

Pham 193817



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 193817 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193817 has 136 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower_100
- Track 2 : Drake94_83, PeaceMeal1_83, KittenMittens_81, Poompha_84, Goose_87, OKCentral2016_85
- Track 3 : Kristoff_84
- Track 4 : WalterMcMickey_86, Twister_87, Edison31_73, Salz_96, Topanga_76, Hutc2_97
- Track 5 : Rowdy_91, RhynO_75, Shapes_91, DustyMartin_91
- Track 6 : Rebeuca_87
- Track 7 : Chupacabra_83
- Track 8 : Timothy_99, Orange_99, Joselito_97, Lucivia_100, Ebony_98, Mulciber_98, Snape_99, Mabel_99, Gilberta_97, Bowtie_95, Fibonacci_99
- Track 9 : Sham4_96, TinyTimmy_97, Insomnia_99, Petersenfast_93, MaCh_99, Flaverint_100
- Track 10 : Et2Brutus_100
- Track 11 : PainterBoy_93, Lucyedi_94, EagleEye_96
- Track 12 : Leviathan_95, AbbyPaige_96, Anselm_97, Dalmatian_94, Agape74_96, Fameo_93, FiringLine_94, Power_94, DudeLittle_93, LilTurb_95
- Track 13 : ANI8_94, VC3_93, C3_87, AN9_94, Kerberos_97
- Track 14 : QueenBeesly_94, Crucio_94, SnapTap_94, Jerm_95, QueenB2_93, Retro23_95, Buggy_84, Dignity_96, Georgie2_96, SweetiePie_94
- Track 15 : MissWhite_93
- Track 16 : VA6_93, AN3_93
- Track 17 : Journey13_80
- Track 18 : Leogania_77, BiancaTri92_90
- Track 19 : Tomathan_97, Naji_86, Duplo_98, Travvers_97, DBQu4n_97, D32_85
- Track 20 : EvilGenius_93, ChipMunk_94
- Track 21 : Serenity_98, Jsquared_101
- Track 22 : Colin_93, Loser_97, Lokk_89, AnnaL29_96, BobSwaget_88, Miko_90, Rachaly_91, RedRock_95
- Track 23 : StarStuff_97, Pomar16_97
- Track 24 : Changeling_92
- Track 25 : Landor_92
- Track 26 : Kalpine_97
- Track 27 : NothingSpecial_88
- Track 28 : JoshKayV_97
- Track 29 : Superchunk_98
- Track 30 : Smeagan_96

- Track 31 : Acolyte_89
- Track 32 : NicoleTera_95
- Track 33 : ArcherNM_90
- Track 34 : Hookmount_90, Todacoro_90, Caviar_79, Popcicle_90, Margo_90, QuinnKiro_89, Lambert1_90, Texage_88
- Track 35 : TNguyen7_92, BlueBird_93
- Track 36 : Bonamassa_87
- Track 37 : Milcery_84, LittleCherry_84
- Track 38 : Airmid_87, Benedict_88, EITiger69_90
- Track 39 : Micasa_87
- Track 40 : Chadwick_87
- Track 41 : Swirley_85
- Track 42 : Cuco_85
- Track 43 : Theia_86
- Track 44 : George_81, Tarynearal_87
- Track 45 : SydNat_85
- Track 46 : Jabiru_85
- Track 47 : PetterN_92
- Track 48 : PP_09
- Track 49 : Saintus_94
- Track 50 : Smeadley_99, Dixon_98, Stephig9_100, Astro_98, NearlyHeadless_100
- Track 51 : Phillis_96

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

The start number called the most often in the published annotations is 26, it was called in 60 of the 130 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• AbbyPaige_96, Acolyte_89, Agape74_96, Airmid_87, Anselm_97, Astro_98, Benedict_88, BlueBird_93, Bonamassa_87, Bowtie_95, Caviar_79, Chadwick_87, Chupacabra_83, Cuco_85, Dalmatian_94, Dixon_98, DudeLittle_93, Ebony_98, EITiger69_90, Et2Brutus_100, Fameo_93, Fibonacci_99, FiringLine_94, Gilberta_97, Hookmount_90, Jabiru_85, Joselito_97, Journey13_80, Jsquared_101, Kalpine_97, Kristoff_84, Lambert1_90, Leviathan_95, LilTurb_95, Lucivia_100, Mabel_99, Margo_90, MissWhite_93, Mulciber_98, NearlyHeadless_100, Orange_99, PetterN_92, Phillis_96, Pomar16_97, Popcicle_90, Power_94, QuinnKiro_89, Saintus_94, Serenity_98, Smeadley_99, Smeagan_96, Snape_99, StarStuff_97, Stephig9_100, SydNat_85, TNguyen7_92, Texage_88, Theia_86, Timothy_99, Todacoro_90,

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

• AN3_93, AN9_94, ANI8_94, AnnaL29_96, ArcherNM_90, BiancaTri92_90, BobSwaget_88, Buggy_84, C3_87, Changeling_92, ChipMunk_94, Colin_93, Crucio_94, D32_85, DBQu4n_97, Dignity_96, Drake94_83, Duplo_98, DustyMartin_91, EagleEye_96, Edison31_73, EvilGenius_93, Flaverint_100, George_81, Georgie2_96, Goose_87, Hutc2_97, Insomnia_99, Jerm_95, JoshKayV_97, Kerberos_97, KittenMittens_81, Landor_92, Leogania_77, LittleCherry_84, Lokk_89, Loser_97, Lucyedi_94, MaCh_99, Micasa_87, Miko_90, Milcery_84, Naji_86, NicoleTera_95, NothingSpecial_88, OKCentral2016_85, PP_09,

PainterBoy_93, PeaceMeal1_83, Petersenfast_93, Poompha_84, QueenB2_93, QueenBeesly_94, Rachaly_91, Rebeuca_87, RedRock_95, Retro23_95, RhynO_75, Rowdy_91, Salz_96, Sham4_96, Shapes_91, SnapTap_94, SweetiePie_94, Swirley_85, Tarynearal_87, TinyTimmy_97, Tomathan_97, Topanga_76, Travvers_97, Twister_87, VA6_93, VC3_93, WalterMcMickey_86,

