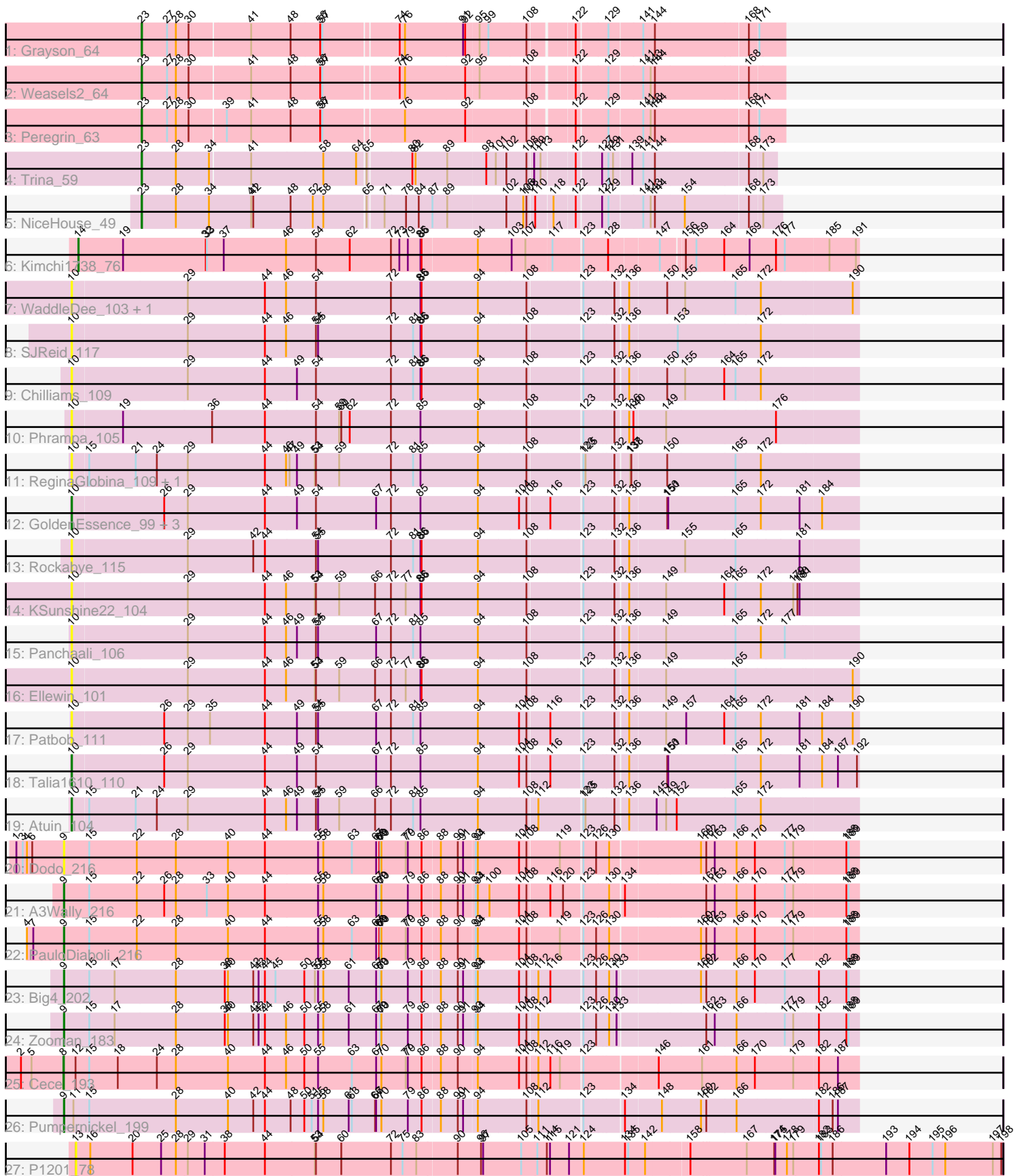


Pham 216416



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 216416 Report

This analysis was run 02/22/25 on database version 588.

