Pham 283522

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51: Miko_91
52: RedRock_96
53: Trooper_95
54: Chargerpower_101
55: Ayanochan_96 + 29
56: Elephantoon_98
57: DreamTeam1_95
58: Darrell_97
59: Klodith_95 + 1
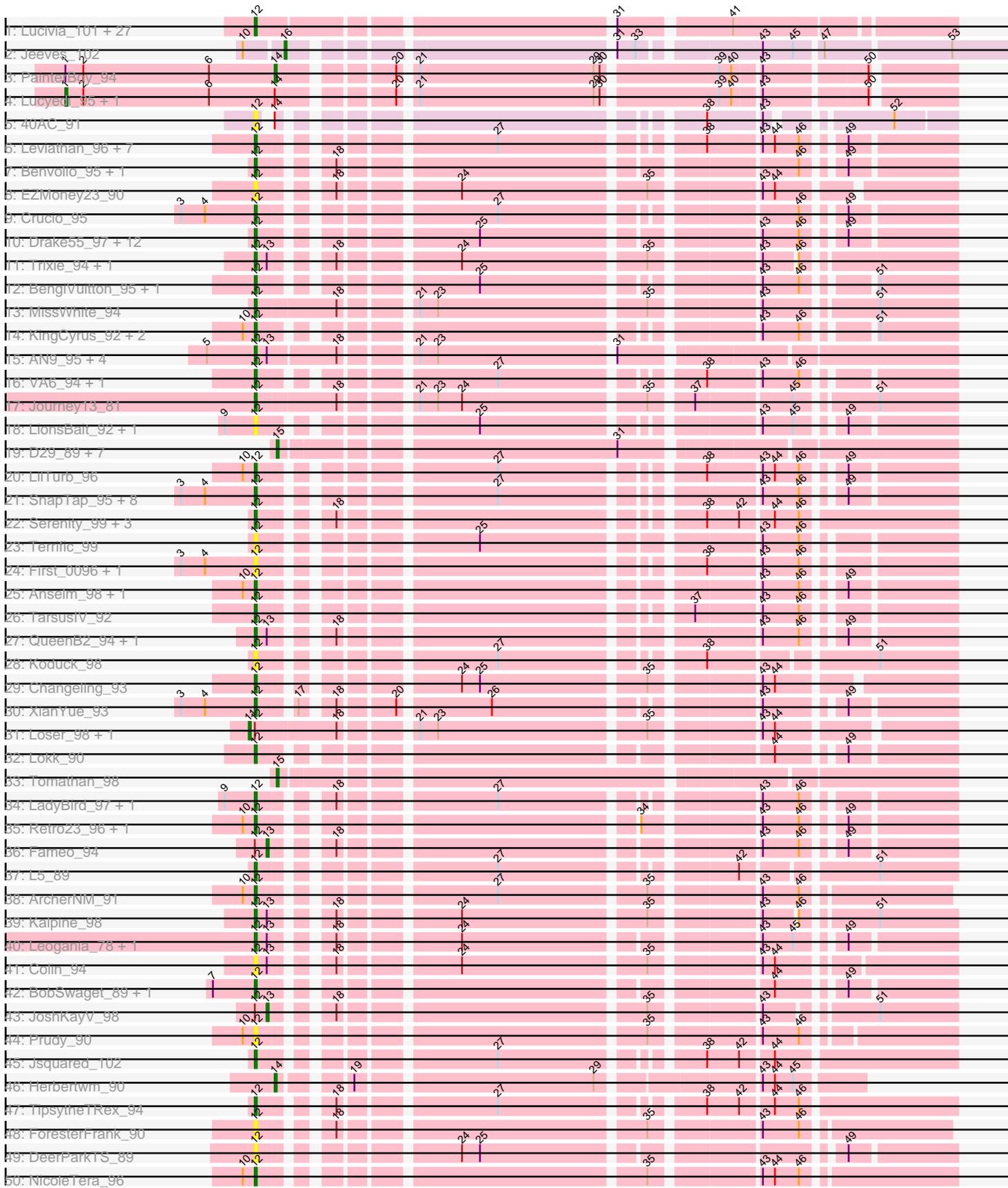60: Maminiaina_98 + 1
61: SheaKeira_94
62: Arissanae_95
63: LoneWolf_99
64: Yecey3_102
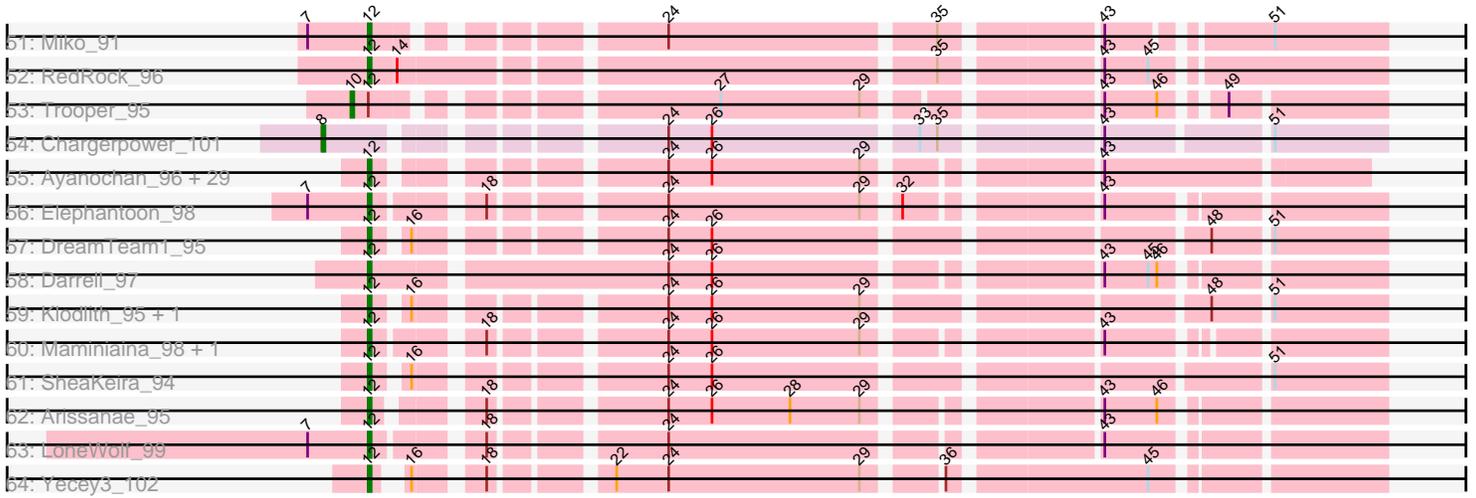
Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly 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 283522 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283522 has 179 members, 33 are drafts.

Phages represented in each track:
• Track 1 : Lucivia_101, Timothy_100, Orange_100, Jabith_100, Munch_98, Joselito_98, Sham4_97, TinyTimmy_98, Kimba_97, Salz_97, Flaverint_101, Ebony_99, Mulciber_99, Bud_92, Et2Brutus_101, MaCh_100, Snape_100, Wolpertinger_100, Aneem_100, Petersenfast_94, Mabel_100, Gilberta_98, Bowtie_96, Hutc2_98, Insomnia_100, Fibonacci_100, Bachome_97, Saskia_98
• Track 2 : Jeeves_102
• Track 3 : PainterBoy_94
• Track 4 : Lucyedi_95, EagleEye_97
• Track 5 : 40AC_91
• Track 6 : Leviathan_96, AbbyPaige_97, Whabigail7_93, Turbido_95, Jerm_96, Agape74_97, Bugsy_85, Dignity_97
• Track 7 : Benvolio_95, Echild_100
• Track 8 : EZMoney23_90
• Track 9 : Crucio_95
• Track 10 : Drake55_97, Centaur_98, Sknot_98, NaSiaTalie_98, Flare16_97, Baehexic_97, Equemioh13_97, WideWale_98, MiculUcigas_97, HarryHoudini_96, Gratitude_95, Updawg_98, Piro94_95
• Track 11 : Trixie_94, WeiHuaDA_96
• Track 12 : BengiVuitton_95, Deloris_95
• Track 13 : MissWhite_94
• Track 14 : KingCyrus_92, EvilGenius_94, ChipMunk_95
• Track 15 : AN9_95, ANI8_95, VC3_94, Kerberos_98, C3_88
• Track 16 : VA6_94, AN3_94
• Track 17 : Journey13_81
• Track 18 : LionsBait_92, HippoHollow_90
• Track 19 : D29_89, Naji_87, Duplo_99, Travvers_98, Pomar16_98, DBQu4n_98, StarStuff_98, D32_86
• Track 20 : LilTurb_96
• Track 21 : SnapTap_95, QueenBeesly_95, Malec_93, Georgie2_97, FiringLine_95, SemperFi_95, Larenn_93, Power_95, SweetiePie_95
• Track 22 : Serenity_99, Quokka_99, MajorMajor_94, Bradman_100
• Track 23 : Terrific_99
• Track 24 : First_0096, 20ES_97
• Track 25 : Anselm_98, DudeLittle_94
• Track 26 : TarsusIV_92
• Track 27 : QueenB2_94, Heffalump_92
• Track 28 : Koduck_98

