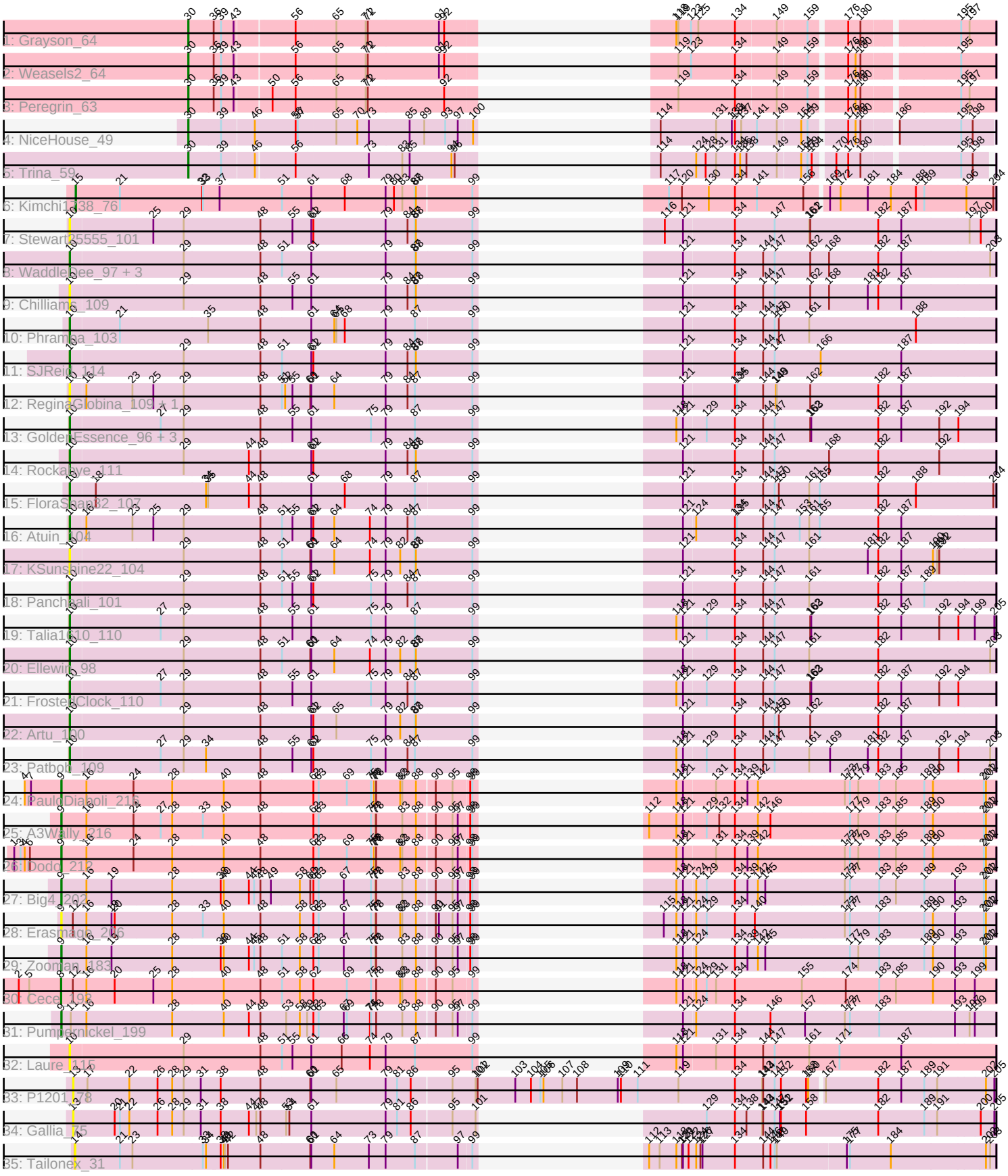
Pham 344153


1: Grayson_64
2: Weasels2_64
3: Peregrin_63
4: NiceHouse_49
5: Trina_59
6: Kimchi1738_76
7: Stewart35555_101
8: WaddleDee_97 + 3
9: Chilliams_109
10: Phramga_103
11: SJReid_114
12: ReginaGlobina_109 + 1
13: GoldenEssence_96 + 3
14: Rockabye_111
15: FloraShan82_107
16: Atuin_104
17: KSunshine22_104
18: Panchali_101
19: Talia1610_110
20: Ellewin_98
21: FrostedClock_110
22: Artu_100
23: Patbob_109
24: PaulDiAngeli_213
25: A3Wally_216
26: Dodo_212
27: Big4_202
28: Erasmus_216
29: Zooman_183
30: Cece_193
31: Pumpernickel_199
32: Laure_115
33: P1201_178
34: Gallia_75
35: Tailonex_31

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 344153 Report

This analysis was run 11/14/26 on database version 672.

