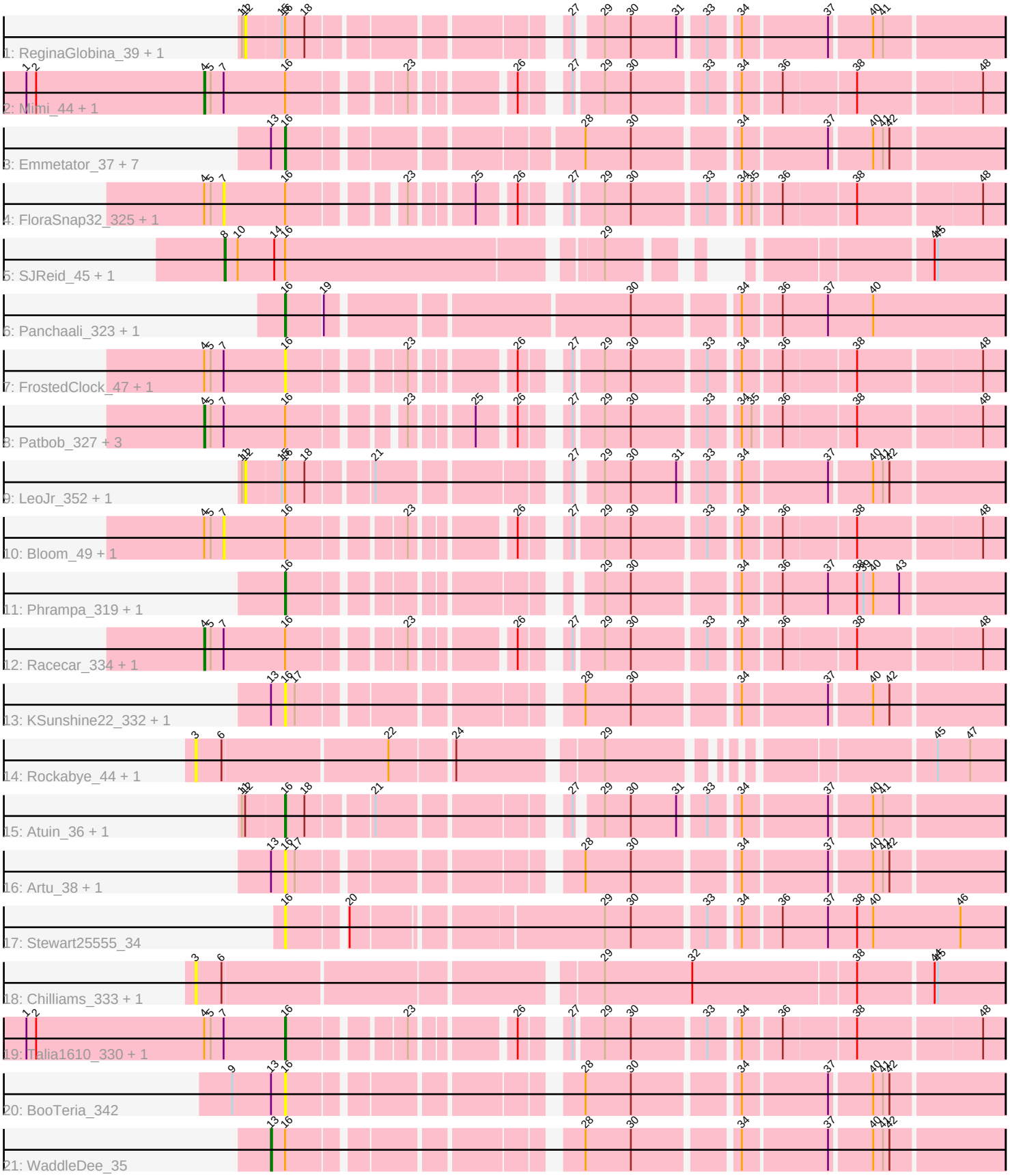
Pham 291273


1: ReginaGlobina_39 + 1
2: Mimi_44 + 1
3: Emmetator_37 + 7
4: FloraSnap32_325 + 1
5: SJReid_45 + 1
6: Panchaali_323 + 1
7: FrostedClock_47 + 1
8: Patbob_327 + 3
9: LeoJr_352 + 1
10: Bloom_49 + 1
11: Phrampa_319 + 1
12: Racecar_334 + 1
13: KSunshine22_332 + 1
14: Rockabye_44 + 1
15: Atuin_36 + 1
16: Artu_38 + 1
17: Stewart25555_34
18: Chilliams_333 + 1
19: Talia1610_330 + 1
20: BooTeria_342
21: WaddleDee_35

