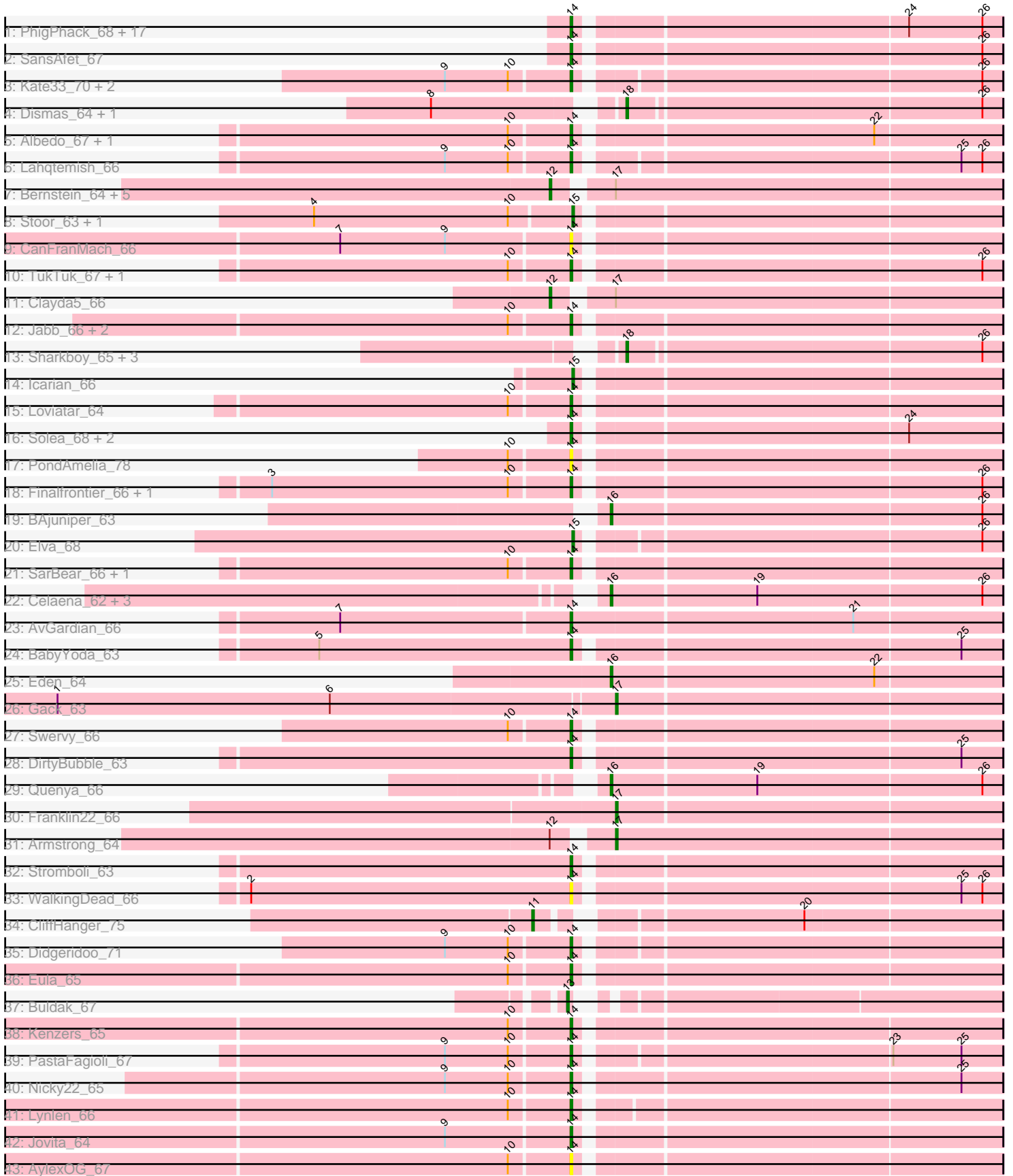


Pham 292734



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 292734 Report

This analysis was run 04/18/26 on database version 643.

