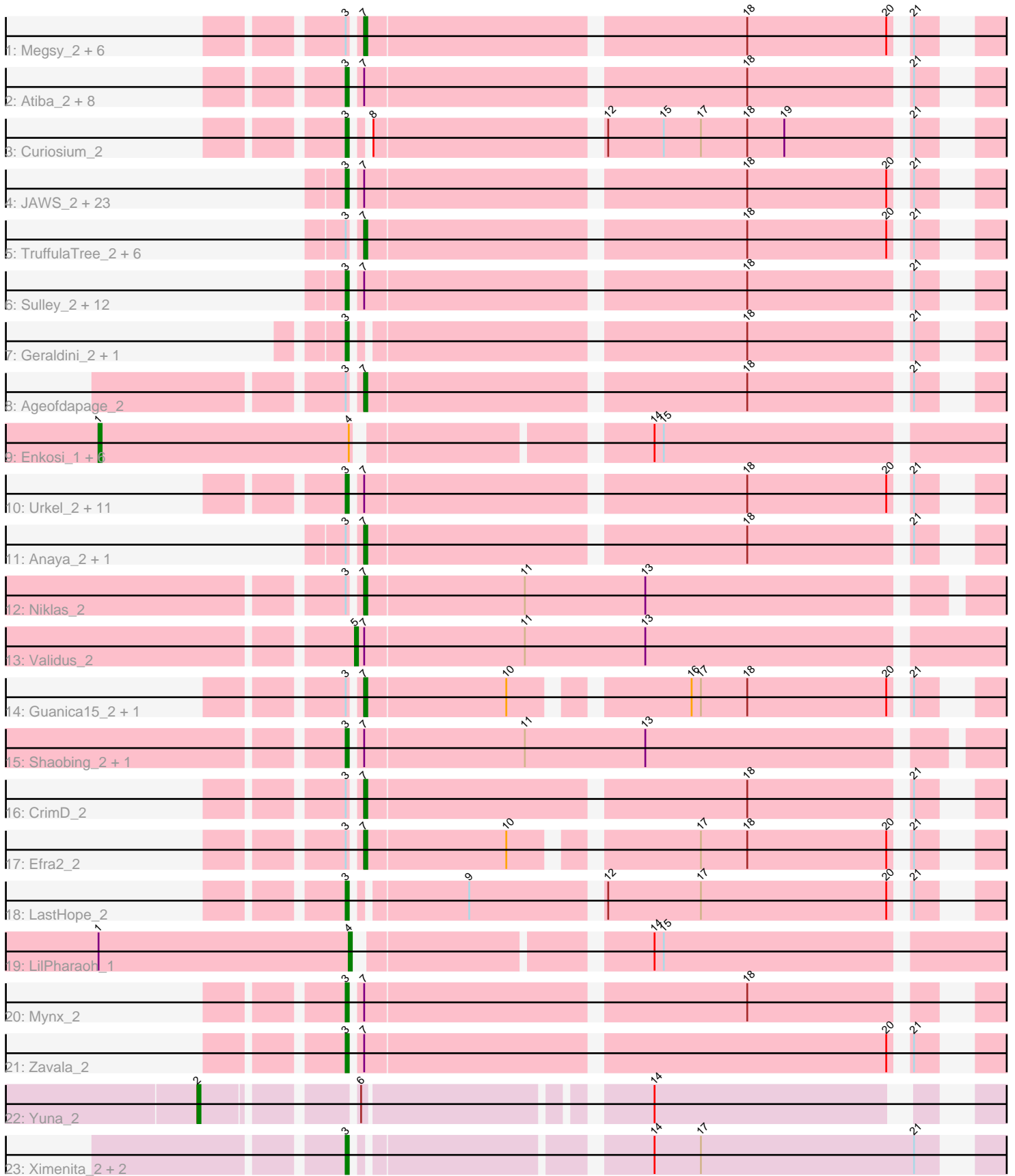


Pham 171352



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 171352 Report

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

Pham number 171352 has 101 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Megsy\_2, TiniBug\_2, Devera\_2, Pokerus\_2, CheetoDust\_2, Illumine\_2, TaiwanKao\_2
- Track 2 : Atiba\_2, Murucutumbu\_2, Ganymede\_2, Adonis\_2, Tiri\_2, LaterM\_2, Stinson\_2, QuincyRose\_2, Tachez\_2
- Track 3 : Curiosium\_2
- Track 4 : JAWS\_2, Inky\_2, Durfee\_2, Blizzard\_2, ShiaSurprise\_2, Homura\_2, Apocalypse\_2, Belladonna\_2, Twitch\_2, Veliki\_2, Piatt\_2, Dalmuri\_2, BarrelRoll\_2, Llorens\_2, Jarvi\_2, Asayake\_2, Hyperbowlee\_2, BEEEST\_2, Jeckyll\_2, Capricorn\_2, Spock\_2, Peel\_2, CREW\_2, Padfoot\_2
- Track 5 : TruffulaTree\_2, BGlluviae\_2, Boiiii\_2, Topper\_2, Lunahalos\_2, Rosmarinus\_2, CaseJules\_2
- Track 6 : Sulley\_2, AlishaPH\_2, Rapunzel97\_2, Angelica\_2, Adephagia\_2, Slimphazie\_2, Zabiza\_2, ActinUp\_2, HedwigODU\_2, Deby\_2, Jayhawk\_2, Padpat\_2, Ramen\_2
- Track 7 : Geraldini\_2, Beezoo\_2
- Track 8 : Ageofdapage\_2
- Track 9 : Enkosi\_1, SgtBeansprout\_1, Mdavu\_1, Nutello\_1, Amelie\_1, Nikao\_1, Binglebops\_1
- Track 10 : Urkel\_2, Joy99\_2, DrHayes\_2, LindNT\_2, TreyKay\_2, Bella96\_2, Dole\_2, YoureAdopted\_2, Prithvi\_2, MeaningOfLife\_2, BaghaKamala\_2, SamuelLPlaqson\_2
