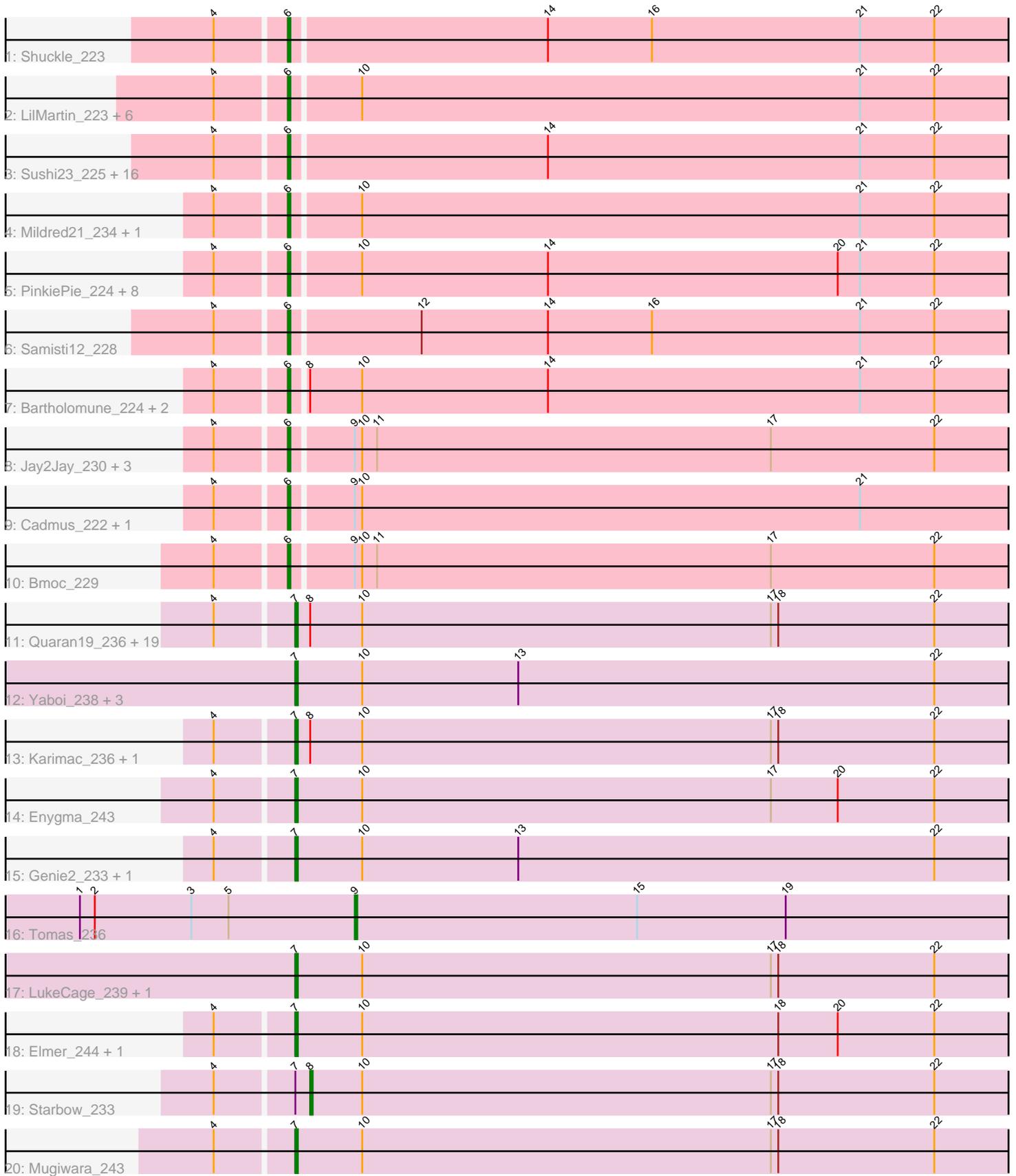# Pham 289236

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 289236 Report

This analysis was run 03/28/26 on database version 641.

Pham number 289236 has 83 members, 4 are drafts.

