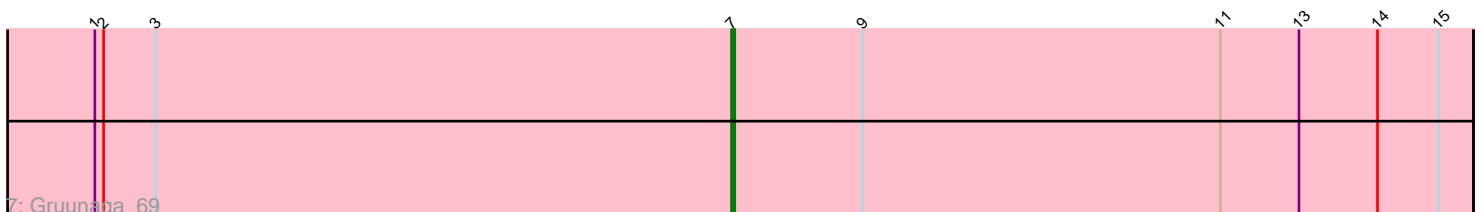
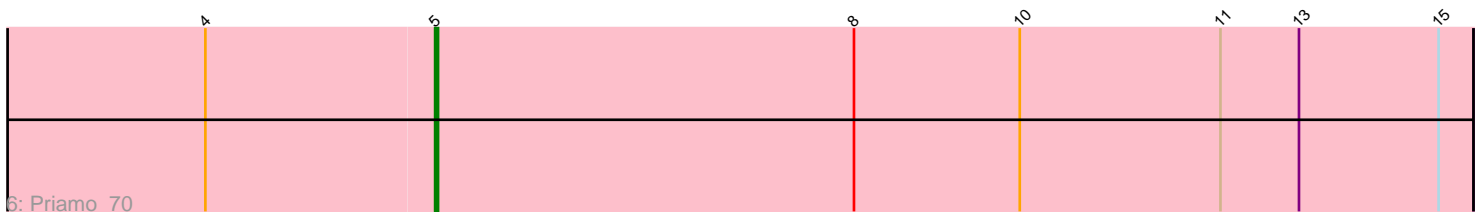
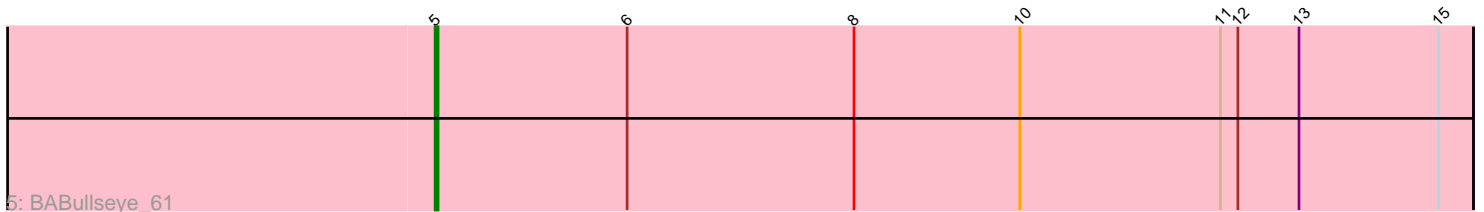
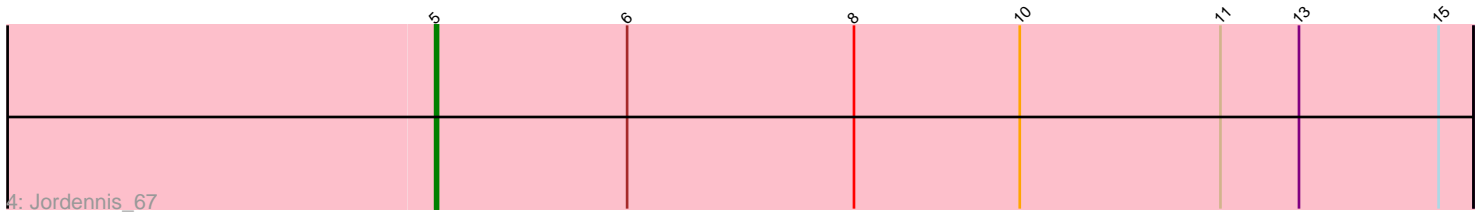
