

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 208692 Report

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

Pham number 208692 has 54 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Symere_64, Byron23_64, Janus167_62, RosieMae_64, Sedgewig_62, HankSprout_63, StirfryIV_62
- Track 2 : NickSell_63, Exploradora_64, Jerbirus_64, Kurt1_63, MrWorldwide_63, JeriBeth_64, Phiderman_63
- Track 3 : Oxtober96_64, Lovelyunicorn_63
- Track 4 : OldNelly_63
- Track 5 : ShaiHulud_64
- Track 6 : Endor_65
- Track 7 : JasonD_66
- Track 8 : FarmerDoug_63
- Track 9 : McGalleon_63
- Track 10 : Agente005_64
- Track 11 : Anilorac_63
- Track 12 : Den3_63
- Track 13 : Rappheph_63
- Track 14 : Figueroism_63, Clancy_62
- Track 15 : Blage_63, Velene_63
- Track 16 : SonOfLevi_64
- Track 17 : CarisSwetlik_63
- Track 18 : GardenB_64
- Track 19 : PhredFlintston_63
- Track 20 : MonChoix_63
- Track 21 : Pikmin_59, Casey_59, Pajaza_59
- Track 22 : Sinatra_58, RenegadeRaider_59
- Track 23 : Golden_58, Lucky3_58
- Track 24 : Bustleton_57, BouleyBill_56, Pherbot_57
- Track 25 : Jingles_56, PrincePhergus_57, Koji_56
- Track 26 : Kauala_56
- Track 27 : Guetzie_59, SirVictor_59
- Track 28 : GaeCeo_60
- Track 29 : ChickenKing_57
- Track 30 : 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 26, it was called in 20 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Blage_63, Byron23_64, Clancy_62, Den3_63, Exploradora_64, Figueroism_63, HankSprout_63, Janus167_62, Jerbirus_64, JeriBeth_64, Kurt1_63, Lovelyunicorn_63, MrWorldwide_63, NickSell_63, OldNelly_63, Oxtober96_64, Phiderman_63, PhredFlintston_63, Rapheph_63, RosieMae_64, Sedgewig_62, ShaiHulud_64, SonOfLevi_64, StirfryIV_62, Symere_64, 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_63, BouleyBill_56, Bustleton_57, CarisSwetlik_63, Casey_59, Cheeto1_59, ChickenKing_57, Endor_65, FarmerDoug_63, GaeCeo_60, GardenB_64, Golden_58, Guetzie_59, JasonD_66, Jingles_56, Kauala_56, Koji_56, Lucky3_58, McGalleon_63, MonChoix_63, Pajaza_59, Pherbot_57, Pikmin_59, PrincePhergus_57, RenegadeRaider_59, Sinatra_58, SirVictor_59,

Summary by start number:

Start 15:

- Found in 3 of 54 (5.6%) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: CarisSwetlik_63 (EA1), JasonD_66 (EA1),

Start 22:

- Found in 3 of 54 (5.6%) of genes in pham
- Manual Annotations of this start: 3 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Endor_65 (EA1), FarmerDoug_63 (EA1), MonChoix_63 (EA1),

Start 25:

- Found in 6 of 54 (11.1%) of genes in pham
- Manual Annotations of this start: 3 of 43
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Agente005_64 (EA1), Anilorac_63 (EA1), GardenB_64 (EA1), McGalleon_63 (EA1),

Start 26:

- Found in 26 of 54 (48.1%) of genes in pham
- Manual Annotations of this start: 20 of 43
- 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_64 (UNK), Figueroism_63 (EA1), HankSprout_63 (EA1), Janus167_62 (EA1), Jerbirus_64 (EA1), JeriBeth_64 (EA1), Kurt1_63 (EA1), Lovelyunicorn_63 (EA1), MrWorldwide_63 (EA1), NickSell_63 (EA1), OldNelly_63 (EA1), Oxtober96_64 (EA1), Phiderman_63 (EA1), PhredFlintston_63

