

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 1872 Report

This analysis was run 07/09/24 on database version 566.

Pham number 1872 has 69 members, 12 are drafts.

Phages represented in each track:

- Track 1 : HangryHippo_229, Lululemon_228, Pepperwood_228, BlueOtter_229, Tribute_224, Watermoore_227, Peebs_225, Sushi23_229, Leo04_228, PacManQ_229, Cursive_231, Cross_227, Larnav_235
- Track 2 : Persimmon_231, Navo_222, Bartholomune_228, Braelyn_224, WhereRU_234, NootNoot_225
- Track 3 : Bmoc_233
- Track 4 : Liandry_228, PinkiePie_228, Paradiddles_220, Squillium_231
- Track 5 : Warpy_231, Jay2Jay_234, Targaryen_228
- Track 6 : Mildred21_238
- Track 7 : Samisti12_232
- Track 8 : Daubenski_222
- Track 9 : Angela_231, LilMartin_227, MulchMansion_231
- Track 10 : Teutsch_227
- Track 11 : Anedea_241
- Track 12 : EGole_232
- Track 13 : Evy_218
- Track 14 : Battuta_238, Spelly_245, TomSawyer_244, Birchlyn_239, Amabiko_244, Quaran19_240, Karimac_240, Bordeaux_238, SaltySpittoon_240, Starbow_237
- Track 15 : Elmer_256, Wofford_240
- Track 16 : CeilingFan_252, PumpkinSpice_243, KentuckyRacer_251, Jollison_244, JimJam_247, Spilled_247
- Track 17 : BoomerJR_237, Genie2_237, Stanimal_237, Yaboi_242, Sollertia_238
- Track 18 : Mugiwara_252
- Track 19 : Enygma_247
- Track 20 : StarPlatinum_247
- Track 21 : LukeCage_243
- Track 22 : Gibbi_248
- Track 23 : Wipeout_230
- Track 24 : Tomas_240
- Track 25 : IchabodCrane_234, MindFlayer_233

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

The start number called the most often in the published annotations is 2, it was called in 51 of the 57 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amabiko_244, Anedea_241, Angela_231, Bartholomune_228, Battuta_238, Birchlyn_239, BlueOtter_229, Bmoc_233, BoomerJR_237, Bordeaux_238, Braelyn_224, CeilingFan_252, Cross_227, Cursive_231, Daubenski_222, EGole_232, Enygma_247, Genie2_237, HangryHippo_229, Jay2Jay_234, JimJam_247, Jollison_244, Karimac_240, KentuckyRacer_251, Larnav_235, Leo04_228, Liandry_228, LilMartin_227, LukeCage_243, Lululemon_228, Mildred21_238, MulchMansion_231, Navo_222, NootNoot_225, PacManQ_229, Paradiddles_220, Peebs_225, Pepperwood_228, Persimmon_231, PinkiePie_228, PumpkinSpice_243, Quaran19_240, SaltySpittoon_240, Samisti12_232, Sollertia_238, Spelly_245, Spilled_247, Squillium_231, Stanimal_237, StarPlatinum_247, Starbow_237, Sushi23_229, Targaryen_228, Teutsch_227, TomSawyer_244, Tribute_224, Warpy_231, Watermoore_227, WhereRU_234, Yaboi_242,

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

- Elmer_256, Evy_218, Gibbi_248, IchabodCrane_234, MindFlayer_233, Mugiwara_252, Tomas_240, Wipeout_230, Wofford_240,

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

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Summary by start number:

Start 1:

- Found in 29 of 69 (42.0%) of genes in pham
- Manual Annotations of this start: 3 of 57
- Called 10.3% of time when present
- Phage (with cluster) where this start called: IchabodCrane_234 (BE2), MindFlayer_233 (BE2), Tomas_240 (BE2),

Start 2:

- Found in 69 of 69 (100.0%) of genes in pham
- Manual Annotations of this start: 51 of 57
- Called 87.0% of time when present
- Phage (with cluster) where this start called: Amabiko_244 (BE2), Anedea_241 (BE1), Angela_231 (BE1), Bartholomune_228 (BE1), Battuta_238 (BE2), Birchlyn_239 (BE2), BlueOtter_229 (BE1), Bmoc_233 (BE1), BoomerJR_237 (BE2), Bordeaux_238 (BE2), Braelyn_224 (BE1), CeilingFan_252 (BE2), Cross_227 (BE1), Cursive_231 (BE1), Daubenski_222 (BE1), EGole_232 (BE1), Enygma_247 (BE2), Genie2_237 (BE2), HangryHippo_229 (BE1), Jay2Jay_234 (BE1), JimJam_247 (BE2), Jollison_244 (BE2), Karimac_240 (BE2), KentuckyRacer_251 (BE2), Larnav_235 (BE1), Leo04_228 (BE1), Liandry_228 (BE1), LilMartin_227 (BE1), LukeCage_243 (BE2), Lululemon_228 (BE1), Mildred21_238 (BE1), MulchMansion_231 (BE1), Navo_222 (BE1), NootNoot_225 (BE1), PacManQ_229 (BE1), Paradiddles_220 (BE1), Peebs_225 (BE1), Pepperwood_228 (BE1), Persimmon_231 (BE1), PinkiePie_228 (BE1), PumpkinSpice_243 (BE2), Quaran19_240 (BE2), SaltySpittoon_240 (BE2), Samisti12_232 (BE1), Sollertia_238 (BE2), Spelly_245 (BE2), Spilled_247 (BE2), Squillium_231 (BE1), Stanimal_237 (BE2), StarPlatinum_247 (BE2), Starbow_237 (BE2), Sushi23_229 (BE1),