- Track 29 : Changeling_93
- Track 30 : XianYue_93
- Track 31 : Loser_98, AnnaL29_97
- Track 32 : Lokk_90
- Track 33 : Tomathan_98
- Track 34 : LadyBird_97, CRB1_95
- Track 35 : Retro23_96, Dalmatian_95
- Track 36 : Fameo_94
- Track 37 : L5_89
- Track 38 : ArcherNM_91
- Track 39 : Kalpine_98
- Track 40 : Leogania_78, BiancaTri92_91
- Track 41 : Colin_94
- Track 42 : BobSwaget_89, Rachaly_92
- Track 43 : JoshKayV_98
- Track 44 : Prudy_90
- Track 45 : Jsquared_102
- Track 46 : Herbertwm_90
- Track 47 : TipsytheTRex_94
- Track 48 : ForesterFrank_90
- Track 49 : DeerParkTS_89
- Track 50 : NicoleTera_96
- Track 51 : Miko_91
- Track 52 : RedRock_96
- Track 53 : Trooper_95
- Track 54 : Chargerpower_101
- Track 55 : Ayanochan_96, Qobbit_97, Aliter_93, Catalina_102, Onglai_97, Scherzo_98, Phonnegut_100, Alma_97, Fayely_96, ExplosioNervosa_96, Tubs_100, Sachima_95, Conquerage_97, EmyBug_96, Phaeder_100, Priya_97, Pioneer_100, Spouty_97, Jiawan_97, Hanray_97, Eidsmoe_97, Beemo_100, Lilleskat_96, Myxus_100, HortumSL17_101, Holex_98, PackMan_94, RyeScarlet_100, Ugenie5_86, EdogawaKiddo_98
- Track 56 : Elephantoon_98
- Track 57 : DreamTeam1_95
- Track 58 : Darrell_97
- Track 59 : Klodlith_95, Charm_94
- Track 60 : Maminiaina_98, BogosyJay_98
- Track 61 : SheaKeira_94
- Track 62 : Arissanae_95
- Track 63 : LoneWolf_99
- Track 64 : Yecey3_102

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

The start number called the most often in the published annotations is 12, it was called in 127 of the 146 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- 20ES_97, 40AC_91, AN3_94, AN9_95, ANI8_95, AbbyPaige_97, Agape74_97, Aliter_93, Alma_97, Aneem_100, Anselm_98, ArcherNM_91, Arissanae_95,

Ayanochan_96, Bachome_97, Baehexic_97, Beemo_100, BengiVuitton_95, Benvolio_95, BiancaTri92_91, BobSwaget_89, BogosyJay_98, Bowtie_96, Bradman_100, Bud_92, Bugsy_85, C3_88, CRB1_95, Catalina_102, Centaur_98, Changeling_93, Charm_94, ChipMunk_95, Colin_94, Conquerage_97, Crucio_95, Dalmatian_95, Darrell_97, DeerParkTS_89, Deloris_95, Dignity_97, Drake55_97, DreamTeam1_95, DudeLittle_94, EZMoney23_90, Ebony_99, Echild_100, EdogawaKiddo_98, Eidsmoe_97, Elephantoon_98, EmyBug_96, Equemioh13_97, Et2Brutus_101, EvilGenius_94, ExplosioNervosa_96, Fayely_96, Fibonacci_100, FiringLine_95, First_0096, Flare16_97, Flaverint_101, ForesterFrank_90, Georgie2_97, Gilberta_98, Gratitude_95, Hanray_97, HarryHoudini_96, Heffalump_92, HippoHollow_90, Holex_98, HortumSL17_101, Hutc2_98, Insomnia_100, Jabith_100, Jerm_96, Jiawan_97, Joselito_98, Journey13_81, Jsquared_102, Kalpine_98, Kerberos_98, Kimba_97, KingCyrus_92, Klodlith_95, Koduck_98, L5_89, LadyBird_97, Larenn_93, Leogania_78, Leviathan_96, LilTurb_96, Lilleskat_96, LionsBait_92, Lokk_90, LoneWolf_99, Lucivia_101, MaCh_100, Mabel_100, MajorMajor_94, Malec_93, Maminiaina_98, MiculUcigas_97, Miko_91, MissWhite_94, Mulciber_99, Munch_98, Myxus_100, NaSiaTalie_98, NicoleTera_96, Onglai_97, Orange_100, PackMan_94, Petersenfast_94, Phaeder_100, Phonnegut_100, Pioneer_100, Piro94_95, Power_95, Priya_97, Prudy_90, Qobbit_97, QueenB2_94, QueenBeesly_95, Quokka_99, Rachaly_92, RedRock_96, Retro23_96, RyeScarlet_100, Sachima_95, Salz_97, Saskia_98, Scherzo_98, SemperFi_95, Serenity_99, Sham4_97, SheaKeira_94, Sknot_98, SnapTap_95, Snape_100, Spouty_97, SweetiePie_95, TarsusIV_92, Terrific_99, Timothy_100, TinyTimmy_98, TipsytheTRex_94, Trixie_94, Tubs_100, Turbido_95, Ugenie5_86, Updawg_98, VA6_94, VC3_94, WeiHuaDA_96, Whabigail7_93, WideWale_98, Wolpertinger_100, XianYue_93, Yecey3_102,

Genes that have the "Most Annotated" start but do not call it:
• AnnaL29_97, Fameo_94, JoshKayV_98, Loser_98, Trooper_95,

Genes that do not have the "Most Annotated" start:
• Chargerpower_101, D29_89, D32_86, DBQu4n_98, Duplo_99, EagleEye_97, Herbertwm_90, Jeeves_102, Lucyedi_95, Naji_87, PainterBoy_94, Pomar16_98, StarStuff_98, Tomathan_98, Travvers_98,

Summary by start number:

Start 1:
• Found in 3 of 179 (1.7%) of genes in pham
• Manual Annotations of this start: 2 of 146
• Called 66.7% of time when present
• Phage (with cluster) where this start called: EagleEye_97 (A16), Lucyedi_95 (A16),

Start 8:
• Found in 1 of 179 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 146
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chargerpower_101 (A22),

Start 10:
• Found in 13 of 179 (7.3%) of genes in pham
• Manual Annotations of this start: 1 of 146
• Called 7.7% of time when present

• Phage (with cluster) where this start called: Trooper_95 (A2),

Start 11:
• Found in 2 of 179 (1.1%) of genes in pham
• Manual Annotations of this start: 2 of 146
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AnnaL29_97 (A2), Loser_98 (A2),

