

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 308604 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308604 has 64 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Kouch_63, Exploradora_62, Kurt1_63, MrWorldwide_63, NickSell_63, JeriBeth_62, Jerbirus_64, Phiderman_63
- Track 2 : Velene_63, Blage_63
- Track 3 : GoneGirl_65
- Track 4 : Oxtober96_64, GoingMerry_64, Lovelyunicorn_63
- Track 5 : OldNelly_63
- Track 6 : Byron23_64, KellyGreen_64, Janus167_62, Sedgewig_62, HankSprout_63, Symere_62, StirfryIV_62
- Track 7 : Endor_65
- Track 8 : FarmerDoug_63
- Track 9 : JasonD_64
- Track 10 : McGalleon_63
- Track 11 : GardenB_64
- Track 12 : Agente005_64
- Track 13 : SolidSnake_64, Merida02_64
- Track 14 : Anilorac_62
- Track 15 : CarisSwetlik_62
- Track 16 : Den3_63
- Track 17 : HavenFinLeoSun_64
- Track 18 : Rappheph_63
- Track 19 : Figueroism_63, Clancy_62
- Track 20 : SonOfLevi_64
- Track 21 : PhredFlintston_63
- Track 22 : MonChoix_63
- Track 23 : Schimmels22_60
- Track 24 : WestPM_59
- Track 25 : Pikmin_59, Casey_59, Pajaza_59
- Track 26 : Sinatra_58, RenegadeRaider_59
- Track 27 : Golden_58, Lucky3_58
- Track 28 : Bustleton_57, BouleyBill_56, Pherbot_57
- Track 29 : Jingles_58, PrincePhergus_57, Koji_56
- Track 30 : Kauala_56
- Track 31 : SirVictor_59, Guetzie_59
- Track 32 : Neferthena_63
- Track 33 : Clock_58
- Track 34 : Nebulous_57
- Track 35 : GaeCeo_60

- Track 36 : ChickenKing_57
- Track 37 : Cheeto1_59

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

The start number called the most often in the published annotations is 54, it was called in 24 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Blage_63, Byron23_64, Clancy_62, Den3_63, Exploradora_62, Figueroism_63, GoingMerry_64, HankSprout_63, Janus167_62, Jerbirus_64, JeriBeth_62, KellyGreen_64, Kouch_63, Kurt1_63, Lovelyunicorn_63, Merida02_64, MrWorldwide_63, NickSell_63, OldNelly_63, Oxtober96_64, Phiderman_63, PhredFlintston_63, Rapheph_63, Sedgewig_62, SolidSnake_64, SonOfLevi_64, StirfryIV_62, Symere_62, Velene_63,

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:

- Agente005_64, Anilorac_62, BouleyBill_56, Bustleton_57, CarisSwetlik_62, Casey_59, Cheeto1_59, ChickenKing_57, Clock_58, Endor_65, FarmerDoug_63, GaeCeo_60, GardenB_64, Golden_58, GoneGirl_65, Guetzie_59, HavenFinLeoSun_64, JasonD_64, Jingles_58, Kauala_56, Koji_56, Lucky3_58, McGalleon_63, MonChoix_63, Nebulous_57, Neferthena_63, Pajaza_59, Pherbot_57, Pikmin_59, PrincePhergus_57, RenegadeRaider_59, Schimmels22_60, Sinatra_58, SirVictor_59, WestPM_59,

Summary by start number:

Start 41:

- Found in 15 of 64 (23.4%) of genes in pham
- Manual Annotations of this start: 2 of 56
- Called 20.0% of time when present
- Phage (with cluster) where this start called: CarisSwetlik_62 (EA1), HavenFinLeoSun_64 (EA1), JasonD_64 (EA1),

Start 45:

- Found in 5 of 64 (7.8%) of genes in pham
- Manual Annotations of this start: 5 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Clock_58 (EA5), Nebulous_57 (EA5), Neferthena_63 (EA5), Schimmels22_60 (EA11), WestPM_59 (EA11),

Start 49:

- Found in 3 of 64 (4.7%) of genes in pham
- Manual Annotations of this start: 3 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Endor_65 (EA1), FarmerDoug_63 (EA1), MonChoix_63 (EA1),

Start 54:

- Found in 29 of 64 (45.3%) of genes in pham
- Manual Annotations of this start: 24 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Blage_63 (EA1), Byron23_64 (EA1), Clancy_62 (EA1), Den3_63 (EA1), Exploradora_62 (EA1), Figueroism_63 (EA1), GoingMerry_64 (EA1), HankSprout_63 (EA1), Janus167_62 (EA1), Jerbirus_64 (EA1), JeriBeth_62 (EA1), KellyGreen_64 (EA1), Kouch_63 (EA1), Kurt1_63 (EA1), Lovelyunicorn_63 (EA1), Merida02_64 (EA1), MrWorldwide_63 (EA1), NickSell_63 (EA1), OldNelly_63 (EA1), Oxtober96_64 (EA1), Phiderman_63 (EA1), PhredFlintston_63 (EA1), Rapheph_63 (EA1), Sedgewig_62 (EA1), SolidSnake_64 (EA1), SonOfLevi_64 (EA1), StirfryIV_62 (EA1), Symere_62 (EA1), Velene_63 (EA1),

Start 55:

- Found in 4 of 64 (6.2%) of genes in pham
- Manual Annotations of this start: 1 of 56
- Called 25.0% of time when present
- Phage (with cluster) where this start called: McGalleon_63 (EA1),

Start 56:

- Found in 5 of 64 (7.8%) of genes in pham
- Manual Annotations of this start: 3 of 56
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Agente005_64 (EA1), Anilorac_62 (EA1), GardenB_64 (EA1), GoneGirl_65 (EA1),

Start 57:

- Found in 13 of 64 (20.3%) of genes in pham
- Manual Annotations of this start: 12 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BouleyBill_56 (EA4), Bustleton_57 (EA4), Golden_58 (EA4), Guetzie_59 (EA4), Jingles_58 (EA4), Kaula_56 (EA4), Koji_56 (EA4), Lucky3_58 (EA4), Pherbot_57 (EA4), PrincePhergus_57 (EA4), RenegadeRaider_59 (EA4), Sinatra_58 (EA4), SirVictor_59 (EA4),

Start 58:

- Found in 3 of 64 (4.7%) of genes in pham
- Manual Annotations of this start: 3 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Casey_59 (EA3), Pajaza_59 (EA3), Pikmin_59 (EA3),

Start 67:

- Found in 3 of 64 (4.7%) of genes in pham
- Manual Annotations of this start: 3 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cheeto1_59 (EA9), ChickenKing_57 (EA9), GaeCeo_60 (EA9),

Summary by clusters:

There are 6 clusters represented in this pham: EA11, EA9, EA1, EA3, EA5, EA4,

Info for manual annotations of cluster EA1:

- Start number 41 was manually annotated 2 times for cluster EA1.
- Start number 49 was manually annotated 3 times for cluster EA1.
- Start number 54 was manually annotated 24 times for cluster EA1.
- Start number 55 was manually annotated 1 time for cluster EA1.
- Start number 56 was manually annotated 3 times for cluster EA1.

Info for manual annotations of cluster EA11:

- Start number 45 was manually annotated 2 times for cluster EA11.

Info for manual annotations of cluster EA3:

- Start number 58 was manually annotated 3 times for cluster EA3.

Info for manual annotations of cluster EA4:

- Start number 57 was manually annotated 12 times for cluster EA4.

Info for manual annotations of cluster EA5:

- Start number 45 was manually annotated 3 times for cluster EA5.

Info for manual annotations of cluster EA9:

- Start number 67 was manually annotated 3 times for cluster EA9.

Gene Information:

Gene: Agente005_64 Start: 41218, Stop: 41679, Start Num: 56

Candidate Starts for Agente005_64:

(48, 41164), (Start: 56 @41218 has 3 MA's), (77, 41350), (84, 41401), (90, 41440), (113, 41638), (119, 41674),

Gene: Anilorac_62 Start: 41125, Stop: 41589, Start Num: 56

Candidate Starts for Anilorac_62:

(48, 41071), (Start: 56 @41125 has 3 MA's), (77, 41257), (90, 41347), (94, 41413), (113, 41548), (119, 41584),

Gene: Blage_63 Start: 41170, Stop: 41613, Start Num: 54

Candidate Starts for Blage_63:

(30, 40972), (31, 40984), (33, 40990), (34, 41014), (40, 41080), (42, 41086), (Start: 54 @41170 has 24 MA's), (76, 41293), (79, 41323), (92, 41428), (99, 41467), (100, 41473), (104, 41515), (108, 41542), (117, 41596), (118, 41599),

