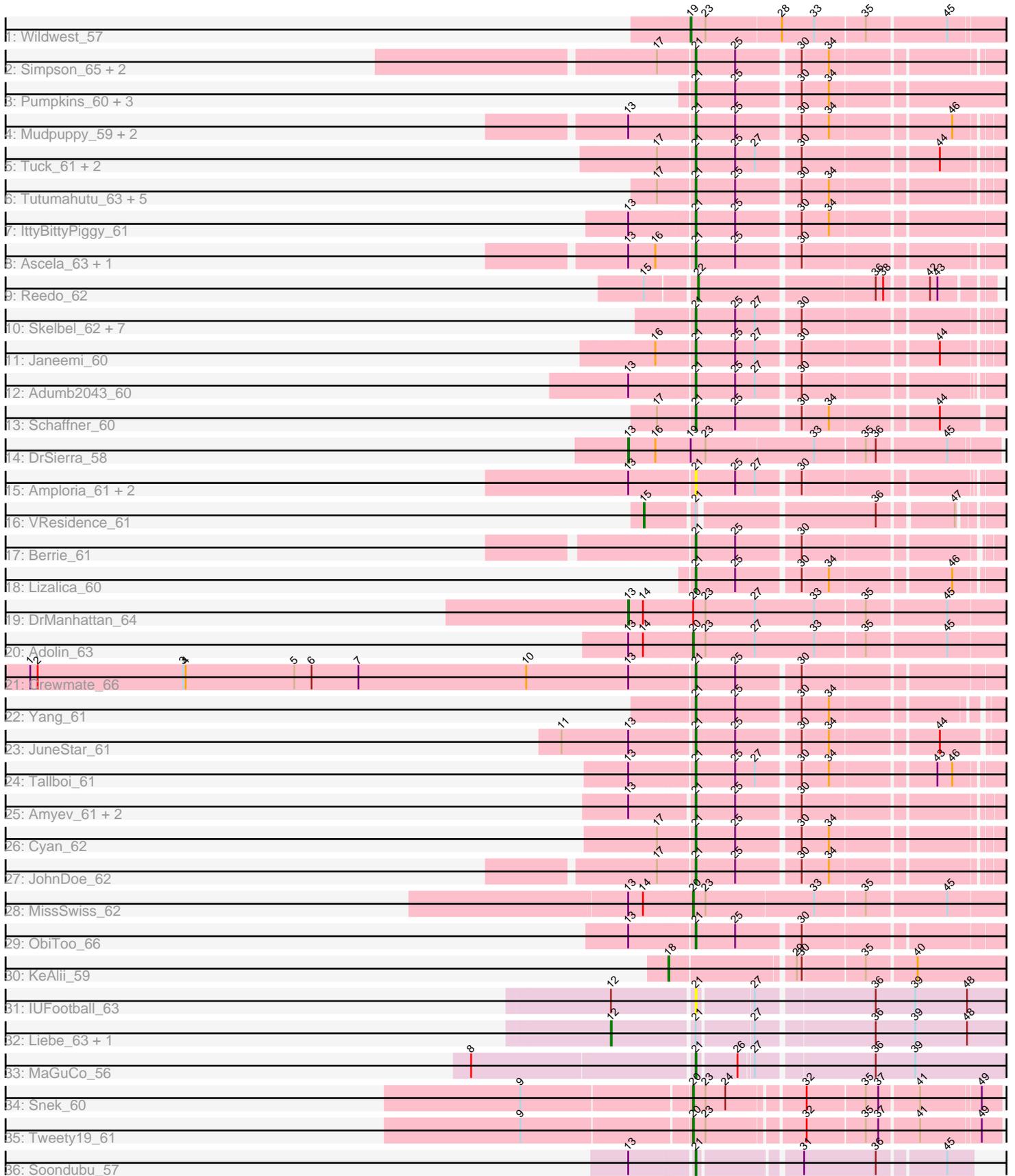


Pham 291166



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 291166 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291166 has 63 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Wildwest\_57
- Track 2 : Simpson\_65, Joemato\_62, Flutur\_61
- Track 3 : Pumpkins\_60, Cassia\_61, TforTroy\_62, Nitro\_62
- Track 4 : Mudpuppy\_59, Warda\_62, Tbone\_61
- Track 5 : Tuck\_61, Phives\_62, Community\_61
- Track 6 : Tutumahutu\_63, Powerpuff\_63, YesChef\_61, Lego\_61, AGrandiflora\_63, Kaylissa\_63
- Track 7 : IttyBittyPiggy\_61
- Track 8 : Ascela\_63, Iter\_62
- Track 9 : Reedo\_62
- Track 10 : Skelbel\_62, Eraser\_61, London\_61, Asa16\_61, Subaru\_61, Niobe\_61, Jstan\_62, Elezi\_60
- Track 11 : Janeemi\_60
- Track 12 : Adumb2043\_60
- Track 13 : Schaffner\_60
- Track 14 : DrSierra\_58
- Track 15 : Amploria\_61, AEgle\_59, Turab\_60
- Track 16 : VResidence\_61
- Track 17 : Berrie\_61
- Track 18 : Lizalica\_60
- Track 19 : DrManhattan\_64
- Track 20 : Adolin\_63
- Track 21 : Crewmate\_66
- Track 22 : Yang\_61
- Track 23 : JuneStar\_61
- Track 24 : Tallboi\_61
- Track 25 : Amyev\_61, Tian\_60, Pixelle\_61
- Track 26 : Cyan\_62
- Track 27 : JohnDoe\_62
- Track 28 : MissSwiss\_62
- Track 29 : ObiToo\_66
- Track 30 : KeAlii\_59
- Track 31 : IUFootball\_63
- Track 32 : Liebe\_63, Maureen\_63
- Track 33 : MaGuCo\_56
- Track 34 : Snek\_60
- Track 35 : Tweety19\_61

- Track 36 : Soondubu\_57

