

Pham 290855



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 290855 Report

This analysis was run 03/28/26 on database version 641.

Pham number 290855 has 206 members, 23 are drafts.

Phages represented in each track:

- Track 1 : Mercedes_26
- Track 2 : Oats_27, Clancy_27, Lovelyunicorn_28, Espinosa_27, Exploradora_27, StirfryIV_27, Jerbirus_28, Renzie_28, Oxtober96_28, AranulaLuti_27, Asta_27, KannH_27, CoraRita_28, MillyPhilly_28, Aubergine_27, Teagan_28, Gargoyle_28, Alyxandracam_28, HankSprout_28, Rog141_27, Delphidian_28, HanSolo_27, Nagem_28, Papafritta_27, Ludgate_28, Winzigespinne_27, Vispistious_28, Peep_28, AlexAdler_28, Tenda_27, Phriends_28, AxiPup_28, Velene_28, Baines_27, Superfresh_28, Antoinette_28, SoilGremlin_28, Dave_28, Riyhil_28, Gubbabump_27, Blage_28, ShaiHulud_28, Den3_28, Gershwin_27, Kouch_27, WildNOut_28, MaeLinda_28, PuppyEggo_28, Bandik_28, Merida02_29, Greys_28, OldNelly_28, Figueroism_28, Zada_28, ManRay_27, Robinson_28, Janus167_27, TeddyBear_27, Christoph_27, SJay_28, BigRedClifford_28
- Track 3 : JasperRussell_27, Erla_27, Ilzat_27, Nattles_27, SonOfLevi_27, Garey24_27, KellyGreen_28, Chamuel_27, Kale_27, JeriBeth_28, Chako_27, Bonino_27, Pocket_27, RosieMae_27, Calix_27, Etta_27, HungryHenry_27, Gelo_27, Klimt_27, Benjal Lauren_28, StingRay_27, Duocatuli_27
- Track 4 : Schnapsidee_27, Peppino_27, BeeBee8_28
- Track 5 : Balsa_27, Etna_27, KingJulien_27, Hamlet_27, Redfield_27, Raccoon_27, PhillyPhantom_27, Soror1_27, Leafus_27, Stormbreaker8_27
- Track 6 : Phireproof_28, GoingMerry_28, Convict_28, Knox_28, Strathdee_28, BonesMcCoy_28, BeautPeep30_28, Ioannes_28, Raptor_28, Thompsone_28, Symere_27
- Track 7 : TinSulphur_28, Shee_28, Inventa_28, ParleG_28, Kurt1_28, TatarkaPM_28, Rapheph_28, Byron23_28, SolidSnake_29, Pherferi_28, PhredFlintston_28, Stanktossa_28, NickSell_28, Martin_29, Dothraki_28, MrWorldwide_28, Phiderman_28
- Track 8 : McGalleon_29, CarisSwetlik_31, JasonD_30
- Track 9 : Endor_29
- Track 10 : Jenos_30
- Track 11 : FarmerDoug_28, GardenB_27
- Track 12 : Anilorac_27
- Track 13 : HavenFinLeoSun_29, Acosta_29
- Track 14 : Agente005_28
- Track 15 : GoneGirl_28
- Track 16 : MonChoix_27
- Track 17 : Sedgewig_27
- Track 18 : Thorongil_28

- Track 19 : MiniVolent_27, Juanyo_27
- Track 20 : Quartz_27, Mandalorian_27, Nucci_27, Carostasia_27
- Track 21 : YuuY_27
- Track 22 : HairyMan_26
- Track 23 : WestPM_26
- Track 24 : Kavo_27
- Track 25 : Tinyman4_28
- Track 26 : Schimmels22_28, Scissor2024_28
- Track 27 : Ixel_27
- Track 28 : Penta_26
- Track 29 : HerculesXL_28
- Track 30 : Sansa_26, Andromedas_27, ChikPic_27, Xebius_27, Eleri_27, Glamour_26, Finny_27, PSirce_27, Zenitsu_27, Saratos_27, Shamu_27, ColaCorta_27
- Track 31 : Phanita_27
- Track 32 : MCubed_27
- Track 33 : Lucky3_27, Guetzie_27, Koji_27, BouleyBill_27, Golden_27, SirVictor_27, RenegadeRaider_28, Jingles_27
- Track 34 : Bustleton_27, Pherbot_27, Sinatra_27
- Track 35 : PrincePhergus_27
- Track 36 : Kauala_27
- Track 37 : Nebulous_27
- Track 38 : Zayuliv_27, LilTerminator_27, Librie_27, Fulton_27, CaptainRex_27, Greenlvy_27, Wardwill_29, QuadZero_27, BaronJohn_28, Hasitha_27
- Track 39 : Zepp_28
- Track 40 : Clock_27
- Track 41 : TwoBits_26
- Track 42 : Alakazam_28
- Track 43 : Neferthena_27
- Track 44 : WilliamStrong_26
- Track 45 : Chepli_28, KatChan_28, Luna18_28
- Track 46 : Jemerald_29, Juicer_29
- Track 47 : Morrigan_29

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

The start number called the most often in the published annotations is 31, it was called in 154 of the 183 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acosta_29, Agente005_28, AlexAdler_28, Alyxandracam_28, Andromedas_27, Anilorac_27, Antoinette_28, AranulaLuti_27, Asta_27, Aubergine_27, AxiPup_28, Baines_27, Balsa_27, Bandik_28, BeautPeep30_28, BeeBee8_28, Benjalauren_28, BigRedClifford_28, Blage_28, BonesMcCoy_28, Bonino_27, Byron23_28, Calix_27, CarisSwetlik_31, Carostasia_27, Chako_27, Chamuel_27, ChikPic_27, Christoph_27, Clancy_27, Clock_27, ColaCorta_27, Convict_28, CoraRita_28, Dave_28, Delphidian_28, Den3_28, Dothraki_28, Duocatuli_27, Eleri_27, Endor_29, Erla_27, Espinosa_27, Etna_27, Etta_27, Exploradora_27, FarmerDoug_28, Figueroism_28, Finny_27, GardenB_27, Garey24_27, Gargoyle_28, Gelo_27, Gershwin_27, Glamour_26, GoingMerry_28, GoneGirl_28, Greys_28, Gubbabump_27,

HairyMan_26, Hamlet_27, HanSolo_27, HankSprout_28, HavenFinLeoSun_29, HerculesXL_28, HungryHenry_27, Ilzat_27, Inventa_28, Ioannes_28, Ixel_27, Janus167_27, JasonD_30, JasperRussell_27, Jemerald_29, Jenos_30, Jerbirus_28, JeriBeth_28, Juanyo_27, Juicer_29, Kale_27, KannH_27, Kavo_27, KellyGreen_28, KingJulien_27, Klimt_27, Knox_28, Kouch_27, Kurt1_28, Leafus_27, Lovelyunicorn_28, Ludgate_28, MCubed_27, MaeLinda_28, ManRay_27, Mandalorian_27, Martin_29, McGalleon_29, Merida02_29, MillyPhilly_28, MiniVolent_27, MonChoix_27, Morrigan_29, MrWorldwide_28, Nagem_28, Nattles_27, Neferthena_27, NickSell_28, Nucci_27, Oats_27, OldNelly_28, Oxtober96_28, PSirce_27, Papafritta_27, ParleG_28, Peep_28, Peppino_27, Pherferi_28, Phiderman_28, PhillyPhantom_27, Phireproof_28, PhredFlintston_28, Phriends_28, Pocket_27, PuppyEggo_28, Quartz_27, Raccoon_27, Rapheph_28, Raptor_28, Redfield_27, Renzie_28, Riyhil_28, Robinson_28, Rog141_27, RosieMae_27, SJay_28, Sansa_26, Saratos_27, Schimmels22_28, Schnapsidee_27, Scissor2024_28, Sedgewig_27, ShaiHulud_28, Shamu_27, Shee_28, SoilGremlin_28, SolidSnake_29, SonOfLevi_27, Soror1_27, Stanktossa_28, StingRay_27, StirfryIV_27, Stormbreaker8_27, Strathdee_28, Superfresh_28, Symere_27, TatarkaPM_28, Teagan_28, TeddyBear_27, Tenda_27, Thompsone_28, Thorongil_28, TinSulphur_28, Tinyman4_28, Velene_28, Vispistious_28, WildNOut_28, WilliamStrong_26, Winzigespinne_27, Xebius_27, Zada_28, Zenitsu_27,

