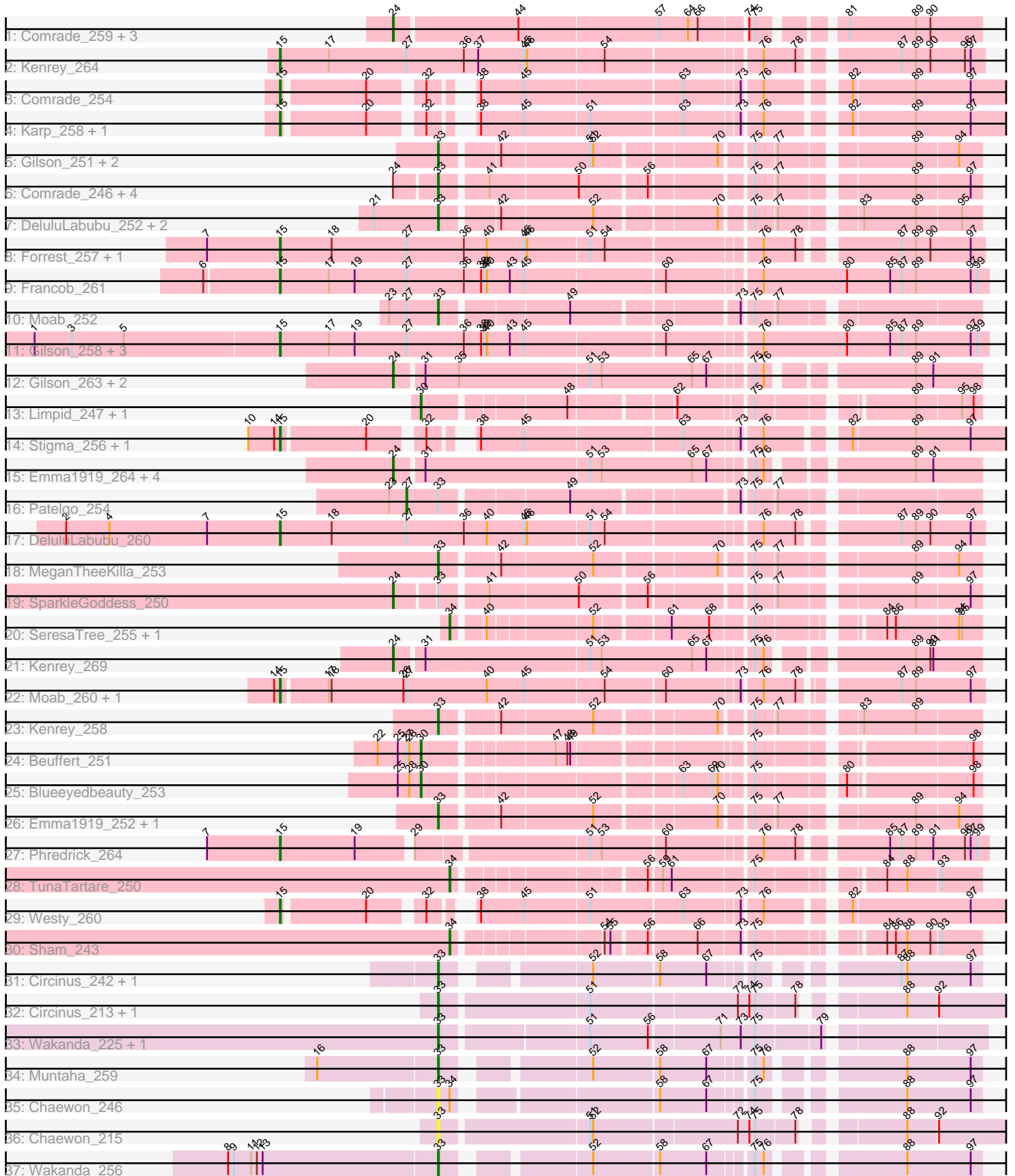


Pham 308574



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 308574 Report

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

Pham number 308574 has 67 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Comrade_259, Belfort_264, Stigma_261, SparkleGoddess_263
- Track 2 : Kenrey_264
- Track 3 : Comrade_254
- Track 4 : Karp_258, Belfort_259
- Track 5 : Gilson_251, Maupel_254, Francob_255
- Track 6 : Comrade_246, Karp_250, Stigma_248, Belfort_251, Westy_252
- Track 7 : DeluluLabubu_252, Jada_250, Forrest_250
- Track 8 : Forrest_257, Jada_258
- Track 9 : Francob_261
- Track 10 : Moab_252
- Track 11 : Gilson_258, Emma1919_259, MeganTheeKilla_260, Maupel_264
- Track 12 : Gilson_263, Maupel_269, Francob_266
- Track 13 : Limpid_247, Annadreamy_241
- Track 14 : Stigma_256, SparkleGoddess_258
- Track 15 : Emma1919_264, Phredrick_269, DeluluLabubu_265, Forrest_262, Jada_263
- Track 16 : Patelgo_254
- Track 17 : DeluluLabubu_260
- Track 18 : MeganTheeKilla_253
- Track 19 : SparkleGoddess_250
- Track 20 : SeresaTree_255, Faust_251
- Track 21 : Kenrey_269
- Track 22 : Moab_260, Patelgo_263
- Track 23 : Kenrey_258
- Track 24 : Beuffert_251
- Track 25 : Blueeyedbeauty_253
- Track 26 : Emma1919_252, Phredrick_257
- Track 27 : Phredrick_264
- Track 28 : TunaTartare_250
- Track 29 : Westy_260
- Track 30 : Sham_243
- Track 31 : Circinus_242, BillNye_243
- Track 32 : Circinus_213, BillNye_213
- Track 33 : Wakanda_225, Muntaha_229
- Track 34 : Muntaha_259
- Track 35 : Chaewon_246
- Track 36 : Chaewon_215

- Track 37 : Wakanda_256

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

The start number called the most often in the published annotations is 33, it was called in 23 of the 61 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Belfort_251, BillNye_213, BillNye_243, Chaewon_215, Chaewon_246, Circinus_213, Circinus_242, Comrade_246, DeluluLabubu_252, Emma1919_252, Forrest_250, Francob_255, Gilson_251, Jada_250, Karp_250, Kenrey_258, Maupel_254, MeganTheeKilla_253, Moab_252, Muntaha_229, Muntaha_259, Phredrick_257, Stigma_248, Wakanda_225, Wakanda_256, Westy_252,