### **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 39 of the 51 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle\_59, AGrandiflora\_63, Adumb2043\_60, Amploria\_61, Amyev\_61, Asa16\_61, Ascela\_63, Berrie\_61, Cassia\_61, Community\_61, Crewmate\_66, Cyan\_62, Elezi\_60, Eraser\_61, Flutur\_61, IUFootball\_63, Iter\_62, IttyBittyPiggy\_61, Janeemi\_60, Joemato\_62, JohnDoe\_62, Jstan\_62, JuneStar\_61, Kaylissa\_63, Lego\_61, Lizalica\_60, London\_61, MaGuCo\_56, Mudpuppy\_59, Niobe\_61, Nitro\_62, ObiToo\_66, Phives\_62, Pixelle\_61, Powerpuff\_63, Pumpkins\_60, Schaffner\_60, Simpson\_65, Skelbel\_62, Soondubu\_57, Subaru\_61, Tallboi\_61, Tbone\_61, TforTroy\_62, Tian\_60, Tuck\_61, Turab\_60, Tutumahutu\_63, Warda\_62, Yang\_61, YesChef\_61,

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

- Liebe\_63, Maureen\_63, VResidence\_61,

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

- Adolin\_63, DrManhattan\_64, DrSierra\_58, KeAlii\_59, MissSwiss\_62, Reedo\_62, Snek\_60, Tweety19\_61, Wildwest\_57,

### **Summary by start number:**

Start 12:

- Found in 3 of 63 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 2 of 51
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Liebe\_63 (AZ2), Maureen\_63 (AZ2),

Start 13:

- Found in 22 of 63 ( 34.9% ) of genes in pham
- Manual Annotations of this start: 2 of 51
- Called 9.1% of time when present
- Phage (with cluster) where this start called: DrManhattan\_64 (AZ1), DrSierra\_58 (AZ1),

Start 15:

- Found in 2 of 63 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 50.0% of time when present
- Phage (with cluster) where this start called: VResidence\_61 (AZ1),

Start 18:

- Found in 1 of 63 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 100.0% of time when present

- Phage (with cluster) where this start called: KeAlii\_59 (AZ1),

Start 19:

- Found in 2 of 63 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Wildwest\_57 (AZ1),

