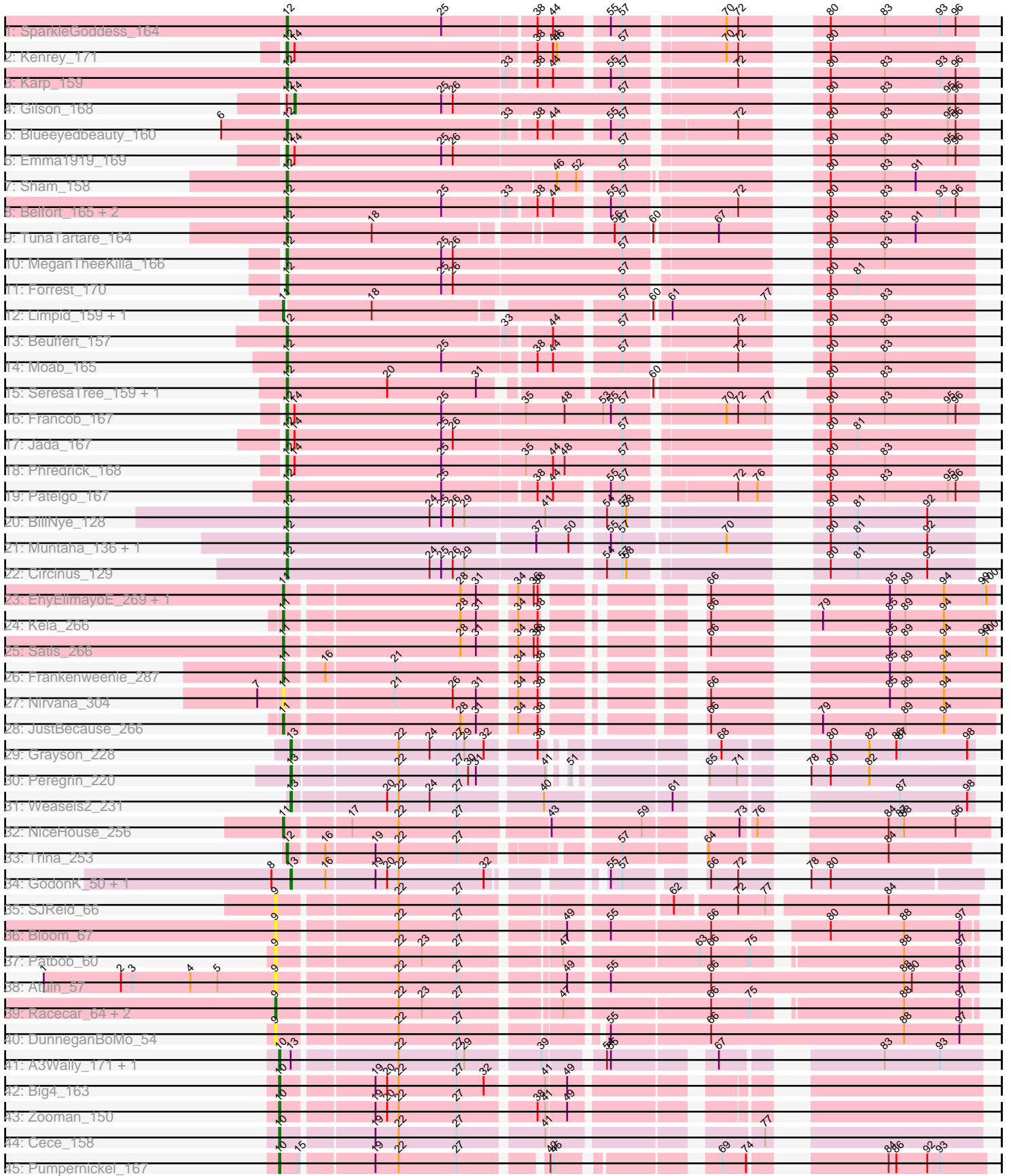


Pham 156415



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 156415 Report

This analysis was run 04/12/24 on database version 558.

Pham number 156415 has 55 members, 9 are drafts.