Phages represented in each track:
• Track 1 : Shuckle_223
• Track 2 : LilMartin_223, LilSaint_225, Angela_227, Marsus_226, Anedea_237, MulchMansion_227, Riptide_225
• Track 3 : Sushi23_225, PacManQ_221, Pepperwood_224, HangryHippo_222, Watermoore_223, Scheme_227, Tribute_220, Larnav_224, Coogler_221, Peebs_221, Teutsch_223, Cross_223, Leo04_224, EGole_228, Lululemon_221, Cursive_227, BlueOtter_222
• Track 4 : Mildred21_234, Paradiddles_216
• Track 5 : PinkiePie_224, FreddyDRoo_228, Squillium_227, Davielle_223, Braelyn_220, Eliot67_226, Liandry_224, WhereRU_223, NootNoot_221
• Track 6 : Samisti12_228
• Track 7 : Bartholomune_224, Persimmon_227, Navo_218
• Track 8 : Jay2Jay_230, Targaryen_224, Evy_214, Warpy_227
• Track 9 : Cadmus_222, Daubenski_218
• Track 10 : Bmoc_229
• Track 11 : Quaran19_236, Battuta_234, Birchlyn_235, PumpkinSpice_239, Jollison_233, Bordeaux_234, Spilled_243, CeilingFan_240, Gibbi_244, MindFlayer_229, SaltySpitoon_236, TomSawyer_240, JimJam_243, AcciDwight_244, Wipeout_226, KentuckyRacer_242, Amabiko_240, IchabodCrane_230, Spelly_241, Rikishi_237
• Track 12 : Yaboi_238, Stanimal_233, BoomerJR_233, AngryGiraffe_233
• Track 13 : Karimac_236, Brizzy_235
• Track 14 : Enygma_243
• Track 15 : Genie2_233, Sollertia_234
• Track 16 : Tomas_236
• Track 17 : LukeCage_239, StarPlatinum_243
• Track 18 : Elmer_244, Wofford_236
• Track 19 : Starbow_233
• Track 20 : Mugiwara_243

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 45 of the 79 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Anedea_237, Angela_227, Bartholomune_224, BlueOtter_222, Bmoc_229, Braelyn_220, Cadmus_222, Coogler_221, Cross_223, Cursive_227, Daubenski_218, Davielle_223, EGole_228, Eliot67_226, Evy_214, FreddyDRoo_228, HangryHippo_222, Jay2Jay_230, Larnav_224, Leo04_224, Liandry_224, LilMartin_223, LilSaint_225, Lululemon_221, Marsus_226, Mildred21_234, MulchMansion_227, Navo_218, NootNoot_221, PacManQ_221, Paradiddles_216, Peebs_221, Pepperwood_224, Persimmon_227, PinkiePie_224, Riptide_225, Samisti12_228, Scheme_227, Shuckle_223, Squillium_227, Sushi23_225, Targaryen_224, Teutsch_223, Tribute_220, Warpy_227, Watermoore_223, WhereRU_223,

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

Genes that do not have the "Most Annotated" start:
• AcciDwight_244, Amabiko_240, AngryGiraffe_233, Battuta_234, Birchlyn_235, BoomerJR_233, Bordeaux_234, Brizzy_235, CeilingFan_240, Elmer_244, Enygma_243, Genie2_233, Gibbi_244, IchabodCrane_230, JimJam_243, Jollison_233, Karimac_236, KentuckyRacer_242, LukeCage_239, MindFlayer_229, Mugiwara_243, PumpkinSpice_239, Quaran19_236, Rikishi_237, SaltySpitoon_236, Sollertia_234, Spelly_241, Spilled_243, Stanimal_233, StarPlatinum_243, Starbow_233, TomSawyer_240, Tomas_236, Wipeout_226, Wofford_236, Yaboi_238,

Summary by start number:

Start 6:
• Found in 47 of 83 (56.6%) of genes in pham
• Manual Annotations of this start: 45 of 79
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Anedea_237 (BE1), Angela_227 (BE1), Bartholomune_224 (BE1), BlueOtter_222 (BE1), Bmoc_229 (BE1), Braelyn_220 (BE1), Cadmus_222 (BE1), Coogler_221 (BE1), Cross_223 (BE1), Cursive_227 (BE1), Daubenski_218 (BE1), Davielle_223 (BE1), EGole_228 (BE1), Eliot67_226 (BE1), Evy_214 (BE1), FreddyDRoo_228 (BE1), HangryHippo_222 (BE1), Jay2Jay_230 (BE1), Larnav_224 (BE1), Leo04_224 (BE1), Liandry_224 (BE1), LilMartin_223 (BE1), LilSaint_225 (BE1), Lululemon_221 (BE1), Marsus_226 (BE1), Mildred21_234 (BE1), MulchMansion_227 (BE1), Navo_218 (BE1), NootNoot_221 (BE1), PacManQ_221 (BE1), Paradiddles_216 (BE1), Peebs_221 (BE1), Pepperwood_224 (BE1), Persimmon_227 (BE1), PinkiePie_224 (BE1), Riptide_225 (BE1), Samisti12_228 (BE1), Scheme_227 (BE1), Shuckle_223 (BE1), Squillium_227 (BE1), Sushi23_225 (BE1), Targaryen_224 (BE1), Teutsch_223 (BE1), Tribute_220 (BE1), Warpy_227 (BE1), Watermoore_223 (BE1), WhereRU_223 (BE1),