Pham number 216416 has 32 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Grayson_64
- Track 2 : Weasels2_64
- Track 3 : Peregrin_63
- Track 4 : Trina_59
- Track 5 : NiceHouse_49
- Track 6 : Kimchi1738_76
- Track 7 : WaddleDee_103, DunneganBoMo_103
- Track 8 : SJReid_117
- Track 9 : Chilliams_109
- Track 10 : Phrampa_105
- Track 11 : ReginaGlobina_109, LeoJr_109
- Track 12 : GoldenEssence_99, Racecar_111, Bloom_114, Mimi_110
- Track 13 : Rockabye_115
- Track 14 : KSunshine22_104
- Track 15 : Panchaali_106
- Track 16 : Ellewin_101
- Track 17 : Patbob_111
- Track 18 : Talia1610_110
- Track 19 : Atuin_104
- Track 20 : Dodo_216
- Track 21 : A3Wally_216
- Track 22 : PauloDiaboli_216
- Track 23 : Big4_202
- Track 24 : Zooman_183
- Track 25 : Cece_193
- Track 26 : Pumpernickel_199
- Track 27 : P1201_78

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

The start number called the most often in the published annotations is 23, it was called in 5 of the 16 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Grayson_64, NiceHouse_49, Peregrin_63, Trina_59, Weasels2_64,

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

-

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

- A3Wally_216, Atuin_104, Big4_202, Bloom_114, Cece_193, Chilliams_109, Dodo_216, DunneganBoMo_103, Ellewin_101, GoldenEssence_99, KSunshine22_104, Kimchi1738_76, LeoJr_109, Mimi_110, P1201_78, Panchaali_106, Patbob_111, PauloDiaboli_216, Phrampa_105, Pumpernickel_199, Racecar_111, ReginaGlobina_109, Rockabye_115, SJReid_117, Talia1610_110, WaddleDee_103, Zooman_183,

Summary by start number:

Start 8:

- Found in 1 of 32 (3.1%) of genes in pham
- Manual Annotations of this start: 1 of 16
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cece_193 (GD3),

Start 9:

- Found in 6 of 32 (18.8%) of genes in pham
- Manual Annotations of this start: 5 of 16
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally_216 (GD1), Big4_202 (GD2), Dodo_216 (GD1), PauloDiaboli_216 (GD1), Pumpernickel_199 (GD4), Zooman_183 (GD2),

Start 10:

- Found in 18 of 32 (56.2%) of genes in pham
- Manual Annotations of this start: 4 of 16
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin_104 (FC), Bloom_114 (FC), Chilliams_109 (FC), DunneganBoMo_103 (FC), Ellewin_101 (FC), GoldenEssence_99 (FC), KSunshine22_104 (FC), LeoJr_109 (FC), Mimi_110 (FC), Panchaali_106 (FC), Patbob_111 (FC), Phrampa_105 (FC), Racecar_111 (FC), ReginaGlobina_109 (FC), Rockabye_115 (FC), SJReid_117 (FC), Talia1610_110 (FC), WaddleDee_103 (FC),

Start 13:

- 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: P1201_78 (singleton),

Start 14:

- Found in 1 of 32 (3.1%) of genes in pham
- Manual Annotations of this start: 1 of 16
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kimchi1738_76 (EN),

Start 23:

- Found in 5 of 32 (15.6%) of genes in pham
- Manual Annotations of this start: 5 of 16
- 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 9 clusters represented in this pham: GD1, GD2, EN, GD4, CB, singleton, CE, FC, GD3,

Info for manual annotations of cluster CB:

- Start number 23 was manually annotated 3 times for cluster CB.

Info for manual annotations of cluster CE:

- Start number 23 was manually annotated 2 times for cluster CE.

Info for manual annotations of cluster EN:

- Start number 14 was manually annotated 1 time for cluster EN.