Pham number 344153 has 42 members, 12 are drafts.

Phages represented in each track:
- Track 1 : Grayson_64
- Track 2 : Weasels2_64
- Track 3 : Peregrin_63
- Track 4 : NiceHouse_49
- Track 5 : Trina_59
- Track 6 : Kimchi1738_76
- Track 7 : Stewart25555_101
- Track 8 : WaddleDee_97, BooTeria_100, DunneganBoMo_99, Emmetator_102
- Track 9 : Chilliams_109
- Track 10 : Phrampa_103
- Track 11 : SJReid_114
- Track 12 : ReginaGlobina_109, LeoJr_109
- Track 13 : GoldenEssence_96, Bloom_114, Racecar_111, Mimi_110
- Track 14 : Rockabye_111
- Track 15 : FloraSnap32_107
- Track 16 : Atuin_104
- Track 17 : KSunshine22_104
- Track 18 : Panchaali_101
- Track 19 : Talia1610_110
- Track 20 : Ellewin_98
- Track 21 : FrostedClock_110
- Track 22 : Artu_100
- Track 23 : Patbob_109
- Track 24 : PauloDiaboli_216
- Track 25 : A3Wally_216
- Track 26 : Dodo_212
- Track 27 : Big4_202
- Track 28 : Erasmago_206
- Track 29 : Zooman_183
- Track 30 : Cece_193
- Track 31 : Pumpernickel_199
- Track 32 : Laure_115
- Track 33 : P1201_78
- Track 34 : Gallia_75
- Track 35 : Tailonex_31

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

The start number called the most often in the published annotations is 10, it was called in 17 of the 30 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Artu_100, Atuin_104, Bloom_114, BooTeria_100, Chilliams_109, DunneganBoMo_99, Ellewin_98, Emmetator_102, FloraSnap32_107, FrostedClock_110, GoldenEssence_96, KSunshine22_104, Laure_115, LeoJr_109, Mimi_110, Panchaali_101, Patbob_109, Phrampa_103, Racecar_111, ReginaGlobina_109, Rockabye_111, SJReid_114, Stewart25555_101, Talia1610_110, WaddleDee_97,

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

Genes that do not have the "Most Annotated" start:
• A3Wally_216, Big4_202, Cece_193, Dodo_212, Erasmago_206, Gallia_75, Grayson_64, Kimchi1738_76, NiceHouse_49, P1201_78, PauloDiaboli_216, Peregrin_63, Pumpernickel_199, Tailonex_31, Trina_59, Weasels2_64, Zooman_183,

Summary by start number:

Start 8:
• Found in 1 of 42 (2.4%) of genes in pham
• Manual Annotations of this start: 1 of 30
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Cece_193 (GD3),

Start 9:
• Found in 7 of 42 (16.7%) of genes in pham
• Manual Annotations of this start: 6 of 30
• Called 100.0% of time when present
• Phage (with cluster) where this start called: A3Wally_216 (GD1), Big4_202 (GD2), Dodo_212 (GD1), Erasmago_206 (GD2), PauloDiaboli_216 (GD1), Pumpernickel_199 (GD4), Zooman_183 (GD2),

Start 10:
• Found in 25 of 42 (59.5%) of genes in pham
• Manual Annotations of this start: 17 of 30
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Artu_100 (FC), Atuin_104 (FC), Bloom_114 (FC), BooTeria_100 (FC), Chilliams_109 (FC), DunneganBoMo_99 (FC), Ellewin_98 (FC), Emmetator_102 (FC), FloraSnap32_107 (FC), FrostedClock_110 (FC), GoldenEssence_96 (FC), KSunshine22_104 (FC), Laure_115 (UNK), LeoJr_109 (FC), Mimi_110 (FC), Panchaali_101 (FC), Patbob_109 (FC), Phrampa_103 (FC), Racecar_111 (FC), ReginaGlobina_109 (FC), Rockabye_111 (FC), SJReid_114 (FC), Stewart25555_101 (FC), Talia1610_110 (FC), WaddleDee_97 (FC),

Start 13:

• Found in 2 of 42 (4.8%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gallia_75 (singleton), P1201_78 (singleton),

Start 14:
• Found in 1 of 42 (2.4%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Tailonex_31 (singleton),