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 291273 Report

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

Pham number 291273 has 47 members, 25 are drafts.

Phages represented in each track:
• Track 1 : ReginaGlobina_39, ReginaGlobina_350
• Track 2 : Mimi_44, Mimi_329
• Track 3 : Emmetator_37, BooTeria_43, Ellewin_335, DunneganBoMo_36, WaddleDee_326, Emmetator_331, DunneganBoMo_331, Ellewin_36
• Track 4 : FloraSnap32_325, FloraSnap32_40
• Track 5 : SJReid_45, SJReid_354
• Track 6 : Panchaali_323, Panchaali_36
• Track 7 : FrostedClock_47, FrostedClock_332
• Track 8 : Patbob_327, GoldenEssence_309, Patbob_41, GoldenEssence_28
• Track 9 : LeoJr_352, LeoJr_39
• Track 10 : Bloom_49, Bloom_336
• Track 11 : Phrampa_319, Phrampa_35
• Track 12 : Racecar_334, Racecar_45
• Track 13 : KSunshine22_332, KSunshine22_40
• Track 14 : Rockabye_44, Rockabye_343
• Track 15 : Atuin_36, Atuin_336
• Track 16 : Artu_38, Artu_325
• Track 17 : Stewart25555_34
• Track 18 : Chilliams_333, Chilliams_42
• Track 19 : Talia1610_330, Talia1610_44
• Track 20 : BooTeria_342
• Track 21 : WaddleDee_35

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

The start number called the most often in the published annotations is 16, it was called in 11 of the 22 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Artu_325, Artu_38, Atuin_336, Atuin_36, BooTeria_342, BooTeria_43, DunneganBoMo_331, DunneganBoMo_36, Ellewin_335, Ellewin_36, Emmetator_331, Emmetator_37, FrostedClock_332, FrostedClock_47, KSunshine22_332, KSunshine22_40, Panchaali_323, Panchaali_36, Phrampa_319, Phrampa_35, Stewart25555_34, Talia1610_330, Talia1610_44, WaddleDee_326,

Genes that have the "Most Annotated" start but do not call it:
• Bloom_336, Bloom_49, FloraSnap32_325, FloraSnap32_40, GoldenEssence_28, GoldenEssence_309, LeoJr_352, LeoJr_39, Mimi_329, Mimi_44, Patbob_327, Patbob_41, Racecar_334, Racecar_45, ReginaGlobina_350, ReginaGlobina_39, SJReid_354, SJReid_45, WaddleDee_35,

Genes that do not have the "Most Annotated" start:
• Chilliams_333, Chilliams_42, Rockabye_343, Rockabye_44,

Summary by start number:

Start 3:
• Found in 4 of 47 (8.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chilliams_333 (FC), Chilliams_42 (FC), Rockabye_343 (FC), Rockabye_44 (FC),

Start 4:
• Found in 16 of 47 (34.0%) of genes in pham
• Manual Annotations of this start: 8 of 22
• Called 50.0% of time when present
• Phage (with cluster) where this start called: GoldenEssence_28 (FC), GoldenEssence_309 (FC), Mimi_329 (FC), Mimi_44 (FC), Patbob_327 (FC), Patbob_41 (FC), Racecar_334 (FC), Racecar_45 (FC),

Start 7:
• Found in 16 of 47 (34.0%) of genes in pham
• No Manual Annotations of this start.
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Bloom_336 (FC), Bloom_49 (FC), FloraSnap32_325 (FC), FloraSnap32_40 (FC),