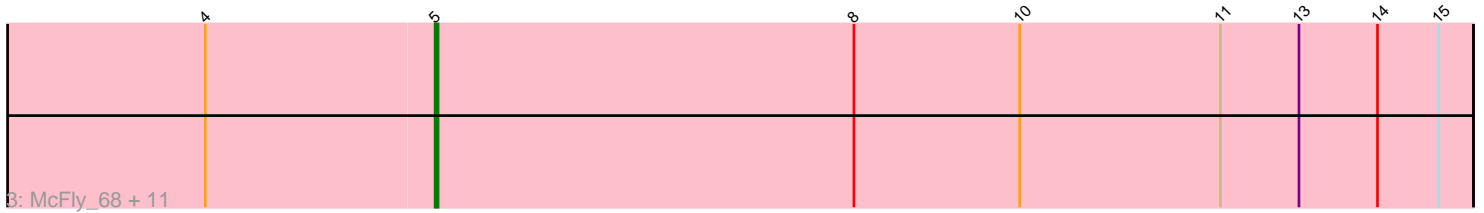
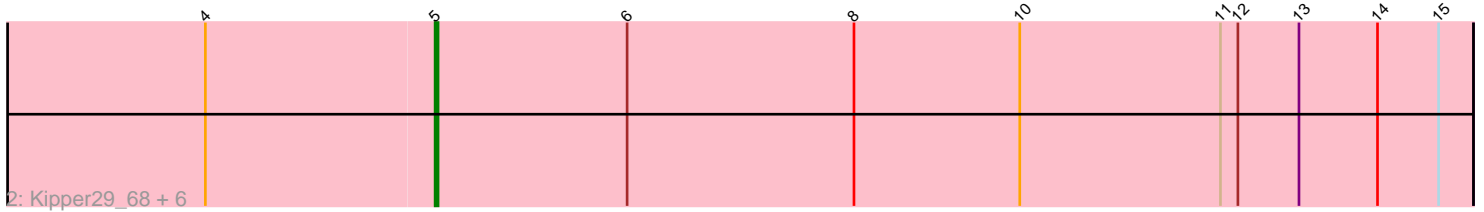
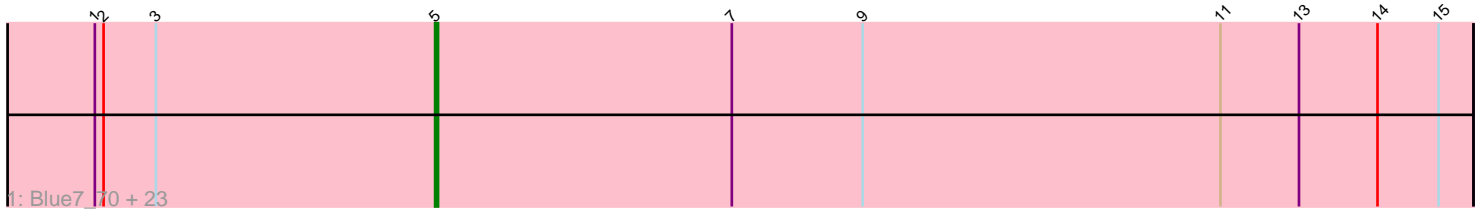