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

- Chargerpower_100, Superchunk_98,

Summary by start number:

Start 17:

- Found in 7 of 136 (5.1%) of genes in pham
- Manual Annotations of this start: 1 of 130
- Called 14.3% of time when present
- Phage (with cluster) where this start called: PP_09 (A7),

Start 18:

- Found in 11 of 136 (8.1%) of genes in pham
- Manual Annotations of this start: 4 of 130
- Called 36.4% of time when present
- Phage (with cluster) where this start called: LittleCherry_84 (A5), Micasa_87 (A5), Milcery_84 (A5), Swirley_85 (A5),

Start 19:

- Found in 92 of 136 (67.6%) of genes in pham
- Manual Annotations of this start: 56 of 130
- Called 64.1% of time when present
- Phage (with cluster) where this start called: AN3_93 (A2), AN9_94 (A2), ANI8_94 (A2), AnnaL29_96 (A2), ArcherNM_90 (A2), BiancaTri92_90 (A2), BobSwaget_88 (A2), Buggy_84 (A2), C3_87 (A2), Chargerpower_100 (A), Colin_93 (A2), Crucio_94 (A2), D32_85 (A2), DBQu4n_97 (A2), Dignity_96 (A2), Drake94_83 (A10), Duplo_98 (A2), EagleEye_96 (A16), Edison31_73 (A10), Flaverint_100 (A11), Georgie2_96 (A2), Goose_87 (A10), Hutc2_97 (A11), Insomnia_99 (A11), Jerm_95 (A2), Kerberos_97 (A2), KittenMittens_81 (A10), Leogania_77 (A2), Lokk_89 (A2), Loser_97 (A2), Lucyedi_94 (A16), MaCh_99 (A11), Miko_90 (A2), Naji_86 (A2), NicoleTera_95 (A2), OKCentral2016_85 (A10), PainterBoy_93 (A16), PeaceMeal1_83 (A10), Petersenfast_93 (A11), Poompha_84 (A10), QueenB2_93 (A2), QueenBeesly_94 (A2), Rachaly_91 (A2), Rebeuca_87 (A10), RedRock_95 (A2), Retro23_95 (A2), Salz_96 (A11), Sham4_96 (A11), SnapTap_94 (A2), Superchunk_98 (A2), SweetiePie_94 (A2), TinyTimmy_97 (A11), Tomathan_97 (A2), Topanga_76 (A10), Travvers_97 (A2), Twister_87 (A10), VA6_93 (A2), VC3_93 (A2), WalterMcMickey_86 (A10),

Start 20:

- Found in 2 of 136 (1.5%) of genes in pham
- Manual Annotations of this start: 2 of 130
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Landor_92 (A2), NothingSpecial_88 (A2),

Start 21:

- Found in 7 of 136 (5.1%) of genes in pham

- Manual Annotations of this start: 2 of 130
- Called 28.6% of time when present
- Phage (with cluster) where this start called: George_81 (A5), Tarynearal_87 (A5),

Start 22:

- Found in 4 of 136 (2.9%) of genes in pham
- Manual Annotations of this start: 1 of 130
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DustyMartin_91 (A10), RhynO_75 (A10), Rowdy_91 (A10), Shapes_91 (A10),

Start 23:

- Found in 6 of 136 (4.4%) of genes in pham
- Manual Annotations of this start: 3 of 130
- Called 50.0% of time when present
- Phage (with cluster) where this start called: ChipMunk_94 (A2), EvilGenius_93 (A2), JoshKayV_97 (A2),

Start 24:

- Found in 33 of 136 (24.3%) of genes in pham
- Manual Annotations of this start: 1 of 130
- Called 3.0% of time when present
- Phage (with cluster) where this start called: Changeling_92 (A2),

Start 26:

- Found in 134 of 136 (98.5%) of genes in pham
- Manual Annotations of this start: 60 of 130
- Called 44.8% of time when present
- Phage (with cluster) where this start called: AbbyPaige_96 (A2), Acolyte_89 (A2), Agape74_96 (A2), Airmid_87 (A5), Anselm_97 (A2), Astro_98 (A8), Benedict_88 (A5), BlueBird_93 (A3), Bonamassa_87 (A5), Bowtie_95 (A11), Caviar_79 (A3), Chadwick_87 (A5), Chupacabra_83 (A10), Cuco_85 (A5), Dalmatian_94 (A2), Dixon_98 (A8), DudeLittle_93 (A2), Ebony_98 (A11), ElTiger69_90 (A5), Et2Brutus_100 (A11), Fameo_93 (A2), Fibonacci_99 (A11), FiringLine_94 (A2), Gilberta_97 (A11), Hookmount_90 (A3), Jabiru_85 (A5), Joselito_97 (A11), Journey13_80 (A2), Jsquared_101 (A2), Kalpine_97 (A2), Kristoff_84 (A10), Lambert1_90 (A3), Leviathan_95 (A2), LilTurb_95 (A2), Lucivia_100 (A11), Mabel_99 (A11), Margo_90 (A3), MissWhite_93 (A2), Mulciber_98 (A11), NearlyHeadless_100 (A8), Orange_99 (A11), PetterN_92 (A5), Phillis_96 (A8), Pomar16_97 (A2), Popcicle_90 (A3), Power_94 (A2), QuinnKiro_89 (A3), Saintus_94 (A8), Serenity_98 (A2), Smeadley_99 (A8), Smeagan_96 (A2), Snape_99 (A11), StarStuff_97 (A2), Stephig9_100 (A8), SydNat_85 (A5), TNguyen7_92 (A3), Texage_88 (A3), Theia_86 (A5), Timothy_99 (A11), Todacoro_90 (A3),

Summary by clusters:

There are 9 clusters represented in this pham: A, A16, A11, A10, A3, A2, A5, A7, A8,

Info for manual annotations of cluster A:

- Start number 19 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A10:

- Start number 19 was manually annotated 11 times for cluster A10.

