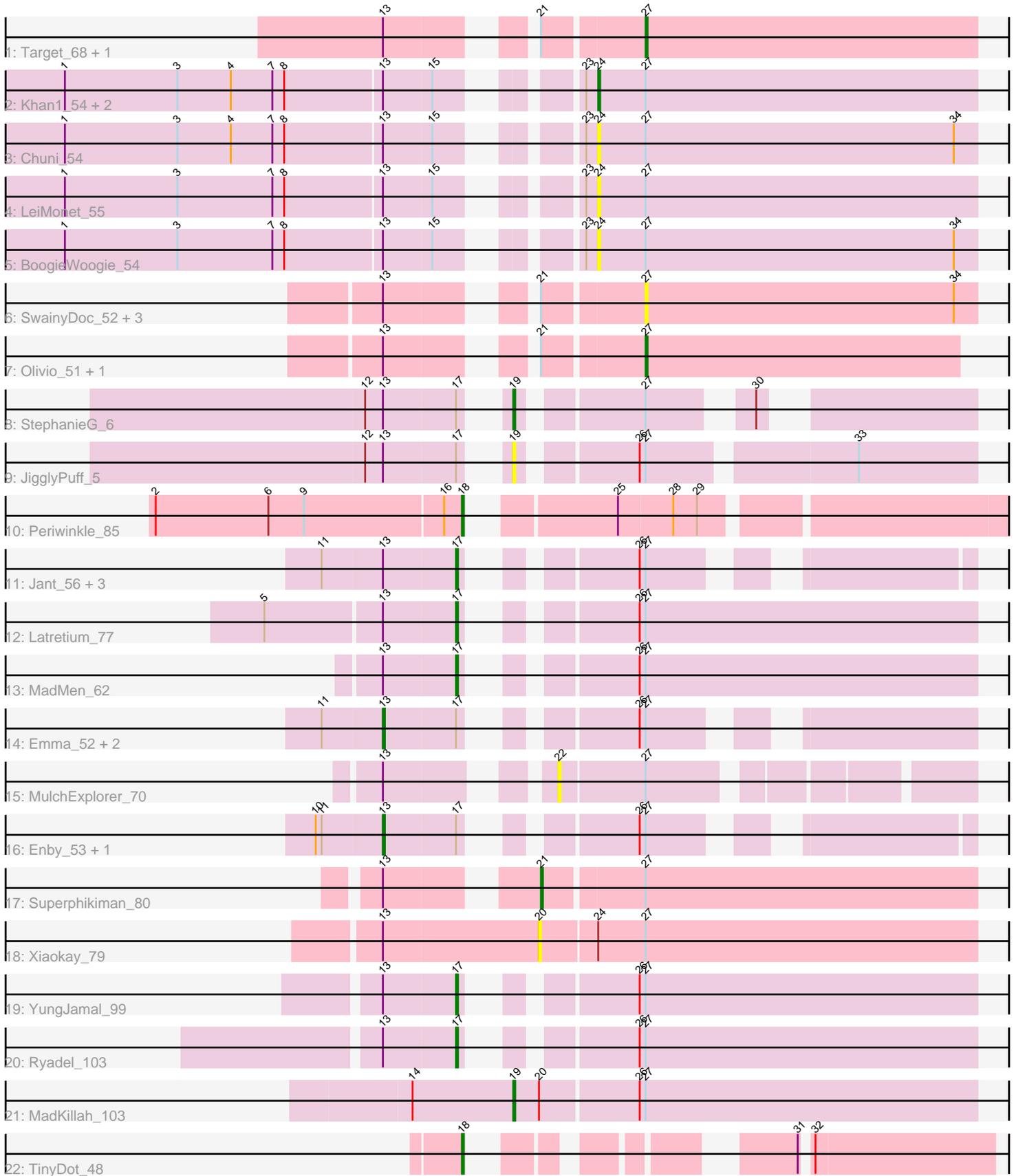


Pham 291358



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 291358 Report

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

Pham number 291358 has 35 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Target\_68, Raid\_65
- Track 2 : Khan1\_54, Gwilliam\_54, DoIon\_57
- Track 3 : Chuni\_54
- Track 4 : LeiMonet\_55
- Track 5 : BoogieWoogie\_54
- Track 6 : SwainyDoc\_52, Marlia\_52, SlippinJimmy\_53, Mulaychimus\_52
- Track 7 : Olivio\_51, Heathcliff\_51
- Track 8 : StephanieG\_6
- Track 9 : JigglyPuff\_5
- Track 10 : Periwinkle\_85
- Track 11 : Jant\_56, Bobi\_55, Krakatau\_50, Harley\_54
- Track 12 : Latretium\_77
- Track 13 : MadMen\_62
- Track 14 : Emma\_52, VRedHorse\_52, Mova\_53
- Track 15 : MulchExplorer\_70
- Track 16 : Enby\_53, Lorde\_53
- Track 17 : Superphikiman\_80
- Track 18 : Xiaokay\_79
- Track 19 : YungJamal\_99
- Track 20 : Ryadel\_103
- Track 21 : MadKillah\_103
- Track 22 : TinyDot\_48

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

The start number called the most often in the published annotations is 17, it was called in 7 of the 20 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Bobi\_55, Harley\_54, Jant\_56, Krakatau\_50, Latretium\_77, MadMen\_62, Ryadel\_103, YungJamal\_99,

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

- Emma\_52, Enby\_53, JigglyPuff\_5, Lorde\_53, Mova\_53, StephanieG\_6, VRedHorse\_52,

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

- BoogieWoogie\_54, Chuni\_54, DolOn\_57, Gwilliam\_54, Heathcliff\_51, Khan1\_54, LeiMonet\_55, MadKillah\_103, Marlia\_52, Mulaychimus\_52, MulchExplorer\_70, Olivio\_51, Periwinkle\_85, Raid\_65, SlippinJimmy\_53, Superphikiman\_80, SwainyDoc\_52, Target\_68, TinyDot\_48, Xiaokay\_79,

### Summary by start number:

Start 13:

- Found in 32 of 35 ( 91.4% ) of genes in pham
- Manual Annotations of this start: 5 of 20
- Called 15.6% of time when present
- Phage (with cluster) where this start called: Emma\_52 (F1), Enby\_53 (F1), Lorde\_53 (F1), Mova\_53 (F1), VRedHorse\_52 (F1),

Start 17:

- Found in 15 of 35 ( 42.9% ) of genes in pham
- Manual Annotations of this start: 7 of 20
- Called 53.3% of time when present
- Phage (with cluster) where this start called: Bobi\_55 (F1), Harley\_54 (F1), Jant\_56 (F1), Krakatau\_50 (F1), Latretium\_77 (F1), MadMen\_62 (F1), Ryadel\_103 (O), YungJamal\_99 (O),

Start 18:

- Found in 2 of 35 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 2 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Periwinkle\_85 (DN1), TinyDot\_48 (singleton),

Start 19:

- Found in 3 of 35 ( 8.6% ) of genes in pham
- Manual Annotations of this start: 2 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JigglyPuff\_5 (C1), MadKillah\_103 (O), StephanieG\_6 (C1),

Start 20:

- Found in 2 of 35 ( 5.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Xiaokay\_79 (J),

Start 21:

- Found in 9 of 35 ( 25.7% ) of genes in pham
- Manual Annotations of this start: 1 of 20
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Superphikiman\_80 (J),

Start 22:

- Found in 1 of 35 ( 2.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MulchExplorer\_70 (F1),

Start 24:

- Found in 7 of 35 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 1 of 20
- Called 85.7% of time when present
- Phage (with cluster) where this start called: BoogieWoogie\_54 (B1), Chuni\_54 (B1), DoIon\_57 (B1), Gwilliam\_54 (B1), Khan1\_54 (B1), LeiMonet\_55 (B1),

Start 27:

- Found in 33 of 35 ( 94.3% ) of genes in pham
- Manual Annotations of this start: 2 of 20
- Called 24.2% of time when present
- Phage (with cluster) where this start called: Heathcliff\_51 (B3), Marlia\_52 (B3), Mulaychimus\_52 (B3), Olivio\_51 (B3), Raid\_65 (A1), SlippinJimmy\_53 (B3), SwainyDoc\_52 (B3), Target\_68 (A1),

### **Summary by clusters:**

There are 9 clusters represented in this pham: F1, singleton, J, O, A1, DN1, B1, B3, C1,

Info for manual annotations of cluster A1:

- Start number 27 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster B1:

- Start number 24 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster B3:

- Start number 27 was manually annotated 1 time for cluster B3.