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

- Patelgo_254, SparkleGoddess_250,

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

- Annadreamy_241, Belfort_259, Belfort_264, Beuffert_251, Blueeyedbeauty_253, Comrade_254, Comrade_259, DeluluLabubu_260, DeluluLabubu_265, Emma1919_259, Emma1919_264, Faust_251, Forrest_257, Forrest_262, Francob_261, Francob_266, Gilson_258, Gilson_263, Jada_258, Jada_263, Karp_258, Kenrey_264, Kenrey_269, Limpid_247, Maupel_264, Maupel_269, MeganTheeKilla_260, Moab_260, Patelgo_263, Phredrick_264, Phredrick_269, SeresaTree_255, Sham_243, SparkleGoddess_258, SparkleGoddess_263, Stigma_256, Stigma_261, TunaTartare_250, Westy_260,

Summary by start number:

Start 15:

- Found in 18 of 67 (26.9%) of genes in pham
- Manual Annotations of this start: 17 of 61
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Belfort_259 (BK1), Comrade_254 (BK1), DeluluLabubu_260 (BK1), Emma1919_259 (BK1), Forrest_257 (BK1), Francob_261 (BK1), Gilson_258 (BK1), Jada_258 (BK1), Karp_258 (BK1), Kenrey_264 (BK1), Maupel_264 (BK1), MeganTheeKilla_260 (BK1), Moab_260 (BK1), Patelgo_263 (BK1), Phredrick_264 (BK1), SparkleGoddess_258 (BK1), Stigma_256 (BK1), Westy_260 (BK1),

Start 24:

- Found in 19 of 67 (28.4%) of genes in pham
- Manual Annotations of this start: 13 of 61
- Called 73.7% of time when present
- Phage (with cluster) where this start called: Belfort_264 (BK1), Comrade_259 (BK1), DeluluLabubu_265 (BK1), Emma1919_264 (BK1), Forrest_262 (BK1), Francob_266 (BK1), Gilson_263 (BK1), Jada_263 (BK1), Kenrey_269 (BK1), Maupel_269 (BK1), Phredrick_269 (BK1), SparkleGoddess_250 (BK1), SparkleGoddess_263 (BK1), Stigma_261 (BK1),

Start 27:

- Found in 14 of 67 (20.9%) of genes in pham
- Manual Annotations of this start: 1 of 61
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Patelgo_254 (BK1),

