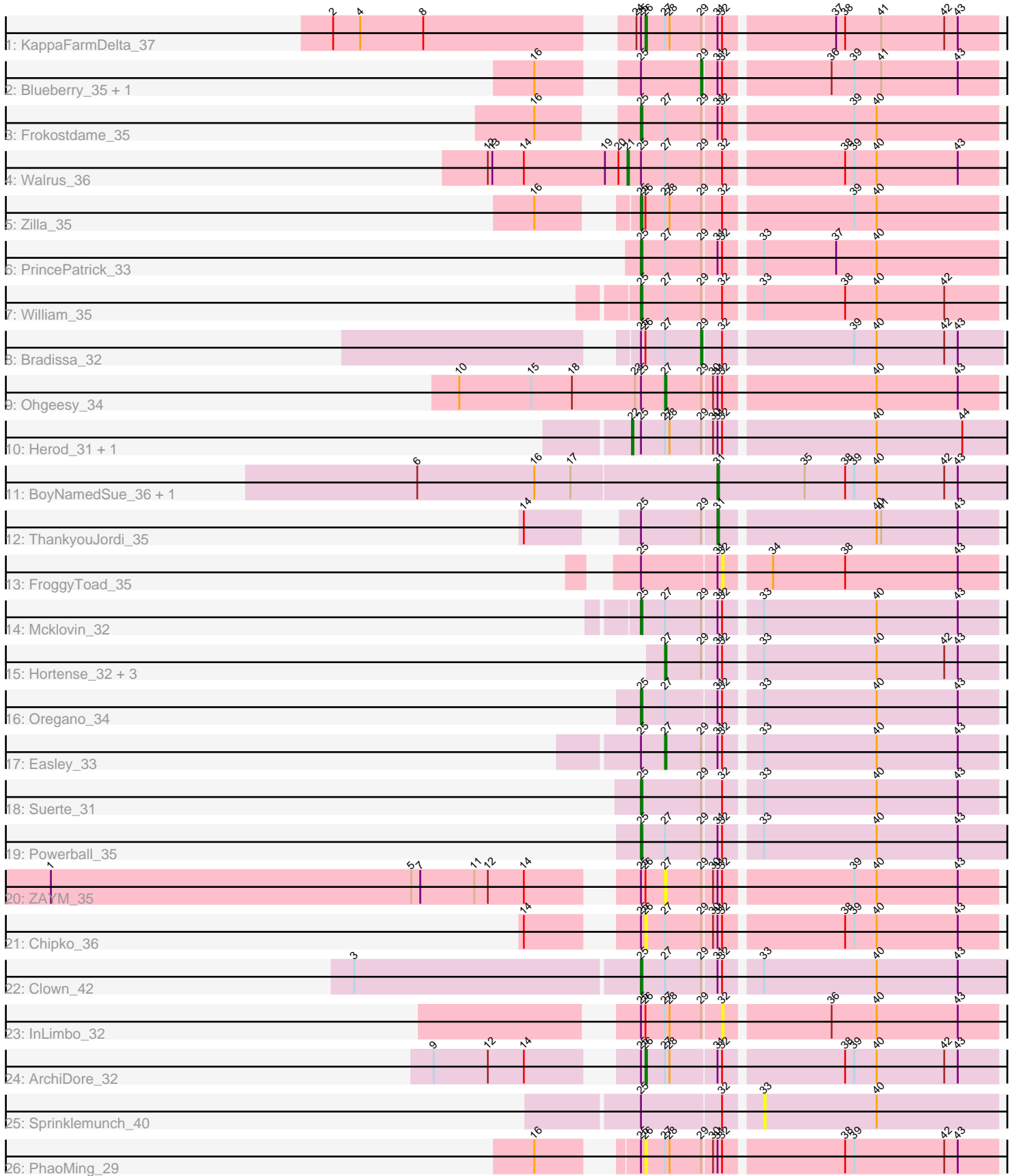


Pham 296790



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 296790 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296790 has 32 members, 7 are drafts.

