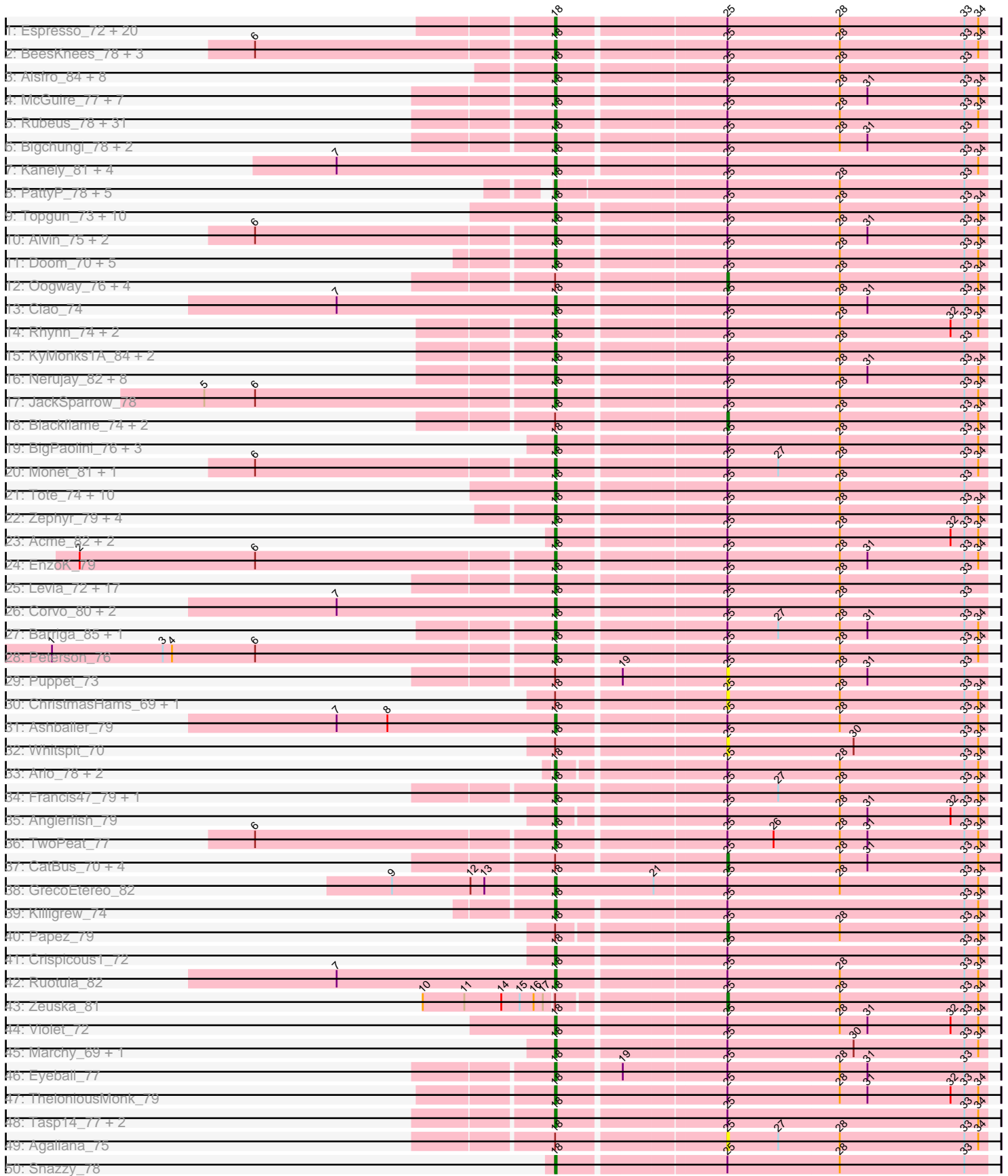


Pham 301041



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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 301041 Report

This analysis was run 06/08/26 on database version 649.

Pham number 301041 has 240 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Espresso\_72, MilleFeuille\_79, Makemake\_81, Seanderson\_77, BK1\_72, Sumter\_75, HarryOW\_79, Manatee\_76, BillKnuckles\_71, Target\_77, Solon\_73, Tripl3t\_81, SwissCheese\_82, Kugel\_79, Gandalf20\_77, Jorgensen\_87, Gwendoluna\_82, Bethlehem\_81, BaconJack\_80, A6\_72, Pari\_83
- Track 2 : BeesKnees\_78, Traft412\_77, Bxb1\_72, Rajelicia\_79
- Track 3 : Alsfro\_84, Dulcie\_79, Blesser\_72, Ichabod\_80, Lesedi\_75, PinkPlastic\_73, Briton15\_80, Graduation\_81, Seabiscuit\_78
- Track 4 : McGuire\_77, Hermia\_73, Homines\_66, Noxious\_74, KikiBouba\_74, Sorpresa\_77, Wheeler\_83, Gyzlar\_70
- Track 5 : Rubeus\_78, Blue\_74, Adahisdi\_73, PherrisBueller\_76, Dreamboat\_77, Bircsak\_78, Bruns\_80, Ringer\_78, Beatrix\_74, JC27\_81, Trouble\_78, Sagefire\_74, Ajay\_74, Treddle\_79, DrFeelGood\_74, StrongArm\_73, McSinger\_76, Turj99\_74, Euphoria\_79, Marcell\_70, Michley\_78, Pelly\_81, Raid\_75, Chanagan\_74, Bexan\_72, Magnito\_77, Norz\_73, Kykar\_77, Jasper\_76, Gompeii16\_78, PowerRanger\_73, Carlyle\_78
- Track 6 : Bigchunggi\_78, ShortQueendom\_72, GageAP\_80
- Track 7 : Kanely\_81, Altman\_82, Atkinbua\_86, ConceptII\_84, HanShotFirst\_75
- Track 8 : PattyP\_78, Slagathor\_78, Museum\_78, NEHalo\_74, Molly\_78, Arcanine\_81
- Track 9 : Topgun\_73, Maroc7\_79, Phlippers\_75, BPBiebs31\_83, Wilkins\_74, Bigfoot\_72, U2\_72, Fascinus\_73, MrGordo\_79, Big3\_79, CactusRose\_80
- Track 10 : Alvin\_75, Hope4ever\_79, Sunshine924\_80
- Track 11 : Doom\_70, PhrostyMug\_80, Smairt\_83, Mule\_78, Zeeculate\_74, PascalRango\_76
- Track 12 : Oogway\_76, Iqorha\_69, Sanya\_72, Teodoridan\_75, Inyanga\_69
- Track 13 : Ciao\_74
- Track 14 : Rhynn\_74, Fenn\_80, Naira\_79
- Track 15 : KyMonks1A\_84, Niza\_78, STLscum\_84
- Track 16 : Nerujay\_82, Lamina13\_81, Dynamix\_77, HermioneGrange\_81, Watermelon\_81, BigMau\_80, Scowl\_78, Jerm2\_79, Marge\_74
- Track 17 : JackSparrow\_78
- Track 18 : Blackflame\_74, Dexes\_81, Bones\_73
- Track 19 : BigPaolini\_76, Licorice\_80, KBG\_76, Magnar\_74
- Track 20 : Monet\_81, Edtherson\_76
- Track 21 : Tote\_74, Sibs6\_78, Burton\_79, PSullivan\_76, Moose\_80, Swole\_79, Lopton\_77, Forsytheast\_80, MPlant7149\_78, JuliaChild\_79, Pita2\_79
- Track 22 : Zephyr\_79, Pinto\_77, Nhonho\_74, Paphu\_75, Petp2012\_78

- Track 23 : Acme\_82, Greg\_81, Fajezeel\_81
- Track 24 : EnzoK\_79
- Track 25 : Levia\_72, GMonster\_75, Abbyshoes\_78, AFIS\_75, Dussy\_77, Perseus\_78, Thor\_81, BluSpix\_76, SarFire\_81, Marsha\_78, BarrowTuph\_81, Kenmech\_80, PhineBark\_74, IgnatiusPatJac\_78, StewieG\_74, Ohno789\_81, Aeneas\_83, SpikeBT\_75
- Track 26 : Corvo\_80, MaryBeth\_76, MetalQZJ\_75
- Track 27 : Barriga\_85, DD5\_75
- Track 28 : Peterson\_76
- Track 29 : Puppet\_73
- Track 30 : ChristmasHams\_69, Mkhuseli\_75
- Track 31 : Ashballer\_79
- Track 32 : Whitspit\_70
- Track 33 : Arlo\_78, Fushigi\_71, KSSJEB\_75
- Track 34 : Francis47\_79, PacerPaul\_82
- Track 35 : Anglerfish\_79
- Track 36 : TwoPeat\_77
- Track 37 : CatBus\_70, Aldrich\_70, GroundGoblin\_72, Sandaddy\_76, DirtDevil\_72
- Track 38 : GrecoEtereo\_82
- Track 39 : Killigrew\_74
- Track 40 : Papez\_79
- Track 41 : Crispicous1\_72
- Track 42 : Ruotula\_82
- Track 43 : Zeuska\_81
- Track 44 : Violet\_72
- Track 45 : Marchy\_69, Hami1\_70
- Track 46 : Eyeball\_77
- Track 47 : TheloniousMonk\_79
- Track 48 : Tasp14\_77, QTRlifeCrisis\_77, Abrogate\_750
- Track 49 : Agaliana\_75
- Track 50 : Snazzy\_78
- Track 51 : Mryolo\_73
- Track 52 : Switzer\_76
- Track 53 : Paraselene\_75
- Track 54 : Parliament\_79
- Track 55 : Petruchio\_78
- Track 56 : Pippin\_78
- Track 57 : Applejack\_77
- Track 58 : CartmannCramer\_74
- Track 59 : DreamCatcher\_81
- Track 60 : ProMouse\_77
- Track 61 : Squee\_78
- Track 62 : Rutherford\_80
- Track 63 : Pepe\_71
- Track 64 : Buttons\_75
- Track 65 : SkiPole\_86
- Track 66 : Rufus\_80
- Track 67 : Rohr\_80
- Track 68 : ILeeKay\_75
- Track 69 : Bob3\_78
- Track 70 : Emmina\_43, Teaspoon\_44
- Track 71 : NonchalantPear\_43
- Track 72 : Porky\_41

