

Pham 196414



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 196414 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196414 has 107 members, 6 are drafts.

Phages represented in each track:

- Track 1 : SamuelLPlaqson_96, DrHayes_96, Urkel_96
- Track 2 : Blizzard_95, Belladonna_95, Capricorn_95, Emerson_99, ShiaSurprise_97, Homura_93, Durfee_95, Geraldini_95, CaseJules_98, Twitch_95, CREW_93, Dalmuri_95, Boiiii_95, Asayake_95, BEEST_94, Jeckyll_95
- Track 3 : Mynx_95, Adonis_94, Veliki_95, Ganymede_94, Adephagia_93, JAWS_93, Tachez_95, QuincyRose_92, Ramen_95, Sulley_93, Jayhawk_98, BarrelRoll_94, Rapunzel97_97, BGlluviae_94, AlishaPH_87, Atiba_95, Pokerus_94, Zavala_96, Slimphazie_97
- Track 4 : TingHuaYa_100
- Track 5 : Dartin_97, Shaobing_95, McMater_97, Niklas_97, Richo_97, Peanam_98
- Track 6 : SgtBeansprout_77, Nikao_79, Torres_78, LilPharaoh_77, Nutello_76, Enkosi_78, Mdavu_77, Amelie_76, Biglebops_76
- Track 7 : Oscar_103, Scarlett_102, LeMond_102, KiSi_103
- Track 8 : TreyKay_96, Prithvi_96
- Track 9 : Beezoo_98
- Track 10 : TaiwanKao_96, Angelica_93, Deby_94, BaghaKamala_94
- Track 11 : Yunkel11_100
- Track 12 : CrimD_94
- Track 13 : Anaya_97
- Track 14 : Murucutumbu_94
- Track 15 : Rosmarinus_95
- Track 16 : Stinson_95, Devera_101, Illumine_98, LaterM_94, Dole_97
- Track 17 : Efra2_103, Guanica15_102
- Track 18 : Validus_105
- Track 19 : LastHope_102
- Track 20 : Megsy_100
- Track 21 : Tiri_95
- Track 22 : MarkPhew_102
- Track 23 : Chris_100
- Track 24 : Nibb_102
- Track 25 : Joy99_96
- Track 26 : LindNT_92
- Track 27 : SirPhilip_97
- Track 28 : PhelpsODU_91, Unicorn_101
- Track 29 : Yuna_99
- Track 30 : Amgine_96, Fefferhead_97, Ellie_95
- Track 31 : Cain_101, Bryler_93, Shadow1_99, Sunflower1121_99, Phrank_102

- Track 32 : Amohnition_94, DarthP_94, Hammy_94
- Track 33 : Marshawn_95
- Track 34 : Tierra_101
- Track 35 : Ximenita_102
- Track 36 : Ekdilam_91
- Track 37 : Syra333_98
- Track 38 : Krueger_100

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

The start number called the most often in the published annotations is 40, it was called in 55 of the 101 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adephagia_93, Adonis_94, AlishaPH_87, Anaya_97, Angelica_93, Asayake_95, Atiba_95, BEEST_94, BGIlluviae_94, BaghaKamala_94, BarrelRoll_94, Beezoo_98, Belladonna_95, Blizzard_95, Boiiii_95, CREW_93, Capricorn_95, CaseJules_98, CrimD_94, Dalmuri_95, Deby_94, Devera_101, Dole_97, DrHayes_96, Durfee_95, Emerson_99, Ganymede_94, Geraldini_95, Homura_93, Illumine_98, JAWS_93, Jayhawk_98, Jeckyll_95, LaterM_94, LindNT_92, Megsy_100, Mynx_95, Pokerus_94, Prithvi_96, QuincyRose_92, Ramen_95, Rapunzel97_97, Rosmarinus_95, SamuelLPlaqson_96, ShiaSurprise_97, Slimphazie_97, Stinson_95, Sulley_93, Tachez_95, TaiwanKao_96, Tiri_95, TreyKay_96, Twitch_95, Urkel_96, Veliki_95, Zavala_96,

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

- Joy99_96,

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

- Amelie_76, Amgine_96, Amohnition_94, Biglebops_76, Bryler_93, Cain_101, Chris_100, DarthP_94, Dartin_97, Efra2_103, Ekdilam_91, Ellie_95, Enkosi_78, Fefferhead_97, Guanica15_102, Hammy_94, KiSi_103, Krueger_100, LastHope_102, LeMond_102, LilPharaoh_77, MarkPhew_102, Marshawn_95, McMater_97, Mdavu_77, Murucutumbu_94, Nibb_102, Nikao_79, Niklas_97, Nutello_76, Oscar_103, Peanam_98, PhelpsODU_91, Phrank_102, Richo_97, Scarlett_102, SgtBeansprout_77, Shadow1_99, Shaobing_95, SirPhilip_97, Sunflower1121_99, Syra333_98, Tierra_101, TingHuaYa_100, Torres_78, Unicorn_101, Validus_105, Ximenita_102, Yuna_99, Yunkel11_100,

Summary by start number:

Start 30:

- Found in 9 of 107 (8.4%) of genes in pham
- Manual Annotations of this start: 9 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chris_100 (K1), KiSi_103 (K1), LeMond_102 (K1), MarkPhew_102 (K1), Marshawn_95 (K6), Nibb_102 (K1), Oscar_103 (K1), Scarlett_102 (K1), SirPhilip_97 (K6),