Start 20:

- Found in 5 of 63 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 4 of 51
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Adolin\_63 (AZ1), MissSwiss\_62 (AZ1), Snek\_60 (AZ3), Tweety19\_61 (AZ3),

Start 21:

- Found in 54 of 63 ( 85.7% ) of genes in pham
- Manual Annotations of this start: 39 of 51
- Called 94.4% of time when present
- Phage (with cluster) where this start called: AEgle\_59 (AZ1), AGrandiflora\_63 (AZ1), Adumb2043\_60 (AZ1), Amploria\_61 (AZ1), Amyev\_61 (AZ1), Asa16\_61 (AZ1), Ascela\_63 (AZ1), Berrie\_61 (AZ1), Cassia\_61 (AZ1), Community\_61 (AZ1), Crewmate\_66 (AZ1), Cyan\_62 (AZ1), Elezi\_60 (AZ1), Eraser\_61 (AZ1), Flutur\_61 (AZ), IUFootball\_63 (AZ2), Iter\_62 (AZ1), IttyBittyPiggy\_61 (AZ1), Janeemi\_60 (AZ1), Joemato\_62 (AZ1), JohnDoe\_62 (AZ1), Jstan\_62 (AZ1), JuneStar\_61 (AZ1), Kaylissa\_63 (AZ1), Lego\_61 (AZ1), Lizalica\_60 (AZ1), London\_61 (AZ1), MaGuCo\_56 (AZ2), Mudpuppy\_59 (AZ1), Niobe\_61 (AZ1), Nitro\_62 (AZ1), ObiToo\_66 (AZ1), Phives\_62 (AZ1), Pixelle\_61 (AZ1), Powerpuff\_63 (AZ1), Pumpkins\_60 (AZ1), Schaffner\_60 (AZ1), Simpson\_65 (AZ1), Skelbel\_62 (AZ1), Soondubu\_57 (AZ6), Subaru\_61 (AZ1), Tallboi\_61 (AZ1), Tbone\_61 (AZ1), TforTroy\_62 (AZ1), Tian\_60 (AZ1), Tuck\_61 (AZ1), Turab\_60 (AZ1), Tutumahutu\_63 (AZ1), Warda\_62 (AZ1), Yang\_61 (AZ1), YesChef\_61 (AZ1),

Start 22:

- Found in 1 of 63 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Reedo\_62 (AZ1),

### Summary by clusters:

There are 5 clusters represented in this pham: AZ1, AZ2, AZ3, AZ, AZ6,

Info for manual annotations of cluster AZ1:

- Start number 13 was manually annotated 2 times for cluster AZ1.
- Start number 15 was manually annotated 1 time for cluster AZ1.
- Start number 18 was manually annotated 1 time for cluster AZ1.
- Start number 19 was manually annotated 1 time for cluster AZ1.
- Start number 20 was manually annotated 2 times for cluster AZ1.
- Start number 21 was manually annotated 37 times for cluster AZ1.
- Start number 22 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 12 was manually annotated 2 times for cluster AZ2.
- Start number 21 was manually annotated 1 time for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 20 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ6:

- Start number 21 was manually annotated 1 time for cluster AZ6.

### **Gene Information:**

Gene: AEgle\_59 Start: 40422, Stop: 40757, Start Num: 21

Candidate Starts for AEgle\_59:

(Start: 13 @40347 has 2 MA's), (Start: 21 @40422 has 39 MA's), (25, 40467), (27, 40491), (30, 40539),

Gene: AGrandiflora\_63 Start: 41322, Stop: 41654, Start Num: 21

Candidate Starts for AGrandiflora\_63:

(17, 41283), (Start: 21 @41322 has 39 MA's), (25, 41367), (30, 41439), (34, 41469),

Gene: Adolin\_63 Start: 40162, Stop: 40527, Start Num: 20

Candidate Starts for Adolin\_63:

(Start: 13 @40087 has 2 MA's), (14, 40105), (Start: 20 @40162 has 4 MA's), (23, 40177), (27, 40237), (33, 40309), (35, 40366), (45, 40459),

