32007, Start Num: 12
Candidate Starts for PuppyEggo_44:
(Start: 12 @32285 has 122 MA's), (24, 32213), (26, 32204), (36, 32138), (49, 32042), (51, 32033),

Gene: Quartz_42 Start: 31184, Stop: 30909, Start Num: 13
Candidate Starts for Quartz_42:
(Start: 13 @31184 has 21 MA's), (Start: 17 @31157 has 11 MA's), (23, 31121), (51, 30941), (52, 30938),

Gene: Raccoon_44 Start: 32080, Stop: 31823, Start Num: 17
Candidate Starts for Raccoon_44:
(Start: 17 @32080 has 11 MA's), (33, 31984),

Gene: Rapheph_44 Start: 32278, Stop: 32000, Start Num: 12
Candidate Starts for Rapheph_44:
(Start: 12 @32278 has 122 MA's), (24, 32206), (26, 32197), (36, 32131), (49, 32035), (51, 32026),

Gene: Raptor_44 Start: 32285, Stop: 32007, Start Num: 12
Candidate Starts for Raptor_44:

(Start: 12 @32285 has 122 MA's), (24, 32213), (26, 32204), (36, 32138), (49, 32042), (51, 32033),

Gene: Redfield_44 Start: 32133, Stop: 31855, Start Num: 12
Candidate Starts for Redfield_44:
(Start: 12 @32133 has 122 MA's), (36, 31986), (51, 31881),

Gene: Renzie_44 Start: 32273, Stop: 31995, Start Num: 12
Candidate Starts for Renzie_44:
(Start: 12 @32273 has 122 MA's), (24, 32201), (26, 32192), (36, 32126), (49, 32030), (51, 32021),

Gene: Riyhil_44 Start: 32288, Stop: 32010, Start Num: 12
Candidate Starts for Riyhil_44:
(Start: 12 @32288 has 122 MA's), (24, 32216), (26, 32207), (36, 32141), (49, 32045), (51, 32036),

Gene: Robinson_44 Start: 32276, Stop: 31998, Start Num: 12
Candidate Starts for Robinson_44:
(Start: 12 @32276 has 122 MA's), (24, 32204), (26, 32195), (36, 32129), (49, 32033), (51, 32024),

Gene: Rog141_43 Start: 31967, Stop: 31689, Start Num: 12
Candidate Starts for Rog141_43:
(Start: 12 @31967 has 122 MA's), (24, 31895), (26, 31886), (36, 31820), (49, 31724), (51, 31715),

Gene: RosieMae_43 Start: 32025, Stop: 31747, Start Num: 12
Candidate Starts for RosieMae_43:
(Start: 12 @32025 has 122 MA's), (24, 31953), (26, 31944), (36, 31878), (49, 31782), (51, 31773),

Gene: SJay_44 Start: 32279, Stop: 32001, Start Num: 12
Candidate Starts for SJay_44:
(Start: 12 @32279 has 122 MA's), (24, 32207), (26, 32198), (36, 32132), (49, 32036), (51, 32027),

Gene: Saratos_42 Start: 31346, Stop: 31068, Start Num: 13
Candidate Starts for Saratos_42:
(8, 31394), (9, 31391), (Start: 13 @31346 has 21 MA's), (Start: 17 @31319 has 11 MA's), (30, 31253), (37, 31190), (39, 31181), (47, 31106), (51, 31094),

Gene: Schnapsidee_44 Start: 32140, Stop: 31862, Start Num: 12
Candidate Starts for Schnapsidee_44:
(Start: 12 @32140 has 122 MA's), (36, 31993), (51, 31888),

Gene: Schubert_41 Start: 30985, Stop: 30704, Start Num: 13
Candidate Starts for Schubert_41:
(3, 31159), (4, 31126), (5, 31084), (7, 31066), (Start: 13 @30985 has 21 MA's), (19, 30949), (32, 30871), (37, 30829),

Gene: Sedgewig_43 Start: 31965, Stop: 31687, Start Num: 12
Candidate Starts for Sedgewig_43:
(Start: 12 @31965 has 122 MA's), (24, 31893), (26, 31884), (36, 31818), (49, 31722), (51, 31713),