Start 31:

- Found in 11 of 107 (10.3%) of genes in pham
- Manual Annotations of this start: 11 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bryler_93 (K6), Cain_101 (K6), Krueger_100 (K6), PhelpsODU_91 (K6), Phrank_102 (K6), Shadow1_99 (K6), Sunflower1121_99 (K6), Syra333_98 (K6), Tierra_101 (K6), Unicorn_101 (K6), Ximenita_102 (K6),

Start 33:

- Found in 1 of 107 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yuna_99 (K6),

Start 34:

- Found in 10 of 107 (9.3%) of genes in pham
- Manual Annotations of this start: 7 of 101
- Called 70.0% of time when present
- Phage (with cluster) where this start called: Amgine_96 (K6), Amohnition_94 (K6), DarthP_94 (K6), Ekdilam_91 (K6), Ellie_95 (K6), Fefferhead_97 (K6), Hammy_94 (K6),

Start 38:

- Found in 12 of 107 (11.2%) of genes in pham
- Manual Annotations of this start: 6 of 101
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Dartin_97 (K1), Efra2_103 (K1), Guanica15_102 (K1), McMater_97 (K1), Niklas_97 (K1), Peanam_98 (K1), Richo_97 (K1), Shaobing_95 (K1), Validus_105 (K1),

Start 40:

- Found in 57 of 107 (53.3%) of genes in pham
- Manual Annotations of this start: 55 of 101
- Called 98.2% of time when present
- Phage (with cluster) where this start called: Adephagia_93 (K1), Adonis_94 (K1), AlishaPH_87 (K1), Anaya_97 (K1), Angelica_93 (K1), Asayake_95 (K1), Atiba_95 (K1), BEEST_94 (K1), BGIlluviae_94 (K1), BaghaKamala_94 (K1), BarrelRoll_94 (K1), Beezoo_98 (K1), Belladonna_95 (K1), Blizzard_95 (K1), Boiiii_95 (K1), CREW_93 (K1), Capricorn_95 (K1), CaseJules_98 (K1), CrimD_94 (K1), Dalmuri_95 (K1), Deby_94 (K1), Devera_101 (K1), Dole_97 (K1), DrHayes_96 (K1), Durfee_95 (K1), Emerson_99 (K1), Ganymede_94 (K1), Geraldini_95 (K1), Homura_93 (K1), Illumine_98 (K1), JAWS_93 (K1), Jayhawk_98 (K1), Jeckyll_95 (K1), LaterM_94 (K1), LindNT_92 (K1), Megsy_100 (K1), Mynx_95 (K1), Pokerus_94 (K1), Prithvi_96 (K1), QuincyRose_92 (K1), Ramen_95 (K1), Rapunzel97_97 (K1), Rosmarinus_95 (K1), SamuelLPlaqson_96 (K1), ShiaSurprise_97 (K1), Slimphazie_97 (K1), Stinson_95 (K1), Sulley_93 (K1), Tachez_95 (K1), TaiwanKao_96 (K1), Tiri_95 (K1), TreyKay_96 (K1), Twitch_95 (K1), Urkel_96 (K1), Veliki_95 (K1), Zavala_96 (K1),

Start 41:

- Found in 10 of 107 (9.3%) of genes in pham
- Manual Annotations of this start: 9 of 101
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Amelie_76 (K1), Binglebops_76 (K1), Enkosi_78 (K1), LilPharaoh_77 (K1), Mdavu_77 (K1), Murucutumbu_94 (K1), Nikao_79 (K1), Nutello_76 (K1), SgtBeansprout_77 (K1), Torres_78 (K1),

Start 46:

- Found in 78 of 107 (72.9%) of genes in pham
- Manual Annotations of this start: 1 of 101
- Called 1.3% of time when present
- Phage (with cluster) where this start called: Joy99_96 (K1),

Start 49:

- Found in 15 of 107 (14.0%) of genes in pham
- Manual Annotations of this start: 2 of 101
- Called 20.0% of time when present
- Phage (with cluster) where this start called: LastHope_102 (K1), TingHuaYa_100 (K1), Yunkel11_100 (K1),

Summary by clusters:

There are 2 clusters represented in this pham: K1, K6,

Info for manual annotations of cluster K1:

- Start number 30 was manually annotated 7 times for cluster K1.
- Start number 38 was manually annotated 6 times for cluster K1.
- Start number 40 was manually annotated 55 times for cluster K1.
- Start number 41 was manually annotated 9 times for cluster K1.
- Start number 46 was manually annotated 1 time for cluster K1.
- Start number 49 was manually annotated 2 times for cluster K1.

Info for manual annotations of cluster K6:

- Start number 30 was manually annotated 2 times for cluster K6.
- Start number 31 was manually annotated 11 times for cluster K6.
- Start number 33 was manually annotated 1 time for cluster K6.
- Start number 34 was manually annotated 7 times for cluster K6.

