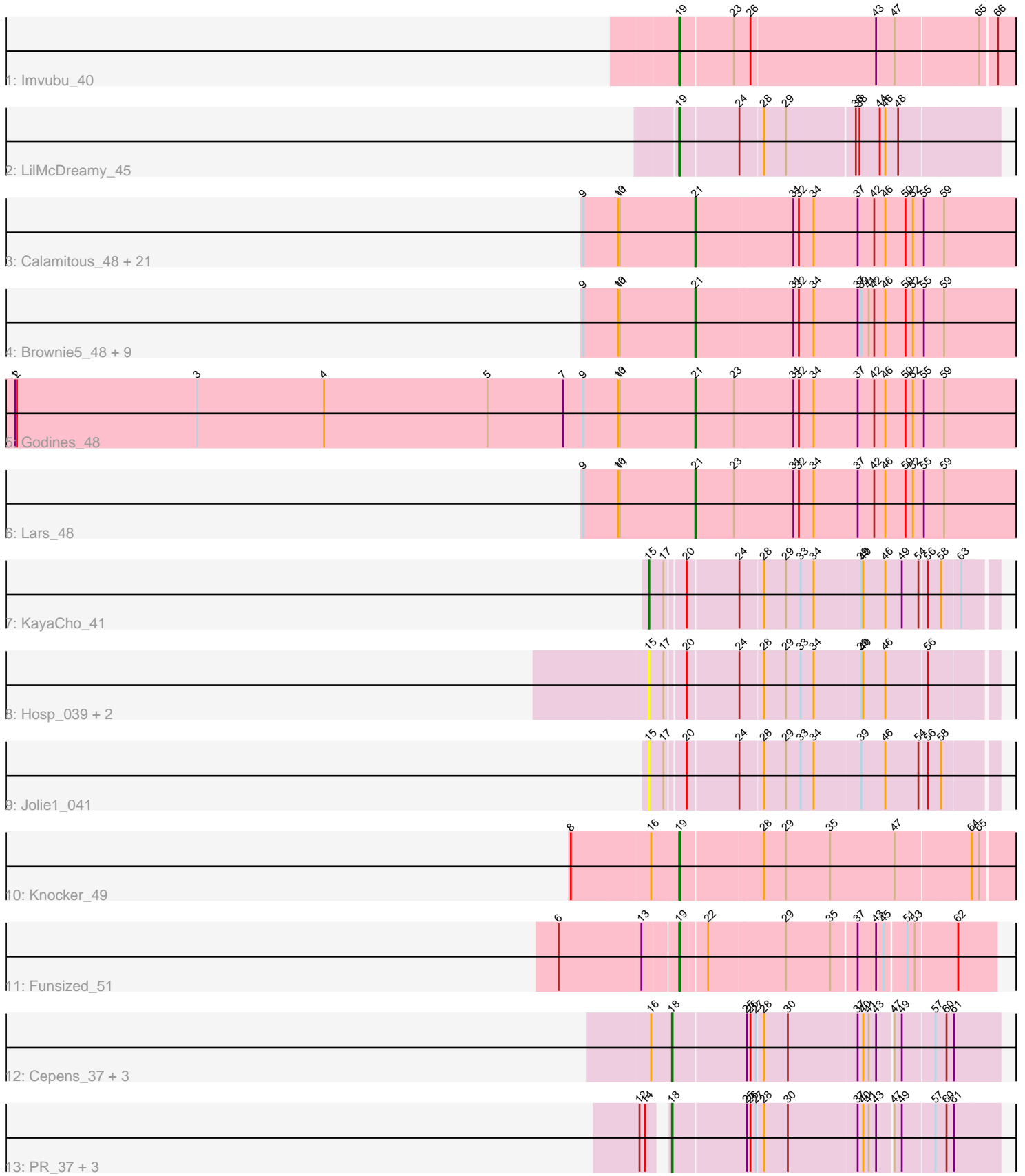


Pham 163663



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 163663 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163663 has 51 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Imvubu_40
- Track 2 : LilMcDreamy_45
- Track 3 : Calamitous_48, Sabella_47, Phantasmagoria_48, Boyle_48, TA17A_48, West99_48, LizLemon_48, Allegro_48, Blocker23_48, Tres_48, Rhinoforte_48, Coffee_48, Lephleur_48, Opia_48, Faze9_47, MasterPo_48, FrenchFry_48, ItsyBitsy1_48, Bananafish_48, Laurie_47, Kheth_48, Holeinone_48
- Track 4 : Brownie5_48, Hedgerow_48, Eaglehorse_48, Kaleb_48, Arbiter_47, Rosebush_47, Qyrzula_45, Ares_48, Glass_48, Tinciduntolum_49
- Track 5 : Godines_48
- Track 6 : Lars_48
- Track 7 : KayaCho_41
- Track 8 : Hosp_039, 39HC_041, 40BC_041
- Track 9 : Jolie1_041
- Track 10 : Knocker_49
- Track 11 : Funsized_51
- Track 12 : Cepens_37, Jeon_37, GodPhather_38, Argie_38
- Track 13 : PR_37, Megabear_37, D12_36, Taptic_37

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

The start number called the most often in the published annotations is 21, it was called in 32 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Allegro_48, Arbiter_47, Ares_48, Bananafish_48, Blocker23_48, Boyle_48, Brownie5_48, Calamitous_48, Coffee_48, Eaglehorse_48, Faze9_47, FrenchFry_48, Glass_48, Godines_48, Hedgerow_48, Holeinone_48, ItsyBitsy1_48, Kaleb_48, Kheth_48, Lars_48, Laurie_47, Lephleur_48, LizLemon_48, MasterPo_48, Opia_48, Phantasmagoria_48, Qyrzula_45, Rhinoforte_48, Rosebush_47, Sabella_47, TA17A_48, Tinciduntolum_49, Tres_48, West99_48,

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

-

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

- 39HC_041, 40BC_041, Argie_38, Cepens_37, D12_36, Funsized_51, GodPhather_38, Hosp_039, Imvubu_40, Jeon_37, Jolie1_041, KayaCho_41, Knocker_49, LilMcDreamy_45, Megabear_37, PR_37, Taptic_37,

Summary by start number:

Start 15:

