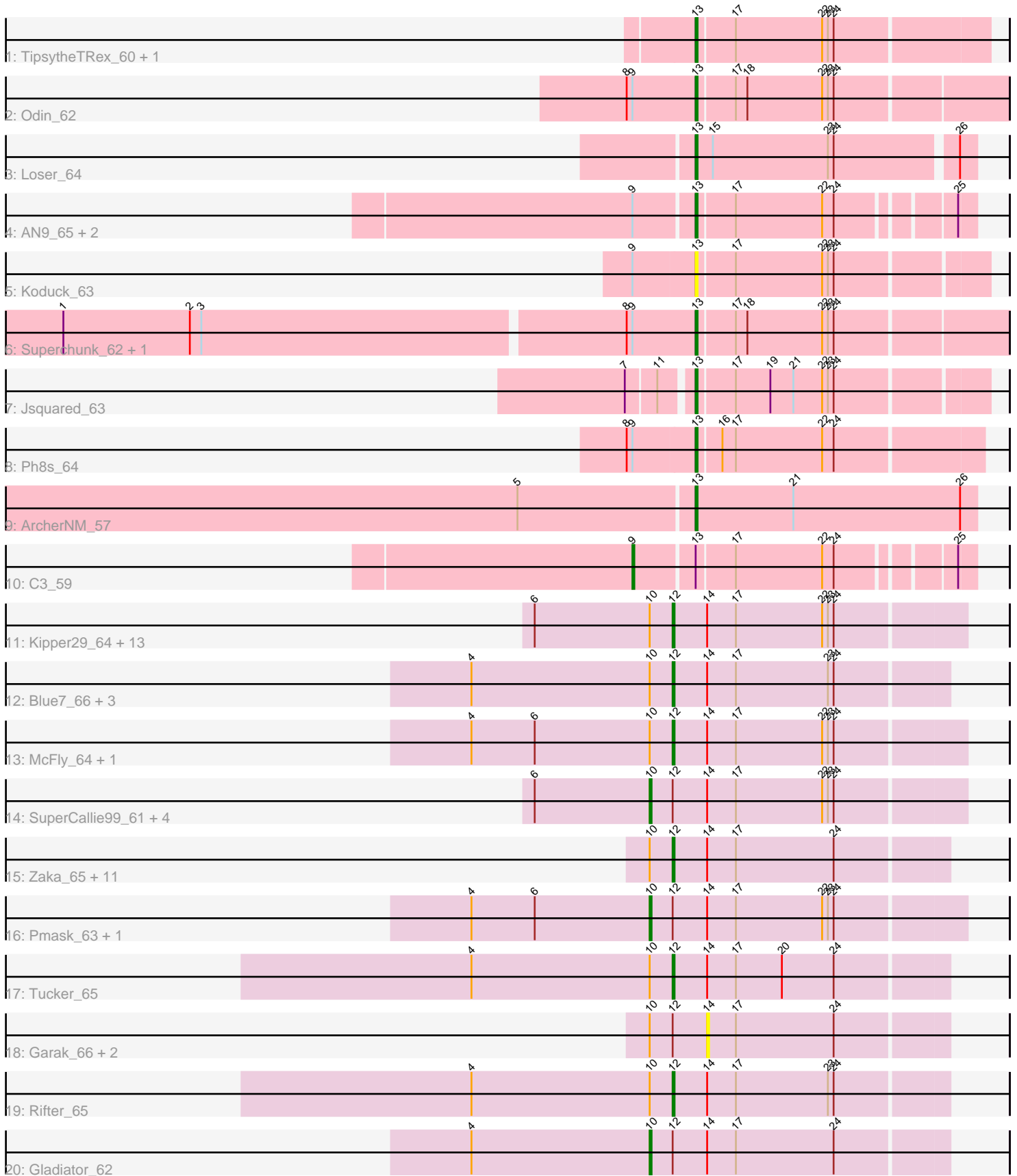


# Pham 171489



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 171489 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171489 has 59 members, 8 are drafts.