Start 8:
• Found in 2 of 47 (4.3%) of genes in pham
• Manual Annotations of this start: 2 of 22
• Called 100.0% of time when present
• Phage (with cluster) where this start called: SJReid_354 (FC), SJReid_45 (FC),

Start 12:
• Found in 6 of 47 (12.8%) of genes in pham
• No Manual Annotations of this start.
• Called 66.7% of time when present
• Phage (with cluster) where this start called: LeoJr_352 (FC), LeoJr_39 (FC), ReginaGlobina_350 (FC), ReginaGlobina_39 (FC),

Start 13:
• Found in 14 of 47 (29.8%) of genes in pham
• Manual Annotations of this start: 1 of 22
• Called 7.1% of time when present
• Phage (with cluster) where this start called: WaddleDee_35 (FC),

Start 16:
• Found in 43 of 47 (91.5%) of genes in pham
• Manual Annotations of this start: 11 of 22
• Called 55.8% of time when present
• Phage (with cluster) where this start called: Artu_325 (FC), Artu_38 (FC), Atuin_336 (FC), Atuin_36 (FC), BooTeria_342 (FC), BooTeria_43 (FC), DunneganBoMo_331 (FC), DunneganBoMo_36 (FC), Ellewin_335 (FC), Ellewin_36 (FC), Emmetator_331 (FC), Emmetator_37 (FC), FrostedClock_332 (FC), FrostedClock_47 (FC), KSunshine22_332 (FC), KSunshine22_40 (FC), Panchaali_323 (FC), Panchaali_36 (FC), Phrampa_319 (FC), Phrampa_35 (FC), Stewart25555_34 (FC), Talia1610_330 (FC), Talia1610_44 (FC), WaddleDee_326 (FC),

Summary by clusters:

There is one cluster represented in this pham: FC

Info for manual annotations of cluster FC:
•Start number 4 was manually annotated 8 times for cluster FC.
•Start number 8 was manually annotated 2 times for cluster FC.
•Start number 13 was manually annotated 1 time for cluster FC.
•Start number 16 was manually annotated 11 times for cluster FC.

Gene Information:

Gene: Artu_38 Start: 15507, Stop: 14923, Start Num: 16
Candidate Starts for Artu_38:
(Start: 13 @15519 has 1 MA's), (Start: 16 @15507 has 11 MA's), (17, 15498), (28, 15279), (30, 15237), (34, 15150), (37, 15075), (40, 15039), (41, 15030), (42, 15024),

Gene: Artu_325 Start: 194661, Stop: 194077, Start Num: 16
Candidate Starts for Artu_325:
(Start: 13 @194673 has 1 MA's), (Start: 16 @194661 has 11 MA's), (17, 194652), (28, 194433), (30, 194391), (34, 194304), (37, 194229), (40, 194193), (41, 194184), (42, 194178),

Gene: Atuin_36 Start: 16951, Stop: 16376, Start Num: 16
Candidate Starts for Atuin_36:
(11, 16987), (12, 16984), (Start: 16 @16951 has 11 MA's), (18, 16933), (21, 16879), (27, 16732), (29, 16714), (30, 16690), (31, 16648), (33, 16627), (34, 16603), (37, 16528), (40, 16492), (41, 16483),

Gene: Atuin_336 Start: 193839, Stop: 193264, Start Num: 16
Candidate Starts for Atuin_336:
(11, 193875), (12, 193872), (Start: 16 @193839 has 11 MA's), (18, 193821), (21, 193767), (27, 193620), (29, 193602), (30, 193578), (31, 193536), (33, 193515), (34, 193491), (37, 193416), (40, 193380), (41, 193371),

Gene: Bloom_49 Start: 20379, Stop: 19762, Start Num: 7
Candidate Starts for Bloom_49:
(Start: 4 @20397 has 8 MA's), (5, 20391), (7, 20379), (Start: 16 @20322 has 11 MA's), (23, 20229), (26, 20151), (27, 20121), (29, 20097), (30, 20073), (33, 20010), (34, 19986), (36, 19953), (38, 19890), (48, 19782),

