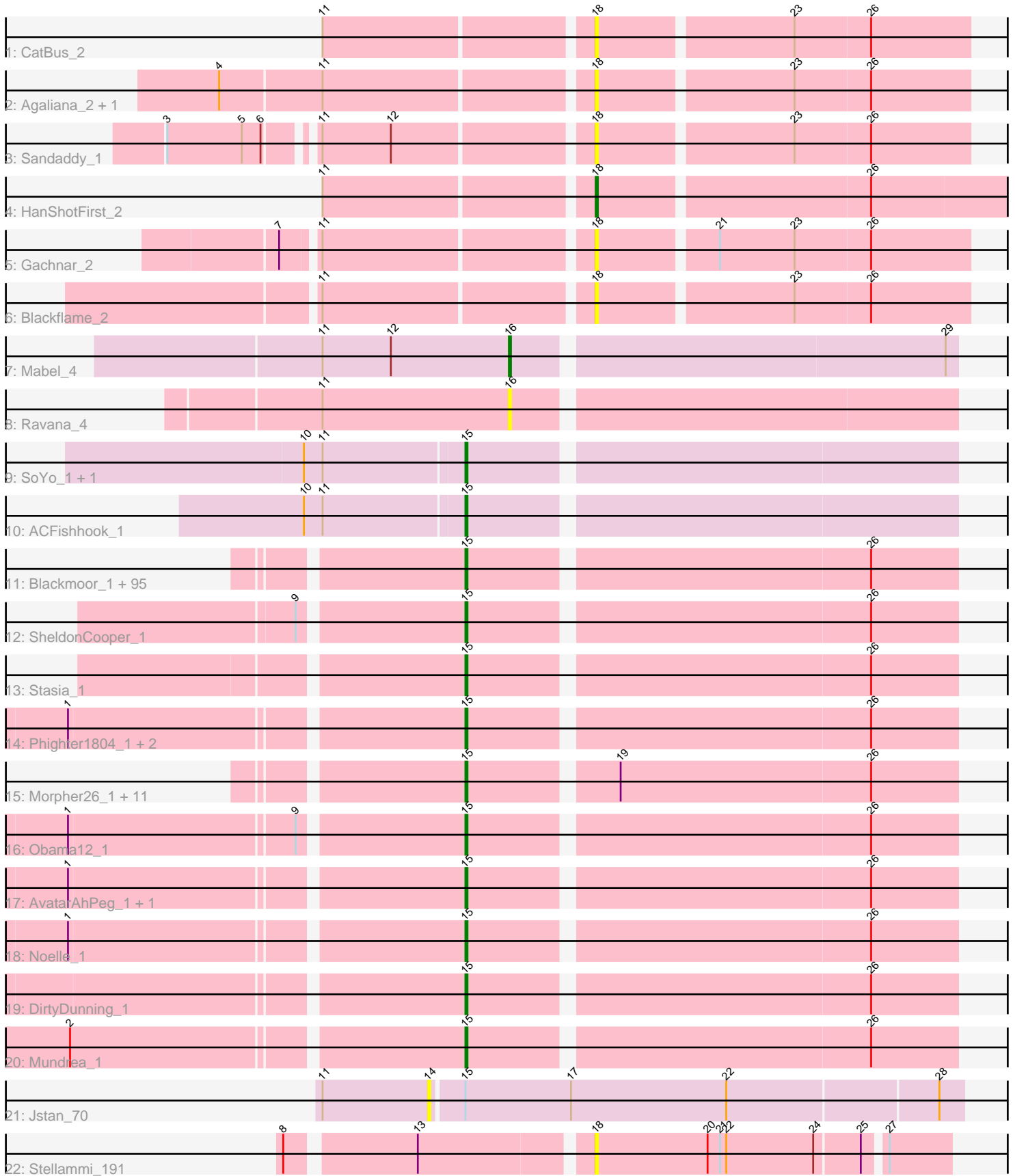


Pham 296344



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 296344 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296344 has 133 members, 10 are drafts.

