



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 192429 Report

This analysis was run 11/02/24 on database version 579.

Pham number 192429 has 120 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Kimona\_54
- Track 2 : Kinmap\_56
- Track 3 : LittleGuy\_54, Wander\_54, Koreni\_53, Polymorphads\_55, Nemo27\_54, Lemur\_54, Rosa24\_53, Ulysses\_53, PeterPeter\_54, Gadost\_54, Taquarus\_54, Avle17\_54, NotAPhaseMom\_54, Phighter1804\_54, TroyPia\_55, Caelakin\_54, Lunsford\_55, Bruiser\_53, Pipcraft\_52, DirtyDunning\_53, Phacado\_54, Houdini22\_54, Thanksgivukkah\_53, Scamp\_54, Tinybot\_53, Iceman\_54, Eris\_53, Annyong\_54, Funston\_53, Palestino\_53, Kyee\_54, OKaNui\_54, Cocoaberry\_54, Pumbaa\_54, LeoAvram\_54, MeeZee\_54, ICleared\_54, Spino\_53, LochMonster\_55, Kingmustik0402\_54, Relief\_53, Maverick\_54, JoongJeon\_53, Mazhar510\_54, Eagle\_54
- Track 4 : Nyxis\_54, Commander\_54, TygerBlood\_54, Bombshell\_54, Nebs\_55, Medusa\_54, BellusTerra\_55, Chaph\_54, Connomayer\_54, KFPoly\_53, Phelipe\_55, Albee\_54, Ruin\_54, JetBlade\_54, Eros\_54, Sabertooth\_54, Blackmoor\_54, Cintron\_53, Abdiel\_54, Bartimeaus\_54, LittleB\_54, Morrow\_55, Alberto7\_55, Citius\_54, Camperdownii\_52, Burger\_52, Millski\_53, Romney\_54, Iracema64\_55, Clarenza\_53, Eapen\_54, Shaka\_54, Maxo\_55, Wizard007\_54, Baby16\_54, Flux\_54, LappelDuVide\_54, BubbleTrouble\_53, Noelle\_54, Skipitt\_53, Ohfah\_55, Eurydice\_55, Druantia\_54, Kremtemulon\_54, Broseidon\_54, Sparxx\_55, Holli\_53, Stasia\_53, Lorenzo\_54, Florean\_54, YoSam321\_54, Roosevelt\_53, NorthStar\_53, Dhanush\_54, Wilbur\_54, Jaykayelowell\_52, Deano\_53, CentreCat\_54, Melvin\_56
- Track 5 : Bumblebee11\_52, Xena\_52, Cici\_53, Datway\_53, Wile\_53, Badger\_52, AbbysRanger\_53, PetiteSangsue\_53, Phontbonne\_54, Perplexer\_53, Katalie136\_53, Achebe\_52, Morpher26\_53, Shygu2\_53

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

The start number called the most often in the published annotations is 6, it was called in 117 of the 118 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger\_53, Abdiel\_54, Achebe\_52, Albee\_54, Alberto7\_55, Annyong\_54, Avle17\_54, Baby16\_54, Badger\_52, Bartimeaus\_54, BellusTerra\_55, Blackmoor\_54, Bombshell\_54, Broseidon\_54, Bruiser\_53, BubbleTrouble\_53, Bumblebee11\_52,