Info for manual annotations of cluster FC:

- Start number 10 was manually annotated 4 times for cluster FC.

Info for manual annotations of cluster GD1:

- Start number 9 was manually annotated 2 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 5 MA's), (15, 117582), (22, 117447), (26, 117372), (28, 117339), (33, 117252), (40, 117192), (44, 117087), (55, 116937), (58, 116922), (67, 116772), (69, 116760), (70, 116757), (79, 116682), (86, 116643), (88, 116595), (90, 116547), (91, 116532), (93, 116502), (94, 116496), (100, 116466), (104, 116388), (108, 116370), (116, 116313), (120, 116277), (123, 116232), (130, 116166), (134, 116130), (162, 115914), (163, 115890), (166, 115830), (170, 115782), (177, 115701), (179, 115677), (188, 115536), (189, 115530),

Gene: Atuin_104 Start: 87692, Stop: 89833, Start Num: 10

Candidate Starts for Atuin_104:

(Start: 10 @87692 has 4 MA's), (15, 87734), (21, 87866), (24, 87923), (29, 88010), (44, 88229), (46, 88289), (49, 88319), (54, 88373), (55, 88379), (59, 88439), (66, 88541), (72, 88586), (81, 88649), (85, 88670), (94, 88832), (108, 88958), (112, 88985), (123, 89096), (125, 89102), (132, 89177), (136,

89210), (145, 89282), (149, 89309), (152, 89336), (165, 89501), (172, 89567),

Gene: Big4_202 Start: 114062, Stop: 111909, Start Num: 9

Candidate Starts for Big4_202:

(Start: 9 @114062 has 5 MA's), (15, 113990), (17, 113918), (28, 113747), (38, 113609), (40, 113600), (42, 113528), (43, 113513), (44, 113495), (45, 113465), (50, 113384), (53, 113354), (55, 113345), (58, 113330), (61, 113258), (67, 113180), (69, 113168), (70, 113165), (79, 113090), (86, 113051), (88, 113003), (90, 112955), (91, 112940), (93, 112910), (94, 112904), (104, 112796), (108, 112778), (112, 112751), (116, 112721), (123, 112640), (126, 112604), (130, 112574), (133, 112553), (160, 112337), (162, 112322), (166, 112238), (170, 112190), (177, 112109), (182, 112022), (188, 111944), (189, 111938),

Gene: Bloom_114 Start: 87765, Stop: 89903, Start Num: 10

Candidate Starts for Bloom_114:

(Start: 10 @87765 has 4 MA's), (26, 88017), (29, 88083), (44, 88302), (49, 88392), (54, 88446), (67, 88617), (72, 88659), (85, 88743), (94, 88905), (104, 89013), (108, 89031), (116, 89088), (123, 89169), (132, 89250), (136, 89283), (150, 89385), (151, 89388), (165, 89571), (172, 89637), (181, 89745), (184, 89799),

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), (15, 118510), (18, 118429), (24, 118321), (28, 118267), (40, 118120), (44, 118015), (46, 117955), (50, 117904), (55, 117865), (63, 117769), (67, 117700), (70, 117685), (77, 117616), (79, 117610), (86, 117571), (88, 117523), (90, 117475), (94, 117424), (104, 117316), (108, 117298), (112, 117271), (116, 117241), (119, 117214), (123, 117160), (146, 116971), (161, 116854), (166, 116758), (170, 116710), (179, 116605), (182, 116542), (187, 116488),

Gene: Chilliams_109 Start: 80522, Stop: 82663, Start Num: 10

Candidate Starts for Chilliams_109:

(Start: 10 @80522 has 4 MA's), (29, 80840), (44, 81059), (49, 81149), (54, 81203), (72, 81416), (81, 81479), (85, 81500), (86, 81503), (94, 81662), (108, 81788), (123, 81926), (132, 82007), (136, 82040), (150, 82142), (155, 82190), (164, 82301), (165, 82331), (172, 82397),

