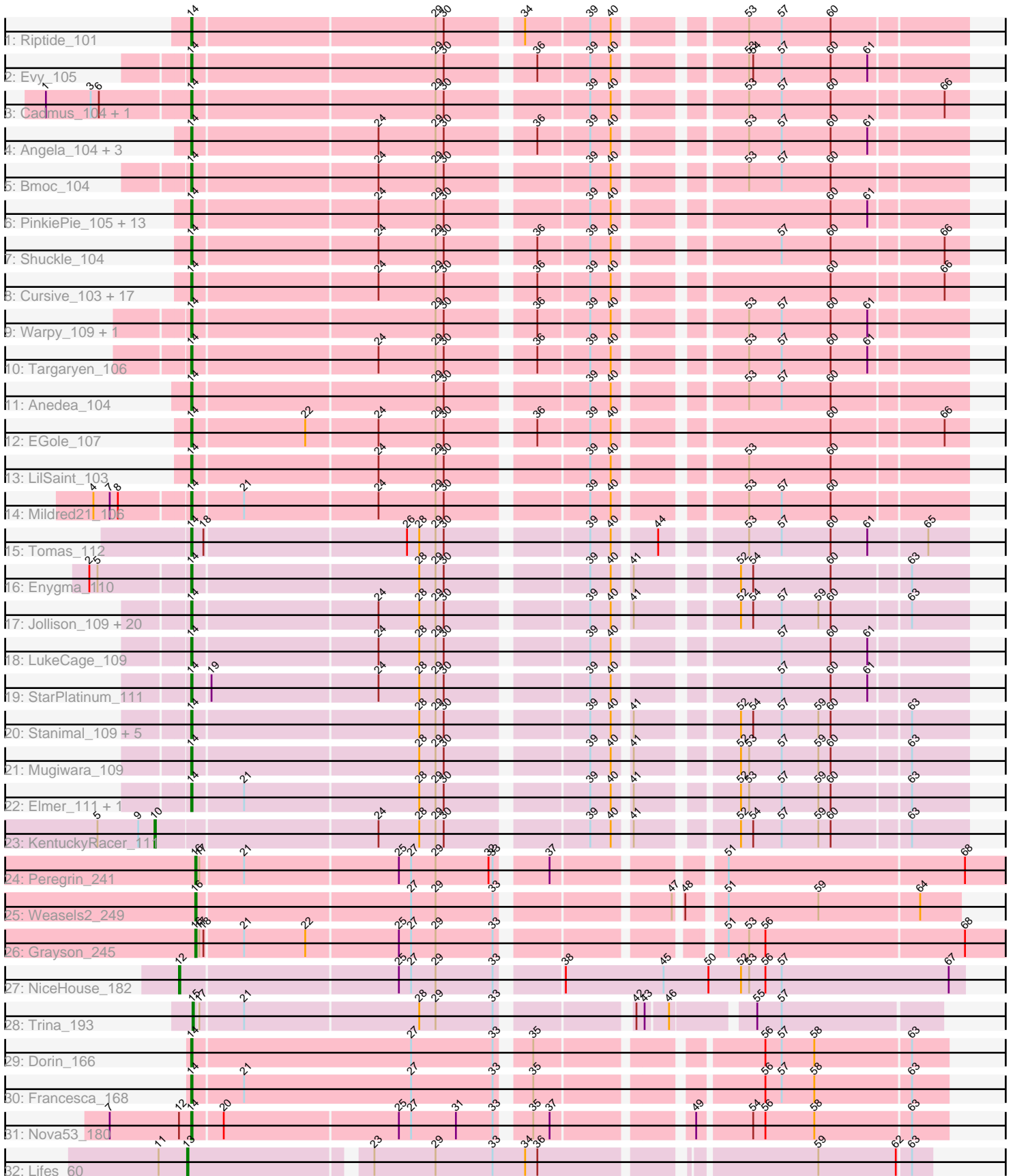


Pham 311455



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 311455 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311455 has 93 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Riptide_101
- Track 2 : Evy_105
- Track 3 : Cadmus_104, Daubenski_108
- Track 4 : Angela_104, LilMartin_104, MulchMansion_104, Marsus_105
- Track 5 : Bmoc_104
- Track 6 : PinkiePie_105, Davielle_105, FreddyDRoo_105, Persimmon_106, Braelyn_108, Paradiddles_102, Liandry_106, Eliot67_105, Navo_104, WhereRU_104, PynkPanther_113, Bartholomune_106, NootNoot_103, Squillium_107
- Track 7 : Shuckle_104
- Track 8 : Cursive_103, PacManQ_104, Tribute_104, Peebs_104, Coogler_105, Larnav_105, Pepperwood_105, Sushi23_105, Cross_105, WashU_109, Scheme_106, Watermoore_104, Leo04_106, Teutsch_105, Samisti12_106, HangryHippo_105, BlueOtter_105, Lululemon_104
- Track 9 : Warpy_109, Jay2Jay_110
- Track 10 : Targaryen_106
- Track 11 : Anedea_104
- Track 12 : EGole_107
- Track 13 : LilSaint_103
- Track 14 : Mildred21_106
- Track 15 : Tomas_112
- Track 16 : Enygma_110
- Track 17 : Jollison_109, MindFlayer_107, Starbow_108, PumpkinSpice_110, Spilled_111, Gibbi_115, Wipeout_107, SaltySpitoon_109, AcciDwight_114, Spelly_110, Amabiko_110, Bordeaux_108, Birchlyn_107, JimJam_111, IchabodCrane_107, CeilingFan_109, TomSawyer_108, Daisy123_114, Rikishi_109, Battuta_108, Quaran19_109
- Track 18 : LukeCage_109
- Track 19 : StarPlatinum_111
- Track 20 : Stanimal_109, AngryGiraffe_109, BoomerJR_110, Genie2_110, Yaboi_110, Sollertia_109
- Track 21 : Mugiwara_109
- Track 22 : Elmer_111, Wofford_107
- Track 23 : KentuckyRacer_111
- Track 24 : Peregrin_241
- Track 25 : Weasels2_249
- Track 26 : Grayson_245
- Track 27 : NiceHouse_182