Info for manual annotations of cluster C1:

- Start number 19 was manually annotated 1 time for cluster C1.

Info for manual annotations of cluster DN1:

- Start number 18 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster F1:

- Start number 13 was manually annotated 5 times for cluster F1.
- Start number 17 was manually annotated 5 times for cluster F1.

Info for manual annotations of cluster J:

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

Info for manual annotations of cluster O:

- Start number 17 was manually annotated 2 times for cluster O.
- Start number 19 was manually annotated 1 time for cluster O.

**Gene Information:**

Gene: Bobi\_55 Start: 38256, Stop: 38450, Start Num: 17

Candidate Starts for Bobi\_55:

(11, 38190), (Start: 13 @38220 has 5 MA's), (Start: 17 @38256 has 7 MA's), (26, 38316), (Start: 27 @38319 has 2 MA's),

Gene: BoogieWoogie\_54 Start: 47559, Stop: 47368, Start Num: 24

Candidate Starts for BoogieWoogie\_54:

(1, 47796), (3, 47739), (7, 47691), (8, 47685), (Start: 13 @47637 has 5 MA's), (15, 47613), (23, 47565), (Start: 24 @47559 has 1 MA's), (Start: 27 @47535 has 2 MA's), (34, 47379),

Gene: Chuni\_54 Start: 48106, Stop: 47915, Start Num: 24

Candidate Starts for Chuni\_54:

(1, 48343), (3, 48286), (4, 48259), (7, 48238), (8, 48232), (Start: 13 @48184 has 5 MA's), (15, 48160), (23, 48112), (Start: 24 @48106 has 1 MA's), (Start: 27 @48082 has 2 MA's), (34, 47926),

Gene: DolOn\_57 Start: 48236, Stop: 48045, Start Num: 24

Candidate Starts for DolOn\_57:

(1, 48473), (3, 48416), (4, 48389), (7, 48368), (8, 48362), (Start: 13 @48314 has 5 MA's), (15, 48290), (23, 48242), (Start: 24 @48236 has 1 MA's), (Start: 27 @48212 has 2 MA's),

Gene: Emma\_52 Start: 36405, Stop: 36638, Start Num: 13

Candidate Starts for Emma\_52:

(11, 36375), (Start: 13 @36405 has 5 MA's), (Start: 17 @36441 has 7 MA's), (26, 36501), (Start: 27 @36504 has 2 MA's),

Gene: Enby\_53 Start: 35552, Stop: 35782, Start Num: 13

Candidate Starts for Enby\_53:

(10, 35519), (11, 35522), (Start: 13 @35552 has 5 MA's), (Start: 17 @35588 has 7 MA's), (26, 35648), (Start: 27 @35651 has 2 MA's),

Gene: Gwilliam\_54 Start: 47871, Stop: 47680, Start Num: 24

Candidate Starts for Gwilliam\_54:

(1, 48108), (3, 48051), (4, 48024), (7, 48003), (8, 47997), (Start: 13 @47949 has 5 MA's), (15, 47925), (23, 47877), (Start: 24 @47871 has 1 MA's), (Start: 27 @47847 has 2 MA's),

Gene: Harley\_54 Start: 37188, Stop: 37382, Start Num: 17

Candidate Starts for Harley\_54:

(11, 37122), (Start: 13 @37152 has 5 MA's), (Start: 17 @37188 has 7 MA's), (26, 37248), (Start: 27 @37251 has 2 MA's),

Gene: Heathcliff\_51 Start: 45274, Stop: 45107, Start Num: 27

Candidate Starts for Heathcliff\_51:

(Start: 13 @45376 has 5 MA's), (Start: 21 @45322 has 1 MA's), (Start: 27 @45274 has 2 MA's),

Gene: Jant\_56 Start: 38892, Stop: 39086, Start Num: 17

Candidate Starts for Jant\_56:

(11, 38826), (Start: 13 @38856 has 5 MA's), (Start: 17 @38892 has 7 MA's), (26, 38952), (Start: 27 @38955 has 2 MA's),

Gene: JigglyPuff\_5 Start: 1776, Stop: 1985, Start Num: 19

Candidate Starts for JigglyPuff\_5:

(12, 1722), (Start: 13 @1731 has 5 MA's), (Start: 17 @1767 has 7 MA's), (Start: 19 @1776 has 2 MA's), (26, 1827), (Start: 27 @1830 has 2 MA's), (33, 1926),

Gene: Khan1\_54 Start: 47495, Stop: 47304, Start Num: 24

Candidate Starts for Khan1\_54:

(1, 47732), (3, 47675), (4, 47648), (7, 47627), (8, 47621), (Start: 13 @47573 has 5 MA's), (15, 47549), (23, 47501), (Start: 24 @47495 has 1 MA's), (Start: 27 @47471 has 2 MA's),

Gene: Krakatau\_50 Start: 36883, Stop: 37077, Start Num: 17

Candidate Starts for Krakatau\_50:

(11, 36817), (Start: 13 @36847 has 5 MA's), (Start: 17 @36883 has 7 MA's), (26, 36943), (Start: 27 @36946 has 2 MA's),

Gene: Latretium\_77 Start: 46947, Stop: 47177, Start Num: 17

Candidate Starts for Latretium\_77:

(5, 46854), (Start: 13 @46911 has 5 MA's), (Start: 17 @46947 has 7 MA's), (26, 47007), (Start: 27 @47010 has 2 MA's),

Gene: LeiMonet\_55 Start: 47494, Stop: 47303, Start Num: 24

Candidate Starts for LeiMonet\_55:

(1, 47731), (3, 47674), (7, 47626), (8, 47620), (Start: 13 @47572 has 5 MA's), (15, 47548), (23, 47500), (Start: 24 @47494 has 1 MA's), (Start: 27 @47470 has 2 MA's),

Gene: Lorde\_53 Start: 35527, Stop: 35757, Start Num: 13

Candidate Starts for Lorde\_53:

(10, 35494), (11, 35497), (Start: 13 @35527 has 5 MA's), (Start: 17 @35563 has 7 MA's), (26, 35623), (Start: 27 @35626 has 2 MA's),

Gene: MadKillah\_103 Start: 62045, Stop: 61815, Start Num: 19

Candidate Starts for MadKillah\_103:

(14, 62096), (Start: 19 @62045 has 2 MA's), (20, 62033), (26, 61985), (Start: 27 @61982 has 2 MA's),

Gene: MadMen\_62 Start: 41080, Stop: 41310, Start Num: 17

Candidate Starts for MadMen\_62:

(Start: 13 @41044 has 5 MA's), (Start: 17 @41080 has 7 MA's), (26, 41140), (Start: 27 @41143 has 2 MA's),

Gene: Marlia\_52 Start: 45756, Stop: 45589, Start Num: 27

Candidate Starts for Marlia\_52:

(Start: 13 @45858 has 5 MA's), (Start: 21 @45804 has 1 MA's), (Start: 27 @45756 has 2 MA's), (34, 45600),

Gene: Mova\_53 Start: 36684, Stop: 36917, Start Num: 13

Candidate Starts for Mova\_53:

(11, 36654), (Start: 13 @36684 has 5 MA's), (Start: 17 @36720 has 7 MA's), (26, 36780), (Start: 27 @36783 has 2 MA's),

Gene: Mulaychimus\_52 Start: 45738, Stop: 45571, Start Num: 27

Candidate Starts for Mulaychimus\_52:

(Start: 13 @45840 has 5 MA's), (Start: 21 @45786 has 1 MA's), (Start: 27 @45738 has 2 MA's), (34, 45582),