Burger\_52, Caelakin\_54, Camperdownii\_52, CentreCat\_54, Chaph\_54, Cici\_53, Cintron\_53, Citius\_54, Clarenza\_53, Cocoaberry\_54, Commander\_54, Connomayer\_54, Datway\_53, Deano\_53, Dhanush\_54, DirtyDunning\_53, Druantia\_54, Eagle\_54, Eapen\_54, Eris\_53, Eros\_54, Eurydice\_55, Florean\_54, Flux\_54, Funston\_53, Gadost\_54, Holli\_53, Houdini22\_54, ICleared\_54, Iceman\_54, Iracema64\_55, Jaykayelowell\_52, JetBlade\_54, JoongJeon\_53, KFPoly\_53, Katalie136\_53, Kingmustik0402\_54, Kinmap\_56, Koreni\_53, Kremtemulon\_54, Kyee\_54, LappelDuVide\_54, Lemur\_54, LeoAvram\_54, LittleB\_54, LittleGuy\_54, LochMonster\_55, Lorenzo\_54, Lunsford\_55, Maverick\_54, Maxo\_55, Mazhar510\_54, Medusa\_54, MeeZee\_54, Melvin\_56, Millski\_53, Morpher26\_53, Morrow\_55, Nebs\_55, Nemo27\_54, Noelle\_54, NorthStar\_53, NotAPhaseMom\_54, Nyxis\_54, OKaNui\_54, Ohfah\_55, Palestino\_53, Perplexer\_53, PeterPeter\_54, PetiteSangsue\_53, Phacado\_54, Phelipe\_55, Phighter1804\_54, Phontbonne\_54, Pipcraft\_52, Polymorphads\_55, Pumbaa\_54, Relief\_53, Romney\_54, Roosevelt\_53, Rosa24\_53, Ruin\_54, Sabertooth\_54, Scamp\_54, Shaka\_54, Shygu2\_53, Skipitt\_53, Sparxx\_55, Spino\_53, Stasia\_53, Taquarus\_54, Thanksgivukkah\_53, Tinybot\_53, TroyPia\_55, TygerBlood\_54, Ulysses\_53, Wander\_54, Wilbur\_54, Wile\_53, Wizard007\_54, Xena\_52, YoSam321\_54,

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

- Kimona\_54,

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

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### Summary by start number:

Start 6:

- Found in 120 of 120 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 117 of 118
- Called 99.2% of time when present
- Phage (with cluster) where this start called: AbbysRanger\_53 (A4), Abdiel\_54 (A4), Achebe\_52 (A4), Albee\_54 (A4), Alberto7\_55 (A4), Annyong\_54 (A4), Avle17\_54 (A4), Baby16\_54 (A4), Badger\_52 (A4), Bartimeaus\_54 (A4), BellusTerra\_55 (A4), Blackmoor\_54 (A4), Bombshell\_54 (A4), Broseidon\_54 (A4), Bruiser\_53 (A4), BubbleTrouble\_53 (A4), Bumblebee11\_52 (A4), Burger\_52 (A4), Caelakin\_54 (A4), Camperdownii\_52 (A4), CentreCat\_54 (A4), Chaph\_54 (A4), Cici\_53 (A4), Cintron\_53 (A4), Citius\_54 (A4), Clarenza\_53 (A4), Cocoaberry\_54 (A4), Commander\_54 (A4), Connomayer\_54 (A4), Datway\_53 (A4), Deano\_53 (A4), Dhanush\_54 (A4), DirtyDunning\_53 (A4), Druantia\_54 (A4), Eagle\_54 (A4), Eapen\_54 (A4), Eris\_53 (A4), Eros\_54 (A4), Eurydice\_55 (A4), Florean\_54 (A4), Flux\_54 (A4), Funston\_53 (A4), Gadost\_54 (A4), Holli\_53 (A4), Houdini22\_54 (A4), ICleared\_54 (A4), Iceman\_54 (A4), Iracema64\_55 (A4), Jaykayelowell\_52 (A4), JetBlade\_54 (A4), JoongJeon\_53 (A4), KFPoly\_53 (A4), Katalie136\_53 (A4), Kingmustik0402\_54 (A4), Kinmap\_56 (A21), Koreni\_53 (A4), Kremtemulon\_54 (A4), Kyee\_54 (A4), LappelDuVide\_54 (A4), Lemur\_54 (A4), LeoAvram\_54 (A4), LittleB\_54 (A4), LittleGuy\_54 (A4), LochMonster\_55 (A4), Lorenzo\_54 (A4), Lunsford\_55 (A4), Maverick\_54 (A4), Maxo\_55 (A4), Mazhar510\_54 (A4), Medusa\_54 (A4), MeeZee\_54 (A4), Melvin\_56 (A4), Millski\_53 (A4), Morpher26\_53 (A4), Morrow\_55 (A4), Nebs\_55 (A4), Nemo27\_54 (A4), Noelle\_54 (A4), NorthStar\_53 (A4), NotAPhaseMom\_54 (A4), Nyxis\_54 (A4), OKaNui\_54 (A4), Ohfah\_55 (A4), Palestino\_53 (A4), Perplexer\_53 (A4), PeterPeter\_54 (A4), PetiteSangsue\_53 (A4), Phacado\_54 (A4), Phelipe\_55 (A4), Phighter1804\_54 (A4), Phontbonne\_54 (A4), Pipcraft\_52 (A4),