Phages represented in each track:

- Track 1 : KappaFarmDelta\_37
- Track 2 : Blueberry\_35, Gambino\_36
- Track 3 : Frokostdame\_35
- Track 4 : Walrus\_36
- Track 5 : Zilla\_35
- Track 6 : PrincePatrick\_33
- Track 7 : William\_35
- Track 8 : Bradissa\_32
- Track 9 : Ohgeesy\_34
- Track 10 : Herod\_31, Hugley\_30
- Track 11 : BoyNamedSue\_36, AlumE\_36
- Track 12 : ThankyouJordi\_35
- Track 13 : FroggyToad\_35
- Track 14 : Mcklovin\_32
- Track 15 : Hortense\_32, Twinkle\_32, Shlim410\_32, Howe\_32
- Track 16 : Oregano\_34
- Track 17 : Easley\_33
- Track 18 : Suerte\_31
- Track 19 : Powerball\_35
- Track 20 : ZAYM\_35
- Track 21 : Chipko\_36
- Track 22 : Clown\_42
- Track 23 : InLimbo\_32
- Track 24 : ArchiDore\_32
- Track 25 : Sprinklemunch\_40
- Track 26 : PhaoMing\_29

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

The start number called the most often in the published annotations is 25, it was called in 9 of the 25 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Clown\_42, Frokostdame\_35, Mcklovin\_32, Oregano\_34, Powerball\_35, PrincePatrick\_33, Suerte\_31, William\_35, Zilla\_35,

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

- ArchiDore\_32, Blueberry\_35, Bradissa\_32, Chipko\_36, Easley\_33, FroggyToad\_35, Gambino\_36, Herod\_31, Hugley\_30, InLimbo\_32, KappaFarmDelta\_37, Ohgeesy\_34, PhaoMing\_29, Sprinklemunch\_40, ThankyouJordi\_35, Walrus\_36, ZAYM\_35,

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

- AlumE\_36, BoyNamedSue\_36, Hortense\_32, Howe\_32, Shlim410\_32, Twinkle\_32,

### Summary by start number:

Start 21:

- Found in 1 of 32 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 1 of 25
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Walrus\_36 (CV),

Start 22:

- Found in 2 of 32 ( 6.2% ) of genes in pham
- Manual Annotations of this start: 1 of 25
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Herod\_31 (CZ1), Hugley\_30 (CZ1),

Start 25:

- Found in 26 of 32 ( 81.2% ) of genes in pham
- Manual Annotations of this start: 9 of 25
- Called 34.6% of time when present
- Phage (with cluster) where this start called: Clown\_42 (DC2), Frokostdame\_35 (CV), Mcklovin\_32 (CZ4), Oregano\_34 (CZ4), Powerball\_35 (CZ4), PrincePatrick\_33 (CV), Suerte\_31 (CZ4), William\_35 (CV), Zilla\_35 (CV),

Start 26:

- Found in 8 of 32 ( 25.0% ) of genes in pham
- Manual Annotations of this start: 2 of 25
- Called 50.0% of time when present
- Phage (with cluster) where this start called: ArchiDore\_32 (DW), Chipko\_36 (DB), KappaFarmDelta\_37 (CV), PhaoMing\_29 (UNK),

Start 27:

- Found in 24 of 32 ( 75.0% ) of genes in pham
- Manual Annotations of this start: 6 of 25
- Called 29.2% of time when present
- Phage (with cluster) where this start called: Easley\_33 (CZ4), Hortense\_32 (CZ4), Howe\_32 (CZ4), Ohgeesy\_34 (CZ), Shlim410\_32 (CZ4), Twinkle\_32 (CZ4), ZAYM\_35 (DB),

Start 29:

- Found in 26 of 32 ( 81.2% ) of genes in pham
- Manual Annotations of this start: 3 of 25
- Called 11.5% of time when present

- Phage (with cluster) where this start called: Blueberry\_35 (CV), Bradissa\_32 (CY1), Gambino\_36 (CV),

Start 31:

- Found in 25 of 32 ( 78.1% ) of genes in pham
- Manual Annotations of this start: 3 of 25
- Called 12.0% of time when present
- Phage (with cluster) where this start called: AlumE\_36 (CZ1), BoyNamedSue\_36 (CZ1), ThankyouJordi\_35 (CZ1),

Start 32:

- Found in 29 of 32 ( 90.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 6.9% of time when present
- Phage (with cluster) where this start called: FroggyToad\_35 (CZ2), InLimbo\_32 (DH),

Start 33:

- Found in 13 of 32 ( 40.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Sprinklemunch\_40 (DW),

### **Summary by clusters:**

There are 11 clusters represented in this pham: CY1, DH, CZ2, CZ1, DB, CZ4, CZ, DW, UNK, DC2, CV,

Info for manual annotations of cluster CV:

- Start number 21 was manually annotated 1 time for cluster CV.
- Start number 25 was manually annotated 4 times for cluster CV.
- Start number 26 was manually annotated 1 time for cluster CV.
- Start number 29 was manually annotated 2 times for cluster CV.

