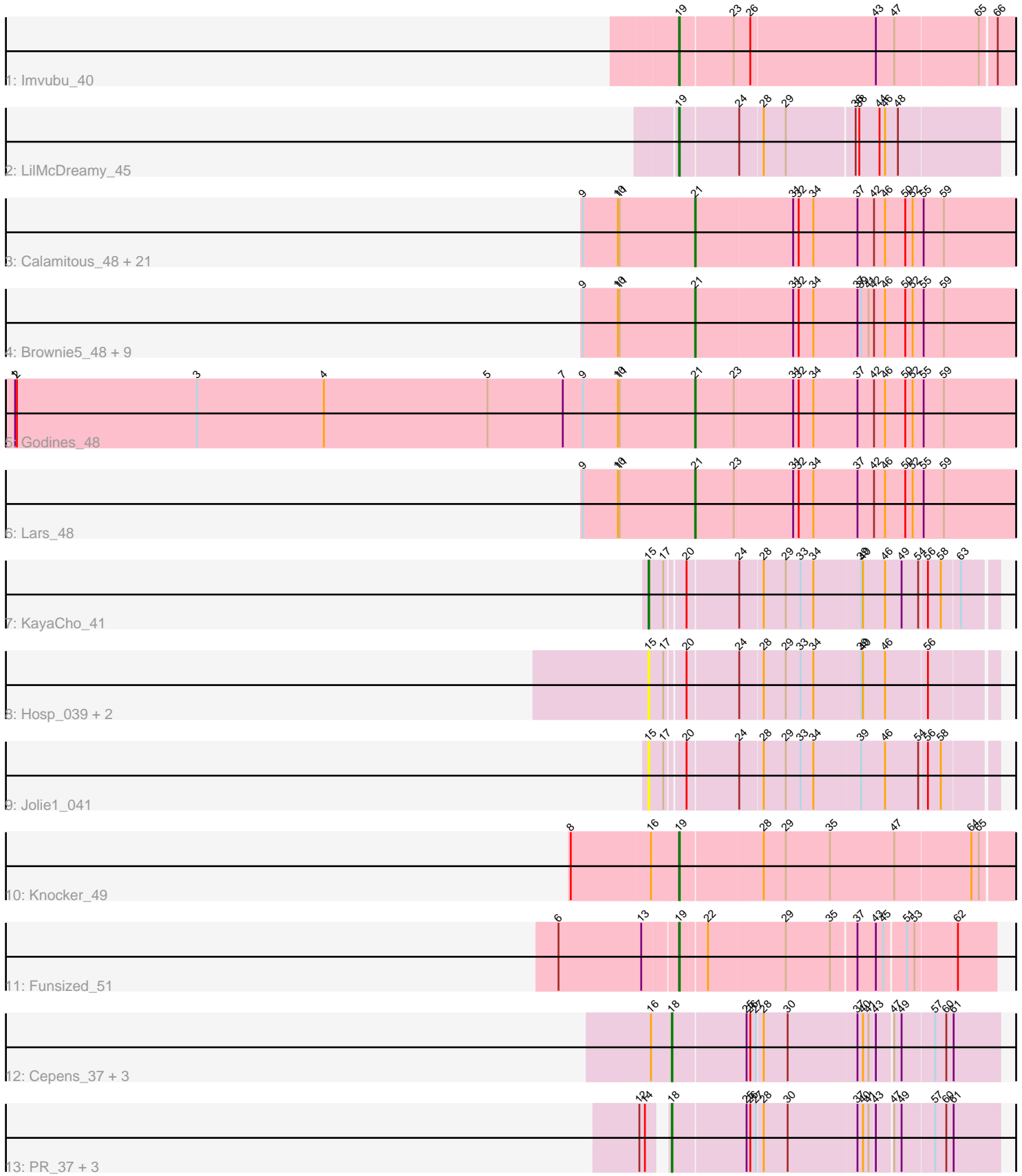


Pham 170030



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 170030 Report

This analysis was run 07/09/24 on database version 566.

Pham number 170030 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),