Polymorphads\_55 (A4), Pumbaa\_54 (A4), Relief\_53 (A4), Romney\_54 (A4), Roosevelt\_53 (A4), Rosa24\_53 (A4), Ruin\_54 (A4), Sabertooth\_54 (A4), Scamp\_54 (A4), Shaka\_54 (A4), Shygu2\_53 (A4), Skipitt\_53 (A4), Sparxx\_55 (A4), Spino\_53 (A4), Stasia\_53 (A4), Taquarus\_54 (A4), Thanksgivukkah\_53 (A4), Tinybot\_53 (A4), TroyPia\_55 (A4), TygerBlood\_54 (A4), Ulysses\_53 (A4), Wander\_54 (A4), Wilbur\_54 (A4), Wile\_53 (A4), Wizard007\_54 (A4), Xena\_52 (A4), YoSam321\_54 (A4),

Start 7:

- Found in 1 of 120 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 118
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kimona\_54 (A19),

### **Summary by clusters:**

There are 3 clusters represented in this pham: A21, A19, A4,

Info for manual annotations of cluster A19:

- Start number 7 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A4:

- Start number 6 was manually annotated 117 times for cluster A4.

### **Gene Information:**

Gene: AbbysRanger\_53 Start: 37450, Stop: 37343, Start Num: 6

Candidate Starts for AbbysRanger\_53:

(Start: 6 @37450 has 117 MA's),

Gene: Abdiel\_54 Start: 37484, Stop: 37374, Start Num: 6

Candidate Starts for Abdiel\_54:

(5, 37685), (Start: 6 @37484 has 117 MA's),

Gene: Achebe\_52 Start: 37433, Stop: 37326, Start Num: 6

Candidate Starts for Achebe\_52:

(Start: 6 @37433 has 117 MA's),

Gene: Albee\_54 Start: 37483, Stop: 37373, Start Num: 6

Candidate Starts for Albee\_54:

(5, 37684), (Start: 6 @37483 has 117 MA's),

Gene: Alberto7\_55 Start: 37820, Stop: 37710, Start Num: 6

Candidate Starts for Alberto7\_55:

(5, 38021), (Start: 6 @37820 has 117 MA's),

Gene: Annyong\_54 Start: 37528, Stop: 37418, Start Num: 6

Candidate Starts for Annyong\_54:

(Start: 6 @37528 has 117 MA's),

Gene: Avle17\_54 Start: 37480, Stop: 37370, Start Num: 6

Candidate Starts for Avle17\_54:  
(Start: 6 @37480 has 117 MA's),

Gene: Baby16\_54 Start: 37494, Stop: 37384, Start Num: 6  
Candidate Starts for Baby16\_54:  
(5, 37695), (Start: 6 @37494 has 117 MA's),

Gene: Badger\_52 Start: 37434, Stop: 37327, Start Num: 6  
Candidate Starts for Badger\_52:  
(Start: 6 @37434 has 117 MA's),

Gene: Bartimeaus\_54 Start: 37485, Stop: 37375, Start Num: 6  
Candidate Starts for Bartimeaus\_54:  
(5, 37686), (Start: 6 @37485 has 117 MA's),

Gene: BellusTerra\_55 Start: 37484, Stop: 37374, Start Num: 6  
Candidate Starts for BellusTerra\_55:  
(5, 37685), (Start: 6 @37484 has 117 MA's),

Gene: Blackmoor\_54 Start: 37485, Stop: 37375, Start Num: 6  
Candidate Starts for Blackmoor\_54:  
(5, 37686), (Start: 6 @37485 has 117 MA's),

