

[illegible]

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 330940 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330940 has 51 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Beleetus_142
- Track 2 : Park1214_144
- Track 3 : GiJojo_135
- Track 4 : LuckySocke_141, Fudan_140
- Track 5 : Alone3_146
- Track 6 : BRock_136
- Track 7 : Talos_145
- Track 8 : Garnacho_136
- Track 9 : Grayson_64
- Track 10 : Weasels2_64
- Track 11 : Peregrin_63
- Track 12 : NiceHouse_49
- Track 13 : Trina_59
- Track 14 : Kimchi1738_76
- Track 15 : FloraSnap32_111
- Track 16 : Stewart25555_101
- Track 17 : Emmetator_102, WaddleDee_97, BooTeria_100, DunneganBoMo_99
- Track 18 : Phrampa_103
- Track 19 : SJReid_114
- Track 20 : ReginaGlobina_109, LeoJr_109
- Track 21 : Artu_102
- Track 22 : Chilliams_109
- Track 23 : GoldenEssence_96, Bloom_114, Racecar_111, Mimi_110
- Track 24 : Rockabye_111
- Track 25 : Atuin_104
- Track 26 : KSunshine22_104
- Track 27 : Panchaali_101
- Track 28 : Talia1610_110
- Track 29 : Ellewin_98
- Track 30 : FrostedClock_113
- Track 31 : Patbob_109
- Track 32 : A3Wally_216
- Track 33 : Dodo_212
- Track 34 : PauloDiaboli_216
- Track 35 : Big4_202
- Track 36 : Zooman_183
- Track 37 : Erasmago_206

- Track 38 : Cece_193
- Track 39 : Pumpnickel_199
- Track 40 : Laure_115
- Track 41 : Gallia_75
- Track 42 : P1201_78
- Track 43 : 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 14 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Artu_102, Atuin_104, Bloom_114, BooTeria_100, Chilliams_109, DunneganBoMo_99, Ellewin_98, Emmetator_102, FloraSnap32_111, FrostedClock_113, 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:

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

- A3Wally_216, Alone3_146, BRock_136, Beleetus_142, Big4_202, Cece_193, Dodo_212, Erasmago_206, Fudan_140, Gallia_75, Garnacho_136, GiJojo_135, Grayson_64, Kimchi1738_76, LuckySocke_141, NiceHouse_49, P1201_78, Park1214_144, PauloDiaboli_216, Peregrin_63, Pumpnickel_199, Tailonex_31, Talos_145, Trina_59, Weasels2_64, Zooman_183,

Summary by start number:

Start 8:

- Found in 1 of 51 (2.0%) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cece_193 (GD3),

Start 9:

- Found in 7 of 51 (13.7%) of genes in pham
- Manual Annotations of this start: 6 of 35
- 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), Pumpnickel_199 (GD4), Zooman_183 (GD2),

Start 10:

- Found in 25 of 51 (49.0%) of genes in pham
- Manual Annotations of this start: 14 of 35
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Artu_102 (FC), Atuin_104 (FC), Bloom_114 (FC), BooTeria_100 (FC), Chilliamps_109 (FC), DunneganBoMo_99 (FC), Ellewin_98 (FC), Emmetator_102 (FC), FloraSnap32_111 (FC), FrostedClock_113 (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 51 (3.9%) 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 51 (2.0%) 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 51 (2.0%) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kimchi1738_76 (EN),

Start 25:

- Found in 5 of 51 (9.8%) of genes in pham
- Manual Annotations of this start: 5 of 35
- 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),

Start 29:

- Found in 7 of 51 (13.7%) of genes in pham
- Manual Annotations of this start: 6 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alone3_146 (BS), BRock_136 (BS), Beleetus_142 (BS), Fudan_140 (BS), Garnacho_136 (BS), LuckySocke_141 (BS), Talos_145 (BS),

Start 31:

- Found in 9 of 51 (17.6%) of genes in pham
- Manual Annotations of this start: 2 of 35
- Called 22.2% of time when present
- Phage (with cluster) where this start called: GiJojo_135 (BS), Park1214_144 (BS),

Summary by clusters:

There are 11 clusters represented in this pham: GD1, GD2, EN, GD4, CB, singleton, CE, FC, BS, GD3, UNK,

Info for manual annotations of cluster BS:

- Start number 29 was manually annotated 6 times for cluster BS.
- Start number 31 was manually annotated 2 times for cluster BS.