Start 15:
• Found in 1 of 42 (2.4%) of genes in pham
• Manual Annotations of this start: 1 of 30
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kimchi1738_76 (EN),

Start 30:
• Found in 5 of 42 (11.9%) of genes in pham
• Manual Annotations of this start: 5 of 30
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Grayson_64 (CB), NiceHouse_49 (CE), Peregrin_63 (CB), Trina_59 (CE), Weasels2_64 (CB),

Summary by clusters:

There are 10 clusters represented in this pham: GD1, GD2, GD3, GD4, CB, singleton, CE, FC, EN, UNK,

Info for manual annotations of cluster CB:
•Start number 30 was manually annotated 3 times for cluster CB.

Info for manual annotations of cluster CE:
•Start number 30 was manually annotated 2 times for cluster CE.

Info for manual annotations of cluster EN:
•Start number 15 was manually annotated 1 time for cluster EN.

Info for manual annotations of cluster FC:
•Start number 10 was manually annotated 17 times for cluster FC.

Info for manual annotations of cluster GD1:
•Start number 9 was manually annotated 3 times for cluster GD1.

Info for manual annotations of cluster GD2:
•Start number 9 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:
•Start number 8 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:
•Start number 9 was manually annotated 1 time for cluster GD4.

Gene Information:

Gene: A3Wally_216 Start: 117654, Stop: 115501, Start Num: 9
Candidate Starts for A3Wally_216:
(Start: 9 @117654 has 6 MA's), (16, 117582), (24, 117447), (27, 117372), (28, 117339), (33, 117252), (40, 117192), (48, 117087), (62, 116937), (63, 116922), (75, 116772), (77, 116760), (78, 116757), (83, 116682), (88, 116643), (90, 116595), (95, 116547), (97, 116532), (98, 116502), (99, 116496), (112, 116466), (118, 116388), (121, 116370), (129, 116313), (132, 116277), (134, 116232), (142, 116166), (146, 116130), (177, 115914), (179, 115890), (183, 115830), (185, 115782), (189, 115701), (190, 115677), (201, 115536), (202, 115530),

Gene: Artu_100 Start: 84180, Stop: 86318, Start Num: 10
Candidate Starts for Artu_100:
(Start: 10 @84180 has 17 MA's), (29, 84498), (48, 84717), (61, 84861), (62, 84867), (65, 84933), (79, 85074), (82, 85116), (87, 85158), (88, 85161), (99, 85320), (121, 85446), (134, 85584), (144, 85665), (147, 85698), (150, 85710), (162, 85797), (182, 85986), (187, 86052),

Gene: Atuin_104 Start: 87692, Stop: 89833, Start Num: 10
Candidate Starts for Atuin_104:
(Start: 10 @87692 has 17 MA's), (16, 87734), (23, 87866), (25, 87923), (29, 88010), (48, 88229), (51, 88289), (55, 88319), (61, 88373), (62, 88379), (64, 88439), (74, 88541), (79, 88586), (84, 88649), (87, 88670), (99, 88832), (121, 88958), (124, 88985), (134, 89096), (135, 89102), (144, 89177), (147, 89210), (153, 89282), (161, 89309), (165, 89336), (182, 89501), (187, 89567),

Gene: Big4_202 Start: 114062, Stop: 111909, Start Num: 9
Candidate Starts for Big4_202:
(Start: 9 @114062 has 6 MA's), (16, 113990), (19, 113918), (28, 113747), (38, 113609), (40, 113600), (44, 113528), (45, 113513), (48, 113495), (49, 113465), (58, 113384), (60, 113354), (62, 113345), (63, 113330), (67, 113258), (75, 113180), (77, 113168), (78, 113165), (83, 113090), (88, 113051), (90, 113003), (95, 112955), (97, 112940), (98, 112910), (99, 112904), (118, 112796), (121, 112778), (124, 112751), (129, 112721), (134, 112640), (139, 112604), (142, 112574), (145, 112553), (173, 112337), (177, 112322), (183, 112238), (185, 112190), (189, 112109), (193, 112022), (201, 111944), (202, 111938),

Gene: Bloom_114 Start: 87765, Stop: 89903, Start Num: 10
Candidate Starts for Bloom_114:
(Start: 10 @87765 has 17 MA's), (27, 88017), (29, 88083), (48, 88302), (55, 88392), (61, 88446), (75, 88617), (79, 88659), (87, 88743), (99, 88905), (118, 89013), (121, 89031), (129, 89088), (134, 89169), (144, 89250), (147, 89283), (162, 89385), (163, 89388), (182, 89571), (187, 89637), (192, 89745), (194, 89799),

