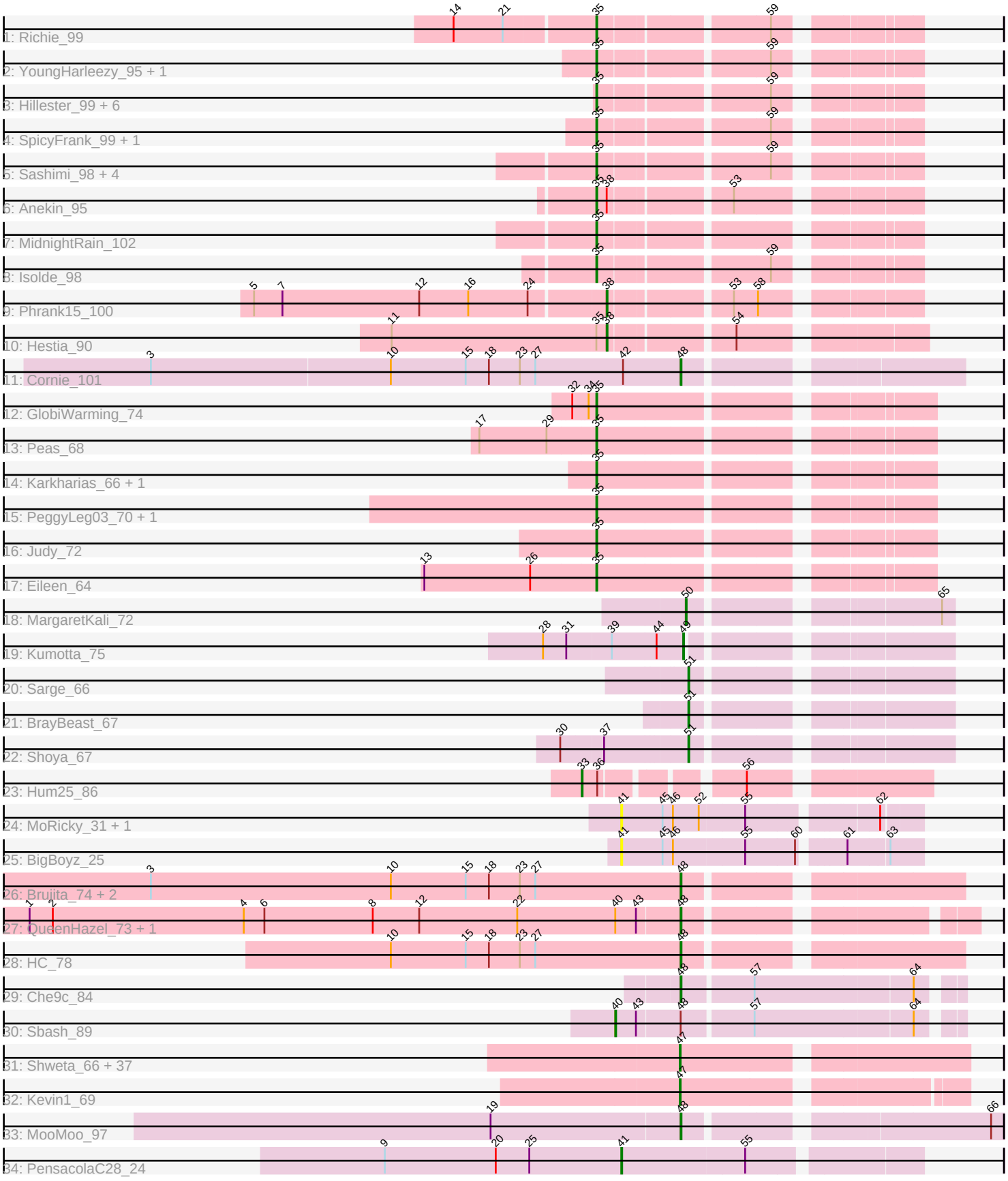
Pham 193918


1: Richie_99
2: YoungHarleezy_95 + 1
3: Hillester_99 + 6
4: SpicyFrank_99 + 1
5: Sashimi_98 + 4
6: Anekin_95
7: MidnightRain_102
8: Isolde_98
9: Phrank15_100
10: Hestia_90
11: Cornie_101
12: GlobiWarming_74
13: Peas_68
14: Karkharias_66 + 1
15: PeggyLeg03_70 + 1
16: Judy_72
17: Eileen_64
18: MargaretKali_72
19: Kumotta_75
20: Sarge_66
21: BrayBeast_67
22: Shoya_67
23: Hum25_86
24: MoRicky_31 + 1
25: BigBoyz_25
26: Brujita_74 + 2
27: QueenHazel_73 + 1
28: HC_78
29: Che9c_84
30: Sbash_89
31: Shweta_66 + 37
32: Kevin1_69
33: MooMoo_97
34: PensacolaC28_24

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 193918 Report

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

Pham number 193918 has 89 members, 13 are drafts.

Phages represented in each track:
• Track 1 : Richie_99
• Track 2 : YoungHarleezy_95, Raphaella_96
• Track 3 : Hillester_99, Auxilium_93, BillyTP_96, EvePickles_96, BenchScraper_96, RadFad_100, Tiff81_95
• Track 4 : SpicyFrank_99, Seahorse_101
• Track 5 : Sashimi_98, CookieBear_94, Globfish_94, Lawnathon_98, Faja_96
• Track 6 : Anekin_95
• Track 7 : MidnightRain_102
• Track 8 : Isolde_98
• Track 9 : Phrank15_100
• Track 10 : Hestia_90
• Track 11 : Cornie_101
• Track 12 : GlobiWarming_74
• Track 13 : Peas_68
• Track 14 : Karkharias_66, Bridgette_71
• Track 15 : PeggyLeg03_70, ChuckDuck_69
• Track 16 : Judy_72
• Track 17 : Eileen_64
• Track 18 : MargaretKali_72
• Track 19 : Kumotta_75
• Track 20 : Sarge_66
• Track 21 : BrayBeast_67