Gene: BouleyBill_56 Start: 38730, Stop: 39152, Start Num: 57

Candidate Starts for BouleyBill_56:

(Start: 41 @38604 has 2 MA's), (43, 38610), (Start: 57 @38730 has 12 MA's), (62, 38754), (64, 38763), (75, 38808), (77, 38826), (78, 38829), (90, 38916), (100, 39012), (103, 39042), (110, 39093), (111, 39099), (116, 39129),

Gene: Bustleton_57 Start: 38699, Stop: 39121, Start Num: 57

Candidate Starts for Bustleton_57:

(Start: 41 @38573 has 2 MA's), (43, 38579), (Start: 57 @38699 has 12 MA's), (62, 38723), (64, 38732), (75, 38777), (77, 38795), (78, 38798), (90, 38885), (100, 38981), (103, 39011), (110, 39062), (111,

39068), (116, 39098),

Gene: Byron23_64 Start: 41180, Stop: 41623, Start Num: 54

Candidate Starts for Byron23_64:

(30, 40982), (33, 41000), (34, 41024), (40, 41090), (42, 41096), (Start: 54 @41180 has 24 MA's), (76, 41303), (79, 41333), (92, 41438), (93, 41441), (99, 41477), (100, 41483), (104, 41525), (108, 41552), (117, 41606), (118, 41609),

Gene: CarisSwetlik_62 Start: 41433, Stop: 42002, Start Num: 41

Candidate Starts for CarisSwetlik_62:

(24, 41253), (30, 41322), (Start: 41 @41433 has 2 MA's), (Start: 55 @41529 has 1 MA's), (77, 41673), (86, 41736), (90, 41763), (91, 41811), (99, 41859), (119, 41997),

Gene: Casey_59 Start: 38795, Stop: 39223, Start Num: 58

Candidate Starts for Casey_59:

(Start: 58 @38795 has 3 MA's), (63, 38813), (70, 38840), (71, 38843), (74, 38849), (75, 38864), (82, 38924), (89, 38960), (90, 38978), (92, 39032), (100, 39077), (107, 39152), (116, 39200), (117, 39206),

Gene: Cheeto1_59 Start: 39365, Stop: 39727, Start Num: 67

Candidate Starts for Cheeto1_59:

(Start: 67 @39365 has 3 MA's), (80, 39440), (82, 39452), (87, 39470), (90, 39491), (97, 39560), (104, 39620), (109, 39653), (114, 39677), (117, 39704),

Gene: ChickenKing_57 Start: 39423, Stop: 39785, Start Num: 67

Candidate Starts for ChickenKing_57:

(Start: 67 @39423 has 3 MA's), (82, 39510), (90, 39549), (97, 39618), (104, 39678), (114, 39735), (117, 39762), (118, 39765),

Gene: Clancy_62 Start: 40928, Stop: 41371, Start Num: 54

Candidate Starts for Clancy_62:

(30, 40730), (33, 40748), (34, 40772), (40, 40838), (42, 40844), (Start: 54 @40928 has 24 MA's), (76, 41051), (79, 41081), (92, 41186), (99, 41225), (100, 41231), (104, 41273), (108, 41300), (117, 41354), (118, 41357),

Gene: Clock_58 Start: 40957, Stop: 41472, Start Num: 45

Candidate Starts for Clock_58:

(35, 40864), (36, 40876), (Start: 45 @40957 has 5 MA's), (46, 40966), (75, 41128), (78, 41149), (79, 41170), (85, 41200), (90, 41242), (98, 41317), (105, 41398), (106, 41401), (111, 41422), (112, 41428), (115, 41449), (116, 41452),

Gene: Den3_63 Start: 41173, Stop: 41616, Start Num: 54

Candidate Starts for Den3_63:

(30, 40975), (33, 40993), (34, 41017), (40, 41083), (42, 41089), (Start: 54 @41173 has 24 MA's), (76, 41296), (79, 41326), (81, 41338), (92, 41431), (93, 41434), (99, 41470), (100, 41476), (104, 41518), (108, 41545), (117, 41599), (118, 41602),

Gene: Endor_65 Start: 41639, Stop: 42139, Start Num: 49

Candidate Starts for Endor_65:

(Start: 49 @41639 has 3 MA's), (79, 41843), (99, 41990), (100, 41996), (108, 42068),