Gene: Adumb2043\_60 Start: 40446, Stop: 40781, Start Num: 21

Candidate Starts for Adumb2043\_60:

(Start: 13 @40371 has 2 MA's), (Start: 21 @40446 has 39 MA's), (25, 40491), (27, 40515), (30, 40563),

Gene: Amploria\_61 Start: 40626, Stop: 40961, Start Num: 21

Candidate Starts for Amploria\_61:

(Start: 13 @40551 has 2 MA's), (Start: 21 @40626 has 39 MA's), (25, 40671), (27, 40695), (30, 40743),

Gene: Amyev\_61 Start: 42012, Stop: 42341, Start Num: 21

Candidate Starts for Amyev\_61:

(Start: 13 @41940 has 2 MA's), (Start: 21 @42012 has 39 MA's), (25, 42057), (30, 42129),

Gene: Asa16\_61 Start: 41006, Stop: 41341, Start Num: 21

Candidate Starts for Asa16\_61:

(Start: 21 @41006 has 39 MA's), (25, 41051), (27, 41075), (30, 41123),

Gene: Ascela\_63 Start: 41495, Stop: 41830, Start Num: 21

Candidate Starts for Ascela\_63:

(Start: 13 @41423 has 2 MA's), (16, 41456), (Start: 21 @41495 has 39 MA's), (25, 41540), (30, 41612),

Gene: Berrie\_61 Start: 41120, Stop: 41446, Start Num: 21

Candidate Starts for Berrie\_61:

(Start: 21 @41120 has 39 MA's), (25, 41165), (30, 41237),

Gene: Cassia\_61 Start: 41124, Stop: 41462, Start Num: 21

Candidate Starts for Cassia\_61:

(Start: 21 @41124 has 39 MA's), (25, 41169), (30, 41241), (34, 41271),

Gene: Community\_61 Start: 41392, Stop: 41721, Start Num: 21

Candidate Starts for Community\_61:

(17, 41353), (Start: 21 @41392 has 39 MA's), (25, 41437), (27, 41461), (30, 41509), (44, 41656),

Gene: Crewmate\_66 Start: 41729, Stop: 42073, Start Num: 21

Candidate Starts for Crewmate\_66:

(1, 40931), (2, 40940), (3, 41117), (4, 41120), (5, 41252), (6, 41273), (7, 41330), (10, 41534), (Start: 13 @41657 has 2 MA's), (Start: 21 @41729 has 39 MA's), (25, 41774), (30, 41846),

Gene: Cyan\_62 Start: 41066, Stop: 41398, Start Num: 21

Candidate Starts for Cyan\_62:

(17, 41027), (Start: 21 @41066 has 39 MA's), (25, 41111), (30, 41183), (34, 41213),

Gene: DrManhattan\_64 Start: 39641, Stop: 40081, Start Num: 13

Candidate Starts for DrManhattan\_64:

(Start: 13 @39641 has 2 MA's), (14, 39659), (Start: 20 @39716 has 4 MA's), (23, 39731), (27, 39791), (33, 39863), (35, 39920), (45, 40013),

Gene: DrSierra\_58 Start: 39809, Stop: 40234, Start Num: 13

Candidate Starts for DrSierra\_58:

(Start: 13 @39809 has 2 MA's), (16, 39842), (Start: 19 @39881 has 1 MA's), (23, 39899), (33, 40028), (35, 40085), (36, 40097), (45, 40178),

Gene: Elezi\_60 Start: 40763, Stop: 41098, Start Num: 21

Candidate Starts for Elezi\_60:

(Start: 21 @40763 has 39 MA's), (25, 40808), (27, 40832), (30, 40880),

Gene: Eraser\_61 Start: 41013, Stop: 41348, Start Num: 21

Candidate Starts for Eraser\_61:

(Start: 21 @41013 has 39 MA's), (25, 41058), (27, 41082), (30, 41130),

Gene: Flutur\_61 Start: 41341, Stop: 41676, Start Num: 21

Candidate Starts for Flutur\_61:

(17, 41302), (Start: 21 @41341 has 39 MA's), (25, 41386), (30, 41458), (34, 41488),

