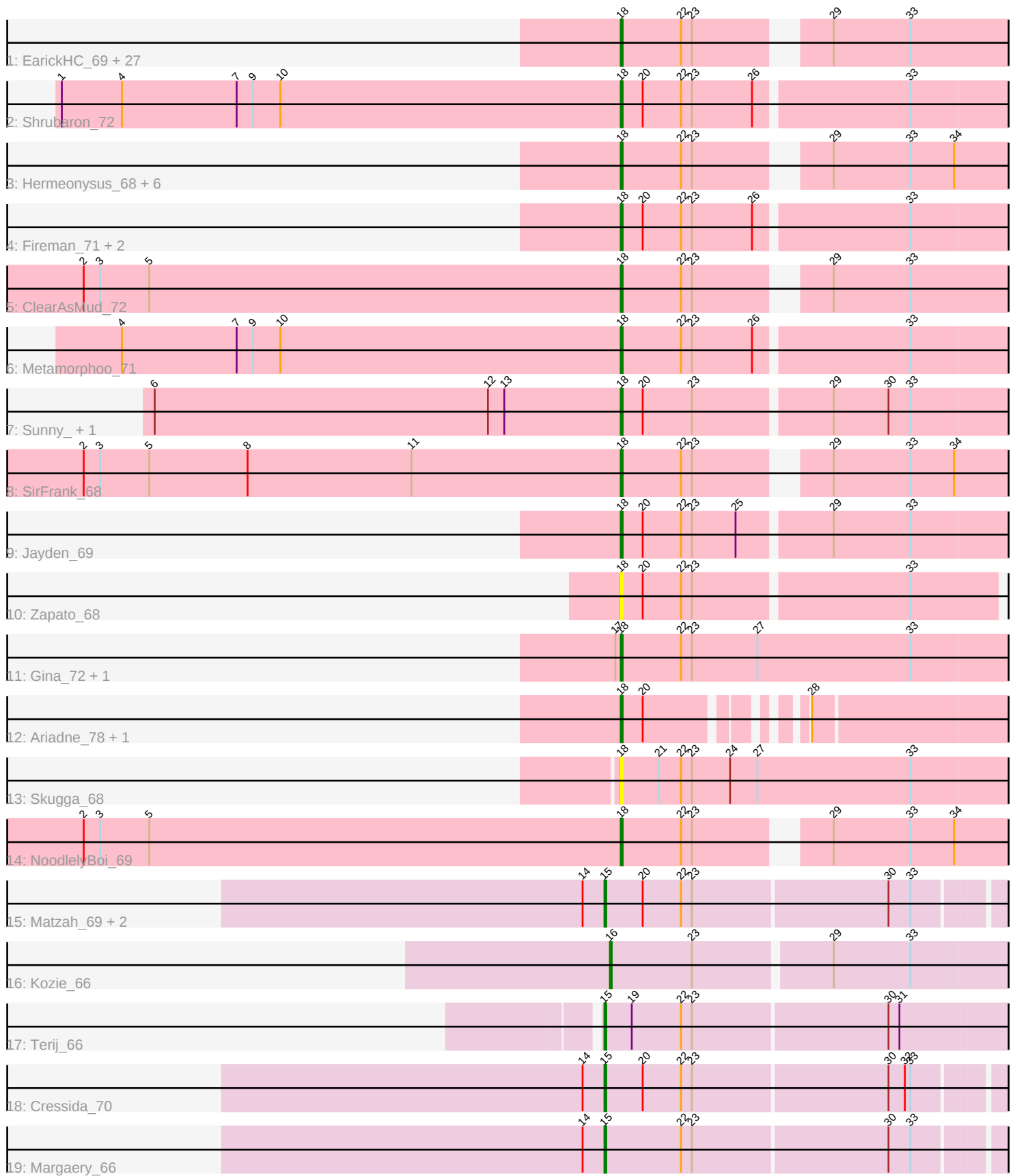


## Pham 274352



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 274352 Report

This analysis was run 02/07/26 on database version 634.

Pham number 274352 has 59 members, 7 are drafts.