Pham 311729



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 311729 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311729 has 47 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Blue7\_70, Lilbunny\_68, Temprado\_70, ToneTone\_66, BennyP\_69, Zaka\_69, Artemis2UCLA\_69, Koko\_71, Gladiator\_66, Tucker\_69, Hexamo\_69, Wiks\_68, Indra\_72, Roksolana\_70, Jeffabunny\_69, Yokurt\_68, Helmet\_71, Garak\_70, WunderPhul\_69, BlessJoy\_69, Hammer\_69, Zulu\_70, Rifter\_69, CloudWang3\_70
- Track 2 : Kipper29\_68, Kazan\_69, EricB\_67, Hoot\_63, VohminGhazi\_68, SmellyB\_68, Candra\_66
- Track 3 : McFly\_68, Isiphiwo\_66, Chartreuse\_67, Dorothea\_68, Pmask\_67, Neeharika16\_67, SuperCallie99\_65, Cookiedough\_68, Newrala\_68, DaVinci\_66, GreedyLawyer\_65, DelvinSonDorr\_65
- Track 4 : Jordennis\_67
- Track 5 : BABullseye\_61
- Track 6 : Priamo\_70
- Track 7 : Gruunaga\_69

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

The start number called the most often in the published annotations is 5, it was called in 43 of the 44 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Artemis2UCLA\_69, BABullseye\_61, BennyP\_69, BlessJoy\_69, Blue7\_70, Candra\_66, Chartreuse\_67, CloudWang3\_70, Cookiedough\_68, DaVinci\_66, DelvinSonDorr\_65, Dorothea\_68, EricB\_67, Garak\_70, Gladiator\_66, GreedyLawyer\_65, Hammer\_69, Helmet\_71, Hexamo\_69, Hoot\_63, Indra\_72, Isiphiwo\_66, Jeffabunny\_69, Jordennis\_67, Kazan\_69, Kipper29\_68, Koko\_71, Lilbunny\_68, McFly\_68, Neeharika16\_67, Newrala\_68, Pmask\_67, Priamo\_70, Rifter\_69, Roksolana\_70, SmellyB\_68, SuperCallie99\_65, Temprado\_70, ToneTone\_66, Tucker\_69, VohminGhazi\_68, Wiks\_68, WunderPhul\_69, Yokurt\_68, Zaka\_69, Zulu\_70,

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

-

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

- Gruunaga\_69,

### Summary by start number:

Start 5:

- Found in 46 of 47 ( 97.9% ) of genes in pham
- Manual Annotations of this start: 43 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Artemis2UCLA\_69 (A6), BABullseye\_61 (A6), BennyP\_69 (A6), BlessJoy\_69 (A6), Blue7\_70 (A6), Candra\_66 (A6), Chartreuse\_67 (A6), CloudWang3\_70 (A6), Cookiedough\_68 (A6), DaVinci\_66 (A6), DelvinSonDorr\_65 (A6), Dorothea\_68 (A6), EricB\_67 (A6), Garak\_70 (A6), Gladiator\_66 (A6), GreedyLawyer\_65 (A6), Hammer\_69 (A6), Helmet\_71 (A6), Hexamo\_69 (A6), Hoot\_63 (A6), Indra\_72 (A6), Isiphiwo\_66 (A6), Jeffabunny\_69 (A6), Jordennis\_67 (A6), Kazan\_69 (A6), Kipper29\_68 (A6), Koko\_71 (A6), Lilbunny\_68 (A6), McFly\_68 (A6), Neeharika16\_67 (A6), Newrala\_68 (A6), Pmask\_67 (A6), Priamo\_70 (A6), Rifter\_69 (A6), Roksolana\_70 (A6), SmellyB\_68 (A6), SuperCallie99\_65 (A6), Temprado\_70 (A6), ToneTone\_66 (A6), Tucker\_69 (A6), VohminGhazi\_68 (A6), Wiks\_68 (A6), WunderPhul\_69 (A6), Yokurt\_68 (A6), Zaka\_69 (A6), Zulu\_70 (A6),

Start 7:

- Found in 25 of 47 ( 53.2% ) of genes in pham
- Manual Annotations of this start: 1 of 44
- Called 4.0% of time when present
- Phage (with cluster) where this start called: Gruunaga\_69 (A6),

### Summary by clusters:

There is one cluster represented in this pham: A6

Info for manual annotations of cluster A6:

- Start number 5 was manually annotated 43 times for cluster A6.
- Start number 7 was manually annotated 1 time for cluster A6.