Gene Information:

Gene: Adephagia_93 Start: 58879, Stop: 59109, Start Num: 40

Candidate Starts for Adephagia_93:

(17, 58639), (18, 58642), (24, 58726), (27, 58786), (Start: 40 @58879 has 55 MA's), (Start: 46 @58936 has 1 MA's), (56, 59014), (59, 59083),

Gene: Adonis_94 Start: 59264, Stop: 59494, Start Num: 40

Candidate Starts for Adonis_94:

(17, 59024), (18, 59027), (24, 59111), (27, 59171), (Start: 40 @59264 has 55 MA's), (Start: 46 @59321 has 1 MA's), (56, 59399), (59, 59468),

Gene: AlishaPH_87 Start: 56267, Stop: 56497, Start Num: 40

Candidate Starts for AlishaPH_87:

(17, 56027), (18, 56030), (24, 56114), (27, 56174), (Start: 40 @56267 has 55 MA's), (Start: 46 @56324 has 1 MA's), (56, 56402), (59, 56471),

Gene: Amelie_76 Start: 55854, Stop: 56072, Start Num: 41

Candidate Starts for Amelie_76:

(32, 55806), (Start: 41 @55854 has 9 MA's), (Start: 46 @55896 has 1 MA's), (50, 55926),

Gene: Amgine_96 Start: 61635, Stop: 61889, Start Num: 34

Candidate Starts for Amgine_96:

(Start: 34 @61635 has 7 MA's), (36, 61641),

Gene: Amohnition_94 Start: 61150, Stop: 61401, Start Num: 34

Candidate Starts for Amohnition_94:

(Start: 34 @61150 has 7 MA's), (47, 61228), (54, 61288), (55, 61297),

Gene: Anaya_97 Start: 60067, Stop: 60297, Start Num: 40

Candidate Starts for Anaya_97:

(Start: 40 @60067 has 55 MA's), (Start: 46 @60124 has 1 MA's), (56, 60202), (59, 60271),

Gene: Angelica_93 Start: 58831, Stop: 59061, Start Num: 40

Candidate Starts for Angelica_93:

(17, 58591), (18, 58594), (19, 58618), (24, 58678), (27, 58738), (Start: 40 @58831 has 55 MA's),
(Start: 46 @58888 has 1 MA's), (56, 58966), (59, 59035),

Gene: Asayake_95 Start: 59138, Stop: 59368, Start Num: 40

Candidate Starts for Asayake_95:

(17, 58898), (18, 58901), (19, 58925), (23, 58964), (24, 58985), (27, 59045), (Start: 40 @59138 has 55 MA's),
(Start: 46 @59195 has 1 MA's), (56, 59273), (59, 59342),

Gene: Atiba_95 Start: 58789, Stop: 59019, Start Num: 40

Candidate Starts for Atiba_95:

(17, 58549), (18, 58552), (24, 58636), (27, 58696), (Start: 40 @58789 has 55 MA's), (Start: 46 @58846 has 1 MA's), (56, 58924), (59, 58993),

Gene: BEEST_94 Start: 59139, Stop: 59369, Start Num: 40

Candidate Starts for BEEST_94:

(17, 58899), (18, 58902), (19, 58926), (23, 58965), (24, 58986), (27, 59046), (Start: 40 @59139 has 55 MA's),
(Start: 46 @59196 has 1 MA's), (56, 59274), (59, 59343),

Gene: BGlluviae_94 Start: 58541, Stop: 58771, Start Num: 40

Candidate Starts for BGlluviae_94:

(17, 58301), (18, 58304), (24, 58388), (27, 58448), (Start: 40 @58541 has 55 MA's), (Start: 46 @58598 has 1 MA's), (56, 58676), (59, 58745),

Gene: BaghaKamala_94 Start: 58365, Stop: 58595, Start Num: 40

Candidate Starts for BaghaKamala_94:

(17, 58125), (18, 58128), (19, 58152), (24, 58212), (27, 58272), (Start: 40 @58365 has 55 MA's),
(Start: 46 @58422 has 1 MA's), (56, 58500), (59, 58569),

Gene: BarrelRoll_94 Start: 58905, Stop: 59135, Start Num: 40

Candidate Starts for BarrelRoll_94:

(17, 58665), (18, 58668), (24, 58752), (27, 58812), (Start: 40 @58905 has 55 MA's), (Start: 46 @58962 has 1 MA's), (56, 59040), (59, 59109),

Gene: Beezoo_98 Start: 59727, Stop: 59957, Start Num: 40

Candidate Starts for Beezoo_98:

(15, 59409), (16, 59481), (20, 59523), (24, 59574), (27, 59634), (Start: 40 @59727 has 55 MA's),
(Start: 46 @59784 has 1 MA's), (56, 59862), (59, 59931),

Gene: Belladonna_95 Start: 58941, Stop: 59171, Start Num: 40

Candidate Starts for Belladonna_95:

(17, 58701), (18, 58704), (19, 58728), (23, 58767), (24, 58788), (27, 58848), (Start: 40 @58941 has 55
MA's), (Start: 46 @58998 has 1 MA's), (56, 59076), (59, 59145),

Gene: Biglebops_76 Start: 55869, Stop: 56087, Start Num: 41

Candidate Starts for Biglebops_76:

(32, 55821), (Start: 41 @55869 has 9 MA's), (Start: 46 @55911 has 1 MA's), (50, 55941),

Gene: Blizzard_95 Start: 59138, Stop: 59368, Start Num: 40

Candidate Starts for Blizzard_95:

(17, 58898), (18, 58901), (19, 58925), (23, 58964), (24, 58985), (27, 59045), (Start: 40 @59138 has 55
MA's), (Start: 46 @59195 has 1 MA's), (56, 59273), (59, 59342),