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

- Penta_26, Phanita_27, WestPM_26, YuuY_27,

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

- Alakazam_28, BaronJohn_28, BouleyBill_27, Bustleton_27, CaptainRex_27, Chepli_28, Fulton_27, Golden_27, GreenIvy_27, Guetzie_27, Hasitha_27, Jingles_27, KatChan_28, Kauala_27, Koji_27, Librie_27, LilTerminator_27, Lucky3_27, Luna18_28, Mercedes_26, Nebulous_27, Pherbot_27, PrincePhergus_27, QuadZero_27, RenegadeRaider_28, Sinatra_27, SirVictor_27, TwoBits_26, Wardwill_29, Zayuliv_27, Zepp_28,

Summary by start number:

Start 18:

- Found in 4 of 206 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 183
- Called 25.0% of time when present
- Phage (with cluster) where this start called: YuuY_27 (EA10),

Start 25:

- Found in 2 of 206 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 183
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Phanita_27 (EA2),

Start 27:

- Found in 13 of 206 (6.3%) of genes in pham
- Manual Annotations of this start: 2 of 183
- Called 15.4% of time when present
- Phage (with cluster) where this start called: PrincePhergus_27 (EA4), WestPM_26 (EA11),

Start 28:

- Found in 1 of 206 (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: Penta_26 (EA11),

Start 29:

- Found in 2 of 206 (1.0%) of genes in pham
- Manual Annotations of this start: 2 of 183
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alakazam_28 (EA5), Nebulous_27 (EA5),

Start 30:

- Found in 16 of 206 (7.8%) of genes in pham
- Manual Annotations of this start: 13 of 183
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaronJohn_28 (EA5), CaptainRex_27 (EA5), Chepli_28 (EA6), Fulton_27 (EA5), Greenlvy_27 (EA5), Hasitha_27 (EA5), KatChan_28 (EA6), Librie_27 (EA5), LilTerminator_27 (EA5), Luna18_28 (EA6), Mercedes_26 (EA), QuadZero_27 (EA5), TwoBits_26 (EA5), Wardwill_29 (EA5), Zayuliv_27 (EA5), Zepp_28 (EA5),

Start 31:

- Found in 175 of 206 (85.0%) of genes in pham
- Manual Annotations of this start: 154 of 183
- Called 97.7% of time when present
- Phage (with cluster) where this start called: Acosta_29 (EA1), Agente005_28 (EA1), AlexAdler_28 (EA1), Alyxandracam_28 (EA1), Andromedas_27 (EA2), Anilorac_27 (EA1), Antoinette_28 (EA1), AranulaLuti_27 (EA1), Asta_27 (EA1), Aubergine_27 (EA1), AxiPup_28 (EA1), Baines_27 (EA1), Balsa_27 (EA1), Bandik_28 (EA1), BeautPeep30_28 (EA1), BeeBee8_28 (EA1), Benjalauen_28 (EA1), BigRedClifford_28 (EA1), Blage_28 (EA1), BonesMcCoy_28 (EA1), Bonino_27 (EA1), Byron23_28 (EA1), Calix_27 (EA1), CarisSwetlik_31 (EA1), Carostasia_27 (EA10), Chako_27 (EA1), Chamuel_27 (EA1), ChikPic_27 (EA2), Christoph_27 (EA1), Clancy_27 (EA1), Clock_27 (EA5), ColaCorta_27 (EA2), Convict_28 (EA1), CoraRita_28 (EA1), Dave_28 (EA1), Delphidian_28 (EA1), Den3_28 (EA1), Dothraki_28 (EA1), Duocatuli_27 (EA1), Eleri_27 (EA2), Endor_29 (EA1), Erla_27 (EA1), Espinosa_27 (EA1), Etna_27 (EA1), Etta_27 (EA1), Exploradora_27 (EA1), FarmerDoug_28 (EA1), Figueroism_28 (EA1), Finny_27 (EA2), GardenB_27 (EA1), Garey24_27 (EA1), Gargoyle_28 (EA1), Gelo_27 (EA1), Gershwin_27 (EA1), Glamour_26 (EA2), GoingMerry_28 (EA1), GoneGirl_28 (EA1), Greys_28 (EA1), Gubbabump_27 (EA1), HairyMan_26 (EA10), Hamlet_27 (EA1), HanSolo_27 (EA1), HankSprout_28 (EA1), HavenFinLeoSun_29 (EA1), HerculesXL_28 (EA11), HungryHenry_27 (EA1), Ilzat_27 (EA1), Inventa_28 (EA1), Ioannes_28 (EA1), Ixel_27 (EA11), Janus167_27 (EA1), JasonD_30 (EA1), JasperRussell_27 (EA1), Jemerald_29 (EA6), Jenos_30 (EA1), Jerbirus_28 (EA1), JeriBeth_28 (EA1), Juanyo_27 (EA10), Juicer_29 (EA6), Kale_27 (EA1), KannH_27 (EA1), Kavo_27 (EA11), KellyGreen_28 (EA1), KingJulien_27 (EA1), Klimt_27 (EA1), Knox_28 (EA1), Kouch_27 (EA1), Kurt1_28 (EA1), Leafus_27 (EA1), Lovelyunicorn_28 (EA1), Ludgate_28 (EA1), MCubed_27 (EA2), MaeLinda_28 (EA1), ManRay_27 (EA1), Mandalorian_27 (EA10), Martin_29 (EA1), McGalleon_29 (EA1), Merida02_29 (EA1),

MillyPhilly_28 (EA1), MiniVolent_27 (EA10), MonChoix_27 (EA1), Morigan_29 (EA6), MrWorldwide_28 (EA1), Nagem_28 (EA1), Nattles_27 (EA1), Neferthena_27 (EA5), NickSell_28 (EA1), Nucci_27 (EA10), Oats_27 (EA1), OldNelly_28 (EA1), Oxtober96_28 (EA1), PSirce_27 (EA2), Papafritta_27 (EA1), ParleG_28 (EA1), Peep_28 (EA1), Peppino_27 (EA1), Pherferi_28 (EA1), Phiderman_28 (EA1), PhillyPhantom_27 (EA1), Phireproof_28 (EA1), PhredFlintston_28 (EA1), Phriends_28 (EA1), Pocket_27 (EA1), PuppyEggo_28 (EA1), Quartz_27 (EA10), Raccoon_27 (EA1), Rapheph_28 (EA1), Raptor_28 (EA1), Redfield_27 (EA1), Renzie_28 (EA1), Riyhil_28 (EA1), Robinson_28 (EA1), Rog141_27 (EA1), RosieMae_27 (EA1), SJay_28 (EA1), Sansa_26 (EA2), Saratos_27 (EA2), Schimmels22_28 (EA11), Schnapsidee_27 (EA1), Scissor2024_28 (EA11), Sedgewig_27 (EA1), ShaiHulud_28 (EA1), Shamu_27 (EA2), Shee_28 (EA1), SoilGremlin_28 (EA1), SolidSnake_29 (EA1), SonOfLevi_27 (EA1), Soror1_27 (EA1), Stanktossa_28 (EA1), StingRay_27 (EA1), StirfryIV_27 (EA1), Stormbreaker8_27 (EA1), Strathdee_28 (EA1), Superfresh_28 (EA1), Symere_27 (EA1), TatarkaPM_28 (EA1), Teagan_28 (EA1), TeddyBear_27 (EA1), Tenda_27 (EA1), Thompsone_28 (EA1), Thorongil_28 (EA1), TinSulphur_28 (EA1), Tinyman4_28 (EA11), Velene_28 (EA1), Vispistious_28 (EA1), WildNOOut_28 (EA1), WilliamStrong_26 (EA6), Winzigespinne_27 (EA1), Xebius_27 (EA2), Zada_28 (EA1), Zenitsu_27 (EA2),

