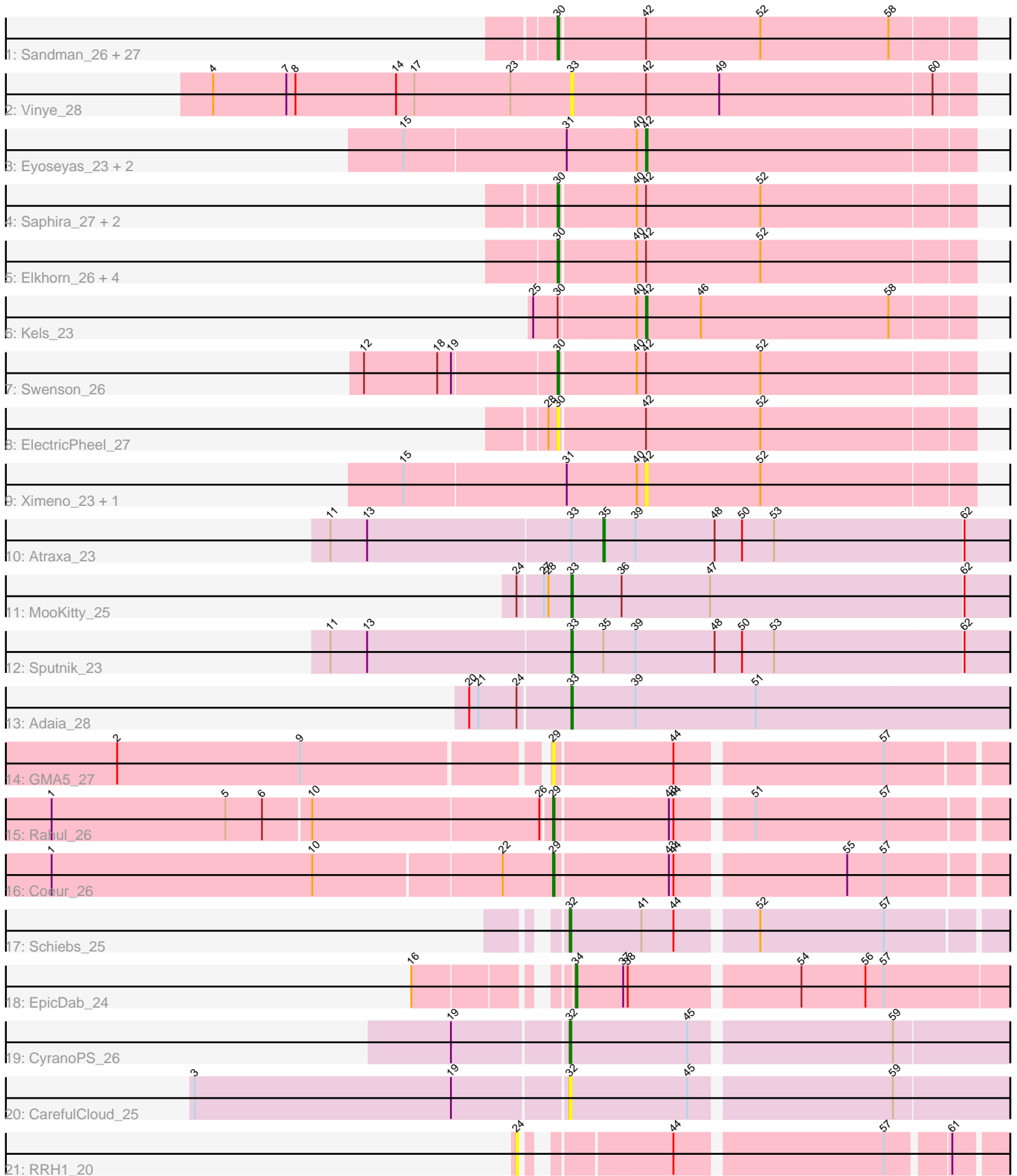


# Pham 294761



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 294761 Report

This analysis was run 04/18/26 on database version 643.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 294761 has 57 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Sandman\_26, Dewayne\_26, Sourignavong\_27, CGermain\_26, Ronnie\_26, LouisXIV\_26, Inspire2\_26, Hunnie\_26, Stratus\_26, Muttie\_26, Azathoth\_26, Courtney3\_26, TinoCrisci\_26, Arby\_26, Moloch\_26, TymAbreu\_26, Massimo\_26, Decurro\_26, Guntur\_26, Maggie\_26, Mariposa\_26, Prospero\_26, Copper\_26, Chestnut\_27, Yank\_26, Seume\_26, Link\_26, Toulouse\_25
- Track 2 : Vinye\_28
- Track 3 : Eyoseyas\_23, SerialPhiller\_23, Arielagos\_23
- Track 4 : Saphira\_27, Taj14\_26, KylieMac\_27
- Track 5 : Elkhorn\_26, StewieGriff\_26, Blair\_26, Lore\_26, Laila\_28
- Track 6 : Kels\_23
- Track 7 : Swenson\_26
- Track 8 : ElectricPheel\_27
- Track 9 : Ximeno\_23, StrawberryLem\_23
- Track 10 : Atraxa\_23
- Track 11 : MooKitty\_25
- Track 12 : Sputnik\_23
- Track 13 : Adaia\_28
- Track 14 : GMA5\_27
- Track 15 : Rahul\_26
- Track 16 : Coeur\_26
- Track 17 : Schiebs\_25
- Track 18 : EpicDab\_24
- Track 19 : CyranoPS\_26
- Track 20 : CarefulCloud\_25
- Track 21 : RRH1\_20

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

The start number called the most often in the published annotations is 30, it was called in 37 of the 49 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arby\_26, Azathoth\_26, Blair\_26, CGermain\_26, Chestnut\_27, Copper\_26, Courtney3\_26, Decurro\_26, Dewayne\_26, ElectricPheel\_27, Elkhorn\_26, Guntur\_26, Hunnie\_26, Inspire2\_26, KylieMac\_27, Laila\_28, Link\_26, Lore\_26, LouisXIV\_26, Maggie\_26, Mariposa\_26, Massimo\_26, Moloch\_26, Muttlie\_26, Prospero\_26, Ronnie\_26, Sandman\_26, Saphira\_27, Seume\_26, Sourignavong\_27, StewieGriff\_26, Stratus\_26, Swenson\_26, Taj14\_26, TinoCrisci\_26, Toulouse\_25, TymAbreu\_26, Yank\_26,

