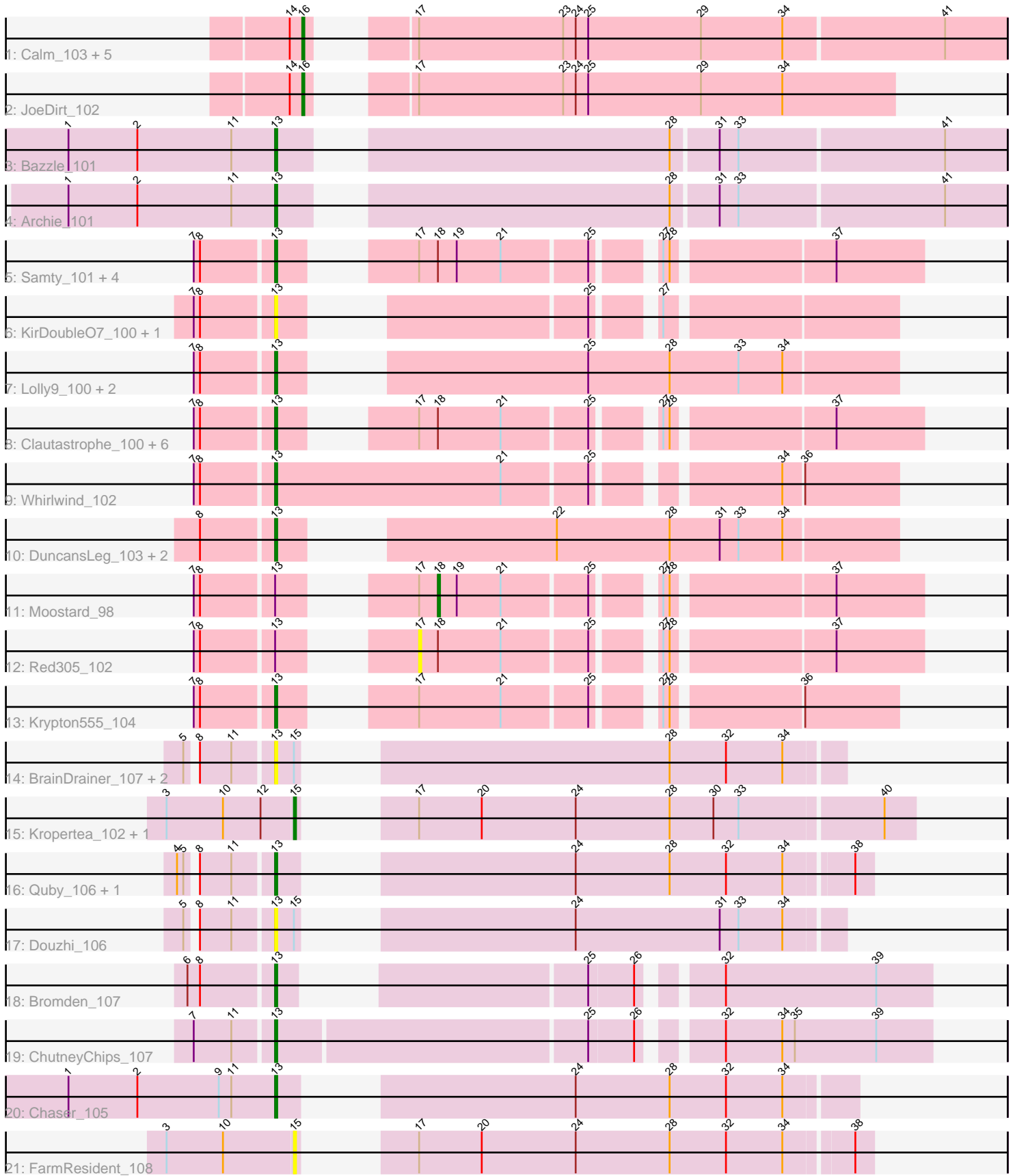


# Pham 308819



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 308819 Report

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

Pham number 308819 has 45 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Calm\_103, DirkDirk\_97, Enceladus\_97, MAckerman\_100, Zaria\_102, Halena\_99
- Track 2 : JoeDirt\_102
- Track 3 : Bazzle\_101
- Track 4 : Archie\_101
- Track 5 : Samty\_101, Kingsolomon\_99, Bellis\_102, Finnry\_102, Nicholas\_99
- Track 6 : KirDoubleO7\_100, Ellson\_101
- Track 7 : Lolly9\_100, MiniLon\_105, MiniMac\_105
- Track 8 : Clautastrophe\_100, Lumos\_101, Jubie\_101, MsGreen\_102, Jobypre\_101, TriFive\_102, Snenia\_100
- Track 9 : Whirlwind\_102
- Track 10 : DuncansLeg\_103, BourbonZero\_103, LiyuLake\_101
- Track 11 : Moostard\_98
- Track 12 : Red305\_102
- Track 13 : Krypton555\_104
- Track 14 : BrainDrainer\_107, PYPDinur\_106, Sheng711\_107
- Track 15 : Kropertea\_102, DyoEdafos\_109
- Track 16 : Quby\_106, Douge\_106
- Track 17 : Douzhi\_106
- Track 18 : Bromden\_107
- Track 19 : ChutneyChips\_107
- Track 20 : Chaser\_105
- Track 21 : FarmResident\_108

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

The start number called the most often in the published annotations is 13, it was called in 24 of the 34 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archie\_101, Bazzle\_101, Bellis\_102, BourbonZero\_103, BrainDrainer\_107, Bromden\_107, Chaser\_105, ChutneyChips\_107, Clautastrophe\_100, Douge\_106, Douzhi\_106, DuncansLeg\_103, Ellson\_101, Finnry\_102, Jobypre\_101, Jubie\_101, Kingsolomon\_99, KirDoubleO7\_100, Krypton555\_104, LiyuLake\_101, Lolly9\_100,