- Found in 5 of 51 (9.8%) of genes in pham
- Manual Annotations of this start: 1 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC_041 (B6), 40BC_041 (B6), Hosp_039 (B6), Jolie1_041 (B6), KayaCho_41 (B6),

Start 18:

- Found in 8 of 51 (15.7%) of genes in pham
- Manual Annotations of this start: 8 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Argie_38 (W), Cepens_37 (W), D12_36 (W), GodPhather_38 (W), Jeon_37 (W), Megabear_37 (W), PR_37 (W), Taptic_37 (W),

Start 19:

- Found in 4 of 51 (7.8%) of genes in pham
- Manual Annotations of this start: 4 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Funsized_51 (B9), Imvubu_40 (B10), Knocker_49 (B9), LilMcDreamy_45 (B12),

Start 21:

- Found in 34 of 51 (66.7%) of genes in pham
- Manual Annotations of this start: 32 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Allegro_48 (B2), Arbiter_47 (B2), Ares_48 (B2), Bananafish_48 (B2), Blocker23_48 (B2), Boyle_48 (B2), Brownie5_48 (B2), Calamitous_48 (B2), Coffee_48 (B2), Eaglehorse_48 (B2), Faze9_47 (B2), FrenchFry_48 (B2), Glass_48 (B2), Godines_48 (B2), Hedgerow_48 (B2), Holeinone_48 (B2), ItsyBitsy1_48 (B2), Kaleb_48 (B2), Kheth_48 (B2), Lars_48 (B2), Laurie_47 (B2), Lephleur_48 (B2), LizLemon_48 (B2), MasterPo_48 (B2), Opia_48 (B2), Phantasmagoria_48 (B2), Qyrzula_45 (B2), Rhinoforte_48 (B2), Rosebush_47 (B2), Sabella_47 (B2), TA17A_48 (B2), Tinciduntolum_49 (B2), Tres_48 (B2), West99_48 (B2),

Summary by clusters:

There are 6 clusters represented in this pham: W, B2, B6, B12, B10, B9,

Info for manual annotations of cluster B10:

- Start number 19 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B12:

- Start number 19 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B2:

- Start number 21 was manually annotated 32 times for cluster B2.

Info for manual annotations of cluster B6:

- Start number 15 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B9:

- Start number 19 was manually annotated 2 times for cluster B9.