Start 7:
• Found in 35 of 83 (42.2%) of genes in pham
• Manual Annotations of this start: 32 of 79
• Called 97.1% of time when present
• Phage (with cluster) where this start called: AcciDwight_244 (BE2), Amabiko_240 (BE2), AngryGiraffe_233 (BE2), Battuta_234 (BE2), Birchlyn_235 (BE2), BoomerJR_233 (BE2), Bordeaux_234 (BE2), Brizzy_235 (BE2), CeilingFan_240

(BE2), Elmer_244 (BE2), Enygma_243 (BE2), Genie2_233 (BE2), Gibbi_244 (BE2), IchabodCrane_230 (BE2), JimJam_243 (BE2), Jollison_233 (BE2), Karimac_236 (BE2), KentuckyRacer_242 (BE2), LukeCage_239 (BE2), MindFlayer_229 (BE2), Mugiwara_243 (BE2), PumpkinSpice_239 (BE2), Quaran19_236 (BE2), Rikishi_237 (BE2), SaltySpitoon_236 (BE2), Sollertia_234 (BE2), Spelly_241 (BE2), Spilled_243 (BE2), Stanimal_233 (BE2), StarPlatinum_243 (BE2), TomSawyer_240 (BE2), Wipeout_226 (BE2), Wofford_236 (BE2), Yaboi_238 (BE2),

Start 8:
• Found in 26 of 83 (31.3%) of genes in pham
• Manual Annotations of this start: 1 of 79
• Called 3.8% of time when present
• Phage (with cluster) where this start called: Starbow_233 (BE2),

Start 9:
• Found in 8 of 83 (9.6%) of genes in pham
• Manual Annotations of this start: 1 of 79
• Called 12.5% of time when present
• Phage (with cluster) where this start called: Tomas_236 (BE2),

Summary by clusters:

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

Info for manual annotations of cluster BE1:
•Start number 6 was manually annotated 45 times for cluster BE1.

Info for manual annotations of cluster BE2:
•Start number 7 was manually annotated 32 times for cluster BE2.
•Start number 8 was manually annotated 1 time for cluster BE2.
•Start number 9 was manually annotated 1 time for cluster BE2.

Gene Information:
Gene: AcciDwight_244 Start: 111573, Stop: 111881, Start Num: 7
Candidate Starts for AcciDwight_244:
(4, 111543), (Start: 7 @111573 has 32 MA's), (Start: 8 @111579 has 1 MA's), (10, 111600), (17, 111765), (18, 111768), (22, 111831),

Gene: Amabiko_240 Start: 111391, Stop: 111699, Start Num: 7
Candidate Starts for Amabiko_240:
(4, 111361), (Start: 7 @111391 has 32 MA's), (Start: 8 @111397 has 1 MA's), (10, 111418), (17, 111583), (18, 111586), (22, 111649),

Gene: Anedea_237 Start: 114868, Stop: 115173, Start Num: 6
Candidate Starts for Anedea_237:
(4, 114841), (Start: 6 @114868 has 45 MA's), (10, 114898), (21, 115099), (22, 115129),

Gene: Angela_227 Start: 113095, Stop: 113397, Start Num: 6
Candidate Starts for Angela_227:
(4, 113068), (Start: 6 @113095 has 45 MA's), (10, 113122), (21, 113323), (22, 113353),

Gene: AngryGiraffe_233 Start: 110874, Stop: 111179, Start Num: 7
Candidate Starts for AngryGiraffe_233:
(Start: 7 @110874 has 32 MA's), (10, 110901), (13, 110964), (22, 111132),