Targaryen_228 (BE1), Teutsch_227 (BE1), TomSawyer_244 (BE2), Tribute_224 (BE1), Warpy_231 (BE1), Watermoore_227 (BE1), WhereRU_234 (BE1), Yaboi_242 (BE2),

Start 3:

- Found in 6 of 69 (8.7%) of genes in pham
- Manual Annotations of this start: 1 of 57
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Elmer_256 (BE2), Wofford_240 (BE2),

Start 4:

- Found in 17 of 69 (24.6%) of genes in pham
- Manual Annotations of this start: 1 of 57
- Called 5.9% of time when present
- Phage (with cluster) where this start called: Evy_218 (BE1),

Start 5:

- Found in 45 of 69 (65.2%) of genes in pham
- No Manual Annotations of this start.
- Called 2.2% of time when present
- Phage (with cluster) where this start called: Gibbi_248 (BE2),

Start 6:

- Found in 65 of 69 (94.2%) of genes in pham
- Manual Annotations of this start: 1 of 57
- Called 1.5% of time when present
- Phage (with cluster) where this start called: Wipeout_230 (BE2),

Start 13:

- Found in 53 of 69 (76.8%) of genes in pham
- No Manual Annotations of this start.
- Called 1.9% of time when present
- Phage (with cluster) where this start called: Mugiwara_252 (BE2),

Summary by clusters:

There are 2 clusters represented in this pham: BE2, BE1,

Info for manual annotations of cluster BE1:

- Start number 2 was manually annotated 30 times for cluster BE1.
- Start number 4 was manually annotated 1 time for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 1 was manually annotated 3 times for cluster BE2.
- Start number 2 was manually annotated 21 times for cluster BE2.
- Start number 3 was manually annotated 1 time for cluster BE2.
- Start number 6 was manually annotated 1 time for cluster BE2.

Gene Information:

Gene: Amabiko_244 Start: 112435, Stop: 112836, Start Num: 2

Candidate Starts for Amabiko_244:

(Start: 1 @112429 has 3 MA's), (Start: 2 @112435 has 51 MA's), (5, 112483), (Start: 6 @112495 has 1 MA's), (11, 112516), (12, 112528), (13, 112537), (14, 112546), (16, 112573), (18, 112600), (19, 112606), (21, 112639), (22, 112648), (27, 112699), (30, 112723), (31, 112729), (34, 112762), (37, 112789), (38, 112798), (39, 112825),

Gene: Anedea_241 Start: 115922, Stop: 116323, Start Num: 2

Candidate Starts for Anedea_241:

(Start: 2 @115922 has 51 MA's), (Start: 6 @115982 has 1 MA's), (10, 116000), (12, 116015), (18, 116087), (19, 116093), (28, 116189), (30, 116210), (32, 116228), (34, 116249), (36, 116273), (38, 116285), (39, 116312),

Gene: Angela_231 Start: 114142, Stop: 114543, Start Num: 2

Candidate Starts for Angela_231:

(Start: 2 @114142 has 51 MA's), (Start: 6 @114202 has 1 MA's), (10, 114220), (12, 114235), (26, 114400), (27, 114406), (28, 114409), (29, 114415), (30, 114430), (32, 114448), (36, 114493), (38, 114505), (39, 114532),

Gene: Bartholomune_228 Start: 113900, Stop: 114301, Start Num: 2

Candidate Starts for Bartholomune_228:

(Start: 2 @113900 has 51 MA's), (Start: 4 @113930 has 1 MA's), (5, 113948), (Start: 6 @113960 has 1 MA's), (10, 113978), (12, 113993), (19, 114071), (21, 114104), (27, 114164), (28, 114167), (36, 114251), (38, 114263), (39, 114290),

Gene: Battuta_238 Start: 111750, Stop: 112151, Start Num: 2

Candidate Starts for Battuta_238:

(Start: 1 @111744 has 3 MA's), (Start: 2 @111750 has 51 MA's), (5, 111798), (Start: 6 @111810 has 1 MA's), (11, 111831), (12, 111843), (13, 111852), (14, 111861), (16, 111888), (18, 111915), (19, 111921), (21, 111954), (22, 111963), (27, 112014), (30, 112038), (31, 112044), (34, 112077), (37, 112104), (38, 112113), (39, 112140),

Gene: Birchlyn_239 Start: 109683, Stop: 110084, Start Num: 2

Candidate Starts for Birchlyn_239:

(Start: 1 @109677 has 3 MA's), (Start: 2 @109683 has 51 MA's), (5, 109731), (Start: 6 @109743 has 1 MA's), (11, 109764), (12, 109776), (13, 109785), (14, 109794), (16, 109821), (18, 109848), (19, 109854), (21, 109887), (22, 109896), (27, 109947), (30, 109971), (31, 109977), (34, 110010), (37, 110037), (38, 110046), (39, 110073),

Gene: BlueOtter_229 Start: 114038, Stop: 114439, Start Num: 2

Candidate Starts for BlueOtter_229:

(Start: 2 @114038 has 51 MA's), (Start: 6 @114098 has 1 MA's), (10, 114116), (12, 114131), (13, 114140), (19, 114209), (20, 114233), (25, 114278), (26, 114296), (28, 114305), (30, 114326), (32, 114344), (36, 114389), (38, 114401), (39, 114428),

Gene: Bmoc_233 Start: 114590, Stop: 114991, Start Num: 2

Candidate Starts for Bmoc_233:

(Start: 2 @114590 has 51 MA's), (Start: 3 @114614 has 1 MA's), (Start: 6 @114650 has 1 MA's), (10, 114668), (12, 114683), (18, 114755), (19, 114761), (28, 114857), (30, 114878), (32, 114896), (34, 114917), (36, 114941), (38, 114953), (39, 114980),

Gene: BoomerJR_237 Start: 112351, Stop: 112752, Start Num: 2

Candidate Starts for BoomerJR_237:

(Start: 2 @112351 has 51 MA's), (5, 112399), (Start: 6 @112411 has 1 MA's), (11, 112432), (12, 112444), (13, 112453), (14, 112462), (18, 112516), (19, 112522), (21, 112555), (22, 112564), (27, 112615), (30, 112639), (31, 112645), (34, 112678), (37, 112705), (39, 112741),

Gene: Bordeaux_238 Start: 112333, Stop: 112734, Start Num: 2

Candidate Starts for Bordeaux_238:

(Start: 1 @112327 has 3 MA's), (Start: 2 @112333 has 51 MA's), (5, 112381), (Start: 6 @112393 has 1 MA's), (11, 112414), (12, 112426), (13, 112435), (14, 112444), (16, 112471), (18, 112498), (19, 112504), (21, 112537), (22, 112546), (27, 112597), (30, 112621), (31, 112627), (34, 112660), (37, 112687), (38, 112696), (39, 112723),

Gene: Braelyn_224 Start: 113547, Stop: 113948, Start Num: 2

Candidate Starts for Braelyn_224:

(Start: 2 @113547 has 51 MA's), (Start: 4 @113577 has 1 MA's), (5, 113595), (Start: 6 @113607 has 1 MA's), (10, 113625), (12, 113640), (19, 113718), (21, 113751), (27, 113811), (28, 113814), (36, 113898), (38, 113910), (39, 113937),

Gene: CeilingFan_252 Start: 113128, Stop: 113529, Start Num: 2

Candidate Starts for CeilingFan_252:

(Start: 1 @113122 has 3 MA's), (Start: 2 @113128 has 51 MA's), (5, 113176), (Start: 6 @113188 has 1 MA's), (11, 113209), (12, 113221), (13, 113230), (14, 113239), (16, 113266), (18, 113293), (19, 113299), (21, 113332), (22, 113341), (27, 113392), (30, 113416), (31, 113422), (33, 113449), (34, 113455), (37, 113482), (38, 113491), (39, 113518),

Gene: Cross_227 Start: 114683, Stop: 115084, Start Num: 2

Candidate Starts for Cross_227:

(Start: 2 @114683 has 51 MA's), (Start: 6 @114743 has 1 MA's), (10, 114761), (12, 114776), (13, 114785), (19, 114854), (20, 114878), (25, 114923), (26, 114941), (28, 114950), (30, 114971), (32, 114989), (36, 115034), (38, 115046), (39, 115073),

Gene: Cursive_231 Start: 114790, Stop: 115191, Start Num: 2

Candidate Starts for Cursive_231:

(Start: 2 @114790 has 51 MA's), (Start: 6 @114850 has 1 MA's), (10, 114868), (12, 114883), (13, 114892), (19, 114961), (20, 114985), (25, 115030), (26, 115048), (28, 115057), (30, 115078), (32, 115096), (36, 115141), (38, 115153), (39, 115180),

Gene: Daubenski_222 Start: 115169, Stop: 115570, Start Num: 2

Candidate Starts for Daubenski_222:

(Start: 1 @115163 has 3 MA's), (Start: 2 @115169 has 51 MA's), (Start: 3 @115193 has 1 MA's), (5, 115217), (10, 115247), (12, 115262), (13, 115271), (15, 115289), (19, 115340), (26, 115427), (28, 115436), (29, 115442), (30, 115457), (36, 115520), (38, 115532), (39, 115559),

Gene: EGole_232 Start: 116874, Stop: 117275, Start Num: 2

Candidate Starts for EGole_232:

(Start: 2 @116874 has 51 MA's), (8, 116940), (10, 116952), (12, 116967), (13, 116976), (19, 117045), (25, 117114), (26, 117132), (28, 117141), (30, 117162), (32, 117180), (36, 117225), (38, 117237), (39, 117264),

Gene: Elmer_256 Start: 115950, Stop: 116327, Start Num: 3

Candidate Starts for Elmer_256:

(Start: 1 @115920 has 3 MA's), (Start: 2 @115926 has 51 MA's), (Start: 3 @115950 has 1 MA's), (Start: 4 @115956 has 1 MA's), (Start: 6 @115986 has 1 MA's), (7, 115989), (11, 116007), (12, 116019), (13, 116028), (16, 116064), (18, 116091), (19, 116097), (26, 116184), (30, 116214), (31,