• Track 22 : Shoya_67
• Track 23 : Hum25_86
• Track 24 : MoRicky_31, Smilerella_29
• Track 25 : BigBoyz_25
• Track 26 : Brujita_74, Island3_76, Babsiella_78
• Track 27 : QueenHazel_73, Xula_74
• Track 28 : HC_78
• Track 29 : Che9c_84
• Track 30 : Sbash_89
• Track 31 : Shweta_66, Chewbacca_74, Bosection6_70, Gex_71, Redi_70, Magsby_71, BabeRuth_70, Phrann_67, Schnauzer_74, Butters_66, Philonius_72, Aggie_67, Pipsqueaks_73, MichelleMyBell_70, Rebel_66, Fulbright_70, Xeno_69, ShrimpFriedEgg_70, Scitech_67, SpongeBob_65, Silvy_68, Carcharodon_71, Xerxes_72, Nenae_70, Jamie19_65, Silvafighter_74, Purgamenstris_70, Phloss_70, Tapioca_70, Duplicity_70, Raymond7_63, Rubeelu_66, PhancyPhin_69,

Parmesanjohn_72, Charlie_69, Andies_65, Panchino_66, Smurph_72
• Track 32 : Kevin1_69
• Track 33 : MooMoo_97
• Track 34 : PensacolaC28_24

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

The start number called the most often in the published annotations is 47, it was called in 37 of the 76 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aggie_67, Andies_65, BabeRuth_70, Bosection6_70, Butters_66, Carcharodon_71, Charlie_69, Chewbacca_74, Duplicity_70, Fulbright_70, Gex_71, Jamie19_65, Kevin1_69, Magsby_71, MichelleMyBell_70, Nenae_70, Panchino_66, Parmesanjohn_72, PhancyPhin_69, Philonius_72, Phloss_70, Phrann_67, Pipsqueaks_73, Purgamenstris_70, Raymond7_63, Rebel_66, Redi_70, Rubeelu_66, Schnauzer_74, Scitech_67, ShrimpFriedEgg_70, Shweta_66, Silvafighter_74, Silvy_68, Smurph_72, SpongeBob_65, Tapioca_70, Xeno_69, Xerxes_72,