### Gene Information:

Gene: Artemis2UCLA\_69 Start: 40044, Stop: 39688, Start Num: 5

Candidate Starts for Artemis2UCLA\_69:

(1, 40161), (2, 40158), (3, 40140), (Start: 5 @40044 has 43 MA's), (Start: 7 @39942 has 1 MA's), (9, 39897), (11, 39774), (13, 39747), (14, 39720), (15, 39699),

Gene: BABullseye\_61 Start: 37712, Stop: 37356, Start Num: 5

Candidate Starts for BABullseye\_61:

(Start: 5 @37712 has 43 MA's), (6, 37646), (8, 37568), (10, 37511), (11, 37442), (12, 37436), (13, 37415), (15, 37367),

Gene: BennyP\_69 Start: 40114, Stop: 39758, Start Num: 5

Candidate Starts for BennyP\_69:

(1, 40231), (2, 40228), (3, 40210), (Start: 5 @40114 has 43 MA's), (Start: 7 @40012 has 1 MA's), (9, 39967), (11, 39844), (13, 39817), (14, 39790), (15, 39769),

Gene: BlessJoy\_69 Start: 40470, Stop: 40114, Start Num: 5

Candidate Starts for BlessJoy\_69:

(1, 40587), (2, 40584), (3, 40566), (Start: 5 @40470 has 43 MA's), (Start: 7 @40368 has 1 MA's), (9, 40323), (11, 40200), (13, 40173), (14, 40146), (15, 40125),

Gene: Blue7\_70 Start: 40172, Stop: 39816, Start Num: 5

Candidate Starts for Blue7\_70:

(1, 40289), (2, 40286), (3, 40268), (Start: 5 @40172 has 43 MA's), (Start: 7 @40070 has 1 MA's), (9, 40025), (11, 39902), (13, 39875), (14, 39848), (15, 39827),

Gene: Candra\_66 Start: 40076, Stop: 39720, Start Num: 5

Candidate Starts for Candra\_66:

(4, 40154), (Start: 5 @40076 has 43 MA's), (6, 40010), (8, 39932), (10, 39875), (11, 39806), (12, 39800), (13, 39779), (14, 39752), (15, 39731),

Gene: Chartreuse\_67 Start: 39392, Stop: 39036, Start Num: 5

Candidate Starts for Chartreuse\_67:

(4, 39470), (Start: 5 @39392 has 43 MA's), (8, 39248), (10, 39191), (11, 39122), (13, 39095), (14, 39068), (15, 39047),

Gene: CloudWang3\_70 Start: 40556, Stop: 40200, Start Num: 5

Candidate Starts for CloudWang3\_70:

(1, 40673), (2, 40670), (3, 40652), (Start: 5 @40556 has 43 MA's), (Start: 7 @40454 has 1 MA's), (9, 40409), (11, 40286), (13, 40259), (14, 40232), (15, 40211),

Gene: Cookiedough\_68 Start: 40020, Stop: 39664, Start Num: 5

Candidate Starts for Cookiedough\_68:

(4, 40098), (Start: 5 @40020 has 43 MA's), (8, 39876), (10, 39819), (11, 39750), (13, 39723), (14, 39696), (15, 39675),

Gene: DaVinci\_66 Start: 39446, Stop: 39090, Start Num: 5

Candidate Starts for DaVinci\_66:

(4, 39524), (Start: 5 @39446 has 43 MA's), (8, 39302), (10, 39245), (11, 39176), (13, 39149), (14, 39122), (15, 39101),

Gene: DelvinSonDorr\_65 Start: 40251, Stop: 39895, Start Num: 5

Candidate Starts for DelvinSonDorr\_65:

(4, 40329), (Start: 5 @40251 has 43 MA's), (8, 40107), (10, 40050), (11, 39981), (13, 39954), (14, 39927), (15, 39906),

Gene: Dorothea\_68 Start: 40018, Stop: 39662, Start Num: 5

Candidate Starts for Dorothea\_68:

(4, 40096), (Start: 5 @40018 has 43 MA's), (8, 39874), (10, 39817), (11, 39748), (13, 39721), (14, 39694), (15, 39673),

Gene: EricB\_67 Start: 40033, Stop: 39677, Start Num: 5

Candidate Starts for EricB\_67:

(4, 40111), (Start: 5 @40033 has 43 MA's), (6, 39967), (8, 39889), (10, 39832), (11, 39763), (12, 39757), (13, 39736), (14, 39709), (15, 39688),

Gene: Garak\_70 Start: 40411, Stop: 40055, Start Num: 5

Candidate Starts for Garak\_70:

(1, 40528), (2, 40525), (3, 40507), (Start: 5 @40411 has 43 MA's), (Start: 7 @40309 has 1 MA's), (9, 40264), (11, 40141), (13, 40114), (14, 40087), (15, 40066),

Gene: Gladiator\_66 Start: 39636, Stop: 39280, Start Num: 5

Candidate Starts for Gladiator\_66:

(1, 39753), (2, 39750), (3, 39732), (Start: 5 @39636 has 43 MA's), (Start: 7 @39534 has 1 MA's), (9, 39489), (11, 39366), (13, 39339), (14, 39312), (15, 39291),

Gene: GreedyLawyer\_65 Start: 40006, Stop: 39650, Start Num: 5

Candidate Starts for GreedyLawyer\_65:

(4, 40084), (Start: 5 @40006 has 43 MA's), (8, 39862), (10, 39805), (11, 39736), (13, 39709), (14, 39682), (15, 39661),

Gene: Gruunaga\_69 Start: 40267, Stop: 40013, Start Num: 7

Candidate Starts for Gruunaga\_69:

(1, 40486), (2, 40483), (3, 40465), (Start: 7 @40267 has 1 MA's), (9, 40222), (11, 40099), (13, 40072), (14, 40045), (15, 40024),

Gene: Hammer\_69 Start: 39976, Stop: 39620, Start Num: 5

Candidate Starts for Hammer\_69:

(1, 40093), (2, 40090), (3, 40072), (Start: 5 @39976 has 43 MA's), (Start: 7 @39874 has 1 MA's), (9, 39829), (11, 39706), (13, 39679), (14, 39652), (15, 39631),

Gene: Helmet\_71 Start: 40411, Stop: 40055, Start Num: 5

Candidate Starts for Helmet\_71:

(1, 40528), (2, 40525), (3, 40507), (Start: 5 @40411 has 43 MA's), (Start: 7 @40309 has 1 MA's), (9, 40264), (11, 40141), (13, 40114), (14, 40087), (15, 40066),

Gene: Hexamo\_69 Start: 40041, Stop: 39685, Start Num: 5

Candidate Starts for Hexamo\_69:

(1, 40158), (2, 40155), (3, 40137), (Start: 5 @40041 has 43 MA's), (Start: 7 @39939 has 1 MA's), (9, 39894), (11, 39771), (13, 39744), (14, 39717), (15, 39696),

Gene: Hoot\_63 Start: 37891, Stop: 37535, Start Num: 5

Candidate Starts for Hoot\_63:

(4, 37969), (Start: 5 @37891 has 43 MA's), (6, 37825), (8, 37747), (10, 37690), (11, 37621), (12, 37615), (13, 37594), (14, 37567), (15, 37546),

Gene: Indra\_72 Start: 40412, Stop: 40056, Start Num: 5

Candidate Starts for Indra\_72:

(1, 40529), (2, 40526), (3, 40508), (Start: 5 @40412 has 43 MA's), (Start: 7 @40310 has 1 MA's), (9, 40265), (11, 40142), (13, 40115), (14, 40088), (15, 40067),

Gene: Isiphiwo\_66 Start: 39572, Stop: 39216, Start Num: 5

Candidate Starts for Isiphiwo\_66:

(4, 39650), (Start: 5 @39572 has 43 MA's), (8, 39428), (10, 39371), (11, 39302), (13, 39275), (14, 39248), (15, 39227),

Gene: Jeffabunny\_69 Start: 40038, Stop: 39682, Start Num: 5

Candidate Starts for Jeffabunny\_69:

(1, 40155), (2, 40152), (3, 40134), (Start: 5 @40038 has 43 MA's), (Start: 7 @39936 has 1 MA's), (9, 39891), (11, 39768), (13, 39741), (14, 39714), (15, 39693),

Gene: Jordennis\_67 Start: 39793, Stop: 39437, Start Num: 5

Candidate Starts for Jordennis\_67:

(Start: 5 @39793 has 43 MA's), (6, 39727), (8, 39649), (10, 39592), (11, 39523), (13, 39496), (15, 39448),

Gene: Kazan\_69 Start: 40046, Stop: 39690, Start Num: 5

Candidate Starts for Kazan\_69:

(4, 40124), (Start: 5 @40046 has 43 MA's), (6, 39980), (8, 39902), (10, 39845), (11, 39776), (12, 39770), (13, 39749), (14, 39722), (15, 39701),

Gene: Kipper29\_68 Start: 40059, Stop: 39703, Start Num: 5

Candidate Starts for Kipper29\_68:

(4, 40137), (Start: 5 @40059 has 43 MA's), (6, 39993), (8, 39915), (10, 39858), (11, 39789), (12, 39783), (13, 39762), (14, 39735), (15, 39714),

Gene: Koko\_71 Start: 40896, Stop: 40540, Start Num: 5

Candidate Starts for Koko\_71:

(1, 41013), (2, 41010), (3, 40992), (Start: 5 @40896 has 43 MA's), (Start: 7 @40794 has 1 MA's), (9, 40749), (11, 40626), (13, 40599), (14, 40572), (15, 40551),

Gene: Lilbunny\_68 Start: 40042, Stop: 39686, Start Num: 5

Candidate Starts for Lilbunny\_68:

(1, 40159), (2, 40156), (3, 40138), (Start: 5 @40042 has 43 MA's), (Start: 7 @39940 has 1 MA's), (9, 39895), (11, 39772), (13, 39745), (14, 39718), (15, 39697),

Gene: McFly\_68 Start: 40005, Stop: 39649, Start Num: 5

Candidate Starts for McFly\_68:

(4, 40083), (Start: 5 @40005 has 43 MA's), (8, 39861), (10, 39804), (11, 39735), (13, 39708), (14, 39681), (15, 39660),

Gene: Neeharika16\_67 Start: 39472, Stop: 39116, Start Num: 5

Candidate Starts for Neeharika16\_67:

(4, 39550), (Start: 5 @39472 has 43 MA's), (8, 39328), (10, 39271), (11, 39202), (13, 39175), (14, 39148), (15, 39127),

Gene: Newrala\_68 Start: 40007, Stop: 39651, Start Num: 5

Candidate Starts for Newrala\_68:

(4, 40085), (Start: 5 @40007 has 43 MA's), (8, 39863), (10, 39806), (11, 39737), (13, 39710), (14, 39683), (15, 39662),

Gene: Pmask\_67 Start: 40008, Stop: 39652, Start Num: 5

Candidate Starts for Pmask\_67:

(4, 40086), (Start: 5 @40008 has 43 MA's), (8, 39864), (10, 39807), (11, 39738), (13, 39711), (14, 39684), (15, 39663),

Gene: Priamo\_70 Start: 39859, Stop: 39503, Start Num: 5

Candidate Starts for Priamo\_70:

(4, 39937), (Start: 5 @39859 has 43 MA's), (8, 39715), (10, 39658), (11, 39589), (13, 39562), (15, 39514),

Gene: Rifter\_69 Start: 39572, Stop: 39216, Start Num: 5

Candidate Starts for Rifter\_69:

(1, 39689), (2, 39686), (3, 39668), (Start: 5 @39572 has 43 MA's), (Start: 7 @39470 has 1 MA's), (9, 39425), (11, 39302), (13, 39275), (14, 39248), (15, 39227),

Gene: Roksolana\_70 Start: 40406, Stop: 40050, Start Num: 5

Candidate Starts for Roksolana\_70:

(1, 40523), (2, 40520), (3, 40502), (Start: 5 @40406 has 43 MA's), (Start: 7 @40304 has 1 MA's), (9, 40259), (11, 40136), (13, 40109), (14, 40082), (15, 40061),