Gene: Bartholomune_224 Start: 112848, Stop: 113156, Start Num: 6
Candidate Starts for Bartholomune_224:
(4, 112821), (Start: 6 @112848 has 45 MA's), (Start: 8 @112854 has 1 MA's), (10, 112875), (14, 112950), (21, 113076), (22, 113106),

Gene: Battuta_234 Start: 110706, Stop: 111014, Start Num: 7
Candidate Starts for Battuta_234:
(4, 110676), (Start: 7 @110706 has 32 MA's), (Start: 8 @110712 has 1 MA's), (10, 110733), (17, 110898), (18, 110901), (22, 110964),

Gene: Birchlyn_235 Start: 108639, Stop: 108947, Start Num: 7
Candidate Starts for Birchlyn_235:
(4, 108609), (Start: 7 @108639 has 32 MA's), (Start: 8 @108645 has 1 MA's), (10, 108666), (17, 108831), (18, 108834), (22, 108897),

Gene: BlueOtter_222 Start: 112984, Stop: 113292, Start Num: 6
Candidate Starts for BlueOtter_222:
(4, 112957), (Start: 6 @112984 has 45 MA's), (14, 113086), (21, 113212), (22, 113242),

Gene: Bmoc_229 Start: 113536, Stop: 113847, Start Num: 6
Candidate Starts for Bmoc_229:
(4, 113509), (Start: 6 @113536 has 45 MA's), (Start: 9 @113560 has 1 MA's), (10, 113563), (11, 113569), (17, 113728), (22, 113794),

Gene: BoomerJR_233 Start: 111307, Stop: 111612, Start Num: 7
Candidate Starts for BoomerJR_233:
(Start: 7 @111307 has 32 MA's), (10, 111334), (13, 111397), (22, 111565),

Gene: Bordeaux_234 Start: 111289, Stop: 111597, Start Num: 7
Candidate Starts for Bordeaux_234:
(4, 111259), (Start: 7 @111289 has 32 MA's), (Start: 8 @111295 has 1 MA's), (10, 111316), (17, 111481), (18, 111484), (22, 111547),

Gene: Braelyn_220 Start: 112495, Stop: 112803, Start Num: 6
Candidate Starts for Braelyn_220:
(4, 112468), (Start: 6 @112495 has 45 MA's), (10, 112522), (14, 112597), (20, 112714), (21, 112723), (22, 112753),

Gene: Brizzy_235 Start: 111817, Stop: 112125, Start Num: 7
Candidate Starts for Brizzy_235:
(4, 111787), (Start: 7 @111817 has 32 MA's), (Start: 8 @111823 has 1 MA's), (10, 111844), (17, 112009), (18, 112012), (22, 112075),

Gene: Cadmus_222 Start: 114217, Stop: 114519, Start Num: 6
Candidate Starts for Cadmus_222:
(4, 114190), (Start: 6 @114217 has 45 MA's), (Start: 9 @114241 has 1 MA's), (10, 114244), (21, 114445),

Gene: CeilingFan_240 Start: 112084, Stop: 112392, Start Num: 7
Candidate Starts for CeilingFan_240:
(4, 112054), (Start: 7 @112084 has 32 MA's), (Start: 8 @112090 has 1 MA's), (10, 112111), (17, 112276), (18, 112279), (22, 112342),

Gene: Coogler_221 Start: 113409, Stop: 113717, Start Num: 6
Candidate Starts for Coogler_221:
(4, 113382), (Start: 6 @113409 has 45 MA's), (14, 113511), (21, 113637), (22, 113667),

Gene: Cross_223 Start: 113629, Stop: 113937, Start Num: 6
Candidate Starts for Cross_223:
(4, 113602), (Start: 6 @113629 has 45 MA's), (14, 113731), (21, 113857), (22, 113887),

Gene: Cursive_227 Start: 113736, Stop: 114044, Start Num: 6
Candidate Starts for Cursive_227:
(4, 113709), (Start: 6 @113736 has 45 MA's), (14, 113838), (21, 113964), (22, 113994),

Gene: Daubenski_218 Start: 114118, Stop: 114420, Start Num: 6
Candidate Starts for Daubenski_218:
(4, 114091), (Start: 6 @114118 has 45 MA's), (Start: 9 @114142 has 1 MA's), (10, 114145), (21, 114346),