Phages represented in each track:

- Track 1 : CatBus\_2
- Track 2 : Agaliana\_2, ChristmasHams\_2
- Track 3 : Sandaddy\_1
- Track 4 : HanShotFirst\_2
- Track 5 : Gachnar\_2
- Track 6 : Blackflame\_2
- Track 7 : Mabel\_4
- Track 8 : Ravana\_4
- Track 9 : SoYo\_1, Croquant\_2
- Track 10 : ACFishhook\_1
- Track 11 : Blackmoor\_1, SenorClean\_1, LittleGuy\_1, Kremtemulon\_1, Druantia\_1, ICleared\_1, Avle17\_1, Mayonnaise\_1, Cocoaberry\_1, Holli\_1, Pipcraft\_1, Polymorphads\_1, Kampy\_1, Palestino\_1, Medusa\_1, Wizard007\_1, Morrow\_1, Melvin\_1, Annyong\_1, Lunsford\_1, Houdini22\_1, Lorenzo\_1, Phontbonne\_1, Koreni\_1, Iracema64\_1, Nemo27\_1, TroyPia\_1, Ohfah\_1, Sultana\_1, Shygu2\_1, BubbleTrouble\_1, Broseidon\_1, OKaNui\_1, Sabertooth\_1, Taquarus\_1, Millski\_1, Citius\_1, Jaykayelowell\_1, Clarenza\_1, JetBlade\_1, CentreCat\_1, Lemur\_1, Cintron\_1, Romney\_1, Sparxx\_1, Eapen\_1, Nebs\_1, NotAPhaseMom\_1, Arturo\_86, Iceman\_1, Florean\_1, Kyee\_1, Maxo\_1, Connomayer\_1, Kratak\_1, Koan\_1, Ruin\_1, Nyxis\_1, Skipitt\_1, Bartimeaus\_1, Relief\_1, Eris\_1, Alberto7\_1, Chaph\_1, JoongJeon\_1, Flux\_1, Spino\_1, TygerBlood\_1, Roosevelt\_1, TinaFeyge\_1, Eros\_1, Funston\_1, Gadost\_1, Albee\_1, Eurydice\_1, Thanksgivukkah\_1, Bombshell\_1, NorthStar\_1, LittleB\_1, Scamp\_1, BellusTerra\_1, Baby16\_1, Mazhar510\_1, KFPoly\_1, Happiness\_1, Deano\_1, YoSam321\_1, Wilbur\_1, Dhanush\_1, Wander\_1, Abdiel\_1, PeterPeter\_1, Bruiser\_1, Phacado\_1, Kingmustik0402\_1, Camperdownii\_1
- Track 12 : SheldonCooper\_1
- Track 13 : Stasia\_1
- Track 14 : Phighter1804\_1, Pumbaa\_1, LochMonster\_1
- Track 15 : Morpher26\_1, Xena\_1, Badger\_1, Datway\_1, PetiteSangsue\_1, Cici\_1, Wile\_1, Katalie136\_1, Achebe\_1, Perplexer\_1, AbbysRanger\_1, Bumblebee11\_1
- Track 16 : Obama12\_1
- Track 17 : AvatarAhPeg\_1, Miramae\_1
- Track 18 : Noelle\_1
- Track 19 : DirtyDunning\_1
- Track 20 : Mundrea\_1
- Track 21 : Jstan\_70
- Track 22 : Stellammi\_191

