

Pham 224458



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 224458 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224458 has 103 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Daubenski_203
- Track 2 : Mildred21_218
- Track 3 : Lululemon_207, Larnav_209, PacManQ_207, HangryHippo_208, Watermoore_209, EGole_213, Samisti12_214, Cursive_212, Scheme_213, Leo04_211, BlueOtter_208
- Track 4 : Teutsch_209, Peebs_207, Cross_209
- Track 5 : Tribute_206, Sushi23_210
- Track 6 : Marsus_222, Bmoc_214
- Track 7 : Cadmus_213
- Track 8 : Bartholomune_211, NootNoot_207, Braelyn_207
- Track 9 : PinkiePie_210, Liandry_210, Squillium_213
- Track 10 : MulchMansion_212, LilMartin_208, Angela_211
- Track 11 : Evy_201, Jay2Jay_215, Warpy_213
- Track 12 : Persimmon_213, WhereRU_210, Navo_205
- Track 13 : Shuckle_212
- Track 14 : Anedea_224
- Track 15 : Riptide_217
- Track 16 : Pepperwood_210
- Track 17 : Paradiddles_202
- Track 18 : Targaryen_209
- Track 19 : Stanimal_222, BoomerJR_222, Yaboi_227, Genie2_222
- Track 20 : LukeCage_228
- Track 21 : StarPlatinum_232
- Track 22 : Tomas_222
- Track 23 : Spilled_231, IchabodCrane_218, SaltySpittoon_224, Bordeaux_222, Spelly_229, Amabiko_228, Battuta_222, JimJam_231, Quaran19_224, CeilingFan_228, MindFlayer_217
- Track 24 : PumpkinSpice_227, Starbow_221, Birchlyn_223, Wipeout_215, TomSawyer_228, Jollison_221, KentuckyRacer_230, Rikishi_232, Karimac_224
- Track 25 : Enygma_232, Mugiwara_236
- Track 26 : Gibbi_232
- Track 27 : Elmer_233
- Track 28 : Wofford_225
- Track 29 : Sollertia_223
- Track 30 : SparkleGoddess_159
- Track 31 : Emma1919_165
- Track 32 : Phredrick_164, Kenrey_167

- Track 33 : Westy_161, Stigma_158, Karp_154, Comrade_157
- Track 34 : Sham_156
- Track 35 : Belfort_160
- Track 36 : MeganTheeKilla_162, Forrest_166, Jada_163
- Track 37 : Gilson_164
- Track 38 : Annadreamy_148
- Track 39 : Limpid_155
- Track 40 : Patelgo_162
- Track 41 : Moab_160
- Track 42 : Beuffert_154
- Track 43 : SeresaTree_156, Faust_154
- Track 44 : Blueeyedbeauty_157
- Track 45 : Francob_163
- Track 46 : TunaTartare_161
- Track 47 : Muntaha_133, Wakanda_132
- Track 48 : BillNye_125, Circinus_126

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

The start number called the most often in the published annotations is 22, it was called in 38 of the 93 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anedea_224, Angela_211, Belfort_160, Birchlyn_223, BlueOtter_208, BoomerJR_222, Cursive_212, EGole_213, Elmer_233, Genie2_222, HangryHippo_208, Jollison_221, Karimac_224, KentuckyRacer_230, Larnav_209, Leo04_211, LilMartin_208, LukeCage_228, Lululemon_207, Moab_160, MulchMansion_212, Navo_205, PacManQ_207, Pepperwood_210, Persimmon_213, PumpkinSpice_227, Rikishi_232, Samisti12_214, Scheme_213, Stanimal_222, StarPlatinum_232, Starbow_221, Targaryen_209, TomSawyer_228, Tomas_222, Watermoore_209, WhereRU_210, Wipeout_215, Wofford_225, Yaboi_227,

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

- Amabiko_228, Annadreamy_148, Bartholomune_211, Battuta_222, Beuffert_154, BillNye_125, Blueeyedbeauty_157, Bmoc_214, Bordeaux_222, Braelyn_207, Cadmus_213, CeilingFan_228, Circinus_126, Comrade_157, Cross_209, Daubenski_203, Emma1919_165, Enygma_232, Evy_201, Faust_154, Forrest_166, Francob_163, Gibbi_232, Gilson_164, IchabodCrane_218, Jada_163, Jay2Jay_215, JimJam_231, Karp_154, Kenrey_167, Liandry_210, Limpid_155, Marsus_222, MeganTheeKilla_162, Mildred21_218, MindFlayer_217, Mugiwara_236, Muntaha_133, NootNoot_207, Paradiddles_202, Patelgo_162, Peebs_207, Phredrick_164, PinkiePie_210, Quarant19_224, Riptide_217, SaltySpittoon_224, SeresaTree_156, Sham_156, Shuckle_212, Sollertia_223, SparkleGoddess_159, Spelly_229, Spilled_231, Squillium_213, Stigma_158, Sushi23_210, Teutsch_209, Tribute_206, TunaTartare_161, Wakanda_132, Warpy_213, Westy_161,

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

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Summary by start number:

Start 12:

- Found in 2 of 103 (1.9%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Cadmus_213 (BE1),

Start 13:

- Found in 18 of 103 (17.5%) of genes in pham
- Manual Annotations of this start: 2 of 93
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Annadreamy_148 (BK1), Limpid_155 (BK1),

Start 16:

