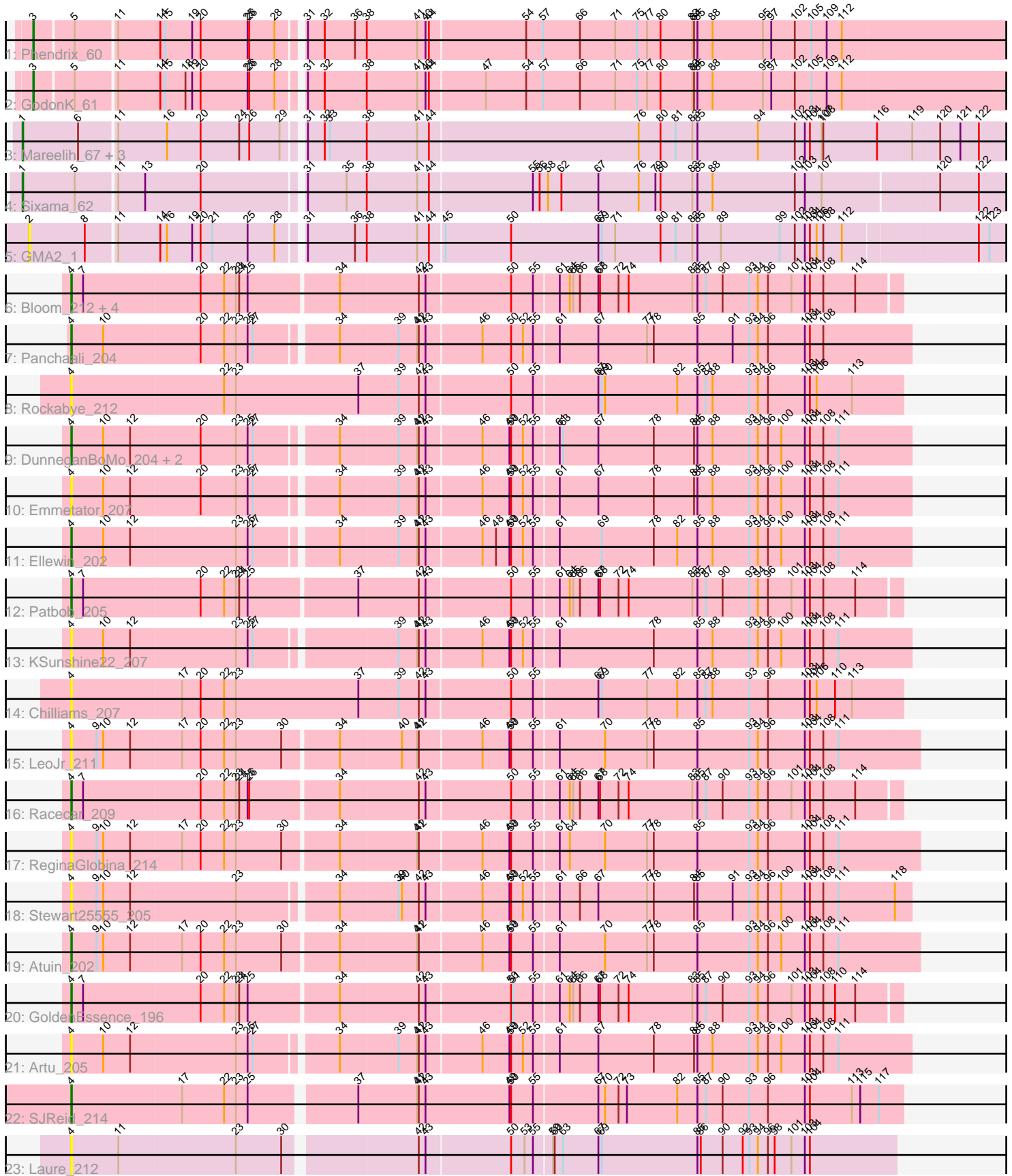


Pham 305198



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 305198 Report

This analysis was run 06/08/26 on database version 649.