Phages represented in each track:

- Track 1 : EarickHC\_69, Pulchra\_70, Quhwah\_72, Shotgun\_68, PhedwardCullen\_66, Paschalis\_68, Busephilis\_67, Savannah\_67, Ganandorf\_67, PierreOrion\_68, Phorgeous\_68, Jefe\_68, Selwyn23\_69, Cranjls\_69, KaiHaiDragon\_69, Crisis\_69, BeagleBug\_67, Piperis\_69, Scumberland\_70, BrazzalePHS\_67, Jollipop\_69, CrazyRich\_67, Ramiel05\_67, Glorp\_69, Phrancesco\_68, Lucretia\_68, Kowalski\_67, Antares\_68
- Track 2 : Shrubaron\_72
- Track 3 : Hermeonysus\_68, Yeti\_70, LittleFortune\_70, Rockwell\_67, Honeyfin\_69, PiperSansNom\_69, Onika\_67
- Track 4 : Fireman\_71, Tyrumbra\_67, RobsFeet\_72
- Track 5 : ClearAsMud\_72
- Track 6 : Metamorphoo\_71
- Track 7 : Sunny\_, Merry\_
- Track 8 : SirFrank\_68
- Track 9 : Jayden\_69
- Track 10 : Zapato\_68
- Track 11 : Gina\_72, Teamocil\_72
- Track 12 : Ariadne\_78, Smarties\_78
- Track 13 : Skugga\_68
- Track 14 : NoodlelyBoi\_69
- Track 15 : Matzah\_69, MementoMori\_68, Cinna\_67
- Track 16 : Kozie\_66
- Track 17 : Terij\_66
- Track 18 : Cressida\_70
- Track 19 : Margaery\_66

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

The start number called the most often in the published annotations is 18, it was called in 45 of the 52 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antares\_68, Ariadne\_78, BeagleBug\_67, BrazzalePHS\_67, Busephilis\_67, ClearAsMud\_72, Cranjls\_69, CrazyRich\_67, Crisis\_69, EarickHC\_69, Fireman\_71,

Ganandorf\_67, Gina\_72, Glorp\_69, Hermeonysus\_68, Honeyfin\_69, Jayden\_69, Jefe\_68, Jollipop\_69, KaiHaiDragon\_69, Kowalski\_67, LittleFortune\_70, Lucretia\_68, Merry\_, Metamorphoo\_71, NoodlelyBoi\_69, Onika\_67, Paschalis\_68, PhedwardCullen\_66, Phorgeous\_68, Phrancesco\_68, PierreOrion\_68, PiperSansNom\_69, Piperis\_69, Pulchra\_70, Quhwah\_72, Ramiel05\_67, RobsFeet\_72, Rockwell\_67, Savannah\_67, Scumberland\_70, Selwyn23\_69, Shotgun\_68, Shrubaron\_72, SirFrank\_68, Skugga\_68, Smarties\_78, Sunny\_, Teamocil\_72, Tyumbra\_67, Yeti\_70, Zapato\_68,

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

- 

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

- Cinna\_67, Cressida\_70, Kozi\_66, Margaery\_66, Matzah\_69, MementoMori\_68, Terij\_66,

### Summary by start number:

Start 15:

- Found in 6 of 59 ( 10.2% ) of genes in pham
- Manual Annotations of this start: 6 of 52
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cinna\_67 (EI), Cressida\_70 (EI), Margaery\_66 (EI), Matzah\_69 (EI), MementoMori\_68 (EI), Terij\_66 (EI),

Start 16:

- Found in 1 of 59 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 1 of 52
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kozi\_66 (EI),

Start 18:

- Found in 52 of 59 ( 88.1% ) of genes in pham
- Manual Annotations of this start: 45 of 52
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antares\_68 (EC), Ariadne\_78 (EC), BeagleBug\_67 (EC), BrazzalePHS\_67 (EC), Busephilis\_67 (EC), ClearAsMud\_72 (EC), Cranjis\_69 (EC), CrazyRich\_67 (EC), Crisis\_69 (EC), EarickHC\_69 (EC), Fireman\_71 (EC), Ganandorf\_67 (EC), Gina\_72 (EC), Glorp\_69 (EC), Hermeonysus\_68 (EC), Honeyfin\_69 (EC), Jayden\_69 (EC), Jefe\_68 (EC), Jollipop\_69 (EC), KaiHaiDragon\_69 (EC), Kowalski\_67 (EC), LittleFortune\_70 (EC), Lucretia\_68 (EC), Merry\_ (EC), Metamorphoo\_71 (EC), NoodlelyBoi\_69 (EC), Onika\_67 (EC), Paschalis\_68 (EC), PhedwardCullen\_66 (EC), Phorgeous\_68 (EC), Phrancesco\_68 (EC), PierreOrion\_68 (EC), PiperSansNom\_69 (EC), Piperis\_69 (EC), Pulchra\_70 (EC), Quhwah\_72 (EC), Ramiel05\_67 (EC), RobsFeet\_72 (EC), Rockwell\_67 (EC), Savannah\_67 (EC), Scumberland\_70 (EC), Selwyn23\_69 (EC), Shotgun\_68 (EC), Shrubaron\_72 (EC), SirFrank\_68 (EC), Skugga\_68 (EC), Smarties\_78 (EC), Sunny\_ (EC), Teamocil\_72 (EC), Tyumbra\_67 (EC), Yeti\_70 (EC), Zapato\_68 (EC),

