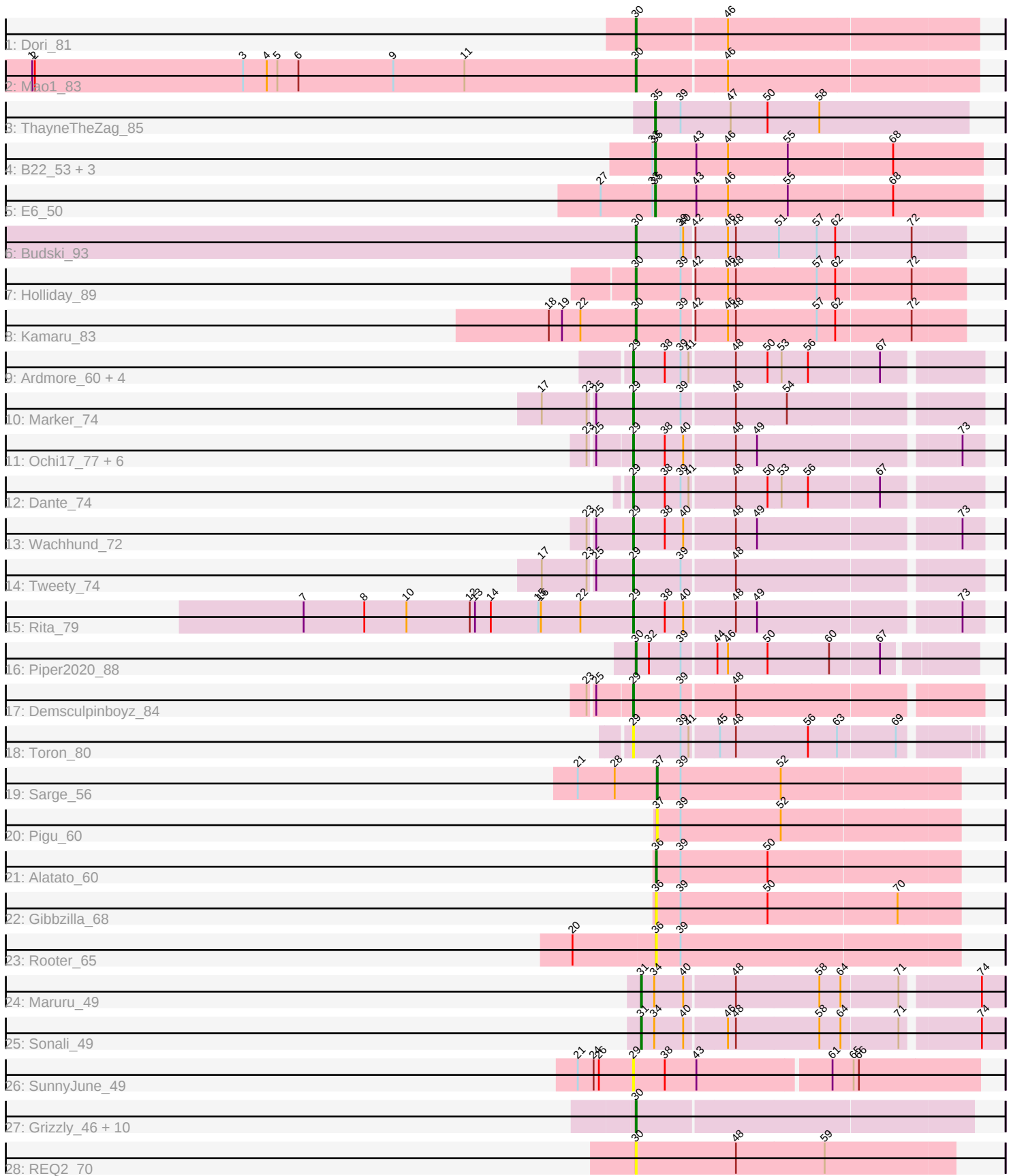


# Pham 278287



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 278287 Report

This analysis was run 02/07/26 on database version 634.