Start 12:
• Found in 164 of 179 (91.6%) of genes in pham
• Manual Annotations of this start: 127 of 146
• Called 97.0% of time when present
• Phage (with cluster) where this start called: 20ES_97 (A2), 40AC_91 (A17), AN3_94 (A2), AN9_95 (A2), ANI8_95 (A2), AbbyPaige_97 (A2), Agape74_97 (A2), Aliter_93 (A9), Alma_97 (A9), Aneem_100 (A11), Anselm_98 (A2), ArcherNM_91 (A2), Arissanae_95 (A9), Ayanochan_96 (A9), Bachome_97 (A11), Baehexic_97 (A2), Beemo_100 (A9), BengiVuitton_95 (A2), Benvolio_95 (A2), BiancaTri92_91 (A2), BobSwaget_89 (A2), BogosyJay_98 (A9), Bowtie_96 (A11), Bradman_100 (A2), Bud_92 (A11), Bugsy_85 (A2), C3_88 (A2), CRB1_95 (A2), Catalina_102 (A9), Centaur_98 (A2), Changeling_93 (A2), Charm_94 (A9), ChipMunk_95 (A2), Colin_94 (A2), Conquerage_97 (A9), Crucio_95 (A2), Dalmatian_95 (A2), Darrell_97 (A9), DeerParkTS_89 (A2), Deloris_95 (A2), Dignity_97 (A2), Drake55_97 (A2), DreamTeam1_95 (A9), DudeLittle_94 (A2), EZMoney23_90 (A2), Ebony_99 (A11), Echild_100 (A2), EdogawaKiddo_98 (A9), Eidsmoe_97 (A9), Elephantoon_98 (A9), EmyBug_96 (A9), Equemioh13_97 (A2), Et2Brutus_101 (A11), EvilGenius_94 (A2), ExplosioNervosa_96 (A9), Fayely_96 (A9), Fibonacci_100 (A11), FiringLine_95 (A2), First_0096 (A2), Flare16_97 (A2), Flaverint_101 (A11), ForesterFrank_90 (A2), Georgie2_97 (A2), Gilberta_98 (A11), Gratitude_95 (A2), Hanray_97 (A9), HarryHoudini_96 (A2), Heffalump_92 (A2), HippoHollow_90 (A2), Holex_98 (A9), HortumSL17_101 (A9), Hutc2_98 (A11), Insomnia_100 (A11), Jabith_100 (A11), Jerm_96 (A2), Jiawan_97 (A9), Joselito_98 (A11), Journey13_81 (A2), Jsquared_102 (A2), Kalpine_98 (A2), Kerberos_98 (A2), Kimba_97 (A11), KingCyrus_92 (A2), Klodlith_95 (A9), Koduck_98 (A2), L5_89 (A2), LadyBird_97 (A2), Larenn_93 (A2), Leogania_78 (A2), Leviathan_96 (A2), LilTurb_96 (A2), Lilleskat_96 (A9), LionsBait_92 (A2), Lokk_90 (A2), LoneWolf_99 (A9), Lucivia_101 (A11), MaCh_100 (A11), Mabel_100 (A11), MajorMajor_94 (A2), Malec_93 (A2), Maminiaina_98 (A9), MiculUcigas_97 (A2), Miko_91 (A2), MissWhite_94 (A2), Mulciber_99 (A11), Munch_98 (A11), Myxus_100 (A9), NaSiaTalie_98 (A2), NicoleTera_96 (A2), Onglai_97 (A9), Orange_100 (A11), PackMan_94 (A9), Petersenfast_94 (A11), Phaeder_100 (A9), Phonnegut_100 (A9), Pioneer_100 (A9), Piro94_95 (A2), Power_95 (A2), Priya_97 (A9), Prudy_90 (A2), Qobbit_97 (A9), QueenB2_94 (A2), QueenBeesly_95 (A2), Quokka_99 (A2), Rachaly_92 (A2), RedRock_96 (A2), Retro23_96 (A2), RyeScarlet_100 (A9), Sachima_95 (A9), Salz_97 (A11), Saskia_98 (A11), Scherzo_98 (A9), SemperFi_95 (A2), Serenity_99 (A2), Sham4_97 (A11), SheaKeira_94 (A9), Sknot_98 (A2), SnapTap_95 (A2), Snape_100 (A11), Spouty_97 (A9), SweetiePie_95 (A2), TarsusIV_92 (A2), Terrific_99 (A2), Timothy_100 (A11), TinyTimmy_98 (A11), TipsytheTRex_94 (A2), Trixie_94 (A2), Tubs_100 (A9), Turbido_95 (A2), Ugenie5_86 (A9), Updawg_98 (A2), VA6_94 (A2), VC3_94 (A2), WeiHuaDA_96 (A2), Whabigail7_93 (A2), WideWale_98 (A2), Wolpertinger_100 (A11), XianYue_93 (A2), Yecey3_102 (A9),

Start 13:
• Found in 15 of 179 (8.4%) of genes in pham

- Manual Annotations of this start: 2 of 146
- Called 13.3% of time when present
- Phage (with cluster) where this start called: Fameo_94 (A2), JoshKayV_98 (A2),

Start 14:
- Found in 6 of 179 (3.4%) of genes in pham
- Manual Annotations of this start: 2 of 146
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Herbertwm_90 (A2), PainterBoy_94 (A16),

Start 15:
- Found in 9 of 179 (5.0%) of genes in pham
- Manual Annotations of this start: 8 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: D29_89 (A2), D32_86 (A2), DBQu4n_98 (A2), Duplo_99 (A2), Naji_87 (A2), Pomar16_98 (A2), StarStuff_98 (A2), Tomathan_98 (A2), Travvers_98 (A2),

Start 16:
- Found in 6 of 179 (3.4%) of genes in pham
- Manual Annotations of this start: 1 of 146
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Jeeves_102 (A14),

Summary by clusters:

There are 7 clusters represented in this pham: A14, A17, A16, A11, A22, A2, A9,

Info for manual annotations of cluster A11:
- Start number 12 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A14:
- Start number 16 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A16:
- Start number 1 was manually annotated 2 times for cluster A16.
- Start number 14 was manually annotated 1 time for cluster A16.

Info for manual annotations of cluster A2:
- Start number 10 was manually annotated 1 time for cluster A2.
- Start number 11 was manually annotated 2 times for cluster A2.
- Start number 12 was manually annotated 72 times for cluster A2.
- Start number 13 was manually annotated 2 times for cluster A2.
- Start number 14 was manually annotated 1 time for cluster A2.
- Start number 15 was manually annotated 8 times for cluster A2.

Info for manual annotations of cluster A22:
- Start number 8 was manually annotated 1 time for cluster A22.

Info for manual annotations of cluster A9:
- Start number 12 was manually annotated 31 times for cluster A9.

Gene Information:

Gene: 20ES_97 Start: 51864, Stop: 51574, Start Num: 12
Candidate Starts for 20ES_97:
(3, 51900), (4, 51888), (Start: 12 @51864 has 127 MA's), (38, 51681), (43, 51657), (46, 51639),

Gene: 40AC_91 Start: 52143, Stop: 51862, Start Num: 12
Candidate Starts for 40AC_91:
(Start: 12 @52143 has 127 MA's), (Start: 14 @52140 has 2 MA's), (38, 51966), (43, 51942), (52, 51891),

Gene: AN3_94 Start: 49778, Stop: 49488, Start Num: 12
Candidate Starts for AN3_94:
(Start: 12 @49778 has 127 MA's), (27, 49682), (38, 49595), (43, 49571), (46, 49553),

Gene: AN9_95 Start: 49945, Stop: 49628, Start Num: 12
Candidate Starts for AN9_95:
(5, 49969), (Start: 12 @49945 has 127 MA's), (Start: 13 @49939 has 2 MA's), (18, 49906), (21, 49876), (23, 49867), (31, 49783),

Gene: ANI8_95 Start: 49945, Stop: 49628, Start Num: 12
Candidate Starts for ANI8_95:
(5, 49969), (Start: 12 @49945 has 127 MA's), (Start: 13 @49939 has 2 MA's), (18, 49906), (21, 49876), (23, 49867), (31, 49783),

Gene: AbbyPaige_97 Start: 51958, Stop: 51668, Start Num: 12
Candidate Starts for AbbyPaige_97:
(Start: 12 @51958 has 127 MA's), (27, 51862), (38, 51775), (43, 51751), (44, 51745), (46, 51733), (49, 51718),

Gene: Agape74_97 Start: 51931, Stop: 51641, Start Num: 12
Candidate Starts for Agape74_97:
(Start: 12 @51931 has 127 MA's), (27, 51835), (38, 51748), (43, 51724), (44, 51718), (46, 51706), (49, 51691),

Gene: Aliter_93 Start: 49003, Stop: 48707, Start Num: 12
Candidate Starts for Aliter_93:
(Start: 12 @49003 has 127 MA's), (24, 48925), (26, 48910), (29, 48859), (43, 48793),

Gene: Alma_97 Start: 51713, Stop: 51417, Start Num: 12
Candidate Starts for Alma_97:
(Start: 12 @51713 has 127 MA's), (24, 51635), (26, 51620), (29, 51569), (43, 51503),

Gene: Aneem_100 Start: 51418, Stop: 51101, Start Num: 12
Candidate Starts for Aneem_100:
(Start: 12 @51418 has 127 MA's), (31, 51256), (41, 51205),

Gene: AnnaL29_97 Start: 52055, Stop: 51741, Start Num: 11
Candidate Starts for AnnaL29_97:

(Start: 11 @52055 has 2 MA's), (Start: 12 @52052 has 127 MA's), (18, 52013), (21, 51983), (23, 51974), (35, 51875), (43, 51827), (44, 51821),

Gene: Anselm_98 Start: 52336, Stop: 52043, Start Num: 12
Candidate Starts for Anselm_98:
(Start: 10 @52342 has 1 MA's), (Start: 12 @52336 has 127 MA's), (43, 52126), (46, 52108), (49, 52093),