- Start number 22 was manually annotated 1 time for cluster A10.
- Start number 26 was manually annotated 2 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 19 was manually annotated 7 times for cluster A11.
- Start number 26 was manually annotated 12 times for cluster A11.

Info for manual annotations of cluster A16:

- Start number 19 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A2:

- Start number 19 was manually annotated 34 times for cluster A2.
- Start number 20 was manually annotated 2 times for cluster A2.
- Start number 23 was manually annotated 3 times for cluster A2.
- Start number 24 was manually annotated 1 time for cluster A2.
- Start number 26 was manually annotated 19 times for cluster A2.

Info for manual annotations of cluster A3:

- Start number 26 was manually annotated 10 times for cluster A3.

Info for manual annotations of cluster A5:

- Start number 18 was manually annotated 4 times for cluster A5.
- Start number 21 was manually annotated 2 times for cluster A5.
- Start number 26 was manually annotated 10 times for cluster A5.

Info for manual annotations of cluster A7:

- Start number 17 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:

- Start number 26 was manually annotated 7 times for cluster A8.

Gene Information:

Gene: AN3_93 Start: 49491, Stop: 49387, Start Num: 19

Candidate Starts for AN3_93:

(Start: 18 @49497 has 4 MA's), (Start: 19 @49491 has 56 MA's), (Start: 24 @49467 has 1 MA's),
(Start: 26 @49464 has 60 MA's),

Gene: AN9_94 Start: 49621, Stop: 49517, Start Num: 19

Candidate Starts for AN9_94:

(Start: 19 @49621 has 56 MA's), (Start: 26 @49594 has 60 MA's), (28, 49576),

Gene: ANI8_94 Start: 49621, Stop: 49517, Start Num: 19

Candidate Starts for ANI8_94:

(Start: 19 @49621 has 56 MA's), (Start: 26 @49594 has 60 MA's), (28, 49576),

Gene: AbbyPaige_96 Start: 51634, Stop: 51557, Start Num: 26

Candidate Starts for AbbyPaige_96:

(Start: 19 @51661 has 56 MA's), (Start: 24 @51637 has 1 MA's), (Start: 26 @51634 has 60 MA's),

Gene: Acolyte_89 Start: 50809, Stop: 50732, Start Num: 26

Candidate Starts for Acolyte_89:
(Start: 19 @50833 has 56 MA's), (Start: 26 @50809 has 60 MA's), (28, 50791), (30, 50767),

Gene: Agape74_96 Start: 51607, Stop: 51530, Start Num: 26
Candidate Starts for Agape74_96:
(Start: 19 @51634 has 56 MA's), (Start: 24 @51610 has 1 MA's), (Start: 26 @51607 has 60 MA's),

Gene: Airmid_87 Start: 49229, Stop: 49152, Start Num: 26
Candidate Starts for Airmid_87:
(Start: 18 @49262 has 4 MA's), (Start: 26 @49229 has 60 MA's), (29, 49193),

Gene: AnnaL29_96 Start: 51737, Stop: 51633, Start Num: 19
Candidate Starts for AnnaL29_96:
(Start: 19 @51737 has 56 MA's), (Start: 24 @51713 has 1 MA's), (Start: 26 @51710 has 60 MA's),

Gene: Anselm_97 Start: 52009, Stop: 51932, Start Num: 26
Candidate Starts for Anselm_97:
(Start: 19 @52036 has 56 MA's), (Start: 24 @52012 has 1 MA's), (Start: 26 @52009 has 60 MA's),

Gene: ArcherNM_90 Start: 51024, Stop: 50920, Start Num: 19
Candidate Starts for ArcherNM_90:
(Start: 19 @51024 has 56 MA's), (Start: 24 @51000 has 1 MA's), (Start: 26 @50997 has 60 MA's),

Gene: Astro_98 Start: 50607, Stop: 50530, Start Num: 26
Candidate Starts for Astro_98:
(Start: 26 @50607 has 60 MA's),

Gene: Benedict_88 Start: 49072, Stop: 48995, Start Num: 26
Candidate Starts for Benedict_88:
(Start: 18 @49105 has 4 MA's), (Start: 26 @49072 has 60 MA's), (29, 49036),

Gene: BiancaTri92_90 Start: 50689, Stop: 50585, Start Num: 19
Candidate Starts for BiancaTri92_90:
(16, 50701), (Start: 19 @50689 has 56 MA's), (Start: 23 @50668 has 3 MA's), (Start: 26 @50662 has 60 MA's), (30, 50620), (31, 50599),

Gene: BlueBird_93 Start: 49300, Stop: 49223, Start Num: 26
Candidate Starts for BlueBird_93:
(Start: 26 @49300 has 60 MA's), (28, 49282), (31, 49237),

Gene: BobSwaget_88 Start: 48834, Stop: 48730, Start Num: 19
Candidate Starts for BobSwaget_88:
(Start: 19 @48834 has 56 MA's), (Start: 24 @48810 has 1 MA's), (Start: 26 @48807 has 60 MA's),

Gene: Bonamassa_87 Start: 49219, Stop: 49142, Start Num: 26
Candidate Starts for Bonamassa_87:
(3, 49333), (6, 49324), (10, 49291), (12, 49288), (Start: 17 @49261 has 1 MA's), (Start: 21 @49240 has 2 MA's), (Start: 26 @49219 has 60 MA's), (29, 49183),

Gene: Bowtie_95 Start: 49674, Stop: 49597, Start Num: 26
Candidate Starts for Bowtie_95:
(Start: 19 @49704 has 56 MA's), (Start: 26 @49674 has 60 MA's), (32, 49605),

