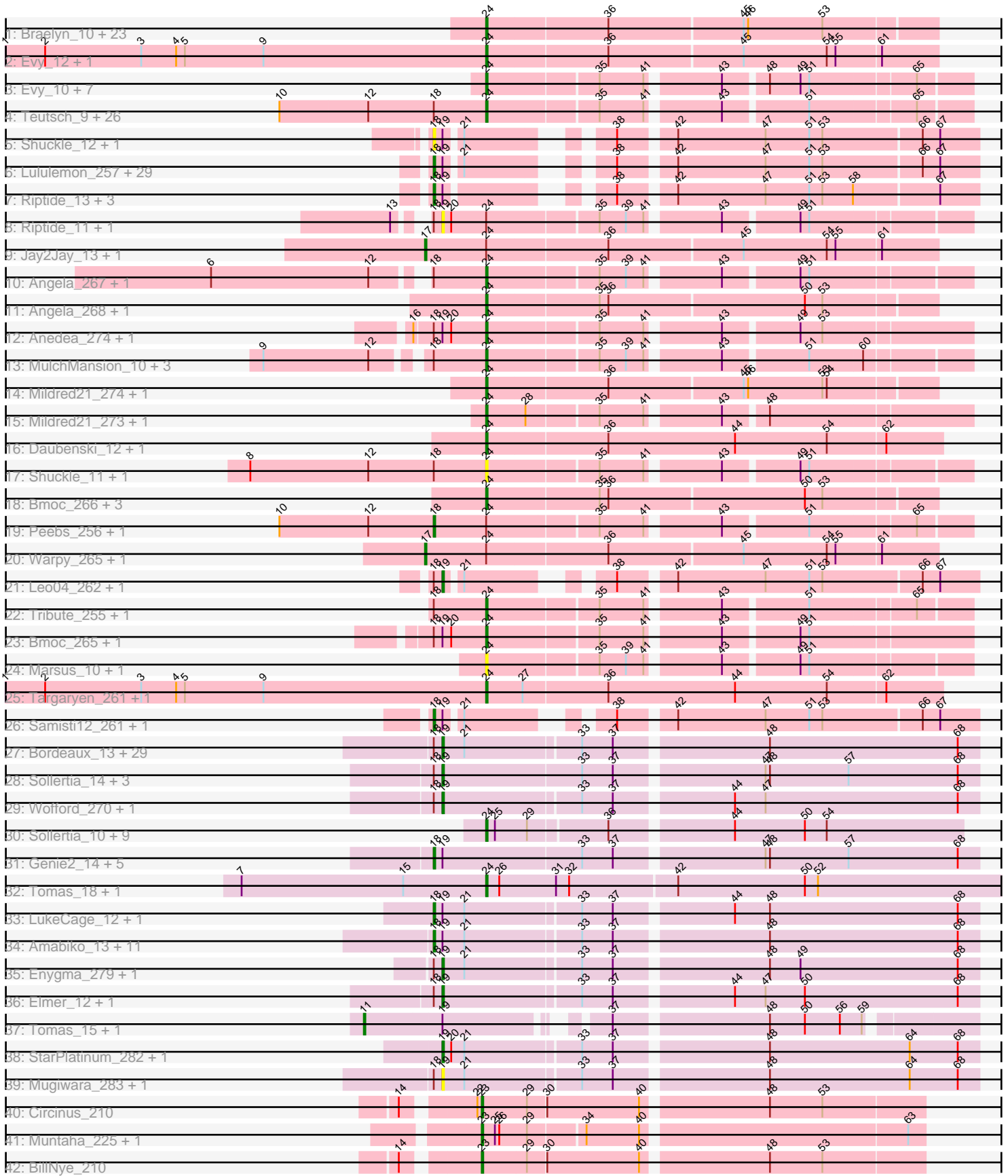


Pham 213981



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 213981 Report

This analysis was run 02/22/25 on database version 588.

Pham number 213981 has 221 members, 22 are drafts.

Phages represented in each track:

- Track 1 : Braelyn_10, Navo_251, Bartholomune_10, WhereRU_9, LilMartin_263, MulchMansion_11, PinkiePie_10, Persimmon_260, Paradiddles_10, Persimmon_9, LilMartin_11, Liandry_259, MulchMansion_267, Liandry_10, NootNoot_255, Paradiddles_251, NootNoot_10, Braelyn_255, Squillium_10, WhereRU_258, PinkiePie_260, Navo_9, Bartholomune_260, Squillium_262
- Track 2 : Evy_12, Evy_250
- Track 3 : Evy_10, Jay2Jay_266, Evy_248, Jay2Jay_11, Warpy_11, Targaryen_260, Warpy_263, Targaryen_9
- Track 4 : Teutsch_9, BlueOtter_9, Cursive_261, EGole_9, HangryHippo_9, Watermoore_256, HangryHippo_257, Lululemon_255, BlueOtter_257, Pepperwood_10, Leo04_260, PacManQ_255, Watermoore_9, Cross_9, Cursive_7, Lululemon_8, Cross_257, Sushi23_10, Larnav_9, EGole_263, Larnav_259, Leo04_9, Pepperwood_259, PacManQ_8, Teutsch_256, Scheme_10, Scheme_263
- Track 5 : Shuckle_12, Shuckle_265
- Track 6 : Lululemon_257, Watermoore_258, Larnav_11, HangryHippo_259, Scheme_265, Peebs_258, Pepperwood_12, Tribute_11, Cross_11, Cross_259, PacManQ_10, Peebs_11, Sushi23_12, PacManQ_257, Larnav_261, Scheme_12, Teutsch_11, Cursive_9, Pepperwood_261, EGole_265, Sushi23_262, Cursive_263, Watermoore_11, BlueOtter_11, Tribute_257, Teutsch_258, EGole_11, BlueOtter_259, HangryHippo_11, Lululemon_10
- Track 7 : Riptide_13, Anedea_276, Riptide_270, Anedea_11
- Track 8 : Riptide_11, Riptide_268
- Track 9 : Jay2Jay_13, Jay2Jay_268
- Track 10 : Angela_267, Angela_10
- Track 11 : Angela_268, Angela_11
- Track 12 : Anedea_274, Anedea_9
- Track 13 : MulchMansion_10, MulchMansion_266, LilMartin_10, LilMartin_262
- Track 14 : Mildred21_274, Mildred21_11
- Track 15 : Mildred21_273, Mildred21_10
- Track 16 : Daubenski_12, Daubenski_256
- Track 17 : Shuckle_11, Shuckle_264
- Track 18 : Bmoc_266, Marsus_11, Marsus_279, Bmoc_10
- Track 19 : Peebs_256, Peebs_9
- Track 20 : Warpy_265, Warpy_13
- Track 21 : Leo04_262, Leo04_11
- Track 22 : Tribute_255, Tribute_9
- Track 23 : Bmoc_265, Bmoc_9

- Track 24 : Marsus_10, Marsus_278
- Track 25 : Targaryen_261, Targaryen_10
- Track 26 : Samisti12_261, Samisti12_10
- Track 27 : Bordeaux_13, Rikishi_282, MindFlayer_264, MindFlayer_12, IchabodCrane_12, Spelly_13, Jollison_13, PumpkinSpice_277, Jollison_270, Gibbi_12, Wipeout_265, Battuta_13, Quaran19_13, CeilingFan_12, Quaran19_274, Spelly_279, CeilingFan_278, Karimac_271, SaltySpittoon_13, Wipeout_12, Gibbi_283, Rikishi_12, PumpkinSpice_13, TomSawyer_13, Battuta_270, Karimac_13, Bordeaux_270, IchabodCrane_265, TomSawyer_278, Birchlyn_10
- Track 28 : Sollertia_14, Yaboi_275, Yaboi_14, Sollertia_270
- Track 29 : Wofford_270, Wofford_12
- Track 30 : Sollertia_10, Yaboi_271, Stanimal_10, Genie2_10, Stanimal_265, BoomerJR_10, Yaboi_10, BoomerJR_265, Genie2_265, Sollertia_266
- Track 31 : Genie2_14, BoomerJR_14, Stanimal_269, Stanimal_14, Genie2_269, BoomerJR_269
- Track 32 : Tomas_18, Tomas_274
- Track 33 : LukeCage_12, LukeCage_275
- Track 34 : Amabiko_13, KentuckyRacer_280, JimJam_281, Starbow_13, Spilled_12, Spilled_280, Birchlyn_270, SaltySpittoon_273, Amabiko_277, Starbow_270, KentuckyRacer_12, JimJam_13
- Track 35 : Enygma_279, Enygma_11
- Track 36 : Elmer_12, Elmer_279
- Track 37 : Tomas_15, Tomas_271
- Track 38 : StarPlatinum_282, StarPlatinum_12
- Track 39 : Mugiwara_283, Mugiwara_11
- Track 40 : Circinus_210
- Track 41 : Muntaha_225, Wakanda_221
- Track 42 : BillNye_210

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

The start number called the most often in the published annotations is 24, it was called in 95 of the 199 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anedea_274, Anedea_9, Angela_10, Angela_11, Angela_267, Angela_268, Bartholomune_10, Bartholomune_260, BlueOtter_257, BlueOtter_9, Bmoc_10, Bmoc_265, Bmoc_266, Bmoc_9, BoomerJR_10, BoomerJR_265, Braelyn_10, Braelyn_255, Cross_257, Cross_9, Cursive_261, Cursive_7, Daubenski_12, Daubenski_256, EGole_263, EGole_9, Evy_10, Evy_12, Evy_248, Evy_250, Genie2_10, Genie2_265, HangryHippo_257, HangryHippo_9, Jay2Jay_11, Jay2Jay_266, Larnav_259, Larnav_9, Leo04_260, Leo04_9, Liandry_10, Liandry_259, LilMartin_10, LilMartin_11, LilMartin_262, LilMartin_263, Lululemon_255, Lululemon_8, Marsus_10, Marsus_11, Marsus_278, Marsus_279, Mildred21_10, Mildred21_11, Mildred21_273, Mildred21_274, MulchMansion_10, MulchMansion_11, MulchMansion_266, MulchMansion_267, Navo_251, Navo_9, NootNoot_10, NootNoot_255, PacManQ_255, PacManQ_8, Paradiddles_10, Paradiddles_251, Pepperwood_10, Pepperwood_259, Persimmon_260, Persimmon_9, PinkiePie_10, PinkiePie_260, Scheme_10, Scheme_263, Shuckle_11, Shuckle_264, Sollertia_10, Sollertia_266, Squillium_10, Squillium_262, Stanimal_10,

Stanimal_265, Sushi23_10, Targaryen_10, Targaryen_260, Targaryen_261, Targaryen_9, Teutsch_256, Teutsch_9, Tomas_18, Tomas_274, Tribute_255, Tribute_9, Warpy_11, Warpy_263, Watermoore_256, Watermoore_9, WhereRU_258, WhereRU_9, Yaboi_10, Yaboi_271,

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

- Jay2Jay_13, Jay2Jay_268, Peebs_256, Peebs_9, Riptide_11, Riptide_268, Warpy_13, Warpy_265,