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

- Kels\_23,

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

- Adaila\_28, Arielagos\_23, Atraxa\_23, CarefulCloud\_25, Coeur\_26, CyranoPS\_26, EpicDab\_24, Eyoseyas\_23, GMA5\_27, MooKitty\_25, RRH1\_20, Rahul\_26, Schiebs\_25, SerialPhiller\_23, Sputnik\_23, StrawberryLem\_23, Vinye\_28, Ximeno\_23,

### Summary by start number:

Start 24:

- Found in 3 of 57 ( 5.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: RRH1\_20 (singleton),

Start 29:

- Found in 3 of 57 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 2 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Coeur\_26 (CW2), GMA5\_27 (CW2), Rahul\_26 (CW2),

Start 30:

- Found in 39 of 57 ( 68.4% ) of genes in pham
- Manual Annotations of this start: 37 of 49
- Called 97.4% of time when present
- Phage (with cluster) where this start called: Arby\_26 (AN), Azathoth\_26 (AN), Blair\_26 (AN), CGermain\_26 (AN), Chestnut\_27 (AN), Copper\_26 (AN), Courtney3\_26 (AN), Decurro\_26 (AN), Dewayne\_26 (AN), ElectricPheel\_27 (AN), Elkhorn\_26 (AN), Guntur\_26 (AN), Hunnie\_26 (AN), Inspire2\_26 (AN), KylieMac\_27 (AN), Laila\_28 (AN), Link\_26 (AN), Lore\_26 (AN), LouisXIV\_26 (AN), Maggie\_26 (AN), Mariposa\_26 (AN), Massimo\_26 (AN), Moloch\_26 (AN), Muttlie\_26 (AN), Prospero\_26 (AN), Ronnie\_26 (AN), Sandman\_26 (AN), Saphira\_27 (AN), Seume\_26 (AN), Sourignavong\_27 (AN), StewieGriff\_26 (AN), Stratus\_26 (AN), Swenson\_26 (AN), Taj14\_26 (AN), TinoCrisci\_26 (AN), Toulouse\_25 (AN), TymAbreu\_26 (AN), Yank\_26 (AN),

Start 32:

- Found in 3 of 57 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 2 of 49
- Called 100.0% of time when present