### **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 121 of the 123 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ACFishhook\_1, AbbysRanger\_1, Abdiel\_1, Achebe\_1, Albee\_1, Alberto7\_1, Annyong\_1, Arturo\_86, AvatarAhPeg\_1, Avle17\_1, Baby16\_1, Badger\_1, Bartimeaus\_1, BellusTerra\_1, Blackmoor\_1, Bombshell\_1, Broseidon\_1, Bruiser\_1, BubbleTrouble\_1, Bumblebee11\_1, Camperdownii\_1, CentreCat\_1, Chaph\_1, Cici\_1, Cintron\_1, Citius\_1, Clarenza\_1, Cocoaberry\_1, Connomayer\_1, Croquant\_2, Datway\_1, Deano\_1, Dhanush\_1, DirtyDunning\_1, Druantia\_1, Eapen\_1, Eris\_1, Eros\_1, Eurydice\_1, Floean\_1, Flux\_1, Funston\_1, Gadost\_1, Happiness\_1, Holli\_1, Houdini22\_1, ICleared\_1, Iceman\_1, Iracema64\_1, Jaykayelowell\_1, JetBlade\_1, JoongJeon\_1, KFPoly\_1, Kampy\_1, Katalie136\_1, Kingmustik0402\_1, Koan\_1, Koreni\_1, Kratark\_1, Kremtemulon\_1, Kyee\_1, Lemur\_1, LittleB\_1, LittleGuy\_1, LochMonster\_1, Lorenzo\_1, Lunsford\_1, Maxo\_1, Mayonnaise\_1, Mazhar510\_1, Medusa\_1, Melvin\_1, Millski\_1, Miramae\_1, Morpher26\_1, Morrow\_1, Mundrea\_1, Nebs\_1, Nemo27\_1, Noelle\_1, NorthStar\_1, NotAPhaseMom\_1, Nyxis\_1, OKaNui\_1, Obama12\_1, Ohfah\_1, Palestino\_1, Perplexer\_1, PeterPeter\_1, PetiteSangsue\_1, Phacado\_1, Phighter1804\_1, Phontbonne\_1, Pipcraft\_1, Polymorphads\_1, Pumbaa\_1, Relief\_1, Romney\_1, Roosevelt\_1, Ruin\_1, Sabertooth\_1, Scamp\_1, SenorClean\_1, SheldonCooper\_1, Shygu2\_1, Skipitt\_1, SoYo\_1, Sparxx\_1, Spino\_1, Stasia\_1, Sultana\_1, Taquarus\_1, Thanksgivukkah\_1, TinaFeyge\_1, TroyPia\_1, TygerBlood\_1, Wander\_1, Wilbur\_1, Wile\_1, Wizard007\_1, Xena\_1, YoSam321\_1,

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

- Jstan\_70,

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

- Agaliana\_2, Blackflame\_2, CatBus\_2, ChristmasHams\_2, Gachnar\_2, HanShotFirst\_2, Mabel\_4, Ravana\_4, Sandaddy\_1, Stellammi\_191,

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

Start 14:

- Found in 1 of 133 ( 0.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jstan\_70 (AZ1),

Start 15:

- Found in 123 of 133 ( 92.5% ) of genes in pham
- Manual Annotations of this start: 121 of 123
- Called 99.2% of time when present
- Phage (with cluster) where this start called: ACFishhook\_1 (A3), AbbysRanger\_1 (A4), Abdiel\_1 (A4), Achebe\_1 (A4), Albee\_1 (A4), Alberto7\_1 (A4), Annyong\_1 (A4), Arturo\_86 (A4), AvatarAhPeg\_1 (A4), Avle17\_1 (A4), Baby16\_1 (A4), Badger\_1 (A4), Bartimeaus\_1 (A4), BellusTerra\_1 (A4), Blackmoor\_1 (A4), Bombshell\_1 (A4),