Start 30:

- Found in 4 of 67 (6.0%) of genes in pham
- Manual Annotations of this start: 4 of 61
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Annadreamy_241 (BK1), Beuffert_251 (BK1), Blueeyedbeauty_253 (BK1), Limpid_247 (BK1),

Start 33:

- Found in 28 of 67 (41.8%) of genes in pham
- Manual Annotations of this start: 23 of 61
- Called 92.9% of time when present
- Phage (with cluster) where this start called: Belfort_251 (BK1), BillNye_213 (BK2), BillNye_243 (BK2), Chaewon_215 (BK2), Chaewon_246 (BK2), Circinus_213 (BK2), Circinus_242 (BK2), Comrade_246 (BK1), DeluluLabubu_252 (BK1), Emma1919_252 (BK1), Forrest_250 (BK1), Francob_255 (BK1), Gilson_251 (BK1), Jada_250 (BK1), Karp_250 (BK1), Kenrey_258 (BK1), Maupel_254 (BK1), MeganTheeKilla_253 (BK1), Moab_252 (BK1), Muntaha_229 (BK2), Muntaha_259 (BK2), Phredrick_257 (BK1), Stigma_248 (BK1), Wakanda_225 (BK2), Wakanda_256 (BK2), Westy_252 (BK1),

Start 34:

- Found in 5 of 67 (7.5%) of genes in pham
- Manual Annotations of this start: 3 of 61
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Faust_251 (BK1), SeresaTree_255 (BK1), Sham_243 (BK1), TunaTartare_250 (BK1),

Summary by clusters:

There are 2 clusters represented in this pham: BK1, BK2,

Info for manual annotations of cluster BK1:

- Start number 15 was manually annotated 17 times for cluster BK1.
- Start number 24 was manually annotated 13 times for cluster BK1.
- Start number 27 was manually annotated 1 time for cluster BK1.
- Start number 30 was manually annotated 4 times for cluster BK1.
- Start number 33 was manually annotated 15 times for cluster BK1.
- Start number 34 was manually annotated 3 times for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 33 was manually annotated 8 times for cluster BK2.

Gene Information:

Gene: Annadreamy_241 Start: 115119, Stop: 115625, Start Num: 30

Candidate Starts for Annadreamy_241:

(Start: 30 @115119 has 4 MA's), (48, 115254), (62, 115353), (75, 115422), (89, 115560), (95, 115605), (98, 115617),

Gene: Belfort_264 Start: 125997, Stop: 126557, Start Num: 24

Candidate Starts for Belfort_264:

(Start: 24 @125997 has 13 MA's), (44, 126117), (57, 126261), (64, 126291), (66, 126300), (74, 126345), (75, 126351), (81, 126420), (89, 126489), (90, 126504),

Gene: Belfort_259 Start: 123969, Stop: 124658, Start Num: 15

Candidate Starts for Belfort_259:

(Start: 15 @123969 has 17 MA's), (20, 124050), (32, 124098), (38, 124125), (45, 124170), (51, 124236), (63, 124329), (73, 124383), (76, 124401), (82, 124470), (89, 124533), (97, 124590),

Gene: Belfort_251 Start: 119236, Stop: 119739, Start Num: 33

Candidate Starts for Belfort_251:

(Start: 24 @119197 has 13 MA's), (Start: 33 @119236 has 23 MA's), (41, 119281), (50, 119371), (56, 119437), (75, 119530), (77, 119551), (89, 119674), (97, 119728),

Gene: Beuffert_251 Start: 119885, Stop: 120391, Start Num: 30

Candidate Starts for Beuffert_251:

(22, 119840), (25, 119861), (Start: 27 @119870 has 1 MA's), (28, 119873), (Start: 30 @119885 has 4 MA's), (47, 120008), (48, 120020), (49, 120023), (75, 120188), (98, 120383),

Gene: BillNye_213 Start: 110662, Stop: 111204, Start Num: 33

Candidate Starts for BillNye_213:

(Start: 33 @110662 has 23 MA's), (51, 110809), (72, 110956), (74, 110968), (75, 110974), (78, 111013), (88, 111097), (92, 111127),

Gene: BillNye_243 Start: 122668, Stop: 123147, Start Num: 33

Candidate Starts for BillNye_243:

(Start: 33 @122668 has 23 MA's), (52, 122794), (58, 122860), (67, 122908), (75, 122947), (87, 123064), (88, 123070), (97, 123136),