### Summary by clusters:

There are 2 clusters represented in this pham: EI, EC,

Info for manual annotations of cluster EC:

- Start number 18 was manually annotated 45 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 15 was manually annotated 6 times for cluster EI.
- Start number 16 was manually annotated 1 time for cluster EI.

### **Gene Information:**

Gene: Antares\_68 Start: 42753, Stop: 42947, Start Num: 18

Candidate Starts for Antares\_68:

(Start: 18 @42753 has 45 MA's), (22, 42786), (23, 42792), (29, 42852), (33, 42894),

Gene: Ariadne\_78 Start: 44331, Stop: 44549, Start Num: 18

Candidate Starts for Ariadne\_78:

(Start: 18 @44331 has 45 MA's), (20, 44343), (28, 44409),

Gene: BeagleBug\_67 Start: 42533, Stop: 42727, Start Num: 18

Candidate Starts for BeagleBug\_67:

(Start: 18 @42533 has 45 MA's), (22, 42566), (23, 42572), (29, 42632), (33, 42674),

Gene: BrazzalePHS\_67 Start: 42521, Stop: 42715, Start Num: 18

Candidate Starts for BrazzalePHS\_67:

(Start: 18 @42521 has 45 MA's), (22, 42554), (23, 42560), (29, 42620), (33, 42662),

Gene: Busephilis\_67 Start: 42460, Stop: 42654, Start Num: 18

Candidate Starts for Busephilis\_67:

(Start: 18 @42460 has 45 MA's), (22, 42493), (23, 42499), (29, 42559), (33, 42601),

Gene: Cinna\_67 Start: 44120, Stop: 44341, Start Num: 15

Candidate Starts for Cinna\_67:

(14, 44108), (Start: 15 @44120 has 6 MA's), (20, 44141), (22, 44162), (23, 44168), (30, 44273), (33, 44285),

Gene: ClearAsMud\_72 Start: 43041, Stop: 43235, Start Num: 18

Candidate Starts for ClearAsMud\_72:

(2, 42747), (3, 42756), (5, 42783), (Start: 18 @43041 has 45 MA's), (22, 43074), (23, 43080), (29, 43140), (33, 43182),

Gene: Cranjis\_69 Start: 42708, Stop: 42902, Start Num: 18

Candidate Starts for Cranjis\_69:

(Start: 18 @42708 has 45 MA's), (22, 42741), (23, 42747), (29, 42807), (33, 42849),

Gene: CrazyRich\_67 Start: 42514, Stop: 42708, Start Num: 18

Candidate Starts for CrazyRich\_67:

(Start: 18 @42514 has 45 MA's), (22, 42547), (23, 42553), (29, 42613), (33, 42655),

Gene: Cressida\_70 Start: 43720, Stop: 43941, Start Num: 15

Candidate Starts for Cressida\_70:

(14, 43708), (Start: 15 @43720 has 6 MA's), (20, 43741), (22, 43762), (23, 43768), (30, 43873), (32, 43882), (33, 43885),

Gene: Crisis\_69 Start: 42523, Stop: 42717, Start Num: 18

Candidate Starts for Crisis\_69:

(Start: 18 @42523 has 45 MA's), (22, 42556), (23, 42562), (29, 42622), (33, 42664),

Gene: EarickHC\_69 Start: 42445, Stop: 42639, Start Num: 18

Candidate Starts for EarickHC\_69:

(Start: 18 @42445 has 45 MA's), (22, 42478), (23, 42484), (29, 42544), (33, 42586),

Gene: Fireman\_71 Start: 44449, Stop: 44691, Start Num: 18

Candidate Starts for Fireman\_71:

(Start: 18 @44449 has 45 MA's), (20, 44461), (22, 44482), (23, 44488), (26, 44521), (33, 44602),

Gene: Ganandorf\_67 Start: 42541, Stop: 42735, Start Num: 18

Candidate Starts for Ganandorf\_67:

(Start: 18 @42541 has 45 MA's), (22, 42574), (23, 42580), (29, 42640), (33, 42682),

Gene: Gina\_72 Start: 42545, Stop: 42793, Start Num: 18

Candidate Starts for Gina\_72:

(17, 42542), (Start: 18 @42545 has 45 MA's), (22, 42578), (23, 42584), (27, 42620), (33, 42704),

Gene: Glorp\_69 Start: 42505, Stop: 42699, Start Num: 18

Candidate Starts for Glorp\_69:

(Start: 18 @42505 has 45 MA's), (22, 42538), (23, 42544), (29, 42604), (33, 42646),

Gene: Hermeonysus\_68 Start: 42430, Stop: 42624, Start Num: 18

Candidate Starts for Hermeonysus\_68:

(Start: 18 @42430 has 45 MA's), (22, 42463), (23, 42469), (29, 42529), (33, 42571), (34, 42595),

Gene: Honeyfin\_69 Start: 42690, Stop: 42884, Start Num: 18

Candidate Starts for Honeyfin\_69:

(Start: 18 @42690 has 45 MA's), (22, 42723), (23, 42729), (29, 42789), (33, 42831), (34, 42855),

Gene: Jayden\_69 Start: 42907, Stop: 43149, Start Num: 18

Candidate Starts for Jayden\_69:

(Start: 18 @42907 has 45 MA's), (20, 42919), (22, 42940), (23, 42946), (25, 42970), (29, 43018), (33, 43060),

Gene: Jefe\_68 Start: 42491, Stop: 42685, Start Num: 18

Candidate Starts for Jefe\_68:

(Start: 18 @42491 has 45 MA's), (22, 42524), (23, 42530), (29, 42590), (33, 42632),

Gene: Jollipop\_69 Start: 42879, Stop: 43073, Start Num: 18

Candidate Starts for Jollipop\_69:

(Start: 18 @42879 has 45 MA's), (22, 42912), (23, 42918), (29, 42978), (33, 43020),

Gene: KaiHaiDragon\_69 Start: 42445, Stop: 42639, Start Num: 18

Candidate Starts for KaiHaiDragon\_69:

(Start: 18 @42445 has 45 MA's), (22, 42478), (23, 42484), (29, 42544), (33, 42586),

Gene: Kowalski\_67 Start: 42516, Stop: 42710, Start Num: 18

Candidate Starts for Kowalski\_67:

(Start: 18 @42516 has 45 MA's), (22, 42549), (23, 42555), (29, 42615), (33, 42657),

Gene: Kozie\_66 Start: 43163, Stop: 43441, Start Num: 16

Candidate Starts for Kozie\_66:

(Start: 16 @43163 has 1 MA's), (23, 43208), (29, 43280), (33, 43322),

Gene: LittleFortune\_70 Start: 42801, Stop: 42995, Start Num: 18

Candidate Starts for LittleFortune\_70:

(Start: 18 @42801 has 45 MA's), (22, 42834), (23, 42840), (29, 42900), (33, 42942), (34, 42966),

Gene: Lucretia\_68 Start: 42423, Stop: 42617, Start Num: 18

Candidate Starts for Lucretia\_68:

(Start: 18 @42423 has 45 MA's), (22, 42456), (23, 42462), (29, 42522), (33, 42564),

Gene: Margaery\_66 Start: 43326, Stop: 43547, Start Num: 15

Candidate Starts for Margaery\_66:

(14, 43314), (Start: 15 @43326 has 6 MA's), (22, 43368), (23, 43374), (30, 43479), (33, 43491),

Gene: Matzah\_69 Start: 44187, Stop: 44408, Start Num: 15

Candidate Starts for Matzah\_69:

(14, 44175), (Start: 15 @44187 has 6 MA's), (20, 44208), (22, 44229), (23, 44235), (30, 44340), (33, 44352),

