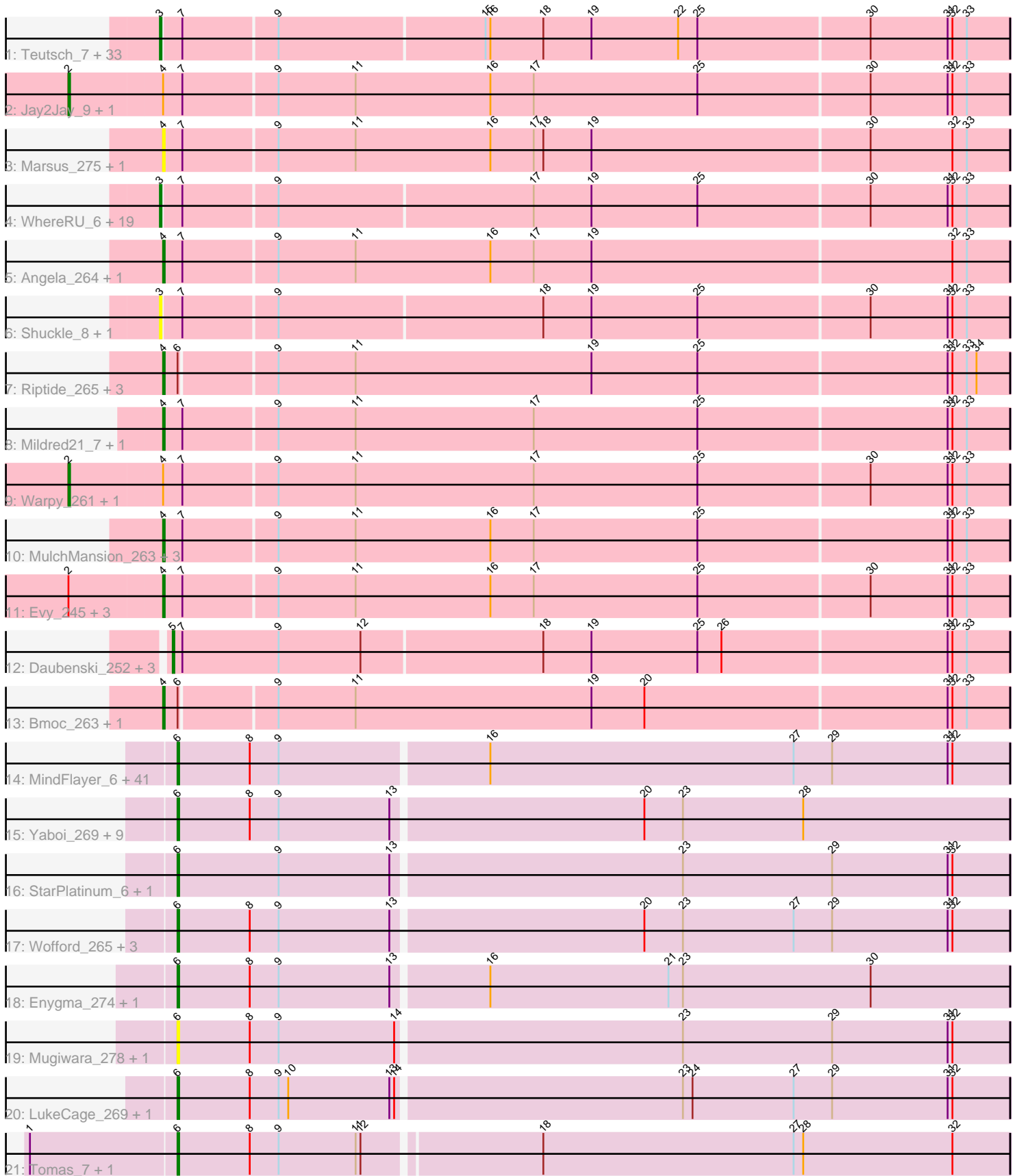


Pham 222954



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 222954 Report

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

Pham number 222954 has 150 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Teutsch_7, Watermoore_7, Cursive_259, Sushi23_258, EGole_7, BlueOtter_7, HangryHippo_7, Watermoore_254, Sushi23_8, HangryHippo_255, Scheme_8, Peebs_254, BlueOtter_255, Peebs_7, Leo04_258, Lululemon_253, Cross_7, Cross_255, Lululemon_6, PacManQ_253, EGole_261, Larnav_7, Larnav_257, Leo04_7, Pepperwood_257, Cursive_5, Teutsch_254, PacManQ_6, Tribute_7, Tribute_253, Pepperwood_8, Samisti12_258, Scheme_261, Samisti12_7
- Track 2 : Jay2Jay_9, Jay2Jay_264
- Track 3 : Marsus_275, Marsus_7
- Track 4 : WhereRU_6, PinkiePie_7, Braelyn_7, Bartholomune_7, Persimmon_257, Persimmon_6, Paradiddles_7, NootNoot_7, Squillium_7, Braelyn_252, Bartholomune_257, Liandry_256, WhereRU_255, NootNoot_252, Paradiddles_248, Liandry_7, PinkiePie_257, Navo_6, Navo_248, Squillium_259
- Track 5 : Angela_264, Angela_7
- Track 6 : Shuckle_8, Shuckle_261
- Track 7 : Riptide_265, Anedea_7, Anedea_272, Riptide_8
- Track 8 : Mildred21_7, Mildred21_270
- Track 9 : Warpy_261, Warpy_9
- Track 10 : MulchMansion_263, LilMartin_259, MulchMansion_7, LilMartin_7
- Track 11 : Evy_245, Evy_7, Targaryen_258, Targaryen_7
- Track 12 : Daubenski_252, Cadmus_262, Daubenski_8, Cadmus_7
- Track 13 : Bmoc_263, Bmoc_7
- Track 14 : MindFlayer_6, Gibbi_6, Karimac_7, Starbow_7, Battuta_7, Spilled_6, SaltySpittoon_7, Jollison_264, PumpkinSpice_7, PumpkinSpice_271, Starbow_264, MindFlayer_258, Quarant19_268, Rikishi_6, TomSawyer_272, JimJam_275, CeilingFan_272, Wipeout_259, KentuckyRacer_6, KentuckyRacer_274, Bordeaux_7, Wipeout_6, Karimac_265, Spelly_273, TomSawyer_7, CeilingFan_6, Gibbi_277, Bordeaux_264, Amabiko_7, Battuta_264, Birchlyn_264, Birchlyn_4, Spilled_274, Amabiko_271, SaltySpittoon_267, Jollison_7, Spelly_7, JimJam_7, Rikishi_276, Quarant19_7, IchabodCrane_259, IchabodCrane_6
- Track 15 : Yaboi_269, Yaboi_8, Genie2_8, Stanimal_8, Stanimal_263, Sollertia_8, Genie2_263, BoomerJR_8, BoomerJR_263, Sollertia_264
- Track 16 : StarPlatinum_6, StarPlatinum_276
- Track 17 : Wofford_265, Elmer_7, Wofford_7, Elmer_274
- Track 18 : Enygma_274, Enygma_6
- Track 19 : Mugiwara_278, Mugiwara_6
- Track 20 : LukeCage_269, LukeCage_6
- Track 21 : Tomas_7, Tomas_263

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

The start number called the most often in the published annotations is 6, it was called in 60 of the 134 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amabiko_271, Amabiko_7, Battuta_264, Battuta_7, Birchlyn_264, Birchlyn_4, BoomerJR_263, BoomerJR_8, Bordeaux_264, Bordeaux_7, CeilingFan_272, CeilingFan_6, Elmer_274, Elmer_7, Enygma_274, Enygma_6, Genie2_263, Genie2_8, Gibbi_277, Gibbi_6, IchabodCrane_259, IchabodCrane_6, JimJam_275, JimJam_7, Jollison_264, Jollison_7, Karimac_265, Karimac_7, KentuckyRacer_274, KentuckyRacer_6, LukeCage_269, LukeCage_6, MindFlayer_258, MindFlayer_6, Mugiwara_278, Mugiwara_6, PumpkinSpice_271, PumpkinSpice_7, Quarant19_268, Quarant19_7, Rikishi_276, Rikishi_6, SaltySpittoon_267, SaltySpittoon_7, Sollertia_264, Sollertia_8, Spelly_273, Spelly_7, Spilled_274, Spilled_6, Stanimal_263, Stanimal_8, StarPlatinum_276, StarPlatinum_6, Starbow_264, Starbow_7, TomSawyer_272, TomSawyer_7, Tomas_263, Tomas_7, Wipeout_259, Wipeout_6, Wofford_265, Wofford_7, Yaboi_269, Yaboi_8,