- Phage (with cluster) where this start called: CarefulCloud\_25 (ER), CyranoPS\_26 (ER), Schiebs\_25 (CW3),

Start 33:

- Found in 5 of 57 ( 8.8% ) of genes in pham
- Manual Annotations of this start: 3 of 49
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Adaia\_28 (AX), MooKitty\_25 (AX), Sputnik\_23 (AX), Vinye\_28 (AN),

Start 34:

- Found in 1 of 57 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 1 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EpicDab\_24 (DM),

Start 35:

- Found in 2 of 57 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 1 of 49
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Atraxa\_23 (AX),

Start 42:

- Found in 45 of 57 ( 78.9% ) of genes in pham
- Manual Annotations of this start: 3 of 49
- Called 13.3% of time when present
- Phage (with cluster) where this start called: Arielagos\_23 (AN), Eyoseyas\_23 (AN), Kels\_23 (AN), SerialPhiller\_23 (AN), StrawberryLem\_23 (AN), Ximeno\_23 (AN),

### **Summary by clusters:**

There are 7 clusters represented in this pham: singleton, DM, CW3, CW2, AN, AX, ER,

Info for manual annotations of cluster AN:

- Start number 30 was manually annotated 37 times for cluster AN.
- Start number 42 was manually annotated 3 times for cluster AN.

Info for manual annotations of cluster AX:

- Start number 33 was manually annotated 3 times for cluster AX.
- Start number 35 was manually annotated 1 time for cluster AX.

Info for manual annotations of cluster CW2:

- Start number 29 was manually annotated 2 times for cluster CW2.

Info for manual annotations of cluster CW3:

- Start number 32 was manually annotated 1 time for cluster CW3.

Info for manual annotations of cluster DM:

- Start number 34 was manually annotated 1 time for cluster DM.

Info for manual annotations of cluster ER:

- Start number 32 was manually annotated 1 time for cluster ER.

**Gene Information:**

Gene: Adaiia\_28 Start: 15533, Stop: 15820, Start Num: 33

Candidate Starts for Adaiia\_28:

(20, 15470), (21, 15476), (24, 15500), (Start: 33 @15533 has 3 MA's), (39, 15575), (51, 15653),

Gene: Arby\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Arby\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Arielagos\_23 Start: 15059, Stop: 15271, Start Num: 42

Candidate Starts for Arielagos\_23:

(15, 14903), (31, 15008), (40, 15053), (Start: 42 @15059 has 3 MA's),

Gene: Atraxa\_23 Start: 14644, Stop: 14904, Start Num: 35

Candidate Starts for Atraxa\_23:

(11, 14467), (13, 14491), (Start: 33 @14623 has 3 MA's), (Start: 35 @14644 has 1 MA's), (39, 14665), (48, 14716), (50, 14734), (53, 14755), (62, 14875),

Gene: Azathoth\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Azathoth\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Blair\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Blair\_26:

(Start: 30 @15263 has 37 MA's), (40, 15311), (Start: 42 @15317 has 3 MA's), (52, 15392),

Gene: CGermain\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for CGermain\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: CarefulCloud\_25 Start: 14576, Stop: 14851, Start Num: 32

Candidate Starts for CarefulCloud\_25:

(3, 14336), (19, 14504), (Start: 32 @14576 has 2 MA's), (45, 14651), (59, 14777),

Gene: Chestnut\_27 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Chestnut\_27:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Coeur\_26 Start: 15840, Stop: 16118, Start Num: 29

Candidate Starts for Coeur\_26:

(1, 15516), (10, 15687), (22, 15807), (Start: 29 @15840 has 2 MA's), (43, 15912), (44, 15915), (55, 16020), (57, 16044),

Gene: Copper\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Copper\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Courtney3\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Courtney3\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: CyranoPS\_26 Start: 14576, Stop: 14851, Start Num: 32

Candidate Starts for CyranoPS\_26:

(19, 14504), (Start: 32 @14576 has 2 MA's), (45, 14651), (59, 14777),

Gene: Decurro\_26 Start: 15231, Stop: 15497, Start Num: 30

Candidate Starts for Decurro\_26:

(Start: 30 @15231 has 37 MA's), (Start: 42 @15285 has 3 MA's), (52, 15360), (58, 15444),

Gene: Dewayne\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Dewayne\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: ElectricPheel\_27 Start: 15304, Stop: 15570, Start Num: 30