- Track 11 : Anaya\_2, Emerson\_2
- Track 12 : Niklas\_2
- Track 13 : Validus\_2
- Track 14 : Guanica15\_2, Yunkel11\_2
- Track 15 : Shaobing\_2, Peanam\_2
- Track 16 : CrimD\_2
- Track 17 : Efra2\_2
- Track 18 : LastHope\_2
- Track 19 : LilPharaoh\_1
- Track 20 : Mynx\_2
- Track 21 : Zavala\_2
- Track 22 : Yuna\_2
- Track 23 : Ximenita\_2, Krueger\_2, Syra333\_2

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

The start number called the most often in the published annotations is 3, it was called in 66 of the 97 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_2, Adephagia\_2, Adonis\_2, AlishaPH\_2, Angelica\_2, Apocalypse\_2, Asayake\_2, Atiba\_2, BEEST\_2, BaghaKamala\_2, BarrelRoll\_2, Beezoo\_2, Bella96\_2, Belladonna\_2, Blizzard\_2, CREW\_2, Capricorn\_2, Curiosium\_2, Dalmuri\_2, Deby\_2, Dole\_2, DrHayes\_2, Durfee\_2, Ganymede\_2, Geraldini\_2, HedwigODU\_2, Homura\_2, Hyperbowlee\_2, Inky\_2, JAWS\_2, Jarvi\_2, Jayhawk\_2, Jeckyll\_2, Joy99\_2, Krueger\_2, LastHope\_2, LaterM\_2, LindNT\_2, Llorens\_2, MeaningOfLife\_2, Murucutumbu\_2, Mynx\_2, Padfoot\_2, Padpat\_2, Peanam\_2, Peel\_2, Piatt\_2, Prithvi\_2, QuincyRose\_2, Ramen\_2, Rapunzel97\_2, SamuelLPlaqson\_2, Shaobing\_2, ShiaSurprise\_2, Slimphazie\_2, Spock\_2, Stinson\_2, Sulley\_2, Syra333\_2, Tachez\_2, Tiri\_2, TreyKay\_2, Twitch\_2, Urkel\_2, Veliki\_2, Ximenita\_2, YoureAdopted\_2, Zabiza\_2, Zavala\_2,