Info for manual annotations of cluster CB:

- Start number 25 was manually annotated 3 times for cluster CB.

Info for manual annotations of cluster CE:

- Start number 25 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 14 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), (28, 117372), (33, 117339), (38, 117252), (47, 117192), (56, 117087), (72, 116937), (76, 116922), (93, 116772), (96, 116760), (97, 116757), (105, 116682), (111, 116643), (115, 116595), (119, 116547), (121, 116532), (124, 116502), (126, 116496), (141, 116466), (151, 116388), (156, 116370), (165, 116313), (168, 116277), (171, 116232), (181, 116166), (187, 116130), (221, 115914), (223, 115890), (230, 115830), (235, 115782), (242, 115701), (243, 115677), (252, 115536), (253, 115530),

Gene: Alone3_146 Start: 78919, Stop: 80550, Start Num: 29

Candidate Starts for Alone3_146:

(Start: 29 @78919 has 6 MA's), (Start: 31 @78925 has 2 MA's), (32, 78937), (39, 79030), (43, 79054), (50, 79093), (54, 79159), (57, 79198), (60, 79222), (66, 79279), (67, 79288), (71, 79321), (77, 79354), (84, 79426), (88, 79456), (89, 79462), (94, 79495), (96, 79501), (109, 79603), (113, 79627), (114, 79657), (139, 79783), (157, 79894), (159, 79903), (168, 79975), (185, 80104), (195, 80173), (196, 80176), (206, 80245), (213, 80287), (214, 80299), (218, 80329), (222, 80350), (224, 80383), (228, 80416), (231, 80449), (232, 80455), (238, 80518), (239, 80527),

Gene: Artu_102 Start: 84180, Stop: 86318, Start Num: 10

Candidate Starts for Artu_102:

(Start: 10 @84180 has 14 MA's), (34, 84498), (56, 84717), (71, 84861), (72, 84867), (79, 84933), (98, 85074), (104, 85116), (110, 85158), (111, 85161), (126, 85320), (156, 85446), (171, 85584), (183, 85665), (188, 85698), (191, 85710), (204, 85797), (229, 85986), (237, 86052),

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

Candidate Starts for Atuin_104:

(Start: 10 @87692 has 14 MA's), (16, 87734), (23, 87866), (26, 87923), (34, 88010), (56, 88229), (61, 88289), (65, 88319), (71, 88373), (72, 88379), (78, 88439), (92, 88541), (98, 88586), (108, 88649), (110, 88670), (126, 88832), (156, 88958), (161, 88985), (171, 89096), (172, 89102), (183, 89177), (188, 89210), (197, 89282), (203, 89309), (207, 89336), (229, 89501), (237, 89567),

Gene: BRock_136 Start: 73464, Stop: 75080, Start Num: 29

Candidate Starts for BRock_136:

(Start: 29 @73464 has 6 MA's), (Start: 31 @73470 has 2 MA's), (32, 73482), (39, 73575), (50, 73638), (51, 73656), (54, 73704), (55, 73710), (57, 73743), (60, 73767), (67, 73833), (71, 73866), (77, 73899), (84, 73971), (89, 74007), (94, 74040), (96, 74046), (109, 74133), (113, 74157), (118, 74238), (139, 74313), (144, 74346), (159, 74433), (160, 74439), (181, 74613), (185, 74634), (186, 74643), (196, 74706), (214, 74829), (224, 74913), (228, 74946), (232, 74985), (238, 75048), (239, 75057),

Gene: Beleetus_142 Start: 76502, Stop: 78118, Start Num: 29

Candidate Starts for Beleetus_142:

(Start: 29 @76502 has 6 MA's), (Start: 31 @76508 has 2 MA's), (32, 76520), (39, 76613), (43, 76637), (50, 76676), (54, 76742), (55, 76748), (57, 76781), (60, 76805), (67, 76871), (71, 76904), (77, 76937), (84, 77009), (88, 77039), (89, 77045), (94, 77078), (96, 77084), (106, 77150), (109, 77171), (113, 77195), (114, 77225), (139, 77351), (157, 77462), (159, 77471), (168, 77543), (173, 77603), (195, 77741), (206, 77813), (213, 77855), (214, 77867), (218, 77897), (222, 77918), (224, 77951), (228, 77984), (232, 78023), (238, 78086), (239, 78095),