Lumos\_101, MiniLon\_105, MiniMac\_105, MsGreen\_102, Nicholas\_99, PYPDinur\_106, Quby\_106, Samty\_101, Sheng711\_107, Snenia\_100, TriFive\_102, Whirlwind\_102,

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

- Moostard\_98, Red305\_102,

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

- Calm\_103, DirkDirk\_97, DyoEdafos\_109, Enceladus\_97, FarmResident\_108, Halena\_99, JoeDirt\_102, Kropertea\_102, MAckerman\_100, Zaria\_102,

### Summary by start number:

Start 13:

- Found in 35 of 45 ( 77.8% ) of genes in pham
- Manual Annotations of this start: 24 of 34
- Called 94.3% of time when present
- Phage (with cluster) where this start called: Archie\_101 (L2), Bazzle\_101 (L2), Bellis\_102 (L3), BourbonZero\_103 (L3), BrainDrainer\_107 (L4), Bromden\_107 (L4), Chaser\_105 (L4), ChutneyChips\_107 (L4), Clautastrophe\_100 (L3), Douge\_106 (L4), Douzhi\_106 (L4), DuncansLeg\_103 (L3), Ellson\_101 (L3), Finnry\_102 (L3), Jobypre\_101 (L3), Jubie\_101 (L3), Kingsolomon\_99 (L3), KirDoubleO7\_100 (L3), Krypton555\_104 (L3), LiyuLake\_101 (L3), Lolly9\_100 (L3), Lumos\_101 (L3), MiniLon\_105 (L3), MiniMac\_105 (L3), MsGreen\_102 (L3), Nicholas\_99 (L3), PYPDinur\_106 (L4), Quby\_106 (L4), Samty\_101 (L3), Sheng711\_107 (L4), Snenia\_100 (L3), TriFive\_102 (L3), Whirlwind\_102 (L3),

Start 15:

- Found in 7 of 45 ( 15.6% ) of genes in pham
- Manual Annotations of this start: 2 of 34
- Called 42.9% of time when present
- Phage (with cluster) where this start called: DyoEdafos\_109 (L4), FarmResident\_108 (L4), Kropertea\_102 (L4),

Start 16:

- Found in 7 of 45 ( 15.6% ) of genes in pham
- Manual Annotations of this start: 7 of 34
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Calm\_103 (L1), DirkDirk\_97 (L1), Enceladus\_97 (L1), Halena\_99 (L1), JoeDirt\_102 (L1), MAckerman\_100 (L1), Zaria\_102 (L1),

Start 17:

- Found in 25 of 45 ( 55.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 4.0% of time when present
- Phage (with cluster) where this start called: Red305\_102 (L3),

Start 18:

- Found in 14 of 45 ( 31.1% ) of genes in pham
- Manual Annotations of this start: 1 of 34
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Moostard\_98 (L3),

## Summary by clusters:

There are 4 clusters represented in this pham: L4, L2, L3, L1,

Info for manual annotations of cluster L1:

- Start number 16 was manually annotated 7 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 13 was manually annotated 2 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 13 was manually annotated 18 times for cluster L3.
- Start number 18 was manually annotated 1 time for cluster L3.

Info for manual annotations of cluster L4:

- Start number 13 was manually annotated 4 times for cluster L4.
- Start number 15 was manually annotated 2 times for cluster L4.

## Gene Information:

Gene: Archie\_101 Start: 62137, Stop: 62454, Start Num: 13

Candidate Starts for Archie\_101:

(1, 62038), (2, 62071), (11, 62116), (Start: 13 @62137 has 24 MA's), (28, 62299), (31, 62320), (33, 62329), (41, 62425),

Gene: Bazzle\_101 Start: 62693, Stop: 63010, Start Num: 13

Candidate Starts for Bazzle\_101:

(1, 62594), (2, 62627), (11, 62672), (Start: 13 @62693 has 24 MA's), (28, 62855), (31, 62876), (33, 62885), (41, 62981),

Gene: Bellis\_102 Start: 62373, Stop: 62630, Start Num: 13

Candidate Starts for Bellis\_102:

(7, 62337), (8, 62340), (Start: 13 @62373 has 24 MA's), (17, 62412), (Start: 18 @62421 has 1 MA's), (19, 62430), (21, 62451), (25, 62490), (27, 62514), (28, 62517), (37, 62589),

Gene: BourbonZero\_103 Start: 62553, Stop: 62810, Start Num: 13

Candidate Starts for BourbonZero\_103:

(8, 62520), (Start: 13 @62553 has 24 MA's), (22, 62649), (28, 62703), (31, 62727), (33, 62736), (34, 62757),

Gene: BrainDrainer\_107 Start: 62854, Stop: 63084, Start Num: 13

Candidate Starts for BrainDrainer\_107:

(5, 62818), (8, 62821), (11, 62836), (Start: 13 @62854 has 24 MA's), (Start: 15 @62863 has 2 MA's), (28, 63004), (32, 63031), (34, 63058),

Gene: Bromden\_107 Start: 64006, Stop: 64263, Start Num: 13

Candidate Starts for Bromden\_107:

(6, 63967), (8, 63973), (Start: 13 @64006 has 24 MA's), (25, 64114), (26, 64135), (32, 64165), (39, 64237),

Gene: Calm\_103 Start: 61255, Stop: 61560, Start Num: 16  
Candidate Starts for Calm\_103:  
(14, 61249), (Start: 16 @61255 has 7 MA's), (17, 61282), (23, 61351), (24, 61357), (25, 61363), (29, 61417), (34, 61456), (41, 61531),

Gene: Chaser\_105 Start: 62309, Stop: 62545, Start Num: 13  
Candidate Starts for Chaser\_105:  
(1, 62210), (2, 62243), (9, 62282), (11, 62288), (Start: 13 @62309 has 24 MA's), (24, 62414), (28, 62459), (32, 62486), (34, 62513),

Gene: ChutneyChips\_107 Start: 62929, Stop: 63222, Start Num: 13  
Candidate Starts for ChutneyChips\_107:  
(7, 62893), (11, 62911), (Start: 13 @62929 has 24 MA's), (25, 63073), (26, 63094), (32, 63124), (34, 63151), (35, 63157), (39, 63196),

