Pham 289232

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 289232 Report

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

Pham number 289232 has 114 members, 14 are drafts.

Phages represented in each track:
• Track 1 : Wyborn_73, Sicarius2_74
• Track 2 : Abba_67, Nostromo_67
• Track 3 : Sedona_82, Paries_88, Lennon_84, BobBob_86, Stultus_79, FuegoCuervo_89, Fitzgerald_82, ChadMasterC_83, Angelicage_83, Shivanishola_86, Sanjuju_82, Ailee_82, Baddon_82, Bibwit_82, McKinley_87, Sitar_83, Love_90, Brandonk123_88, Kewpiedoll_85, Affeca_86
• Track 4 : Jabberwocky_83, MoontowerMania_85, Keitabear_82
• Track 5 : Fosterous_86, Kamashten_85, Galadriel_85, McCrothy_83, Thing3_85, Rofo_84
• Track 6 : RiverRaider_86
• Track 7 : Nordenberg_83, Charming_87
• Track 8 : Tangent_87, Vivi2_88, Barsten_87, Geodirt_84
• Track 9 : Ali17_83, Leonard_86, Hans_87, Phinally_86
• Track 10 : Phauci_78
• Track 11 : MelBins_88
• Track 12 : Inspectinfecti_87
• Track 13 : Abblin_88, Natkenzie_88, Sampson_90, Scioto_88
• Track 14 : DoctorFroggo_88, Verity_87, Zipp_88, Delrey21_88
• Track 15 : Tardus_90
• Track 16 : Pumpkiney_88
• Track 17 : Lilbeanie_97
• Track 18 : Sunny_, Merry_
• Track 19 : PhedwardCullen_64, Crisis_67, Antares_66, Shotgun_66, Pulchra_68, Phrancesco_66, Phorgeous_66, CrazyRich_65, Honeyfin_67, Busephilis_65, Ganandorf_65, Jefe_66, Selwyn23_67, Lucretia_66, Glorp_67
• Track 20 : Metamorphoo_69, Tyrumbra_65, Shrubaron_70, RobsFeet_70
• Track 21 : Savannah_65, Hermeonysus_66, Quhwah_70, BeagleBug_65, LittleFortune_68, Cranjis_67
• Track 22 : Scumberland_68
• Track 23 : Smarties_76, Fireman_69, Ariadne_76
• Track 24 : Piperis_67, KaiHaiDragon_67, Yeti_68, EarickHC_67
• Track 25 : Teamocil_70, Gina_70
• Track 26 : NoodlelyBoi_67
• Track 27 : Kowalski_65, Rockwell_65, Paschalis_66, BrazzalePHS_65, Ramiel05_65, Jollipop_67, PiperSansNom_67, Onika_65
• Track 28 : ClearAsMud_70, SirFrank_66
• Track 29 : PierreOrion_66

- Track 30 : Zapato_66
- Track 31 : Skugga_66
- Track 32 : Jayden_67
- Track 33 : Gooberta_77, GoldDust_76, Music_81
- Track 34 : Vibaki_78

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

The start number called the most often in the published annotations is 15, it was called in 45 of the 100 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- Antares_66, Ariadne_76, BeagleBug_65, BrazzalePHS_65, Busephilis_65, ClearAsMud_70, Cranjis_67, CrazyRich_65, Crisis_67, EarickHC_67, Fireman_69, Ganandorf_65, Gina_70, Glorp_67, Hermeonysus_66, Honeyfin_67, Jayden_67, Jefe_66, Jollipop_67, KaiHaiDragon_67, Kowalski_65, LittleFortune_68, Lucretia_66, Merry_, Metamorphoo_69, NoodlelyBoi_67, Onika_65, Paschalis_66, PhedwardCullen_64, Phorgeous_66, Phrancesco_66, PierreOrion_66, PiperSansNom_67, Piperis_67, Pulchra_68, Quhwah_70, Ramiel05_65, RobsFeet_70, Rockwell_65, Savannah_65, Scumberland_68, Selwyn23_67, Shotgun_66, Shrubaron_70, SirFrank_66, Skugga_66, Smarties_76, Sunny_, Teamocil_70, Tyrumbra_65, Yeti_68, Zapato_66,

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

Genes that do not have the "Most Annotated" start:
- Abba_67, Abblin_88, Affeca_86, Ailee_82, Ali17_83, Angelicage_83, Baddon_82, Barsten_87, Bibwit_82, BobBob_86, Brandonk123_88, ChadMasterC_83, Charming_87, Delrey21_88, DoctorFroggo_88, Fitzgerald_82, Fosterous_86, FuegoCuervo_89, Galadriel_85, Geodirt_84, GoldDust_76, Gooberta_77, Hans_87, Inspectinfecti_87, Jabberwocky_83, Kamashten_85, Keitabear_82, Kewpiedoll_85, Lennon_84, Leonard_86, Lilbeanie_97, Love_90, McCrothy_83, McKinley_87, MelBins_88, MoontowerMania_85, Music_81, Natkenzie_88, Nordenberg_83, Nostromo_67, Paries_88, Phauci_78, Phinally_86, Pumpkiney_88, RiverRaider_86, Rofo_84, Sampson_90, Sanjuju_82, Scioto_88, Sedona_82, Shivanishola_86, Sicarius2_74, Sitar_83, Stultus_79, Tangent_87, Tardus_90, Thing3_85, Verity_87, Vibaki_78, Vivi2_88, Wyborn_73, Zipp_88,

