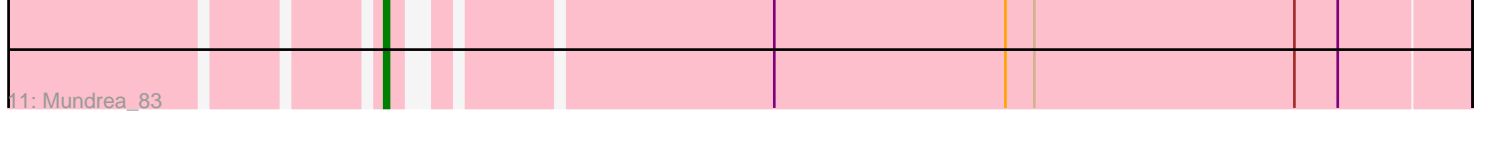
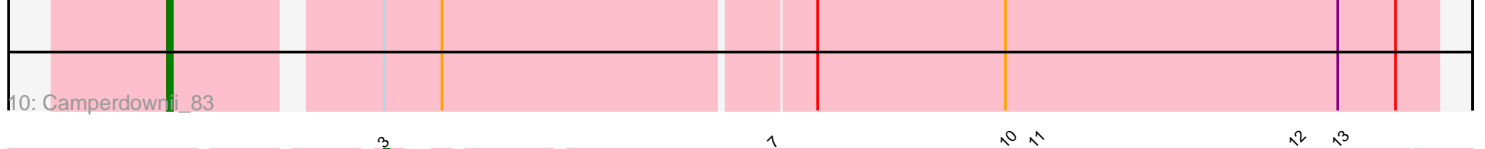
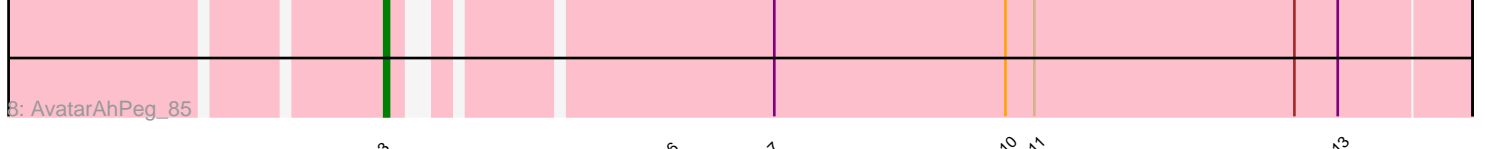
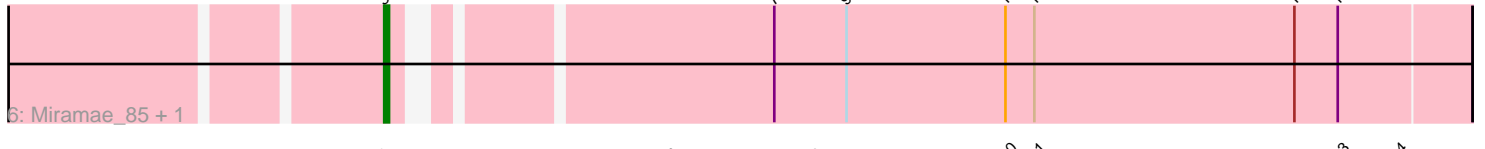
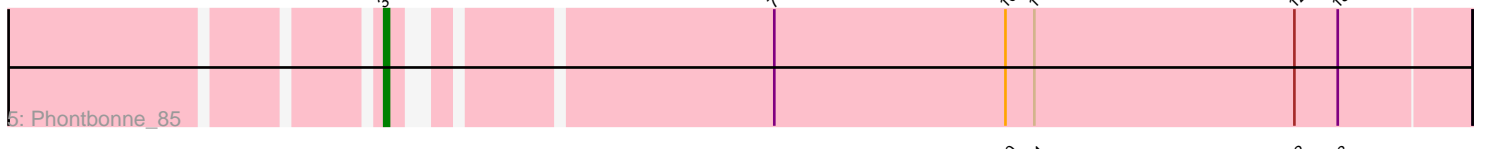