Gene: Davielle_223 Start: 112893, Stop: 113201, Start Num: 6
Candidate Starts for Davielle_223:
(4, 112866), (Start: 6 @112893 has 45 MA's), (10, 112920), (14, 112995), (20, 113112), (21, 113121), (22, 113151),

Gene: EGole_228 Start: 115820, Stop: 116128, Start Num: 6
Candidate Starts for EGole_228:
(4, 115793), (Start: 6 @115820 has 45 MA's), (14, 115922), (21, 116048), (22, 116078),

Gene: Eliot67_226 Start: 112677, Stop: 112985, Start Num: 6
Candidate Starts for Eliot67_226:
(4, 112650), (Start: 6 @112677 has 45 MA's), (10, 112704), (14, 112779), (20, 112896), (21, 112905), (22, 112935),

Gene: Elmer_244 Start: 114882, Stop: 115190, Start Num: 7
Candidate Starts for Elmer_244:
(4, 114852), (Start: 7 @114882 has 32 MA's), (10, 114909), (18, 115077), (20, 115101), (22, 115140),

Gene: Enygma_243 Start: 114092, Stop: 114400, Start Num: 7
Candidate Starts for Enygma_243:
(4, 114062), (Start: 7 @114092 has 32 MA's), (10, 114119), (17, 114284), (20, 114311), (22, 114350),

Gene: Evy_214 Start: 113803, Stop: 114114, Start Num: 6
Candidate Starts for Evy_214:
(4, 113776), (Start: 6 @113803 has 45 MA's), (Start: 9 @113827 has 1 MA's), (10, 113830), (11, 113836), (17, 113995), (22, 114061),

Gene: FreddyDRoo_228 Start: 112677, Stop: 112985, Start Num: 6
Candidate Starts for FreddyDRoo_228:
(4, 112650), (Start: 6 @112677 has 45 MA's), (10, 112704), (14, 112779), (20, 112896), (21, 112905), (22, 112935),

Gene: Genie2_233 Start: 111432, Stop: 111740, Start Num: 7
Candidate Starts for Genie2_233:
(4, 111402), (Start: 7 @111432 has 32 MA's), (10, 111459), (13, 111522), (22, 111690),

Gene: Gibbi_244 Start: 111577, Stop: 111885, Start Num: 7
Candidate Starts for Gibbi_244:
(4, 111547), (Start: 7 @111577 has 32 MA's), (Start: 8 @111583 has 1 MA's), (10, 111604), (17, 111769), (18, 111772), (22, 111835),

Gene: HangryHippo_222 Start: 112984, Stop: 113292, Start Num: 6
Candidate Starts for HangryHippo_222:
(4, 112957), (Start: 6 @112984 has 45 MA's), (14, 113086), (21, 113212), (22, 113242),

Gene: IchabodCrane_230 Start: 111092, Stop: 111400, Start Num: 7
Candidate Starts for IchabodCrane_230:
(4, 111062), (Start: 7 @111092 has 32 MA's), (Start: 8 @111098 has 1 MA's), (10, 111119), (17, 111284), (18, 111287), (22, 111350),

Gene: Jay2Jay_230 Start: 113958, Stop: 114269, Start Num: 6
Candidate Starts for Jay2Jay_230:
(4, 113931), (Start: 6 @113958 has 45 MA's), (Start: 9 @113982 has 1 MA's), (10, 113985), (11, 113991), (17, 114150), (22, 114216),

Gene: JimJam_243 Start: 113013, Stop: 113321, Start Num: 7
Candidate Starts for JimJam_243:
(4, 112983), (Start: 7 @113013 has 32 MA's), (Start: 8 @113019 has 1 MA's), (10, 113040), (17, 113205), (18, 113208), (22, 113271),

Gene: Jollison_233 Start: 111223, Stop: 111531, Start Num: 7
Candidate Starts for Jollison_233:
(4, 111193), (Start: 7 @111223 has 32 MA's), (Start: 8 @111229 has 1 MA's), (10, 111250), (17, 111415), (18, 111418), (22, 111481),

Gene: Karimac_236 Start: 111408, Stop: 111716, Start Num: 7
Candidate Starts for Karimac_236:
(4, 111378), (Start: 7 @111408 has 32 MA's), (Start: 8 @111414 has 1 MA's), (10, 111435), (17, 111600), (18, 111603), (22, 111666),

Gene: KentuckyRacer_242 Start: 112928, Stop: 113236, Start Num: 7
Candidate Starts for KentuckyRacer_242:
(4, 112898), (Start: 7 @112928 has 32 MA's), (Start: 8 @112934 has 1 MA's), (10, 112955), (17, 113120), (18, 113123), (22, 113186),