Info for manual annotations of cluster CY1:

- Start number 29 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CZ:

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

Info for manual annotations of cluster CZ1:

- Start number 22 was manually annotated 1 time for cluster CZ1.
- Start number 31 was manually annotated 3 times for cluster CZ1.

Info for manual annotations of cluster CZ4:

- Start number 25 was manually annotated 4 times for cluster CZ4.
- Start number 27 was manually annotated 5 times for cluster CZ4.

Info for manual annotations of cluster DC2:

- Start number 25 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DW:

•Start number 26 was manually annotated 1 time for cluster DW.

**Gene Information:**

Gene: AlumE\_36 Start: 30317, Stop: 30123, Start Num: 31

Candidate Starts for AlumE\_36:

(6, 30515), (16, 30437), (17, 30413), (Start: 31 @30317 has 3 MA's), (35, 30260), (38, 30233), (39, 30227), (40, 30212), (42, 30167), (43, 30158),

Gene: ArchiDore\_32 Start: 28535, Stop: 28311, Start Num: 26

Candidate Starts for ArchiDore\_32:

(9, 28652), (12, 28616), (14, 28592), (Start: 25 @28538 has 9 MA's), (Start: 26 @28535 has 2 MA's), (Start: 27 @28523 has 6 MA's), (28, 28520), (Start: 31 @28490 has 3 MA's), (32, 28487), (38, 28412), (39, 28406), (40, 28391), (42, 28346), (43, 28337),

Gene: Blueberry\_35 Start: 28987, Stop: 28799, Start Num: 29

Candidate Starts for Blueberry\_35:

(16, 29071), (Start: 25 @29026 has 9 MA's), (Start: 29 @28987 has 3 MA's), (Start: 31 @28978 has 3 MA's), (32, 28975), (36, 28909), (39, 28894), (41, 28876), (43, 28825),

Gene: BoyNamedSue\_36 Start: 30317, Stop: 30123, Start Num: 31

Candidate Starts for BoyNamedSue\_36:

(6, 30515), (16, 30437), (17, 30413), (Start: 31 @30317 has 3 MA's), (35, 30260), (38, 30233), (39, 30227), (40, 30212), (42, 30167), (43, 30158),

Gene: Bradissa\_32 Start: 28422, Stop: 28231, Start Num: 29

Candidate Starts for Bradissa\_32:

(Start: 25 @28461 has 9 MA's), (Start: 26 @28458 has 2 MA's), (Start: 27 @28446 has 6 MA's), (Start: 29 @28422 has 3 MA's), (32, 28410), (39, 28329), (40, 28314), (42, 28269), (43, 28260),

Gene: Chipko\_36 Start: 31057, Stop: 30833, Start Num: 26

Candidate Starts for Chipko\_36:

(14, 31114), (Start: 25 @31060 has 9 MA's), (Start: 26 @31057 has 2 MA's), (Start: 27 @31045 has 6 MA's), (Start: 29 @31021 has 3 MA's), (30, 31015), (Start: 31 @31012 has 3 MA's), (32, 31009), (38, 30934), (39, 30928), (40, 30913), (43, 30859),

Gene: Clown\_42 Start: 35272, Stop: 35024, Start Num: 25

Candidate Starts for Clown\_42:

(3, 35458), (Start: 25 @35272 has 9 MA's), (Start: 27 @35257 has 6 MA's), (Start: 29 @35233 has 3 MA's), (Start: 31 @35224 has 3 MA's), (32, 35221), (33, 35200), (40, 35125), (43, 35071),

Gene: Easley\_33 Start: 26425, Stop: 26213, Start Num: 27

Candidate Starts for Easley\_33:

(Start: 25 @26440 has 9 MA's), (Start: 27 @26425 has 6 MA's), (Start: 29 @26401 has 3 MA's), (Start: 31 @26392 has 3 MA's), (32, 26389), (33, 26368), (40, 26293), (43, 26239),

Gene: FroggyToad\_35 Start: 27684, Stop: 27508, Start Num: 32

Candidate Starts for FroggyToad\_35:

(Start: 25 @27735 has 9 MA's), (Start: 31 @27687 has 3 MA's), (32, 27684), (34, 27657), (38, 27609), (43, 27534),

Gene: Frokostdame\_35 Start: 28824, Stop: 28597, Start Num: 25

Candidate Starts for Frokostdame\_35:

(16, 28869), (Start: 25 @28824 has 9 MA's), (Start: 27 @28809 has 6 MA's), (Start: 29 @28785 has 3 MA's), (Start: 31 @28776 has 3 MA's), (32, 28773), (39, 28692), (40, 28677),