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

Genes that do not have the "Most Annotated" start:
• Anekin_95, Auxilium_93, Babsiella_78, BenchScraper_96, BigBoyz_25, BillyTP_96, BrayBeast_67, Bridgette_71, Brujita_74, Che9c_84, ChuckDuck_69, CookieBear_94, Cornie_101, Eileen_64, EvePickles_96, Faja_96, Globfish_94, GlobiWarming_74, HC_78, Hestia_90, Hillester_99, Hum25_86, Island3_76, Isolde_98, Judy_72, Karkharias_66, Kumotta_75, Lawnathon_98, MargaretKali_72, MidnightRain_102, MoRicky_31, MooMoo_97, Peas_68, PeggyLeg03_70, PensacolaC28_24, Phrank15_100, QueenHazel_73, RadFad_100, Raphaella_96, Richie_99, Sarge_66, Sashimi_98, Sbash_89, Seahorse_101, Shoya_67, Smilerella_29, SpicyFrank_99, Tiff81_95, Xula_74, YoungHarleezy_95,

Summary by start number:

Start 33:
• Found in 1 of 89 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Hum25_86 (FQ),

Start 35:
• Found in 29 of 89 (32.6%) of genes in pham
• Manual Annotations of this start: 20 of 76
• Called 96.6% of time when present
• Phage (with cluster) where this start called: Anekin_95 (AY), Auxilium_93 (AY), BenchScraper_96 (AY), BillyTP_96 (AY), Bridgette_71 (FA), ChuckDuck_69 (FA), CookieBear_94 (AY), Eileen_64 (FA), EvePickles_96 (AY), Faja_96 (AY), Globfish_94 (AY), GlobiWarming_74 (FA), Hillester_99 (AY), Isolde_98 (AY), Judy_72 (FA), Karkharias_66 (FA), Lawnathon_98 (AY), MidnightRain_102 (AY),

Peas_68 (FA), PeggyLeg03_70 (FA), RadFad_100 (AY), Raphaella_96 (AY), Richie_99 (AY), Sashimi_98 (AY), Seahorse_101 (AY), SpicyFrank_99 (AY), Tiff81_95 (AY), YoungHarleezy_95 (AY),

Start 38:
• Found in 3 of 89 (3.4%) of genes in pham
• Manual Annotations of this start: 2 of 76
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Hestia_90 (AY), Phrank15_100 (AY),

Start 40:
• Found in 3 of 89 (3.4%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Sbash_89 (I2),

Start 41:
• Found in 4 of 89 (4.5%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BigBoyz_25 (GH), MoRicky_31 (GH), PensacolaC28_24 (singleton), Smilerella_29 (GH),

Start 47:
• Found in 39 of 89 (43.8%) of genes in pham
• Manual Annotations of this start: 37 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aggie_67 (N), Andies_65 (N), BabeRuth_70 (N), Bosection6_70 (N), Butters_66 (N), Carcharodon_71 (N), Charlie_69 (N), Chewbacca_74 (N), Duplicity_70 (N), Fulbright_70 (N), Gex_71 (N), Jamie19_65 (N), Kevin1_69 (N), Magsby_71 (N), MichelleMyBell_70 (N), Nenae_70 (N), Panchino_66 (N), Parmesanjohn_72 (N), PhancyPhin_69 (N), Philonius_72 (N), Phloss_70 (N), Phrann_67 (N), Pipsqueaks_73 (N), Purgamenstris_70 (N), Raymond7_63 (N), Rebel_66 (N), Redi_70 (N), Rubeelu_66 (N), Schnauzer_74 (N), Scitech_67 (N), ShrimpFriedEgg_70 (N), Shweta_66 (N), Silvafighter_74 (N), Silvy_68 (N), Smurph_72 (N), SpongeBob_65 (N), Tapioca_70 (N), Xeno_69 (N), Xerxes_72 (N),