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

- Amabiko_13, Amabiko_277, Anedea_11, Anedea_276, Battuta_13, Battuta_270, BillNye_210, Birchlyn_10, Birchlyn_270, BlueOtter_11, BlueOtter_259, BoomerJR_14, BoomerJR_269, Bordeaux_13, Bordeaux_270, CeilingFan_12, CeilingFan_278, Circinus_210, Cross_11, Cross_259, Cursive_263, Cursive_9, EGole_11, EGole_265, Elmer_12, Elmer_279, Enygma_11, Enygma_279, Genie2_14, Genie2_269, Gibbi_12, Gibbi_283, HangryHippo_11, HangryHippo_259, IchabodCrane_12, IchabodCrane_265, JimJam_13, JimJam_281, Jollison_13, Jollison_270, Karimac_13, Karimac_271, KentuckyRacer_12, KentuckyRacer_280, Larnav_11, Larnav_261, Leo04_11, Leo04_262, LukeCage_12, LukeCage_275, Lululemon_10, Lululemon_257, MindFlayer_12, MindFlayer_264, Mugiwara_11, Mugiwara_283, Muntaha_225, PacManQ_10, PacManQ_257, Peebs_11, Peebs_258, Pepperwood_12, Pepperwood_261, PumpkinSpice_13, PumpkinSpice_277, Quarant19_13, Quarant19_274, Rikishi_12, Rikishi_282, Riptide_13, Riptide_270, SaltySpittoon_13, SaltySpittoon_273, Samisti12_10, Samisti12_261, Scheme_12, Scheme_265, Shuckle_12, Shuckle_265, Sollertia_14, Sollertia_270, Spelly_13, Spelly_279, Spilled_12, Spilled_280, Stanimal_14, Stanimal_269, StarPlatinum_12, StarPlatinum_282, Starbow_13, Starbow_270, Sushi23_12, Sushi23_262, Teutsch_11, Teutsch_258, TomSawyer_13, TomSawyer_278, Tomas_15, Tomas_271, Tribute_11, Tribute_257, Wakanda_221, Watermoore_11, Watermoore_258, Wipeout_12, Wipeout_265, Wofford_12, Wofford_270, Yaboi_14, Yaboi_275,

Summary by start number:

Start 11:

- Found in 2 of 221 (0.9%) of genes in pham
- Manual Annotations of this start: 2 of 199
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tomas_15 (BE2), Tomas_271 (BE2),

Start 17:

- Found in 4 of 221 (1.8%) of genes in pham
- Manual Annotations of this start: 4 of 199
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jay2Jay_13 (BE1), Jay2Jay_268 (BE1), Warpy_13 (BE1), Warpy_265 (BE1),

Start 18:

- Found in 147 of 221 (66.5%) of genes in pham
- Manual Annotations of this start: 54 of 199
- Called 40.8% of time when present
- Phage (with cluster) where this start called: Amabiko_13 (BE2), Amabiko_277 (BE2), Anedea_11 (BE1), Anedea_276 (BE1), Birchlyn_270 (BE2), BlueOtter_11 (BE1),

BlueOtter_259 (BE1), BoomerJR_14 (BE2), BoomerJR_269 (BE2), Cross_11 (BE1), Cross_259 (BE1), Cursive_263 (BE1), Cursive_9 (BE1), EGole_11 (BE1), EGole_265 (BE1), Genie2_14 (BE2), Genie2_269 (BE2), HangryHippo_11 (BE1), HangryHippo_259 (BE1), JimJam_13 (BE2), JimJam_281 (BE2), KentuckyRacer_12 (BE2), KentuckyRacer_280 (BE2), Larnav_11 (BE1), Larnav_261 (BE1), LukeCage_12 (BE2), LukeCage_275 (BE2), Lululemon_10 (BE1), Lululemon_257 (BE1), PacManQ_10 (BE1), PacManQ_257 (BE1), Peebs_11 (BE1), Peebs_256 (BE1), Peebs_258 (BE1), Peebs_9 (BE1), Pepperwood_12 (BE1), Pepperwood_261 (BE1), Riptide_13 (BE1), Riptide_270 (BE1), SaltySpittoon_273 (BE2), Samisti12_10 (BE1), Samisti12_261 (BE1), Scheme_12 (BE1), Scheme_265 (BE1), Shuckle_12 (BE1), Shuckle_265 (BE1), Spilled_12 (BE2), Spilled_280 (BE2), Stanimal_14 (BE2), Stanimal_269 (BE2), Starbow_13 (BE2), Starbow_270 (BE2), Sushi23_12 (BE1), Sushi23_262 (BE1), Teutsch_11 (BE1), Teutsch_258 (BE1), Tribute_11 (BE1), Tribute_257 (BE1), Watermoore_11 (BE1), Watermoore_258 (BE1),

Start 19:

- Found in 112 of 221 (50.7%) of genes in pham
- Manual Annotations of this start: 40 of 199
- Called 42.9% of time when present
- Phage (with cluster) where this start called: Battuta_13 (BE2), Battuta_270 (BE2), Birchlyn_10 (BE2), Bordeaux_13 (BE2), Bordeaux_270 (BE2), CeilingFan_12 (BE2), CeilingFan_278 (BE2), Elmer_12 (BE2), Elmer_279 (BE2), Enygma_11 (BE2), Enygma_279 (BE2), Gibbi_12 (BE2), Gibbi_283 (BE2), IchabodCrane_12 (BE2), IchabodCrane_265 (BE2), Jollison_13 (BE2), Jollison_270 (BE2), Karimac_13 (BE2), Karimac_271 (BE2), Leo04_11 (BE1), Leo04_262 (BE1), MindFlayer_12 (BE2), MindFlayer_264 (BE2), Mugiwara_11 (BE2), Mugiwara_283 (BE2), PumpkinSpice_13 (BE2), PumpkinSpice_277 (BE2), Quarant19_13 (BE2), Quarant19_274 (BE2), Rikishi_12 (BE2), Rikishi_282 (BE2), Riptide_11 (BE1), Riptide_268 (BE1), SaltySpittoon_13 (BE2), Sollertia_14 (BE2), Sollertia_270 (BE2), Spelly_13 (BE2), Spelly_279 (BE2), StarPlatinum_12 (BE2), StarPlatinum_282 (BE2), TomSawyer_13 (BE2), TomSawyer_278 (BE2), Wipeout_12 (BE2), Wipeout_265 (BE2), Wofford_12 (BE2), Wofford_270 (BE2), Yaboi_14 (BE2), Yaboi_275 (BE2),

Start 23:

- Found in 4 of 221 (1.8%) of genes in pham
- Manual Annotations of this start: 4 of 199
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BillNye_210 (BK2), Circinus_210 (BK2), Muntaha_225 (BK2), Wakanda_221 (BK2),

Start 24:

- Found in 111 of 221 (50.2%) of genes in pham
- Manual Annotations of this start: 95 of 199
- Called 92.8% of time when present
- Phage (with cluster) where this start called: Anedea_274 (BE1), Anedea_9 (BE1), Angela_10 (BE1), Angela_11 (BE1), Angela_267 (BE1), Angela_268 (BE1), Bartholomune_10 (BE1), Bartholomune_260 (BE1), BlueOtter_257 (BE1), BlueOtter_9 (BE1), Bmoc_10 (BE1), Bmoc_265 (BE1), Bmoc_266 (BE1), Bmoc_9 (BE1), BoomerJR_10 (BE2), BoomerJR_265 (BE2), Braelyn_10 (BE1), Braelyn_255 (BE1), Cross_257 (BE1), Cross_9 (BE1), Cursive_261 (BE1), Cursive_7 (BE1), Daubenski_12 (BE1), Daubenski_256 (BE1), EGole_263 (BE1), EGole_9 (BE1), Evy_10 (BE1), Evy_12 (BE1), Evy_248 (BE1), Evy_250 (BE1), Genie2_10 (BE2), Genie2_265 (BE2), HangryHippo_257 (BE1), HangryHippo_9 (BE1), Jay2Jay_11

(BE1), Jay2Jay_266 (BE1), Larnav_259 (BE1), Larnav_9 (BE1), Leo04_260 (BE1), Leo04_9 (BE1), Liandry_10 (BE1), Liandry_259 (BE1), LilMartin_10 (BE1), LilMartin_11 (BE1), LilMartin_262 (BE1), LilMartin_263 (BE1), Lululemon_255 (BE1), Lululemon_8 (BE1), Marsus_10 (BE1), Marsus_11 (BE1), Marsus_278 (BE1), Marsus_279 (BE1), Mildred21_10 (BE1), Mildred21_11 (BE1), Mildred21_273 (BE1), Mildred21_274 (BE1), MulchMansion_10 (BE1), MulchMansion_11 (BE1), MulchMansion_266 (BE1), MulchMansion_267 (BE1), Navo_251 (BE1), Navo_9 (BE1), NootNoot_10 (BE1), NootNoot_255 (BE1), PacManQ_255 (BE1), PacManQ_8 (BE1), Paradiddles_10 (BE1), Paradiddles_251 (BE1), Pepperwood_10 (BE1), Pepperwood_259 (BE1), Persimmon_260 (BE1), Persimmon_9 (BE1), PinkiePie_10 (BE1), PinkiePie_260 (BE1), Scheme_10 (BE1), Scheme_263 (BE1), Shuckle_11 (BE1), Shuckle_264 (BE1), Sollertia_10 (BE2), Sollertia_266 (BE2), Squillium_10 (BE1), Squillium_262 (BE1), Stanimal_10 (BE2), Stanimal_265 (BE2), Sushi23_10 (BE1), Targaryen_10 (BE1), Targaryen_260 (BE1), Targaryen_261 (BE1), Targaryen_9 (BE1), Teutsch_256 (BE1), Teutsch_9 (BE1), Tomas_18 (BE2), Tomas_274 (BE2), Tribute_255 (BE1), Tribute_9 (BE1), Warpy_11 (BE1), Warpy_263 (BE1), Watermoore_256 (BE1), Watermoore_9 (BE1), WhereRU_258 (BE1), WhereRU_9 (BE1), Yaboi_10 (BE2), Yaboi_271 (BE2),

Summary by clusters:

There are 3 clusters represented in this pham: BE2, BE1, BK2,

Info for manual annotations of cluster BE1:

- Start number 17 was manually annotated 4 times for cluster BE1.
- Start number 18 was manually annotated 34 times for cluster BE1.
- Start number 19 was manually annotated 2 times for cluster BE1.
- Start number 24 was manually annotated 83 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 11 was manually annotated 2 times for cluster BE2.
- Start number 18 was manually annotated 20 times for cluster BE2.
- Start number 19 was manually annotated 38 times for cluster BE2.
- Start number 24 was manually annotated 12 times for cluster BE2.

Info for manual annotations of cluster BK2:

- Start number 23 was manually annotated 4 times for cluster BK2.