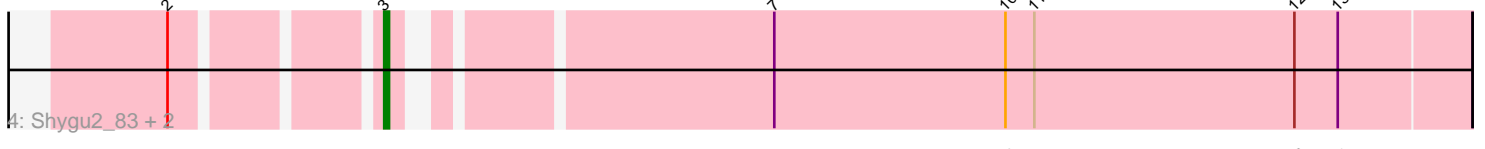
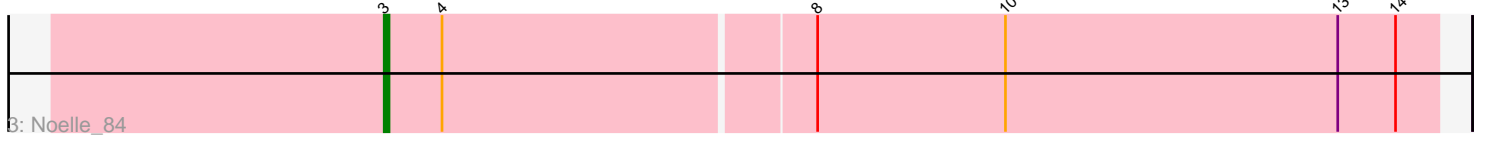
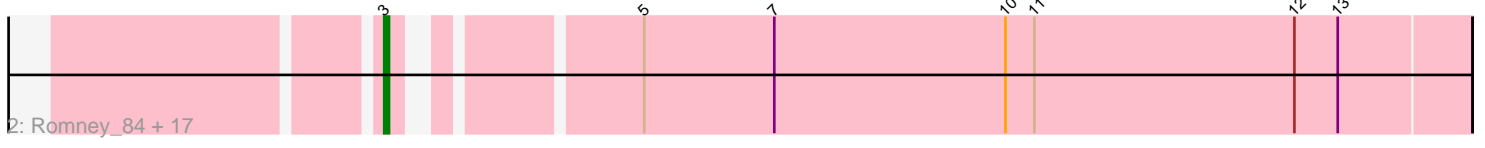
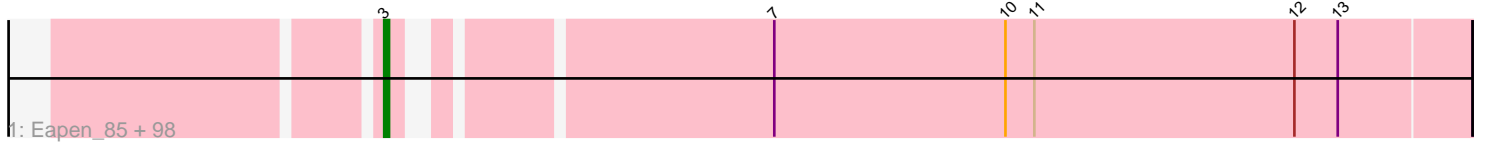