Start 48:
• Found in 10 of 89 (11.2%) of genes in pham
• Manual Annotations of this start: 9 of 76
• Called 90.0% of time when present
• Phage (with cluster) where this start called: Babsiella_78 (I1), Brujita_74 (I1), Che9c_84 (I2), Cornie_101 (F5), HC_78 (I1), Island3_76 (I1), MooMoo_97 (singleton), QueenHazel_73 (I1), Xula_74 (I1),

Start 49:
• Found in 1 of 89 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kumotta_75 (FB),

Start 50:

• Found in 1 of 89 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MargaretKali_72 (FB),

Start 51:
• Found in 3 of 89 (3.4%) of genes in pham
• Manual Annotations of this start: 3 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BrayBeast_67 (FB), Sarge_66 (FB), Shoya_67 (FB),

Summary by clusters:

There are 10 clusters represented in this pham: FQ, singleton, F5, I1, I2, N, FA, FB, AY, GH,

Info for manual annotations of cluster AY:
•Start number 35 was manually annotated 12 times for cluster AY.
•Start number 38 was manually annotated 2 times for cluster AY.

Info for manual annotations of cluster F5:
•Start number 48 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster FA:
•Start number 35 was manually annotated 8 times for cluster FA.

Info for manual annotations of cluster FB:
•Start number 49 was manually annotated 1 time for cluster FB.
•Start number 50 was manually annotated 1 time for cluster FB.
•Start number 51 was manually annotated 3 times for cluster FB.

Info for manual annotations of cluster FQ:
•Start number 33 was manually annotated 1 time for cluster FQ.

Info for manual annotations of cluster I1:
•Start number 48 was manually annotated 6 times for cluster I1.

Info for manual annotations of cluster I2:
•Start number 40 was manually annotated 1 time for cluster I2.
•Start number 48 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster N:
•Start number 47 was manually annotated 37 times for cluster N.

Gene Information:

Gene: Aggie_67 Start: 43847, Stop: 44146, Start Num: 47
Candidate Starts for Aggie_67:
(Start: 47 @43847 has 37 MA's),

Gene: Andies_65 Start: 43293, Stop: 43592, Start Num: 47
Candidate Starts for Andies_65:
(Start: 47 @43293 has 37 MA's),

Gene: Anekin_95 Start: 52237, Stop: 52560, Start Num: 35
Candidate Starts for Anekin_95:
(Start: 35 @52237 has 20 MA's), (Start: 38 @52249 has 2 MA's), (53, 52375),

Gene: Auxilium_93 Start: 49043, Stop: 49363, Start Num: 35
Candidate Starts for Auxilium_93:
(Start: 35 @49043 has 20 MA's), (59, 49223),

Gene: BabeRuth_70 Start: 42101, Stop: 42409, Start Num: 47
Candidate Starts for BabeRuth_70:
(Start: 47 @42101 has 37 MA's),

Gene: Babsiella_78 Start: 47992, Stop: 48282, Start Num: 48
Candidate Starts for Babsiella_78:
(3, 47377), (10, 47656), (15, 47743), (18, 47770), (23, 47806), (27, 47824), (Start: 48 @47992 has 9 MA's),

Gene: BenchScraper_96 Start: 50794, Stop: 51114, Start Num: 35
Candidate Starts for BenchScraper_96:
(Start: 35 @50794 has 20 MA's), (59, 50974),

Gene: BigBoyz_25 Start: 16651, Stop: 16974, Start Num: 41
Candidate Starts for BigBoyz_25:
(Start: 41 @16651 has 1 MA's), (45, 16699), (46, 16711), (55, 16792), (60, 16849), (61, 16891), (63, 16936),

Gene: BillyTP_96 Start: 52593, Stop: 52919, Start Num: 35
Candidate Starts for BillyTP_96:
(Start: 35 @52593 has 20 MA's), (59, 52773),

Gene: Bosection6_70 Start: 42917, Stop: 43225, Start Num: 47
Candidate Starts for Bosection6_70:
(Start: 47 @42917 has 37 MA's),