Candidate Starts for ElectricPheel\_27:

(28, 15298), (Start: 30 @15304 has 37 MA's), (Start: 42 @15358 has 3 MA's), (52, 15433),

Gene: Elkhorn\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Elkhorn\_26:

(Start: 30 @15263 has 37 MA's), (40, 15311), (Start: 42 @15317 has 3 MA's), (52, 15392),

Gene: EpicDab\_24 Start: 16340, Stop: 16612, Start Num: 34

Candidate Starts for EpicDab\_24:

(16, 16259), (Start: 34 @16340 has 1 MA's), (37, 16370), (38, 16373), (54, 16478), (56, 16520), (57, 16532),

Gene: Eyoseyas\_23 Start: 15059, Stop: 15271, Start Num: 42

Candidate Starts for Eyoseyas\_23:

(15, 14903), (31, 15008), (40, 15053), (Start: 42 @15059 has 3 MA's),

Gene: GMA5\_27 Start: 17062, Stop: 17340, Start Num: 29

Candidate Starts for GMA5\_27:

(2, 16792), (9, 16912), (Start: 29 @17062 has 2 MA's), (44, 17137), (57, 17266),

Gene: Guntur\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Guntur\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Hunnie\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Hunnie\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Inspire2\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Inspire2\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Kels\_23 Start: 14592, Stop: 14804, Start Num: 42

Candidate Starts for Kels\_23:

(25, 14523), (Start: 30 @14538 has 37 MA's), (40, 14586), (Start: 42 @14592 has 3 MA's), (46, 14628), (58, 14751),

Gene: KylieMac\_27 Start: 15247, Stop: 15513, Start Num: 30

Candidate Starts for KylieMac\_27:

(Start: 30 @15247 has 37 MA's), (40, 15295), (Start: 42 @15301 has 3 MA's), (52, 15376),

Gene: Laila\_28 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Laila\_28:

(Start: 30 @15263 has 37 MA's), (40, 15311), (Start: 42 @15317 has 3 MA's), (52, 15392),

Gene: Link\_26 Start: 15228, Stop: 15494, Start Num: 30

Candidate Starts for Link\_26:

(Start: 30 @15228 has 37 MA's), (Start: 42 @15282 has 3 MA's), (52, 15357), (58, 15441),

Gene: Lore\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Lore\_26:

(Start: 30 @15263 has 37 MA's), (40, 15311), (Start: 42 @15317 has 3 MA's), (52, 15392),

Gene: LouisXIV\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for LouisXIV\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Maggie\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Maggie\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Mariposa\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Mariposa\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Massimo\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Massimo\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Moloch\_26 Start: 15337, Stop: 15603, Start Num: 30

Candidate Starts for Moloch\_26:

(Start: 30 @15337 has 37 MA's), (Start: 42 @15391 has 3 MA's), (52, 15466), (58, 15550),

Gene: MooKitty\_25 Start: 15668, Stop: 15949, Start Num: 33

Candidate Starts for MooKitty\_25:

(24, 15635), (27, 15650), (28, 15653), (Start: 33 @15668 has 3 MA's), (36, 15701), (47, 15758), (62, 15920),

Gene: Muttie\_26 Start: 15231, Stop: 15497, Start Num: 30

Candidate Starts for Muttie\_26:

(Start: 30 @15231 has 37 MA's), (Start: 42 @15285 has 3 MA's), (52, 15360), (58, 15444),

Gene: Prospero\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Prospero\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: RRH1\_20 Start: 13909, Stop: 14184, Start Num: 24

Candidate Starts for RRH1\_20:

(24, 13909), (44, 13987), (57, 14116), (61, 14152),

Gene: Rahul\_26 Start: 15845, Stop: 16123, Start Num: 29

Candidate Starts for Rahul\_26:

(1, 15524), (5, 15638), (6, 15662), (10, 15692), (26, 15839), (Start: 29 @15845 has 2 MA's), (43, 15917), (44, 15920), (51, 15965), (57, 16049),

Gene: Ronnie\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for Ronnie\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Sandman\_26 Start: 15337, Stop: 15603, Start Num: 30

Candidate Starts for Sandman\_26:

(Start: 30 @15337 has 37 MA's), (Start: 42 @15391 has 3 MA's), (52, 15466), (58, 15550),

Gene: Saphira\_27 Start: 15256, Stop: 15522, Start Num: 30

Candidate Starts for Saphira\_27:

(Start: 30 @15256 has 37 MA's), (40, 15304), (Start: 42 @15310 has 3 MA's), (52, 15385),

Gene: Schiebs\_25 Start: 14310, Stop: 14615, Start Num: 32

Candidate Starts for Schiebs\_25:

(Start: 32 @14310 has 2 MA's), (41, 14355), (44, 14376), (52, 14424), (57, 14505),

Gene: SerialPhiller\_23 Start: 15059, Stop: 15271, Start Num: 42

Candidate Starts for SerialPhiller\_23:

(15, 14903), (31, 15008), (40, 15053), (Start: 42 @15059 has 3 MA's),

Gene: Seume\_26 Start: 15026, Stop: 15292, Start Num: 30

Candidate Starts for Seume\_26:

(Start: 30 @15026 has 37 MA's), (Start: 42 @15080 has 3 MA's), (52, 15155), (58, 15239),

Gene: Sourignavong\_27 Start: 15332, Stop: 15598, Start Num: 30

Candidate Starts for Sourignavong\_27:

(Start: 30 @15332 has 37 MA's), (Start: 42 @15386 has 3 MA's), (52, 15461), (58, 15545),

Gene: Sputnik\_23 Start: 14623, Stop: 14904, Start Num: 33

Candidate Starts for Sputnik\_23:

(11, 14467), (13, 14491), (Start: 33 @14623 has 3 MA's), (Start: 35 @14644 has 1 MA's), (39, 14665), (48, 14716), (50, 14734), (53, 14755), (62, 14875),

Gene: StewieGriff\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for StewieGriff\_26:

(Start: 30 @15263 has 37 MA's), (40, 15311), (Start: 42 @15317 has 3 MA's), (52, 15392),

Gene: Stratus\_26 Start: 15337, Stop: 15603, Start Num: 30

Candidate Starts for Stratus\_26:

(Start: 30 @15337 has 37 MA's), (Start: 42 @15391 has 3 MA's), (52, 15466), (58, 15550),

Gene: StrawberryLem\_23 Start: 14969, Stop: 15181, Start Num: 42

Candidate Starts for StrawberryLem\_23:

(15, 14813), (31, 14918), (40, 14963), (Start: 42 @14969 has 3 MA's), (52, 15044),

Gene: Swenson\_26 Start: 15387, Stop: 15653, Start Num: 30

Candidate Starts for Swenson\_26:

(12, 15264), (18, 15312), (19, 15321), (Start: 30 @15387 has 37 MA's), (40, 15435), (Start: 42 @15441 has 3 MA's), (52, 15516),

Gene: Taj14\_26 Start: 15253, Stop: 15519, Start Num: 30

Candidate Starts for Taj14\_26:

(Start: 30 @15253 has 37 MA's), (40, 15301), (Start: 42 @15307 has 3 MA's), (52, 15382),

Gene: TinoCrisci\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for TinoCrisci\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Toulouse\_25 Start: 15026, Stop: 15292, Start Num: 30

Candidate Starts for Toulouse\_25:

(Start: 30 @15026 has 37 MA's), (Start: 42 @15080 has 3 MA's), (52, 15155), (58, 15239),

Gene: TymAbreu\_26 Start: 15263, Stop: 15529, Start Num: 30

Candidate Starts for TymAbreu\_26:

(Start: 30 @15263 has 37 MA's), (Start: 42 @15317 has 3 MA's), (52, 15392), (58, 15476),

Gene: Vinye\_28 Start: 15707, Stop: 15967, Start Num: 33

Candidate Starts for Vinye\_28:

(4, 15473), (7, 15521), (8, 15527), (14, 15593), (17, 15605), (23, 15668), (Start: 33 @15707 has 3 MA's), (Start: 42 @15755 has 3 MA's), (49, 15803), (60, 15941),

Gene: Ximeno\_23 Start: 15057, Stop: 15269, Start Num: 42

Candidate Starts for Ximeno\_23:

(15, 14901), (31, 15006), (40, 15051), (Start: 42 @15057 has 3 MA's), (52, 15132),

Gene: Yank\_26 Start: 15231, Stop: 15497, Start Num: 30

Candidate Starts for Yank\_26:

(Start: 30 @15231 has 37 MA's), (Start: 42 @15285 has 3 MA's), (52, 15360), (58, 15444),