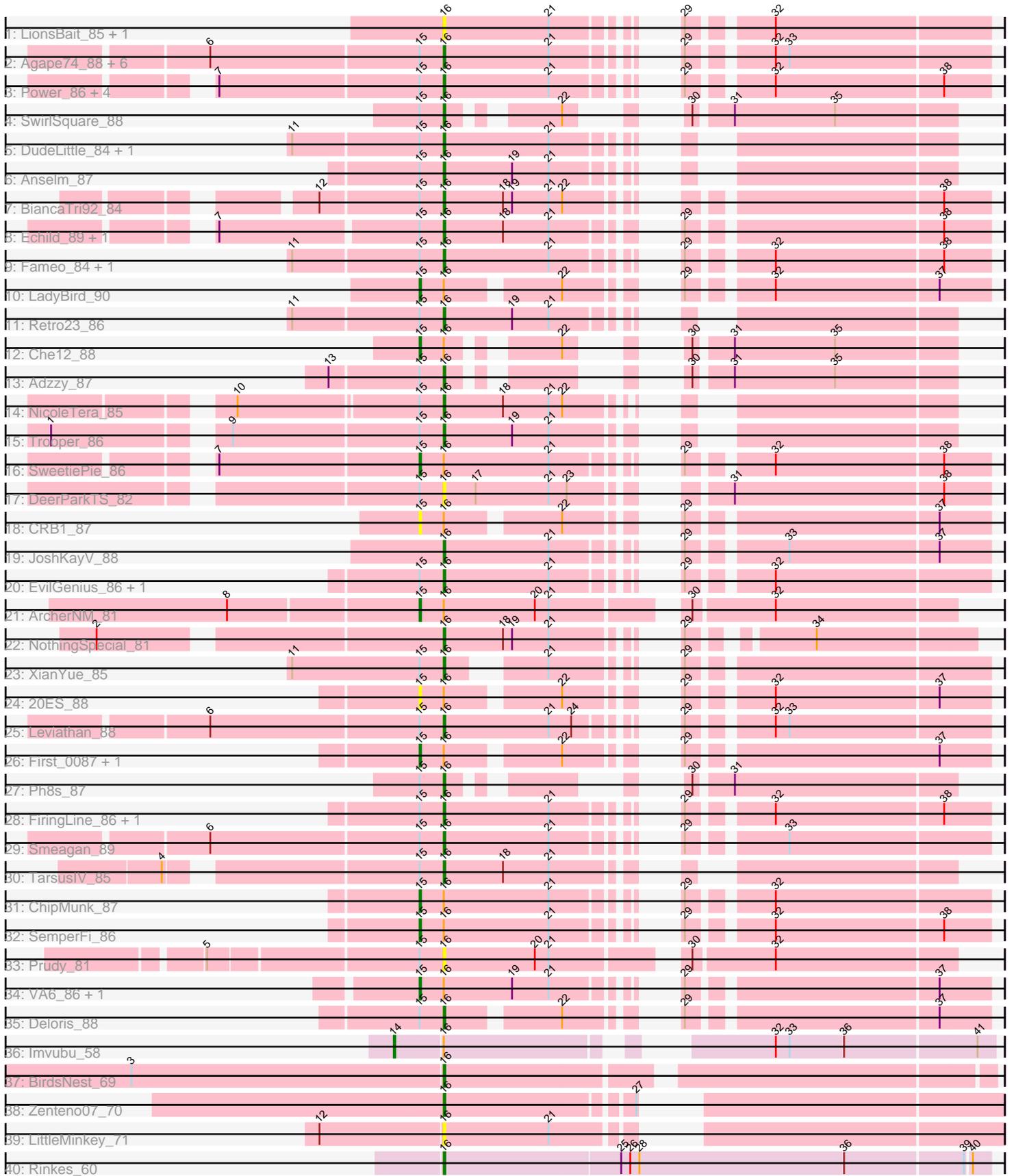# Pham 291191

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 291191 Report

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

Pham number 291191 has 58 members, 8 are drafts.