Summary by start number:

Start 11:
- Found in 29 of 114 (25.4%) of genes in pham
- Manual Annotations of this start: 5 of 100
- Called 17.2% of time when present
- Phage (with cluster) where this start called: Charming_87 (DE1), Jabberwocky_83 (DE1), Keitabear_82 (DE1), MoontowerMania_85 (DE1), Nordenberg_83 (DE1),

Start 13:
- Found in 8 of 114 (7.0%) of genes in pham

• Manual Annotations of this start: 6 of 100
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Abba_67 (AO3), GoldDust_76 (FL), Gooberta_77 (FL), Music_81 (FL), Nostromo_67 (AO3), Sicarius2_74 (AO2), Vibaki_78 (FL), Wyborn_73 (AO2),

Start 14:
• Found in 10 of 114 (8.8%) of genes in pham
• Manual Annotations of this start: 6 of 100
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Abblin_88 (DE4), Delrey21_88 (DE4), DoctorFroggo_88 (DE4), Natkenzie_88 (DE4), Pumpkiney_88 (DE4), Sampson_90 (DE4), Scioto_88 (DE4), Tardus_90 (DE4), Verity_87 (DE4), Zipp_88 (DE4),

Start 15:
• Found in 52 of 114 (45.6%) of genes in pham
• Manual Annotations of this start: 45 of 100
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Antares_66 (EC), Ariadne_76 (EC), BeagleBug_65 (EC), BrazzalePHS_65 (EC), Busephilis_65 (EC), ClearAsMud_70 (EC), Cranjis_67 (EC), CrazyRich_65 (EC), Crisis_67 (EC), EarickHC_67 (EC), Fireman_69 (EC), Ganandorf_65 (EC), Gina_70 (EC), Glorp_67 (EC), Hermeonysus_66 (EC), Honeyfin_67 (EC), Jayden_67 (EC), Jefe_66 (EC), Jollipop_67 (EC), KaiHaiDragon_67 (EC), Kowalski_65 (EC), LittleFortune_68 (EC), Lucretia_66 (EC), Merry_ (EC), Metamorphoo_69 (EC), NoodlelyBoi_67 (EC), Onika_65 (EC), Paschalis_66 (EC), PhedwardCullen_64 (EC), Phorgeous_66 (EC), Phrancesco_66 (EC), PierreOrion_66 (EC), PiperSansNom_67 (EC), Piperis_67 (EC), Pulchra_68 (EC), Quhwah_70 (EC), Ramiel05_65 (EC), RobsFeet_70 (EC), Rockwell_65 (EC), Savannah_65 (EC), Scumberland_68 (EC), Selwyn23_67 (EC), Shotgun_66 (EC), Shrubaron_70 (EC), SirFrank_66 (EC), Skugga_66 (EC), Smarties_76 (EC), Sunny_ (EC), Teamocil_70 (EC), Tyrumbra_65 (EC), Yeti_68 (EC), Zapato_66 (EC),

Start 16:
• Found in 43 of 114 (37.7%) of genes in pham
• Manual Annotations of this start: 37 of 100
• Called 88.4% of time when present
• Phage (with cluster) where this start called: Affeca_86 (DE1), Ailee_82 (DE1), Ali17_83 (DE2), Angelicage_83 (DE1), Baddon_82 (DE1), Barsten_87 (DE1), Bibwit_82 (DE1), BobBob_86 (DE1), Brandonk123_88 (DE1), ChadMasterC_83 (DE1), Fitzgerald_82 (DE1), Fosterous_86 (DE1), FuegoCuervo_89 (DE1), Galadriel_85 (DE1), Geodirt_84 (DE1), Hans_87 (DE2), Inspectinfecti_87 (DE2), Kamashten_85 (DE1), Kewpiedoll_85 (DE1), Lennon_84 (DE1), Leonard_86 (DE2), Love_90 (DE1), McCrothy_83 (DE1), McKinley_87 (DE1), MelBins_88 (DE2), Paries_88 (DE1), Phauci_78 (DE2), Phinally_86 (DE2), RiverRaider_86 (DE1), Rofo_84 (DE1), Sanjuju_82 (DE1), Sedona_82 (DE1), Shivanishola_86 (DE1), Sitar_83 (DE1), Stultus_79 (DE1), Tangent_87 (DE1), Thing3_85 (DE1), Vivi2_88 (DE1),

Start 22:
• Found in 1 of 114 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 100
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Lilbeanie_97 (DE5),

Summary by clusters:

There are 8 clusters represented in this pham: DE1, DE2, DE4, DE5, EC, AO3, AO2, FL,

Info for manual annotations of cluster AO2:
•Start number 13 was manually annotated 2 times for cluster AO2.