- Track 28 : Trina_193
- Track 29 : Dorin_166
- Track 30 : Francesca_168
- Track 31 : Nova53_180
- Track 32 : Lifes_60

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

The start number called the most often in the published annotations is 14, it was called in 79 of the 86 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AcciDwight_114, Amabiko_110, Anedea_104, Angela_104, AngryGiraffe_109, Bartholomune_106, Battuta_108, Birchlyn_107, BlueOtter_105, Bmoc_104, BoomerJR_110, Bordeaux_108, Braelyn_108, Cadmus_104, CeilingFan_109, Coogler_105, Cross_105, Cursive_103, Daisy123_114, Daubenski_108, Davielle_105, Dorin_166, EGole_107, Eliot67_105, Elmer_111, Enygma_110, Evy_105, Francesca_168, FreddyDRoo_105, Genie2_110, Gibbi_115, HangryHippo_105, IchabodCrane_107, Jay2Jay_110, JimJam_111, Jollison_109, Larnav_105, Leo04_106, Liandry_106, LilMartin_104, LilSaint_103, LukeCage_109, Lululemon_104, Marsus_105, Mildred21_106, MindFlayer_107, Mugiwarara_109, MulchMansion_104, Navo_104, NootNoot_103, Nova53_180, PacManQ_104, Paradiddles_102, Peebs_104, Pepperwood_105, Persimmon_106, PinkiePie_105, PumpkinSpice_110, PynkPanther_113, Quarant19_109, Rikishi_109, Riptide_101, SaltySpittoon_109, Samisti12_106, Scheme_106, Shuckle_104, Sollertia_109, Spelly_110, Spilled_111, Squillium_107, Stanimal_109, StarPlatinum_111, Starbow_108, Sushi23_105, Targaryen_106, Teutsch_105, TomSawyer_108, Tomas_112, Tribute_104, Warpy_109, WashU_109, Watermoore_104, WhereRU_104, Wipeout_107, Wofford_107, Yaboi_110,

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

-

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

- Grayson_245, KentuckyRacer_111, Lifes_60, NiceHouse_182, Peregrin_241, Trina_193, Weasels2_249,

Summary by start number:

Start 10:

- Found in 1 of 93 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KentuckyRacer_111 (BE2),

Start 12:

- Found in 2 of 93 (2.2%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 50.0% of time when present
- Phage (with cluster) where this start called: NiceHouse_182 (CE),

Start 13:

- Found in 1 of 93 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lifes_60 (GB),

Start 14:

- Found in 86 of 93 (92.5%) of genes in pham
- Manual Annotations of this start: 79 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AcciDwight_114 (BE2), Amabiko_110 (BE2), Anedeia_104 (BE1), Angela_104 (BE1), AngryGiraffe_109 (BE2), Bartholomune_106 (BE1), Battuta_108 (BE2), Birchlyn_107 (BE2), BlueOtter_105 (BE1), Bmoc_104 (BE1), BoomerJR_110 (BE2), Bordeaux_108 (BE2), Braelyn_108 (BE1), Cadmus_104 (BE1), CeilingFan_109 (BE2), Coogler_105 (BE1), Cross_105 (BE1), Cursive_103 (BE1), Daisy123_114 (BE2), Daubenski_108 (BE1), Davielle_105 (BE1), Dorin_166 (CG), EGole_107 (BE1), Elliot67_105 (BE1), Elmer_111 (BE2), Enygma_110 (BE2), Evy_105 (BE1), Francesca_168 (CG), FreddyDRoo_105 (BE1), Genie2_110 (BE2), Gibbi_115 (BE2), HangryHippo_105 (BE1), IchabodCrane_107 (BE2), Jay2Jay_110 (BE1), JimJam_111 (BE2), Jollison_109 (BE2), Larnav_105 (BE1), Leo04_106 (BE1), Liandry_106 (BE1), LilMartin_104 (BE1), LilSaint_103 (BE1), LukeCage_109 (BE2), Lululemon_104 (BE1), Marsus_105 (BE1), Mildred21_106 (BE1), MindFlayer_107 (BE2), Mugiwara_109 (BE2), MulchMansion_104 (BE1), Navo_104 (BE1), NootNoot_103 (BE1), Nova53_180 (CG), PacManQ_104 (BE1), Paradiddles_102 (BE1), Peebs_104 (BE1), Pepperwood_105 (BE1), Persimmon_106 (BE1), PinkiePie_105 (BE1), PumpkinSpice_110 (BE2), PynkPanther_113 (BE1), Quarant19_109 (BE2), Rikishi_109 (BE2), Riptide_101 (BE1), SaltySpittoon_109 (BE2), Samisti12_106 (BE1), Scheme_106 (BE1), Shuckle_104 (BE1), Sollertia_109 (BE2), Spelly_110 (BE2), Spilled_111 (BE2), Squillium_107 (BE1), Stanimal_109 (BE2), StarPlatinum_111 (BE2), Starbow_108 (BE2), Sushi23_105 (BE1), Targaryen_106 (BE1), Teutsch_105 (BE1), TomSawyer_108 (BE2), Tomas_112 (BE2), Tribute_104 (BE1), Warpy_109 (BE1), WashU_109 (BE1), Watermoore_104 (BE1), WhereRU_104 (BE1), Wipeout_107 (BE2), Wofford_107 (BE2), Yaboi_110 (BE2),

Start 15:

- Found in 1 of 93 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trina_193 (CE),

Start 16:

- Found in 3 of 93 (3.2%) of genes in pham
- Manual Annotations of this start: 3 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Grayson_245 (CB), Peregrin_241 (CB), Weasels2_249 (CB),

Summary by clusters:

There are 6 clusters represented in this pham: CB, CG, CE, GB, BE2, BE1,

Info for manual annotations of cluster BE1:

- Start number 14 was manually annotated 45 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 10 was manually annotated 1 time for cluster BE2.
- Start number 14 was manually annotated 31 times for cluster BE2.