Start 32:

- Found in 14 of 206 (6.8%) of genes in pham
- Manual Annotations of this start: 10 of 183
- Called 85.7% of time when present
- Phage (with cluster) where this start called: BouleyBill_27 (EA4), Bustleton_27 (EA4), Golden_27 (EA4), Guetzie_27 (EA4), Jingles_27 (EA4), Kauala_27 (EA4), Koji_27 (EA4), Lucky3_27 (EA4), Pherbot_27 (EA4), RenegadeRaider_28 (EA4), Sinatra_27 (EA4), SirVictor_27 (EA4),

Summary by clusters:

There are 8 clusters represented in this pham: EA11, EA10, EA, EA1, EA2, EA5, EA4, EA6,

Info for manual annotations of cluster EA:

- Start number 30 was manually annotated 1 time for cluster EA.

Info for manual annotations of cluster EA1:

- Start number 31 was manually annotated 126 times for cluster EA1.

Info for manual annotations of cluster EA10:

- Start number 18 was manually annotated 1 time for cluster EA10.
- Start number 31 was manually annotated 6 times for cluster EA10.

Info for manual annotations of cluster EA11:

- Start number 27 was manually annotated 1 time for cluster EA11.
- Start number 31 was manually annotated 4 times for cluster EA11.

Info for manual annotations of cluster EA2:

- Start number 25 was manually annotated 1 time for cluster EA2.
- Start number 31 was manually annotated 12 times for cluster EA2.

Info for manual annotations of cluster EA4:

- Start number 27 was manually annotated 1 time for cluster EA4.
- Start number 32 was manually annotated 10 times for cluster EA4.

Info for manual annotations of cluster EA5:

- Start number 29 was manually annotated 2 times for cluster EA5.
- Start number 30 was manually annotated 9 times for cluster EA5.
- Start number 31 was manually annotated 2 times for cluster EA5.

Info for manual annotations of cluster EA6:

- Start number 30 was manually annotated 3 times for cluster EA6.
- Start number 31 was manually annotated 4 times for cluster EA6.

Gene Information:

Gene: Acosta_29 Start: 20845, Stop: 20654, Start Num: 31

Candidate Starts for Acosta_29:

(Start: 31 @20845 has 154 MA's), (42, 20701), (43, 20695),

Gene: Agente005_28 Start: 20551, Stop: 20363, Start Num: 31

Candidate Starts for Agente005_28:

(9, 20677), (14, 20635), (Start: 18 @20620 has 1 MA's), (Start: 31 @20551 has 154 MA's), (42, 20407), (43, 20401), (46, 20386),

Gene: Alakazam_28 Start: 20771, Stop: 20586, Start Num: 29

Candidate Starts for Alakazam_28:

(Start: 29 @20771 has 2 MA's), (35, 20726), (40, 20669), (42, 20630), (43, 20624), (44, 20621), (47, 20597),

Gene: AlexAdler_28 Start: 20552, Stop: 20364, Start Num: 31

Candidate Starts for AlexAdler_28:

(Start: 31 @20552 has 154 MA's), (36, 20501), (42, 20408), (43, 20402), (46, 20387),

Gene: Alyxandracam_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for Alyxandracam_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Andromedas_27 Start: 20591, Stop: 20415, Start Num: 31

Candidate Starts for Andromedas_27:

(Start: 31 @20591 has 154 MA's), (43, 20450),

Gene: Anilorac_27 Start: 20402, Stop: 20214, Start Num: 31

Candidate Starts for Anilorac_27:

(Start: 31 @20402 has 154 MA's), (40, 20297), (42, 20258), (43, 20252), (46, 20237),

Gene: Antoinette_28 Start: 20549, Stop: 20361, Start Num: 31

Candidate Starts for Antoinette_28:

(Start: 31 @20549 has 154 MA's), (36, 20498), (42, 20405), (43, 20399), (46, 20384),

Gene: AranulaLuti_27 Start: 20363, Stop: 20175, Start Num: 31

Candidate Starts for AranulaLuti_27:

(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: Asta_27 Start: 20376, Stop: 20188, Start Num: 31

Candidate Starts for Asta_27:

(Start: 31 @20376 has 154 MA's), (36, 20325), (42, 20232), (43, 20226), (46, 20211),

Gene: Aubergine_27 Start: 20376, Stop: 20188, Start Num: 31

Candidate Starts for Aubergine_27:

(Start: 31 @20376 has 154 MA's), (36, 20325), (42, 20232), (43, 20226), (46, 20211),

Gene: AxiPup_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for AxiPup_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Baines_27 Start: 20363, Stop: 20175, Start Num: 31

Candidate Starts for Baines_27:

(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: Balsa_27 Start: 20396, Stop: 20208, Start Num: 31

Candidate Starts for Balsa_27:

(Start: 31 @20396 has 154 MA's), (40, 20291), (42, 20252), (43, 20246), (46, 20231),

Gene: Bandik_28 Start: 20557, Stop: 20369, Start Num: 31

Candidate Starts for Bandik_28:

(Start: 31 @20557 has 154 MA's), (36, 20506), (42, 20413), (43, 20407), (46, 20392),

Gene: BaronJohn_28 Start: 19871, Stop: 19686, Start Num: 30

Candidate Starts for BaronJohn_28:

(Start: 30 @19871 has 13 MA's), (39, 19778),

Gene: BeautPeep30_28 Start: 20563, Stop: 20375, Start Num: 31

Candidate Starts for BeautPeep30_28:

(Start: 31 @20563 has 154 MA's), (36, 20512), (42, 20419), (43, 20413), (46, 20398),

Gene: BeeBee8_28 Start: 20563, Stop: 20375, Start Num: 31

Candidate Starts for BeeBee8_28:

(Start: 31 @20563 has 154 MA's), (36, 20512), (40, 20458), (42, 20419), (43, 20413), (46, 20398),

Gene: Benjalauren_28 Start: 20373, Stop: 20185, Start Num: 31

Candidate Starts for Benjalauren_28:

(Start: 31 @20373 has 154 MA's), (36, 20322), (42, 20229), (43, 20223), (46, 20208),

Gene: BigRedClifford_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for BigRedClifford_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Blage_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for Blage_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: BonesMcCoy_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for BonesMcCoy_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Bonino_27 Start: 20352, Stop: 20164, Start Num: 31
Candidate Starts for Bonino_27:
(Start: 31 @20352 has 154 MA's), (36, 20301), (42, 20208), (43, 20202), (46, 20187),

Gene: BouleyBill_27 Start: 20560, Stop: 20378, Start Num: 32
Candidate Starts for BouleyBill_27:
(Start: 27 @20575 has 2 MA's), (Start: 32 @20560 has 10 MA's), (43, 20413), (44, 20410), (47, 20386),