Pham 303174



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 303174 Report

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

Pham number 303174 has 129 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Eapen\_85, Eurydice\_86, Happiness\_84, Deano\_82, Arturo\_82, Annyong\_84, JoongJeon\_84, LappelDuVide\_85, Tinybot\_84, Peaches\_83, Burger\_83, Obama12\_86, DirtyDunning\_84, Ohfah\_86, Holli\_84, BubbleTrouble\_84, Huxley\_77, Eagle\_84, SeniorClean\_86, Baby16\_85, Citius\_85, Flux\_86, Funston\_84, Thanksgivukkah\_84, Broseidon\_85, Maverick\_84, LittleGuy\_85, Iceman\_83, Maxo\_87, TinaFeyge\_83, Kampy\_84, Nemo27\_84, Gadost\_85, Kyee\_85, ChampagnePapi\_88, Palestino\_84, Kratark\_84, Melvin\_87, NorthStar\_82, ICleared\_84, Polymorphads\_86, Commander\_83, Florean\_85, Roosevelt\_83, MeeZee\_84, Eris\_84, Lemur\_85, Mazhar510\_85, Chaph\_85, CentreCat\_85, Rosa24\_81, Jaykayelowell\_82, NotAPhaseMom\_84, Caelakin\_83, Bombshell\_85, Ulysses\_84, Sultana\_85, OKaNui\_84, Ruin\_85, KekoraPapaka\_82, Lorenzo\_85, Cocoaberry\_85, TygerBlood\_85, RockieBear\_82, Millski\_84, Wander\_85, TroyPia\_86, Connomayer\_85, Dhanush\_85, Avle17\_85, YoSam321\_85, Koreni\_84, Pipcraft\_81, Houdini22\_84, Bruiser\_84, Shaka\_83, Phelipe\_85, KFPoly\_84, Alberto7\_86, Morrow\_87, LHTSCC\_88, Medusa\_84, Nyxis\_84, Blackmoor\_84, Phacado\_85, HamSlice\_81, Taquarus\_84, Koan\_82, Sabertooth\_85, TiroTheta9\_84, SteMason\_81, Eros\_85, Bartimeaus\_85, BellusTerra\_85, Clarenza\_84, Lunsford\_85, Iracema64\_85, Scamp\_85, Nebs\_86
- Track 2 : Romney\_84, Abdiel\_84, BangNhom\_82, Pumbaa\_85, LochMonster\_86, Sparxx\_86, Phighter1804\_85, Kingmustik0402\_85, Spino\_84, PeterPeter\_85, SheldonCooper\_85, Cerulean\_87, Wilbur\_85, Relief\_84, LittleB\_85, Albee\_85, JetBlade\_86, Skipitt\_84
- Track 3 : Noelle\_84
- Track 4 : Shygu2\_83, Xena\_81, Datway\_82
- Track 5 : Phontbonne\_85
- Track 6 : Miramae\_85, Stink\_85
- Track 7 : Stasia\_82
- Track 8 : AvatarAhPeg\_85
- Track 9 : Cindaradix\_80
- Track 10 : Camperdownii\_83
- Track 11 : Mundrea\_83

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

The start number called the most often in the published annotations is 3, it was called in 124 of the 125 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abdiel\_84, Albee\_85, Alberto7\_86, Annyong\_84, Arturo\_82, AvatarAhPeg\_85, Avle17\_85, Baby16\_85, BangNhom\_82, Bartimeaus\_85, BellusTerra\_85, Blackmoor\_84, Bombshell\_85, Broseidon\_85, Bruiser\_84, BubbleTrouble\_84, Burger\_83, Caelakin\_83, CentreCat\_85, Cerulean\_87, ChampagnePapi\_88, Chaph\_85, Cindaradix\_80, Citius\_85, Clarenza\_84, Cocoaberry\_85, Commander\_83, Connomayer\_85, Datway\_82, Deano\_82, Dhanush\_85, DirtyDunning\_84, Eagle\_84, Eapen\_85, Eris\_84, Eros\_85, Eurydice\_86, Floean\_85, Flux\_86, Funston\_84, Gadost\_85, HamSlice\_81, Happiness\_84, Holli\_84, Houdini22\_84, Huxley\_77, ICleared\_84, Iceman\_83, Iracema64\_85, Jaykayelowell\_82, JetBlade\_86, JoongJeon\_84, KFPoly\_84, Kamy\_84, KekoraPapaka\_82, Kingmustik0402\_85, Koan\_82, Koreni\_84, Kratark\_84, Kyee\_85, LHTSCC\_88, LappelDuVide\_85, Lemur\_85, LittleB\_85, LittleGuy\_85, LochMonster\_86, Lorenzo\_85, Lunsford\_85, Maverick\_84, Maxo\_87, Mazhar510\_85, Medusa\_84, MeeZee\_84, Melvin\_87, Millski\_84, Miramae\_85, Morrow\_87, Mundrea\_83, Nebs\_86, Nemo27\_84, Noelle\_84, NorthStar\_82, NotAPhaseMom\_84, Nyxis\_84, OKaNui\_84, Obama12\_86, Ohfah\_86, Palestino\_84, Peaches\_83, PeterPeter\_85, Phacado\_85, Felipe\_85, Phighter1804\_85, Phontbonne\_85, Pipcraft\_81, Polymorphads\_86, Pumbaa\_85, Relief\_84, RockieBear\_82, Romney\_84, Roosevelt\_83, Rosa24\_81, Ruin\_85, Sabertooth\_85, Scamp\_85, SeniorClean\_86, Shaka\_83, SheldonCooper\_85, Shygu2\_83, Skipitt\_84, Sparxx\_86, Spino\_84, Stasia\_82, SteMason\_81, Stink\_85, Sultana\_85, Taquarus\_84, Thanksgivukkah\_84, TinaFeyge\_83, Tinybot\_84, TiroTheta9\_84, TroyPia\_86, TygerBlood\_85, Ulysses\_84, Wander\_85, Wilbur\_85, Xena\_81, YoSam321\_85,