Gene: ArcherNM_91 Start: 51333, Stop: 51034, Start Num: 12
Candidate Starts for ArcherNM_91:
(Start: 10 @51339 has 1 MA's), (Start: 12 @51333 has 127 MA's), (27, 51237), (35, 51168), (43, 51120), (46, 51102),

Gene: Arissanae_95 Start: 51941, Stop: 51645, Start Num: 12
Candidate Starts for Arissanae_95:
(Start: 12 @51941 has 127 MA's), (18, 51914), (24, 51863), (26, 51848), (28, 51821), (29, 51797), (43, 51731), (46, 51713),

Gene: Ayanochan_96 Start: 51504, Stop: 51208, Start Num: 12
Candidate Starts for Ayanochan_96:
(Start: 12 @51504 has 127 MA's), (24, 51426), (26, 51411), (29, 51360), (43, 51294),

Gene: Bachome_97 Start: 50466, Stop: 50149, Start Num: 12
Candidate Starts for Bachome_97:
(Start: 12 @50466 has 127 MA's), (31, 50304), (41, 50253),

Gene: Baehexic_97 Start: 51948, Stop: 51655, Start Num: 12
Candidate Starts for Baehexic_97:
(Start: 12 @51948 has 127 MA's), (25, 51861), (43, 51738), (46, 51720), (49, 51705),

Gene: Beemo_100 Start: 51834, Stop: 51538, Start Num: 12
Candidate Starts for Beemo_100:
(Start: 12 @51834 has 127 MA's), (24, 51756), (26, 51741), (29, 51690), (43, 51624),

Gene: BengiVuitton_95 Start: 51703, Stop: 51413, Start Num: 12
Candidate Starts for BengiVuitton_95:
(Start: 12 @51703 has 127 MA's), (25, 51616), (43, 51496), (46, 51478), (51, 51451),

Gene: Benvolio_95 Start: 51929, Stop: 51636, Start Num: 12
Candidate Starts for Benvolio_95:
(Start: 12 @51929 has 127 MA's), (18, 51902), (46, 51701), (49, 51686),

Gene: BiancaTri92_91 Start: 50985, Stop: 50692, Start Num: 12
Candidate Starts for BiancaTri92_91:
(Start: 12 @50985 has 127 MA's), (Start: 13 @50979 has 2 MA's), (18, 50958), (24, 50907), (43, 50775), (45, 50760), (49, 50742),

Gene: BobSwaget_89 Start: 49131, Stop: 48838, Start Num: 12
Candidate Starts for BobSwaget_89:
(7, 49152), (Start: 12 @49131 has 127 MA's), (44, 48915), (49, 48888),

Gene: BogosyJay_98 Start: 51847, Stop: 51551, Start Num: 12
Candidate Starts for BogosyJay_98:

(Start: 12 @51847 has 127 MA's), (18, 51817), (24, 51766), (26, 51751), (29, 51700), (43, 51634),

Gene: Bowtie_96 Start: 50025, Stop: 49708, Start Num: 12
Candidate Starts for Bowtie_96:
(Start: 12 @50025 has 127 MA's), (31, 49863), (41, 49812),

Gene: Bradman_100 Start: 51499, Stop: 51200, Start Num: 12
Candidate Starts for Bradman_100:
(Start: 12 @51499 has 127 MA's), (18, 51472), (38, 51316), (42, 51301), (44, 51286), (46, 51274),

Gene: Bud_92 Start: 50124, Stop: 49807, Start Num: 12
Candidate Starts for Bud_92:
(Start: 12 @50124 has 127 MA's), (31, 49962), (41, 49911),

Gene: Bugsy_85 Start: 48670, Stop: 48380, Start Num: 12
Candidate Starts for Bugsy_85:
(Start: 12 @48670 has 127 MA's), (27, 48574), (38, 48487), (43, 48463), (44, 48457), (46, 48445), (49, 48430),

Gene: C3_88 Start: 49945, Stop: 49628, Start Num: 12
Candidate Starts for C3_88:
(5, 49969), (Start: 12 @49945 has 127 MA's), (Start: 13 @49939 has 2 MA's), (18, 49906), (21, 49876), (23, 49867), (31, 49783),

Gene: CRB1_95 Start: 51714, Stop: 51424, Start Num: 12
Candidate Starts for CRB1_95:
(9, 51729), (Start: 12 @51714 has 127 MA's), (18, 51687), (27, 51618), (43, 51507), (46, 51489),

Gene: Catalina_102 Start: 51947, Stop: 51651, Start Num: 12
Candidate Starts for Catalina_102:
(Start: 12 @51947 has 127 MA's), (24, 51869), (26, 51854), (29, 51803), (43, 51737),

Gene: Centaur_98 Start: 51815, Stop: 51522, Start Num: 12
Candidate Starts for Centaur_98:
(Start: 12 @51815 has 127 MA's), (25, 51728), (43, 51605), (46, 51587), (49, 51572),

Gene: Changeling_93 Start: 51752, Stop: 51453, Start Num: 12
Candidate Starts for Changeling_93:
(Start: 12 @51752 has 127 MA's), (24, 51674), (25, 51665), (35, 51587), (43, 51539), (44, 51533),

Gene: Chargerpower_101 Start: 51440, Stop: 51123, Start Num: 8
Candidate Starts for Chargerpower_101:
(Start: 8 @51440 has 1 MA's), (24, 51347), (26, 51332), (33, 51266), (35, 51260), (43, 51212), (51, 51161),

Gene: Charm_94 Start: 51212, Stop: 50910, Start Num: 12
Candidate Starts for Charm_94:
(Start: 12 @51212 has 127 MA's), (Start: 16 @51203 has 1 MA's), (24, 51134), (26, 51119), (29, 51068), (48, 50966), (51, 50948),

Gene: ChipMunk_95 Start: 52668, Stop: 52378, Start Num: 12
Candidate Starts for ChipMunk_95:

(Start: 10 @52674 has 1 MA's), (Start: 12 @52668 has 127 MA's), (43, 52461), (46, 52443), (51, 52416),

Gene: Colin_94 Start: 52297, Stop: 51998, Start Num: 12
Candidate Starts for Colin_94:
(Start: 12 @52297 has 127 MA's), (Start: 13 @52291 has 2 MA's), (18, 52270), (24, 52219), (35, 52132), (43, 52084), (44, 52078),

Gene: Conquerage_97 Start: 51489, Stop: 51193, Start Num: 12
Candidate Starts for Conquerage_97:
(Start: 12 @51489 has 127 MA's), (24, 51411), (26, 51396), (29, 51345), (43, 51279),

Gene: Crucio_95 Start: 52008, Stop: 51718, Start Num: 12
Candidate Starts for Crucio_95:
(3, 52044), (4, 52032), (Start: 12 @52008 has 127 MA's), (27, 51912), (46, 51783), (49, 51768),

Gene: D29_89 Start: 47930, Stop: 47619, Start Num: 15
Candidate Starts for D29_89:
(Start: 15 @47930 has 8 MA's), (31, 47774),

Gene: D32_86 Start: 47930, Stop: 47619, Start Num: 15
Candidate Starts for D32_86:
(Start: 15 @47930 has 8 MA's), (31, 47774),

Gene: DBQu4n_98 Start: 51545, Stop: 51234, Start Num: 15
Candidate Starts for DBQu4n_98:
(Start: 15 @51545 has 8 MA's), (31, 51389),

Gene: Dalmatian_95 Start: 51637, Stop: 51344, Start Num: 12
Candidate Starts for Dalmatian_95:
(Start: 10 @51643 has 1 MA's), (Start: 12 @51637 has 127 MA's), (34, 51478), (43, 51427), (46, 51409), (49, 51394),

Gene: Darrell_97 Start: 50844, Stop: 50530, Start Num: 12
Candidate Starts for Darrell_97:
(Start: 12 @50844 has 127 MA's), (24, 50748), (26, 50733), (43, 50616), (45, 50601), (46, 50598),

Gene: DeerParkTS_89 Start: 50083, Stop: 49790, Start Num: 12
Candidate Starts for DeerParkTS_89:
(Start: 12 @50083 has 127 MA's), (24, 50005), (25, 49996), (49, 49840),

Gene: Deloris_95 Start: 51396, Stop: 51106, Start Num: 12
Candidate Starts for Deloris_95:
(Start: 12 @51396 has 127 MA's), (25, 51309), (43, 51189), (46, 51171), (51, 51144),

Gene: Dignity_97 Start: 52038, Stop: 51748, Start Num: 12
Candidate Starts for Dignity_97:
(Start: 12 @52038 has 127 MA's), (27, 51942), (38, 51855), (43, 51831), (44, 51825), (46, 51813), (49, 51798),