Info for manual annotations of cluster CB:

- Start number 16 was manually annotated 3 times for cluster CB.

Info for manual annotations of cluster CE:

- Start number 12 was manually annotated 1 time for cluster CE.
- Start number 15 was manually annotated 1 time for cluster CE.

Info for manual annotations of cluster CG:

- Start number 14 was manually annotated 3 times for cluster CG.

Info for manual annotations of cluster GB:

- Start number 13 was manually annotated 1 time for cluster GB.

Gene Information:

Gene: AcciDwight_114 Start: 73826, Stop: 74347, Start Num: 14

Candidate Starts for AcciDwight_114:

(Start: 14 @73826 has 79 MA's), (24, 73958), (28, 73988), (29, 74000), (30, 74006), (39, 74099), (40, 74114), (41, 74123), (52, 74186), (54, 74195), (57, 74216), (59, 74243), (60, 74252), (63, 74306),

Gene: Amabiko_110 Start: 73871, Stop: 74392, Start Num: 14

Candidate Starts for Amabiko_110:

(Start: 14 @73871 has 79 MA's), (24, 74003), (28, 74033), (29, 74045), (30, 74051), (39, 74144), (40, 74159), (41, 74168), (52, 74231), (54, 74240), (57, 74261), (59, 74288), (60, 74297), (63, 74351),

Gene: Anedea_104 Start: 72637, Stop: 73158, Start Num: 14

Candidate Starts for Anedea_104:

(Start: 14 @72637 has 79 MA's), (29, 72811), (30, 72817), (39, 72910), (40, 72925), (53, 73003), (57, 73027), (60, 73063),

Gene: Angela_104 Start: 72977, Stop: 73498, Start Num: 14

Candidate Starts for Angela_104:

(Start: 14 @72977 has 79 MA's), (24, 73109), (29, 73151), (30, 73157), (36, 73214), (39, 73250), (40, 73265), (53, 73343), (57, 73367), (60, 73403), (61, 73430),

Gene: AngryGiraffe_109 Start: 74031, Stop: 74552, Start Num: 14

Candidate Starts for AngryGiraffe_109:

(Start: 14 @74031 has 79 MA's), (28, 74193), (29, 74205), (30, 74211), (39, 74304), (40, 74319), (41, 74328), (52, 74391), (54, 74400), (57, 74421), (59, 74448), (60, 74457), (63, 74511),

Gene: Bartholomune_106 Start: 73480, Stop: 74001, Start Num: 14

Candidate Starts for Bartholomune_106:

(Start: 14 @73480 has 79 MA's), (24, 73612), (29, 73654), (30, 73660), (39, 73753), (40, 73768), (60, 73906), (61, 73933),

Gene: Battuta_108 Start: 73845, Stop: 74366, Start Num: 14

Candidate Starts for Battuta_108:

(Start: 14 @73845 has 79 MA's), (24, 73977), (28, 74007), (29, 74019), (30, 74025), (39, 74118), (40, 74133), (41, 74142), (52, 74205), (54, 74214), (57, 74235), (59, 74262), (60, 74271), (63, 74325),

Gene: Birchlyn_107 Start: 71731, Stop: 72252, Start Num: 14

Candidate Starts for Birchlyn_107:

(Start: 14 @71731 has 79 MA's), (24, 71863), (28, 71893), (29, 71905), (30, 71911), (39, 72004), (40, 72019), (41, 72028), (52, 72091), (54, 72100), (57, 72121), (59, 72148), (60, 72157), (63, 72211),

Gene: BlueOtter_105 Start: 73885, Stop: 74406, Start Num: 14

Candidate Starts for BlueOtter_105:

(Start: 14 @73885 has 79 MA's), (24, 74017), (29, 74059), (30, 74065), (36, 74122), (39, 74158), (40, 74173), (60, 74311), (66, 74389),

Gene: Bmoc_104 Start: 73073, Stop: 73594, Start Num: 14

Candidate Starts for Bmoc_104:

(Start: 14 @73073 has 79 MA's), (24, 73205), (29, 73247), (30, 73253), (39, 73346), (40, 73361), (53, 73439), (57, 73463), (60, 73499),

Gene: BoomerJR_110 Start: 73920, Stop: 74441, Start Num: 14

Candidate Starts for BoomerJR_110:

(Start: 14 @73920 has 79 MA's), (28, 74082), (29, 74094), (30, 74100), (39, 74193), (40, 74208), (41, 74217), (52, 74280), (54, 74289), (57, 74310), (59, 74337), (60, 74346), (63, 74400),

Gene: Bordeaux_108 Start: 74000, Stop: 74521, Start Num: 14

Candidate Starts for Bordeaux_108:

(Start: 14 @74000 has 79 MA's), (24, 74132), (28, 74162), (29, 74174), (30, 74180), (39, 74273), (40, 74288), (41, 74297), (52, 74360), (54, 74369), (57, 74390), (59, 74417), (60, 74426), (63, 74480),

Gene: Braelyn_108 Start: 74369, Stop: 74890, Start Num: 14

Candidate Starts for Braelyn_108:

(Start: 14 @74369 has 79 MA's), (24, 74501), (29, 74543), (30, 74549), (39, 74642), (40, 74657), (60, 74795), (61, 74822),

Gene: Cadmus_104 Start: 72775, Stop: 73296, Start Num: 14

Candidate Starts for Cadmus_104:

(1, 72673), (3, 72706), (6, 72712), (Start: 14 @72775 has 79 MA's), (29, 72949), (30, 72955), (39, 73048), (40, 73063), (53, 73141), (57, 73165), (60, 73201), (66, 73279),

Gene: CeilingFan_109 Start: 73763, Stop: 74284, Start Num: 14

Candidate Starts for CeilingFan_109:

(Start: 14 @73763 has 79 MA's), (24, 73895), (28, 73925), (29, 73937), (30, 73943), (39, 74036), (40, 74051), (41, 74060), (52, 74123), (54, 74132), (57, 74153), (59, 74180), (60, 74189), (63, 74243),

Gene: Coogler_105 Start: 73911, Stop: 74432, Start Num: 14

Candidate Starts for Coogler_105:

(Start: 14 @73911 has 79 MA's), (24, 74043), (29, 74085), (30, 74091), (36, 74148), (39, 74184), (40, 74199), (60, 74337), (66, 74415),

Gene: Cross_105 Start: 73886, Stop: 74407, Start Num: 14

Candidate Starts for Cross_105:

(Start: 14 @73886 has 79 MA's), (24, 74018), (29, 74060), (30, 74066), (36, 74123), (39, 74159), (40, 74174), (60, 74312), (66, 74390),

Gene: Cursive_103 Start: 73411, Stop: 73932, Start Num: 14

Candidate Starts for Cursive_103:

(Start: 14 @73411 has 79 MA's), (24, 73543), (29, 73585), (30, 73591), (36, 73648), (39, 73684), (40, 73699), (60, 73837), (66, 73915),

Gene: Daisy123_114 Start: 74185, Stop: 74706, Start Num: 14

Candidate Starts for Daisy123_114:

(Start: 14 @74185 has 79 MA's), (24, 74317), (28, 74347), (29, 74359), (30, 74365), (39, 74458), (40, 74473), (41, 74482), (52, 74545), (54, 74554), (57, 74575), (59, 74602), (60, 74611), (63, 74665),

Gene: Daubenski_108 Start: 73540, Stop: 74061, Start Num: 14

Candidate Starts for Daubenski_108:

(1, 73438), (3, 73471), (6, 73477), (Start: 14 @73540 has 79 MA's), (29, 73714), (30, 73720), (39, 73813), (40, 73828), (53, 73906), (57, 73930), (60, 73966), (66, 74044),

Gene: Davielle_105 Start: 73822, Stop: 74343, Start Num: 14

Candidate Starts for Davielle_105:

(Start: 14 @73822 has 79 MA's), (24, 73954), (29, 73996), (30, 74002), (39, 74095), (40, 74110), (60, 74248), (61, 74275),

Gene: Dorin_166 Start: 93358, Stop: 93870, Start Num: 14

Candidate Starts for Dorin_166:

(Start: 14 @93358 has 79 MA's), (27, 93517), (33, 93577), (35, 93595), (56, 93739), (57, 93751), (58, 93775), (63, 93844),

Gene: EGole_107 Start: 74730, Stop: 75251, Start Num: 14

Candidate Starts for EGole_107:

(Start: 14 @74730 has 79 MA's), (22, 74811), (24, 74862), (29, 74904), (30, 74910), (36, 74967), (39, 75003), (40, 75018), (60, 75156), (66, 75234),

Gene: Eliot67_105 Start: 73522, Stop: 74043, Start Num: 14

Candidate Starts for Eliot67_105:

(Start: 14 @73522 has 79 MA's), (24, 73654), (29, 73696), (30, 73702), (39, 73795), (40, 73810), (60, 73948), (61, 73975),

Gene: Elmer_111 Start: 75475, Stop: 75996, Start Num: 14

Candidate Starts for Elmer_111:

(Start: 14 @75475 has 79 MA's), (21, 75511), (28, 75637), (29, 75649), (30, 75655), (39, 75748), (40, 75763), (41, 75772), (52, 75835), (53, 75841), (57, 75865), (59, 75892), (60, 75901), (63, 75955),

Gene: Enygma_110 Start: 75762, Stop: 76283, Start Num: 14

Candidate Starts for Enygma_110:

(2, 75693), (5, 75699), (Start: 14 @75762 has 79 MA's), (28, 75924), (29, 75936), (30, 75942), (39, 76035), (40, 76050), (41, 76059), (52, 76122), (54, 76131), (60, 76188), (63, 76242),

Gene: Evy_105 Start: 73765, Stop: 74286, Start Num: 14

Candidate Starts for Evy_105:

(Start: 14 @73765 has 79 MA's), (29, 73939), (30, 73945), (36, 74002), (39, 74038), (40, 74053), (53, 74131), (54, 74134), (57, 74155), (60, 74191), (61, 74218),

Gene: Francesca_168 Start: 94277, Stop: 94789, Start Num: 14

Candidate Starts for Francesca_168:

(Start: 14 @94277 has 79 MA's), (21, 94313), (27, 94436), (33, 94496), (35, 94514), (56, 94658), (57, 94670), (58, 94694), (63, 94763),

Gene: FreddyDRoo_105 Start: 73522, Stop: 74043, Start Num: 14

Candidate Starts for FreddyDRoo_105:

(Start: 14 @73522 has 79 MA's), (24, 73654), (29, 73696), (30, 73702), (39, 73795), (40, 73810), (60, 73948), (61, 73975),