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), (33, 113747), (45, 113609), (47, 113600), (53, 113528), (54, 113513), (56, 113495), (58, 113465), (67, 113384), (70, 113354), (72, 113345), (76, 113330), (81, 113258), (93, 113180), (96, 113168), (97, 113165), (105, 113090), (111, 113051), (115, 113003), (119, 112955), (121, 112940), (124, 112910), (126, 112904), (151, 112796), (156, 112778), (161, 112751), (165, 112721), (171, 112640), (176, 112604), (181, 112574), (184, 112553), (217, 112337), (221, 112322), (230, 112238), (235, 112190), (242, 112109), (246, 112022), (252, 111944), (253, 111938),

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

Candidate Starts for Bloom_114:

(Start: 10 @87765 has 14 MA's), (28, 88017), (34, 88083), (56, 88302), (65, 88392), (71, 88446), (93, 88617), (98, 88659), (110, 88743), (126, 88905), (151, 89013), (156, 89031), (165, 89088), (171, 89169), (183, 89250), (188, 89283), (204, 89385), (205, 89388), (229, 89571), (237, 89637), (245, 89745), (247, 89799),

Gene: BooTeria_100 Start: 84293, Stop: 86434, Start Num: 10

Candidate Starts for BooTeria_100:

(Start: 10 @84293 has 14 MA's), (34, 84611), (56, 84830), (61, 84890), (71, 84974), (98, 85187), (110, 85271), (111, 85274), (126, 85433), (156, 85559), (171, 85697), (183, 85778), (188, 85811), (204, 85913), (211, 85961), (229, 86102), (237, 86168), (254, 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), (26, 118321), (33, 118267), (47, 118120), (56, 118015), (61, 117955), (67, 117904), (72, 117865), (83, 117769), (93, 117700), (97, 117685), (104, 117616), (105, 117610), (111, 117571), (115, 117523), (119, 117475), (126, 117424), (151, 117316), (156, 117298), (161, 117271), (165, 117241), (167, 117214), (171, 117160), (198, 116971), (219, 116854), (230, 116758), (235, 116710), (243, 116605), (246, 116542), (250, 116488),

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

Candidate Starts for Chilliams_109:

(Start: 10 @80522 has 14 MA's), (34, 80840), (56, 81059), (65, 81149), (71, 81203), (98, 81416), (108, 81479), (110, 81500), (111, 81503), (126, 81662), (156, 81788), (171, 81926), (183, 82007), (188, 82040), (204, 82142), (211, 82190), (225, 82301), (229, 82331), (237, 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), (33, 117141), (47, 116994), (56, 116889), (72, 116739), (76, 116724), (83, 116643), (93, 116574), (95, 116565), (96, 116562), (97, 116559), (104, 116490), (105, 116484), (111, 116445), (115, 116397), (119, 116349), (121, 116334), (124, 116304), (126, 116298), (151, 116190), (156, 116172), (167, 116088), (171, 116034), (176, 115998), (181, 115968), (217, 115731), (221, 115716), (223, 115692), (230, 115632), (235, 115584), (242, 115503), (243, 115479), (252, 115338), (253, 115332),

Gene: DunneganBoMo_99 Start: 83562, Stop: 85703, Start Num: 10

Candidate Starts for DunneganBoMo_99:

(Start: 10 @83562 has 14 MA's), (34, 83880), (56, 84099), (61, 84159), (71, 84243), (98, 84456), (110, 84540), (111, 84543), (126, 84702), (156, 84828), (171, 84966), (183, 85047), (188, 85080), (204, 85182), (211, 85230), (229, 85371), (237, 85437), (254, 85686),

Gene: Ellewin_98 Start: 82973, Stop: 85111, Start Num: 10

Candidate Starts for Ellewin_98:

(Start: 10 @82973 has 14 MA's), (34, 83291), (56, 83510), (61, 83570), (70, 83651), (71, 83654), (78, 83720), (92, 83822), (98, 83867), (104, 83909), (110, 83951), (111, 83954), (126, 84113), (156, 84239), (171, 84377), (183, 84458), (188, 84491), (203, 84590), (229, 84779), (254, 85094),

Gene: Emmetator_102 Start: 83517, Stop: 85658, Start Num: 10

Candidate Starts for Emmetator_102:

(Start: 10 @83517 has 14 MA's), (34, 83835), (56, 84054), (61, 84114), (71, 84198), (98, 84411), (110, 84495), (111, 84498), (126, 84657), (156, 84783), (171, 84921), (183, 85002), (188, 85035), (204, 85137), (211, 85185), (229, 85326), (237, 85392), (254, 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), (33, 112005), (38, 111918), (47, 111858), (56, 111753), (67, 111642), (72, 111603), (76, 111588), (81, 111516), (93, 111438), (96, 111426), (97, 111423), (104, 111354), (105, 111348), (111, 111309), (115, 111261), (117, 111252), (119, 111213), (121, 111198), (124, 111168), (126, 111162), (145, 111090), (151, 111054), (156, 111036), (161, 111009), (165, 110979), (171, 110898), (179, 110841), (217, 110595), (221, 110580), (230, 110496), (242, 110367), (243, 110343), (246, 110280), (252, 110202), (253, 110196),

Gene: FloraSnap32_111 Start: 86664, Stop: 88799, Start Num: 10

Candidate Starts for FloraSnap32_111:

(Start: 10 @86664 has 14 MA's), (18, 86733), (41, 87045), (42, 87051), (53, 87168), (56, 87201), (71, 87345), (82, 87441), (98, 87558), (110, 87642), (126, 87798), (156, 87924), (171, 88062), (183, 88143), (188, 88176), (191, 88188), (203, 88275), (207, 88302), (229, 88467), (240, 88575), (255, 88791),

Gene: FrostedClock_113 Start: 87962, Stop: 90100, Start Num: 10

Candidate Starts for FrostedClock_113:

(Start: 10 @87962 has 14 MA's), (28, 88214), (34, 88280), (56, 88499), (65, 88589), (71, 88643), (93, 88814), (98, 88856), (108, 88919), (110, 88940), (126, 89102), (151, 89210), (156, 89228), (165, 89285), (171, 89366), (183, 89447), (188, 89480), (204, 89582), (205, 89585), (229, 89768), (237, 89834), (245, 89942), (247, 89996),

Gene: Fudan_140 Start: 76883, Stop: 78514, Start Num: 29

Candidate Starts for Fudan_140:

(Start: 29 @76883 has 6 MA's), (Start: 31 @76889 has 2 MA's), (32, 76901), (39, 76994), (43, 77018), (50, 77057), (54, 77123), (57, 77162), (60, 77186), (66, 77243), (67, 77252), (71, 77285), (77, 77318), (84, 77390), (88, 77420), (89, 77426), (94, 77459), (96, 77465), (109, 77567), (113, 77591), (114, 77621), (139, 77747), (157, 77858), (159, 77867), (168, 77939), (185, 78068), (195, 78137), (196, 78140), (206, 78209), (218, 78293), (222, 78314), (224, 78347), (228, 78380), (232, 78419), (238, 78482),

Gene: Gallia_75 Start: 60199, Stop: 58061, Start Num: 13

Candidate Starts for Gallia_75:

(13, 60199), (20, 60085), (21, 60070), (22, 60043), (27, 59962), (33, 59920), (34, 59887), (36, 59839), (45, 59785), (53, 59704), (55, 59683), (56, 59671), (63, 59599), (64, 59590), (71, 59527), (98, 59314), (102, 59281), (109, 59242), (119, 59131), (128, 59065), (165, 58885), (171, 58804), (175, 58771), (182, 58726), (183, 58723), (188, 58690), (192, 58675), (193, 58672), (201, 58600), (229, 58393), (242, 58261), (244, 58225), (251, 58105), (256, 58066),

Gene: Garnacho_136 Start: 76507, Stop: 78120, Start Num: 29

Candidate Starts for Garnacho_136:

(Start: 29 @76507 has 6 MA's), (Start: 31 @76513 has 2 MA's), (32, 76522), (39, 76615), (50, 76678), (54, 76744), (57, 76783), (58, 76792), (60, 76807), (62, 76831), (67, 76873), (71, 76906), (77, 76939), (84, 77011), (88, 77041), (89, 77047), (94, 77080), (96, 77086), (103, 77143), (109, 77173), (113, 77197), (118, 77278), (139, 77353), (151, 77434), (157, 77464), (159, 77473), (170, 77566), (173, 77605), (181, 77653), (186, 77683), (195, 77743), (196, 77746), (214, 77869), (218, 77899), (222, 77920), (224, 77953), (227, 77980), (228, 77986), (232, 78025), (238, 78088),