Phages represented in each track:

- Track 1 : SparkleGoddess_164
- Track 2 : Kenrey_171
- Track 3 : Karp_159
- Track 4 : Gilson_168
- Track 5 : Blueeyedbeauty_160
- Track 6 : Emma1919_169
- Track 7 : Sham_158
- Track 8 : Belfort_165, Comrade_162, Stigma_163
- Track 9 : TunaTartare_164
- Track 10 : MeganTheeKilla_166
- Track 11 : Forrest_170
- Track 12 : Limpid_159, Annadreamy_152
- Track 13 : Beuffert_157
- Track 14 : Moab_165
- Track 15 : SeresaTree_159, Faust_157
- Track 16 : Francob_167
- Track 17 : Jada_167
- Track 18 : Phredrick_168
- Track 19 : Patelgo_167
- Track 20 : BillNye_128
- Track 21 : Muntaha_136, Wakanda_135
- Track 22 : Circinus_129
- Track 23 : EhyElimayoE_269, Kradal_266
- Track 24 : Kela_266
- Track 25 : Satis_266
- Track 26 : Frankenweenie_287
- Track 27 : Nirvana_304
- Track 28 : JustBecause_266
- Track 29 : Grayson_228
- Track 30 : Peregrin_220
- Track 31 : Weasels2_231
- Track 32 : NiceHouse_256
- Track 33 : Trina_253
- Track 34 : GodonK_50, Phendrix_50
- Track 35 : SJReid_66
- Track 36 : Bloom_67
- Track 37 : Patbob_60

- Track 38 : Atuin_57
- Track 39 : Racecar_64, Talia1610_67, Mimi_69
- Track 40 : DunneganBoMo_54
- Track 41 : A3Wally_171, PauloDiaboli_171
- Track 42 : Big4_163
- Track 43 : Zooman_150
- Track 44 : Cece_158
- Track 45 : Pumpernickel_167

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 24 of the 46 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Belfort_165, Beuffert_157, BillNye_128, Blueeyedbeauty_160, Circinus_129, Comrade_162, Emma1919_169, Faust_157, Forrest_170, Francob_167, Jada_167, Karp_159, Kenrey_171, MeganTheeKilla_166, Moab_165, Muntaha_136, Patelgo_167, Phredrick_168, SeresaTree_159, Sham_158, SparkleGoddess_164, Stigma_163, Trina_253, TunaTartare_164, Wakanda_135,

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

- Gilson_168,

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

- A3Wally_171, Annadreamy_152, Atuin_57, Big4_163, Bloom_67, Cece_158, DunneganBoMo_54, EhyElimayoE_269, Frankenweenie_287, GodonK_50, Grayson_228, JustBecause_266, Kela_266, Kradal_266, Limpid_159, Mimi_69, NiceHouse_256, Nirvana_304, Patbob_60, PauloDiaboli_171, Peregrin_220, Phendrix_50, Pumpernickel_167, Racecar_64, SJReid_66, Satis_266, Talia1610_67, Weasels2_231, Zooman_150,

Summary by start number:

Start 9:

- Found in 8 of 55 (14.5%) of genes in pham
- Manual Annotations of this start: 1 of 46
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin_57 (FC), Bloom_67 (FC), DunneganBoMo_54 (FC), Mimi_69 (FC), Patbob_60 (FC), Racecar_64 (FC), SJReid_66 (FC), Talia1610_67 (FC),

Start 10:

- Found in 6 of 55 (10.9%) of genes in pham
- Manual Annotations of this start: 6 of 46
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally_171 (GD1), Big4_163 (GD2), Cece_158 (GD3), PauloDiaboli_171 (GD1), Pumpernickel_167 (GD4), Zooman_150 (GD2),

Start 11:

- Found in 10 of 55 (18.2%) of genes in pham
- Manual Annotations of this start: 9 of 46
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Annadreamy_152 (BK1), EhyElimayoE_269 (BM), Frankenweenie_287 (BM), JustBecause_266 (BM), Kela_266 (BM), Kradal_266 (BM), Limpid_159 (BK1), NiceHouse_256 (CE), Nirvana_304 (BM), Satis_266 (BM),

Start 12:

- Found in 26 of 55 (47.3%) of genes in pham
- Manual Annotations of this start: 24 of 46
- Called 96.2% of time when present
- Phage (with cluster) where this start called: Belfort_165 (BK1), Beuffert_157 (BK1), BillNye_128 (BK2), Blueeyedbeauty_160 (BK1), Circinus_129 (BK2), Comrade_162 (BK1), Emma1919_169 (BK1), Faust_157 (BK1), Forrest_170 (BK1), Francob_167 (BK1), Jada_167 (BK1), Karp_159 (BK1), Kenrey_171 (BK1), MeganTheeKilla_166 (BK1), Moab_165 (BK1), Muntaha_136 (BK2), Patelgo_167 (BK1), Phredrick_168 (BK1), SeresaTree_159 (BK1), Sham_158 (BK1), SparkleGoddess_164 (BK1), Stigma_163 (BK1), Trina_253 (CE), TunaTartare_164 (BK1), Wakanda_135 (BK2),

Start 13:

- Found in 7 of 55 (12.7%) of genes in pham
- Manual Annotations of this start: 5 of 46
- Called 71.4% of time when present
- Phage (with cluster) where this start called: GodonK_50 (DK), Grayson_228 (CB), Peregrin_220 (CB), Phendrix_50 (DK), Weasels2_231 (CB),

Start 14:

- Found in 6 of 55 (10.9%) of genes in pham
- Manual Annotations of this start: 1 of 46
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Gilson_168 (BK1),

Summary by clusters:

There are 11 clusters represented in this pham: GD1, GD2, GD3, GD4, DK, BM, CE, FC, BK1, BK2, CB,

Info for manual annotations of cluster BK1:

- Start number 11 was manually annotated 2 times for cluster BK1.
- Start number 12 was manually annotated 19 times for cluster BK1.
- Start number 14 was manually annotated 1 time for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 12 was manually annotated 4 times for cluster BK2.

Info for manual annotations of cluster BM:

- Start number 11 was manually annotated 6 times for cluster BM.

Info for manual annotations of cluster CB:

- Start number 13 was manually annotated 3 times for cluster CB.

Info for manual annotations of cluster CE:

- Start number 11 was manually annotated 1 time for cluster CE.
- Start number 12 was manually annotated 1 time for cluster CE.

Info for manual annotations of cluster DK:

- Start number 13 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster FC:

- Start number 9 was manually annotated 1 time for cluster FC.

Info for manual annotations of cluster GD1:

- Start number 10 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 10 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 10 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 10 was manually annotated 1 time for cluster GD4.

Gene Information:

Gene: A3Wally_171 Start: 96202, Stop: 96663, Start Num: 10

Candidate Starts for A3Wally_171:

(Start: 10 @96202 has 6 MA's), (Start: 13 @96211 has 5 MA's), (22, 96286), (27, 96331), (29, 96337), (39, 96388), (54, 96427), (55, 96430), (67, 96496), (83, 96589), (93, 96631),

Gene: Annadreamy_152 Start: 82558, Stop: 83025, Start Num: 11

Candidate Starts for Annadreamy_152:

(Start: 11 @82558 has 9 MA's), (18, 82624), (57, 82795), (60, 82816), (61, 82825), (77, 82897), (80, 82915), (83, 82957),

Gene: Atuin_57 Start: 22728, Stop: 23243, Start Num: 9

Candidate Starts for Atuin_57:

(1, 22548), (2, 22608), (3, 22617), (4, 22662), (5, 22683), (Start: 9 @22728 has 1 MA's), (22, 22815), (27, 22860), (49, 22932), (55, 22959), (66, 23037), (88, 23187), (90, 23193), (97, 23229),

Gene: Belfort_165 Start: 88488, Stop: 88964, Start Num: 12

Candidate Starts for Belfort_165:

(Start: 12 @88488 has 24 MA's), (25, 88608), (33, 88656), (38, 88677), (44, 88689), (55, 88725), (57, 88734), (72, 88812), (80, 88851), (83, 88893), (93, 88935), (96, 88947),

Gene: Beuffert_157 Start: 86417, Stop: 86890, Start Num: 12

Candidate Starts for Beuffert_157:

(Start: 12 @86417 has 24 MA's), (33, 86585), (44, 86618), (57, 86663), (72, 86741), (80, 86780), (83, 86822),