Pham number 278287 has 51 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Dori\_81
- Track 2 : Mao1\_83
- Track 3 : ThayneTheZag\_85
- Track 4 : B22\_53, Anatole\_45, B3\_47, E1\_45
- Track 5 : E6\_50
- Track 6 : Budski\_93
- Track 7 : Holliday\_89
- Track 8 : Kamaru\_83
- Track 9 : Ardmore\_60, Chuckly\_71, Avani\_81, Jant\_75, ThetaBob\_78
- Track 10 : Marker\_74
- Track 11 : Ochi17\_77, AlpineSix\_78, Seabastian\_79, Modragons\_76, Jinglebell\_78, OfUltron\_79, Llama\_78
- Track 12 : Dante\_74
- Track 13 : Wachhund\_72
- Track 14 : Tweety\_74
- Track 15 : Rita\_79
- Track 16 : Piper2020\_88
- Track 17 : Demsculpinboyz\_84
- Track 18 : Toron\_80
- Track 19 : Sarge\_56
- Track 20 : Pigu\_60
- Track 21 : Alatao\_60
- Track 22 : Gibbzilla\_68
- Track 23 : Rooter\_65
- Track 24 : Maruru\_49
- Track 25 : Sonali\_49
- Track 26 : SunnyJune\_49
- Track 27 : Grizzly\_46, DNAlll\_0044, Jolene\_46, Rabbs\_48, Rattrick\_46, Sneeze\_47, Liefie\_45, Terror\_45, Periodt\_46, Barkley26\_46, Taheera\_45
- Track 28 : REQ2\_70

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

The start number called the most often in the published annotations is 29, it was called in 16 of the 42 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AlpineSix\_78, Ardmore\_60, Avani\_81, Chuckly\_71, Dante\_74, Demsculpinboyz\_84, Jant\_75, Jinglebell\_78, Llama\_78, Marker\_74, Modragons\_76, Ochi17\_77, OfUltron\_79, Rita\_79, Seabastian\_79, SunnyJune\_49, ThetaBob\_78, Toron\_80, Tweety\_74, Wachhund\_72,

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

- 

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

- Alatato\_60, Anatole\_45, B22\_53, B3\_47, Barkley26\_46, Budski\_93, DNAlll\_0044, Dori\_81, E1\_45, E6\_50, Gibbzilla\_68, Grizzly\_46, Holliday\_89, Jolene\_46, Kamaru\_83, Liefie\_45, Mao1\_83, Maruru\_49, Periodt\_46, Pigu\_60, Piper2020\_88, REQ2\_70, Rabbs\_48, Ratrick\_46, Rooter\_65, Sarge\_56, Sneeze\_47, Sonali\_49, Taheera\_45, Terror\_45, ThayneTheZag\_85,

### Summary by start number:

Start 29:

- Found in 20 of 51 ( 39.2% ) of genes in pham
- Manual Annotations of this start: 16 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AlpineSix\_78 (F1), Ardmore\_60 (F1), Avani\_81 (F2), Chuckly\_71 (F1), Dante\_74 (F1), Demsculpinboyz\_84 (F2), Jant\_75 (F1), Jinglebell\_78 (F1), Llama\_78 (F1), Marker\_74 (F1), Modragons\_76 (F1), Ochi17\_77 (F1), OfUltron\_79 (F1), Rita\_79 (F1), Seabastian\_79 (F1), SunnyJune\_49 (FL), ThetaBob\_78 (F4), Toron\_80 (F6), Tweety\_74 (F1), Wachhund\_72 (F1),

Start 30:

- Found in 18 of 51 ( 35.3% ) of genes in pham
- Manual Annotations of this start: 16 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barkley26\_46 (G1), Budski\_93 (DN), DNAlll\_0044 (G1), Dori\_81 (AD), Grizzly\_46 (G1), Holliday\_89 (DN1), Jolene\_46 (G1), Kamaru\_83 (DN1), Liefie\_45 (G1), Mao1\_83 (AD), Periodt\_46 (G1), Piper2020\_88 (F1), REQ2\_70 (singleton), Rabbs\_48 (G1), Ratrick\_46 (G1), Sneeze\_47 (G1), Taheera\_45 (G1), Terror\_45 (G1),