- Track 73 : Stellammi\_194

**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 206 of the 221 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6\_72, AFIS\_75, Abbyshoes\_78, Abrogate\_750, Acme\_82, Adahisdi\_73, Aeneas\_83, Ajay\_74, Alsfro\_84, Altman\_82, Alvin\_75, Anglerfish\_79, Arcanine\_81, Arlo\_78, Ashballer\_79, Atkinbua\_86, BK1\_72, BPBiebs31\_83, BaconJack\_80, Barriga\_85, BarrowTuph\_81, Beatrix\_74, BeesKnees\_78, Bethlehem\_81, Bexan\_72, Big3\_79, BigMau\_80, BigPaolini\_76, Bigchungi\_78, Bigfoot\_72, BillKnuckles\_71, Bircsak\_78, Blesser\_72, BluSpix\_76, Blue\_74, Briton15\_80, Bruns\_80, Burton\_79, Bxb1\_72, CactusRose\_80, Carlyle\_78, Chanagan\_74, Ciao\_74, ConceptII\_84, Corvo\_80, Crispicous1\_72, DD5\_75, Doom\_70, DrFeelGood\_74, DreamCatcher\_81, Dreamboat\_77, Dulcie\_79, Dussy\_77, Dynamix\_77, Edtherson\_76, EnzoK\_79, Espresso\_72, Euphoria\_79, Eyeball\_77, Fajezeel\_81, Fascinus\_73, Fenn\_80, Forsytheast\_80, Francis47\_79, Fushigi\_71, GMonster\_75, GageAP\_80, Gandalf20\_77, Gompeii16\_78, Graduation\_81, GrecoEtereo\_82, Greg\_81, Gwendoluna\_82, Gyzlar\_70, Hami1\_70, HanShotFirst\_75, HarryOW\_79, Hermia\_73, HermioneGrange\_81, Homines\_66, Hope4ever\_79, ILeeKay\_75, Ichabod\_80, IgnatiusPatJac\_78, JC27\_81, JackSparrow\_78, Jasper\_76, Jerm2\_79, Jorgensen\_87, JuliaChild\_79, KBG\_76, KSSJEB\_75, Kanely\_81, Kenmech\_80, KikiBouba\_74, Killigrew\_74, Kugel\_79, KyMonks1A\_84, Kykar\_77, Lamina13\_81, Lesedi\_75, Levia\_72, Licorice\_80, Lopton\_77, MPlant7149\_78, Magnar\_74, Magnito\_77, Makemake\_81, Manatee\_76, Marcell\_70, Marchy\_69, Marge\_74, Maroc7\_79, Marsha\_78, MaryBeth\_76, McGuire\_77, McSinger\_76, MetalQZJ\_75, Michley\_78, MilleFeuille\_79, Molly\_78, Monet\_81, Moose\_80, MrGordo\_79, Mryolo\_73, Mule\_78, Museum\_78, NEHalo\_74, Naira\_79, Nerujay\_82, Nhonho\_74, Niza\_78, Norz\_73, Noxious\_74, Ohno789\_81, PSullivan\_76, PacerPaul\_82, Paphu\_75, Paraselene\_75, Pari\_83, Parliament\_79, PascalRango\_76, PattyP\_78, Pelly\_81, Perseus\_78, Peterson\_76, Petp2012\_78, Petruccio\_78, PherrisBueller\_76, PhineBark\_74, Phlippers\_75, PhrostyMug\_80, PinkPlastic\_73, Pinto\_77, Pippin\_78, Pita2\_79, PowerRanger\_73, QTRlifeCrisis\_77, Raid\_75, Rajelicia\_79, Rhynn\_74, Ringer\_78, Rohr\_80, Rubeus\_78, Rufus\_80, Ruotula\_82, Rutherferd\_80, STLscum\_84, Sagefire\_74, SarFire\_81, Scowl\_78, Seabiscuit\_78, Seanderson\_77, ShortQueendom\_72, Sibs6\_78, SkiPole\_86, Slagathor\_78, Smairt\_83, Snazzy\_78, Solon\_73, Sorpresa\_77, SpikeBT\_75, Squee\_78, StewieG\_74, StrongArm\_73, Sumter\_75, Sunshine924\_80, SwissCheese\_82, Switzer\_76, Swole\_79, Target\_77, Tasp14\_77, TheloniousMonk\_79, Thor\_81, Topgun\_73, Tote\_74, Traft412\_77, Treddle\_79, Tripl3t\_81, Trouble\_78, Turj99\_74, TwoPeat\_77, U2\_72, Violet\_72, Watermelon\_81, Wheeler\_83, Wilkins\_74, Zeeculate\_74, Zephyr\_79,

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

- Agaliana\_75, Aldrich\_70, Applejack\_77, Blackflame\_74, Bob3\_78, Bones\_73, Buttons\_75, CartmannCramer\_74, CatBus\_70, ChristmasHams\_69, Dexes\_81, DirtDevil\_72, GroundGoblin\_72, Inyanga\_69, Iqorha\_69, Mkhuseleli\_75, Oogway\_76, Papez\_79, Pepe\_71, ProMouse\_77, Puppet\_73, Sandaddy\_76, Sanya\_72, Teodoridan\_75, Whitspit\_70, Zeuska\_81,

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

- Emmina\_43, NonchalantPear\_43, Porky\_41, Stellammi\_194, Teaspoon\_44,

### Summary by start number:

Start 18:

- Found in 235 of 240 ( 97.9% ) of genes in pham
- Manual Annotations of this start: 206 of 221
- Called 88.9% of time when present
- Phage (with cluster) where this start called: A6\_72 (A1), AFIS\_75 (A1), Abbyshoes\_78 (A1), Abrogate\_750 (A1), Acme\_82 (A1), Adahisdi\_73 (A1), Aeneas\_83 (A1), Ajay\_74 (A1), Alsfro\_84 (A1), Altman\_82 (A1), Alvin\_75 (A1), Anglerfish\_79 (A1), Arcanine\_81 (A1), Arlo\_78 (A1), Ashballer\_79 (A1), Atkinbua\_86 (A1), BK1\_72 (A1), BPBiebs31\_83 (A1), BaconJack\_80 (A1), Barriga\_85 (A1), BarrowTuph\_81 (A1), Beatrix\_74 (A1), BeesKnees\_78 (A1), Bethlehem\_81 (A1), Bexan\_72 (A1), Big3\_79 (A1), BigMau\_80 (A1), BigPaolini\_76 (A1), Bigchungi\_78 (A1), Bigfoot\_72 (A1), BillKnuckles\_71 (A1), Bircsak\_78 (A1), Blessor\_72 (A1), BluSpix\_76 (A1), Blue\_74 (A1), Briton15\_80 (A1), Bruns\_80 (A1), Burton\_79 (A1), Bxb1\_72 (A1), CactusRose\_80 (A1), Carlyle\_78 (A1), Chanagan\_74 (A1), Ciao\_74 (A1), Conceptll\_84 (A1), Corvo\_80 (A1), Crispicous1\_72 (A1), DD5\_75 (A1), Doom\_70 (A1), DrFeelGood\_74 (A1), DreamCatcher\_81 (A1), Dreamboat\_77 (A1), Dulcie\_79 (A1), Dussy\_77 (A1), Dynamix\_77 (A1), Edtherson\_76 (A1), EnzoK\_79 (A1), Espresso\_72 (A1), Euphoria\_79 (A1), Eyeball\_77 (A1), Fajezeel\_81 (A1), Fascinus\_73 (A1), Fenn\_80 (A1), Forsytheast\_80 (A1), Francis47\_79 (A1), Fushigi\_71 (A1), GMonster\_75 (A1), GageAP\_80 (A1), Gandalf20\_77 (A1), Gompeii16\_78 (A1), Graduation\_81 (A1), GrecoEtereo\_82 (A1), Greg\_81 (A1), Gwendoluna\_82 (A1), Gyzlar\_70 (A1), Hami1\_70 (A1), HanShotFirst\_75 (A1), HarryOW\_79 (A1), Hermia\_73 (A1), HermioneGrange\_81 (A1), Homines\_66 (A1), Hope4ever\_79 (A1), ILeeKay\_75 (A1), Ichabod\_80 (A1), IgnatiusPatJac\_78 (A1), JC27\_81 (A1), JackSparrow\_78 (A1), Jasper\_76 (A1), Jerm2\_79 (A1), Jorgensen\_87 (A1), JuliaChild\_79 (A1), KBG\_76 (A1), KSSJEB\_75 (A1), Kanely\_81 (A1), Kenmech\_80 (A1), KikiBouba\_74 (A1), Killigrew\_74 (A1), Kugel\_79 (A1), KyMonks1A\_84 (A1), Kykar\_77 (A1), Lamina13\_81 (A1), Lesedi\_75 (A1), Levia\_72 (A1), Licorice\_80 (A1), Lopton\_77 (A1), MPlant7149\_78 (A1), Magnar\_74 (A1), Magnito\_77 (A1), Makemake\_81 (A1), Manatee\_76 (A1), Marcell\_70 (A1), Marchy\_69 (A1), Marge\_74 (A1), Maroc7\_79 (A1), Marsha\_78 (A1), MaryBeth\_76 (A1), McGuire\_77 (A1), McSinger\_76 (A1), MetalQZJ\_75 (A1), Michley\_78 (A1), MilleFeuille\_79 (A1), Molly\_78 (A1), Monet\_81 (A1), Moose\_80 (A1), MrGordo\_79 (A1), Mryolo\_73 (A1), Mule\_78 (A1), Museum\_78 (A1), NEHalo\_74 (A1), Naira\_79 (A1), Nerujay\_82 (A1), Nhonho\_74 (A1), Niza\_78 (A1), Norz\_73 (A1), Noxious\_74 (A1), Ohno789\_81 (A1), PSullivan\_76 (A1), PacerPaul\_82 (A1), Paphu\_75 (A1), Paraselene\_75 (A1), Pari\_83 (A1), Parliament\_79 (A1), PascalRango\_76 (A1), PattyP\_78 (A1), Pelly\_81 (A1), Perseus\_78 (A1), Peterson\_76 (A1), Petp2012\_78 (A1), Petruccio\_78 (A1), PherrisBueller\_76 (A1), PhineBark\_74 (A1), Phlippers\_75 (A1), PhrostyMug\_80 (A1), PinkPlastic\_73 (A1), Pinto\_77 (A1), Pippin\_78 (A1), Pita2\_79 (A1), PowerRanger\_73 (A1), QTRlifeCrisis\_77 (A1), Raid\_75 (A1), Rajelicia\_79 (A1), Rhynn\_74 (A1), Ringer\_78 (A1), Rohr\_80 (A1), Rubeus\_78 (A1), Rufus\_80 (A1), Ruotula\_82 (A1), Rutherferd\_80 (A1), STLscum\_84 (A1), Sagefire\_74 (A1), SarFire\_81 (A1), Scowl\_78 (A1), Seabiscuit\_78 (A1), Seanderson\_77 (A1), ShortQueendom\_72 (A1), Sibs6\_78 (A1), SkiPole\_86 (A1), Slagathor\_78 (A1), Smairt\_83 (A1), Snazzy\_78 (A1), Solon\_73 (A1), Sorpresa\_77 (A1), SpikeBT\_75 (A1), Squee\_78 (A1), StewieG\_74 (A1), StrongArm\_73 (A1), Sumter\_75 (A1),

Sunshine924\_80 (A1), SwissCheese\_82 (A1), Switzer\_76 (A1), Swole\_79 (A1), Target\_77 (A1), Tasp14\_77 (A1), ThelioniousMonk\_79 (A1), Thor\_81 (A1), Topgun\_73 (A1), Tote\_74 (A1), Traft412\_77 (A1), Treddle\_79 (A1), Tripl3t\_81 (A1), Trouble\_78 (A1), Turj99\_74 (A1), TwoPeat\_77 (A1), U2\_72 (A1), Violet\_72 (A1), Watermelon\_81 (A1), Wheeler\_83 (A1), Wilkins\_74 (A1), Zeeculate\_74 (A1), Zephyr\_79 (A1),

**Start 23:**

- Found in 1 of 240 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 221
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Stellammi\_194 (UNK),

**Start 24:**

- Found in 2 of 240 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 221
- Called 50.0% of time when present
- Phage (with cluster) where this start called: NonchalantPear\_43 (E),

**Start 25:**

- Found in 239 of 240 ( 99.6% ) of genes in pham
- Manual Annotations of this start: 13 of 221
- Called 12.1% of time when present
- Phage (with cluster) where this start called: Agaliana\_75 (A1), Aldrich\_70 (A1), Applejack\_77 (A1), Blackflame\_74 (A1), Bob3\_78 (A1), Bones\_73 (A1), Buttons\_75 (A1), CartmannCramer\_74 (A1), CatBus\_70 (A1), ChristmasHams\_69 (A1), Dexes\_81 (A1), DirtDevil\_72 (A1), Emmina\_43 (E), GroundGoblin\_72 (A1), Inyanga\_69 (A1), Iqorha\_69 (A1), Mkhuseleli\_75 (A1), Oogway\_76 (A1), Papez\_79 (A1), Pepe\_71 (A1), Porky\_41 (E), ProMouse\_77 (A1), Puppet\_73 (A1), Sandaddy\_76 (A1), Sanya\_72 (A1), Teaspoon\_44 (E), Teodoridan\_75 (A1), Whitspit\_70 (A1), Zeuska\_81 (A1),

**Summary by clusters:**

There are 3 clusters represented in this pham: A1, UNK, E,

Info for manual annotations of cluster A1:

- Start number 18 was manually annotated 206 times for cluster A1.
- Start number 25 was manually annotated 10 times for cluster A1.