Gene: Blueeyedbeauty_253 Start: 119883, Stop: 120389, Start Num: 30

Candidate Starts for Blueeyedbeauty_253:

(25, 119859), (28, 119871), (Start: 30 @119883 has 4 MA's), (63, 120123), (69, 120153), (70, 120159), (75, 120186), (80, 120261), (98, 120381),

Gene: Chaewon_246 Start: 123507, Stop: 123992, Start Num: 33

Candidate Starts for Chaewon_246:

(Start: 33 @123507 has 23 MA's), (Start: 34 @123519 has 3 MA's), (58, 123705), (67, 123753), (75, 123792), (88, 123915), (97, 123981),

Gene: Chaewon_215 Start: 110591, Stop: 111133, Start Num: 33

Candidate Starts for Chaewon_215:

(Start: 33 @110591 has 23 MA's), (51, 110738), (52, 110741), (72, 110885), (74, 110897), (75, 110903), (78, 110942), (88, 111026), (92, 111056),

Gene: Circinus_242 Start: 122175, Stop: 122654, Start Num: 33

Candidate Starts for Circinus_242:

(Start: 33 @122175 has 23 MA's), (52, 122301), (58, 122367), (67, 122415), (75, 122454), (87, 122571), (88, 122577), (97, 122643),

Gene: Circinus_213 Start: 110252, Stop: 110794, Start Num: 33

Candidate Starts for Circinus_213:

(Start: 33 @110252 has 23 MA's), (51, 110399), (72, 110546), (74, 110558), (75, 110564), (78, 110603), (88, 110687), (92, 110717),

Gene: Comrade_259 Start: 126136, Stop: 126696, Start Num: 24

Candidate Starts for Comrade_259:

(Start: 24 @126136 has 13 MA's), (44, 126256), (57, 126400), (64, 126430), (66, 126439), (74, 126484), (75, 126490), (81, 126559), (89, 126628), (90, 126643),

Gene: Comrade_254 Start: 124111, Stop: 124800, Start Num: 15

Candidate Starts for Comrade_254:

(Start: 15 @124111 has 17 MA's), (20, 124192), (32, 124240), (38, 124267), (45, 124312), (63, 124471), (73, 124525), (76, 124543), (82, 124612), (89, 124675), (97, 124732),

Gene: Comrade_246 Start: 119378, Stop: 119881, Start Num: 33

Candidate Starts for Comrade_246:

(Start: 24 @119339 has 13 MA's), (Start: 33 @119378 has 23 MA's), (41, 119423), (50, 119513), (56, 119579), (75, 119672), (77, 119693), (89, 119816), (97, 119870),

Gene: DeluluLabubu_252 Start: 118837, Stop: 119337, Start Num: 33

Candidate Starts for DeluluLabubu_252:

(21, 118774), (Start: 33 @118837 has 23 MA's), (42, 118891), (52, 118984), (70, 119101), (75, 119128), (77, 119149), (83, 119218), (89, 119272), (95, 119317),

Gene: DeluluLabubu_260 Start: 123551, Stop: 124243, Start Num: 15

Candidate Starts for DeluluLabubu_260:

(2, 123329), (4, 123374), (7, 123476), (Start: 15 @123551 has 17 MA's), (18, 123605), (Start: 27 @123683 has 1 MA's), (36, 123743), (40, 123767), (45, 123806), (46, 123809), (51, 123872), (54, 123887), (76, 124037), (78, 124070), (87, 124157), (89, 124172), (90, 124187), (97, 124229),

Gene: DeluluLabubu_265 Start: 125800, Stop: 126357, Start Num: 24

Candidate Starts for DeluluLabubu_265:

(Start: 24 @125800 has 13 MA's), (31, 125827), (51, 125992), (53, 126004), (65, 126097), (67, 126112), (75, 126151), (76, 126160), (89, 126289), (91, 126307),

Gene: Emma1919_259 Start: 122901, Stop: 123620, Start Num: 15

Candidate Starts for Emma1919_259:

(1, 122649), (3, 122688), (5, 122742), (Start: 15 @122901 has 17 MA's), (17, 122952), (19, 122979), (Start: 27 @123033 has 1 MA's), (36, 123093), (38, 123111), (39, 123114), (40, 123117), (43, 123141), (45, 123156), (60, 123297), (76, 123387), (80, 123474), (85, 123519), (87, 123531), (89, 123546), (97, 123603), (99, 123609),