(EA1), Rapheph_63 (EA1), RosieMae_64 (EA1), Sedgewig_62 (EA1), ShaiHulud_64 (EA1), SonOfLevi_64 (EA1), StirfryIV_62 (EA1), Symere_64 (EA1), Velene_63 (EA1),

Start 29:

- Found in 13 of 54 (24.1%) of genes in pham
- Manual Annotations of this start: 11 of 43
- 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_56 (EA4), Kauala_56 (EA4), Koji_56 (EA4), Lucky3_58 (EA4), Pherbot_57 (EA4), PrincePhergus_57 (EA4), RenegadeRaider_59 (EA4), Sinatra_58 (EA4), SirVictor_59 (EA4),

Start 30:

- Found in 3 of 54 (5.6%) of genes in pham
- Manual Annotations of this start: 3 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Casey_59 (EA3), Pajaza_59 (EA3), Pikmin_59 (EA3),

Start 38:

- Found in 3 of 54 (5.6%) of genes in pham
- Manual Annotations of this start: 3 of 43
- 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 5 clusters represented in this pham: EA9, EA1, EA3, UNK, EA4,

Info for manual annotations of cluster EA1:

- Start number 22 was manually annotated 3 times for cluster EA1.
- Start number 25 was manually annotated 3 times for cluster EA1.
- Start number 26 was manually annotated 20 times for cluster EA1.

Info for manual annotations of cluster EA3:

- Start number 30 was manually annotated 3 times for cluster EA3.

Info for manual annotations of cluster EA4:

- Start number 29 was manually annotated 11 times for cluster EA4.

Info for manual annotations of cluster EA9:

- Start number 38 was manually annotated 3 times for cluster EA9.

Gene Information:

Gene: Agente005_64 Start: 41218, Stop: 41679, Start Num: 25

Candidate Starts for Agente005_64:

(21, 41164), (Start: 25 @41218 has 3 MA's), (44, 41350), (51, 41401), (55, 41440), (74, 41638), (79, 41674),

Gene: Anilorac_63 Start: 41125, Stop: 41589, Start Num: 25

Candidate Starts for Anilorac_63:

(21, 41071), (Start: 25 @41125 has 3 MA's), (44, 41257), (55, 41347), (59, 41413), (74, 41548), (79, 41584),

Gene: Blage_63 Start: 41170, Stop: 41613, Start Num: 26

Candidate Starts for Blage_63:

(8, 40972), (9, 40984), (11, 40990), (12, 41014), (17, 41080), (19, 41086), (Start: 26 @41170 has 20 MA's), (43, 41293), (46, 41323), (57, 41428), (63, 41467), (64, 41473), (68, 41515), (70, 41542), (77, 41596), (78, 41599),

Gene: BouleyBill_56 Start: 38730, Stop: 39152, Start Num: 29

Candidate Starts for BouleyBill_56:

(18, 38604), (20, 38610), (Start: 29 @38730 has 11 MA's), (33, 38754), (35, 38763), (42, 38808), (44, 38826), (45, 38829), (55, 38916), (64, 39012), (67, 39042), (72, 39093), (73, 39099), (76, 39129),

Gene: Bustleton_57 Start: 38699, Stop: 39121, Start Num: 29

Candidate Starts for Bustleton_57:

(18, 38573), (20, 38579), (Start: 29 @38699 has 11 MA's), (33, 38723), (35, 38732), (42, 38777), (44, 38795), (45, 38798), (55, 38885), (64, 38981), (67, 39011), (72, 39062), (73, 39068), (76, 39098),

Gene: Byron23_64 Start: 41180, Stop: 41623, Start Num: 26

Candidate Starts for Byron23_64:

(8, 40982), (11, 41000), (12, 41024), (17, 41090), (19, 41096), (Start: 26 @41180 has 20 MA's), (43, 41303), (46, 41333), (57, 41438), (58, 41441), (63, 41477), (64, 41483), (68, 41525), (70, 41552), (77, 41606), (78, 41609),