Info for manual annotations of cluster E:

- Start number 24 was manually annotated 1 time for cluster E.
- Start number 25 was manually annotated 3 times for cluster E.

Info for manual annotations of cluster UNK:

- Start number 23 was manually annotated 1 time for cluster UNK.

**Gene Information:**

Gene: A6\_72 Start: 44932, Stop: 44663, Start Num: 18

Candidate Starts for A6\_72:

(Start: 18 @44932 has 206 MA's), (Start: 25 @44830 has 13 MA's), (28, 44758), (33, 44677), (34, 44668),

Gene: AFIS\_75 Start: 47953, Stop: 47684, Start Num: 18

Candidate Starts for AFIS\_75:

(Start: 18 @47953 has 206 MA's), (Start: 25 @47851 has 13 MA's), (28, 47779), (33, 47698),

Gene: Abbysshoes\_78 Start: 47206, Stop: 46937, Start Num: 18

Candidate Starts for Abbysshoes\_78:

(Start: 18 @47206 has 206 MA's), (Start: 25 @47104 has 13 MA's), (28, 47032), (33, 46951),

Gene: Abrogate\_750 Start: 47919, Stop: 47650, Start Num: 18

Candidate Starts for Abrogate\_750:

(Start: 18 @47919 has 206 MA's), (Start: 25 @47817 has 13 MA's), (33, 47664), (34, 47655),

Gene: Acme\_82 Start: 49460, Stop: 49191, Start Num: 18

Candidate Starts for Acme\_82:

(Start: 18 @49460 has 206 MA's), (Start: 25 @49358 has 13 MA's), (28, 49286), (32, 49214), (33, 49205), (34, 49196),

Gene: Adahisdi\_73 Start: 47104, Stop: 46835, Start Num: 18

Candidate Starts for Adahisdi\_73:

(Start: 18 @47104 has 206 MA's), (Start: 25 @47002 has 13 MA's), (28, 46930), (33, 46849), (34, 46840),

Gene: Aeneas\_83 Start: 49565, Stop: 49296, Start Num: 18

Candidate Starts for Aeneas\_83:

(Start: 18 @49565 has 206 MA's), (Start: 25 @49463 has 13 MA's), (28, 49391), (33, 49310),

Gene: Agaliana\_75 Start: 45820, Stop: 45653, Start Num: 25

Candidate Starts for Agaliana\_75:

(Start: 18 @45922 has 206 MA's), (Start: 25 @45820 has 13 MA's), (27, 45787), (28, 45748), (33, 45667), (34, 45658),

Gene: Ajay\_74 Start: 46305, Stop: 46036, Start Num: 18

Candidate Starts for Ajay\_74:

(Start: 18 @46305 has 206 MA's), (Start: 25 @46203 has 13 MA's), (28, 46131), (33, 46050), (34, 46041),

Gene: Aldrich\_70 Start: 45693, Stop: 45517, Start Num: 25

Candidate Starts for Aldrich\_70:

(Start: 18 @45795 has 206 MA's), (Start: 25 @45693 has 13 MA's), (28, 45621), (31, 45603), (33, 45540), (34, 45531),

Gene: Alsfro\_84 Start: 47668, Stop: 47399, Start Num: 18

Candidate Starts for Alsfro\_84:

(Start: 18 @47668 has 206 MA's), (Start: 25 @47566 has 13 MA's), (28, 47494), (33, 47413),

Gene: Altman\_82 Start: 48592, Stop: 48323, Start Num: 18

Candidate Starts for Altman\_82:

(7, 48733), (Start: 18 @48592 has 206 MA's), (Start: 25 @48490 has 13 MA's), (33, 48337), (34, 48328),

Gene: Alvin\_75 Start: 46525, Stop: 46256, Start Num: 18

Candidate Starts for Alvin\_75:

(6, 46714), (Start: 18 @46525 has 206 MA's), (Start: 25 @46423 has 13 MA's), (28, 46351), (31, 46333), (33, 46270), (34, 46261),

Gene: Anglerfish\_79 Start: 48433, Stop: 48167, Start Num: 18

Candidate Starts for Anglerfish\_79:

(Start: 18 @48433 has 206 MA's), (Start: 25 @48334 has 13 MA's), (28, 48262), (31, 48244), (32, 48190), (33, 48181), (34, 48172),

Gene: Applejack\_77 Start: 45484, Stop: 45317, Start Num: 25

Candidate Starts for Applejack\_77:

(Start: 18 @45586 has 206 MA's), (Start: 25 @45484 has 13 MA's), (28, 45412), (33, 45331), (34, 45322),

Gene: Arcanine\_81 Start: 49041, Stop: 48769, Start Num: 18

Candidate Starts for Arcanine\_81:

(Start: 18 @49041 has 206 MA's), (Start: 25 @48936 has 13 MA's), (28, 48864), (33, 48783),

Gene: Arlo\_78 Start: 47997, Stop: 47731, Start Num: 18

Candidate Starts for Arlo\_78:

(Start: 18 @47997 has 206 MA's), (Start: 25 @47898 has 13 MA's), (28, 47826), (33, 47745), (34, 47736),

Gene: Ashballer\_79 Start: 48035, Stop: 47766, Start Num: 18

Candidate Starts for Ashballer\_79:

(7, 48176), (8, 48143), (Start: 18 @48035 has 206 MA's), (Start: 25 @47933 has 13 MA's), (28, 47861), (33, 47780), (34, 47771),

Gene: Atkinbua\_86 Start: 49400, Stop: 49131, Start Num: 18

Candidate Starts for Atkinbua\_86:

(7, 49541), (Start: 18 @49400 has 206 MA's), (Start: 25 @49298 has 13 MA's), (33, 49145), (34, 49136),

Gene: BK1\_72 Start: 44932, Stop: 44663, Start Num: 18

Candidate Starts for BK1\_72:

(Start: 18 @44932 has 206 MA's), (Start: 25 @44830 has 13 MA's), (28, 44758), (33, 44677), (34, 44668),

Gene: BPBiebs31\_83 Start: 49112, Stop: 48843, Start Num: 18

Candidate Starts for BPBiebs31\_83:

(Start: 18 @49112 has 206 MA's), (Start: 25 @49010 has 13 MA's), (28, 48938), (33, 48857), (34, 48848),

Gene: BaconJack\_80 Start: 49267, Stop: 48998, Start Num: 18

Candidate Starts for BaconJack\_80:

(Start: 18 @49267 has 206 MA's), (Start: 25 @49165 has 13 MA's), (28, 49093), (33, 49012), (34, 49003),

Gene: Barriga\_85 Start: 48133, Stop: 47864, Start Num: 18

Candidate Starts for Barriga\_85:

(Start: 18 @48133 has 206 MA's), (Start: 25 @48031 has 13 MA's), (27, 47998), (28, 47959), (31, 47941), (33, 47878), (34, 47869),

Gene: BarrowTuph\_81 Start: 48313, Stop: 48044, Start Num: 18  
Candidate Starts for BarrowTuph\_81:  
(Start: 18 @48313 has 206 MA's), (Start: 25 @48211 has 13 MA's), (28, 48139), (33, 48058),

Gene: Beatrix\_74 Start: 47100, Stop: 46831, Start Num: 18  
Candidate Starts for Beatrix\_74:  
(Start: 18 @47100 has 206 MA's), (Start: 25 @46998 has 13 MA's), (28, 46926), (33, 46845), (34, 46836),

Gene: BeesKnees\_78 Start: 46203, Stop: 45934, Start Num: 18  
Candidate Starts for BeesKnees\_78:  
(6, 46392), (Start: 18 @46203 has 206 MA's), (Start: 25 @46101 has 13 MA's), (28, 46029), (33, 45948), (34, 45939),

Gene: Bethlehem\_81 Start: 50152, Stop: 49883, Start Num: 18  
Candidate Starts for Bethlehem\_81:  
(Start: 18 @50152 has 206 MA's), (Start: 25 @50050 has 13 MA's), (28, 49978), (33, 49897), (34, 49888),

Gene: Bexan\_72 Start: 46874, Stop: 46605, Start Num: 18  
Candidate Starts for Bexan\_72:  
(Start: 18 @46874 has 206 MA's), (Start: 25 @46772 has 13 MA's), (28, 46700), (33, 46619), (34, 46610),

Gene: Big3\_79 Start: 49102, Stop: 48833, Start Num: 18  
Candidate Starts for Big3\_79:  
(Start: 18 @49102 has 206 MA's), (Start: 25 @49000 has 13 MA's), (28, 48928), (33, 48847), (34, 48838),

Gene: BigMau\_80 Start: 48690, Stop: 48421, Start Num: 18  
Candidate Starts for BigMau\_80:  
(Start: 18 @48690 has 206 MA's), (Start: 25 @48588 has 13 MA's), (28, 48516), (31, 48498), (33, 48435), (34, 48426),

Gene: BigPaolini\_76 Start: 46474, Stop: 46205, Start Num: 18  
Candidate Starts for BigPaolini\_76:  
(Start: 18 @46474 has 206 MA's), (Start: 25 @46372 has 13 MA's), (28, 46300), (33, 46219), (34, 46210),

Gene: Bigchungji\_78 Start: 48515, Stop: 48246, Start Num: 18  
Candidate Starts for Bigchungji\_78:  
(Start: 18 @48515 has 206 MA's), (Start: 25 @48413 has 13 MA's), (28, 48341), (31, 48323), (33, 48260),

Gene: Bigfoot\_72 Start: 47170, Stop: 46901, Start Num: 18  
Candidate Starts for Bigfoot\_72:  
(Start: 18 @47170 has 206 MA's), (Start: 25 @47068 has 13 MA's), (28, 46996), (33, 46915), (34, 46906),

Gene: BillKnuckles\_71 Start: 47077, Stop: 46808, Start Num: 18  
Candidate Starts for BillKnuckles\_71:

(Start: 18 @47077 has 206 MA's), (Start: 25 @46975 has 13 MA's), (28, 46903), (33, 46822), (34, 46813),

Gene: Bircsak\_78 Start: 49765, Stop: 49496, Start Num: 18

Candidate Starts for Bircsak\_78:

(Start: 18 @49765 has 206 MA's), (Start: 25 @49663 has 13 MA's), (28, 49591), (33, 49510), (34, 49501),

Gene: Blackflame\_74 Start: 47368, Stop: 47201, Start Num: 25

Candidate Starts for Blackflame\_74:

(Start: 18 @47470 has 206 MA's), (Start: 25 @47368 has 13 MA's), (28, 47296), (33, 47215), (34, 47206),

Gene: Blessor\_72 Start: 45803, Stop: 45534, Start Num: 18

Candidate Starts for Blessor\_72:

(Start: 18 @45803 has 206 MA's), (Start: 25 @45701 has 13 MA's), (28, 45629), (33, 45548),

Gene: BluSpix\_76 Start: 42801, Stop: 42532, Start Num: 18

Candidate Starts for BluSpix\_76:

(Start: 18 @42801 has 206 MA's), (Start: 25 @42699 has 13 MA's), (28, 42627), (33, 42546),

Gene: Blue\_74 Start: 46981, Stop: 46712, Start Num: 18

Candidate Starts for Blue\_74:

(Start: 18 @46981 has 206 MA's), (Start: 25 @46879 has 13 MA's), (28, 46807), (33, 46726), (34, 46717),

Gene: Bob3\_78 Start: 47855, Stop: 47688, Start Num: 25

Candidate Starts for Bob3\_78:

(Start: 18 @47957 has 206 MA's), (Start: 25 @47855 has 13 MA's), (28, 47783), (31, 47765), (33, 47702), (34, 47693),

Gene: Bones\_73 Start: 47161, Stop: 46994, Start Num: 25

Candidate Starts for Bones\_73:

(Start: 18 @47263 has 206 MA's), (Start: 25 @47161 has 13 MA's), (28, 47089), (33, 47008), (34, 46999),

Gene: Briton15\_80 Start: 48343, Stop: 48074, Start Num: 18

Candidate Starts for Briton15\_80:

(Start: 18 @48343 has 206 MA's), (Start: 25 @48241 has 13 MA's), (28, 48169), (33, 48088),

Gene: Bruns\_80 Start: 47206, Stop: 46937, Start Num: 18

Candidate Starts for Bruns\_80:

(Start: 18 @47206 has 206 MA's), (Start: 25 @47104 has 13 MA's), (28, 47032), (33, 46951), (34, 46942),

Gene: Burton\_79 Start: 49544, Stop: 49275, Start Num: 18

Candidate Starts for Burton\_79:

(Start: 18 @49544 has 206 MA's), (Start: 25 @49442 has 13 MA's), (28, 49370), (33, 49289),

Gene: Buttons\_75 Start: 45560, Stop: 45384, Start Num: 25

Candidate Starts for Buttons\_75:

(Start: 18 @45662 has 206 MA's), (Start: 25 @45560 has 13 MA's), (33, 45407), (34, 45398),

Gene: Bxb1\_72 Start: 45749, Stop: 45480, Start Num: 18

Candidate Starts for Bxb1\_72:

(6, 45938), (Start: 18 @45749 has 206 MA's), (Start: 25 @45647 has 13 MA's), (28, 45575), (33, 45494), (34, 45485),

Gene: CactusRose\_80 Start: 48187, Stop: 47918, Start Num: 18

Candidate Starts for CactusRose\_80:

(Start: 18 @48187 has 206 MA's), (Start: 25 @48085 has 13 MA's), (28, 48013), (33, 47932), (34, 47923),

Gene: Carlyle\_78 Start: 46661, Stop: 46392, Start Num: 18

Candidate Starts for Carlyle\_78:

(Start: 18 @46661 has 206 MA's), (Start: 25 @46559 has 13 MA's), (28, 46487), (33, 46406), (34, 46397),

Gene: CartmannCramer\_74 Start: 48186, Stop: 48019, Start Num: 25

Candidate Starts for CartmannCramer\_74:

(Start: 18 @48288 has 206 MA's), (Start: 25 @48186 has 13 MA's), (28, 48114), (31, 48096), (33, 48033),

Gene: CatBus\_70 Start: 45885, Stop: 45709, Start Num: 25

Candidate Starts for CatBus\_70:

(Start: 18 @45987 has 206 MA's), (Start: 25 @45885 has 13 MA's), (28, 45813), (31, 45795), (33, 45732), (34, 45723),

Gene: Chanagan\_74 Start: 45622, Stop: 45353, Start Num: 18

Candidate Starts for Chanagan\_74:

(Start: 18 @45622 has 206 MA's), (Start: 25 @45520 has 13 MA's), (28, 45448), (33, 45367), (34, 45358),

Gene: ChristmasHams\_69 Start: 44195, Stop: 44028, Start Num: 25

Candidate Starts for ChristmasHams\_69:

(Start: 18 @44297 has 206 MA's), (Start: 25 @44195 has 13 MA's), (28, 44123), (33, 44042), (34, 44033),

Gene: Ciao\_74 Start: 45782, Stop: 45513, Start Num: 18

Candidate Starts for Ciao\_74:

(7, 45923), (Start: 18 @45782 has 206 MA's), (Start: 25 @45680 has 13 MA's), (28, 45608), (31, 45590), (33, 45527), (34, 45518),

Gene: ConceptII\_84 Start: 49693, Stop: 49424, Start Num: 18

Candidate Starts for ConceptII\_84:

(7, 49834), (Start: 18 @49693 has 206 MA's), (Start: 25 @49591 has 13 MA's), (33, 49438), (34, 49429),

Gene: Corvo\_80 Start: 49035, Stop: 48766, Start Num: 18

Candidate Starts for Corvo\_80:

(7, 49176), (Start: 18 @49035 has 206 MA's), (Start: 25 @48933 has 13 MA's), (28, 48861), (33, 48780),

Gene: Crispicous1\_72 Start: 45304, Stop: 45035, Start Num: 18

Candidate Starts for Crispicous1\_72:

(Start: 18 @45304 has 206 MA's), (Start: 25 @45202 has 13 MA's), (33, 45049), (34, 45040),

Gene: DD5\_75 Start: 47389, Stop: 47120, Start Num: 18  
Candidate Starts for DD5\_75:  
(Start: 18 @47389 has 206 MA's), (Start: 25 @47287 has 13 MA's), (27, 47254), (28, 47215), (31, 47197), (33, 47134), (34, 47125),

Gene: Dexes\_81 Start: 50369, Stop: 50202, Start Num: 25  
Candidate Starts for Dexes\_81:  
(Start: 18 @50471 has 206 MA's), (Start: 25 @50369 has 13 MA's), (28, 50297), (33, 50216), (34, 50207),

Gene: DirtDevil\_72 Start: 45693, Stop: 45517, Start Num: 25  
Candidate Starts for DirtDevil\_72:  
(Start: 18 @45795 has 206 MA's), (Start: 25 @45693 has 13 MA's), (28, 45621), (31, 45603), (33, 45540), (34, 45531),

Gene: Doom\_70 Start: 46318, Stop: 46049, Start Num: 18  
Candidate Starts for Doom\_70:  
(Start: 18 @46318 has 206 MA's), (Start: 25 @46216 has 13 MA's), (28, 46144), (33, 46063), (34, 46054),

Gene: DrFeelGood\_74 Start: 45747, Stop: 45478, Start Num: 18  
Candidate Starts for DrFeelGood\_74:  
(Start: 18 @45747 has 206 MA's), (Start: 25 @45645 has 13 MA's), (28, 45573), (33, 45492), (34, 45483),

Gene: DreamCatcher\_81 Start: 48193, Stop: 47924, Start Num: 18  
Candidate Starts for DreamCatcher\_81:  
(7, 48334), (Start: 18 @48193 has 206 MA's), (Start: 25 @48091 has 13 MA's), (28, 48019), (33, 47938),

Gene: Dreamboat\_77 Start: 45675, Stop: 45406, Start Num: 18  
Candidate Starts for Dreamboat\_77:  
(Start: 18 @45675 has 206 MA's), (Start: 25 @45573 has 13 MA's), (28, 45501), (33, 45420), (34, 45411),

Gene: Dulcie\_79 Start: 49641, Stop: 49372, Start Num: 18  
Candidate Starts for Dulcie\_79:  
(Start: 18 @49641 has 206 MA's), (Start: 25 @49539 has 13 MA's), (28, 49467), (33, 49386),

Gene: Dussy\_77 Start: 47226, Stop: 46957, Start Num: 18  
Candidate Starts for Dussy\_77:  
(Start: 18 @47226 has 206 MA's), (Start: 25 @47124 has 13 MA's), (28, 47052), (33, 46971),

Gene: Dynamix\_77 Start: 46109, Stop: 45840, Start Num: 18  
Candidate Starts for Dynamix\_77:  
(Start: 18 @46109 has 206 MA's), (Start: 25 @46007 has 13 MA's), (28, 45935), (31, 45917), (33, 45854), (34, 45845),

Gene: Edtherson\_76 Start: 47285, Stop: 47016, Start Num: 18  
Candidate Starts for Edtherson\_76:  
(6, 47474), (Start: 18 @47285 has 206 MA's), (Start: 25 @47183 has 13 MA's), (27, 47150), (28, 47111), (33, 47030), (34, 47021),

Gene: Emmina\_43 Start: 34507, Stop: 34331, Start Num: 25

Candidate Starts for Emmina\_43:

(Start: 25 @34507 has 13 MA's), (28, 34435), (31, 34417), (33, 34354), (34, 34345),

Gene: EnzoK\_79 Start: 45567, Stop: 45298, Start Num: 18

Candidate Starts for EnzoK\_79:

(2, 45870), (6, 45756), (Start: 18 @45567 has 206 MA's), (Start: 25 @45465 has 13 MA's), (28, 45393), (31, 45375), (33, 45312), (34, 45303),

Gene: Espresso\_72 Start: 46330, Stop: 46061, Start Num: 18

Candidate Starts for Espresso\_72:

(Start: 18 @46330 has 206 MA's), (Start: 25 @46228 has 13 MA's), (28, 46156), (33, 46075), (34, 46066),

Gene: Euphoria\_79 Start: 48046, Stop: 47777, Start Num: 18

Candidate Starts for Euphoria\_79:

(Start: 18 @48046 has 206 MA's), (Start: 25 @47944 has 13 MA's), (28, 47872), (33, 47791), (34, 47782),

Gene: Eyeball\_77 Start: 47331, Stop: 47062, Start Num: 18

Candidate Starts for Eyeball\_77:

(Start: 18 @47331 has 206 MA's), (19, 47292), (Start: 25 @47229 has 13 MA's), (28, 47157), (31, 47139), (33, 47076),

Gene: Fajezeel\_81 Start: 48750, Stop: 48481, Start Num: 18

Candidate Starts for Fajezeel\_81:

(Start: 18 @48750 has 206 MA's), (Start: 25 @48648 has 13 MA's), (28, 48576), (32, 48504), (33, 48495), (34, 48486),

Gene: Fascinus\_73 Start: 47683, Stop: 47414, Start Num: 18

Candidate Starts for Fascinus\_73:

(Start: 18 @47683 has 206 MA's), (Start: 25 @47581 has 13 MA's), (28, 47509), (33, 47428), (34, 47419),

Gene: Fenn\_80 Start: 48214, Stop: 47945, Start Num: 18

Candidate Starts for Fenn\_80:

(Start: 18 @48214 has 206 MA's), (Start: 25 @48112 has 13 MA's), (28, 48040), (32, 47968), (33, 47959), (34, 47950),

Gene: Forsytheast\_80 Start: 48069, Stop: 47800, Start Num: 18

Candidate Starts for Forsytheast\_80:

(Start: 18 @48069 has 206 MA's), (Start: 25 @47967 has 13 MA's), (28, 47895), (33, 47814),

Gene: Francis47\_79 Start: 49766, Stop: 49497, Start Num: 18

Candidate Starts for Francis47\_79:

(Start: 18 @49766 has 206 MA's), (Start: 25 @49664 has 13 MA's), (27, 49631), (28, 49592), (33, 49511), (34, 49502),

