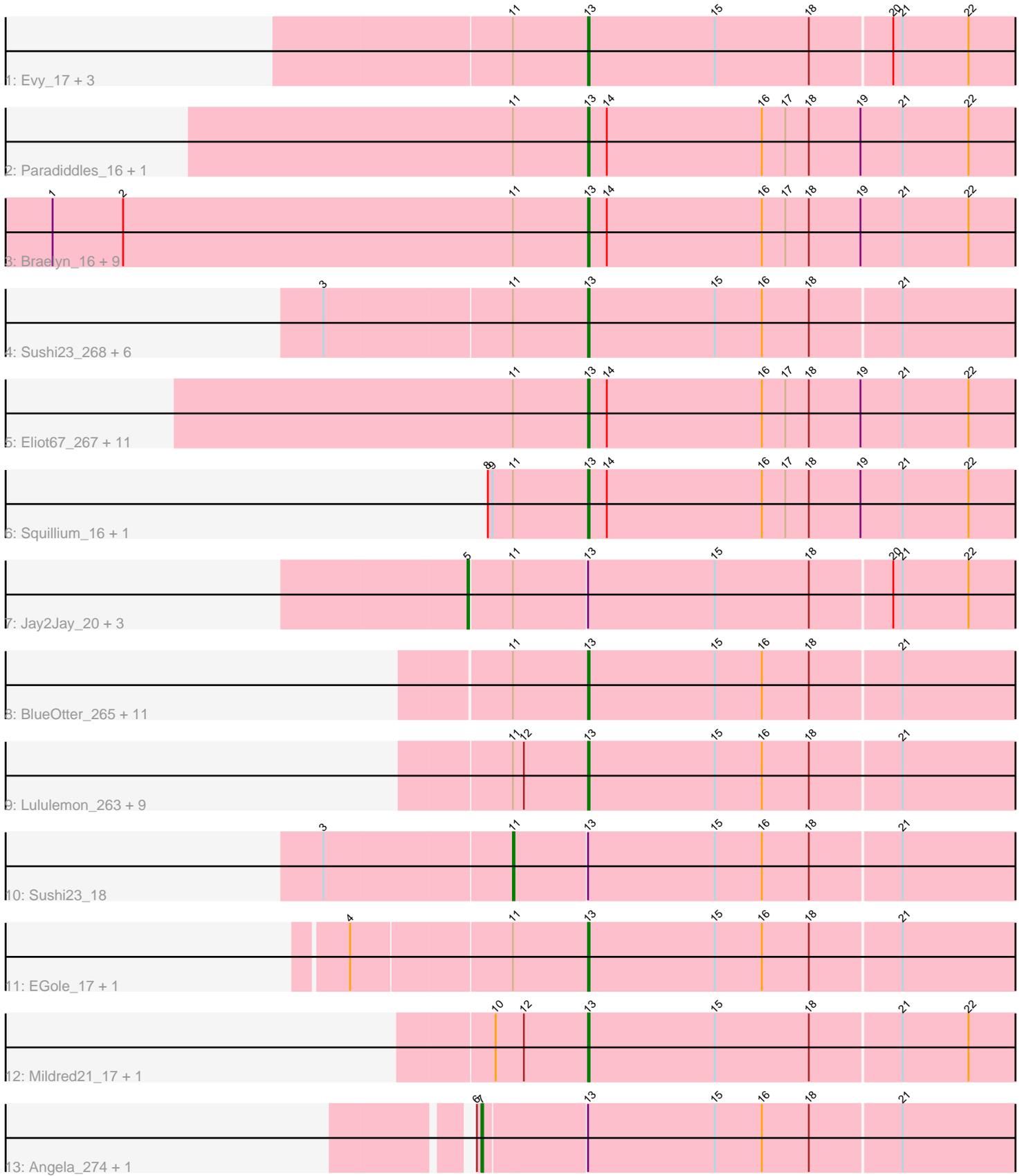


Pham 283776



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 283776 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283776 has 70 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Evy_17, Targaryen_15, Evy_255, Targaryen_266
- Track 2 : Paradiddles_16, Paradiddles_257
- Track 3 : Braelyn_16, Navo_257, Persimmon_266, Braelyn_261, WhereRU_264, Davielle_15, WhereRU_15, Davielle_264, Navo_15, Persimmon_15
- Track 4 : Sushi23_268, Coogler_263, Larnav_17, Tribute_263, Coogler_17, Tribute_17, Larnav_267
- Track 5 : Eliot67_267, NootNoot_16, Bartholomune_16, Liandry_16, Eliot67_16, Bartholomune_266, FreddyDRoo_16, Liandry_265, PinkiePie_266, FreddyDRoo_269, PinkiePie_16, NootNoot_261
- Track 6 : Squillium_16, Squillium_268
- Track 7 : Jay2Jay_20, Jay2Jay_275, Warpy_272, Warpy_20
- Track 8 : BlueOtter_265, Watermoore_17, Leo04_268, Cursive_15, HangryHippo_17, Leo04_17, Cross_265, Cross_17, Watermoore_264, HangryHippo_265, Cursive_269, BlueOtter_17
- Track 9 : Lululemon_263, PacManQ_16, Scheme_271, Pepperwood_18, PacManQ_263, Pepperwood_267, Peebs_264, Peebs_17, Lululemon_16, Scheme_18
- Track 10 : Sushi23_18
- Track 11 : EGole_17, EGole_271
- Track 12 : Mildred21_17, Mildred21_280
- Track 13 : Angela_274, Angela_17

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

The start number called the most often in the published annotations is 13, it was called in 59 of the 66 