Gene: CarisSwetlik_63 Start: 41433, Stop: 42002, Start Num: 15

Candidate Starts for CarisSwetlik_63:

(2, 41253), (6, 41322), (15, 41433), (Start: 25 @41529 has 3 MA's), (44, 41673), (52, 41736), (55, 41763), (56, 41811), (63, 41859), (79, 41997),

Gene: Casey_59 Start: 38795, Stop: 39223, Start Num: 30

Candidate Starts for Casey_59:

(Start: 30 @38795 has 3 MA's), (34, 38813), (39, 38840), (40, 38843), (41, 38849), (42, 38864), (49, 38924), (54, 38960), (55, 38978), (57, 39032), (64, 39077), (69, 39152), (76, 39200), (77, 39206),

Gene: Cheeto1_59 Start: 39365, Stop: 39727, Start Num: 38

Candidate Starts for Cheeto1_59:

(Start: 38 @39365 has 3 MA's), (47, 39440), (49, 39452), (53, 39470), (55, 39491), (62, 39560), (68, 39620), (71, 39653), (75, 39677), (77, 39704),

Gene: ChickenKing_57 Start: 39423, Stop: 39785, Start Num: 38

Candidate Starts for ChickenKing_57:

(Start: 38 @39423 has 3 MA's), (49, 39510), (55, 39549), (62, 39618), (68, 39678), (75, 39735), (77, 39762), (78, 39765),

Gene: Clancy_62 Start: 40928, Stop: 41371, Start Num: 26

Candidate Starts for Clancy_62:

(8, 40730), (11, 40748), (12, 40772), (17, 40838), (19, 40844), (Start: 26 @40928 has 20 MA's), (43, 41051), (46, 41081), (57, 41186), (63, 41225), (64, 41231), (68, 41273), (70, 41300), (77, 41354), (78, 41357),

Gene: Den3_63 Start: 41173, Stop: 41616, Start Num: 26

Candidate Starts for Den3_63:

(8, 40975), (11, 40993), (12, 41017), (17, 41083), (19, 41089), (Start: 26 @41173 has 20 MA's), (43, 41296), (46, 41326), (48, 41338), (57, 41431), (58, 41434), (63, 41470), (64, 41476), (68, 41518), (70, 41545), (77, 41599), (78, 41602),

Gene: Endor_65 Start: 41639, Stop: 42139, Start Num: 22

Candidate Starts for Endor_65:

(Start: 22 @41639 has 3 MA's), (46, 41843), (63, 41990), (64, 41996), (70, 42068),

Gene: Exploradora_64 Start: 40876, Stop: 41319, Start Num: 26

Candidate Starts for Exploradora_64:

(8, 40678), (9, 40690), (11, 40696), (12, 40720), (17, 40786), (19, 40792), (Start: 26 @40876 has 20 MA's), (43, 40999), (46, 41029), (57, 41134), (58, 41137), (63, 41173), (64, 41179), (68, 41221), (70, 41248), (78, 41305),

Gene: FarmerDoug_63 Start: 41088, Stop: 41597, Start Num: 22

Candidate Starts for FarmerDoug_63:

(10, 40950), (14, 41007), (Start: 22 @41088 has 3 MA's), (32, 41187), (63, 41448), (64, 41454), (70, 41526),

Gene: Figueroism_63 Start: 41220, Stop: 41663, Start Num: 26

Candidate Starts for Figueroism_63:

(8, 41022), (11, 41040), (12, 41064), (17, 41130), (19, 41136), (Start: 26 @41220 has 20 MA's), (43, 41343), (46, 41373), (57, 41478), (63, 41517), (64, 41523), (68, 41565), (70, 41592), (77, 41646), (78, 41649),

Gene: GaeCeo_60 Start: 39667, Stop: 40029, Start Num: 38

Candidate Starts for GaeCeo_60:

(Start: 38 @39667 has 3 MA's), (49, 39754), (53, 39772), (55, 39793), (60, 39850), (62, 39862), (65, 39886), (68, 39922), (75, 39979), (77, 40006), (78, 40009),