Gene: Bombshell\_54 Start: 37480, Stop: 37370, Start Num: 6  
Candidate Starts for Bombshell\_54:  
(5, 37681), (Start: 6 @37480 has 117 MA's),

Gene: Broseidon\_54 Start: 37485, Stop: 37375, Start Num: 6  
Candidate Starts for Broseidon\_54:  
(5, 37686), (Start: 6 @37485 has 117 MA's),

Gene: Bruiser\_53 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for Bruiser\_53:  
(Start: 6 @37483 has 117 MA's),

Gene: BubbleTrouble\_53 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for BubbleTrouble\_53:  
(5, 37684), (Start: 6 @37483 has 117 MA's),

Gene: Bumblebee11\_52 Start: 37436, Stop: 37329, Start Num: 6  
Candidate Starts for Bumblebee11\_52:  
(Start: 6 @37436 has 117 MA's),

Gene: Burger\_52 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for Burger\_52:  
(5, 37684), (Start: 6 @37483 has 117 MA's),

Gene: Caelakin\_54 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for Caelakin\_54:  
(Start: 6 @37483 has 117 MA's),

Gene: Camperdownii\_52 Start: 37157, Stop: 37047, Start Num: 6  
Candidate Starts for Camperdownii\_52:

(5, 37358), (Start: 6 @37157 has 117 MA's),

Gene: CentreCat\_54 Start: 37486, Stop: 37376, Start Num: 6

Candidate Starts for CentreCat\_54:

(5, 37687), (Start: 6 @37486 has 117 MA's),

Gene: Chaph\_54 Start: 37494, Stop: 37384, Start Num: 6

Candidate Starts for Chaph\_54:

(5, 37695), (Start: 6 @37494 has 117 MA's),

Gene: Cici\_53 Start: 37451, Stop: 37344, Start Num: 6

Candidate Starts for Cici\_53:

(Start: 6 @37451 has 117 MA's),

Gene: Cintron\_53 Start: 37460, Stop: 37350, Start Num: 6

Candidate Starts for Cintron\_53:

(5, 37661), (Start: 6 @37460 has 117 MA's),

Gene: Citius\_54 Start: 37504, Stop: 37394, Start Num: 6

Candidate Starts for Citius\_54:

(5, 37705), (Start: 6 @37504 has 117 MA's),

Gene: Clarenza\_53 Start: 37480, Stop: 37370, Start Num: 6

Candidate Starts for Clarenza\_53:

(5, 37681), (Start: 6 @37480 has 117 MA's),

Gene: Cocoaberry\_54 Start: 37487, Stop: 37377, Start Num: 6

Candidate Starts for Cocoaberry\_54:

(Start: 6 @37487 has 117 MA's),

Gene: Commander\_54 Start: 37482, Stop: 37372, Start Num: 6

Candidate Starts for Commander\_54:

(5, 37683), (Start: 6 @37482 has 117 MA's),

Gene: Connomayer\_54 Start: 37483, Stop: 37373, Start Num: 6

Candidate Starts for Connomayer\_54:

(5, 37684), (Start: 6 @37483 has 117 MA's),

Gene: Datway\_53 Start: 37422, Stop: 37315, Start Num: 6

Candidate Starts for Datway\_53:

(Start: 6 @37422 has 117 MA's),

Gene: Deano\_53 Start: 37491, Stop: 37381, Start Num: 6

Candidate Starts for Deano\_53:

(5, 37692), (Start: 6 @37491 has 117 MA's),

Gene: Dhanush\_54 Start: 37486, Stop: 37376, Start Num: 6

Candidate Starts for Dhanush\_54:

(5, 37687), (Start: 6 @37486 has 117 MA's),

Gene: DirtyDunning\_53 Start: 37495, Stop: 37385, Start Num: 6

Candidate Starts for DirtyDunning\_53:

(Start: 6 @37495 has 117 MA's),

Gene: Druantia\_54 Start: 37486, Stop: 37376, Start Num: 6  
Candidate Starts for Druantia\_54:  
(5, 37687), (Start: 6 @37486 has 117 MA's),