Info for manual annotations of cluster AO3:
•Start number 13 was manually annotated 2 times for cluster AO3.

Info for manual annotations of cluster DE1:
•Start number 11 was manually annotated 5 times for cluster DE1.
•Start number 16 was manually annotated 30 times for cluster DE1.

Info for manual annotations of cluster DE2:
•Start number 16 was manually annotated 7 times for cluster DE2.

Info for manual annotations of cluster DE4:
•Start number 14 was manually annotated 6 times for cluster DE4.

Info for manual annotations of cluster DE5:
•Start number 22 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster EC:
•Start number 15 was manually annotated 45 times for cluster EC.

Info for manual annotations of cluster FL:
•Start number 13 was manually annotated 2 times for cluster FL.

Gene Information:
Gene: Abba_67 Start: 42825, Stop: 42538, Start Num: 13
Candidate Starts for Abba_67:
(Start: 13 @42825 has 6 MA's), (33, 42639), (38, 42555),

Gene: Abblin_88 Start: 58873, Stop: 59145, Start Num: 14
Candidate Starts for Abblin_88:
(3, 58672), (4, 58681), (5, 58693), (6, 58699), (Start: 14 @58873 has 6 MA's), (23, 58942), (29, 59020),

Gene: Affeca_86 Start: 58157, Stop: 58420, Start Num: 16
Candidate Starts for Affeca_86:
(Start: 11 @58124 has 5 MA's), (Start: 16 @58157 has 37 MA's), (23, 58220), (29, 58301),

Gene: Ailee_82 Start: 57328, Stop: 57591, Start Num: 16
Candidate Starts for Ailee_82:
(Start: 11 @57295 has 5 MA's), (Start: 16 @57328 has 37 MA's), (23, 57391), (29, 57472),

Gene: Ali17_83 Start: 57614, Stop: 57865, Start Num: 16

Candidate Starts for Ali17_83:
(Start: 16 @57614 has 37 MA's), (23, 57677), (26, 57737), (27, 57743), (29, 57755), (30, 57758),

Gene: Angelicage_83 Start: 58231, Stop: 58494, Start Num: 16
Candidate Starts for Angelicage_83:
(Start: 11 @58198 has 5 MA's), (Start: 16 @58231 has 37 MA's), (23, 58294), (29, 58375),

Gene: Antares_66 Start: 41631, Stop: 41924, Start Num: 15
Candidate Starts for Antares_66:
(12, 41607), (Start: 15 @41631 has 45 MA's), (24, 41709), (30, 41772), (31, 41787), (32, 41790),

Gene: Ariadne_76 Start: 43251, Stop: 43544, Start Num: 15
Candidate Starts for Ariadne_76:
(Start: 15 @43251 has 45 MA's), (24, 43329), (30, 43392), (32, 43410),

Gene: Baddon_82 Start: 57243, Stop: 57506, Start Num: 16
Candidate Starts for Baddon_82:
(Start: 11 @57210 has 5 MA's), (Start: 16 @57243 has 37 MA's), (23, 57306), (29, 57387),

Gene: Barsten_87 Start: 58499, Stop: 58765, Start Num: 16
Candidate Starts for Barsten_87:
(Start: 11 @58466 has 5 MA's), (Start: 16 @58499 has 37 MA's), (23, 58562), (29, 58643), (35, 58745),

Gene: BeagleBug_65 Start: 41411, Stop: 41704, Start Num: 15
Candidate Starts for BeagleBug_65:
(Start: 15 @41411 has 45 MA's), (24, 41489), (30, 41552), (31, 41567), (32, 41570),

Gene: Bibwit_82 Start: 56692, Stop: 56955, Start Num: 16
Candidate Starts for Bibwit_82:
(Start: 11 @56659 has 5 MA's), (Start: 16 @56692 has 37 MA's), (23, 56755), (29, 56836),

Gene: BobBob_86 Start: 57531, Stop: 57794, Start Num: 16
Candidate Starts for BobBob_86:
(Start: 11 @57498 has 5 MA's), (Start: 16 @57531 has 37 MA's), (23, 57594), (29, 57675),

Gene: Brandonk123_88 Start: 57696, Stop: 57959, Start Num: 16
Candidate Starts for Brandonk123_88:
(Start: 11 @57663 has 5 MA's), (Start: 16 @57696 has 37 MA's), (23, 57759), (29, 57840),

Gene: BrazzalePHS_65 Start: 41393, Stop: 41692, Start Num: 15
Candidate Starts for BrazzalePHS_65:
(Start: 15 @41393 has 45 MA's), (19, 41423), (30, 41540), (31, 41555), (32, 41558),

Gene: Busephilis_65 Start: 41338, Stop: 41631, Start Num: 15
Candidate Starts for Busephilis_65:
(12, 41314), (Start: 15 @41338 has 45 MA's), (24, 41416), (30, 41479), (31, 41494), (32, 41497),