Gene: GardenB_64 Start: 41481, Stop: 41960, Start Num: 25

Candidate Starts for GardenB_64:

(16, 41391), (21, 41427), (Start: 25 @41481 has 3 MA's), (27, 41517), (51, 41676), (55, 41715), (74, 41919), (79, 41955),

Gene: Golden_58 Start: 39155, Stop: 39577, Start Num: 29

Candidate Starts for Golden_58:

(18, 39029), (20, 39035), (24, 39092), (Start: 29 @39155 has 11 MA's), (33, 39179), (35, 39188), (36, 39191), (39, 39209), (41, 39218), (42, 39233), (44, 39251), (48, 39281), (50, 39293), (52, 39308), (55, 39341), (64, 39437), (67, 39467), (72, 39518),

Gene: Guetzie_59 Start: 39273, Stop: 39695, Start Num: 29

Candidate Starts for Guetzie_59:

(Start: 29 @39273 has 11 MA's), (33, 39297), (35, 39306), (36, 39309), (39, 39327), (41, 39336), (42, 39351), (44, 39369), (48, 39399), (50, 39411), (52, 39426), (55, 39459), (64, 39555), (67, 39585), (72, 39636),

Gene: HankSprout_63 Start: 40794, Stop: 41237, Start Num: 26

Candidate Starts for HankSprout_63:

(8, 40596), (11, 40614), (12, 40638), (17, 40704), (19, 40710), (Start: 26 @40794 has 20 MA's), (43, 40917), (46, 40947), (57, 41052), (58, 41055), (63, 41091), (64, 41097), (68, 41139), (70, 41166), (77, 41220), (78, 41223),

Gene: Janus167_62 Start: 40903, Stop: 41346, Start Num: 26

Candidate Starts for Janus167_62:

(8, 40705), (11, 40723), (12, 40747), (17, 40813), (19, 40819), (Start: 26 @40903 has 20 MA's), (43, 41026), (46, 41056), (57, 41161), (58, 41164), (63, 41200), (64, 41206), (68, 41248), (70, 41275), (77, 41329), (78, 41332),

Gene: JasonD_66 Start: 41391, Stop: 41957, Start Num: 15

Candidate Starts for JasonD_66:

(1, 41133), (5, 41262), (6, 41280), (15, 41391), (Start: 25 @41487 has 3 MA's), (28, 41538), (37, 41577), (44, 41631), (46, 41655), (55, 41718), (58, 41775), (63, 41814), (64, 41820), (73, 41907), (79, 41952),

Gene: Jerbirus_64 Start: 40919, Stop: 41362, Start Num: 26

Candidate Starts for Jerbirus_64:

(8, 40721), (9, 40733), (11, 40739), (12, 40763), (17, 40829), (19, 40835), (Start: 26 @40919 has 20 MA's), (43, 41042), (46, 41072), (57, 41177), (58, 41180), (63, 41216), (64, 41222), (68, 41264), (70, 41291), (78, 41348),

Gene: JeriBeth_64 Start: 40807, Stop: 41250, Start Num: 26

Candidate Starts for JeriBeth_64:

(8, 40609), (9, 40621), (11, 40627), (12, 40651), (17, 40717), (19, 40723), (Start: 26 @40807 has 20 MA's), (43, 40930), (46, 40960), (57, 41065), (58, 41068), (63, 41104), (64, 41110), (68, 41152), (70, 41179), (78, 41236),

Gene: Jingles_56 Start: 38796, Stop: 39218, Start Num: 29

Candidate Starts for Jingles_56:

(18, 38670), (20, 38676), (24, 38733), (Start: 29 @38796 has 11 MA's), (33, 38820), (35, 38829), (42, 38874), (44, 38892), (45, 38895), (55, 38982), (64, 39078), (67, 39108), (72, 39159), (73, 39165), (76, 39195),

Gene: Kauala_56 Start: 38890, Stop: 39315, Start Num: 29

Candidate Starts for Kauala_56:

(13, 38713), (18, 38764), (20, 38770), (Start: 29 @38890 has 11 MA's), (33, 38917), (42, 38971), (44, 38989), (55, 39079), (61, 39151), (64, 39175), (73, 39262), (76, 39292),

Gene: Koji_56 Start: 38918, Stop: 39340, Start Num: 29

Candidate Starts for Koji_56:

(18, 38792), (20, 38798), (24, 38855), (Start: 29 @38918 has 11 MA's), (33, 38942), (35, 38951), (42, 38996), (44, 39014), (45, 39017), (55, 39104), (64, 39200), (67, 39230), (72, 39281), (73, 39287), (76, 39317),

Gene: Kurt1_63 Start: 41176, Stop: 41619, Start Num: 26

Candidate Starts for Kurt1_63:

(8, 40978), (9, 40990), (11, 40996), (12, 41020), (17, 41086), (19, 41092), (Start: 26 @41176 has 20 MA's), (43, 41299), (46, 41329), (57, 41434), (58, 41437), (63, 41473), (64, 41479), (68, 41521), (70, 41548), (78, 41605),

Gene: Lovelyunicorn_63 Start: 41171, Stop: 41614, Start Num: 26

Candidate Starts for Lovelyunicorn_63:

(8, 40973), (11, 40991), (12, 41015), (17, 41081), (19, 41087), (Start: 26 @41171 has 20 MA's), (43, 41294), (46, 41324), (57, 41429), (58, 41432), (63, 41468), (64, 41474), (68, 41516), (70, 41543), (78, 41600),

Gene: Lucky3_58 Start: 39155, Stop: 39577, Start Num: 29

Candidate Starts for Lucky3_58:

(18, 39029), (20, 39035), (24, 39092), (Start: 29 @39155 has 11 MA's), (33, 39179), (35, 39188), (36, 39191), (39, 39209), (41, 39218), (42, 39233), (44, 39251), (48, 39281), (50, 39293), (52, 39308), (55, 39341), (64, 39437), (67, 39467), (72, 39518),

Gene: McGalleon_63 Start: 41920, Stop: 42396, Start Num: 25

Candidate Starts for McGalleon_63:

(2, 41641), (5, 41692), (6, 41710), (15, 41821), (Start: 25 @41920 has 3 MA's), (42, 42058), (44, 42076), (55, 42166), (63, 42253), (64, 42259), (66, 42268), (70, 42328), (73, 42346), (74, 42355),

Gene: MonChoix_63 Start: 41006, Stop: 41509, Start Num: 22

Candidate Starts for MonChoix_63:

(Start: 22 @41006 has 3 MA's), (40, 41144), (48, 41219), (63, 41363), (64, 41369), (70, 41438),

Gene: MrWorldwide_63 Start: 41183, Stop: 41626, Start Num: 26

Candidate Starts for MrWorldwide_63:

(8, 40985), (9, 40997), (11, 41003), (12, 41027), (17, 41093), (19, 41099), (Start: 26 @41183 has 20 MA's), (43, 41306), (46, 41336), (57, 41441), (58, 41444), (63, 41480), (64, 41486), (68, 41528), (70, 41555), (78, 41612),

Gene: NickSell_63 Start: 41186, Stop: 41629, Start Num: 26

Candidate Starts for NickSell_63:

(8, 40988), (9, 41000), (11, 41006), (12, 41030), (17, 41096), (19, 41102), (Start: 26 @41186 has 20 MA's), (43, 41309), (46, 41339), (57, 41444), (58, 41447), (63, 41483), (64, 41489), (68, 41531), (70, 41558), (78, 41615),

Gene: OldNelly_63 Start: 40973, Stop: 41416, Start Num: 26

Candidate Starts for OldNelly_63:

(8, 40775), (11, 40793), (12, 40817), (17, 40883), (19, 40889), (Start: 26 @40973 has 20 MA's), (43, 41096), (46, 41126), (57, 41231), (63, 41270), (64, 41276), (70, 41345), (77, 41399), (78, 41402),