Gene: Fushigi\_71 Start: 44212, Stop: 43946, Start Num: 18

Candidate Starts for Fushigi\_71:

(Start: 18 @44212 has 206 MA's), (Start: 25 @44113 has 13 MA's), (28, 44041), (33, 43960), (34, 43951),

Gene: GMonster\_75 Start: 47061, Stop: 46792, Start Num: 18

Candidate Starts for GMonster\_75:

(Start: 18 @47061 has 206 MA's), (Start: 25 @46959 has 13 MA's), (28, 46887), (33, 46806),

Gene: GageAP\_80 Start: 49119, Stop: 48850, Start Num: 18

Candidate Starts for GageAP\_80:

(Start: 18 @49119 has 206 MA's), (Start: 25 @49017 has 13 MA's), (28, 48945), (31, 48927), (33, 48864),

Gene: Gandalf20\_77 Start: 47615, Stop: 47346, Start Num: 18

Candidate Starts for Gandalf20\_77:

(Start: 18 @47615 has 206 MA's), (Start: 25 @47513 has 13 MA's), (28, 47441), (33, 47360), (34, 47351),

Gene: Gompeii16\_78 Start: 49766, Stop: 49497, Start Num: 18

Candidate Starts for Gompeii16\_78:

(Start: 18 @49766 has 206 MA's), (Start: 25 @49664 has 13 MA's), (28, 49592), (33, 49511), (34, 49502),

Gene: Graduation\_81 Start: 47896, Stop: 47627, Start Num: 18

Candidate Starts for Graduation\_81:

(Start: 18 @47896 has 206 MA's), (Start: 25 @47794 has 13 MA's), (28, 47722), (33, 47641),

Gene: GrecoEtereo\_82 Start: 49049, Stop: 48774, Start Num: 18

Candidate Starts for GrecoEtereo\_82:

(9, 49151), (12, 49100), (13, 49091), (Start: 18 @49049 has 206 MA's), (21, 48986), (Start: 25 @48941 has 13 MA's), (28, 48869), (33, 48788), (34, 48779),

Gene: Greg\_81 Start: 48750, Stop: 48481, Start Num: 18

Candidate Starts for Greg\_81:

(Start: 18 @48750 has 206 MA's), (Start: 25 @48648 has 13 MA's), (28, 48576), (32, 48504), (33, 48495), (34, 48486),

Gene: GroundGoblin\_72 Start: 45835, Stop: 45659, Start Num: 25

Candidate Starts for GroundGoblin\_72:

(Start: 18 @45937 has 206 MA's), (Start: 25 @45835 has 13 MA's), (28, 45763), (31, 45745), (33, 45682), (34, 45673),

Gene: Gwendoluna\_82 Start: 48880, Stop: 48611, Start Num: 18

Candidate Starts for Gwendoluna\_82:

(Start: 18 @48880 has 206 MA's), (Start: 25 @48778 has 13 MA's), (28, 48706), (33, 48625), (34, 48616),

Gene: Gyzlar\_70 Start: 44067, Stop: 43798, Start Num: 18

Candidate Starts for Gyzlar\_70:

(Start: 18 @44067 has 206 MA's), (Start: 25 @43965 has 13 MA's), (28, 43893), (31, 43875), (33, 43812), (34, 43803),

Gene: Hami1\_70 Start: 42108, Stop: 41839, Start Num: 18

Candidate Starts for Hami1\_70:

(Start: 18 @42108 has 206 MA's), (Start: 25 @42006 has 13 MA's), (30, 41925), (33, 41853), (34, 41844),

Gene: HanShotFirst\_75 Start: 47673, Stop: 47404, Start Num: 18

Candidate Starts for HanShotFirst\_75:

(7, 47814), (Start: 18 @47673 has 206 MA's), (Start: 25 @47571 has 13 MA's), (33, 47418), (34, 47409),

Gene: HarryOW\_79 Start: 49091, Stop: 48822, Start Num: 18

Candidate Starts for HarryOW\_79:

(Start: 18 @49091 has 206 MA's), (Start: 25 @48989 has 13 MA's), (28, 48917), (33, 48836), (34, 48827),

Gene: Hermia\_73 Start: 45987, Stop: 45709, Start Num: 18

Candidate Starts for Hermia\_73:

(Start: 18 @45987 has 206 MA's), (Start: 25 @45885 has 13 MA's), (28, 45813), (31, 45795), (33, 45732), (34, 45723),

Gene: HermioneGrange\_81 Start: 49184, Stop: 48915, Start Num: 18

Candidate Starts for HermioneGrange\_81:

(Start: 18 @49184 has 206 MA's), (Start: 25 @49082 has 13 MA's), (28, 49010), (31, 48992), (33, 48929), (34, 48920),

Gene: Homines\_66 Start: 42317, Stop: 42039, Start Num: 18

Candidate Starts for Homines\_66:

(Start: 18 @42317 has 206 MA's), (Start: 25 @42215 has 13 MA's), (28, 42143), (31, 42125), (33, 42062), (34, 42053),

Gene: Hope4ever\_79 Start: 47698, Stop: 47429, Start Num: 18

Candidate Starts for Hope4ever\_79:

(6, 47887), (Start: 18 @47698 has 206 MA's), (Start: 25 @47596 has 13 MA's), (28, 47524), (31, 47506), (33, 47443), (34, 47434),

Gene: ILeeKay\_75 Start: 45709, Stop: 45440, Start Num: 18

Candidate Starts for ILeeKay\_75:

(Start: 18 @45709 has 206 MA's), (Start: 25 @45607 has 13 MA's), (28, 45535), (32, 45463), (33, 45454),

Gene: Ichabod\_80 Start: 47956, Stop: 47687, Start Num: 18

Candidate Starts for Ichabod\_80:

(Start: 18 @47956 has 206 MA's), (Start: 25 @47854 has 13 MA's), (28, 47782), (33, 47701),

Gene: IgnatiusPatJac\_78 Start: 46746, Stop: 46477, Start Num: 18

Candidate Starts for IgnatiusPatJac\_78:

(Start: 18 @46746 has 206 MA's), (Start: 25 @46644 has 13 MA's), (28, 46572), (33, 46491),

Gene: Inyanga\_69 Start: 45800, Stop: 45633, Start Num: 25

Candidate Starts for Inyanga\_69:

(Start: 18 @45902 has 206 MA's), (Start: 25 @45800 has 13 MA's), (28, 45728), (33, 45647), (34, 45638),

Gene: Iqorha\_69 Start: 45799, Stop: 45632, Start Num: 25

Candidate Starts for Iqorha\_69:

(Start: 18 @45901 has 206 MA's), (Start: 25 @45799 has 13 MA's), (28, 45727), (33, 45646), (34, 45637),

Gene: JC27\_81 Start: 47825, Stop: 47556, Start Num: 18

Candidate Starts for JC27\_81:

(Start: 18 @47825 has 206 MA's), (Start: 25 @47723 has 13 MA's), (28, 47651), (33, 47570), (34, 47561),

Gene: JackSparrow\_78 Start: 46809, Stop: 46540, Start Num: 18

Candidate Starts for JackSparrow\_78:

(5, 47031), (6, 46998), (Start: 18 @46809 has 206 MA's), (Start: 25 @46707 has 13 MA's), (28, 46635), (33, 46554), (34, 46545),

Gene: Jasper\_76 Start: 45561, Stop: 45292, Start Num: 18

Candidate Starts for Jasper\_76:

(Start: 18 @45561 has 206 MA's), (Start: 25 @45459 has 13 MA's), (28, 45387), (33, 45306), (34, 45297),

Gene: Jerm2\_79 Start: 49254, Stop: 48985, Start Num: 18

Candidate Starts for Jerm2\_79:

(Start: 18 @49254 has 206 MA's), (Start: 25 @49152 has 13 MA's), (28, 49080), (31, 49062), (33, 48999), (34, 48990),

Gene: Jorgensen\_87 Start: 49298, Stop: 49029, Start Num: 18

Candidate Starts for Jorgensen\_87:

(Start: 18 @49298 has 206 MA's), (Start: 25 @49196 has 13 MA's), (28, 49124), (33, 49043), (34, 49034),

Gene: JuliaChild\_79 Start: 47974, Stop: 47705, Start Num: 18

Candidate Starts for JuliaChild\_79:

(Start: 18 @47974 has 206 MA's), (Start: 25 @47872 has 13 MA's), (28, 47800), (33, 47719),

Gene: KBG\_76 Start: 48629, Stop: 48360, Start Num: 18

Candidate Starts for KBG\_76:

(Start: 18 @48629 has 206 MA's), (Start: 25 @48527 has 13 MA's), (28, 48455), (33, 48374), (34, 48365),

Gene: KSSJEB\_75 Start: 46188, Stop: 45922, Start Num: 18

Candidate Starts for KSSJEB\_75:

(Start: 18 @46188 has 206 MA's), (Start: 25 @46089 has 13 MA's), (28, 46017), (33, 45936), (34, 45927),

Gene: Kanely\_81 Start: 48369, Stop: 48100, Start Num: 18

Candidate Starts for Kanely\_81:

(7, 48510), (Start: 18 @48369 has 206 MA's), (Start: 25 @48267 has 13 MA's), (33, 48114), (34, 48105),

Gene: Kenmech\_80 Start: 48352, Stop: 48083, Start Num: 18

Candidate Starts for Kenmech\_80:

(Start: 18 @48352 has 206 MA's), (Start: 25 @48250 has 13 MA's), (28, 48178), (33, 48097),

Gene: KikiBouba\_74 Start: 45796, Stop: 45518, Start Num: 18

Candidate Starts for KikiBouba\_74:

(Start: 18 @45796 has 206 MA's), (Start: 25 @45694 has 13 MA's), (28, 45622), (31, 45604), (33, 45541), (34, 45532),

Gene: Killigrew\_74 Start: 46400, Stop: 46131, Start Num: 18  
Candidate Starts for Killigrew\_74:  
(Start: 18 @46400 has 206 MA's), (Start: 25 @46298 has 13 MA's), (33, 46145), (34, 46136),

Gene: Kugel\_79 Start: 48042, Stop: 47773, Start Num: 18  
Candidate Starts for Kugel\_79:  
(Start: 18 @48042 has 206 MA's), (Start: 25 @47940 has 13 MA's), (28, 47868), (33, 47787), (34, 47778),

Gene: KyMonks1A\_84 Start: 48683, Stop: 48414, Start Num: 18  
Candidate Starts for KyMonks1A\_84:  
(Start: 18 @48683 has 206 MA's), (Start: 25 @48581 has 13 MA's), (28, 48509), (33, 48428),

Gene: Kykar\_77 Start: 47081, Stop: 46812, Start Num: 18  
Candidate Starts for Kykar\_77:  
(Start: 18 @47081 has 206 MA's), (Start: 25 @46979 has 13 MA's), (28, 46907), (33, 46826), (34, 46817),

Gene: Lamina13\_81 Start: 49534, Stop: 49265, Start Num: 18  
Candidate Starts for Lamina13\_81:  
(Start: 18 @49534 has 206 MA's), (Start: 25 @49432 has 13 MA's), (28, 49360), (31, 49342), (33, 49279), (34, 49270),

Gene: Lesedi\_75 Start: 45840, Stop: 45571, Start Num: 18  
Candidate Starts for Lesedi\_75:  
(Start: 18 @45840 has 206 MA's), (Start: 25 @45738 has 13 MA's), (28, 45666), (33, 45585),