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

- Camperdownii\_83,

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

- 

### Summary by start number:

Start 2:

- Found in 4 of 129 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Camperdownii\_83 (A4),

Start 3:

- Found in 129 of 129 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 124 of 125
- Called 99.2% of time when present
- Phage (with cluster) where this start called: Abdiel\_84 (A4), Albee\_85 (A4), Alberto7\_86 (A4), Annyong\_84 (A4), Arturo\_82 (A4), AvatarAhPeg\_85 (A4), Avle17\_85 (A4), Baby16\_85 (A4), BangNhom\_82 (A4), Bartimeaus\_85 (A4), BellusTerra\_85 (A4), Blackmoor\_84 (A4), Bombshell\_85 (A4), Broseidon\_85 (A4), Bruiser\_84 (A4), BubbleTrouble\_84 (A4), Burger\_83 (A4), Caelakin\_83 (A4), CentreCat\_85 (A4), Cerulean\_87 (A4), ChampagnePapi\_88 (A4), Chaph\_85 (A4), Cindaradix\_80 (A4), Citius\_85 (A4), Clarenza\_84 (A4), Cocoaberry\_85 (A4),

Commander\_83 (A4), Connomayer\_85 (A4), Datway\_82 (A4), Deano\_82 (A4), Dhanush\_85 (A4), DirtyDunning\_84 (A4), Eagle\_84 (A4), Eapen\_85 (A4), Eris\_84 (A4), Eros\_85 (A4), Eurydice\_86 (A4), Florean\_85 (A4), Flux\_86 (A4), Funston\_84 (A4), Gadost\_85 (A4), HamSlice\_81 (A4), Happiness\_84 (A4), Holli\_84 (A4), Houdini22\_84 (A4), Huxley\_77 (A4), ICleared\_84 (A4), Iceman\_83 (A4), Iracema64\_85 (A4), Jaykayelowell\_82 (A4), JetBlade\_86 (A4), JoongJeon\_84 (A4), KFPoly\_84 (A4), Kampy\_84 (A4), KekoraPapaka\_82 (A4), Kingmustik0402\_85 (A4), Koan\_82 (A4), Koreni\_84 (A4), Kratark\_84 (A4), Kye\_85 (A4), LHTSCC\_88 (A4), LappelDuVide\_85 (A4), Lemur\_85 (A4), LittleB\_85 (A4), LittleGuy\_85 (A4), LochMonster\_86 (A4), Lorenzo\_85 (A4), Lunsford\_85 (A4), Maverick\_84 (A4), Maxo\_87 (A4), Mazhar510\_85 (A4), Medusa\_84 (A4), MeeZee\_84 (A4), Melvin\_87 (A4), Millski\_84 (A4), Miramae\_85 (A4), Morrow\_87 (A4), Mundrea\_83 (A4), Nebs\_86 (A4), Nemo27\_84 (A4), Noelle\_84 (A4), NorthStar\_82 (A4), NotAPhaseMom\_84 (A4), Nyxis\_84 (A4), OKaNui\_84 (A4), Obama12\_86 (A4), Ohfah\_86 (A4), Palestino\_84 (A4), Peaches\_83 (A4), PeterPeter\_85 (A4), Phacado\_85 (A4), Phelipe\_85 (A4), Phighter1804\_85 (A4), Phontbonne\_85 (A4), Pipcraft\_81 (A4), Polymorphads\_86 (A4), Pumbaa\_85 (A4), Relief\_84 (A4), RockieBear\_82 (A4), Romney\_84 (A4), Roosevelt\_83 (A4), Rosa24\_81 (A4), Ruin\_85 (A4), Sabertooth\_85 (A4), Scamp\_85 (A4), SenorClean\_86 (A4), Shaka\_83 (A4), SheldonCooper\_85 (A4), Shygu2\_83 (A4), Skipitt\_84 (A4), Sparxx\_86 (A4), Spino\_84 (A4), Stasia\_82 (A4), SteMason\_81 (A4), Stink\_85 (A4), Sultana\_85 (A4), Taquarus\_84 (A4), Thanksgivukkah\_84 (A4), TinaFeyge\_83 (A4), Tinybot\_84 (A4), TiroTheta9\_84 (A4), TroyPia\_86 (A4), TygerBlood\_85 (A4), Ulysses\_84 (A4), Wander\_85 (A4), Wilbur\_85 (A4), Xena\_81 (A4), YoSam321\_85 (A4),