Gene: MulchExplorer\_70 Start: 43157, Stop: 43342, Start Num: 22

Candidate Starts for MulchExplorer\_70:  
(Start: 13 @43094 has 5 MA's), (22, 43157), (Start: 27 @43199 has 2 MA's),

Gene: Olivio\_51 Start: 45617, Stop: 45459, Start Num: 27  
Candidate Starts for Olivio\_51:  
(Start: 13 @45719 has 5 MA's), (Start: 21 @45665 has 1 MA's), (Start: 27 @45617 has 2 MA's),

Gene: Periwinkle\_85 Start: 46796, Stop: 47035, Start Num: 18  
Candidate Starts for Periwinkle\_85:  
(2, 46643), (6, 46700), (9, 46718), (16, 46787), (Start: 18 @46796 has 2 MA's), (25, 46853), (28, 46880), (29, 46892),

Gene: Raid\_65 Start: 42540, Stop: 42373, Start Num: 27  
Candidate Starts for Raid\_65:  
(Start: 13 @42642 has 5 MA's), (Start: 21 @42588 has 1 MA's), (Start: 27 @42540 has 2 MA's),

Gene: Ryadel\_103 Start: 62455, Stop: 62225, Start Num: 17  
Candidate Starts for Ryadel\_103:  
(Start: 13 @62491 has 5 MA's), (Start: 17 @62455 has 7 MA's), (26, 62395), (Start: 27 @62392 has 2 MA's),

Gene: SlippinJimmy\_53 Start: 46540, Stop: 46373, Start Num: 27  
Candidate Starts for SlippinJimmy\_53:  
(Start: 13 @46642 has 5 MA's), (Start: 21 @46588 has 1 MA's), (Start: 27 @46540 has 2 MA's), (34, 46384),

Gene: StephanieG\_6 Start: 1933, Stop: 2115, Start Num: 19  
Candidate Starts for StephanieG\_6:  
(12, 1879), (Start: 13 @1888 has 5 MA's), (Start: 17 @1924 has 7 MA's), (Start: 19 @1933 has 2 MA's), (Start: 27 @1987 has 2 MA's), (30, 2026),

Gene: Superphikiman\_80 Start: 49081, Stop: 48866, Start Num: 21  
Candidate Starts for Superphikiman\_80:  
(Start: 13 @49135 has 5 MA's), (Start: 21 @49081 has 1 MA's), (Start: 27 @49033 has 2 MA's),

Gene: SwainyDoc\_52 Start: 45770, Stop: 45603, Start Num: 27  
Candidate Starts for SwainyDoc\_52:  
(Start: 13 @45872 has 5 MA's), (Start: 21 @45818 has 1 MA's), (Start: 27 @45770 has 2 MA's), (34, 45614),

Gene: Target\_68 Start: 42412, Stop: 42245, Start Num: 27  
Candidate Starts for Target\_68:  
(Start: 13 @42514 has 5 MA's), (Start: 21 @42460 has 1 MA's), (Start: 27 @42412 has 2 MA's),

Gene: TinyDot\_48 Start: 31963, Stop: 32163, Start Num: 18  
Candidate Starts for TinyDot\_48:  
(Start: 18 @31963 has 2 MA's), (31, 32071), (32, 32074),

Gene: VRedHorse\_52 Start: 36525, Stop: 36758, Start Num: 13  
Candidate Starts for VRedHorse\_52:  
(11, 36495), (Start: 13 @36525 has 5 MA's), (Start: 17 @36561 has 7 MA's), (26, 36621), (Start: 27 @36624 has 2 MA's),

Gene: Xiaokay\_79 Start: 52707, Stop: 52925, Start Num: 20

Candidate Starts for Xiaokay\_79:

(Start: 13 @52629 has 5 MA's), (20, 52707), (Start: 24 @52734 has 1 MA's), (Start: 27 @52758 has 2 MA's),

Gene: YungJamal\_99 Start: 61508, Stop: 61278, Start Num: 17

Candidate Starts for YungJamal\_99:

(Start: 13 @61544 has 5 MA's), (Start: 17 @61508 has 7 MA's), (26, 61448), (Start: 27 @61445 has 2 MA's),