Info for manual annotations of cluster W:

- Start number 18 was manually annotated 8 times for cluster W.

Gene Information:

Gene: 39HC_041 Start: 39858, Stop: 40382, Start Num: 15

Candidate Starts for 39HC_041:

(Start: 15 @39858 has 1 MA's), (17, 39879), (20, 39906), (24, 39987), (28, 40023), (29, 40059), (33, 40083), (34, 40104), (39, 40179), (40, 40182), (46, 40218), (56, 40284),

Gene: 40BC_041 Start: 39858, Stop: 40382, Start Num: 15

Candidate Starts for 40BC_041:

(Start: 15 @39858 has 1 MA's), (17, 39879), (20, 39906), (24, 39987), (28, 40023), (29, 40059), (33, 40083), (34, 40104), (39, 40179), (40, 40182), (46, 40218), (56, 40284),

Gene: Allegro_48 Start: 42310, Stop: 42843, Start Num: 21

Candidate Starts for Allegro_48:

(9, 42127), (10, 42184), (11, 42187), (Start: 21 @42310 has 32 MA's), (31, 42466), (32, 42475), (34, 42499), (37, 42568), (42, 42595), (46, 42613), (50, 42646), (52, 42658), (55, 42676), (59, 42709),

Gene: Arbiter_47 Start: 42384, Stop: 42920, Start Num: 21

Candidate Starts for Arbiter_47:

(9, 42201), (10, 42258), (11, 42261), (Start: 21 @42384 has 32 MA's), (31, 42540), (32, 42549), (34, 42573), (37, 42645), (39, 42651), (41, 42663), (42, 42672), (46, 42690), (50, 42723), (52, 42735), (55, 42753), (59, 42786),

Gene: Ares_48 Start: 42368, Stop: 42904, Start Num: 21

Candidate Starts for Ares_48:

(9, 42185), (10, 42242), (11, 42245), (Start: 21 @42368 has 32 MA's), (31, 42524), (32, 42533), (34, 42557), (37, 42629), (39, 42635), (41, 42647), (42, 42656), (46, 42674), (50, 42707), (52, 42719), (55, 42737), (59, 42770),

Gene: Argie_38 Start: 38017, Stop: 38526, Start Num: 18

Candidate Starts for Argie_38:

(16, 37987), (Start: 18 @38017 has 8 MA's), (25, 38134), (26, 38140), (27, 38149), (28, 38158), (30, 38197), (37, 38308), (40, 38317), (41, 38326), (43, 38335), (47, 38359), (49, 38371), (57, 38422), (60, 38440), (61, 38452),

Gene: Bananafish_48 Start: 42304, Stop: 42837, Start Num: 21

Candidate Starts for Bananafish_48:

(9, 42121), (10, 42178), (11, 42181), (Start: 21 @42304 has 32 MA's), (31, 42460), (32, 42469), (34, 42493), (37, 42562), (42, 42589), (46, 42607), (50, 42640), (52, 42652), (55, 42670), (59, 42703),

Gene: Blocker23_48 Start: 42422, Stop: 42955, Start Num: 21

Candidate Starts for Blocker23_48:

(9, 42239), (10, 42296), (11, 42299), (Start: 21 @42422 has 32 MA's), (31, 42578), (32, 42587), (34, 42611), (37, 42680), (42, 42707), (46, 42725), (50, 42758), (52, 42770), (55, 42788), (59, 42821),

Gene: Boyle_48 Start: 42423, Stop: 42956, Start Num: 21

Candidate Starts for Boyle_48:

(9, 42240), (10, 42297), (11, 42300), (Start: 21 @42423 has 32 MA's), (31, 42579), (32, 42588), (34, 42612), (37, 42681), (42, 42708), (46, 42726), (50, 42759), (52, 42771), (55, 42789), (59, 42822),

Gene: Brownie5_48 Start: 42435, Stop: 42971, Start Num: 21

Candidate Starts for Brownie5_48:

(9, 42252), (10, 42309), (11, 42312), (Start: 21 @42435 has 32 MA's), (31, 42591), (32, 42600), (34, 42624), (37, 42696), (39, 42702), (41, 42714), (42, 42723), (46, 42741), (50, 42774), (52, 42786), (55, 42804), (59, 42837),