Gene: Levia\_72 Start: 45378, Stop: 45109, Start Num: 18  
Candidate Starts for Levia\_72:  
(Start: 18 @45378 has 206 MA's), (Start: 25 @45276 has 13 MA's), (28, 45204), (33, 45123),

Gene: Licorice\_80 Start: 49670, Stop: 49401, Start Num: 18  
Candidate Starts for Licorice\_80:  
(Start: 18 @49670 has 206 MA's), (Start: 25 @49568 has 13 MA's), (28, 49496), (33, 49415), (34, 49406),

Gene: Lopton\_77 Start: 48685, Stop: 48416, Start Num: 18  
Candidate Starts for Lopton\_77:  
(Start: 18 @48685 has 206 MA's), (Start: 25 @48583 has 13 MA's), (28, 48511), (33, 48430),

Gene: MPlant7149\_78 Start: 47239, Stop: 46970, Start Num: 18  
Candidate Starts for MPlant7149\_78:  
(Start: 18 @47239 has 206 MA's), (Start: 25 @47137 has 13 MA's), (28, 47065), (33, 46984),

Gene: Magnar\_74 Start: 46550, Stop: 46281, Start Num: 18  
Candidate Starts for Magnar\_74:  
(Start: 18 @46550 has 206 MA's), (Start: 25 @46448 has 13 MA's), (28, 46376), (33, 46295), (34, 46286),

Gene: Magnito\_77 Start: 46668, Stop: 46399, Start Num: 18  
Candidate Starts for Magnito\_77:

(Start: 18 @46668 has 206 MA's), (Start: 25 @46566 has 13 MA's), (28, 46494), (33, 46413), (34, 46404),

Gene: Makemake\_81 Start: 48290, Stop: 48021, Start Num: 18

Candidate Starts for Makemake\_81:

(Start: 18 @48290 has 206 MA's), (Start: 25 @48188 has 13 MA's), (28, 48116), (33, 48035), (34, 48026),

Gene: Manatee\_76 Start: 46220, Stop: 45951, Start Num: 18

Candidate Starts for Manatee\_76:

(Start: 18 @46220 has 206 MA's), (Start: 25 @46118 has 13 MA's), (28, 46046), (33, 45965), (34, 45956),

Gene: Marcell\_70 Start: 44815, Stop: 44546, Start Num: 18

Candidate Starts for Marcell\_70:

(Start: 18 @44815 has 206 MA's), (Start: 25 @44713 has 13 MA's), (28, 44641), (33, 44560), (34, 44551),

Gene: Marchy\_69 Start: 43619, Stop: 43350, Start Num: 18

Candidate Starts for Marchy\_69:

(Start: 18 @43619 has 206 MA's), (Start: 25 @43517 has 13 MA's), (30, 43436), (33, 43364), (34, 43355),

Gene: Marge\_74 Start: 46312, Stop: 46043, Start Num: 18

Candidate Starts for Marge\_74:

(Start: 18 @46312 has 206 MA's), (Start: 25 @46210 has 13 MA's), (28, 46138), (31, 46120), (33, 46057), (34, 46048),

Gene: Maroc7\_79 Start: 49111, Stop: 48842, Start Num: 18

Candidate Starts for Maroc7\_79:

(Start: 18 @49111 has 206 MA's), (Start: 25 @49009 has 13 MA's), (28, 48937), (33, 48856), (34, 48847),

Gene: Marsha\_78 Start: 49115, Stop: 48846, Start Num: 18

Candidate Starts for Marsha\_78:

(Start: 18 @49115 has 206 MA's), (Start: 25 @49013 has 13 MA's), (28, 48941), (33, 48860),

Gene: MaryBeth\_76 Start: 47510, Stop: 47241, Start Num: 18

Candidate Starts for MaryBeth\_76:

(7, 47651), (Start: 18 @47510 has 206 MA's), (Start: 25 @47408 has 13 MA's), (28, 47336), (33, 47255),

Gene: McGuire\_77 Start: 46351, Stop: 46082, Start Num: 18

Candidate Starts for McGuire\_77:

(Start: 18 @46351 has 206 MA's), (Start: 25 @46249 has 13 MA's), (28, 46177), (31, 46159), (33, 46096), (34, 46087),

Gene: McSinger\_76 Start: 47481, Stop: 47212, Start Num: 18

Candidate Starts for McSinger\_76:

(Start: 18 @47481 has 206 MA's), (Start: 25 @47379 has 13 MA's), (28, 47307), (33, 47226), (34, 47217),

Gene: MetalQZJ\_75 Start: 47510, Stop: 47241, Start Num: 18

Candidate Starts for MetalQZJ\_75:

(7, 47651), (Start: 18 @47510 has 206 MA's), (Start: 25 @47408 has 13 MA's), (28, 47336), (33, 47255),

Gene: Michley\_78 Start: 47079, Stop: 46810, Start Num: 18

Candidate Starts for Michley\_78:

(Start: 18 @47079 has 206 MA's), (Start: 25 @46977 has 13 MA's), (28, 46905), (33, 46824), (34, 46815),

Gene: MilleFeuille\_79 Start: 46752, Stop: 46483, Start Num: 18

Candidate Starts for MilleFeuille\_79:

(Start: 18 @46752 has 206 MA's), (Start: 25 @46650 has 13 MA's), (28, 46578), (33, 46497), (34, 46488),

Gene: Mkhuseleli\_75 Start: 45140, Stop: 44973, Start Num: 25

Candidate Starts for Mkhuseleli\_75:

(Start: 18 @45242 has 206 MA's), (Start: 25 @45140 has 13 MA's), (28, 45068), (33, 44987), (34, 44978),

Gene: Molly\_78 Start: 46899, Stop: 46627, Start Num: 18

Candidate Starts for Molly\_78:

(Start: 18 @46899 has 206 MA's), (Start: 25 @46794 has 13 MA's), (28, 46722), (33, 46641),

Gene: Monet\_81 Start: 48761, Stop: 48492, Start Num: 18

Candidate Starts for Monet\_81:

(6, 48950), (Start: 18 @48761 has 206 MA's), (Start: 25 @48659 has 13 MA's), (27, 48626), (28, 48587), (33, 48506), (34, 48497),

Gene: Moose\_80 Start: 48069, Stop: 47800, Start Num: 18

Candidate Starts for Moose\_80:

(Start: 18 @48069 has 206 MA's), (Start: 25 @47967 has 13 MA's), (28, 47895), (33, 47814),

Gene: MrGordo\_79 Start: 46848, Stop: 46579, Start Num: 18

Candidate Starts for MrGordo\_79:

(Start: 18 @46848 has 206 MA's), (Start: 25 @46746 has 13 MA's), (28, 46674), (33, 46593), (34, 46584),

Gene: Mryolo\_73 Start: 45854, Stop: 45585, Start Num: 18

Candidate Starts for Mryolo\_73:

(Start: 18 @45854 has 206 MA's), (Start: 25 @45752 has 13 MA's), (28, 45680), (31, 45662), (33, 45599),

Gene: Mule\_78 Start: 47141, Stop: 46872, Start Num: 18

Candidate Starts for Mule\_78:

(Start: 18 @47141 has 206 MA's), (Start: 25 @47039 has 13 MA's), (28, 46967), (33, 46886), (34, 46877),

Gene: Museum\_78 Start: 47962, Stop: 47690, Start Num: 18

Candidate Starts for Museum\_78:

(Start: 18 @47962 has 206 MA's), (Start: 25 @47857 has 13 MA's), (28, 47785), (33, 47704),

Gene: NEHalo\_74 Start: 46772, Stop: 46500, Start Num: 18

Candidate Starts for NEHalo\_74:

(Start: 18 @46772 has 206 MA's), (Start: 25 @46667 has 13 MA's), (28, 46595), (33, 46514),

Gene: Naira\_79 Start: 48270, Stop: 48001, Start Num: 18

Candidate Starts for Naira\_79:

(Start: 18 @48270 has 206 MA's), (Start: 25 @48168 has 13 MA's), (28, 48096), (32, 48024), (33, 48015), (34, 48006),

Gene: Nerujay\_82 Start: 49338, Stop: 49069, Start Num: 18

Candidate Starts for Nerujay\_82:

(Start: 18 @49338 has 206 MA's), (Start: 25 @49236 has 13 MA's), (28, 49164), (31, 49146), (33, 49083), (34, 49074),

Gene: Nhonho\_74 Start: 47135, Stop: 46866, Start Num: 18

Candidate Starts for Nhonho\_74:

(Start: 18 @47135 has 206 MA's), (Start: 25 @47033 has 13 MA's), (28, 46961), (33, 46880), (34, 46871),

Gene: Niza\_78 Start: 48242, Stop: 47973, Start Num: 18

Candidate Starts for Niza\_78:

(Start: 18 @48242 has 206 MA's), (Start: 25 @48140 has 13 MA's), (28, 48068), (33, 47987),

Gene: NonchalantPear\_43 Start: 34547, Stop: 34335, Start Num: 24

Candidate Starts for NonchalantPear\_43:

(20, 34559), (Start: 24 @34547 has 1 MA's), (Start: 25 @34511 has 13 MA's), (28, 34439), (31, 34421), (33, 34358), (34, 34349),

Gene: Norz\_73 Start: 48260, Stop: 47991, Start Num: 18

Candidate Starts for Norz\_73:

(Start: 18 @48260 has 206 MA's), (Start: 25 @48158 has 13 MA's), (28, 48086), (33, 48005), (34, 47996),

Gene: Noxious\_74 Start: 45987, Stop: 45709, Start Num: 18

Candidate Starts for Noxious\_74:

(Start: 18 @45987 has 206 MA's), (Start: 25 @45885 has 13 MA's), (28, 45813), (31, 45795), (33, 45732), (34, 45723),

Gene: Ohno789\_81 Start: 48992, Stop: 48723, Start Num: 18

Candidate Starts for Ohno789\_81:

(Start: 18 @48992 has 206 MA's), (Start: 25 @48890 has 13 MA's), (28, 48818), (33, 48737),

Gene: Oogway\_76 Start: 47549, Stop: 47382, Start Num: 25

Candidate Starts for Oogway\_76:

(Start: 18 @47651 has 206 MA's), (Start: 25 @47549 has 13 MA's), (28, 47477), (33, 47396), (34, 47387),

Gene: PSullivan\_76 Start: 46042, Stop: 45773, Start Num: 18

Candidate Starts for PSullivan\_76:

(Start: 18 @46042 has 206 MA's), (Start: 25 @45940 has 13 MA's), (28, 45868), (33, 45787),

Gene: PacerPaul\_82 Start: 49133, Stop: 48864, Start Num: 18

Candidate Starts for PacerPaul\_82:

(Start: 18 @49133 has 206 MA's), (Start: 25 @49031 has 13 MA's), (27, 48998), (28, 48959), (33, 48878), (34, 48869),

Gene: Papez\_79 Start: 48159, Stop: 47992, Start Num: 25

Candidate Starts for Papez\_79:

(Start: 18 @48258 has 206 MA's), (Start: 25 @48159 has 13 MA's), (28, 48087), (33, 48006), (34, 47997),

Gene: Paphu\_75 Start: 46857, Stop: 46588, Start Num: 18

Candidate Starts for Paphu\_75:

(Start: 18 @46857 has 206 MA's), (Start: 25 @46755 has 13 MA's), (28, 46683), (33, 46602), (34, 46593),

Gene: Paraselene\_75 Start: 46941, Stop: 46675, Start Num: 18

Candidate Starts for Paraselene\_75:

(Start: 18 @46941 has 206 MA's), (Start: 25 @46842 has 13 MA's), (28, 46770), (31, 46752), (33, 46689), (34, 46680),