Gene: Clautastrophe\_100 Start: 62368, Stop: 62625, Start Num: 13  
Candidate Starts for Clautastrophe\_100:  
(7, 62332), (8, 62335), (Start: 13 @62368 has 24 MA's), (17, 62407), (Start: 18 @62416 has 1 MA's), (21, 62446), (25, 62485), (27, 62509), (28, 62512), (37, 62584),

Gene: DirkDirk\_97 Start: 60081, Stop: 60386, Start Num: 16  
Candidate Starts for DirkDirk\_97:  
(14, 60075), (Start: 16 @60081 has 7 MA's), (17, 60108), (23, 60177), (24, 60183), (25, 60189), (29, 60243), (34, 60282), (41, 60357),

Gene: Douge\_106 Start: 62274, Stop: 62516, Start Num: 13  
Candidate Starts for Douge\_106:  
(4, 62235), (5, 62238), (8, 62241), (11, 62256), (Start: 13 @62274 has 24 MA's), (24, 62379), (28, 62424), (32, 62451), (34, 62478), (38, 62508),

Gene: Douzhi\_106 Start: 62543, Stop: 62773, Start Num: 13  
Candidate Starts for Douzhi\_106:  
(5, 62507), (8, 62510), (11, 62525), (Start: 13 @62543 has 24 MA's), (Start: 15 @62552 has 2 MA's), (24, 62648), (31, 62717), (33, 62726), (34, 62747),

Gene: DuncansLeg\_103 Start: 62541, Stop: 62798, Start Num: 13  
Candidate Starts for DuncansLeg\_103:  
(8, 62508), (Start: 13 @62541 has 24 MA's), (22, 62637), (28, 62691), (31, 62715), (33, 62724), (34, 62745),

Gene: DyoEdafos\_109 Start: 63096, Stop: 63350, Start Num: 15  
Candidate Starts for DyoEdafos\_109:  
(3, 63036), (10, 63063), (12, 63081), (Start: 15 @63096 has 2 MA's), (17, 63117), (20, 63147), (24, 63192), (28, 63237), (30, 63258), (33, 63270), (40, 63336),

Gene: Ellson\_101 Start: 62856, Stop: 63092, Start Num: 13  
Candidate Starts for Ellson\_101:  
(7, 62820), (8, 62823), (Start: 13 @62856 has 24 MA's), (25, 62964), (27, 62988),

Gene: Enceladus\_97 Start: 60379, Stop: 60684, Start Num: 16  
Candidate Starts for Enceladus\_97:  
(14, 60373), (Start: 16 @60379 has 7 MA's), (17, 60406), (23, 60475), (24, 60481), (25, 60487), (29, 60541), (34, 60580), (41, 60655),

Gene: FarmResident\_108 Start: 62701, Stop: 62934, Start Num: 15

Candidate Starts for FarmResident\_108:

(3, 62641), (10, 62668), (Start: 15 @62701 has 2 MA's), (17, 62722), (20, 62752), (24, 62797), (28, 62842), (32, 62869), (34, 62896), (38, 62926),

Gene: Finnry\_102 Start: 62721, Stop: 62978, Start Num: 13

Candidate Starts for Finnry\_102:

(7, 62685), (8, 62688), (Start: 13 @62721 has 24 MA's), (17, 62760), (Start: 18 @62769 has 1 MA's), (19, 62778), (21, 62799), (25, 62838), (27, 62862), (28, 62865), (37, 62937),

Gene: Halena\_99 Start: 60171, Stop: 60476, Start Num: 16

Candidate Starts for Halena\_99:

(14, 60165), (Start: 16 @60171 has 7 MA's), (17, 60198), (23, 60267), (24, 60273), (25, 60279), (29, 60333), (34, 60372), (41, 60447),

Gene: Jobypre\_101 Start: 62368, Stop: 62625, Start Num: 13

Candidate Starts for Jobypre\_101:

(7, 62332), (8, 62335), (Start: 13 @62368 has 24 MA's), (17, 62407), (Start: 18 @62416 has 1 MA's), (21, 62446), (25, 62485), (27, 62509), (28, 62512), (37, 62584),