- Found in 73 of 103 (70.9%) of genes in pham
- Manual Annotations of this start: 20 of 93
- Called 30.1% of time when present
- Phage (with cluster) where this start called: Amabiko_228 (BE2), Battuta_222 (BE2), Bmoc_214 (BE1), Bordeaux_222 (BE2), CeilingFan_228 (BE2), Enygma_232 (BE2), Evy_201 (BE1), IchabodCrane_218 (BE2), Jay2Jay_215 (BE1), JimJam_231 (BE2), Marsus_222 (BE1), MindFlayer_217 (BE2), Mugiwara_236 (BE2), Paradiddles_202 (BE1), Quarant19_224 (BE2), SaltySpittoon_224 (BE2), Sollertia_223 (BE2), Spelly_229 (BE2), Spilled_231 (BE2), Sushi23_210 (BE1), Tribute_206 (BE1), Warpy_213 (BE1),

Start 17:

- Found in 4 of 103 (3.9%) of genes in pham
- Manual Annotations of this start: 2 of 93
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Beuffert_154 (BK1), Blueeyedbeauty_157 (BK1),

Start 18:

- Found in 24 of 103 (23.3%) of genes in pham
- Manual Annotations of this start: 20 of 93
- Called 91.7% of time when present
- Phage (with cluster) where this start called: BillNye_125 (BK2), Circinus_126 (BK2), Comrade_157 (BK1), Emma1919_165 (BK1), Faust_154 (BK1), Forrest_166 (BK1), Francob_163 (BK1), Gilson_164 (BK1), Jada_163 (BK1), Karp_154 (BK1), Kenrey_167 (BK1), MeganTheeKilla_162 (BK1), Muntaha_133 (BK2), Patelgo_162 (BK1), Phredrick_164 (BK1), SeresaTree_156 (BK1), Sham_156 (BK1), SparkleGoddess_159 (BK1), Stigma_158 (BK1), TunaTartare_161 (BK1), Wakanda_132 (BK2), Westy_161 (BK1),

Start 20:

- Found in 7 of 103 (6.8%) of genes in pham
- Manual Annotations of this start: 1 of 93
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Daubenski_203 (BE1),

Start 22:

- Found in 103 of 103 (100.0%) of genes in pham

- Manual Annotations of this start: 38 of 93
- Called 38.8% of time when present
- Phage (with cluster) where this start called: Anedea_224 (BE1), Angela_211 (BE1), Belfort_160 (BK1), Birchlyn_223 (BE2), BlueOtter_208 (BE1), BoomerJR_222 (BE2), Cursive_212 (BE1), EGole_213 (BE1), Elmer_233 (BE2), Genie2_222 (BE2), HangryHippo_208 (BE1), Jollison_221 (BE2), Karimac_224 (BE2), KentuckyRacer_230 (BE2), Larnav_209 (BE1), Leo04_211 (BE1), LilMartin_208 (BE1), LukeCage_228 (BE2), Lululemon_207 (BE1), Moab_160 (BK1), MulchMansion_212 (BE1), Navo_205 (BE1), PacManQ_207 (BE1), Pepperwood_210 (BE1), Persimmon_213 (BE1), PumpkinSpice_227 (BE2), Rikishi_232 (BE2), Samisti12_214 (BE1), Scheme_213 (BE1), Stanimal_222 (BE2), StarPlatinum_232 (BE2), Starbow_221 (BE2), Targaryen_209 (BE1), TomSawyer_228 (BE2), Tomas_222 (BE2), Watermoore_209 (BE1), WhereRU_210 (BE1), Wipeout_215 (BE2), Wofford_225 (BE2), Yaboi_227 (BE2),

Start 23:

- Found in 92 of 103 (89.3%) of genes in pham
- Manual Annotations of this start: 10 of 93
- Called 13.0% of time when present
- Phage (with cluster) where this start called: Bartholomune_211 (BE1), Braelyn_207 (BE1), Cross_209 (BE1), Gibbi_232 (BE2), Liandry_210 (BE1), Mildred21_218 (BE1), NootNoot_207 (BE1), Peebs_207 (BE1), PinkiePie_210 (BE1), Riptide_217 (BE1), Squillium_213 (BE1), Teutsch_209 (BE1),

Start 26:

- Found in 52 of 103 (50.5%) of genes in pham
- No Manual Annotations of this start.
- Called 1.9% of time when present
- Phage (with cluster) where this start called: Shuckle_212 (BE1),

Summary by clusters:

There are 4 clusters represented in this pham: BE2, BE1, BK1, BK2,

Info for manual annotations of cluster BE1:

- Start number 16 was manually annotated 7 times for cluster BE1.
- Start number 20 was manually annotated 1 time for cluster BE1.
- Start number 22 was manually annotated 19 times for cluster BE1.
- Start number 23 was manually annotated 10 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 16 was manually annotated 13 times for cluster BE2.
- Start number 22 was manually annotated 17 times for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 13 was manually annotated 2 times for cluster BK1.
- Start number 17 was manually annotated 2 times for cluster BK1.
- Start number 18 was manually annotated 16 times for cluster BK1.
- Start number 22 was manually annotated 2 times for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 18 was manually annotated 4 times for cluster BK2.