Gene: Drake55_97 Start: 51533, Stop: 51240, Start Num: 12
Candidate Starts for Drake55_97:
(Start: 12 @51533 has 127 MA's), (25, 51446), (43, 51323), (46, 51305), (49, 51290),

Gene: DreamTeam1_95 Start: 51173, Stop: 50871, Start Num: 12
Candidate Starts for DreamTeam1_95:
(Start: 12 @51173 has 127 MA's), (Start: 16 @51164 has 1 MA's), (24, 51095), (26, 51080), (48, 50927), (51, 50909),

Gene: DudeLittle_94 Start: 51703, Stop: 51410, Start Num: 12
Candidate Starts for DudeLittle_94:
(Start: 10 @51709 has 1 MA's), (Start: 12 @51703 has 127 MA's), (43, 51493), (46, 51475), (49, 51460),

Gene: Duplo_99 Start: 51602, Stop: 51291, Start Num: 15
Candidate Starts for Duplo_99:
(Start: 15 @51602 has 8 MA's), (31, 51446),

Gene: EZMoney23_90 Start: 50589, Stop: 50290, Start Num: 12
Candidate Starts for EZMoney23_90:
(Start: 12 @50589 has 127 MA's), (18, 50562), (24, 50511), (35, 50424), (43, 50376), (44, 50370),

Gene: EagleEye_97 Start: 51822, Stop: 51415, Start Num: 1
Candidate Starts for EagleEye_97:
(Start: 1 @51822 has 2 MA's), (2, 51813), (6, 51750), (Start: 14 @51717 has 2 MA's), (20, 51669), (21, 51663), (29, 51576), (30, 51573), (39, 51519), (40, 51513), (43, 51501), (50, 51453),

Gene: Ebony_99 Start: 50989, Stop: 50672, Start Num: 12
Candidate Starts for Ebony_99:
(Start: 12 @50989 has 127 MA's), (31, 50827), (41, 50776),

Gene: Echild_100 Start: 51953, Stop: 51660, Start Num: 12
Candidate Starts for Echild_100:
(Start: 12 @51953 has 127 MA's), (18, 51926), (46, 51725), (49, 51710),

Gene: EdogawaKiddo_98 Start: 51910, Stop: 51614, Start Num: 12
Candidate Starts for EdogawaKiddo_98:
(Start: 12 @51910 has 127 MA's), (24, 51832), (26, 51817), (29, 51766), (43, 51700),

Gene: Eidsmoe_97 Start: 51482, Stop: 51186, Start Num: 12
Candidate Starts for Eidsmoe_97:
(Start: 12 @51482 has 127 MA's), (24, 51404), (26, 51389), (29, 51338), (43, 51272),

Gene: Elephantoon_98 Start: 51617, Stop: 51318, Start Num: 12
Candidate Starts for Elephantoon_98:
(7, 51638), (Start: 12 @51617 has 127 MA's), (18, 51587), (24, 51536), (29, 51470), (32, 51461), (43, 51404),

Gene: EmyBug_96 Start: 51484, Stop: 51188, Start Num: 12
Candidate Starts for EmyBug_96:
(Start: 12 @51484 has 127 MA's), (24, 51406), (26, 51391), (29, 51340), (43, 51274),

Gene: Equemioh13_97 Start: 51856, Stop: 51563, Start Num: 12
Candidate Starts for Equemioh13_97:
(Start: 12 @51856 has 127 MA's), (25, 51769), (43, 51646), (46, 51628), (49, 51613),

Gene: Et2Brutus_101 Start: 51334, Stop: 51017, Start Num: 12
Candidate Starts for Et2Brutus_101:
(Start: 12 @51334 has 127 MA's), (31, 51172), (41, 51121),

Gene: EvilGenius_94 Start: 52669, Stop: 52379, Start Num: 12
Candidate Starts for EvilGenius_94:
(Start: 10 @52675 has 1 MA's), (Start: 12 @52669 has 127 MA's), (43, 52462), (46, 52444), (51, 52417),

Gene: ExplosioNervosa_96 Start: 51550, Stop: 51254, Start Num: 12
Candidate Starts for ExplosioNervosa_96:
(Start: 12 @51550 has 127 MA's), (24, 51472), (26, 51457), (29, 51406), (43, 51340),

Gene: Fameo_94 Start: 51403, Stop: 51116, Start Num: 13
Candidate Starts for Fameo_94:
(Start: 12 @51409 has 127 MA's), (Start: 13 @51403 has 2 MA's), (18, 51382), (43, 51199), (46, 51181), (49, 51166),

Gene: Fayely_96 Start: 51458, Stop: 51162, Start Num: 12
Candidate Starts for Fayely_96:
(Start: 12 @51458 has 127 MA's), (24, 51380), (26, 51365), (29, 51314), (43, 51248),

Gene: Fibonacci_100 Start: 51272, Stop: 50955, Start Num: 12
Candidate Starts for Fibonacci_100:
(Start: 12 @51272 has 127 MA's), (31, 51110), (41, 51059),

Gene: FiringLine_95 Start: 52104, Stop: 51814, Start Num: 12
Candidate Starts for FiringLine_95:
(3, 52140), (4, 52128), (Start: 12 @52104 has 127 MA's), (27, 52008), (43, 51897), (46, 51879), (49, 51864),

Gene: First_0096 Start: 51767, Stop: 51477, Start Num: 12
Candidate Starts for First_0096:
(3, 51803), (4, 51791), (Start: 12 @51767 has 127 MA's), (38, 51584), (43, 51560), (46, 51542),

Gene: Flare16_97 Start: 51671, Stop: 51378, Start Num: 12
Candidate Starts for Flare16_97:
(Start: 12 @51671 has 127 MA's), (25, 51584), (43, 51461), (46, 51443), (49, 51428),

Gene: Flaverint_101 Start: 51416, Stop: 51099, Start Num: 12
Candidate Starts for Flaverint_101:
(Start: 12 @51416 has 127 MA's), (31, 51254), (41, 51203),

Gene: ForesterFrank_90 Start: 51261, Stop: 50962, Start Num: 12
Candidate Starts for ForesterFrank_90:
(Start: 12 @51261 has 127 MA's), (18, 51234), (35, 51096), (43, 51048), (46, 51030),

Gene: Georgie2_97 Start: 52152, Stop: 51862, Start Num: 12
Candidate Starts for Georgie2_97:
(3, 52188), (4, 52176), (Start: 12 @52152 has 127 MA's), (27, 52056), (43, 51945), (46, 51927), (49, 51912),

Gene: Gilberta_98 Start: 50292, Stop: 49975, Start Num: 12

Candidate Starts for Gilberta_98:
(Start: 12 @50292 has 127 MA's), (31, 50130), (41, 50079),

Gene: Gratitude_95 Start: 51856, Stop: 51563, Start Num: 12
Candidate Starts for Gratitude_95:
(Start: 12 @51856 has 127 MA's), (25, 51769), (43, 51646), (46, 51628), (49, 51613),

Gene: Hanray_97 Start: 51899, Stop: 51603, Start Num: 12
Candidate Starts for Hanray_97:
(Start: 12 @51899 has 127 MA's), (24, 51821), (26, 51806), (29, 51755), (43, 51689),

Gene: HarryHoudini_96 Start: 51537, Stop: 51244, Start Num: 12
Candidate Starts for HarryHoudini_96:
(Start: 12 @51537 has 127 MA's), (25, 51450), (43, 51327), (46, 51309), (49, 51294),

Gene: Heffalump_92 Start: 51878, Stop: 51585, Start Num: 12
Candidate Starts for Heffalump_92:
(Start: 12 @51878 has 127 MA's), (Start: 13 @51872 has 2 MA's), (18, 51851), (43, 51668), (46, 51650), (49, 51635),

Gene: Herbertwm_90 Start: 50464, Stop: 50207, Start Num: 14
Candidate Starts for Herbertwm_90:
(Start: 14 @50464 has 2 MA's), (19, 50437), (29, 50326), (43, 50254), (44, 50248), (45, 50239),

Gene: HippoHollow_90 Start: 52339, Stop: 52049, Start Num: 12
Candidate Starts for HippoHollow_90:
(9, 52354), (Start: 12 @52339 has 127 MA's), (25, 52252), (43, 52132), (45, 52117), (49, 52099),

Gene: Holex_98 Start: 51912, Stop: 51616, Start Num: 12
Candidate Starts for Holex_98:
(Start: 12 @51912 has 127 MA's), (24, 51834), (26, 51819), (29, 51768), (43, 51702),