Gene Information:

Gene: Amabiko_13 Start: 7147, Stop: 6788, Start Num: 18

Candidate Starts for Amabiko_13:

(Start: 18 @7147 has 54 MA's), (Start: 19 @7141 has 40 MA's), (21, 7126), (33, 7051), (37, 7030), (48, 6931), (68, 6802),

Gene: Amabiko_277 Start: 125973, Stop: 125614, Start Num: 18

Candidate Starts for Amabiko_277:

(Start: 18 @125973 has 54 MA's), (Start: 19 @125967 has 40 MA's), (21, 125952), (33, 125877), (37, 125856), (48, 125757), (68, 125628),

Gene: Anedea_274 Start: 128991, Stop: 128683, Start Num: 24

Candidate Starts for Anedeia_274:

(16, 129039), (Start: 18 @129027 has 54 MA's), (Start: 19 @129021 has 40 MA's), (20, 129015), (Start: 24 @128991 has 95 MA's), (35, 128919), (41, 128889), (43, 128844), (49, 128796), (53, 128781),

Gene: Anedeia_276 Start: 129542, Stop: 129219, Start Num: 18

Candidate Starts for Anedeia_276:

(Start: 18 @129542 has 54 MA's), (Start: 19 @129536 has 40 MA's), (38, 129455), (42, 129422), (47, 129362), (51, 129332), (53, 129323), (58, 129302), (67, 129245),

Gene: Anedeia_9 Start: 5942, Stop: 5634, Start Num: 24

Candidate Starts for Anedeia_9:

(16, 5990), (Start: 18 @5978 has 54 MA's), (Start: 19 @5972 has 40 MA's), (20, 5966), (Start: 24 @5942 has 95 MA's), (35, 5870), (41, 5840), (43, 5795), (49, 5747), (53, 5732),

Gene: Anedeia_11 Start: 6493, Stop: 6170, Start Num: 18

Candidate Starts for Anedeia_11:

(Start: 18 @6493 has 54 MA's), (Start: 19 @6487 has 40 MA's), (38, 6406), (42, 6373), (47, 6313), (51, 6283), (53, 6274), (58, 6253), (67, 6196),

Gene: Angela_267 Start: 128577, Stop: 128272, Start Num: 24

Candidate Starts for Angela_267:

(6, 128748), (12, 128640), (Start: 18 @128613 has 54 MA's), (Start: 24 @128577 has 95 MA's), (35, 128505), (39, 128487), (41, 128475), (43, 128430), (49, 128382), (51, 128376),

Gene: Angela_268 Start: 129119, Stop: 128820, Start Num: 24

Candidate Starts for Angela_268:

(Start: 24 @129119 has 95 MA's), (35, 129044), (36, 129038), (50, 128906), (53, 128894),

Gene: Angela_10 Start: 6174, Stop: 5869, Start Num: 24

Candidate Starts for Angela_10:

(6, 6345), (12, 6237), (Start: 18 @6210 has 54 MA's), (Start: 24 @6174 has 95 MA's), (35, 6102), (39, 6084), (41, 6072), (43, 6027), (49, 5979), (51, 5973),

Gene: Angela_11 Start: 6716, Stop: 6417, Start Num: 24

Candidate Starts for Angela_11:

(Start: 24 @6716 has 95 MA's), (35, 6641), (36, 6635), (50, 6503), (53, 6491),

Gene: Bartholomune_10 Start: 6043, Stop: 5744, Start Num: 24

Candidate Starts for Bartholomune_10:

(Start: 24 @6043 has 95 MA's), (36, 5962), (45, 5872), (46, 5869), (53, 5818),

Gene: Bartholomune_260 Start: 127142, Stop: 126843, Start Num: 24

Candidate Starts for Bartholomune_260:

(Start: 24 @127142 has 95 MA's), (36, 127061), (45, 126971), (46, 126968), (53, 126917),

Gene: Battuta_13 Start: 7141, Stop: 6788, Start Num: 19

Candidate Starts for Battuta_13:

(Start: 18 @7147 has 54 MA's), (Start: 19 @7141 has 40 MA's), (21, 7126), (33, 7051), (37, 7030), (48, 6931), (68, 6802),

Gene: Battuta_270 Start: 125296, Stop: 124943, Start Num: 19

Candidate Starts for Battuta_270:

(Start: 18 @125302 has 54 MA's), (Start: 19 @125296 has 40 MA's), (21, 125281), (33, 125206), (37, 125185), (48, 125086), (68, 124957),

Gene: BillNye_210 Start: 109627, Stop: 109917, Start Num: 23

Candidate Starts for BillNye_210:

(14, 109582), (Start: 23 @109627 has 4 MA's), (29, 109657), (30, 109669), (40, 109732), (48, 109813), (53, 109849),

Gene: Birchlyn_270 Start: 121091, Stop: 120732, Start Num: 18

Candidate Starts for Birchlyn_270:

(Start: 18 @121091 has 54 MA's), (Start: 19 @121085 has 40 MA's), (21, 121070), (33, 120995), (37, 120974), (48, 120875), (68, 120746),

Gene: Birchlyn_10 Start: 4994, Stop: 4641, Start Num: 19

Candidate Starts for Birchlyn_10:

(Start: 18 @5000 has 54 MA's), (Start: 19 @4994 has 40 MA's), (21, 4979), (33, 4904), (37, 4883), (48, 4784), (68, 4655),

Gene: BlueOtter_9 Start: 5793, Stop: 5488, Start Num: 24

Candidate Starts for BlueOtter_9:

(10, 5934), (12, 5874), (Start: 18 @5829 has 54 MA's), (Start: 24 @5793 has 95 MA's), (35, 5721), (41, 5691), (43, 5646), (51, 5592), (65, 5523),

Gene: BlueOtter_257 Start: 126880, Stop: 126575, Start Num: 24

Candidate Starts for BlueOtter_257:

(10, 127021), (12, 126961), (Start: 18 @126916 has 54 MA's), (Start: 24 @126880 has 95 MA's), (35, 126808), (41, 126778), (43, 126733), (51, 126679), (65, 126610),

Gene: BlueOtter_11 Start: 6361, Stop: 6038, Start Num: 18

Candidate Starts for BlueOtter_11:

(Start: 18 @6361 has 54 MA's), (Start: 19 @6355 has 40 MA's), (21, 6346), (38, 6274), (42, 6241), (47, 6181), (51, 6151), (53, 6142), (66, 6076), (67, 6064),

Gene: BlueOtter_259 Start: 127448, Stop: 127125, Start Num: 18

Candidate Starts for BlueOtter_259:

(Start: 18 @127448 has 54 MA's), (Start: 19 @127442 has 40 MA's), (21, 127433), (38, 127361), (42, 127328), (47, 127268), (51, 127238), (53, 127229), (66, 127163), (67, 127151),

Gene: Bmoc_266 Start: 128418, Stop: 128119, Start Num: 24

Candidate Starts for Bmoc_266:

(Start: 24 @128418 has 95 MA's), (35, 128343), (36, 128337), (50, 128205), (53, 128193),

Gene: Bmoc_265 Start: 127855, Stop: 127547, Start Num: 24

Candidate Starts for Bmoc_265:

(Start: 18 @127891 has 54 MA's), (Start: 19 @127885 has 40 MA's), (20, 127879), (Start: 24 @127855 has 95 MA's), (35, 127783), (41, 127753), (43, 127708), (49, 127660), (51, 127654),

Gene: Bmoc_9 Start: 6033, Stop: 5725, Start Num: 24

Candidate Starts for Bmoc_9:

(Start: 18 @6069 has 54 MA's), (Start: 19 @6063 has 40 MA's), (20, 6057), (Start: 24 @6033 has 95 MA's), (35, 5961), (41, 5931), (43, 5886), (49, 5838), (51, 5832),

Gene: Bmoc_10 Start: 6596, Stop: 6297, Start Num: 24

Candidate Starts for Bmoc_10:

(Start: 24 @6596 has 95 MA's), (35, 6521), (36, 6515), (50, 6383), (53, 6371),

Gene: BoomerJR_14 Start: 7130, Stop: 6768, Start Num: 18

Candidate Starts for BoomerJR_14:

(Start: 18 @7130 has 54 MA's), (Start: 19 @7124 has 40 MA's), (33, 7031), (37, 7010), (47, 6914), (48, 6911), (57, 6857), (68, 6782),

Gene: BoomerJR_10 Start: 5615, Stop: 5304, Start Num: 24

Candidate Starts for BoomerJR_10:

(Start: 24 @5615 has 95 MA's), (25, 5609), (29, 5588), (36, 5537), (44, 5459), (50, 5411), (54, 5396),

Gene: BoomerJR_269 Start: 125918, Stop: 125556, Start Num: 18

Candidate Starts for BoomerJR_269:

(Start: 18 @125918 has 54 MA's), (Start: 19 @125912 has 40 MA's), (33, 125819), (37, 125798), (47, 125702), (48, 125699), (57, 125645), (68, 125570),

Gene: BoomerJR_265 Start: 124403, Stop: 124092, Start Num: 24

Candidate Starts for BoomerJR_265:

(Start: 24 @124403 has 95 MA's), (25, 124397), (29, 124376), (36, 124325), (44, 124247), (50, 124199), (54, 124184),

Gene: Bordeaux_13 Start: 7141, Stop: 6788, Start Num: 19

Candidate Starts for Bordeaux_13:

(Start: 18 @7147 has 54 MA's), (Start: 19 @7141 has 40 MA's), (21, 7126), (33, 7051), (37, 7030), (48, 6931), (68, 6802),

Gene: Bordeaux_270 Start: 125879, Stop: 125526, Start Num: 19

Candidate Starts for Bordeaux_270:

(Start: 18 @125885 has 54 MA's), (Start: 19 @125879 has 40 MA's), (21, 125864), (33, 125789), (37, 125768), (48, 125669), (68, 125540),

Gene: Braelyn_10 Start: 6055, Stop: 5756, Start Num: 24

Candidate Starts for Braelyn_10:

(Start: 24 @6055 has 95 MA's), (36, 5974), (45, 5884), (46, 5881), (53, 5830),

Gene: Braelyn_255 Start: 126465, Stop: 126166, Start Num: 24

Candidate Starts for Braelyn_255:

(Start: 24 @126465 has 95 MA's), (36, 126384), (45, 126294), (46, 126291), (53, 126240),

Gene: CeilingFan_12 Start: 6752, Stop: 6399, Start Num: 19

Candidate Starts for CeilingFan_12:

(Start: 18 @6758 has 54 MA's), (Start: 19 @6752 has 40 MA's), (21, 6737), (33, 6662), (37, 6641), (48, 6542), (68, 6413),

Gene: CeilingFan_278 Start: 127359, Stop: 127006, Start Num: 19

Candidate Starts for CeilingFan_278:

(Start: 18 @127365 has 54 MA's), (Start: 19 @127359 has 40 MA's), (21, 127344), (33, 127269), (37, 127248), (48, 127149), (68, 127020),

Gene: Circinus_210 Start: 109217, Stop: 109507, Start Num: 23

Candidate Starts for Circinus_210:

(14, 109172), (22, 109214), (Start: 23 @109217 has 4 MA's), (29, 109247), (30, 109259), (40, 109322), (48, 109403), (53, 109439),

Gene: Cross_9 Start: 5793, Stop: 5488, Start Num: 24

Candidate Starts for Cross_9:

(10, 5934), (12, 5874), (Start: 18 @5829 has 54 MA's), (Start: 24 @5793 has 95 MA's), (35, 5721), (41, 5691), (43, 5646), (51, 5592), (65, 5523),

Gene: Cross_11 Start: 6361, Stop: 6038, Start Num: 18

Candidate Starts for Cross_11:

(Start: 18 @6361 has 54 MA's), (Start: 19 @6355 has 40 MA's), (21, 6346), (38, 6274), (42, 6241), (47, 6181), (51, 6151), (53, 6142), (66, 6076), (67, 6064),

Gene: Cross_259 Start: 128093, Stop: 127770, Start Num: 18

Candidate Starts for Cross_259:

(Start: 18 @128093 has 54 MA's), (Start: 19 @128087 has 40 MA's), (21, 128078), (38, 128006), (42, 127973), (47, 127913), (51, 127883), (53, 127874), (66, 127808), (67, 127796),

Gene: Cross_257 Start: 127525, Stop: 127220, Start Num: 24

Candidate Starts for Cross_257:

(10, 127666), (12, 127606), (Start: 18 @127561 has 54 MA's), (Start: 24 @127525 has 95 MA's), (35, 127453), (41, 127423), (43, 127378), (51, 127324), (65, 127255),