Pham number 292734 has 83 members, 9 are drafts.

Phages represented in each track:

- Track 1 : PhigPhack\_68, Abigail\_65, Arroyo\_66, Phisb\_67, CroZenni\_66, DickRichards\_64, Doobus\_64, Cashington\_65, BubbaBear\_65, LimaBean\_65, Johnathan\_65, BelmontSKP\_65, AnnaLie\_65, Burritobowl\_67, Softsoap\_67, QMacho\_67, Albright\_65, Bengal\_68
- Track 2 : SansAfet\_67
- Track 3 : Kate33\_70, BabyDaisy\_68, IndyLu\_68
- Track 4 : Dismas\_64, Rona\_63
- Track 5 : Albedo\_67, SirBeanington\_66
- Track 6 : Lahqtemish\_66
- Track 7 : Bernstein\_64, Rollins\_64, Coltrane\_64, Skylord\_64, Brahms\_64, Vitas\_64
- Track 8 : Stoor\_63, SanaSana\_65
- Track 9 : CanFranMach\_66
- Track 10 : TukTuk\_67, Lilo27\_67
- Track 11 : Clayda5\_66
- Track 12 : Jabb\_66, CupcakePrincess\_66, MsUbiquitous\_66
- Track 13 : Sharkboy\_65, Kieran\_62, ChiliPepper\_62, Kamdara\_62
- Track 14 : Icarian\_66
- Track 15 : Loviatar\_64
- Track 16 : Solea\_68, Milomuff\_67, Avocadoman\_65
- Track 17 : PondAmelia\_78
- Track 18 : Finalfrontier\_66, Slay\_67
- Track 19 : BAjuniper\_63
- Track 20 : Elva\_68
- Track 21 : SarBear\_66, Pecas\_66
- Track 22 : Celaena\_62, Bachaco\_62, Katzastrophic\_63, FlameThrower\_61
- Track 23 : AvGardian\_66
- Track 24 : BabyYoda\_63
- Track 25 : Eden\_64
- Track 26 : Gack\_63
- Track 27 : Swervy\_66
- Track 28 : DirtyBubble\_63
- Track 29 : Quenya\_66
- Track 30 : Franklin22\_66
- Track 31 : Armstrong\_64
- Track 32 : Stromboli\_63
- Track 33 : WalkingDead\_66
- Track 34 : CliffHanger\_75

- Track 35 : Didgeridoo\_71
- Track 36 : Eula\_65
- Track 37 : Buldak\_67
- Track 38 : Kenzers\_65
- Track 39 : PastaFagioli\_67
- Track 40 : Nicky22\_65
- Track 41 : Lynlen\_66
- Track 42 : Jovita\_64
- Track 43 : AylexOG\_67

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

The start number called the most often in the published annotations is 14, it was called in 46 of the 74 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abigail\_65, Albedo\_67, Albright\_65, AnnaLie\_65, Arroyo\_66, AvGardian\_66, Avocadoman\_65, AylexOG\_67, BabyDaisy\_68, BabyYoda\_63, BelmontSKP\_65, Bengal\_68, BubbaBear\_65, Burritobowl\_67, CanFranMach\_66, Cashington\_65, CroZenni\_66, CupcakePrincess\_66, DickRichards\_64, Didgeridoo\_71, DirtyBubble\_63, Doobus\_64, Eula\_65, Finalfrontier\_66, IndyLu\_68, Jabb\_66, Johnathan\_65, Jovita\_64, Kate33\_70, Kenzers\_65, Lahqtemish\_66, Lilo27\_67, LimaBean\_65, Loviatar\_64, Lynlen\_66, Milomuff\_67, MsUbiquitous\_66, Nicky22\_65, PastaFagioli\_67, Pecas\_66, PhigPhack\_68, Phisb\_67, PondAmelia\_78, QMacho\_67, SansAfet\_67, SarBear\_66, SirBeanington\_66, Slay\_67, Softsoap\_67, Solea\_68, Stromboli\_63, Swervy\_66, TukTuk\_67, WalkingDead\_66,