Phages represented in each track:
• Track 1 : LionsBait_85, HippoHollow_83
• Track 2 : Agape74_88, LilTurb_87, Dignity_88, Jerm_88, AbbyPaige_88, Whabigail7_85, Turbido_87
• Track 3 : Power_86, Crucio_86, Georgie2_88, SnapTap_86, QueenB2_83
• Track 4 : SwirlSquare_88
• Track 5 : DudeLittle_84, Dalmatian_86
• Track 6 : Anselm_87
• Track 7 : BiancaTri92_84
• Track 8 : Echild_89, Benvolio_85
• Track 9 : Fameo_84, Heffalump_83
• Track 10 : LadyBird_90
• Track 11 : Retro23_86
• Track 12 : Che12_88
• Track 13 : Adzzy_87
• Track 14 : NicoleTera_85
• Track 15 : Trooper_86
• Track 16 : SweetiePie_86
• Track 17 : DeerParkTS_82
• Track 18 : CRB1_87
• Track 19 : JoshKayV_88
• Track 20 : EvilGenius_86, KingCyrus_85
• Track 21 : ArcherNM_81
• Track 22 : NothingSpecial_81
• Track 23 : XianYue_85
• Track 24 : 20ES_88
• Track 25 : Leviathan_88
• Track 26 : First_0087, BengiVuitton_88
• Track 27 : Ph8s_87
• Track 28 : FiringLine_86, QueenBeesly_86
• Track 29 : Smeagan_89
• Track 30 : TarsusIV_85
• Track 31 : ChipMunk_87
• Track 32 : SemperFi_86
• Track 33 : Prudy_81
• Track 34 : VA6_86, AN3_86
• Track 35 : Deloris_88
• Track 36 : Imvubu_58

- Track 37 : BirdsNest_69
- Track 38 : Zenteno07_70
- Track 39 : LittleMinkey_71
- Track 40 : Rinkes_60

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

The start number called the most often in the published annotations is 16, it was called in 40 of the 50 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AbbyPaige_88, Adzzy_87, Agape74_88, Anselm_87, Benvolio_85, BiancaTri92_84, BirdsNest_69, Crucio_86, Dalmatian_86, DeerParkTS_82, Deloris_88, Dignity_88, DudeLittle_84, Echild_89, EvilGenius_86, Fameo_84, FiringLine_86, Georgie2_88, Heffalump_83, HippoHollow_83, Jerm_88, JoshKayV_88, KingCyrus_85, Leviathan_88, LilTurb_87, LionsBait_85, LittleMinkey_71, NicoleTera_85, NothingSpecial_81, Ph8s_87, Power_86, Prudy_81, QueenB2_83, QueenBeesly_86, Retro23_86, Rinkes_60, Smeagan_89, SnapTap_86, SwirlSquare_88, TarsusIV_85, Trooper_86, Turbido_87, Whabigail7_85, XianYue_85, Zenteno07_70,

Genes that have the "Most Annotated" start but do not call it:
• 20ES_88, AN3_86, ArcherNM_81, BengiVuitton_88, CRB1_87, Che12_88, ChipMunk_87, First_0087, Imvubu_58, LadyBird_90, SemperFi_86, SweetiePie_86, VA6_86,

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

Summary by start number:

Start 14:
• Found in 1 of 58 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 50
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Imvubu_58 (B10),

Start 15:
• Found in 49 of 58 (84.5%) of genes in pham
• Manual Annotations of this start: 9 of 50
• Called 24.5% of time when present
• Phage (with cluster) where this start called: 20ES_88 (A2), AN3_86 (A2), ArcherNM_81 (A2), BengiVuitton_88 (A2), CRB1_87 (A2), Che12_88 (A2), ChipMunk_87 (A2), First_0087 (A2), LadyBird_90 (A2), SemperFi_86 (A2), SweetiePie_86 (A2), VA6_86 (A2),

Start 16:
• Found in 58 of 58 (100.0%) of genes in pham
• Manual Annotations of this start: 40 of 50
• Called 77.6% of time when present

• Phage (with cluster) where this start called: AbbyPaige_88 (A2), Adzzy_87 (A2), Agape74_88 (A2), Anselm_87 (A2), Benvolio_85 (A2), BiancaTri92_84 (A2), BirdsNest_69 (B13), Crucio_86 (A2), Dalmatian_86 (A2), DeerParkTS_82 (A2), Deloris_88 (A2), Dignity_88 (A2), DudeLittle_84 (A2), Echild_89 (A2), EvilGenius_86 (A2), Fameo_84 (A2), FiringLine_86 (A2), Georgie2_88 (A2), Heffalump_83 (A2), HippoHollow_83 (A2), Jerm_88 (A2), JoshKayV_88 (A2), KingCyrus_85 (A2), Leviathan_88 (A2), LilTurb_87 (A2), LionsBait_85 (A2), LittleMinkey_71 (B13), NicoleTera_85 (A2), NothingSpecial_81 (A2), Ph8s_87 (A2), Power_86 (A2), Prudy_81 (A2), QueenB2_83 (A2), QueenBeesly_86 (A2), Retro23_86 (A2), Rinkes_60 (B9), Smeagan_89 (A2), SnapTap_86 (A2), SwirlSquare_88 (A2), TarsusIV_85 (A2), Trooper_86 (A2), Turbido_87 (A2), Whabigail7_85 (A2), XianYue_85 (A2), Zenteno07_70 (B13),