Gene: Big4_163 Start: 93329, Stop: 93793, Start Num: 10

Candidate Starts for Big4_163:

(Start: 10 @93329 has 6 MA's), (19, 93395), (20, 93404), (22, 93413), (27, 93458), (32, 93479), (41, 93518), (49, 93533),

Gene: BillNye_128 Start: 77977, Stop: 78453, Start Num: 12

Candidate Starts for BillNye_128:

(Start: 12 @77977 has 24 MA's), (24, 78088), (25, 78097), (26, 78106), (29, 78115), (41, 78175), (54, 78214), (57, 78226), (58, 78229), (80, 78343), (81, 78364), (92, 78418),

Gene: Bloom_67 Start: 26741, Stop: 27235, Start Num: 9

Candidate Starts for Bloom_67:

(Start: 9 @26741 has 1 MA's), (22, 26828), (27, 26873), (49, 26945), (55, 26972), (66, 27047), (80, 27125), (88, 27182), (97, 27224),

Gene: Blueeyedbeauty_160 Start: 86300, Stop: 86776, Start Num: 12

Candidate Starts for Blueeyedbeauty_160:

(6, 86249), (Start: 12 @86300 has 24 MA's), (33, 86468), (38, 86489), (44, 86501), (55, 86537), (57, 86546), (72, 86624), (80, 86663), (83, 86705), (95, 86753), (96, 86759),

Gene: Cece_158 Start: 98749, Stop: 99213, Start Num: 10

Candidate Starts for Cece_158:

(Start: 10 @98749 has 6 MA's), (19, 98815), (22, 98833), (27, 98878), (41, 98938), (77, 99076),

Gene: Circinus_129 Start: 77945, Stop: 78421, Start Num: 12

Candidate Starts for Circinus_129:

(Start: 12 @77945 has 24 MA's), (24, 78056), (25, 78065), (26, 78074), (29, 78083), (54, 78182), (57, 78194), (58, 78197), (80, 78311), (81, 78332), (92, 78386),

Gene: Comrade_162 Start: 88690, Stop: 89166, Start Num: 12

Candidate Starts for Comrade_162:

(Start: 12 @88690 has 24 MA's), (25, 88810), (33, 88858), (38, 88879), (44, 88891), (55, 88927), (57, 88936), (72, 89014), (80, 89053), (83, 89095), (93, 89137), (96, 89149),

Gene: DunneganBoMo_54 Start: 20816, Stop: 21325, Start Num: 9

Candidate Starts for DunneganBoMo_54:

(Start: 9 @20816 has 1 MA's), (22, 20903), (27, 20948), (55, 21041), (66, 21116), (88, 21266), (97, 21308),

Gene: EhyElimayoE_269 Start: 153102, Stop: 152647, Start Num: 11

Candidate Starts for EhyElimayoE_269:

(Start: 11 @153102 has 9 MA's), (28, 152973), (31, 152961), (34, 152937), (36, 152925), (38, 152922), (66, 152835), (85, 152727), (89, 152715), (94, 152685), (99, 152655), (100, 152652),

Gene: Emma1919_169 Start: 87379, Stop: 87867, Start Num: 12

Candidate Starts for Emma1919_169:

(Start: 12 @87379 has 24 MA's), (Start: 14 @87385 has 1 MA's), (25, 87499), (26, 87508), (57, 87637), (80, 87754), (83, 87796), (95, 87844), (96, 87850),

Gene: Faust_157 Start: 87675, Stop: 88151, Start Num: 12

Candidate Starts for Faust_157:

(Start: 12 @87675 has 24 MA's), (20, 87753), (31, 87822), (60, 87936), (80, 88041), (83, 88083),

Gene: Forrest_170 Start: 88362, Stop: 88847, Start Num: 12

Candidate Starts for Forrest_170:

(Start: 12 @88362 has 24 MA's), (25, 88482), (26, 88491), (57, 88620), (80, 88737), (81, 88758),

Gene: Francob_167 Start: 87884, Stop: 88372, Start Num: 12

Candidate Starts for Francob_167:

(Start: 12 @87884 has 24 MA's), (Start: 14 @87890 has 1 MA's), (25, 88004), (35, 88067), (48, 88097), (53, 88127), (55, 88133), (57, 88142), (70, 88211), (72, 88220), (77, 88241), (80, 88259), (83, 88301), (95, 88349), (96, 88355),