Gene: ShaiHulud_44 Start: 32294, Stop: 32016, Start Num: 12
Candidate Starts for ShaiHulud_44:
(Start: 12 @32294 has 122 MA's), (24, 32222), (26, 32213), (36, 32147), (49, 32051), (51, 32042),

Gene: Shamu_43 Start: 31525, Stop: 31247, Start Num: 13

Candidate Starts for Shamu_43:
(8, 31573), (9, 31570), (Start: 13 @31525 has 21 MA's), (Start: 17 @31498 has 11 MA's), (30, 31432), (37, 31369), (39, 31360), (47, 31285), (51, 31273),

Gene: Shee_44 Start: 32275, Stop: 31997, Start Num: 12
Candidate Starts for Shee_44:
(Start: 12 @32275 has 122 MA's), (24, 32203), (26, 32194), (36, 32128), (49, 32032), (51, 32023),

Gene: SoilGremlin_45 Start: 32281, Stop: 32003, Start Num: 12
Candidate Starts for SoilGremlin_45:
(Start: 12 @32281 has 122 MA's), (24, 32209), (26, 32200), (36, 32134), (49, 32038), (51, 32029),

Gene: SolidSnake_46 Start: 32284, Stop: 32006, Start Num: 12
Candidate Starts for SolidSnake_46:
(Start: 12 @32284 has 122 MA's), (24, 32212), (26, 32203), (36, 32137), (49, 32041), (51, 32032),

Gene: SonOfLevi_44 Start: 31998, Stop: 31720, Start Num: 12
Candidate Starts for SonOfLevi_44:
(Start: 12 @31998 has 122 MA's), (24, 31926), (26, 31917), (36, 31851), (49, 31755), (51, 31746),

Gene: Soror1_43 Start: 32031, Stop: 31753, Start Num: 12
Candidate Starts for Soror1_43:
(Start: 12 @32031 has 122 MA's), (18, 31995), (36, 31884), (51, 31779),

Gene: Stanktossa_44 Start: 32278, Stop: 32000, Start Num: 12
Candidate Starts for Stanktossa_44:
(Start: 12 @32278 has 122 MA's), (24, 32206), (26, 32197), (36, 32131), (49, 32035), (51, 32026),

Gene: StingRay_43 Start: 31983, Stop: 31705, Start Num: 12
Candidate Starts for StingRay_43:
(Start: 12 @31983 has 122 MA's), (24, 31911), (26, 31902), (36, 31836), (49, 31740), (51, 31731),

Gene: StirfryIV_43 Start: 31976, Stop: 31698, Start Num: 12
Candidate Starts for StirfryIV_43:
(Start: 12 @31976 has 122 MA's), (24, 31904), (26, 31895), (36, 31829), (49, 31733), (51, 31724),

Gene: Stormbreaker8_43 Start: 32016, Stop: 31738, Start Num: 12
Candidate Starts for Stormbreaker8_43:
(Start: 12 @32016 has 122 MA's), (18, 31980), (36, 31869), (51, 31764),

Gene: Strathdee_44 Start: 32284, Stop: 32006, Start Num: 12
Candidate Starts for Strathdee_44:
(Start: 12 @32284 has 122 MA's), (24, 32212), (26, 32203), (36, 32137), (49, 32041), (51, 32032),

Gene: Superfresh_44 Start: 32273, Stop: 31995, Start Num: 12
Candidate Starts for Superfresh_44:
(Start: 12 @32273 has 122 MA's), (24, 32201), (26, 32192), (36, 32126), (49, 32030), (51, 32021),

Gene: Symere_43 Start: 31975, Stop: 31697, Start Num: 12
Candidate Starts for Symere_43:
(Start: 12 @31975 has 122 MA's), (24, 31903), (26, 31894), (36, 31828), (49, 31732), (51, 31723),

Gene: TatarkaPM_44 Start: 32288, Stop: 32010, Start Num: 12

Candidate Starts for TatarkaPM_44:
(Start: 12 @32288 has 122 MA's), (24, 32216), (26, 32207), (36, 32141), (49, 32045), (51, 32036),