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

- 

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

- Armstrong\_64, BAjuniper\_63, Bachaco\_62, Bernstein\_64, Brahms\_64, Buldak\_67, Celaena\_62, ChiliPepper\_62, Clayda5\_66, CliffHanger\_75, Coltrane\_64, Dismas\_64, Eden\_64, Elva\_68, FlameThrower\_61, Franklin22\_66, Gack\_63, Icarian\_66, Kamdara\_62, Katzastrophic\_63, Kieran\_62, Quenya\_66, Rollins\_64, Rona\_63, SanaSana\_65, Sharkboy\_65, Skylord\_64, Stoor\_63, Vitas\_64,

**Summary by start number:**

Start 11:

- Found in 1 of 83 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CliffHanger\_75 (EB),

Start 12:

- Found in 8 of 83 ( 9.6% ) of genes in pham
- Manual Annotations of this start: 7 of 74
- Called 87.5% of time when present

- Phage (with cluster) where this start called: Bernstein\_64 (EB), Brahms\_64 (EB), Clayda5\_66 (EB), Coltrane\_64 (EB), Rollins\_64 (EB), Skylord\_64 (EB), Vitas\_64 (EB),

#### Start 13:

- Found in 1 of 83 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Buldak\_67 (EB),

#### Start 14:

- Found in 54 of 83 ( 65.1% ) of genes in pham
- Manual Annotations of this start: 46 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abigail\_65 (EB), Albedo\_67 (EB), Albright\_65 (EB), AnnaLie\_65 (EB), Arroyo\_66 (EB), AvGardian\_66 (EB), Avocadoman\_65 (EB), AylexOG\_67 (EB), BabyDaisy\_68 (EB), BabyYoda\_63 (EB), BelmontSKP\_65 (EB), Bengal\_68 (EB), BubbaBear\_65 (EB), Burritobowl\_67 (EB), CanFranMach\_66 (EB), Cashington\_65 (EB), CroZenni\_66 (EB), CupcakePrincess\_66 (EB), DickRichards\_64 (EB), Didgeridoo\_71 (EB), DirtyBubble\_63 (EB), Doobus\_64 (EB), Eula\_65 (EB), Finalfrontier\_66 (EB), IndyLu\_68 (EB), Jabb\_66 (EB), Johnathan\_65 (EB), Jovita\_64 (EB), Kate33\_70 (EB), Kenzers\_65 (EB), Lahqtemish\_66 (EB), Lilo27\_67 (EB), LimaBean\_65 (EB), Loviatar\_64 (EB), Lynlen\_66 (EB), Milomuff\_67 (EB), MsUbiquitous\_66 (EB), Nicky22\_65 (EB), PastaFagioli\_67 (EB), Pecas\_66 (EB), PhigPhack\_68 (EB), Phisb\_67 (EB), PondAmelia\_78 (EB), QMacho\_67 (EB), SansAfet\_67 (EB), SarBear\_66 (EB), SirBeanington\_66 (EB), Slay\_67 (EB), Softsoap\_67 (EB), Solea\_68 (EB), Stromboli\_63 (EB), Swervy\_66 (EB), TukTuk\_67 (EB), WalkingDead\_66 (EB),

#### Start 15:

- Found in 4 of 83 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 4 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Elva\_68 (EB), Icarian\_66 (EB), SanaSana\_65 (EB), Stoor\_63 (EB),

#### Start 16:

- Found in 7 of 83 ( 8.4% ) of genes in pham
- Manual Annotations of this start: 7 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BAjuniper\_63 (EB), Bachaco\_62 (EB), Celaena\_62 (EB), Eden\_64 (EB), FlameThrower\_61 (EB), Katzastrophic\_63 (EB), Quenya\_66 (EB),