Gene: IUFootball\_63 Start: 43049, Stop: 43444, Start Num: 21

Candidate Starts for IUFootball\_63:

(Start: 12 @42953 has 2 MA's), (Start: 21 @43049 has 39 MA's), (27, 43112), (36, 43247), (39, 43295), (48, 43358),

Gene: Iter\_62 Start: 41266, Stop: 41601, Start Num: 21

Candidate Starts for Iter\_62:

(Start: 13 @41194 has 2 MA's), (16, 41227), (Start: 21 @41266 has 39 MA's), (25, 41311), (30, 41383),

Gene: IttyBittyPiggy\_61 Start: 39364, Stop: 39705, Start Num: 21

Candidate Starts for IttyBittyPiggy\_61:

(Start: 13 @39292 has 2 MA's), (Start: 21 @39364 has 39 MA's), (25, 39409), (30, 39481), (34, 39511),

Gene: Janeemi\_60 Start: 40891, Stop: 41220, Start Num: 21

Candidate Starts for Janeemi\_60:

(16, 40849), (Start: 21 @40891 has 39 MA's), (25, 40936), (27, 40960), (30, 41008), (44, 41155),

Gene: Joemato\_62 Start: 41116, Stop: 41451, Start Num: 21

Candidate Starts for Joemato\_62:

(17, 41077), (Start: 21 @41116 has 39 MA's), (25, 41161), (30, 41233), (34, 41263),

Gene: JohnDoe\_62 Start: 41160, Stop: 41492, Start Num: 21

Candidate Starts for JohnDoe\_62:

(17, 41121), (Start: 21 @41160 has 39 MA's), (25, 41205), (30, 41277), (34, 41307),

Gene: Jstan\_62 Start: 40767, Stop: 41102, Start Num: 21

Candidate Starts for Jstan\_62:

(Start: 21 @40767 has 39 MA's), (25, 40812), (27, 40836), (30, 40884),

Gene: JuneStar\_61 Start: 42226, Stop: 42558, Start Num: 21

Candidate Starts for JuneStar\_61:

(11, 42073), (Start: 13 @42154 has 2 MA's), (Start: 21 @42226 has 39 MA's), (25, 42271), (30, 42343), (34, 42373), (44, 42490),

Gene: Kaylissa\_63 Start: 41523, Stop: 41855, Start Num: 21

Candidate Starts for Kaylissa\_63:

(17, 41484), (Start: 21 @41523 has 39 MA's), (25, 41568), (30, 41640), (34, 41670),

Gene: KeAlii\_59 Start: 39420, Stop: 39800, Start Num: 18

Candidate Starts for KeAlii\_59:

(Start: 18 @39420 has 1 MA's), (29, 39558), (30, 39564), (35, 39633), (40, 39690),

Gene: Lego\_61 Start: 40842, Stop: 41174, Start Num: 21

Candidate Starts for Lego\_61:

(17, 40803), (Start: 21 @40842 has 39 MA's), (25, 40887), (30, 40959), (34, 40989),

Gene: Liebe\_63 Start: 42952, Stop: 43443, Start Num: 12

Candidate Starts for Liebe\_63:

(Start: 12 @42952 has 2 MA's), (Start: 21 @43048 has 39 MA's), (27, 43111), (36, 43246), (39, 43294), (48, 43357),

Gene: Lizalica\_60 Start: 40320, Stop: 40652, Start Num: 21

Candidate Starts for Lizalica\_60:

(Start: 21 @40320 has 39 MA's), (25, 40365), (30, 40437), (34, 40467), (46, 40599),

Gene: London\_61 Start: 41004, Stop: 41339, Start Num: 21

Candidate Starts for London\_61:

(Start: 21 @41004 has 39 MA's), (25, 41049), (27, 41073), (30, 41121),

Gene: MaGuCo\_56 Start: 41051, Stop: 41443, Start Num: 21

Candidate Starts for MaGuCo\_56:

(8, 40790), (Start: 21 @41051 has 39 MA's), (26, 41096), (27, 41111), (36, 41246), (39, 41294),