Gene: Exploradora_62 Start: 40876, Stop: 41319, Start Num: 54

Candidate Starts for Exploradora_62:

(30, 40678), (31, 40690), (33, 40696), (34, 40720), (40, 40786), (42, 40792), (Start: 54 @40876 has 24 MA's), (76, 40999), (79, 41029), (92, 41134), (93, 41137), (99, 41173), (100, 41179), (104, 41221), (108, 41248), (118, 41305),

Gene: FarmerDoug_63 Start: 41088, Stop: 41597, Start Num: 49

Candidate Starts for FarmerDoug_63:

(32, 40950), (38, 41007), (Start: 49 @41088 has 3 MA's), (60, 41187), (99, 41448), (100, 41454), (108, 41526),

Gene: Figueroism_63 Start: 41220, Stop: 41663, Start Num: 54

Candidate Starts for Figueroism_63:

(30, 41022), (33, 41040), (34, 41064), (40, 41130), (42, 41136), (Start: 54 @41220 has 24 MA's), (76, 41343), (79, 41373), (92, 41478), (99, 41517), (100, 41523), (104, 41565), (108, 41592), (117, 41646), (118, 41649),

Gene: GaeCeo_60 Start: 39667, Stop: 40029, Start Num: 67

Candidate Starts for GaeCeo_60:

(Start: 67 @39667 has 3 MA's), (82, 39754), (87, 39772), (90, 39793), (95, 39850), (97, 39862), (101, 39886), (104, 39922), (114, 39979), (117, 40006), (118, 40009),

Gene: GardenB_64 Start: 41481, Stop: 41960, Start Num: 56

Candidate Starts for GardenB_64:

(44, 41391), (48, 41427), (Start: 56 @41481 has 3 MA's), (59, 41517), (84, 41676), (90, 41715), (113, 41919), (119, 41955),

Gene: GoingMerry_64 Start: 41152, Stop: 41595, Start Num: 54

Candidate Starts for GoingMerry_64:

(30, 40954), (33, 40972), (34, 40996), (40, 41062), (42, 41068), (Start: 54 @41152 has 24 MA's), (76, 41275), (79, 41305), (92, 41410), (93, 41413), (99, 41449), (100, 41455), (104, 41497), (108, 41524), (118, 41581),

Gene: Golden_58 Start: 39155, Stop: 39577, Start Num: 57

Candidate Starts for Golden_58:

(Start: 41 @39029 has 2 MA's), (43, 39035), (53, 39092), (Start: 57 @39155 has 12 MA's), (62, 39179), (64, 39188), (65, 39191), (70, 39209), (74, 39218), (75, 39233), (77, 39251), (81, 39281), (83, 39293), (86, 39308), (90, 39341), (100, 39437), (103, 39467), (110, 39518),

Gene: GoneGirl_65 Start: 41468, Stop: 41947, Start Num: 56

Candidate Starts for GoneGirl_65:

(44, 41378), (48, 41414), (Start: 56 @41468 has 3 MA's), (59, 41504), (77, 41612), (90, 41702), (113, 41906), (119, 41942),

Gene: Guetzie_59 Start: 39273, Stop: 39695, Start Num: 57

Candidate Starts for Guetzie_59:

(Start: 57 @39273 has 12 MA's), (62, 39297), (64, 39306), (65, 39309), (70, 39327), (74, 39336), (75, 39351), (77, 39369), (81, 39399), (83, 39411), (86, 39426), (90, 39459), (100, 39555), (103, 39585), (110, 39636),

Gene: HankSprout_63 Start: 40794, Stop: 41237, Start Num: 54

Candidate Starts for HankSprout_63:

(30, 40596), (33, 40614), (34, 40638), (40, 40704), (42, 40710), (Start: 54 @40794 has 24 MA's), (76, 40917), (79, 40947), (92, 41052), (93, 41055), (99, 41091), (100, 41097), (104, 41139), (108, 41166), (117, 41220), (118, 41223),

Gene: HavenFinLeoSun_64 Start: 41126, Stop: 41692, Start Num: 41

Candidate Starts for HavenFinLeoSun_64:

(27, 40988), (28, 40994), (30, 41015), (Start: 41 @41126 has 2 MA's), (Start: 55 @41222 has 1 MA's), (61, 41273), (77, 41366), (79, 41390), (90, 41453), (93, 41510), (99, 41549), (100, 41555), (111, 41642), (119, 41687),