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Bartholomune_16, Bartholomune_266, BlueOtter_17, BlueOtter_265, Braelyn_16, Braelyn_261, Coogler_17, Coogler_263, Cross_17, Cross_265, Cursive_15, Cursive_269, Davielle_15, Davielle_264, EGole_17, EGole_271, Eliot67_16, Eliot67_267, Evy_17, Evy_255, FreddyDRoo_16, FreddyDRoo_269, HangryHippo_17, HangryHippo_265, Larnav_17, Larnav_267, Leo04_17, Leo04_268, Liandry_16, Liandry_265, Lululemon_16, Lululemon_263, Mildred21_17,

Mildred21_280, Navo_15, Navo_257, NootNoot_16, NootNoot_261, PacManQ_16, PacManQ_263, Paradiddles_16, Paradiddles_257, Peebs_17, Peebs_264, Pepperwood_18, Pepperwood_267, Persimmon_15, Persimmon_266, PinkiePie_16, PinkiePie_266, Scheme_18, Scheme_271, Squillium_16, Squillium_268, Sushi23_268, Targaryen_15, Targaryen_266, Tribute_17, Tribute_263, Watermoore_17, Watermoore_264, WhereRU_15, WhereRU_264,

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

- Angela_17, Angela_274, Jay2Jay_20, Jay2Jay_275, Sushi23_18, Warpy_20, Warpy_272,

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

-

Summary by start number:

Start 5:

- Found in 4 of 70 (5.7%) of genes in pham
- Manual Annotations of this start: 4 of 66
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jay2Jay_20 (BE1), Jay2Jay_275 (BE1), Warpy_20 (BE1), Warpy_272 (BE1),

Start 7:

- Found in 2 of 70 (2.9%) of genes in pham
- Manual Annotations of this start: 2 of 66
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Angela_17 (BE1), Angela_274 (BE1),

Start 11:

- Found in 66 of 70 (94.3%) of genes in pham
- Manual Annotations of this start: 1 of 66
- Called 1.5% of time when present
- Phage (with cluster) where this start called: Sushi23_18 (BE1),

Start 13:

- Found in 70 of 70 (100.0%) of genes in pham
- Manual Annotations of this start: 59 of 66
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Bartholomune_16 (BE1), Bartholomune_266 (BE1), BlueOtter_17 (BE1), BlueOtter_265 (BE1), Braelyn_16 (BE1), Braelyn_261 (BE1), Coogler_17 (BE1), Coogler_263 (BE1), Cross_17 (BE1), Cross_265 (BE1), Cursive_15 (BE1), Cursive_269 (BE1), Davielle_15 (BE1), Davielle_264 (BE1), EGole_17 (BE1), EGole_271 (BE1), Eliot67_16 (BE1), Eliot67_267 (BE1), Evy_17 (BE1), Evy_255 (BE1), FreddyDRoo_16 (BE1), FreddyDRoo_269 (BE1), HangryHippo_17 (BE1), HangryHippo_265 (BE1), Larnav_17 (BE1), Larnav_267 (BE1), Leo04_17 (BE1), Leo04_268 (BE1), Liandry_16 (BE1), Liandry_265 (BE1), Lululemon_16 (BE1), Lululemon_263 (BE1), Mildred21_17 (BE1), Mildred21_280 (BE1), Navo_15 (BE1), Navo_257 (BE1), NootNoot_16 (BE1), NootNoot_261 (BE1), PacManQ_16 (BE1), PacManQ_263 (BE1), Paradiddles_16 (BE1), Paradiddles_257 (BE1), Peebs_17 (BE1), Peebs_264 (BE1), Pepperwood_18 (BE1), Pepperwood_267 (BE1), Persimmon_15 (BE1), Persimmon_266 (BE1), PinkiePie_16 (BE1), PinkiePie_266 (BE1), Scheme_18 (BE1), Scheme_271 (BE1),

Squillium_16 (BE1), Squillium_268 (BE1), Sushi23_268 (BE1), Targaryen_15 (BE1), Targaryen_266 (BE1), Tribute_17 (BE1), Tribute_263 (BE1), Watermoore_17 (BE1), Watermoore_264 (BE1), WhereRU_15 (BE1), WhereRU_264 (BE1),

Summary by clusters:

There is one cluster represented in this pham: BE1

Info for manual annotations of cluster BE1:

- Start number 5 was manually annotated 4 times for cluster BE1.
- Start number 7 was manually annotated 2 times for cluster BE1.
- Start number 11 was manually annotated 1 time for cluster BE1.
- Start number 13 was manually annotated 59 times for cluster BE1.

Gene Information:

Gene: Angela_274 Start: 131229, Stop: 130840, Start Num: 7

Candidate Starts for Angela_274:

(6, 131232), (Start: 7 @131229 has 2 MA's), (Start: 13 @131166 has 59 MA's), (15, 131085), (16, 131055), (18, 131025), (21, 130968),

Gene: Angela_17 Start: 8826, Stop: 8437, Start Num: 7

Candidate Starts for Angela_17:

(6, 8829), (Start: 7 @8826 has 2 MA's), (Start: 13 @8763 has 59 MA's), (15, 8682), (16, 8652), (18, 8622), (21, 8565),

Gene: Bartholomune_16 Start: 8160, Stop: 7819, Start Num: 13

Candidate Starts for Bartholomune_16:

(Start: 11 @8208 has 1 MA's), (Start: 13 @8160 has 59 MA's), (14, 8148), (16, 8049), (17, 8034), (18, 8019), (19, 7986), (21, 7959), (22, 7917),

Gene: Bartholomune_266 Start: 129259, Stop: 128918, Start Num: 13

Candidate Starts for Bartholomune_266:

(Start: 11 @129307 has 1 MA's), (Start: 13 @129259 has 59 MA's), (14, 129247), (16, 129148), (17, 129133), (18, 129118), (19, 129085), (21, 129058), (22, 129016),

Gene: BlueOtter_265 Start: 129541, Stop: 129215, Start Num: 13

Candidate Starts for BlueOtter_265:

(Start: 11 @129586 has 1 MA's), (Start: 13 @129541 has 59 MA's), (15, 129460), (16, 129430), (18, 129400), (21, 129343),

Gene: BlueOtter_17 Start: 8454, Stop: 8128, Start Num: 13

Candidate Starts for BlueOtter_17:

(Start: 11 @8499 has 1 MA's), (Start: 13 @8454 has 59 MA's), (15, 8373), (16, 8343), (18, 8313), (21, 8256),

Gene: Braelyn_16 Start: 8203, Stop: 7862, Start Num: 13

Candidate Starts for Braelyn_16:

(1, 8545), (2, 8500), (Start: 11 @8251 has 1 MA's), (Start: 13 @8203 has 59 MA's), (14, 8191), (16, 8092), (17, 8077), (18, 8062), (19, 8029), (21, 8002), (22, 7960),