Gene: Emma1919_264 Start: 125172, Stop: 125729, Start Num: 24

Candidate Starts for Emma1919_264:

(Start: 24 @125172 has 13 MA's), (31, 125199), (51, 125364), (53, 125376), (65, 125469), (67, 125484), (75, 125523), (76, 125532), (89, 125661), (91, 125679),

Gene: Emma1919_252 Start: 118200, Stop: 118700, Start Num: 33

Candidate Starts for Emma1919_252:

(Start: 33 @118200 has 23 MA's), (42, 118254), (52, 118347), (70, 118464), (75, 118491), (77, 118512), (89, 118635), (94, 118677),

Gene: Faust_251 Start: 120587, Stop: 121060, Start Num: 34

Candidate Starts for Faust_251:

(Start: 34 @120587 has 3 MA's), (40, 120614), (52, 120713), (61, 120782), (68, 120821), (75, 120860), (84, 120965), (86, 120974), (94, 121037), (95, 121040),

Gene: Forrest_257 Start: 123360, Stop: 124052, Start Num: 15

Candidate Starts for Forrest_257:

(7, 123285), (Start: 15 @123360 has 17 MA's), (18, 123414), (Start: 27 @123492 has 1 MA's), (36, 123552), (40, 123576), (45, 123615), (46, 123618), (51, 123681), (54, 123696), (76, 123846), (78, 123879), (87, 123966), (89, 123981), (90, 123996), (97, 124038),

Gene: Forrest_250 Start: 118548, Stop: 119048, Start Num: 33

Candidate Starts for Forrest_250:

(21, 118485), (Start: 33 @118548 has 23 MA's), (42, 118602), (52, 118695), (70, 118812), (75, 118839), (77, 118860), (83, 118929), (89, 118983), (95, 119028),

Gene: Forrest_262 Start: 125609, Stop: 126166, Start Num: 24

Candidate Starts for Forrest_262:

(Start: 24 @125609 has 13 MA's), (31, 125636), (51, 125801), (53, 125813), (65, 125906), (67, 125921), (75, 125960), (76, 125969), (89, 126098), (91, 126116),

Gene: Francob_261 Start: 123723, Stop: 124442, Start Num: 15

Candidate Starts for Francob_261:

(6, 123648), (Start: 15 @123723 has 17 MA's), (17, 123774), (19, 123801), (Start: 27 @123855 has 1 MA's), (36, 123915), (38, 123933), (39, 123936), (40, 123939), (43, 123963), (45, 123978), (60, 124119), (76, 124209), (80, 124296), (85, 124341), (87, 124353), (89, 124368), (97, 124425), (99, 124431),

Gene: Francob_266 Start: 125994, Stop: 126551, Start Num: 24

Candidate Starts for Francob_266:

(Start: 24 @125994 has 13 MA's), (31, 126021), (35, 126054), (51, 126186), (53, 126198), (65, 126291), (67, 126306), (75, 126345), (76, 126354), (89, 126483), (91, 126501),

Gene: Francob_255 Start: 119293, Stop: 119793, Start Num: 33

Candidate Starts for Francob_255:

(Start: 33 @119293 has 23 MA's), (42, 119347), (51, 119437), (52, 119440), (70, 119557), (75, 119584), (77, 119605), (89, 119728), (94, 119770),

Gene: Gilson_251 Start: 118558, Stop: 119058, Start Num: 33

Candidate Starts for Gilson_251:

(Start: 33 @118558 has 23 MA's), (42, 118612), (51, 118702), (52, 118705), (70, 118822), (75, 118849), (77, 118870), (89, 118993), (94, 119035),

Gene: Gilson_258 Start: 123260, Stop: 123979, Start Num: 15

Candidate Starts for Gilson_258:

(1, 123008), (3, 123047), (5, 123101), (Start: 15 @123260 has 17 MA's), (17, 123311), (19, 123338), (Start: 27 @123392 has 1 MA's), (36, 123452), (38, 123470), (39, 123473), (40, 123476), (43, 123500), (45, 123515), (60, 123656), (76, 123746), (80, 123833), (85, 123878), (87, 123890), (89, 123905), (97, 123962), (99, 123968),

Gene: Gilson_263 Start: 125531, Stop: 126088, Start Num: 24

Candidate Starts for Gilson_263:

(Start: 24 @125531 has 13 MA's), (31, 125558), (35, 125591), (51, 125723), (53, 125735), (65, 125828), (67, 125843), (75, 125882), (76, 125891), (89, 126020), (91, 126038),