Gene: Janus167_62 Start: 40903, Stop: 41346, Start Num: 54

Candidate Starts for Janus167_62:

(30, 40705), (33, 40723), (34, 40747), (40, 40813), (42, 40819), (Start: 54 @40903 has 24 MA's), (76, 41026), (79, 41056), (92, 41161), (93, 41164), (99, 41200), (100, 41206), (104, 41248), (108, 41275), (117, 41329), (118, 41332),

Gene: JasonD_64 Start: 41391, Stop: 41957, Start Num: 41

Candidate Starts for JasonD_64:

(21, 41133), (29, 41262), (30, 41280), (Start: 41 @41391 has 2 MA's), (Start: 55 @41487 has 1 MA's), (61, 41538), (72, 41577), (77, 41631), (79, 41655), (90, 41718), (93, 41775), (99, 41814), (100, 41820), (111, 41907), (119, 41952),

Gene: Jerbirus_64 Start: 40919, Stop: 41362, Start Num: 54

Candidate Starts for Jerbirus_64:

(30, 40721), (31, 40733), (33, 40739), (34, 40763), (40, 40829), (42, 40835), (Start: 54 @40919 has 24 MA's), (76, 41042), (79, 41072), (92, 41177), (93, 41180), (99, 41216), (100, 41222), (104, 41264), (108, 41291), (118, 41348),

Gene: JeriBeth_62 Start: 40807, Stop: 41250, Start Num: 54

Candidate Starts for JeriBeth_62:

(30, 40609), (31, 40621), (33, 40627), (34, 40651), (40, 40717), (42, 40723), (Start: 54 @40807 has 24 MA's), (76, 40930), (79, 40960), (92, 41065), (93, 41068), (99, 41104), (100, 41110), (104, 41152), (108, 41179), (118, 41236),

Gene: Jingles_58 Start: 38796, Stop: 39218, Start Num: 57

Candidate Starts for Jingles_58:

(Start: 41 @38670 has 2 MA's), (43, 38676), (53, 38733), (Start: 57 @38796 has 12 MA's), (62, 38820), (64, 38829), (75, 38874), (77, 38892), (78, 38895), (90, 38982), (100, 39078), (103, 39108), (110, 39159), (111, 39165), (116, 39195),

Gene: Kauala_56 Start: 38890, Stop: 39315, Start Num: 57

Candidate Starts for Kauala_56:

(37, 38713), (Start: 41 @38764 has 2 MA's), (43, 38770), (Start: 57 @38890 has 12 MA's), (62, 38917), (75, 38971), (77, 38989), (90, 39079), (96, 39151), (100, 39175), (111, 39262), (116, 39292),

Gene: KellyGreen_64 Start: 40913, Stop: 41356, Start Num: 54

Candidate Starts for KellyGreen_64:

(30, 40715), (33, 40733), (34, 40757), (40, 40823), (42, 40829), (Start: 54 @40913 has 24 MA's), (76, 41036), (79, 41066), (92, 41171), (93, 41174), (99, 41210), (100, 41216), (104, 41258), (108, 41285), (117, 41339), (118, 41342),

Gene: Koji_56 Start: 38918, Stop: 39340, Start Num: 57

Candidate Starts for Koji_56:

(Start: 41 @38792 has 2 MA's), (43, 38798), (53, 38855), (Start: 57 @38918 has 12 MA's), (62, 38942), (64, 38951), (75, 38996), (77, 39014), (78, 39017), (90, 39104), (100, 39200), (103, 39230), (110, 39281), (111, 39287), (116, 39317),

Gene: Kouch_63 Start: 40876, Stop: 41319, Start Num: 54

Candidate Starts for Kouch_63:

(30, 40678), (31, 40690), (33, 40696), (34, 40720), (40, 40786), (42, 40792), (Start: 54 @40876 has 24 MA's), (76, 40999), (79, 41029), (92, 41134), (93, 41137), (99, 41173), (100, 41179), (104, 41221), (108, 41248), (118, 41305),

Gene: Kurt1_63 Start: 41176, Stop: 41619, Start Num: 54

Candidate Starts for Kurt1_63:

(30, 40978), (31, 40990), (33, 40996), (34, 41020), (40, 41086), (42, 41092), (Start: 54 @41176 has 24 MA's), (76, 41299), (79, 41329), (92, 41434), (93, 41437), (99, 41473), (100, 41479), (104, 41521), (108, 41548), (118, 41605),