116220), (34, 116253), (35, 116262), (37, 116280), (39, 116316),

Gene: Enygma_247 Start: 115136, Stop: 115537, Start Num: 2

Candidate Starts for Enygma_247:

(Start: 1 @115130 has 3 MA's), (Start: 2 @115136 has 51 MA's), (5, 115184), (Start: 6 @115196 has 1 MA's), (11, 115217), (12, 115229), (13, 115238), (16, 115274), (18, 115301), (19, 115307), (21, 115340), (22, 115349), (27, 115400), (30, 115424), (31, 115430), (34, 115463), (37, 115490), (38, 115499), (39, 115526),

Gene: Evy_218 Start: 114889, Stop: 115260, Start Num: 4

Candidate Starts for Evy_218:

(Start: 2 @114859 has 51 MA's), (Start: 4 @114889 has 1 MA's), (5, 114907), (Start: 6 @114919 has 1 MA's), (10, 114937), (12, 114952), (13, 114961), (19, 115030), (22, 115072), (26, 115117), (28, 115126), (29, 115132), (30, 115147), (32, 115165), (36, 115210), (38, 115222), (39, 115249),

Gene: Genie2_237 Start: 112476, Stop: 112877, Start Num: 2

Candidate Starts for Genie2_237:

(Start: 2 @112476 has 51 MA's), (5, 112524), (Start: 6 @112536 has 1 MA's), (11, 112557), (12, 112569), (13, 112578), (14, 112587), (18, 112641), (19, 112647), (21, 112680), (22, 112689), (27, 112740), (30, 112764), (31, 112770), (34, 112803), (37, 112830), (39, 112866),

Gene: Gibbi_248 Start: 112669, Stop: 113022, Start Num: 5

Candidate Starts for Gibbi_248:

(Start: 1 @112615 has 3 MA's), (Start: 2 @112621 has 51 MA's), (5, 112669), (Start: 6 @112681 has 1 MA's), (11, 112702), (12, 112714), (13, 112723), (14, 112732), (16, 112759), (18, 112786), (19, 112792), (21, 112825), (22, 112834), (27, 112885), (30, 112909), (31, 112915), (33, 112942), (34, 112948), (37, 112975), (38, 112984), (39, 113011),

Gene: HangryHippo_229 Start: 114038, Stop: 114439, Start Num: 2

Candidate Starts for HangryHippo_229:

(Start: 2 @114038 has 51 MA's), (Start: 6 @114098 has 1 MA's), (10, 114116), (12, 114131), (13, 114140), (19, 114209), (20, 114233), (25, 114278), (26, 114296), (28, 114305), (30, 114326), (32, 114344), (36, 114389), (38, 114401), (39, 114428),

Gene: IchabodCrane_234 Start: 112130, Stop: 112537, Start Num: 1

Candidate Starts for IchabodCrane_234:

(Start: 1 @112130 has 3 MA's), (Start: 2 @112136 has 51 MA's), (5, 112184), (Start: 6 @112196 has 1 MA's), (11, 112217), (12, 112229), (13, 112238), (14, 112247), (16, 112274), (18, 112301), (19, 112307), (21, 112340), (22, 112349), (27, 112400), (30, 112424), (31, 112430), (34, 112463), (37, 112490), (38, 112499), (39, 112526),

Gene: Jay2Jay_234 Start: 115014, Stop: 115415, Start Num: 2

Candidate Starts for Jay2Jay_234:

(Start: 2 @115014 has 51 MA's), (Start: 4 @115044 has 1 MA's), (5, 115062), (Start: 6 @115074 has 1 MA's), (10, 115092), (12, 115107), (13, 115116), (19, 115185), (22, 115227), (26, 115272), (28, 115281), (29, 115287), (30, 115302), (32, 115320), (36, 115365), (38, 115377), (39, 115404),

Gene: JimJam_247 Start: 114057, Stop: 114458, Start Num: 2

Candidate Starts for JimJam_247:

(Start: 1 @114051 has 3 MA's), (Start: 2 @114057 has 51 MA's), (5, 114105), (Start: 6 @114117 has 1 MA's), (11, 114138), (12, 114150), (13, 114159), (14, 114168), (16, 114195), (18, 114222), (19, 114228), (21, 114261), (22, 114270), (27, 114321), (30, 114345), (31, 114351), (33, 114378), (34, 114384), (37, 114411), (38, 114420), (39, 114447),

Gene: Jollison_244 Start: 112267, Stop: 112668, Start Num: 2

Candidate Starts for Jollison_244:

(Start: 1 @112261 has 3 MA's), (Start: 2 @112267 has 51 MA's), (5, 112315), (Start: 6 @112327 has 1 MA's), (11, 112348), (12, 112360), (13, 112369), (14, 112378), (16, 112405), (18, 112432), (19, 112438), (21, 112471), (22, 112480), (27, 112531), (30, 112555), (31, 112561), (33, 112588), (34, 112594), (37, 112621), (38, 112630), (39, 112657),

Gene: Karimac_240 Start: 112452, Stop: 112853, Start Num: 2

Candidate Starts for Karimac_240:

(Start: 1 @112446 has 3 MA's), (Start: 2 @112452 has 51 MA's), (5, 112500), (Start: 6 @112512 has 1 MA's), (11, 112533), (12, 112545), (13, 112554), (14, 112563), (16, 112590), (18, 112617), (19, 112623), (21, 112656), (22, 112665), (27, 112716), (30, 112740), (31, 112746), (34, 112779), (37, 112806), (38, 112815), (39, 112842),