Gene: Bloom_336 Start: 193854, Stop: 193237, Start Num: 7
Candidate Starts for Bloom_336:
(Start: 4 @193872 has 8 MA's), (5, 193866), (7, 193854), (Start: 16 @193797 has 11 MA's), (23, 193704), (26, 193626), (27, 193596), (29, 193572), (30, 193548), (33, 193485), (34, 193461), (36, 193428), (38, 193365), (48, 193257),

Gene: BooTeria_43 Start: 16101, Stop: 15517, Start Num: 16
Candidate Starts for BooTeria_43:
(Start: 13 @16113 has 1 MA's), (Start: 16 @16101 has 11 MA's), (28, 15873), (30, 15831), (34, 15744), (37, 15669), (40, 15633), (41, 15624), (42, 15618),

Gene: BooTeria_342 Start: 195010, Stop: 194426, Start Num: 16
Candidate Starts for BooTeria_342:
(9, 195058), (Start: 13 @195022 has 1 MA's), (Start: 16 @195010 has 11 MA's), (28, 194782), (30, 194740), (34, 194653), (37, 194578), (40, 194542), (41, 194533), (42, 194527),

Gene: Chilliams_333 Start: 191655, Stop: 190954, Start Num: 3
Candidate Starts for Chilliams_333:
(3, 191655), (6, 191631), (29, 191313), (32, 191232), (38, 191085), (44, 191019), (45, 191016),

Gene: Chilliams_42 Start: 18921, Stop: 18220, Start Num: 3
Candidate Starts for Chilliams_42:
(3, 18921), (6, 18897), (29, 18579), (32, 18498), (38, 18351), (44, 18285), (45, 18282),

Gene: DunneganBoMo_36 Start: 16090, Stop: 15506, Start Num: 16
Candidate Starts for DunneganBoMo_36:
(Start: 13 @16102 has 1 MA's), (Start: 16 @16090 has 11 MA's), (28, 15862), (30, 15820), (34, 15733), (37, 15658), (40, 15622), (41, 15613), (42, 15607),

Gene: DunneganBoMo_331 Start: 195502, Stop: 194918, Start Num: 16
Candidate Starts for DunneganBoMo_331:
(Start: 13 @195514 has 1 MA's), (Start: 16 @195502 has 11 MA's), (28, 195274), (30, 195232), (34, 195145), (37, 195070), (40, 195034), (41, 195025), (42, 195019),

Gene: Ellewin_335 Start: 194480, Stop: 193896, Start Num: 16
Candidate Starts for Ellewin_335:
(Start: 13 @194492 has 1 MA's), (Start: 16 @194480 has 11 MA's), (28, 194252), (30, 194210), (34, 194123), (37, 194048), (40, 194012), (41, 194003), (42, 193997),

Gene: Ellewin_36 Start: 15366, Stop: 14782, Start Num: 16
Candidate Starts for Ellewin_36:
(Start: 13 @15378 has 1 MA's), (Start: 16 @15366 has 11 MA's), (28, 15138), (30, 15096), (34, 15009), (37, 14934), (40, 14898), (41, 14889), (42, 14883),

Gene: Emmetator_37 Start: 15949, Stop: 15353, Start Num: 16
Candidate Starts for Emmetator_37:
(Start: 13 @15961 has 1 MA's), (Start: 16 @15949 has 11 MA's), (28, 15709), (30, 15667), (34, 15580), (37, 15505), (40, 15469), (41, 15460), (42, 15454),

Gene: Emmetator_331 Start: 194249, Stop: 193653, Start Num: 16
Candidate Starts for Emmetator_331:
(Start: 13 @194261 has 1 MA's), (Start: 16 @194249 has 11 MA's), (28, 194009), (30, 193967), (34, 193880), (37, 193805), (40, 193769), (41, 193760), (42, 193754),

Gene: FloraSnap32_325 Start: 192058, Stop: 191447, Start Num: 7
Candidate Starts for FloraSnap32_325:
(Start: 4 @192076 has 8 MA's), (5, 192070), (7, 192058), (Start: 16 @192001 has 11 MA's), (23, 191914), (25, 191866), (26, 191836), (27, 191806), (29, 191782), (30, 191758), (33, 191695), (34, 191671), (35, 191662), (36, 191638), (38, 191575), (48, 191467),