Gene: BooTeria_100 Start: 84293, Stop: 86434, Start Num: 10
Candidate Starts for BooTeria_100:
(Start: 10 @84293 has 17 MA's), (29, 84611), (48, 84830), (51, 84890), (61, 84974), (79, 85187), (87, 85271), (88, 85274), (99, 85433), (121, 85559), (134, 85697), (144, 85778), (147, 85811), (162, 85913), (168, 85961), (182, 86102), (187, 86168), (203, 86417),

Gene: Cece_193 Start: 118582, Stop: 116429, Start Num: 8
Candidate Starts for Cece_193:

(2, 118702), (5, 118672), (Start: 8 @118582 has 1 MA's), (12, 118549), (16, 118510), (20, 118429), (25, 118321), (28, 118267), (40, 118120), (48, 118015), (51, 117955), (58, 117904), (62, 117865), (69, 117769), (75, 117700), (78, 117685), (82, 117616), (83, 117610), (88, 117571), (90, 117523), (95, 117475), (99, 117424), (118, 117316), (121, 117298), (124, 117271), (129, 117241), (131, 117214), (134, 117160), (155, 116971), (174, 116854), (183, 116758), (185, 116710), (190, 116605), (193, 116542), (199, 116488),

Gene: Chilliams_109 Start: 80522, Stop: 82663, Start Num: 10
Candidate Starts for Chilliams_109:
(Start: 10 @80522 has 17 MA's), (29, 80840), (48, 81059), (55, 81149), (61, 81203), (79, 81416), (84, 81479), (87, 81500), (88, 81503), (99, 81662), (121, 81788), (134, 81926), (144, 82007), (147, 82040), (162, 82142), (168, 82190), (181, 82301), (182, 82331), (187, 82397),

Gene: Dodo_212 Start: 117456, Stop: 115303, Start Num: 9
Candidate Starts for Dodo_212:
(1, 117591), (3, 117573), (4, 117561), (6, 117546), (Start: 9 @117456 has 6 MA's), (16, 117384), (24, 117249), (28, 117141), (40, 116994), (48, 116889), (62, 116739), (63, 116724), (69, 116643), (75, 116574), (76, 116565), (77, 116562), (78, 116559), (82, 116490), (83, 116484), (88, 116445), (90, 116397), (95, 116349), (97, 116334), (98, 116304), (99, 116298), (118, 116190), (121, 116172), (131, 116088), (134, 116034), (139, 115998), (142, 115968), (173, 115731), (177, 115716), (179, 115692), (183, 115632), (185, 115584), (189, 115503), (190, 115479), (201, 115338), (202, 115332),

Gene: DunneganBoMo_99 Start: 83562, Stop: 85703, Start Num: 10
Candidate Starts for DunneganBoMo_99:
(Start: 10 @83562 has 17 MA's), (29, 83880), (48, 84099), (51, 84159), (61, 84243), (79, 84456), (87, 84540), (88, 84543), (99, 84702), (121, 84828), (134, 84966), (144, 85047), (147, 85080), (162, 85182), (168, 85230), (182, 85371), (187, 85437), (203, 85686),

Gene: Ellewin_98 Start: 82973, Stop: 85111, Start Num: 10
Candidate Starts for Ellewin_98:
(Start: 10 @82973 has 17 MA's), (29, 83291), (48, 83510), (51, 83570), (60, 83651), (61, 83654), (64, 83720), (74, 83822), (79, 83867), (82, 83909), (87, 83951), (88, 83954), (99, 84113), (121, 84239), (134, 84377), (144, 84458), (147, 84491), (161, 84590), (182, 84779), (203, 85094),

Gene: Emmetator_102 Start: 83517, Stop: 85658, Start Num: 10
Candidate Starts for Emmetator_102:
(Start: 10 @83517 has 17 MA's), (29, 83835), (48, 84054), (51, 84114), (61, 84198), (79, 84411), (87, 84495), (88, 84498), (99, 84657), (121, 84783), (134, 84921), (144, 85002), (147, 85035), (162, 85137), (168, 85185), (182, 85326), (187, 85392), (203, 85641),