Gene: Oxtober96_64 Start: 41171, Stop: 41614, Start Num: 26

Candidate Starts for Oxtober96_64:

(8, 40973), (11, 40991), (12, 41015), (17, 41081), (19, 41087), (Start: 26 @41171 has 20 MA's), (43, 41294), (46, 41324), (57, 41429), (58, 41432), (63, 41468), (64, 41474), (68, 41516), (70, 41543), (78, 41600),

Gene: Pajaza_59 Start: 38795, Stop: 39223, Start Num: 30

Candidate Starts for Pajaza_59:

(Start: 30 @38795 has 3 MA's), (34, 38813), (39, 38840), (40, 38843), (41, 38849), (42, 38864), (49, 38924), (54, 38960), (55, 38978), (57, 39032), (64, 39077), (69, 39152), (76, 39200), (77, 39206),

Gene: Pherbot_57 Start: 38686, Stop: 39108, Start Num: 29

Candidate Starts for Pherbot_57:

(18, 38560), (20, 38566), (Start: 29 @38686 has 11 MA's), (33, 38710), (35, 38719), (42, 38764), (44, 38782), (45, 38785), (55, 38872), (64, 38968), (67, 38998), (72, 39049), (73, 39055), (76, 39085),

Gene: Phiderman_63 Start: 41172, Stop: 41615, Start Num: 26

Candidate Starts for Phiderman_63:

(8, 40974), (9, 40986), (11, 40992), (12, 41016), (17, 41082), (19, 41088), (Start: 26 @41172 has 20 MA's), (43, 41295), (46, 41325), (57, 41430), (58, 41433), (63, 41469), (64, 41475), (68, 41517), (70, 41544), (78, 41601),

Gene: PhredFlintston_63 Start: 41176, Stop: 41619, Start Num: 26

Candidate Starts for PhredFlintston_63:

(3, 40909), (4, 40921), (7, 40960), (8, 40978), (9, 40990), (11, 40996), (12, 41020), (17, 41086), (Start: 26 @41176 has 20 MA's), (43, 41299), (46, 41329), (57, 41434), (58, 41437), (63, 41473), (64, 41479), (68, 41521), (70, 41548), (78, 41605),

Gene: Pikmin_59 Start: 38795, Stop: 39223, Start Num: 30

Candidate Starts for Pikmin_59:

(Start: 30 @38795 has 3 MA's), (34, 38813), (39, 38840), (40, 38843), (41, 38849), (42, 38864), (49, 38924), (54, 38960), (55, 38978), (57, 39032), (64, 39077), (69, 39152), (76, 39200), (77, 39206),

Gene: PrincePhergus_57 Start: 38703, Stop: 39128, Start Num: 29

Candidate Starts for PrincePhergus_57:

(18, 38577), (20, 38583), (24, 38640), (Start: 29 @38703 has 11 MA's), (33, 38730), (35, 38739), (42, 38784), (44, 38802), (45, 38805), (55, 38892), (64, 38988), (67, 39018), (72, 39069), (73, 39075), (76, 39105),

Gene: Rapheph_63 Start: 41176, Stop: 41619, Start Num: 26

Candidate Starts for Rapheph_63:

(8, 40978), (9, 40990), (11, 40996), (12, 41020), (17, 41086), (19, 41092), (Start: 26 @41176 has 20 MA's), (43, 41299), (46, 41329), (57, 41434), (63, 41473), (64, 41479), (70, 41548), (77, 41602), (78, 41605),

Gene: RenegadeRaider_59 Start: 38624, Stop: 39049, Start Num: 29

Candidate Starts for RenegadeRaider_59:

(18, 38498), (20, 38504), (23, 38549), (Start: 29 @38624 has 11 MA's), (33, 38651), (35, 38660), (42, 38705), (44, 38723), (45, 38726), (55, 38813), (64, 38909), (67, 38939), (72, 38990), (73, 38996), (76, 39026),