Gene: HortumSL17_101 Start: 51948, Stop: 51652, Start Num: 12
Candidate Starts for HortumSL17_101:
(Start: 12 @51948 has 127 MA's), (24, 51870), (26, 51855), (29, 51804), (43, 51738),

Gene: Hutc2_98 Start: 50224, Stop: 49907, Start Num: 12
Candidate Starts for Hutc2_98:
(Start: 12 @50224 has 127 MA's), (31, 50062), (41, 50011),

Gene: Insomnia_100 Start: 51450, Stop: 51133, Start Num: 12
Candidate Starts for Insomnia_100:
(Start: 12 @51450 has 127 MA's), (31, 51288), (41, 51237),

Gene: Jabith_100 Start: 51532, Stop: 51215, Start Num: 12
Candidate Starts for Jabith_100:
(Start: 12 @51532 has 127 MA's), (31, 51370), (41, 51319),

Gene: Jeeves_102 Start: 51140, Stop: 50811, Start Num: 16
Candidate Starts for Jeeves_102:
(Start: 10 @51158 has 1 MA's), (Start: 16 @51140 has 1 MA's), (31, 50999), (33, 50990), (43, 50936), (45, 50921), (47, 50909), (53, 50849),

Gene: Jerm_96 Start: 51896, Stop: 51606, Start Num: 12
Candidate Starts for Jerm_96:
(Start: 12 @51896 has 127 MA's), (27, 51800), (38, 51713), (43, 51689), (44, 51683), (46, 51671), (49, 51656),

Gene: Jiawan_97 Start: 51929, Stop: 51633, Start Num: 12
Candidate Starts for Jiawan_97:
(Start: 12 @51929 has 127 MA's), (24, 51851), (26, 51836), (29, 51785), (43, 51719),

Gene: Joselito_98 Start: 51170, Stop: 50853, Start Num: 12
Candidate Starts for Joselito_98:
(Start: 12 @51170 has 127 MA's), (31, 51008), (41, 50957),

Gene: JoshKayV_98 Start: 52139, Stop: 51846, Start Num: 13
Candidate Starts for JoshKayV_98:
(Start: 12 @52145 has 127 MA's), (Start: 13 @52139 has 2 MA's), (18, 52118), (35, 51980), (43, 51932), (51, 51884),

Gene: Journey13_81 Start: 47229, Stop: 46915, Start Num: 12
Candidate Starts for Journey13_81:
(Start: 12 @47229 has 127 MA's), (18, 47190), (21, 47160), (23, 47151), (24, 47139), (35, 47052), (37, 47034), (45, 46989), (51, 46953),

Gene: Jsquared_102 Start: 51747, Stop: 51448, Start Num: 12
Candidate Starts for Jsquared_102:
(Start: 12 @51747 has 127 MA's), (27, 51651), (38, 51564), (42, 51549), (44, 51534),

Gene: Kalpine_98 Start: 52161, Stop: 51862, Start Num: 12
Candidate Starts for Kalpine_98:
(Start: 12 @52161 has 127 MA's), (Start: 13 @52155 has 2 MA's), (18, 52134), (24, 52083), (35, 51996), (43, 51948), (46, 51933), (51, 51900),

Gene: Kerberos_98 Start: 51574, Stop: 51257, Start Num: 12
Candidate Starts for Kerberos_98:
(5, 51598), (Start: 12 @51574 has 127 MA's), (Start: 13 @51568 has 2 MA's), (18, 51535), (21, 51505), (23, 51496), (31, 51412),

Gene: Kimba_97 Start: 50474, Stop: 50157, Start Num: 12
Candidate Starts for Kimba_97:
(Start: 12 @50474 has 127 MA's), (31, 50312), (41, 50261),

Gene: KingCyrus_92 Start: 52682, Stop: 52392, Start Num: 12
Candidate Starts for KingCyrus_92:
(Start: 10 @52688 has 1 MA's), (Start: 12 @52682 has 127 MA's), (43, 52475), (46, 52457), (51, 52430),

Gene: Klodlith_95 Start: 51285, Stop: 50983, Start Num: 12
Candidate Starts for Klodlith_95:
(Start: 12 @51285 has 127 MA's), (Start: 16 @51276 has 1 MA's), (24, 51207), (26, 51192), (29, 51141), (48, 51039), (51, 51021),

Gene: Koduck_98 Start: 51378, Stop: 51082, Start Num: 12
Candidate Starts for Koduck_98:

(Start: 12 @51378 has 127 MA's), (27, 51282), (38, 51195), (51, 51120),

Gene: L5_89 Start: 51082, Stop: 50786, Start Num: 12
Candidate Starts for L5_89:
(Start: 12 @51082 has 127 MA's), (27, 50986), (42, 50884), (51, 50824),

Gene: LadyBird_97 Start: 51890, Stop: 51600, Start Num: 12
Candidate Starts for LadyBird_97:
(9, 51905), (Start: 12 @51890 has 127 MA's), (18, 51863), (27, 51794), (43, 51683), (46, 51665),

Gene: Larenn_93 Start: 51727, Stop: 51437, Start Num: 12
Candidate Starts for Larenn_93:
(3, 51763), (4, 51751), (Start: 12 @51727 has 127 MA's), (27, 51631), (43, 51520), (46, 51502), (49, 51487),

Gene: Leogania_78 Start: 47800, Stop: 47507, Start Num: 12
Candidate Starts for Leogania_78:
(Start: 12 @47800 has 127 MA's), (Start: 13 @47794 has 2 MA's), (18, 47773), (24, 47722), (43, 47590), (45, 47575), (49, 47557),

Gene: Leviathan_96 Start: 51974, Stop: 51684, Start Num: 12
Candidate Starts for Leviathan_96:
(Start: 12 @51974 has 127 MA's), (27, 51878), (38, 51791), (43, 51767), (44, 51761), (46, 51749), (49, 51734),

Gene: LilTurb_96 Start: 51886, Stop: 51596, Start Num: 12
Candidate Starts for LilTurb_96:
(Start: 10 @51892 has 1 MA's), (Start: 12 @51886 has 127 MA's), (27, 51790), (38, 51703), (43, 51679), (44, 51673), (46, 51661), (49, 51646),

Gene: Lilleskat_96 Start: 51900, Stop: 51604, Start Num: 12
Candidate Starts for Lilleskat_96:
(Start: 12 @51900 has 127 MA's), (24, 51822), (26, 51807), (29, 51756), (43, 51690),

Gene: LionsBait_92 Start: 52277, Stop: 51987, Start Num: 12
Candidate Starts for LionsBait_92:
(9, 52292), (Start: 12 @52277 has 127 MA's), (25, 52190), (43, 52070), (45, 52055), (49, 52037),

Gene: Lokk_90 Start: 49752, Stop: 49459, Start Num: 12
Candidate Starts for Lokk_90:
(Start: 12 @49752 has 127 MA's), (44, 49536), (49, 49509),

Gene: LoneWolf_99 Start: 51833, Stop: 51534, Start Num: 12
Candidate Starts for LoneWolf_99:
(7, 51854), (Start: 12 @51833 has 127 MA's), (18, 51803), (24, 51752), (43, 51620),

Gene: Loser_98 Start: 52299, Stop: 51985, Start Num: 11
Candidate Starts for Loser_98:
(Start: 11 @52299 has 2 MA's), (Start: 12 @52296 has 127 MA's), (18, 52257), (21, 52227), (23, 52218), (35, 52119), (43, 52071), (44, 52065),

Gene: Lucivia_101 Start: 51449, Stop: 51132, Start Num: 12
Candidate Starts for Lucivia_101:

(Start: 12 @51449 has 127 MA's), (31, 51287), (41, 51236),

Gene: Lucyedi_95 Start: 51835, Stop: 51428, Start Num: 1
Candidate Starts for Lucyedi_95:
(Start: 1 @51835 has 2 MA's), (2, 51826), (6, 51763), (Start: 14 @51730 has 2 MA's), (20, 51682), (21, 51676), (29, 51589), (30, 51586), (39, 51532), (40, 51526), (43, 51514), (50, 51466),

Gene: MaCh_100 Start: 51413, Stop: 51096, Start Num: 12
Candidate Starts for MaCh_100:
(Start: 12 @51413 has 127 MA's), (31, 51251), (41, 51200),

Gene: Mabel_100 Start: 51414, Stop: 51097, Start Num: 12
Candidate Starts for Mabel_100:
(Start: 12 @51414 has 127 MA's), (31, 51252), (41, 51201),