Gene: Genie2_110 Start: 74034, Stop: 74555, Start Num: 14

Candidate Starts for Genie2_110:

(Start: 14 @74034 has 79 MA's), (28, 74196), (29, 74208), (30, 74214), (39, 74307), (40, 74322), (41, 74331), (52, 74394), (54, 74403), (57, 74424), (59, 74451), (60, 74460), (63, 74514),

Gene: Gibbi_115 Start: 73983, Stop: 74504, Start Num: 14

Candidate Starts for Gibbi_115:

(Start: 14 @73983 has 79 MA's), (24, 74115), (28, 74145), (29, 74157), (30, 74163), (39, 74256), (40, 74271), (41, 74280), (52, 74343), (54, 74352), (57, 74373), (59, 74400), (60, 74409), (63, 74463),

Gene: Grayson_245 Start: 116794, Stop: 117357, Start Num: 16

Candidate Starts for Grayson_245:

(Start: 16 @116794 has 3 MA's), (17, 116797), (18, 116800), (21, 116827), (22, 116872), (25, 116938), (27, 116947), (29, 116965), (33, 117007), (51, 117142), (53, 117157), (56, 117169), (68, 117313),

Gene: HangryHippo_105 Start: 73885, Stop: 74406, Start Num: 14

Candidate Starts for HangryHippo_105:

(Start: 14 @73885 has 79 MA's), (24, 74017), (29, 74059), (30, 74065), (36, 74122), (39, 74158), (40, 74173), (60, 74311), (66, 74389),

Gene: IchabodCrane_107 Start: 73572, Stop: 74093, Start Num: 14

Candidate Starts for IchabodCrane_107:

(Start: 14 @73572 has 79 MA's), (24, 73704), (28, 73734), (29, 73746), (30, 73752), (39, 73845), (40, 73860), (41, 73869), (52, 73932), (54, 73941), (57, 73962), (59, 73989), (60, 73998), (63, 74052),

Gene: Jay2Jay_110 Start: 74702, Stop: 75223, Start Num: 14

Candidate Starts for Jay2Jay_110:

(Start: 14 @74702 has 79 MA's), (29, 74876), (30, 74882), (36, 74939), (39, 74975), (40, 74990), (53, 75068), (57, 75092), (60, 75128), (61, 75155),

Gene: JimJam_111 Start: 74394, Stop: 74915, Start Num: 14

Candidate Starts for JimJam_111:

(Start: 14 @74394 has 79 MA's), (24, 74526), (28, 74556), (29, 74568), (30, 74574), (39, 74667), (40, 74682), (41, 74691), (52, 74754), (54, 74763), (57, 74784), (59, 74811), (60, 74820), (63, 74874),

Gene: Jollison_109 Start: 73828, Stop: 74349, Start Num: 14

Candidate Starts for Jollison_109:

(Start: 14 @73828 has 79 MA's), (24, 73960), (28, 73990), (29, 74002), (30, 74008), (39, 74101), (40, 74116), (41, 74125), (52, 74188), (54, 74197), (57, 74218), (59, 74245), (60, 74254), (63, 74308),

Gene: KentuckyRacer_111 Start: 74234, Stop: 74779, Start Num: 10

Candidate Starts for KentuckyRacer_111:

(5, 74192), (9, 74222), (Start: 10 @74234 has 1 MA's), (24, 74390), (28, 74420), (29, 74432), (30, 74438), (39, 74531), (40, 74546), (41, 74555), (52, 74618), (54, 74627), (57, 74648), (59, 74675), (60, 74684), (63, 74738),

Gene: Larnav_105 Start: 73870, Stop: 74391, Start Num: 14

Candidate Starts for Larnav_105:

(Start: 14 @73870 has 79 MA's), (24, 74002), (29, 74044), (30, 74050), (36, 74107), (39, 74143), (40, 74158), (60, 74296), (66, 74374),

Gene: Leo04_106 Start: 74385, Stop: 74906, Start Num: 14

Candidate Starts for Leo04_106:

(Start: 14 @74385 has 79 MA's), (24, 74517), (29, 74559), (30, 74565), (36, 74622), (39, 74658), (40, 74673), (60, 74811), (66, 74889),

Gene: Liandry_106 Start: 74229, Stop: 74750, Start Num: 14

Candidate Starts for Liandry_106:

(Start: 14 @74229 has 79 MA's), (24, 74361), (29, 74403), (30, 74409), (39, 74502), (40, 74517), (60, 74655), (61, 74682),

Gene: Lifes_60 Start: 34232, Stop: 33729, Start Num: 13

Candidate Starts for Lifes_60:

(11, 34253), (Start: 13 @34232 has 1 MA's), (23, 34109), (29, 34064), (33, 34022), (34, 33998), (36, 33989), (59, 33809), (62, 33752), (63, 33743),

Gene: LilMartin_104 Start: 72925, Stop: 73446, Start Num: 14

Candidate Starts for LilMartin_104:

(Start: 14 @72925 has 79 MA's), (24, 73057), (29, 73099), (30, 73105), (36, 73162), (39, 73198), (40, 73213), (53, 73291), (57, 73315), (60, 73351), (61, 73378),

Gene: LilSaint_103 Start: 72314, Stop: 72835, Start Num: 14

Candidate Starts for LilSaint_103:

(Start: 14 @72314 has 79 MA's), (24, 72446), (29, 72488), (30, 72494), (39, 72587), (40, 72602), (53, 72680), (60, 72740),

Gene: LukeCage_109 Start: 73859, Stop: 74380, Start Num: 14

Candidate Starts for LukeCage_109:

(Start: 14 @73859 has 79 MA's), (24, 73991), (28, 74021), (29, 74033), (30, 74039), (39, 74132), (40, 74147), (57, 74249), (60, 74285), (61, 74312),