Gene: BrayBeast_67 Start: 37446, Stop: 37709, Start Num: 51
Candidate Starts for BrayBeast_67:
(Start: 51 @37446 has 3 MA's),

Gene: Bridgette_71 Start: 42699, Stop: 43043, Start Num: 35
Candidate Starts for Bridgette_71:
(Start: 35 @42699 has 20 MA's),

Gene: Brujita_74 Start: 46629, Stop: 46919, Start Num: 48
Candidate Starts for Brujita_74:
(3, 46014), (10, 46293), (15, 46380), (18, 46407), (23, 46443), (27, 46461), (Start: 48 @46629 has 9 MA's),

Gene: Butters_66 Start: 41009, Stop: 41308, Start Num: 47

Candidate Starts for Butters_66:
(Start: 47 @41009 has 37 MA's),

Gene: Carcharodon_71 Start: 43194, Stop: 43493, Start Num: 47
Candidate Starts for Carcharodon_71:
(Start: 47 @43194 has 37 MA's),

Gene: Charlie_69 Start: 42541, Stop: 42849, Start Num: 47
Candidate Starts for Charlie_69:
(Start: 47 @42541 has 37 MA's),

Gene: Che9c_84 Start: 56646, Stop: 56942, Start Num: 48
Candidate Starts for Che9c_84:
(Start: 48 @56646 has 9 MA's), (57, 56724), (64, 56901),

Gene: Chewbacca_74 Start: 43089, Stop: 43388, Start Num: 47
Candidate Starts for Chewbacca_74:
(Start: 47 @43089 has 37 MA's),

Gene: ChuckDuck_69 Start: 42418, Stop: 42762, Start Num: 35
Candidate Starts for ChuckDuck_69:
(Start: 35 @42418 has 20 MA's),

Gene: CookieBear_94 Start: 51777, Stop: 52097, Start Num: 35
Candidate Starts for CookieBear_94:
(Start: 35 @51777 has 20 MA's), (59, 51957),

Gene: Cornie_101 Start: 56005, Stop: 56292, Start Num: 48
Candidate Starts for Cornie_101:
(3, 55393), (10, 55669), (15, 55756), (18, 55783), (23, 55819), (27, 55837), (42, 55939), (Start: 48 @56005 has 9 MA's),

Gene: Duplicity_70 Start: 42451, Stop: 42750, Start Num: 47
Candidate Starts for Duplicity_70:
(Start: 47 @42451 has 37 MA's),

Gene: Eileen_64 Start: 40750, Stop: 41094, Start Num: 35
Candidate Starts for Eileen_64:
(13, 40555), (26, 40678), (Start: 35 @40750 has 20 MA's),

Gene: EvePickles_96 Start: 52994, Stop: 53314, Start Num: 35
Candidate Starts for EvePickles_96:
(Start: 35 @52994 has 20 MA's), (59, 53174),

Gene: Faja_96 Start: 52066, Stop: 52386, Start Num: 35
Candidate Starts for Faja_96:
(Start: 35 @52066 has 20 MA's), (59, 52246),

Gene: Fulbright_70 Start: 41910, Stop: 42209, Start Num: 47
Candidate Starts for Fulbright_70:
(Start: 47 @41910 has 37 MA's),

Gene: Gex_71 Start: 43210, Stop: 43509, Start Num: 47

Candidate Starts for Gex_71:
(Start: 47 @43210 has 37 MA's),

Gene: Globfish_94 Start: 50972, Stop: 51292, Start Num: 35
Candidate Starts for Globfish_94:
(Start: 35 @50972 has 20 MA's), (59, 51152),

Gene: GlobiWarming_74 Start: 42547, Stop: 42891, Start Num: 35
Candidate Starts for GlobiWarming_74:
(32, 42526), (34, 42541), (Start: 35 @42547 has 20 MA's),

Gene: HC_78 Start: 45878, Stop: 46168, Start Num: 48
Candidate Starts for HC_78:
(10, 45542), (15, 45629), (18, 45656), (23, 45692), (27, 45710), (Start: 48 @45878 has 9 MA's),