Start 31:

- Found in 2 of 51 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 2 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Maruru\_49 (FG), Sonali\_49 (FG),

Start 35:

- Found in 6 of 51 ( 11.8% ) of genes in pham
- Manual Annotations of this start: 6 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anatole\_45 (BV), B22\_53 (BW), B3\_47 (BV), E1\_45 (BV), E6\_50 (BW), ThayneTheZag\_85 (AY),

Start 36:

- Found in 3 of 51 ( 5.9% ) of genes in pham
- Manual Annotations of this start: 1 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alatato\_60 (FB), Gibbzilla\_68 (FB), Rooter\_65 (FB),

Start 37:

- Found in 2 of 51 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 1 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pigu\_60 (FB), Sarge\_56 (FB),

### **Summary by clusters:**

There are 15 clusters represented in this pham: DN, F1, singleton, F4, AD, G1, FB, F6, AY, BV, BW, DN1, FG, F2, FL,

Info for manual annotations of cluster AD:

- Start number 30 was manually annotated 2 times for cluster AD.

Info for manual annotations of cluster AY:

- Start number 35 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster BV:

- Start number 35 was manually annotated 3 times for cluster BV.

Info for manual annotations of cluster BW:

- Start number 35 was manually annotated 2 times for cluster BW.

Info for manual annotations of cluster DN:

- Start number 30 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 30 was manually annotated 2 times for cluster DN1.

Info for manual annotations of cluster F1:

- Start number 29 was manually annotated 13 times for cluster F1.
- Start number 30 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 29 was manually annotated 2 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 29 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster FB:

- Start number 36 was manually annotated 1 time for cluster FB.
- Start number 37 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FG:

- Start number 31 was manually annotated 2 times for cluster FG.

Info for manual annotations of cluster G1:

- Start number 30 was manually annotated 10 times for cluster G1.

### **Gene Information:**

Gene: Alatato\_60 Start: 34727, Stop: 35062, Start Num: 36

Candidate Starts for Alatato\_60:

(Start: 36 @34727 has 1 MA's), (39, 34754), (50, 34853),

Gene: AlpineSix\_78 Start: 47298, Stop: 47669, Start Num: 29

Candidate Starts for AlpineSix\_78:

(23, 47253), (25, 47259), (Start: 29 @47298 has 16 MA's), (38, 47334), (40, 47355), (48, 47409), (49, 47433), (73, 47646),

Gene: Anatole\_45 Start: 30233, Stop: 30598, Start Num: 35

Candidate Starts for Anatole\_45:

(33, 30230), (Start: 35 @30233 has 6 MA's), (43, 30278), (46, 30314), (55, 30380), (68, 30497),

Gene: Ardmore\_60 Start: 41615, Stop: 41989, Start Num: 29

Candidate Starts for Ardmore\_60:

(Start: 29 @41615 has 16 MA's), (38, 41651), (39, 41669), (41, 41678), (48, 41726), (50, 41762), (53, 41777), (56, 41807), (67, 41885),

Gene: Avani\_81 Start: 44848, Stop: 45222, Start Num: 29

Candidate Starts for Avani\_81:

(Start: 29 @44848 has 16 MA's), (38, 44884), (39, 44902), (41, 44911), (48, 44959), (50, 44995), (53, 45010), (56, 45040), (67, 45118),

Gene: B22\_53 Start: 33661, Stop: 34026, Start Num: 35

Candidate Starts for B22\_53:

(33, 33658), (Start: 35 @33661 has 6 MA's), (43, 33706), (46, 33742), (55, 33808), (68, 33925),

Gene: B3\_47 Start: 30896, Stop: 31261, Start Num: 35

Candidate Starts for B3\_47:

(33, 30893), (Start: 35 @30896 has 6 MA's), (43, 30941), (46, 30977), (55, 31043), (68, 31160),

Gene: Barkley26\_46 Start: 35142, Stop: 35513, Start Num: 30

Candidate Starts for Barkley26\_46:

(Start: 30 @35142 has 16 MA's),

Gene: Budski\_93 Start: 50931, Stop: 51293, Start Num: 30

Candidate Starts for Budski\_93:

(Start: 30 @50931 has 16 MA's), (39, 50982), (40, 50985), (42, 50994), (46, 51030), (48, 51039), (51, 51087), (57, 51129), (62, 51150), (72, 51234),

Gene: Chuckly\_71 Start: 44186, Stop: 44560, Start Num: 29

Candidate Starts for Chuckly\_71:

(Start: 29 @44186 has 16 MA's), (38, 44222), (39, 44240), (41, 44249), (48, 44297), (50, 44333), (53, 44348), (56, 44378), (67, 44456),

Gene: DNAIII\_0044 Start: 33784, Stop: 34155, Start Num: 30

Candidate Starts for DNAIII\_0044:

(Start: 30 @33784 has 16 MA's),

Gene: Dante\_74 Start: 48875, Stop: 49249, Start Num: 29

Candidate Starts for Dante\_74:

(Start: 29 @48875 has 16 MA's), (38, 48911), (39, 48929), (41, 48938), (48, 48986), (50, 49022), (53, 49037), (56, 49067), (67, 49145),

Gene: Demsculpinboyz\_84 Start: 44357, Stop: 44731, Start Num: 29

Candidate Starts for Demsculpinboyz\_84:

(23, 44312), (25, 44318), (Start: 29 @44357 has 16 MA's), (39, 44411), (48, 44468),

Gene: Dori\_81 Start: 57732, Stop: 58109, Start Num: 30

Candidate Starts for Dori\_81:

(Start: 30 @57732 has 16 MA's), (46, 57831),

Gene: E1\_45 Start: 30233, Stop: 30598, Start Num: 35

Candidate Starts for E1\_45:

(33, 30230), (Start: 35 @30233 has 6 MA's), (43, 30278), (46, 30314), (55, 30380), (68, 30497),

Gene: E6\_50 Start: 33161, Stop: 33526, Start Num: 35

Candidate Starts for E6\_50:

(27, 33101), (33, 33158), (Start: 35 @33161 has 6 MA's), (43, 33206), (46, 33242), (55, 33308), (68, 33425),

Gene: Gibbzilla\_68 Start: 35366, Stop: 35701, Start Num: 36

Candidate Starts for Gibbzilla\_68:

(Start: 36 @35366 has 1 MA's), (39, 35393), (50, 35492), (70, 35633),

Gene: Grizzly\_46 Start: 35126, Stop: 35497, Start Num: 30

Candidate Starts for Grizzly\_46:

(Start: 30 @35126 has 16 MA's),

Gene: Holliday\_89 Start: 51444, Stop: 51806, Start Num: 30

Candidate Starts for Holliday\_89:

(Start: 30 @51444 has 16 MA's), (39, 51495), (42, 51507), (46, 51543), (48, 51552), (57, 51642), (62, 51663), (72, 51747),

Gene: Jant\_75 Start: 45698, Stop: 46072, Start Num: 29

Candidate Starts for Jant\_75:

(Start: 29 @45698 has 16 MA's), (38, 45734), (39, 45752), (41, 45761), (48, 45809), (50, 45845), (53, 45860), (56, 45890), (67, 45968),

Gene: Jinglebell\_78 Start: 47297, Stop: 47668, Start Num: 29

Candidate Starts for Jinglebell\_78:

(23, 47252), (25, 47258), (Start: 29 @47297 has 16 MA's), (38, 47333), (40, 47354), (48, 47408), (49, 47432), (73, 47645),