Summary by clusters:

There are 4 clusters represented in this pham: A2, B9, B10, B13,

Info for manual annotations of cluster A2:
•Start number 15 was manually annotated 9 times for cluster A2.
•Start number 16 was manually annotated 37 times for cluster A2.

Info for manual annotations of cluster B10:
•Start number 14 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B13:
•Start number 16 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B9:
•Start number 16 was manually annotated 1 time for cluster B9.

Gene Information:
Gene: 20ES_88 Start: 48926, Stop: 48621, Start Num: 15
Candidate Starts for 20ES_88:
(Start: 15 @48926 has 9 MA's), (Start: 16 @48911 has 40 MA's), (22, 48845), (29, 48803), (32, 48758), (37, 48653),

Gene: AN3_86 Start: 47190, Stop: 46879, Start Num: 15
Candidate Starts for AN3_86:
(Start: 15 @47190 has 9 MA's), (Start: 16 @47175 has 40 MA's), (19, 47130), (21, 47106), (29, 47061), (37, 46911),

Gene: AbbyPaige_88 Start: 49174, Stop: 48878, Start Num: 16
Candidate Starts for AbbyPaige_88:
(6, 49324), (Start: 15 @49189 has 9 MA's), (Start: 16 @49174 has 40 MA's), (21, 49105), (29, 49060), (32, 49015), (33, 49006),

Gene: Adzzy_87 Start: 47625, Stop: 47383, Start Num: 16
Candidate Starts for Adzzy_87:
(13, 47697), (Start: 15 @47640 has 9 MA's), (Start: 16 @47625 has 40 MA's), (30, 47547), (31, 47526), (35, 47460),

Gene: Agape74_88 Start: 49150, Stop: 48854, Start Num: 16
Candidate Starts for Agape74_88:
(6, 49300), (Start: 15 @49165 has 9 MA's), (Start: 16 @49150 has 40 MA's), (21, 49081), (29, 49036), (32, 48991), (33, 48982),

Gene: Anselm_87 Start: 49020, Stop: 48757, Start Num: 16
Candidate Starts for Anselm_87:
(Start: 15 @49035 has 9 MA's), (Start: 16 @49020 has 40 MA's), (19, 48975), (21, 48951),

Gene: ArcherNM_81 Start: 48470, Stop: 48147, Start Num: 15
Candidate Starts for ArcherNM_81:
(8, 48590), (Start: 15 @48470 has 9 MA's), (Start: 16 @48455 has 40 MA's), (20, 48395), (21, 48386), (30, 48314), (32, 48263),

Gene: BengiVuitton_88 Start: 49031, Stop: 48726, Start Num: 15
Candidate Starts for BengiVuitton_88:
(Start: 15 @49031 has 9 MA's), (Start: 16 @49016 has 40 MA's), (22, 48950), (29, 48908), (37, 48758),

Gene: Benvolio_85 Start: 48794, Stop: 48495, Start Num: 16
Candidate Starts for Benvolio_85:
(7, 48935), (Start: 15 @48809 has 9 MA's), (Start: 16 @48794 has 40 MA's), (18, 48755), (21, 48725), (29, 48677), (38, 48524),

Gene: BiancaTri92_84 Start: 48631, Stop: 48332, Start Num: 16
Candidate Starts for BiancaTri92_84:
(12, 48709), (Start: 15 @48646 has 9 MA's), (Start: 16 @48631 has 40 MA's), (18, 48592), (19, 48586), (21, 48562), (22, 48553), (38, 48361),

Gene: BirdsNest_69 Start: 56932, Stop: 56600, Start Num: 16
Candidate Starts for BirdsNest_69:
(3, 57136), (Start: 16 @56932 has 40 MA's),

Gene: CRB1_87 Start: 49179, Stop: 48874, Start Num: 15
Candidate Starts for CRB1_87:
(Start: 15 @49179 has 9 MA's), (Start: 16 @49164 has 40 MA's), (22, 49098), (29, 49056), (37, 48906),