Gene: Erasmago_206 Start: 112320, Stop: 110167, Start Num: 9
Candidate Starts for Erasmago_206:
(Start: 9 @112320 has 6 MA's), (12, 112287), (16, 112248), (19, 112176), (20, 112167), (28, 112005), (33, 111918), (40, 111858), (48, 111753), (58, 111642), (62, 111603), (63, 111588), (67, 111516), (75, 111438), (77, 111426), (78, 111423), (82, 111354), (83, 111348), (88, 111309), (90, 111261), (91, 111252), (95, 111213), (97, 111198), (98, 111168), (99, 111162), (115, 111090), (118, 111054), (121, 111036), (124, 111009), (129, 110979), (134, 110898), (140, 110841), (173, 110595), (177, 110580), (183, 110496), (189, 110367), (190, 110343), (193, 110280), (201, 110202), (202, 110196),

Gene: FloraSnap32_107 Start: 86664, Stop: 88799, Start Num: 10
Candidate Starts for FloraSnap32_107:
(Start: 10 @86664 has 17 MA's), (18, 86733), (34, 87045), (35, 87051), (44, 87168), (48, 87201), (61, 87345), (68, 87441), (79, 87558), (87, 87642), (99, 87798), (121, 87924), (134, 88062), (144, 88143),

(147, 88176), (150, 88188), (161, 88275), (165, 88302), (182, 88467), (188, 88575), (204, 88791),

Gene: FrostedClock_110 Start: 87962, Stop: 90100, Start Num: 10
Candidate Starts for FrostedClock_110:
(Start: 10 @87962 has 17 MA's), (27, 88214), (29, 88280), (48, 88499), (55, 88589), (61, 88643), (75, 88814), (79, 88856), (84, 88919), (87, 88940), (99, 89102), (118, 89210), (121, 89228), (129, 89285), (134, 89366), (144, 89447), (147, 89480), (162, 89582), (163, 89585), (182, 89768), (187, 89834), (192, 89942), (194, 89996),

Gene: Gallia_75 Start: 60199, Stop: 58061, Start Num: 13
Candidate Starts for Gallia_75:
(13, 60199), (20, 60085), (21, 60070), (22, 60043), (26, 59962), (28, 59920), (29, 59887), (31, 59839), (38, 59785), (44, 59704), (47, 59683), (48, 59671), (53, 59599), (54, 59590), (61, 59527), (79, 59314), (81, 59281), (86, 59242), (95, 59131), (101, 59065), (129, 58885), (134, 58804), (138, 58771), (143, 58726), (144, 58723), (147, 58690), (151, 58675), (152, 58672), (158, 58600), (182, 58393), (189, 58261), (191, 58225), (200, 58105), (205, 58066),

Gene: GoldenEssence_96 Start: 81557, Stop: 83695, Start Num: 10
Candidate Starts for GoldenEssence_96:
(Start: 10 @81557 has 17 MA's), (27, 81809), (29, 81875), (48, 82094), (55, 82184), (61, 82238), (75, 82409), (79, 82451), (87, 82535), (99, 82697), (118, 82805), (121, 82823), (129, 82880), (134, 82961), (144, 83042), (147, 83075), (162, 83177), (163, 83180), (182, 83363), (187, 83429), (192, 83537), (194, 83591),

Gene: Grayson_64 Start: 25287, Stop: 26981, Start Num: 30
Candidate Starts for Grayson_64:
(Start: 30 @25287 has 5 MA's), (36, 25359), (39, 25380), (43, 25416), (56, 25575), (65, 25686), (71, 25767), (72, 25773), (91, 25974), (92, 25989), (118, 26151), (119, 26157), (123, 26193), (125, 26214), (134, 26319), (149, 26433), (159, 26514), (176, 26604), (180, 26637), (195, 26886), (197, 26910),

Gene: KSunshine22_104 Start: 84574, Stop: 86715, Start Num: 10
Candidate Starts for KSunshine22_104:
(Start: 10 @84574 has 17 MA's), (29, 84892), (48, 85111), (51, 85171), (60, 85252), (61, 85255), (64, 85321), (74, 85423), (79, 85468), (82, 85510), (87, 85552), (88, 85555), (99, 85714), (121, 85840), (134, 85978), (144, 86059), (147, 86092), (161, 86191), (181, 86353), (182, 86383), (187, 86449), (190, 86539), (191, 86551), (192, 86557),

Gene: Kimchi1738_76 Start: 56215, Stop: 54110, Start Num: 15
Candidate Starts for Kimchi1738_76:
(Start: 15 @56215 has 1 MA's), (21, 56092), (32, 55861), (33, 55858), (37, 55813), (51, 55636), (61, 55552), (68, 55456), (79, 55339), (80, 55315), (83, 55291), (87, 55255), (88, 55252), (99, 55099), (117, 55012), (120, 54976), (130, 54904), (134, 54829), (141, 54766), (156, 54634), (169, 54577), (172, 54550), (181, 54472), (184, 54406), (188, 54334), (189, 54310), (196, 54193), (204, 54118),