Gene: Hestia_90 Start: 50238, Stop: 50558, Start Num: 38
Candidate Starts for Hestia_90:
(11, 49992), (Start: 35 @50226 has 20 MA's), (Start: 38 @50238 has 2 MA's), (54, 50367),

Gene: Hillester_99 Start: 52313, Stop: 52633, Start Num: 35
Candidate Starts for Hillester_99:
(Start: 35 @52313 has 20 MA's), (59, 52493),

Gene: Hum25_86 Start: 42285, Stop: 42626, Start Num: 33
Candidate Starts for Hum25_86:
(Start: 33 @42285 has 1 MA's), (36, 42303), (56, 42438),

Gene: Island3_76 Start: 46859, Stop: 47149, Start Num: 48
Candidate Starts for Island3_76:
(3, 46244), (10, 46523), (15, 46610), (18, 46637), (23, 46673), (27, 46691), (Start: 48 @46859 has 9 MA's),

Gene: Isolde_98 Start: 52809, Stop: 53129, Start Num: 35
Candidate Starts for Isolde_98:
(Start: 35 @52809 has 20 MA's), (59, 52989),

Gene: Jamie19_65 Start: 40783, Stop: 41091, Start Num: 47
Candidate Starts for Jamie19_65:
(Start: 47 @40783 has 37 MA's),

Gene: Judy_72 Start: 43025, Stop: 43369, Start Num: 35
Candidate Starts for Judy_72:
(Start: 35 @43025 has 20 MA's),

Gene: Karkharias_66 Start: 42195, Stop: 42539, Start Num: 35
Candidate Starts for Karkharias_66:
(Start: 35 @42195 has 20 MA's),

Gene: Kevin1_69 Start: 41506, Stop: 41805, Start Num: 47
Candidate Starts for Kevin1_69:
(Start: 47 @41506 has 37 MA's),

Gene: Kumotta_75 Start: 39866, Stop: 40129, Start Num: 49

Candidate Starts for Kumotta_75:
(28, 39707), (31, 39734), (39, 39785), (44, 39836), (Start: 49 @39866 has 1 MA's),

Gene: Lawnathon_98 Start: 52639, Stop: 52959, Start Num: 35
Candidate Starts for Lawnathon_98:
(Start: 35 @52639 has 20 MA's), (59, 52819),

Gene: Magsby_71 Start: 43156, Stop: 43455, Start Num: 47
Candidate Starts for Magsby_71:
(Start: 47 @43156 has 37 MA's),

Gene: MargaretKali_72 Start: 38623, Stop: 38889, Start Num: 50
Candidate Starts for MargaretKali_72:
(Start: 50 @38623 has 1 MA's), (65, 38875),

Gene: MichelleMyBell_70 Start: 41746, Stop: 42054, Start Num: 47
Candidate Starts for MichelleMyBell_70:
(Start: 47 @41746 has 37 MA's),

Gene: MidnightRain_102 Start: 53249, Stop: 53569, Start Num: 35
Candidate Starts for MidnightRain_102:
(Start: 35 @53249 has 20 MA's),

Gene: MoRicky_31 Start: 17069, Stop: 17386, Start Num: 41
Candidate Starts for MoRicky_31:
(Start: 41 @17069 has 1 MA's), (45, 17117), (46, 17129), (52, 17159), (55, 17210), (62, 17342),

Gene: MooMoo_97 Start: 54747, Stop: 55079, Start Num: 48
Candidate Starts for MooMoo_97:
(19, 54531), (Start: 48 @54747 has 9 MA's), (66, 55065),

Gene: Nenae_70 Start: 42103, Stop: 42411, Start Num: 47
Candidate Starts for Nenae_70:
(Start: 47 @42103 has 37 MA's),

Gene: Panchino_66 Start: 43021, Stop: 43329, Start Num: 47
Candidate Starts for Panchino_66:
(Start: 47 @43021 has 37 MA's),

Gene: Parmesanjohn_72 Start: 43214, Stop: 43513, Start Num: 47
Candidate Starts for Parmesanjohn_72:
(Start: 47 @43214 has 37 MA's),