Gene: Che12_88 Start: 47719, Stop: 47462, Start Num: 15
Candidate Starts for Che12_88:
(Start: 15 @47719 has 9 MA's), (Start: 16 @47704 has 40 MA's), (22, 47650), (30, 47626), (31, 47605), (35, 47539),

Gene: ChipMunk_87 Start: 50092, Stop: 49781, Start Num: 15
Candidate Starts for ChipMunk_87:
(Start: 15 @50092 has 9 MA's), (Start: 16 @50077 has 40 MA's), (21, 50008), (29, 49963), (32, 49918),

Gene: Crucio_86 Start: 49024, Stop: 48728, Start Num: 16
Candidate Starts for Crucio_86:
(7, 49168), (Start: 15 @49039 has 9 MA's), (Start: 16 @49024 has 40 MA's), (21, 48955), (29, 48910), (32, 48865), (38, 48757),

Gene: Dalmatian_86 Start: 48805, Stop: 48542, Start Num: 16
Candidate Starts for Dalmatian_86:

(11, 48901), (Start: 15 @48820 has 9 MA's), (Start: 16 @48805 has 40 MA's), (21, 48736),

Gene: DeerParkTS_82 Start: 47533, Stop: 47222, Start Num: 16
Candidate Starts for DeerParkTS_82:
(Start: 15 @47548 has 9 MA's), (Start: 16 @47533 has 40 MA's), (17, 47512), (21, 47464), (23, 47452),
(31, 47386), (38, 47251),

Gene: Deloris_88 Start: 48709, Stop: 48419, Start Num: 16
Candidate Starts for Deloris_88:
(Start: 15 @48724 has 9 MA's), (Start: 16 @48709 has 40 MA's), (22, 48643), (29, 48601), (37, 48451),

Gene: Dignity_88 Start: 49257, Stop: 48961, Start Num: 16
Candidate Starts for Dignity_88:
(6, 49407), (Start: 15 @49272 has 9 MA's), (Start: 16 @49257 has 40 MA's), (21, 49188), (29, 49143),
(32, 49098), (33, 49089),

Gene: DudeLittle_84 Start: 48523, Stop: 48260, Start Num: 16
Candidate Starts for DudeLittle_84:
(11, 48619), (Start: 15 @48538 has 9 MA's), (Start: 16 @48523 has 40 MA's), (21, 48454),

Gene: Echild_89 Start: 48818, Stop: 48519, Start Num: 16
Candidate Starts for Echild_89:
(7, 48959), (Start: 15 @48833 has 9 MA's), (Start: 16 @48818 has 40 MA's), (18, 48779), (21, 48749),
(29, 48701), (38, 48548),

Gene: EvilGenius_86 Start: 50078, Stop: 49782, Start Num: 16
Candidate Starts for EvilGenius_86:
(Start: 15 @50093 has 9 MA's), (Start: 16 @50078 has 40 MA's), (21, 50009), (29, 49964), (32, 49919),

Gene: Fameo_84 Start: 48576, Stop: 48280, Start Num: 16
Candidate Starts for Fameo_84:
(11, 48672), (Start: 15 @48591 has 9 MA's), (Start: 16 @48576 has 40 MA's), (21, 48507), (29, 48462),
(32, 48417), (38, 48309),

Gene: FiringLine_86 Start: 48964, Stop: 48668, Start Num: 16
Candidate Starts for FiringLine_86:
(Start: 15 @48979 has 9 MA's), (Start: 16 @48964 has 40 MA's), (21, 48895), (29, 48850), (32, 48805),
(38, 48697),

Gene: First_0087 Start: 48829, Stop: 48521, Start Num: 15
Candidate Starts for First_0087:
(Start: 15 @48829 has 9 MA's), (Start: 16 @48814 has 40 MA's), (22, 48748), (29, 48706), (37, 48553),

Gene: Georgie2_88 Start: 49168, Stop: 48872, Start Num: 16
Candidate Starts for Georgie2_88:
(7, 49312), (Start: 15 @49183 has 9 MA's), (Start: 16 @49168 has 40 MA's), (21, 49099), (29, 49054),
(32, 49009), (38, 48901),

Gene: Heffalump_83 Start: 49044, Stop: 48748, Start Num: 16
Candidate Starts for Heffalump_83:
(11, 49140), (Start: 15 @49059 has 9 MA's), (Start: 16 @49044 has 40 MA's), (21, 48975), (29, 48930),
(32, 48885), (38, 48777),