Phages represented in each track:

- Track 1 : TipsytheTRex\_60, Serenity\_63
- Track 2 : Odin\_62
- Track 3 : Loser\_64
- Track 4 : AN9\_65, AN18\_65, VC3\_65
- Track 5 : Koduck\_63
- Track 6 : Superchunk\_62, Caraxes\_63
- Track 7 : Jsquared\_63
- Track 8 : Ph8s\_64
- Track 9 : ArcherNM\_57
- Track 10 : C3\_59
- Track 11 : Kipper29\_64, EricB\_63, Hoot\_59, SuperAwesome\_64, Candra\_62, JewelBug\_64, Isiphiwo\_62, Dorothea\_61, VohminGhazi\_64, BABullseye\_57, DaVinci\_62, SmellyB\_64, Newrala\_64, Kazan\_65
- Track 12 : Blue7\_66, Roksolana\_66, Hammer\_65, Gruunaga\_65
- Track 13 : McFly\_64, Cookiedough\_64
- Track 14 : SuperCallie99\_61, Jordennis\_63, Blinn1\_67, Priamo\_66, Chartreuse\_61
- Track 15 : Zaka\_65, Artemis2UCLA\_65, Koko\_67, Hexamo\_65, CloudWang3\_66, Indra\_68, Yokurt\_64, Wiks\_64, WunderPhul\_65, Jeffabunny\_65, ToneTone\_62, Zulu\_66
- Track 16 : Pmask\_63, Neeharika16\_63
- Track 17 : Tucker\_65
- Track 18 : Garak\_66, Helmet\_66, Lilbunny\_62
- Track 19 : Rifter\_65
- Track 20 : Gladiator\_62

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

The start number called the most often in the published annotations is 12, it was called in 32 of the 51 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Artemis2UCLA\_65, BABullseye\_57, Blue7\_66, Candra\_62, CloudWang3\_66, Cookiedough\_64, DaVinci\_62, Dorothea\_61, EricB\_63, Gruunaga\_65, Hammer\_65, Hexamo\_65, Hoot\_59, Indra\_68, Isiphiwo\_62, Jeffabunny\_65, JewelBug\_64,

Kazan\_65, Kipper29\_64, Koko\_67, McFly\_64, Newrala\_64, Rifter\_65, Roksolana\_66, SmellyB\_64, SuperAwesome\_64, ToneTone\_62, Tucker\_65, VohminGhazi\_64, Wiks\_64, WunderPhul\_65, Yokurt\_64, Zaka\_65, Zulu\_66,

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

- Blinn1\_67, Chartreuse\_61, Garak\_66, Gladiator\_62, Helmet\_66, Jordennis\_63, Lilbunny\_62, Neeharika16\_63, Pmask\_63, Priamo\_66, SuperCallie99\_61,

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

- AN9\_65, ANI8\_65, ArcherNM\_57, C3\_59, Caraxes\_63, Jsquared\_63, Koduck\_63, Loser\_64, Odin\_62, Ph8s\_64, Serenity\_63, Superchunk\_62, TipsytheTRex\_60, VC3\_65,

### Summary by start number:

Start 9:

- Found in 9 of 59 ( 15.3% ) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 11.1% of time when present
- Phage (with cluster) where this start called: C3\_59 (A2),

Start 10:

- Found in 45 of 59 ( 76.3% ) of genes in pham
- Manual Annotations of this start: 7 of 51
- Called 17.8% of time when present
- Phage (with cluster) where this start called: Blinn1\_67 (A6), Chartreuse\_61 (A6), Gladiator\_62 (A6), Jordennis\_63 (A6), Neeharika16\_63 (A6), Pmask\_63 (A6), Priamo\_66 (A6), SuperCallie99\_61 (A6),

Start 12:

- Found in 45 of 59 ( 76.3% ) of genes in pham
- Manual Annotations of this start: 32 of 51
- Called 75.6% of time when present
- Phage (with cluster) where this start called: Artemis2UCLA\_65 (A6), BABullseye\_57 (A6), Blue7\_66 (A6), Candra\_62 (A6), CloudWang3\_66 (A6), Cookiedough\_64 (A6), DaVinci\_62 (A6), Dorothea\_61 (A6), EricB\_63 (A6), Gruunaga\_65 (A6), Hammer\_65 (A6), Hexamo\_65 (A6), Hoot\_59 (A6), Indra\_68 (A6), Isiphiwo\_62 (A6), Jeffabunny\_65 (A6), JewelBug\_64 (A6), Kazan\_65 (A6), Kipper29\_64 (A6), Koko\_67 (A6), McFly\_64 (A6), Newrala\_64 (A6), Rifter\_65 (A6), Roksolana\_66 (A6), SmellyB\_64 (A6), SuperAwesome\_64 (A6), ToneTone\_62 (A6), Tucker\_65 (A6), VohminGhazi\_64 (A6), Wiks\_64 (A6), WunderPhul\_65 (A6), Yokurt\_64 (A6), Zaka\_65 (A6), Zulu\_66 (A6),

Start 13:

- Found in 14 of 59 ( 23.7% ) of genes in pham
- Manual Annotations of this start: 11 of 51
- Called 92.9% of time when present
- Phage (with cluster) where this start called: AN9\_65 (A2), ANI8\_65 (A2), ArcherNM\_57 (A2), Caraxes\_63 (A2), Jsquared\_63 (A2), Koduck\_63 (A2), Loser\_64 (A2), Odin\_62 (A2), Ph8s\_64 (A2), Serenity\_63 (A2), Superchunk\_62 (A2), TipsytheTRex\_60 (A2), VC3\_65 (A2),

Start 14:

- Found in 45 of 59 ( 76.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Garak\_66 (A6), Helmet\_66 (A6), Lilbunny\_62 (A6),

### **Summary by clusters:**

There are 2 clusters represented in this pham: A2, A6,

Info for manual annotations of cluster A2:

- Start number 9 was manually annotated 1 time for cluster A2.
- Start number 13 was manually annotated 11 times for cluster A2.

Info for manual annotations of cluster A6:

- Start number 10 was manually annotated 7 times for cluster A6.
- Start number 12 was manually annotated 32 times for cluster A6.

### **Gene Information:**

Gene: AN9\_65 Start: 40106, Stop: 39975, Start Num: 13

Candidate Starts for AN9\_65:

(Start: 9 @40136 has 1 MA's), (Start: 13 @40106 has 11 MA's), (17, 40088), (22, 40043), (24, 40037), (25, 39983),

Gene: ANI8\_65 Start: 40106, Stop: 39975, Start Num: 13

Candidate Starts for ANI8\_65:

(Start: 9 @40136 has 1 MA's), (Start: 13 @40106 has 11 MA's), (17, 40088), (22, 40043), (24, 40037), (25, 39983),

Gene: ArcherNM\_57 Start: 39573, Stop: 39427, Start Num: 13

Candidate Starts for ArcherNM\_57:

(5, 39663), (Start: 13 @39573 has 11 MA's), (21, 39522), (26, 39435),

Gene: Artemis2UCLA\_65 Start: 38809, Stop: 38669, Start Num: 12

Candidate Starts for Artemis2UCLA\_65:

(Start: 10 @38821 has 7 MA's), (Start: 12 @38809 has 32 MA's), (14, 38791), (17, 38776), (24, 38725),

Gene: BABullseye\_57 Start: 36364, Stop: 36215, Start Num: 12

Candidate Starts for BABullseye\_57:

(6, 36436), (Start: 10 @36376 has 7 MA's), (Start: 12 @36364 has 32 MA's), (14, 36346), (17, 36331), (22, 36286), (23, 36283), (24, 36280),

Gene: Blinn1\_67 Start: 38905, Stop: 38744, Start Num: 10

Candidate Starts for Blinn1\_67:

(6, 38965), (Start: 10 @38905 has 7 MA's), (Start: 12 @38893 has 32 MA's), (14, 38875), (17, 38860), (22, 38815), (23, 38812), (24, 38809),

Gene: Blue7\_66 Start: 38903, Stop: 38763, Start Num: 12

Candidate Starts for Blue7\_66:

(4, 39008), (Start: 10 @38915 has 7 MA's), (Start: 12 @38903 has 32 MA's), (14, 38885), (17, 38870), (23, 38822), (24, 38819),

