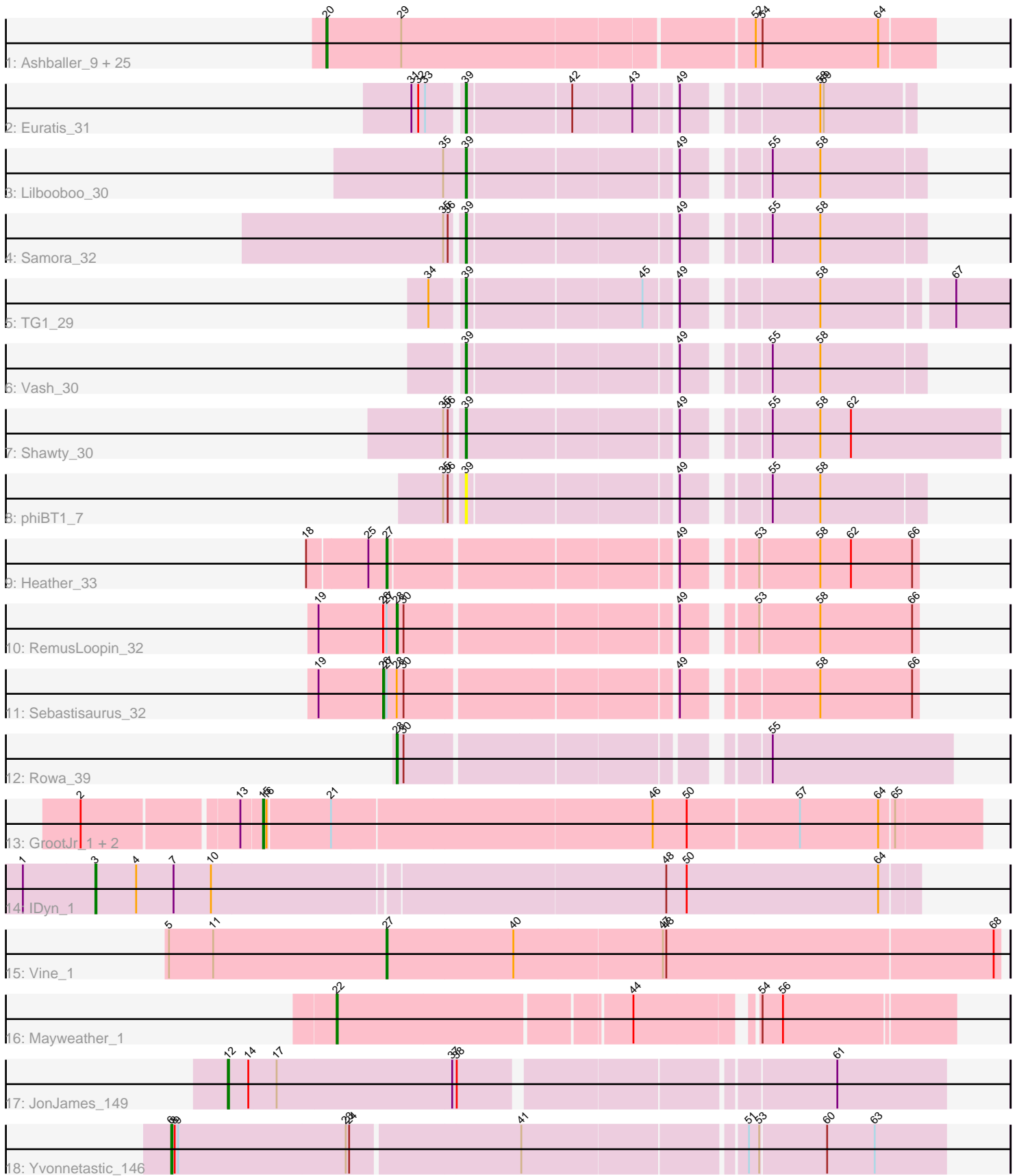


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 216288 Report

This analysis was run 02/22/25 on database version 588.