Gene: Teagan_44 Start: 32278, Stop: 32000, Start Num: 12
Candidate Starts for Teagan_44:
(Start: 12 @32278 has 122 MA's), (24, 32206), (26, 32197), (36, 32131), (49, 32035), (51, 32026),

Gene: TeddyBear_43 Start: 31980, Stop: 31702, Start Num: 12
Candidate Starts for TeddyBear_43:
(Start: 12 @31980 has 122 MA's), (24, 31908), (26, 31899), (36, 31833), (49, 31737), (51, 31728),

Gene: Tenda_43 Start: 31978, Stop: 31700, Start Num: 12
Candidate Starts for Tenda_43:
(Start: 12 @31978 has 122 MA's), (24, 31906), (26, 31897), (36, 31831), (49, 31735), (51, 31726),

Gene: Thompsone_44 Start: 32285, Stop: 32007, Start Num: 12
Candidate Starts for Thompsone_44:
(Start: 12 @32285 has 122 MA's), (24, 32213), (26, 32204), (36, 32138), (49, 32042), (51, 32033),

Gene: Thorongil_44 Start: 31799, Stop: 31521, Start Num: 12
Candidate Starts for Thorongil_44:
(Start: 12 @31799 has 122 MA's), (24, 31727), (26, 31718), (36, 31652), (49, 31556), (51, 31547),

Gene: TinSulphur_45 Start: 32284, Stop: 32006, Start Num: 12
Candidate Starts for TinSulphur_45:
(Start: 12 @32284 has 122 MA's), (24, 32212), (26, 32203), (36, 32137), (49, 32041), (51, 32032),

Gene: Velene_44 Start: 32283, Stop: 32005, Start Num: 12
Candidate Starts for Velene_44:
(Start: 12 @32283 has 122 MA's), (24, 32211), (26, 32202), (36, 32136), (49, 32040), (51, 32031),

Gene: Vispistious_44 Start: 32285, Stop: 32007, Start Num: 12
Candidate Starts for Vispistious_44:
(Start: 12 @32285 has 122 MA's), (24, 32213), (26, 32204), (36, 32138), (49, 32042), (51, 32033),

Gene: WestPM_38 Start: 29624, Stop: 29334, Start Num: 11
Candidate Starts for WestPM_38:
(Start: 11 @29624 has 2 MA's), (36, 29468), (39, 29450),

Gene: WildNOut_44 Start: 32281, Stop: 32003, Start Num: 12
Candidate Starts for WildNOut_44:
(Start: 12 @32281 has 122 MA's), (24, 32209), (26, 32200), (36, 32134), (49, 32038), (51, 32029),

Gene: Winzigespinne_43 Start: 31966, Stop: 31688, Start Num: 12
Candidate Starts for Winzigespinne_43:
(Start: 12 @31966 has 122 MA's), (24, 31894), (26, 31885), (36, 31819), (49, 31723), (51, 31714),

Gene: Xebius_42 Start: 31349, Stop: 31071, Start Num: 13
Candidate Starts for Xebius_42:
(8, 31397), (9, 31394), (Start: 13 @31349 has 21 MA's), (25, 31277), (27, 31268), (39, 31184), (47, 31109), (51, 31097),

Gene: YuuY_42 Start: 31651, Stop: 31373, Start Num: 13

Candidate Starts for YuuY_42:
(Start: 13 @31651 has 21 MA's), (Start: 17 @31624 has 11 MA's), (29, 31561), (30, 31558), (34, 31525), (38, 31492), (46, 31423), (49, 31408), (52, 31396),

Gene: Zada_45 Start: 32254, Stop: 31976, Start Num: 12
Candidate Starts for Zada_45:
(Start: 12 @32254 has 122 MA's), (24, 32182), (26, 32173), (36, 32107), (49, 32011), (51, 32002),

Gene: Zenitsu_42 Start: 31391, Stop: 31113, Start Num: 13
Candidate Starts for Zenitsu_42:
(8, 31439), (9, 31436), (Start: 13 @31391 has 21 MA's), (25, 31319), (27, 31310), (37, 31235), (39, 31226), (51, 31139),