Gene: C3\_59 Start: 40136, Stop: 39975, Start Num: 9

Candidate Starts for C3\_59:

(Start: 9 @40136 has 1 MA's), (Start: 13 @40106 has 11 MA's), (17, 40088), (22, 40043), (24, 40037), (25, 39983),

Gene: Candra\_62 Start: 38728, Stop: 38579, Start Num: 12

Candidate Starts for Candra\_62:

(6, 38800), (Start: 10 @38740 has 7 MA's), (Start: 12 @38728 has 32 MA's), (14, 38710), (17, 38695), (22, 38650), (23, 38647), (24, 38644),

Gene: Caraxes\_63 Start: 38676, Stop: 38521, Start Num: 13

Candidate Starts for Caraxes\_63:

(1, 39000), (2, 38934), (3, 38928), (8, 38712), (Start: 9 @38709 has 1 MA's), (Start: 13 @38676 has 11 MA's), (17, 38658), (18, 38652), (22, 38613), (23, 38610), (24, 38607),

Gene: Chartreuse\_61 Start: 38091, Stop: 37930, Start Num: 10

Candidate Starts for Chartreuse\_61:

(6, 38151), (Start: 10 @38091 has 7 MA's), (Start: 12 @38079 has 32 MA's), (14, 38061), (17, 38046), (22, 38001), (23, 37998), (24, 37995),

Gene: CloudWang3\_66 Start: 39321, Stop: 39181, Start Num: 12

Candidate Starts for CloudWang3\_66:

(Start: 10 @39333 has 7 MA's), (Start: 12 @39321 has 32 MA's), (14, 39303), (17, 39288), (24, 39237),

Gene: Cookie dough\_64 Start: 38707, Stop: 38558, Start Num: 12

Candidate Starts for Cookie dough\_64:

(4, 38812), (6, 38779), (Start: 10 @38719 has 7 MA's), (Start: 12 @38707 has 32 MA's), (14, 38689), (17, 38674), (22, 38629), (23, 38626), (24, 38623),

Gene: DaVinci\_62 Start: 38133, Stop: 37984, Start Num: 12

Candidate Starts for DaVinci\_62:

(6, 38205), (Start: 10 @38145 has 7 MA's), (Start: 12 @38133 has 32 MA's), (14, 38115), (17, 38100), (22, 38055), (23, 38052), (24, 38049),

Gene: Dorothea\_61 Start: 38705, Stop: 38556, Start Num: 12

Candidate Starts for Dorothea\_61:

(6, 38777), (Start: 10 @38717 has 7 MA's), (Start: 12 @38705 has 32 MA's), (14, 38687), (17, 38672), (22, 38627), (23, 38624), (24, 38621),

Gene: EricB\_63 Start: 38685, Stop: 38536, Start Num: 12

Candidate Starts for EricB\_63:

(6, 38757), (Start: 10 @38697 has 7 MA's), (Start: 12 @38685 has 32 MA's), (14, 38667), (17, 38652), (22, 38607), (23, 38604), (24, 38601),

Gene: Garak\_66 Start: 39158, Stop: 39036, Start Num: 14

Candidate Starts for Garak\_66:

(Start: 10 @39188 has 7 MA's), (Start: 12 @39176 has 32 MA's), (14, 39158), (17, 39143), (24, 39092),

Gene: Gladiator\_62 Start: 38413, Stop: 38261, Start Num: 10

Candidate Starts for Gladiator\_62:

(4, 38506), (Start: 10 @38413 has 7 MA's), (Start: 12 @38401 has 32 MA's), (14, 38383), (17, 38368), (24, 38317),

Gene: Gruunaga\_65 Start: 39100, Stop: 38960, Start Num: 12

Candidate Starts for Gruunaga\_65:

(4, 39205), (Start: 10 @39112 has 7 MA's), (Start: 12 @39100 has 32 MA's), (14, 39082), (17, 39067), (23, 39019), (24, 39016),

Gene: Hammer\_65 Start: 38707, Stop: 38567, Start Num: 12

Candidate Starts for Hammer\_65:

(4, 38812), (Start: 10 @38719 has 7 MA's), (Start: 12 @38707 has 32 MA's), (14, 38689), (17, 38674), (23, 38626), (24, 38623),