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

- Ageofdapage\_2, Anaya\_2, BGlluviae\_2, Boiiii\_2, CaseJules\_2, CheetoDust\_2, CrimD\_2, Devera\_2, Efra2\_2, Emerson\_2, Guanica15\_2, Illumine\_2, Lunahalos\_2, Megsy\_2, Niklas\_2, Pokerus\_2, Rosmarinus\_2, TaiwanKao\_2, TiniBug\_2, Topper\_2, TruffulaTree\_2, Yunkel11\_2,

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

- Amelie\_1, Biglebops\_1, Enkosi\_1, LilPharaoh\_1, Mdavu\_1, Nikao\_1, Nutello\_1, SgtBeansprout\_1, Validus\_2, Yuna\_2,

### Summary by start number:

Start 1:

- Found in 8 of 101 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 7 of 97
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Amelie\_1 (K1), Biglebops\_1 (K1), Enkosi\_1 (K1), Mdavu\_1 (K1), Nikao\_1 (K1), Nutello\_1 (K1), SgtBeansprout\_1 (K1),

Start 2:

- Found in 1 of 101 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yuna\_2 (K6),

Start 3:

- Found in 91 of 101 ( 90.1% ) of genes in pham
- Manual Annotations of this start: 66 of 97
- Called 75.8% of time when present
- Phage (with cluster) where this start called: ActinUp\_2 (K1), Adephagia\_2 (K1), Adonis\_2 (K1), AlishaPH\_2 (K1), Angelica\_2 (K1), Apocalypse\_2 (K1), Asayake\_2 (K1), Atiba\_2 (K1), BEEST\_2 (K1), BaghaKamala\_2 (K1), BarrelRoll\_2 (K1), Beezoo\_2 (K1), Bella96\_2 (K1), Belladonna\_2 (K1), Blizzard\_2 (K1), CREW\_2 (K1), Capricorn\_2 (K1), Curiosium\_2 (K1), Dalmuri\_2 (K1), Deby\_2 (K1), Dole\_2 (K1), DrHayes\_2 (K1), Durfee\_2 (K1), Ganymede\_2 (K1), Geraldini\_2 (K1), HedwigODU\_2 (K1), Homura\_2 (K1), Hyperbowlee\_2 (K1), Inky\_2 (K1), JAWS\_2 (K1), Jarvi\_2 (K1),

Jayhawk\_2 (K1), Jeckyll\_2 (K1), Joy99\_2 (K1), Krueger\_2 (K6), LastHope\_2 (K1), LaterM\_2 (K1), LindNT\_2 (K1), Llorens\_2 (K1), MeaningOfLife\_2 (K1), Murucutumbu\_2 (K1), Mynx\_2 (K1), Padfoot\_2 (K1), Padpat\_2 (K1), Peanam\_2 (K1), Peel\_2 (K1), Piatt\_2 (K1), Prithvi\_2 (K1), QuincyRose\_2 (K1), Ramen\_2 (K1), Rapunzel97\_2 (K1), SamuelLPlaqsom\_2 (K1), Shaobing\_2 (K1), ShiaSurprise\_2 (K1), Slimphazie\_2 (K1), Spock\_2 (K1), Stinson\_2 (K1), Sulley\_2 (K1), Syra333\_2 (K6), Tachez\_2 (K1), Tiri\_2 (K1), TreyKay\_2 (K1), Twitch\_2 (K1), Urkel\_2 (K1), Veliki\_2 (K1), Ximenita\_2 (K6), YoureAdopted\_2 (K1), Zabiza\_2 (K1), Zavala\_2 (K1),