Gene: GiJojo_135 Start: 78278, Stop: 79900, Start Num: 31

Candidate Starts for GiJojo_135:

(Start: 31 @78278 has 2 MA's), (32, 78287), (39, 78380), (54, 78509), (55, 78515), (58, 78557), (60, 78572), (62, 78596), (67, 78638), (71, 78671), (73, 78680), (77, 78704), (84, 78776), (89, 78812), (90, 78818), (96, 78851), (113, 78977), (114, 79007), (123, 79106), (142, 79151), (147, 79193), (149, 79208), (159, 79253), (196, 79526), (213, 79637), (214, 79649), (218, 79679), (222, 79700), (224, 79733), (226, 79751), (228, 79766), (232, 79805), (238, 79868),

Gene: GoldenEssence_96 Start: 81557, Stop: 83695, Start Num: 10

Candidate Starts for GoldenEssence_96:

(Start: 10 @81557 has 14 MA's), (28, 81809), (34, 81875), (56, 82094), (65, 82184), (71, 82238), (93, 82409), (98, 82451), (110, 82535), (126, 82697), (151, 82805), (156, 82823), (165, 82880), (171, 82961), (183, 83042), (188, 83075), (204, 83177), (205, 83180), (229, 83363), (237, 83429), (245, 83537), (247, 83591),

Gene: Grayson_64 Start: 25287, Stop: 26981, Start Num: 25

Candidate Starts for Grayson_64:

(Start: 25 @25287 has 5 MA's), (30, 25359), (33, 25380), (35, 25416), (52, 25575), (63, 25686), (74, 25767), (75, 25773), (99, 25974), (100, 25989), (118, 26151), (120, 26157), (122, 26193), (127, 26214), (150, 26319), (169, 26433), (177, 26514), (192, 26604), (195, 26637), (233, 26886), (236, 26910),

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

Candidate Starts for KSunshine22_104:

(Start: 10 @84574 has 14 MA's), (34, 84892), (56, 85111), (61, 85171), (70, 85252), (71, 85255), (78, 85321), (92, 85423), (98, 85468), (104, 85510), (110, 85552), (111, 85555), (126, 85714), (156, 85840), (171, 85978), (183, 86059), (188, 86092), (203, 86191), (225, 86353), (229, 86383), (237, 86449), (243, 86539), (244, 86551), (245, 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), (37, 55861), (38, 55858), (44, 55813), (61, 55636), (71, 55552), (82, 55456), (98, 55339), (101, 55315), (105, 55291), (110, 55255), (111, 55252), (126, 55099), (147, 55012), (154, 54976), (166, 54904), (171, 54829), (180, 54766), (199, 54634), (212, 54577), (216, 54550), (225, 54472), (234, 54406), (240, 54334), (242, 54310), (248, 54193), (255, 54118),

Gene: Laure_115 Start: 80487, Stop: 82622, Start Num: 10

Candidate Starts for Laure_115:

(Start: 10 @80487 has 14 MA's), (34, 80805), (56, 81024), (61, 81084), (65, 81114), (71, 81168), (80, 81255), (92, 81336), (98, 81381), (110, 81465), (126, 81624), (151, 81732), (156, 81750), (167, 81834), (171, 81888), (183, 81969), (188, 82002), (203, 82101), (215, 82179), (237, 82356),

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

Candidate Starts for LeoJr_109:

(Start: 10 @87927 has 14 MA's), (16, 87969), (23, 88101), (26, 88158), (34, 88245), (56, 88464), (61, 88524), (62, 88533), (65, 88554), (70, 88605), (71, 88608), (78, 88674), (98, 88821), (108, 88884), (110, 88905), (126, 89067), (156, 89193), (171, 89331), (172, 89337), (183, 89412), (189, 89448), (190, 89451), (204, 89547), (229, 89733), (237, 89799),

Gene: LuckySocke_141 Start: 76832, Stop: 78463, Start Num: 29

Candidate Starts for LuckySocke_141:

(Start: 29 @76832 has 6 MA's), (Start: 31 @76838 has 2 MA's), (32, 76850), (39, 76943), (43, 76967), (50, 77006), (54, 77072), (57, 77111), (60, 77135), (66, 77192), (67, 77201), (71, 77234), (77, 77267), (84, 77339), (88, 77369), (89, 77375), (94, 77408), (96, 77414), (109, 77516), (113, 77540), (114, 77570), (139, 77696), (157, 77807), (159, 77816), (168, 77888), (185, 78017), (195, 78086), (196, 78089), (206, 78158), (218, 78242), (222, 78263), (224, 78296), (228, 78329), (232, 78368), (238, 78431),

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

Candidate Starts for Mimi_110:

(Start: 10 @87112 has 14 MA's), (28, 87364), (34, 87430), (56, 87649), (65, 87739), (71, 87793), (93, 87964), (98, 88006), (110, 88090), (126, 88252), (151, 88360), (156, 88378), (165, 88435), (171, 88516), (183, 88597), (188, 88630), (204, 88732), (205, 88735), (229, 88918), (237, 88984), (245, 89092), (247, 89146),

Gene: NiceHouse_49 Start: 21298, Stop: 23001, Start Num: 25

Candidate Starts for NiceHouse_49:

(Start: 25 @21298 has 5 MA's), (33, 21391), (40, 21481), (52, 21598), (53, 21604), (63, 21709), (69, 21769), (76, 21799), (88, 21913), (94, 21955), (101, 22015), (107, 22051), (112, 22090), (116, 22129), (143, 22288), (148, 22333), (150, 22342), (155, 22360), (163, 22405), (169, 22462), (174, 22522), (177, 22540), (192, 22630), (194, 22651), (195, 22663), (210, 22744), (233, 22915), (237, 22948),

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

Candidate Starts for P1201_78:

(13, 60988), (17, 60952), (22, 60832), (27, 60751), (33, 60709), (34, 60676), (36, 60628), (45, 60574), (56, 60460), (70, 60319), (71, 60316), (79, 60244), (98, 60103), (102, 60070), (109, 60031), (119, 59920), (128, 59854), (129, 59848), (130, 59740), (131, 59695), (132, 59668), (133, 59659), (134, 59605), (135, 59563), (136, 59446), (137, 59437), (138, 59389), (152, 59272), (171, 59116), (182, 59038), (183, 59035), (188, 59002), (193, 58984), (201, 58912), (202, 58906), (209, 58873), (229, 58723), (237, 58657), (242, 58591), (244, 58555), (253, 58420), (256, 58396),

Gene: Panchaali_101 Start: 84551, Stop: 86689, Start Num: 10

Candidate Starts for Panchaali_101:

(Start: 10 @84551 has 14 MA's), (34, 84869), (56, 85088), (61, 85148), (65, 85178), (71, 85232), (72, 85238), (93, 85403), (98, 85445), (108, 85508), (110, 85529), (126, 85691), (156, 85817), (171, 85955), (183, 86036), (188, 86069), (203, 86168), (229, 86357), (237, 86423), (242, 86489),

Gene: Park1214_144 Start: 77842, Stop: 79449, Start Num: 31

Candidate Starts for Park1214_144:

(Start: 31 @77842 has 2 MA's), (32, 77851), (39, 77944), (50, 78007), (54, 78073), (55, 78079), (57, 78112), (58, 78121), (59, 78133), (60, 78136), (67, 78202), (71, 78235), (77, 78268), (84, 78340), (85, 78346), (87, 78367), (89, 78376), (94, 78409), (96, 78415), (106, 78481), (109, 78502), (113, 78526), (139, 78682), (142, 78700), (157, 78793), (159, 78802), (195, 79072), (196, 79075), (214, 79198), (218, 79228), (222, 79249), (224, 79282), (228, 79315), (232, 79354), (238, 79417), (241, 79435),

Gene: Patbob_109 Start: 87847, Stop: 89985, Start Num: 10

Candidate Starts for Patbob_109:

(Start: 10 @87847 has 14 MA's), (28, 88099), (34, 88165), (41, 88228), (56, 88384), (65, 88474), (71, 88528), (72, 88534), (93, 88699), (98, 88741), (108, 88804), (110, 88825), (126, 88987), (151, 89095), (156, 89113), (165, 89170), (171, 89251), (183, 89332), (188, 89365), (203, 89464), (212, 89515), (225, 89623), (229, 89653), (237, 89719), (245, 89827), (247, 89881), (254, 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), (33, 115552), (47, 115405), (56, 115300), (72, 115150), (76, 115135), (83, 115054), (93, 114985), (95, 114976), (96, 114973), (97, 114970), (104, 114901), (105, 114895), (111, 114856), (115, 114808), (119, 114760), (124, 114715), (126, 114709), (151, 114601), (156, 114583), (167, 114499), (171, 114445), (176, 114409), (181, 114379), (217, 114142), (221, 114127), (223, 114103), (230, 114043), (235, 113995), (242, 113914), (243, 113890), (252, 113749), (253, 113743),