Gene: MajorMajor_94 Start: 49791, Stop: 49492, Start Num: 12
Candidate Starts for MajorMajor_94:
(Start: 12 @49791 has 127 MA's), (18, 49764), (38, 49608), (42, 49593), (44, 49578), (46, 49566),

Gene: Malec_93 Start: 52135, Stop: 51845, Start Num: 12
Candidate Starts for Malec_93:
(3, 52171), (4, 52159), (Start: 12 @52135 has 127 MA's), (27, 52039), (43, 51928), (46, 51910), (49, 51895),

Gene: Maminiaina_98 Start: 51829, Stop: 51533, Start Num: 12
Candidate Starts for Maminiaina_98:
(Start: 12 @51829 has 127 MA's), (18, 51799), (24, 51748), (26, 51733), (29, 51682), (43, 51616),

Gene: MiculUcigas_97 Start: 51574, Stop: 51281, Start Num: 12
Candidate Starts for MiculUcigas_97:
(Start: 12 @51574 has 127 MA's), (25, 51487), (43, 51364), (46, 51346), (49, 51331),

Gene: Miko_91 Start: 50615, Stop: 50316, Start Num: 12
Candidate Starts for Miko_91:
(7, 50636), (Start: 12 @50615 has 127 MA's), (24, 50537), (35, 50450), (43, 50402), (51, 50354),

Gene: MissWhite_94 Start: 49072, Stop: 48758, Start Num: 12
Candidate Starts for MissWhite_94:
(Start: 12 @49072 has 127 MA's), (18, 49033), (21, 49003), (23, 48994), (35, 48895), (43, 48847), (51, 48796),

Gene: Mulciber_99 Start: 51269, Stop: 50952, Start Num: 12
Candidate Starts for Mulciber_99:
(Start: 12 @51269 has 127 MA's), (31, 51107), (41, 51056),

Gene: Munch_98 Start: 51418, Stop: 51101, Start Num: 12
Candidate Starts for Munch_98:
(Start: 12 @51418 has 127 MA's), (31, 51256), (41, 51205),

Gene: Myxus_100 Start: 51948, Stop: 51652, Start Num: 12
Candidate Starts for Myxus_100:
(Start: 12 @51948 has 127 MA's), (24, 51870), (26, 51855), (29, 51804), (43, 51738),

Gene: NaSiaTalie_98 Start: 51735, Stop: 51442, Start Num: 12
Candidate Starts for NaSiaTalie_98:
(Start: 12 @51735 has 127 MA's), (25, 51648), (43, 51525), (46, 51507), (49, 51492),

Gene: Naji_87 Start: 47930, Stop: 47619, Start Num: 15
Candidate Starts for Naji_87:
(Start: 15 @47930 has 8 MA's), (31, 47774),

Gene: NicoleTera_96 Start: 51731, Stop: 51429, Start Num: 12
Candidate Starts for NicoleTera_96:
(Start: 10 @51737 has 1 MA's), (Start: 12 @51731 has 127 MA's), (35, 51566), (43, 51518), (44, 51512), (46, 51500),

Gene: Onglai_97 Start: 50101, Stop: 49805, Start Num: 12
Candidate Starts for Onglai_97:
(Start: 12 @50101 has 127 MA's), (24, 50023), (26, 50008), (29, 49957), (43, 49891),

Gene: Orange_100 Start: 50968, Stop: 50651, Start Num: 12
Candidate Starts for Orange_100:
(Start: 12 @50968 has 127 MA's), (31, 50806), (41, 50755),

Gene: PackMan_94 Start: 49862, Stop: 49566, Start Num: 12
Candidate Starts for PackMan_94:
(Start: 12 @49862 has 127 MA's), (24, 49784), (26, 49769), (29, 49718), (43, 49652),

Gene: PainterBoy_94 Start: 51441, Stop: 51139, Start Num: 14
Candidate Starts for PainterBoy_94:
(Start: 1 @51546 has 2 MA's), (2, 51537), (6, 51474), (Start: 14 @51441 has 2 MA's), (20, 51393), (21, 51387), (29, 51300), (30, 51297), (39, 51243), (40, 51237), (43, 51225), (50, 51177),

Gene: Petersenfast_94 Start: 49849, Stop: 49532, Start Num: 12
Candidate Starts for Petersenfast_94:
(Start: 12 @49849 has 127 MA's), (31, 49687), (41, 49636),

Gene: Phaeder_100 Start: 51823, Stop: 51527, Start Num: 12
Candidate Starts for Phaeder_100:
(Start: 12 @51823 has 127 MA's), (24, 51745), (26, 51730), (29, 51679), (43, 51613),

Gene: Phonnegut_100 Start: 51833, Stop: 51537, Start Num: 12
Candidate Starts for Phonnegut_100:
(Start: 12 @51833 has 127 MA's), (24, 51755), (26, 51740), (29, 51689), (43, 51623),

Gene: Pioneer_100 Start: 51833, Stop: 51537, Start Num: 12
Candidate Starts for Pioneer_100:
(Start: 12 @51833 has 127 MA's), (24, 51755), (26, 51740), (29, 51689), (43, 51623),

Gene: Piro94_95 Start: 51462, Stop: 51169, Start Num: 12
Candidate Starts for Piro94_95:
(Start: 12 @51462 has 127 MA's), (25, 51375), (43, 51252), (46, 51234), (49, 51219),

Gene: Pomar16_98 Start: 51638, Stop: 51327, Start Num: 15
Candidate Starts for Pomar16_98:
(Start: 15 @51638 has 8 MA's), (31, 51482),

Gene: Power_95 Start: 52151, Stop: 51861, Start Num: 12
Candidate Starts for Power_95:
(3, 52187), (4, 52175), (Start: 12 @52151 has 127 MA's), (27, 52055), (43, 51944), (46, 51926), (49, 51911),

Gene: Priya_97 Start: 51485, Stop: 51189, Start Num: 12
Candidate Starts for Priya_97:
(Start: 12 @51485 has 127 MA's), (24, 51407), (26, 51392), (29, 51341), (43, 51275),

Gene: Prudy_90 Start: 51527, Stop: 51228, Start Num: 12
Candidate Starts for Prudy_90:
(Start: 10 @51533 has 1 MA's), (Start: 12 @51527 has 127 MA's), (35, 51362), (43, 51314), (46, 51296),

Gene: Qobbit_97 Start: 51447, Stop: 51151, Start Num: 12
Candidate Starts for Qobbit_97:
(Start: 12 @51447 has 127 MA's), (24, 51369), (26, 51354), (29, 51303), (43, 51237),

Gene: QueenB2_94 Start: 51529, Stop: 51236, Start Num: 12
Candidate Starts for QueenB2_94:
(Start: 12 @51529 has 127 MA's), (Start: 13 @51523 has 2 MA's), (18, 51502), (43, 51319), (46, 51301), (49, 51286),

Gene: QueenBeesly_95 Start: 52104, Stop: 51814, Start Num: 12
Candidate Starts for QueenBeesly_95:
(3, 52140), (4, 52128), (Start: 12 @52104 has 127 MA's), (27, 52008), (43, 51897), (46, 51879), (49, 51864),

Gene: Quokka_99 Start: 51500, Stop: 51201, Start Num: 12
Candidate Starts for Quokka_99:
(Start: 12 @51500 has 127 MA's), (18, 51473), (38, 51317), (42, 51302), (44, 51287), (46, 51275),

Gene: Rachaly_92 Start: 50752, Stop: 50459, Start Num: 12
Candidate Starts for Rachaly_92:
(7, 50773), (Start: 12 @50752 has 127 MA's), (44, 50536), (49, 50509),

Gene: RedRock_96 Start: 52057, Stop: 51743, Start Num: 12
Candidate Starts for RedRock_96:
(Start: 12 @52057 has 127 MA's), (Start: 14 @52048 has 2 MA's), (35, 51880), (43, 51832), (45, 51817),

Gene: Retro23_96 Start: 51827, Stop: 51534, Start Num: 12
Candidate Starts for Retro23_96:
(Start: 10 @51833 has 1 MA's), (Start: 12 @51827 has 127 MA's), (34, 51668), (43, 51617), (46, 51599), (49, 51584),

Gene: RyeScarlet_100 Start: 51819, Stop: 51523, Start Num: 12
Candidate Starts for RyeScarlet_100:
(Start: 12 @51819 has 127 MA's), (24, 51741), (26, 51726), (29, 51675), (43, 51609),

Gene: Sachima_95 Start: 51847, Stop: 51551, Start Num: 12
Candidate Starts for Sachima_95:

(Start: 12 @51847 has 127 MA's), (24, 51769), (26, 51754), (29, 51703), (43, 51637),