Gene: Dodo_216 Start: 117456, Stop: 115303, Start Num: 9

Candidate Starts for Dodo_216:

(1, 117591), (3, 117573), (4, 117561), (6, 117546), (Start: 9 @117456 has 5 MA's), (15, 117384), (22, 117249), (28, 117141), (40, 116994), (44, 116889), (55, 116739), (58, 116724), (63, 116643), (67, 116574), (68, 116565), (69, 116562), (70, 116559), (77, 116490), (79, 116484), (86, 116445), (88, 116397), (90, 116349), (91, 116334), (93, 116304), (94, 116298), (104, 116190), (108, 116172), (119, 116088), (123, 116034), (126, 115998), (130, 115968), (160, 115731), (162, 115716), (163, 115692), (166, 115632), (170, 115584), (177, 115503), (179, 115479), (188, 115338), (189, 115332),

Gene: DunneganBoMo_103 Start: 83562, Stop: 85703, Start Num: 10

Candidate Starts for DunneganBoMo_103:

(Start: 10 @83562 has 4 MA's), (29, 83880), (44, 84099), (46, 84159), (54, 84243), (72, 84456), (85, 84540), (86, 84543), (94, 84702), (108, 84828), (123, 84966), (132, 85047), (136, 85080), (150, 85182), (155, 85230), (165, 85371), (172, 85437), (190, 85686),

Gene: Ellewin_101 Start: 82973, Stop: 85111, Start Num: 10

Candidate Starts for Ellewin_101:

(Start: 10 @82973 has 4 MA's), (29, 83291), (44, 83510), (46, 83570), (53, 83651), (54, 83654), (59, 83720), (66, 83822), (72, 83867), (77, 83909), (85, 83951), (86, 83954), (94, 84113), (108, 84239),

(123, 84377), (132, 84458), (136, 84491), (149, 84590), (165, 84779), (190, 85094),

Gene: GoldenEssence_99 Start: 81557, Stop: 83695, Start Num: 10

Candidate Starts for GoldenEssence_99:

(Start: 10 @81557 has 4 MA's), (26, 81809), (29, 81875), (44, 82094), (49, 82184), (54, 82238), (67, 82409), (72, 82451), (85, 82535), (94, 82697), (104, 82805), (108, 82823), (116, 82880), (123, 82961), (132, 83042), (136, 83075), (150, 83177), (151, 83180), (165, 83363), (172, 83429), (181, 83537), (184, 83591),

Gene: Grayson_64 Start: 25287, Stop: 26981, Start Num: 23

Candidate Starts for Grayson_64:

(Start: 23 @25287 has 5 MA's), (27, 25359), (28, 25380), (30, 25416), (41, 25575), (48, 25686), (56, 25767), (57, 25773), (74, 25974), (76, 25989), (91, 26151), (92, 26157), (95, 26193), (99, 26214), (108, 26319), (122, 26433), (129, 26514), (141, 26604), (144, 26637), (168, 26886), (171, 26910),

Gene: KSunshine22_104 Start: 84574, Stop: 86715, Start Num: 10

Candidate Starts for KSunshine22_104:

(Start: 10 @84574 has 4 MA's), (29, 84892), (44, 85111), (46, 85171), (53, 85252), (54, 85255), (59, 85321), (66, 85423), (72, 85468), (77, 85510), (85, 85552), (86, 85555), (94, 85714), (108, 85840), (123, 85978), (132, 86059), (136, 86092), (149, 86191), (164, 86353), (165, 86383), (172, 86449), (179, 86539), (180, 86551), (181, 86557),

Gene: Kimchi1738_76 Start: 56215, Stop: 54110, Start Num: 14

Candidate Starts for Kimchi1738_76:

(Start: 14 @56215 has 1 MA's), (19, 56092), (32, 55861), (33, 55858), (37, 55813), (46, 55636), (54, 55552), (62, 55456), (72, 55339), (73, 55315), (79, 55291), (85, 55255), (86, 55252), (94, 55099), (103, 55012), (107, 54976), (117, 54904), (123, 54829), (128, 54766), (147, 54634), (156, 54577), (159, 54550), (164, 54472), (169, 54406), (176, 54334), (177, 54310), (185, 54193), (191, 54118),

Gene: LeoJr_109 Start: 87927, Stop: 90065, Start Num: 10

Candidate Starts for LeoJr_109:

(Start: 10 @87927 has 4 MA's), (15, 87969), (21, 88101), (24, 88158), (29, 88245), (44, 88464), (46, 88524), (47, 88533), (49, 88554), (53, 88605), (54, 88608), (59, 88674), (72, 88821), (81, 88884), (85, 88905), (94, 89067), (108, 89193), (123, 89331), (125, 89337), (132, 89412), (137, 89448), (138, 89451), (150, 89547), (165, 89733), (172, 89799),

Gene: Mimi_110 Start: 87112, Stop: 89250, Start Num: 10

Candidate Starts for Mimi_110:

(Start: 10 @87112 has 4 MA's), (26, 87364), (29, 87430), (44, 87649), (49, 87739), (54, 87793), (67, 87964), (72, 88006), (85, 88090), (94, 88252), (104, 88360), (108, 88378), (116, 88435), (123, 88516), (132, 88597), (136, 88630), (150, 88732), (151, 88735), (165, 88918), (172, 88984), (181, 89092), (184, 89146),

Gene: NiceHouse_49 Start: 21298, Stop: 23001, Start Num: 23

Candidate Starts for NiceHouse_49:

(Start: 23 @21298 has 5 MA's), (28, 21391), (34, 21481), (41, 21598), (42, 21604), (48, 21709), (52, 21769), (58, 21799), (65, 21913), (71, 21955), (78, 22015), (84, 22051), (87, 22090), (89, 22129), (102, 22288), (106, 22333), (108, 22342), (110, 22360), (118, 22405), (122, 22462), (127, 22522), (129, 22540), (141, 22630), (143, 22651), (144, 22663), (154, 22744), (168, 22915), (173, 22948),

Gene: P1201_78 Start: 60988, Stop: 58391, Start Num: 13

Candidate Starts for P1201_78:

(13, 60988), (16, 60952), (20, 60832), (25, 60751), (28, 60709), (29, 60676), (31, 60628), (38, 60574), (44, 60460), (53, 60319), (54, 60316), (60, 60244), (72, 60103), (75, 60070), (83, 60031), (90, 59920), (96, 59854), (97, 59848), (105, 59740), (111, 59695), (114, 59668), (115, 59659), (121, 59605), (124, 59563), (134, 59446), (135, 59437), (142, 59389), (158, 59272), (167, 59116), (174, 59038), (175, 59035), (178, 59002), (179, 58984), (182, 58912), (183, 58906), (186, 58873), (193, 58723), (194, 58657), (195, 58591), (196, 58555), (197, 58420), (198, 58396),

Gene: Panchaali_106 Start: 84551, Stop: 86689, Start Num: 10

Candidate Starts for Panchaali_106:

(Start: 10 @84551 has 4 MA's), (29, 84869), (44, 85088), (46, 85148), (49, 85178), (54, 85232), (55, 85238), (67, 85403), (72, 85445), (81, 85508), (85, 85529), (94, 85691), (108, 85817), (123, 85955), (132, 86036), (136, 86069), (149, 86168), (165, 86357), (172, 86423), (177, 86489),

Gene: Patbob_111 Start: 87847, Stop: 89985, Start Num: 10

Candidate Starts for Patbob_111:

(Start: 10 @87847 has 4 MA's), (26, 88099), (29, 88165), (35, 88228), (44, 88384), (49, 88474), (54, 88528), (55, 88534), (67, 88699), (72, 88741), (81, 88804), (85, 88825), (94, 88987), (104, 89095), (108, 89113), (116, 89170), (123, 89251), (132, 89332), (136, 89365), (149, 89464), (157, 89515), (164, 89623), (165, 89653), (172, 89719), (181, 89827), (184, 89881), (190, 89968),