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 216288 has 45 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Ashballer\_9, Rubeus\_11, Fajezeel\_12, Jerm2\_11, PattyP\_12, Rufus\_11, Pippin\_12, Rutherferd\_12, DreamCatcher\_13, Museum\_12, Greg\_12, Fushigi\_11, Bruns\_9, GageAP\_12, Marge\_11, Kenmech\_13, Niza\_12, Treddle\_12, SpikeBT\_12, Gyzlar\_12, Sibs6\_12, Mkhusei\_10, Monet\_12, Acme\_12, Burton\_11, BigMau\_12
- Track 2 : Euratis\_31
- Track 3 : Lilbooboo\_30
- Track 4 : Samora\_32
- Track 5 : TG1\_29
- Track 6 : Vash\_30
- Track 7 : Shawty\_30
- Track 8 : phiBT1\_7
- Track 9 : Heather\_33
- Track 10 : RemusLoopin\_32
- Track 11 : Sebastisaurus\_32
- Track 12 : Rowa\_39
- Track 13 : GrootJr\_1, NatB6\_1, NovumRegina\_1
- Track 14 : IDyn\_1
- Track 15 : Vine\_1
- Track 16 : Mayweather\_1
- Track 17 : JonJames\_149
- Track 18 : Yvonnetastic\_146

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

The start number called the most often in the published annotations is 20, it was called in 25 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acme\_12, Ashballer\_9, BigMau\_12, Bruns\_9, Burton\_11, DreamCatcher\_13, Fajezeel\_12, Fushigi\_11, GageAP\_12, Greg\_12, Gyzlar\_12, Jerm2\_11,

Kenmech\_13, Marge\_11, Mkhusele\_10, Monet\_12, Museum\_12, Niza\_12, PattyP\_12, Pippin\_12, Rubeus\_11, Rufus\_11, Rutherford\_12, Sibs6\_12, SpikeBT\_12, Treddle\_12,

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

- 

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

• Euratis\_31, GrootJr\_1, Heather\_33, IDyn\_1, JonJames\_149, Lilbooboo\_30, Mayweather\_1, NatB6\_1, NovumRegina\_1, RemusLoopin\_32, Rowa\_39, Samora\_32, Sebastisaurus\_32, Shawty\_30, TG1\_29, Vash\_30, Vine\_1, Yvonnestic\_146, phiBT1\_7,

### Summary by start number:

Start 3:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: IDyn\_1 (CR4),

Start 6:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yvonnestic\_146 (DD),

Start 12:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JonJames\_149 (DD),

Start 15:

- Found in 3 of 45 ( 6.7% ) of genes in pham
- Manual Annotations of this start: 3 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GrootJr\_1 (CR2), NatB6\_1 (CR2), NovumRegina\_1 (CR2),

Start 20:

- Found in 26 of 45 ( 57.8% ) of genes in pham
- Manual Annotations of this start: 25 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acme\_12 (A1), Ashballer\_9 (A1), BigMau\_12 (A1), Bruns\_9 (A1), Burton\_11 (A1), DreamCatcher\_13 (A1), Fajezeel\_12 (A1), Fushigi\_11 (A1), GageAP\_12 (A1), Greg\_12 (A1), Gyzlar\_12 (A1), Jerm2\_11 (A1), Kenmech\_13 (A1), Marge\_11 (A1), Mkhusele\_10 (A1), Monet\_12 (A1), Museum\_12 (A1), Niza\_12 (A1), PattyP\_12 (A1), Pippin\_12 (A1), Rubeus\_11 (A1), Rufus\_11 (A1), Rutherford\_12 (A1), Sibs6\_12 (A1), SpikeBT\_12 (A1), Treddle\_12 (A1),

Start 22:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mayweather\_1 (CT),

Start 26:

- Found in 2 of 45 ( 4.4% ) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Sebastisaurus\_32 (BB2),

Start 27:

- Found in 4 of 45 ( 8.9% ) of genes in pham
- Manual Annotations of this start: 2 of 43
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Heather\_33 (BB2), Vine\_1 (CT),

Start 28:

- Found in 3 of 45 ( 6.7% ) of genes in pham
- Manual Annotations of this start: 2 of 43
- Called 66.7% of time when present
- Phage (with cluster) where this start called: RemusLoopin\_32 (BB2), Rowa\_39 (BL),

Start 39:

- Found in 7 of 45 ( 15.6% ) of genes in pham
- Manual Annotations of this start: 6 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Euratis\_31 (BB1), Lilbooboo\_30 (BB1), Samora\_32 (BB1), Shawty\_30 (BB1), TG1\_29 (BB1), Vash\_30 (BB1), phiBT1\_7 (BB1),

### **Summary by clusters:**

There are 8 clusters represented in this pham: CR2, CR4, BL, DD, A1, BB2, BB1, CT,

Info for manual annotations of cluster A1:

- Start number 20 was manually annotated 25 times for cluster A1.