### **Summary by clusters:**

There is one cluster represented in this pham: A4

Info for manual annotations of cluster A4:

- Start number 2 was manually annotated 1 time for cluster A4.
- Start number 3 was manually annotated 124 times for cluster A4.

### **Gene Information:**

Gene: Abdiel\_84 Start: 48815, Stop: 48603, Start Num: 3

Candidate Starts for Abdiel\_84:

(Start: 3 @48815 has 124 MA's), (5, 48773), (7, 48746), (10, 48698), (11, 48692), (12, 48638), (13, 48629),

Gene: Albee\_85 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for Albee\_85:

(Start: 3 @48803 has 124 MA's), (5, 48761), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: Alberto7\_86 Start: 49140, Stop: 48928, Start Num: 3

Candidate Starts for Alberto7\_86:

(Start: 3 @49140 has 124 MA's), (7, 49071), (10, 49023), (11, 49017), (12, 48963), (13, 48954),

Gene: Annyong\_84 Start: 48848, Stop: 48636, Start Num: 3

Candidate Starts for Annyong\_84:

(Start: 3 @48848 has 124 MA's), (7, 48779), (10, 48731), (11, 48725), (12, 48671), (13, 48662),

Gene: Arturo\_82 Start: 48931, Stop: 48719, Start Num: 3

Candidate Starts for Arturo\_82:

(Start: 3 @48931 has 124 MA's), (7, 48862), (10, 48814), (11, 48808), (12, 48754), (13, 48745),

Gene: AvatarAhPeg\_85 Start: 49056, Stop: 48844, Start Num: 3

Candidate Starts for AvatarAhPeg\_85:

(Start: 3 @49056 has 124 MA's), (7, 48987), (10, 48939), (11, 48933), (12, 48879), (13, 48870),

Gene: Avle17\_85 Start: 48797, Stop: 48585, Start Num: 3

Candidate Starts for Avle17\_85:

(Start: 3 @48797 has 124 MA's), (7, 48728), (10, 48680), (11, 48674), (12, 48620), (13, 48611),

Gene: Baby16\_85 Start: 48814, Stop: 48602, Start Num: 3

Candidate Starts for Baby16\_85:

(Start: 3 @48814 has 124 MA's), (7, 48745), (10, 48697), (11, 48691), (12, 48637), (13, 48628),

Gene: BangNhom\_82 Start: 49240, Stop: 49028, Start Num: 3

Candidate Starts for BangNhom\_82:

(Start: 3 @49240 has 124 MA's), (5, 49198), (7, 49171), (10, 49123), (11, 49117), (12, 49063), (13, 49054),

Gene: Bartimeaus\_85 Start: 48805, Stop: 48593, Start Num: 3

Candidate Starts for Bartimeaus\_85:

(Start: 3 @48805 has 124 MA's), (7, 48736), (10, 48688), (11, 48682), (12, 48628), (13, 48619),

Gene: BellusTerra\_85 Start: 48668, Stop: 48456, Start Num: 3

Candidate Starts for BellusTerra\_85:

(Start: 3 @48668 has 124 MA's), (7, 48599), (10, 48551), (11, 48545), (12, 48491), (13, 48482),

Gene: Blackmoor\_84 Start: 48805, Stop: 48593, Start Num: 3

Candidate Starts for Blackmoor\_84:

(Start: 3 @48805 has 124 MA's), (7, 48736), (10, 48688), (11, 48682), (12, 48628), (13, 48619),

Gene: Bombshell\_85 Start: 48800, Stop: 48588, Start Num: 3

Candidate Starts for Bombshell\_85:

(Start: 3 @48800 has 124 MA's), (7, 48731), (10, 48683), (11, 48677), (12, 48623), (13, 48614),

Gene: Broseidon\_85 Start: 48806, Stop: 48594, Start Num: 3

Candidate Starts for Broseidon\_85:

(Start: 3 @48806 has 124 MA's), (7, 48737), (10, 48689), (11, 48683), (12, 48629), (13, 48620),

Gene: Bruiser\_84 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for Bruiser\_84:

(Start: 3 @48803 has 124 MA's), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: BubbleTrouble\_84 Start: 48830, Stop: 48618, Start Num: 3

Candidate Starts for BubbleTrouble\_84:

(Start: 3 @48830 has 124 MA's), (7, 48761), (10, 48713), (11, 48707), (12, 48653), (13, 48644),

Gene: Burger\_83 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for Burger\_83:

(Start: 3 @48803 has 124 MA's), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: Caelakin\_83 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for Caelakin\_83:

(Start: 3 @48803 has 124 MA's), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: Camperdownii\_83 Start: 48398, Stop: 48144, Start Num: 2

Candidate Starts for Camperdownii\_83:

(Start: 2 @48398 has 1 MA's), (Start: 3 @48359 has 124 MA's), (4, 48347), (8, 48272), (10, 48233), (13, 48164), (14, 48152),

Gene: CentreCat\_85 Start: 48843, Stop: 48631, Start Num: 3

Candidate Starts for CentreCat\_85:

(Start: 3 @48843 has 124 MA's), (7, 48774), (10, 48726), (11, 48720), (12, 48666), (13, 48657),

Gene: Cerulean\_87 Start: 49241, Stop: 49029, Start Num: 3

Candidate Starts for Cerulean\_87:

(Start: 3 @49241 has 124 MA's), (5, 49199), (7, 49172), (10, 49124), (11, 49118), (12, 49064), (13, 49055),

Gene: ChampagnePapi\_88 Start: 49243, Stop: 49031, Start Num: 3

Candidate Starts for ChampagnePapi\_88:

(Start: 3 @49243 has 124 MA's), (7, 49174), (10, 49126), (11, 49120), (12, 49066), (13, 49057),

Gene: Chaph\_85 Start: 48814, Stop: 48602, Start Num: 3

Candidate Starts for Chaph\_85:

(Start: 3 @48814 has 124 MA's), (7, 48745), (10, 48697), (11, 48691), (12, 48637), (13, 48628),

Gene: Cindaradix\_80 Start: 49002, Stop: 48796, Start Num: 3

Candidate Starts for Cindaradix\_80:

(Start: 3 @49002 has 124 MA's), (6, 48954), (7, 48933), (10, 48885), (11, 48879), (13, 48816),

Gene: Citius\_85 Start: 48824, Stop: 48612, Start Num: 3

Candidate Starts for Citius\_85:

(Start: 3 @48824 has 124 MA's), (7, 48755), (10, 48707), (11, 48701), (12, 48647), (13, 48638),