Gene: PauloDiaboli_216 Start: 115867, Stop: 113714, Start Num: 9

Candidate Starts for PauloDiaboli_216:

(4, 115969), (7, 115954), (Start: 9 @115867 has 5 MA's), (15, 115795), (22, 115660), (28, 115552), (40, 115405), (44, 115300), (55, 115150), (58, 115135), (63, 115054), (67, 114985), (68, 114976), (69, 114973), (70, 114970), (77, 114901), (79, 114895), (86, 114856), (88, 114808), (90, 114760), (93, 114715), (94, 114709), (104, 114601), (108, 114583), (119, 114499), (123, 114445), (126, 114409), (130, 114379), (160, 114142), (162, 114127), (163, 114103), (166, 114043), (170, 113995), (177, 113914), (179, 113890), (188, 113749), (189, 113743),

Gene: Peregrin_63 Start: 24861, Stop: 26558, Start Num: 23

Candidate Starts for Peregrin_63:

(Start: 23 @24861 has 5 MA's), (27, 24933), (28, 24954), (30, 24990), (39, 25086), (41, 25152), (48, 25263), (56, 25344), (57, 25350), (76, 25566), (92, 25734), (108, 25896), (122, 26010), (129, 26091), (141, 26181), (143, 26202), (144, 26214), (168, 26463), (171, 26487),

Gene: Phrampa_105 Start: 89253, Stop: 91385, Start Num: 10

Candidate Starts for Phrampa_105:

(Start: 10 @89253 has 4 MA's), (19, 89391), (36, 89640), (44, 89790), (54, 89934), (59, 90000), (60, 90006), (62, 90030), (72, 90147), (85, 90231), (94, 90387), (108, 90513), (123, 90651), (132, 90732), (136, 90765), (140, 90777), (149, 90864), (176, 91161),

Gene: Pumpernickel_199 Start: 115229, Stop: 113079, Start Num: 9

Candidate Starts for Pumpernickel_199:

(Start: 9 @115229 has 5 MA's), (11, 115205), (15, 115160), (28, 114917), (40, 114770), (42, 114698), (44, 114665), (48, 114593), (50, 114554), (51, 114533), (55, 114515), (58, 114500), (61, 114428), (63, 114419), (66, 114353), (67, 114350), (70, 114335), (79, 114260), (86, 114221), (88, 114173), (90, 114125), (91, 114110), (94, 114074), (108, 113948), (112, 113921), (123, 113810), (134, 113708), (148, 113612), (160, 113507), (162, 113492), (166, 113408), (182, 113192), (186, 113153), (187, 113138),

Gene: Racecar_111 Start: 87765, Stop: 89903, Start Num: 10

Candidate Starts for Racecar_111:

(Start: 10 @87765 has 4 MA's), (26, 88017), (29, 88083), (44, 88302), (49, 88392), (54, 88446), (67, 88617), (72, 88659), (85, 88743), (94, 88905), (104, 89013), (108, 89031), (116, 89088), (123, 89169), (132, 89250), (136, 89283), (150, 89385), (151, 89388), (165, 89571), (172, 89637), (181, 89745), (184, 89799),

Gene: ReginaGlobina_109 Start: 87493, Stop: 89631, Start Num: 10

Candidate Starts for ReginaGlobina_109:

(Start: 10 @87493 has 4 MA's), (15, 87535), (21, 87667), (24, 87724), (29, 87811), (44, 88030), (46, 88090), (47, 88099), (49, 88120), (53, 88171), (54, 88174), (59, 88240), (72, 88387), (81, 88450), (85, 88471), (94, 88633), (108, 88759), (123, 88897), (125, 88903), (132, 88978), (137, 89014), (138, 89017), (150, 89113), (165, 89299), (172, 89365),