Gene: Bustleton_27 Start: 20560, Stop: 20378, Start Num: 32
Candidate Starts for Bustleton_27:
(Start: 27 @20575 has 2 MA's), (Start: 32 @20560 has 10 MA's), (40, 20458), (43, 20413), (44, 20410),
(47, 20386),

Gene: Byron23_28 Start: 20566, Stop: 20378, Start Num: 31
Candidate Starts for Byron23_28:
(Start: 31 @20566 has 154 MA's), (42, 20422), (43, 20416), (46, 20401),

Gene: Calix_27 Start: 20356, Stop: 20168, Start Num: 31
Candidate Starts for Calix_27:
(Start: 31 @20356 has 154 MA's), (36, 20305), (42, 20212), (43, 20206), (46, 20191),

Gene: CaptainRex_27 Start: 19283, Stop: 19098, Start Num: 30
Candidate Starts for CaptainRex_27:
(Start: 30 @19283 has 13 MA's), (39, 19190),

Gene: CarisSwetlik_31 Start: 21341, Stop: 21150, Start Num: 31
Candidate Starts for CarisSwetlik_31:
(Start: 31 @21341 has 154 MA's), (42, 21197), (43, 21191), (46, 21176),

Gene: Carostasia_27 Start: 20900, Stop: 20721, Start Num: 31
Candidate Starts for Carostasia_27:
(Start: 31 @20900 has 154 MA's), (42, 20765), (43, 20759), (44, 20756),

Gene: Chako_27 Start: 20363, Stop: 20175, Start Num: 31
Candidate Starts for Chako_27:
(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: Chamuel_27 Start: 20358, Stop: 20170, Start Num: 31
Candidate Starts for Chamuel_27:
(Start: 31 @20358 has 154 MA's), (36, 20307), (42, 20214), (43, 20208), (46, 20193),

Gene: Chepli_28 Start: 20036, Stop: 19851, Start Num: 30
Candidate Starts for Chepli_28:
(Start: 30 @20036 has 13 MA's), (39, 19943), (43, 19889), (44, 19886), (47, 19862),

Gene: ChikPic_27 Start: 20607, Stop: 20431, Start Num: 31
Candidate Starts for ChikPic_27:
(Start: 31 @20607 has 154 MA's), (43, 20466),

Gene: Christoph_27 Start: 20374, Stop: 20186, Start Num: 31
Candidate Starts for Christoph_27:
(Start: 31 @20374 has 154 MA's), (36, 20323), (42, 20230), (43, 20224), (46, 20209),

Gene: Clancy_27 Start: 20363, Stop: 20175, Start Num: 31
Candidate Starts for Clancy_27:
(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: Clock_27 Start: 21158, Stop: 20970, Start Num: 31
Candidate Starts for Clock_27:
(1, 21728), (2, 21599), (3, 21566), (8, 21293), (Start: 31 @21158 has 154 MA's), (34, 21134), (36, 21107), (40, 21053), (42, 21014), (43, 21008), (46, 20993), (47, 20981),

Gene: ColaCorta_27 Start: 20591, Stop: 20415, Start Num: 31
Candidate Starts for ColaCorta_27:
(Start: 31 @20591 has 154 MA's), (43, 20450),

Gene: Convict_28 Start: 20561, Stop: 20373, Start Num: 31
Candidate Starts for Convict_28:
(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: CoraRita_28 Start: 20372, Stop: 20184, Start Num: 31
Candidate Starts for CoraRita_28:
(Start: 31 @20372 has 154 MA's), (36, 20321), (42, 20228), (43, 20222), (46, 20207),

Gene: Dave_28 Start: 20549, Stop: 20361, Start Num: 31
Candidate Starts for Dave_28:
(Start: 31 @20549 has 154 MA's), (36, 20498), (42, 20405), (43, 20399), (46, 20384),

Gene: Delphidian_28 Start: 20560, Stop: 20372, Start Num: 31
Candidate Starts for Delphidian_28:
(Start: 31 @20560 has 154 MA's), (36, 20509), (42, 20416), (43, 20410), (46, 20395),

Gene: Den3_28 Start: 20565, Stop: 20377, Start Num: 31
Candidate Starts for Den3_28:
(Start: 31 @20565 has 154 MA's), (36, 20514), (42, 20421), (43, 20415), (46, 20400),

Gene: Dothraki_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for Dothraki_28:
(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: Duocatuli_27 Start: 20363, Stop: 20175, Start Num: 31
Candidate Starts for Duocatuli_27:
(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: Eleri_27 Start: 20604, Stop: 20428, Start Num: 31
Candidate Starts for Eleri_27:
(Start: 31 @20604 has 154 MA's), (43, 20463),

Gene: Endor_29 Start: 20967, Stop: 20776, Start Num: 31
Candidate Starts for Endor_29:
(Start: 31 @20967 has 154 MA's), (42, 20823), (43, 20817),

Gene: Erla_27 Start: 20356, Stop: 20168, Start Num: 31
Candidate Starts for Erla_27:
(Start: 31 @20356 has 154 MA's), (36, 20305), (42, 20212), (43, 20206), (46, 20191),

Gene: Espinosa_27 Start: 20374, Stop: 20186, Start Num: 31
Candidate Starts for Espinosa_27:
(Start: 31 @20374 has 154 MA's), (36, 20323), (42, 20230), (43, 20224), (46, 20209),

Gene: Etna_27 Start: 20389, Stop: 20201, Start Num: 31
Candidate Starts for Etna_27:
(Start: 31 @20389 has 154 MA's), (40, 20284), (42, 20245), (43, 20239), (46, 20224),

Gene: Etta_27 Start: 20360, Stop: 20172, Start Num: 31
Candidate Starts for Etta_27:
(Start: 31 @20360 has 154 MA's), (36, 20309), (42, 20216), (43, 20210), (46, 20195),

Gene: Exploradora_27 Start: 20363, Stop: 20175, Start Num: 31
Candidate Starts for Exploradora_27:
(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: FarmerDoug_28 Start: 20586, Stop: 20398, Start Num: 31
Candidate Starts for FarmerDoug_28:
(Start: 31 @20586 has 154 MA's), (42, 20442), (43, 20436), (46, 20421),

Gene: Figueroism_28 Start: 20548, Stop: 20360, Start Num: 31
Candidate Starts for Figueroism_28:
(Start: 31 @20548 has 154 MA's), (36, 20497), (42, 20404), (43, 20398), (46, 20383),

Gene: Finny_27 Start: 20587, Stop: 20414, Start Num: 31
Candidate Starts for Finny_27:
(Start: 31 @20587 has 154 MA's), (43, 20449),

Gene: Fulton_27 Start: 19287, Stop: 19102, Start Num: 30
Candidate Starts for Fulton_27:
(Start: 30 @19287 has 13 MA's), (39, 19194),

Gene: GardenB_27 Start: 20398, Stop: 20210, Start Num: 31
Candidate Starts for GardenB_27:
(Start: 31 @20398 has 154 MA's), (42, 20254), (43, 20248), (46, 20233),

Gene: Garey24_27 Start: 20339, Stop: 20151, Start Num: 31
Candidate Starts for Garey24_27:
(Start: 31 @20339 has 154 MA's), (36, 20288), (42, 20195), (43, 20189), (46, 20174),

Gene: Gargoyle_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for Gargoyle_28:
(Start: 31 @20563 has 154 MA's), (36, 20512), (42, 20419), (43, 20413), (46, 20398),

Gene: Gelo_27 Start: 20360, Stop: 20172, Start Num: 31
Candidate Starts for Gelo_27:
(Start: 31 @20360 has 154 MA's), (36, 20309), (42, 20216), (43, 20210), (46, 20195),

Gene: Gershwin_27 Start: 20376, Stop: 20188, Start Num: 31
Candidate Starts for Gershwin_27:
(Start: 31 @20376 has 154 MA's), (36, 20325), (42, 20232), (43, 20226), (46, 20211),