Gene: Lululemon_104 Start: 73266, Stop: 73787, Start Num: 14

Candidate Starts for Lululemon_104:

(Start: 14 @73266 has 79 MA's), (24, 73398), (29, 73440), (30, 73446), (36, 73503), (39, 73539), (40, 73554), (60, 73692), (66, 73770),

Gene: Marsus_105 Start: 73396, Stop: 73917, Start Num: 14

Candidate Starts for Marsus_105:

(Start: 14 @73396 has 79 MA's), (24, 73528), (29, 73570), (30, 73576), (36, 73633), (39, 73669), (40, 73684), (53, 73762), (57, 73786), (60, 73822), (61, 73849),

Gene: Mildred21_106 Start: 73167, Stop: 73688, Start Num: 14

Candidate Starts for Mildred21_106:

(4, 73101), (7, 73113), (8, 73119), (Start: 14 @73167 has 79 MA's), (21, 73203), (24, 73299), (29, 73341), (30, 73347), (39, 73440), (40, 73455), (53, 73533), (57, 73557), (60, 73593),

Gene: MindFlyer_107 Start: 73479, Stop: 74000, Start Num: 14

Candidate Starts for MindFlyer_107:

(Start: 14 @73479 has 79 MA's), (24, 73611), (28, 73641), (29, 73653), (30, 73659), (39, 73752), (40, 73767), (41, 73776), (52, 73839), (54, 73848), (57, 73869), (59, 73896), (60, 73905), (63, 73959),

Gene: Mugiwara_109 Start: 74364, Stop: 74885, Start Num: 14

Candidate Starts for Mugiwara_109:

(Start: 14 @74364 has 79 MA's), (28, 74526), (29, 74538), (30, 74544), (39, 74637), (40, 74652), (41, 74661), (52, 74724), (53, 74730), (57, 74754), (59, 74781), (60, 74790), (63, 74844),

Gene: MulchMansion_104 Start: 72925, Stop: 73446, Start Num: 14

Candidate Starts for MulchMansion_104:

(Start: 14 @72925 has 79 MA's), (24, 73057), (29, 73099), (30, 73105), (36, 73162), (39, 73198), (40, 73213), (53, 73291), (57, 73315), (60, 73351), (61, 73378),

Gene: Navo_104 Start: 74031, Stop: 74552, Start Num: 14

Candidate Starts for Navo_104:

(Start: 14 @74031 has 79 MA's), (24, 74163), (29, 74205), (30, 74211), (39, 74304), (40, 74319), (60, 74457), (61, 74484),

Gene: NiceHouse_182 Start: 101832, Stop: 102389, Start Num: 12

Candidate Starts for NiceHouse_182:

(Start: 12 @101832 has 1 MA's), (25, 101988), (27, 101997), (29, 102015), (33, 102057), (38, 102096), (45, 102168), (50, 102201), (52, 102225), (53, 102231), (56, 102243), (57, 102255), (67, 102378),

Gene: NootNoot_103 Start: 73143, Stop: 73664, Start Num: 14

Candidate Starts for NootNoot_103:

(Start: 14 @73143 has 79 MA's), (24, 73275), (29, 73317), (30, 73323), (39, 73416), (40, 73431), (60, 73569), (61, 73596),

Gene: Nova53_180 Start: 96507, Stop: 97016, Start Num: 14

Candidate Starts for Nova53_180:

(7, 96447), (Start: 12 @96498 has 1 MA's), (Start: 14 @96507 has 79 MA's), (20, 96528), (25, 96654), (27, 96663), (31, 96696), (33, 96723), (35, 96741), (37, 96753), (49, 96840), (54, 96876), (56, 96885), (58, 96921), (63, 96990),

Gene: PacManQ_104 Start: 73266, Stop: 73787, Start Num: 14

Candidate Starts for PacManQ_104:

(Start: 14 @73266 has 79 MA's), (24, 73398), (29, 73440), (30, 73446), (36, 73503), (39, 73539), (40, 73554), (60, 73692), (66, 73770),

Gene: Paradiddles_102 Start: 73292, Stop: 73813, Start Num: 14

Candidate Starts for Paradiddles_102:

(Start: 14 @73292 has 79 MA's), (24, 73424), (29, 73466), (30, 73472), (39, 73565), (40, 73580), (60, 73718), (61, 73745),

Gene: Peebs_104 Start: 73683, Stop: 74204, Start Num: 14

Candidate Starts for Peebs_104:

(Start: 14 @73683 has 79 MA's), (24, 73815), (29, 73857), (30, 73863), (36, 73920), (39, 73956), (40, 73971), (60, 74109), (66, 74187),

Gene: Pepperwood_105 Start: 73816, Stop: 74337, Start Num: 14

Candidate Starts for Pepperwood_105:

(Start: 14 @73816 has 79 MA's), (24, 73948), (29, 73990), (30, 73996), (36, 74053), (39, 74089), (40, 74104), (60, 74242), (66, 74320),

Gene: Peregrin_241 Start: 117602, Stop: 118165, Start Num: 16

Candidate Starts for Peregrin_241:

(Start: 16 @117602 has 3 MA's), (17, 117605), (21, 117635), (25, 117746), (27, 117755), (29, 117773), (32, 117812), (33, 117815), (37, 117845), (51, 117950), (68, 118121),

Gene: Persimmon_106 Start: 73077, Stop: 73598, Start Num: 14

Candidate Starts for Persimmon_106:

(Start: 14 @73077 has 79 MA's), (24, 73209), (29, 73251), (30, 73257), (39, 73350), (40, 73365), (60, 73503), (61, 73530),