Gene: ChadMasterC_83 Start: 58686, Stop: 58949, Start Num: 16
Candidate Starts for ChadMasterC_83:
(Start: 11 @58653 has 5 MA's), (Start: 16 @58686 has 37 MA's), (23, 58749), (29, 58830),

Gene: Charming_87 Start: 56965, Stop: 57264, Start Num: 11
Candidate Starts for Charming_87:

(Start: 11 @56965 has 5 MA's), (Start: 16 @56998 has 37 MA's), (23, 57061), (29, 57142), (35, 57244),

Gene: ClearAsMud_70 Start: 41913, Stop: 42206, Start Num: 15
Candidate Starts for ClearAsMud_70:
(Start: 15 @41913 has 45 MA's), (20, 41940), (24, 41991), (30, 42054), (32, 42072),

Gene: Cranjis_67 Start: 41586, Stop: 41879, Start Num: 15
Candidate Starts for Cranjis_67:
(Start: 15 @41586 has 45 MA's), (24, 41664), (30, 41727), (31, 41742), (32, 41745),

Gene: CrazyRich_65 Start: 41392, Stop: 41685, Start Num: 15
Candidate Starts for CrazyRich_65:
(12, 41368), (Start: 15 @41392 has 45 MA's), (24, 41470), (30, 41533), (31, 41548), (32, 41551),

Gene: Crisis_67 Start: 41401, Stop: 41694, Start Num: 15
Candidate Starts for Crisis_67:
(12, 41377), (Start: 15 @41401 has 45 MA's), (24, 41479), (30, 41542), (31, 41557), (32, 41560),

Gene: Delrey21_88 Start: 60349, Stop: 60621, Start Num: 14
Candidate Starts for Delrey21_88:
(8, 60304), (Start: 14 @60349 has 6 MA's), (17, 60367), (23, 60418), (29, 60496), (34, 60544),

Gene: DoctorFroggo_88 Start: 60349, Stop: 60621, Start Num: 14
Candidate Starts for DoctorFroggo_88:
(8, 60304), (Start: 14 @60349 has 6 MA's), (17, 60367), (23, 60418), (29, 60496), (34, 60544),

Gene: EarickHC_67 Start: 41323, Stop: 41616, Start Num: 15
Candidate Starts for EarickHC_67:
(Start: 15 @41323 has 45 MA's), (24, 41401), (30, 41464), (31, 41479), (32, 41482),

Gene: Fireman_69 Start: 43363, Stop: 43656, Start Num: 15
Candidate Starts for Fireman_69:
(Start: 15 @43363 has 45 MA's), (24, 43441), (30, 43504), (32, 43522),

Gene: Fitzgerald_82 Start: 57842, Stop: 58105, Start Num: 16
Candidate Starts for Fitzgerald_82:
(Start: 11 @57809 has 5 MA's), (Start: 16 @57842 has 37 MA's), (23, 57905), (29, 57986),

Gene: Fosterous_86 Start: 57990, Stop: 58253, Start Num: 16
Candidate Starts for Fosterous_86:
(8, 57939), (Start: 16 @57990 has 37 MA's), (23, 58053), (29, 58134),

Gene: FuegoCuervo_89 Start: 58028, Stop: 58291, Start Num: 16
Candidate Starts for FuegoCuervo_89:
(Start: 11 @57995 has 5 MA's), (Start: 16 @58028 has 37 MA's), (23, 58091), (29, 58172),

Gene: Galadriel_85 Start: 58206, Stop: 58469, Start Num: 16
Candidate Starts for Galadriel_85:
(8, 58155), (Start: 16 @58206 has 37 MA's), (23, 58269), (29, 58350),

Gene: Ganandorf_65 Start: 41419, Stop: 41712, Start Num: 15
Candidate Starts for Ganandorf_65:
(12, 41395), (Start: 15 @41419 has 45 MA's), (24, 41497), (30, 41560), (31, 41575), (32, 41578),

Gene: Geodirt_84 Start: 58493, Stop: 58759, Start Num: 16
Candidate Starts for Geodirt_84:
(Start: 11 @58460 has 5 MA's), (Start: 16 @58493 has 37 MA's), (23, 58556), (29, 58637), (35, 58739),

Gene: Gina_70 Start: 41480, Stop: 41773, Start Num: 15
Candidate Starts for Gina_70:
(7, 41387), (Start: 15 @41480 has 45 MA's), (24, 41558), (30, 41621), (32, 41639),

Gene: Glorp_67 Start: 41383, Stop: 41676, Start Num: 15
Candidate Starts for Glorp_67:
(12, 41359), (Start: 15 @41383 has 45 MA's), (24, 41461), (30, 41524), (31, 41539), (32, 41542),

Gene: GoldDust_76 Start: 48481, Stop: 48173, Start Num: 13
Candidate Starts for GoldDust_76:
(Start: 13 @48481 has 6 MA's), (28, 48340), (31, 48310), (37, 48211), (39, 48196),