Gene: Glamour_26 Start: 20592, Stop: 20416, Start Num: 31

Candidate Starts for Glamour_26:
(Start: 31 @20592 has 154 MA's), (43, 20451),

Gene: GoingMerry_28 Start: 20571, Stop: 20383, Start Num: 31
Candidate Starts for GoingMerry_28:
(Start: 31 @20571 has 154 MA's), (36, 20520), (42, 20427), (43, 20421), (46, 20406),

Gene: Golden_27 Start: 20665, Stop: 20483, Start Num: 32
Candidate Starts for Golden_27:
(Start: 27 @20680 has 2 MA's), (Start: 32 @20665 has 10 MA's), (43, 20518), (44, 20515), (47, 20491),

Gene: GoneGirl_28 Start: 20504, Stop: 20316, Start Num: 31
Candidate Starts for GoneGirl_28:
(Start: 31 @20504 has 154 MA's), (42, 20360), (43, 20354), (46, 20339),

Gene: Greenlvy_27 Start: 19873, Stop: 19688, Start Num: 30
Candidate Starts for Greenlvy_27:
(Start: 30 @19873 has 13 MA's), (39, 19780),

Gene: Greys_28 Start: 20558, Stop: 20370, Start Num: 31
Candidate Starts for Greys_28:
(Start: 31 @20558 has 154 MA's), (36, 20507), (42, 20414), (43, 20408), (46, 20393),

Gene: Gubbabump_27 Start: 20365, Stop: 20177, Start Num: 31
Candidate Starts for Gubbabump_27:
(Start: 31 @20365 has 154 MA's), (36, 20314), (42, 20221), (43, 20215), (46, 20200),

Gene: Guetzie_27 Start: 20653, Stop: 20471, Start Num: 32
Candidate Starts for Guetzie_27:
(Start: 27 @20668 has 2 MA's), (Start: 32 @20653 has 10 MA's), (43, 20506), (44, 20503), (47, 20479),

Gene: HairyMan_26 Start: 20566, Stop: 20363, Start Num: 31
Candidate Starts for HairyMan_26:
(4, 20857), (5, 20785), (11, 20683), (Start: 31 @20566 has 154 MA's), (37, 20479), (40, 20461), (41, 20428), (42, 20422), (43, 20416),

Gene: Hamlet_27 Start: 20396, Stop: 20208, Start Num: 31
Candidate Starts for Hamlet_27:
(Start: 31 @20396 has 154 MA's), (40, 20291), (42, 20252), (43, 20246), (46, 20231),

Gene: HanSolo_27 Start: 20363, Stop: 20175, Start Num: 31
Candidate Starts for HanSolo_27:
(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: HankSprout_28 Start: 20243, Stop: 20055, Start Num: 31
Candidate Starts for HankSprout_28:
(Start: 31 @20243 has 154 MA's), (36, 20192), (42, 20099), (43, 20093), (46, 20078),

Gene: Hasitha_27 Start: 19299, Stop: 19114, Start Num: 30
Candidate Starts for Hasitha_27:
(Start: 30 @19299 has 13 MA's), (39, 19206),

Gene: HavenFinLeoSun_29 Start: 20827, Stop: 20636, Start Num: 31

Candidate Starts for HavenFinLeoSun_29:
(Start: 31 @20827 has 154 MA's), (42, 20683), (43, 20677),

Gene: HerculesXL_28 Start: 19517, Stop: 19329, Start Num: 31
Candidate Starts for HerculesXL_28:
(15, 19598), (22, 19565), (Start: 31 @19517 has 154 MA's), (39, 19421), (41, 19379), (42, 19373), (43, 19367), (45, 19358), (48, 19337),

Gene: HungryHenry_27 Start: 20374, Stop: 20186, Start Num: 31
Candidate Starts for HungryHenry_27:
(Start: 31 @20374 has 154 MA's), (36, 20323), (42, 20230), (43, 20224), (46, 20209),

Gene: Ilzat_27 Start: 20373, Stop: 20185, Start Num: 31
Candidate Starts for Ilzat_27:
(Start: 31 @20373 has 154 MA's), (36, 20322), (42, 20229), (43, 20223), (46, 20208),

Gene: Inventa_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for Inventa_28:
(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: Ioannes_28 Start: 20561, Stop: 20373, Start Num: 31
Candidate Starts for Ioannes_28:
(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Ixel_27 Start: 19192, Stop: 19004, Start Num: 31
Candidate Starts for Ixel_27:
(Start: 31 @19192 has 154 MA's), (35, 19144), (38, 19102), (43, 19042),

Gene: Janus167_27 Start: 20363, Stop: 20175, Start Num: 31
Candidate Starts for Janus167_27:
(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: JasonD_30 Start: 21007, Stop: 20819, Start Num: 31
Candidate Starts for JasonD_30:
(Start: 31 @21007 has 154 MA's), (42, 20863), (43, 20857), (46, 20842),

Gene: JasperRussell_27 Start: 20363, Stop: 20175, Start Num: 31
Candidate Starts for JasperRussell_27:
(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: Jemerald_29 Start: 21031, Stop: 20846, Start Num: 31
Candidate Starts for Jemerald_29:
(Start: 31 @21031 has 154 MA's), (41, 20896), (42, 20890), (43, 20884),

Gene: Jenos_30 Start: 21283, Stop: 21092, Start Num: 31
Candidate Starts for Jenos_30:
(Start: 31 @21283 has 154 MA's), (42, 21139), (43, 21133), (46, 21118),

Gene: Jerbirus_28 Start: 20363, Stop: 20175, Start Num: 31
Candidate Starts for Jerbirus_28:
(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: JeriBeth_28 Start: 20220, Stop: 20032, Start Num: 31

Candidate Starts for JeriBeth_28:

(Start: 31 @20220 has 154 MA's), (36, 20169), (42, 20076), (43, 20070), (46, 20055),

Gene: Jingles_27 Start: 20567, Stop: 20385, Start Num: 32

Candidate Starts for Jingles_27:

(Start: 27 @20582 has 2 MA's), (Start: 32 @20567 has 10 MA's), (43, 20420), (44, 20417), (47, 20393),

Gene: Juanyo_27 Start: 20814, Stop: 20638, Start Num: 31

Candidate Starts for Juanyo_27:

(Start: 31 @20814 has 154 MA's), (43, 20673),

Gene: Juicer_29 Start: 21031, Stop: 20846, Start Num: 31

Candidate Starts for Juicer_29:

(Start: 31 @21031 has 154 MA's), (41, 20896), (42, 20890), (43, 20884),

Gene: Kale_27 Start: 20378, Stop: 20190, Start Num: 31

Candidate Starts for Kale_27:

(Start: 31 @20378 has 154 MA's), (36, 20327), (42, 20234), (43, 20228), (46, 20213),

Gene: KannH_27 Start: 20363, Stop: 20175, Start Num: 31

Candidate Starts for KannH_27:

(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: KatChan_28 Start: 20042, Stop: 19857, Start Num: 30

Candidate Starts for KatChan_28:

(Start: 30 @20042 has 13 MA's), (39, 19949), (43, 19895), (44, 19892), (47, 19868),

Gene: Kauala_27 Start: 20564, Stop: 20382, Start Num: 32

Candidate Starts for Kauala_27:

(Start: 32 @20564 has 10 MA's), (43, 20417), (44, 20414), (47, 20390),

Gene: Kavo_27 Start: 19353, Stop: 19165, Start Num: 31

Candidate Starts for Kavo_27:

(Start: 31 @19353 has 154 MA's), (39, 19257), (41, 19215), (43, 19203), (45, 19194), (48, 19173),