Gene: Laure_115 Start: 80487, Stop: 82622, Start Num: 10
Candidate Starts for Laure_115:
(Start: 10 @80487 has 17 MA's), (29, 80805), (48, 81024), (51, 81084), (55, 81114), (61, 81168), (66, 81255), (74, 81336), (79, 81381), (87, 81465), (99, 81624), (118, 81732), (121, 81750), (131, 81834), (134, 81888), (144, 81969), (147, 82002), (161, 82101), (171, 82179), (187, 82356),

Gene: LeoJr_109 Start: 87927, Stop: 90065, Start Num: 10
Candidate Starts for LeoJr_109:

(Start: 10 @87927 has 17 MA's), (16, 87969), (23, 88101), (25, 88158), (29, 88245), (48, 88464), (51, 88524), (52, 88533), (55, 88554), (60, 88605), (61, 88608), (64, 88674), (79, 88821), (84, 88884), (87, 88905), (99, 89067), (121, 89193), (134, 89331), (135, 89337), (144, 89412), (148, 89448), (149, 89451), (162, 89547), (182, 89733), (187, 89799),

Gene: Mimi_110 Start: 87112, Stop: 89250, Start Num: 10
Candidate Starts for Mimi_110:
(Start: 10 @87112 has 17 MA's), (27, 87364), (29, 87430), (48, 87649), (55, 87739), (61, 87793), (75, 87964), (79, 88006), (87, 88090), (99, 88252), (118, 88360), (121, 88378), (129, 88435), (134, 88516), (144, 88597), (147, 88630), (162, 88732), (163, 88735), (182, 88918), (187, 88984), (192, 89092), (194, 89146),

Gene: NiceHouse_49 Start: 21298, Stop: 23001, Start Num: 30
Candidate Starts for NiceHouse_49:
(Start: 30 @21298 has 5 MA's), (39, 21391), (46, 21481), (56, 21598), (57, 21604), (65, 21709), (70, 21769), (73, 21799), (85, 21913), (89, 21955), (93, 22015), (97, 22051), (100, 22090), (114, 22129), (131, 22288), (133, 22333), (134, 22342), (137, 22360), (141, 22405), (149, 22462), (154, 22522), (159, 22540), (176, 22630), (178, 22651), (180, 22663), (186, 22744), (195, 22915), (198, 22948),

Gene: P1201_78 Start: 60988, Stop: 58391, Start Num: 13
Candidate Starts for P1201_78:
(13, 60988), (17, 60952), (22, 60832), (26, 60751), (28, 60709), (29, 60676), (31, 60628), (38, 60574), (48, 60460), (60, 60319), (61, 60316), (65, 60244), (79, 60103), (81, 60070), (86, 60031), (95, 59920), (101, 59854), (102, 59848), (103, 59740), (104, 59695), (105, 59668), (106, 59659), (107, 59605), (108, 59563), (109, 59446), (110, 59437), (111, 59389), (119, 59272), (134, 59116), (143, 59038), (144, 59035), (147, 59002), (152, 58984), (158, 58912), (160, 58906), (167, 58873), (182, 58723), (187, 58657), (189, 58591), (191, 58555), (202, 58420), (205, 58396),

Gene: Panchaali_101 Start: 84551, Stop: 86689, Start Num: 10
Candidate Starts for Panchaali_101:
(Start: 10 @84551 has 17 MA's), (29, 84869), (48, 85088), (51, 85148), (55, 85178), (61, 85232), (62, 85238), (75, 85403), (79, 85445), (84, 85508), (87, 85529), (99, 85691), (121, 85817), (134, 85955), (144, 86036), (147, 86069), (161, 86168), (182, 86357), (187, 86423), (189, 86489),

Gene: Patbob_109 Start: 87847, Stop: 89985, Start Num: 10
Candidate Starts for Patbob_109:
(Start: 10 @87847 has 17 MA's), (27, 88099), (29, 88165), (34, 88228), (48, 88384), (55, 88474), (61, 88528), (62, 88534), (75, 88699), (79, 88741), (84, 88804), (87, 88825), (99, 88987), (118, 89095), (121, 89113), (129, 89170), (134, 89251), (144, 89332), (147, 89365), (161, 89464), (169, 89515), (181, 89623), (182, 89653), (187, 89719), (192, 89827), (194, 89881), (203, 89968),