Gene: Eagle\_54 Start: 37508, Stop: 37398, Start Num: 6  
Candidate Starts for Eagle\_54:  
(Start: 6 @37508 has 117 MA's),

Gene: Eapen\_54 Start: 37478, Stop: 37368, Start Num: 6  
Candidate Starts for Eapen\_54:  
(5, 37679), (Start: 6 @37478 has 117 MA's),

Gene: Eris\_53 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for Eris\_53:  
(Start: 6 @37483 has 117 MA's),

Gene: Eros\_54 Start: 37485, Stop: 37375, Start Num: 6  
Candidate Starts for Eros\_54:  
(5, 37686), (Start: 6 @37485 has 117 MA's),

Gene: Eurydice\_55 Start: 37480, Stop: 37370, Start Num: 6  
Candidate Starts for Eurydice\_55:  
(5, 37681), (Start: 6 @37480 has 117 MA's),

Gene: Florean\_54 Start: 37482, Stop: 37372, Start Num: 6  
Candidate Starts for Florean\_54:  
(5, 37683), (Start: 6 @37482 has 117 MA's),

Gene: Flux\_54 Start: 37482, Stop: 37372, Start Num: 6  
Candidate Starts for Flux\_54:  
(5, 37683), (Start: 6 @37482 has 117 MA's),

Gene: Funston\_53 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for Funston\_53:  
(Start: 6 @37483 has 117 MA's),

Gene: Gadost\_54 Start: 37487, Stop: 37377, Start Num: 6  
Candidate Starts for Gadost\_54:  
(Start: 6 @37487 has 117 MA's),

Gene: Holli\_53 Start: 37273, Stop: 37163, Start Num: 6  
Candidate Starts for Holli\_53:  
(5, 37474), (Start: 6 @37273 has 117 MA's),

Gene: Houdini22\_54 Start: 37487, Stop: 37377, Start Num: 6  
Candidate Starts for Houdini22\_54:  
(Start: 6 @37487 has 117 MA's),

Gene: ICleared\_54 Start: 37512, Stop: 37402, Start Num: 6  
Candidate Starts for ICleared\_54:  
(Start: 6 @37512 has 117 MA's),

Gene: Iceman\_54 Start: 37769, Stop: 37659, Start Num: 6  
Candidate Starts for Iceman\_54:  
(Start: 6 @37769 has 117 MA's),

Gene: Iracema64\_55 Start: 37747, Stop: 37637, Start Num: 6  
Candidate Starts for Iracema64\_55:  
(5, 37948), (Start: 6 @37747 has 117 MA's),

Gene: Jaykayelowell\_52 Start: 37476, Stop: 37366, Start Num: 6  
Candidate Starts for Jaykayelowell\_52:  
(5, 37677), (Start: 6 @37476 has 117 MA's),

Gene: JetBlade\_54 Start: 37477, Stop: 37367, Start Num: 6  
Candidate Starts for JetBlade\_54:  
(5, 37678), (Start: 6 @37477 has 117 MA's),

Gene: JoongJeon\_53 Start: 37480, Stop: 37370, Start Num: 6  
Candidate Starts for JoongJeon\_53:  
(Start: 6 @37480 has 117 MA's),

Gene: KFPoly\_53 Start: 37477, Stop: 37367, Start Num: 6  
Candidate Starts for KFPoly\_53:  
(5, 37678), (Start: 6 @37477 has 117 MA's),

Gene: Katalie136\_53 Start: 37436, Stop: 37329, Start Num: 6  
Candidate Starts for Katalie136\_53:  
(Start: 6 @37436 has 117 MA's),

Gene: Kimona\_54 Start: 36110, Stop: 35979, Start Num: 7  
Candidate Starts for Kimona\_54:  
(Start: 6 @36113 has 117 MA's), (Start: 7 @36110 has 1 MA's),

Gene: Kingmustik0402\_54 Start: 37472, Stop: 37362, Start Num: 6  
Candidate Starts for Kingmustik0402\_54:  
(Start: 6 @37472 has 117 MA's),

Gene: Kinmap\_56 Start: 36677, Stop: 36573, Start Num: 6  
Candidate Starts for Kinmap\_56:  
(1, 37124), (2, 37091), (3, 37082), (4, 36905), (5, 36878), (Start: 6 @36677 has 117 MA's),