Gene: Helmet\_66 Start: 39158, Stop: 39036, Start Num: 14

Candidate Starts for Helmet\_66:

(Start: 10 @39188 has 7 MA's), (Start: 12 @39176 has 32 MA's), (14, 39158), (17, 39143), (24, 39092),

Gene: Hexamo\_65 Start: 38806, Stop: 38666, Start Num: 12

Candidate Starts for Hexamo\_65:

(Start: 10 @38818 has 7 MA's), (Start: 12 @38806 has 32 MA's), (14, 38788), (17, 38773), (24, 38722),

Gene: Hoot\_59 Start: 36543, Stop: 36394, Start Num: 12

Candidate Starts for Hoot\_59:

(6, 36615), (Start: 10 @36555 has 7 MA's), (Start: 12 @36543 has 32 MA's), (14, 36525), (17, 36510), (22, 36465), (23, 36462), (24, 36459),

Gene: Indra\_68 Start: 39177, Stop: 39037, Start Num: 12

Candidate Starts for Indra\_68:

(Start: 10 @39189 has 7 MA's), (Start: 12 @39177 has 32 MA's), (14, 39159), (17, 39144), (24, 39093),

Gene: Isiphiwo\_62 Start: 38259, Stop: 38110, Start Num: 12

Candidate Starts for Isiphiwo\_62:

(6, 38331), (Start: 10 @38271 has 7 MA's), (Start: 12 @38259 has 32 MA's), (14, 38241), (17, 38226), (22, 38181), (23, 38178), (24, 38175),

Gene: Jeffabunny\_65 Start: 38803, Stop: 38663, Start Num: 12

Candidate Starts for Jeffabunny\_65:

(Start: 10 @38815 has 7 MA's), (Start: 12 @38803 has 32 MA's), (14, 38785), (17, 38770), (24, 38719),

Gene: JewelBug\_64 Start: 38964, Stop: 38815, Start Num: 12

Candidate Starts for JewelBug\_64:

(6, 39036), (Start: 10 @38976 has 7 MA's), (Start: 12 @38964 has 32 MA's), (14, 38946), (17, 38931), (22, 38886), (23, 38883), (24, 38880),

Gene: Jordennis\_63 Start: 38457, Stop: 38296, Start Num: 10

Candidate Starts for Jordennis\_63:

(6, 38517), (Start: 10 @38457 has 7 MA's), (Start: 12 @38445 has 32 MA's), (14, 38427), (17, 38412), (22, 38367), (23, 38364), (24, 38361),

Gene: Jsquared\_63 Start: 39358, Stop: 39215, Start Num: 13

Candidate Starts for Jsquared\_63:

(7, 39388), (11, 39373), (Start: 13 @39358 has 11 MA's), (17, 39340), (19, 39322), (21, 39310), (22, 39295), (23, 39292), (24, 39289),

Gene: Kazan\_65 Start: 38698, Stop: 38549, Start Num: 12

Candidate Starts for Kazan\_65:

(6, 38770), (Start: 10 @38710 has 7 MA's), (Start: 12 @38698 has 32 MA's), (14, 38680), (17, 38665), (22, 38620), (23, 38617), (24, 38614),

Gene: Kipper29\_64 Start: 38711, Stop: 38562, Start Num: 12

Candidate Starts for Kipper29\_64:

(6, 38783), (Start: 10 @38723 has 7 MA's), (Start: 12 @38711 has 32 MA's), (14, 38693), (17, 38678), (22, 38633), (23, 38630), (24, 38627),

Gene: Koduck\_63 Start: 39295, Stop: 39152, Start Num: 13

Candidate Starts for Koduck\_63:

(Start: 9 @39316 has 1 MA's), (Start: 13 @39295 has 11 MA's), (17, 39277), (22, 39232), (23, 39229), (24, 39226),

Gene: Koko\_67 Start: 39661, Stop: 39521, Start Num: 12

Candidate Starts for Koko\_67:

(Start: 10 @39673 has 7 MA's), (Start: 12 @39661 has 32 MA's), (14, 39643), (17, 39628), (24, 39577),