Gene: Calamitous_48 Start: 42309, Stop: 42842, Start Num: 21

Candidate Starts for Calamitous_48:

(9, 42126), (10, 42183), (11, 42186), (Start: 21 @42309 has 32 MA's), (31, 42465), (32, 42474), (34, 42498), (37, 42567), (42, 42594), (46, 42612), (50, 42645), (52, 42657), (55, 42675), (59, 42708),

Gene: Cepens_37 Start: 37732, Stop: 38241, Start Num: 18

Candidate Starts for Cepens_37:

(16, 37702), (Start: 18 @37732 has 8 MA's), (25, 37849), (26, 37855), (27, 37864), (28, 37873), (30, 37912), (37, 38023), (40, 38032), (41, 38041), (43, 38050), (47, 38074), (49, 38086), (57, 38137), (60, 38155), (61, 38167),

Gene: Coffee_48 Start: 42412, Stop: 42945, Start Num: 21

Candidate Starts for Coffee_48:

(9, 42229), (10, 42286), (11, 42289), (Start: 21 @42412 has 32 MA's), (31, 42568), (32, 42577), (34, 42601), (37, 42670), (42, 42697), (46, 42715), (50, 42748), (52, 42760), (55, 42778), (59, 42811),

Gene: D12_36 Start: 38280, Stop: 38789, Start Num: 18

Candidate Starts for D12_36:

(12, 38253), (14, 38262), (Start: 18 @38280 has 8 MA's), (25, 38397), (26, 38403), (27, 38412), (28, 38421), (30, 38460), (37, 38571), (40, 38580), (41, 38589), (43, 38598), (47, 38622), (49, 38634), (57, 38685), (60, 38703), (61, 38715),

Gene: Eaglehorse_48 Start: 42336, Stop: 42872, Start Num: 21

Candidate Starts for Eaglehorse_48:

(9, 42153), (10, 42210), (11, 42213), (Start: 21 @42336 has 32 MA's), (31, 42492), (32, 42501), (34, 42525), (37, 42597), (39, 42603), (41, 42615), (42, 42624), (46, 42642), (50, 42675), (52, 42687), (55, 42705), (59, 42738),

Gene: Faze9_47 Start: 42432, Stop: 42965, Start Num: 21

Candidate Starts for Faze9_47:

(9, 42249), (10, 42306), (11, 42309), (Start: 21 @42432 has 32 MA's), (31, 42588), (32, 42597), (34, 42621), (37, 42690), (42, 42717), (46, 42735), (50, 42768), (52, 42780), (55, 42798), (59, 42831),

Gene: FrenchFry_48 Start: 42426, Stop: 42959, Start Num: 21

Candidate Starts for FrenchFry_48:

(9, 42243), (10, 42300), (11, 42303), (Start: 21 @42426 has 32 MA's), (31, 42582), (32, 42591), (34, 42615), (37, 42684), (42, 42711), (46, 42729), (50, 42762), (52, 42774), (55, 42792), (59, 42825),

Gene: Funsized_51 Start: 44809, Stop: 45291, Start Num: 19

Candidate Starts for Funsized_51:

(6, 44626), (13, 44758), (Start: 19 @44809 has 4 MA's), (22, 44848), (29, 44971), (35, 45043), (37, 45082), (43, 45112), (45, 45124), (51, 45157), (53, 45169), (62, 45229),

Gene: Glass_48 Start: 42426, Stop: 42962, Start Num: 21

Candidate Starts for Glass_48:

(9, 42243), (10, 42300), (11, 42303), (Start: 21 @42426 has 32 MA's), (31, 42582), (32, 42591), (34, 42615), (37, 42687), (39, 42693), (41, 42705), (42, 42714), (46, 42732), (50, 42765), (52, 42777), (55, 42795), (59, 42828),

Gene: GodPhather_38 Start: 38496, Stop: 39005, Start Num: 18

Candidate Starts for GodPhather_38:

(16, 38466), (Start: 18 @38496 has 8 MA's), (25, 38613), (26, 38619), (27, 38628), (28, 38637), (30, 38676), (37, 38787), (40, 38796), (41, 38805), (43, 38814), (47, 38838), (49, 38850), (57, 38901), (60, 38919), (61, 38931),