Gene: Koreni\_53 Start: 37164, Stop: 37054, Start Num: 6  
Candidate Starts for Koreni\_53:  
(Start: 6 @37164 has 117 MA's),

Gene: Kremtemulon\_54 Start: 37431, Stop: 37321, Start Num: 6  
Candidate Starts for Kremtemulon\_54:  
(5, 37632), (Start: 6 @37431 has 117 MA's),

Gene: Kyee\_54 Start: 37481, Stop: 37371, Start Num: 6  
Candidate Starts for Kyee\_54:  
(Start: 6 @37481 has 117 MA's),

Gene: LappelDuVide\_54 Start: 37482, Stop: 37372, Start Num: 6



Candidate Starts for LappelDuVide\_54:  
(5, 37683), (Start: 6 @37482 has 117 MA's),

Gene: Lemur\_54 Start: 37480, Stop: 37370, Start Num: 6  
Candidate Starts for Lemur\_54:  
(Start: 6 @37480 has 117 MA's),

Gene: LeoAvram\_54 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for LeoAvram\_54:  
(Start: 6 @37483 has 117 MA's),

Gene: LittleB\_54 Start: 37484, Stop: 37374, Start Num: 6  
Candidate Starts for LittleB\_54:  
(5, 37685), (Start: 6 @37484 has 117 MA's),

Gene: LittleGuy\_54 Start: 37379, Stop: 37269, Start Num: 6  
Candidate Starts for LittleGuy\_54:  
(Start: 6 @37379 has 117 MA's),

Gene: LochMonster\_55 Start: 37719, Stop: 37609, Start Num: 6  
Candidate Starts for LochMonster\_55:  
(Start: 6 @37719 has 117 MA's),

Gene: Lorenzo\_54 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for Lorenzo\_54:  
(5, 37684), (Start: 6 @37483 has 117 MA's),

Gene: Lunsford\_55 Start: 37477, Stop: 37367, Start Num: 6  
Candidate Starts for Lunsford\_55:  
(Start: 6 @37477 has 117 MA's),

Gene: Maverick\_54 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for Maverick\_54:  
(Start: 6 @37483 has 117 MA's),

Gene: Maxo\_55 Start: 37485, Stop: 37375, Start Num: 6  
Candidate Starts for Maxo\_55:  
(5, 37686), (Start: 6 @37485 has 117 MA's),

Gene: Mazhar510\_54 Start: 37484, Stop: 37374, Start Num: 6  
Candidate Starts for Mazhar510\_54:  
(Start: 6 @37484 has 117 MA's),

Gene: Medusa\_54 Start: 37482, Stop: 37372, Start Num: 6  
Candidate Starts for Medusa\_54:  
(5, 37683), (Start: 6 @37482 has 117 MA's),

Gene: MeeZee\_54 Start: 37480, Stop: 37370, Start Num: 6  
Candidate Starts for MeeZee\_54:  
(Start: 6 @37480 has 117 MA's),

Gene: Melvin\_56 Start: 37478, Stop: 37368, Start Num: 6  
Candidate Starts for Melvin\_56:

(5, 37679), (Start: 6 @37478 has 117 MA's),

Gene: Millski\_53 Start: 37484, Stop: 37374, Start Num: 6

Candidate Starts for Millski\_53:

(5, 37685), (Start: 6 @37484 has 117 MA's),

Gene: Morpher26\_53 Start: 37457, Stop: 37350, Start Num: 6

Candidate Starts for Morpher26\_53:

(Start: 6 @37457 has 117 MA's),

Gene: Morrow\_55 Start: 37489, Stop: 37379, Start Num: 6

Candidate Starts for Morrow\_55:

(5, 37690), (Start: 6 @37489 has 117 MA's),

Gene: Nebs\_55 Start: 37483, Stop: 37373, Start Num: 6

Candidate Starts for Nebs\_55:

(5, 37684), (Start: 6 @37483 has 117 MA's),

Gene: Nemo27\_54 Start: 37482, Stop: 37372, Start Num: 6

Candidate Starts for Nemo27\_54:

(Start: 6 @37482 has 117 MA's),

Gene: Noelle\_54 Start: 37758, Stop: 37648, Start Num: 6

Candidate Starts for Noelle\_54:

(5, 37959), (Start: 6 @37758 has 117 MA's),

Gene: NorthStar\_53 Start: 37483, Stop: 37373, Start Num: 6

Candidate Starts for NorthStar\_53:

(5, 37684), (Start: 6 @37483 has 117 MA's),

Gene: NotAPhaseMom\_54 Start: 37487, Stop: 37377, Start Num: 6

Candidate Starts for NotAPhaseMom\_54:

(Start: 6 @37487 has 117 MA's),

Gene: Nyxis\_54 Start: 37373, Stop: 37263, Start Num: 6

Candidate Starts for Nyxis\_54:

(5, 37574), (Start: 6 @37373 has 117 MA's),

Gene: OKaNui\_54 Start: 37533, Stop: 37423, Start Num: 6

Candidate Starts for OKaNui\_54:

(Start: 6 @37533 has 117 MA's),

Gene: Ohfah\_55 Start: 37483, Stop: 37373, Start Num: 6

Candidate Starts for Ohfah\_55:

(5, 37684), (Start: 6 @37483 has 117 MA's),

Gene: Palestino\_53 Start: 37483, Stop: 37373, Start Num: 6

Candidate Starts for Palestino\_53:

(Start: 6 @37483 has 117 MA's),

Gene: Perplexer\_53 Start: 37433, Stop: 37326, Start Num: 6

Candidate Starts for Perplexer\_53:

(Start: 6 @37433 has 117 MA's),

Gene: PeterPeter\_54 Start: 37480, Stop: 37370, Start Num: 6  
Candidate Starts for PeterPeter\_54:  
(Start: 6 @37480 has 117 MA's),

Gene: PetiteSangsue\_53 Start: 37436, Stop: 37329, Start Num: 6  
Candidate Starts for PetiteSangsue\_53:  
(Start: 6 @37436 has 117 MA's),

Gene: Phacado\_54 Start: 37482, Stop: 37372, Start Num: 6  
Candidate Starts for Phacado\_54:  
(Start: 6 @37482 has 117 MA's),

Gene: Phelipe\_55 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for Phelipe\_55:  
(5, 37684), (Start: 6 @37483 has 117 MA's),

Gene: Phighter1804\_54 Start: 37544, Stop: 37434, Start Num: 6  
Candidate Starts for Phighter1804\_54:  
(Start: 6 @37544 has 117 MA's),

Gene: Phontbonne\_54 Start: 37374, Stop: 37264, Start Num: 6  
Candidate Starts for Phontbonne\_54:  
(Start: 6 @37374 has 117 MA's),

Gene: Pipcraft\_52 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for Pipcraft\_52:  
(Start: 6 @37483 has 117 MA's),

Gene: Polymorphads\_55 Start: 37476, Stop: 37366, Start Num: 6  
Candidate Starts for Polymorphads\_55:  
(Start: 6 @37476 has 117 MA's),

Gene: Pumbaa\_54 Start: 37428, Stop: 37318, Start Num: 6  
Candidate Starts for Pumbaa\_54:  
(Start: 6 @37428 has 117 MA's),

Gene: Relief\_53 Start: 37480, Stop: 37370, Start Num: 6  
Candidate Starts for Relief\_53:  
(Start: 6 @37480 has 117 MA's),

Gene: Romney\_54 Start: 37480, Stop: 37370, Start Num: 6  
Candidate Starts for Romney\_54:  
(5, 37681), (Start: 6 @37480 has 117 MA's),

Gene: Roosevelt\_53 Start: 37485, Stop: 37375, Start Num: 6  
Candidate Starts for Roosevelt\_53:  
(5, 37686), (Start: 6 @37485 has 117 MA's),

Gene: Rosa24\_53 Start: 37511, Stop: 37401, Start Num: 6  
Candidate Starts for Rosa24\_53:  
(Start: 6 @37511 has 117 MA's),