Gene: Gooberta_77 Start: 49208, Stop: 48900, Start Num: 13
Candidate Starts for Gooberta_77:
(Start: 13 @49208 has 6 MA's), (28, 49067), (31, 49037), (37, 48938), (39, 48923),

Gene: Hans_87 Start: 58571, Stop: 58822, Start Num: 16
Candidate Starts for Hans_87:
(Start: 16 @58571 has 37 MA's), (23, 58634), (26, 58694), (27, 58700), (29, 58712), (30, 58715),

Gene: Hermeonysus_66 Start: 41314, Stop: 41607, Start Num: 15
Candidate Starts for Hermeonysus_66:
(Start: 15 @41314 has 45 MA's), (24, 41392), (30, 41455), (31, 41470), (32, 41473),

Gene: Honeyfin_67 Start: 41574, Stop: 41867, Start Num: 15
Candidate Starts for Honeyfin_67:
(12, 41550), (Start: 15 @41574 has 45 MA's), (24, 41652), (30, 41715), (31, 41730), (32, 41733),

Gene: Inspectinfecti_87 Start: 58519, Stop: 58770, Start Num: 16
Candidate Starts for Inspectinfecti_87:
(Start: 16 @58519 has 37 MA's), (23, 58582), (26, 58642), (27, 58648), (29, 58660), (30, 58663),

Gene: Jabberwocky_83 Start: 58270, Stop: 58566, Start Num: 11
Candidate Starts for Jabberwocky_83:
(Start: 11 @58270 has 5 MA's), (Start: 16 @58303 has 37 MA's), (23, 58366), (29, 58447),

Gene: Jayden_67 Start: 41914, Stop: 42210, Start Num: 15
Candidate Starts for Jayden_67:
(Start: 15 @41914 has 45 MA's), (30, 42058), (32, 42076), (41, 42196),

Gene: Jefe_66 Start: 41369, Stop: 41662, Start Num: 15
Candidate Starts for Jefe_66:
(12, 41345), (Start: 15 @41369 has 45 MA's), (24, 41447), (30, 41510), (31, 41525), (32, 41528),

Gene: Jollipop_67 Start: 41751, Stop: 42050, Start Num: 15
Candidate Starts for Jollipop_67:
(Start: 15 @41751 has 45 MA's), (19, 41781), (30, 41898), (31, 41913), (32, 41916),

Gene: KaiHaiDragon_67 Start: 41323, Stop: 41616, Start Num: 15
Candidate Starts for KaiHaiDragon_67:
(Start: 15 @41323 has 45 MA's), (24, 41401), (30, 41464), (31, 41479), (32, 41482),

Gene: Kamashten_85 Start: 58100, Stop: 58363, Start Num: 16
Candidate Starts for Kamashten_85:
(8, 58049), (Start: 16 @58100 has 37 MA's), (23, 58163), (29, 58244),

Gene: Keitabear_82 Start: 58580, Stop: 58876, Start Num: 11
Candidate Starts for Keitabear_82:
(Start: 11 @58580 has 5 MA's), (Start: 16 @58613 has 37 MA's), (23, 58676), (29, 58757),

Gene: Kewpiedoll_85 Start: 58474, Stop: 58737, Start Num: 16
Candidate Starts for Kewpiedoll_85:
(Start: 11 @58441 has 5 MA's), (Start: 16 @58474 has 37 MA's), (23, 58537), (29, 58618),

Gene: Kowalski_65 Start: 41388, Stop: 41687, Start Num: 15
Candidate Starts for Kowalski_65:
(Start: 15 @41388 has 45 MA's), (19, 41418), (30, 41535), (31, 41550), (32, 41553),

Gene: Lennon_84 Start: 59043, Stop: 59306, Start Num: 16
Candidate Starts for Lennon_84:
(Start: 11 @59010 has 5 MA's), (Start: 16 @59043 has 37 MA's), (23, 59106), (29, 59187),

Gene: Leonard_86 Start: 58581, Stop: 58832, Start Num: 16
Candidate Starts for Leonard_86:
(Start: 16 @58581 has 37 MA's), (23, 58644), (26, 58704), (27, 58710), (29, 58722), (30, 58725),

Gene: Lilbeanie_97 Start: 58823, Stop: 59047, Start Num: 22
Candidate Starts for Lilbeanie_97:
(Start: 22 @58823 has 1 MA's), (25, 58886), (36, 59015),

Gene: LittleFortune_68 Start: 41679, Stop: 41972, Start Num: 15
Candidate Starts for LittleFortune_68:
(Start: 15 @41679 has 45 MA's), (24, 41757), (30, 41820), (31, 41835), (32, 41838),

Gene: Love_90 Start: 58854, Stop: 59117, Start Num: 16
Candidate Starts for Love_90:
(Start: 11 @58821 has 5 MA's), (Start: 16 @58854 has 37 MA's), (23, 58917), (29, 58998),

Gene: Lucretia_66 Start: 41301, Stop: 41594, Start Num: 15
Candidate Starts for Lucretia_66:
(12, 41277), (Start: 15 @41301 has 45 MA's), (24, 41379), (30, 41442), (31, 41457), (32, 41460),