Gene: Buggy_84 Start: 48373, Stop: 48269, Start Num: 19
Candidate Starts for Buggy_84:
(Start: 19 @48373 has 56 MA's), (Start: 24 @48349 has 1 MA's), (Start: 26 @48346 has 60 MA's),

Gene: C3_87 Start: 49621, Stop: 49517, Start Num: 19
Candidate Starts for C3_87:
(Start: 19 @49621 has 56 MA's), (Start: 26 @49594 has 60 MA's), (28, 49576),

Gene: Caviar_79 Start: 45928, Stop: 45851, Start Num: 26
Candidate Starts for Caviar_79:
(Start: 26 @45928 has 60 MA's), (31, 45865),

Gene: Chadwick_87 Start: 47540, Stop: 47460, Start Num: 26
Candidate Starts for Chadwick_87:
(Start: 26 @47540 has 60 MA's),

Gene: Changeling_92 Start: 51425, Stop: 51345, Start Num: 24
Candidate Starts for Changeling_92:
(Start: 19 @51449 has 56 MA's), (Start: 24 @51425 has 1 MA's), (Start: 26 @51422 has 60 MA's),

Gene: Chargerpower_100 Start: 51126, Stop: 51016, Start Num: 19
Candidate Starts for Chargerpower_100:
(Start: 19 @51126 has 56 MA's), (27, 51096),

Gene: ChipMunk_94 Start: 52355, Stop: 52272, Start Num: 23
Candidate Starts for ChipMunk_94:
(5, 52445), (8, 52421), (Start: 23 @52355 has 3 MA's), (Start: 26 @52349 has 60 MA's), (28, 52331),
(31, 52286), (32, 52280),

Gene: Chupacabra_83 Start: 49581, Stop: 49504, Start Num: 26
Candidate Starts for Chupacabra_83:
(Start: 19 @49608 has 56 MA's), (Start: 26 @49581 has 60 MA's),

Gene: Colin_93 Start: 51994, Stop: 51890, Start Num: 19
Candidate Starts for Colin_93:
(Start: 19 @51994 has 56 MA's), (Start: 24 @51970 has 1 MA's), (Start: 26 @51967 has 60 MA's),

Gene: Crucio_94 Start: 51711, Stop: 51607, Start Num: 19
Candidate Starts for Crucio_94:
(Start: 19 @51711 has 56 MA's), (Start: 24 @51687 has 1 MA's), (Start: 26 @51684 has 60 MA's),

Gene: Cuco_85 Start: 49160, Stop: 49059, Start Num: 26
Candidate Starts for Cuco_85:
(13, 49211), (15, 49205), (Start: 26 @49160 has 60 MA's), (29, 49124), (33, 49067),

Gene: D32_85 Start: 47615, Stop: 47511, Start Num: 19
Candidate Starts for D32_85:
(Start: 19 @47615 has 56 MA's), (Start: 26 @47588 has 60 MA's), (28, 47570),

Gene: DBQu4n_97 Start: 51230, Stop: 51126, Start Num: 19
Candidate Starts for DBQu4n_97:
(Start: 19 @51230 has 56 MA's), (Start: 26 @51203 has 60 MA's), (28, 51185),

Gene: Dalmatian_94 Start: 51310, Stop: 51233, Start Num: 26
Candidate Starts for Dalmatian_94:
(Start: 19 @51337 has 56 MA's), (Start: 24 @51313 has 1 MA's), (Start: 26 @51310 has 60 MA's),

Gene: Dignity_96 Start: 51741, Stop: 51637, Start Num: 19
Candidate Starts for Dignity_96:
(Start: 19 @51741 has 56 MA's), (Start: 24 @51717 has 1 MA's), (Start: 26 @51714 has 60 MA's),

Gene: Dixon_98 Start: 50172, Stop: 50095, Start Num: 26
Candidate Starts for Dixon_98:
(Start: 26 @50172 has 60 MA's),

Gene: Drake94_83 Start: 48766, Stop: 48662, Start Num: 19
Candidate Starts for Drake94_83:
(Start: 19 @48766 has 56 MA's), (Start: 26 @48739 has 60 MA's),

Gene: DudeLittle_93 Start: 51376, Stop: 51299, Start Num: 26
Candidate Starts for DudeLittle_93:
(Start: 19 @51403 has 56 MA's), (Start: 24 @51379 has 1 MA's), (Start: 26 @51376 has 60 MA's),

Gene: Duplo_98 Start: 51287, Stop: 51183, Start Num: 19
Candidate Starts for Duplo_98:
(Start: 19 @51287 has 56 MA's), (Start: 26 @51260 has 60 MA's), (28, 51242),

Gene: DustyMartin_91 Start: 49998, Stop: 49909, Start Num: 22
Candidate Starts for DustyMartin_91:
(Start: 19 @50013 has 56 MA's), (Start: 22 @49998 has 1 MA's), (Start: 26 @49986 has 60 MA's),

Gene: EagleEye_96 Start: 51407, Stop: 51303, Start Num: 19
Candidate Starts for EagleEye_96:
(3, 51491), (Start: 19 @51407 has 56 MA's), (Start: 26 @51380 has 60 MA's),

Gene: Ebony_98 Start: 50638, Stop: 50561, Start Num: 26
Candidate Starts for Ebony_98:
(Start: 19 @50668 has 56 MA's), (Start: 26 @50638 has 60 MA's), (32, 50569),

Gene: Edison31_73 Start: 45753, Stop: 45649, Start Num: 19
Candidate Starts for Edison31_73:
(Start: 19 @45753 has 56 MA's), (Start: 26 @45726 has 60 MA's),

Gene: EITiger69_90 Start: 49493, Stop: 49416, Start Num: 26
Candidate Starts for EITiger69_90:
(Start: 18 @49526 has 4 MA's), (Start: 26 @49493 has 60 MA's), (29, 49457),

Gene: Et2Brutus_100 Start: 50983, Stop: 50906, Start Num: 26
Candidate Starts for Et2Brutus_100:
(Start: 19 @51013 has 56 MA's), (Start: 26 @50983 has 60 MA's),