#### Start 4:

- Found in 8 of 101 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 12.5% of time when present
- Phage (with cluster) where this start called: LilPharaoh\_1 (K1),

#### Start 5:

- Found in 1 of 101 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Validus\_2 (K1),

#### Start 7:

- Found in 85 of 101 ( 84.2% ) of genes in pham
- Manual Annotations of this start: 21 of 97
- Called 25.9% of time when present
- Phage (with cluster) where this start called: Ageofdapage\_2 (K1), Anaya\_2 (K1), BGIlluvia\_2 (K1), Boiiii\_2 (K1), CaseJules\_2 (K1), CheetoDust\_2 (K1), CrimD\_2 (K1), Devera\_2 (K1), Efra2\_2 (K1), Emerson\_2 (K1), Guanica15\_2 (K1), Illumine\_2 (K1), Lunahalos\_2 (K1), Megsy\_2 (K1), Niklas\_2 (K1), Pokerus\_2 (K1), Rosmarinus\_2 (K1), TaiwanKao\_2 (K1), TiniBug\_2 (K1), Topper\_2 (K1), TruffulaTree\_2 (K1), Yunkel11\_2 (K1),

### **Summary by clusters:**

There are 2 clusters represented in this pham: K1, K6,

#### Info for manual annotations of cluster K1:

- Start number 1 was manually annotated 7 times for cluster K1.
- Start number 3 was manually annotated 63 times for cluster K1.
- Start number 4 was manually annotated 1 time for cluster K1.
- Start number 5 was manually annotated 1 time for cluster K1.
- Start number 7 was manually annotated 21 times for cluster K1.

#### Info for manual annotations of cluster K6:

- Start number 2 was manually annotated 1 time for cluster K6.
- Start number 3 was manually annotated 3 times for cluster K6.

### **Gene Information:**

Gene: ActinUp\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for ActinUp\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Adephagia\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Adephagia\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Adonis\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for Adonis\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (21, 438),

Gene: Ageofdapage\_2 Start: 256, Stop: 438, Start Num: 7

Candidate Starts for Ageofdapage\_2:

(Start: 3 @253 has 66 MA's), (Start: 7 @256 has 21 MA's), (18, 373), (21, 421),

Gene: AlishaPH\_2 Start: 293, Stop: 478, Start Num: 3

Candidate Starts for AlishaPH\_2:

(Start: 3 @293 has 66 MA's), (Start: 7 @296 has 21 MA's), (18, 413), (21, 461),

Gene: Amelie\_1 Start: 75, Stop: 353, Start Num: 1

Candidate Starts for Amelie\_1:

(Start: 1 @75 has 7 MA's), (Start: 4 @156 has 1 MA's), (14, 240), (15, 243),

Gene: Anaya\_2 Start: 297, Stop: 479, Start Num: 7

Candidate Starts for Anaya\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Angelica\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Angelica\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Apocalypse\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Apocalypse\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Asayake\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Asayake\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Atiba\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for Atiba\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (21, 438),

Gene: BEEST\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for BEEST\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: BGlluviae\_2 Start: 297, Stop: 479, Start Num: 7

Candidate Starts for BGlluviae\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: BaghaKamala\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for BaghaKamala\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: BarrelRoll\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for BarrelRoll\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Beezoo\_2 Start: 294, Stop: 476, Start Num: 3

Candidate Starts for Beezoo\_2:

(Start: 3 @294 has 66 MA's), (18, 411), (21, 459),

Gene: Bella96\_2 Start: 258, Stop: 443, Start Num: 3

Candidate Starts for Bella96\_2:

(Start: 3 @258 has 66 MA's), (Start: 7 @261 has 21 MA's), (18, 378), (20, 423), (21, 426),

Gene: Belladonna\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Belladonna\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Biglebops\_1 Start: 75, Stop: 353, Start Num: 1