Gene: Peregrin_63 Start: 24861, Stop: 26558, Start Num: 25

Candidate Starts for Peregrin_63:

(Start: 25 @24861 has 5 MA's), (30, 24933), (33, 24954), (35, 24990), (46, 25086), (52, 25152), (63, 25263), (74, 25344), (75, 25350), (100, 25566), (120, 25734), (150, 25896), (169, 26010), (177, 26091), (192, 26181), (194, 26202), (195, 26214), (233, 26463), (236, 26487),

Gene: Phrampa_103 Start: 89253, Stop: 91385, Start Num: 10

Candidate Starts for Phrampa_103:

(Start: 10 @89253 has 14 MA's), (21, 89391), (42, 89640), (56, 89790), (71, 89934), (78, 90000), (79, 90006), (82, 90030), (98, 90147), (110, 90231), (126, 90387), (156, 90513), (171, 90651), (183, 90732), (188, 90765), (191, 90777), (203, 90864), (240, 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), (33, 114917), (47, 114770), (53, 114698), (56, 114665), (63, 114593), (67, 114554), (68, 114533), (72, 114515), (76, 114500), (81, 114428), (83, 114419), (92, 114353), (93, 114350), (97, 114335), (105, 114260), (111, 114221), (115, 114173), (119, 114125), (121, 114110), (126, 114074), (156, 113948), (161, 113921), (171, 113810), (187, 113708), (200, 113612), (217, 113507), (221, 113492), (230, 113408), (246, 113192), (249, 113153), (250, 113138),

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

Candidate Starts for Racecar_111:

(Start: 10 @87765 has 14 MA's), (28, 88017), (34, 88083), (56, 88302), (65, 88392), (71, 88446), (93, 88617), (98, 88659), (110, 88743), (126, 88905), (151, 89013), (156, 89031), (165, 89088), (171, 89169), (183, 89250), (188, 89283), (204, 89385), (205, 89388), (229, 89571), (237, 89637), (245, 89745), (247, 89799),

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

Candidate Starts for ReginaGlobina_109:

(Start: 10 @87493 has 14 MA's), (16, 87535), (23, 87667), (26, 87724), (34, 87811), (56, 88030), (61, 88090), (62, 88099), (65, 88120), (70, 88171), (71, 88174), (78, 88240), (98, 88387), (108, 88450), (110, 88471), (126, 88633), (156, 88759), (171, 88897), (172, 88903), (183, 88978), (189, 89014), (190, 89017), (204, 89113), (229, 89299), (237, 89365),

Gene: Rockabye_111 Start: 80960, Stop: 83101, Start Num: 10

Candidate Starts for Rockabye_111:

(Start: 10 @80960 has 14 MA's), (34, 81278), (53, 81464), (56, 81497), (71, 81641), (72, 81647), (98, 81854), (108, 81917), (110, 81938), (111, 81941), (126, 82100), (156, 82226), (171, 82364), (183, 82445), (188, 82478), (211, 82628), (229, 82769), (245, 82943),

Gene: SJReid_114 Start: 80008, Stop: 82146, Start Num: 10

Candidate Starts for SJReid_114:

(Start: 10 @80008 has 14 MA's), (34, 80326), (56, 80545), (61, 80605), (71, 80689), (72, 80695), (98, 80902), (108, 80965), (110, 80986), (111, 80989), (126, 81148), (156, 81274), (171, 81412), (183, 81493), (188, 81526), (208, 81655), (237, 81880),

Gene: Stewart25555_101 Start: 84299, Stop: 86437, Start Num: 10

Candidate Starts for Stewart25555_101:

(Start: 10 @84299 has 14 MA's), (26, 84530), (34, 84617), (56, 84836), (65, 84926), (71, 84980), (72, 84986), (98, 85193), (108, 85256), (110, 85277), (111, 85280), (126, 85439), (146, 85514), (156, 85565), (171, 85703), (188, 85817), (203, 85916), (204, 85919), (229, 86105), (237, 86171), (249, 86363), (251, 86393),