Gene: Boiiii_95 Start: 59140, Stop: 59370, Start Num: 40

Candidate Starts for Boiiii_95:

(17, 58900), (18, 58903), (19, 58927), (23, 58966), (24, 58987), (27, 59047), (Start: 40 @59140 has 55
MA's), (Start: 46 @59197 has 1 MA's), (56, 59275), (59, 59344),

Gene: Bryler_93 Start: 57045, Stop: 57311, Start Num: 31

Candidate Starts for Bryler_93:

(Start: 31 @57045 has 11 MA's), (35, 57069), (Start: 46 @57138 has 1 MA's), (54, 57201),

Gene: CREW_93 Start: 58940, Stop: 59170, Start Num: 40

Candidate Starts for CREW_93:

(17, 58700), (18, 58703), (19, 58727), (23, 58766), (24, 58787), (27, 58847), (Start: 40 @58940 has 55
MA's), (Start: 46 @58997 has 1 MA's), (56, 59075), (59, 59144),

Gene: Cain_101 Start: 60192, Stop: 60458, Start Num: 31

Candidate Starts for Cain_101:

(Start: 31 @60192 has 11 MA's), (35, 60216), (Start: 46 @60285 has 1 MA's), (54, 60348),

Gene: Capricorn_95 Start: 58941, Stop: 59171, Start Num: 40

Candidate Starts for Capricorn_95:

(17, 58701), (18, 58704), (19, 58728), (23, 58767), (24, 58788), (27, 58848), (Start: 40 @58941 has 55
MA's), (Start: 46 @58998 has 1 MA's), (56, 59076), (59, 59145),

Gene: CaseJules_98 Start: 59138, Stop: 59368, Start Num: 40

Candidate Starts for CaseJules_98:

(17, 58898), (18, 58901), (19, 58925), (23, 58964), (24, 58985), (27, 59045), (Start: 40 @59138 has 55
MA's), (Start: 46 @59195 has 1 MA's), (56, 59273), (59, 59342),

Gene: Chris_100 Start: 61462, Stop: 61725, Start Num: 30

Candidate Starts for Chris_100:

(3, 60892), (4, 60919), (6, 61006), (7, 61027), (10, 61099), (11, 61132), (Start: 30 @61462 has 9
MA's), (54, 61615), (58, 61645),

Gene: CrimD_94 Start: 59033, Stop: 59263, Start Num: 40

Candidate Starts for CrimD_94:

(26, 58901), (27, 58940), (Start: 40 @59033 has 55 MA's), (Start: 46 @59090 has 1 MA's), (56, 59168), (59, 59237),

Gene: Dalmuri_95 Start: 58941, Stop: 59171, Start Num: 40

Candidate Starts for Dalmuri_95:

(17, 58701), (18, 58704), (19, 58728), (23, 58767), (24, 58788), (27, 58848), (Start: 40 @58941 has 55 MA's), (Start: 46 @58998 has 1 MA's), (56, 59076), (59, 59145),

Gene: DarthP_94 Start: 60983, Stop: 61234, Start Num: 34

Candidate Starts for DarthP_94:

(Start: 34 @60983 has 7 MA's), (47, 61061), (54, 61121), (55, 61130),

Gene: Dartin_97 Start: 60821, Stop: 61057, Start Num: 38

Candidate Starts for Dartin_97:

(22, 60617), (29, 60743), (Start: 38 @60821 has 6 MA's), (Start: 49 @60887 has 2 MA's), (51, 60914), (52, 60920), (59, 61028),

Gene: Deby_94 Start: 59696, Stop: 59926, Start Num: 40

Candidate Starts for Deby_94:

(17, 59456), (18, 59459), (19, 59483), (24, 59543), (27, 59603), (Start: 40 @59696 has 55 MA's), (Start: 46 @59753 has 1 MA's), (56, 59831), (59, 59900),

Gene: Devera_101 Start: 59853, Stop: 60083, Start Num: 40

Candidate Starts for Devera_101:

(26, 59724), (27, 59760), (Start: 40 @59853 has 55 MA's), (Start: 46 @59910 has 1 MA's), (56, 59988), (59, 60057),

Gene: Dole_97 Start: 59856, Stop: 60086, Start Num: 40

Candidate Starts for Dole_97:

(26, 59727), (27, 59763), (Start: 40 @59856 has 55 MA's), (Start: 46 @59913 has 1 MA's), (56, 59991), (59, 60060),

Gene: DrHayes_96 Start: 59765, Stop: 59995, Start Num: 40

Candidate Starts for DrHayes_96:

(17, 59525), (18, 59528), (24, 59612), (27, 59672), (28, 59687), (Start: 40 @59765 has 55 MA's), (Start: 46 @59822 has 1 MA's), (56, 59900), (59, 59969),

Gene: Durfee_95 Start: 59138, Stop: 59368, Start Num: 40

Candidate Starts for Durfee_95:

(17, 58898), (18, 58901), (19, 58925), (23, 58964), (24, 58985), (27, 59045), (Start: 40 @59138 has 55 MA's), (Start: 46 @59195 has 1 MA's), (56, 59273), (59, 59342),

Gene: Efra2_103 Start: 60683, Stop: 60925, Start Num: 38

Candidate Starts for Efra2_103:

(13, 60350), (Start: 38 @60683 has 6 MA's), (45, 60731), (Start: 49 @60749 has 2 MA's), (53, 60791), (55, 60821),