Broseidon\_1 (A4), Bruiser\_1 (A4), BubbleTrouble\_1 (A4), Bumblebee11\_1 (A4), Camperdownii\_1 (A4), CentreCat\_1 (A4), Chaph\_1 (A4), Cici\_1 (A4), Cintron\_1 (A4), Citius\_1 (A4), Clarenza\_1 (A4), Cocoaberry\_1 (A4), Connomayer\_1 (A4), Croquant\_2 (A3), Datway\_1 (A4), Deano\_1 (A4), Dhanush\_1 (A4), DirtyDunning\_1 (A4), Druantia\_1 (A4), Eapen\_1 (A4), Eris\_1 (A4), Eros\_1 (A4), Eurydice\_1 (A4), Floean\_1 (A4), Flux\_1 (A4), Funston\_1 (A4), Gadost\_1 (A4), Happiness\_1 (A4), Holli\_1 (A4), Houdini22\_1 (A4), ICleared\_1 (A4), Iceman\_1 (A4), Iracema64\_1 (A4), Jaykayelowell\_1 (A4), JetBlade\_1 (A4), JoongJeon\_1 (A4), KFPoly\_1 (A4), Kampy\_1 (A4), Katalie136\_1 (A4), Kingmustik0402\_1 (A4), Koan\_1 (A4), Koreni\_1 (A4), Kratark\_1 (A4), Kremtemulon\_1 (A4), Kye\_1 (A4), Lemur\_1 (A4), LittleB\_1 (A4), LittleGuy\_1 (A4), LochMonster\_1 (A4), Lorenzo\_1 (A4), Lunsford\_1 (A4), Maxo\_1 (A4), Mayonnaise\_1 (A4), Mazhar510\_1 (A4), Medusa\_1 (A4), Melvin\_1 (A4), Millski\_1 (A4), Miramae\_1 (A4), Morpher26\_1 (A4), Morrow\_1 (A4), Mundrea\_1 (A4), Nebs\_1 (A4), Nemo27\_1 (A4), Noelle\_1 (A4), NorthStar\_1 (A4), NotAPhaseMom\_1 (A4), Nyxis\_1 (A4), OKaNui\_1 (A4), Obama12\_1 (A4), Ohfah\_1 (A4), Palestino\_1 (A4), Perplexer\_1 (A4), PeterPeter\_1 (A4), PetiteSangsue\_1 (A4), Phacado\_1 (A4), Phighter1804\_1 (A4), Phontbonne\_1 (A4), Pipcraft\_1 (A4), Polymorphads\_1 (A4), Pumbaa\_1 (A4), Relief\_1 (A4), Romney\_1 (A4), Roosevelt\_1 (A4), Ruin\_1 (A4), Sabertooth\_1 (A4), Scamp\_1 (A4), SenorClean\_1 (A4), SheldonCooper\_1 (A4), Shygu2\_1 (A4), Skipitt\_1 (A4), SoYo\_1 (A3), Sparxx\_1 (A4), Spino\_1 (A4), Stasia\_1 (A4), Sultana\_1 (A4), Taquarus\_1 (A4), Thanksgivukkah\_1 (A4), TinaFeyge\_1 (A4), TroyPia\_1 (A4), TygerBlood\_1 (A4), Wander\_1 (A4), Wilbur\_1 (A4), Wile\_1 (A4), Wizard007\_1 (A4), Xena\_1 (A4), YoSam321\_1 (A4),

Start 16:

- Found in 2 of 133 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 123
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mabel\_4 (A11), Ravana\_4 (A15),

Start 18:

- Found in 8 of 133 ( 6.0% ) of genes in pham
- Manual Annotations of this start: 1 of 123
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agaliana\_2 (A1), Blackflame\_2 (A1), CatBus\_2 (A1), ChristmasHams\_2 (A1), Gachnar\_2 (A1), HanShotFirst\_2 (A1), Sandaddy\_1 (A1), Stellammi\_191 (UNK),

### Summary by clusters:

There are 7 clusters represented in this pham: A15, A11, A1, A3, A4, AZ1, UNK,

Info for manual annotations of cluster A1:

- Start number 18 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster A11:

- Start number 16 was manually annotated 1 time for cluster A11.

Info for manual annotations of cluster A3:

- Start number 15 was manually annotated 2 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 15 was manually annotated 119 times for cluster A4.

**Gene Information:**

Gene: ACFishhook\_1 Start: 596, Stop: 823, Start Num: 15

Candidate Starts for ACFishhook\_1:

(10, 521), (11, 530), (Start: 15 @596 has 121 MA's),

Gene: AbbysRanger\_1 Start: 542, Stop: 769, Start Num: 15

Candidate Starts for AbbysRanger\_1:

(Start: 15 @542 has 121 MA's), (19, 608), (26, 728),

Gene: Abdiel\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Abdiel\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Achebe\_1 Start: 542, Stop: 769, Start Num: 15

Candidate Starts for Achebe\_1:

(Start: 15 @542 has 121 MA's), (19, 608), (26, 728),

Gene: Agaliana\_2 Start: 958, Stop: 1131, Start Num: 18

Candidate Starts for Agaliana\_2:

(4, 787), (11, 835), (Start: 18 @958 has 1 MA's), (23, 1048), (26, 1084),

Gene: Albee\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Albee\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Alberto7\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Alberto7\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Annyong\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Annyong\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Arturo\_86 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Arturo\_86:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: AvatarAhPeg\_1 Start: 535, Stop: 762, Start Num: 15

Candidate Starts for AvatarAhPeg\_1:

(1, 355), (Start: 15 @535 has 121 MA's), (26, 721),

Gene: Avle17\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Avle17\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Baby16\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Baby16\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Badger\_1 Start: 543, Stop: 770, Start Num: 15  
Candidate Starts for Badger\_1:  
(Start: 15 @543 has 121 MA's), (19, 609), (26, 729),