Gene: Peas_68 Start: 43688, Stop: 44032, Start Num: 35
Candidate Starts for Peas_68:
(17, 43556), (29, 43634), (Start: 35 @43688 has 20 MA's),

Gene: PeggyLeg03_70 Start: 42854, Stop: 43198, Start Num: 35
Candidate Starts for PeggyLeg03_70:
(Start: 35 @42854 has 20 MA's),

Gene: PensacolaC28_24 Start: 16361, Stop: 16687, Start Num: 41
Candidate Starts for PensacolaC28_24:

(9, 16088), (20, 16217), (25, 16256), (Start: 41 @16361 has 1 MA's), (55, 16502),

Gene: PhancyPhin_69 Start: 41960, Stop: 42268, Start Num: 47
Candidate Starts for PhancyPhin_69:
(Start: 47 @41960 has 37 MA's),

Gene: Philonius_72 Start: 43400, Stop: 43699, Start Num: 47
Candidate Starts for Philonius_72:
(Start: 47 @43400 has 37 MA's),

Gene: Phloss_70 Start: 42621, Stop: 42920, Start Num: 47
Candidate Starts for Phloss_70:
(Start: 47 @42621 has 37 MA's),

Gene: Phrank15_100 Start: 52150, Stop: 52461, Start Num: 38
Candidate Starts for Phrank15_100:
(5, 51760), (7, 51793), (12, 51952), (16, 52009), (24, 52078), (Start: 38 @52150 has 2 MA's), (53, 52276), (58, 52303),

Gene: Phrann_67 Start: 44377, Stop: 44685, Start Num: 47
Candidate Starts for Phrann_67:
(Start: 47 @44377 has 37 MA's),

Gene: Pipsqueaks_73 Start: 43192, Stop: 43491, Start Num: 47
Candidate Starts for Pipsqueaks_73:
(Start: 47 @43192 has 37 MA's),

Gene: Purgamenstris_70 Start: 42101, Stop: 42409, Start Num: 47
Candidate Starts for Purgamenstris_70:
(Start: 47 @42101 has 37 MA's),

Gene: QueenHazel_73 Start: 47625, Stop: 47915, Start Num: 48
Candidate Starts for QueenHazel_73:
(1, 46872), (2, 46899), (4, 47121), (6, 47145), (8, 47271), (12, 47325), (22, 47439), (Start: 40 @47553 has 1 MA's), (43, 47577), (Start: 48 @47625 has 9 MA's),

Gene: RadFad_100 Start: 52313, Stop: 52633, Start Num: 35
Candidate Starts for RadFad_100:
(Start: 35 @52313 has 20 MA's), (59, 52493),

Gene: Raphaella_96 Start: 51282, Stop: 51608, Start Num: 35
Candidate Starts for Raphaella_96:
(Start: 35 @51282 has 20 MA's), (59, 51462),

Gene: Raymond7_63 Start: 41889, Stop: 42197, Start Num: 47
Candidate Starts for Raymond7_63:
(Start: 47 @41889 has 37 MA's),

Gene: Rebel_66 Start: 40085, Stop: 40393, Start Num: 47
Candidate Starts for Rebel_66:
(Start: 47 @40085 has 37 MA's),

Gene: Redi_70 Start: 42100, Stop: 42408, Start Num: 47

Candidate Starts for Redi_70:
(Start: 47 @42100 has 37 MA's),

Gene: Richie_99 Start: 53442, Stop: 53762, Start Num: 35
Candidate Starts for Richie_99:
(14, 53286), (21, 53343), (Start: 35 @53442 has 20 MA's), (59, 53622),

Gene: Rubeelu_66 Start: 41009, Stop: 41308, Start Num: 47
Candidate Starts for Rubeelu_66:
(Start: 47 @41009 has 37 MA's),

Gene: Sarge_66 Start: 35891, Stop: 36154, Start Num: 51
Candidate Starts for Sarge_66:
(Start: 51 @35891 has 3 MA's),