Gene: Braelyn_261 Start: 128613, Stop: 128272, Start Num: 13

Candidate Starts for Braelyn_261:

(1, 128955), (2, 128910), (Start: 11 @128661 has 1 MA's), (Start: 13 @128613 has 59 MA's), (14, 128601), (16, 128502), (17, 128487), (18, 128472), (19, 128439), (21, 128412), (22, 128370),

Gene: Coogler_263 Start: 129966, Stop: 129640, Start Num: 13

Candidate Starts for Coogler_263:

(3, 130128), (Start: 11 @130011 has 1 MA's), (Start: 13 @129966 has 59 MA's), (15, 129885), (16, 129855), (18, 129825), (21, 129768),

Gene: Coogler_17 Start: 8454, Stop: 8128, Start Num: 13

Candidate Starts for Coogler_17:

(3, 8616), (Start: 11 @8499 has 1 MA's), (Start: 13 @8454 has 59 MA's), (15, 8373), (16, 8343), (18, 8313), (21, 8256),

Gene: Cross_265 Start: 130187, Stop: 129861, Start Num: 13

Candidate Starts for Cross_265:

(Start: 11 @130232 has 1 MA's), (Start: 13 @130187 has 59 MA's), (15, 130106), (16, 130076), (18, 130046), (21, 129989),

Gene: Cross_17 Start: 8455, Stop: 8129, Start Num: 13

Candidate Starts for Cross_17:

(Start: 11 @8500 has 1 MA's), (Start: 13 @8455 has 59 MA's), (15, 8374), (16, 8344), (18, 8314), (21, 8257),

Gene: Cursive_15 Start: 7272, Stop: 6946, Start Num: 13

Candidate Starts for Cursive_15:

(Start: 11 @7317 has 1 MA's), (Start: 13 @7272 has 59 MA's), (15, 7191), (16, 7161), (18, 7131), (21, 7074),

Gene: Cursive_269 Start: 129281, Stop: 128955, Start Num: 13

Candidate Starts for Cursive_269:

(Start: 11 @129326 has 1 MA's), (Start: 13 @129281 has 59 MA's), (15, 129200), (16, 129170), (18, 129140), (21, 129083),

Gene: Davielle_15 Start: 7989, Stop: 7648, Start Num: 13

Candidate Starts for Davielle_15:

(1, 8331), (2, 8286), (Start: 11 @8037 has 1 MA's), (Start: 13 @7989 has 59 MA's), (14, 7977), (16, 7878), (17, 7863), (18, 7848), (19, 7815), (21, 7788), (22, 7746),

Gene: Davielle_264 Start: 129149, Stop: 128808, Start Num: 13

Candidate Starts for Davielle_264:

(1, 129491), (2, 129446), (Start: 11 @129197 has 1 MA's), (Start: 13 @129149 has 59 MA's), (14, 129137), (16, 129038), (17, 129023), (18, 129008), (19, 128975), (21, 128948), (22, 128906),

Gene: EGole_17 Start: 8875, Stop: 8549, Start Num: 13

Candidate Starts for EGole_17:

(4, 9019), (Start: 11 @8920 has 1 MA's), (Start: 13 @8875 has 59 MA's), (15, 8794), (16, 8764), (18, 8734), (21, 8677),

Gene: EGole_271 Start: 133187, Stop: 132861, Start Num: 13

Candidate Starts for EGole_271:

(4, 133331), (Start: 11 @133232 has 1 MA's), (Start: 13 @133187 has 59 MA's), (15, 133106), (16, 133076), (18, 133046), (21, 132989),

Gene: Eliot67_267 Start: 128974, Stop: 128633, Start Num: 13

Candidate Starts for Eliot67_267:

(Start: 11 @129022 has 1 MA's), (Start: 13 @128974 has 59 MA's), (14, 128962), (16, 128863), (17, 128848), (18, 128833), (19, 128800), (21, 128773), (22, 128731),

Gene: Eliot67_16 Start: 8160, Stop: 7819, Start Num: 13

Candidate Starts for Eliot67_16:

(Start: 11 @8208 has 1 MA's), (Start: 13 @8160 has 59 MA's), (14, 8148), (16, 8049), (17, 8034), (18, 8019), (19, 7986), (21, 7959), (22, 7917),