Gene: Frankenweenie_287 Start: 164243, Stop: 163782, Start Num: 11

Candidate Starts for Frankenweenie_287:

(Start: 11 @164243 has 9 MA's), (16, 164216), (21, 164165), (34, 164078), (38, 164063), (85, 163868), (89, 163856), (94, 163826),

Gene: Gilson_168 Start: 87347, Stop: 87829, Start Num: 14

Candidate Starts for Gilson_168:

(Start: 12 @87341 has 24 MA's), (Start: 14 @87347 has 1 MA's), (25, 87461), (26, 87470), (57, 87599), (80, 87716), (83, 87758), (95, 87806), (96, 87812),

Gene: GodonK_50 Start: 16803, Stop: 17243, Start Num: 13

Candidate Starts for GodonK_50:

(8, 16788), (Start: 13 @16803 has 5 MA's), (16, 16830), (19, 16866), (20, 16875), (22, 16884), (32, 16950), (55, 17013), (57, 17022), (66, 17067), (72, 17088), (78, 17115), (80, 17130),

Gene: Grayson_228 Start: 111586, Stop: 112026, Start Num: 13

Candidate Starts for Grayson_228:

(Start: 13 @111586 has 5 MA's), (22, 111664), (24, 111688), (27, 111709), (29, 111715), (32, 111730), (38, 111763), (68, 111865), (80, 111916), (82, 111946), (86, 111967), (87, 111970), (98, 112021),

Gene: Jada_167 Start: 87058, Stop: 87543, Start Num: 12

Candidate Starts for Jada_167:

(Start: 12 @87058 has 24 MA's), (Start: 14 @87064 has 1 MA's), (25, 87178), (26, 87187), (57, 87316), (80, 87433), (81, 87454),

Gene: JustBecause_266 Start: 149782, Stop: 149327, Start Num: 11

Candidate Starts for JustBecause_266:

(Start: 11 @149782 has 9 MA's), (28, 149653), (31, 149641), (34, 149617), (38, 149602), (66, 149515), (79, 149458), (89, 149395), (94, 149365),

Gene: Karp_159 Start: 87914, Stop: 88390, Start Num: 12

Candidate Starts for Karp_159:

(Start: 12 @87914 has 24 MA's), (33, 88082), (38, 88103), (44, 88115), (55, 88151), (57, 88160), (72, 88238), (80, 88277), (83, 88319), (93, 88361), (96, 88373),

Gene: Kela_266 Start: 151386, Stop: 150931, Start Num: 11

Candidate Starts for Kela_266:

(Start: 11 @151386 has 9 MA's), (28, 151257), (31, 151245), (34, 151221), (38, 151206), (66, 151119), (79, 151062), (85, 151011), (89, 150999), (94, 150969),

Gene: Kenrey_171 Start: 88511, Stop: 88984, Start Num: 12

Candidate Starts for Kenrey_171:

(Start: 12 @88511 has 24 MA's), (Start: 14 @88517 has 1 MA's), (38, 88700), (44, 88712), (46, 88715), (57, 88757), (70, 88826), (72, 88835), (80, 88874),

Gene: Kradal_266 Start: 153099, Stop: 152644, Start Num: 11

Candidate Starts for Kradal_266:

(Start: 11 @153099 has 9 MA's), (28, 152970), (31, 152958), (34, 152934), (36, 152922), (38, 152919), (66, 152832), (85, 152724), (89, 152712), (94, 152682), (99, 152652), (100, 152649),

Gene: Limpid_159 Start: 87871, Stop: 88338, Start Num: 11

Candidate Starts for Limpid_159:

(Start: 11 @87871 has 9 MA's), (18, 87937), (57, 88108), (60, 88129), (61, 88138), (77, 88210), (80, 88228), (83, 88270),

Gene: MeganTheeKilla_166 Start: 86965, Stop: 87450, Start Num: 12

Candidate Starts for MeganTheeKilla_166:

(Start: 12 @86965 has 24 MA's), (25, 87085), (26, 87094), (57, 87223), (80, 87340), (83, 87382),