Gene: Lovelyunicorn_63 Start: 41171, Stop: 41614, Start Num: 54

Candidate Starts for Lovelyunicorn_63:

(30, 40973), (33, 40991), (34, 41015), (40, 41081), (42, 41087), (Start: 54 @41171 has 24 MA's), (76, 41294), (79, 41324), (92, 41429), (93, 41432), (99, 41468), (100, 41474), (104, 41516), (108, 41543), (118, 41600),

Gene: Lucky3_58 Start: 39155, Stop: 39577, Start Num: 57

Candidate Starts for Lucky3_58:

(Start: 41 @39029 has 2 MA's), (43, 39035), (53, 39092), (Start: 57 @39155 has 12 MA's), (62, 39179), (64, 39188), (65, 39191), (70, 39209), (74, 39218), (75, 39233), (77, 39251), (81, 39281), (83, 39293), (86, 39308), (90, 39341), (100, 39437), (103, 39467), (110, 39518),

Gene: McGalleon_63 Start: 41920, Stop: 42396, Start Num: 55

Candidate Starts for McGalleon_63:

(24, 41641), (29, 41692), (30, 41710), (Start: 41 @41821 has 2 MA's), (Start: 55 @41920 has 1 MA's), (75, 42058), (77, 42076), (90, 42166), (99, 42253), (100, 42259), (102, 42268), (108, 42328), (111, 42346), (113, 42355),

Gene: Merida02_64 Start: 40975, Stop: 41418, Start Num: 54

Candidate Starts for Merida02_64:

(30, 40777), (33, 40795), (34, 40819), (40, 40885), (42, 40891), (Start: 54 @40975 has 24 MA's), (76, 41098), (79, 41128), (92, 41233), (99, 41272), (100, 41278), (108, 41347), (118, 41404),

Gene: MonChoix_63 Start: 41006, Stop: 41509, Start Num: 49

Candidate Starts for MonChoix_63:

(Start: 49 @41006 has 3 MA's), (71, 41144), (81, 41219), (99, 41363), (100, 41369), (108, 41438),

Gene: MrWorldwide_63 Start: 41183, Stop: 41626, Start Num: 54

Candidate Starts for MrWorldwide_63:

(30, 40985), (31, 40997), (33, 41003), (34, 41027), (40, 41093), (42, 41099), (Start: 54 @41183 has 24 MA's), (76, 41306), (79, 41336), (92, 41441), (93, 41444), (99, 41480), (100, 41486), (104, 41528), (108, 41555), (118, 41612),

Gene: Nebulous_57 Start: 40714, Stop: 41241, Start Num: 45

Candidate Starts for Nebulous_57:

(35, 40621), (36, 40633), (Start: 45 @40714 has 5 MA's), (47, 40729), (52, 40747), (75, 40897), (78, 40918), (85, 40969), (90, 41011), (98, 41086), (105, 41167), (106, 41170), (111, 41191), (112, 41197), (115, 41218), (116, 41221),

Gene: Neferthena_63 Start: 40908, Stop: 41468, Start Num: 45

Candidate Starts for Neferthena_63:

(35, 40815), (36, 40827), (39, 40854), (Start: 45 @40908 has 5 MA's), (47, 40923), (50, 40932), (52, 40941), (Start: 56 @40983 has 3 MA's), (66, 41073), (78, 41145), (90, 41238), (93, 41286), (98, 41313), (105, 41394), (111, 41418), (112, 41424), (115, 41445), (119, 41463),

Gene: NickSell_63 Start: 41186, Stop: 41629, Start Num: 54

Candidate Starts for NickSell_63:

(30, 40988), (31, 41000), (33, 41006), (34, 41030), (40, 41096), (42, 41102), (Start: 54 @41186 has 24 MA's), (76, 41309), (79, 41339), (92, 41444), (93, 41447), (99, 41483), (100, 41489), (104, 41531), (108, 41558), (118, 41615),

Gene: OldNelly_63 Start: 40973, Stop: 41416, Start Num: 54

Candidate Starts for OldNelly_63:

(30, 40775), (33, 40793), (34, 40817), (40, 40883), (42, 40889), (Start: 54 @40973 has 24 MA's), (76, 41096), (79, 41126), (92, 41231), (99, 41270), (100, 41276), (108, 41345), (117, 41399), (118, 41402),