Gene: Cursive_261 Start: 126620, Stop: 126315, Start Num: 24

Candidate Starts for Cursive_261:

(10, 126761), (12, 126701), (Start: 18 @126656 has 54 MA's), (Start: 24 @126620 has 95 MA's), (35, 126548), (41, 126518), (43, 126473), (51, 126419), (65, 126350),

Gene: Cursive_7 Start: 4611, Stop: 4306, Start Num: 24

Candidate Starts for Cursive_7:

(10, 4752), (12, 4692), (Start: 18 @4647 has 54 MA's), (Start: 24 @4611 has 95 MA's), (35, 4539), (41, 4509), (43, 4464), (51, 4410), (65, 4341),

Gene: Cursive_9 Start: 5179, Stop: 4856, Start Num: 18

Candidate Starts for Cursive_9:

(Start: 18 @5179 has 54 MA's), (Start: 19 @5173 has 40 MA's), (21, 5164), (38, 5092), (42, 5059), (47, 4999), (51, 4969), (53, 4960), (66, 4894), (67, 4882),

Gene: Cursive_263 Start: 127188, Stop: 126865, Start Num: 18

Candidate Starts for Cursive_263:

(Start: 18 @127188 has 54 MA's), (Start: 19 @127182 has 40 MA's), (21, 127173), (38, 127101), (42, 127068), (47, 127008), (51, 126978), (53, 126969), (66, 126903), (67, 126891),

Gene: Daubenski_12 Start: 6584, Stop: 6276, Start Num: 24

Candidate Starts for Daubenski_12:

(Start: 24 @6584 has 95 MA's), (36, 6503), (44, 6416), (54, 6353), (62, 6314),

Gene: Daubenski_256 Start: 128960, Stop: 128652, Start Num: 24

Candidate Starts for Daubenski_256:

(Start: 24 @128960 has 95 MA's), (36, 128879), (44, 128792), (54, 128729), (62, 128690),

Gene: EGole_9 Start: 6213, Stop: 5908, Start Num: 24

Candidate Starts for EGole_9:

(10, 6354), (12, 6294), (Start: 18 @6249 has 54 MA's), (Start: 24 @6213 has 95 MA's), (35, 6141), (41, 6111), (43, 6066), (51, 6012), (65, 5943),

Gene: EGole_263 Start: 130525, Stop: 130220, Start Num: 24

Candidate Starts for EGole_263:

(10, 130666), (12, 130606), (Start: 18 @130561 has 54 MA's), (Start: 24 @130525 has 95 MA's), (35, 130453), (41, 130423), (43, 130378), (51, 130324), (65, 130255),

Gene: EGole_265 Start: 131094, Stop: 130771, Start Num: 18

Candidate Starts for EGole_265:

(Start: 18 @131094 has 54 MA's), (Start: 19 @131088 has 40 MA's), (21, 131079), (38, 131007), (42, 130974), (47, 130914), (51, 130884), (53, 130875), (66, 130809), (67, 130797),

Gene: EGole_11 Start: 6782, Stop: 6459, Start Num: 18

Candidate Starts for EGole_11:

(Start: 18 @6782 has 54 MA's), (Start: 19 @6776 has 40 MA's), (21, 6767), (38, 6695), (42, 6662), (47, 6602), (51, 6572), (53, 6563), (66, 6497), (67, 6485),

Gene: Elmer_12 Start: 6271, Stop: 5918, Start Num: 19

Candidate Starts for Elmer_12:

(Start: 18 @6277 has 54 MA's), (Start: 19 @6271 has 40 MA's), (33, 6181), (37, 6160), (44, 6085), (47, 6064), (50, 6037), (68, 5932),

Gene: Elmer_279 Start: 128639, Stop: 128286, Start Num: 19

Candidate Starts for Elmer_279:

(Start: 18 @128645 has 54 MA's), (Start: 19 @128639 has 40 MA's), (33, 128549), (37, 128528), (44, 128453), (47, 128432), (50, 128405), (68, 128300),

Gene: Enygma_279 Start: 128827, Stop: 128474, Start Num: 19

Candidate Starts for Enygma_279:

(Start: 18 @128833 has 54 MA's), (Start: 19 @128827 has 40 MA's), (21, 128812), (33, 128737), (37, 128716), (48, 128617), (49, 128596), (68, 128488),

Gene: Enygma_11 Start: 6403, Stop: 6050, Start Num: 19

Candidate Starts for Enygma_11:

(Start: 18 @6409 has 54 MA's), (Start: 19 @6403 has 40 MA's), (21, 6388), (33, 6313), (37, 6292), (48, 6193), (49, 6172), (68, 6064),

Gene: Evy_12 Start: 6669, Stop: 6367, Start Num: 24

Candidate Starts for Evy_12:

(1, 6999), (2, 6972), (3, 6906), (4, 6882), (5, 6876), (9, 6822), (Start: 24 @6669 has 95 MA's), (36, 6588), (45, 6498), (54, 6441), (55, 6435), (61, 6405),

Gene: Evy_10 Start: 6128, Stop: 5823, Start Num: 24

Candidate Starts for Evy_10:

(Start: 24 @6128 has 95 MA's), (35, 6056), (41, 6026), (43, 5981), (48, 5954), (49, 5933), (51, 5927), (65, 5858),

Gene: Evy_250 Start: 128398, Stop: 128096, Start Num: 24

Candidate Starts for Evy_250:

(1, 128728), (2, 128701), (3, 128635), (4, 128611), (5, 128605), (9, 128551), (Start: 24 @128398 has 95 MA's), (36, 128317), (45, 128227), (54, 128170), (55, 128164), (61, 128134),

Gene: Evy_248 Start: 127857, Stop: 127552, Start Num: 24

Candidate Starts for Evy_248:

(Start: 24 @127857 has 95 MA's), (35, 127785), (41, 127755), (43, 127710), (48, 127683), (49, 127662), (51, 127656), (65, 127587),

Gene: Genie2_14 Start: 7130, Stop: 6768, Start Num: 18

Candidate Starts for Genie2_14:

(Start: 18 @7130 has 54 MA's), (Start: 19 @7124 has 40 MA's), (33, 7031), (37, 7010), (47, 6914), (48, 6911), (57, 6857), (68, 6782),

Gene: Genie2_10 Start: 5615, Stop: 5304, Start Num: 24

Candidate Starts for Genie2_10:

(Start: 24 @5615 has 95 MA's), (25, 5609), (29, 5588), (36, 5537), (44, 5459), (50, 5411), (54, 5396),

Gene: Genie2_269 Start: 126031, Stop: 125669, Start Num: 18

Candidate Starts for Genie2_269:

(Start: 18 @126031 has 54 MA's), (Start: 19 @126025 has 40 MA's), (33, 125932), (37, 125911), (47, 125815), (48, 125812), (57, 125758), (68, 125683),

Gene: Genie2_265 Start: 124516, Stop: 124205, Start Num: 24

Candidate Starts for Genie2_265:

(Start: 24 @124516 has 95 MA's), (25, 124510), (29, 124489), (36, 124438), (44, 124360), (50, 124312), (54, 124297),

Gene: Gibbi_12 Start: 6752, Stop: 6399, Start Num: 19

Candidate Starts for Gibbi_12:

(Start: 18 @6758 has 54 MA's), (Start: 19 @6752 has 40 MA's), (21, 6737), (33, 6662), (37, 6641), (48, 6542), (68, 6413),

Gene: Gibbi_283 Start: 126852, Stop: 126499, Start Num: 19

Candidate Starts for Gibbi_283:

(Start: 18 @126858 has 54 MA's), (Start: 19 @126852 has 40 MA's), (21, 126837), (33, 126762), (37, 126741), (48, 126642), (68, 126513),

Gene: HangryHippo_9 Start: 5793, Stop: 5488, Start Num: 24

Candidate Starts for HangryHippo_9:

(10, 5934), (12, 5874), (Start: 18 @5829 has 54 MA's), (Start: 24 @5793 has 95 MA's), (35, 5721), (41, 5691), (43, 5646), (51, 5592), (65, 5523),

Gene: HangryHippo_257 Start: 126880, Stop: 126575, Start Num: 24

Candidate Starts for HangryHippo_257:

(10, 127021), (12, 126961), (Start: 18 @126916 has 54 MA's), (Start: 24 @126880 has 95 MA's), (35, 126808), (41, 126778), (43, 126733), (51, 126679), (65, 126610),

Gene: HangryHippo_259 Start: 127448, Stop: 127125, Start Num: 18

Candidate Starts for HangryHippo_259:

(Start: 18 @127448 has 54 MA's), (Start: 19 @127442 has 40 MA's), (21, 127433), (38, 127361), (42, 127328), (47, 127268), (51, 127238), (53, 127229), (66, 127163), (67, 127151),

Gene: HangryHippo_11 Start: 6361, Stop: 6038, Start Num: 18

Candidate Starts for HangryHippo_11:

(Start: 18 @6361 has 54 MA's), (Start: 19 @6355 has 40 MA's), (21, 6346), (38, 6274), (42, 6241), (47, 6181), (51, 6151), (53, 6142), (66, 6076), (67, 6064),

Gene: IchabodCrane_12 Start: 6749, Stop: 6396, Start Num: 19

Candidate Starts for IchabodCrane_12:

(Start: 18 @6755 has 54 MA's), (Start: 19 @6749 has 40 MA's), (21, 6734), (33, 6659), (37, 6638), (48, 6539), (68, 6410),

Gene: IchabodCrane_265 Start: 125292, Stop: 124939, Start Num: 19

Candidate Starts for IchabodCrane_265:

(Start: 18 @125298 has 54 MA's), (Start: 19 @125292 has 40 MA's), (21, 125277), (33, 125202), (37, 125181), (48, 125082), (68, 124953),

Gene: Jay2Jay_13 Start: 6415, Stop: 6071, Start Num: 17

Candidate Starts for Jay2Jay_13:

(Start: 17 @6415 has 4 MA's), (Start: 24 @6373 has 95 MA's), (36, 6292), (45, 6202), (54, 6145), (55, 6139), (61, 6109),

Gene: Jay2Jay_266 Start: 127925, Stop: 127620, Start Num: 24

Candidate Starts for Jay2Jay_266:

(Start: 24 @127925 has 95 MA's), (35, 127853), (41, 127823), (43, 127778), (48, 127751), (49, 127730), (51, 127724), (65, 127655),

Gene: Jay2Jay_268 Start: 128508, Stop: 128164, Start Num: 17

Candidate Starts for Jay2Jay_268:

(Start: 17 @128508 has 4 MA's), (Start: 24 @128466 has 95 MA's), (36, 128385), (45, 128295), (54, 128238), (55, 128232), (61, 128202),

Gene: Jay2Jay_11 Start: 5832, Stop: 5527, Start Num: 24

Candidate Starts for Jay2Jay_11:

(Start: 24 @5832 has 95 MA's), (35, 5760), (41, 5730), (43, 5685), (48, 5658), (49, 5637), (51, 5631), (65, 5562),

Gene: JimJam_281 Start: 128682, Stop: 128323, Start Num: 18

Candidate Starts for JimJam_281:

(Start: 18 @128682 has 54 MA's), (Start: 19 @128676 has 40 MA's), (21, 128661), (33, 128586), (37, 128565), (48, 128466), (68, 128337),

Gene: JimJam_13 Start: 7146, Stop: 6787, Start Num: 18

Candidate Starts for JimJam_13:

(Start: 18 @7146 has 54 MA's), (Start: 19 @7140 has 40 MA's), (21, 7125), (33, 7050), (37, 7029), (48, 6930), (68, 6801),

Gene: Jollison_13 Start: 7141, Stop: 6788, Start Num: 19

Candidate Starts for Jollison_13:

(Start: 18 @7147 has 54 MA's), (Start: 19 @7141 has 40 MA's), (21, 7126), (33, 7051), (37, 7030), (48, 6931), (68, 6802),

Gene: Jollison_270 Start: 125816, Stop: 125463, Start Num: 19

Candidate Starts for Jollison_270:

(Start: 18 @125822 has 54 MA's), (Start: 19 @125816 has 40 MA's), (21, 125801), (33, 125726), (37, 125705), (48, 125606), (68, 125477),

Gene: Karimac_271 Start: 126462, Stop: 126109, Start Num: 19

Candidate Starts for Karimac_271:

(Start: 18 @126468 has 54 MA's), (Start: 19 @126462 has 40 MA's), (21, 126447), (33, 126372), (37, 126351), (48, 126252), (68, 126123),

Gene: Karimac_13 Start: 7143, Stop: 6790, Start Num: 19

Candidate Starts for Karimac_13:

(Start: 18 @7149 has 54 MA's), (Start: 19 @7143 has 40 MA's), (21, 7128), (33, 7053), (37, 7032), (48, 6933), (68, 6804),

Gene: KentuckyRacer_280 Start: 128210, Stop: 127851, Start Num: 18

Candidate Starts for KentuckyRacer_280:

(Start: 18 @128210 has 54 MA's), (Start: 19 @128204 has 40 MA's), (21, 128189), (33, 128114), (37, 128093), (48, 127994), (68, 127865),

Gene: KentuckyRacer_12 Start: 6759, Stop: 6400, Start Num: 18

Candidate Starts for KentuckyRacer_12:

(Start: 18 @6759 has 54 MA's), (Start: 19 @6753 has 40 MA's), (21, 6738), (33, 6663), (37, 6642), (48, 6543), (68, 6414),

Gene: Larnav_11 Start: 6361, Stop: 6038, Start Num: 18

Candidate Starts for Larnav_11:

(Start: 18 @6361 has 54 MA's), (Start: 19 @6355 has 40 MA's), (21, 6346), (38, 6274), (42, 6241), (47, 6181), (51, 6151), (53, 6142), (66, 6076), (67, 6064),

Gene: Larnav_9 Start: 5793, Stop: 5488, Start Num: 24

Candidate Starts for Larnav_9:

(10, 5934), (12, 5874), (Start: 18 @5829 has 54 MA's), (Start: 24 @5793 has 95 MA's), (35, 5721), (41, 5691), (43, 5646), (51, 5592), (65, 5523),

Gene: Larnav_259 Start: 127798, Stop: 127493, Start Num: 24

Candidate Starts for Larnav_259:

(10, 127939), (12, 127879), (Start: 18 @127834 has 54 MA's), (Start: 24 @127798 has 95 MA's), (35, 127726), (41, 127696), (43, 127651), (51, 127597), (65, 127528),

Gene: Larnav_261 Start: 128366, Stop: 128043, Start Num: 18

Candidate Starts for Larnav_261:

(Start: 18 @128366 has 54 MA's), (Start: 19 @128360 has 40 MA's), (21, 128351), (38, 128279), (42, 128246), (47, 128186), (51, 128156), (53, 128147), (66, 128081), (67, 128069),

Gene: Leo04_260 Start: 127910, Stop: 127605, Start Num: 24

Candidate Starts for Leo04_260:

(10, 128051), (12, 127991), (Start: 18 @127946 has 54 MA's), (Start: 24 @127910 has 95 MA's), (35, 127838), (41, 127808), (43, 127763), (51, 127709), (65, 127640),

Gene: Leo04_262 Start: 128472, Stop: 128155, Start Num: 19

Candidate Starts for Leo04_262:

(Start: 18 @128478 has 54 MA's), (Start: 19 @128472 has 40 MA's), (21, 128463), (38, 128391), (42, 128358), (47, 128298), (51, 128268), (53, 128259), (66, 128193), (67, 128181),

Gene: Leo04_11 Start: 6354, Stop: 6037, Start Num: 19

Candidate Starts for Leo04_11:

(Start: 18 @6360 has 54 MA's), (Start: 19 @6354 has 40 MA's), (21, 6345), (38, 6273), (42, 6240), (47, 6180), (51, 6150), (53, 6141), (66, 6075), (67, 6063),

Gene: Leo04_9 Start: 5792, Stop: 5487, Start Num: 24

Candidate Starts for Leo04_9:

(10, 5933), (12, 5873), (Start: 18 @5828 has 54 MA's), (Start: 24 @5792 has 95 MA's), (35, 5720), (41, 5690), (43, 5645), (51, 5591), (65, 5522),

Gene: Liandry_259 Start: 127564, Stop: 127265, Start Num: 24

Candidate Starts for Liandry_259:

(Start: 24 @127564 has 95 MA's), (36, 127483), (45, 127393), (46, 127390), (53, 127339),

Gene: Liandry_10 Start: 6043, Stop: 5744, Start Num: 24

Candidate Starts for Liandry_10:

(Start: 24 @6043 has 95 MA's), (36, 5962), (45, 5872), (46, 5869), (53, 5818),

Gene: LilMartin_263 Start: 128036, Stop: 127737, Start Num: 24

Candidate Starts for LilMartin_263:

(Start: 24 @128036 has 95 MA's), (36, 127955), (45, 127865), (46, 127862), (53, 127811),

Gene: LilMartin_11 Start: 6692, Stop: 6393, Start Num: 24

Candidate Starts for LilMartin_11:

(Start: 24 @6692 has 95 MA's), (36, 6611), (45, 6521), (46, 6518), (53, 6467),

Gene: LilMartin_10 Start: 6160, Stop: 5855, Start Num: 24

Candidate Starts for LilMartin_10:

(9, 6298), (12, 6226), (Start: 18 @6196 has 54 MA's), (Start: 24 @6160 has 95 MA's), (35, 6088), (39, 6070), (41, 6058), (43, 6013), (51, 5959), (60, 5923),

Gene: LilMartin_262 Start: 127504, Stop: 127199, Start Num: 24

Candidate Starts for LilMartin_262:

(9, 127642), (12, 127570), (Start: 18 @127540 has 54 MA's), (Start: 24 @127504 has 95 MA's), (35, 127432), (39, 127414), (41, 127402), (43, 127357), (51, 127303), (60, 127267),

Gene: LukeCage_12 Start: 6689, Stop: 6330, Start Num: 18

Candidate Starts for LukeCage_12:

(Start: 18 @6689 has 54 MA's), (Start: 19 @6683 has 40 MA's), (21, 6668), (33, 6593), (37, 6572), (44, 6497), (48, 6473), (68, 6344),

Gene: LukeCage_275 Start: 127593, Stop: 127234, Start Num: 18

Candidate Starts for LukeCage_275:

(Start: 18 @127593 has 54 MA's), (Start: 19 @127587 has 40 MA's), (21, 127572), (33, 127497), (37, 127476), (44, 127401), (48, 127377), (68, 127248),

Gene: Lululemon_257 Start: 126633, Stop: 126310, Start Num: 18

Candidate Starts for Lululemon_257:

(Start: 18 @126633 has 54 MA's), (Start: 19 @126627 has 40 MA's), (21, 126618), (38, 126546), (42, 126513), (47, 126453), (51, 126423), (53, 126414), (66, 126348), (67, 126336),

Gene: Lululemon_255 Start: 126065, Stop: 125760, Start Num: 24

Candidate Starts for Lululemon_255:

(10, 126206), (12, 126146), (Start: 18 @126101 has 54 MA's), (Start: 24 @126065 has 95 MA's), (35, 125993), (41, 125963), (43, 125918), (51, 125864), (65, 125795),

Gene: Lululemon_8 Start: 5173, Stop: 4868, Start Num: 24

Candidate Starts for Lululemon_8:

(10, 5314), (12, 5254), (Start: 18 @5209 has 54 MA's), (Start: 24 @5173 has 95 MA's), (35, 5101), (41, 5071), (43, 5026), (51, 4972), (65, 4903),

Gene: Lululemon_10 Start: 5741, Stop: 5418, Start Num: 18

Candidate Starts for Lululemon_10:

(Start: 18 @5741 has 54 MA's), (Start: 19 @5735 has 40 MA's), (21, 5726), (38, 5654), (42, 5621), (47, 5561), (51, 5531), (53, 5522), (66, 5456), (67, 5444),

Gene: Marsus_11 Start: 6696, Stop: 6397, Start Num: 24

Candidate Starts for Marsus_11:

(Start: 24 @6696 has 95 MA's), (35, 6621), (36, 6615), (50, 6483), (53, 6471),

Gene: Marsus_10 Start: 6159, Stop: 5854, Start Num: 24

Candidate Starts for Marsus_10:

(Start: 24 @6159 has 95 MA's), (35, 6087), (39, 6069), (41, 6057), (43, 6012), (49, 5964), (51, 5958),

Gene: Marsus_278 Start: 129863, Stop: 129558, Start Num: 24

Candidate Starts for Marsus_278:

(Start: 24 @129863 has 95 MA's), (35, 129791), (39, 129773), (41, 129761), (43, 129716), (49, 129668), (51, 129662),

Gene: Marsus_279 Start: 130400, Stop: 130101, Start Num: 24

Candidate Starts for Marsus_279:

(Start: 24 @130400 has 95 MA's), (35, 130325), (36, 130319), (50, 130187), (53, 130175),

Gene: Mildred21_274 Start: 127436, Stop: 127137, Start Num: 24

Candidate Starts for Mildred21_274:

(Start: 24 @127436 has 95 MA's), (36, 127355), (45, 127265), (46, 127262), (53, 127211), (54, 127208),

Gene: Mildred21_273 Start: 126906, Stop: 126598, Start Num: 24

Candidate Starts for Mildred21_273:

(Start: 24 @126906 has 95 MA's), (28, 126879), (35, 126834), (41, 126804), (43, 126759), (48, 126732),

Gene: Mildred21_11 Start: 6278, Stop: 5979, Start Num: 24

Candidate Starts for Mildred21_11:

(Start: 24 @6278 has 95 MA's), (36, 6197), (45, 6107), (46, 6104), (53, 6053), (54, 6050),

Gene: Mildred21_10 Start: 5748, Stop: 5440, Start Num: 24

Candidate Starts for Mildred21_10:

(Start: 24 @5748 has 95 MA's), (28, 5721), (35, 5676), (41, 5646), (43, 5601), (48, 5574),

Gene: MindFlayer_264 Start: 124811, Stop: 124458, Start Num: 19

Candidate Starts for MindFlayer_264:

(Start: 18 @124817 has 54 MA's), (Start: 19 @124811 has 40 MA's), (21, 124796), (33, 124721), (37, 124700), (48, 124601), (68, 124472),

Gene: MindFlayer_12 Start: 6751, Stop: 6398, Start Num: 19

Candidate Starts for MindFlayer_12:

(Start: 18 @6757 has 54 MA's), (Start: 19 @6751 has 40 MA's), (21, 6736), (33, 6661), (37, 6640), (48, 6541), (68, 6412),

Gene: Mugiwara_283 Start: 127795, Stop: 127442, Start Num: 19

Candidate Starts for Mugiwara_283:

(Start: 18 @127801 has 54 MA's), (Start: 19 @127795 has 40 MA's), (21, 127780), (33, 127705), (37, 127684), (48, 127585), (64, 127489), (68, 127456),

Gene: Mugiwara_11 Start: 6410, Stop: 6057, Start Num: 19

Candidate Starts for Mugiwara_11:

(Start: 18 @6416 has 54 MA's), (Start: 19 @6410 has 40 MA's), (21, 6395), (33, 6320), (37, 6299), (48, 6200), (64, 6104), (68, 6071),

Gene: MulchMansion_10 Start: 6160, Stop: 5855, Start Num: 24

Candidate Starts for MulchMansion_10:

(9, 6298), (12, 6226), (Start: 18 @6196 has 54 MA's), (Start: 24 @6160 has 95 MA's), (35, 6088), (39, 6070), (41, 6058), (43, 6013), (51, 5959), (60, 5923),

Gene: MulchMansion_11 Start: 6692, Stop: 6393, Start Num: 24

Candidate Starts for MulchMansion_11:

(Start: 24 @6692 has 95 MA's), (36, 6611), (45, 6521), (46, 6518), (53, 6467),

Gene: MulchMansion_266 Start: 129138, Stop: 128833, Start Num: 24

Candidate Starts for MulchMansion_266:

(9, 129276), (12, 129204), (Start: 18 @129174 has 54 MA's), (Start: 24 @129138 has 95 MA's), (35, 129066), (39, 129048), (41, 129036), (43, 128991), (51, 128937), (60, 128901),

Gene: MulchMansion_267 Start: 129670, Stop: 129371, Start Num: 24

Candidate Starts for MulchMansion_267:

(Start: 24 @129670 has 95 MA's), (36, 129589), (45, 129499), (46, 129496), (53, 129445),

Gene: Muntaha_225 Start: 109742, Stop: 110029, Start Num: 23

Candidate Starts for Muntaha_225:

(Start: 23 @109742 has 4 MA's), (25, 109751), (26, 109754), (29, 109772), (34, 109808), (40, 109844), (63, 110018),

Gene: Navo_251 Start: 125466, Stop: 125167, Start Num: 24

Candidate Starts for Navo_251:

(Start: 24 @125466 has 95 MA's), (36, 125385), (45, 125295), (46, 125292), (53, 125241),

Gene: Navo_9 Start: 5841, Stop: 5542, Start Num: 24

Candidate Starts for Navo_9:

(Start: 24 @5841 has 95 MA's), (36, 5760), (45, 5670), (46, 5667), (53, 5616),

Gene: NootNoot_255 Start: 126352, Stop: 126053, Start Num: 24

Candidate Starts for NootNoot_255:

(Start: 24 @126352 has 95 MA's), (36, 126271), (45, 126181), (46, 126178), (53, 126127),

Gene: NootNoot_10 Start: 6053, Stop: 5754, Start Num: 24

Candidate Starts for NootNoot_10:

(Start: 24 @6053 has 95 MA's), (36, 5972), (45, 5882), (46, 5879), (53, 5828),

Gene: PacManQ_255 Start: 126065, Stop: 125760, Start Num: 24

Candidate Starts for PacManQ_255:

(10, 126206), (12, 126146), (Start: 18 @126101 has 54 MA's), (Start: 24 @126065 has 95 MA's), (35, 125993), (41, 125963), (43, 125918), (51, 125864), (65, 125795),

Gene: PacManQ_10 Start: 5741, Stop: 5418, Start Num: 18

Candidate Starts for PacManQ_10:

(Start: 18 @5741 has 54 MA's), (Start: 19 @5735 has 40 MA's), (21, 5726), (38, 5654), (42, 5621), (47, 5561), (51, 5531), (53, 5522), (66, 5456), (67, 5444),

Gene: PacManQ_257 Start: 126633, Stop: 126310, Start Num: 18

Candidate Starts for PacManQ_257:

(Start: 18 @126633 has 54 MA's), (Start: 19 @126627 has 40 MA's), (21, 126618), (38, 126546), (42, 126513), (47, 126453), (51, 126423), (53, 126414), (66, 126348), (67, 126336),

Gene: PacManQ_8 Start: 5173, Stop: 4868, Start Num: 24

Candidate Starts for PacManQ_8:

(10, 5314), (12, 5254), (Start: 18 @5209 has 54 MA's), (Start: 24 @5173 has 95 MA's), (35, 5101), (41, 5071), (43, 5026), (51, 4972), (65, 4903),

Gene: Paradiddles_10 Start: 6043, Stop: 5744, Start Num: 24

Candidate Starts for Paradiddles_10:

(Start: 24 @6043 has 95 MA's), (36, 5962), (45, 5872), (46, 5869), (53, 5818),

Gene: Paradiddles_251 Start: 128751, Stop: 128452, Start Num: 24

Candidate Starts for Paradiddles_251:

(Start: 24 @128751 has 95 MA's), (36, 128670), (45, 128580), (46, 128577), (53, 128526),

Gene: Peebs_256 Start: 127803, Stop: 127462, Start Num: 18

Candidate Starts for Peebs_256:

(10, 127908), (12, 127848), (Start: 18 @127803 has 54 MA's), (Start: 24 @127767 has 95 MA's), (35, 127695), (41, 127665), (43, 127620), (51, 127566), (65, 127497),

Gene: Peebs_258 Start: 128335, Stop: 128012, Start Num: 18

Candidate Starts for Peebs_258:

(Start: 18 @128335 has 54 MA's), (Start: 19 @128329 has 40 MA's), (21, 128320), (38, 128248), (42, 128215), (47, 128155), (51, 128125), (53, 128116), (66, 128050), (67, 128038),

Gene: Peebs_9 Start: 5828, Stop: 5487, Start Num: 18

Candidate Starts for Peebs_9:

(10, 5933), (12, 5873), (Start: 18 @5828 has 54 MA's), (Start: 24 @5792 has 95 MA's), (35, 5720), (41, 5690), (43, 5645), (51, 5591), (65, 5522),

Gene: Peebs_11 Start: 6360, Stop: 6037, Start Num: 18

Candidate Starts for Peebs_11:

(Start: 18 @6360 has 54 MA's), (Start: 19 @6354 has 40 MA's), (21, 6345), (38, 6273), (42, 6240), (47, 6180), (51, 6150), (53, 6141), (66, 6075), (67, 6063),

Gene: Pepperwood_12 Start: 6515, Stop: 6192, Start Num: 18

Candidate Starts for Pepperwood_12:

(Start: 18 @6515 has 54 MA's), (Start: 19 @6509 has 40 MA's), (21, 6500), (38, 6428), (42, 6395), (47, 6335), (51, 6305), (53, 6296), (66, 6230), (67, 6218),

Gene: Pepperwood_10 Start: 5947, Stop: 5642, Start Num: 24

Candidate Starts for Pepperwood_10:

(10, 6088), (12, 6028), (Start: 18 @5983 has 54 MA's), (Start: 24 @5947 has 95 MA's), (35, 5875), (41, 5845), (43, 5800), (51, 5746), (65, 5677),

Gene: Pepperwood_259 Start: 127732, Stop: 127427, Start Num: 24

Candidate Starts for Pepperwood_259:

(10, 127873), (12, 127813), (Start: 18 @127768 has 54 MA's), (Start: 24 @127732 has 95 MA's), (35, 127660), (41, 127630), (43, 127585), (51, 127531), (65, 127462),

Gene: Pepperwood_261 Start: 128300, Stop: 127977, Start Num: 18

Candidate Starts for Pepperwood_261:

(Start: 18 @128300 has 54 MA's), (Start: 19 @128294 has 40 MA's), (21, 128285), (38, 128213), (42, 128180), (47, 128120), (51, 128090), (53, 128081), (66, 128015), (67, 128003),

Gene: Persimmon_260 Start: 126652, Stop: 126353, Start Num: 24

Candidate Starts for Persimmon_260:

(Start: 24 @126652 has 95 MA's), (36, 126571), (45, 126481), (46, 126478), (53, 126427),

Gene: Persimmon_9 Start: 5841, Stop: 5542, Start Num: 24

Candidate Starts for Persimmon_9:

(Start: 24 @5841 has 95 MA's), (36, 5760), (45, 5670), (46, 5667), (53, 5616),

Gene: PinkiePie_10 Start: 6043, Stop: 5744, Start Num: 24

Candidate Starts for PinkiePie_10:

(Start: 24 @6043 has 95 MA's), (36, 5962), (45, 5872), (46, 5869), (53, 5818),

Gene: PinkiePie_260 Start: 127564, Stop: 127265, Start Num: 24

Candidate Starts for PinkiePie_260:

(Start: 24 @127564 has 95 MA's), (36, 127483), (45, 127393), (46, 127390), (53, 127339),

Gene: PumpkinSpice_277 Start: 127033, Stop: 126680, Start Num: 19

Candidate Starts for PumpkinSpice_277:

(Start: 18 @127039 has 54 MA's), (Start: 19 @127033 has 40 MA's), (21, 127018), (33, 126943), (37, 126922), (48, 126823), (68, 126694),

Gene: PumpkinSpice_13 Start: 7141, Stop: 6788, Start Num: 19

Candidate Starts for PumpkinSpice_13:

(Start: 18 @7147 has 54 MA's), (Start: 19 @7141 has 40 MA's), (21, 7126), (33, 7051), (37, 7030), (48, 6931), (68, 6802),

Gene: Quaran19_13 Start: 7141, Stop: 6788, Start Num: 19

Candidate Starts for Quaran19_13:

(Start: 18 @7147 has 54 MA's), (Start: 19 @7141 has 40 MA's), (21, 7126), (33, 7051), (37, 7030), (48, 6931), (68, 6802),

Gene: Quaran19_274 Start: 126323, Stop: 125970, Start Num: 19

Candidate Starts for Quaran19_274:

(Start: 18 @126329 has 54 MA's), (Start: 19 @126323 has 40 MA's), (21, 126308), (33, 126233), (37, 126212), (48, 126113), (68, 125984),

Gene: Rikishi_282 Start: 126824, Stop: 126471, Start Num: 19

Candidate Starts for Rikishi_282:

(Start: 18 @126830 has 54 MA's), (Start: 19 @126824 has 40 MA's), (21, 126809), (33, 126734), (37, 126713), (48, 126614), (68, 126485),

Gene: Rikishi_12 Start: 6751, Stop: 6398, Start Num: 19

Candidate Starts for Rikishi_12:

(Start: 18 @6757 has 54 MA's), (Start: 19 @6751 has 40 MA's), (21, 6736), (33, 6661), (37, 6640), (48, 6541), (68, 6412),

Gene: Riptide_13 Start: 6772, Stop: 6449, Start Num: 18

Candidate Starts for Riptide_13:

(Start: 18 @6772 has 54 MA's), (Start: 19 @6766 has 40 MA's), (38, 6685), (42, 6652), (47, 6592), (51, 6562), (53, 6553), (58, 6532), (67, 6475),

Gene: Riptide_11 Start: 6251, Stop: 5916, Start Num: 19

Candidate Starts for Riptide_11:

(13, 6269), (Start: 18 @6257 has 54 MA's), (Start: 19 @6251 has 40 MA's), (20, 6245), (Start: 24 @6221 has 95 MA's), (35, 6149), (39, 6131), (41, 6119), (43, 6074), (49, 6026), (51, 6020),

Gene: Riptide_270 Start: 128224, Stop: 127901, Start Num: 18

Candidate Starts for Riptide_270:

(Start: 18 @128224 has 54 MA's), (Start: 19 @128218 has 40 MA's), (38, 128137), (42, 128104), (47, 128044), (51, 128014), (53, 128005), (58, 127984), (67, 127927),

Gene: Riptide_268 Start: 127703, Stop: 127368, Start Num: 19

Candidate Starts for Riptide_268:

(13, 127721), (Start: 18 @127709 has 54 MA's), (Start: 19 @127703 has 40 MA's), (20, 127697), (Start: 24 @127673 has 95 MA's), (35, 127601), (39, 127583), (41, 127571), (43, 127526), (49, 127478), (51, 127472),

Gene: SaltySpittoon_13 Start: 7141, Stop: 6788, Start Num: 19

Candidate Starts for SaltySpittoon_13:

(Start: 18 @7147 has 54 MA's), (Start: 19 @7141 has 40 MA's), (21, 7126), (33, 7051), (37, 7030), (48, 6931), (68, 6802),

Gene: SaltySpittoon_273 Start: 125411, Stop: 125052, Start Num: 18

Candidate Starts for SaltySpittoon_273:

(Start: 18 @125411 has 54 MA's), (Start: 19 @125405 has 40 MA's), (21, 125390), (33, 125315), (37, 125294), (48, 125195), (68, 125066),

Gene: Samisti12_261 Start: 129404, Stop: 129081, Start Num: 18

Candidate Starts for Samisti12_261:

(Start: 18 @129404 has 54 MA's), (Start: 19 @129398 has 40 MA's), (21, 129389), (38, 129317), (42, 129284), (47, 129224), (51, 129194), (53, 129185), (66, 129119), (67, 129107),

Gene: Samisti12_10 Start: 6360, Stop: 6037, Start Num: 18

Candidate Starts for Samisti12_10:

(Start: 18 @6360 has 54 MA's), (Start: 19 @6354 has 40 MA's), (21, 6345), (38, 6273), (42, 6240), (47, 6180), (51, 6150), (53, 6141), (66, 6075), (67, 6063),

Gene: Scheme_265 Start: 129710, Stop: 129387, Start Num: 18

Candidate Starts for Scheme_265:

(Start: 18 @129710 has 54 MA's), (Start: 19 @129704 has 40 MA's), (21, 129695), (38, 129623), (42, 129590), (47, 129530), (51, 129500), (53, 129491), (66, 129425), (67, 129413),

Gene: Scheme_12 Start: 6515, Stop: 6192, Start Num: 18

Candidate Starts for Scheme_12:

(Start: 18 @6515 has 54 MA's), (Start: 19 @6509 has 40 MA's), (21, 6500), (38, 6428), (42, 6395), (47, 6335), (51, 6305), (53, 6296), (66, 6230), (67, 6218),

Gene: Scheme_10 Start: 5947, Stop: 5642, Start Num: 24

Candidate Starts for Scheme_10:

(10, 6088), (12, 6028), (Start: 18 @5983 has 54 MA's), (Start: 24 @5947 has 95 MA's), (35, 5875), (41, 5845), (43, 5800), (51, 5746), (65, 5677),

Gene: Scheme_263 Start: 129142, Stop: 128837, Start Num: 24

Candidate Starts for Scheme_263:

(10, 129283), (12, 129223), (Start: 18 @129178 has 54 MA's), (Start: 24 @129142 has 95 MA's), (35, 129070), (41, 129040), (43, 128995), (51, 128941), (65, 128872),

Gene: Shuckle_12 Start: 6805, Stop: 6482, Start Num: 18

Candidate Starts for Shuckle_12:

(Start: 18 @6805 has 54 MA's), (Start: 19 @6799 has 40 MA's), (21, 6790), (38, 6718), (42, 6685), (47, 6625), (51, 6595), (53, 6586), (66, 6520), (67, 6508),

Gene: Shuckle_265 Start: 129438, Stop: 129115, Start Num: 18

Candidate Starts for Shuckle_265:

(Start: 18 @129438 has 54 MA's), (Start: 19 @129432 has 40 MA's), (21, 129423), (38, 129351), (42, 129318), (47, 129258), (51, 129228), (53, 129219), (66, 129153), (67, 129141),

Gene: Shuckle_11 Start: 6235, Stop: 5930, Start Num: 24

Candidate Starts for Shuckle_11:

(8, 6397), (12, 6316), (Start: 18 @6271 has 54 MA's), (Start: 24 @6235 has 95 MA's), (35, 6163), (41, 6133), (43, 6088), (49, 6040), (51, 6034),

Gene: Shuckle_264 Start: 128868, Stop: 128563, Start Num: 24

Candidate Starts for Shuckle_264:

(8, 129030), (12, 128949), (Start: 18 @128904 has 54 MA's), (Start: 24 @128868 has 95 MA's), (35, 128796), (41, 128766), (43, 128721), (49, 128673), (51, 128667),

Gene: Sollertia_14 Start: 7124, Stop: 6768, Start Num: 19

Candidate Starts for Sollertia_14:

(Start: 18 @7130 has 54 MA's), (Start: 19 @7124 has 40 MA's), (33, 7031), (37, 7010), (47, 6914), (48, 6911), (57, 6857), (68, 6782),

Gene: Sollertia_10 Start: 5615, Stop: 5304, Start Num: 24

Candidate Starts for Sollertia_10:

(Start: 24 @5615 has 95 MA's), (25, 5609), (29, 5588), (36, 5537), (44, 5459), (50, 5411), (54, 5396),

Gene: Sollertia_266 Start: 124505, Stop: 124194, Start Num: 24

Candidate Starts for Sollertia_266:

(Start: 24 @124505 has 95 MA's), (25, 124499), (29, 124478), (36, 124427), (44, 124349), (50, 124301), (54, 124286),

Gene: Sollertia_270 Start: 126014, Stop: 125658, Start Num: 19

Candidate Starts for Sollertia_270:

(Start: 18 @126020 has 54 MA's), (Start: 19 @126014 has 40 MA's), (33, 125921), (37, 125900), (47, 125804), (48, 125801), (57, 125747), (68, 125672),

Gene: Spelly_13 Start: 7141, Stop: 6788, Start Num: 19

Candidate Starts for Spelly_13:

(Start: 18 @7147 has 54 MA's), (Start: 19 @7141 has 40 MA's), (21, 7126), (33, 7051), (37, 7030), (48, 6931), (68, 6802),

Gene: Spelly_279 Start: 125945, Stop: 125592, Start Num: 19

Candidate Starts for Spelly_279:

(Start: 18 @125951 has 54 MA's), (Start: 19 @125945 has 40 MA's), (21, 125930), (33, 125855), (37, 125834), (48, 125735), (68, 125606),

Gene: Spilled_12 Start: 6757, Stop: 6398, Start Num: 18

Candidate Starts for Spilled_12:

(Start: 18 @6757 has 54 MA's), (Start: 19 @6751 has 40 MA's), (21, 6736), (33, 6661), (37, 6640), (48, 6541), (68, 6412),

Gene: Spilled_280 Start: 127226, Stop: 126867, Start Num: 18

Candidate Starts for Spilled_280:

(Start: 18 @127226 has 54 MA's), (Start: 19 @127220 has 40 MA's), (21, 127205), (33, 127130), (37, 127109), (48, 127010), (68, 126881),

Gene: Squillium_10 Start: 6043, Stop: 5744, Start Num: 24

Candidate Starts for Squillium_10:

(Start: 24 @6043 has 95 MA's), (36, 5962), (45, 5872), (46, 5869), (53, 5818),

Gene: Squillium_262 Start: 127567, Stop: 127268, Start Num: 24

Candidate Starts for Squillium_262:

(Start: 24 @127567 has 95 MA's), (36, 127486), (45, 127396), (46, 127393), (53, 127342),

Gene: Stanimal_10 Start: 5615, Stop: 5304, Start Num: 24

Candidate Starts for Stanimal_10:

(Start: 24 @5615 has 95 MA's), (25, 5609), (29, 5588), (36, 5537), (44, 5459), (50, 5411), (54, 5396),

Gene: Stanimal_265 Start: 124889, Stop: 124578, Start Num: 24

Candidate Starts for Stanimal_265:

(Start: 24 @124889 has 95 MA's), (25, 124883), (29, 124862), (36, 124811), (44, 124733), (50, 124685), (54, 124670),

Gene: Stanimal_269 Start: 126404, Stop: 126042, Start Num: 18

Candidate Starts for Stanimal_269:

(Start: 18 @126404 has 54 MA's), (Start: 19 @126398 has 40 MA's), (33, 126305), (37, 126284), (47, 126188), (48, 126185), (57, 126131), (68, 126056),

Gene: Stanimal_14 Start: 7130, Stop: 6768, Start Num: 18

Candidate Starts for Stanimal_14:

(Start: 18 @7130 has 54 MA's), (Start: 19 @7124 has 40 MA's), (33, 7031), (37, 7010), (47, 6914), (48, 6911), (57, 6857), (68, 6782),

Gene: StarPlatinum_282 Start: 128529, Stop: 128176, Start Num: 19

Candidate Starts for StarPlatinum_282:

(Start: 19 @128529 has 40 MA's), (20, 128523), (21, 128514), (33, 128439), (37, 128418), (48, 128319), (64, 128223), (68, 128190),

Gene: StarPlatinum_12 Start: 6842, Stop: 6489, Start Num: 19

Candidate Starts for StarPlatinum_12:

(Start: 19 @6842 has 40 MA's), (20, 6836), (21, 6827), (33, 6752), (37, 6731), (48, 6632), (64, 6536), (68, 6503),

Gene: Starbow_13 Start: 7147, Stop: 6788, Start Num: 18

Candidate Starts for Starbow_13:

(Start: 18 @7147 has 54 MA's), (Start: 19 @7141 has 40 MA's), (21, 7126), (33, 7051), (37, 7030), (48, 6931), (68, 6802),

Gene: Starbow_270 Start: 125995, Stop: 125636, Start Num: 18

Candidate Starts for Starbow_270:

(Start: 18 @125995 has 54 MA's), (Start: 19 @125989 has 40 MA's), (21, 125974), (33, 125899), (37, 125878), (48, 125779), (68, 125650),

Gene: Sushi23_10 Start: 5793, Stop: 5488, Start Num: 24

Candidate Starts for Sushi23_10:

(10, 5934), (12, 5874), (Start: 18 @5829 has 54 MA's), (Start: 24 @5793 has 95 MA's), (35, 5721), (41, 5691), (43, 5646), (51, 5592), (65, 5523),

Gene: Sushi23_12 Start: 6361, Stop: 6038, Start Num: 18

Candidate Starts for Sushi23_12:

(Start: 18 @6361 has 54 MA's), (Start: 19 @6355 has 40 MA's), (21, 6346), (38, 6274), (42, 6241), (47, 6181), (51, 6151), (53, 6142), (66, 6076), (67, 6064),

Gene: Sushi23_262 Start: 129204, Stop: 128881, Start Num: 18

Candidate Starts for Sushi23_262:

(Start: 18 @129204 has 54 MA's), (Start: 19 @129198 has 40 MA's), (21, 129189), (38, 129117), (42, 129084), (47, 129024), (51, 128994), (53, 128985), (66, 128919), (67, 128907),

Gene: Targaryen_261 Start: 130341, Stop: 130033, Start Num: 24

Candidate Starts for Targaryen_261:

(1, 130671), (2, 130644), (3, 130578), (4, 130554), (5, 130548), (9, 130494), (Start: 24 @130341 has 95 MA's), (27, 130317), (36, 130260), (44, 130173), (54, 130110), (62, 130071),