Gene Information:

Gene: Amabiko_228 Start: 107245, Stop: 107454, Start Num: 16

Candidate Starts for Amabiko_228:

(Start: 16 @107245 has 20 MA's), (Start: 22 @107287 has 38 MA's), (Start: 23 @107302 has 10 MA's), (26, 107344), (33, 107419),

Gene: Anedea_224 Start: 108221, Stop: 108418, Start Num: 22

Candidate Starts for Anedea_224:

(10, 108155), (11, 108164), (Start: 16 @108185 has 20 MA's), (21, 108218), (Start: 22 @108221 has 38 MA's), (Start: 23 @108236 has 10 MA's), (25, 108275), (29, 108293), (33, 108353),

Gene: Angela_211 Start: 105294, Stop: 105497, Start Num: 22

Candidate Starts for Angela_211:

(Start: 13 @105243 has 2 MA's), (Start: 16 @105258 has 20 MA's), (Start: 20 @105279 has 1 MA's), (Start: 22 @105294 has 38 MA's), (Start: 23 @105309 has 10 MA's), (29, 105366), (30, 105405), (33, 105426),

Gene: Annadreamy_148 Start: 81009, Stop: 81242, Start Num: 13

Candidate Starts for Annadreamy_148:

(7, 80976), (Start: 13 @81009 has 2 MA's), (Start: 17 @81027 has 2 MA's), (19, 81045), (21, 81063), (Start: 22 @81066 has 38 MA's), (32, 81192),

Gene: Bartholomune_211 Start: 105870, Stop: 106058, Start Num: 23

Candidate Starts for Bartholomune_211:

(Start: 16 @105819 has 20 MA's), (Start: 22 @105855 has 38 MA's), (Start: 23 @105870 has 10 MA's), (33, 105987),

Gene: Battuta_222 Start: 106560, Stop: 106769, Start Num: 16

Candidate Starts for Battuta_222:

(Start: 16 @106560 has 20 MA's), (Start: 22 @106602 has 38 MA's), (Start: 23 @106617 has 10 MA's), (26, 106659), (33, 106734),

Gene: Belfort_160 Start: 86816, Stop: 87007, Start Num: 22

Candidate Starts for Belfort_160:

(Start: 18 @86783 has 20 MA's), (Start: 22 @86816 has 38 MA's), (Start: 23 @86831 has 10 MA's), (24, 86846), (26, 86870), (28, 86882), (29, 86885), (32, 86942),

Gene: Beuffert_154 Start: 85560, Stop: 85778, Start Num: 17

Candidate Starts for Beuffert_154:

(7, 85509), (Start: 13 @85542 has 2 MA's), (Start: 17 @85560 has 2 MA's), (19, 85578), (21, 85596), (Start: 22 @85599 has 38 MA's), (30, 85707), (32, 85725),

Gene: BillNye_125 Start: 76916, Stop: 77134, Start Num: 18

Candidate Starts for BillNye_125:

(Start: 18 @76916 has 20 MA's), (21, 76946), (Start: 22 @76949 has 38 MA's), (24, 76979), (25, 77000), (28, 77015), (31, 77066), (32, 77075),

Gene: Birchlyn_223 Start: 104535, Stop: 104702, Start Num: 22

Candidate Starts for Birchlyn_223:

(Start: 16 @104493 has 20 MA's), (Start: 22 @104535 has 38 MA's), (Start: 23 @104550 has 10 MA's), (26, 104592), (33, 104667),

Gene: BlueOtter_208 Start: 105995, Stop: 106201, Start Num: 22

Candidate Starts for BlueOtter_208:

(Start: 16 @105959 has 20 MA's), (21, 105992), (Start: 22 @105995 has 38 MA's), (Start: 23 @106010 has 10 MA's), (29, 106067), (30, 106106), (33, 106127),

Gene: Blueeyedbeauty_157 Start: 85443, Stop: 85661, Start Num: 17

Candidate Starts for Blueeyedbeauty_157:

(7, 85392), (Start: 13 @85425 has 2 MA's), (Start: 17 @85443 has 2 MA's), (19, 85461), (21, 85479), (Start: 22 @85482 has 38 MA's), (32, 85608),

Gene: Bmoc_214 Start: 106071, Stop: 106304, Start Num: 16

Candidate Starts for Bmoc_214:

(Start: 13 @106056 has 2 MA's), (Start: 16 @106071 has 20 MA's), (Start: 20 @106092 has 1 MA's), (Start: 22 @106107 has 38 MA's), (Start: 23 @106122 has 10 MA's), (29, 106179), (30, 106218), (33, 106239),

Gene: BoomerJR_222 Start: 107605, Stop: 107772, Start Num: 22

Candidate Starts for BoomerJR_222:

(Start: 16 @107563 has 20 MA's), (Start: 22 @107605 has 38 MA's), (Start: 23 @107620 has 10 MA's), (26, 107662), (33, 107737),

Gene: Bordeaux_222 Start: 107143, Stop: 107352, Start Num: 16

Candidate Starts for Bordeaux_222:

(Start: 16 @107143 has 20 MA's), (Start: 22 @107185 has 38 MA's), (Start: 23 @107200 has 10 MA's), (26, 107242), (33, 107317),

Gene: Braelyn_207 Start: 105517, Stop: 105705, Start Num: 23

Candidate Starts for Braelyn_207:

(Start: 16 @105466 has 20 MA's), (Start: 22 @105502 has 38 MA's), (Start: 23 @105517 has 10 MA's), (33, 105634),

Gene: Cadmus_213 Start: 106739, Stop: 106996, Start Num: 12

Candidate Starts for Cadmus_213:

(12, 106739), (15, 106754), (Start: 20 @106778 has 1 MA's), (21, 106790), (Start: 22 @106793 has 38 MA's), (Start: 23 @106808 has 10 MA's), (27, 106859), (29, 106865), (30, 106904), (33, 106925), (35, 106961),

Gene: CeilingFan_228 Start: 107938, Stop: 108147, Start Num: 16

Candidate Starts for CeilingFan_228:

(Start: 16 @107938 has 20 MA's), (Start: 22 @107980 has 38 MA's), (Start: 23 @107995 has 10 MA's), (26, 108037), (33, 108112),

Gene: Circinus_126 Start: 76884, Stop: 77102, Start Num: 18

Candidate Starts for Circinus_126:

(Start: 18 @76884 has 20 MA's), (21, 76914), (Start: 22 @76917 has 38 MA's), (24, 76947), (25, 76968), (28, 76983), (31, 77034), (32, 77043),