Gene: McCrothy_83 Start: 58830, Stop: 59093, Start Num: 16
Candidate Starts for McCrothy_83:
(8, 58779), (Start: 16 @58830 has 37 MA's), (23, 58893), (29, 58974),

Gene: McKinley_87 Start: 57834, Stop: 58097, Start Num: 16
Candidate Starts for McKinley_87:
(Start: 11 @57801 has 5 MA's), (Start: 16 @57834 has 37 MA's), (23, 57897), (29, 57978),

Gene: MelBins_88 Start: 59070, Stop: 59321, Start Num: 16

Candidate Starts for MelBins_88:
(1, 58767), (Start: 16 @59070 has 37 MA's), (23, 59133), (26, 59193), (29, 59211), (30, 59214),

Gene: Merry_ Start: 43564, Stop: 43854, Start Num: 15
Candidate Starts for Merry_:
(9, 43516), (Start: 15 @43564 has 45 MA's), (24, 43648), (30, 43711),

Gene: Metamorphoo_69 Start: 42657, Stop: 42950, Start Num: 15
Candidate Starts for Metamorphoo_69:
(Start: 15 @42657 has 45 MA's), (24, 42735), (30, 42798), (32, 42816),

Gene: MoontowerMania_85 Start: 58915, Stop: 59211, Start Num: 11
Candidate Starts for MoontowerMania_85:
(Start: 11 @58915 has 5 MA's), (Start: 16 @58948 has 37 MA's), (23, 59011), (29, 59092),

Gene: Music_81 Start: 49006, Stop: 48698, Start Num: 13
Candidate Starts for Music_81:
(Start: 13 @49006 has 6 MA's), (28, 48865), (31, 48835), (37, 48736), (39, 48721),

Gene: Natkenzie_88 Start: 58873, Stop: 59145, Start Num: 14
Candidate Starts for Natkenzie_88:
(3, 58672), (4, 58681), (5, 58693), (6, 58699), (Start: 14 @58873 has 6 MA's), (23, 58942), (29, 59020),

Gene: NoodlelyBoi_67 Start: 42162, Stop: 42455, Start Num: 15
Candidate Starts for NoodlelyBoi_67:
(10, 42120), (Start: 15 @42162 has 45 MA's), (20, 42189), (24, 42240), (30, 42303), (32, 42321),

Gene: Nordenberg_83 Start: 56540, Stop: 56839, Start Num: 11
Candidate Starts for Nordenberg_83:
(Start: 11 @56540 has 5 MA's), (Start: 16 @56573 has 37 MA's), (23, 56636), (29, 56717), (35, 56819),

Gene: Nostromo_67 Start: 43577, Stop: 43287, Start Num: 13
Candidate Starts for Nostromo_67:
(Start: 13 @43577 has 6 MA's), (33, 43391), (38, 43307),

Gene: Onika_65 Start: 41397, Stop: 41696, Start Num: 15
Candidate Starts for Onika_65:
(Start: 15 @41397 has 45 MA's), (19, 41427), (30, 41544), (31, 41559), (32, 41562),

Gene: Paries_88 Start: 59125, Stop: 59388, Start Num: 16
Candidate Starts for Paries_88:
(Start: 11 @59092 has 5 MA's), (Start: 16 @59125 has 37 MA's), (23, 59188), (29, 59269),

Gene: Paschalis_66 Start: 41416, Stop: 41715, Start Num: 15
Candidate Starts for Paschalis_66:
(Start: 15 @41416 has 45 MA's), (19, 41446), (30, 41563), (31, 41578), (32, 41581),

Gene: Phauci_78 Start: 55646, Stop: 55897, Start Num: 16
Candidate Starts for Phauci_78:
(2, 55400), (Start: 16 @55646 has 37 MA's), (23, 55709), (26, 55769), (27, 55775), (29, 55787), (30, 55790),

Gene: PhedwardCullen_64 Start: 41139, Stop: 41432, Start Num: 15

Candidate Starts for PhedwardCullen_64:
(12, 41115), (Start: 15 @41139 has 45 MA's), (24, 41217), (30, 41280), (31, 41295), (32, 41298),

Gene: Phinally_86 Start: 58578, Stop: 58829, Start Num: 16
Candidate Starts for Phinally_86:
(Start: 16 @58578 has 37 MA's), (23, 58641), (26, 58701), (27, 58707), (29, 58719), (30, 58722),

Gene: Phorgeous_66 Start: 41205, Stop: 41498, Start Num: 15
Candidate Starts for Phorgeous_66:
(12, 41181), (Start: 15 @41205 has 45 MA's), (24, 41283), (30, 41346), (31, 41361), (32, 41364),

Gene: Phrancesco_66 Start: 41528, Stop: 41821, Start Num: 15
Candidate Starts for Phrancesco_66:
(12, 41504), (Start: 15 @41528 has 45 MA's), (24, 41606), (30, 41669), (31, 41684), (32, 41687),