Gene: KentuckyRacer_251 Start: 113972, Stop: 114373, Start Num: 2

Candidate Starts for KentuckyRacer_251:

(Start: 1 @113966 has 3 MA's), (Start: 2 @113972 has 51 MA's), (5, 114020), (Start: 6 @114032 has 1 MA's), (11, 114053), (12, 114065), (13, 114074), (14, 114083), (16, 114110), (18, 114137), (19, 114143), (21, 114176), (22, 114185), (27, 114236), (30, 114260), (31, 114266), (33, 114293), (34, 114299), (37, 114326), (38, 114335), (39, 114362),

Gene: Larnav_235 Start: 114956, Stop: 115357, Start Num: 2

Candidate Starts for Larnav_235:

(Start: 2 @114956 has 51 MA's), (Start: 6 @115016 has 1 MA's), (10, 115034), (12, 115049), (13, 115058), (19, 115127), (20, 115151), (25, 115196), (26, 115214), (28, 115223), (30, 115244), (32, 115262), (36, 115307), (38, 115319), (39, 115346),

Gene: Leo04_228 Start: 115064, Stop: 115465, Start Num: 2

Candidate Starts for Leo04_228:

(Start: 2 @115064 has 51 MA's), (Start: 6 @115124 has 1 MA's), (10, 115142), (12, 115157), (13, 115166), (19, 115235), (20, 115259), (25, 115304), (26, 115322), (28, 115331), (30, 115352), (32, 115370), (36, 115415), (38, 115427), (39, 115454),

Gene: Liandry_228 Start: 114436, Stop: 114837, Start Num: 2

Candidate Starts for Liandry_228:

(Start: 2 @114436 has 51 MA's), (Start: 4 @114466 has 1 MA's), (5, 114484), (Start: 6 @114496 has 1 MA's), (10, 114514), (12, 114529), (19, 114607), (21, 114640), (27, 114700), (28, 114703), (32, 114742), (36, 114787), (38, 114799), (39, 114826),

Gene: LilMartin_227 Start: 113082, Stop: 113483, Start Num: 2

Candidate Starts for LilMartin_227:

(Start: 2 @113082 has 51 MA's), (Start: 6 @113142 has 1 MA's), (10, 113160), (12, 113175), (26, 113340), (27, 113346), (28, 113349), (29, 113355), (30, 113370), (32, 113388), (36, 113433), (38, 113445), (39, 113472),

Gene: LukeCage_243 Start: 114297, Stop: 114698, Start Num: 2

Candidate Starts for LukeCage_243:

(Start: 1 @114291 has 3 MA's), (Start: 2 @114297 has 51 MA's), (5, 114345), (Start: 6 @114357 has 1 MA's), (11, 114378), (12, 114390), (13, 114399), (14, 114408), (16, 114435), (18, 114462), (19, 114468), (21, 114501), (24, 114534), (27, 114561), (29, 114570), (30, 114585), (34, 114624), (37, 114651), (38, 114660), (39, 114687),

Gene: Lululemon_228 Start: 113843, Stop: 114244, Start Num: 2

Candidate Starts for Lululemon_228:

(Start: 2 @113843 has 51 MA's), (Start: 6 @113903 has 1 MA's), (10, 113921), (12, 113936), (13, 113945), (19, 114014), (20, 114038), (25, 114083), (26, 114101), (28, 114110), (30, 114131), (32, 114149), (36, 114194), (38, 114206), (39, 114233),

Gene: Mildred21_238 Start: 113227, Stop: 113628, Start Num: 2

Candidate Starts for Mildred21_238:

(Start: 1 @113221 has 3 MA's), (Start: 2 @113227 has 51 MA's), (Start: 4 @113257 has 1 MA's), (5, 113275), (Start: 6 @113287 has 1 MA's), (10, 113305), (12, 113320), (19, 113398), (21, 113431), (22, 113440), (27, 113491), (28, 113494), (29, 113500), (30, 113515), (32, 113533), (34, 113554), (36, 113578), (38, 113590), (39, 113617),

Gene: MindFlayer_233 Start: 111646, Stop: 112053, Start Num: 1

Candidate Starts for MindFlayer_233:

(Start: 1 @111646 has 3 MA's), (Start: 2 @111652 has 51 MA's), (5, 111700), (Start: 6 @111712 has 1 MA's), (11, 111733), (12, 111745), (13, 111754), (14, 111763), (16, 111790), (18, 111817), (19, 111823), (21, 111856), (22, 111865), (27, 111916), (30, 111940), (31, 111946), (34, 111979), (37, 112006), (38, 112015), (39, 112042),

Gene: Mugiwara_252 Start: 114938, Stop: 115237, Start Num: 13

Candidate Starts for Mugiwara_252:

(Start: 1 @114830 has 3 MA's), (Start: 2 @114836 has 51 MA's), (Start: 3 @114860 has 1 MA's), (5, 114884), (Start: 6 @114896 has 1 MA's), (11, 114917), (12, 114929), (13, 114938), (14, 114947), (16, 114974), (18, 115001), (19, 115007), (21, 115040), (22, 115049), (23, 115064), (27, 115100), (29, 115109), (30, 115124), (31, 115130), (37, 115190), (38, 115199), (39, 115226),