Gene: Targaryen_260 Start: 129804, Stop: 129499, Start Num: 24

Candidate Starts for Targaryen_260:

(Start: 24 @129804 has 95 MA's), (35, 129732), (41, 129702), (43, 129657), (48, 129630), (49, 129609), (51, 129603), (65, 129534),

Gene: Targaryen_9 Start: 6128, Stop: 5823, Start Num: 24

Candidate Starts for Targaryen_9:

(Start: 24 @6128 has 95 MA's), (35, 6056), (41, 6026), (43, 5981), (48, 5954), (49, 5933), (51, 5927), (65, 5858),

Gene: Targaryen_10 Start: 6665, Stop: 6357, Start Num: 24

Candidate Starts for Targaryen_10:

(1, 6995), (2, 6968), (3, 6902), (4, 6878), (5, 6872), (9, 6818), (Start: 24 @6665 has 95 MA's), (27, 6641), (36, 6584), (44, 6497), (54, 6434), (62, 6395),

Gene: Teutsch_9 Start: 5794, Stop: 5489, Start Num: 24

Candidate Starts for Teutsch_9:

(10, 5935), (12, 5875), (Start: 18 @5830 has 54 MA's), (Start: 24 @5794 has 95 MA's), (35, 5722), (41, 5692), (43, 5647), (51, 5593), (65, 5524),

Gene: Teutsch_11 Start: 6362, Stop: 6039, Start Num: 18

Candidate Starts for Teutsch_11:

(Start: 18 @6362 has 54 MA's), (Start: 19 @6356 has 40 MA's), (21, 6347), (38, 6275), (42, 6242), (47, 6182), (51, 6152), (53, 6143), (66, 6077), (67, 6065),

Gene: Teutsch_258 Start: 128571, Stop: 128248, Start Num: 18

Candidate Starts for Teutsch_258:

(Start: 18 @128571 has 54 MA's), (Start: 19 @128565 has 40 MA's), (21, 128556), (38, 128484), (42, 128451), (47, 128391), (51, 128361), (53, 128352), (66, 128286), (67, 128274),

Gene: Teutsch_256 Start: 128003, Stop: 127698, Start Num: 24

Candidate Starts for Teutsch_256:

(10, 128144), (12, 128084), (Start: 18 @128039 has 54 MA's), (Start: 24 @128003 has 95 MA's), (35, 127931), (41, 127901), (43, 127856), (51, 127802), (65, 127733),

Gene: TomSawyer_13 Start: 6734, Stop: 6381, Start Num: 19

Candidate Starts for TomSawyer_13:

(Start: 18 @6740 has 54 MA's), (Start: 19 @6734 has 40 MA's), (21, 6719), (33, 6644), (37, 6623), (48, 6524), (68, 6395),

Gene: TomSawyer_278 Start: 128513, Stop: 128160, Start Num: 19

Candidate Starts for TomSawyer_278:

(Start: 18 @128519 has 54 MA's), (Start: 19 @128513 has 40 MA's), (21, 128498), (33, 128423), (37, 128402), (48, 128303), (68, 128174),

Gene: Tomas_18 Start: 8698, Stop: 8333, Start Num: 24

Candidate Starts for Tomas_18:

(7, 8866), (15, 8755), (Start: 24 @8698 has 95 MA's), (26, 8689), (31, 8650), (32, 8641), (42, 8569), (50, 8482), (52, 8473),

Gene: Tomas_15 Start: 7771, Stop: 7403, Start Num: 11

Candidate Starts for Tomas_15:

(Start: 11 @7771 has 2 MA's), (Start: 19 @7720 has 40 MA's), (37, 7633), (48, 7534), (50, 7510), (56, 7486), (59, 7471),

Gene: Tomas_274 Start: 130405, Stop: 130040, Start Num: 24

Candidate Starts for Tomas_274:

(7, 130573), (15, 130462), (Start: 24 @130405 has 95 MA's), (26, 130396), (31, 130357), (32, 130348), (42, 130276), (50, 130189), (52, 130180),

Gene: Tomas_271 Start: 129478, Stop: 129110, Start Num: 11

Candidate Starts for Tomas_271:

(Start: 11 @129478 has 2 MA's), (Start: 19 @129427 has 40 MA's), (37, 129340), (48, 129241), (50, 129217), (56, 129193), (59, 129178),

Gene: Tribute_11 Start: 6361, Stop: 6038, Start Num: 18

Candidate Starts for Tribute_11:

(Start: 18 @6361 has 54 MA's), (Start: 19 @6355 has 40 MA's), (21, 6346), (38, 6274), (42, 6241), (47, 6181), (51, 6151), (53, 6142), (66, 6076), (67, 6064),

Gene: Tribute_255 Start: 128337, Stop: 128032, Start Num: 24

Candidate Starts for Tribute_255:

(Start: 18 @128373 has 54 MA's), (Start: 24 @128337 has 95 MA's), (35, 128265), (41, 128235), (43, 128190), (51, 128136), (65, 128067),

Gene: Tribute_257 Start: 128905, Stop: 128582, Start Num: 18

Candidate Starts for Tribute_257:

(Start: 18 @128905 has 54 MA's), (Start: 19 @128899 has 40 MA's), (21, 128890), (38, 128818), (42, 128785), (47, 128725), (51, 128695), (53, 128686), (66, 128620), (67, 128608),

Gene: Tribute_9 Start: 5793, Stop: 5488, Start Num: 24

Candidate Starts for Tribute_9:

(Start: 18 @5829 has 54 MA's), (Start: 24 @5793 has 95 MA's), (35, 5721), (41, 5691), (43, 5646), (51, 5592), (65, 5523),

Gene: Wakanda_221 Start: 108728, Stop: 109015, Start Num: 23

Candidate Starts for Wakanda_221:

(Start: 23 @108728 has 4 MA's), (25, 108737), (26, 108740), (29, 108758), (34, 108794), (40, 108830), (63, 109004),

Gene: Warpy_265 Start: 127974, Stop: 127630, Start Num: 17

Candidate Starts for Warpy_265:

(Start: 17 @127974 has 4 MA's), (Start: 24 @127932 has 95 MA's), (36, 127851), (45, 127761), (54, 127704), (55, 127698), (61, 127668),

Gene: Warpy_13 Start: 6436, Stop: 6092, Start Num: 17

Candidate Starts for Warpy_13:

(Start: 17 @6436 has 4 MA's), (Start: 24 @6394 has 95 MA's), (36, 6313), (45, 6223), (54, 6166), (55, 6160), (61, 6130),

Gene: Warpy_11 Start: 5853, Stop: 5548, Start Num: 24

Candidate Starts for Warpy_11:

(Start: 24 @5853 has 95 MA's), (35, 5781), (41, 5751), (43, 5706), (48, 5679), (49, 5658), (51, 5652), (65, 5583),

Gene: Warpy_263 Start: 127391, Stop: 127086, Start Num: 24

Candidate Starts for Warpy_263:

(Start: 24 @127391 has 95 MA's), (35, 127319), (41, 127289), (43, 127244), (48, 127217), (49, 127196), (51, 127190), (65, 127121),

Gene: Watermoore_258 Start: 128958, Stop: 128635, Start Num: 18

Candidate Starts for Watermoore_258:

(Start: 18 @128958 has 54 MA's), (Start: 19 @128952 has 40 MA's), (21, 128943), (38, 128871), (42, 128838), (47, 128778), (51, 128748), (53, 128739), (66, 128673), (67, 128661),

Gene: Watermoore_256 Start: 128390, Stop: 128085, Start Num: 24

Candidate Starts for Watermoore_256:

(10, 128531), (12, 128471), (Start: 18 @128426 has 54 MA's), (Start: 24 @128390 has 95 MA's), (35, 128318), (41, 128288), (43, 128243), (51, 128189), (65, 128120),

Gene: Watermoore_9 Start: 5794, Stop: 5489, Start Num: 24

Candidate Starts for Watermoore_9:

(10, 5935), (12, 5875), (Start: 18 @5830 has 54 MA's), (Start: 24 @5794 has 95 MA's), (35, 5722), (41, 5692), (43, 5647), (51, 5593), (65, 5524),

Gene: Watermoore_11 Start: 6362, Stop: 6039, Start Num: 18

Candidate Starts for Watermoore_11:

(Start: 18 @6362 has 54 MA's), (Start: 19 @6356 has 40 MA's), (21, 6347), (38, 6275), (42, 6242), (47, 6182), (51, 6152), (53, 6143), (66, 6077), (67, 6065),

Gene: WhereRU_9 Start: 5841, Stop: 5542, Start Num: 24

Candidate Starts for WhereRU_9:

(Start: 24 @5841 has 95 MA's), (36, 5760), (45, 5670), (46, 5667), (53, 5616),

Gene: WhereRU_258 Start: 126986, Stop: 126687, Start Num: 24

Candidate Starts for WhereRU_258:

(Start: 24 @126986 has 95 MA's), (36, 126905), (45, 126815), (46, 126812), (53, 126761),

Gene: Wipeout_265 Start: 127487, Stop: 127134, Start Num: 19

Candidate Starts for Wipeout_265:

(Start: 18 @127493 has 54 MA's), (Start: 19 @127487 has 40 MA's), (21, 127472), (33, 127397), (37, 127376), (48, 127277), (68, 127148),

Gene: Wipeout_12 Start: 6756, Stop: 6403, Start Num: 19

Candidate Starts for Wipeout_12:

(Start: 18 @6762 has 54 MA's), (Start: 19 @6756 has 40 MA's), (21, 6741), (33, 6666), (37, 6645), (48, 6546), (68, 6417),

Gene: Wofford_270 Start: 128069, Stop: 127716, Start Num: 19

Candidate Starts for Wofford_270:

(Start: 18 @128075 has 54 MA's), (Start: 19 @128069 has 40 MA's), (33, 127979), (37, 127958), (44, 127883), (47, 127862), (68, 127730),

Gene: Wofford_12 Start: 6276, Stop: 5923, Start Num: 19

Candidate Starts for Wofford_12:

(Start: 18 @6282 has 54 MA's), (Start: 19 @6276 has 40 MA's), (33, 6186), (37, 6165), (44, 6090), (47, 6069), (68, 5937),

Gene: Yaboi_275 Start: 125942, Stop: 125586, Start Num: 19

Candidate Starts for Yaboi_275:

(Start: 18 @125948 has 54 MA's), (Start: 19 @125942 has 40 MA's), (33, 125849), (37, 125828), (47, 125732), (48, 125729), (57, 125675), (68, 125600),

Gene: Yaboi_271 Start: 124433, Stop: 124122, Start Num: 24

Candidate Starts for Yaboi_271:

(Start: 24 @124433 has 95 MA's), (25, 124427), (29, 124406), (36, 124355), (44, 124277), (50, 124229), (54, 124214),

Gene: Yaboi_10 Start: 5615, Stop: 5304, Start Num: 24

Candidate Starts for Yaboi_10:

(Start: 24 @5615 has 95 MA's), (25, 5609), (29, 5588), (36, 5537), (44, 5459), (50, 5411), (54, 5396),

Gene: Yaboi_14 Start: 7124, Stop: 6768, Start Num: 19

Candidate Starts for Yaboi_14:

(Start: 18 @7130 has 54 MA's), (Start: 19 @7124 has 40 MA's), (33, 7031), (37, 7010), (47, 6914), (48, 6911), (57, 6857), (68, 6782),