Gene: Evy_17 Start: 8633, Stop: 8307, Start Num: 13

Candidate Starts for Evy_17:

(Start: 11 @8678 has 1 MA's), (Start: 13 @8633 has 59 MA's), (15, 8552), (18, 8492), (20, 8441), (21, 8435), (22, 8393),

Gene: Evy_255 Start: 130362, Stop: 130036, Start Num: 13

Candidate Starts for Evy_255:

(Start: 11 @130407 has 1 MA's), (Start: 13 @130362 has 59 MA's), (15, 130281), (18, 130221), (20, 130170), (21, 130164), (22, 130122),

Gene: FreddyDRoo_16 Start: 8160, Stop: 7819, Start Num: 13

Candidate Starts for FreddyDRoo_16:

(Start: 11 @8208 has 1 MA's), (Start: 13 @8160 has 59 MA's), (14, 8148), (16, 8049), (17, 8034), (18, 8019), (19, 7986), (21, 7959), (22, 7917),

Gene: FreddyDRoo_269 Start: 128974, Stop: 128633, Start Num: 13

Candidate Starts for FreddyDRoo_269:

(Start: 11 @129022 has 1 MA's), (Start: 13 @128974 has 59 MA's), (14, 128962), (16, 128863), (17, 128848), (18, 128833), (19, 128800), (21, 128773), (22, 128731),

Gene: HangryHippo_17 Start: 8454, Stop: 8128, Start Num: 13

Candidate Starts for HangryHippo_17:

(Start: 11 @8499 has 1 MA's), (Start: 13 @8454 has 59 MA's), (15, 8373), (16, 8343), (18, 8313), (21, 8256),

Gene: HangryHippo_265 Start: 129541, Stop: 129215, Start Num: 13

Candidate Starts for HangryHippo_265:

(Start: 11 @129586 has 1 MA's), (Start: 13 @129541 has 59 MA's), (15, 129460), (16, 129430), (18, 129400), (21, 129343),

Gene: Jay2Jay_20 Start: 8895, Stop: 8497, Start Num: 5

Candidate Starts for Jay2Jay_20:

(Start: 5 @8895 has 4 MA's), (Start: 11 @8868 has 1 MA's), (Start: 13 @8823 has 59 MA's), (15, 8742), (18, 8682), (20, 8631), (21, 8625), (22, 8583),

Gene: Jay2Jay_275 Start: 130988, Stop: 130590, Start Num: 5

Candidate Starts for Jay2Jay_275:

(Start: 5 @130988 has 4 MA's), (Start: 11 @130961 has 1 MA's), (Start: 13 @130916 has 59 MA's), (15, 130835), (18, 130775), (20, 130724), (21, 130718), (22, 130676),

Gene: Larnav_17 Start: 8454, Stop: 8128, Start Num: 13

Candidate Starts for Larnav_17:

(3, 8616), (Start: 11 @8499 has 1 MA's), (Start: 13 @8454 has 59 MA's), (15, 8373), (16, 8343), (18, 8313), (21, 8256),

Gene: Larnav_267 Start: 130459, Stop: 130133, Start Num: 13

Candidate Starts for Larnav_267:

(3, 130621), (Start: 11 @130504 has 1 MA's), (Start: 13 @130459 has 59 MA's), (15, 130378), (16, 130348), (18, 130318), (21, 130261),

Gene: Leo04_268 Start: 130571, Stop: 130245, Start Num: 13

Candidate Starts for Leo04_268:

(Start: 11 @130616 has 1 MA's), (Start: 13 @130571 has 59 MA's), (15, 130490), (16, 130460), (18, 130430), (21, 130373),

Gene: Leo04_17 Start: 8453, Stop: 8127, Start Num: 13

Candidate Starts for Leo04_17:

(Start: 11 @8498 has 1 MA's), (Start: 13 @8453 has 59 MA's), (15, 8372), (16, 8342), (18, 8312), (21, 8255),

Gene: Liandry_16 Start: 8159, Stop: 7818, Start Num: 13

Candidate Starts for Liandry_16:

(Start: 11 @8207 has 1 MA's), (Start: 13 @8159 has 59 MA's), (14, 8147), (16, 8048), (17, 8033), (18, 8018), (19, 7985), (21, 7958), (22, 7916),