#### Start 17:

- Found in 10 of 83 ( 12.0% ) of genes in pham
- Manual Annotations of this start: 3 of 74
- Called 30.0% of time when present
- Phage (with cluster) where this start called: Armstrong\_64 (EB), Franklin22\_66 (EB), Gack\_63 (EB),

#### Start 18:

- Found in 6 of 83 ( 7.2% ) of genes in pham

- Manual Annotations of this start: 5 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChiliPepper\_62 (EB), Dismas\_64 (EB), Kamdara\_62 (EB), Kieran\_62 (EB), Rona\_63 (EB), Sharkboy\_65 (EB),

### **Summary by clusters:**

There is one cluster represented in this pham: EB

Info for manual annotations of cluster EB:

- Start number 11 was manually annotated 1 time for cluster EB.
- Start number 12 was manually annotated 7 times for cluster EB.
- Start number 13 was manually annotated 1 time for cluster EB.
- Start number 14 was manually annotated 46 times for cluster EB.
- Start number 15 was manually annotated 4 times for cluster EB.
- Start number 16 was manually annotated 7 times for cluster EB.
- Start number 17 was manually annotated 3 times for cluster EB.
- Start number 18 was manually annotated 5 times for cluster EB.

### **Gene Information:**

Gene: Abigail\_65 Start: 39510, Stop: 39740, Start Num: 14

Candidate Starts for Abigail\_65:

(Start: 14 @39510 has 46 MA's), (24, 39687), (26, 39729),

Gene: Albedo\_67 Start: 40431, Stop: 40661, Start Num: 14

Candidate Starts for Albedo\_67:

(10, 40398), (Start: 14 @40431 has 46 MA's), (22, 40590),

Gene: Albright\_65 Start: 39492, Stop: 39722, Start Num: 14

Candidate Starts for Albright\_65:

(Start: 14 @39492 has 46 MA's), (24, 39669), (26, 39711),

Gene: AnnaLie\_65 Start: 40171, Stop: 40401, Start Num: 14

Candidate Starts for AnnaLie\_65:

(Start: 14 @40171 has 46 MA's), (24, 40348), (26, 40390),

Gene: Armstrong\_64 Start: 38085, Stop: 38303, Start Num: 17

Candidate Starts for Armstrong\_64:

(Start: 12 @38058 has 7 MA's), (Start: 17 @38085 has 3 MA's),

Gene: Arroyo\_66 Start: 40635, Stop: 40865, Start Num: 14

Candidate Starts for Arroyo\_66:

(Start: 14 @40635 has 46 MA's), (24, 40812), (26, 40854),

Gene: AvGardian\_66 Start: 40233, Stop: 40472, Start Num: 14

Candidate Starts for AvGardian\_66:

(7, 40104), (Start: 14 @40233 has 46 MA's), (21, 40389),

Gene: Avocadoman\_65 Start: 39642, Stop: 39872, Start Num: 14

Candidate Starts for Avocadoman\_65:

(Start: 14 @39642 has 46 MA's), (24, 39819),

Gene: AylexOG\_67 Start: 40257, Stop: 40487, Start Num: 14

Candidate Starts for AylexOG\_67:

(10, 40224), (Start: 14 @40257 has 46 MA's),

Gene: BAjuniper\_63 Start: 40333, Stop: 40551, Start Num: 16

Candidate Starts for BAjuniper\_63:

(Start: 16 @40333 has 7 MA's), (26, 40540),

Gene: BabyDaisy\_68 Start: 40982, Stop: 41209, Start Num: 14

Candidate Starts for BabyDaisy\_68:

(9, 40913), (10, 40949), (Start: 14 @40982 has 46 MA's), (26, 41198),

Gene: BabyYoda\_63 Start: 39882, Stop: 40112, Start Num: 14

Candidate Starts for BabyYoda\_63:

(5, 39738), (Start: 14 @39882 has 46 MA's), (25, 40089),

Gene: Bachaco\_62 Start: 41012, Stop: 41230, Start Num: 16

Candidate Starts for Bachaco\_62:

(Start: 16 @41012 has 7 MA's), (19, 41093), (26, 41219),

Gene: BelmontSKP\_65 Start: 40171, Stop: 40401, Start Num: 14

Candidate Starts for BelmontSKP\_65:

(Start: 14 @40171 has 46 MA's), (24, 40348), (26, 40390),

Gene: Bengal\_68 Start: 40402, Stop: 40632, Start Num: 14

Candidate Starts for Bengal\_68:

(Start: 14 @40402 has 46 MA's), (24, 40579), (26, 40621),

Gene: Bernstein\_64 Start: 38056, Stop: 38301, Start Num: 12

Candidate Starts for Bernstein\_64:

(Start: 12 @38056 has 7 MA's), (Start: 17 @38083 has 3 MA's),

Gene: Brahms\_64 Start: 37958, Stop: 38203, Start Num: 12

Candidate Starts for Brahms\_64:

(Start: 12 @37958 has 7 MA's), (Start: 17 @37985 has 3 MA's),

Gene: BubbaBear\_65 Start: 40423, Stop: 40653, Start Num: 14

Candidate Starts for BubbaBear\_65:

(Start: 14 @40423 has 46 MA's), (24, 40600), (26, 40642),

Gene: Buldak\_67 Start: 38647, Stop: 38865, Start Num: 13

Candidate Starts for Buldak\_67:

(Start: 13 @38647 has 1 MA's),

Gene: Burritobowl\_67 Start: 39993, Stop: 40223, Start Num: 14

Candidate Starts for Burritobowl\_67:

(Start: 14 @39993 has 46 MA's), (24, 40170), (26, 40212),

Gene: CanFranMach\_66 Start: 40036, Stop: 40266, Start Num: 14

Candidate Starts for CanFranMach\_66:

(7, 39907), (9, 39967), (Start: 14 @40036 has 46 MA's),

Gene: Cashington\_65 Start: 39734, Stop: 39964, Start Num: 14  
Candidate Starts for Cashington\_65:  
(Start: 14 @39734 has 46 MA's), (24, 39911), (26, 39953),

Gene: Celaena\_62 Start: 40775, Stop: 40993, Start Num: 16  
Candidate Starts for Celaena\_62:  
(Start: 16 @40775 has 7 MA's), (19, 40856), (26, 40982),

Gene: ChiliPepper\_62 Start: 40251, Stop: 40457, Start Num: 18  
Candidate Starts for ChiliPepper\_62:  
(Start: 18 @40251 has 5 MA's), (26, 40446),

Gene: Clayda5\_66 Start: 38024, Stop: 38269, Start Num: 12  
Candidate Starts for Clayda5\_66:  
(Start: 12 @38024 has 7 MA's), (Start: 17 @38051 has 3 MA's),

Gene: CliffHanger\_75 Start: 40041, Stop: 40280, Start Num: 11  
Candidate Starts for CliffHanger\_75:  
(Start: 11 @40041 has 1 MA's), (20, 40170),

Gene: Coltrane\_64 Start: 37958, Stop: 38203, Start Num: 12  
Candidate Starts for Coltrane\_64:  
(Start: 12 @37958 has 7 MA's), (Start: 17 @37985 has 3 MA's),

Gene: CroZenni\_66 Start: 39978, Stop: 40208, Start Num: 14  
Candidate Starts for CroZenni\_66:  
(Start: 14 @39978 has 46 MA's), (24, 40155), (26, 40197),

Gene: CupcakePrincess\_66 Start: 39981, Stop: 40211, Start Num: 14  
Candidate Starts for CupcakePrincess\_66:  
(10, 39948), (Start: 14 @39981 has 46 MA's),