Gene: MulchMansion_231 Start: 114716, Stop: 115117, Start Num: 2

Candidate Starts for MulchMansion_231:

(Start: 2 @114716 has 51 MA's), (Start: 6 @114776 has 1 MA's), (10, 114794), (12, 114809), (26, 114974), (27, 114980), (28, 114983), (29, 114989), (30, 115004), (32, 115022), (36, 115067), (38, 115079), (39, 115106),

Gene: Navo_222 Start: 112751, Stop: 113152, Start Num: 2

Candidate Starts for Navo_222:

(Start: 2 @112751 has 51 MA's), (Start: 4 @112781 has 1 MA's), (5, 112799), (Start: 6 @112811 has 1 MA's), (10, 112829), (12, 112844), (19, 112922), (21, 112955), (27, 113015), (28, 113018), (36, 113102), (38, 113114), (39, 113141),

Gene: NootNoot_225 Start: 113281, Stop: 113682, Start Num: 2

Candidate Starts for NootNoot_225:

(Start: 2 @113281 has 51 MA's), (Start: 4 @113311 has 1 MA's), (5, 113329), (Start: 6 @113341 has 1 MA's), (10, 113359), (12, 113374), (19, 113452), (21, 113485), (27, 113545), (28, 113548), (36, 113632), (38, 113644), (39, 113671),

Gene: PacManQ_229 Start: 113843, Stop: 114244, Start Num: 2

Candidate Starts for PacManQ_229:

(Start: 2 @113843 has 51 MA's), (Start: 6 @113903 has 1 MA's), (10, 113921), (12, 113936), (13, 113945), (19, 114014), (20, 114038), (25, 114083), (26, 114101), (28, 114110), (30, 114131), (32, 114149), (36, 114194), (38, 114206), (39, 114233),

Gene: Paradiddles_220 Start: 115656, Stop: 116057, Start Num: 2

Candidate Starts for Paradiddles_220:

(Start: 2 @115656 has 51 MA's), (Start: 4 @115686 has 1 MA's), (5, 115704), (Start: 6 @115716 has 1 MA's), (10, 115734), (12, 115749), (19, 115827), (21, 115860), (27, 115920), (28, 115923), (32, 115962), (36, 116007), (38, 116019), (39, 116046),

Gene: Peebs_225 Start: 114927, Stop: 115328, Start Num: 2

Candidate Starts for Peebs_225:

(Start: 2 @114927 has 51 MA's), (Start: 6 @114987 has 1 MA's), (10, 115005), (12, 115020), (13, 115029), (19, 115098), (20, 115122), (25, 115167), (26, 115185), (28, 115194), (30, 115215), (32, 115233), (36, 115278), (38, 115290), (39, 115317),

Gene: Pepperwood_228 Start: 114735, Stop: 115136, Start Num: 2

Candidate Starts for Pepperwood_228:

(Start: 2 @114735 has 51 MA's), (Start: 6 @114795 has 1 MA's), (10, 114813), (12, 114828), (13, 114837), (19, 114906), (20, 114930), (25, 114975), (26, 114993), (28, 115002), (30, 115023), (32, 115041), (36, 115086), (38, 115098), (39, 115125),

Gene: Persimmon_231 Start: 113769, Stop: 114170, Start Num: 2

Candidate Starts for Persimmon_231:

(Start: 2 @113769 has 51 MA's), (Start: 4 @113799 has 1 MA's), (5, 113817), (Start: 6 @113829 has 1 MA's), (10, 113847), (12, 113862), (19, 113940), (21, 113973), (27, 114033), (28, 114036), (36, 114120), (38, 114132), (39, 114159),

Gene: PinkiePie_228 Start: 114436, Stop: 114837, Start Num: 2

Candidate Starts for PinkiePie_228:

(Start: 2 @114436 has 51 MA's), (Start: 4 @114466 has 1 MA's), (5, 114484), (Start: 6 @114496 has 1 MA's), (10, 114514), (12, 114529), (19, 114607), (21, 114640), (27, 114700), (28, 114703), (32, 114742), (36, 114787), (38, 114799), (39, 114826),

Gene: PumpkinSpice_243 Start: 112873, Stop: 113274, Start Num: 2

Candidate Starts for PumpkinSpice_243:

(Start: 1 @112867 has 3 MA's), (Start: 2 @112873 has 51 MA's), (5, 112921), (Start: 6 @112933 has 1 MA's), (11, 112954), (12, 112966), (13, 112975), (14, 112984), (16, 113011), (18, 113038), (19, 113044), (21, 113077), (22, 113086), (27, 113137), (30, 113161), (31, 113167), (33, 113194), (34, 113200), (37, 113227), (38, 113236), (39, 113263),

Gene: Quaran19_240 Start: 112314, Stop: 112715, Start Num: 2

Candidate Starts for Quaran19_240:

(Start: 1 @112308 has 3 MA's), (Start: 2 @112314 has 51 MA's), (5, 112362), (Start: 6 @112374 has 1 MA's), (11, 112395), (12, 112407), (13, 112416), (14, 112425), (16, 112452), (18, 112479), (19, 112485), (21, 112518), (22, 112527), (27, 112578), (30, 112602), (31, 112608), (34, 112641), (37, 112668), (38, 112677), (39, 112704),