Gene: Sashimi_98 Start: 51797, Stop: 52117, Start Num: 35
Candidate Starts for Sashimi_98:
(Start: 35 @51797 has 20 MA's), (59, 51977),

Gene: Sbash_89 Start: 55345, Stop: 55713, Start Num: 40
Candidate Starts for Sbash_89:
(Start: 40 @55345 has 1 MA's), (43, 55369), (Start: 48 @55417 has 9 MA's), (57, 55495), (64, 55672),

Gene: Schnauzer_74 Start: 43214, Stop: 43513, Start Num: 47
Candidate Starts for Schnauzer_74:
(Start: 47 @43214 has 37 MA's),

Gene: Scitech_67 Start: 42617, Stop: 42916, Start Num: 47
Candidate Starts for Scitech_67:
(Start: 47 @42617 has 37 MA's),

Gene: Seahorse_101 Start: 56066, Stop: 56386, Start Num: 35
Candidate Starts for Seahorse_101:
(Start: 35 @56066 has 20 MA's), (59, 56246),

Gene: Shoya_67 Start: 37457, Stop: 37720, Start Num: 51
Candidate Starts for Shoya_67:
(30, 37322), (37, 37370), (Start: 51 @37457 has 3 MA's),

Gene: ShrimpFriedEgg_70 Start: 42100, Stop: 42408, Start Num: 47
Candidate Starts for ShrimpFriedEgg_70:
(Start: 47 @42100 has 37 MA's),

Gene: Shweta_66 Start: 42196, Stop: 42504, Start Num: 47
Candidate Starts for Shweta_66:
(Start: 47 @42196 has 37 MA's),

Gene: Silvafighter_74 Start: 42757, Stop: 43056, Start Num: 47
Candidate Starts for Silvafighter_74:
(Start: 47 @42757 has 37 MA's),

Gene: Silvy_68 Start: 43847, Stop: 44146, Start Num: 47
Candidate Starts for Silvy_68:

(Start: 47 @43847 has 37 MA's),

Gene: Smilerella_29 Start: 17159, Stop: 17476, Start Num: 41
Candidate Starts for Smilerella_29:
(Start: 41 @17159 has 1 MA's), (45, 17207), (46, 17219), (52, 17249), (55, 17300), (62, 17432),

Gene: Smurph_72 Start: 43214, Stop: 43513, Start Num: 47
Candidate Starts for Smurph_72:
(Start: 47 @43214 has 37 MA's),

Gene: SpicyFrank_99 Start: 51851, Stop: 52171, Start Num: 35
Candidate Starts for SpicyFrank_99:
(Start: 35 @51851 has 20 MA's), (59, 52031),

Gene: SpongeBob_65 Start: 40783, Stop: 41091, Start Num: 47
Candidate Starts for SpongeBob_65:
(Start: 47 @40783 has 37 MA's),

Gene: Tapioca_70 Start: 43719, Stop: 44018, Start Num: 47
Candidate Starts for Tapioca_70:
(Start: 47 @43719 has 37 MA's),

Gene: Tiff81_95 Start: 50115, Stop: 50435, Start Num: 35
Candidate Starts for Tiff81_95:
(Start: 35 @50115 has 20 MA's), (59, 50295),

Gene: Xeno_69 Start: 41900, Stop: 42208, Start Num: 47
Candidate Starts for Xeno_69:
(Start: 47 @41900 has 37 MA's),

Gene: Xerxes_72 Start: 43211, Stop: 43510, Start Num: 47
Candidate Starts for Xerxes_72:
(Start: 47 @43211 has 37 MA's),

Gene: Xula_74 Start: 48112, Stop: 48402, Start Num: 48
Candidate Starts for Xula_74:
(1, 47359), (2, 47386), (4, 47608), (6, 47632), (8, 47758), (12, 47812), (22, 47926), (Start: 40 @48040 has 1 MA's), (43, 48064), (Start: 48 @48112 has 9 MA's),

Gene: YoungHarleezy_95 Start: 52603, Stop: 52923, Start Num: 35
Candidate Starts for YoungHarleezy_95:
(Start: 35 @52603 has 20 MA's), (59, 52783),