Gene: SmellyB\_68 Start: 40040, Stop: 39684, Start Num: 5

Candidate Starts for SmellyB\_68:

(4, 40118), (Start: 5 @40040 has 43 MA's), (6, 39974), (8, 39896), (10, 39839), (11, 39770), (12, 39764), (13, 39743), (14, 39716), (15, 39695),

Gene: SuperCallie99\_65 Start: 39892, Stop: 39536, Start Num: 5

Candidate Starts for SuperCallie99\_65:

(4, 39970), (Start: 5 @39892 has 43 MA's), (8, 39748), (10, 39691), (11, 39622), (13, 39595), (14, 39568), (15, 39547),

Gene: Temprado\_70 Start: 40411, Stop: 40055, Start Num: 5

Candidate Starts for Temprado\_70:

(1, 40528), (2, 40525), (3, 40507), (Start: 5 @40411 has 43 MA's), (Start: 7 @40309 has 1 MA's), (9, 40264), (11, 40141), (13, 40114), (14, 40087), (15, 40066),

Gene: ToneTone\_66 Start: 39971, Stop: 39615, Start Num: 5

Candidate Starts for ToneTone\_66:

(1, 40088), (2, 40085), (3, 40067), (Start: 5 @39971 has 43 MA's), (Start: 7 @39869 has 1 MA's), (9, 39824), (11, 39701), (13, 39674), (14, 39647), (15, 39626),

Gene: Tucker\_69 Start: 40174, Stop: 39818, Start Num: 5

Candidate Starts for Tucker\_69:

(1, 40291), (2, 40288), (3, 40270), (Start: 5 @40174 has 43 MA's), (Start: 7 @40072 has 1 MA's), (9, 40027), (11, 39904), (13, 39877), (14, 39850), (15, 39829),

Gene: VohminGhazi\_68 Start: 40041, Stop: 39685, Start Num: 5

Candidate Starts for VohminGhazi\_68:

(4, 40119), (Start: 5 @40041 has 43 MA's), (6, 39975), (8, 39897), (10, 39840), (11, 39771), (12, 39765), (13, 39744), (14, 39717), (15, 39696),

Gene: Wiks\_68 Start: 40042, Stop: 39686, Start Num: 5

Candidate Starts for Wiks\_68:

(1, 40159), (2, 40156), (3, 40138), (Start: 5 @40042 has 43 MA's), (Start: 7 @39940 has 1 MA's), (9, 39895), (11, 39772), (13, 39745), (14, 39718), (15, 39697),

Gene: WunderPhul\_69 Start: 40040, Stop: 39684, Start Num: 5

Candidate Starts for WunderPhul\_69:

(1, 40157), (2, 40154), (3, 40136), (Start: 5 @40040 has 43 MA's), (Start: 7 @39938 has 1 MA's), (9, 39893), (11, 39770), (13, 39743), (14, 39716), (15, 39695),

Gene: Yokurt\_68 Start: 40042, Stop: 39686, Start Num: 5

Candidate Starts for Yokurt\_68:

(1, 40159), (2, 40156), (3, 40138), (Start: 5 @40042 has 43 MA's), (Start: 7 @39940 has 1 MA's), (9, 39895), (11, 39772), (13, 39745), (14, 39718), (15, 39697),

Gene: Zaka\_69 Start: 40042, Stop: 39686, Start Num: 5

Candidate Starts for Zaka\_69:

(1, 40159), (2, 40156), (3, 40138), (Start: 5 @40042 has 43 MA's), (Start: 7 @39940 has 1 MA's), (9, 39895), (11, 39772), (13, 39745), (14, 39718), (15, 39697),

Gene: Zulu\_70 Start: 40420, Stop: 40064, Start Num: 5

Candidate Starts for Zulu\_70:

(1, 40537), (2, 40534), (3, 40516), (Start: 5 @40420 has 43 MA's), (Start: 7 @40318 has 1 MA's), (9, 40273), (11, 40150), (13, 40123), (14, 40096), (15, 40075),