Candidate Starts for Biglebops\_1:

(Start: 1 @75 has 7 MA's), (Start: 4 @156 has 1 MA's), (14, 240), (15, 243),

Gene: Blizzard\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Blizzard\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Boiiii\_2 Start: 297, Stop: 479, Start Num: 7

Candidate Starts for Boiiii\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: CREW\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for CREW\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Capricorn\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Capricorn\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: CaseJules\_2 Start: 297, Stop: 479, Start Num: 7

Candidate Starts for CaseJules\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: CheetoDust\_2 Start: 273, Stop: 455, Start Num: 7

Candidate Starts for CheetoDust\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: CrimD\_2 Start: 273, Stop: 455, Start Num: 7

Candidate Starts for CrimD\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (21, 438),

Gene: Curiosium\_2 Start: 338, Stop: 520, Start Num: 3

Candidate Starts for Curiosium\_2:

(Start: 3 @338 has 66 MA's), (8, 341), (12, 410), (15, 428), (17, 440), (18, 455), (19, 467), (21, 503),

Gene: Dalmuri\_2 Start: 294, Stop: 479, Start Num: 3  
Candidate Starts for Dalmuri\_2:  
(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Deby\_2 Start: 294, Stop: 479, Start Num: 3  
Candidate Starts for Deby\_2:  
(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Devera\_2 Start: 273, Stop: 455, Start Num: 7  
Candidate Starts for Devera\_2:  
(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: Dole\_2 Start: 270, Stop: 455, Start Num: 3  
Candidate Starts for Dole\_2:  
(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: DrHayes\_2 Start: 258, Stop: 443, Start Num: 3  
Candidate Starts for DrHayes\_2:  
(Start: 3 @258 has 66 MA's), (Start: 7 @261 has 21 MA's), (18, 378), (20, 423), (21, 426),

Gene: Durfee\_2 Start: 294, Stop: 479, Start Num: 3  
Candidate Starts for Durfee\_2:  
(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Efra2\_2 Start: 272, Stop: 448, Start Num: 7  
Candidate Starts for Efra2\_2:  
(Start: 3 @269 has 66 MA's), (Start: 7 @272 has 21 MA's), (10, 317), (17, 368), (18, 383), (20, 428),  
(21, 431),

Gene: Emerson\_2 Start: 297, Stop: 479, Start Num: 7  
Candidate Starts for Emerson\_2:  
(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Enkosi\_1 Start: 75, Stop: 353, Start Num: 1  
Candidate Starts for Enkosi\_1:  
(Start: 1 @75 has 7 MA's), (Start: 4 @156 has 1 MA's), (14, 240), (15, 243),

Gene: Ganymede\_2 Start: 270, Stop: 455, Start Num: 3  
Candidate Starts for Ganymede\_2:  
(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (21, 438),

Gene: Geraldini\_2 Start: 294, Stop: 476, Start Num: 3  
Candidate Starts for Geraldini\_2:  
(Start: 3 @294 has 66 MA's), (18, 411), (21, 459),

Gene: Guanica15\_2 Start: 272, Stop: 448, Start Num: 7  
Candidate Starts for Guanica15\_2:  
(Start: 3 @269 has 66 MA's), (Start: 7 @272 has 21 MA's), (10, 317), (16, 365), (17, 368), (18, 383),  
(20, 428), (21, 431),

Gene: HedwigODU\_2 Start: 294, Stop: 479, Start Num: 3  
Candidate Starts for HedwigODU\_2:  
(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Homura\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Homura\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Hyperbowlee\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Hyperbowlee\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Illumine\_2 Start: 273, Stop: 455, Start Num: 7

Candidate Starts for Illumine\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: Inky\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Inky\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: JAWS\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for JAWS\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Jarvi\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Jarvi\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Jayhawk\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Jayhawk\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Jeckyll\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Jeckyll\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Joy99\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for Joy99\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: Krueger\_2 Start: 327, Stop: 503, Start Num: 3