Gene: Gambino\_36 Start: 28987, Stop: 28799, Start Num: 29

Candidate Starts for Gambino\_36:

(16, 29071), (Start: 25 @29026 has 9 MA's), (Start: 29 @28987 has 3 MA's), (Start: 31 @28978 has 3 MA's), (32, 28975), (36, 28909), (39, 28894), (41, 28876), (43, 28825),

Gene: Herod\_31 Start: 28850, Stop: 28608, Start Num: 22

Candidate Starts for Herod\_31:

(Start: 22 @28850 has 1 MA's), (Start: 25 @28844 has 9 MA's), (Start: 27 @28829 has 6 MA's), (28, 28826), (Start: 29 @28805 has 3 MA's), (30, 28799), (Start: 31 @28796 has 3 MA's), (32, 28793), (40, 28697), (44, 28640),

Gene: Hortense\_32 Start: 28665, Stop: 28453, Start Num: 27

Candidate Starts for Hortense\_32:

(Start: 27 @28665 has 6 MA's), (Start: 29 @28641 has 3 MA's), (Start: 31 @28632 has 3 MA's), (32, 28629), (33, 28608), (40, 28533), (42, 28488), (43, 28479),

Gene: Howe\_32 Start: 28665, Stop: 28453, Start Num: 27

Candidate Starts for Howe\_32:

(Start: 27 @28665 has 6 MA's), (Start: 29 @28641 has 3 MA's), (Start: 31 @28632 has 3 MA's), (32, 28629), (33, 28608), (40, 28533), (42, 28488), (43, 28479),

Gene: Hugley\_30 Start: 28849, Stop: 28607, Start Num: 22

Candidate Starts for Hugley\_30:

(Start: 22 @28849 has 1 MA's), (Start: 25 @28843 has 9 MA's), (Start: 27 @28828 has 6 MA's), (28, 28825), (Start: 29 @28804 has 3 MA's), (30, 28798), (Start: 31 @28795 has 3 MA's), (32, 28792), (40, 28696), (44, 28639),

Gene: InLimbo\_32 Start: 25604, Stop: 25428, Start Num: 32

Candidate Starts for InLimbo\_32:

(Start: 25 @25655 has 9 MA's), (Start: 26 @25652 has 2 MA's), (Start: 27 @25640 has 6 MA's), (28, 25637), (Start: 29 @25616 has 3 MA's), (32, 25604), (36, 25538), (40, 25508), (43, 25454),

Gene: KappaFarmDelta\_37 Start: 28565, Stop: 28341, Start Num: 26

Candidate Starts for KappaFarmDelta\_37:

(2, 28748), (4, 28730), (8, 28688), (24, 28571), (Start: 25 @28568 has 9 MA's), (Start: 26 @28565 has 2 MA's), (Start: 27 @28553 has 6 MA's), (28, 28550), (Start: 29 @28529 has 3 MA's), (Start: 31 @28520 has 3 MA's), (32, 28517), (37, 28448), (38, 28442), (41, 28418), (42, 28376), (43, 28367),

Gene: Mcklovin\_32 Start: 30905, Stop: 30678, Start Num: 25

Candidate Starts for Mcklovin\_32:

(Start: 25 @30905 has 9 MA's), (Start: 27 @30890 has 6 MA's), (Start: 29 @30866 has 3 MA's), (Start: 31 @30857 has 3 MA's), (32, 30854), (33, 30833), (40, 30758), (43, 30704),

Gene: Ohgeesy\_34 Start: 29848, Stop: 29636, Start Num: 27

Candidate Starts for Ohgeesy\_34:

(10, 29983), (15, 29935), (18, 29908), (23, 29866), (Start: 25 @29863 has 9 MA's), (Start: 27 @29848 has 6 MA's), (Start: 29 @29824 has 3 MA's), (30, 29818), (Start: 31 @29815 has 3 MA's), (32, 29812), (40, 29716), (43, 29662),

Gene: Oregano\_34 Start: 27096, Stop: 26869, Start Num: 25

Candidate Starts for Oregano\_34:

(Start: 25 @27096 has 9 MA's), (Start: 27 @27081 has 6 MA's), (Start: 31 @27048 has 3 MA's), (32, 27045), (33, 27024), (40, 26949), (43, 26895),

Gene: PhaoMing\_29 Start: 26379, Stop: 26155, Start Num: 26

Candidate Starts for PhaoMing\_29:

(16, 26427), (Start: 25 @26382 has 9 MA's), (Start: 26 @26379 has 2 MA's), (Start: 27 @26367 has 6 MA's), (28, 26364), (Start: 29 @26343 has 3 MA's), (30, 26337), (Start: 31 @26334 has 3 MA's), (32, 26331), (38, 26256), (39, 26250), (42, 26190), (43, 26181),

Gene: Powerball\_35 Start: 28956, Stop: 28720, Start Num: 25

Candidate Starts for Powerball\_35:

(Start: 25 @28956 has 9 MA's), (Start: 27 @28941 has 6 MA's), (Start: 29 @28917 has 3 MA's), (Start: 31 @28908 has 3 MA's), (32, 28905), (33, 28884), (40, 28809), (43, 28755),

Gene: PrincePatrick\_33 Start: 27253, Stop: 27026, Start Num: 25

Candidate Starts for PrincePatrick\_33:

(Start: 25 @27253 has 9 MA's), (Start: 27 @27238 has 6 MA's), (Start: 29 @27214 has 3 MA's), (Start: 31 @27205 has 3 MA's), (32, 27202), (33, 27181), (37, 27133), (40, 27106),

Gene: Shlim410\_32 Start: 28665, Stop: 28453, Start Num: 27

Candidate Starts for Shlim410\_32:

(Start: 27 @28665 has 6 MA's), (Start: 29 @28641 has 3 MA's), (Start: 31 @28632 has 3 MA's), (32, 28629), (33, 28608), (40, 28533), (42, 28488), (43, 28479),

Gene: Sprinklemunch\_40 Start: 30648, Stop: 30493, Start Num: 33

Candidate Starts for Sprinklemunch\_40:

(Start: 25 @30720 has 9 MA's), (32, 30669), (33, 30648), (40, 30573),

Gene: Suerte\_31 Start: 27445, Stop: 27218, Start Num: 25

Candidate Starts for Suerte\_31:

(Start: 25 @27445 has 9 MA's), (Start: 29 @27406 has 3 MA's), (32, 27394), (33, 27373), (40, 27298), (43, 27244),

Gene: ThankyouJordi\_35 Start: 30189, Stop: 30010, Start Num: 31

Candidate Starts for ThankyouJordi\_35:

(14, 30288), (Start: 25 @30237 has 9 MA's), (Start: 29 @30198 has 3 MA's), (Start: 31 @30189 has 3 MA's), (40, 30090), (41, 30087), (43, 30036),

Gene: Twinkle\_32 Start: 29724, Stop: 29512, Start Num: 27

Candidate Starts for Twinkle\_32:

(Start: 27 @29724 has 6 MA's), (Start: 29 @29700 has 3 MA's), (Start: 31 @29691 has 3 MA's), (32, 29688), (33, 29667), (40, 29592), (42, 29547), (43, 29538),

Gene: Walrus\_36 Start: 29330, Stop: 29094, Start Num: 21

Candidate Starts for Walrus\_36:

(12, 29423), (13, 29420), (14, 29399), (19, 29345), (20, 29336), (Start: 21 @29330 has 1 MA's), (Start: 25 @29321 has 9 MA's), (Start: 27 @29306 has 6 MA's), (Start: 29 @29282 has 3 MA's), (32, 29270),

(38, 29195), (39, 29189), (40, 29174), (43, 29120),

Gene: William\_35 Start: 28714, Stop: 28487, Start Num: 25

Candidate Starts for William\_35:

(Start: 25 @28714 has 9 MA's), (Start: 27 @28699 has 6 MA's), (Start: 29 @28675 has 3 MA's), (32, 28663), (33, 28642), (38, 28588), (40, 28567), (42, 28522),

Gene: ZAYM\_35 Start: 28842, Stop: 28630, Start Num: 27

Candidate Starts for ZAYM\_35:

(1, 29226), (5, 28986), (7, 28980), (11, 28944), (12, 28935), (14, 28911), (Start: 25 @28857 has 9 MA's), (Start: 26 @28854 has 2 MA's), (Start: 27 @28842 has 6 MA's), (Start: 29 @28818 has 3 MA's), (30, 28812), (Start: 31 @28809 has 3 MA's), (32, 28806), (39, 28725), (40, 28710), (43, 28656),

Gene: Zilla\_35 Start: 29547, Stop: 29320, Start Num: 25

Candidate Starts for Zilla\_35:

(16, 29592), (Start: 25 @29547 has 9 MA's), (Start: 26 @29544 has 2 MA's), (Start: 27 @29532 has 6 MA's), (28, 29529), (Start: 29 @29508 has 3 MA's), (32, 29496), (39, 29415), (40, 29400),