Gene: PinkiePie_105 Start: 74229, Stop: 74750, Start Num: 14

Candidate Starts for PinkiePie_105:

(Start: 14 @74229 has 79 MA's), (24, 74361), (29, 74403), (30, 74409), (39, 74502), (40, 74517), (60, 74655), (61, 74682),

Gene: PumpkinSpice_110 Start: 74437, Stop: 74958, Start Num: 14

Candidate Starts for PumpkinSpice_110:

(Start: 14 @74437 has 79 MA's), (24, 74569), (28, 74599), (29, 74611), (30, 74617), (39, 74710), (40, 74725), (41, 74734), (52, 74797), (54, 74806), (57, 74827), (59, 74854), (60, 74863), (63, 74917),

Gene: PynkPanther_113 Start: 74664, Stop: 75185, Start Num: 14

Candidate Starts for PynkPanther_113:

(Start: 14 @74664 has 79 MA's), (24, 74796), (29, 74838), (30, 74844), (39, 74937), (40, 74952), (60, 75090), (61, 75117),

Gene: Quaran19_109 Start: 73862, Stop: 74383, Start Num: 14

Candidate Starts for Quaran19_109:

(Start: 14 @73862 has 79 MA's), (24, 73994), (28, 74024), (29, 74036), (30, 74042), (39, 74135), (40, 74150), (41, 74159), (52, 74222), (54, 74231), (57, 74252), (59, 74279), (60, 74288), (63, 74342),

Gene: Rikishi_109 Start: 73777, Stop: 74298, Start Num: 14

Candidate Starts for Rikishi_109:

(Start: 14 @73777 has 79 MA's), (24, 73909), (28, 73939), (29, 73951), (30, 73957), (39, 74050), (40, 74065), (41, 74074), (52, 74137), (54, 74146), (57, 74167), (59, 74194), (60, 74203), (63, 74257),

Gene: Riptide_101 Start: 71854, Stop: 72375, Start Num: 14

Candidate Starts for Riptide_101:

(Start: 14 @71854 has 79 MA's), (29, 72028), (30, 72034), (34, 72082), (39, 72127), (40, 72142), (53, 72220), (57, 72244), (60, 72280),

Gene: SaltySpittoon_109 Start: 73874, Stop: 74395, Start Num: 14

Candidate Starts for SaltySpittoon_109:

(Start: 14 @73874 has 79 MA's), (24, 74006), (28, 74036), (29, 74048), (30, 74054), (39, 74147), (40, 74162), (41, 74171), (52, 74234), (54, 74243), (57, 74264), (59, 74291), (60, 74300), (63, 74354),

Gene: Samisti12_106 Start: 75062, Stop: 75583, Start Num: 14

Candidate Starts for Samisti12_106:

(Start: 14 @75062 has 79 MA's), (24, 75194), (29, 75236), (30, 75242), (36, 75299), (39, 75335), (40, 75350), (60, 75488), (66, 75566),

Gene: Scheme_106 Start: 74467, Stop: 74988, Start Num: 14

Candidate Starts for Scheme_106:

(Start: 14 @74467 has 79 MA's), (24, 74599), (29, 74641), (30, 74647), (36, 74704), (39, 74740), (40, 74755), (60, 74893), (66, 74971),

Gene: Shuckle_104 Start: 74196, Stop: 74717, Start Num: 14

Candidate Starts for Shuckle_104:

(Start: 14 @74196 has 79 MA's), (24, 74328), (29, 74370), (30, 74376), (36, 74433), (39, 74469), (40, 74484), (57, 74586), (60, 74622), (66, 74700),

Gene: Sollertia_109 Start: 74034, Stop: 74555, Start Num: 14

Candidate Starts for Sollertia_109:

(Start: 14 @74034 has 79 MA's), (28, 74196), (29, 74208), (30, 74214), (39, 74307), (40, 74322), (41, 74331), (52, 74394), (54, 74403), (57, 74424), (59, 74451), (60, 74460), (63, 74514),

Gene: Spelly_110 Start: 73826, Stop: 74347, Start Num: 14

Candidate Starts for Spelly_110:

(Start: 14 @73826 has 79 MA's), (24, 73958), (28, 73988), (29, 74000), (30, 74006), (39, 74099), (40, 74114), (41, 74123), (52, 74186), (54, 74195), (57, 74216), (59, 74243), (60, 74252), (63, 74306),

Gene: Spilled_111 Start: 73943, Stop: 74464, Start Num: 14

Candidate Starts for Spilled_111:

(Start: 14 @73943 has 79 MA's), (24, 74075), (28, 74105), (29, 74117), (30, 74123), (39, 74216), (40, 74231), (41, 74240), (52, 74303), (54, 74312), (57, 74333), (59, 74360), (60, 74369), (63, 74423),

Gene: Squillium_107 Start: 74230, Stop: 74751, Start Num: 14

Candidate Starts for Squillium_107:

(Start: 14 @74230 has 79 MA's), (24, 74362), (29, 74404), (30, 74410), (39, 74503), (40, 74518), (60, 74656), (61, 74683),

Gene: Stanimal_109 Start: 73923, Stop: 74444, Start Num: 14

Candidate Starts for Stanimal_109:

(Start: 14 @73923 has 79 MA's), (28, 74085), (29, 74097), (30, 74103), (39, 74196), (40, 74211), (41, 74220), (52, 74283), (54, 74292), (57, 74313), (59, 74340), (60, 74349), (63, 74403),

Gene: StarPlatinum_111 Start: 74737, Stop: 75258, Start Num: 14

Candidate Starts for StarPlatinum_111:

(Start: 14 @74737 has 79 MA's), (19, 74749), (24, 74869), (28, 74899), (29, 74911), (30, 74917), (39, 75010), (40, 75025), (57, 75127), (60, 75163), (61, 75190),