Gene: JoeDirt\_102 Start: 61308, Stop: 61562, Start Num: 16

Candidate Starts for JoeDirt\_102:

(14, 61302), (Start: 16 @61308 has 7 MA's), (17, 61335), (23, 61404), (24, 61410), (25, 61416), (29, 61470), (34, 61509),

Gene: Jubie\_101 Start: 62503, Stop: 62760, Start Num: 13

Candidate Starts for Jubie\_101:

(7, 62467), (8, 62470), (Start: 13 @62503 has 24 MA's), (17, 62542), (Start: 18 @62551 has 1 MA's), (21, 62581), (25, 62620), (27, 62644), (28, 62647), (37, 62719),

Gene: Kingsolomon\_99 Start: 62477, Stop: 62734, Start Num: 13

Candidate Starts for Kingsolomon\_99:

(7, 62441), (8, 62444), (Start: 13 @62477 has 24 MA's), (17, 62516), (Start: 18 @62525 has 1 MA's), (19, 62534), (21, 62555), (25, 62594), (27, 62618), (28, 62621), (37, 62693),

Gene: KirDoubleO7\_100 Start: 62543, Stop: 62779, Start Num: 13

Candidate Starts for KirDoubleO7\_100:

(7, 62507), (8, 62510), (Start: 13 @62543 has 24 MA's), (25, 62651), (27, 62675),

Gene: Kropertea\_102 Start: 62334, Stop: 62588, Start Num: 15

Candidate Starts for Kropertea\_102:

(3, 62274), (10, 62301), (12, 62319), (Start: 15 @62334 has 2 MA's), (17, 62355), (20, 62385), (24, 62430), (28, 62475), (30, 62496), (33, 62508), (40, 62574),

Gene: Krypton555\_104 Start: 62789, Stop: 63034, Start Num: 13

Candidate Starts for Krypton555\_104:

(7, 62753), (8, 62756), (Start: 13 @62789 has 24 MA's), (17, 62828), (21, 62867), (25, 62906), (27, 62930), (28, 62933), (36, 62990),

Gene: LiyuLake\_101 Start: 62616, Stop: 62873, Start Num: 13

Candidate Starts for LiyuLake\_101:

(8, 62583), (Start: 13 @62616 has 24 MA's), (22, 62712), (28, 62766), (31, 62790), (33, 62799), (34, 62820),

Gene: Lolly9\_100 Start: 62459, Stop: 62716, Start Num: 13

Candidate Starts for Lolly9\_100:

(7, 62423), (8, 62426), (Start: 13 @62459 has 24 MA's), (25, 62570), (28, 62609), (33, 62642), (34, 62663),

Gene: Lumos\_101 Start: 62365, Stop: 62622, Start Num: 13

Candidate Starts for Lumos\_101:

(7, 62329), (8, 62332), (Start: 13 @62365 has 24 MA's), (17, 62404), (Start: 18 @62413 has 1 MA's), (21, 62443), (25, 62482), (27, 62506), (28, 62509), (37, 62581),

Gene: MAckerman\_100 Start: 60164, Stop: 60469, Start Num: 16

Candidate Starts for MAckerman\_100:

(14, 60158), (Start: 16 @60164 has 7 MA's), (17, 60191), (23, 60260), (24, 60266), (25, 60272), (29, 60326), (34, 60365), (41, 60440),

Gene: MiniLon\_105 Start: 62460, Stop: 62717, Start Num: 13

Candidate Starts for MiniLon\_105:

(7, 62424), (8, 62427), (Start: 13 @62460 has 24 MA's), (25, 62571), (28, 62610), (33, 62643), (34, 62664),

Gene: MiniMac\_105 Start: 62455, Stop: 62712, Start Num: 13

Candidate Starts for MiniMac\_105:

(7, 62419), (8, 62422), (Start: 13 @62455 has 24 MA's), (25, 62566), (28, 62605), (33, 62638), (34, 62659),

Gene: Moostard\_98 Start: 62520, Stop: 62729, Start Num: 18

Candidate Starts for Moostard\_98:

(7, 62436), (8, 62439), (Start: 13 @62472 has 24 MA's), (17, 62511), (Start: 18 @62520 has 1 MA's), (19, 62529), (21, 62550), (25, 62589), (27, 62613), (28, 62616), (37, 62688),

Gene: MsGreen\_102 Start: 62367, Stop: 62624, Start Num: 13

Candidate Starts for MsGreen\_102:

(7, 62331), (8, 62334), (Start: 13 @62367 has 24 MA's), (17, 62406), (Start: 18 @62415 has 1 MA's), (21, 62445), (25, 62484), (27, 62508), (28, 62511), (37, 62583),

Gene: Nicholas\_99 Start: 62477, Stop: 62734, Start Num: 13

Candidate Starts for Nicholas\_99:

(7, 62441), (8, 62444), (Start: 13 @62477 has 24 MA's), (17, 62516), (Start: 18 @62525 has 1 MA's), (19, 62534), (21, 62555), (25, 62594), (27, 62618), (28, 62621), (37, 62693),

Gene: PYPDinur\_106 Start: 63106, Stop: 63336, Start Num: 13

Candidate Starts for PYPDinur\_106:

(5, 63070), (8, 63073), (11, 63088), (Start: 13 @63106 has 24 MA's), (Start: 15 @63115 has 2 MA's), (28, 63256), (32, 63283), (34, 63310),

Gene: Quby\_106 Start: 62432, Stop: 62674, Start Num: 13

Candidate Starts for Quby\_106:

(4, 62393), (5, 62396), (8, 62399), (11, 62414), (Start: 13 @62432 has 24 MA's), (24, 62537), (28, 62582), (32, 62609), (34, 62636), (38, 62666),

Gene: Red305\_102 Start: 62407, Stop: 62625, Start Num: 17

Candidate Starts for Red305\_102:

(7, 62332), (8, 62335), (Start: 13 @62368 has 24 MA's), (17, 62407), (Start: 18 @62416 has 1 MA's), (21, 62446), (25, 62485), (27, 62509), (28, 62512), (37, 62584),

Gene: Samty\_101 Start: 62465, Stop: 62722, Start Num: 13

Candidate Starts for Samty\_101:

(7, 62429), (8, 62432), (Start: 13 @62465 has 24 MA's), (17, 62504), (Start: 18 @62513 has 1 MA's), (19, 62522), (21, 62543), (25, 62582), (27, 62606), (28, 62609), (37, 62681),

Gene: Sheng711\_107 Start: 62630, Stop: 62860, Start Num: 13

Candidate Starts for Sheng711\_107:

(5, 62594), (8, 62597), (11, 62612), (Start: 13 @62630 has 24 MA's), (Start: 15 @62639 has 2 MA's), (28, 62780), (32, 62807), (34, 62834),

Gene: Snenia\_100 Start: 62369, Stop: 62626, Start Num: 13

Candidate Starts for Snenia\_100:

(7, 62333), (8, 62336), (Start: 13 @62369 has 24 MA's), (17, 62408), (Start: 18 @62417 has 1 MA's), (21, 62447), (25, 62486), (27, 62510), (28, 62513), (37, 62585),

Gene: TriFive\_102 Start: 62481, Stop: 62738, Start Num: 13

Candidate Starts for TriFive\_102:

(7, 62445), (8, 62448), (Start: 13 @62481 has 24 MA's), (17, 62520), (Start: 18 @62529 has 1 MA's), (21, 62559), (25, 62598), (27, 62622), (28, 62625), (37, 62697),

Gene: Whirlwind\_102 Start: 62617, Stop: 62892, Start Num: 13

Candidate Starts for Whirlwind\_102:

(7, 62581), (8, 62584), (Start: 13 @62617 has 24 MA's), (21, 62725), (25, 62764), (34, 62839), (36, 62848),

Gene: Zaria\_102 Start: 60720, Stop: 61025, Start Num: 16

Candidate Starts for Zaria\_102:

(14, 60714), (Start: 16 @60720 has 7 MA's), (17, 60747), (23, 60816), (24, 60822), (25, 60828), (29, 60882), (34, 60921), (41, 60996),