Gene: HippoHollow_83 Start: 49676, Stop: 49380, Start Num: 16
Candidate Starts for HippoHollow_83:
(Start: 16 @49676 has 40 MA's), (21, 49607), (29, 49562), (32, 49517),

Gene: Imvubu_58 Start: 54802, Stop: 54467, Start Num: 14
Candidate Starts for Imvubu_58:
(Start: 14 @54802 has 1 MA's), (Start: 16 @54772 has 40 MA's), (32, 54607), (33, 54598), (36, 54562), (41, 54478),

Gene: Jerm_88 Start: 49225, Stop: 48929, Start Num: 16
Candidate Starts for Jerm_88:
(6, 49375), (Start: 15 @49240 has 9 MA's), (Start: 16 @49225 has 40 MA's), (21, 49156), (29, 49111), (32, 49066), (33, 49057),

Gene: JoshKayV_88 Start: 49393, Stop: 49097, Start Num: 16
Candidate Starts for JoshKayV_88:
(Start: 16 @49393 has 40 MA's), (21, 49324), (29, 49279), (33, 49225), (37, 49129),

Gene: KingCyrus_85 Start: 50091, Stop: 49795, Start Num: 16
Candidate Starts for KingCyrus_85:
(Start: 15 @50106 has 9 MA's), (Start: 16 @50091 has 40 MA's), (21, 50022), (29, 49977), (32, 49932),

Gene: LadyBird_90 Start: 49324, Stop: 49019, Start Num: 15
Candidate Starts for LadyBird_90:
(Start: 15 @49324 has 9 MA's), (Start: 16 @49309 has 40 MA's), (22, 49243), (29, 49201), (32, 49156), (37, 49051),

Gene: Leviathan_88 Start: 49306, Stop: 49010, Start Num: 16
Candidate Starts for Leviathan_88:
(6, 49456), (Start: 15 @49321 has 9 MA's), (Start: 16 @49306 has 40 MA's), (21, 49237), (24, 49222), (29, 49192), (32, 49147), (33, 49138),

Gene: LilTurb_87 Start: 49102, Stop: 48806, Start Num: 16
Candidate Starts for LilTurb_87:
(6, 49252), (Start: 15 @49117 has 9 MA's), (Start: 16 @49102 has 40 MA's), (21, 49033), (29, 48988), (32, 48943), (33, 48934),

Gene: LionsBait_85 Start: 49616, Stop: 49320, Start Num: 16
Candidate Starts for LionsBait_85:
(Start: 16 @49616 has 40 MA's), (21, 49547), (29, 49502), (32, 49457),

Gene: LittleMinkey_71 Start: 56857, Stop: 56546, Start Num: 16
Candidate Starts for LittleMinkey_71:
(12, 56935), (Start: 16 @56857 has 40 MA's), (21, 56788),

Gene: NicoleTera_85 Start: 48705, Stop: 48442, Start Num: 16
Candidate Starts for NicoleTera_85:
(10, 48834), (Start: 15 @48720 has 9 MA's), (Start: 16 @48705 has 40 MA's), (18, 48666), (21, 48636), (22, 48627),

Gene: NothingSpecial_81 Start: 48512, Stop: 48231, Start Num: 16
Candidate Starts for NothingSpecial_81:

(2, 48719), (Start: 16 @48512 has 40 MA's), (18, 48473), (19, 48467), (21, 48443), (29, 48395), (34, 48332),

Gene: Ph8s_87 Start: 47838, Stop: 47596, Start Num: 16
Candidate Starts for Ph8s_87:
(Start: 15 @47853 has 9 MA's), (Start: 16 @47838 has 40 MA's), (30, 47760), (31, 47739),

Gene: Power_86 Start: 49167, Stop: 48871, Start Num: 16
Candidate Starts for Power_86:
(7, 49311), (Start: 15 @49182 has 9 MA's), (Start: 16 @49167 has 40 MA's), (21, 49098), (29, 49053), (32, 49008), (38, 48900),

Gene: Prudy_81 Start: 48955, Stop: 48647, Start Num: 16
Candidate Starts for Prudy_81:
(5, 49102), (Start: 15 @48970 has 9 MA's), (Start: 16 @48955 has 40 MA's), (20, 48895), (21, 48886), (30, 48814), (32, 48763),

Gene: QueenB2_83 Start: 48257, Stop: 47961, Start Num: 16
Candidate Starts for QueenB2_83:
(7, 48401), (Start: 15 @48272 has 9 MA's), (Start: 16 @48257 has 40 MA's), (21, 48188), (29, 48143), (32, 48098), (38, 47990),