Gene: Pari\_83 Start: 47836, Stop: 47567, Start Num: 18

Candidate Starts for Pari\_83:

(Start: 18 @47836 has 206 MA's), (Start: 25 @47734 has 13 MA's), (28, 47662), (33, 47581), (34, 47572),

Gene: Parliament\_79 Start: 50017, Stop: 49748, Start Num: 18

Candidate Starts for Parliament\_79:

(Start: 18 @50017 has 206 MA's), (Start: 25 @49915 has 13 MA's), (33, 49762), (34, 49753),

Gene: PascalRango\_76 Start: 47111, Stop: 46842, Start Num: 18

Candidate Starts for PascalRango\_76:

(Start: 18 @47111 has 206 MA's), (Start: 25 @47009 has 13 MA's), (28, 46937), (33, 46856), (34, 46847),

Gene: PattyP\_78 Start: 47668, Stop: 47396, Start Num: 18

Candidate Starts for PattyP\_78:

(Start: 18 @47668 has 206 MA's), (Start: 25 @47563 has 13 MA's), (28, 47491), (33, 47410),

Gene: Pelly\_81 Start: 50381, Stop: 50112, Start Num: 18

Candidate Starts for Pelly\_81:

(Start: 18 @50381 has 206 MA's), (Start: 25 @50279 has 13 MA's), (28, 50207), (33, 50126), (34, 50117),

Gene: Pepe\_71 Start: 44846, Stop: 44679, Start Num: 25

Candidate Starts for Pepe\_71:

(9, 45053), (13, 44993), (Start: 18 @44951 has 206 MA's), (21, 44891), (Start: 25 @44846 has 13 MA's), (28, 44774), (33, 44693),

Gene: Perseus\_78 Start: 49098, Stop: 48829, Start Num: 18

Candidate Starts for Perseus\_78:

(Start: 18 @49098 has 206 MA's), (Start: 25 @48996 has 13 MA's), (28, 48924), (33, 48843),

Gene: Peterson\_76 Start: 48092, Stop: 47823, Start Num: 18

Candidate Starts for Peterson\_76:

(1, 48413), (3, 48341), (4, 48335), (6, 48281), (Start: 18 @48092 has 206 MA's), (Start: 25 @47990 has 13 MA's), (28, 47918), (33, 47837), (34, 47828),

Gene: Petp2012\_78 Start: 48274, Stop: 48005, Start Num: 18  
Candidate Starts for Petp2012\_78:  
(Start: 18 @48274 has 206 MA's), (Start: 25 @48172 has 13 MA's), (28, 48100), (33, 48019), (34, 48010),

Gene: Petruccio\_78 Start: 46510, Stop: 46244, Start Num: 18  
Candidate Starts for Petruccio\_78:  
(Start: 18 @46510 has 206 MA's), (Start: 25 @46411 has 13 MA's), (28, 46339), (33, 46258), (34, 46249),

Gene: PherrisBueller\_76 Start: 45212, Stop: 44943, Start Num: 18  
Candidate Starts for PherrisBueller\_76:  
(Start: 18 @45212 has 206 MA's), (Start: 25 @45110 has 13 MA's), (28, 45038), (33, 44957), (34, 44948),

Gene: PhineBark\_74 Start: 46396, Stop: 46127, Start Num: 18  
Candidate Starts for PhineBark\_74:  
(Start: 18 @46396 has 206 MA's), (Start: 25 @46294 has 13 MA's), (28, 46222), (33, 46141),

Gene: Phlippers\_75 Start: 48575, Stop: 48306, Start Num: 18  
Candidate Starts for Phlippers\_75:  
(Start: 18 @48575 has 206 MA's), (Start: 25 @48473 has 13 MA's), (28, 48401), (33, 48320), (34, 48311),

Gene: PhrostyMug\_80 Start: 49311, Stop: 49042, Start Num: 18  
Candidate Starts for PhrostyMug\_80:  
(Start: 18 @49311 has 206 MA's), (Start: 25 @49209 has 13 MA's), (28, 49137), (33, 49056), (34, 49047),

Gene: PinkPlastic\_73 Start: 45860, Stop: 45591, Start Num: 18  
Candidate Starts for PinkPlastic\_73:  
(Start: 18 @45860 has 206 MA's), (Start: 25 @45758 has 13 MA's), (28, 45686), (33, 45605),

Gene: Pinto\_77 Start: 47723, Stop: 47454, Start Num: 18  
Candidate Starts for Pinto\_77:  
(Start: 18 @47723 has 206 MA's), (Start: 25 @47621 has 13 MA's), (28, 47549), (33, 47468), (34, 47459),

Gene: Pippin\_78 Start: 47365, Stop: 47096, Start Num: 18  
Candidate Starts for Pippin\_78:  
(7, 47506), (Start: 18 @47365 has 206 MA's), (19, 47326), (Start: 25 @47263 has 13 MA's), (28, 47191), (31, 47173), (33, 47110), (34, 47101),

Gene: Pita2\_79 Start: 47538, Stop: 47269, Start Num: 18  
Candidate Starts for Pita2\_79:  
(Start: 18 @47538 has 206 MA's), (Start: 25 @47436 has 13 MA's), (28, 47364), (33, 47283),

Gene: Porky\_41 Start: 34516, Stop: 34340, Start Num: 25  
Candidate Starts for Porky\_41:  
(20, 34564), (Start: 24 @34552 has 1 MA's), (Start: 25 @34516 has 13 MA's), (28, 34444), (31, 34426), (33, 34363), (34, 34354),

Gene: PowerRanger\_73 Start: 47298, Stop: 47029, Start Num: 18

Candidate Starts for PowerRanger\_73:

(Start: 18 @47298 has 206 MA's), (Start: 25 @47196 has 13 MA's), (28, 47124), (33, 47043), (34, 47034),

Gene: ProMouse\_77 Start: 46763, Stop: 46596, Start Num: 25

Candidate Starts for ProMouse\_77:

(Start: 18 @46865 has 206 MA's), (Start: 25 @46763 has 13 MA's), (28, 46691), (33, 46610),

Gene: Puppet\_73 Start: 47653, Stop: 47486, Start Num: 25

Candidate Starts for Puppet\_73:

(Start: 18 @47755 has 206 MA's), (19, 47716), (Start: 25 @47653 has 13 MA's), (28, 47581), (31, 47563), (33, 47500),

Gene: QTRlifeCrisis\_77 Start: 46897, Stop: 46619, Start Num: 18

Candidate Starts for QTRlifeCrisis\_77:

(Start: 18 @46897 has 206 MA's), (Start: 25 @46795 has 13 MA's), (33, 46642), (34, 46633),

Gene: Raid\_75 Start: 46764, Stop: 46495, Start Num: 18

Candidate Starts for Raid\_75:

(Start: 18 @46764 has 206 MA's), (Start: 25 @46662 has 13 MA's), (28, 46590), (33, 46509), (34, 46500),

Gene: Rajelicia\_79 Start: 49546, Stop: 49277, Start Num: 18

Candidate Starts for Rajelicia\_79:

(6, 49735), (Start: 18 @49546 has 206 MA's), (Start: 25 @49444 has 13 MA's), (28, 49372), (33, 49291), (34, 49282),

Gene: Rhynn\_74 Start: 47488, Stop: 47219, Start Num: 18

Candidate Starts for Rhynn\_74:

(Start: 18 @47488 has 206 MA's), (Start: 25 @47386 has 13 MA's), (28, 47314), (32, 47242), (33, 47233), (34, 47224),

Gene: Ringer\_78 Start: 48455, Stop: 48186, Start Num: 18

Candidate Starts for Ringer\_78:

(Start: 18 @48455 has 206 MA's), (Start: 25 @48353 has 13 MA's), (28, 48281), (33, 48200), (34, 48191),

Gene: Rohr\_80 Start: 49329, Stop: 49060, Start Num: 18

Candidate Starts for Rohr\_80:

(Start: 18 @49329 has 206 MA's), (Start: 25 @49227 has 13 MA's), (28, 49155), (31, 49137), (33, 49074), (34, 49065),

Gene: Rubeus\_78 Start: 45829, Stop: 45560, Start Num: 18

Candidate Starts for Rubeus\_78:

(Start: 18 @45829 has 206 MA's), (Start: 25 @45727 has 13 MA's), (28, 45655), (33, 45574), (34, 45565),

Gene: Rufus\_80 Start: 48518, Stop: 48249, Start Num: 18

Candidate Starts for Rufus\_80:

(Start: 18 @48518 has 206 MA's), (Start: 25 @48416 has 13 MA's), (28, 48344), (31, 48326), (33, 48263), (34, 48254),

Gene: Ruotula\_82 Start: 49201, Stop: 48932, Start Num: 18

Candidate Starts for Ruotula\_82:

(7, 49342), (Start: 18 @49201 has 206 MA's), (Start: 25 @49099 has 13 MA's), (28, 49027), (33, 48946), (34, 48937),

Gene: Rutherferd\_80 Start: 48283, Stop: 48014, Start Num: 18

Candidate Starts for Rutherferd\_80:

(6, 48472), (Start: 18 @48283 has 206 MA's), (22, 48223), (Start: 25 @48181 has 13 MA's), (28, 48109), (33, 48028), (34, 48019),

Gene: STLscum\_84 Start: 48312, Stop: 48043, Start Num: 18

Candidate Starts for STLscum\_84:

(Start: 18 @48312 has 206 MA's), (Start: 25 @48210 has 13 MA's), (28, 48138), (33, 48057),

Gene: Sagefire\_74 Start: 47188, Stop: 46919, Start Num: 18

Candidate Starts for Sagefire\_74:

(Start: 18 @47188 has 206 MA's), (Start: 25 @47086 has 13 MA's), (28, 47014), (33, 46933), (34, 46924),

Gene: Sandaddy\_76 Start: 47590, Stop: 47423, Start Num: 25

Candidate Starts for Sandaddy\_76:

(Start: 18 @47692 has 206 MA's), (Start: 25 @47590 has 13 MA's), (28, 47518), (31, 47500), (33, 47437), (34, 47428),

Gene: Sanya\_72 Start: 47723, Stop: 47556, Start Num: 25

Candidate Starts for Sanya\_72:

(Start: 18 @47825 has 206 MA's), (Start: 25 @47723 has 13 MA's), (28, 47651), (33, 47570), (34, 47561),

Gene: SarFire\_81 Start: 49162, Stop: 48893, Start Num: 18

Candidate Starts for SarFire\_81:

(Start: 18 @49162 has 206 MA's), (Start: 25 @49060 has 13 MA's), (28, 48988), (33, 48907),

Gene: Scowl\_78 Start: 47485, Stop: 47216, Start Num: 18

Candidate Starts for Scowl\_78:

(Start: 18 @47485 has 206 MA's), (Start: 25 @47383 has 13 MA's), (28, 47311), (31, 47293), (33, 47230), (34, 47221),

Gene: Seabiscuit\_78 Start: 46585, Stop: 46316, Start Num: 18

Candidate Starts for Seabiscuit\_78:

(Start: 18 @46585 has 206 MA's), (Start: 25 @46483 has 13 MA's), (28, 46411), (33, 46330),

Gene: Seanderson\_77 Start: 48889, Stop: 48620, Start Num: 18

Candidate Starts for Seanderson\_77:

(Start: 18 @48889 has 206 MA's), (Start: 25 @48787 has 13 MA's), (28, 48715), (33, 48634), (34, 48625),

