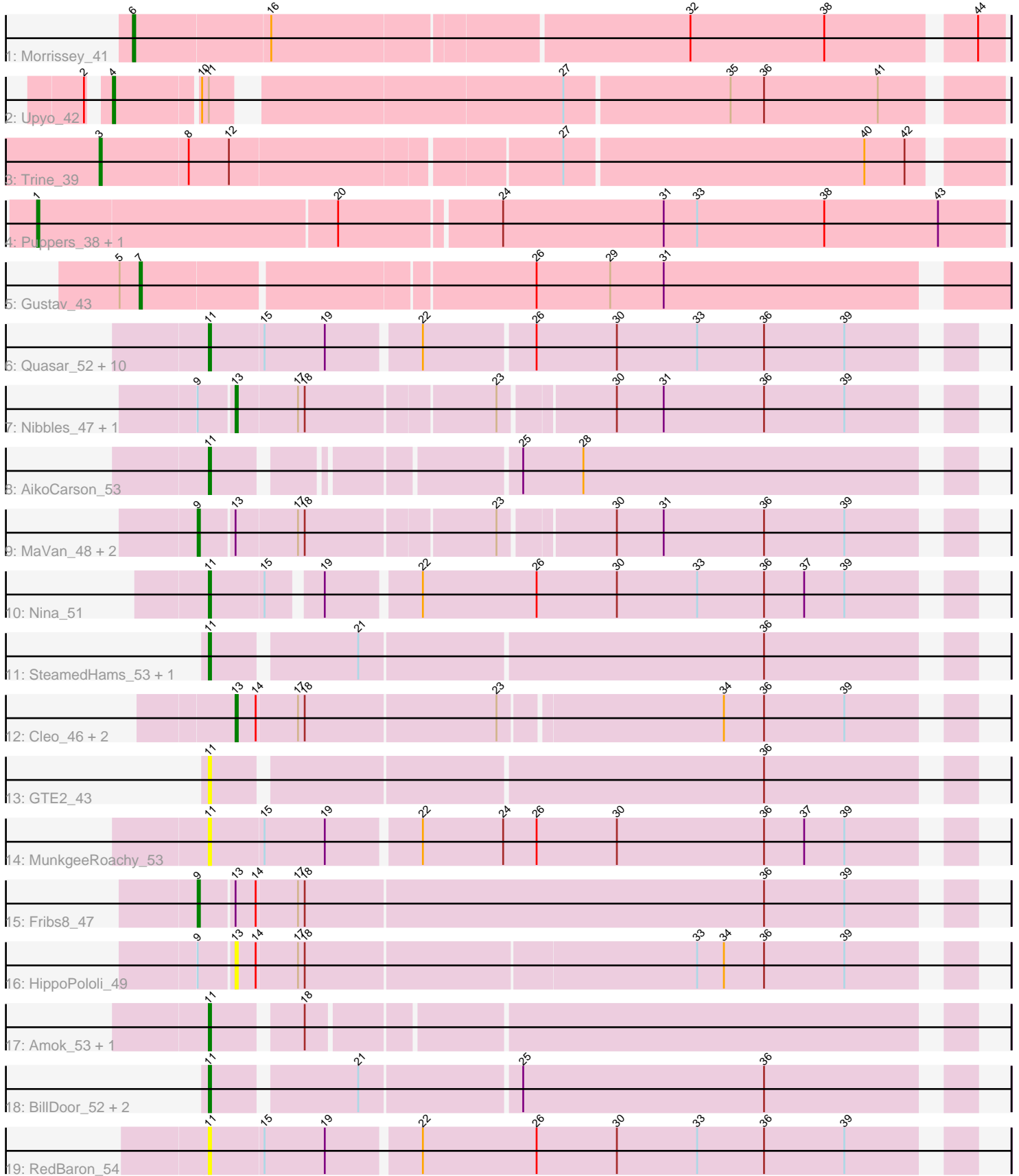


Pham 163748



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 163748 Report

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

Pham number 163748 has 39 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Morrissey\_41
- Track 2 : Upyo\_42
- Track 3 : Trine\_39
- Track 4 : Puppies\_38, Widow\_40
- Track 5 : Gustav\_43
- Track 6 : Quasar\_52, Agatha\_52, Sopespian\_49, Cozz\_50, PsychoKiller\_51, SweatNTears\_54, Elliott\_52, Axym\_51, GoldHunter\_53, Burnsey\_52, Typhonmachy\_52
- Track 7 : Nibbles\_47, Zareef\_50
- Track 8 : AikoCarson\_53
- Track 9 : MaVan\_48, Azira\_48, Survivors\_48
- Track 10 : Nina\_51
- Track 11 : SteamedHams\_53, Tolls\_53
- Track 12 : Cleo\_46, Dre3\_47, Gibbous\_47
- Track 13 : GTE2\_43
- Track 14 : MunkgeeRoachy\_53
- Track 15 : Fribs8\_47
- Track 16 : HippoPololi\_49
- Track 17 : Amok\_53, Emalyn\_51
- Track 18 : BillDoor\_52, AndPeggy\_49, Yarn\_49
- Track 19 : RedBaron\_54

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

The start number called the most often in the published annotations is 11, it was called in 15 of the 29 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha\_52, AikoCarson\_53, Amok\_53, AndPeggy\_49, Axym\_51, BillDoor\_52, Burnsey\_52, Cozz\_50, Elliott\_52, Emalyn\_51, GTE2\_43, GoldHunter\_53, MunkgeeRoachy\_53, Nina\_51, PsychoKiller\_51, Quasar\_52, RedBaron\_54, Sopespian\_49, SteamedHams\_53, SweatNTears\_54, Tolls\_53, Typhonmachy\_52, Yarn\_49,

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

- Upyo\_42,

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

- Azira\_48, Cleo\_46, Dre3\_47, Fribs8\_47, Gibbous\_47, Gustav\_43, HippoPololi\_49, MaVan\_48, Morrissey\_41, Nibbles\_47, Puppies\_38, Survivors\_48, Trine\_39, Widow\_40, Zareef\_50,

### Summary by start number:

Start 1:

- Found in 2 of 39 ( 5.1% ) of genes in pham
- Manual Annotations of this start: 2 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Puppies\_38 (CD), Widow\_40 (CD),

Start 3:

- Found in 1 of 39 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trine\_39 (CD),