Gene: Godines_48 Start: 42368, Stop: 42901, Start Num: 21

Candidate Starts for Godines_48:

(1, 41258), (2, 41261), (3, 41555), (4, 41762), (5, 42029), (7, 42152), (9, 42185), (10, 42242), (11, 42245), (Start: 21 @42368 has 32 MA's), (23, 42431), (31, 42524), (32, 42533), (34, 42557), (37, 42626), (42, 42653), (46, 42671), (50, 42704), (52, 42716), (55, 42734), (59, 42767),

Gene: Hedgerow_48 Start: 42408, Stop: 42944, Start Num: 21

Candidate Starts for Hedgerow_48:

(9, 42225), (10, 42282), (11, 42285), (Start: 21 @42408 has 32 MA's), (31, 42564), (32, 42573), (34, 42597), (37, 42669), (39, 42675), (41, 42687), (42, 42696), (46, 42714), (50, 42747), (52, 42759), (55, 42777), (59, 42810),

Gene: Holeinone_48 Start: 42288, Stop: 42821, Start Num: 21

Candidate Starts for Holeinone_48:

(9, 42105), (10, 42162), (11, 42165), (Start: 21 @42288 has 32 MA's), (31, 42444), (32, 42453), (34, 42477), (37, 42546), (42, 42573), (46, 42591), (50, 42624), (52, 42636), (55, 42654), (59, 42687),

Gene: Hosp_039 Start: 38050, Stop: 38574, Start Num: 15

Candidate Starts for Hosp_039:

(Start: 15 @38050 has 1 MA's), (17, 38071), (20, 38098), (24, 38179), (28, 38215), (29, 38251), (33, 38275), (34, 38296), (39, 38371), (40, 38374), (46, 38410), (56, 38476),

Gene: Imvubu_40 Start: 38839, Stop: 39363, Start Num: 19

Candidate Starts for Imvubu_40:

(Start: 19 @38839 has 4 MA's), (23, 38923), (26, 38950), (43, 39151), (47, 39181), (65, 39310), (66, 39334),

Gene: ItsyBitsy1_48 Start: 42290, Stop: 42823, Start Num: 21

Candidate Starts for ItsyBitsy1_48:

(9, 42107), (10, 42164), (11, 42167), (Start: 21 @42290 has 32 MA's), (31, 42446), (32, 42455), (34, 42479), (37, 42548), (42, 42575), (46, 42593), (50, 42626), (52, 42638), (55, 42656), (59, 42689),

Gene: Jeon_37 Start: 38238, Stop: 38747, Start Num: 18

Candidate Starts for Jeon_37:

(16, 38208), (Start: 18 @38238 has 8 MA's), (25, 38355), (26, 38361), (27, 38370), (28, 38379), (30, 38418), (37, 38529), (40, 38538), (41, 38547), (43, 38556), (47, 38580), (49, 38592), (57, 38643), (60, 38661), (61, 38673),

Gene: Jolie1_041 Start: 39828, Stop: 40349, Start Num: 15

Candidate Starts for Jolie1_041:

(Start: 15 @39828 has 1 MA's), (17, 39849), (20, 39876), (24, 39957), (28, 39993), (29, 40029), (33, 40053), (34, 40074), (39, 40149), (46, 40188), (54, 40242), (56, 40254), (58, 40272),

Gene: Kaleb_48 Start: 42423, Stop: 42959, Start Num: 21

Candidate Starts for Kaleb_48:

(9, 42240), (10, 42297), (11, 42300), (Start: 21 @42423 has 32 MA's), (31, 42579), (32, 42588), (34, 42612), (37, 42684), (39, 42690), (41, 42702), (42, 42711), (46, 42729), (50, 42762), (52, 42774), (55, 42792), (59, 42825),

Gene: KayaCho_41 Start: 39832, Stop: 40353, Start Num: 15

Candidate Starts for KayaCho_41:

(Start: 15 @39832 has 1 MA's), (17, 39853), (20, 39880), (24, 39961), (28, 39997), (29, 40033), (33, 40057), (34, 40078), (39, 40153), (40, 40156), (46, 40192), (49, 40219), (54, 40246), (56, 40258), (58, 40276), (63, 40303),

Gene: Kheth_48 Start: 42341, Stop: 42874, Start Num: 21

Candidate Starts for Kheth_48:

(9, 42158), (10, 42215), (11, 42218), (Start: 21 @42341 has 32 MA's), (31, 42497), (32, 42506), (34, 42530), (37, 42599), (42, 42626), (46, 42644), (50, 42677), (52, 42689), (55, 42707), (59, 42740),

Gene: Knocker_49 Start: 43770, Stop: 44288, Start Num: 19

Candidate Starts for Knocker_49:

(8, 43602), (16, 43728), (Start: 19 @43770 has 4 MA's), (28, 43899), (29, 43935), (35, 44007), (47, 44112), (64, 44229), (65, 44241),

Gene: Lars_48 Start: 42413, Stop: 42946, Start Num: 21

Candidate Starts for Lars_48:

(9, 42230), (10, 42287), (11, 42290), (Start: 21 @42413 has 32 MA's), (23, 42476), (31, 42569), (32, 42578), (34, 42602), (37, 42671), (42, 42698), (46, 42716), (50, 42749), (52, 42761), (55, 42779), (59, 42812),

Gene: Laurie_47 Start: 41812, Stop: 42345, Start Num: 21

Candidate Starts for Laurie_47:

(9, 41629), (10, 41686), (11, 41689), (Start: 21 @41812 has 32 MA's), (31, 41968), (32, 41977), (34, 42001), (37, 42070), (42, 42097), (46, 42115), (50, 42148), (52, 42160), (55, 42178), (59, 42211),

Gene: Lephleur_48 Start: 42306, Stop: 42839, Start Num: 21

Candidate Starts for Lephleur_48:

(9, 42123), (10, 42180), (11, 42183), (Start: 21 @42306 has 32 MA's), (31, 42462), (32, 42471), (34, 42495), (37, 42564), (42, 42591), (46, 42609), (50, 42642), (52, 42654), (55, 42672), (59, 42705),

Gene: LilMcDreamy_45 Start: 41638, Stop: 42135, Start Num: 19

Candidate Starts for LilMcDreamy_45:

(Start: 19 @41638 has 4 MA's), (24, 41728), (28, 41764), (29, 41800), (36, 41908), (38, 41914), (44, 41947), (46, 41956), (48, 41977),

Gene: LizLemon_48 Start: 42422, Stop: 42955, Start Num: 21

Candidate Starts for LizLemon_48:

(9, 42239), (10, 42296), (11, 42299), (Start: 21 @42422 has 32 MA's), (31, 42578), (32, 42587), (34, 42611), (37, 42680), (42, 42707), (46, 42725), (50, 42758), (52, 42770), (55, 42788), (59, 42821),

Gene: MasterPo_48 Start: 42309, Stop: 42845, Start Num: 21

Candidate Starts for MasterPo_48:

(9, 42126), (10, 42183), (11, 42186), (Start: 21 @42309 has 32 MA's), (31, 42465), (32, 42474), (34, 42498), (37, 42570), (42, 42597), (46, 42615), (50, 42648), (52, 42660), (55, 42678), (59, 42711),

Gene: Megabear_37 Start: 37653, Stop: 38162, Start Num: 18

Candidate Starts for Megabear_37:

(12, 37626), (14, 37635), (Start: 18 @37653 has 8 MA's), (25, 37770), (26, 37776), (27, 37785), (28, 37794), (30, 37833), (37, 37944), (40, 37953), (41, 37962), (43, 37971), (47, 37995), (49, 38007), (57, 38058), (60, 38076), (61, 38088),

Gene: Opia_48 Start: 42295, Stop: 42828, Start Num: 21

Candidate Starts for Opia_48:

(9, 42112), (10, 42169), (11, 42172), (Start: 21 @42295 has 32 MA's), (31, 42451), (32, 42460), (34, 42484), (37, 42553), (42, 42580), (46, 42598), (50, 42631), (52, 42643), (55, 42661), (59, 42694),

Gene: PR_37 Start: 38257, Stop: 38766, Start Num: 18

Candidate Starts for PR_37:

(12, 38230), (14, 38239), (Start: 18 @38257 has 8 MA's), (25, 38374), (26, 38380), (27, 38389), (28, 38398), (30, 38437), (37, 38548), (40, 38557), (41, 38566), (43, 38575), (47, 38599), (49, 38611), (57, 38662), (60, 38680), (61, 38692),