Gene: Larnav_224 Start: 113902, Stop: 114210, Start Num: 6
Candidate Starts for Larnav_224:
(4, 113875), (Start: 6 @113902 has 45 MA's), (14, 114004), (21, 114130), (22, 114160),

Gene: Leo04_224 Start: 114010, Stop: 114318, Start Num: 6
Candidate Starts for Leo04_224:
(4, 113983), (Start: 6 @114010 has 45 MA's), (14, 114112), (21, 114238), (22, 114268),

Gene: Liandry_224 Start: 113384, Stop: 113692, Start Num: 6

Candidate Starts for Liandry_224:
(4, 113357), (Start: 6 @113384 has 45 MA's), (10, 113411), (14, 113486), (20, 113603), (21, 113612), (22, 113642),

Gene: LilMartin_223 Start: 112035, Stop: 112337, Start Num: 6
Candidate Starts for LilMartin_223:
(4, 112008), (Start: 6 @112035 has 45 MA's), (10, 112062), (21, 112263), (22, 112293),

Gene: LilSaint_225 Start: 113240, Stop: 113545, Start Num: 6
Candidate Starts for LilSaint_225:
(4, 113213), (Start: 6 @113240 has 45 MA's), (10, 113270), (21, 113471), (22, 113501),

Gene: LukeCage_239 Start: 113253, Stop: 113561, Start Num: 7
Candidate Starts for LukeCage_239:
(Start: 7 @113253 has 32 MA's), (10, 113280), (17, 113445), (18, 113448), (22, 113511),

Gene: Lululemon_221 Start: 112789, Stop: 113097, Start Num: 6
Candidate Starts for Lululemon_221:
(4, 112762), (Start: 6 @112789 has 45 MA's), (14, 112891), (21, 113017), (22, 113047),

Gene: Marsus_226 Start: 113700, Stop: 114002, Start Num: 6
Candidate Starts for Marsus_226:
(4, 113673), (Start: 6 @113700 has 45 MA's), (10, 113727), (21, 113928), (22, 113958),

Gene: Mildred21_234 Start: 112174, Stop: 112482, Start Num: 6
Candidate Starts for Mildred21_234:
(4, 112147), (Start: 6 @112174 has 45 MA's), (10, 112201), (21, 112402), (22, 112432),

Gene: MindFlayer_229 Start: 110608, Stop: 110916, Start Num: 7
Candidate Starts for MindFlayer_229:
(4, 110578), (Start: 7 @110608 has 32 MA's), (Start: 8 @110614 has 1 MA's), (10, 110635), (17, 110800), (18, 110803), (22, 110866),

Gene: Mugiwara_243 Start: 113791, Stop: 114099, Start Num: 7
Candidate Starts for Mugiwara_243:
(4, 113761), (Start: 7 @113791 has 32 MA's), (10, 113818), (17, 113983), (18, 113986), (22, 114049),

Gene: MulchMansion_227 Start: 113669, Stop: 113971, Start Num: 6
Candidate Starts for MulchMansion_227:
(4, 113642), (Start: 6 @113669 has 45 MA's), (10, 113696), (21, 113897), (22, 113927),

Gene: Navo_218 Start: 111699, Stop: 112007, Start Num: 6
Candidate Starts for Navo_218:
(4, 111672), (Start: 6 @111699 has 45 MA's), (Start: 8 @111705 has 1 MA's), (10, 111726), (14, 111801), (21, 111927), (22, 111957),

Gene: NootNoot_221 Start: 112229, Stop: 112537, Start Num: 6
Candidate Starts for NootNoot_221:
(4, 112202), (Start: 6 @112229 has 45 MA's), (10, 112256), (14, 112331), (20, 112448), (21, 112457), (22, 112487),

Gene: PacManQ_221 Start: 112789, Stop: 113097, Start Num: 6
Candidate Starts for PacManQ_221:

(4, 112762), (Start: 6 @112789 has 45 MA's), (14, 112891), (21, 113017), (22, 113047),

Gene: Paradiddles_216 Start: 114604, Stop: 114912, Start Num: 6
Candidate Starts for Paradiddles_216:
(4, 114577), (Start: 6 @114604 has 45 MA's), (10, 114631), (21, 114832), (22, 114862),