Start 4:

- Found in 1 of 39 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Upyo\_42 (CD),

Start 6:

- Found in 1 of 39 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Morrissey\_41 (CD),

Start 7:

- Found in 1 of 39 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gustav\_43 (CD),

Start 9:

- Found in 7 of 39 ( 17.9% ) of genes in pham
- Manual Annotations of this start: 4 of 29
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Azira\_48 (CT), Fribs8\_47 (CT), MaVan\_48 (CT), Survivors\_48 (CT),

Start 11:

- Found in 24 of 39 ( 61.5% ) of genes in pham
- Manual Annotations of this start: 15 of 29
- Called 95.8% of time when present
- Phage (with cluster) where this start called: Agatha\_52 (CT), AikoCarson\_53 (CT), Amok\_53 (CT), AndPeggy\_49 (CT), Axym\_51 (CT), BillDoor\_52 (CT), Burnsey\_52

(CT), Cozz\_50 (CT), Elliott\_52 (CT), Emalyn\_51 (CT), GTE2\_43 (CT), GoldHunter\_53 (CT), MunkgeeRoachy\_53 (CT), Nina\_51 (CT), PsychoKiller\_51 (CT), Quasar\_52 (CT), RedBaron\_54 (CT), Sopespian\_49 (CT), SteamedHams\_53 (CT), SweatNTears\_54 (CT), Tolls\_53 (CT), Typhonmacy\_52 (CT), Yarn\_49 (CT),

Start 13:

- Found in 10 of 39 ( 25.6% ) of genes in pham
- Manual Annotations of this start: 4 of 29
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Cleo\_46 (CT), Dre3\_47 (CT), Gibbous\_47 (CT), HippoPololi\_49 (CT), Nibbles\_47 (CT), Zareef\_50 (CT),

### **Summary by clusters:**

There are 2 clusters represented in this pham: CD, CT,

Info for manual annotations of cluster CD:

- Start number 1 was manually annotated 2 times for cluster CD.
- Start number 3 was manually annotated 1 time for cluster CD.
- Start number 4 was manually annotated 1 time for cluster CD.
- Start number 6 was manually annotated 1 time for cluster CD.
- Start number 7 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CT:

- Start number 9 was manually annotated 4 times for cluster CT.
- Start number 11 was manually annotated 15 times for cluster CT.
- Start number 13 was manually annotated 4 times for cluster CT.