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

- Anedea_272, Anedea_7, Bmoc_263, Bmoc_7, Riptide_265, Riptide_8,

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

- Angela_264, Angela_7, Bartholomune_257, Bartholomune_7, BlueOtter_255, BlueOtter_7, Braelyn_252, Braelyn_7, Cadmus_262, Cadmus_7, Cross_255, Cross_7, Cursive_259, Cursive_5, Daubenski_252, Daubenski_8, EGole_261, EGole_7, Evy_245, Evy_7, HangryHippo_255, HangryHippo_7, Jay2Jay_264, Jay2Jay_9, Larnav_257, Larnav_7, Leo04_258, Leo04_7, Liandry_256, Liandry_7, LilMartin_259, LilMartin_7, Lululemon_253, Lululemon_6, Marsus_275, Marsus_7, Mildred21_270, Mildred21_7, MulchMansion_263, MulchMansion_7, Navo_248, Navo_6, NootNoot_252, NootNoot_7, PacManQ_253, PacManQ_6, Paradiddles_248, Paradiddles_7, Peebs_254, Peebs_7, Pepperwood_257, Pepperwood_8, Persimmon_257, Persimmon_6, PinkiePie_257, PinkiePie_7, Samisti12_258, Samisti12_7, Scheme_261, Scheme_8, Shuckle_261, Shuckle_8, Squillium_259, Squillium_7, Sushi23_258, Sushi23_8, Targaryen_258, Targaryen_7, Teutsch_254, Teutsch_7, Tribute_253, Tribute_7, Warpy_261, Warpy_9, Watermoore_254, Watermoore_7, WhereRU_255, WhereRU_6,

Summary by start number:

Start 2:

- Found in 8 of 150 (5.3%) of genes in pham
- Manual Annotations of this start: 4 of 134
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Jay2Jay_264 (BE1), Jay2Jay_9 (BE1), Warpy_261 (BE1), Warpy_9 (BE1),

Start 3:

- Found in 56 of 150 (37.3%) of genes in pham

- Manual Annotations of this start: 52 of 134
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bartholomune_257 (BE1), Bartholomune_7 (BE1), BlueOtter_255 (BE1), BlueOtter_7 (BE1), Braelyn_252 (BE1), Braelyn_7 (BE1), Cross_255 (BE1), Cross_7 (BE1), Cursive_259 (BE1), Cursive_5 (BE1), EGole_261 (BE1), EGole_7 (BE1), HangryHippo_255 (BE1), HangryHippo_7 (BE1), Larnav_257 (BE1), Larnav_7 (BE1), Leo04_258 (BE1), Leo04_7 (BE1), Liandry_256 (BE1), Liandry_7 (BE1), Lululemon_253 (BE1), Lululemon_6 (BE1), Navo_248 (BE1), Navo_6 (BE1), NootNoot_252 (BE1), NootNoot_7 (BE1), PacManQ_253 (BE1), PacManQ_6 (BE1), Paradiddles_248 (BE1), Paradiddles_7 (BE1), Peebs_254 (BE1), Peebs_7 (BE1), Pepperwood_257 (BE1), Pepperwood_8 (BE1), Persimmon_257 (BE1), Persimmon_6 (BE1), PinkiePie_257 (BE1), PinkiePie_7 (BE1), Samisti12_258 (BE1), Samisti12_7 (BE1), Scheme_261 (BE1), Scheme_8 (BE1), Shuckle_261 (BE1), Shuckle_8 (BE1), Squillium_259 (BE1), Squillium_7 (BE1), Sushi23_258 (BE1), Sushi23_8 (BE1), Teutsch_254 (BE1), Teutsch_7 (BE1), Tribute_253 (BE1), Tribute_7 (BE1), Watermoore_254 (BE1), Watermoore_7 (BE1), WhereRU_255 (BE1), WhereRU_6 (BE1),

Start 4:

- Found in 24 of 150 (16.0%) of genes in pham
- Manual Annotations of this start: 16 of 134
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Anedea_272 (BE1), Anedea_7 (BE1), Angela_264 (BE1), Angela_7 (BE1), Bmoc_263 (BE1), Bmoc_7 (BE1), Evy_245 (BE1), Evy_7 (BE1), LilMartin_259 (BE1), LilMartin_7 (BE1), Marsus_275 (BE1), Marsus_7 (BE1), Mildred21_270 (BE1), Mildred21_7 (BE1), MulchMansion_263 (BE1), MulchMansion_7 (BE1), Riptide_265 (BE1), Riptide_8 (BE1), Targaryen_258 (BE1), Targaryen_7 (BE1),

Start 5:

- Found in 4 of 150 (2.7%) of genes in pham
- Manual Annotations of this start: 2 of 134
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cadmus_262 (BE1), Cadmus_7 (BE1), Daubenski_252 (BE1), Daubenski_8 (BE1),

Start 6:

- Found in 72 of 150 (48.0%) of genes in pham
- Manual Annotations of this start: 60 of 134
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Amabiko_271 (BE2), Amabiko_7 (BE2), Battuta_264 (BE2), Battuta_7 (BE2), Birchlyn_264 (BE2), Birchlyn_4 (BE2), BoomerJR_263 (BE2), BoomerJR_8 (BE2), Bordeaux_264 (BE2), Bordeaux_7 (BE2), CeilingFan_272 (BE2), CeilingFan_6 (BE2), Elmer_274 (BE2), Elmer_7 (BE2), Enygma_274 (BE2), Enygma_6 (BE2), Genie2_263 (BE2), Genie2_8 (BE2), Gibbi_277 (BE2), Gibbi_6 (BE2), IchabodCrane_259 (BE2), IchabodCrane_6 (BE2), JimJam_275 (BE2), JimJam_7 (BE2), Jollison_264 (BE2), Jollison_7 (BE2), Karimac_265 (BE2), Karimac_7 (BE2), KentuckyRacer_274 (BE2), KentuckyRacer_6 (BE2), LukeCage_269 (BE2), LukeCage_6 (BE2), MindFlayer_258 (BE2), MindFlayer_6 (BE2), Mugiwara_278 (BE2), Mugiwara_6 (BE2), PumpkinSpice_271 (BE2), PumpkinSpice_7 (BE2), Quarant19_268 (BE2), Quarant19_7 (BE2), Rikishi_276 (BE2), Rikishi_6 (BE2), SaltySpittoon_267 (BE2), SaltySpittoon_7 (BE2), Sollertia_264 (BE2), Sollertia_8 (BE2), Spelly_273 (BE2), Spelly_7 (BE2),

Spilled_274 (BE2), Spilled_6 (BE2), Stanimal_263 (BE2), Stanimal_8 (BE2), StarPlatinum_276 (BE2), StarPlatinum_6 (BE2), Starbow_264 (BE2), Starbow_7 (BE2), TomSawyer_272 (BE2), TomSawyer_7 (BE2), Tomas_263 (BE2), Tomas_7 (BE2), Wipeout_259 (BE2), Wipeout_6 (BE2), Wofford_265 (BE2), Wofford_7 (BE2), Yaboi_269 (BE2), Yaboi_8 (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 4 times for cluster BE1.
- Start number 3 was manually annotated 52 times for cluster BE1.
- Start number 4 was manually annotated 16 times for cluster BE1.
- Start number 5 was manually annotated 2 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 6 was manually annotated 60 times for cluster BE2.