Gene: EvilGenius_93 Start: 52356, Stop: 52273, Start Num: 23
Candidate Starts for EvilGenius_93:
(5, 52446), (8, 52422), (Start: 23 @52356 has 3 MA's), (Start: 26 @52350 has 60 MA's), (28, 52332),
(31, 52287), (32, 52281),

Gene: Fameo_93 Start: 51082, Stop: 51005, Start Num: 26
Candidate Starts for Fameo_93:
(Start: 19 @51109 has 56 MA's), (Start: 24 @51085 has 1 MA's), (Start: 26 @51082 has 60 MA's),

Gene: Fibonacci_99 Start: 50921, Stop: 50844, Start Num: 26
Candidate Starts for Fibonacci_99:
(Start: 19 @50951 has 56 MA's), (Start: 26 @50921 has 60 MA's), (32, 50852),

Gene: FiringLine_94 Start: 51780, Stop: 51703, Start Num: 26
Candidate Starts for FiringLine_94:
(Start: 19 @51807 has 56 MA's), (Start: 24 @51783 has 1 MA's), (Start: 26 @51780 has 60 MA's),

Gene: Flaverint_100 Start: 51095, Stop: 50988, Start Num: 19
Candidate Starts for Flaverint_100:
(Start: 19 @51095 has 56 MA's), (Start: 26 @51065 has 60 MA's), (32, 50996),

Gene: George_81 Start: 49646, Stop: 49548, Start Num: 21
Candidate Starts for George_81:
(3, 49739), (6, 49730), (10, 49697), (12, 49694), (Start: 17 @49667 has 1 MA's), (Start: 18 @49661 has 4 MA's), (Start: 21 @49646 has 2 MA's), (Start: 26 @49625 has 60 MA's), (29, 49589),

Gene: Georgie2_96 Start: 51855, Stop: 51751, Start Num: 19
Candidate Starts for Georgie2_96:
(Start: 19 @51855 has 56 MA's), (Start: 24 @51831 has 1 MA's), (Start: 26 @51828 has 60 MA's),

Gene: Gilberta_97 Start: 49941, Stop: 49864, Start Num: 26
Candidate Starts for Gilberta_97:
(Start: 19 @49971 has 56 MA's), (Start: 26 @49941 has 60 MA's), (32, 49872),

Gene: Goose_87 Start: 49419, Stop: 49315, Start Num: 19
Candidate Starts for Goose_87:
(Start: 19 @49419 has 56 MA's), (Start: 26 @49392 has 60 MA's),

Gene: Hookmount_90 Start: 48931, Stop: 48854, Start Num: 26
Candidate Starts for Hookmount_90:
(Start: 26 @48931 has 60 MA's), (31, 48868),

Gene: Hutc2_97 Start: 49903, Stop: 49796, Start Num: 19
Candidate Starts for Hutc2_97:
(Start: 19 @49903 has 56 MA's), (Start: 26 @49873 has 60 MA's),

Gene: Insomnia_99 Start: 51129, Stop: 51022, Start Num: 19
Candidate Starts for Insomnia_99:
(Start: 19 @51129 has 56 MA's), (Start: 26 @51099 has 60 MA's), (32, 51030),

Gene: Jabiru_85 Start: 48652, Stop: 48572, Start Num: 26
Candidate Starts for Jabiru_85:
(Start: 26 @48652 has 60 MA's), (29, 48613),

Gene: Jerm_95 Start: 51599, Stop: 51495, Start Num: 19
Candidate Starts for Jerm_95:
(Start: 19 @51599 has 56 MA's), (Start: 24 @51575 has 1 MA's), (Start: 26 @51572 has 60 MA's),

Gene: Joselito_97 Start: 50819, Stop: 50742, Start Num: 26
Candidate Starts for Joselito_97:
(Start: 19 @50849 has 56 MA's), (Start: 26 @50819 has 60 MA's), (32, 50750),

Gene: JoshKayV_97 Start: 51822, Stop: 51739, Start Num: 23
Candidate Starts for JoshKayV_97:
(Start: 23 @51822 has 3 MA's), (Start: 26 @51816 has 60 MA's), (31, 51753), (32, 51747),

Gene: Journey13_80 Start: 46885, Stop: 46808, Start Num: 26
Candidate Starts for Journey13_80:
(Start: 26 @46885 has 60 MA's), (28, 46867),

Gene: Jsquared_101 Start: 51418, Stop: 51341, Start Num: 26
Candidate Starts for Jsquared_101:
(Start: 26 @51418 has 60 MA's), (28, 51400),

Gene: Kalpine_97 Start: 51831, Stop: 51754, Start Num: 26
Candidate Starts for Kalpine_97:
(Start: 19 @51858 has 56 MA's), (Start: 24 @51834 has 1 MA's), (Start: 26 @51831 has 60 MA's),

Gene: Kerberos_97 Start: 51250, Stop: 51146, Start Num: 19
Candidate Starts for Kerberos_97:
(Start: 19 @51250 has 56 MA's), (Start: 26 @51223 has 60 MA's), (28, 51205),

Gene: KittenMittens_81 Start: 48769, Stop: 48665, Start Num: 19
Candidate Starts for KittenMittens_81:
(Start: 19 @48769 has 56 MA's), (Start: 26 @48742 has 60 MA's),

Gene: Kristoff_84 Start: 50050, Stop: 49973, Start Num: 26
Candidate Starts for Kristoff_84:
(9, 50122), (Start: 19 @50077 has 56 MA's), (Start: 26 @50050 has 60 MA's),

Gene: Lambert1_90 Start: 48932, Stop: 48855, Start Num: 26
Candidate Starts for Lambert1_90:
(Start: 26 @48932 has 60 MA's), (31, 48869),