### **Gene Information:**

Gene: Agatha\_52 Start: 37367, Stop: 37041, Start Num: 11

Candidate Starts for Agatha\_52:

(Start: 11 @37367 has 15 MA's), (15, 37343), (19, 37316), (22, 37277), (26, 37226), (30, 37190), (33, 37154), (36, 37124), (39, 37088),

Gene: AikoCarson\_53 Start: 37632, Stop: 37321, Start Num: 11

Candidate Starts for AikoCarson\_53:

(Start: 11 @37632 has 15 MA's), (25, 37512), (28, 37485),

Gene: Amok\_53 Start: 37560, Stop: 37246, Start Num: 11

Candidate Starts for Amok\_53:

(Start: 11 @37560 has 15 MA's), (18, 37524),

Gene: AndPeggy\_49 Start: 36840, Stop: 36526, Start Num: 11

Candidate Starts for AndPeggy\_49:

(Start: 11 @36840 has 15 MA's), (21, 36780), (25, 36717), (36, 36609),

Gene: Axym\_51 Start: 37264, Stop: 36938, Start Num: 11

Candidate Starts for Axym\_51:

(Start: 11 @37264 has 15 MA's), (15, 37240), (19, 37213), (22, 37174), (26, 37123), (30, 37087), (33, 37051), (36, 37021), (39, 36985),

Gene: Azira\_48 Start: 36422, Stop: 36099, Start Num: 9

Candidate Starts for Azira\_48:

(Start: 9 @36422 has 4 MA's), (Start: 13 @36407 has 4 MA's), (17, 36380), (18, 36377), (23, 36296), (30, 36248), (31, 36227), (36, 36182), (39, 36146),

Gene: BillDoor\_52 Start: 36516, Stop: 36196, Start Num: 11

Candidate Starts for BillDoor\_52:

(Start: 11 @36516 has 15 MA's), (21, 36456), (25, 36387), (36, 36279),

Gene: Burnsey\_52 Start: 37358, Stop: 37032, Start Num: 11

Candidate Starts for Burnsey\_52:

(Start: 11 @37358 has 15 MA's), (15, 37334), (19, 37307), (22, 37268), (26, 37217), (30, 37181), (33, 37145), (36, 37115), (39, 37079),

Gene: Cleo\_46 Start: 36154, Stop: 35843, Start Num: 13

Candidate Starts for Cleo\_46:

(Start: 13 @36154 has 4 MA's), (14, 36145), (17, 36127), (18, 36124), (23, 36040), (34, 35944), (36, 35926), (39, 35890),

Gene: Cozz\_50 Start: 36955, Stop: 36629, Start Num: 11

Candidate Starts for Cozz\_50:

(Start: 11 @36955 has 15 MA's), (15, 36931), (19, 36904), (22, 36865), (26, 36814), (30, 36778), (33, 36742), (36, 36712), (39, 36676),

Gene: Dre3\_47 Start: 35897, Stop: 35586, Start Num: 13

Candidate Starts for Dre3\_47:

(Start: 13 @35897 has 4 MA's), (14, 35888), (17, 35870), (18, 35867), (23, 35783), (34, 35687), (36, 35669), (39, 35633),

Gene: Elliott\_52 Start: 37251, Stop: 36925, Start Num: 11

Candidate Starts for Elliott\_52:

(Start: 11 @37251 has 15 MA's), (15, 37227), (19, 37200), (22, 37161), (26, 37110), (30, 37074), (33, 37038), (36, 37008), (39, 36972),