Gene: Ekdilam_91 Start: 61162, Stop: 61413, Start Num: 34

Candidate Starts for Ekdilam_91:

(Start: 34 @61162 has 7 MA's), (48, 61243), (55, 61306),

Gene: Ellie_95 Start: 61344, Stop: 61598, Start Num: 34

Candidate Starts for Ellie_95:

(Start: 34 @61344 has 7 MA's), (36, 61350),

Gene: Emerson_99 Start: 59543, Stop: 59773, Start Num: 40

Candidate Starts for Emerson_99:

(17, 59303), (18, 59306), (19, 59330), (23, 59369), (24, 59390), (27, 59450), (Start: 40 @59543 has 55 MA's), (Start: 46 @59600 has 1 MA's), (56, 59678), (59, 59747),

Gene: Enkosi_78 Start: 58467, Stop: 58685, Start Num: 41

Candidate Starts for Enkosi_78:

(32, 58419), (Start: 41 @58467 has 9 MA's), (Start: 46 @58509 has 1 MA's), (50, 58539),

Gene: Fefferhead_97 Start: 60765, Stop: 61019, Start Num: 34

Candidate Starts for Fefferhead_97:

(Start: 34 @60765 has 7 MA's), (36, 60771),

Gene: Ganymede_94 Start: 58952, Stop: 59182, Start Num: 40

Candidate Starts for Ganymede_94:

(17, 58712), (18, 58715), (24, 58799), (27, 58859), (Start: 40 @58952 has 55 MA's), (Start: 46 @59009 has 1 MA's), (56, 59087), (59, 59156),

Gene: Geraldini_95 Start: 59051, Stop: 59281, Start Num: 40

Candidate Starts for Geraldini_95:

(17, 58811), (18, 58814), (19, 58838), (23, 58877), (24, 58898), (27, 58958), (Start: 40 @59051 has 55 MA's), (Start: 46 @59108 has 1 MA's), (56, 59186), (59, 59255),

Gene: Guanica15_102 Start: 60372, Stop: 60614, Start Num: 38

Candidate Starts for Guanica15_102:

(13, 60039), (Start: 38 @60372 has 6 MA's), (45, 60420), (Start: 49 @60438 has 2 MA's), (53, 60480), (55, 60510),

Gene: Hammy_94 Start: 61201, Stop: 61452, Start Num: 34

Candidate Starts for Hammy_94:

(Start: 34 @61201 has 7 MA's), (47, 61279), (54, 61339), (55, 61348),

Gene: Homura_93 Start: 58941, Stop: 59171, Start Num: 40

Candidate Starts for Homura_93:

(17, 58701), (18, 58704), (19, 58728), (23, 58767), (24, 58788), (27, 58848), (Start: 40 @58941 has 55 MA's), (Start: 46 @58998 has 1 MA's), (56, 59076), (59, 59145),

Gene: Illumine_98 Start: 59855, Stop: 60085, Start Num: 40

Candidate Starts for Illumine_98:

(26, 59726), (27, 59762), (Start: 40 @59855 has 55 MA's), (Start: 46 @59912 has 1 MA's), (56, 59990), (59, 60059),

Gene: JAWS_93 Start: 58982, Stop: 59212, Start Num: 40

Candidate Starts for JAWS_93:

(17, 58742), (18, 58745), (24, 58829), (27, 58889), (Start: 40 @58982 has 55 MA's), (Start: 46 @59039 has 1 MA's), (56, 59117), (59, 59186),

Gene: Jayhawk_98 Start: 58965, Stop: 59195, Start Num: 40

Candidate Starts for Jayhawk_98:

(17, 58725), (18, 58728), (24, 58812), (27, 58872), (Start: 40 @58965 has 55 MA's), (Start: 46 @59022 has 1 MA's), (56, 59100), (59, 59169),

Gene: Jeckyll_95 Start: 58941, Stop: 59171, Start Num: 40

Candidate Starts for Jeckyll_95:

(17, 58701), (18, 58704), (19, 58728), (23, 58767), (24, 58788), (27, 58848), (Start: 40 @58941 has 55 MA's), (Start: 46 @58998 has 1 MA's), (56, 59076), (59, 59145),

Gene: Joy99_96 Start: 59127, Stop: 59300, Start Num: 46

Candidate Starts for Joy99_96:

(17, 58830), (18, 58833), (19, 58857), (23, 58896), (24, 58917), (27, 58977), (Start: 40 @59070 has 55 MA's), (Start: 46 @59127 has 1 MA's), (56, 59205), (59, 59274),

Gene: KiSi_103 Start: 61933, Stop: 62211, Start Num: 30

Candidate Starts for KiSi_103:

(11, 61603), (Start: 30 @61933 has 9 MA's), (42, 62008), (54, 62101),

Gene: Krueger_100 Start: 59699, Stop: 59965, Start Num: 31

Candidate Starts for Krueger_100:

(Start: 31 @59699 has 11 MA's), (Start: 46 @59792 has 1 MA's), (54, 59855),

Gene: LastHope_102 Start: 60395, Stop: 60571, Start Num: 49

Candidate Starts for LastHope_102:

(1, 59678), (2, 59687), (8, 59849), (13, 59996), (Start: 38 @60329 has 6 MA's), (Start: 49 @60395 has 2 MA's), (53, 60437), (55, 60467), (57, 60479),