Gene: Salz_97 Start: 50146, Stop: 49829, Start Num: 12
Candidate Starts for Salz_97:
(Start: 12 @50146 has 127 MA's), (31, 49984), (41, 49933),

Gene: Saskia_98 Start: 50637, Stop: 50320, Start Num: 12
Candidate Starts for Saskia_98:
(Start: 12 @50637 has 127 MA's), (31, 50475), (41, 50424),

Gene: Scherzo_98 Start: 51864, Stop: 51568, Start Num: 12
Candidate Starts for Scherzo_98:
(Start: 12 @51864 has 127 MA's), (24, 51786), (26, 51771), (29, 51720), (43, 51654),

Gene: SemperFi_95 Start: 51992, Stop: 51702, Start Num: 12
Candidate Starts for SemperFi_95:
(3, 52028), (4, 52016), (Start: 12 @51992 has 127 MA's), (27, 51896), (43, 51785), (46, 51767), (49, 51752),

Gene: Serenity_99 Start: 50858, Stop: 50559, Start Num: 12
Candidate Starts for Serenity_99:
(Start: 12 @50858 has 127 MA's), (18, 50831), (38, 50675), (42, 50660), (44, 50645), (46, 50633),

Gene: Sham4_97 Start: 50164, Stop: 49847, Start Num: 12
Candidate Starts for Sham4_97:
(Start: 12 @50164 has 127 MA's), (31, 50002), (41, 49951),

Gene: SheaKeira_94 Start: 51085, Stop: 50783, Start Num: 12
Candidate Starts for SheaKeira_94:
(Start: 12 @51085 has 127 MA's), (Start: 16 @51076 has 1 MA's), (24, 51007), (26, 50992), (51, 50821),

Gene: Sknot_98 Start: 51862, Stop: 51569, Start Num: 12
Candidate Starts for Sknot_98:
(Start: 12 @51862 has 127 MA's), (25, 51775), (43, 51652), (46, 51634), (49, 51619),

Gene: SnapTap_95 Start: 51807, Stop: 51517, Start Num: 12
Candidate Starts for SnapTap_95:
(3, 51843), (4, 51831), (Start: 12 @51807 has 127 MA's), (27, 51711), (43, 51600), (46, 51582), (49, 51567),

Gene: Snape_100 Start: 50957, Stop: 50640, Start Num: 12
Candidate Starts for Snape_100:
(Start: 12 @50957 has 127 MA's), (31, 50795), (41, 50744),

Gene: Spouty_97 Start: 51484, Stop: 51188, Start Num: 12
Candidate Starts for Spouty_97:
(Start: 12 @51484 has 127 MA's), (24, 51406), (26, 51391), (29, 51340), (43, 51274),

Gene: StarStuff_98 Start: 51600, Stop: 51289, Start Num: 15
Candidate Starts for StarStuff_98:
(Start: 15 @51600 has 8 MA's), (31, 51444),

Gene: SweetiePie_95 Start: 51940, Stop: 51650, Start Num: 12
Candidate Starts for SweetiePie_95:
(3, 51976), (4, 51964), (Start: 12 @51940 has 127 MA's), (27, 51844), (43, 51733), (46, 51715), (49, 51700),

Gene: TarsusIV_92 Start: 51423, Stop: 51133, Start Num: 12
Candidate Starts for TarsusIV_92:
(Start: 12 @51423 has 127 MA's), (37, 51246), (43, 51216), (46, 51198),

Gene: Terrific_99 Start: 51830, Stop: 51537, Start Num: 12
Candidate Starts for Terrific_99:
(Start: 12 @51830 has 127 MA's), (25, 51743), (43, 51620), (46, 51602),

Gene: Timothy_100 Start: 50934, Stop: 50617, Start Num: 12
Candidate Starts for Timothy_100:
(Start: 12 @50934 has 127 MA's), (31, 50772), (41, 50721),

Gene: TinyTimmy_98 Start: 50663, Stop: 50346, Start Num: 12
Candidate Starts for TinyTimmy_98:
(Start: 12 @50663 has 127 MA's), (31, 50501), (41, 50450),

Gene: TipsytheTRex_94 Start: 51132, Stop: 50833, Start Num: 12
Candidate Starts for TipsytheTRex_94:
(Start: 12 @51132 has 127 MA's), (18, 51105), (27, 51036), (38, 50949), (42, 50934), (44, 50919), (46, 50907),

Gene: Tomathan_98 Start: 51679, Stop: 51368, Start Num: 15
Candidate Starts for Tomathan_98:
(Start: 15 @51679 has 8 MA's),

Gene: Travvers_98 Start: 51596, Stop: 51285, Start Num: 15
Candidate Starts for Travvers_98:
(Start: 15 @51596 has 8 MA's), (31, 51440),

Gene: Trixie_94 Start: 52346, Stop: 52047, Start Num: 12
Candidate Starts for Trixie_94:
(Start: 12 @52346 has 127 MA's), (Start: 13 @52340 has 2 MA's), (18, 52319), (24, 52268), (35, 52181), (43, 52133), (46, 52118),

Gene: Trooper_95 Start: 51322, Stop: 51023, Start Num: 10
Candidate Starts for Trooper_95:
(Start: 10 @51322 has 1 MA's), (Start: 12 @51316 has 127 MA's), (27, 51220), (29, 51172), (43, 51106), (46, 51088), (49, 51073),

Gene: Tubs_100 Start: 51823, Stop: 51527, Start Num: 12
Candidate Starts for Tubs_100:
(Start: 12 @51823 has 127 MA's), (24, 51745), (26, 51730), (29, 51679), (43, 51613),

Gene: Turbido_95 Start: 51902, Stop: 51612, Start Num: 12
Candidate Starts for Turbido_95:
(Start: 12 @51902 has 127 MA's), (27, 51806), (38, 51719), (43, 51695), (44, 51689), (46, 51677), (49, 51662),

Gene: Ugenie5_86 Start: 49308, Stop: 49012, Start Num: 12
Candidate Starts for Ugenie5_86:
(Start: 12 @49308 has 127 MA's), (24, 49230), (26, 49215), (29, 49164), (43, 49098),

Gene: Updawg_98 Start: 51856, Stop: 51563, Start Num: 12
Candidate Starts for Updawg_98:
(Start: 12 @51856 has 127 MA's), (25, 51769), (43, 51646), (46, 51628), (49, 51613),

Gene: VA6_94 Start: 51349, Stop: 51059, Start Num: 12
Candidate Starts for VA6_94:
(Start: 12 @51349 has 127 MA's), (27, 51253), (38, 51166), (43, 51142), (46, 51124),

Gene: VC3_94 Start: 49945, Stop: 49628, Start Num: 12
Candidate Starts for VC3_94:
(5, 49969), (Start: 12 @49945 has 127 MA's), (Start: 13 @49939 has 2 MA's), (18, 49906), (21, 49876), (23, 49867), (31, 49783),

Gene: WeiHuaDA_96 Start: 52378, Stop: 52079, Start Num: 12
Candidate Starts for WeiHuaDA_96:
(Start: 12 @52378 has 127 MA's), (Start: 13 @52372 has 2 MA's), (18, 52351), (24, 52300), (35, 52213), (43, 52165), (46, 52150),

Gene: Whabigail7_93 Start: 51900, Stop: 51610, Start Num: 12
Candidate Starts for Whabigail7_93:
(Start: 12 @51900 has 127 MA's), (27, 51804), (38, 51717), (43, 51693), (44, 51687), (46, 51675), (49, 51660),

Gene: WideWale_98 Start: 51856, Stop: 51563, Start Num: 12
Candidate Starts for WideWale_98:
(Start: 12 @51856 has 127 MA's), (25, 51769), (43, 51646), (46, 51628), (49, 51613),

Gene: Wolpertinger_100 Start: 51283, Stop: 50966, Start Num: 12
Candidate Starts for Wolpertinger_100:
(Start: 12 @51283 has 127 MA's), (31, 51121), (41, 51070),

Gene: XianYue_93 Start: 51675, Stop: 51385, Start Num: 12
Candidate Starts for XianYue_93:
(3, 51711), (4, 51699), (Start: 12 @51675 has 127 MA's), (17, 51660), (18, 51648), (20, 51624), (26, 51582), (43, 51468), (49, 51435),

Gene: Yecey3_102 Start: 51908, Stop: 51612, Start Num: 12
Candidate Starts for Yecey3_102:
(Start: 12 @51908 has 127 MA's), (Start: 16 @51902 has 1 MA's), (18, 51884), (22, 51851), (24, 51833), (29, 51767), (36, 51746), (45, 51683),