Gene: Peebs_221 Start: 113873, Stop: 114181, Start Num: 6
Candidate Starts for Peebs_221:
(4, 113846), (Start: 6 @113873 has 45 MA's), (14, 113975), (21, 114101), (22, 114131),

Gene: Pepperwood_224 Start: 113681, Stop: 113989, Start Num: 6
Candidate Starts for Pepperwood_224:
(4, 113654), (Start: 6 @113681 has 45 MA's), (14, 113783), (21, 113909), (22, 113939),

Gene: Persimmon_227 Start: 112717, Stop: 113025, Start Num: 6
Candidate Starts for Persimmon_227:
(4, 112690), (Start: 6 @112717 has 45 MA's), (Start: 8 @112723 has 1 MA's), (10, 112744), (14, 112819), (21, 112945), (22, 112975),

Gene: PinkiePie_224 Start: 113384, Stop: 113692, Start Num: 6
Candidate Starts for PinkiePie_224:
(4, 113357), (Start: 6 @113384 has 45 MA's), (10, 113411), (14, 113486), (20, 113603), (21, 113612), (22, 113642),

Gene: PumpkinSpice_239 Start: 111829, Stop: 112137, Start Num: 7
Candidate Starts for PumpkinSpice_239:
(4, 111799), (Start: 7 @111829 has 32 MA's), (Start: 8 @111835 has 1 MA's), (10, 111856), (17, 112021), (18, 112024), (22, 112087),

Gene: Quaran19_236 Start: 111270, Stop: 111578, Start Num: 7
Candidate Starts for Quaran19_236:
(4, 111240), (Start: 7 @111270 has 32 MA's), (Start: 8 @111276 has 1 MA's), (10, 111297), (17, 111462), (18, 111465), (22, 111528),

Gene: Rikishi_237 Start: 111551, Stop: 111859, Start Num: 7
Candidate Starts for Rikishi_237:
(4, 111521), (Start: 7 @111551 has 32 MA's), (Start: 8 @111557 has 1 MA's), (10, 111578), (17, 111743), (18, 111746), (22, 111809),

Gene: Riptide_225 Start: 112398, Stop: 112703, Start Num: 6
Candidate Starts for Riptide_225:
(4, 112371), (Start: 6 @112398 has 45 MA's), (10, 112428), (21, 112629), (22, 112659),

Gene: SaltySpitoon_236 Start: 110812, Stop: 111120, Start Num: 7
Candidate Starts for SaltySpitoon_236:
(4, 110782), (Start: 7 @110812 has 32 MA's), (Start: 8 @110818 has 1 MA's), (10, 110839), (17, 111004), (18, 111007), (22, 111070),

Gene: Samisti12_228 Start: 115275, Stop: 115583, Start Num: 6
Candidate Starts for Samisti12_228:
(4, 115248), (Start: 6 @115275 has 45 MA's), (12, 115326), (14, 115377), (16, 115419), (21, 115503), (22, 115533),

Gene: Scheme_227 Start: 114920, Stop: 115228, Start Num: 6
Candidate Starts for Scheme_227:
(4, 114893), (Start: 6 @114920 has 45 MA's), (14, 115022), (21, 115148), (22, 115178),

Gene: Shuckle_223 Start: 114233, Stop: 114541, Start Num: 6
Candidate Starts for Shuckle_223:
(4, 114206), (Start: 6 @114233 has 45 MA's), (14, 114335), (16, 114377), (21, 114461), (22, 114491),

Gene: Sollertia_234 Start: 111421, Stop: 111729, Start Num: 7
Candidate Starts for Sollertia_234:
(4, 111391), (Start: 7 @111421 has 32 MA's), (10, 111448), (13, 111511), (22, 111679),

Gene: Spelly_241 Start: 110741, Stop: 111049, Start Num: 7
Candidate Starts for Spelly_241:
(4, 110711), (Start: 7 @110741 has 32 MA's), (Start: 8 @110747 has 1 MA's), (10, 110768), (17, 110933), (18, 110936), (22, 110999),

Gene: Spilled_243 Start: 111945, Stop: 112253, Start Num: 7
Candidate Starts for Spilled_243:
(4, 111915), (Start: 7 @111945 has 32 MA's), (Start: 8 @111951 has 1 MA's), (10, 111972), (17, 112137), (18, 112140), (22, 112203),