Gene: KellyGreen_28 Start: 20363, Stop: 20175, Start Num: 31

Candidate Starts for KellyGreen_28:

(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: KingJulien_27 Start: 20392, Stop: 20204, Start Num: 31

Candidate Starts for KingJulien_27:

(Start: 31 @20392 has 154 MA's), (40, 20287), (42, 20248), (43, 20242), (46, 20227),

Gene: Klimt_27 Start: 20358, Stop: 20170, Start Num: 31

Candidate Starts for Klimt_27:

(Start: 31 @20358 has 154 MA's), (36, 20307), (42, 20214), (43, 20208), (46, 20193),

Gene: Knox_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for Knox_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Koji_27 Start: 20689, Stop: 20507, Start Num: 32

Candidate Starts for Koji_27:

(Start: 27 @20704 has 2 MA's), (Start: 32 @20689 has 10 MA's), (43, 20542), (44, 20539), (47, 20515),

Gene: Kouch_27 Start: 20363, Stop: 20175, Start Num: 31

Candidate Starts for Kouch_27:

(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: Kurt1_28 Start: 20563, Stop: 20375, Start Num: 31

Candidate Starts for Kurt1_28:

(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: Leafus_27 Start: 20534, Stop: 20346, Start Num: 31

Candidate Starts for Leafus_27:

(Start: 31 @20534 has 154 MA's), (40, 20429), (42, 20390), (43, 20384), (46, 20369),

Gene: Librie_27 Start: 19283, Stop: 19098, Start Num: 30

Candidate Starts for Librie_27:

(Start: 30 @19283 has 13 MA's), (39, 19190),

Gene: LilTerminator_27 Start: 19305, Stop: 19120, Start Num: 30

Candidate Starts for LilTerminator_27:

(Start: 30 @19305 has 13 MA's), (39, 19212),

Gene: Lovelyunicorn_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for Lovelyunicorn_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Lucky3_27 Start: 20665, Stop: 20483, Start Num: 32

Candidate Starts for Lucky3_27:

(Start: 27 @20680 has 2 MA's), (Start: 32 @20665 has 10 MA's), (43, 20518), (44, 20515), (47, 20491),

Gene: Ludgate_28 Start: 20557, Stop: 20369, Start Num: 31

Candidate Starts for Ludgate_28:

(Start: 31 @20557 has 154 MA's), (36, 20506), (42, 20413), (43, 20407), (46, 20392),

Gene: Luna18_28 Start: 20042, Stop: 19857, Start Num: 30

Candidate Starts for Luna18_28:

(Start: 30 @20042 has 13 MA's), (39, 19949), (43, 19895), (44, 19892), (47, 19868),

Gene: MCubed_27 Start: 20615, Stop: 20442, Start Num: 31

Candidate Starts for MCubed_27:

(Start: 18 @20687 has 1 MA's), (Start: 25 @20654 has 1 MA's), (Start: 31 @20615 has 154 MA's), (43, 20477),

Gene: MaeLinda_28 Start: 20563, Stop: 20375, Start Num: 31

Candidate Starts for MaeLinda_28:

(Start: 31 @20563 has 154 MA's), (36, 20512), (42, 20419), (43, 20413), (46, 20398),

Gene: ManRay_27 Start: 20376, Stop: 20188, Start Num: 31

Candidate Starts for ManRay_27:

(Start: 31 @20376 has 154 MA's), (36, 20325), (42, 20232), (43, 20226), (46, 20211),

Gene: Mandalorian_27 Start: 20898, Stop: 20719, Start Num: 31

Candidate Starts for Mandalorian_27:

(Start: 31 @20898 has 154 MA's), (42, 20763), (43, 20757), (44, 20754),

Gene: Martin_29 Start: 20563, Stop: 20375, Start Num: 31

Candidate Starts for Martin_29:

(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: McGalleon_29 Start: 21442, Stop: 21251, Start Num: 31

Candidate Starts for McGalleon_29:

(Start: 31 @21442 has 154 MA's), (42, 21298), (43, 21292), (46, 21277),

Gene: Mercedes_26 Start: 19068, Stop: 18889, Start Num: 30

Candidate Starts for Mercedes_26:

(Start: 30 @19068 has 13 MA's), (48, 18897),

Gene: Merida02_29 Start: 20560, Stop: 20372, Start Num: 31

Candidate Starts for Merida02_29:

(Start: 31 @20560 has 154 MA's), (36, 20509), (42, 20416), (43, 20410), (46, 20395),

Gene: MillyPhilly_28 Start: 20560, Stop: 20372, Start Num: 31

Candidate Starts for MillyPhilly_28:

(Start: 31 @20560 has 154 MA's), (36, 20509), (42, 20416), (43, 20410), (46, 20395),

Gene: MiniVolent_27 Start: 20803, Stop: 20627, Start Num: 31

Candidate Starts for MiniVolent_27:

(Start: 31 @20803 has 154 MA's), (43, 20662),

Gene: MonChoix_27 Start: 20513, Stop: 20325, Start Num: 31

Candidate Starts for MonChoix_27:

(Start: 31 @20513 has 154 MA's), (40, 20408), (42, 20369), (43, 20363),

Gene: Morrigan_29 Start: 20940, Stop: 20761, Start Num: 31

Candidate Starts for Morrigan_29:

(Start: 31 @20940 has 154 MA's), (33, 20934), (39, 20850), (43, 20796), (44, 20793), (47, 20769),

Gene: MrWorldwide_28 Start: 20564, Stop: 20376, Start Num: 31

Candidate Starts for MrWorldwide_28:

(Start: 31 @20564 has 154 MA's), (42, 20420), (43, 20414), (46, 20399),

Gene: Nagem_28 Start: 20557, Stop: 20369, Start Num: 31

Candidate Starts for Nagem_28:

(Start: 31 @20557 has 154 MA's), (36, 20506), (42, 20413), (43, 20407), (46, 20392),

Gene: Nattles_27 Start: 20363, Stop: 20175, Start Num: 31

Candidate Starts for Nattles_27:

(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: Nebulous_27 Start: 21343, Stop: 21152, Start Num: 29

Candidate Starts for Nebulous_27:

(26, 21355), (Start: 29 @21343 has 2 MA's), (Start: 32 @21334 has 10 MA's), (47, 21163), (48, 21160),

Gene: Neferthena_27 Start: 21189, Stop: 21001, Start Num: 31

Candidate Starts for Neferthena_27:

(Start: 31 @21189 has 154 MA's), (34, 21165), (36, 21138), (40, 21084), (43, 21039), (46, 21024),

Gene: NickSell_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for NickSell_28:
(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: Nucci_27 Start: 20887, Stop: 20708, Start Num: 31
Candidate Starts for Nucci_27:
(Start: 31 @20887 has 154 MA's), (42, 20752), (43, 20746), (44, 20743),

Gene: Oats_27 Start: 20376, Stop: 20188, Start Num: 31
Candidate Starts for Oats_27:
(Start: 31 @20376 has 154 MA's), (36, 20325), (42, 20232), (43, 20226), (46, 20211),

Gene: OldNelly_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for OldNelly_28:
(Start: 31 @20563 has 154 MA's), (36, 20512), (42, 20419), (43, 20413), (46, 20398),

Gene: Oxtober96_28 Start: 20561, Stop: 20373, Start Num: 31
Candidate Starts for Oxtober96_28:
(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: PSirce_27 Start: 20607, Stop: 20431, Start Num: 31
Candidate Starts for PSirce_27:
(Start: 31 @20607 has 154 MA's), (43, 20466),

Gene: Papafritta_27 Start: 20372, Stop: 20184, Start Num: 31
Candidate Starts for Papafritta_27:
(Start: 31 @20372 has 154 MA's), (36, 20321), (42, 20228), (43, 20222), (46, 20207),