Gene: Phantasmagoria_48 Start: 42307, Stop: 42840, Start Num: 21

Candidate Starts for Phantasmagoria_48:

(9, 42124), (10, 42181), (11, 42184), (Start: 21 @42307 has 32 MA's), (31, 42463), (32, 42472), (34, 42496), (37, 42565), (42, 42592), (46, 42610), (50, 42643), (52, 42655), (55, 42673), (59, 42706),

Gene: Qyrzula_45 Start: 42454, Stop: 42987, Start Num: 21

Candidate Starts for Qyrzula_45:

(9, 42271), (10, 42328), (11, 42331), (Start: 21 @42454 has 32 MA's), (31, 42610), (32, 42619), (34, 42643), (37, 42712), (39, 42718), (41, 42730), (42, 42739), (46, 42757), (50, 42790), (52, 42802), (55, 42820), (59, 42853),

Gene: Rhinoforte_48 Start: 42428, Stop: 42961, Start Num: 21

Candidate Starts for Rhinoforte_48:

(9, 42245), (10, 42302), (11, 42305), (Start: 21 @42428 has 32 MA's), (31, 42584), (32, 42593), (34, 42617), (37, 42686), (42, 42713), (46, 42731), (50, 42764), (52, 42776), (55, 42794), (59, 42827),

Gene: Rosebush_47 Start: 42423, Stop: 42959, Start Num: 21

Candidate Starts for Rosebush_47:

(9, 42240), (10, 42297), (11, 42300), (Start: 21 @42423 has 32 MA's), (31, 42579), (32, 42588), (34, 42612), (37, 42684), (39, 42690), (41, 42702), (42, 42711), (46, 42729), (50, 42762), (52, 42774), (55, 42792), (59, 42825),

Gene: Sabella_47 Start: 42300, Stop: 42833, Start Num: 21

Candidate Starts for Sabella_47:

(9, 42117), (10, 42174), (11, 42177), (Start: 21 @42300 has 32 MA's), (31, 42456), (32, 42465), (34, 42489), (37, 42558), (42, 42585), (46, 42603), (50, 42636), (52, 42648), (55, 42666), (59, 42699),

Gene: TA17A_48 Start: 42290, Stop: 42823, Start Num: 21

Candidate Starts for TA17A_48:

(9, 42107), (10, 42164), (11, 42167), (Start: 21 @42290 has 32 MA's), (31, 42446), (32, 42455), (34, 42479), (37, 42548), (42, 42575), (46, 42593), (50, 42626), (52, 42638), (55, 42656), (59, 42689),

Gene: Taptic_37 Start: 37653, Stop: 38162, Start Num: 18

Candidate Starts for Taptic_37:

(12, 37626), (14, 37635), (Start: 18 @37653 has 8 MA's), (25, 37770), (26, 37776), (27, 37785), (28, 37794), (30, 37833), (37, 37944), (40, 37953), (41, 37962), (43, 37971), (47, 37995), (49, 38007), (57, 38058), (60, 38076), (61, 38088),

Gene: Tinciduntolum_49 Start: 42434, Stop: 42970, Start Num: 21

Candidate Starts for Tinciduntolum_49:

(9, 42251), (10, 42308), (11, 42311), (Start: 21 @42434 has 32 MA's), (31, 42590), (32, 42599), (34, 42623), (37, 42695), (39, 42701), (41, 42713), (42, 42722), (46, 42740), (50, 42773), (52, 42785), (55, 42803), (59, 42836),

Gene: Tres_48 Start: 42303, Stop: 42836, Start Num: 21

Candidate Starts for Tres_48:

(9, 42120), (10, 42177), (11, 42180), (Start: 21 @42303 has 32 MA's), (31, 42459), (32, 42468), (34, 42492), (37, 42561), (42, 42588), (46, 42606), (50, 42639), (52, 42651), (55, 42669), (59, 42702),

Gene: West99_48 Start: 42423, Stop: 42956, Start Num: 21

Candidate Starts for West99_48:

(9, 42240), (10, 42297), (11, 42300), (Start: 21 @42423 has 32 MA's), (31, 42579), (32, 42588), (34, 42612), (37, 42681), (42, 42708), (46, 42726), (50, 42759), (52, 42771), (55, 42789), (59, 42822),