Gene: Squillium_227 Start: 113386, Stop: 113694, Start Num: 6
Candidate Starts for Squillium_227:
(4, 113359), (Start: 6 @113386 has 45 MA's), (10, 113413), (14, 113488), (20, 113605), (21, 113614), (22, 113644),

Gene: Stanimal_233 Start: 111793, Stop: 112098, Start Num: 7
Candidate Starts for Stanimal_233:
(Start: 7 @111793 has 32 MA's), (10, 111820), (13, 111883), (22, 112051),

Gene: StarPlatinum_243 Start: 113753, Stop: 114061, Start Num: 7
Candidate Starts for StarPlatinum_243:
(Start: 7 @113753 has 32 MA's), (10, 113780), (17, 113945), (18, 113948), (22, 114011),

Gene: Starbow_233 Start: 110791, Stop: 111093, Start Num: 8
Candidate Starts for Starbow_233:
(4, 110755), (Start: 7 @110785 has 32 MA's), (Start: 8 @110791 has 1 MA's), (10, 110812), (17, 110977), (18, 110980), (22, 111043),

Gene: Sushi23_225 Start: 114739, Stop: 115047, Start Num: 6
Candidate Starts for Sushi23_225:
(4, 114712), (Start: 6 @114739 has 45 MA's), (14, 114841), (21, 114967), (22, 114997),

Gene: Targaryen_224 Start: 114911, Stop: 115222, Start Num: 6
Candidate Starts for Targaryen_224:
(4, 114884), (Start: 6 @114911 has 45 MA's), (Start: 9 @114935 has 1 MA's), (10, 114938), (11, 114944), (17, 115103), (22, 115169),

Gene: Teutsch_223 Start: 114104, Stop: 114412, Start Num: 6
Candidate Starts for Teutsch_223:
(4, 114077), (Start: 6 @114104 has 45 MA's), (14, 114206), (21, 114332), (22, 114362),

Gene: TomSawyer_240 Start: 113256, Stop: 113564, Start Num: 7
Candidate Starts for TomSawyer_240:
(4, 113226), (Start: 7 @113256 has 32 MA's), (Start: 8 @113262 has 1 MA's), (10, 113283), (17, 113448), (18, 113451), (22, 113514),

Gene: Tomas_236 Start: 115186, Stop: 115470, Start Num: 9
Candidate Starts for Tomas_236:
(1, 115075), (2, 115081), (3, 115120), (5, 115135), (Start: 9 @115186 has 1 MA's), (15, 115300), (19, 115360),

Gene: Tribute_220 Start: 114269, Stop: 114577, Start Num: 6
Candidate Starts for Tribute_220:
(4, 114242), (Start: 6 @114269 has 45 MA's), (14, 114371), (21, 114497), (22, 114527),

Gene: Warpy_227 Start: 113396, Stop: 113707, Start Num: 6
Candidate Starts for Warpy_227:
(4, 113369), (Start: 6 @113396 has 45 MA's), (Start: 9 @113420 has 1 MA's), (10, 113423), (11, 113429), (17, 113588), (22, 113654),

Gene: Watermoore_223 Start: 114627, Stop: 114935, Start Num: 6
Candidate Starts for Watermoore_223:
(4, 114600), (Start: 6 @114627 has 45 MA's), (14, 114729), (21, 114855), (22, 114885),

Gene: WhereRU_223 Start: 112878, Stop: 113186, Start Num: 6
Candidate Starts for WhereRU_223:
(4, 112851), (Start: 6 @112878 has 45 MA's), (10, 112905), (14, 112980), (20, 113097), (21, 113106), (22, 113136),

Gene: Wipeout_226 Start: 112208, Stop: 112516, Start Num: 7
Candidate Starts for Wipeout_226:
(4, 112178), (Start: 7 @112208 has 32 MA's), (Start: 8 @112214 has 1 MA's), (10, 112235), (17, 112400), (18, 112403), (22, 112466),

Gene: Wofford_236 Start: 114496, Stop: 114804, Start Num: 7
Candidate Starts for Wofford_236:
(4, 114466), (Start: 7 @114496 has 32 MA's), (10, 114523), (18, 114691), (20, 114715), (22, 114754),

Gene: Yaboi_238 Start: 111356, Stop: 111661, Start Num: 7
Candidate Starts for Yaboi_238:
(Start: 7 @111356 has 32 MA's), (10, 111383), (13, 111446), (22, 111614),