Gene: FloraSnap32_40 Start: 17920, Stop: 17309, Start Num: 7
Candidate Starts for FloraSnap32_40:
(Start: 4 @17938 has 8 MA's), (5, 17932), (7, 17920), (Start: 16 @17863 has 11 MA's), (23, 17776), (25, 17728), (26, 17698), (27, 17668), (29, 17644), (30, 17620), (33, 17557), (34, 17533), (35, 17524), (36, 17500), (38, 17437), (48, 17329),

Gene: FrostedClock_47 Start: 19595, Stop: 19035, Start Num: 16
Candidate Starts for FrostedClock_47:
(Start: 4 @19670 has 8 MA's), (5, 19664), (7, 19652), (Start: 16 @19595 has 11 MA's), (23, 19502), (26, 19424), (27, 19394), (29, 19370), (30, 19346), (33, 19283), (34, 19259), (36, 19226), (38, 19163), (48, 19055),

Gene: FrostedClock_332 Start: 193395, Stop: 192835, Start Num: 16
Candidate Starts for FrostedClock_332:
(Start: 4 @193470 has 8 MA's), (5, 193464), (7, 193452), (Start: 16 @193395 has 11 MA's), (23, 193302), (26, 193224), (27, 193194), (29, 193170), (30, 193146), (33, 193083), (34, 193059), (36, 193026), (38, 192963), (48, 192855),

Gene: GoldenEssence_309 Start: 183862, Stop: 183233, Start Num: 4
Candidate Starts for GoldenEssence_309:
(Start: 4 @183862 has 8 MA's), (5, 183856), (7, 183844), (Start: 16 @183787 has 11 MA's), (23, 183700), (25, 183652), (26, 183622), (27, 183592), (29, 183568), (30, 183544), (33, 183481), (34, 183457), (35, 183448), (36, 183424), (38, 183361), (48, 183253),

Gene: GoldenEssence_28 Start: 13309, Stop: 12680, Start Num: 4
Candidate Starts for GoldenEssence_28:
(Start: 4 @13309 has 8 MA's), (5, 13303), (7, 13291), (Start: 16 @13234 has 11 MA's), (23, 13147), (25, 13099), (26, 13069), (27, 13039), (29, 13015), (30, 12991), (33, 12928), (34, 12904), (35, 12895), (36, 12871), (38, 12808), (48, 12700),

Gene: KSunshine22_332 Start: 193551, Stop: 192967, Start Num: 16
Candidate Starts for KSunshine22_332:
(Start: 13 @193563 has 1 MA's), (Start: 16 @193551 has 11 MA's), (17, 193542), (28, 193323), (30, 193281), (34, 193194), (37, 193119), (40, 193083), (42, 193068),

Gene: KSunshine22_40 Start: 16650, Stop: 16066, Start Num: 16
Candidate Starts for KSunshine22_40:
(Start: 13 @16662 has 1 MA's), (Start: 16 @16650 has 11 MA's), (17, 16641), (28, 16422), (30, 16380), (34, 16293), (37, 16218), (40, 16182), (42, 16167),

Gene: LeoJr_352 Start: 194465, Stop: 193857, Start Num: 12
Candidate Starts for LeoJr_352:
(11, 194468), (12, 194465), (15, 194435), (Start: 16 @194432 has 11 MA's), (18, 194414), (21, 194360), (27, 194213), (29, 194195), (30, 194171), (31, 194129), (33, 194108), (34, 194084), (37, 194009), (40, 193973), (41, 193964), (42, 193958),

Gene: LeoJr_39 Start: 17162, Stop: 16554, Start Num: 12
Candidate Starts for LeoJr_39:
(11, 17165), (12, 17162), (15, 17132), (Start: 16 @17129 has 11 MA's), (18, 17111), (21, 17057), (27, 16910), (29, 16892), (30, 16868), (31, 16826), (33, 16805), (34, 16781), (37, 16706), (40, 16670), (41, 16661), (42, 16655),