Gene: Jolene\_46 Start: 35150, Stop: 35521, Start Num: 30

Candidate Starts for Jolene\_46:  
(Start: 30 @35150 has 16 MA's),

Gene: Kamaru\_83 Start: 47388, Stop: 47750, Start Num: 30  
Candidate Starts for Kamaru\_83:  
(18, 47289), (19, 47304), (22, 47325), (Start: 30 @47388 has 16 MA's), (39, 47439), (42, 47451), (46, 47487), (48, 47496), (57, 47586), (62, 47607), (72, 47691),

Gene: Liefie\_45 Start: 35148, Stop: 35519, Start Num: 30  
Candidate Starts for Liefie\_45:  
(Start: 30 @35148 has 16 MA's),

Gene: Llama\_78 Start: 47152, Stop: 47523, Start Num: 29  
Candidate Starts for Llama\_78:  
(23, 47107), (25, 47113), (Start: 29 @47152 has 16 MA's), (38, 47188), (40, 47209), (48, 47263), (49, 47287), (73, 47500),

Gene: Mao1\_83 Start: 56621, Stop: 56998, Start Num: 30  
Candidate Starts for Mao1\_83:  
(1, 55934), (2, 55937), (3, 56174), (4, 56201), (5, 56213), (6, 56237), (9, 56345), (11, 56426), (Start: 30 @56621 has 16 MA's), (46, 56720),

Gene: Marker\_74 Start: 45543, Stop: 45917, Start Num: 29  
Candidate Starts for Marker\_74:  
(17, 45444), (23, 45495), (25, 45501), (Start: 29 @45543 has 16 MA's), (39, 45597), (48, 45654), (54, 45711),

Gene: Maruru\_49 Start: 38776, Stop: 39165, Start Num: 31  
Candidate Starts for Maruru\_49:  
(Start: 31 @38776 has 2 MA's), (34, 38791), (40, 38824), (48, 38878), (58, 38971), (64, 38995), (71, 39058), (74, 39139),

Gene: Modragons\_76 Start: 47141, Stop: 47512, Start Num: 29  
Candidate Starts for Modragons\_76:  
(23, 47096), (25, 47102), (Start: 29 @47141 has 16 MA's), (38, 47177), (40, 47198), (48, 47252), (49, 47276), (73, 47489),

Gene: Ochi17\_77 Start: 46748, Stop: 47119, Start Num: 29  
Candidate Starts for Ochi17\_77:  
(23, 46703), (25, 46709), (Start: 29 @46748 has 16 MA's), (38, 46784), (40, 46805), (48, 46859), (49, 46883), (73, 47096),

Gene: OfUltron\_79 Start: 47297, Stop: 47668, Start Num: 29  
Candidate Starts for OfUltron\_79:  
(23, 47252), (25, 47258), (Start: 29 @47297 has 16 MA's), (38, 47333), (40, 47354), (48, 47408), (49, 47432), (73, 47645),

Gene: Periodt\_46 Start: 35141, Stop: 35512, Start Num: 30  
Candidate Starts for Periodt\_46:  
(Start: 30 @35141 has 16 MA's),

Gene: Pigu\_60 Start: 32856, Stop: 33191, Start Num: 37  
Candidate Starts for Pigu\_60:

(Start: 37 @32856 has 1 MA's), (39, 32883), (52, 32997),

Gene: Piper2020\_88 Start: 52279, Stop: 52644, Start Num: 30

Candidate Starts for Piper2020\_88:

(Start: 30 @52279 has 16 MA's), (32, 52294), (39, 52330), (44, 52366), (46, 52378), (50, 52423), (60, 52492), (67, 52546),

Gene: REQ2\_70 Start: 43365, Stop: 43724, Start Num: 30

Candidate Starts for REQ2\_70:

(Start: 30 @43365 has 16 MA's), (48, 43479), (59, 43578),

Gene: Rabbs\_48 Start: 35478, Stop: 35849, Start Num: 30

Candidate Starts for Rabbs\_48:

(Start: 30 @35478 has 16 MA's),

Gene: Rattrick\_46 Start: 35141, Stop: 35512, Start Num: 30

Candidate Starts for Rattrick\_46:

(Start: 30 @35141 has 16 MA's),

Gene: Rita\_79 Start: 48269, Stop: 48640, Start Num: 29

Candidate Starts for Rita\_79:

(7, 47894), (8, 47963), (10, 48011), (12, 48083), (13, 48089), (14, 48107), (15, 48161), (16, 48164), (22, 48209), (Start: 29 @48269 has 16 MA's), (38, 48305), (40, 48326), (48, 48380), (49, 48404), (73, 48617),

Gene: Rooter\_65 Start: 34611, Stop: 34946, Start Num: 36

Candidate Starts for Rooter\_65:

(20, 34518), (Start: 36 @34611 has 1 MA's), (39, 34638),

Gene: Sarge\_56 Start: 32052, Stop: 32387, Start Num: 37

Candidate Starts for Sarge\_56:

(21, 31962), (28, 32004), (Start: 37 @32052 has 1 MA's), (39, 32079), (52, 32193),

Gene: Seabastian\_79 Start: 47298, Stop: 47669, Start Num: 29

Candidate Starts for Seabastian\_79:

(23, 47253), (25, 47259), (Start: 29 @47298 has 16 MA's), (38, 47334), (40, 47355), (48, 47409), (49, 47433), (73, 47646),

Gene: Sneeze\_47 Start: 35477, Stop: 35848, Start Num: 30

Candidate Starts for Sneeze\_47:

(Start: 30 @35477 has 16 MA's),

Gene: Sonali\_49 Start: 39233, Stop: 39622, Start Num: 31

Candidate Starts for Sonali\_49:

(Start: 31 @39233 has 2 MA's), (34, 39248), (40, 39281), (46, 39326), (48, 39335), (58, 39428), (64, 39452), (71, 39515), (74, 39596),

Gene: SunnyJune\_49 Start: 34283, Stop: 34666, Start Num: 29

Candidate Starts for SunnyJune\_49:

(21, 34220), (24, 34238), (26, 34244), (Start: 29 @34283 has 16 MA's), (38, 34319), (43, 34355), (61, 34502), (65, 34526), (66, 34532),

Gene: Taheera\_45 Start: 34853, Stop: 35224, Start Num: 30

Candidate Starts for Taheera\_45:  
(Start: 30 @34853 has 16 MA's),

Gene: Terror\_45 Start: 34853, Stop: 35224, Start Num: 30  
Candidate Starts for Terror\_45:  
(Start: 30 @34853 has 16 MA's),

Gene: ThayneTheZag\_85 Start: 46273, Stop: 46623, Start Num: 35  
Candidate Starts for ThayneTheZag\_85:  
(Start: 35 @46273 has 6 MA's), (39, 46300), (47, 46357), (50, 46399), (58, 46456),

Gene: ThetaBob\_78 Start: 46922, Stop: 47296, Start Num: 29  
Candidate Starts for ThetaBob\_78:  
(Start: 29 @46922 has 16 MA's), (38, 46958), (39, 46976), (41, 46985), (48, 47033), (50, 47069), (53, 47084), (56, 47114), (67, 47192),

Gene: Toron\_80 Start: 48999, Stop: 49367, Start Num: 29  
Candidate Starts for Toron\_80:  
(Start: 29 @48999 has 16 MA's), (39, 49053), (41, 49062), (45, 49092), (48, 49110), (56, 49191), (63, 49224), (69, 49287),

Gene: Tweety\_74 Start: 47222, Stop: 47596, Start Num: 29  
Candidate Starts for Tweety\_74:  
(17, 47123), (23, 47174), (25, 47180), (Start: 29 @47222 has 16 MA's), (39, 47276), (48, 47333),

Gene: Wachhund\_72 Start: 44350, Stop: 44721, Start Num: 29  
Candidate Starts for Wachhund\_72:  
(23, 44302), (25, 44308), (Start: 29 @44350 has 16 MA's), (38, 44386), (40, 44407), (48, 44461), (49, 44485), (73, 44698),