Gene: Ruin\_54 Start: 37476, Stop: 37366, Start Num: 6  
Candidate Starts for Ruin\_54:  
(5, 37677), (Start: 6 @37476 has 117 MA's),

Gene: Sabertooth\_54 Start: 37485, Stop: 37375, Start Num: 6  
Candidate Starts for Sabertooth\_54:  
(5, 37686), (Start: 6 @37485 has 117 MA's),

Gene: Scamp\_54 Start: 37485, Stop: 37375, Start Num: 6  
Candidate Starts for Scamp\_54:  
(Start: 6 @37485 has 117 MA's),

Gene: Shaka\_54 Start: 37480, Stop: 37370, Start Num: 6  
Candidate Starts for Shaka\_54:  
(5, 37681), (Start: 6 @37480 has 117 MA's),

Gene: Shygu2\_53 Start: 37485, Stop: 37378, Start Num: 6  
Candidate Starts for Shygu2\_53:  
(Start: 6 @37485 has 117 MA's),

Gene: Skipitt\_53 Start: 37477, Stop: 37367, Start Num: 6  
Candidate Starts for Skipitt\_53:  
(5, 37678), (Start: 6 @37477 has 117 MA's),

Gene: Sparxx\_55 Start: 37478, Stop: 37368, Start Num: 6  
Candidate Starts for Sparxx\_55:  
(5, 37679), (Start: 6 @37478 has 117 MA's),

Gene: Spino\_53 Start: 37483, Stop: 37373, Start Num: 6  
Candidate Starts for Spino\_53:  
(Start: 6 @37483 has 117 MA's),

Gene: Stasia\_53 Start: 37361, Stop: 37254, Start Num: 6  
Candidate Starts for Stasia\_53:  
(5, 37562), (Start: 6 @37361 has 117 MA's),

Gene: Taquarus\_54 Start: 37486, Stop: 37376, Start Num: 6  
Candidate Starts for Taquarus\_54:  
(Start: 6 @37486 has 117 MA's),

Gene: Thanksgivukkah\_53 Start: 37481, Stop: 37371, Start Num: 6  
Candidate Starts for Thanksgivukkah\_53:  
(Start: 6 @37481 has 117 MA's),

Gene: Tinybot\_53 Start: 37510, Stop: 37400, Start Num: 6  
Candidate Starts for Tinybot\_53:  
(Start: 6 @37510 has 117 MA's),

Gene: TroyPia\_55 Start: 37481, Stop: 37371, Start Num: 6  
Candidate Starts for TroyPia\_55:  
(Start: 6 @37481 has 117 MA's),

Gene: TygerBlood\_54 Start: 37483, Stop: 37373, Start Num: 6

Candidate Starts for TygerBlood\_54:  
(5, 37684), (Start: 6 @37483 has 117 MA's),

Gene: Ulysses\_53 Start: 37160, Stop: 37050, Start Num: 6  
Candidate Starts for Ulysses\_53:  
(Start: 6 @37160 has 117 MA's),

Gene: Wander\_54 Start: 37480, Stop: 37370, Start Num: 6  
Candidate Starts for Wander\_54:  
(Start: 6 @37480 has 117 MA's),

Gene: Wilbur\_54 Start: 37480, Stop: 37370, Start Num: 6  
Candidate Starts for Wilbur\_54:  
(5, 37681), (Start: 6 @37480 has 117 MA's),

Gene: Wile\_53 Start: 37467, Stop: 37360, Start Num: 6  
Candidate Starts for Wile\_53:  
(Start: 6 @37467 has 117 MA's),

Gene: Wizard007\_54 Start: 37488, Stop: 37378, Start Num: 6  
Candidate Starts for Wizard007\_54:  
(5, 37689), (Start: 6 @37488 has 117 MA's),

Gene: Xena\_52 Start: 37433, Stop: 37326, Start Num: 6  
Candidate Starts for Xena\_52:  
(Start: 6 @37433 has 117 MA's),

Gene: YoSam321\_54 Start: 37477, Stop: 37367, Start Num: 6  
Candidate Starts for YoSam321\_54:  
(5, 37678), (Start: 6 @37477 has 117 MA's),