Gene: DickRichards\_64 Start: 39949, Stop: 40179, Start Num: 14  
Candidate Starts for DickRichards\_64:  
(Start: 14 @39949 has 46 MA's), (24, 40126), (26, 40168),

Gene: Didgeridoo\_71 Start: 41092, Stop: 41319, Start Num: 14  
Candidate Starts for Didgeridoo\_71:  
(9, 41023), (10, 41059), (Start: 14 @41092 has 46 MA's),

Gene: DirtyBubble\_63 Start: 39921, Stop: 40151, Start Num: 14  
Candidate Starts for DirtyBubble\_63:  
(Start: 14 @39921 has 46 MA's), (25, 40128),

Gene: Dismas\_64 Start: 40389, Stop: 40595, Start Num: 18  
Candidate Starts for Dismas\_64:  
(8, 40296), (Start: 18 @40389 has 5 MA's), (26, 40584),

Gene: Doobus\_64 Start: 39804, Stop: 40034, Start Num: 14  
Candidate Starts for Doobus\_64:  
(Start: 14 @39804 has 46 MA's), (24, 39981), (26, 40023),

Gene: Eden\_64 Start: 38679, Stop: 38897, Start Num: 16  
Candidate Starts for Eden\_64:  
(Start: 16 @38679 has 7 MA's), (22, 38826),

Gene: Elva\_68 Start: 40764, Stop: 40991, Start Num: 15  
Candidate Starts for Elva\_68:  
(Start: 15 @40764 has 4 MA's), (26, 40980),

Gene: Eula\_65 Start: 39714, Stop: 39944, Start Num: 14  
Candidate Starts for Eula\_65:  
(10, 39681), (Start: 14 @39714 has 46 MA's),

Gene: Finalfrontier\_66 Start: 40698, Stop: 40928, Start Num: 14  
Candidate Starts for Finalfrontier\_66:  
(3, 40530), (10, 40665), (Start: 14 @40698 has 46 MA's), (26, 40917),

Gene: FlameThrower\_61 Start: 39811, Stop: 40029, Start Num: 16  
Candidate Starts for FlameThrower\_61:  
(Start: 16 @39811 has 7 MA's), (19, 39892), (26, 40018),

Gene: Franklin22\_66 Start: 38403, Stop: 38618, Start Num: 17  
Candidate Starts for Franklin22\_66:  
(Start: 17 @38403 has 3 MA's),

Gene: Gack\_63 Start: 38308, Stop: 38523, Start Num: 17  
Candidate Starts for Gack\_63:  
(1, 37993), (6, 38149), (Start: 17 @38308 has 3 MA's),

Gene: Icarian\_66 Start: 40572, Stop: 40802, Start Num: 15  
Candidate Starts for Icarian\_66:  
(Start: 15 @40572 has 4 MA's),

Gene: IndyLu\_68 Start: 40713, Stop: 40940, Start Num: 14  
Candidate Starts for IndyLu\_68:  
(9, 40644), (10, 40680), (Start: 14 @40713 has 46 MA's), (26, 40929),

Gene: Jabb\_66 Start: 39981, Stop: 40211, Start Num: 14  
Candidate Starts for Jabb\_66:  
(10, 39948), (Start: 14 @39981 has 46 MA's),

Gene: Johnathan\_65 Start: 39493, Stop: 39723, Start Num: 14  
Candidate Starts for Johnathan\_65:  
(Start: 14 @39493 has 46 MA's), (24, 39670), (26, 39712),

Gene: Jovita\_64 Start: 39482, Stop: 39712, Start Num: 14  
Candidate Starts for Jovita\_64:  
(9, 39413), (Start: 14 @39482 has 46 MA's),

Gene: Kamdara\_62 Start: 40210, Stop: 40416, Start Num: 18  
Candidate Starts for Kamdara\_62:  
(Start: 18 @40210 has 5 MA's), (26, 40405),

Gene: Kate33\_70 Start: 40443, Stop: 40670, Start Num: 14

Candidate Starts for Kate33\_70:  
(9, 40374), (10, 40410), (Start: 14 @40443 has 46 MA's), (26, 40659),