Gene: Rockabye_115 Start: 80960, Stop: 83101, Start Num: 10

Candidate Starts for Rockabye_115:

(Start: 10 @80960 has 4 MA's), (29, 81278), (42, 81464), (44, 81497), (54, 81641), (55, 81647), (72, 81854), (81, 81917), (85, 81938), (86, 81941), (94, 82100), (108, 82226), (123, 82364), (132, 82445), (136, 82478), (155, 82628), (165, 82769), (181, 82943),

Gene: SJReid_117 Start: 80008, Stop: 82146, Start Num: 10

Candidate Starts for SJReid_117:

(Start: 10 @80008 has 4 MA's), (29, 80326), (44, 80545), (46, 80605), (54, 80689), (55, 80695), (72, 80902), (81, 80965), (85, 80986), (86, 80989), (94, 81148), (108, 81274), (123, 81412), (132, 81493), (136, 81526), (153, 81655), (172, 81880),

Gene: Talia1610_110 Start: 87131, Stop: 89269, Start Num: 10

Candidate Starts for Talia1610_110:

(Start: 10 @87131 has 4 MA's), (26, 87383), (29, 87449), (44, 87668), (49, 87758), (54, 87812), (67, 87983), (72, 88025), (85, 88109), (94, 88271), (104, 88379), (108, 88397), (116, 88454), (123, 88535), (132, 88616), (136, 88649), (150, 88751), (151, 88754), (165, 88937), (172, 89003), (181, 89111), (184, 89165), (187, 89210), (192, 89264),

Gene: Trina_59 Start: 25020, Stop: 26696, Start Num: 23

Candidate Starts for Trina_59:

(Start: 23 @25020 has 5 MA's), (28, 25113), (34, 25203), (41, 25308), (58, 25509), (64, 25602), (65, 25623), (80, 25743), (82, 25752), (89, 25839), (98, 25941), (101, 25968), (102, 25998), (108, 26052), (109, 26067), (113, 26085), (122, 26172), (127, 26232), (129, 26250), (131, 26262), (139, 26310), (141, 26340), (144, 26373), (168, 26625), (173, 26658),

Gene: WaddleDee_103 Start: 82748, Stop: 84889, Start Num: 10

Candidate Starts for WaddleDee_103:

(Start: 10 @82748 has 4 MA's), (29, 83066), (44, 83285), (46, 83345), (54, 83429), (72, 83642), (85, 83726), (86, 83729), (94, 83888), (108, 84014), (123, 84152), (132, 84233), (136, 84266), (150, 84368), (155, 84416), (165, 84557), (172, 84623), (190, 84872),

Gene: Weasels2_64 Start: 24867, Stop: 26561, Start Num: 23

Candidate Starts for Weasels2_64:

(Start: 23 @24867 has 5 MA's), (27, 24939), (28, 24960), (30, 24996), (41, 25155), (48, 25266), (56, 25347), (57, 25353), (74, 25554), (76, 25569), (92, 25737), (95, 25773), (108, 25899), (122, 26013), (129, 26094), (141, 26184), (143, 26205), (144, 26217), (168, 26466),

Gene: Zooman_183 Start: 110285, Stop: 108132, Start Num: 9

Candidate Starts for Zooman_183:

(Start: 9 @110285 has 5 MA's), (15, 110213), (17, 110141), (28, 109970), (38, 109832), (40, 109823), (42, 109751), (43, 109736), (44, 109718), (46, 109658), (50, 109607), (55, 109568), (58, 109553), (61, 109481), (67, 109403), (69, 109391), (70, 109388), (79, 109313), (86, 109274), (88, 109226), (90, 109178), (91, 109163), (93, 109133), (94, 109127), (104, 109019), (108, 109001), (112, 108974), (123, 108863), (126, 108827), (130, 108797), (133, 108776), (162, 108545), (163, 108521), (166, 108461), (177, 108332), (179, 108308), (182, 108245), (188, 108167), (189, 108161),