Gene: RosieMae_64 Start: 40980, Stop: 41423, Start Num: 26

Candidate Starts for RosieMae_64:

(8, 40782), (11, 40800), (12, 40824), (17, 40890), (19, 40896), (Start: 26 @40980 has 20 MA's), (43, 41103), (46, 41133), (57, 41238), (58, 41241), (63, 41277), (64, 41283), (68, 41325), (70, 41352), (77, 41406), (78, 41409),

Gene: Sedgewig_62 Start: 40878, Stop: 41321, Start Num: 26

Candidate Starts for Sedgewig_62:

(8, 40680), (11, 40698), (12, 40722), (17, 40788), (19, 40794), (Start: 26 @40878 has 20 MA's), (43, 41001), (46, 41031), (57, 41136), (58, 41139), (63, 41175), (64, 41181), (68, 41223), (70, 41250), (77, 41304), (78, 41307),

Gene: ShaiHulud_64 Start: 41185, Stop: 41628, Start Num: 26

Candidate Starts for ShaiHulud_64:

(8, 40987), (11, 41005), (12, 41029), (17, 41095), (19, 41101), (Start: 26 @41185 has 20 MA's), (31, 41230), (43, 41308), (46, 41338), (57, 41443), (58, 41446), (63, 41482), (64, 41488), (68, 41530), (70, 41557), (78, 41614),

Gene: Sinatra_58 Start: 38698, Stop: 39120, Start Num: 29

Candidate Starts for Sinatra_58:

(18, 38572), (20, 38578), (23, 38623), (Start: 29 @38698 has 11 MA's), (33, 38722), (35, 38731), (42, 38776), (44, 38794), (45, 38797), (55, 38884), (64, 38980), (67, 39010), (72, 39061), (73, 39067), (76, 39097),

Gene: SirVictor_59 Start: 39273, Stop: 39695, Start Num: 29

Candidate Starts for SirVictor_59:

(Start: 29 @39273 has 11 MA's), (33, 39297), (35, 39306), (36, 39309), (39, 39327), (41, 39336), (42, 39351), (44, 39369), (48, 39399), (50, 39411), (52, 39426), (55, 39459), (64, 39555), (67, 39585), (72, 39636),

Gene: SonOfLevi_64 Start: 40946, Stop: 41389, Start Num: 26

Candidate Starts for SonOfLevi_64:

(8, 40748), (9, 40760), (11, 40766), (12, 40790), (17, 40856), (19, 40862), (Start: 26 @40946 has 20 MA's), (43, 41069), (46, 41099), (57, 41204), (63, 41243), (64, 41249), (68, 41291), (70, 41318), (78, 41375),

Gene: StirfryIV_62 Start: 40892, Stop: 41335, Start Num: 26

Candidate Starts for StirfryIV_62:

(8, 40694), (11, 40712), (12, 40736), (17, 40802), (19, 40808), (Start: 26 @40892 has 20 MA's), (43, 41015), (46, 41045), (57, 41150), (58, 41153), (63, 41189), (64, 41195), (68, 41237), (70, 41264), (77, 41318), (78, 41321),

Gene: Symere_64 Start: 40888, Stop: 41331, Start Num: 26

Candidate Starts for Symere_64:

(8, 40690), (11, 40708), (12, 40732), (17, 40798), (19, 40804), (Start: 26 @40888 has 20 MA's), (43, 41011), (46, 41041), (57, 41146), (58, 41149), (63, 41185), (64, 41191), (68, 41233), (70, 41260), (77, 41314), (78, 41317),

Gene: Velene_63 Start: 41171, Stop: 41614, Start Num: 26

Candidate Starts for Velene_63:

(8, 40973), (9, 40985), (11, 40991), (12, 41015), (17, 41081), (19, 41087), (Start: 26 @41171 has 20 MA's), (43, 41294), (46, 41324), (57, 41429), (63, 41468), (64, 41474), (68, 41516), (70, 41543), (77, 41597), (78, 41600),