Gene: Katzastrophic\_63 Start: 40321, Stop: 40539, Start Num: 16  
Candidate Starts for Katzastrophic\_63:  
(Start: 16 @40321 has 7 MA's), (19, 40402), (26, 40528),

Gene: Kenzers\_65 Start: 39565, Stop: 39795, Start Num: 14  
Candidate Starts for Kenzers\_65:  
(10, 39532), (Start: 14 @39565 has 46 MA's),

Gene: Kieran\_62 Start: 40213, Stop: 40419, Start Num: 18  
Candidate Starts for Kieran\_62:  
(Start: 18 @40213 has 5 MA's), (26, 40408),

Gene: Lahqtemish\_66 Start: 40915, Stop: 41142, Start Num: 14  
Candidate Starts for Lahqtemish\_66:  
(9, 40846), (10, 40882), (Start: 14 @40915 has 46 MA's), (25, 41119), (26, 41131),

Gene: Lilo27\_67 Start: 40215, Stop: 40445, Start Num: 14  
Candidate Starts for Lilo27\_67:  
(10, 40182), (Start: 14 @40215 has 46 MA's), (26, 40434),

Gene: LimaBean\_65 Start: 39387, Stop: 39617, Start Num: 14  
Candidate Starts for LimaBean\_65:  
(Start: 14 @39387 has 46 MA's), (24, 39564), (26, 39606),

Gene: Loviatar\_64 Start: 40989, Stop: 41219, Start Num: 14  
Candidate Starts for Loviatar\_64:  
(10, 40956), (Start: 14 @40989 has 46 MA's),

Gene: Lynlen\_66 Start: 39718, Stop: 39945, Start Num: 14  
Candidate Starts for Lynlen\_66:  
(10, 39685), (Start: 14 @39718 has 46 MA's),

Gene: Milomuff\_67 Start: 40262, Stop: 40492, Start Num: 14  
Candidate Starts for Milomuff\_67:  
(Start: 14 @40262 has 46 MA's), (24, 40439),

Gene: MsUbiquitous\_66 Start: 39981, Stop: 40211, Start Num: 14  
Candidate Starts for MsUbiquitous\_66:  
(10, 39948), (Start: 14 @39981 has 46 MA's),

Gene: Nicky22\_65 Start: 40157, Stop: 40387, Start Num: 14  
Candidate Starts for Nicky22\_65:  
(9, 40088), (10, 40124), (Start: 14 @40157 has 46 MA's), (25, 40364),

Gene: PastaFagioli\_67 Start: 40666, Stop: 40893, Start Num: 14  
Candidate Starts for PastaFagioli\_67:  
(9, 40597), (10, 40633), (Start: 14 @40666 has 46 MA's), (23, 40831), (25, 40870),

Gene: Pecas\_66 Start: 40015, Stop: 40245, Start Num: 14  
Candidate Starts for Pecas\_66:

(10, 39982), (Start: 14 @40015 has 46 MA's),

Gene: PhigPhack\_68 Start: 40089, Stop: 40319, Start Num: 14

Candidate Starts for PhigPhack\_68:

(Start: 14 @40089 has 46 MA's), (24, 40266), (26, 40308),

Gene: Phisb\_67 Start: 40062, Stop: 40292, Start Num: 14

Candidate Starts for Phisb\_67:

(Start: 14 @40062 has 46 MA's), (24, 40239), (26, 40281),

Gene: PondAmelia\_78 Start: 39948, Stop: 40178, Start Num: 14

Candidate Starts for PondAmelia\_78:

(10, 39915), (Start: 14 @39948 has 46 MA's),

Gene: QMacho\_67 Start: 40193, Stop: 40423, Start Num: 14

Candidate Starts for QMacho\_67:

(Start: 14 @40193 has 46 MA's), (24, 40370), (26, 40412),

Gene: Quenya\_66 Start: 40652, Stop: 40870, Start Num: 16

Candidate Starts for Quenya\_66:

(Start: 16 @40652 has 7 MA's), (19, 40733), (26, 40859),

Gene: Rollins\_64 Start: 38056, Stop: 38301, Start Num: 12

Candidate Starts for Rollins\_64:

(Start: 12 @38056 has 7 MA's), (Start: 17 @38083 has 3 MA's),

Gene: Rona\_63 Start: 40380, Stop: 40586, Start Num: 18

Candidate Starts for Rona\_63:

(8, 40287), (Start: 18 @40380 has 5 MA's), (26, 40575),

Gene: SanaSana\_65 Start: 40332, Stop: 40562, Start Num: 15

Candidate Starts for SanaSana\_65:

(4, 40188), (10, 40299), (Start: 15 @40332 has 4 MA's),

Gene: SansAfet\_67 Start: 40038, Stop: 40268, Start Num: 14

Candidate Starts for SansAfet\_67:

(Start: 14 @40038 has 46 MA's), (26, 40257),

Gene: SarBear\_66 Start: 39807, Stop: 40037, Start Num: 14

Candidate Starts for SarBear\_66:

(10, 39774), (Start: 14 @39807 has 46 MA's),

Gene: Sharkboy\_65 Start: 40744, Stop: 40950, Start Num: 18

Candidate Starts for Sharkboy\_65:

(Start: 18 @40744 has 5 MA's), (26, 40939),

Gene: SirBeanington\_66 Start: 40298, Stop: 40528, Start Num: 14

Candidate Starts for SirBeanington\_66:

(10, 40265), (Start: 14 @40298 has 46 MA's), (22, 40457),

Gene: Skylord\_64 Start: 37973, Stop: 38218, Start Num: 12

Candidate Starts for Skylord\_64:

(Start: 12 @37973 has 7 MA's), (Start: 17 @38000 has 3 MA's),

Gene: Slay\_67 Start: 40573, Stop: 40803, Start Num: 14  
Candidate Starts for Slay\_67:  
(3, 40405), (10, 40540), (Start: 14 @40573 has 46 MA's), (26, 40792),

Gene: Softsoap\_67 Start: 40261, Stop: 40491, Start Num: 14  
Candidate Starts for Softsoap\_67:  
(Start: 14 @40261 has 46 MA's), (24, 40438), (26, 40480),

Gene: Solea\_68 Start: 40261, Stop: 40491, Start Num: 14  
Candidate Starts for Solea\_68:  
(Start: 14 @40261 has 46 MA's), (24, 40438),

Gene: Stoor\_63 Start: 40119, Stop: 40349, Start Num: 15  
Candidate Starts for Stoor\_63:  
(4, 39975), (10, 40086), (Start: 15 @40119 has 4 MA's),

Gene: Stromboli\_63 Start: 39920, Stop: 40150, Start Num: 14  
Candidate Starts for Stromboli\_63:  
(Start: 14 @39920 has 46 MA's),

Gene: Swervy\_66 Start: 39844, Stop: 40074, Start Num: 14  
Candidate Starts for Swervy\_66:  
(10, 39811), (Start: 14 @39844 has 46 MA's),

Gene: TukTuk\_67 Start: 40352, Stop: 40582, Start Num: 14  
Candidate Starts for TukTuk\_67:  
(10, 40319), (Start: 14 @40352 has 46 MA's), (26, 40571),

Gene: Vitas\_64 Start: 38029, Stop: 38274, Start Num: 12  
Candidate Starts for Vitas\_64:  
(Start: 12 @38029 has 7 MA's), (Start: 17 @38056 has 3 MA's),

Gene: WalkingDead\_66 Start: 41098, Stop: 41328, Start Num: 14  
Candidate Starts for WalkingDead\_66:  
(2, 40915), (Start: 14 @41098 has 46 MA's), (25, 41305), (26, 41317),