Gene: Bartimeaus\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Bartimeaus\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: BellusTerra\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for BellusTerra\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Blackflame\_2 Start: 840, Stop: 1013, Start Num: 18  
Candidate Starts for Blackflame\_2:  
(11, 717), (Start: 18 @840 has 1 MA's), (23, 930), (26, 966),

Gene: Blackmoor\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Blackmoor\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Bombshell\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Bombshell\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Broseidon\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Broseidon\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Bruiser\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Bruiser\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: BubbleTrouble\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for BubbleTrouble\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Bumblebee11\_1 Start: 542, Stop: 769, Start Num: 15  
Candidate Starts for Bumblebee11\_1:  
(Start: 15 @542 has 121 MA's), (19, 608), (26, 728),

Gene: Camperdownii\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Camperdownii\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: CatBus\_2 Start: 873, Stop: 1046, Start Num: 18  
Candidate Starts for CatBus\_2:  
(11, 750), (Start: 18 @873 has 1 MA's), (23, 963), (26, 999),

Gene: CentreCat\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for CentreCat\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Chaph\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Chaph\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: ChristmasHams\_2 Start: 958, Stop: 1131, Start Num: 18

Candidate Starts for ChristmasHams\_2:

(4, 787), (11, 835), (Start: 18 @958 has 1 MA's), (23, 1048), (26, 1084),

Gene: Cici\_1 Start: 542, Stop: 769, Start Num: 15

Candidate Starts for Cici\_1:

(Start: 15 @542 has 121 MA's), (19, 608), (26, 728),

Gene: Cintron\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Cintron\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Citius\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Citius\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Clarenza\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Clarenza\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Cocoaberry\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Cocoaberry\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Connomayer\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Connomayer\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Croquant\_2 Start: 592, Stop: 819, Start Num: 15

Candidate Starts for Croquant\_2:

(10, 517), (11, 526), (Start: 15 @592 has 121 MA's),

Gene: Datway\_1 Start: 542, Stop: 769, Start Num: 15

Candidate Starts for Datway\_1:

(Start: 15 @542 has 121 MA's), (19, 608), (26, 728),

Gene: Deano\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Deano\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Dhanush\_1 Start: 537, Stop: 764, Start Num: 15

Candidate Starts for Dhanush\_1:

(Start: 15 @537 has 121 MA's), (26, 723),

Gene: DirtyDunning\_1 Start: 536, Stop: 763, Start Num: 15

Candidate Starts for DirtyDunning\_1:

(Start: 15 @536 has 121 MA's), (26, 722),

Gene: Druantia\_1 Start: 539, Stop: 766, Start Num: 15  
Candidate Starts for Druantia\_1:  
(Start: 15 @539 has 121 MA's), (26, 725),

Gene: Eapen\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Eapen\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Eris\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Eris\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Eros\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Eros\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Eurydice\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Eurydice\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Florean\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Florean\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Flux\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Flux\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Funston\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Funston\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Gachnar\_2 Start: 892, Stop: 1065, Start Num: 18  
Candidate Starts for Gachnar\_2:  
(7, 754), (11, 769), (Start: 18 @892 has 1 MA's), (21, 946), (23, 982), (26, 1018),

Gene: Gadost\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Gadost\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: HanShotFirst\_2 Start: 873, Stop: 1067, Start Num: 18  
Candidate Starts for HanShotFirst\_2:  
(11, 750), (Start: 18 @873 has 1 MA's), (26, 999),

Gene: Happiness\_1 Start: 537, Stop: 764, Start Num: 15  
Candidate Starts for Happiness\_1:  
(Start: 15 @537 has 121 MA's), (26, 723),

Gene: Holli\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Holli\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Houdini22\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Houdini22\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: ICleared\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for ICleared\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Iceman\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Iceman\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Iracema64\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Iracema64\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Jaykayelowell\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Jaykayelowell\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: JetBlade\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for JetBlade\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: JoongJeon\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for JoongJeon\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Jstan\_70 Start: 43158, Stop: 43409, Start Num: 14  
Candidate Starts for Jstan\_70:  
(11, 43107), (14, 43158), (Start: 15 @43173 has 121 MA's), (17, 43224), (22, 43299), (28, 43398),