Gene: SaltySpittoon_240 Start: 111856, Stop: 112257, Start Num: 2

Candidate Starts for SaltySpittoon_240:

(Start: 1 @111850 has 3 MA's), (Start: 2 @111856 has 51 MA's), (5, 111904), (Start: 6 @111916 has 1 MA's), (11, 111937), (12, 111949), (13, 111958), (14, 111967), (16, 111994), (18, 112021), (19, 112027), (21, 112060), (22, 112069), (27, 112120), (30, 112144), (31, 112150), (34, 112183), (37, 112210), (38, 112219), (39, 112246),

Gene: Samisti12_232 Start: 116329, Stop: 116730, Start Num: 2

Candidate Starts for Samisti12_232:

(Start: 2 @116329 has 51 MA's), (Start: 3 @116353 has 1 MA's), (8, 116395), (10, 116407), (12, 116422), (13, 116431), (19, 116500), (25, 116569), (26, 116587), (28, 116596), (30, 116617), (32,

116635), (36, 116680), (38, 116692), (39, 116719),

Gene: Sollertia_238 Start: 112465, Stop: 112866, Start Num: 2

Candidate Starts for Sollertia_238:

(Start: 2 @112465 has 51 MA's), (5, 112513), (Start: 6 @112525 has 1 MA's), (11, 112546), (12, 112558), (13, 112567), (14, 112576), (18, 112630), (19, 112636), (21, 112669), (22, 112678), (27, 112729), (30, 112753), (31, 112759), (34, 112792), (37, 112819), (39, 112855),

Gene: Spelly_245 Start: 111785, Stop: 112186, Start Num: 2

Candidate Starts for Spelly_245:

(Start: 1 @111779 has 3 MA's), (Start: 2 @111785 has 51 MA's), (5, 111833), (Start: 6 @111845 has 1 MA's), (11, 111866), (12, 111878), (13, 111887), (14, 111896), (16, 111923), (18, 111950), (19, 111956), (21, 111989), (22, 111998), (27, 112049), (30, 112073), (31, 112079), (34, 112112), (37, 112139), (38, 112148), (39, 112175),

Gene: Spilled_247 Start: 112989, Stop: 113390, Start Num: 2

Candidate Starts for Spilled_247:

(Start: 1 @112983 has 3 MA's), (Start: 2 @112989 has 51 MA's), (5, 113037), (Start: 6 @113049 has 1 MA's), (11, 113070), (12, 113082), (13, 113091), (14, 113100), (16, 113127), (18, 113154), (19, 113160), (21, 113193), (22, 113202), (27, 113253), (30, 113277), (31, 113283), (33, 113310), (34, 113316), (37, 113343), (38, 113352), (39, 113379),

Gene: Squillium_231 Start: 114438, Stop: 114839, Start Num: 2

Candidate Starts for Squillium_231:

(Start: 2 @114438 has 51 MA's), (Start: 4 @114468 has 1 MA's), (5, 114486), (Start: 6 @114498 has 1 MA's), (10, 114516), (12, 114531), (19, 114609), (21, 114642), (27, 114702), (28, 114705), (32, 114744), (36, 114789), (38, 114801), (39, 114828),

Gene: Stanimal_237 Start: 112837, Stop: 113238, Start Num: 2

Candidate Starts for Stanimal_237:

(Start: 2 @112837 has 51 MA's), (5, 112885), (Start: 6 @112897 has 1 MA's), (11, 112918), (12, 112930), (13, 112939), (14, 112948), (18, 113002), (19, 113008), (21, 113041), (22, 113050), (27, 113101), (30, 113125), (31, 113131), (34, 113164), (37, 113191), (39, 113227),

Gene: StarPlatinum_247 Start: 114798, Stop: 115199, Start Num: 2

Candidate Starts for StarPlatinum_247:

(Start: 1 @114792 has 3 MA's), (Start: 2 @114798 has 51 MA's), (5, 114846), (Start: 6 @114858 has 1 MA's), (11, 114879), (12, 114891), (13, 114900), (14, 114909), (16, 114936), (17, 114942), (18, 114963), (19, 114969), (22, 115011), (27, 115062), (30, 115086), (31, 115092), (34, 115125), (37, 115152), (38, 115161), (39, 115188),

Gene: Starbow_237 Start: 111829, Stop: 112230, Start Num: 2

Candidate Starts for Starbow_237:

(Start: 1 @111823 has 3 MA's), (Start: 2 @111829 has 51 MA's), (5, 111877), (Start: 6 @111889 has 1 MA's), (11, 111910), (12, 111922), (13, 111931), (14, 111940), (16, 111967), (18, 111994), (19, 112000), (21, 112033), (22, 112042), (27, 112093), (30, 112117), (31, 112123), (34, 112156), (37, 112183), (38, 112192), (39, 112219),

Gene: Sushi23_229 Start: 115793, Stop: 116194, Start Num: 2

Candidate Starts for Sushi23_229:

(Start: 2 @115793 has 51 MA's), (Start: 6 @115853 has 1 MA's), (10, 115871), (12, 115886), (13, 115895), (19, 115964), (20, 115988), (25, 116033), (26, 116051), (28, 116060), (30, 116081), (32, 116099), (36, 116144), (38, 116156), (39, 116183),

Gene: Targaryen_228 Start: 115967, Stop: 116368, Start Num: 2

Candidate Starts for Targaryen_228:

(Start: 2 @115967 has 51 MA's), (Start: 4 @115997 has 1 MA's), (5, 116015), (Start: 6 @116027 has 1 MA's), (10, 116045), (12, 116060), (13, 116069), (19, 116138), (22, 116180), (26, 116225), (28, 116234), (29, 116240), (30, 116255), (32, 116273), (36, 116318), (38, 116330), (39, 116357),

Gene: Teutsch_227 Start: 115158, Stop: 115559, Start Num: 2

Candidate Starts for Teutsch_227:

(Start: 2 @115158 has 51 MA's), (Start: 6 @115218 has 1 MA's), (10, 115236), (12, 115251), (13, 115260), (20, 115353), (25, 115398), (26, 115416), (28, 115425), (30, 115446), (32, 115464), (36, 115509), (38, 115521), (39, 115548),

Gene: TomSawyer_244 Start: 114300, Stop: 114701, Start Num: 2

Candidate Starts for TomSawyer_244:

(Start: 1 @114294 has 3 MA's), (Start: 2 @114300 has 51 MA's), (5, 114348), (Start: 6 @114360 has 1 MA's), (11, 114381), (12, 114393), (13, 114402), (14, 114411), (16, 114438), (18, 114465), (19, 114471), (21, 114504), (22, 114513), (27, 114564), (30, 114588), (31, 114594), (34, 114627), (37, 114654), (38, 114663), (39, 114690),

Gene: Tomas_240 Start: 116197, Stop: 116604, Start Num: 1

Candidate Starts for Tomas_240:

(Start: 1 @116197 has 3 MA's), (Start: 2 @116203 has 51 MA's), (9, 116275), (12, 116296), (13, 116305), (27, 116467), (28, 116470), (30, 116491), (39, 116593),

Gene: Tribute_224 Start: 115323, Stop: 115724, Start Num: 2

Candidate Starts for Tribute_224:

(Start: 2 @115323 has 51 MA's), (Start: 6 @115383 has 1 MA's), (10, 115401), (12, 115416), (13, 115425), (19, 115494), (20, 115518), (25, 115563), (26, 115581), (28, 115590), (30, 115611), (32, 115629), (36, 115674), (38, 115686), (39, 115713),

Gene: Warpy_231 Start: 114452, Stop: 114853, Start Num: 2

Candidate Starts for Warpy_231:

(Start: 2 @114452 has 51 MA's), (Start: 4 @114482 has 1 MA's), (5, 114500), (Start: 6 @114512 has 1 MA's), (10, 114530), (12, 114545), (13, 114554), (19, 114623), (22, 114665), (26, 114710), (28, 114719), (29, 114725), (30, 114740), (32, 114758), (36, 114803), (38, 114815), (39, 114842),

Gene: Watermoore_227 Start: 115681, Stop: 116082, Start Num: 2

Candidate Starts for Watermoore_227:

(Start: 2 @115681 has 51 MA's), (Start: 6 @115741 has 1 MA's), (10, 115759), (12, 115774), (13, 115783), (19, 115852), (20, 115876), (25, 115921), (26, 115939), (28, 115948), (30, 115969), (32, 115987), (36, 116032), (38, 116044), (39, 116071),

Gene: WhereRU_234 Start: 113930, Stop: 114331, Start Num: 2

Candidate Starts for WhereRU_234:

(Start: 2 @113930 has 51 MA's), (Start: 4 @113960 has 1 MA's), (5, 113978), (Start: 6 @113990 has 1 MA's), (10, 114008), (12, 114023), (19, 114101), (21, 114134), (27, 114194), (28, 114197), (36, 114281), (38, 114293), (39, 114320),

Gene: Wipeout_230 Start: 113312, Stop: 113653, Start Num: 6

Candidate Starts for Wipeout_230:

(Start: 1 @113246 has 3 MA's), (Start: 2 @113252 has 51 MA's), (5, 113300), (Start: 6 @113312 has 1 MA's), (11, 113333), (12, 113345), (13, 113354), (14, 113363), (16, 113390), (18, 113417), (19,

113423), (21, 113456), (22, 113465), (27, 113516), (30, 113540), (31, 113546), (34, 113579), (37, 113606), (38, 113615), (39, 113642),

Gene: Wofford_240 Start: 115564, Stop: 115941, Start Num: 3

Candidate Starts for Wofford_240:

(Start: 1 @115534 has 3 MA's), (Start: 2 @115540 has 51 MA's), (Start: 3 @115564 has 1 MA's), (Start: 4 @115570 has 1 MA's), (Start: 6 @115600 has 1 MA's), (7, 115603), (11, 115621), (12, 115633), (13, 115642), (16, 115678), (18, 115705), (19, 115711), (26, 115798), (30, 115828), (31, 115834), (34, 115867), (35, 115876), (37, 115894), (39, 115930),

Gene: Yaboi_242 Start: 112400, Stop: 112801, Start Num: 2

Candidate Starts for Yaboi_242:

(Start: 2 @112400 has 51 MA's), (5, 112448), (Start: 6 @112460 has 1 MA's), (11, 112481), (12, 112493), (13, 112502), (14, 112511), (18, 112565), (19, 112571), (21, 112604), (22, 112613), (27, 112664), (30, 112688), (31, 112694), (34, 112727), (37, 112754), (39, 112790),