Gene Information:

Gene: Amabiko_7 Start: 4424, Stop: 3912, Start Num: 6

Candidate Starts for Amabiko_7:

(Start: 6 @4424 has 60 MA's), (8, 4379), (9, 4361), (16, 4235), (27, 4046), (29, 4022), (31, 3950), (32, 3947),

Gene: Amabiko_271 Start: 123250, Stop: 122738, Start Num: 6

Candidate Starts for Amabiko_271:

(Start: 6 @123250 has 60 MA's), (8, 123205), (9, 123187), (16, 123061), (27, 122872), (29, 122848), (31, 122776), (32, 122773),

Gene: Anedea_7 Start: 4666, Stop: 4148, Start Num: 4

Candidate Starts for Anedea_7:

(Start: 4 @4666 has 16 MA's), (Start: 6 @4657 has 60 MA's), (9, 4600), (11, 4552), (19, 4405), (25, 4339), (31, 4186), (32, 4183), (33, 4174), (34, 4168),

Gene: Anedea_272 Start: 127715, Stop: 127197, Start Num: 4

Candidate Starts for Anedea_272:

(Start: 4 @127715 has 16 MA's), (Start: 6 @127706 has 60 MA's), (9, 127649), (11, 127601), (19, 127454), (25, 127388), (31, 127235), (32, 127232), (33, 127223), (34, 127217),

Gene: Angela_264 Start: 127039, Stop: 126518, Start Num: 4

Candidate Starts for Angela_264:

(Start: 4 @127039 has 16 MA's), (7, 127027), (9, 126970), (11, 126922), (16, 126838), (17, 126811), (19, 126775), (32, 126553), (33, 126544),

Gene: Angela_7 Start: 4636, Stop: 4115, Start Num: 4

Candidate Starts for Angela_7:

(Start: 4 @4636 has 16 MA's), (7, 4624), (9, 4567), (11, 4519), (16, 4435), (17, 4408), (19, 4372), (32, 4150), (33, 4141),

Gene: Bartholomune_7 Start: 4222, Stop: 3704, Start Num: 3

Candidate Starts for Bartholomune_7:

(Start: 3 @4222 has 52 MA's), (7, 4210), (9, 4153), (17, 3997), (19, 3961), (25, 3895), (30, 3790), (31, 3742), (32, 3739), (33, 3730),

Gene: Bartholomune_257 Start: 125321, Stop: 124803, Start Num: 3

Candidate Starts for Bartholomune_257:

(Start: 3 @125321 has 52 MA's), (7, 125309), (9, 125252), (17, 125096), (19, 125060), (25, 124994), (30, 124889), (31, 124841), (32, 124838), (33, 124829),

Gene: Battuta_7 Start: 4424, Stop: 3912, Start Num: 6

Candidate Starts for Battuta_7:

(Start: 6 @4424 has 60 MA's), (8, 4379), (9, 4361), (16, 4235), (27, 4046), (29, 4022), (31, 3950), (32, 3947),

Gene: Battuta_264 Start: 122579, Stop: 122067, Start Num: 6

Candidate Starts for Battuta_264:

(Start: 6 @122579 has 60 MA's), (8, 122534), (9, 122516), (16, 122390), (27, 122201), (29, 122177), (31, 122105), (32, 122102),

Gene: Birchlyn_264 Start: 118368, Stop: 117856, Start Num: 6

Candidate Starts for Birchlyn_264:

(Start: 6 @118368 has 60 MA's), (8, 118323), (9, 118305), (16, 118179), (27, 117990), (29, 117966), (31, 117894), (32, 117891),

Gene: Birchlyn_4 Start: 2277, Stop: 1765, Start Num: 6

Candidate Starts for Birchlyn_4:

(Start: 6 @2277 has 60 MA's), (8, 2232), (9, 2214), (16, 2088), (27, 1899), (29, 1875), (31, 1803), (32, 1800),

Gene: BlueOtter_7 Start: 4574, Stop: 4056, Start Num: 3

Candidate Starts for BlueOtter_7:

(Start: 3 @4574 has 52 MA's), (7, 4562), (9, 4505), (15, 4379), (16, 4376), (18, 4343), (19, 4313), (22, 4259), (25, 4247), (30, 4142), (31, 4094), (32, 4091), (33, 4082),

Gene: BlueOtter_255 Start: 125661, Stop: 125143, Start Num: 3

Candidate Starts for BlueOtter_255:

(Start: 3 @125661 has 52 MA's), (7, 125649), (9, 125592), (15, 125466), (16, 125463), (18, 125430), (19, 125400), (22, 125346), (25, 125334), (30, 125229), (31, 125181), (32, 125178), (33, 125169),

Gene: Bmoc_263 Start: 126520, Stop: 126002, Start Num: 4

Candidate Starts for Bmoc_263:

(Start: 4 @126520 has 16 MA's), (Start: 6 @126511 has 60 MA's), (9, 126454), (11, 126406), (19, 126259), (20, 126226), (31, 126040), (32, 126037), (33, 126028),

Gene: Bmoc_7 Start: 4698, Stop: 4180, Start Num: 4

Candidate Starts for Bmoc_7:

(Start: 4 @4698 has 16 MA's), (Start: 6 @4689 has 60 MA's), (9, 4632), (11, 4584), (19, 4437), (20, 4404), (31, 4218), (32, 4215), (33, 4206),

Gene: BoomerJR_8 Start: 4398, Stop: 3886, Start Num: 6

Candidate Starts for BoomerJR_8:

(Start: 6 @4398 has 60 MA's), (8, 4353), (9, 4335), (13, 4266), (20, 4113), (23, 4089), (28, 4014),

Gene: BoomerJR_263 Start: 123186, Stop: 122674, Start Num: 6
Candidate Starts for BoomerJR_263:
(Start: 6 @123186 has 60 MA's), (8, 123141), (9, 123123), (13, 123054), (20, 122901), (23, 122877),
(28, 122802),

Gene: Bordeaux_7 Start: 4424, Stop: 3912, Start Num: 6
Candidate Starts for Bordeaux_7:
(Start: 6 @4424 has 60 MA's), (8, 4379), (9, 4361), (16, 4235), (27, 4046), (29, 4022), (31, 3950), (32,
3947),

Gene: Bordeaux_264 Start: 123162, Stop: 122650, Start Num: 6
Candidate Starts for Bordeaux_264:
(Start: 6 @123162 has 60 MA's), (8, 123117), (9, 123099), (16, 122973), (27, 122784), (29, 122760),
(31, 122688), (32, 122685),

Gene: Braelyn_7 Start: 4234, Stop: 3716, Start Num: 3
Candidate Starts for Braelyn_7:
(Start: 3 @4234 has 52 MA's), (7, 4222), (9, 4165), (17, 4009), (19, 3973), (25, 3907), (30, 3802), (31,
3754), (32, 3751), (33, 3742),

Gene: Braelyn_252 Start: 124644, Stop: 124126, Start Num: 3
Candidate Starts for Braelyn_252:
(Start: 3 @124644 has 52 MA's), (7, 124632), (9, 124575), (17, 124419), (19, 124383), (25, 124317),
(30, 124212), (31, 124164), (32, 124161), (33, 124152),

Gene: Cadmus_262 Start: 127079, Stop: 126564, Start Num: 5
Candidate Starts for Cadmus_262:
(Start: 5 @127079 has 2 MA's), (7, 127073), (9, 127013), (12, 126962), (18, 126851), (19, 126821),
(25, 126755), (26, 126740), (31, 126602), (32, 126599), (33, 126590),

Gene: Cadmus_7 Start: 4598, Stop: 4083, Start Num: 5
Candidate Starts for Cadmus_7:
(Start: 5 @4598 has 2 MA's), (7, 4592), (9, 4532), (12, 4481), (18, 4370), (19, 4340), (25, 4274), (26,
4259), (31, 4121), (32, 4118), (33, 4109),

Gene: CeilingFan_272 Start: 124642, Stop: 124130, Start Num: 6
Candidate Starts for CeilingFan_272:
(Start: 6 @124642 has 60 MA's), (8, 124597), (9, 124579), (16, 124453), (27, 124264), (29, 124240),
(31, 124168), (32, 124165),

Gene: CeilingFan_6 Start: 4035, Stop: 3523, Start Num: 6
Candidate Starts for CeilingFan_6:
(Start: 6 @4035 has 60 MA's), (8, 3990), (9, 3972), (16, 3846), (27, 3657), (29, 3633), (31, 3561), (32,
3558),

Gene: Cross_7 Start: 4574, Stop: 4056, Start Num: 3
Candidate Starts for Cross_7:
(Start: 3 @4574 has 52 MA's), (7, 4562), (9, 4505), (15, 4379), (16, 4376), (18, 4343), (19, 4313), (22,
4259), (25, 4247), (30, 4142), (31, 4094), (32, 4091), (33, 4082),

Gene: Cross_255 Start: 126306, Stop: 125788, Start Num: 3
Candidate Starts for Cross_255:

(Start: 3 @126306 has 52 MA's), (7, 126294), (9, 126237), (15, 126111), (16, 126108), (18, 126075), (19, 126045), (22, 125991), (25, 125979), (30, 125874), (31, 125826), (32, 125823), (33, 125814),

Gene: Cursive_259 Start: 125401, Stop: 124883, Start Num: 3

Candidate Starts for Cursive_259:

(Start: 3 @125401 has 52 MA's), (7, 125389), (9, 125332), (15, 125206), (16, 125203), (18, 125170), (19, 125140), (22, 125086), (25, 125074), (30, 124969), (31, 124921), (32, 124918), (33, 124909),

Gene: Cursive_5 Start: 3392, Stop: 2874, Start Num: 3

Candidate Starts for Cursive_5:

(Start: 3 @3392 has 52 MA's), (7, 3380), (9, 3323), (15, 3197), (16, 3194), (18, 3161), (19, 3131), (22, 3077), (25, 3065), (30, 2960), (31, 2912), (32, 2909), (33, 2900),

Gene: Daubenski_252 Start: 126972, Stop: 126457, Start Num: 5

Candidate Starts for Daubenski_252:

(Start: 5 @126972 has 2 MA's), (7, 126966), (9, 126906), (12, 126855), (18, 126744), (19, 126714), (25, 126648), (26, 126633), (31, 126495), (32, 126492), (33, 126483),

Gene: Daubenski_8 Start: 4596, Stop: 4081, Start Num: 5

Candidate Starts for Daubenski_8:

(Start: 5 @4596 has 2 MA's), (7, 4590), (9, 4530), (12, 4479), (18, 4368), (19, 4338), (25, 4272), (26, 4257), (31, 4119), (32, 4116), (33, 4107),

Gene: EGole_7 Start: 4994, Stop: 4476, Start Num: 3

Candidate Starts for EGole_7:

(Start: 3 @4994 has 52 MA's), (7, 4982), (9, 4925), (15, 4799), (16, 4796), (18, 4763), (19, 4733), (22, 4679), (25, 4667), (30, 4562), (31, 4514), (32, 4511), (33, 4502),

Gene: EGole_261 Start: 129306, Stop: 128788, Start Num: 3

Candidate Starts for EGole_261:

(Start: 3 @129306 has 52 MA's), (7, 129294), (9, 129237), (15, 129111), (16, 129108), (18, 129075), (19, 129045), (22, 128991), (25, 128979), (30, 128874), (31, 128826), (32, 128823), (33, 128814),

Gene: Elmer_7 Start: 4303, Stop: 3791, Start Num: 6

Candidate Starts for Elmer_7:

(Start: 6 @4303 has 60 MA's), (8, 4258), (9, 4240), (13, 4171), (20, 4018), (23, 3994), (27, 3925), (29, 3901), (31, 3829), (32, 3826),

Gene: Elmer_274 Start: 126671, Stop: 126159, Start Num: 6

Candidate Starts for Elmer_274:

(Start: 6 @126671 has 60 MA's), (8, 126626), (9, 126608), (13, 126539), (20, 126386), (23, 126362), (27, 126293), (29, 126269), (31, 126197), (32, 126194),

Gene: Enygma_274 Start: 126406, Stop: 125894, Start Num: 6

Candidate Starts for Enygma_274:

(Start: 6 @126406 has 60 MA's), (8, 126361), (9, 126343), (13, 126274), (16, 126217), (21, 126106), (23, 126097), (30, 125980),

Gene: Enygma_6 Start: 3982, Stop: 3470, Start Num: 6

Candidate Starts for Enygma_6:

(Start: 6 @3982 has 60 MA's), (8, 3937), (9, 3919), (13, 3850), (16, 3793), (21, 3682), (23, 3673), (30, 3556),

Gene: Evy_245 Start: 126422, Stop: 125901, Start Num: 4

Candidate Starts for Evy_245:

(Start: 2 @126479 has 4 MA's), (Start: 4 @126422 has 16 MA's), (7, 126410), (9, 126353), (11, 126305), (16, 126221), (17, 126194), (25, 126092), (30, 125987), (31, 125939), (32, 125936), (33, 125927),

Gene: Evy_7 Start: 4693, Stop: 4172, Start Num: 4

Candidate Starts for Evy_7:

(Start: 2 @4750 has 4 MA's), (Start: 4 @4693 has 16 MA's), (7, 4681), (9, 4624), (11, 4576), (16, 4492), (17, 4465), (25, 4363), (30, 4258), (31, 4210), (32, 4207), (33, 4198),

Gene: Genie2_8 Start: 4398, Stop: 3886, Start Num: 6

Candidate Starts for Genie2_8:

(Start: 6 @4398 has 60 MA's), (8, 4353), (9, 4335), (13, 4266), (20, 4113), (23, 4089), (28, 4014),

Gene: Genie2_263 Start: 123299, Stop: 122787, Start Num: 6

Candidate Starts for Genie2_263:

(Start: 6 @123299 has 60 MA's), (8, 123254), (9, 123236), (13, 123167), (20, 123014), (23, 122990), (28, 122915),

Gene: Gibbi_6 Start: 4035, Stop: 3523, Start Num: 6

Candidate Starts for Gibbi_6:

(Start: 6 @4035 has 60 MA's), (8, 3990), (9, 3972), (16, 3846), (27, 3657), (29, 3633), (31, 3561), (32, 3558),

Gene: Gibbi_277 Start: 124135, Stop: 123623, Start Num: 6

Candidate Starts for Gibbi_277:

(Start: 6 @124135 has 60 MA's), (8, 124090), (9, 124072), (16, 123946), (27, 123757), (29, 123733), (31, 123661), (32, 123658),

Gene: HangryHippo_7 Start: 4574, Stop: 4056, Start Num: 3

Candidate Starts for HangryHippo_7:

(Start: 3 @4574 has 52 MA's), (7, 4562), (9, 4505), (15, 4379), (16, 4376), (18, 4343), (19, 4313), (22, 4259), (25, 4247), (30, 4142), (31, 4094), (32, 4091), (33, 4082),

Gene: HangryHippo_255 Start: 125661, Stop: 125143, Start Num: 3

Candidate Starts for HangryHippo_255:

(Start: 3 @125661 has 52 MA's), (7, 125649), (9, 125592), (15, 125466), (16, 125463), (18, 125430), (19, 125400), (22, 125346), (25, 125334), (30, 125229), (31, 125181), (32, 125178), (33, 125169),

Gene: IchabodCrane_259 Start: 122575, Stop: 122063, Start Num: 6

Candidate Starts for IchabodCrane_259:

(Start: 6 @122575 has 60 MA's), (8, 122530), (9, 122512), (16, 122386), (27, 122197), (29, 122173), (31, 122101), (32, 122098),

Gene: IchabodCrane_6 Start: 4032, Stop: 3520, Start Num: 6

Candidate Starts for IchabodCrane_6:

(Start: 6 @4032 has 60 MA's), (8, 3987), (9, 3969), (16, 3843), (27, 3654), (29, 3630), (31, 3558), (32, 3555),

Gene: Jay2Jay_9 Start: 4454, Stop: 3876, Start Num: 2

Candidate Starts for Jay2Jay_9:

(Start: 2 @4454 has 4 MA's), (Start: 4 @4397 has 16 MA's), (7, 4385), (9, 4328), (11, 4280), (16, 4196), (17, 4169), (25, 4067), (30, 3962), (31, 3914), (32, 3911), (33, 3902),

Gene: Jay2Jay_264 Start: 126547, Stop: 125969, Start Num: 2

Candidate Starts for Jay2Jay_264:

(Start: 2 @126547 has 4 MA's), (Start: 4 @126490 has 16 MA's), (7, 126478), (9, 126421), (11, 126373), (16, 126289), (17, 126262), (25, 126160), (30, 126055), (31, 126007), (32, 126004), (33, 125995),

Gene: JimJam_275 Start: 125959, Stop: 125447, Start Num: 6

Candidate Starts for JimJam_275:

(Start: 6 @125959 has 60 MA's), (8, 125914), (9, 125896), (16, 125770), (27, 125581), (29, 125557), (31, 125485), (32, 125482),

Gene: JimJam_7 Start: 4423, Stop: 3911, Start Num: 6

Candidate Starts for JimJam_7:

(Start: 6 @4423 has 60 MA's), (8, 4378), (9, 4360), (16, 4234), (27, 4045), (29, 4021), (31, 3949), (32, 3946),

Gene: Jollison_264 Start: 123099, Stop: 122587, Start Num: 6

Candidate Starts for Jollison_264:

(Start: 6 @123099 has 60 MA's), (8, 123054), (9, 123036), (16, 122910), (27, 122721), (29, 122697), (31, 122625), (32, 122622),

Gene: Jollison_7 Start: 4424, Stop: 3912, Start Num: 6

Candidate Starts for Jollison_7:

(Start: 6 @4424 has 60 MA's), (8, 4379), (9, 4361), (16, 4235), (27, 4046), (29, 4022), (31, 3950), (32, 3947),

Gene: Karimac_7 Start: 4426, Stop: 3914, Start Num: 6

Candidate Starts for Karimac_7:

(Start: 6 @4426 has 60 MA's), (8, 4381), (9, 4363), (16, 4237), (27, 4048), (29, 4024), (31, 3952), (32, 3949),

Gene: Karimac_265 Start: 123745, Stop: 123233, Start Num: 6

Candidate Starts for Karimac_265:

(Start: 6 @123745 has 60 MA's), (8, 123700), (9, 123682), (16, 123556), (27, 123367), (29, 123343), (31, 123271), (32, 123268),

Gene: KentuckyRacer_6 Start: 4036, Stop: 3524, Start Num: 6

Candidate Starts for KentuckyRacer_6:

(Start: 6 @4036 has 60 MA's), (8, 3991), (9, 3973), (16, 3847), (27, 3658), (29, 3634), (31, 3562), (32, 3559),

Gene: KentuckyRacer_274 Start: 125487, Stop: 124975, Start Num: 6

Candidate Starts for KentuckyRacer_274:

(Start: 6 @125487 has 60 MA's), (8, 125442), (9, 125424), (16, 125298), (27, 125109), (29, 125085), (31, 125013), (32, 125010),

Gene: Larnav_7 Start: 4574, Stop: 4056, Start Num: 3

Candidate Starts for Larnav_7:

(Start: 3 @4574 has 52 MA's), (7, 4562), (9, 4505), (15, 4379), (16, 4376), (18, 4343), (19, 4313), (22, 4259), (25, 4247), (30, 4142), (31, 4094), (32, 4091), (33, 4082),

Gene: Larnav_257 Start: 126579, Stop: 126061, Start Num: 3

Candidate Starts for Larnav_257:

(Start: 3 @126579 has 52 MA's), (7, 126567), (9, 126510), (15, 126384), (16, 126381), (18, 126348), (19, 126318), (22, 126264), (25, 126252), (30, 126147), (31, 126099), (32, 126096), (33, 126087),

Gene: Leo04_258 Start: 126691, Stop: 126173, Start Num: 3

Candidate Starts for Leo04_258:

(Start: 3 @126691 has 52 MA's), (7, 126679), (9, 126622), (15, 126496), (16, 126493), (18, 126460), (19, 126430), (22, 126376), (25, 126364), (30, 126259), (31, 126211), (32, 126208), (33, 126199),

Gene: Leo04_7 Start: 4573, Stop: 4055, Start Num: 3

Candidate Starts for Leo04_7:

(Start: 3 @4573 has 52 MA's), (7, 4561), (9, 4504), (15, 4378), (16, 4375), (18, 4342), (19, 4312), (22, 4258), (25, 4246), (30, 4141), (31, 4093), (32, 4090), (33, 4081),

Gene: Liandry_256 Start: 125743, Stop: 125225, Start Num: 3

Candidate Starts for Liandry_256:

(Start: 3 @125743 has 52 MA's), (7, 125731), (9, 125674), (17, 125518), (19, 125482), (25, 125416), (30, 125311), (31, 125263), (32, 125260), (33, 125251),

Gene: Liandry_7 Start: 4222, Stop: 3704, Start Num: 3

Candidate Starts for Liandry_7:

(Start: 3 @4222 has 52 MA's), (7, 4210), (9, 4153), (17, 3997), (19, 3961), (25, 3895), (30, 3790), (31, 3742), (32, 3739), (33, 3730),

Gene: LilMartin_259 Start: 125954, Stop: 125433, Start Num: 4

Candidate Starts for LilMartin_259:

(Start: 4 @125954 has 16 MA's), (7, 125942), (9, 125885), (11, 125837), (16, 125753), (17, 125726), (25, 125624), (31, 125471), (32, 125468), (33, 125459),

Gene: LilMartin_7 Start: 4610, Stop: 4089, Start Num: 4

Candidate Starts for LilMartin_7:

(Start: 4 @4610 has 16 MA's), (7, 4598), (9, 4541), (11, 4493), (16, 4409), (17, 4382), (25, 4280), (31, 4127), (32, 4124), (33, 4115),

Gene: LukeCage_269 Start: 124930, Stop: 124418, Start Num: 6

Candidate Starts for LukeCage_269:

(Start: 6 @124930 has 60 MA's), (8, 124885), (9, 124867), (10, 124861), (13, 124798), (14, 124795), (23, 124621), (24, 124615), (27, 124552), (29, 124528), (31, 124456), (32, 124453),

Gene: LukeCage_6 Start: 4026, Stop: 3514, Start Num: 6

Candidate Starts for LukeCage_6:

(Start: 6 @4026 has 60 MA's), (8, 3981), (9, 3963), (10, 3957), (13, 3894), (14, 3891), (23, 3717), (24, 3711), (27, 3648), (29, 3624), (31, 3552), (32, 3549),

Gene: Lululemon_253 Start: 124846, Stop: 124328, Start Num: 3

Candidate Starts for Lululemon_253:

(Start: 3 @124846 has 52 MA's), (7, 124834), (9, 124777), (15, 124651), (16, 124648), (18, 124615), (19, 124585), (22, 124531), (25, 124519), (30, 124414), (31, 124366), (32, 124363), (33, 124354),

Gene: Lululemon_6 Start: 3954, Stop: 3436, Start Num: 3

Candidate Starts for Lululemon_6:

(Start: 3 @3954 has 52 MA's), (7, 3942), (9, 3885), (15, 3759), (16, 3756), (18, 3723), (19, 3693), (22, 3639), (25, 3627), (30, 3522), (31, 3474), (32, 3471), (33, 3462),

Gene: Marsus_275 Start: 128320, Stop: 127799, Start Num: 4

Candidate Starts for Marsus_275:

(Start: 4 @128320 has 16 MA's), (7, 128308), (9, 128251), (11, 128203), (16, 128119), (17, 128092), (18, 128086), (19, 128056), (30, 127885), (32, 127834), (33, 127825),

Gene: Marsus_7 Start: 4616, Stop: 4095, Start Num: 4

Candidate Starts for Marsus_7:

(Start: 4 @4616 has 16 MA's), (7, 4604), (9, 4547), (11, 4499), (16, 4415), (17, 4388), (18, 4382), (19, 4352), (30, 4181), (32, 4130), (33, 4121),

Gene: Mildred21_7 Start: 4196, Stop: 3675, Start Num: 4

Candidate Starts for Mildred21_7:

(Start: 4 @4196 has 16 MA's), (7, 4184), (9, 4127), (11, 4079), (17, 3968), (25, 3866), (31, 3713), (32, 3710), (33, 3701),

Gene: Mildred21_270 Start: 125354, Stop: 124833, Start Num: 4

Candidate Starts for Mildred21_270:

(Start: 4 @125354 has 16 MA's), (7, 125342), (9, 125285), (11, 125237), (17, 125126), (25, 125024), (31, 124871), (32, 124868), (33, 124859),

Gene: MindFlayer_6 Start: 4034, Stop: 3522, Start Num: 6

Candidate Starts for MindFlayer_6:

(Start: 6 @4034 has 60 MA's), (8, 3989), (9, 3971), (16, 3845), (27, 3656), (29, 3632), (31, 3560), (32, 3557),

Gene: MindFlayer_258 Start: 122094, Stop: 121582, Start Num: 6

Candidate Starts for MindFlayer_258:

(Start: 6 @122094 has 60 MA's), (8, 122049), (9, 122031), (16, 121905), (27, 121716), (29, 121692), (31, 121620), (32, 121617),