Gene: KFPoly\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for KFPoly\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Kampy\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Kampy\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Katalie136\_1 Start: 542, Stop: 769, Start Num: 15  
Candidate Starts for Katalie136\_1:  
(Start: 15 @542 has 121 MA's), (19, 608), (26, 728),

Gene: Kingmustik0402\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Kingmustik0402\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Koan\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Koan\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Koreni\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Koreni\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Kratark\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Kratark\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Kremtemulon\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Kremtemulon\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Kyee\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Kyee\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Lemur\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Lemur\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: LittleB\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for LittleB\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: LittleGuy\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for LittleGuy\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: LochMonster\_1 Start: 536, Stop: 763, Start Num: 15  
Candidate Starts for LochMonster\_1:  
(1, 356), (Start: 15 @536 has 121 MA's), (26, 722),

Gene: Lorenzo\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Lorenzo\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Lunsford\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Lunsford\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Mabel\_4 Start: 2458, Stop: 2664, Start Num: 16  
Candidate Starts for Mabel\_4:  
(11, 2368), (12, 2401), (Start: 16 @2458 has 1 MA's), (29, 2659),

Gene: Maxo\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Maxo\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Mayonnaise\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Mayonnaise\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Mazhar510\_1 Start: 539, Stop: 766, Start Num: 15  
Candidate Starts for Mazhar510\_1:

(Start: 15 @539 has 121 MA's), (26, 725),

Gene: Medusa\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Medusa\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Melvin\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Melvin\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Millski\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Millski\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Miramae\_1 Start: 535, Stop: 762, Start Num: 15

Candidate Starts for Miramae\_1:

(1, 355), (Start: 15 @535 has 121 MA's), (26, 721),

Gene: Morpher26\_1 Start: 542, Stop: 769, Start Num: 15

Candidate Starts for Morpher26\_1:

(Start: 15 @542 has 121 MA's), (19, 608), (26, 728),

Gene: Morrow\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Morrow\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Mundrea\_1 Start: 539, Stop: 766, Start Num: 15

Candidate Starts for Mundrea\_1:

(2, 359), (Start: 15 @539 has 121 MA's), (26, 725),

Gene: Nebs\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Nebs\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Nemo27\_1 Start: 537, Stop: 764, Start Num: 15

Candidate Starts for Nemo27\_1:

(Start: 15 @537 has 121 MA's), (26, 723),

Gene: Noelle\_1 Start: 526, Stop: 753, Start Num: 15

Candidate Starts for Noelle\_1:

(1, 346), (Start: 15 @526 has 121 MA's), (26, 712),

Gene: NorthStar\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for NorthStar\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: NotAPhaseMom\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for NotAPhaseMom\_1:

(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Nyxis\_1 Start: 539, Stop: 766, Start Num: 15

Candidate Starts for Nyxis\_1:

(Start: 15 @539 has 121 MA's), (26, 725),

Gene: OKaNui\_1 Start: 537, Stop: 764, Start Num: 15  
Candidate Starts for OKaNui\_1:  
(Start: 15 @537 has 121 MA's), (26, 723),

Gene: Obama12\_1 Start: 537, Stop: 764, Start Num: 15  
Candidate Starts for Obama12\_1:  
(1, 357), (9, 462), (Start: 15 @537 has 121 MA's), (26, 723),

Gene: Ohfah\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Ohfah\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Palestino\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Palestino\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Perplexer\_1 Start: 542, Stop: 769, Start Num: 15  
Candidate Starts for Perplexer\_1:  
(Start: 15 @542 has 121 MA's), (19, 608), (26, 728),

Gene: PeterPeter\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for PeterPeter\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: PetiteSangsue\_1 Start: 542, Stop: 769, Start Num: 15  
Candidate Starts for PetiteSangsue\_1:  
(Start: 15 @542 has 121 MA's), (19, 608), (26, 728),

Gene: Phacado\_1 Start: 537, Stop: 764, Start Num: 15  
Candidate Starts for Phacado\_1:  
(Start: 15 @537 has 121 MA's), (26, 723),

Gene: Phighter1804\_1 Start: 536, Stop: 763, Start Num: 15  
Candidate Starts for Phighter1804\_1:  
(1, 356), (Start: 15 @536 has 121 MA's), (26, 722),

