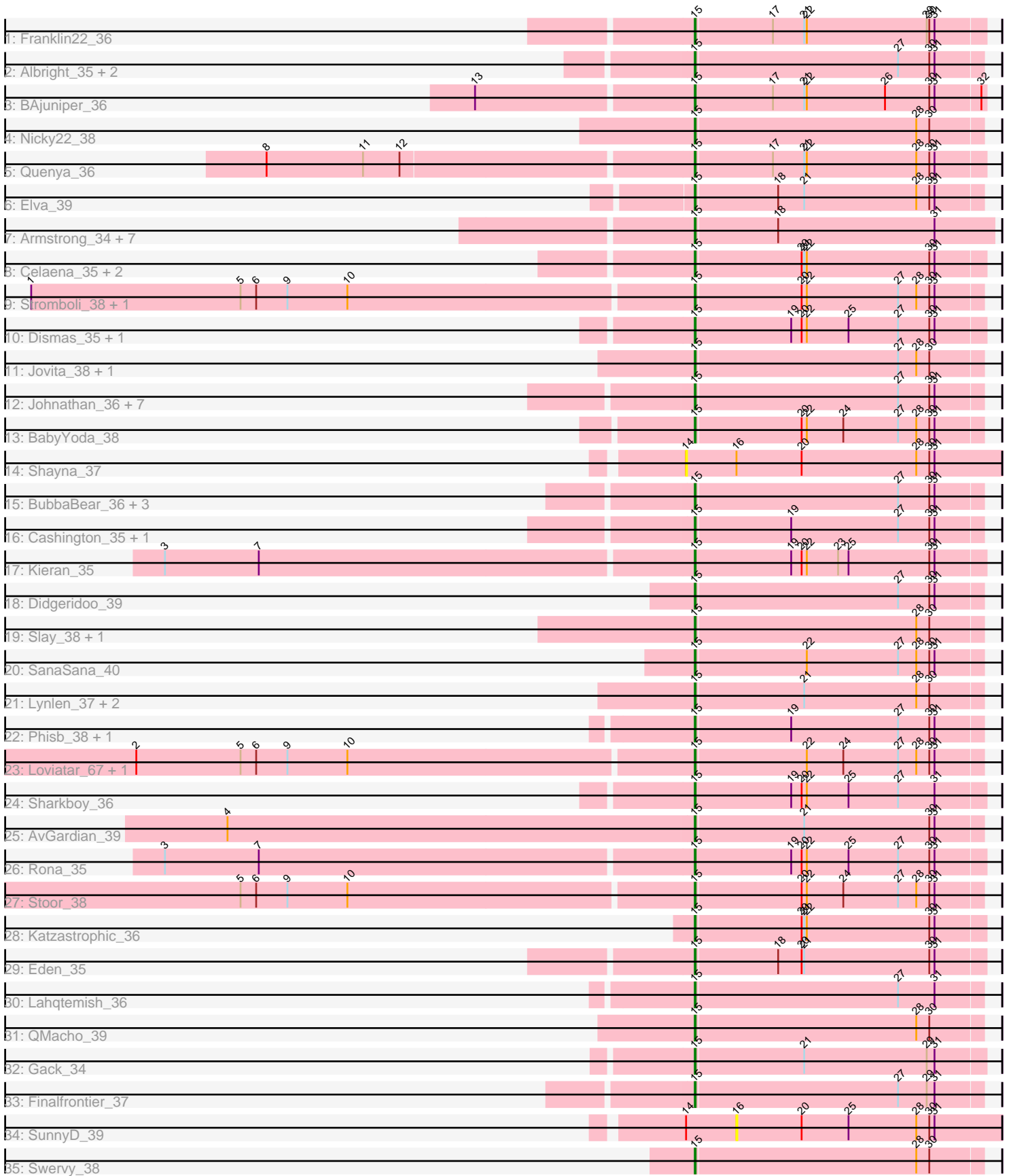


Pham 168229



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 168229 Report

This analysis was run 07/09/24 on database version 566.