Gene: Mimi_44 Start: 19565, Stop: 18930, Start Num: 4
Candidate Starts for Mimi_44:
(1, 19730), (2, 19721), (Start: 4 @19565 has 8 MA's), (5, 19559), (7, 19547), (Start: 16 @19490 has 11 MA's), (23, 19397), (26, 19319), (27, 19289), (29, 19265), (30, 19241), (33, 19178), (34, 19154), (36, 19121), (38, 19058), (48, 18950),

Gene: Mimi_329 Start: 192225, Stop: 191590, Start Num: 4
Candidate Starts for Mimi_329:
(1, 192390), (2, 192381), (Start: 4 @192225 has 8 MA's), (5, 192219), (7, 192207), (Start: 16 @192150 has 11 MA's), (23, 192057), (26, 191979), (27, 191949), (29, 191925), (30, 191901), (33, 191838), (34, 191814), (36, 191781), (38, 191718), (48, 191610),

Gene: Panchaali_323 Start: 194342, Stop: 193725, Start Num: 16
Candidate Starts for Panchaali_323:
(Start: 16 @194342 has 11 MA's), (19, 194309), (30, 194051), (34, 193964), (36, 193931), (37, 193889), (40, 193847),

Gene: Panchaali_36 Start: 15284, Stop: 14667, Start Num: 16
Candidate Starts for Panchaali_36:
(Start: 16 @15284 has 11 MA's), (19, 15251), (30, 14993), (34, 14906), (36, 14873), (37, 14831), (40, 14789),

Gene: Patbob_327 Start: 194582, Stop: 193953, Start Num: 4
Candidate Starts for Patbob_327:
(Start: 4 @194582 has 8 MA's), (5, 194576), (7, 194564), (Start: 16 @194507 has 11 MA's), (23, 194420), (25, 194372), (26, 194342), (27, 194312), (29, 194288), (30, 194264), (33, 194201), (34, 194177), (35, 194168), (36, 194144), (38, 194081), (48, 193973),

Gene: Patbob_41 Start: 19123, Stop: 18494, Start Num: 4
Candidate Starts for Patbob_41:
(Start: 4 @19123 has 8 MA's), (5, 19117), (7, 19105), (Start: 16 @19048 has 11 MA's), (23, 18961), (25, 18913), (26, 18883), (27, 18853), (29, 18829), (30, 18805), (33, 18742), (34, 18718), (35, 18709), (36, 18685), (38, 18622), (48, 18514),

Gene: Phrampa_319 Start: 192708, Stop: 192139, Start Num: 16
Candidate Starts for Phrampa_319:
(Start: 16 @192708 has 11 MA's), (29, 192483), (30, 192459), (34, 192372), (36, 192339), (37, 192297), (38, 192270), (39, 192264), (40, 192255), (43, 192231),

Gene: Phrampa_35 Start: 16337, Stop: 15768, Start Num: 16
Candidate Starts for Phrampa_35:
(Start: 16 @16337 has 11 MA's), (29, 16112), (30, 16088), (34, 16001), (36, 15968), (37, 15926), (38, 15899), (39, 15893), (40, 15884), (43, 15860),

Gene: Racecar_334 Start: 193874, Stop: 193239, Start Num: 4
Candidate Starts for Racecar_334:

(Start: 4 @193874 has 8 MA's), (5, 193868), (7, 193856), (Start: 16 @193799 has 11 MA's), (23, 193706), (26, 193628), (27, 193598), (29, 193574), (30, 193550), (33, 193487), (34, 193463), (36, 193430), (38, 193367), (48, 193259),

Gene: Racecar_45 Start: 20165, Stop: 19530, Start Num: 4
Candidate Starts for Racecar_45:
(Start: 4 @20165 has 8 MA's), (5, 20159), (7, 20147), (Start: 16 @20090 has 11 MA's), (23, 19997), (26, 19919), (27, 19889), (29, 19865), (30, 19841), (33, 19778), (34, 19754), (36, 19721), (38, 19658), (48, 19550),