Gene: Jada_250 Start: 117788, Stop: 118288, Start Num: 33

Candidate Starts for Jada_250:

(21, 117725), (Start: 33 @117788 has 23 MA's), (42, 117842), (52, 117935), (70, 118052), (75, 118079), (77, 118100), (83, 118169), (89, 118223), (95, 118268),

Gene: Jada_258 Start: 122600, Stop: 123292, Start Num: 15

Candidate Starts for Jada_258:

(7, 122525), (Start: 15 @122600 has 17 MA's), (18, 122654), (Start: 27 @122732 has 1 MA's), (36, 122792), (40, 122816), (45, 122855), (46, 122858), (51, 122921), (54, 122936), (76, 123086), (78, 123119), (87, 123206), (89, 123221), (90, 123236), (97, 123278),

Gene: Jada_263 Start: 124849, Stop: 125406, Start Num: 24

Candidate Starts for Jada_263:

(Start: 24 @124849 has 13 MA's), (31, 124876), (51, 125041), (53, 125053), (65, 125146), (67, 125161), (75, 125200), (76, 125209), (89, 125338), (91, 125356),

Gene: Karp_258 Start: 125566, Stop: 126255, Start Num: 15

Candidate Starts for Karp_258:

(Start: 15 @125566 has 17 MA's), (20, 125647), (32, 125695), (38, 125722), (45, 125767), (51, 125833), (63, 125926), (73, 125980), (76, 125998), (82, 126067), (89, 126130), (97, 126187),

Gene: Karp_250 Start: 120834, Stop: 121337, Start Num: 33

Candidate Starts for Karp_250:

(Start: 24 @120795 has 13 MA's), (Start: 33 @120834 has 23 MA's), (41, 120879), (50, 120969), (56, 121035), (75, 121128), (77, 121149), (89, 121272), (97, 121326),

Gene: Kenrey_264 Start: 124500, Stop: 125192, Start Num: 15

Candidate Starts for Kenrey_264:

(Start: 15 @124500 has 17 MA's), (17, 124551), (Start: 27 @124632 has 1 MA's), (36, 124692), (37, 124707), (45, 124755), (46, 124758), (54, 124836), (76, 124986), (78, 125019), (87, 125106), (89, 125121), (90, 125136), (96, 125172), (97, 125178),

Gene: Kenrey_269 Start: 126743, Stop: 127300, Start Num: 24

Candidate Starts for Kenrey_269:

(Start: 24 @126743 has 13 MA's), (31, 126770), (51, 126935), (53, 126947), (65, 127040), (67, 127055), (75, 127094), (76, 127103), (89, 127232), (90, 127247), (91, 127250),

Gene: Kenrey_258 Start: 119950, Stop: 120450, Start Num: 33

Candidate Starts for Kenrey_258:

(Start: 33 @119950 has 23 MA's), (42, 120004), (52, 120097), (70, 120214), (75, 120241), (77, 120262), (83, 120331), (89, 120385),

Gene: Limpid_247 Start: 120432, Stop: 120938, Start Num: 30

Candidate Starts for Limpid_247:

(Start: 30 @120432 has 4 MA's), (48, 120567), (62, 120666), (75, 120735), (89, 120873), (95, 120918), (98, 120930),

Gene: Maupel_269 Start: 124724, Stop: 125281, Start Num: 24

Candidate Starts for Maupel_269:

(Start: 24 @124724 has 13 MA's), (31, 124751), (35, 124784), (51, 124916), (53, 124928), (65, 125021), (67, 125036), (75, 125075), (76, 125084), (89, 125213), (91, 125231),

Gene: Maupel_254 Start: 117751, Stop: 118251, Start Num: 33

Candidate Starts for Maupel_254:

(Start: 33 @117751 has 23 MA's), (42, 117805), (51, 117895), (52, 117898), (70, 118015), (75, 118042), (77, 118063), (89, 118186), (94, 118228),

Gene: Maupel_264 Start: 122453, Stop: 123172, Start Num: 15

Candidate Starts for Maupel_264:

(1, 122201), (3, 122240), (5, 122294), (Start: 15 @122453 has 17 MA's), (17, 122504), (19, 122531), (Start: 27 @122585 has 1 MA's), (36, 122645), (38, 122663), (39, 122666), (40, 122669), (43, 122693), (45, 122708), (60, 122849), (76, 122939), (80, 123026), (85, 123071), (87, 123083), (89, 123098), (97, 123155), (99, 123161),