Gene: Oxtober96_64 Start: 41171, Stop: 41614, Start Num: 54

Candidate Starts for Oxtober96_64:

(30, 40973), (33, 40991), (34, 41015), (40, 41081), (42, 41087), (Start: 54 @41171 has 24 MA's), (76, 41294), (79, 41324), (92, 41429), (93, 41432), (99, 41468), (100, 41474), (104, 41516), (108, 41543), (118, 41600),

Gene: Pajaza_59 Start: 38795, Stop: 39223, Start Num: 58

Candidate Starts for Pajaza_59:

(Start: 58 @38795 has 3 MA's), (63, 38813), (70, 38840), (71, 38843), (74, 38849), (75, 38864), (82, 38924), (89, 38960), (90, 38978), (92, 39032), (100, 39077), (107, 39152), (116, 39200), (117, 39206),

Gene: Pherbot_57 Start: 38686, Stop: 39108, Start Num: 57

Candidate Starts for Pherbot_57:

(Start: 41 @38560 has 2 MA's), (43, 38566), (Start: 57 @38686 has 12 MA's), (62, 38710), (64, 38719), (75, 38764), (77, 38782), (78, 38785), (90, 38872), (100, 38968), (103, 38998), (110, 39049), (111, 39055), (116, 39085),

Gene: Phiderman_63 Start: 41172, Stop: 41615, Start Num: 54

Candidate Starts for Phiderman_63:

(30, 40974), (31, 40986), (33, 40992), (34, 41016), (40, 41082), (42, 41088), (Start: 54 @41172 has 24 MA's), (76, 41295), (79, 41325), (92, 41430), (93, 41433), (99, 41469), (100, 41475), (104, 41517), (108, 41544), (118, 41601),

Gene: PhredFlintston_63 Start: 41176, Stop: 41619, Start Num: 54

Candidate Starts for PhredFlintston_63:

(25, 40909), (26, 40921), (29, 40960), (30, 40978), (31, 40990), (33, 40996), (34, 41020), (40, 41086), (Start: 54 @41176 has 24 MA's), (76, 41299), (79, 41329), (92, 41434), (93, 41437), (99, 41473), (100, 41479), (104, 41521), (108, 41548), (118, 41605),

Gene: Pikmin_59 Start: 38795, Stop: 39223, Start Num: 58

Candidate Starts for Pikmin_59:

(Start: 58 @38795 has 3 MA's), (63, 38813), (70, 38840), (71, 38843), (74, 38849), (75, 38864), (82, 38924), (89, 38960), (90, 38978), (92, 39032), (100, 39077), (107, 39152), (116, 39200), (117, 39206),

Gene: PrincePhergus_57 Start: 38703, Stop: 39128, Start Num: 57

Candidate Starts for PrincePhergus_57:

(Start: 41 @38577 has 2 MA's), (43, 38583), (53, 38640), (Start: 57 @38703 has 12 MA's), (62, 38730), (64, 38739), (75, 38784), (77, 38802), (78, 38805), (90, 38892), (100, 38988), (103, 39018), (110, 39069), (111, 39075), (116, 39105),

Gene: Rapheph_63 Start: 41176, Stop: 41619, Start Num: 54

Candidate Starts for Rapheph_63:

(30, 40978), (31, 40990), (33, 40996), (34, 41020), (40, 41086), (42, 41092), (Start: 54 @41176 has 24 MA's), (76, 41299), (79, 41329), (92, 41434), (99, 41473), (100, 41479), (108, 41548), (117, 41602), (118, 41605),

Gene: RenegadeRaider_59 Start: 38624, Stop: 39049, Start Num: 57

Candidate Starts for RenegadeRaider_59:

(Start: 41 @38498 has 2 MA's), (43, 38504), (51, 38549), (Start: 57 @38624 has 12 MA's), (62, 38651), (64, 38660), (75, 38705), (77, 38723), (78, 38726), (90, 38813), (100, 38909), (103, 38939), (110, 38990), (111, 38996), (116, 39026),

Gene: Schimmels22_60 Start: 38999, Stop: 39520, Start Num: 45

Candidate Starts for Schimmels22_60:

(1, 38135), (2, 38144), (3, 38168), (4, 38174), (5, 38177), (6, 38189), (7, 38198), (8, 38204), (9, 38273), (10, 38285), (11, 38309), (12, 38345), (13, 38354), (14, 38369), (15, 38375), (16, 38402), (17, 38429), (18, 38531), (19, 38633), (20, 38705), (22, 38729), (23, 38750), (Start: 45 @38999 has 5 MA's), (68, 39125), (69, 39128), (73, 39146), (76, 39185), (77, 39191), (79, 39215), (80, 39221), (88, 39260), (98, 39368), (111, 39470), (112, 39476), (115, 39497),

Gene: Sedgewig_62 Start: 40878, Stop: 41321, Start Num: 54

Candidate Starts for Sedgewig_62:

(30, 40680), (33, 40698), (34, 40722), (40, 40788), (42, 40794), (Start: 54 @40878 has 24 MA's), (76, 41001), (79, 41031), (92, 41136), (93, 41139), (99, 41175), (100, 41181), (104, 41223), (108, 41250), (117, 41304), (118, 41307),

Gene: Sinatra_58 Start: 38698, Stop: 39120, Start Num: 57

Candidate Starts for Sinatra_58:

(Start: 41 @38572 has 2 MA's), (43, 38578), (51, 38623), (Start: 57 @38698 has 12 MA's), (62, 38722), (64, 38731), (75, 38776), (77, 38794), (78, 38797), (90, 38884), (100, 38980), (103, 39010), (110, 39061), (111, 39067), (116, 39097),

Gene: SirVictor_59 Start: 39273, Stop: 39695, Start Num: 57

Candidate Starts for SirVictor_59:

(Start: 57 @39273 has 12 MA's), (62, 39297), (64, 39306), (65, 39309), (70, 39327), (74, 39336), (75, 39351), (77, 39369), (81, 39399), (83, 39411), (86, 39426), (90, 39459), (100, 39555), (103, 39585), (110, 39636),

Gene: SolidSnake_64 Start: 40969, Stop: 41412, Start Num: 54

Candidate Starts for SolidSnake_64:

(30, 40771), (33, 40789), (34, 40813), (40, 40879), (42, 40885), (Start: 54 @40969 has 24 MA's), (76, 41092), (79, 41122), (92, 41227), (99, 41266), (100, 41272), (108, 41341), (118, 41398),

Gene: SonOfLevi_64 Start: 40946, Stop: 41389, Start Num: 54

Candidate Starts for SonOfLevi_64:

(30, 40748), (31, 40760), (33, 40766), (34, 40790), (40, 40856), (42, 40862), (Start: 54 @40946 has 24 MA's), (76, 41069), (79, 41099), (92, 41204), (99, 41243), (100, 41249), (104, 41291), (108, 41318), (118, 41375),

Gene: StirfryIV_62 Start: 40892, Stop: 41335, Start Num: 54

Candidate Starts for StirfryIV_62:

(30, 40694), (33, 40712), (34, 40736), (40, 40802), (42, 40808), (Start: 54 @40892 has 24 MA's), (76, 41015), (79, 41045), (92, 41150), (93, 41153), (99, 41189), (100, 41195), (104, 41237), (108, 41264), (117, 41318), (118, 41321),

Gene: Symere_62 Start: 40888, Stop: 41331, Start Num: 54

Candidate Starts for Symere_62:

(30, 40690), (33, 40708), (34, 40732), (40, 40798), (42, 40804), (Start: 54 @40888 has 24 MA's), (76, 41011), (79, 41041), (92, 41146), (93, 41149), (99, 41185), (100, 41191), (104, 41233), (108, 41260), (117, 41314), (118, 41317),

Gene: Velene_63 Start: 41171, Stop: 41614, Start Num: 54

Candidate Starts for Velene_63:

(30, 40973), (31, 40985), (33, 40991), (34, 41015), (40, 41081), (42, 41087), (Start: 54 @41171 has 24 MA's), (76, 41294), (79, 41324), (92, 41429), (99, 41468), (100, 41474), (104, 41516), (108, 41543), (117, 41597), (118, 41600),

Gene: WestPM_59 Start: 38858, Stop: 39406, Start Num: 45

Candidate Starts for WestPM_59:

(18, 38390), (19, 38492), (20, 38564), (22, 38588), (23, 38609), (Start: 45 @38858 has 5 MA's), (68, 38984), (69, 38987), (76, 39071), (77, 39077), (79, 39101), (80, 39107), (88, 39146), (94, 39233), (98, 39254), (111, 39356), (112, 39362), (115, 39383),