Gene: ReginaGlobina_39 Start: 17390, Stop: 16782, Start Num: 12
Candidate Starts for ReginaGlobina_39:
(11, 17393), (12, 17390), (15, 17360), (Start: 16 @17357 has 11 MA's), (18, 17339), (27, 17138), (29, 17120), (30, 17096), (31, 17054), (33, 17033), (34, 17009), (37, 16934), (40, 16898), (41, 16889),

Gene: ReginaGlobina_350 Start: 194837, Stop: 194229, Start Num: 12
Candidate Starts for ReginaGlobina_350:
(11, 194840), (12, 194837), (15, 194807), (Start: 16 @194804 has 11 MA's), (18, 194786), (27, 194585), (29, 194567), (30, 194543), (31, 194501), (33, 194480), (34, 194456), (37, 194381), (40, 194345), (41, 194336),

Gene: Rockabye_44 Start: 19174, Stop: 18518, Start Num: 3
Candidate Starts for Rockabye_44:
(3, 19174), (6, 19150), (22, 19006), (24, 18952), (29, 18832), (45, 18580), (47, 18550),

Gene: Rockabye_343 Start: 191787, Stop: 191131, Start Num: 3
Candidate Starts for Rockabye_343:
(3, 191787), (6, 191763), (22, 191619), (24, 191565), (29, 191445), (45, 191193), (47, 191163),

Gene: SJReid_45 Start: 19758, Stop: 19144, Start Num: 8
Candidate Starts for SJReid_45:
(Start: 8 @19758 has 2 MA's), (10, 19746), (14, 19713), (Start: 16 @19704 has 11 MA's), (29, 19431), (44, 19209), (45, 19206),

Gene: SJReid_354 Start: 192597, Stop: 191983, Start Num: 8
Candidate Starts for SJReid_354:
(Start: 8 @192597 has 2 MA's), (10, 192585), (14, 192552), (Start: 16 @192543 has 11 MA's), (29, 192270), (44, 192048), (45, 192045),

Gene: Stewart25555_34 Start: 15496, Stop: 14885, Start Num: 16
Candidate Starts for Stewart25555_34:
(Start: 16 @15496 has 11 MA's), (20, 15448), (29, 15235), (30, 15211), (33, 15148), (34, 15124), (36, 15091), (37, 15049), (38, 15022), (40, 15007), (46, 14926),

Gene: Talia1610_330 Start: 193980, Stop: 193420, Start Num: 16
Candidate Starts for Talia1610_330:
(1, 194220), (2, 194211), (Start: 4 @194055 has 8 MA's), (5, 194049), (7, 194037), (Start: 16 @193980 has 11 MA's), (23, 193887), (26, 193809), (27, 193779), (29, 193755), (30, 193731), (33, 193668), (34, 193644), (36, 193611), (38, 193548), (48, 193440),

Gene: Talia1610_44 Start: 19508, Stop: 18948, Start Num: 16
Candidate Starts for Talia1610_44:

(1, 19748), (2, 19739), (Start: 4 @19583 has 8 MA's), (5, 19577), (7, 19565), (Start: 16 @19508 has 11 MA's), (23, 19415), (26, 19337), (27, 19307), (29, 19283), (30, 19259), (33, 19196), (34, 19172), (36, 19139), (38, 19076), (48, 18968),

Gene: WaddleDee_326 Start: 194026, Stop: 193442, Start Num: 16
Candidate Starts for WaddleDee_326:
(Start: 13 @194038 has 1 MA's), (Start: 16 @194026 has 11 MA's), (28, 193798), (30, 193756), (34, 193669), (37, 193594), (40, 193558), (41, 193549), (42, 193543),

Gene: WaddleDee_35 Start: 15843, Stop: 15247, Start Num: 13
Candidate Starts for WaddleDee_35:
(Start: 13 @15843 has 1 MA's), (Start: 16 @15831 has 11 MA's), (28, 15603), (30, 15561), (34, 15474), (37, 15399), (40, 15363), (41, 15354), (42, 15348),