Gene: Mugiwara_278 Start: 125399, Stop: 124887, Start Num: 6

Candidate Starts for Mugiwara_278:

(Start: 6 @125399 has 60 MA's), (8, 125354), (9, 125336), (14, 125264), (23, 125090), (29, 124997), (31, 124925), (32, 124922),

Gene: Mugiwara_6 Start: 4014, Stop: 3502, Start Num: 6

Candidate Starts for Mugiwara_6:

(Start: 6 @4014 has 60 MA's), (8, 3969), (9, 3951), (14, 3879), (23, 3705), (29, 3612), (31, 3540), (32, 3537),

Gene: MulchMansion_263 Start: 127588, Stop: 127067, Start Num: 4

Candidate Starts for MulchMansion_263:

(Start: 4 @127588 has 16 MA's), (7, 127576), (9, 127519), (11, 127471), (16, 127387), (17, 127360), (25, 127258), (31, 127105), (32, 127102), (33, 127093),

Gene: MulchMansion_7 Start: 4610, Stop: 4089, Start Num: 4

Candidate Starts for MulchMansion_7:

(Start: 4 @4610 has 16 MA's), (7, 4598), (9, 4541), (11, 4493), (16, 4409), (17, 4382), (25, 4280), (31, 4127), (32, 4124), (33, 4115),

Gene: Navo_6 Start: 4020, Stop: 3502, Start Num: 3

Candidate Starts for Navo_6:

(Start: 3 @4020 has 52 MA's), (7, 4008), (9, 3951), (17, 3795), (19, 3759), (25, 3693), (30, 3588), (31, 3540), (32, 3537), (33, 3528),

Gene: Navo_248 Start: 123645, Stop: 123127, Start Num: 3

Candidate Starts for Navo_248:

(Start: 3 @123645 has 52 MA's), (7, 123633), (9, 123576), (17, 123420), (19, 123384), (25, 123318), (30, 123213), (31, 123165), (32, 123162), (33, 123153),

Gene: NootNoot_7 Start: 4232, Stop: 3714, Start Num: 3

Candidate Starts for NootNoot_7:

(Start: 3 @4232 has 52 MA's), (7, 4220), (9, 4163), (17, 4007), (19, 3971), (25, 3905), (30, 3800), (31, 3752), (32, 3749), (33, 3740),

Gene: NootNoot_252 Start: 124531, Stop: 124013, Start Num: 3

Candidate Starts for NootNoot_252:

(Start: 3 @124531 has 52 MA's), (7, 124519), (9, 124462), (17, 124306), (19, 124270), (25, 124204), (30, 124099), (31, 124051), (32, 124048), (33, 124039),

Gene: PacManQ_253 Start: 124846, Stop: 124328, Start Num: 3

Candidate Starts for PacManQ_253:

(Start: 3 @124846 has 52 MA's), (7, 124834), (9, 124777), (15, 124651), (16, 124648), (18, 124615), (19, 124585), (22, 124531), (25, 124519), (30, 124414), (31, 124366), (32, 124363), (33, 124354),

Gene: PacManQ_6 Start: 3954, Stop: 3436, Start Num: 3

Candidate Starts for PacManQ_6:

(Start: 3 @3954 has 52 MA's), (7, 3942), (9, 3885), (15, 3759), (16, 3756), (18, 3723), (19, 3693), (22, 3639), (25, 3627), (30, 3522), (31, 3474), (32, 3471), (33, 3462),

Gene: Paradiddles_7 Start: 4222, Stop: 3704, Start Num: 3

Candidate Starts for Paradiddles_7:

(Start: 3 @4222 has 52 MA's), (7, 4210), (9, 4153), (17, 3997), (19, 3961), (25, 3895), (30, 3790), (31, 3742), (32, 3739), (33, 3730),

Gene: Paradiddles_248 Start: 126930, Stop: 126412, Start Num: 3

Candidate Starts for Paradiddles_248:

(Start: 3 @126930 has 52 MA's), (7, 126918), (9, 126861), (17, 126705), (19, 126669), (25, 126603), (30, 126498), (31, 126450), (32, 126447), (33, 126438),

Gene: Peebs_254 Start: 126548, Stop: 126030, Start Num: 3

Candidate Starts for Peebs_254:

(Start: 3 @126548 has 52 MA's), (7, 126536), (9, 126479), (15, 126353), (16, 126350), (18, 126317), (19, 126287), (22, 126233), (25, 126221), (30, 126116), (31, 126068), (32, 126065), (33, 126056),

Gene: Peebs_7 Start: 4573, Stop: 4055, Start Num: 3

Candidate Starts for Peebs_7:

(Start: 3 @4573 has 52 MA's), (7, 4561), (9, 4504), (15, 4378), (16, 4375), (18, 4342), (19, 4312), (22, 4258), (25, 4246), (30, 4141), (31, 4093), (32, 4090), (33, 4081),

Gene: Pepperwood_257 Start: 126513, Stop: 125995, Start Num: 3

Candidate Starts for Pepperwood_257:

(Start: 3 @126513 has 52 MA's), (7, 126501), (9, 126444), (15, 126318), (16, 126315), (18, 126282), (19, 126252), (22, 126198), (25, 126186), (30, 126081), (31, 126033), (32, 126030), (33, 126021),

Gene: Pepperwood_8 Start: 4728, Stop: 4210, Start Num: 3

Candidate Starts for Pepperwood_8:

(Start: 3 @4728 has 52 MA's), (7, 4716), (9, 4659), (15, 4533), (16, 4530), (18, 4497), (19, 4467), (22, 4413), (25, 4401), (30, 4296), (31, 4248), (32, 4245), (33, 4236),

Gene: Persimmon_257 Start: 124831, Stop: 124313, Start Num: 3

Candidate Starts for Persimmon_257:

(Start: 3 @124831 has 52 MA's), (7, 124819), (9, 124762), (17, 124606), (19, 124570), (25, 124504), (30, 124399), (31, 124351), (32, 124348), (33, 124339),

Gene: Persimmon_6 Start: 4020, Stop: 3502, Start Num: 3

Candidate Starts for Persimmon_6:

(Start: 3 @4020 has 52 MA's), (7, 4008), (9, 3951), (17, 3795), (19, 3759), (25, 3693), (30, 3588), (31, 3540), (32, 3537), (33, 3528),

Gene: PinkiePie_7 Start: 4222, Stop: 3704, Start Num: 3

Candidate Starts for PinkiePie_7:

(Start: 3 @4222 has 52 MA's), (7, 4210), (9, 4153), (17, 3997), (19, 3961), (25, 3895), (30, 3790), (31, 3742), (32, 3739), (33, 3730),

Gene: PinkiePie_257 Start: 125743, Stop: 125225, Start Num: 3

Candidate Starts for PinkiePie_257:

(Start: 3 @125743 has 52 MA's), (7, 125731), (9, 125674), (17, 125518), (19, 125482), (25, 125416), (30, 125311), (31, 125263), (32, 125260), (33, 125251),

Gene: PumpkinSpice_7 Start: 4424, Stop: 3912, Start Num: 6

Candidate Starts for PumpkinSpice_7:

(Start: 6 @4424 has 60 MA's), (8, 4379), (9, 4361), (16, 4235), (27, 4046), (29, 4022), (31, 3950), (32, 3947),

Gene: PumpkinSpice_271 Start: 124316, Stop: 123804, Start Num: 6

Candidate Starts for PumpkinSpice_271:

(Start: 6 @124316 has 60 MA's), (8, 124271), (9, 124253), (16, 124127), (27, 123938), (29, 123914), (31, 123842), (32, 123839),

Gene: Quaran19_268 Start: 123606, Stop: 123094, Start Num: 6

Candidate Starts for Quaran19_268:

(Start: 6 @123606 has 60 MA's), (8, 123561), (9, 123543), (16, 123417), (27, 123228), (29, 123204), (31, 123132), (32, 123129),

Gene: Quaran19_7 Start: 4424, Stop: 3912, Start Num: 6

Candidate Starts for Quaran19_7:

(Start: 6 @4424 has 60 MA's), (8, 4379), (9, 4361), (16, 4235), (27, 4046), (29, 4022), (31, 3950), (32, 3947),

Gene: Rikishi_6 Start: 4034, Stop: 3522, Start Num: 6

Candidate Starts for Rikishi_6:

(Start: 6 @4034 has 60 MA's), (8, 3989), (9, 3971), (16, 3845), (27, 3656), (29, 3632), (31, 3560), (32, 3557),

Gene: Rikishi_276 Start: 124107, Stop: 123595, Start Num: 6

Candidate Starts for Rikishi_276:

(Start: 6 @124107 has 60 MA's), (8, 124062), (9, 124044), (16, 123918), (27, 123729), (29, 123705), (31, 123633), (32, 123630),

Gene: Riptide_265 Start: 126122, Stop: 125604, Start Num: 4

Candidate Starts for Riptide_265:

(Start: 4 @126122 has 16 MA's), (Start: 6 @126113 has 60 MA's), (9, 126056), (11, 126008), (19, 125861), (25, 125795), (31, 125642), (32, 125639), (33, 125630), (34, 125624),

Gene: Riptide_8 Start: 4670, Stop: 4152, Start Num: 4

Candidate Starts for Riptide_8:

(Start: 4 @4670 has 16 MA's), (Start: 6 @4661 has 60 MA's), (9, 4604), (11, 4556), (19, 4409), (25, 4343), (31, 4190), (32, 4187), (33, 4178), (34, 4172),

Gene: SaltySpittoon_7 Start: 4424, Stop: 3912, Start Num: 6

Candidate Starts for SaltySpittoon_7:

(Start: 6 @4424 has 60 MA's), (8, 4379), (9, 4361), (16, 4235), (27, 4046), (29, 4022), (31, 3950), (32, 3947),

Gene: SaltySpittoon_267 Start: 122688, Stop: 122176, Start Num: 6

Candidate Starts for SaltySpittoon_267:

(Start: 6 @122688 has 60 MA's), (8, 122643), (9, 122625), (16, 122499), (27, 122310), (29, 122286), (31, 122214), (32, 122211),

Gene: Samisti12_258 Start: 127617, Stop: 127099, Start Num: 3

Candidate Starts for Samisti12_258:

(Start: 3 @127617 has 52 MA's), (7, 127605), (9, 127548), (15, 127422), (16, 127419), (18, 127386), (19, 127356), (22, 127302), (25, 127290), (30, 127185), (31, 127137), (32, 127134), (33, 127125),

Gene: Samisti12_7 Start: 4573, Stop: 4055, Start Num: 3

Candidate Starts for Samisti12_7:

(Start: 3 @4573 has 52 MA's), (7, 4561), (9, 4504), (15, 4378), (16, 4375), (18, 4342), (19, 4312), (22, 4258), (25, 4246), (30, 4141), (31, 4093), (32, 4090), (33, 4081),

Gene: Scheme_8 Start: 4728, Stop: 4210, Start Num: 3

Candidate Starts for Scheme_8:

(Start: 3 @4728 has 52 MA's), (7, 4716), (9, 4659), (15, 4533), (16, 4530), (18, 4497), (19, 4467), (22, 4413), (25, 4401), (30, 4296), (31, 4248), (32, 4245), (33, 4236),

Gene: Scheme_261 Start: 127923, Stop: 127405, Start Num: 3

Candidate Starts for Scheme_261:

(Start: 3 @127923 has 52 MA's), (7, 127911), (9, 127854), (15, 127728), (16, 127725), (18, 127692), (19, 127662), (22, 127608), (25, 127596), (30, 127491), (31, 127443), (32, 127440), (33, 127431),

Gene: Shuckle_8 Start: 4604, Stop: 4086, Start Num: 3

Candidate Starts for Shuckle_8:

(Start: 3 @4604 has 52 MA's), (7, 4592), (9, 4535), (18, 4373), (19, 4343), (25, 4277), (30, 4172), (31, 4124), (32, 4121), (33, 4112),

Gene: Shuckle_261 Start: 127237, Stop: 126719, Start Num: 3

Candidate Starts for Shuckle_261:

(Start: 3 @127237 has 52 MA's), (7, 127225), (9, 127168), (18, 127006), (19, 126976), (25, 126910), (30, 126805), (31, 126757), (32, 126754), (33, 126745),

Gene: Sollertia_8 Start: 4398, Stop: 3886, Start Num: 6

Candidate Starts for Sollertia_8:

(Start: 6 @4398 has 60 MA's), (8, 4353), (9, 4335), (13, 4266), (20, 4113), (23, 4089), (28, 4014),

Gene: Sollertia_264 Start: 123288, Stop: 122776, Start Num: 6

Candidate Starts for Sollertia_264:

(Start: 6 @123288 has 60 MA's), (8, 123243), (9, 123225), (13, 123156), (20, 123003), (23, 122979), (28, 122904),

Gene: Spelly_273 Start: 123228, Stop: 122716, Start Num: 6

Candidate Starts for Spelly_273:

(Start: 6 @123228 has 60 MA's), (8, 123183), (9, 123165), (16, 123039), (27, 122850), (29, 122826), (31, 122754), (32, 122751),

Gene: Spelly_7 Start: 4424, Stop: 3912, Start Num: 6

Candidate Starts for Spelly_7:

(Start: 6 @4424 has 60 MA's), (8, 4379), (9, 4361), (16, 4235), (27, 4046), (29, 4022), (31, 3950), (32, 3947),

Gene: Spilled_6 Start: 4034, Stop: 3522, Start Num: 6

Candidate Starts for Spilled_6:

(Start: 6 @4034 has 60 MA's), (8, 3989), (9, 3971), (16, 3845), (27, 3656), (29, 3632), (31, 3560), (32, 3557),

Gene: Spilled_274 Start: 124503, Stop: 123991, Start Num: 6

Candidate Starts for Spilled_274:

(Start: 6 @124503 has 60 MA's), (8, 124458), (9, 124440), (16, 124314), (27, 124125), (29, 124101), (31, 124029), (32, 124026),

Gene: Squillium_7 Start: 4222, Stop: 3704, Start Num: 3

Candidate Starts for Squillium_7:

(Start: 3 @4222 has 52 MA's), (7, 4210), (9, 4153), (17, 3997), (19, 3961), (25, 3895), (30, 3790), (31, 3742), (32, 3739), (33, 3730),

Gene: Squillium_259 Start: 125746, Stop: 125228, Start Num: 3

Candidate Starts for Squillium_259:

(Start: 3 @125746 has 52 MA's), (7, 125734), (9, 125677), (17, 125521), (19, 125485), (25, 125419), (30, 125314), (31, 125266), (32, 125263), (33, 125254),

Gene: Stanimal_8 Start: 4398, Stop: 3886, Start Num: 6

Candidate Starts for Stanimal_8:

(Start: 6 @4398 has 60 MA's), (8, 4353), (9, 4335), (13, 4266), (20, 4113), (23, 4089), (28, 4014),

Gene: Stanimal_263 Start: 123672, Stop: 123160, Start Num: 6

Candidate Starts for Stanimal_263:

(Start: 6 @123672 has 60 MA's), (8, 123627), (9, 123609), (13, 123540), (20, 123387), (23, 123363), (28, 123288),

Gene: StarPlatinum_6 Start: 4168, Stop: 3656, Start Num: 6

Candidate Starts for StarPlatinum_6:

(Start: 6 @4168 has 60 MA's), (9, 4105), (13, 4036), (23, 3859), (29, 3766), (31, 3694), (32, 3691),

Gene: StarPlatinum_276 Start: 125855, Stop: 125343, Start Num: 6

Candidate Starts for StarPlatinum_276:

(Start: 6 @125855 has 60 MA's), (9, 125792), (13, 125723), (23, 125546), (29, 125453), (31, 125381), (32, 125378),

Gene: Starbow_7 Start: 4424, Stop: 3912, Start Num: 6

Candidate Starts for Starbow_7:

(Start: 6 @4424 has 60 MA's), (8, 4379), (9, 4361), (16, 4235), (27, 4046), (29, 4022), (31, 3950), (32, 3947),

Gene: Starbow_264 Start: 123272, Stop: 122760, Start Num: 6

Candidate Starts for Starbow_264:

(Start: 6 @123272 has 60 MA's), (8, 123227), (9, 123209), (16, 123083), (27, 122894), (29, 122870), (31, 122798), (32, 122795),

Gene: Sushi23_258 Start: 127417, Stop: 126899, Start Num: 3

Candidate Starts for Sushi23_258:

(Start: 3 @127417 has 52 MA's), (7, 127405), (9, 127348), (15, 127222), (16, 127219), (18, 127186), (19, 127156), (22, 127102), (25, 127090), (30, 126985), (31, 126937), (32, 126934), (33, 126925),

Gene: Sushi23_8 Start: 4574, Stop: 4056, Start Num: 3

Candidate Starts for Sushi23_8:

(Start: 3 @4574 has 52 MA's), (7, 4562), (9, 4505), (15, 4379), (16, 4376), (18, 4343), (19, 4313), (22, 4259), (25, 4247), (30, 4142), (31, 4094), (32, 4091), (33, 4082),

Gene: Targaryen_258 Start: 128369, Stop: 127848, Start Num: 4

Candidate Starts for Targaryen_258:

(Start: 2 @128426 has 4 MA's), (Start: 4 @128369 has 16 MA's), (7, 128357), (9, 128300), (11, 128252), (16, 128168), (17, 128141), (25, 128039), (30, 127934), (31, 127886), (32, 127883), (33, 127874),

Gene: Targaryen_7 Start: 4693, Stop: 4172, Start Num: 4

Candidate Starts for Targaryen_7:

(Start: 2 @4750 has 4 MA's), (Start: 4 @4693 has 16 MA's), (7, 4681), (9, 4624), (11, 4576), (16, 4492), (17, 4465), (25, 4363), (30, 4258), (31, 4210), (32, 4207), (33, 4198),

Gene: Teutsch_7 Start: 4575, Stop: 4057, Start Num: 3

Candidate Starts for Teutsch_7:

(Start: 3 @4575 has 52 MA's), (7, 4563), (9, 4506), (15, 4380), (16, 4377), (18, 4344), (19, 4314), (22, 4260), (25, 4248), (30, 4143), (31, 4095), (32, 4092), (33, 4083),

Gene: Teutsch_254 Start: 126784, Stop: 126266, Start Num: 3

Candidate Starts for Teutsch_254:

(Start: 3 @126784 has 52 MA's), (7, 126772), (9, 126715), (15, 126589), (16, 126586), (18, 126553), (19, 126523), (22, 126469), (25, 126457), (30, 126352), (31, 126304), (32, 126301), (33, 126292),

Gene: TomSawyer_272 Start: 125797, Stop: 125285, Start Num: 6

Candidate Starts for TomSawyer_272:

(Start: 6 @125797 has 60 MA's), (8, 125752), (9, 125734), (16, 125608), (27, 125419), (29, 125395), (31, 125323), (32, 125320),

Gene: TomSawyer_7 Start: 4018, Stop: 3506, Start Num: 6

Candidate Starts for TomSawyer_7:

(Start: 6 @4018 has 60 MA's), (8, 3973), (9, 3955), (16, 3829), (27, 3640), (29, 3616), (31, 3544), (32, 3541),

Gene: Tomas_7 Start: 4430, Stop: 3921, Start Num: 6

Candidate Starts for Tomas_7:

(1, 4520), (Start: 6 @4430 has 60 MA's), (8, 4385), (9, 4367), (11, 4319), (12, 4316), (18, 4211), (27, 4055), (28, 4049), (32, 3956),

Gene: Tomas_263 Start: 126137, Stop: 125628, Start Num: 6

Candidate Starts for Tomas_263:

(1, 126227), (Start: 6 @126137 has 60 MA's), (8, 126092), (9, 126074), (11, 126026), (12, 126023), (18, 125918), (27, 125762), (28, 125756), (32, 125663),

Gene: Tribute_7 Start: 4574, Stop: 4056, Start Num: 3

Candidate Starts for Tribute_7:

(Start: 3 @4574 has 52 MA's), (7, 4562), (9, 4505), (15, 4379), (16, 4376), (18, 4343), (19, 4313), (22, 4259), (25, 4247), (30, 4142), (31, 4094), (32, 4091), (33, 4082),

Gene: Tribute_253 Start: 127118, Stop: 126600, Start Num: 3

Candidate Starts for Tribute_253:

(Start: 3 @127118 has 52 MA's), (7, 127106), (9, 127049), (15, 126923), (16, 126920), (18, 126887), (19, 126857), (22, 126803), (25, 126791), (30, 126686), (31, 126638), (32, 126635), (33, 126626),

Gene: Warpy_261 Start: 126013, Stop: 125435, Start Num: 2

Candidate Starts for Warpy_261:

(Start: 2 @126013 has 4 MA's), (Start: 4 @125956 has 16 MA's), (7, 125944), (9, 125887), (11, 125839), (17, 125728), (25, 125626), (30, 125521), (31, 125473), (32, 125470), (33, 125461),

Gene: Warpy_9 Start: 4475, Stop: 3897, Start Num: 2

Candidate Starts for Warpy_9:

(Start: 2 @4475 has 4 MA's), (Start: 4 @4418 has 16 MA's), (7, 4406), (9, 4349), (11, 4301), (17, 4190), (25, 4088), (30, 3983), (31, 3935), (32, 3932), (33, 3923),

Gene: Watermoore_7 Start: 4575, Stop: 4057, Start Num: 3

Candidate Starts for Watermoore_7:

(Start: 3 @4575 has 52 MA's), (7, 4563), (9, 4506), (15, 4380), (16, 4377), (18, 4344), (19, 4314), (22, 4260), (25, 4248), (30, 4143), (31, 4095), (32, 4092), (33, 4083),

Gene: Watermoore_254 Start: 127171, Stop: 126653, Start Num: 3

Candidate Starts for Watermoore_254:

(Start: 3 @127171 has 52 MA's), (7, 127159), (9, 127102), (15, 126976), (16, 126973), (18, 126940), (19, 126910), (22, 126856), (25, 126844), (30, 126739), (31, 126691), (32, 126688), (33, 126679),

Gene: WhereRU_6 Start: 4020, Stop: 3502, Start Num: 3

Candidate Starts for WhereRU_6:

(Start: 3 @4020 has 52 MA's), (7, 4008), (9, 3951), (17, 3795), (19, 3759), (25, 3693), (30, 3588), (31, 3540), (32, 3537), (33, 3528),

Gene: WhereRU_255 Start: 125165, Stop: 124647, Start Num: 3

Candidate Starts for WhereRU_255:

(Start: 3 @125165 has 52 MA's), (7, 125153), (9, 125096), (17, 124940), (19, 124904), (25, 124838), (30, 124733), (31, 124685), (32, 124682), (33, 124673),

Gene: Wipeout_259 Start: 124770, Stop: 124258, Start Num: 6

Candidate Starts for Wipeout_259:

(Start: 6 @124770 has 60 MA's), (8, 124725), (9, 124707), (16, 124581), (27, 124392), (29, 124368), (31, 124296), (32, 124293),

Gene: Wipeout_6 Start: 4039, Stop: 3527, Start Num: 6

Candidate Starts for Wipeout_6:

(Start: 6 @4039 has 60 MA's), (8, 3994), (9, 3976), (16, 3850), (27, 3661), (29, 3637), (31, 3565), (32, 3562),

Gene: Wofford_265 Start: 126101, Stop: 125589, Start Num: 6

Candidate Starts for Wofford_265:

(Start: 6 @126101 has 60 MA's), (8, 126056), (9, 126038), (13, 125969), (20, 125816), (23, 125792), (27, 125723), (29, 125699), (31, 125627), (32, 125624),

Gene: Wofford_7 Start: 4308, Stop: 3796, Start Num: 6

Candidate Starts for Wofford_7:

(Start: 6 @4308 has 60 MA's), (8, 4263), (9, 4245), (13, 4176), (20, 4023), (23, 3999), (27, 3930), (29, 3906), (31, 3834), (32, 3831),

Gene: Yaboi_269 Start: 123216, Stop: 122704, Start Num: 6

Candidate Starts for Yaboi_269:

(Start: 6 @123216 has 60 MA's), (8, 123171), (9, 123153), (13, 123084), (20, 122931), (23, 122907), (28, 122832),

Gene: Yaboi_8 Start: 4398, Stop: 3886, Start Num: 6

Candidate Starts for Yaboi_8:

(Start: 6 @4398 has 60 MA's), (8, 4353), (9, 4335), (13, 4266), (20, 4113), (23, 4089), (28, 4014),