Gene: PierreOrion_66 Start: 41628, Stop: 41927, Start Num: 15
Candidate Starts for PierreOrion_66:
(Start: 15 @41628 has 45 MA's), (19, 41658), (30, 41775), (31, 41790), (32, 41793),

Gene: PiperSansNom_67 Start: 41707, Stop: 42006, Start Num: 15
Candidate Starts for PiperSansNom_67:
(Start: 15 @41707 has 45 MA's), (19, 41737), (30, 41854), (31, 41869), (32, 41872),

Gene: Piperis_67 Start: 41330, Stop: 41623, Start Num: 15
Candidate Starts for Piperis_67:
(Start: 15 @41330 has 45 MA's), (24, 41408), (30, 41471), (31, 41486), (32, 41489),

Gene: Pulchra_68 Start: 41726, Stop: 42019, Start Num: 15
Candidate Starts for Pulchra_68:
(12, 41702), (Start: 15 @41726 has 45 MA's), (24, 41804), (30, 41867), (31, 41882), (32, 41885),

Gene: Pumpkiney_88 Start: 57465, Stop: 57734, Start Num: 14
Candidate Starts for Pumpkiney_88:
(3, 57261), (4, 57270), (5, 57282), (Start: 14 @57465 has 6 MA's), (23, 57534), (29, 57612),

Gene: Quhwah_70 Start: 42015, Stop: 42308, Start Num: 15
Candidate Starts for Quhwah_70:
(Start: 15 @42015 has 45 MA's), (24, 42093), (30, 42156), (31, 42171), (32, 42174),

Gene: Ramiel05_65 Start: 41388, Stop: 41687, Start Num: 15
Candidate Starts for Ramiel05_65:
(Start: 15 @41388 has 45 MA's), (19, 41418), (30, 41535), (31, 41550), (32, 41553),

Gene: RiverRaider_86 Start: 55943, Stop: 56194, Start Num: 16
Candidate Starts for RiverRaider_86:
(8, 55889), (Start: 16 @55943 has 37 MA's), (18, 55964), (23, 56006), (28, 56072), (29, 56084),

Gene: RobsFeet_70 Start: 42943, Stop: 43236, Start Num: 15
Candidate Starts for RobsFeet_70:
(Start: 15 @42943 has 45 MA's), (24, 43021), (30, 43084), (32, 43102),

Gene: Rockwell_65 Start: 41418, Stop: 41717, Start Num: 15
Candidate Starts for Rockwell_65:

(Start: 15 @41418 has 45 MA's), (19, 41448), (30, 41565), (31, 41580), (32, 41583),

Gene: Rofo_84 Start: 57573, Stop: 57836, Start Num: 16
Candidate Starts for Rofo_84:
(8, 57522), (Start: 16 @57573 has 37 MA's), (23, 57636), (29, 57717),

Gene: Sampson_90 Start: 59024, Stop: 59296, Start Num: 14
Candidate Starts for Sampson_90:
(3, 58823), (4, 58832), (5, 58844), (6, 58850), (Start: 14 @59024 has 6 MA's), (23, 59093), (29, 59171),

Gene: Sanjuju_82 Start: 57928, Stop: 58191, Start Num: 16
Candidate Starts for Sanjuju_82:
(Start: 11 @57895 has 5 MA's), (Start: 16 @57928 has 37 MA's), (23, 57991), (29, 58072),

Gene: Savannah_65 Start: 41445, Stop: 41738, Start Num: 15
Candidate Starts for Savannah_65:
(Start: 15 @41445 has 45 MA's), (24, 41523), (30, 41586), (31, 41601), (32, 41604),

Gene: Scioto_88 Start: 58874, Stop: 59146, Start Num: 14
Candidate Starts for Scioto_88:
(3, 58673), (4, 58682), (5, 58694), (6, 58700), (Start: 14 @58874 has 6 MA's), (23, 58943), (29, 59021),

Gene: Scumberland_68 Start: 41640, Stop: 41933, Start Num: 15
Candidate Starts for Scumberland_68:
(Start: 15 @41640 has 45 MA's), (20, 41667), (24, 41718), (30, 41781), (31, 41796), (32, 41799),

Gene: Sedona_82 Start: 58425, Stop: 58688, Start Num: 16
Candidate Starts for Sedona_82:
(Start: 11 @58392 has 5 MA's), (Start: 16 @58425 has 37 MA's), (23, 58488), (29, 58569),

Gene: Selwyn23_67 Start: 41557, Stop: 41850, Start Num: 15
Candidate Starts for Selwyn23_67:
(12, 41533), (Start: 15 @41557 has 45 MA's), (24, 41635), (30, 41698), (31, 41713), (32, 41716),

Gene: Shivanishola_86 Start: 56589, Stop: 56852, Start Num: 16
Candidate Starts for Shivanishola_86:
(Start: 11 @56556 has 5 MA's), (Start: 16 @56589 has 37 MA's), (23, 56652), (29, 56733),