Gene: Maureen\_63 Start: 42951, Stop: 43442, Start Num: 12

Candidate Starts for Maureen\_63:

(Start: 12 @42951 has 2 MA's), (Start: 21 @43047 has 39 MA's), (27, 43110), (36, 43245), (39, 43293), (48, 43356),

Gene: MissSwiss\_62 Start: 39726, Stop: 40088, Start Num: 20

Candidate Starts for MissSwiss\_62:

(Start: 13 @39651 has 2 MA's), (14, 39669), (Start: 20 @39726 has 4 MA's), (23, 39741), (33, 39870), (35, 39927), (45, 40020),

Gene: Mudpuppy\_59 Start: 41090, Stop: 41422, Start Num: 21

Candidate Starts for Mudpuppy\_59:

(Start: 13 @41018 has 2 MA's), (Start: 21 @41090 has 39 MA's), (25, 41135), (30, 41207), (34, 41237), (46, 41369),

Gene: Niobe\_61 Start: 41007, Stop: 41342, Start Num: 21

Candidate Starts for Niobe\_61:

(Start: 21 @41007 has 39 MA's), (25, 41052), (27, 41076), (30, 41124),

Gene: Nitro\_62 Start: 41706, Stop: 42038, Start Num: 21

Candidate Starts for Nitro\_62:

(Start: 21 @41706 has 39 MA's), (25, 41751), (30, 41823), (34, 41853),

Gene: ObiToo\_66 Start: 41345, Stop: 41689, Start Num: 21

Candidate Starts for ObiToo\_66:

(Start: 13 @41273 has 2 MA's), (Start: 21 @41345 has 39 MA's), (25, 41390), (30, 41462),

Gene: Phives\_62 Start: 41507, Stop: 41836, Start Num: 21

Candidate Starts for Phives\_62:

(17, 41468), (Start: 21 @41507 has 39 MA's), (25, 41552), (27, 41576), (30, 41624), (44, 41771),

Gene: Pixelle\_61 Start: 42113, Stop: 42442, Start Num: 21

Candidate Starts for Pixelle\_61:

(Start: 13 @42041 has 2 MA's), (Start: 21 @42113 has 39 MA's), (25, 42158), (30, 42230),

Gene: Powerpuff\_63 Start: 42045, Stop: 42377, Start Num: 21

Candidate Starts for Powerpuff\_63:

(17, 42006), (Start: 21 @42045 has 39 MA's), (25, 42090), (30, 42162), (34, 42192),

Gene: Pumpkins\_60 Start: 41637, Stop: 41981, Start Num: 21

Candidate Starts for Pumpkins\_60:

(Start: 21 @41637 has 39 MA's), (25, 41682), (30, 41754), (34, 41784),

Gene: Reedo\_62 Start: 39642, Stop: 39962, Start Num: 22

Candidate Starts for Reedo\_62:

(Start: 15 @39588 has 1 MA's), (Start: 22 @39642 has 1 MA's), (36, 39843), (38, 39852), (42, 39897), (43, 39906),

Gene: Schaffner\_60 Start: 41330, Stop: 41665, Start Num: 21

Candidate Starts for Schaffner\_60:

(17, 41291), (Start: 21 @41330 has 39 MA's), (25, 41375), (30, 41447), (34, 41477), (44, 41594),

Gene: Simpson\_65 Start: 41120, Stop: 41455, Start Num: 21

Candidate Starts for Simpson\_65:

(17, 41081), (Start: 21 @41120 has 39 MA's), (25, 41165), (30, 41237), (34, 41267),

Gene: Skelbel\_62 Start: 41007, Stop: 41342, Start Num: 21

Candidate Starts for Skelbel\_62:

(Start: 21 @41007 has 39 MA's), (25, 41052), (27, 41076), (30, 41124),

Gene: Snek\_60 Start: 38237, Stop: 38578, Start Num: 20

Candidate Starts for Snek\_60:

(9, 38042), (Start: 20 @38237 has 4 MA's), (23, 38252), (24, 38276), (32, 38360), (35, 38426), (37, 38441), (41, 38486), (49, 38555),