Gene: Starbow_108 Start: 73847, Stop: 74368, Start Num: 14

Candidate Starts for Starbow_108:

(Start: 14 @73847 has 79 MA's), (24, 73979), (28, 74009), (29, 74021), (30, 74027), (39, 74120), (40, 74135), (41, 74144), (52, 74207), (54, 74216), (57, 74237), (59, 74264), (60, 74273), (63, 74327),

Gene: Sushi23_105 Start: 74041, Stop: 74562, Start Num: 14

Candidate Starts for Sushi23_105:

(Start: 14 @74041 has 79 MA's), (24, 74173), (29, 74215), (30, 74221), (36, 74278), (39, 74314), (40, 74329), (60, 74467), (66, 74545),

Gene: Targaryen_106 Start: 74752, Stop: 75273, Start Num: 14

Candidate Starts for Targaryen_106:

(Start: 14 @74752 has 79 MA's), (24, 74884), (29, 74926), (30, 74932), (36, 74989), (39, 75025), (40, 75040), (53, 75118), (57, 75142), (60, 75178), (61, 75205),

Gene: Teutsch_105 Start: 74241, Stop: 74762, Start Num: 14

Candidate Starts for Teutsch_105:

(Start: 14 @74241 has 79 MA's), (24, 74373), (29, 74415), (30, 74421), (36, 74478), (39, 74514), (40, 74529), (60, 74667), (66, 74745),

Gene: TomSawyer_108 Start: 73465, Stop: 73986, Start Num: 14

Candidate Starts for TomSawyer_108:

(Start: 14 @73465 has 79 MA's), (24, 73597), (28, 73627), (29, 73639), (30, 73645), (39, 73738), (40, 73753), (41, 73762), (52, 73825), (54, 73834), (57, 73855), (59, 73882), (60, 73891), (63, 73945),

Gene: Tomas_112 Start: 76069, Stop: 76593, Start Num: 14

Candidate Starts for Tomas_112:

(Start: 14 @76069 has 79 MA's), (18, 76078), (26, 76222), (28, 76231), (29, 76243), (30, 76249), (39, 76342), (40, 76357), (44, 76384), (53, 76435), (57, 76459), (60, 76495), (61, 76522), (65, 76564),

Gene: Tribute_104 Start: 73928, Stop: 74449, Start Num: 14

Candidate Starts for Tribute_104:

(Start: 14 @73928 has 79 MA's), (24, 74060), (29, 74102), (30, 74108), (36, 74165), (39, 74201), (40, 74216), (60, 74354), (66, 74432),

Gene: Trina_193 Start: 104738, Stop: 105238, Start Num: 15

Candidate Starts for Trina_193:

(Start: 15 @104738 has 1 MA's), (17, 104741), (21, 104771), (28, 104897), (29, 104909), (33, 104951), (42, 105032), (43, 105038), (46, 105053), (55, 105107), (57, 105125),

Gene: Warpy_109 Start: 74215, Stop: 74736, Start Num: 14

Candidate Starts for Warpy_109:

(Start: 14 @74215 has 79 MA's), (29, 74389), (30, 74395), (36, 74452), (39, 74488), (40, 74503), (53, 74581), (57, 74605), (60, 74641), (61, 74668),

Gene: WashU_109 Start: 74256, Stop: 74777, Start Num: 14

Candidate Starts for WashU_109:

(Start: 14 @74256 has 79 MA's), (24, 74388), (29, 74430), (30, 74436), (36, 74493), (39, 74529), (40, 74544), (60, 74682), (66, 74760),

Gene: Watermoore_104 Start: 74457, Stop: 74978, Start Num: 14

Candidate Starts for Watermoore_104:

(Start: 14 @74457 has 79 MA's), (24, 74589), (29, 74631), (30, 74637), (36, 74694), (39, 74730), (40, 74745), (60, 74883), (66, 74961),

Gene: Weasels2_249 Start: 119547, Stop: 120062, Start Num: 16

Candidate Starts for Weasels2_249:

(Start: 16 @119547 has 3 MA's), (27, 119700), (29, 119718), (33, 119760), (47, 119868), (48, 119871), (51, 119895), (59, 119961), (64, 120033),

Gene: WhereRU_104 Start: 73822, Stop: 74343, Start Num: 14

Candidate Starts for WhereRU_104:

(Start: 14 @73822 has 79 MA's), (24, 73954), (29, 73996), (30, 74002), (39, 74095), (40, 74110), (60, 74248), (61, 74275),

Gene: Wipeout_107 Start: 74216, Stop: 74737, Start Num: 14

Candidate Starts for Wipeout_107:

(Start: 14 @74216 has 79 MA's), (24, 74348), (28, 74378), (29, 74390), (30, 74396), (39, 74489), (40, 74504), (41, 74513), (52, 74576), (54, 74585), (57, 74606), (59, 74633), (60, 74642), (63, 74696),

Gene: Wofford_107 Start: 75439, Stop: 75960, Start Num: 14

Candidate Starts for Wofford_107:

(Start: 14 @75439 has 79 MA's), (21, 75475), (28, 75601), (29, 75613), (30, 75619), (39, 75712), (40, 75727), (41, 75736), (52, 75799), (53, 75805), (57, 75829), (59, 75856), (60, 75865), (63, 75919),

Gene: Yaboi_110 Start: 74011, Stop: 74532, Start Num: 14

Candidate Starts for Yaboi_110:

(Start: 14 @74011 has 79 MA's), (28, 74173), (29, 74185), (30, 74191), (39, 74284), (40, 74299), (41, 74308), (52, 74371), (54, 74380), (57, 74401), (59, 74428), (60, 74437), (63, 74491),