Pham number 168229 has 65 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Franklin22\_36
- Track 2 : Albright\_35, Doobus\_36, Avocadoman\_36
- Track 3 : BAJuniper\_36
- Track 4 : Nicky22\_38
- Track 5 : Quenya\_36
- Track 6 : Elva\_39
- Track 7 : Armstrong\_34, Coltrane\_34, Vitas\_34, Brahms\_34, Skylord\_34, Bernstein\_34, Clayda5\_35, Rollins\_34
- Track 8 : Celaena\_35, FlameThrower\_35, Bachaco\_36
- Track 9 : Stromboli\_38, DirtyBubble\_37
- Track 10 : Dismas\_35, ChiliPepper\_34
- Track 11 : Jovita\_38, Eula\_38
- Track 12 : Johnathan\_36, CroZenni\_37, Arroyo\_38, Burritobowl\_37, DickRichards\_36, IndyLu\_36, AnnaLie\_38, BelmontSKP\_38
- Track 13 : BabyYoda\_38
- Track 14 : Shayna\_37
- Track 15 : BubbaBear\_36, Abigail\_36, SansAfet\_38, LimaBean\_36
- Track 16 : Cashington\_35, BabyDaisy\_36
- Track 17 : Kieran\_35
- Track 18 : Didgeridoo\_39
- Track 19 : Slay\_38, SarBear\_37
- Track 20 : SanaSana\_40
- Track 21 : Lynlen\_37, Kenzers\_37, Albedo\_37
- Track 22 : Phisb\_38, TukTuk\_38
- Track 23 : Loviatar\_67, Icarian\_40
- Track 24 : Sharkboy\_36
- Track 25 : AvGardian\_39
- Track 26 : Rona\_35
- Track 27 : Stoor\_38
- Track 28 : Katzastrophic\_36
- Track 29 : Eden\_35
- Track 30 : Lahqtemish\_36
- Track 31 : QMacho\_39
- Track 32 : Gack\_34
- Track 33 : Finalfrontier\_37
- Track 34 : SunnyD\_39
- Track 35 : Swervy\_38

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

The start number called the most often in the published annotations is 15, it was called in 60 of the 60 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abigail\_36, Albedo\_37, Albright\_35, AnnaLie\_38, Armstrong\_34, Arroyo\_38, AvGardian\_39, Avocadoman\_36, BAjuniper\_36, BabyDaisy\_36, BabyYoda\_38, Bachaco\_36, BelmontSKP\_38, Bernstein\_34, Brahms\_34, BubbaBear\_36, Burritobowl\_37, Cashington\_35, Celaena\_35, ChiliPepper\_34, Clayda5\_35, Coltrane\_34, CroZenni\_37, DickRichards\_36, Didgeridoo\_39, DirtyBubble\_37, Dismas\_35, Doobus\_36, Eden\_35, Elva\_39, Eula\_38, Finalfrontier\_37, FlameThrower\_35, Franklin22\_36, Gack\_34, Icarian\_40, IndyLu\_36, Johnathan\_36, Jovita\_38, Katzastrophic\_36, Kenzers\_37, Kieran\_35, Lahqtemish\_36, LimaBean\_36, Loviatar\_67, Lynlen\_37, Nicky22\_38, Phisb\_38, QMacho\_39, Quenya\_36, Rollins\_34, Rona\_35, SanaSana\_40, SansAfet\_38, SarBear\_37, Sharkboy\_36, Skylord\_34, Slay\_38, Stoor\_38, Stromboli\_38, Swervy\_38, TukTuk\_38, Vitas\_34,

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

- 

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

- Shayna\_37, SunnyD\_39,

### **Summary by start number:**

Start 14:

- Found in 2 of 65 ( 3.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Shayna\_37 (EB),

Start 15:

- Found in 63 of 65 ( 96.9% ) of genes in pham
- Manual Annotations of this start: 60 of 60
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abigail\_36 (EB), Albedo\_37 (EB), Albright\_35 (EB), AnnaLie\_38 (EB), Armstrong\_34 (EB), Arroyo\_38 (EB), AvGardian\_39 (EB), Avocadoman\_36 (EB), BAjuniper\_36 (EB), BabyDaisy\_36 (EB), BabyYoda\_38 (EB), Bachaco\_36 (EB), BelmontSKP\_38 (EB), Bernstein\_34 (EB), Brahms\_34 (EB), BubbaBear\_36 (EB), Burritobowl\_37 (EB), Cashington\_35 (EB), Celaena\_35 (EB), ChiliPepper\_34 (EB), Clayda5\_35 (EB), Coltrane\_34 (EB), CroZenni\_37 (EB), DickRichards\_36 (EB), Didgeridoo\_39 (EB), DirtyBubble\_37 (EB), Dismas\_35 (EB), Doobus\_36 (EB), Eden\_35 (EB), Elva\_39 (EB), Eula\_38 (EB), Finalfrontier\_37 (EB), FlameThrower\_35 (EB), Franklin22\_36 (EB), Gack\_34 (EB), Icarian\_40 (EB), IndyLu\_36 (EB), Johnathan\_36 (EB), Jovita\_38 (EB), Katzastrophic\_36 (EB), Kenzers\_37 (EB), Kieran\_35 (EB), Lahqtemish\_36 (EB), LimaBean\_36 (EB), Loviatar\_67 (EB), Lynlen\_37 (EB), Nicky22\_38 (EB), Phisb\_38 (EB), QMacho\_39 (EB), Quenya\_36 (EB), Rollins\_34 (EB), Rona\_35 (EB),

SanaSana\_40 (EB), SansAfet\_38 (EB), SarBear\_37 (EB), Sharkboy\_36 (EB), Skylord\_34 (EB), Slay\_38 (EB), Stoor\_38 (EB), Stromboli\_38 (EB), Swervy\_38 (EB), TukTuk\_38 (EB), Vitas\_34 (EB),

Start 16:

- Found in 2 of 65 ( 3.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: SunnyD\_39 (EB),

### **Summary by clusters:**

There is one cluster represented in this pham: EB

Info for manual annotations of cluster EB:

- Start number 15 was manually annotated 60 times for cluster EB.

### ***Gene Information:***

Gene: Abigail\_36 Start: 25222, Stop: 25548, Start Num: 15

Candidate Starts for Abigail\_36:

(Start: 15 @25222 has 60 MA's), (27, 25453), (30, 25489), (31, 25495),

Gene: Albedo\_37 Start: 25772, Stop: 26098, Start Num: 15

Candidate Starts for Albedo\_37:

(Start: 15 @25772 has 60 MA's), (21, 25895), (28, 26024), (30, 26039),

Gene: Albright\_35 Start: 24924, Stop: 25250, Start Num: 15

Candidate Starts for Albright\_35:

(Start: 15 @24924 has 60 MA's), (27, 25155), (30, 25191), (31, 25197),

Gene: AnnaLie\_38 Start: 26045, Stop: 26371, Start Num: 15

Candidate Starts for AnnaLie\_38:

(Start: 15 @26045 has 60 MA's), (27, 26276), (30, 26312), (31, 26318),

Gene: Armstrong\_34 Start: 23647, Stop: 23988, Start Num: 15

Candidate Starts for Armstrong\_34:

(Start: 15 @23647 has 60 MA's), (18, 23740), (31, 23920),

Gene: Arroyo\_38 Start: 26083, Stop: 26409, Start Num: 15

Candidate Starts for Arroyo\_38:

(Start: 15 @26083 has 60 MA's), (27, 26314), (30, 26350), (31, 26356),

Gene: AvGardian\_39 Start: 26215, Stop: 26541, Start Num: 15

Candidate Starts for AvGardian\_39:

(4, 25681), (Start: 15 @26215 has 60 MA's), (21, 26338), (30, 26482), (31, 26488),

Gene: Avocadoman\_36 Start: 25161, Stop: 25487, Start Num: 15

Candidate Starts for Avocadoman\_36:

(Start: 15 @25161 has 60 MA's), (27, 25392), (30, 25428), (31, 25434),

Gene: BAjuniper\_36 Start: 26884, Stop: 27216, Start Num: 15  
Candidate Starts for BAjuniper\_36:  
(13, 26641), (Start: 15 @26884 has 60 MA's), (17, 26974), (21, 27010), (22, 27013), (26, 27103), (30, 27154), (31, 27160), (32, 27211),

Gene: BabyDaisy\_36 Start: 25684, Stop: 26010, Start Num: 15  
Candidate Starts for BabyDaisy\_36:  
(Start: 15 @25684 has 60 MA's), (19, 25792), (27, 25915), (30, 25951), (31, 25957),

Gene: BabyYoda\_38 Start: 26829, Stop: 27155, Start Num: 15  
Candidate Starts for BabyYoda\_38:  
(Start: 15 @26829 has 60 MA's), (20, 26949), (22, 26955), (24, 26997), (27, 27060), (28, 27081), (30, 27096), (31, 27102),

Gene: Bachaco\_36 Start: 26844, Stop: 27173, Start Num: 15  
Candidate Starts for Bachaco\_36:  
(Start: 15 @26844 has 60 MA's), (20, 26964), (21, 26967), (22, 26970), (30, 27111), (31, 27117),

Gene: BelmontSKP\_38 Start: 26045, Stop: 26371, Start Num: 15  
Candidate Starts for BelmontSKP\_38:  
(Start: 15 @26045 has 60 MA's), (27, 26276), (30, 26312), (31, 26318),

Gene: Bernstein\_34 Start: 23702, Stop: 24043, Start Num: 15  
Candidate Starts for Bernstein\_34:  
(Start: 15 @23702 has 60 MA's), (18, 23795), (31, 23975),

Gene: Brahms\_34 Start: 23649, Stop: 23990, Start Num: 15  
Candidate Starts for Brahms\_34:  
(Start: 15 @23649 has 60 MA's), (18, 23742), (31, 23922),

Gene: BubbaBear\_36 Start: 25617, Stop: 25943, Start Num: 15  
Candidate Starts for BubbaBear\_36:  
(Start: 15 @25617 has 60 MA's), (27, 25848), (30, 25884), (31, 25890),

Gene: Burritobowl\_37 Start: 25618, Stop: 25944, Start Num: 15  
Candidate Starts for Burritobowl\_37:  
(Start: 15 @25618 has 60 MA's), (27, 25849), (30, 25885), (31, 25891),

Gene: Cashington\_35 Start: 24964, Stop: 25290, Start Num: 15  
Candidate Starts for Cashington\_35:  
(Start: 15 @24964 has 60 MA's), (19, 25072), (27, 25195), (30, 25231), (31, 25237),

Gene: Celaena\_35 Start: 26594, Stop: 26923, Start Num: 15  
Candidate Starts for Celaena\_35:  
(Start: 15 @26594 has 60 MA's), (20, 26714), (21, 26717), (22, 26720), (30, 26861), (31, 26867),

Gene: ChiliPepper\_34 Start: 26048, Stop: 26380, Start Num: 15  
Candidate Starts for ChiliPepper\_34:  
(Start: 15 @26048 has 60 MA's), (19, 26159), (20, 26171), (22, 26177), (25, 26225), (27, 26282), (30, 26318), (31, 26324),

Gene: Clayda5\_35 Start: 23636, Stop: 23977, Start Num: 15  
Candidate Starts for Clayda5\_35:

(Start: 15 @23636 has 60 MA's), (18, 23729), (31, 23909),

Gene: Coltrane\_34 Start: 23649, Stop: 23990, Start Num: 15

Candidate Starts for Coltrane\_34:

(Start: 15 @23649 has 60 MA's), (18, 23742), (31, 23922),

Gene: CroZenni\_37 Start: 25508, Stop: 25834, Start Num: 15

Candidate Starts for CroZenni\_37:

(Start: 15 @25508 has 60 MA's), (27, 25739), (30, 25775), (31, 25781),

Gene: DickRichards\_36 Start: 25947, Stop: 26273, Start Num: 15

Candidate Starts for DickRichards\_36:

(Start: 15 @25947 has 60 MA's), (27, 26178), (30, 26214), (31, 26220),

Gene: Didgeridoo\_39 Start: 26093, Stop: 26419, Start Num: 15

Candidate Starts for Didgeridoo\_39:

(Start: 15 @26093 has 60 MA's), (27, 26324), (30, 26360), (31, 26366),

Gene: DirtyBubble\_37 Start: 26477, Stop: 26803, Start Num: 15

Candidate Starts for DirtyBubble\_37:

(1, 25724), (5, 25964), (6, 25982), (9, 26018), (10, 26087), (Start: 15 @26477 has 60 MA's), (20, 26597), (22, 26603), (27, 26708), (28, 26729), (30, 26744), (31, 26750),

Gene: Dismas\_35 Start: 26219, Stop: 26551, Start Num: 15

Candidate Starts for Dismas\_35:

(Start: 15 @26219 has 60 MA's), (19, 26330), (20, 26342), (22, 26348), (25, 26396), (27, 26453), (30, 26489), (31, 26495),

Gene: Doobus\_36 Start: 25328, Stop: 25654, Start Num: 15

Candidate Starts for Doobus\_36:

(Start: 15 @25328 has 60 MA's), (27, 25559), (30, 25595), (31, 25601),

Gene: Eden\_35 Start: 24432, Stop: 24761, Start Num: 15

Candidate Starts for Eden\_35:

(Start: 15 @24432 has 60 MA's), (18, 24525), (20, 24552), (21, 24555), (30, 24699), (31, 24705),

Gene: Elva\_39 Start: 26539, Stop: 26865, Start Num: 15

Candidate Starts for Elva\_39:

(Start: 15 @26539 has 60 MA's), (18, 26632), (21, 26662), (28, 26791), (30, 26806), (31, 26812),

Gene: Eula\_38 Start: 25719, Stop: 26045, Start Num: 15

Candidate Starts for Eula\_38:

(Start: 15 @25719 has 60 MA's), (27, 25950), (28, 25971), (30, 25986),

Gene: Finalfrontier\_37 Start: 26331, Stop: 26657, Start Num: 15

Candidate Starts for Finalfrontier\_37:

(Start: 15 @26331 has 60 MA's), (27, 26562), (29, 26595), (31, 26604),

Gene: FlameThrower\_35 Start: 26044, Stop: 26373, Start Num: 15

Candidate Starts for FlameThrower\_35:

(Start: 15 @26044 has 60 MA's), (20, 26164), (21, 26167), (22, 26170), (30, 26311), (31, 26317),

Gene: Franklin22\_36 Start: 24418, Stop: 24747, Start Num: 15

Candidate Starts for Franklin22\_36:

(Start: 15 @24418 has 60 MA's), (17, 24505), (21, 24541), (22, 24544), (29, 24682), (30, 24685), (31, 24691),

Gene: Gack\_34 Start: 24169, Stop: 24498, Start Num: 15

Candidate Starts for Gack\_34:

(Start: 15 @24169 has 60 MA's), (21, 24292), (29, 24433), (31, 24442),

Gene: Icarian\_40 Start: 27112, Stop: 27438, Start Num: 15

Candidate Starts for Icarian\_40:

(2, 26479), (5, 26599), (6, 26617), (9, 26653), (10, 26722), (Start: 15 @27112 has 60 MA's), (22, 27238), (24, 27280), (27, 27343), (28, 27364), (30, 27379), (31, 27385),

Gene: IndyLu\_36 Start: 25645, Stop: 25971, Start Num: 15

Candidate Starts for IndyLu\_36:

(Start: 15 @25645 has 60 MA's), (27, 25876), (30, 25912), (31, 25918),

Gene: Johnathan\_36 Start: 25051, Stop: 25377, Start Num: 15

Candidate Starts for Johnathan\_36:

(Start: 15 @25051 has 60 MA's), (27, 25282), (30, 25318), (31, 25324),

Gene: Jovita\_38 Start: 25821, Stop: 26147, Start Num: 15

Candidate Starts for Jovita\_38:

(Start: 15 @25821 has 60 MA's), (27, 26052), (28, 26073), (30, 26088),

Gene: Katzastrophic\_36 Start: 26173, Stop: 26502, Start Num: 15

Candidate Starts for Katzastrophic\_36:

(Start: 15 @26173 has 60 MA's), (20, 26293), (21, 26296), (22, 26299), (30, 26440), (31, 26446),

Gene: Kenzers\_37 Start: 25644, Stop: 25970, Start Num: 15

Candidate Starts for Kenzers\_37:

(Start: 15 @25644 has 60 MA's), (21, 25767), (28, 25896), (30, 25911),

Gene: Kieran\_35 Start: 26228, Stop: 26560, Start Num: 15

Candidate Starts for Kieran\_35:

(3, 25631), (7, 25739), (Start: 15 @26228 has 60 MA's), (19, 26339), (20, 26351), (22, 26357), (23, 26393), (25, 26405), (30, 26498), (31, 26504),

Gene: Lahqtemish\_36 Start: 25690, Stop: 26016, Start Num: 15

Candidate Starts for Lahqtemish\_36:

(Start: 15 @25690 has 60 MA's), (27, 25921), (31, 25963),

Gene: LimaBean\_36 Start: 25100, Stop: 25426, Start Num: 15

Candidate Starts for LimaBean\_36:

(Start: 15 @25100 has 60 MA's), (27, 25331), (30, 25367), (31, 25373),

Gene: Loviatar\_67 Start: 27664, Stop: 27990, Start Num: 15

Candidate Starts for Loviatar\_67:

(2, 27031), (5, 27151), (6, 27169), (9, 27205), (10, 27274), (Start: 15 @27664 has 60 MA's), (22, 27790), (24, 27832), (27, 27895), (28, 27916), (30, 27931), (31, 27937),

Gene: Lynlen\_37 Start: 25644, Stop: 25970, Start Num: 15

Candidate Starts for Lynlen\_37:

(Start: 15 @25644 has 60 MA's), (21, 25767), (28, 25896), (30, 25911),

Gene: Nicky22\_38 Start: 26183, Stop: 26509, Start Num: 15

Candidate Starts for Nicky22\_38:

(Start: 15 @26183 has 60 MA's), (28, 26435), (30, 26450),

Gene: Phisb\_38 Start: 25777, Stop: 26103, Start Num: 15

Candidate Starts for Phisb\_38:

(Start: 15 @25777 has 60 MA's), (19, 25885), (27, 26008), (30, 26044), (31, 26050),

Gene: QMacho\_39 Start: 26201, Stop: 26527, Start Num: 15

Candidate Starts for QMacho\_39:

(Start: 15 @26201 has 60 MA's), (28, 26453), (30, 26468),

Gene: Quenya\_36 Start: 25890, Stop: 26219, Start Num: 15

Candidate Starts for Quenya\_36:

(8, 25413), (11, 25524), (12, 25566), (Start: 15 @25890 has 60 MA's), (17, 25977), (21, 26013), (22, 26016), (28, 26142), (30, 26157), (31, 26163),

Gene: Rollins\_34 Start: 23702, Stop: 24043, Start Num: 15

Candidate Starts for Rollins\_34:

(Start: 15 @23702 has 60 MA's), (18, 23795), (31, 23975),

Gene: Rona\_35 Start: 26210, Stop: 26542, Start Num: 15

Candidate Starts for Rona\_35:

(3, 25613), (7, 25721), (Start: 15 @26210 has 60 MA's), (19, 26321), (20, 26333), (22, 26339), (25, 26387), (27, 26444), (30, 26480), (31, 26486),

Gene: SanaSana\_40 Start: 27314, Stop: 27640, Start Num: 15

Candidate Starts for SanaSana\_40:

(Start: 15 @27314 has 60 MA's), (22, 27440), (27, 27545), (28, 27566), (30, 27581), (31, 27587),

Gene: SansAfet\_38 Start: 25631, Stop: 25957, Start Num: 15

Candidate Starts for SansAfet\_38:

(Start: 15 @25631 has 60 MA's), (27, 25862), (30, 25898), (31, 25904),

Gene: SarBear\_37 Start: 25498, Stop: 25824, Start Num: 15

Candidate Starts for SarBear\_37:

(Start: 15 @25498 has 60 MA's), (28, 25750), (30, 25765),

Gene: Sharkboy\_36 Start: 26309, Stop: 26641, Start Num: 15

Candidate Starts for Sharkboy\_36:

(Start: 15 @26309 has 60 MA's), (19, 26420), (20, 26432), (22, 26438), (25, 26486), (27, 26543), (31, 26585),

Gene: Shayna\_37 Start: 24987, Stop: 25346, Start Num: 14

Candidate Starts for Shayna\_37:

(14, 24987), (16, 25041), (20, 25116), (28, 25248), (30, 25263), (31, 25269),

Gene: Skylord\_34 Start: 23633, Stop: 23974, Start Num: 15

Candidate Starts for Skylord\_34:

(Start: 15 @23633 has 60 MA's), (18, 23726), (31, 23906),



Gene: Slay\_38 Start: 26179, Stop: 26505, Start Num: 15  
Candidate Starts for Slay\_38:  
(Start: 15 @26179 has 60 MA's), (28, 26431), (30, 26446),

Gene: Stoor\_38 Start: 26983, Stop: 27309, Start Num: 15  
Candidate Starts for Stoor\_38:  
(5, 26470), (6, 26488), (9, 26524), (10, 26593), (Start: 15 @26983 has 60 MA's), (20, 27103), (22, 27109), (24, 27151), (27, 27214), (28, 27235), (30, 27250), (31, 27256),

Gene: Stromboli\_38 Start: 26847, Stop: 27173, Start Num: 15  
Candidate Starts for Stromboli\_38:  
(1, 26094), (5, 26334), (6, 26352), (9, 26388), (10, 26457), (Start: 15 @26847 has 60 MA's), (20, 26967), (22, 26973), (27, 27078), (28, 27099), (30, 27114), (31, 27120),

Gene: SunnyD\_39 Start: 25043, Stop: 25348, Start Num: 16  
Candidate Starts for SunnyD\_39:  
(14, 24989), (16, 25043), (20, 25118), (25, 25172), (28, 25250), (30, 25265), (31, 25271),

Gene: Swervy\_38 Start: 25698, Stop: 26024, Start Num: 15  
Candidate Starts for Swervy\_38:  
(Start: 15 @25698 has 60 MA's), (28, 25950), (30, 25965),

Gene: TukTuk\_38 Start: 25769, Stop: 26095, Start Num: 15  
Candidate Starts for TukTuk\_38:  
(Start: 15 @25769 has 60 MA's), (19, 25877), (27, 26000), (30, 26036), (31, 26042),

Gene: Vitas\_34 Start: 23642, Stop: 23983, Start Num: 15  
Candidate Starts for Vitas\_34:  
(Start: 15 @23642 has 60 MA's), (18, 23735), (31, 23915),