Gene: QueenBeesly_86 Start: 48964, Stop: 48668, Start Num: 16
Candidate Starts for QueenBeesly_86:
(Start: 15 @48979 has 9 MA's), (Start: 16 @48964 has 40 MA's), (21, 48895), (29, 48850), (32, 48805), (38, 48697),

Gene: Retro23_86 Start: 48647, Stop: 48384, Start Num: 16
Candidate Starts for Retro23_86:
(11, 48743), (Start: 15 @48662 has 9 MA's), (Start: 16 @48647 has 40 MA's), (19, 48602), (21, 48578),

Gene: Rinkes_60 Start: 56279, Stop: 55929, Start Num: 16
Candidate Starts for Rinkes_60:
(Start: 16 @56279 has 40 MA's), (25, 56165), (26, 56159), (28, 56153), (36, 56018), (39, 55943), (40, 55940),

Gene: SemperFi_86 Start: 48867, Stop: 48556, Start Num: 15
Candidate Starts for SemperFi_86:
(Start: 15 @48867 has 9 MA's), (Start: 16 @48852 has 40 MA's), (21, 48783), (29, 48738), (32, 48693), (38, 48585),

Gene: Smeagan_89 Start: 49397, Stop: 49101, Start Num: 16
Candidate Starts for Smeagan_89:
(6, 49547), (Start: 15 @49412 has 9 MA's), (Start: 16 @49397 has 40 MA's), (21, 49328), (29, 49283), (33, 49229),

Gene: SnapTap_86 Start: 48823, Stop: 48527, Start Num: 16
Candidate Starts for SnapTap_86:
(7, 48967), (Start: 15 @48838 has 9 MA's), (Start: 16 @48823 has 40 MA's), (21, 48754), (29, 48709), (32, 48664), (38, 48556),

Gene: SweetiePie_86 Start: 48971, Stop: 48660, Start Num: 15
Candidate Starts for SweetiePie_86:

(7, 49100), (Start: 15 @48971 has 9 MA's), (Start: 16 @48956 has 40 MA's), (21, 48887), (29, 48842), (32, 48797), (38, 48689),

Gene: SwirlSquare_88 Start: 47313, Stop: 47071, Start Num: 16
Candidate Starts for SwirlSquare_88:
(Start: 15 @47328 has 9 MA's), (Start: 16 @47313 has 40 MA's), (22, 47259), (30, 47235), (31, 47214), (35, 47148),

Gene: TarsusIV_85 Start: 48814, Stop: 48545, Start Num: 16
Candidate Starts for TarsusIV_85:
(4, 48976), (Start: 15 @48829 has 9 MA's), (Start: 16 @48814 has 40 MA's), (18, 48775), (21, 48745),

Gene: Trooper_86 Start: 48532, Stop: 48263, Start Num: 16
Candidate Starts for Trooper_86:
(1, 48766), (9, 48667), (Start: 15 @48547 has 9 MA's), (Start: 16 @48532 has 40 MA's), (19, 48487), (21, 48463),

Gene: Turbido_87 Start: 49118, Stop: 48822, Start Num: 16
Candidate Starts for Turbido_87:
(6, 49268), (Start: 15 @49133 has 9 MA's), (Start: 16 @49118 has 40 MA's), (21, 49049), (29, 49004), (32, 48959), (33, 48950),

Gene: VA6_86 Start: 48761, Stop: 48450, Start Num: 15
Candidate Starts for VA6_86:
(Start: 15 @48761 has 9 MA's), (Start: 16 @48746 has 40 MA's), (19, 48701), (21, 48677), (29, 48632), (37, 48482),

Gene: Whabigail7_85 Start: 49116, Stop: 48820, Start Num: 16
Candidate Starts for Whabigail7_85:
(6, 49266), (Start: 15 @49131 has 9 MA's), (Start: 16 @49116 has 40 MA's), (21, 49047), (29, 49002), (32, 48957), (33, 48948),

Gene: XianYue_85 Start: 48882, Stop: 48607, Start Num: 16
Candidate Starts for XianYue_85:
(11, 48981), (Start: 15 @48897 has 9 MA's), (Start: 16 @48882 has 40 MA's), (21, 48837), (29, 48789),

Gene: Zenteno07_70 Start: 57108, Stop: 56800, Start Num: 16
Candidate Starts for Zenteno07_70:
(Start: 16 @57108 has 40 MA's), (27, 56994),