Candidate Starts for Krueger\_2:

(Start: 3 @327 has 66 MA's), (14, 411), (17, 426), (21, 486),

Gene: LastHope\_2 Start: 268, Stop: 450, Start Num: 3

Candidate Starts for LastHope\_2:

(Start: 3 @268 has 66 MA's), (9, 301), (12, 340), (17, 370), (20, 430), (21, 433),

Gene: LaterM\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for LaterM\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (21, 438),

Gene: LilPharaoh\_1 Start: 156, Stop: 353, Start Num: 4

Candidate Starts for LilPharaoh\_1:

(Start: 1 @75 has 7 MA's), (Start: 4 @156 has 1 MA's), (14, 240), (15, 243),



Gene: LindNT\_2 Start: 270, Stop: 455, Start Num: 3  
Candidate Starts for LindNT\_2:  
(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: Llorens\_2 Start: 294, Stop: 479, Start Num: 3  
Candidate Starts for Llorens\_2:  
(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Lunahalos\_2 Start: 297, Stop: 479, Start Num: 7  
Candidate Starts for Lunahalos\_2:  
(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Mdavu\_1 Start: 75, Stop: 353, Start Num: 1  
Candidate Starts for Mdavu\_1:  
(Start: 1 @75 has 7 MA's), (Start: 4 @156 has 1 MA's), (14, 240), (15, 243),

Gene: MeaningOfLife\_2 Start: 270, Stop: 455, Start Num: 3  
Candidate Starts for MeaningOfLife\_2:  
(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: Megsy\_2 Start: 273, Stop: 455, Start Num: 7  
Candidate Starts for Megsy\_2:  
(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: Murucutumbu\_2 Start: 270, Stop: 455, Start Num: 3  
Candidate Starts for Murucutumbu\_2:  
(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (21, 438),

Gene: Mynx\_2 Start: 270, Stop: 455, Start Num: 3  
Candidate Starts for Mynx\_2:  
(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390),

Gene: Nikao\_1 Start: 75, Stop: 353, Start Num: 1  
Candidate Starts for Nikao\_1:  
(Start: 1 @75 has 7 MA's), (Start: 4 @156 has 1 MA's), (14, 240), (15, 243),

Gene: Niklas\_2 Start: 278, Stop: 472, Start Num: 7  
Candidate Starts for Niklas\_2:  
(Start: 3 @275 has 66 MA's), (Start: 7 @278 has 21 MA's), (11, 329), (13, 368),

Gene: Nutello\_1 Start: 75, Stop: 353, Start Num: 1  
Candidate Starts for Nutello\_1:  
(Start: 1 @75 has 7 MA's), (Start: 4 @156 has 1 MA's), (14, 240), (15, 243),

Gene: Padfoot\_2 Start: 294, Stop: 479, Start Num: 3  
Candidate Starts for Padfoot\_2:  
(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Padpat\_2 Start: 294, Stop: 479, Start Num: 3  
Candidate Starts for Padpat\_2:  
(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Peanam\_2 Start: 275, Stop: 472, Start Num: 3

Candidate Starts for Peanam\_2:

(Start: 3 @275 has 66 MA's), (Start: 7 @278 has 21 MA's), (11, 329), (13, 368),

Gene: Peel\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Peel\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Piatt\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Piatt\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Pokerus\_2 Start: 273, Stop: 455, Start Num: 7

Candidate Starts for Pokerus\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: Prithvi\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for Prithvi\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: QuincyRose\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for QuincyRose\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (21, 438),

Gene: Ramen\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Ramen\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Rapunzel97\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Rapunzel97\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Rosmarinus\_2 Start: 297, Stop: 479, Start Num: 7

Candidate Starts for Rosmarinus\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: SamuelLPlaqson\_2 Start: 258, Stop: 443, Start Num: 3