Gene: Mimi_69 Start: 26091, Stop: 26582, Start Num: 9

Candidate Starts for Mimi_69:

(Start: 9 @26091 has 1 MA's), (22, 26178), (23, 26196), (27, 26223), (47, 26292), (66, 26397), (75, 26427), (88, 26529), (97, 26571),

Gene: Moab_165 Start: 89688, Stop: 90161, Start Num: 12

Candidate Starts for Moab_165:

(Start: 12 @89688 has 24 MA's), (25, 89808), (38, 89877), (44, 89889), (57, 89934), (72, 90012), (80, 90051), (83, 90093),

Gene: Muntaha_136 Start: 76880, Stop: 77359, Start Num: 12

Candidate Starts for Muntaha_136:

(Start: 12 @76880 has 24 MA's), (37, 77069), (50, 77093), (55, 77117), (57, 77126), (70, 77201), (80, 77249), (81, 77270), (92, 77324),

Gene: NiceHouse_256 Start: 128727, Stop: 129197, Start Num: 11

Candidate Starts for NiceHouse_256:

(Start: 11 @128727 has 9 MA's), (17, 128772), (22, 128808), (27, 128853), (43, 128919), (59, 128982), (73, 129039), (76, 129048), (84, 129120), (87, 129129), (88, 129132), (96, 129171),

Gene: Nirvana_304 Start: 164957, Stop: 164496, Start Num: 11

Candidate Starts for Nirvana_304:

(7, 164975), (Start: 11 @164957 has 9 MA's), (21, 164879), (26, 164834), (31, 164816), (34, 164792), (38, 164777), (66, 164690), (85, 164582), (89, 164570), (94, 164540),

Gene: Patbob_60 Start: 25547, Stop: 26038, Start Num: 9

Candidate Starts for Patbob_60:

(Start: 9 @25547 has 1 MA's), (22, 25634), (23, 25652), (27, 25679), (47, 25748), (63, 25844), (66, 25853), (75, 25883), (88, 25985), (97, 26027),

Gene: Patelgo_167 Start: 90380, Stop: 90856, Start Num: 12

Candidate Starts for Patelgo_167:

(Start: 12 @90380 has 24 MA's), (25, 90500), (38, 90569), (44, 90581), (55, 90617), (57, 90626), (72, 90704), (76, 90719), (80, 90743), (83, 90785), (95, 90833), (96, 90839),

Gene: PauloDiaboli_171 Start: 94249, Stop: 94710, Start Num: 10

Candidate Starts for PauloDiaboli_171:

(Start: 10 @94249 has 6 MA's), (Start: 13 @94258 has 5 MA's), (22, 94333), (27, 94378), (29, 94384), (39, 94435), (54, 94474), (55, 94477), (67, 94543), (83, 94636), (93, 94678),

Gene: Peregrin_220 Start: 110987, Stop: 111421, Start Num: 13

Candidate Starts for Peregrin_220:

(Start: 13 @110987 has 5 MA's), (22, 111065), (27, 111110), (30, 111119), (31, 111125), (41, 111170), (51, 111176), (65, 111251), (71, 111272), (78, 111296), (80, 111311), (82, 111341),

Gene: Phendrix_50 Start: 16816, Stop: 17256, Start Num: 13

Candidate Starts for Phendrix_50:

(8, 16801), (Start: 13 @16816 has 5 MA's), (16, 16843), (19, 16879), (20, 16888), (22, 16897), (32, 16963), (55, 17026), (57, 17035), (66, 17080), (72, 17101), (78, 17128), (80, 17143),

Gene: Phredrick_168 Start: 86854, Stop: 87339, Start Num: 12

Candidate Starts for Phredrick_168:

(Start: 12 @86854 has 24 MA's), (Start: 14 @86860 has 1 MA's), (25, 86974), (35, 87037), (44, 87058), (48, 87067), (57, 87112), (80, 87229), (83, 87271),

Gene: Pumpernickel_167 Start: 96347, Stop: 96799, Start Num: 10

Candidate Starts for Pumpernickel_167:

(Start: 10 @96347 has 6 MA's), (15, 96362), (19, 96413), (22, 96431), (27, 96476), (42, 96530), (45, 96533), (69, 96632), (74, 96650), (84, 96725), (86, 96731), (92, 96755), (93, 96764),