Pham number 305198 has 32 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Phendrix\_60
- Track 2 : GodonK\_61
- Track 3 : Mareelih\_67, Boopy\_69, BlueNGold\_67, Forza\_69
- Track 4 : Sixama\_62
- Track 5 : GMA2\_1
- Track 6 : Bloom\_212, FloraSnap32\_206, FrostedClock\_211, Talia1610\_209, Mimi\_207
- Track 7 : Panchaali\_204
- Track 8 : Rockabye\_212
- Track 9 : DunneganBoMo\_204, WaddleDee\_199, BooTeria\_212
- Track 10 : Emmetator\_207
- Track 11 : Ellewin\_202
- Track 12 : Patbob\_205
- Track 13 : KSunshine22\_207
- Track 14 : Chilliams\_207
- Track 15 : LeoJr\_211
- Track 16 : Racecar\_209
- Track 17 : ReginaGlobina\_214
- Track 18 : Stewart25555\_205
- Track 19 : Atuin\_202
- Track 20 : GoldenEssence\_196
- Track 21 : Artu\_205
- Track 22 : SJReid\_214
- Track 23 : Laure\_212

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

The start number called the most often in the published annotations is 4, it was called in 11 of the 18 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Artu\_205, Atuin\_202, Bloom\_212, BooTeria\_212, Chilliams\_207, DunneganBoMo\_204, Ellewin\_202, Emmetator\_207, FloraSnap32\_206, FrostedClock\_211, GoldenEssence\_196, KSunshine22\_207, Laure\_212, LeoJr\_211,

Mimi\_207, Panchaali\_204, Patbob\_205, Racecar\_209, ReginaGlobina\_214, Rockabye\_212, SJReid\_214, Stewart25555\_205, Talia1610\_209, WaddleDee\_199,

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

- 

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

- BlueNGold\_67, Boopy\_69, Forza\_69, GMA2\_1, GodonK\_61, Mareelih\_67, Phendrix\_60, Sixama\_62,

### Summary by start number:

Start 1:

- Found in 5 of 32 ( 15.6% ) of genes in pham
- Manual Annotations of this start: 5 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueNGold\_67 (DS), Boopy\_69 (DS), Forza\_69 (DS), Mareelih\_67 (DS), Sixama\_62 (DS),

Start 2:

- Found in 1 of 32 ( 3.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA2\_1 (DS),

Start 3:

- Found in 2 of 32 ( 6.2% ) of genes in pham
- Manual Annotations of this start: 2 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GodonK\_61 (DK), Phendrix\_60 (DK),

Start 4:

- Found in 24 of 32 ( 75.0% ) of genes in pham
- Manual Annotations of this start: 11 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Artu\_205 (FC), Atuin\_202 (FC), Bloom\_212 (FC), BooTeria\_212 (FC), Chilliams\_207 (FC), DunneganBoMo\_204 (FC), Ellewin\_202 (FC), Emmetator\_207 (FC), FloraSnap32\_206 (FC), FrostedClock\_211 (FC), GoldenEssence\_196 (FC), KSunshine22\_207 (FC), Laure\_212 (UNK), LeoJr\_211 (FC), Mimi\_207 (FC), Panchaali\_204 (FC), Patbob\_205 (FC), Racecar\_209 (FC), ReginaGlobina\_214 (FC), Rockabye\_212 (FC), SJReid\_214 (FC), Stewart25555\_205 (FC), Talia1610\_209 (FC), WaddleDee\_199 (FC),

### Summary by clusters:

There are 4 clusters represented in this pham: FC, UNK, DS, DK,

Info for manual annotations of cluster DK:

- Start number 3 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DS:

- Start number 1 was manually annotated 5 times for cluster DS.

Info for manual annotations of cluster FC:

•Start number 4 was manually annotated 11 times for cluster FC.

### **Gene Information:**

Gene: Artu\_205 Start: 149723, Stop: 148269, Start Num: 4

Candidate Starts for Artu\_205:

(Start: 4 @149723 has 11 MA's), (10, 149666), (12, 149618), (23, 149432), (25, 149411), (27, 149402), (34, 149270), (39, 149168), (41, 149135), (42, 149132), (43, 149120), (46, 149024), (49, 148976), (50, 148973), (52, 148952), (55, 148934), (61, 148892), (67, 148826), (78, 148727), (84, 148655), (85, 148649), (88, 148622), (93, 148556), (94, 148541), (96, 148523), (100, 148499), (103, 148457), (104, 148448), (108, 148424), (111, 148397),

Gene: Atuin\_202 Start: 142914, Stop: 141436, Start Num: 4

Candidate Starts for Atuin\_202:

(Start: 4 @142914 has 11 MA's), (9, 142869), (10, 142857), (12, 142809), (17, 142719), (20, 142686), (22, 142644), (23, 142623), (30, 142542), (34, 142449), (41, 142314), (42, 142311), (46, 142203), (49, 142155), (50, 142152), (55, 142113), (61, 142071), (70, 141993), (77, 141918), (78, 141906), (85, 141828), (93, 141735), (94, 141720), (96, 141702), (100, 141678), (103, 141636), (104, 141627), (108, 141603), (111, 141576),

Gene: Bloom\_212 Start: 144896, Stop: 143451, Start Num: 4

Candidate Starts for Bloom\_212:

(Start: 4 @144896 has 11 MA's), (7, 144875), (20, 144668), (22, 144626), (23, 144605), (24, 144599), (25, 144584), (34, 144431), (42, 144293), (43, 144281), (50, 144134), (55, 144095), (61, 144053), (64, 144038), (65, 144032), (66, 144020), (67, 143987), (68, 143984), (72, 143951), (74, 143933), (83, 143819), (85, 143810), (87, 143795), (90, 143765), (93, 143717), (94, 143702), (96, 143684), (101, 143642), (103, 143618), (104, 143609), (108, 143585), (114, 143528),

Gene: BlueNGold\_67 Start: 25140, Stop: 26858, Start Num: 1

Candidate Starts for BlueNGold\_67:

(Start: 1 @25140 has 5 MA's), (6, 25239), (11, 25302), (16, 25389), (20, 25449), (24, 25518), (26, 25536), (29, 25590), (31, 25617), (32, 25647), (33, 25656), (38, 25722), (41, 25812), (44, 25833), (76, 26202), (80, 26241), (81, 26265), (83, 26295), (85, 26304), (94, 26412), (102, 26478), (103, 26496), (104, 26505), (107, 26526), (108, 26529), (116, 26625), (119, 26688), (120, 26733), (121, 26766), (122, 26799),

Gene: BooTeria\_212 Start: 149233, Stop: 147779, Start Num: 4

Candidate Starts for BooTeria\_212:

(Start: 4 @149233 has 11 MA's), (10, 149176), (12, 149128), (20, 149005), (23, 148942), (25, 148921), (27, 148912), (34, 148780), (39, 148678), (41, 148645), (42, 148642), (43, 148630), (46, 148534), (49, 148486), (50, 148483), (52, 148462), (55, 148444), (61, 148402), (63, 148396), (67, 148336), (78, 148237), (84, 148165), (85, 148159), (88, 148132), (93, 148066), (94, 148051), (96, 148033), (100, 148009), (103, 147967), (104, 147958), (108, 147934), (111, 147907),

Gene: Boopy\_69 Start: 25152, Stop: 26870, Start Num: 1

Candidate Starts for Boopy\_69:

(Start: 1 @25152 has 5 MA's), (6, 25251), (11, 25314), (16, 25401), (20, 25461), (24, 25530), (26, 25548), (29, 25602), (31, 25629), (32, 25659), (33, 25668), (38, 25734), (41, 25824), (44, 25845), (76, 26214), (80, 26253), (81, 26277), (83, 26307), (85, 26316), (94, 26424), (102, 26490), (103, 26508),

(104, 26517), (107, 26538), (108, 26541), (116, 26637), (119, 26700), (120, 26745), (121, 26778), (122, 26811),

Gene: Chilliams\_207 Start: 140757, Stop: 139294, Start Num: 4

Candidate Starts for Chilliams\_207:

(Start: 4 @140757 has 11 MA's), (17, 140562), (20, 140529), (22, 140487), (23, 140466), (37, 140247), (39, 140178), (42, 140142), (43, 140130), (50, 139983), (55, 139944), (67, 139836), (69, 139830), (77, 139749), (82, 139695), (85, 139659), (87, 139644), (88, 139632), (93, 139566), (96, 139533), (103, 139467), (104, 139458), (106, 139446), (110, 139413), (113, 139383),

Gene: DunneganBoMo\_204 Start: 148697, Stop: 147243, Start Num: 4

Candidate Starts for DunneganBoMo\_204:

(Start: 4 @148697 has 11 MA's), (10, 148640), (12, 148592), (20, 148469), (23, 148406), (25, 148385), (27, 148376), (34, 148244), (39, 148142), (41, 148109), (42, 148106), (43, 148094), (46, 147998), (49, 147950), (50, 147947), (52, 147926), (55, 147908), (61, 147866), (63, 147860), (67, 147800), (78, 147701), (84, 147629), (85, 147623), (88, 147596), (93, 147530), (94, 147515), (96, 147497), (100, 147473), (103, 147431), (104, 147422), (108, 147398), (111, 147371),

Gene: Ellewin\_202 Start: 147964, Stop: 146510, Start Num: 4

Candidate Starts for Ellewin\_202:

(Start: 4 @147964 has 11 MA's), (10, 147907), (12, 147859), (23, 147673), (25, 147652), (27, 147643), (34, 147511), (39, 147409), (41, 147376), (42, 147373), (43, 147361), (46, 147265), (48, 147241), (49, 147217), (50, 147214), (52, 147193), (55, 147175), (61, 147133), (69, 147061), (78, 146968), (82, 146926), (85, 146890), (88, 146863), (93, 146797), (94, 146782), (96, 146764), (100, 146740), (103, 146698), (104, 146689), (108, 146665), (111, 146638),

Gene: Emmetator\_207 Start: 148093, Stop: 146639, Start Num: 4

Candidate Starts for Emmetator\_207:

(Start: 4 @148093 has 11 MA's), (10, 148036), (12, 147988), (20, 147865), (23, 147802), (25, 147781), (27, 147772), (34, 147640), (39, 147538), (41, 147505), (42, 147502), (43, 147490), (46, 147394), (49, 147346), (50, 147343), (52, 147322), (55, 147304), (61, 147262), (67, 147196), (78, 147097), (84, 147025), (85, 147019), (88, 146992), (93, 146926), (94, 146911), (96, 146893), (100, 146869), (103, 146827), (104, 146818), (108, 146794), (111, 146767),

Gene: FloraSnap32\_206 Start: 143499, Stop: 142054, Start Num: 4

Candidate Starts for FloraSnap32\_206:

(Start: 4 @143499 has 11 MA's), (7, 143478), (20, 143271), (22, 143229), (23, 143208), (24, 143202), (25, 143187), (34, 143034), (42, 142896), (43, 142884), (50, 142737), (55, 142698), (61, 142656), (64, 142641), (65, 142635), (66, 142623), (67, 142590), (68, 142587), (72, 142554), (74, 142536), (83, 142422), (85, 142413), (87, 142398), (90, 142368), (93, 142320), (94, 142305), (96, 142287), (101, 142245), (103, 142221), (104, 142212), (108, 142188), (114, 142131),

Gene: Forza\_69 Start: 25068, Stop: 26786, Start Num: 1

Candidate Starts for Forza\_69:

(Start: 1 @25068 has 5 MA's), (6, 25167), (11, 25230), (16, 25317), (20, 25377), (24, 25446), (26, 25464), (29, 25518), (31, 25545), (32, 25575), (33, 25584), (38, 25650), (41, 25740), (44, 25761), (76, 26130), (80, 26169), (81, 26193), (83, 26223), (85, 26232), (94, 26340), (102, 26406), (103, 26424), (104, 26433), (107, 26454), (108, 26457), (116, 26553), (119, 26616), (120, 26661), (121, 26694), (122, 26727),

Gene: FrostedClock\_211 Start: 144816, Stop: 143371, Start Num: 4

Candidate Starts for FrostedClock\_211:

(Start: 4 @144816 has 11 MA's), (7, 144795), (20, 144588), (22, 144546), (23, 144525), (24, 144519), (25, 144504), (34, 144351), (42, 144213), (43, 144201), (50, 144054), (55, 144015), (61, 143973), (64, 143958), (65, 143952), (66, 143940), (67, 143907), (68, 143904), (72, 143871), (74, 143853), (83, 143739), (85, 143730), (87, 143715), (90, 143685), (93, 143637), (94, 143622), (96, 143604), (101, 143562), (103, 143538), (104, 143529), (108, 143505), (114, 143448),

Gene: GMA2\_1 Start: 138, Stop: 1817, Start Num: 2

Candidate Starts for GMA2\_1:

(2, 138), (8, 237), (11, 288), (14, 363), (16, 375), (19, 420), (20, 435), (21, 456), (25, 519), (28, 567), (31, 603), (36, 687), (38, 708), (41, 798), (44, 819), (45, 843), (50, 960), (67, 1116), (69, 1122), (71, 1146), (80, 1227), (81, 1251), (83, 1281), (85, 1290), (89, 1332), (99, 1437), (102, 1464), (103, 1482), (104, 1491), (106, 1503), (108, 1515), (112, 1548), (122, 1776), (123, 1791),

Gene: GodonK\_61 Start: 20550, Stop: 22244, Start Num: 3

Candidate Starts for GodonK\_61:

(Start: 3 @20550 has 2 MA's), (5, 20613), (11, 20682), (14, 20757), (15, 20766), (18, 20802), (19, 20814), (20, 20829), (25, 20913), (26, 20916), (28, 20961), (31, 20997), (32, 21027), (38, 21102), (41, 21192), (43, 21207), (44, 21213), (47, 21309), (54, 21381), (57, 21411), (66, 21477), (71, 21540), (75, 21579), (77, 21597), (80, 21621), (83, 21675), (84, 21678), (85, 21684), (88, 21711), (95, 21801), (97, 21816), (102, 21858), (105, 21888), (109, 21915), (112, 21942),

Gene: GoldenEssence\_196 Start: 138872, Stop: 137427, Start Num: 4

Candidate Starts for GoldenEssence\_196:

(Start: 4 @138872 has 11 MA's), (7, 138851), (20, 138644), (22, 138602), (23, 138581), (24, 138575), (25, 138560), (34, 138407), (42, 138269), (43, 138257), (50, 138110), (51, 138107), (55, 138071), (61, 138029), (64, 138014), (65, 138008), (66, 137996), (67, 137963), (68, 137960), (72, 137927), (74, 137909), (83, 137795), (85, 137786), (87, 137771), (90, 137741), (93, 137693), (94, 137678), (96, 137660), (101, 137618), (103, 137594), (104, 137585), (108, 137561), (110, 137540), (114, 137504),

Gene: KSunshine22\_207 Start: 147375, Stop: 145921, Start Num: 4

Candidate Starts for KSunshine22\_207:

(Start: 4 @147375 has 11 MA's), (10, 147318), (12, 147270), (23, 147084), (25, 147063), (27, 147054), (39, 146820), (41, 146787), (42, 146784), (43, 146772), (46, 146676), (49, 146628), (50, 146625), (52, 146604), (55, 146586), (61, 146544), (78, 146379), (85, 146301), (88, 146274), (93, 146208), (94, 146193), (96, 146175), (100, 146151), (103, 146109), (104, 146100), (108, 146076), (111, 146049),

Gene: Laure\_212 Start: 133219, Stop: 131792, Start Num: 4

Candidate Starts for Laure\_212:

(Start: 4 @133219 has 11 MA's), (11, 133135), (23, 132928), (30, 132847), (42, 132628), (43, 132616), (50, 132469), (53, 132445), (55, 132430), (59, 132400), (60, 132397), (63, 132382), (67, 132322), (69, 132316), (85, 132145), (86, 132139), (90, 132100), (92, 132064), (93, 132052), (94, 132037), (96, 132019), (98, 132007), (101, 131977), (103, 131953), (104, 131944),

Gene: LeoJr\_211 Start: 143085, Stop: 141607, Start Num: 4

Candidate Starts for LeoJr\_211:

(Start: 4 @143085 has 11 MA's), (9, 143040), (10, 143028), (12, 142980), (17, 142890), (20, 142857), (22, 142815), (23, 142794), (30, 142713), (34, 142620), (40, 142512), (41, 142485), (42, 142482), (46, 142374), (49, 142326), (50, 142323), (55, 142284), (61, 142242), (70, 142164), (77, 142089), (78, 142077), (85, 141999), (93, 141906), (94, 141891), (96, 141873), (103, 141807), (104, 141798), (108, 141774), (111, 141747),

Gene: Mareelih\_67 Start: 24570, Stop: 26288, Start Num: 1

Candidate Starts for Mareelih\_67:

(Start: 1 @24570 has 5 MA's), (6, 24669), (11, 24732), (16, 24819), (20, 24879), (24, 24948), (26, 24966), (29, 25020), (31, 25047), (32, 25077), (33, 25086), (38, 25152), (41, 25242), (44, 25263), (76, 25632), (80, 25671), (81, 25695), (83, 25725), (85, 25734), (94, 25842), (102, 25908), (103, 25926), (104, 25935), (107, 25956), (108, 25959), (116, 26055), (119, 26118), (120, 26163), (121, 26196), (122, 26229),