Gene: Shotgun_66 Start: 41324, Stop: 41617, Start Num: 15
Candidate Starts for Shotgun_66:
(12, 41300), (Start: 15 @41324 has 45 MA's), (24, 41402), (30, 41465), (31, 41480), (32, 41483),

Gene: Shrubaron_70 Start: 42538, Stop: 42831, Start Num: 15
Candidate Starts for Shrubaron_70:
(Start: 15 @42538 has 45 MA's), (24, 42616), (30, 42679), (32, 42697),

Gene: Sicarius2_74 Start: 44932, Stop: 44645, Start Num: 13
Candidate Starts for Sicarius2_74:
(Start: 13 @44932 has 6 MA's), (21, 44884), (23, 44860), (40, 44653),

Gene: SirFrank_66 Start: 41608, Stop: 41901, Start Num: 15
Candidate Starts for SirFrank_66:
(Start: 15 @41608 has 45 MA's), (20, 41635), (24, 41686), (30, 41749), (32, 41767),

Gene: Sitar_83 Start: 58447, Stop: 58710, Start Num: 16
Candidate Starts for Sitar_83:
(Start: 11 @58414 has 5 MA's), (Start: 16 @58447 has 37 MA's), (23, 58510), (29, 58591),

Gene: Skugga_66 Start: 41866, Stop: 42165, Start Num: 15
Candidate Starts for Skugga_66:
(Start: 15 @41866 has 45 MA's), (24, 41950), (30, 42013), (31, 42028), (32, 42031),

Gene: Smarties_76 Start: 43251, Stop: 43544, Start Num: 15
Candidate Starts for Smarties_76:
(Start: 15 @43251 has 45 MA's), (24, 43329), (30, 43392), (32, 43410),

Gene: Stultus_79 Start: 56719, Stop: 56982, Start Num: 16
Candidate Starts for Stultus_79:
(Start: 11 @56686 has 5 MA's), (Start: 16 @56719 has 37 MA's), (23, 56782), (29, 56863),

Gene: Sunny_ Start: 43566, Stop: 43856, Start Num: 15
Candidate Starts for Sunny_:
(9, 43518), (Start: 15 @43566 has 45 MA's), (24, 43650), (30, 43713),

Gene: Tangent_87 Start: 57279, Stop: 57545, Start Num: 16
Candidate Starts for Tangent_87:
(Start: 11 @57246 has 5 MA's), (Start: 16 @57279 has 37 MA's), (23, 57342), (29, 57423), (35, 57525),

Gene: Tardus_90 Start: 59420, Stop: 59689, Start Num: 14
Candidate Starts for Tardus_90:
(Start: 14 @59420 has 6 MA's), (23, 59489), (29, 59567),

Gene: Teamocil_70 Start: 41573, Stop: 41866, Start Num: 15
Candidate Starts for Teamocil_70:
(7, 41480), (Start: 15 @41573 has 45 MA's), (24, 41651), (30, 41714), (32, 41732),

Gene: Thing3_85 Start: 58100, Stop: 58363, Start Num: 16
Candidate Starts for Thing3_85:
(8, 58049), (Start: 16 @58100 has 37 MA's), (23, 58163), (29, 58244),

Gene: Tyrumbra_65 Start: 42225, Stop: 42518, Start Num: 15
Candidate Starts for Tyrumbra_65:
(Start: 15 @42225 has 45 MA's), (24, 42303), (30, 42366), (32, 42384),

Gene: Verity_87 Start: 60121, Stop: 60393, Start Num: 14
Candidate Starts for Verity_87:
(8, 60076), (Start: 14 @60121 has 6 MA's), (17, 60139), (23, 60190), (29, 60268), (34, 60316),

Gene: Vibaki_78 Start: 47924, Stop: 47616, Start Num: 13
Candidate Starts for Vibaki_78:
(Start: 13 @47924 has 6 MA's), (28, 47783), (31, 47753), (37, 47654), (39, 47639),

Gene: Vivi2_88 Start: 58335, Stop: 58601, Start Num: 16
Candidate Starts for Vivi2_88:
(Start: 11 @58302 has 5 MA's), (Start: 16 @58335 has 37 MA's), (23, 58398), (29, 58479), (35, 58581),

Gene: Wyborn_73 Start: 45667, Stop: 45380, Start Num: 13
Candidate Starts for Wyborn_73:
(Start: 13 @45667 has 6 MA's), (21, 45619), (23, 45595), (40, 45388),

Gene: Yeti_68 Start: 41362, Stop: 41655, Start Num: 15
Candidate Starts for Yeti_68:
(Start: 15 @41362 has 45 MA's), (24, 41440), (30, 41503), (31, 41518), (32, 41521),

Gene: Zapato_66 Start: 42216, Stop: 42509, Start Num: 15
Candidate Starts for Zapato_66:
(Start: 15 @42216 has 45 MA's), (24, 42294), (30, 42357),

Gene: Zipp_88 Start: 60092, Stop: 60364, Start Num: 14
Candidate Starts for Zipp_88:
(8, 60047), (Start: 14 @60092 has 6 MA's), (17, 60110), (23, 60161), (29, 60239), (34, 60287),