Gene: Racecar_64 Start: 26744, Stop: 27235, Start Num: 9

Candidate Starts for Racecar_64:

(Start: 9 @26744 has 1 MA's), (22, 26831), (23, 26849), (27, 26876), (47, 26945), (66, 27050), (75, 27080), (88, 27182), (97, 27224),

Gene: SJReid_66 Start: 26527, Stop: 27021, Start Num: 9

Candidate Starts for SJReid_66:

(Start: 9 @26527 has 1 MA's), (22, 26614), (27, 26659), (62, 26800), (72, 26845), (77, 26866), (84, 26953),

Gene: Satis_266 Start: 153436, Stop: 152981, Start Num: 11

Candidate Starts for Satis_266:

(Start: 11 @153436 has 9 MA's), (28, 153307), (31, 153295), (34, 153271), (36, 153259), (38, 153256), (66, 153169), (85, 153061), (89, 153049), (94, 153019), (99, 152989), (100, 152986),

Gene: SeresaTree_159 Start: 87057, Stop: 87533, Start Num: 12

Candidate Starts for SeresaTree_159:

(Start: 12 @87057 has 24 MA's), (20, 87135), (31, 87204), (60, 87318), (80, 87423), (83, 87465),

Gene: Sham_158 Start: 88846, Stop: 89325, Start Num: 12

Candidate Starts for Sham_158:

(Start: 12 @88846 has 24 MA's), (46, 89053), (52, 89068), (57, 89095), (80, 89215), (83, 89257), (91, 89281),

Gene: SparkleGoddess_164 Start: 88701, Stop: 89177, Start Num: 12

Candidate Starts for SparkleGoddess_164:

(Start: 12 @88701 has 24 MA's), (25, 88821), (38, 88890), (44, 88902), (55, 88938), (57, 88947), (70, 89016), (72, 89025), (80, 89064), (83, 89106), (93, 89148), (96, 89160),

Gene: Stigma_163 Start: 89135, Stop: 89611, Start Num: 12

Candidate Starts for Stigma_163:

(Start: 12 @89135 has 24 MA's), (25, 89255), (33, 89303), (38, 89324), (44, 89336), (55, 89372), (57, 89381), (72, 89459), (80, 89498), (83, 89540), (93, 89582), (96, 89594),

Gene: Talia1610_67 Start: 26109, Stop: 26600, Start Num: 9

Candidate Starts for Talia1610_67:

(Start: 9 @26109 has 1 MA's), (22, 26196), (23, 26214), (27, 26241), (47, 26310), (66, 26415), (75, 26445), (88, 26547), (97, 26589),

Gene: Trina_253 Start: 127069, Stop: 127509, Start Num: 12

Candidate Starts for Trina_253:

(Start: 12 @127069 has 24 MA's), (16, 127093), (19, 127129), (22, 127147), (27, 127192), (57, 127294), (64, 127342), (84, 127447),

Gene: TunaTartare_164 Start: 90092, Stop: 90559, Start Num: 12

Candidate Starts for TunaTartare_164:

(Start: 12 @90092 has 24 MA's), (18, 90158), (56, 90323), (57, 90329), (60, 90350), (67, 90395), (80, 90449), (83, 90491), (91, 90515),

Gene: Wakanda_135 Start: 76822, Stop: 77301, Start Num: 12

Candidate Starts for Wakanda_135:

(Start: 12 @76822 has 24 MA's), (37, 77011), (50, 77035), (55, 77059), (57, 77068), (70, 77143), (80, 77191), (81, 77212), (92, 77266),

Gene: Weasels2_231 Start: 113792, Stop: 114247, Start Num: 13

Candidate Starts for Weasels2_231:

(Start: 13 @113792 has 5 MA's), (20, 113861), (22, 113870), (24, 113894), (27, 113915), (40, 113975), (61, 114065), (87, 114191), (98, 114242),

Gene: Zooman_150 Start: 90927, Stop: 91391, Start Num: 10

Candidate Starts for Zooman_150:

(Start: 10 @90927 has 6 MA's), (19, 90993), (20, 91002), (22, 91011), (27, 91056), (38, 91110), (41, 91116), (49, 91131),