Gene: LaterM_94 Start: 59378, Stop: 59608, Start Num: 40

Candidate Starts for LaterM_94:

(26, 59249), (27, 59285), (Start: 40 @59378 has 55 MA's), (Start: 46 @59435 has 1 MA's), (56, 59513), (59, 59582),

Gene: LeMond_102 Start: 61890, Stop: 62168, Start Num: 30

Candidate Starts for LeMond_102:

(11, 61560), (Start: 30 @61890 has 9 MA's), (42, 61965), (54, 62058),

Gene: LilPharaoh_77 Start: 55582, Stop: 55800, Start Num: 41

Candidate Starts for LilPharaoh_77:

(32, 55534), (Start: 41 @55582 has 9 MA's), (Start: 46 @55624 has 1 MA's), (50, 55654),

Gene: LindNT_92 Start: 59288, Stop: 59518, Start Num: 40

Candidate Starts for LindNT_92:

(17, 59048), (18, 59051), (19, 59075), (24, 59135), (27, 59195), (37, 59270), (Start: 40 @59288 has 55 MA's), (Start: 46 @59345 has 1 MA's), (56, 59423), (59, 59492),

Gene: MarkPhew_102 Start: 61533, Stop: 61808, Start Num: 30

Candidate Starts for MarkPhew_102:

(5, 61035), (9, 61131), (Start: 30 @61533 has 9 MA's),

Gene: Marshawn_95 Start: 60831, Stop: 61100, Start Num: 30

Candidate Starts for Marshawn_95:

(Start: 30 @60831 has 9 MA's), (56, 61002),

Gene: McMater_97 Start: 60821, Stop: 61057, Start Num: 38

Candidate Starts for McMater_97:

(22, 60617), (29, 60743), (Start: 38 @60821 has 6 MA's), (Start: 49 @60887 has 2 MA's), (51, 60914), (52, 60920), (59, 61028),

Gene: Mdavu_77 Start: 55858, Stop: 56076, Start Num: 41

Candidate Starts for Mdavu_77:

(32, 55810), (Start: 41 @55858 has 9 MA's), (Start: 46 @55900 has 1 MA's), (50, 55930),

Gene: Megsy_100 Start: 59426, Stop: 59656, Start Num: 40

Candidate Starts for Megsy_100:

(18, 59189), (19, 59213), (24, 59273), (27, 59333), (Start: 40 @59426 has 55 MA's), (Start: 46 @59483 has 1 MA's), (56, 59561), (59, 59630),

Gene: Murucutumbu_94 Start: 59843, Stop: 60073, Start Num: 41

Candidate Starts for Murucutumbu_94:

(25, 59711), (Start: 41 @59843 has 9 MA's), (Start: 46 @59900 has 1 MA's), (56, 59978), (59, 60047),

Gene: Mynx_95 Start: 59288, Stop: 59518, Start Num: 40

Candidate Starts for Mynx_95:

(17, 59048), (18, 59051), (24, 59135), (27, 59195), (Start: 40 @59288 has 55 MA's), (Start: 46 @59345 has 1 MA's), (56, 59423), (59, 59492),

Gene: Nibb_102 Start: 61676, Stop: 61948, Start Num: 30

Candidate Starts for Nibb_102:

(Start: 30 @61676 has 9 MA's), (54, 61838),

Gene: Nikao_79 Start: 58467, Stop: 58685, Start Num: 41

Candidate Starts for Nikao_79:

(32, 58419), (Start: 41 @58467 has 9 MA's), (Start: 46 @58509 has 1 MA's), (50, 58539),

Gene: Niklas_97 Start: 60422, Stop: 60658, Start Num: 38

Candidate Starts for Niklas_97:

(22, 60218), (29, 60344), (Start: 38 @60422 has 6 MA's), (Start: 49 @60488 has 2 MA's), (51, 60515), (52, 60521), (59, 60629),

Gene: Nutello_76 Start: 55854, Stop: 56072, Start Num: 41

Candidate Starts for Nutello_76:

(32, 55806), (Start: 41 @55854 has 9 MA's), (Start: 46 @55896 has 1 MA's), (50, 55926),

Gene: Oscar_103 Start: 61812, Stop: 62090, Start Num: 30

Candidate Starts for Oscar_103:

(11, 61482), (Start: 30 @61812 has 9 MA's), (42, 61887), (54, 61980),

Gene: Peanam_98 Start: 60489, Stop: 60710, Start Num: 38

Candidate Starts for Peanam_98:

(22, 60285), (29, 60411), (Start: 38 @60489 has 6 MA's), (Start: 49 @60540 has 2 MA's), (51, 60567), (52, 60573), (59, 60681),

Gene: PhelpsODU_91 Start: 55946, Stop: 56224, Start Num: 31

Candidate Starts for PhelpsODU_91:

(Start: 31 @55946 has 11 MA's), (Start: 34 @55967 has 7 MA's), (44, 56033), (Start: 46 @56051 has 1 MA's), (Start: 49 @56063 has 2 MA's), (54, 56114),

Gene: Phrank_102 Start: 60490, Stop: 60756, Start Num: 31

Candidate Starts for Phrank_102:

(Start: 31 @60490 has 11 MA's), (35, 60514), (Start: 46 @60583 has 1 MA's), (54, 60646),

Gene: Pokerus_94 Start: 59008, Stop: 59238, Start Num: 40

Candidate Starts for Pokerus_94:

(17, 58768), (18, 58771), (24, 58855), (27, 58915), (Start: 40 @59008 has 55 MA's), (Start: 46 @59065 has 1 MA's), (56, 59143), (59, 59212),

Gene: Prithvi_96 Start: 59546, Stop: 59776, Start Num: 40

Candidate Starts for Prithvi_96:

(17, 59306), (18, 59309), (21, 59345), (24, 59393), (27, 59453), (Start: 40 @59546 has 55 MA's), (Start: 46 @59603 has 1 MA's), (56, 59681), (59, 59750),

Gene: QuincyRose_92 Start: 58952, Stop: 59182, Start Num: 40

Candidate Starts for QuincyRose_92:

(17, 58712), (18, 58715), (24, 58799), (27, 58859), (Start: 40 @58952 has 55 MA's), (Start: 46 @59009 has 1 MA's), (56, 59087), (59, 59156),

Gene: Ramen_95 Start: 58695, Stop: 58925, Start Num: 40

Candidate Starts for Ramen_95:

(17, 58455), (18, 58458), (24, 58542), (27, 58602), (Start: 40 @58695 has 55 MA's), (Start: 46 @58752 has 1 MA's), (56, 58830), (59, 58899),

Gene: Rapunzel97_97 Start: 58920, Stop: 59150, Start Num: 40

Candidate Starts for Rapunzel97_97:

(17, 58680), (18, 58683), (24, 58767), (27, 58827), (Start: 40 @58920 has 55 MA's), (Start: 46 @58977 has 1 MA's), (56, 59055), (59, 59124),

Gene: Richo_97 Start: 60821, Stop: 61057, Start Num: 38

Candidate Starts for Richo_97:

(22, 60617), (29, 60743), (Start: 38 @60821 has 6 MA's), (Start: 49 @60887 has 2 MA's), (51, 60914), (52, 60920), (59, 61028),

Gene: Rosmarinus_95 Start: 58929, Stop: 59159, Start Num: 40

Candidate Starts for Rosmarinus_95:

(Start: 40 @58929 has 55 MA's), (Start: 46 @58986 has 1 MA's), (56, 59064), (59, 59133),

Gene: SamuelLPlaqson_96 Start: 59765, Stop: 59995, Start Num: 40

Candidate Starts for SamuelLPlaqson_96:

(17, 59525), (18, 59528), (24, 59612), (27, 59672), (28, 59687), (Start: 40 @59765 has 55 MA's), (Start: 46 @59822 has 1 MA's), (56, 59900), (59, 59969),

Gene: Scarlett_102 Start: 61681, Stop: 61959, Start Num: 30

Candidate Starts for Scarlett_102:

(11, 61351), (Start: 30 @61681 has 9 MA's), (42, 61756), (54, 61849),

Gene: SgtBeansprout_77 Start: 55854, Stop: 56072, Start Num: 41

Candidate Starts for SgtBeansprout_77:

(32, 55806), (Start: 41 @55854 has 9 MA's), (Start: 46 @55896 has 1 MA's), (50, 55926),

Gene: Shadow1_99 Start: 59836, Stop: 60102, Start Num: 31

Candidate Starts for Shadow1_99:

(Start: 31 @59836 has 11 MA's), (35, 59860), (Start: 46 @59929 has 1 MA's), (54, 59992),

Gene: Shaobing_95 Start: 60463, Stop: 60699, Start Num: 38

Candidate Starts for Shaobing_95:

(22, 60259), (29, 60385), (Start: 38 @60463 has 6 MA's), (Start: 49 @60529 has 2 MA's), (51, 60556), (52, 60562), (59, 60670),

Gene: ShiaSurprise_97 Start: 59138, Stop: 59368, Start Num: 40

Candidate Starts for ShiaSurprise_97:

(17, 58898), (18, 58901), (19, 58925), (23, 58964), (24, 58985), (27, 59045), (Start: 40 @59138 has 55 MA's), (Start: 46 @59195 has 1 MA's), (56, 59273), (59, 59342),

Gene: SirPhilip_97 Start: 61295, Stop: 61543, Start Num: 30

Candidate Starts for SirPhilip_97:

(Start: 30 @61295 has 9 MA's), (56, 61448), (57, 61454),

Gene: Slimphazie_97 Start: 59376, Stop: 59606, Start Num: 40

Candidate Starts for Slimphazie_97:

(17, 59136), (18, 59139), (24, 59223), (27, 59283), (Start: 40 @59376 has 55 MA's), (Start: 46 @59433 has 1 MA's), (56, 59511), (59, 59580),

Gene: Stinson_95 Start: 59153, Stop: 59383, Start Num: 40

Candidate Starts for Stinson_95:

(26, 59024), (27, 59060), (Start: 40 @59153 has 55 MA's), (Start: 46 @59210 has 1 MA's), (56, 59288), (59, 59357),

Gene: Sulley_93 Start: 59106, Stop: 59336, Start Num: 40

Candidate Starts for Sulley_93:

(17, 58866), (18, 58869), (24, 58953), (27, 59013), (Start: 40 @59106 has 55 MA's), (Start: 46 @59163 has 1 MA's), (56, 59241), (59, 59310),

Gene: Sunflower1121_99 Start: 59594, Stop: 59860, Start Num: 31

Candidate Starts for Sunflower1121_99:

(Start: 31 @59594 has 11 MA's), (35, 59618), (Start: 46 @59687 has 1 MA's), (54, 59750),