Info for manual annotations of cluster BB1:

- Start number 39 was manually annotated 6 times for cluster BB1.

Info for manual annotations of cluster BB2:

- Start number 26 was manually annotated 1 time for cluster BB2.
- Start number 27 was manually annotated 1 time for cluster BB2.
- Start number 28 was manually annotated 1 time for cluster BB2.

Info for manual annotations of cluster BL:

- Start number 28 was manually annotated 1 time for cluster BL.

Info for manual annotations of cluster CR2:

- Start number 15 was manually annotated 3 times for cluster CR2.

Info for manual annotations of cluster CR4:

- Start number 3 was manually annotated 1 time for cluster CR4.

Info for manual annotations of cluster CT:

- Start number 22 was manually annotated 1 time for cluster CT.
- Start number 27 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster DD:

- Start number 6 was manually annotated 1 time for cluster DD.
- Start number 12 was manually annotated 1 time for cluster DD.

### ***Gene Information:***

Gene: Acme\_12 Start: 6852, Stop: 7370, Start Num: 20

Candidate Starts for Acme\_12:

(Start: 20 @6852 has 25 MA's), (29, 6918), (52, 7215), (54, 7221), (64, 7323),

Gene: Ashballe\_9 Start: 6492, Stop: 7010, Start Num: 20

Candidate Starts for Ashballe\_9:

(Start: 20 @6492 has 25 MA's), (29, 6558), (52, 6855), (54, 6861), (64, 6963),

Gene: BigMau\_12 Start: 6719, Stop: 7237, Start Num: 20

Candidate Starts for BigMau\_12:

(Start: 20 @6719 has 25 MA's), (29, 6785), (52, 7082), (54, 7088), (64, 7190),

Gene: Bruns\_9 Start: 6422, Stop: 6940, Start Num: 20

Candidate Starts for Bruns\_9:

(Start: 20 @6422 has 25 MA's), (29, 6488), (52, 6785), (54, 6791), (64, 6893),

Gene: Burton\_11 Start: 6622, Stop: 7140, Start Num: 20

Candidate Starts for Burton\_11:

(Start: 20 @6622 has 25 MA's), (29, 6688), (52, 6985), (54, 6991), (64, 7093),

Gene: DreamCatcher\_13 Start: 7699, Stop: 8217, Start Num: 20

Candidate Starts for DreamCatcher\_13:

(Start: 20 @7699 has 25 MA's), (29, 7765), (52, 8062), (54, 8068), (64, 8170),

Gene: Euratis\_31 Start: 22823, Stop: 23176, Start Num: 39

Candidate Starts for Euratis\_31:

(31, 22784), (32, 22790), (33, 22796), (Start: 39 @22823 has 6 MA's), (42, 22910), (43, 22961), (49, 22994), (58, 23096), (59, 23099),

Gene: Fajezeel\_12 Start: 6818, Stop: 7336, Start Num: 20

Candidate Starts for Fajezeel\_12:

(Start: 20 @6818 has 25 MA's), (29, 6884), (52, 7181), (54, 7187), (64, 7289),

Gene: Fushigi\_11 Start: 6909, Stop: 7427, Start Num: 20

Candidate Starts for Fushigi\_11:

(Start: 20 @6909 has 25 MA's), (29, 6975), (52, 7272), (54, 7278), (64, 7380),

Gene: GageAP\_12 Start: 7234, Stop: 7752, Start Num: 20

Candidate Starts for GageAP\_12:

(Start: 20 @7234 has 25 MA's), (29, 7300), (52, 7597), (54, 7603), (64, 7705),

Gene: Greg\_12 Start: 6818, Stop: 7336, Start Num: 20

Candidate Starts for Greg\_12:

(Start: 20 @6818 has 25 MA's), (29, 6884), (52, 7181), (54, 7187), (64, 7289),

Gene: GrootJr\_1 Start: 214, Stop: 828, Start Num: 15

Candidate Starts for GrootJr\_1:

(2, 67), (13, 196), (Start: 15 @214 has 3 MA's), (16, 217), (21, 271), (46, 547), (50, 577), (57, 673), (64, 742), (65, 754),

Gene: Gyzlar\_12 Start: 7448, Stop: 7966, Start Num: 20

Candidate Starts for Gyzlar\_12:

(Start: 20 @7448 has 25 MA's), (29, 7514), (52, 7811), (54, 7817), (64, 7919),

Gene: Heather\_33 Start: 23706, Stop: 24128, Start Num: 27

Candidate Starts for Heather\_33:

(18, 23640), (25, 23691), (Start: 27 @23706 has 2 MA's), (49, 23940), (53, 23991), (58, 24042), (62, 24069), (66, 24123),

Gene: IDyn\_1 Start: 79, Stop: 786, Start Num: 3

Candidate Starts for IDyn\_1:

(1, 16), (Start: 3 @79 has 1 MA's), (4, 115), (7, 148), (10, 181), (48, 568), (50, 586), (64, 754),

Gene: Jerm2\_11 Start: 6719, Stop: 7237, Start Num: 20

Candidate Starts for Jerm2\_11:

(Start: 20 @6719 has 25 MA's), (29, 6785), (52, 7082), (54, 7088), (64, 7190),

Gene: JonJames\_149 Start: 83143, Stop: 83742, Start Num: 12

Candidate Starts for JonJames\_149:

(Start: 12 @83143 has 1 MA's), (14, 83161), (17, 83185), (37, 83338), (38, 83341), (61, 83647),

Gene: Kenmech\_13 Start: 7591, Stop: 8109, Start Num: 20

Candidate Starts for Kenmech\_13:

(Start: 20 @7591 has 25 MA's), (29, 7657), (52, 7954), (54, 7960), (64, 8062),

Gene: Lilbooboo\_30 Start: 22871, Stop: 23233, Start Num: 39

Candidate Starts for Lilbooboo\_30:

(35, 22853), (Start: 39 @22871 has 6 MA's), (49, 23042), (55, 23102), (58, 23144),

Gene: Marge\_11 Start: 6955, Stop: 7473, Start Num: 20

Candidate Starts for Marge\_11:

(Start: 20 @6955 has 25 MA's), (29, 7021), (52, 7318), (54, 7324), (64, 7426),

Gene: Mayweather\_1 Start: 38, Stop: 541, Start Num: 22

Candidate Starts for Mayweather\_1:

(Start: 22 @38 has 1 MA's), (44, 284), (54, 377), (56, 395),

Gene: Mkhuseli\_10 Start: 6576, Stop: 7094, Start Num: 20

Candidate Starts for Mkhuseli\_10:

(Start: 20 @6576 has 25 MA's), (29, 6642), (52, 6939), (54, 6945), (64, 7047),

Gene: Monet\_12 Start: 7472, Stop: 7990, Start Num: 20

Candidate Starts for Monet\_12:

(Start: 20 @7472 has 25 MA's), (29, 7538), (52, 7835), (54, 7841), (64, 7943),

Gene: Museum\_12 Start: 6561, Stop: 7079, Start Num: 20

Candidate Starts for Museum\_12:

(Start: 20 @6561 has 25 MA's), (29, 6627), (52, 6924), (54, 6930), (64, 7032),

Gene: NatB6\_1 Start: 214, Stop: 828, Start Num: 15

Candidate Starts for NatB6\_1:

(2, 67), (13, 196), (Start: 15 @214 has 3 MA's), (16, 217), (21, 271), (46, 547), (50, 577), (57, 673), (64, 742), (65, 754),

Gene: Niza\_12 Start: 7581, Stop: 8099, Start Num: 20

Candidate Starts for Niza\_12:

(Start: 20 @7581 has 25 MA's), (29, 7647), (52, 7944), (54, 7950), (64, 8052),

Gene: NovumRegina\_1 Start: 214, Stop: 828, Start Num: 15

Candidate Starts for NovumRegina\_1:

(2, 67), (13, 196), (Start: 15 @214 has 3 MA's), (16, 217), (21, 271), (46, 547), (50, 577), (57, 673), (64, 742), (65, 754),

Gene: PattyP\_12 Start: 6770, Stop: 7288, Start Num: 20

Candidate Starts for PattyP\_12:

(Start: 20 @6770 has 25 MA's), (29, 6836), (52, 7133), (54, 7139), (64, 7241),

Gene: Pippin\_12 Start: 6820, Stop: 7338, Start Num: 20

Candidate Starts for Pippin\_12:

(Start: 20 @6820 has 25 MA's), (29, 6886), (52, 7183), (54, 7189), (64, 7291),

Gene: RemusLoopin\_32 Start: 23906, Stop: 24322, Start Num: 28

Candidate Starts for RemusLoopin\_32:

(19, 23837), (Start: 26 @23894 has 1 MA's), (Start: 27 @23897 has 2 MA's), (Start: 28 @23906 has 2 MA's), (30, 23912), (49, 24134), (53, 24185), (58, 24236), (66, 24317),

Gene: Rowa\_39 Start: 26669, Stop: 27115, Start Num: 28

Candidate Starts for Rowa\_39:

(Start: 28 @26669 has 2 MA's), (30, 26675), (55, 26957),

Gene: Rubeus\_11 Start: 6578, Stop: 7096, Start Num: 20

Candidate Starts for Rubeus\_11:

(Start: 20 @6578 has 25 MA's), (29, 6644), (52, 6941), (54, 6947), (64, 7049),

Gene: Rufus\_11 Start: 6635, Stop: 7153, Start Num: 20

Candidate Starts for Rufus\_11:

(Start: 20 @6635 has 25 MA's), (29, 6701), (52, 6998), (54, 7004), (64, 7106),

Gene: Rutherferd\_12 Start: 7096, Stop: 7614, Start Num: 20

Candidate Starts for Rutherferd\_12:

(Start: 20 @7096 has 25 MA's), (29, 7162), (52, 7459), (54, 7465), (64, 7567),

Gene: Samora\_32 Start: 23469, Stop: 23831, Start Num: 39

Candidate Starts for Samora\_32:

(35, 23457), (36, 23460), (Start: 39 @23469 has 6 MA's), (49, 23640), (55, 23700), (58, 23742),

Gene: Sebastisaurus\_32 Start: 23688, Stop: 24116, Start Num: 26

Candidate Starts for Sebastisaurus\_32:

(19, 23631), (Start: 26 @23688 has 1 MA's), (Start: 27 @23691 has 2 MA's), (Start: 28 @23700 has 2 MA's), (30, 23706), (49, 23928), (58, 24030), (66, 24111),

Gene: Shawty\_30 Start: 23340, Stop: 23774, Start Num: 39

Candidate Starts for Shawty\_30:

(35, 23328), (36, 23331), (Start: 39 @23340 has 6 MA's), (49, 23514), (55, 23574), (58, 23616), (62, 23643),

Gene: Sibs6\_12 Start: 6771, Stop: 7289, Start Num: 20

Candidate Starts for Sibs6\_12:

(Start: 20 @6771 has 25 MA's), (29, 6837), (52, 7134), (54, 7140), (64, 7242),

Gene: SpikeBT\_12 Start: 7407, Stop: 7925, Start Num: 20

Candidate Starts for SpikeBT\_12:

(Start: 20 @7407 has 25 MA's), (29, 7473), (52, 7770), (54, 7776), (64, 7878),

Gene: TG1\_29 Start: 22916, Stop: 23344, Start Num: 39

Candidate Starts for TG1\_29:

(34, 22892), (Start: 39 @22916 has 6 MA's), (45, 23063), (49, 23087), (58, 23189), (67, 23297),

Gene: Treddle\_12 Start: 7473, Stop: 7991, Start Num: 20

Candidate Starts for Treddle\_12:

(Start: 20 @7473 has 25 MA's), (29, 7539), (52, 7836), (54, 7842), (64, 7944),

Gene: Vash\_30 Start: 22721, Stop: 23083, Start Num: 39

Candidate Starts for Vash\_30:

(Start: 39 @22721 has 6 MA's), (49, 22892), (55, 22952), (58, 22994),

Gene: Vine\_1 Start: 257, Stop: 790, Start Num: 27

Candidate Starts for Vine\_1:

(5, 65), (11, 104), (Start: 27 @257 has 2 MA's), (40, 368), (47, 497), (48, 500), (68, 785),

Gene: Yvonnetastic\_146 Start: 79771, Stop: 80427, Start Num: 6

Candidate Starts for Yvonnetastic\_146:

(Start: 6 @79771 has 1 MA's), (8, 79774), (9, 79777), (23, 79924), (24, 79927), (41, 80071), (51, 80257), (53, 80266), (60, 80323), (63, 80365),

Gene: phiBT1\_7 Start: 24178, Stop: 24540, Start Num: 39

Candidate Starts for phiBT1\_7:

(35, 24166), (36, 24169), (Start: 39 @24178 has 6 MA's), (49, 24349), (55, 24409), (58, 24451),