Gene: Lilbunny\_62 Start: 38789, Stop: 38667, Start Num: 14

Candidate Starts for Lilbunny\_62:

(Start: 10 @38819 has 7 MA's), (Start: 12 @38807 has 32 MA's), (14, 38789), (17, 38774), (24, 38723),

Gene: Loser\_64 Start: 40496, Stop: 40356, Start Num: 13

Candidate Starts for Loser\_64:

(Start: 13 @40496 has 11 MA's), (15, 40487), (23, 40427), (24, 40424), (26, 40364),

Gene: McFly\_64 Start: 38692, Stop: 38543, Start Num: 12

Candidate Starts for McFly\_64:

(4, 38797), (6, 38764), (Start: 10 @38704 has 7 MA's), (Start: 12 @38692 has 32 MA's), (14, 38674), (17, 38659), (22, 38614), (23, 38611), (24, 38608),

Gene: Neeharika16\_63 Start: 38164, Stop: 38003, Start Num: 10

Candidate Starts for Neeharika16\_63:

(4, 38257), (6, 38224), (Start: 10 @38164 has 7 MA's), (Start: 12 @38152 has 32 MA's), (14, 38134), (17, 38119), (22, 38074), (23, 38071), (24, 38068),

Gene: Newrala\_64 Start: 38694, Stop: 38545, Start Num: 12

Candidate Starts for Newrala\_64:

(6, 38766), (Start: 10 @38706 has 7 MA's), (Start: 12 @38694 has 32 MA's), (14, 38676), (17, 38661), (22, 38616), (23, 38613), (24, 38610),

Gene: Odin\_62 Start: 39060, Stop: 38905, Start Num: 13

Candidate Starts for Odin\_62:

(8, 39096), (Start: 9 @39093 has 1 MA's), (Start: 13 @39060 has 11 MA's), (17, 39042), (18, 39036), (22, 38997), (23, 38994), (24, 38991),

Gene: Ph8s\_64 Start: 39243, Stop: 39100, Start Num: 13

Candidate Starts for Ph8s\_64:

(8, 39267), (Start: 9 @39264 has 1 MA's), (Start: 13 @39243 has 11 MA's), (16, 39231), (17, 39225), (22, 39180), (24, 39174),

Gene: Pmask\_63 Start: 38707, Stop: 38546, Start Num: 10

Candidate Starts for Pmask\_63:

(4, 38800), (6, 38767), (Start: 10 @38707 has 7 MA's), (Start: 12 @38695 has 32 MA's), (14, 38677), (17, 38662), (22, 38617), (23, 38614), (24, 38611),

Gene: Priamo\_66 Start: 38523, Stop: 38362, Start Num: 10

Candidate Starts for Priamo\_66:

(6, 38583), (Start: 10 @38523 has 7 MA's), (Start: 12 @38511 has 32 MA's), (14, 38493), (17, 38478), (22, 38433), (23, 38430), (24, 38427),

Gene: Rifter\_65 Start: 38303, Stop: 38163, Start Num: 12

Candidate Starts for Rifter\_65:

(4, 38408), (Start: 10 @38315 has 7 MA's), (Start: 12 @38303 has 32 MA's), (14, 38285), (17, 38270), (23, 38222), (24, 38219),

Gene: Roksolana\_66 Start: 39137, Stop: 38997, Start Num: 12

Candidate Starts for Roksolana\_66:

(4, 39242), (Start: 10 @39149 has 7 MA's), (Start: 12 @39137 has 32 MA's), (14, 39119), (17, 39104), (23, 39056), (24, 39053),

Gene: Serenity\_63 Start: 39413, Stop: 39267, Start Num: 13

Candidate Starts for Serenity\_63:

(Start: 13 @39413 has 11 MA's), (17, 39395), (22, 39350), (23, 39347), (24, 39344),

Gene: SmellyB\_64 Start: 38692, Stop: 38543, Start Num: 12

Candidate Starts for SmellyB\_64:

(6, 38764), (Start: 10 @38704 has 7 MA's), (Start: 12 @38692 has 32 MA's), (14, 38674), (17, 38659), (22, 38614), (23, 38611), (24, 38608),