Gene: Soondubu\_57 Start: 42688, Stop: 42990, Start Num: 21

Candidate Starts for Soondubu\_57:

(Start: 13 @42616 has 2 MA's), (Start: 21 @42688 has 39 MA's), (31, 42799), (36, 42886), (45, 42961),

Gene: Subaru\_61 Start: 40763, Stop: 41098, Start Num: 21

Candidate Starts for Subaru\_61:

(Start: 21 @40763 has 39 MA's), (25, 40808), (27, 40832), (30, 40880),

Gene: Tallboi\_61 Start: 41005, Stop: 41346, Start Num: 21

Candidate Starts for Tallboi\_61:

(Start: 13 @40930 has 2 MA's), (Start: 21 @41005 has 39 MA's), (25, 41053), (27, 41077), (30, 41125), (34, 41155), (43, 41269), (46, 41287),

Gene: Tbone\_61 Start: 41486, Stop: 41824, Start Num: 21

Candidate Starts for Tbone\_61:

(Start: 13 @41414 has 2 MA's), (Start: 21 @41486 has 39 MA's), (25, 41531), (30, 41603), (34, 41633), (46, 41765),

Gene: TforTroy\_62 Start: 41302, Stop: 41634, Start Num: 21

Candidate Starts for TforTroy\_62:

(Start: 21 @41302 has 39 MA's), (25, 41347), (30, 41419), (34, 41449),

Gene: Tian\_60 Start: 42011, Stop: 42340, Start Num: 21

Candidate Starts for Tian\_60:

(Start: 13 @41939 has 2 MA's), (Start: 21 @42011 has 39 MA's), (25, 42056), (30, 42128),

Gene: Tuck\_61 Start: 41295, Stop: 41624, Start Num: 21

Candidate Starts for Tuck\_61:

(17, 41256), (Start: 21 @41295 has 39 MA's), (25, 41340), (27, 41364), (30, 41412), (44, 41559),

Gene: Turab\_60 Start: 40466, Stop: 40801, Start Num: 21

Candidate Starts for Turab\_60:

(Start: 13 @40391 has 2 MA's), (Start: 21 @40466 has 39 MA's), (25, 40511), (27, 40535), (30, 40583),

Gene: Tutumahutu\_63 Start: 41088, Stop: 41420, Start Num: 21

Candidate Starts for Tutumahutu\_63:

(17, 41049), (Start: 21 @41088 has 39 MA's), (25, 41133), (30, 41205), (34, 41235),

Gene: Tweety19\_61 Start: 38238, Stop: 38579, Start Num: 20

Candidate Starts for Tweety19\_61:

(9, 38043), (Start: 20 @38238 has 4 MA's), (23, 38253), (32, 38361), (35, 38427), (37, 38442), (41, 38487), (49, 38556),

Gene: VResidence\_61 Start: 38974, Stop: 39348, Start Num: 15

Candidate Starts for VResidence\_61:

(Start: 15 @38974 has 1 MA's), (Start: 21 @39028 has 39 MA's), (36, 39223), (47, 39304),

Gene: Warda\_62 Start: 41212, Stop: 41550, Start Num: 21

Candidate Starts for Warda\_62:

(Start: 13 @41140 has 2 MA's), (Start: 21 @41212 has 39 MA's), (25, 41257), (30, 41329), (34, 41359), (46, 41491),

Gene: Wildwest\_57 Start: 40861, Stop: 41223, Start Num: 19

Candidate Starts for Wildwest\_57:

(Start: 19 @40861 has 1 MA's), (23, 40879), (28, 40969), (33, 41008), (35, 41065), (45, 41158),

Gene: Yang\_61 Start: 40955, Stop: 41278, Start Num: 21

Candidate Starts for Yang\_61:

(Start: 21 @40955 has 39 MA's), (25, 41000), (30, 41072), (34, 41102),

Gene: YesChef\_61 Start: 40904, Stop: 41236, Start Num: 21

Candidate Starts for YesChef\_61:

(17, 40865), (Start: 21 @40904 has 39 MA's), (25, 40949), (30, 41021), (34, 41051),