Gene: Emalyn\_51 Start: 36352, Stop: 36038, Start Num: 11

Candidate Starts for Emalyn\_51:

(Start: 11 @36352 has 15 MA's), (18, 36316),

Gene: Fribs8\_47 Start: 36192, Stop: 35860, Start Num: 9

Candidate Starts for Fribs8\_47:

(Start: 9 @36192 has 4 MA's), (Start: 13 @36177 has 4 MA's), (14, 36168), (17, 36150), (18, 36147), (36, 35943), (39, 35907),

Gene: GTE2\_43 Start: 36955, Stop: 36635, Start Num: 11

Candidate Starts for GTE2\_43:

(Start: 11 @36955 has 15 MA's), (36, 36718),

Gene: Gibbous\_47 Start: 35897, Stop: 35586, Start Num: 13

Candidate Starts for Gibbous\_47:

(Start: 13 @35897 has 4 MA's), (14, 35888), (17, 35870), (18, 35867), (23, 35783), (34, 35687), (36, 35669), (39, 35633),

Gene: GoldHunter\_53 Start: 37368, Stop: 37042, Start Num: 11

Candidate Starts for GoldHunter\_53:

(Start: 11 @37368 has 15 MA's), (15, 37344), (19, 37317), (22, 37278), (26, 37227), (30, 37191), (33, 37155), (36, 37125), (39, 37089),

Gene: Gustav\_43 Start: 32873, Stop: 32505, Start Num: 7

Candidate Starts for Gustav\_43:

(5, 32882), (Start: 7 @32873 has 1 MA's), (26, 32705), (29, 32672), (31, 32648),

Gene: HippoPololi\_49 Start: 36312, Stop: 35998, Start Num: 13

Candidate Starts for HippoPololi\_49:

(Start: 9 @36327 has 4 MA's), (Start: 13 @36312 has 4 MA's), (14, 36303), (17, 36285), (18, 36282), (33, 36111), (34, 36099), (36, 36081), (39, 36045),

Gene: MaVan\_48 Start: 36451, Stop: 36128, Start Num: 9

Candidate Starts for MaVan\_48:

(Start: 9 @36451 has 4 MA's), (Start: 13 @36436 has 4 MA's), (17, 36409), (18, 36406), (23, 36325), (30, 36277), (31, 36256), (36, 36211), (39, 36175),

Gene: Morrissey\_41 Start: 32244, Stop: 31873, Start Num: 6

Candidate Starts for Morrissey\_41:

(Start: 6 @32244 has 1 MA's), (16, 32184), (32, 32004), (38, 31944), (44, 31884),

Gene: MunkgeeRoachy\_53 Start: 36714, Stop: 36388, Start Num: 11

Candidate Starts for MunkgeeRoachy\_53:

(Start: 11 @36714 has 15 MA's), (15, 36690), (19, 36663), (22, 36624), (24, 36588), (26, 36573), (30, 36537), (36, 36471), (37, 36453), (39, 36435),

Gene: Nibbles\_47 Start: 36132, Stop: 35824, Start Num: 13

Candidate Starts for Nibbles\_47:

(Start: 9 @36147 has 4 MA's), (Start: 13 @36132 has 4 MA's), (17, 36105), (18, 36102), (23, 36021), (30, 35973), (31, 35952), (36, 35907), (39, 35871),

Gene: Nina\_51 Start: 37528, Stop: 37208, Start Num: 11

Candidate Starts for Nina\_51:

(Start: 11 @37528 has 15 MA's), (15, 37504), (19, 37483), (22, 37444), (26, 37393), (30, 37357), (33, 37321), (36, 37291), (37, 37273), (39, 37255),

Gene: PsychoKiller\_51 Start: 37252, Stop: 36926, Start Num: 11

Candidate Starts for PsychoKiller\_51:

(Start: 11 @37252 has 15 MA's), (15, 37228), (19, 37201), (22, 37162), (26, 37111), (30, 37075), (33, 37039), (36, 37009), (39, 36973),

Gene: Puppies\_38 Start: 31067, Stop: 30642, Start Num: 1

Candidate Starts for Puppies\_38:

(Start: 1 @31067 has 2 MA's), (20, 30935), (24, 30866), (31, 30794), (33, 30779), (38, 30722), (43, 30671),

Gene: Quasar\_52 Start: 37956, Stop: 37633, Start Num: 11

Candidate Starts for Quasar\_52:

(Start: 11 @37956 has 15 MA's), (15, 37932), (19, 37905), (22, 37866), (26, 37818), (30, 37782), (33, 37746), (36, 37716), (39, 37680),

Gene: RedBaron\_54 Start: 37581, Stop: 37255, Start Num: 11

Candidate Starts for RedBaron\_54:

(Start: 11 @37581 has 15 MA's), (15, 37557), (19, 37530), (22, 37491), (26, 37440), (30, 37404), (33, 37368), (36, 37338), (39, 37302),

Gene: Sopespian\_49 Start: 37253, Stop: 36927, Start Num: 11

Candidate Starts for Sopespian\_49:

(Start: 11 @37253 has 15 MA's), (15, 37229), (19, 37202), (22, 37163), (26, 37112), (30, 37076), (33, 37040), (36, 37010), (39, 36974),

Gene: SteamedHams\_53 Start: 36817, Stop: 36497, Start Num: 11

Candidate Starts for SteamedHams\_53:

(Start: 11 @36817 has 15 MA's), (21, 36757), (36, 36580),

Gene: Survivors\_48 Start: 36347, Stop: 36024, Start Num: 9

Candidate Starts for Survivors\_48:

(Start: 9 @36347 has 4 MA's), (Start: 13 @36332 has 4 MA's), (17, 36305), (18, 36302), (23, 36221), (30, 36173), (31, 36152), (36, 36107), (39, 36071),

Gene: SweatNTears\_54 Start: 37495, Stop: 37169, Start Num: 11

Candidate Starts for SweatNTears\_54:

(Start: 11 @37495 has 15 MA's), (15, 37471), (19, 37444), (22, 37405), (26, 37354), (30, 37318), (33, 37282), (36, 37252), (39, 37216),

Gene: Tolls\_53 Start: 37088, Stop: 36768, Start Num: 11

Candidate Starts for Tolls\_53:

(Start: 11 @37088 has 15 MA's), (21, 37028), (36, 36851),

Gene: Trine\_39 Start: 31423, Stop: 31040, Start Num: 3

Candidate Starts for Trine\_39:

(Start: 3 @31423 has 1 MA's), (8, 31384), (12, 31366), (27, 31225), (40, 31093), (42, 31075),

Gene: Typhonomachy\_52 Start: 37077, Stop: 36751, Start Num: 11

Candidate Starts for Typhonomachy\_52:

(Start: 11 @37077 has 15 MA's), (15, 37053), (19, 37026), (22, 36987), (26, 36936), (30, 36900), (33, 36864), (36, 36834), (39, 36798),

Gene: Upyo\_42 Start: 32741, Stop: 32373, Start Num: 4

Candidate Starts for Upyo\_42:

(2, 32747), (Start: 4 @32741 has 1 MA's), (10, 32705), (Start: 11 @32702 has 15 MA's), (27, 32558), (35, 32486), (36, 32471), (41, 32420),

Gene: Widow\_40 Start: 32148, Stop: 31723, Start Num: 1

Candidate Starts for Widow\_40:

(Start: 1 @32148 has 2 MA's), (20, 32016), (24, 31947), (31, 31875), (33, 31860), (38, 31803), (43, 31752),

Gene: Yarn\_49 Start: 36845, Stop: 36531, Start Num: 11

Candidate Starts for Yarn\_49:

(Start: 11 @36845 has 15 MA's), (21, 36785), (25, 36722), (36, 36614),

Gene: Zareef\_50 Start: 36426, Stop: 36118, Start Num: 13

Candidate Starts for Zareef\_50:

(Start: 9 @36441 has 4 MA's), (Start: 13 @36426 has 4 MA's), (17, 36399), (18, 36396), (23, 36315),  
(30, 36267), (31, 36246), (36, 36201), (39, 36165),