Gene: Mimi\_207 Start: 144271, Stop: 142826, Start Num: 4

Candidate Starts for Mimi\_207:

(Start: 4 @144271 has 11 MA's), (7, 144250), (20, 144043), (22, 144001), (23, 143980), (24, 143974), (25, 143959), (34, 143806), (42, 143668), (43, 143656), (50, 143509), (55, 143470), (61, 143428), (64, 143413), (65, 143407), (66, 143395), (67, 143362), (68, 143359), (72, 143326), (74, 143308), (83, 143194), (85, 143185), (87, 143170), (90, 143140), (93, 143092), (94, 143077), (96, 143059), (101, 143017), (103, 142993), (104, 142984), (108, 142960), (114, 142903),

Gene: Panchaali\_204 Start: 149306, Stop: 147852, Start Num: 4

Candidate Starts for Panchaali\_204:

(Start: 4 @149306 has 11 MA's), (10, 149249), (20, 149078), (22, 149036), (23, 149015), (25, 148994), (27, 148985), (34, 148853), (39, 148751), (41, 148718), (42, 148715), (43, 148703), (46, 148607), (50, 148556), (52, 148535), (55, 148517), (61, 148475), (67, 148409), (77, 148322), (78, 148310), (85, 148232), (91, 148169), (93, 148139), (94, 148124), (96, 148106), (103, 148040), (104, 148031), (108, 148007),

Gene: Patbob\_205 Start: 144669, Stop: 143224, Start Num: 4

Candidate Starts for Patbob\_205:

(Start: 4 @144669 has 11 MA's), (7, 144648), (20, 144441), (22, 144399), (23, 144378), (24, 144372), (25, 144357), (37, 144171), (42, 144066), (43, 144054), (50, 143907), (55, 143868), (61, 143826), (64, 143811), (65, 143805), (66, 143793), (67, 143760), (68, 143757), (72, 143724), (74, 143706), (83, 143592), (85, 143583), (87, 143568), (90, 143538), (93, 143490), (94, 143475), (96, 143457), (101, 143415), (103, 143391), (104, 143382), (108, 143358), (114, 143301),

Gene: Phendrix\_60 Start: 20398, Stop: 22092, Start Num: 3

Candidate Starts for Phendrix\_60:

(Start: 3 @20398 has 2 MA's), (5, 20461), (11, 20530), (14, 20605), (15, 20614), (19, 20662), (20, 20677), (25, 20761), (26, 20764), (28, 20809), (31, 20845), (32, 20875), (36, 20929), (38, 20950), (41, 21040), (43, 21055), (44, 21061), (54, 21229), (57, 21259), (66, 21325), (71, 21388), (75, 21427), (77, 21445), (80, 21469), (83, 21523), (84, 21526), (85, 21532), (88, 21559), (95, 21649), (97, 21664), (102, 21706), (105, 21736), (109, 21763), (112, 21790),

Gene: Racecar\_209 Start: 144651, Stop: 143206, Start Num: 4

Candidate Starts for Racecar\_209:

(Start: 4 @144651 has 11 MA's), (7, 144630), (20, 144423), (22, 144381), (23, 144360), (24, 144354), (25, 144339), (26, 144336), (34, 144186), (42, 144048), (43, 144036), (50, 143889), (55, 143850), (61, 143808), (64, 143793), (65, 143787), (66, 143775), (67, 143742), (68, 143739), (72, 143706), (74, 143688), (83, 143574), (85, 143565), (87, 143550), (90, 143520), (93, 143472), (94, 143457), (96, 143439), (101, 143397), (103, 143373), (104, 143364), (108, 143340), (114, 143283),

Gene: ReginaGlobina\_214 Start: 144370, Stop: 142892, Start Num: 4

Candidate Starts for ReginaGlobina\_214:

(Start: 4 @144370 has 11 MA's), (9, 144325), (10, 144313), (12, 144265), (17, 144175), (20, 144142), (22, 144100), (23, 144079), (30, 143998), (34, 143905), (41, 143770), (42, 143767), (46, 143659), (49, 143611), (50, 143608), (55, 143569), (61, 143527), (64, 143512), (70, 143449), (77, 143374), (78, 143362), (85, 143284), (93, 143191), (94, 143176), (96, 143158), (103, 143092), (104, 143083), (108, 143059), (111, 143032),

Gene: Rockabye\_212 Start: 139391, Stop: 137928, Start Num: 4

Candidate Starts for Rockabye\_212:

(Start: 4 @139391 has 11 MA's), (22, 139121), (23, 139100), (37, 138881), (39, 138812), (42, 138776), (43, 138764), (50, 138617), (55, 138578), (67, 138470), (69, 138464), (70, 138458), (82, 138329), (85, 138293), (87, 138278), (88, 138266), (93, 138200), (94, 138185), (96, 138167), (103, 138101), (104, 138092), (106, 138080), (113, 138017),

Gene: SJReid\_214 Start: 138275, Stop: 136830, Start Num: 4

Candidate Starts for SJReid\_214:

(Start: 4 @138275 has 11 MA's), (17, 138080), (22, 138005), (23, 137984), (25, 137963), (37, 137789), (41, 137687), (42, 137684), (43, 137672), (49, 137522), (50, 137519), (55, 137480), (67, 137372), (70, 137360), (72, 137336), (73, 137321), (82, 137231), (85, 137195), (87, 137180), (90, 137150), (93, 137102), (96, 137069), (103, 137003), (104, 136994), (113, 136919), (115, 136904), (117, 136871),

Gene: Sixama\_62 Start: 23138, Stop: 24844, Start Num: 1

Candidate Starts for Sixama\_62:

(Start: 1 @23138 has 5 MA's), (5, 23231), (11, 23300), (13, 23348), (20, 23447), (31, 23615), (35, 23684), (38, 23720), (41, 23810), (44, 23831), (55, 24011), (56, 24023), (58, 24038), (62, 24062), (67, 24128), (76, 24200), (79, 24230), (80, 24239), (83, 24293), (85, 24302), (88, 24329), (102, 24476), (103, 24494), (107, 24524), (120, 24719), (122, 24785),

Gene: Stewart25555\_205 Start: 146615, Stop: 145161, Start Num: 4

Candidate Starts for Stewart25555\_205:

(Start: 4 @146615 has 11 MA's), (9, 146570), (10, 146558), (12, 146510), (23, 146324), (34, 146162), (39, 146060), (40, 146054), (42, 146024), (43, 146012), (46, 145916), (49, 145868), (50, 145865), (52, 145844), (55, 145826), (61, 145784), (66, 145751), (67, 145718), (77, 145631), (78, 145619), (84, 145547), (85, 145541), (91, 145478), (93, 145448), (94, 145433), (96, 145415), (100, 145391), (103, 145349), (104, 145340), (108, 145316), (111, 145289), (118, 145190),

Gene: Talia1610\_209 Start: 144680, Stop: 143235, Start Num: 4

Candidate Starts for Talia1610\_209:

(Start: 4 @144680 has 11 MA's), (7, 144659), (20, 144452), (22, 144410), (23, 144389), (24, 144383), (25, 144368), (34, 144215), (42, 144077), (43, 144065), (50, 143918), (55, 143879), (61, 143837), (64, 143822), (65, 143816), (66, 143804), (67, 143771), (68, 143768), (72, 143735), (74, 143717), (83, 143603), (85, 143594), (87, 143579), (90, 143549), (93, 143501), (94, 143486), (96, 143468), (101, 143426), (103, 143402), (104, 143393), (108, 143369), (114, 143312),

Gene: WaddleDee\_199 Start: 147158, Stop: 145704, Start Num: 4

Candidate Starts for WaddleDee\_199:

(Start: 4 @147158 has 11 MA's), (10, 147101), (12, 147053), (20, 146930), (23, 146867), (25, 146846), (27, 146837), (34, 146705), (39, 146603), (41, 146570), (42, 146567), (43, 146555), (46, 146459), (49, 146411), (50, 146408), (52, 146387), (55, 146369), (61, 146327), (63, 146321), (67, 146261), (78, 146162), (84, 146090), (85, 146084), (88, 146057), (93, 145991), (94, 145976), (96, 145958), (100, 145934), (103, 145892), (104, 145883), (108, 145859), (111, 145832),