Gene: ShortQueendom\_72 Start: 45194, Stop: 44925, Start Num: 18

Candidate Starts for ShortQueendom\_72:

(Start: 18 @45194 has 206 MA's), (Start: 25 @45092 has 13 MA's), (28, 45020), (31, 45002), (33, 44939),

Gene: Sibs6\_78 Start: 45006, Stop: 44737, Start Num: 18

Candidate Starts for Sibs6\_78:

(Start: 18 @45006 has 206 MA's), (Start: 25 @44904 has 13 MA's), (28, 44832), (33, 44751),

Gene: SkiPole\_86 Start: 48493, Stop: 48221, Start Num: 18

Candidate Starts for SkiPole\_86:

(9, 48595), (13, 48535), (Start: 18 @48493 has 206 MA's), (21, 48433), (Start: 25 @48388 has 13 MA's), (28, 48316), (33, 48235),

Gene: Slagathor\_78 Start: 48349, Stop: 48077, Start Num: 18

Candidate Starts for Slagathor\_78:

(Start: 18 @48349 has 206 MA's), (Start: 25 @48244 has 13 MA's), (28, 48172), (33, 48091),

Gene: Smairt\_83 Start: 50328, Stop: 50059, Start Num: 18

Candidate Starts for Smairt\_83:

(Start: 18 @50328 has 206 MA's), (Start: 25 @50226 has 13 MA's), (28, 50154), (33, 50073), (34, 50064),

Gene: Snazzy\_78 Start: 47997, Stop: 47728, Start Num: 18

Candidate Starts for Snazzy\_78:

(Start: 18 @47997 has 206 MA's), (Start: 25 @47895 has 13 MA's), (28, 47823), (33, 47742),

Gene: Solon\_73 Start: 45632, Stop: 45363, Start Num: 18

Candidate Starts for Solon\_73:

(Start: 18 @45632 has 206 MA's), (Start: 25 @45530 has 13 MA's), (28, 45458), (33, 45377), (34, 45368),

Gene: Sorpresa\_77 Start: 47698, Stop: 47429, Start Num: 18

Candidate Starts for Sorpresa\_77:

(Start: 18 @47698 has 206 MA's), (Start: 25 @47596 has 13 MA's), (28, 47524), (31, 47506), (33, 47443), (34, 47434),

Gene: SpikeBT\_75 Start: 46626, Stop: 46357, Start Num: 18

Candidate Starts for SpikeBT\_75:

(Start: 18 @46626 has 206 MA's), (Start: 25 @46524 has 13 MA's), (28, 46452), (33, 46371),

Gene: Squee\_78 Start: 47070, Stop: 46801, Start Num: 18

Candidate Starts for Squee\_78:

(6, 47259), (Start: 18 @47070 has 206 MA's), (Start: 25 @46968 has 13 MA's), (28, 46896), (33, 46815),

Gene: Stellammi\_194 Start: 87432, Stop: 87641, Start Num: 23

Candidate Starts for Stellammi\_194:

(Start: 23 @87432 has 1 MA's), (29, 87549), (33, 87627),

Gene: StewieG\_74 Start: 44776, Stop: 44507, Start Num: 18

Candidate Starts for StewieG\_74:

(Start: 18 @44776 has 206 MA's), (Start: 25 @44674 has 13 MA's), (28, 44602), (33, 44521),

Gene: StrongArm\_73 Start: 47002, Stop: 46733, Start Num: 18

Candidate Starts for StrongArm\_73:

(Start: 18 @47002 has 206 MA's), (Start: 25 @46900 has 13 MA's), (28, 46828), (33, 46747), (34, 46738),

Gene: Sumter\_75 Start: 48350, Stop: 48081, Start Num: 18

Candidate Starts for Sumter\_75:

(Start: 18 @48350 has 206 MA's), (Start: 25 @48248 has 13 MA's), (28, 48176), (33, 48095), (34, 48086),

Gene: Sunshine924\_80 Start: 47137, Stop: 46868, Start Num: 18

Candidate Starts for Sunshine924\_80:

(6, 47326), (Start: 18 @47137 has 206 MA's), (Start: 25 @47035 has 13 MA's), (28, 46963), (31, 46945), (33, 46882), (34, 46873),

Gene: SwissCheese\_82 Start: 47689, Stop: 47420, Start Num: 18

Candidate Starts for SwissCheese\_82:

(Start: 18 @47689 has 206 MA's), (Start: 25 @47587 has 13 MA's), (28, 47515), (33, 47434), (34, 47425),

Gene: Switzer\_76 Start: 47461, Stop: 47192, Start Num: 18

Candidate Starts for Switzer\_76:

(6, 47650), (Start: 18 @47461 has 206 MA's), (Start: 25 @47359 has 13 MA's), (32, 47215), (33, 47206), (34, 47197),

Gene: Swole\_79 Start: 47448, Stop: 47179, Start Num: 18

Candidate Starts for Swole\_79:

(Start: 18 @47448 has 206 MA's), (Start: 25 @47346 has 13 MA's), (28, 47274), (33, 47193),

Gene: Target\_77 Start: 46094, Stop: 45825, Start Num: 18

Candidate Starts for Target\_77:

(Start: 18 @46094 has 206 MA's), (Start: 25 @45992 has 13 MA's), (28, 45920), (33, 45839), (34, 45830),

Gene: Tasp14\_77 Start: 47736, Stop: 47467, Start Num: 18

Candidate Starts for Tasp14\_77:

(Start: 18 @47736 has 206 MA's), (Start: 25 @47634 has 13 MA's), (33, 47481), (34, 47472),

Gene: Teaspoon\_44 Start: 35222, Stop: 35046, Start Num: 25

Candidate Starts for Teaspoon\_44:

(Start: 25 @35222 has 13 MA's), (28, 35150), (31, 35132), (33, 35069), (34, 35060),

Gene: Teodoridan\_75 Start: 45299, Stop: 45132, Start Num: 25

Candidate Starts for Teodoridan\_75:

(Start: 18 @45401 has 206 MA's), (Start: 25 @45299 has 13 MA's), (28, 45227), (33, 45146), (34, 45137),

Gene: TheloniousMonk\_79 Start: 48786, Stop: 48517, Start Num: 18

Candidate Starts for TheloniousMonk\_79:

(Start: 18 @48786 has 206 MA's), (Start: 25 @48684 has 13 MA's), (28, 48612), (31, 48594), (32, 48540), (33, 48531), (34, 48522),

Gene: Thor\_81 Start: 48520, Stop: 48251, Start Num: 18

Candidate Starts for Thor\_81:

(Start: 18 @48520 has 206 MA's), (Start: 25 @48418 has 13 MA's), (28, 48346), (33, 48265),

Gene: Topgun\_73 Start: 45738, Stop: 45469, Start Num: 18

Candidate Starts for Topgun\_73:

(Start: 18 @45738 has 206 MA's), (Start: 25 @45636 has 13 MA's), (28, 45564), (33, 45483), (34, 45474),

Gene: Tote\_74 Start: 44716, Stop: 44447, Start Num: 18

Candidate Starts for Tote\_74:

(Start: 18 @44716 has 206 MA's), (Start: 25 @44614 has 13 MA's), (28, 44542), (33, 44461),

Gene: Traft412\_77 Start: 47819, Stop: 47550, Start Num: 18

Candidate Starts for Traft412\_77:

(6, 48008), (Start: 18 @47819 has 206 MA's), (Start: 25 @47717 has 13 MA's), (28, 47645), (33, 47564), (34, 47555),

Gene: Treddle\_79 Start: 48549, Stop: 48280, Start Num: 18

Candidate Starts for Treddle\_79:

(Start: 18 @48549 has 206 MA's), (Start: 25 @48447 has 13 MA's), (28, 48375), (33, 48294), (34, 48285),

Gene: Tripl3t\_81 Start: 50261, Stop: 49992, Start Num: 18

Candidate Starts for Tripl3t\_81:

(Start: 18 @50261 has 206 MA's), (Start: 25 @50159 has 13 MA's), (28, 50087), (33, 50006), (34, 49997),

Gene: Trouble\_78 Start: 47927, Stop: 47658, Start Num: 18

Candidate Starts for Trouble\_78:

(Start: 18 @47927 has 206 MA's), (Start: 25 @47825 has 13 MA's), (28, 47753), (33, 47672), (34, 47663),

Gene: Turj99\_74 Start: 47279, Stop: 47010, Start Num: 18

Candidate Starts for Turj99\_74:

(Start: 18 @47279 has 206 MA's), (Start: 25 @47177 has 13 MA's), (28, 47105), (33, 47024), (34, 47015),

Gene: TwoPeat\_77 Start: 47081, Stop: 46812, Start Num: 18

Candidate Starts for TwoPeat\_77:

(6, 47270), (Start: 18 @47081 has 206 MA's), (Start: 25 @46979 has 13 MA's), (26, 46949), (28, 46907), (31, 46889), (33, 46826), (34, 46817),

Gene: U2\_72 Start: 47490, Stop: 47221, Start Num: 18

Candidate Starts for U2\_72:

(Start: 18 @47490 has 206 MA's), (Start: 25 @47388 has 13 MA's), (28, 47316), (33, 47235), (34, 47226),

Gene: Violet\_72 Start: 47713, Stop: 47444, Start Num: 18

Candidate Starts for Violet\_72:

(Start: 18 @47713 has 206 MA's), (Start: 25 @47611 has 13 MA's), (28, 47539), (31, 47521), (32, 47467), (33, 47458), (34, 47449),

Gene: Watermelon\_81 Start: 48795, Stop: 48526, Start Num: 18

Candidate Starts for Watermelon\_81:

(Start: 18 @48795 has 206 MA's), (Start: 25 @48693 has 13 MA's), (28, 48621), (31, 48603), (33, 48540), (34, 48531),

Gene: Wheeler\_83 Start: 49524, Stop: 49246, Start Num: 18

Candidate Starts for Wheeler\_83:

(Start: 18 @49524 has 206 MA's), (Start: 25 @49422 has 13 MA's), (28, 49350), (31, 49332), (33, 49269), (34, 49260),

Gene: Whitspit\_70 Start: 44343, Stop: 44176, Start Num: 25

Candidate Starts for Whitspit\_70:

(Start: 18 @44445 has 206 MA's), (Start: 25 @44343 has 13 MA's), (30, 44262), (33, 44190), (34, 44181),

Gene: Wilkins\_74 Start: 45668, Stop: 45399, Start Num: 18

Candidate Starts for Wilkins\_74:

(Start: 18 @45668 has 206 MA's), (Start: 25 @45566 has 13 MA's), (28, 45494), (33, 45413), (34, 45404),

Gene: Zeeculate\_74 Start: 47613, Stop: 47344, Start Num: 18

Candidate Starts for Zeeculate\_74:

(Start: 18 @47613 has 206 MA's), (Start: 25 @47511 has 13 MA's), (28, 47439), (33, 47358), (34, 47349),

Gene: Zephyr\_79 Start: 47713, Stop: 47444, Start Num: 18

Candidate Starts for Zephyr\_79:

(Start: 18 @47713 has 206 MA's), (Start: 25 @47611 has 13 MA's), (28, 47539), (33, 47458), (34, 47449),

Gene: Zeuska\_81 Start: 49026, Stop: 48859, Start Num: 25

Candidate Starts for Zeuska\_81:

(10, 49209), (11, 49182), (14, 49158), (15, 49146), (16, 49137), (17, 49131), (Start: 18 @49125 has 206 MA's), (Start: 25 @49026 has 13 MA's), (28, 48954), (33, 48873), (34, 48864),