Gene: Landor_92 Start: 52182, Stop: 52081, Start Num: 20
Candidate Starts for Landor_92:
(Start: 20 @52182 has 2 MA's), (Start: 26 @52158 has 60 MA's), (28, 52140), (30, 52116), (31, 52095),

Gene: Leogania_77 Start: 47504, Stop: 47400, Start Num: 19
Candidate Starts for Leogania_77:
(16, 47516), (Start: 19 @47504 has 56 MA's), (Start: 23 @47483 has 3 MA's), (Start: 26 @47477 has 60 MA's), (30, 47435), (31, 47414),

Gene: Leviathan_95 Start: 51650, Stop: 51573, Start Num: 26
Candidate Starts for Leviathan_95:
(Start: 19 @51677 has 56 MA's), (Start: 24 @51653 has 1 MA's), (Start: 26 @51650 has 60 MA's),

Gene: LilTurb_95 Start: 51562, Stop: 51485, Start Num: 26
Candidate Starts for LilTurb_95:
(Start: 19 @51589 has 56 MA's), (Start: 24 @51565 has 1 MA's), (Start: 26 @51562 has 60 MA's),

Gene: LittleCherry_84 Start: 48771, Stop: 48658, Start Num: 18
Candidate Starts for LittleCherry_84:
(3, 48849), (6, 48840), (10, 48807), (12, 48804), (Start: 17 @48777 has 1 MA's), (Start: 18 @48771 has 4 MA's), (Start: 21 @48756 has 2 MA's), (Start: 26 @48735 has 60 MA's), (29, 48699),

Gene: Lokk_89 Start: 49455, Stop: 49351, Start Num: 19
Candidate Starts for Lokk_89:
(Start: 19 @49455 has 56 MA's), (Start: 24 @49431 has 1 MA's), (Start: 26 @49428 has 60 MA's),

Gene: Loser_97 Start: 51981, Stop: 51877, Start Num: 19
Candidate Starts for Loser_97:
(Start: 19 @51981 has 56 MA's), (Start: 24 @51957 has 1 MA's), (Start: 26 @51954 has 60 MA's),

Gene: Lucivia_100 Start: 51098, Stop: 51021, Start Num: 26
Candidate Starts for Lucivia_100:
(Start: 19 @51128 has 56 MA's), (Start: 26 @51098 has 60 MA's), (32, 51029),

Gene: Lucyedi_94 Start: 51420, Stop: 51316, Start Num: 19
Candidate Starts for Lucyedi_94:
(3, 51504), (Start: 19 @51420 has 56 MA's), (Start: 26 @51393 has 60 MA's),

Gene: MaCh_99 Start: 51092, Stop: 50985, Start Num: 19
Candidate Starts for MaCh_99:
(Start: 19 @51092 has 56 MA's), (Start: 26 @51062 has 60 MA's), (32, 50993),

Gene: Mabel_99 Start: 51063, Stop: 50986, Start Num: 26
Candidate Starts for Mabel_99:
(Start: 19 @51093 has 56 MA's), (Start: 26 @51063 has 60 MA's), (32, 50994),

Gene: Margo_90 Start: 48957, Stop: 48880, Start Num: 26
Candidate Starts for Margo_90:
(Start: 26 @48957 has 60 MA's), (31, 48894),

Gene: Micasa_87 Start: 49438, Stop: 49325, Start Num: 18
Candidate Starts for Micasa_87:
(Start: 17 @49444 has 1 MA's), (Start: 18 @49438 has 4 MA's), (Start: 21 @49423 has 2 MA's), (Start: 26 @49402 has 60 MA's), (29, 49366),

Gene: Miko_90 Start: 50312, Stop: 50208, Start Num: 19
Candidate Starts for Miko_90:
(Start: 19 @50312 has 56 MA's), (Start: 24 @50288 has 1 MA's), (Start: 26 @50285 has 60 MA's),

Gene: Milcery_84 Start: 49067, Stop: 48954, Start Num: 18
Candidate Starts for Milcery_84:
(3, 49145), (6, 49136), (10, 49103), (12, 49100), (Start: 17 @49073 has 1 MA's), (Start: 18 @49067 has 4 MA's), (Start: 21 @49052 has 2 MA's), (Start: 26 @49031 has 60 MA's), (29, 48995),

Gene: MissWhite_93 Start: 48728, Stop: 48651, Start Num: 26
Candidate Starts for MissWhite_93:
(Start: 26 @48728 has 60 MA's), (28, 48710), (29, 48692),

Gene: Mulciber_98 Start: 50918, Stop: 50841, Start Num: 26

Candidate Starts for Mulciber_98:

(Start: 19 @50948 has 56 MA's), (Start: 26 @50918 has 60 MA's), (32, 50849),

Gene: Naji_86 Start: 47615, Stop: 47511, Start Num: 19

Candidate Starts for Naji_86:

(Start: 19 @47615 has 56 MA's), (Start: 26 @47588 has 60 MA's), (28, 47570),

Gene: NearlyHeadless_100 Start: 50504, Stop: 50427, Start Num: 26

Candidate Starts for NearlyHeadless_100:

(Start: 26 @50504 has 60 MA's),

Gene: NicoleTera_95 Start: 51425, Stop: 51324, Start Num: 19

Candidate Starts for NicoleTera_95:

(Start: 19 @51425 has 56 MA's), (Start: 26 @51401 has 60 MA's), (28, 51383), (31, 51338), (32, 51332),

Gene: NothingSpecial_88 Start: 50971, Stop: 50870, Start Num: 20

Candidate Starts for NothingSpecial_88:

(Start: 20 @50971 has 2 MA's), (Start: 26 @50947 has 60 MA's), (28, 50929), (30, 50905),

Gene: OKCentral2016_85 Start: 48846, Stop: 48742, Start Num: 19

Candidate Starts for OKCentral2016_85:

(Start: 19 @48846 has 56 MA's), (Start: 26 @48819 has 60 MA's),

Gene: Orange_99 Start: 50617, Stop: 50540, Start Num: 26

Candidate Starts for Orange_99:

(Start: 19 @50647 has 56 MA's), (Start: 26 @50617 has 60 MA's), (32, 50548),

Gene: PP_09 Start: 2269, Stop: 2150, Start Num: 17

Candidate Starts for PP_09:

(2, 2356), (Start: 17 @2269 has 1 MA's), (Start: 26 @2227 has 60 MA's),

Gene: PainterBoy_93 Start: 51131, Stop: 51027, Start Num: 19

Candidate Starts for PainterBoy_93:

(3, 51215), (Start: 19 @51131 has 56 MA's), (Start: 26 @51104 has 60 MA's),

Gene: PeaceMeal1_83 Start: 48773, Stop: 48669, Start Num: 19

Candidate Starts for PeaceMeal1_83:

(Start: 19 @48773 has 56 MA's), (Start: 26 @48746 has 60 MA's),

Gene: Petersenfast_93 Start: 49528, Stop: 49421, Start Num: 19

Candidate Starts for Petersenfast_93:

(Start: 19 @49528 has 56 MA's), (Start: 26 @49498 has 60 MA's), (32, 49429),

Gene: PetterN_92 Start: 49239, Stop: 49159, Start Num: 26

Candidate Starts for PetterN_92:

(7, 49320), (Start: 26 @49239 has 60 MA's),

Gene: Phillis_96 Start: 49511, Stop: 49434, Start Num: 26

Candidate Starts for Phillis_96:

(Start: 26 @49511 has 60 MA's),

Gene: Pomar16_97 Start: 51296, Stop: 51219, Start Num: 26

Candidate Starts for Pomar16_97:

(Start: 19 @51323 has 56 MA's), (Start: 26 @51296 has 60 MA's), (28, 51278),

Gene: Poompha_84 Start: 48962, Stop: 48858, Start Num: 19

Candidate Starts for Poompha_84:

(Start: 19 @48962 has 56 MA's), (Start: 26 @48935 has 60 MA's),

Gene: Popcicle_90 Start: 48928, Stop: 48851, Start Num: 26

Candidate Starts for Popcicle_90:

(Start: 26 @48928 has 60 MA's), (31, 48865),

Gene: Power_94 Start: 51827, Stop: 51750, Start Num: 26

Candidate Starts for Power_94:

(Start: 19 @51854 has 56 MA's), (Start: 24 @51830 has 1 MA's), (Start: 26 @51827 has 60 MA's),

Gene: QueenB2_93 Start: 51229, Stop: 51125, Start Num: 19

Candidate Starts for QueenB2_93:

(Start: 19 @51229 has 56 MA's), (Start: 24 @51205 has 1 MA's), (Start: 26 @51202 has 60 MA's),

Gene: QueenBeesly_94 Start: 51807, Stop: 51703, Start Num: 19

Candidate Starts for QueenBeesly_94:

(Start: 19 @51807 has 56 MA's), (Start: 24 @51783 has 1 MA's), (Start: 26 @51780 has 60 MA's),

Gene: QuinnKiro_89 Start: 48931, Stop: 48854, Start Num: 26

Candidate Starts for QuinnKiro_89:

(Start: 26 @48931 has 60 MA's), (31, 48868),

Gene: Rachaly_91 Start: 50455, Stop: 50351, Start Num: 19

Candidate Starts for Rachaly_91:

(Start: 19 @50455 has 56 MA's), (Start: 24 @50431 has 1 MA's), (Start: 26 @50428 has 60 MA's),

Gene: Rebeuca_87 Start: 50078, Stop: 49974, Start Num: 19

Candidate Starts for Rebeuca_87:

(9, 50123), (Start: 19 @50078 has 56 MA's), (Start: 26 @50051 has 60 MA's),

Gene: RedRock_95 Start: 51739, Stop: 51635, Start Num: 19

Candidate Starts for RedRock_95:

(Start: 19 @51739 has 56 MA's), (Start: 24 @51715 has 1 MA's), (Start: 26 @51712 has 60 MA's),

Gene: Retro23_95 Start: 51527, Stop: 51423, Start Num: 19

Candidate Starts for Retro23_95:

(Start: 19 @51527 has 56 MA's), (Start: 24 @51503 has 1 MA's), (Start: 26 @51500 has 60 MA's),

Gene: RhynO_75 Start: 45612, Stop: 45523, Start Num: 22

Candidate Starts for RhynO_75:

(Start: 19 @45627 has 56 MA's), (Start: 22 @45612 has 1 MA's), (Start: 26 @45600 has 60 MA's),

Gene: Rowdy_91 Start: 49998, Stop: 49909, Start Num: 22

Candidate Starts for Rowdy_91:

(Start: 19 @50013 has 56 MA's), (Start: 22 @49998 has 1 MA's), (Start: 26 @49986 has 60 MA's),

Gene: Saintus_94 Start: 47348, Stop: 47271, Start Num: 26

Candidate Starts for Saintus_94:

(Start: 26 @47348 has 60 MA's),

Gene: Salz_96 Start: 49825, Stop: 49718, Start Num: 19

Candidate Starts for Salz_96:

(Start: 19 @49825 has 56 MA's), (Start: 26 @49795 has 60 MA's),

Gene: Serenity_98 Start: 50529, Stop: 50452, Start Num: 26

Candidate Starts for Serenity_98:

(Start: 26 @50529 has 60 MA's), (28, 50511),

Gene: Sham4_96 Start: 49843, Stop: 49736, Start Num: 19

Candidate Starts for Sham4_96:

(Start: 19 @49843 has 56 MA's), (Start: 26 @49813 has 60 MA's), (32, 49744),

Gene: Shapes_91 Start: 49998, Stop: 49909, Start Num: 22

Candidate Starts for Shapes_91:

(Start: 19 @50013 has 56 MA's), (Start: 22 @49998 has 1 MA's), (Start: 26 @49986 has 60 MA's),

Gene: Smeadley_99 Start: 50508, Stop: 50431, Start Num: 26

Candidate Starts for Smeadley_99:

(Start: 26 @50508 has 60 MA's),

Gene: Smeagan_96 Start: 51716, Stop: 51639, Start Num: 26

Candidate Starts for Smeagan_96:

(5, 51812), (8, 51788), (Start: 23 @51722 has 3 MA's), (Start: 26 @51716 has 60 MA's), (28, 51698), (31, 51653), (32, 51647),

Gene: SnapTap_94 Start: 51510, Stop: 51406, Start Num: 19

Candidate Starts for SnapTap_94:

(Start: 19 @51510 has 56 MA's), (Start: 24 @51486 has 1 MA's), (Start: 26 @51483 has 60 MA's),

Gene: Snape_99 Start: 50606, Stop: 50529, Start Num: 26

Candidate Starts for Snape_99:

(Start: 19 @50636 has 56 MA's), (Start: 26 @50606 has 60 MA's), (32, 50537),

Gene: StarStuff_97 Start: 51258, Stop: 51181, Start Num: 26

Candidate Starts for StarStuff_97:

(Start: 19 @51285 has 56 MA's), (Start: 26 @51258 has 60 MA's), (28, 51240),

Gene: Stephig9_100 Start: 50834, Stop: 50757, Start Num: 26

Candidate Starts for Stephig9_100:

(Start: 26 @50834 has 60 MA's),

Gene: Superchunk_98 Start: 51262, Stop: 51158, Start Num: 19

Candidate Starts for Superchunk_98:

(1, 51382), (4, 51337), (11, 51295), (14, 51277), (Start: 19 @51262 has 56 MA's), (25, 51238), (32, 51166),

Gene: SweetiePie_94 Start: 51643, Stop: 51539, Start Num: 19

Candidate Starts for SweetiePie_94:

(Start: 19 @51643 has 56 MA's), (Start: 24 @51619 has 1 MA's), (Start: 26 @51616 has 60 MA's),

Gene: Swirley_85 Start: 47789, Stop: 47676, Start Num: 18

Candidate Starts for Swirley_85:

(3, 47867), (6, 47858), (10, 47825), (12, 47822), (Start: 18 @47789 has 4 MA's), (Start: 21 @47774 has 2 MA's), (Start: 26 @47753 has 60 MA's), (29, 47717),

Gene: SydNat_85 Start: 49394, Stop: 49317, Start Num: 26

Candidate Starts for SydNat_85:

(15, 49439), (Start: 26 @49394 has 60 MA's), (29, 49358),

Gene: TNguyen7_92 Start: 49258, Stop: 49181, Start Num: 26

Candidate Starts for TNguyen7_92:

(Start: 26 @49258 has 60 MA's), (28, 49240), (31, 49195),

Gene: Tarynearal_87 Start: 49212, Stop: 49114, Start Num: 21

Candidate Starts for Tarynearal_87:

(3, 49305), (6, 49296), (10, 49263), (12, 49260), (Start: 17 @49233 has 1 MA's), (Start: 18 @49227 has 4 MA's), (Start: 21 @49212 has 2 MA's), (Start: 26 @49191 has 60 MA's), (29, 49155),

Gene: Texage_88 Start: 48932, Stop: 48855, Start Num: 26

Candidate Starts for Texage_88:

(Start: 26 @48932 has 60 MA's), (31, 48869),

Gene: Theia_86 Start: 49737, Stop: 49660, Start Num: 26

Candidate Starts for Theia_86:

(13, 49788), (15, 49782), (Start: 26 @49737 has 60 MA's), (29, 49701),

Gene: Timothy_99 Start: 50583, Stop: 50506, Start Num: 26

Candidate Starts for Timothy_99:

(Start: 19 @50613 has 56 MA's), (Start: 26 @50583 has 60 MA's), (32, 50514),

Gene: TinyTimmy_97 Start: 50342, Stop: 50235, Start Num: 19

Candidate Starts for TinyTimmy_97:

(Start: 19 @50342 has 56 MA's), (Start: 26 @50312 has 60 MA's), (32, 50243),

Gene: Todacoro_90 Start: 48931, Stop: 48854, Start Num: 26

Candidate Starts for Todacoro_90:

(Start: 26 @48931 has 60 MA's), (31, 48868),

Gene: Tomathan_97 Start: 51364, Stop: 51260, Start Num: 19

Candidate Starts for Tomathan_97:

(Start: 19 @51364 has 56 MA's), (Start: 26 @51337 has 60 MA's), (28, 51319),

Gene: Topanga_76 Start: 46554, Stop: 46450, Start Num: 19

Candidate Starts for Topanga_76:

(Start: 19 @46554 has 56 MA's), (Start: 26 @46527 has 60 MA's),

Gene: Travvers_97 Start: 51281, Stop: 51177, Start Num: 19

Candidate Starts for Travvers_97:

(Start: 19 @51281 has 56 MA's), (Start: 26 @51254 has 60 MA's), (28, 51236),

Gene: Twister_87 Start: 49768, Stop: 49664, Start Num: 19

Candidate Starts for Twister_87:

(Start: 19 @49768 has 56 MA's), (Start: 26 @49741 has 60 MA's),

Gene: VA6_93 Start: 51062, Stop: 50958, Start Num: 19

Candidate Starts for VA6_93:

(Start: 18 @51068 has 4 MA's), (Start: 19 @51062 has 56 MA's), (Start: 24 @51038 has 1 MA's),
(Start: 26 @51035 has 60 MA's),

Gene: VC3_93 Start: 49621, Stop: 49517, Start Num: 19

Candidate Starts for VC3_93:

(Start: 19 @49621 has 56 MA's), (Start: 26 @49594 has 60 MA's), (28, 49576),

Gene: WalterMcMickey_86 Start: 49768, Stop: 49664, Start Num: 19

Candidate Starts for WalterMcMickey_86:

(Start: 19 @49768 has 56 MA's), (Start: 26 @49741 has 60 MA's),