Gene: MementoMori\_68 Start: 43782, Stop: 43997, Start Num: 15

Candidate Starts for MementoMori\_68:

(14, 43770), (Start: 15 @43782 has 6 MA's), (20, 43803), (22, 43824), (23, 43830), (30, 43935), (33, 43947),

Gene: Merry\_ Start: 44599, Stop: 44841, Start Num: 18

Candidate Starts for Merry\_:

(6, 44344), (12, 44527), (13, 44536), (Start: 18 @44599 has 45 MA's), (20, 44611), (23, 44638), (29, 44710), (30, 44740), (33, 44752),

Gene: Metamorphoo\_71 Start: 43743, Stop: 43985, Start Num: 18

Candidate Starts for Metamorphoo\_71:

(4, 43470), (7, 43533), (9, 43542), (10, 43557), (Start: 18 @43743 has 45 MA's), (22, 43776), (23, 43782), (26, 43815), (33, 43896),

Gene: NoodlelyBoi\_69 Start: 43290, Stop: 43484, Start Num: 18

Candidate Starts for NoodlelyBoi\_69:

(2, 42996), (3, 43005), (5, 43032), (Start: 18 @43290 has 45 MA's), (22, 43323), (23, 43329), (29, 43389), (33, 43431), (34, 43455),

Gene: Onika\_67 Start: 42519, Stop: 42713, Start Num: 18

Candidate Starts for Onika\_67:

(Start: 18 @42519 has 45 MA's), (22, 42552), (23, 42558), (29, 42618), (33, 42660), (34, 42684),

Gene: Paschalis\_68 Start: 42544, Stop: 42738, Start Num: 18

Candidate Starts for Paschalis\_68:

(Start: 18 @42544 has 45 MA's), (22, 42577), (23, 42583), (29, 42643), (33, 42685),

Gene: PhedwardCullen\_66 Start: 42261, Stop: 42455, Start Num: 18

Candidate Starts for PhedwardCullen\_66:

(Start: 18 @42261 has 45 MA's), (22, 42294), (23, 42300), (29, 42360), (33, 42402),

Gene: Phorgeous\_68 Start: 42327, Stop: 42521, Start Num: 18

Candidate Starts for Phorgeous\_68:

(Start: 18 @42327 has 45 MA's), (22, 42360), (23, 42366), (29, 42426), (33, 42468),

Gene: Phrancesco\_68 Start: 42650, Stop: 42844, Start Num: 18

Candidate Starts for Phrancesco\_68:

(Start: 18 @42650 has 45 MA's), (22, 42683), (23, 42689), (29, 42749), (33, 42791),

Gene: PierreOrion\_68 Start: 42756, Stop: 42950, Start Num: 18

Candidate Starts for PierreOrion\_68:

(Start: 18 @42756 has 45 MA's), (22, 42789), (23, 42795), (29, 42855), (33, 42897),

Gene: PiperSansNom\_69 Start: 42829, Stop: 43023, Start Num: 18

Candidate Starts for PiperSansNom\_69:

(Start: 18 @42829 has 45 MA's), (22, 42862), (23, 42868), (29, 42928), (33, 42970), (34, 42994),

Gene: Piperis\_69 Start: 42452, Stop: 42646, Start Num: 18

Candidate Starts for Piperis\_69:

(Start: 18 @42452 has 45 MA's), (22, 42485), (23, 42491), (29, 42551), (33, 42593),

Gene: Pulchra\_70 Start: 42848, Stop: 43042, Start Num: 18

Candidate Starts for Pulchra\_70:

(Start: 18 @42848 has 45 MA's), (22, 42881), (23, 42887), (29, 42947), (33, 42989),

Gene: Quhwah\_72 Start: 43137, Stop: 43331, Start Num: 18

Candidate Starts for Quhwah\_72:

(Start: 18 @43137 has 45 MA's), (22, 43170), (23, 43176), (29, 43236), (33, 43278),

Gene: Ramiel05\_67 Start: 42516, Stop: 42710, Start Num: 18

Candidate Starts for Ramiel05\_67:

(Start: 18 @42516 has 45 MA's), (22, 42549), (23, 42555), (29, 42615), (33, 42657),

Gene: RobsFeet\_72 Start: 44029, Stop: 44271, Start Num: 18

Candidate Starts for RobsFeet\_72:

(Start: 18 @44029 has 45 MA's), (20, 44041), (22, 44062), (23, 44068), (26, 44101), (33, 44182),

Gene: Rockwell\_67 Start: 42540, Stop: 42734, Start Num: 18

Candidate Starts for Rockwell\_67:

(Start: 18 @42540 has 45 MA's), (22, 42573), (23, 42579), (29, 42639), (33, 42681), (34, 42705),

Gene: Savannah\_67 Start: 42567, Stop: 42761, Start Num: 18

Candidate Starts for Savannah\_67:

(Start: 18 @42567 has 45 MA's), (22, 42600), (23, 42606), (29, 42666), (33, 42708),

Gene: Scumberland\_70 Start: 42762, Stop: 42956, Start Num: 18

Candidate Starts for Scumberland\_70:

(Start: 18 @42762 has 45 MA's), (22, 42795), (23, 42801), (29, 42861), (33, 42903),

Gene: Selwyn23\_69 Start: 42679, Stop: 42873, Start Num: 18

Candidate Starts for Selwyn23\_69:

(Start: 18 @42679 has 45 MA's), (22, 42712), (23, 42718), (29, 42778), (33, 42820),

Gene: Shotgun\_68 Start: 42446, Stop: 42640, Start Num: 18

Candidate Starts for Shotgun\_68:

(Start: 18 @42446 has 45 MA's), (22, 42479), (23, 42485), (29, 42545), (33, 42587),

Gene: Shrubaron\_72 Start: 43624, Stop: 43866, Start Num: 18

Candidate Starts for Shrubaron\_72:

(1, 43318), (4, 43351), (7, 43414), (9, 43423), (10, 43438), (Start: 18 @43624 has 45 MA's), (20, 43636), (22, 43657), (23, 43663), (26, 43696), (33, 43777),

Gene: SirFrank\_68 Start: 42736, Stop: 42930, Start Num: 18

Candidate Starts for SirFrank\_68:

(2, 42442), (3, 42451), (5, 42478), (8, 42532), (11, 42622), (Start: 18 @42736 has 45 MA's), (22, 42769), (23, 42775), (29, 42835), (33, 42877), (34, 42901),

Gene: Skugga\_68 Start: 42934, Stop: 43182, Start Num: 18

Candidate Starts for Skugga\_68:

(Start: 18 @42934 has 45 MA's), (21, 42955), (22, 42967), (23, 42973), (24, 42994), (27, 43009), (33, 43093),

Gene: Smarties\_78 Start: 44331, Stop: 44549, Start Num: 18

Candidate Starts for Smarties\_78:

(Start: 18 @44331 has 45 MA's), (20, 44343), (28, 44409),

Gene: Sunny\_ Start: 44601, Stop: 44843, Start Num: 18

Candidate Starts for Sunny\_:

(6, 44346), (12, 44529), (13, 44538), (Start: 18 @44601 has 45 MA's), (20, 44613), (23, 44640), (29, 44712), (30, 44742), (33, 44754),

Gene: Teamocil\_72 Start: 42638, Stop: 42886, Start Num: 18

Candidate Starts for Teamocil\_72:

(17, 42635), (Start: 18 @42638 has 45 MA's), (22, 42671), (23, 42677), (27, 42713), (33, 42797),

Gene: Terij\_66 Start: 42367, Stop: 42636, Start Num: 15

Candidate Starts for Terij\_66:

(Start: 15 @42367 has 6 MA's), (19, 42382), (22, 42409), (23, 42415), (30, 42520), (31, 42526),

Gene: Tyumbra\_67 Start: 43254, Stop: 43496, Start Num: 18

Candidate Starts for Tyumbra\_67:

(Start: 18 @43254 has 45 MA's), (20, 43266), (22, 43287), (23, 43293), (26, 43326), (33, 43407),

Gene: Yeti\_70 Start: 42478, Stop: 42672, Start Num: 18

Candidate Starts for Yeti\_70:

(Start: 18 @42478 has 45 MA's), (22, 42511), (23, 42517), (29, 42577), (33, 42619), (34, 42643),

Gene: Zapato\_68 Start: 43209, Stop: 43409, Start Num: 18

Candidate Starts for Zapato\_68:

(Start: 18 @43209 has 45 MA's), (20, 43221), (22, 43242), (23, 43248), (33, 43362),