Candidate Starts for SamuelLPlaqson\_2:

(Start: 3 @258 has 66 MA's), (Start: 7 @261 has 21 MA's), (18, 378), (20, 423), (21, 426),

Gene: SgtBeansprout\_1 Start: 75, Stop: 353, Start Num: 1

Candidate Starts for SgtBeansprout\_1:

(Start: 1 @75 has 7 MA's), (Start: 4 @156 has 1 MA's), (14, 240), (15, 243),

Gene: Shaobing\_2 Start: 275, Stop: 472, Start Num: 3

Candidate Starts for Shaobing\_2:

(Start: 3 @275 has 66 MA's), (Start: 7 @278 has 21 MA's), (11, 329), (13, 368),

Gene: ShiaSurprise\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for ShiaSurprise\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Slimphazie\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Slimphazie\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Spock\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Spock\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Stinson\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for Stinson\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (21, 438),

Gene: Sulley\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Sulley\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Syra333\_2 Start: 327, Stop: 512, Start Num: 3

Candidate Starts for Syra333\_2:

(Start: 3 @327 has 66 MA's), (14, 411), (17, 426), (21, 495),

Gene: Tachez\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for Tachez\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (21, 438),

Gene: TaiwanKao\_2 Start: 273, Stop: 455, Start Num: 7

Candidate Starts for TaiwanKao\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: TiniBug\_2 Start: 261, Stop: 443, Start Num: 7

Candidate Starts for TiniBug\_2:

(Start: 3 @258 has 66 MA's), (Start: 7 @261 has 21 MA's), (18, 378), (20, 423), (21, 426),

Gene: Tiri\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for Tiri\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (21, 438),

Gene: Topper\_2 Start: 297, Stop: 479, Start Num: 7

Candidate Starts for Topper\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: TreyKay\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for TreyKay\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: TruffulaTree\_2 Start: 297, Stop: 479, Start Num: 7

Candidate Starts for TruffulaTree\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Twitch\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Twitch\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Urkel\_2 Start: 258, Stop: 443, Start Num: 3

Candidate Starts for Urkel\_2:

(Start: 3 @258 has 66 MA's), (Start: 7 @261 has 21 MA's), (18, 378), (20, 423), (21, 426),

Gene: Validus\_2 Start: 277, Stop: 480, Start Num: 5

Candidate Starts for Validus\_2:

(Start: 5 @277 has 1 MA's), (Start: 7 @280 has 21 MA's), (11, 331), (13, 370),

Gene: Veliki\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Veliki\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (20, 459), (21, 462),

Gene: Ximenita\_2 Start: 327, Stop: 512, Start Num: 3

Candidate Starts for Ximenita\_2:

(Start: 3 @327 has 66 MA's), (14, 411), (17, 426), (21, 495),

Gene: YoureAdopted\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for YoureAdopted\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (18, 390), (20, 435), (21, 438),

Gene: Yuna\_2 Start: 313, Stop: 528, Start Num: 2

Candidate Starts for Yuna\_2:

(Start: 2 @313 has 1 MA's), (6, 355), (14, 436),

Gene: Yunkel11\_2 Start: 272, Stop: 448, Start Num: 7

Candidate Starts for Yunkel11\_2:

(Start: 3 @269 has 66 MA's), (Start: 7 @272 has 21 MA's), (10, 317), (16, 365), (17, 368), (18, 383), (20, 428), (21, 431),

Gene: Zabiza\_2 Start: 294, Stop: 479, Start Num: 3

Candidate Starts for Zabiza\_2:

(Start: 3 @294 has 66 MA's), (Start: 7 @297 has 21 MA's), (18, 414), (21, 462),

Gene: Zavala\_2 Start: 270, Stop: 455, Start Num: 3

Candidate Starts for Zavala\_2:

(Start: 3 @270 has 66 MA's), (Start: 7 @273 has 21 MA's), (20, 435), (21, 438),