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

Candidate Starts for Tailonex_31:

(14, 29851), (21, 29722), (23, 29686), (38, 29488), (41, 29479), (45, 29440), (47, 29431), (48, 29428), (49, 29419), (56, 29326), (70, 29185), (71, 29182), (78, 29116), (91, 29017), (98, 28969), (110, 28885), (121, 28771), (126, 28735), (141, 28705), (144, 28675), (151, 28627), (154, 28612), (156, 28609), (158, 28597), (161, 28579), (162, 28567), (164, 28561), (171, 28468), (183, 28387), (187, 28366), (188, 28354), (190, 28348), (220, 28159), (221, 28150), (234, 28033), (253, 27766), (254, 27754),

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

Candidate Starts for Talia1610_110:

(Start: 10 @87131 has 14 MA's), (28, 87383), (34, 87449), (56, 87668), (65, 87758), (71, 87812), (93, 87983), (98, 88025), (110, 88109), (126, 88271), (151, 88379), (156, 88397), (165, 88454), (171, 88535), (183, 88616), (188, 88649), (204, 88751), (205, 88754), (229, 88937), (237, 89003), (245, 89111), (247, 89165), (250, 89210), (256, 89264),

Gene: Talos_145 Start: 77070, Stop: 78686, Start Num: 29

Candidate Starts for Talos_145:

(Start: 29 @77070 has 6 MA's), (Start: 31 @77076 has 2 MA's), (32, 77088), (39, 77181), (50, 77244), (54, 77310), (55, 77316), (57, 77349), (60, 77373), (62, 77397), (67, 77439), (71, 77472), (77, 77505), (84, 77577), (88, 77607), (89, 77613), (94, 77646), (96, 77652), (106, 77718), (109, 77739), (113, 77763), (114, 77793), (139, 77919), (142, 77937), (149, 77994), (159, 78039), (173, 78171), (195, 78309), (196, 78312), (214, 78435), (218, 78465), (222, 78486), (224, 78519), (226, 78537), (228, 78552), (238, 78654),

Gene: Trina_59 Start: 25020, Stop: 26696, Start Num: 25

Candidate Starts for Trina_59:

(Start: 25 @25020 has 5 MA's), (33, 25113), (40, 25203), (52, 25308), (76, 25509), (86, 25602), (88, 25623), (104, 25743), (106, 25752), (116, 25839), (125, 25941), (140, 25968), (143, 25998), (150, 26052), (153, 26067), (158, 26085), (169, 26172), (174, 26232), (177, 26250), (178, 26262), (186, 26310), (192, 26340), (195, 26373), (233, 26625), (237, 26658),

Gene: WaddleDee_97 Start: 82748, Stop: 84889, Start Num: 10

Candidate Starts for WaddleDee_97:

(Start: 10 @82748 has 14 MA's), (34, 83066), (56, 83285), (61, 83345), (71, 83429), (98, 83642), (110, 83726), (111, 83729), (126, 83888), (156, 84014), (171, 84152), (183, 84233), (188, 84266), (204, 84368), (211, 84416), (229, 84557), (237, 84623), (254, 84872),

Gene: Weasels2_64 Start: 24867, Stop: 26561, Start Num: 25

Candidate Starts for Weasels2_64:

(Start: 25 @24867 has 5 MA's), (30, 24939), (33, 24960), (35, 24996), (52, 25155), (63, 25266), (74, 25347), (75, 25353), (99, 25554), (100, 25569), (120, 25737), (122, 25773), (150, 25899), (169, 26013), (177, 26094), (192, 26184), (194, 26205), (195, 26217), (233, 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), (33, 109970), (45, 109832), (47, 109823), (53, 109751), (54, 109736), (56, 109718), (61, 109658), (67, 109607), (72, 109568), (76, 109553), (81, 109481), (93, 109403), (96, 109391), (97, 109388), (105, 109313), (111, 109274), (115, 109226), (119, 109178), (121, 109163), (124, 109133), (126, 109127), (151, 109019), (156, 109001), (161, 108974), (171, 108863), (176, 108827), (181, 108797), (184, 108776), (221, 108545), (223, 108521), (230, 108461), (242, 108332), (243, 108308), (246, 108245), (252, 108167), (253, 108161),