Gene: ParleG_28 Start: 20564, Stop: 20376, Start Num: 31
Candidate Starts for ParleG_28:
(Start: 31 @20564 has 154 MA's), (42, 20420), (43, 20414), (46, 20399),

Gene: Peep_28 Start: 20549, Stop: 20361, Start Num: 31
Candidate Starts for Peep_28:
(Start: 31 @20549 has 154 MA's), (36, 20498), (42, 20405), (43, 20399), (46, 20384),

Gene: Penta_26 Start: 19217, Stop: 19005, Start Num: 28
Candidate Starts for Penta_26:
(13, 19310), (28, 19217), (Start: 31 @19208 has 154 MA's), (39, 19112), (41, 19070), (42, 19064), (44, 19055),

Gene: Peppino_27 Start: 20388, Stop: 20200, Start Num: 31
Candidate Starts for Peppino_27:
(Start: 31 @20388 has 154 MA's), (36, 20337), (40, 20283), (42, 20244), (43, 20238), (46, 20223),

Gene: Phanita_27 Start: 20627, Stop: 20415, Start Num: 25
Candidate Starts for Phanita_27:
(Start: 18 @20660 has 1 MA's), (Start: 25 @20627 has 1 MA's), (Start: 31 @20588 has 154 MA's), (43, 20450),

Gene: Pherbot_27 Start: 20559, Stop: 20377, Start Num: 32
Candidate Starts for Pherbot_27:

(Start: 27 @20574 has 2 MA's), (Start: 32 @20559 has 10 MA's), (40, 20457), (43, 20412), (44, 20409), (47, 20385),

Gene: Pherferi_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for Pherferi_28:
(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: Phiderman_28 Start: 20560, Stop: 20372, Start Num: 31
Candidate Starts for Phiderman_28:
(Start: 31 @20560 has 154 MA's), (42, 20416), (43, 20410), (46, 20395),

Gene: PhillyPhantom_27 Start: 20396, Stop: 20208, Start Num: 31
Candidate Starts for PhillyPhantom_27:
(Start: 31 @20396 has 154 MA's), (40, 20291), (42, 20252), (43, 20246), (46, 20231),

Gene: Phireproof_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for Phireproof_28:
(Start: 31 @20563 has 154 MA's), (36, 20512), (42, 20419), (43, 20413), (46, 20398),

Gene: PhredFlintston_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for PhredFlintston_28:
(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: Phriends_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for Phriends_28:
(Start: 31 @20563 has 154 MA's), (36, 20512), (42, 20419), (43, 20413), (46, 20398),

Gene: Pocket_27 Start: 20361, Stop: 20173, Start Num: 31
Candidate Starts for Pocket_27:
(Start: 31 @20361 has 154 MA's), (36, 20310), (42, 20217), (43, 20211), (46, 20196),

Gene: PrincePhergus_27 Start: 20577, Stop: 20380, Start Num: 27
Candidate Starts for PrincePhergus_27:
(Start: 27 @20577 has 2 MA's), (Start: 32 @20562 has 10 MA's), (43, 20415), (44, 20412), (47, 20388),

Gene: PuppyEggo_28 Start: 20561, Stop: 20373, Start Num: 31
Candidate Starts for PuppyEggo_28:
(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: QuadZero_27 Start: 19309, Stop: 19124, Start Num: 30
Candidate Starts for QuadZero_27:
(Start: 30 @19309 has 13 MA's), (39, 19216),

Gene: Quartz_27 Start: 20899, Stop: 20720, Start Num: 31
Candidate Starts for Quartz_27:
(Start: 31 @20899 has 154 MA's), (42, 20764), (43, 20758), (44, 20755),

Gene: Raccoon_27 Start: 20396, Stop: 20208, Start Num: 31
Candidate Starts for Raccoon_27:
(Start: 31 @20396 has 154 MA's), (40, 20291), (42, 20252), (43, 20246), (46, 20231),

Gene: Rapheph_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for Rapheph_28:

(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: Raptor_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for Raptor_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Redfield_27 Start: 20395, Stop: 20207, Start Num: 31

Candidate Starts for Redfield_27:

(Start: 31 @20395 has 154 MA's), (40, 20290), (42, 20251), (43, 20245), (46, 20230),

Gene: RenegadeRaider_28 Start: 20558, Stop: 20376, Start Num: 32

Candidate Starts for RenegadeRaider_28:

(Start: 27 @20573 has 2 MA's), (Start: 32 @20558 has 10 MA's), (43, 20411), (44, 20408), (47, 20384),

Gene: Renzie_28 Start: 20549, Stop: 20361, Start Num: 31

Candidate Starts for Renzie_28:

(Start: 31 @20549 has 154 MA's), (36, 20498), (42, 20405), (43, 20399), (46, 20384),

Gene: Riyhil_28 Start: 20563, Stop: 20375, Start Num: 31

Candidate Starts for Riyhil_28:

(Start: 31 @20563 has 154 MA's), (36, 20512), (42, 20419), (43, 20413), (46, 20398),

Gene: Robinson_28 Start: 20555, Stop: 20367, Start Num: 31

Candidate Starts for Robinson_28:

(Start: 31 @20555 has 154 MA's), (36, 20504), (42, 20411), (43, 20405), (46, 20390),

Gene: Rog141_27 Start: 20363, Stop: 20175, Start Num: 31

Candidate Starts for Rog141_27:

(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: RosieMae_27 Start: 20373, Stop: 20185, Start Num: 31

Candidate Starts for RosieMae_27:

(Start: 31 @20373 has 154 MA's), (36, 20322), (42, 20229), (43, 20223), (46, 20208),

Gene: SJay_28 Start: 20558, Stop: 20370, Start Num: 31

Candidate Starts for SJay_28:

(Start: 31 @20558 has 154 MA's), (36, 20507), (42, 20414), (43, 20408), (46, 20393),

Gene: Sansa_26 Start: 20614, Stop: 20438, Start Num: 31

Candidate Starts for Sansa_26:

(Start: 31 @20614 has 154 MA's), (43, 20473),

Gene: Saratos_27 Start: 20589, Stop: 20416, Start Num: 31

Candidate Starts for Saratos_27:

(Start: 31 @20589 has 154 MA's), (43, 20451),

Gene: Schimmels22_28 Start: 19876, Stop: 19691, Start Num: 31

Candidate Starts for Schimmels22_28:

(Start: 31 @19876 has 154 MA's), (39, 19783), (41, 19741), (43, 19729), (45, 19720),

Gene: Schnapsidee_27 Start: 20389, Stop: 20201, Start Num: 31

Candidate Starts for Schnapsidee_27:

(Start: 31 @20389 has 154 MA's), (36, 20338), (40, 20284), (42, 20245), (43, 20239), (46, 20224),

Gene: Scissor2024_28 Start: 19512, Stop: 19327, Start Num: 31

Candidate Starts for Scissor2024_28:

(Start: 31 @19512 has 154 MA's), (39, 19419), (41, 19377), (43, 19365), (45, 19356),

Gene: Sedgewig_27 Start: 20363, Stop: 20175, Start Num: 31

Candidate Starts for Sedgewig_27:

(17, 20429), (Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: ShaiHulud_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for ShaiHulud_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Shamu_27 Start: 20604, Stop: 20428, Start Num: 31

Candidate Starts for Shamu_27:

(Start: 31 @20604 has 154 MA's), (43, 20463),

Gene: Shee_28 Start: 20560, Stop: 20372, Start Num: 31

Candidate Starts for Shee_28:

(Start: 31 @20560 has 154 MA's), (42, 20416), (43, 20410), (46, 20395),

Gene: Sinatra_27 Start: 20559, Stop: 20377, Start Num: 32

Candidate Starts for Sinatra_27:

(Start: 27 @20574 has 2 MA's), (Start: 32 @20559 has 10 MA's), (40, 20457), (43, 20412), (44, 20409), (47, 20385),

Gene: SirVictor_27 Start: 20653, Stop: 20471, Start Num: 32

Candidate Starts for SirVictor_27:

(Start: 27 @20668 has 2 MA's), (Start: 32 @20653 has 10 MA's), (43, 20506), (44, 20503), (47, 20479),

Gene: SoilGremlin_28 Start: 20560, Stop: 20372, Start Num: 31

Candidate Starts for SoilGremlin_28:

(Start: 31 @20560 has 154 MA's), (36, 20509), (42, 20416), (43, 20410), (46, 20395),

Gene: SolidSnake_29 Start: 20563, Stop: 20375, Start Num: 31

Candidate Starts for SolidSnake_29:

(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: SonOfLevi_27 Start: 20358, Stop: 20170, Start Num: 31

Candidate Starts for SonOfLevi_27:

(Start: 31 @20358 has 154 MA's), (36, 20307), (42, 20214), (43, 20208), (46, 20193),

Gene: Soror1_27 Start: 20401, Stop: 20213, Start Num: 31

Candidate Starts for Soror1_27:

(Start: 31 @20401 has 154 MA's), (40, 20296), (42, 20257), (43, 20251), (46, 20236),

Gene: Stanktossa_28 Start: 20563, Stop: 20375, Start Num: 31

Candidate Starts for Stanktossa_28:

(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: StingRay_27 Start: 20373, Stop: 20185, Start Num: 31

Candidate Starts for StingRay_27:

(Start: 31 @20373 has 154 MA's), (36, 20322), (42, 20229), (43, 20223), (46, 20208),

Gene: StirfryIV_27 Start: 20363, Stop: 20175, Start Num: 31
Candidate Starts for StirfryIV_27:
(Start: 31 @20363 has 154 MA's), (36, 20312), (42, 20219), (43, 20213), (46, 20198),

Gene: Stormbreaker8_27 Start: 20392, Stop: 20204, Start Num: 31
Candidate Starts for Stormbreaker8_27:
(Start: 31 @20392 has 154 MA's), (40, 20287), (42, 20248), (43, 20242), (46, 20227),

Gene: Strathdee_28 Start: 20562, Stop: 20374, Start Num: 31
Candidate Starts for Strathdee_28:
(Start: 31 @20562 has 154 MA's), (36, 20511), (42, 20418), (43, 20412), (46, 20397),

Gene: Superfresh_28 Start: 20549, Stop: 20361, Start Num: 31
Candidate Starts for Superfresh_28:
(Start: 31 @20549 has 154 MA's), (36, 20498), (42, 20405), (43, 20399), (46, 20384),

Gene: Symere_27 Start: 20360, Stop: 20172, Start Num: 31
Candidate Starts for Symere_27:
(Start: 31 @20360 has 154 MA's), (36, 20309), (42, 20216), (43, 20210), (46, 20195),

Gene: TatarkaPM_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for TatarkaPM_28:
(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: Teagan_28 Start: 20557, Stop: 20369, Start Num: 31
Candidate Starts for Teagan_28:
(Start: 31 @20557 has 154 MA's), (36, 20506), (42, 20413), (43, 20407), (46, 20392),

Gene: TeddyBear_27 Start: 20376, Stop: 20188, Start Num: 31
Candidate Starts for TeddyBear_27:
(Start: 31 @20376 has 154 MA's), (36, 20325), (42, 20232), (43, 20226), (46, 20211),

Gene: Tenda_27 Start: 20374, Stop: 20186, Start Num: 31
Candidate Starts for Tenda_27:
(Start: 31 @20374 has 154 MA's), (36, 20323), (42, 20230), (43, 20224), (46, 20209),

Gene: Thompsone_28 Start: 20561, Stop: 20373, Start Num: 31
Candidate Starts for Thompsone_28:
(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Thorongil_28 Start: 20561, Stop: 20373, Start Num: 31
Candidate Starts for Thorongil_28:
(10, 20687), (Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: TinSulphur_28 Start: 20563, Stop: 20375, Start Num: 31
Candidate Starts for TinSulphur_28:
(Start: 31 @20563 has 154 MA's), (42, 20419), (43, 20413), (46, 20398),

Gene: Tinyman4_28 Start: 19517, Stop: 19329, Start Num: 31
Candidate Starts for Tinyman4_28:
(15, 19598), (19, 19580), (Start: 31 @19517 has 154 MA's), (39, 19421), (41, 19379), (43, 19367), (45, 19358), (48, 19337),

Gene: TwoBits_26 Start: 19686, Stop: 19501, Start Num: 30

Candidate Starts for TwoBits_26:

(Start: 30 @19686 has 13 MA's), (39, 19593), (44, 19536),

Gene: Velene_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for Velene_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Vispistious_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for Vispistious_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: Wardwill_29 Start: 19467, Stop: 19282, Start Num: 30

Candidate Starts for Wardwill_29:

(Start: 30 @19467 has 13 MA's), (39, 19374),

Gene: WestPM_26 Start: 19226, Stop: 19014, Start Num: 27

Candidate Starts for WestPM_26:

(Start: 27 @19226 has 2 MA's), (Start: 31 @19217 has 154 MA's), (39, 19121), (41, 19079), (44, 19064),

Gene: WildNOut_28 Start: 20561, Stop: 20373, Start Num: 31

Candidate Starts for WildNOut_28:

(Start: 31 @20561 has 154 MA's), (36, 20510), (42, 20417), (43, 20411), (46, 20396),

Gene: WilliamStrong_26 Start: 20940, Stop: 20761, Start Num: 31

Candidate Starts for WilliamStrong_26:

(7, 21084), (20, 21003), (24, 20979), (Start: 31 @20940 has 154 MA's), (33, 20934), (39, 20853), (40, 20844), (42, 20805), (43, 20799), (44, 20796), (48, 20769),

Gene: Winzigespinne_27 Start: 20362, Stop: 20174, Start Num: 31

Candidate Starts for Winzigespinne_27:

(Start: 31 @20362 has 154 MA's), (36, 20311), (42, 20218), (43, 20212), (46, 20197),

Gene: Xebius_27 Start: 20592, Stop: 20416, Start Num: 31

Candidate Starts for Xebius_27:

(Start: 31 @20592 has 154 MA's), (43, 20451),

Gene: YuuY_27 Start: 20895, Stop: 20662, Start Num: 18

Candidate Starts for YuuY_27:

(Start: 18 @20895 has 1 MA's), (21, 20877), (Start: 31 @20838 has 154 MA's), (42, 20703), (43, 20697), (44, 20694),

Gene: Zada_28 Start: 20542, Stop: 20354, Start Num: 31

Candidate Starts for Zada_28:

(Start: 31 @20542 has 154 MA's), (36, 20491), (42, 20398), (43, 20392), (46, 20377),

Gene: Zayuliv_27 Start: 19895, Stop: 19710, Start Num: 30

Candidate Starts for Zayuliv_27:

(Start: 30 @19895 has 13 MA's), (39, 19802),

Gene: Zenitsu_27 Start: 20619, Stop: 20443, Start Num: 31

Candidate Starts for Zenitsu_27:
(Start: 31 @20619 has 154 MA's), (43, 20478),

Gene: Zepp_28 Start: 19293, Stop: 19108, Start Num: 30

Candidate Starts for Zepp_28:
(6, 19473), (12, 19407), (16, 19365), (23, 19332), (Start: 30 @19293 has 13 MA's), (39, 19200),