Gene: Phontbonne\_1 Start: 536, Stop: 763, Start Num: 15  
Candidate Starts for Phontbonne\_1:  
(Start: 15 @536 has 121 MA's), (26, 722),

Gene: Pipcraft\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Pipcraft\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Polymorphads\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Polymorphads\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Pumbaa\_1 Start: 536, Stop: 763, Start Num: 15  
Candidate Starts for Pumbaa\_1:  
(1, 356), (Start: 15 @536 has 121 MA's), (26, 722),

Gene: Ravana\_4 Start: 2368, Stop: 2574, Start Num: 16  
Candidate Starts for Ravana\_4:  
(11, 2278), (Start: 16 @2368 has 1 MA's),

Gene: Relief\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Relief\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Romney\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Romney\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Roosevelt\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Roosevelt\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Ruin\_1 Start: 537, Stop: 764, Start Num: 15  
Candidate Starts for Ruin\_1:  
(Start: 15 @537 has 121 MA's), (26, 723),

Gene: Sabertooth\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Sabertooth\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Sandaddy\_1 Start: 722, Stop: 895, Start Num: 18  
Candidate Starts for Sandaddy\_1:  
(3, 536), (5, 572), (6, 581), (11, 599), (12, 632), (Start: 18 @722 has 1 MA's), (23, 812), (26, 848),

Gene: Scamp\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Scamp\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: SenorClean\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for SenorClean\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: SheldonCooper\_1 Start: 536, Stop: 763, Start Num: 15  
Candidate Starts for SheldonCooper\_1:  
(9, 461), (Start: 15 @536 has 121 MA's), (26, 722),

Gene: Shygu2\_1 Start: 542, Stop: 769, Start Num: 15  
Candidate Starts for Shygu2\_1:  
(Start: 15 @542 has 121 MA's), (26, 728),

Gene: Skipitt\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Skipitt\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: SoYo\_1 Start: 592, Stop: 819, Start Num: 15  
Candidate Starts for SoYo\_1:  
(10, 517), (11, 526), (Start: 15 @592 has 121 MA's),

Gene: Sparxx\_1 Start: 538, Stop: 765, Start Num: 15

Candidate Starts for Sparxx\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Spino\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Spino\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Stasia\_1 Start: 544, Stop: 771, Start Num: 15  
Candidate Starts for Stasia\_1:  
(Start: 15 @544 has 121 MA's), (26, 730),

Gene: Stellammi\_191 Start: 80430, Stop: 80594, Start Num: 18  
Candidate Starts for Stellammi\_191:  
(8, 80295), (13, 80352), (Start: 18 @80430 has 1 MA's), (20, 80484), (21, 80490), (22, 80493), (24, 80535), (25, 80556), (27, 80565),

Gene: Sultana\_1 Start: 539, Stop: 766, Start Num: 15  
Candidate Starts for Sultana\_1:  
(Start: 15 @539 has 121 MA's), (26, 725),

Gene: Taquarus\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Taquarus\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Thanksgivukkah\_1 Start: 539, Stop: 766, Start Num: 15  
Candidate Starts for Thanksgivukkah\_1:  
(Start: 15 @539 has 121 MA's), (26, 725),

Gene: TinaFeyge\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for TinaFeyge\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: TroyPia\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for TroyPia\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: TygerBlood\_1 Start: 540, Stop: 767, Start Num: 15  
Candidate Starts for TygerBlood\_1:  
(Start: 15 @540 has 121 MA's), (26, 726),

Gene: Wander\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Wander\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Wilbur\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for Wilbur\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),

Gene: Wile\_1 Start: 543, Stop: 770, Start Num: 15  
Candidate Starts for Wile\_1:  
(Start: 15 @543 has 121 MA's), (19, 609), (26, 729),

Gene: Wizard007\_1 Start: 540, Stop: 767, Start Num: 15

Candidate Starts for Wizard007\_1:  
(Start: 15 @540 has 121 MA's), (26, 726),

Gene: Xena\_1 Start: 542, Stop: 769, Start Num: 15  
Candidate Starts for Xena\_1:  
(Start: 15 @542 has 121 MA's), (19, 608), (26, 728),

Gene: YoSam321\_1 Start: 538, Stop: 765, Start Num: 15  
Candidate Starts for YoSam321\_1:  
(Start: 15 @538 has 121 MA's), (26, 724),