Gene: PauloDiaboli_216 Start: 115867, Stop: 113714, Start Num: 9
Candidate Starts for PauloDiaboli_216:
(4, 115969), (7, 115954), (Start: 9 @115867 has 6 MA's), (16, 115795), (24, 115660), (28, 115552), (40, 115405), (48, 115300), (62, 115150), (63, 115135), (69, 115054), (75, 114985), (76, 114976), (77, 114973), (78, 114970), (82, 114901), (83, 114895), (88, 114856), (90, 114808), (95, 114760), (98, 114715), (99, 114709), (118, 114601), (121, 114583), (131, 114499), (134, 114445), (139, 114409), (142, 114379), (173, 114142), (177, 114127), (179, 114103), (183, 114043), (185, 113995), (189, 113914), (190, 113890), (201, 113749), (202, 113743),

Gene: Peregrin_63 Start: 24861, Stop: 26558, Start Num: 30
Candidate Starts for Peregrin_63:

(Start: 30 @24861 has 5 MA's), (36, 24933), (39, 24954), (43, 24990), (50, 25086), (56, 25152), (65, 25263), (71, 25344), (72, 25350), (92, 25566), (119, 25734), (134, 25896), (149, 26010), (159, 26091), (176, 26181), (178, 26202), (180, 26214), (195, 26463), (197, 26487),

Gene: Phrampa_103 Start: 89253, Stop: 91385, Start Num: 10
Candidate Starts for Phrampa_103:
(Start: 10 @89253 has 17 MA's), (21, 89391), (35, 89640), (48, 89790), (61, 89934), (64, 90000), (65, 90006), (68, 90030), (79, 90147), (87, 90231), (99, 90387), (121, 90513), (134, 90651), (144, 90732), (147, 90765), (150, 90777), (161, 90864), (188, 91161),

Gene: Pumpernickel_199 Start: 115229, Stop: 113079, Start Num: 9
Candidate Starts for Pumpernickel_199:
(Start: 9 @115229 has 6 MA's), (11, 115205), (16, 115160), (28, 114917), (40, 114770), (44, 114698), (48, 114665), (53, 114593), (58, 114554), (59, 114533), (62, 114515), (63, 114500), (67, 114428), (69, 114419), (74, 114353), (75, 114350), (78, 114335), (83, 114260), (88, 114221), (90, 114173), (95, 114125), (97, 114110), (99, 114074), (121, 113948), (124, 113921), (134, 113810), (146, 113708), (157, 113612), (173, 113507), (177, 113492), (183, 113408), (193, 113192), (197, 113153), (199, 113138),

Gene: Racecar_111 Start: 87765, Stop: 89903, Start Num: 10
Candidate Starts for Racecar_111:
(Start: 10 @87765 has 17 MA's), (27, 88017), (29, 88083), (48, 88302), (55, 88392), (61, 88446), (75, 88617), (79, 88659), (87, 88743), (99, 88905), (118, 89013), (121, 89031), (129, 89088), (134, 89169), (144, 89250), (147, 89283), (162, 89385), (163, 89388), (182, 89571), (187, 89637), (192, 89745), (194, 89799),

Gene: ReginaGlobina_109 Start: 87493, Stop: 89631, Start Num: 10
Candidate Starts for ReginaGlobina_109:
(Start: 10 @87493 has 17 MA's), (16, 87535), (23, 87667), (25, 87724), (29, 87811), (48, 88030), (51, 88090), (52, 88099), (55, 88120), (60, 88171), (61, 88174), (64, 88240), (79, 88387), (84, 88450), (87, 88471), (99, 88633), (121, 88759), (134, 88897), (135, 88903), (144, 88978), (148, 89014), (149, 89017), (162, 89113), (182, 89299), (187, 89365),

Gene: Rockabye_111 Start: 80960, Stop: 83101, Start Num: 10
Candidate Starts for Rockabye_111:
(Start: 10 @80960 has 17 MA's), (29, 81278), (44, 81464), (48, 81497), (61, 81641), (62, 81647), (79, 81854), (84, 81917), (87, 81938), (88, 81941), (99, 82100), (121, 82226), (134, 82364), (144, 82445), (147, 82478), (168, 82628), (182, 82769), (192, 82943),

Gene: SJReid_114 Start: 80008, Stop: 82146, Start Num: 10
Candidate Starts for SJReid_114:
(Start: 10 @80008 has 17 MA's), (29, 80326), (48, 80545), (51, 80605), (61, 80689), (62, 80695), (79, 80902), (84, 80965), (87, 80986), (88, 80989), (99, 81148), (121, 81274), (134, 81412), (144, 81493), (147, 81526), (166, 81655), (187, 81880),