Gene: MeganTheeKilla_253 Start: 118359, Stop: 118859, Start Num: 33

Candidate Starts for MeganTheeKilla_253:

(Start: 33 @118359 has 23 MA's), (42, 118413), (52, 118506), (70, 118623), (75, 118650), (77, 118671), (89, 118794), (94, 118836),

Gene: MeganTheeKilla_260 Start: 123071, Stop: 123790, Start Num: 15

Candidate Starts for MeganTheeKilla_260:

(1, 122819), (3, 122858), (5, 122912), (Start: 15 @123071 has 17 MA's), (17, 123122), (19, 123149), (Start: 27 @123203 has 1 MA's), (36, 123263), (38, 123281), (39, 123284), (40, 123287), (43, 123311), (45, 123326), (60, 123467), (76, 123557), (80, 123644), (85, 123689), (87, 123701), (89, 123716), (97, 123773), (99, 123779),

Gene: Moab_252 Start: 120522, Stop: 121022, Start Num: 33

Candidate Starts for Moab_252:

(23, 120471), (Start: 27 @120489 has 1 MA's), (Start: 33 @120522 has 23 MA's), (49, 120645), (73, 120804), (75, 120813), (77, 120834),

Gene: Moab_260 Start: 125006, Stop: 125689, Start Num: 15

Candidate Starts for Moab_260:

(14, 125000), (Start: 15 @125006 has 17 MA's), (17, 125051), (18, 125054), (26, 125129), (Start: 27 @125132 has 1 MA's), (40, 125216), (45, 125255), (54, 125336), (60, 125396), (73, 125468), (76, 125486), (78, 125519), (87, 125603), (89, 125618), (97, 125675),

Gene: Muntaha_259 Start: 123170, Stop: 123649, Start Num: 33

Candidate Starts for Muntaha_259:

(16, 123047), (Start: 33 @123170 has 23 MA's), (52, 123296), (58, 123362), (67, 123410), (75, 123449), (76, 123458), (88, 123572), (97, 123638),

Gene: Muntaha_229 Start: 110982, Stop: 111503, Start Num: 33

Candidate Starts for Muntaha_229:

(Start: 33 @110982 has 23 MA's), (51, 111123), (56, 111183), (71, 111252), (73, 111273), (75, 111288), (79, 111351),

Gene: Patelgo_254 Start: 121436, Stop: 121969, Start Num: 27

Candidate Starts for Patelgo_254:

(23, 121418), (Start: 27 @121436 has 1 MA's), (Start: 33 @121469 has 23 MA's), (49, 121592), (73, 121751), (75, 121760), (77, 121781),

Gene: Patelgo_263 Start: 125938, Stop: 126621, Start Num: 15

Candidate Starts for Patelgo_263:

(14, 125932), (Start: 15 @125938 has 17 MA's), (17, 125983), (18, 125986), (26, 126061), (Start: 27 @126064 has 1 MA's), (40, 126148), (45, 126187), (54, 126268), (60, 126328), (73, 126400), (76, 126418), (78, 126451), (87, 126535), (89, 126550), (97, 126607),

Gene: Phredrick_269 Start: 125970, Stop: 126527, Start Num: 24

Candidate Starts for Phredrick_269:

(Start: 24 @125970 has 13 MA's), (31, 125997), (51, 126162), (53, 126174), (65, 126267), (67, 126282), (75, 126321), (76, 126330), (89, 126459), (91, 126477),

Gene: Phredrick_264 Start: 123744, Stop: 124418, Start Num: 15

Candidate Starts for Phredrick_264:

(7, 123669), (Start: 15 @123744 has 17 MA's), (19, 123822), (29, 123873), (51, 124041), (53, 124053), (60, 124116), (76, 124206), (78, 124239), (85, 124317), (87, 124329), (89, 124344), (91, 124362), (96, 124395), (97, 124401), (99, 124407),

Gene: Phredrick_257 Start: 119042, Stop: 119542, Start Num: 33

Candidate Starts for Phredrick_257:

(Start: 33 @119042 has 23 MA's), (42, 119096), (52, 119189), (70, 119306), (75, 119333), (77, 119354), (89, 119477), (94, 119519),

Gene: SeresaTree_255 Start: 120812, Stop: 121285, Start Num: 34

Candidate Starts for SeresaTree_255:

(Start: 34 @120812 has 3 MA's), (40, 120839), (52, 120938), (61, 121007), (68, 121046), (75, 121085), (84, 121190), (86, 121199), (94, 121262), (95, 121265),

Gene: Sham_243 Start: 121073, Stop: 121546, Start Num: 34

Candidate Starts for Sham_243:

(Start: 34 @121073 has 3 MA's), (54, 121208), (55, 121214), (56, 121247), (66, 121295), (73, 121337), (75, 121346), (84, 121451), (86, 121460), (88, 121472), (90, 121496), (93, 121505),

Gene: SparkleGoddess_258 Start: 124835, Stop: 125527, Start Num: 15

Candidate Starts for SparkleGoddess_258:

(10, 124802), (14, 124829), (Start: 15 @124835 has 17 MA's), (20, 124919), (32, 124967), (38, 124994), (45, 125039), (63, 125198), (73, 125252), (76, 125270), (82, 125339), (89, 125402), (97, 125459),

Gene: SparkleGoddess_250 Start: 120070, Stop: 120612, Start Num: 24

Candidate Starts for SparkleGoddess_250:

(Start: 24 @120070 has 13 MA's), (Start: 33 @120109 has 23 MA's), (41, 120154), (50, 120244), (56, 120310), (75, 120403), (77, 120424), (89, 120547), (97, 120601),

Gene: SparkleGoddess_263 Start: 126863, Stop: 127423, Start Num: 24

Candidate Starts for SparkleGoddess_263:

(Start: 24 @126863 has 13 MA's), (44, 126983), (57, 127127), (64, 127157), (66, 127166), (74, 127211), (75, 127217), (81, 127286), (89, 127355), (90, 127370),

Gene: Stigma_261 Start: 126576, Stop: 127136, Start Num: 24

Candidate Starts for Stigma_261:

(Start: 24 @126576 has 13 MA's), (44, 126696), (57, 126840), (64, 126870), (66, 126879), (74, 126924), (75, 126930), (81, 126999), (89, 127068), (90, 127083),

Gene: Stigma_256 Start: 124548, Stop: 125240, Start Num: 15

Candidate Starts for Stigma_256:

(10, 124515), (14, 124542), (Start: 15 @124548 has 17 MA's), (20, 124632), (32, 124680), (38, 124707), (45, 124752), (63, 124911), (73, 124965), (76, 124983), (82, 125052), (89, 125115), (97, 125172),

Gene: Stigma_248 Start: 119821, Stop: 120324, Start Num: 33

Candidate Starts for Stigma_248:

(Start: 24 @119782 has 13 MA's), (Start: 33 @119821 has 23 MA's), (41, 119866), (50, 119956), (56, 120022), (75, 120115), (77, 120136), (89, 120259), (97, 120313),

Gene: TunaTartare_250 Start: 122541, Stop: 123014, Start Num: 34

Candidate Starts for TunaTartare_250:

(Start: 34 @122541 has 3 MA's), (56, 122715), (59, 122727), (61, 122736), (75, 122814), (84, 122919), (88, 122940), (93, 122973),

Gene: Wakanda_225 Start: 109969, Stop: 110490, Start Num: 33

Candidate Starts for Wakanda_225:

(Start: 33 @109969 has 23 MA's), (51, 110110), (56, 110170), (71, 110239), (73, 110260), (75, 110275), (79, 110338),

Gene: Wakanda_256 Start: 122334, Stop: 122813, Start Num: 33

Candidate Starts for Wakanda_256:

(8, 122118), (9, 122124), (11, 122142), (12, 122148), (13, 122154), (Start: 33 @122334 has 23 MA's), (52, 122460), (58, 122526), (67, 122574), (75, 122613), (76, 122622), (88, 122736), (97, 122802),

Gene: Westy_252 Start: 120639, Stop: 121142, Start Num: 33

Candidate Starts for Westy_252:

(Start: 24 @120600 has 13 MA's), (Start: 33 @120639 has 23 MA's), (41, 120684), (50, 120774), (56, 120840), (75, 120933), (77, 120954), (89, 121077), (97, 121131),

Gene: Westy_260 Start: 125372, Stop: 126061, Start Num: 15

Candidate Starts for Westy_260:

(Start: 15 @125372 has 17 MA's), (20, 125453), (32, 125501), (38, 125528), (45, 125573), (51, 125639), (63, 125732), (73, 125786), (76, 125804), (82, 125873), (97, 125993),