Gene: Comrade_157 Start: 86985, Stop: 87209, Start Num: 18

Candidate Starts for Comrade_157:

(Start: 18 @86985 has 20 MA's), (Start: 22 @87018 has 38 MA's), (Start: 23 @87033 has 10 MA's), (24, 87048), (26, 87072), (28, 87084), (29, 87087), (32, 87144),

Gene: Cross_209 Start: 106655, Stop: 106846, Start Num: 23

Candidate Starts for Cross_209:

(Start: 16 @106604 has 20 MA's), (21, 106637), (Start: 22 @106640 has 38 MA's), (Start: 23 @106655 has 10 MA's), (29, 106712), (30, 106751), (33, 106772),

Gene: Cursive_212 Start: 106324, Stop: 106530, Start Num: 22

Candidate Starts for Cursive_212:

(Start: 16 @106288 has 20 MA's), (21, 106321), (Start: 22 @106324 has 38 MA's), (Start: 23 @106339 has 10 MA's), (29, 106396), (30, 106435), (33, 106456),

Gene: Daubenski_203 Start: 106673, Stop: 106891, Start Num: 20

Candidate Starts for Daubenski_203:

(12, 106634), (15, 106649), (Start: 20 @106673 has 1 MA's), (21, 106685), (Start: 22 @106688 has 38 MA's), (Start: 23 @106703 has 10 MA's), (27, 106754), (29, 106760), (30, 106799), (33, 106820), (35, 106856),

Gene: EGole_213 Start: 108337, Stop: 108543, Start Num: 22

Candidate Starts for EGole_213:

(Start: 16 @108301 has 20 MA's), (21, 108334), (Start: 22 @108337 has 38 MA's), (Start: 23 @108352 has 10 MA's), (29, 108409), (30, 108448), (33, 108469),

Gene: Elmer_233 Start: 110929, Stop: 111096, Start Num: 22

Candidate Starts for Elmer_233:

(1, 110797), (2, 110800), (3, 110812), (4, 110815), (5, 110818), (6, 110833), (8, 110842), (Start: 16 @110887 has 20 MA's), (Start: 22 @110929 has 38 MA's), (Start: 23 @110944 has 10 MA's), (26, 110986), (33, 111061),

Gene: Emma1919_165 Start: 86362, Stop: 86586, Start Num: 18

Candidate Starts for Emma1919_165:

(7, 86311), (9, 86317), (Start: 13 @86344 has 2 MA's), (Start: 18 @86362 has 20 MA's), (Start: 22 @86395 has 38 MA's), (Start: 23 @86410 has 10 MA's), (24, 86425), (26, 86449), (27, 86458), (32, 86521),

Gene: Enygma_232 Start: 110347, Stop: 110556, Start Num: 16

Candidate Starts for Enygma_232:

(Start: 16 @110347 has 20 MA's), (21, 110386), (Start: 22 @110389 has 38 MA's), (Start: 23 @110404 has 10 MA's), (26, 110446), (33, 110521),

Gene: Evy_201 Start: 106757, Stop: 106996, Start Num: 16

Candidate Starts for Evy_201:

(Start: 16 @106757 has 20 MA's), (21, 106790), (Start: 22 @106793 has 38 MA's), (Start: 23 @106808 has 10 MA's), (33, 106925),

Gene: Faust_154 Start: 86399, Stop: 86611, Start Num: 18

Candidate Starts for Faust_154:

(14, 86390), (Start: 18 @86399 has 20 MA's), (Start: 22 @86432 has 38 MA's), (Start: 23 @86447 has 10 MA's), (27, 86495), (32, 86558), (34, 86576),

Gene: Forrest_166 Start: 87345, Stop: 87569, Start Num: 18

Candidate Starts for Forrest_166:

(7, 87294), (9, 87300), (Start: 13 @87327 has 2 MA's), (Start: 18 @87345 has 20 MA's), (Start: 22 @87378 has 38 MA's), (Start: 23 @87393 has 10 MA's), (24, 87408), (26, 87432), (27, 87441), (28, 87444), (32, 87504),

Gene: Francob_163 Start: 86864, Stop: 87091, Start Num: 18

Candidate Starts for Francob_163:

(7, 86813), (9, 86819), (Start: 13 @86846 has 2 MA's), (Start: 18 @86864 has 20 MA's), (Start: 22 @86897 has 38 MA's), (Start: 23 @86912 has 10 MA's), (24, 86927), (26, 86951), (32, 87023),

Gene: Genie2_222 Start: 107730, Stop: 107897, Start Num: 22

Candidate Starts for Genie2_222:

(Start: 16 @107688 has 20 MA's), (Start: 22 @107730 has 38 MA's), (Start: 23 @107745 has 10 MA's), (26, 107787), (33, 107862),

Gene: Gibbi_232 Start: 107488, Stop: 107640, Start Num: 23

Candidate Starts for Gibbi_232:

(Start: 16 @107431 has 20 MA's), (Start: 22 @107473 has 38 MA's), (Start: 23 @107488 has 10 MA's), (26, 107530), (33, 107605),

Gene: Gilson_164 Start: 86324, Stop: 86548, Start Num: 18

Candidate Starts for Gilson_164:

(7, 86273), (Start: 13 @86306 has 2 MA's), (Start: 18 @86324 has 20 MA's), (Start: 22 @86357 has 38 MA's), (Start: 23 @86372 has 10 MA's), (24, 86387), (26, 86411), (27, 86420), (32, 86483),

Gene: HangryHippo_208 Start: 105995, Stop: 106201, Start Num: 22

Candidate Starts for HangryHippo_208:

(Start: 16 @105959 has 20 MA's), (21, 105992), (Start: 22 @105995 has 38 MA's), (Start: 23 @106010 has 10 MA's), (29, 106067), (30, 106106), (33, 106127),

Gene: IchabodCrane_218 Start: 106946, Stop: 107155, Start Num: 16

Candidate Starts for IchabodCrane_218:

(Start: 16 @106946 has 20 MA's), (Start: 22 @106988 has 38 MA's), (Start: 23 @107003 has 10 MA's), (26, 107045), (33, 107120),

Gene: Jada_163 Start: 86041, Stop: 86265, Start Num: 18

Candidate Starts for Jada_163:

(7, 85990), (9, 85996), (Start: 13 @86023 has 2 MA's), (Start: 18 @86041 has 20 MA's), (Start: 22 @86074 has 38 MA's), (Start: 23 @86089 has 10 MA's), (24, 86104), (26, 86128), (27, 86137), (28, 86140), (32, 86200),

Gene: Jay2Jay_215 Start: 106912, Stop: 107151, Start Num: 16

Candidate Starts for Jay2Jay_215:

(Start: 16 @106912 has 20 MA's), (21, 106945), (Start: 22 @106948 has 38 MA's), (Start: 23 @106963 has 10 MA's), (33, 107080),

Gene: JimJam_231 Start: 108867, Stop: 109076, Start Num: 16

Candidate Starts for JimJam_231:

(Start: 16 @108867 has 20 MA's), (Start: 22 @108909 has 38 MA's), (Start: 23 @108924 has 10 MA's), (26, 108966), (33, 109041),

Gene: Jollison_221 Start: 107119, Stop: 107286, Start Num: 22

Candidate Starts for Jollison_221:

(Start: 16 @107077 has 20 MA's), (Start: 22 @107119 has 38 MA's), (Start: 23 @107134 has 10 MA's), (26, 107176), (33, 107251),

Gene: Karimac_224 Start: 107304, Stop: 107471, Start Num: 22

Candidate Starts for Karimac_224:

(Start: 16 @107262 has 20 MA's), (Start: 22 @107304 has 38 MA's), (Start: 23 @107319 has 10 MA's), (26, 107361), (33, 107436),

Gene: Karp_154 Start: 86209, Stop: 86433, Start Num: 18

Candidate Starts for Karp_154:

(Start: 18 @86209 has 20 MA's), (Start: 22 @86242 has 38 MA's), (Start: 23 @86257 has 10 MA's), (24, 86272), (26, 86296), (28, 86308), (29, 86311), (32, 86368),

Gene: Kenrey_167 Start: 87485, Stop: 87709, Start Num: 18

Candidate Starts for Kenrey_167:

(Start: 18 @87485 has 20 MA's), (Start: 22 @87518 has 38 MA's), (24, 87548), (26, 87572), (27, 87581), (32, 87644),

Gene: KentuckyRacer_230 Start: 108824, Stop: 108991, Start Num: 22

Candidate Starts for KentuckyRacer_230:

(Start: 16 @108782 has 20 MA's), (Start: 22 @108824 has 38 MA's), (Start: 23 @108839 has 10 MA's), (26, 108881), (33, 108956),

Gene: Larnav_209 Start: 106456, Stop: 106662, Start Num: 22

Candidate Starts for Larnav_209:

(Start: 16 @106420 has 20 MA's), (21, 106453), (Start: 22 @106456 has 38 MA's), (Start: 23 @106471 has 10 MA's), (29, 106528), (30, 106567), (33, 106588),

Gene: Leo04_211 Start: 107021, Stop: 107227, Start Num: 22

Candidate Starts for Leo04_211:

(Start: 16 @106985 has 20 MA's), (21, 107018), (Start: 22 @107021 has 38 MA's), (Start: 23 @107036 has 10 MA's), (29, 107093), (30, 107132), (33, 107153),

Gene: Liandry_210 Start: 106113, Stop: 106301, Start Num: 23

Candidate Starts for Liandry_210:

(Start: 16 @106062 has 20 MA's), (21, 106095), (Start: 22 @106098 has 38 MA's), (Start: 23 @106113 has 10 MA's), (33, 106230),

Gene: LilMartin_208 Start: 104658, Stop: 104861, Start Num: 22

Candidate Starts for LilMartin_208:

(Start: 13 @104607 has 2 MA's), (Start: 16 @104622 has 20 MA's), (Start: 20 @104643 has 1 MA's), (Start: 22 @104658 has 38 MA's), (Start: 23 @104673 has 10 MA's), (29, 104730), (30, 104769), (33, 104790),

Gene: Limpid_155 Start: 86322, Stop: 86555, Start Num: 13

Candidate Starts for Limpid_155:

(7, 86289), (Start: 13 @86322 has 2 MA's), (Start: 17 @86340 has 2 MA's), (21, 86376), (Start: 22 @86379 has 38 MA's), (32, 86505),

Gene: LukeCage_228 Start: 109583, Stop: 109750, Start Num: 22

Candidate Starts for LukeCage_228:

(Start: 16 @109544 has 20 MA's), (21, 109580), (Start: 22 @109583 has 38 MA's), (Start: 23 @109598 has 10 MA's), (33, 109715),

Gene: Lululemon_207 Start: 105376, Stop: 105582, Start Num: 22

Candidate Starts for Lululemon_207:

(Start: 16 @105340 has 20 MA's), (21, 105373), (Start: 22 @105376 has 38 MA's), (Start: 23 @105391 has 10 MA's), (29, 105448), (30, 105487), (33, 105508),

Gene: Marsus_222 Start: 106366, Stop: 106605, Start Num: 16

Candidate Starts for Marsus_222:

(Start: 13 @106351 has 2 MA's), (Start: 16 @106366 has 20 MA's), (Start: 20 @106387 has 1 MA's), (Start: 22 @106402 has 38 MA's), (Start: 23 @106417 has 10 MA's), (29, 106474), (30, 106513), (33, 106534),

Gene: MeganTheeKilla_162 Start: 85948, Stop: 86172, Start Num: 18

Candidate Starts for MeganTheeKilla_162:

(7, 85897), (9, 85903), (Start: 13 @85930 has 2 MA's), (Start: 18 @85948 has 20 MA's), (Start: 22 @85981 has 38 MA's), (Start: 23 @85996 has 10 MA's), (24, 86011), (26, 86035), (27, 86044), (28, 86047), (32, 86107),

Gene: Mildred21_218 Start: 104439, Stop: 104618, Start Num: 23

Candidate Starts for Mildred21_218:

(Start: 13 @104373 has 2 MA's), (Start: 16 @104388 has 20 MA's), (21, 104421), (Start: 22 @104424 has 38 MA's), (Start: 23 @104439 has 10 MA's), (26, 104481), (29, 104496), (30, 104535), (33, 104556),

Gene: MindFlayer_217 Start: 106462, Stop: 106671, Start Num: 16

Candidate Starts for MindFlayer_217:

(Start: 16 @106462 has 20 MA's), (Start: 22 @106504 has 38 MA's), (Start: 23 @106519 has 10 MA's), (26, 106561), (33, 106636),

Gene: Moab_160 Start: 88026, Stop: 88205, Start Num: 22

Candidate Starts for Moab_160:

(Start: 18 @87993 has 20 MA's), (Start: 22 @88026 has 38 MA's), (Start: 23 @88041 has 10 MA's), (24, 88056), (27, 88089), (32, 88152),

Gene: Mugiwara_236 Start: 110044, Stop: 110250, Start Num: 16

Candidate Starts for Mugiwara_236:

(Start: 16 @110044 has 20 MA's), (21, 110080), (Start: 22 @110083 has 38 MA's), (Start: 23 @110098 has 10 MA's), (26, 110140), (33, 110215),

Gene: MulchMansion_212 Start: 106292, Stop: 106495, Start Num: 22

Candidate Starts for MulchMansion_212:

(Start: 13 @106241 has 2 MA's), (Start: 16 @106256 has 20 MA's), (Start: 20 @106277 has 1 MA's), (Start: 22 @106292 has 38 MA's), (Start: 23 @106307 has 10 MA's), (29, 106364), (30, 106403), (33, 106424),

Gene: Muntaha_133 Start: 75826, Stop: 76041, Start Num: 18

Candidate Starts for Muntaha_133:

(Start: 18 @75826 has 20 MA's), (Start: 22 @75862 has 38 MA's), (32, 75988),

Gene: Navo_205 Start: 104706, Stop: 104909, Start Num: 22

Candidate Starts for Navo_205:

(Start: 16 @104670 has 20 MA's), (Start: 22 @104706 has 38 MA's), (Start: 23 @104721 has 10 MA's), (33, 104838),

Gene: NootNoot_207 Start: 104925, Stop: 105113, Start Num: 23
Candidate Starts for NootNoot_207:
(Start: 16 @104874 has 20 MA's), (Start: 22 @104910 has 38 MA's), (Start: 23 @104925 has 10 MA's), (33, 105042),

Gene: PacManQ_207 Start: 105376, Stop: 105582, Start Num: 22
Candidate Starts for PacManQ_207:
(Start: 16 @105340 has 20 MA's), (21, 105373), (Start: 22 @105376 has 38 MA's), (Start: 23 @105391 has 10 MA's), (29, 105448), (30, 105487), (33, 105508),

Gene: Paradiddles_202 Start: 107249, Stop: 107488, Start Num: 16
Candidate Starts for Paradiddles_202:
(Start: 16 @107249 has 20 MA's), (Start: 22 @107285 has 38 MA's), (Start: 23 @107300 has 10 MA's), (33, 107417),

Gene: Patelgo_162 Start: 88685, Stop: 88897, Start Num: 18
Candidate Starts for Patelgo_162:
(Start: 18 @88685 has 20 MA's), (Start: 22 @88718 has 38 MA's), (Start: 23 @88733 has 10 MA's), (24, 88748), (26, 88772), (27, 88781), (32, 88844),

Gene: Peebs_207 Start: 106442, Stop: 106633, Start Num: 23
Candidate Starts for Peebs_207:
(Start: 16 @106391 has 20 MA's), (21, 106424), (Start: 22 @106427 has 38 MA's), (Start: 23 @106442 has 10 MA's), (29, 106499), (30, 106538), (33, 106559),

Gene: Pepperwood_210 Start: 106662, Stop: 106865, Start Num: 22
Candidate Starts for Pepperwood_210:
(Start: 16 @106626 has 20 MA's), (21, 106659), (Start: 22 @106662 has 38 MA's), (Start: 23 @106677 has 10 MA's), (26, 106719), (29, 106734), (33, 106794),

Gene: Persimmon_213 Start: 105724, Stop: 105927, Start Num: 22
Candidate Starts for Persimmon_213:
(Start: 16 @105688 has 20 MA's), (Start: 22 @105724 has 38 MA's), (Start: 23 @105739 has 10 MA's), (33, 105856),

Gene: Phredrick_164 Start: 85828, Stop: 86052, Start Num: 18
Candidate Starts for Phredrick_164:
(Start: 18 @85828 has 20 MA's), (Start: 22 @85861 has 38 MA's), (24, 85891), (26, 85915), (27, 85924), (32, 85987),