Gene: Liandry_265 Start: 129680, Stop: 129339, Start Num: 13

Candidate Starts for Liandry_265:

(Start: 11 @129728 has 1 MA's), (Start: 13 @129680 has 59 MA's), (14, 129668), (16, 129569), (17, 129554), (18, 129539), (19, 129506), (21, 129479), (22, 129437),

Gene: Lululemon_263 Start: 128726, Stop: 128400, Start Num: 13

Candidate Starts for Lululemon_263:

(Start: 11 @128771 has 1 MA's), (12, 128765), (Start: 13 @128726 has 59 MA's), (15, 128645), (16, 128615), (18, 128585), (21, 128528),

Gene: Lululemon_16 Start: 7834, Stop: 7508, Start Num: 13

Candidate Starts for Lululemon_16:

(Start: 11 @7879 has 1 MA's), (12, 7873), (Start: 13 @7834 has 59 MA's), (15, 7753), (16, 7723), (18, 7693), (21, 7636),

Gene: Mildred21_17 Start: 8348, Stop: 8022, Start Num: 13

Candidate Starts for Mildred21_17:

(10, 8405), (12, 8387), (Start: 13 @8348 has 59 MA's), (15, 8267), (18, 8207), (21, 8150), (22, 8108),

Gene: Mildred21_280 Start: 129506, Stop: 129180, Start Num: 13

Candidate Starts for Mildred21_280:

(10, 129563), (12, 129545), (Start: 13 @129506 has 59 MA's), (15, 129425), (18, 129365), (21, 129308), (22, 129266),

Gene: Navo_257 Start: 127583, Stop: 127242, Start Num: 13

Candidate Starts for Navo_257:

(1, 127925), (2, 127880), (Start: 11 @127631 has 1 MA's), (Start: 13 @127583 has 59 MA's), (14, 127571), (16, 127472), (17, 127457), (18, 127442), (19, 127409), (21, 127382), (22, 127340),

Gene: Navo_15 Start: 7958, Stop: 7617, Start Num: 13

Candidate Starts for Navo_15:

(1, 8300), (2, 8255), (Start: 11 @8006 has 1 MA's), (Start: 13 @7958 has 59 MA's), (14, 7946), (16, 7847), (17, 7832), (18, 7817), (19, 7784), (21, 7757), (22, 7715),

Gene: NootNoot_16 Start: 8170, Stop: 7829, Start Num: 13

Candidate Starts for NootNoot_16:

(Start: 11 @8218 has 1 MA's), (Start: 13 @8170 has 59 MA's), (14, 8158), (16, 8059), (17, 8044), (18, 8029), (19, 7996), (21, 7969), (22, 7927),

Gene: NootNoot_261 Start: 128469, Stop: 128128, Start Num: 13

Candidate Starts for NootNoot_261:

(Start: 11 @128517 has 1 MA's), (Start: 13 @128469 has 59 MA's), (14, 128457), (16, 128358), (17, 128343), (18, 128328), (19, 128295), (21, 128268), (22, 128226),

Gene: PacManQ_16 Start: 7834, Stop: 7508, Start Num: 13

Candidate Starts for PacManQ_16:

(Start: 11 @7879 has 1 MA's), (12, 7873), (Start: 13 @7834 has 59 MA's), (15, 7753), (16, 7723), (18, 7693), (21, 7636),

Gene: PacManQ_263 Start: 128726, Stop: 128400, Start Num: 13

Candidate Starts for PacManQ_263:

(Start: 11 @128771 has 1 MA's), (12, 128765), (Start: 13 @128726 has 59 MA's), (15, 128645), (16, 128615), (18, 128585), (21, 128528),

Gene: Paradiddles_16 Start: 8160, Stop: 7819, Start Num: 13

Candidate Starts for Paradiddles_16:

(Start: 11 @8208 has 1 MA's), (Start: 13 @8160 has 59 MA's), (14, 8148), (16, 8049), (17, 8034), (18, 8019), (19, 7986), (21, 7959), (22, 7917),

Gene: Paradiddles_257 Start: 130868, Stop: 130527, Start Num: 13

Candidate Starts for Paradiddles_257:

(Start: 11 @130916 has 1 MA's), (Start: 13 @130868 has 59 MA's), (14, 130856), (16, 130757), (17, 130742), (18, 130727), (19, 130694), (21, 130667), (22, 130625),

Gene: Peebs_264 Start: 130428, Stop: 130102, Start Num: 13

Candidate Starts for Peebs_264:

(Start: 11 @130473 has 1 MA's), (12, 130467), (Start: 13 @130428 has 59 MA's), (15, 130347), (16, 130317), (18, 130287), (21, 130230),

Gene: Peebs_17 Start: 8453, Stop: 8127, Start Num: 13

Candidate Starts for Peebs_17:

(Start: 11 @8498 has 1 MA's), (12, 8492), (Start: 13 @8453 has 59 MA's), (15, 8372), (16, 8342), (18, 8312), (21, 8255),

Gene: Pepperwood_18 Start: 8608, Stop: 8282, Start Num: 13

Candidate Starts for Pepperwood_18:

(Start: 11 @8653 has 1 MA's), (12, 8647), (Start: 13 @8608 has 59 MA's), (15, 8527), (16, 8497), (18, 8467), (21, 8410),

Gene: Pepperwood_267 Start: 130393, Stop: 130067, Start Num: 13

Candidate Starts for Pepperwood_267:

(Start: 11 @130438 has 1 MA's), (12, 130432), (Start: 13 @130393 has 59 MA's), (15, 130312), (16, 130282), (18, 130252), (21, 130195),

Gene: Persimmon_266 Start: 128800, Stop: 128459, Start Num: 13

Candidate Starts for Persimmon_266:

(1, 129142), (2, 129097), (Start: 11 @128848 has 1 MA's), (Start: 13 @128800 has 59 MA's), (14, 128788), (16, 128689), (17, 128674), (18, 128659), (19, 128626), (21, 128599), (22, 128557),

Gene: Persimmon_15 Start: 7989, Stop: 7648, Start Num: 13

Candidate Starts for Persimmon_15:

(1, 8331), (2, 8286), (Start: 11 @8037 has 1 MA's), (Start: 13 @7989 has 59 MA's), (14, 7977), (16, 7878), (17, 7863), (18, 7848), (19, 7815), (21, 7788), (22, 7746),

Gene: PinkiePie_266 Start: 129681, Stop: 129340, Start Num: 13

Candidate Starts for PinkiePie_266:

(Start: 11 @129729 has 1 MA's), (Start: 13 @129681 has 59 MA's), (14, 129669), (16, 129570), (17, 129555), (18, 129540), (19, 129507), (21, 129480), (22, 129438),

Gene: PinkiePie_16 Start: 8160, Stop: 7819, Start Num: 13

Candidate Starts for PinkiePie_16:

(Start: 11 @8208 has 1 MA's), (Start: 13 @8160 has 59 MA's), (14, 8148), (16, 8049), (17, 8034), (18, 8019), (19, 7986), (21, 7959), (22, 7917),

Gene: Scheme_271 Start: 131803, Stop: 131477, Start Num: 13

Candidate Starts for Scheme_271:

(Start: 11 @131848 has 1 MA's), (12, 131842), (Start: 13 @131803 has 59 MA's), (15, 131722), (16, 131692), (18, 131662), (21, 131605),

Gene: Scheme_18 Start: 8608, Stop: 8282, Start Num: 13

Candidate Starts for Scheme_18:

(Start: 11 @8653 has 1 MA's), (12, 8647), (Start: 13 @8608 has 59 MA's), (15, 8527), (16, 8497), (18, 8467), (21, 8410),

Gene: Squillium_16 Start: 8160, Stop: 7819, Start Num: 13

Candidate Starts for Squillium_16:

(8, 8223), (9, 8220), (Start: 11 @8208 has 1 MA's), (Start: 13 @8160 has 59 MA's), (14, 8148), (16, 8049), (17, 8034), (18, 8019), (19, 7986), (21, 7959), (22, 7917),

Gene: Squillium_268 Start: 129684, Stop: 129343, Start Num: 13

Candidate Starts for Squillium_268:

(8, 129747), (9, 129744), (Start: 11 @129732 has 1 MA's), (Start: 13 @129684 has 59 MA's), (14, 129672), (16, 129573), (17, 129558), (18, 129543), (19, 129510), (21, 129483), (22, 129441),

Gene: Sushi23_268 Start: 131297, Stop: 130971, Start Num: 13

Candidate Starts for Sushi23_268:

(3, 131459), (Start: 11 @131342 has 1 MA's), (Start: 13 @131297 has 59 MA's), (15, 131216), (16, 131186), (18, 131156), (21, 131099),

Gene: Sushi23_18 Start: 8499, Stop: 8128, Start Num: 11

Candidate Starts for Sushi23_18:

(3, 8616), (Start: 11 @8499 has 1 MA's), (Start: 13 @8454 has 59 MA's), (15, 8373), (16, 8343), (18, 8313), (21, 8256),

Gene: Targaryen_15 Start: 8629, Stop: 8303, Start Num: 13
Candidate Starts for Targaryen_15:
(Start: 11 @8674 has 1 MA's), (Start: 13 @8629 has 59 MA's), (15, 8548), (18, 8488), (20, 8437), (21, 8431), (22, 8389),

Gene: Targaryen_266 Start: 132305, Stop: 131979, Start Num: 13
Candidate Starts for Targaryen_266:
(Start: 11 @132350 has 1 MA's), (Start: 13 @132305 has 59 MA's), (15, 132224), (18, 132164), (20, 132113), (21, 132107), (22, 132065),

Gene: Tribute_263 Start: 130998, Stop: 130672, Start Num: 13
Candidate Starts for Tribute_263:
(3, 131160), (Start: 11 @131043 has 1 MA's), (Start: 13 @130998 has 59 MA's), (15, 130917), (16, 130887), (18, 130857), (21, 130800),

Gene: Tribute_17 Start: 8454, Stop: 8128, Start Num: 13
Candidate Starts for Tribute_17:
(3, 8616), (Start: 11 @8499 has 1 MA's), (Start: 13 @8454 has 59 MA's), (15, 8373), (16, 8343), (18, 8313), (21, 8256),

Gene: Warpy_272 Start: 130454, Stop: 130056, Start Num: 5
Candidate Starts for Warpy_272:
(Start: 5 @130454 has 4 MA's), (Start: 11 @130427 has 1 MA's), (Start: 13 @130382 has 59 MA's), (15, 130301), (18, 130241), (20, 130190), (21, 130184), (22, 130142),

Gene: Warpy_20 Start: 8916, Stop: 8518, Start Num: 5
Candidate Starts for Warpy_20:
(Start: 5 @8916 has 4 MA's), (Start: 11 @8889 has 1 MA's), (Start: 13 @8844 has 59 MA's), (15, 8763), (18, 8703), (20, 8652), (21, 8646), (22, 8604),

Gene: Watermoore_17 Start: 8455, Stop: 8129, Start Num: 13
Candidate Starts for Watermoore_17:
(Start: 11 @8500 has 1 MA's), (Start: 13 @8455 has 59 MA's), (15, 8374), (16, 8344), (18, 8314), (21, 8257),

Gene: Watermoore_264 Start: 131051, Stop: 130725, Start Num: 13
Candidate Starts for Watermoore_264:
(Start: 11 @131096 has 1 MA's), (Start: 13 @131051 has 59 MA's), (15, 130970), (16, 130940), (18, 130910), (21, 130853),

Gene: WhereRU_264 Start: 129134, Stop: 128793, Start Num: 13
Candidate Starts for WhereRU_264:
(1, 129476), (2, 129431), (Start: 11 @129182 has 1 MA's), (Start: 13 @129134 has 59 MA's), (14, 129122), (16, 129023), (17, 129008), (18, 128993), (19, 128960), (21, 128933), (22, 128891),

Gene: WhereRU_15 Start: 7989, Stop: 7648, Start Num: 13
Candidate Starts for WhereRU_15:
(1, 8331), (2, 8286), (Start: 11 @8037 has 1 MA's), (Start: 13 @7989 has 59 MA's), (14, 7977), (16, 7878), (17, 7863), (18, 7848), (19, 7815), (21, 7788), (22, 7746),