Gene: SuperAwesome\_64 Start: 38697, Stop: 38548, Start Num: 12

Candidate Starts for SuperAwesome\_64:

(6, 38769), (Start: 10 @38709 has 7 MA's), (Start: 12 @38697 has 32 MA's), (14, 38679), (17, 38664), (22, 38619), (23, 38616), (24, 38613),

Gene: SuperCallie99\_61 Start: 38591, Stop: 38430, Start Num: 10

Candidate Starts for SuperCallie99\_61:

(6, 38651), (Start: 10 @38591 has 7 MA's), (Start: 12 @38579 has 32 MA's), (14, 38561), (17, 38546), (22, 38501), (23, 38498), (24, 38495),

Gene: Superchunk\_62 Start: 38676, Stop: 38521, Start Num: 13

Candidate Starts for Superchunk\_62:

(1, 39000), (2, 38934), (3, 38928), (8, 38712), (Start: 9 @38709 has 1 MA's), (Start: 13 @38676 has 11 MA's), (17, 38658), (18, 38652), (22, 38613), (23, 38610), (24, 38607),



Gene: TipsytheTRex\_60 Start: 39483, Stop: 39337, Start Num: 13  
Candidate Starts for TipsytheTRex\_60:  
(Start: 13 @39483 has 11 MA's), (17, 39465), (22, 39420), (23, 39417), (24, 39414),

Gene: ToneTone\_62 Start: 38736, Stop: 38596, Start Num: 12  
Candidate Starts for ToneTone\_62:  
(Start: 10 @38748 has 7 MA's), (Start: 12 @38736 has 32 MA's), (14, 38718), (17, 38703), (24, 38652),

Gene: Tucker\_65 Start: 38905, Stop: 38765, Start Num: 12  
Candidate Starts for Tucker\_65:  
(4, 39010), (Start: 10 @38917 has 7 MA's), (Start: 12 @38905 has 32 MA's), (14, 38887), (17, 38872), (20, 38848), (24, 38821),

Gene: VC3\_65 Start: 40106, Stop: 39975, Start Num: 13  
Candidate Starts for VC3\_65:  
(Start: 9 @40136 has 1 MA's), (Start: 13 @40106 has 11 MA's), (17, 40088), (22, 40043), (24, 40037), (25, 39983),

Gene: VohminGhazi\_64 Start: 38693, Stop: 38544, Start Num: 12  
Candidate Starts for VohminGhazi\_64:  
(6, 38765), (Start: 10 @38705 has 7 MA's), (Start: 12 @38693 has 32 MA's), (14, 38675), (17, 38660), (22, 38615), (23, 38612), (24, 38609),

Gene: Wiks\_64 Start: 38807, Stop: 38667, Start Num: 12  
Candidate Starts for Wiks\_64:  
(Start: 10 @38819 has 7 MA's), (Start: 12 @38807 has 32 MA's), (14, 38789), (17, 38774), (24, 38723),

Gene: WunderPhul\_65 Start: 38805, Stop: 38665, Start Num: 12  
Candidate Starts for WunderPhul\_65:  
(Start: 10 @38817 has 7 MA's), (Start: 12 @38805 has 32 MA's), (14, 38787), (17, 38772), (24, 38721),

Gene: Yokurt\_64 Start: 38807, Stop: 38667, Start Num: 12  
Candidate Starts for Yokurt\_64:  
(Start: 10 @38819 has 7 MA's), (Start: 12 @38807 has 32 MA's), (14, 38789), (17, 38774), (24, 38723),

Gene: Zaka\_65 Start: 38807, Stop: 38667, Start Num: 12  
Candidate Starts for Zaka\_65:  
(Start: 10 @38819 has 7 MA's), (Start: 12 @38807 has 32 MA's), (14, 38789), (17, 38774), (24, 38723),

Gene: Zulu\_66 Start: 39185, Stop: 39045, Start Num: 12  
Candidate Starts for Zulu\_66:  
(Start: 10 @39197 has 7 MA's), (Start: 12 @39185 has 32 MA's), (14, 39167), (17, 39152), (24, 39101),