Gene: Stewart25555_101 Start: 84299, Stop: 86437, Start Num: 10
Candidate Starts for Stewart25555_101:
(Start: 10 @84299 has 17 MA's), (25, 84530), (29, 84617), (48, 84836), (55, 84926), (61, 84980), (62, 84986), (79, 85193), (84, 85256), (87, 85277), (88, 85280), (99, 85439), (116, 85514), (121, 85565), (134, 85703), (147, 85817), (161, 85916), (162, 85919), (182, 86105), (187, 86171), (197, 86363), (200, 86393),

Gene: Tailonex_31 Start: 29851, Stop: 27737, Start Num: 14

Candidate Starts for Tailonex_31:
(14, 29851), (21, 29722), (23, 29686), (33, 29488), (34, 29479), (38, 29440), (40, 29431), (41, 29428), (42, 29419), (48, 29326), (60, 29185), (61, 29182), (64, 29116), (73, 29017), (79, 28969), (87, 28885), (97, 28771), (99, 28735), (112, 28705), (113, 28675), (118, 28627), (120, 28612), (121, 28609), (122, 28597), (124, 28579), (126, 28567), (127, 28561), (134, 28468), (144, 28387), (146, 28366), (147, 28354), (149, 28348), (175, 28159), (177, 28150), (184, 28033), (202, 27766), (203, 27754),

Gene: Talia1610_110 Start: 87131, Stop: 89269, Start Num: 10
Candidate Starts for Talia1610_110:
(Start: 10 @87131 has 17 MA's), (27, 87383), (29, 87449), (48, 87668), (55, 87758), (61, 87812), (75, 87983), (79, 88025), (87, 88109), (99, 88271), (118, 88379), (121, 88397), (129, 88454), (134, 88535), (144, 88616), (147, 88649), (162, 88751), (163, 88754), (182, 88937), (187, 89003), (192, 89111), (194, 89165), (199, 89210), (205, 89264),

Gene: Trina_59 Start: 25020, Stop: 26696, Start Num: 30
Candidate Starts for Trina_59:
(Start: 30 @25020 has 5 MA's), (39, 25113), (46, 25203), (56, 25308), (73, 25509), (83, 25602), (85, 25623), (94, 25743), (96, 25752), (114, 25839), (124, 25941), (128, 25968), (131, 25998), (134, 26052), (136, 26067), (138, 26085), (149, 26172), (154, 26232), (159, 26250), (164, 26262), (170, 26310), (176, 26340), (180, 26373), (195, 26625), (198, 26658),

Gene: WaddleDee_97 Start: 82748, Stop: 84889, Start Num: 10
Candidate Starts for WaddleDee_97:
(Start: 10 @82748 has 17 MA's), (29, 83066), (48, 83285), (51, 83345), (61, 83429), (79, 83642), (87, 83726), (88, 83729), (99, 83888), (121, 84014), (134, 84152), (144, 84233), (147, 84266), (162, 84368), (168, 84416), (182, 84557), (187, 84623), (203, 84872),

Gene: Weasels2_64 Start: 24867, Stop: 26561, Start Num: 30
Candidate Starts for Weasels2_64:
(Start: 30 @24867 has 5 MA's), (36, 24939), (39, 24960), (43, 24996), (56, 25155), (65, 25266), (71, 25347), (72, 25353), (91, 25554), (92, 25569), (119, 25737), (123, 25773), (134, 25899), (149, 26013), (159, 26094), (176, 26184), (178, 26205), (180, 26217), (195, 26466),

Gene: Zooman_183 Start: 110285, Stop: 108132, Start Num: 9
Candidate Starts for Zooman_183:
(Start: 9 @110285 has 6 MA's), (16, 110213), (19, 110141), (28, 109970), (38, 109832), (40, 109823), (44, 109751), (45, 109736), (48, 109718), (51, 109658), (58, 109607), (62, 109568), (63, 109553), (67, 109481), (75, 109403), (77, 109391), (78, 109388), (83, 109313), (88, 109274), (90, 109226), (95, 109178), (97, 109163), (98, 109133), (99, 109127), (118, 109019), (121, 109001), (124, 108974), (134, 108863), (139, 108827), (142, 108797), (145, 108776), (177, 108545), (179, 108521), (183, 108461), (189, 108332), (190, 108308), (193, 108245), (201, 108167), (202, 108161),