Gene: PinkiePie_210 Start: 106113, Stop: 106301, Start Num: 23
Candidate Starts for PinkiePie_210:
(Start: 16 @106062 has 20 MA's), (21, 106095), (Start: 22 @106098 has 38 MA's), (Start: 23 @106113 has 10 MA's), (33, 106230),

Gene: PumpkinSpice_227 Start: 107725, Stop: 107892, Start Num: 22
Candidate Starts for PumpkinSpice_227:
(Start: 16 @107683 has 20 MA's), (Start: 22 @107725 has 38 MA's), (Start: 23 @107740 has 10 MA's), (26, 107782), (33, 107857),

Gene: Quaran19_224 Start: 107124, Stop: 107333, Start Num: 16
Candidate Starts for Quaran19_224:

(Start: 16 @107124 has 20 MA's), (Start: 22 @107166 has 38 MA's), (Start: 23 @107181 has 10 MA's), (26, 107223), (33, 107298),

Gene: Rikishi_232 Start: 107447, Stop: 107614, Start Num: 22

Candidate Starts for Rikishi_232:

(Start: 16 @107405 has 20 MA's), (Start: 22 @107447 has 38 MA's), (Start: 23 @107462 has 10 MA's), (26, 107504), (33, 107579),

Gene: Riptide_217 Start: 105766, Stop: 105948, Start Num: 23

Candidate Starts for Riptide_217:

(10, 105685), (11, 105694), (Start: 16 @105715 has 20 MA's), (21, 105748), (Start: 22 @105751 has 38 MA's), (Start: 23 @105766 has 10 MA's), (25, 105805), (29, 105823), (33, 105883),

Gene: SaltySpittoon_224 Start: 106666, Stop: 106875, Start Num: 16

Candidate Starts for SaltySpittoon_224:

(Start: 16 @106666 has 20 MA's), (Start: 22 @106708 has 38 MA's), (Start: 23 @106723 has 10 MA's), (26, 106765), (33, 106840),

Gene: Samisti12_214 Start: 108286, Stop: 108492, Start Num: 22

Candidate Starts for Samisti12_214:

(Start: 16 @108250 has 20 MA's), (21, 108283), (Start: 22 @108286 has 38 MA's), (Start: 23 @108301 has 10 MA's), (29, 108358), (30, 108397), (33, 108418),

Gene: Scheme_213 Start: 107931, Stop: 108137, Start Num: 22

Candidate Starts for Scheme_213:

(Start: 16 @107895 has 20 MA's), (21, 107928), (Start: 22 @107931 has 38 MA's), (Start: 23 @107946 has 10 MA's), (29, 108003), (30, 108042), (33, 108063),

Gene: SeresaTree_156 Start: 85781, Stop: 85993, Start Num: 18

Candidate Starts for SeresaTree_156:

(14, 85772), (Start: 18 @85781 has 20 MA's), (Start: 22 @85814 has 38 MA's), (Start: 23 @85829 has 10 MA's), (27, 85877), (32, 85940), (34, 85958),

Gene: Sham_156 Start: 88256, Stop: 88465, Start Num: 18

Candidate Starts for Sham_156:

(Start: 13 @88238 has 2 MA's), (Start: 18 @88256 has 20 MA's), (Start: 22 @88289 has 38 MA's), (Start: 23 @88304 has 10 MA's), (27, 88352), (33, 88418), (34, 88433),

Gene: Shuckle_212 Start: 106713, Stop: 106859, Start Num: 26

Candidate Starts for Shuckle_212:

(Start: 16 @106620 has 20 MA's), (21, 106653), (Start: 22 @106656 has 38 MA's), (Start: 23 @106671 has 10 MA's), (26, 106713), (29, 106728), (30, 106767), (33, 106788),

Gene: Sollertia_223 Start: 107677, Stop: 107886, Start Num: 16

Candidate Starts for Sollertia_223:

(Start: 16 @107677 has 20 MA's), (Start: 22 @107719 has 38 MA's), (Start: 23 @107734 has 10 MA's), (26, 107776), (33, 107851),

Gene: SparkleGoddess_159 Start: 86996, Stop: 87220, Start Num: 18

Candidate Starts for SparkleGoddess_159:

(Start: 18 @86996 has 20 MA's), (Start: 22 @87029 has 38 MA's), (Start: 23 @87044 has 10 MA's), (26, 87083), (29, 87098), (32, 87155),

Gene: Spelly_229 Start: 106595, Stop: 106804, Start Num: 16

Candidate Starts for Spelly_229:

(Start: 16 @106595 has 20 MA's), (Start: 22 @106637 has 38 MA's), (Start: 23 @106652 has 10 MA's), (26, 106694), (33, 106769),

Gene: Spilled_231 Start: 107799, Stop: 108008, Start Num: 16

Candidate Starts for Spilled_231:

(Start: 16 @107799 has 20 MA's), (Start: 22 @107841 has 38 MA's), (Start: 23 @107856 has 10 MA's), (26, 107898), (33, 107973),

Gene: Squillium_213 Start: 106115, Stop: 106303, Start Num: 23

Candidate Starts for Squillium_213:

(Start: 16 @106064 has 20 MA's), (21, 106097), (Start: 22 @106100 has 38 MA's), (Start: 23 @106115 has 10 MA's), (33, 106232),

Gene: Stanimal_222 Start: 108091, Stop: 108258, Start Num: 22

Candidate Starts for Stanimal_222:

(Start: 16 @108049 has 20 MA's), (Start: 22 @108091 has 38 MA's), (Start: 23 @108106 has 10 MA's), (26, 108148), (33, 108223),

Gene: StarPlatinum_232 Start: 109814, Stop: 109981, Start Num: 22

Candidate Starts for StarPlatinum_232:

(Start: 16 @109775 has 20 MA's), (21, 109811), (Start: 22 @109814 has 38 MA's), (Start: 23 @109829 has 10 MA's), (26, 109871), (33, 109946),

Gene: Starbow_221 Start: 106681, Stop: 106848, Start Num: 22

Candidate Starts for Starbow_221:

(Start: 16 @106639 has 20 MA's), (Start: 22 @106681 has 38 MA's), (Start: 23 @106696 has 10 MA's), (26, 106738), (33, 106813),

Gene: Stigma_158 Start: 87430, Stop: 87654, Start Num: 18

Candidate Starts for Stigma_158:

(Start: 18 @87430 has 20 MA's), (Start: 22 @87463 has 38 MA's), (Start: 23 @87478 has 10 MA's), (24, 87493), (26, 87517), (28, 87529), (29, 87532), (32, 87589),

Gene: Sushi23_210 Start: 107260, Stop: 107499, Start Num: 16

Candidate Starts for Sushi23_210:

(Start: 16 @107260 has 20 MA's), (21, 107293), (Start: 22 @107296 has 38 MA's), (Start: 23 @107311 has 10 MA's), (26, 107353), (29, 107368), (33, 107428),

Gene: Targaryen_209 Start: 107477, Stop: 107680, Start Num: 22

Candidate Starts for Targaryen_209:

(Start: 16 @107441 has 20 MA's), (21, 107474), (Start: 22 @107477 has 38 MA's), (Start: 23 @107492 has 10 MA's), (33, 107609),

Gene: Teutsch_209 Start: 107130, Stop: 107321, Start Num: 23

Candidate Starts for Teutsch_209:

(Start: 16 @107079 has 20 MA's), (21, 107112), (Start: 22 @107115 has 38 MA's), (Start: 23 @107130 has 10 MA's), (29, 107187), (30, 107226), (33, 107247),

Gene: TomSawyer_228 Start: 109152, Stop: 109319, Start Num: 22

Candidate Starts for TomSawyer_228:

(Start: 16 @109110 has 20 MA's), (Start: 22 @109152 has 38 MA's), (Start: 23 @109167 has 10 MA's), (26, 109209), (33, 109284),

Gene: Tomas_222 Start: 108094, Stop: 108276, Start Num: 22

Candidate Starts for Tomas_222:

(Start: 16 @108061 has 20 MA's), (Start: 22 @108094 has 38 MA's), (26, 108151), (27, 108160), (33, 108226),

Gene: Tribute_206 Start: 107247, Stop: 107486, Start Num: 16

Candidate Starts for Tribute_206:

(Start: 16 @107247 has 20 MA's), (21, 107280), (Start: 22 @107283 has 38 MA's), (Start: 23 @107298 has 10 MA's), (26, 107340), (29, 107355), (33, 107415),

Gene: TunaTartare_161 Start: 89502, Stop: 89711, Start Num: 18

Candidate Starts for TunaTartare_161:

(Start: 13 @89484 has 2 MA's), (Start: 18 @89502 has 20 MA's), (Start: 22 @89535 has 38 MA's), (Start: 23 @89550 has 10 MA's), (27, 89598), (33, 89664), (34, 89679),

Gene: Wakanda_132 Start: 75768, Stop: 75983, Start Num: 18

Candidate Starts for Wakanda_132:

(Start: 18 @75768 has 20 MA's), (Start: 22 @75804 has 38 MA's), (32, 75930),

Gene: Warpy_213 Start: 106350, Stop: 106589, Start Num: 16

Candidate Starts for Warpy_213:

(Start: 16 @106350 has 20 MA's), (21, 106383), (Start: 22 @106386 has 38 MA's), (Start: 23 @106401 has 10 MA's), (33, 106518),

Gene: Watermoore_209 Start: 107638, Stop: 107844, Start Num: 22

Candidate Starts for Watermoore_209:

(Start: 16 @107602 has 20 MA's), (21, 107635), (Start: 22 @107638 has 38 MA's), (Start: 23 @107653 has 10 MA's), (29, 107710), (30, 107749), (33, 107770),

Gene: Westy_161 Start: 87745, Stop: 87969, Start Num: 18

Candidate Starts for Westy_161:

(Start: 18 @87745 has 20 MA's), (Start: 22 @87778 has 38 MA's), (Start: 23 @87793 has 10 MA's), (24, 87808), (26, 87832), (28, 87844), (29, 87847), (32, 87904),

Gene: WhereRU_210 Start: 105903, Stop: 106106, Start Num: 22

Candidate Starts for WhereRU_210:

(Start: 16 @105867 has 20 MA's), (Start: 22 @105903 has 38 MA's), (Start: 23 @105918 has 10 MA's), (33, 106035),

Gene: Wipeout_215 Start: 108104, Stop: 108271, Start Num: 22

Candidate Starts for Wipeout_215:

(Start: 16 @108062 has 20 MA's), (Start: 22 @108104 has 38 MA's), (Start: 23 @108119 has 10 MA's), (26, 108161), (33, 108236),

Gene: Wofford_225 Start: 110795, Stop: 110962, Start Num: 22

Candidate Starts for Wofford_225:

(1, 110663), (4, 110681), (5, 110684), (6, 110699), (8, 110708), (Start: 16 @110753 has 20 MA's), (Start: 22 @110795 has 38 MA's), (Start: 23 @110810 has 10 MA's), (26, 110852), (33, 110927),

Gene: Yaboi_227 Start: 107654, Stop: 107821, Start Num: 22

Candidate Starts for Yaboi_227:

(Start: 16 @107612 has 20 MA's), (Start: 22 @107654 has 38 MA's), (Start: 23 @107669 has 10 MA's), (26, 107711), (33, 107786),