Gene: Syra333_98 Start: 59676, Stop: 59942, Start Num: 31

Candidate Starts for Syra333_98:

(Start: 31 @59676 has 11 MA's), (Start: 46 @59769 has 1 MA's), (54, 59832),

Gene: Tachez_95 Start: 58789, Stop: 59019, Start Num: 40

Candidate Starts for Tachez_95:

(17, 58549), (18, 58552), (24, 58636), (27, 58696), (Start: 40 @58789 has 55 MA's), (Start: 46 @58846 has 1 MA's), (56, 58924), (59, 58993),

Gene: TaiwanKao_96 Start: 59201, Stop: 59431, Start Num: 40

Candidate Starts for TaiwanKao_96:

(17, 58961), (18, 58964), (19, 58988), (24, 59048), (27, 59108), (Start: 40 @59201 has 55 MA's), (Start: 46 @59258 has 1 MA's), (56, 59336), (59, 59405),

Gene: Tierra_101 Start: 60797, Stop: 61063, Start Num: 31

Candidate Starts for Tierra_101:

(Start: 31 @60797 has 11 MA's), (Start: 34 @60818 has 7 MA's), (43, 60872), (Start: 46 @60890 has 1 MA's), (Start: 49 @60902 has 2 MA's), (54, 60953),

Gene: TingHuaYa_100 Start: 60724, Stop: 60897, Start Num: 49
Candidate Starts for TingHuaYa_100:
(Start: 38 @60658 has 6 MA's), (Start: 49 @60724 has 2 MA's), (53, 60766), (55, 60796), (57, 60808),

Gene: Tiri_95 Start: 58682, Stop: 58912, Start Num: 40
Candidate Starts for Tiri_95:
(12, 58340), (13, 58346), (14, 58355), (25, 58550), (27, 58589), (Start: 40 @58682 has 55 MA's),
(Start: 46 @58739 has 1 MA's), (56, 58817), (59, 58886),

Gene: Torres_78 Start: 58468, Stop: 58686, Start Num: 41
Candidate Starts for Torres_78:
(32, 58420), (Start: 41 @58468 has 9 MA's), (Start: 46 @58510 has 1 MA's), (50, 58540),

Gene: TreyKay_96 Start: 59546, Stop: 59776, Start Num: 40
Candidate Starts for TreyKay_96:
(17, 59306), (18, 59309), (21, 59345), (24, 59393), (27, 59453), (Start: 40 @59546 has 55 MA's),
(Start: 46 @59603 has 1 MA's), (56, 59681), (59, 59750),

Gene: Twitch_95 Start: 58944, Stop: 59174, Start Num: 40
Candidate Starts for Twitch_95:
(17, 58704), (18, 58707), (19, 58731), (23, 58770), (24, 58791), (27, 58851), (Start: 40 @58944 has 55 MA's),
(Start: 46 @59001 has 1 MA's), (56, 59079), (59, 59148),

Gene: Unicorn_101 Start: 60574, Stop: 60852, Start Num: 31
Candidate Starts for Unicorn_101:
(Start: 31 @60574 has 11 MA's), (Start: 34 @60595 has 7 MA's), (44, 60661), (Start: 46 @60679 has 1 MA's),
(Start: 49 @60691 has 2 MA's), (54, 60742),

Gene: Urkel_96 Start: 59765, Stop: 59995, Start Num: 40
Candidate Starts for Urkel_96:
(17, 59525), (18, 59528), (24, 59612), (27, 59672), (28, 59687), (Start: 40 @59765 has 55 MA's),
(Start: 46 @59822 has 1 MA's), (56, 59900), (59, 59969),

Gene: Validus_105 Start: 61894, Stop: 62133, Start Num: 38
Candidate Starts for Validus_105:
(Start: 38 @61894 has 6 MA's), (Start: 49 @61963 has 2 MA's), (51, 61990), (52, 61996), (59, 62104),

Gene: Veliki_95 Start: 58967, Stop: 59197, Start Num: 40
Candidate Starts for Veliki_95:
(17, 58727), (18, 58730), (24, 58814), (27, 58874), (Start: 40 @58967 has 55 MA's), (Start: 46 @59024 has 1 MA's),
(56, 59102), (59, 59171),

Gene: Ximenita_102 Start: 60409, Stop: 60675, Start Num: 31
Candidate Starts for Ximenita_102:
(Start: 31 @60409 has 11 MA's), (39, 60457), (Start: 46 @60502 has 1 MA's), (54, 60565),

Gene: Yuna_99 Start: 61586, Stop: 61840, Start Num: 33
Candidate Starts for Yuna_99:
(Start: 33 @61586 has 1 MA's), (42, 61634), (54, 61733), (59, 61817),

Gene: Yunkel11_100 Start: 60221, Stop: 60397, Start Num: 49
Candidate Starts for Yunkel11_100:

(Start: 38 @60155 has 6 MA's), (45, 60203), (Start: 49 @60221 has 2 MA's), (53, 60263), (55, 60293), (60, 60371),

Gene: Zavala_96 Start: 59202, Stop: 59432, Start Num: 40

Candidate Starts for Zavala_96:

(17, 58962), (18, 58965), (24, 59049), (27, 59109), (Start: 40 @59202 has 55 MA's), (Start: 46 @59259 has 1 MA's), (56, 59337), (59, 59406),