Gene: Clarenza\_84 Start: 48800, Stop: 48588, Start Num: 3

Candidate Starts for Clarenza\_84:

(Start: 3 @48800 has 124 MA's), (7, 48731), (10, 48683), (11, 48677), (12, 48623), (13, 48614),

Gene: Cocoaberry\_85 Start: 48804, Stop: 48592, Start Num: 3

Candidate Starts for Cocoaberry\_85:

(Start: 3 @48804 has 124 MA's), (7, 48735), (10, 48687), (11, 48681), (12, 48627), (13, 48618),

Gene: Commander\_83 Start: 48807, Stop: 48595, Start Num: 3

Candidate Starts for Commander\_83:

(Start: 3 @48807 has 124 MA's), (7, 48738), (10, 48690), (11, 48684), (12, 48630), (13, 48621),

Gene: Connomayer\_85 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for Connomayer\_85:

(Start: 3 @48803 has 124 MA's), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: Datway\_82 Start: 48614, Stop: 48402, Start Num: 3

Candidate Starts for Datway\_82:

(Start: 2 @48650 has 1 MA's), (Start: 3 @48614 has 124 MA's), (7, 48545), (10, 48497), (11, 48491), (12, 48437), (13, 48428),

Gene: Deano\_82 Start: 48811, Stop: 48599, Start Num: 3

Candidate Starts for Deano\_82:

(Start: 3 @48811 has 124 MA's), (7, 48742), (10, 48694), (11, 48688), (12, 48634), (13, 48625),

Gene: Dhanush\_85 Start: 48806, Stop: 48594, Start Num: 3

Candidate Starts for Dhanush\_85:

(Start: 3 @48806 has 124 MA's), (7, 48737), (10, 48689), (11, 48683), (12, 48629), (13, 48620),

Gene: DirtyDunning\_84 Start: 48815, Stop: 48603, Start Num: 3

Candidate Starts for DirtyDunning\_84:

(Start: 3 @48815 has 124 MA's), (7, 48746), (10, 48698), (11, 48692), (12, 48638), (13, 48629),

Gene: Eagle\_84 Start: 48865, Stop: 48653, Start Num: 3

Candidate Starts for Eagle\_84:

(Start: 3 @48865 has 124 MA's), (7, 48796), (10, 48748), (11, 48742), (12, 48688), (13, 48679),

Gene: Eapen\_85 Start: 48798, Stop: 48586, Start Num: 3

Candidate Starts for Eapen\_85:

(Start: 3 @48798 has 124 MA's), (7, 48729), (10, 48681), (11, 48675), (12, 48621), (13, 48612),

Gene: Eris\_84 Start: 48815, Stop: 48603, Start Num: 3

Candidate Starts for Eris\_84:

(Start: 3 @48815 has 124 MA's), (7, 48746), (10, 48698), (11, 48692), (12, 48638), (13, 48629),

Gene: Eros\_85 Start: 48811, Stop: 48599, Start Num: 3

Candidate Starts for Eros\_85:

(Start: 3 @48811 has 124 MA's), (7, 48742), (10, 48694), (11, 48688), (12, 48634), (13, 48625),

Gene: Eurydice\_86 Start: 48840, Stop: 48628, Start Num: 3

Candidate Starts for Eurydice\_86:

(Start: 3 @48840 has 124 MA's), (7, 48771), (10, 48723), (11, 48717), (12, 48663), (13, 48654),

Gene: Florean\_85 Start: 48802, Stop: 48590, Start Num: 3

Candidate Starts for Florean\_85:

(Start: 3 @48802 has 124 MA's), (7, 48733), (10, 48685), (11, 48679), (12, 48625), (13, 48616),

Gene: Flux\_86 Start: 48801, Stop: 48589, Start Num: 3

Candidate Starts for Flux\_86:

(Start: 3 @48801 has 124 MA's), (7, 48732), (10, 48684), (11, 48678), (12, 48624), (13, 48615),

Gene: Funston\_84 Start: 48800, Stop: 48588, Start Num: 3

Candidate Starts for Funston\_84:

(Start: 3 @48800 has 124 MA's), (7, 48731), (10, 48683), (11, 48677), (12, 48623), (13, 48614),

Gene: Gadost\_85 Start: 48804, Stop: 48592, Start Num: 3

Candidate Starts for Gadost\_85:

(Start: 3 @48804 has 124 MA's), (7, 48735), (10, 48687), (11, 48681), (12, 48627), (13, 48618),

Gene: HamSlice\_81 Start: 48802, Stop: 48590, Start Num: 3

Candidate Starts for HamSlice\_81:

(Start: 3 @48802 has 124 MA's), (7, 48733), (10, 48685), (11, 48679), (12, 48625), (13, 48616),

Gene: Happiness\_84 Start: 48826, Stop: 48614, Start Num: 3

Candidate Starts for Happiness\_84:

(Start: 3 @48826 has 124 MA's), (7, 48757), (10, 48709), (11, 48703), (12, 48649), (13, 48640),

Gene: Holli\_84 Start: 48593, Stop: 48381, Start Num: 3

Candidate Starts for Holli\_84:

(Start: 3 @48593 has 124 MA's), (7, 48524), (10, 48476), (11, 48470), (12, 48416), (13, 48407),

Gene: Houdini22\_84 Start: 48804, Stop: 48592, Start Num: 3

Candidate Starts for Houdini22\_84:

(Start: 3 @48804 has 124 MA's), (7, 48735), (10, 48687), (11, 48681), (12, 48627), (13, 48618),

Gene: Huxley\_77 Start: 46696, Stop: 46484, Start Num: 3

Candidate Starts for Huxley\_77:

(Start: 3 @46696 has 124 MA's), (7, 46627), (10, 46579), (11, 46573), (12, 46519), (13, 46510),

Gene: ICleared\_84 Start: 48871, Stop: 48659, Start Num: 3

Candidate Starts for ICleared\_84:

(Start: 3 @48871 has 124 MA's), (7, 48802), (10, 48754), (11, 48748), (12, 48694), (13, 48685),

Gene: Iceman\_83 Start: 49093, Stop: 48881, Start Num: 3

Candidate Starts for Iceman\_83:

(Start: 3 @49093 has 124 MA's), (7, 49024), (10, 48976), (11, 48970), (12, 48916), (13, 48907),

Gene: Iracema64\_85 Start: 49067, Stop: 48855, Start Num: 3

Candidate Starts for Iracema64\_85:

(Start: 3 @49067 has 124 MA's), (7, 48998), (10, 48950), (11, 48944), (12, 48890), (13, 48881),

Gene: Jaykayelowell\_82 Start: 48796, Stop: 48584, Start Num: 3

Candidate Starts for Jaykayelowell\_82:

(Start: 3 @48796 has 124 MA's), (7, 48727), (10, 48679), (11, 48673), (12, 48619), (13, 48610),

Gene: JetBlade\_86 Start: 48831, Stop: 48619, Start Num: 3

Candidate Starts for JetBlade\_86:

(Start: 3 @48831 has 124 MA's), (5, 48789), (7, 48762), (10, 48714), (11, 48708), (12, 48654), (13, 48645),

Gene: JoongJeon\_84 Start: 48797, Stop: 48585, Start Num: 3

Candidate Starts for JoongJeon\_84:

(Start: 3 @48797 has 124 MA's), (7, 48728), (10, 48680), (11, 48674), (12, 48620), (13, 48611),

Gene: KFPoly\_84 Start: 48797, Stop: 48585, Start Num: 3

Candidate Starts for KFPoly\_84:

(Start: 3 @48797 has 124 MA's), (7, 48728), (10, 48680), (11, 48674), (12, 48620), (13, 48611),

Gene: Kampy\_84 Start: 48806, Stop: 48594, Start Num: 3

Candidate Starts for Kampy\_84:

(Start: 3 @48806 has 124 MA's), (7, 48737), (10, 48689), (11, 48683), (12, 48629), (13, 48620),

Gene: KekoraPapaka\_82 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for KekoraPapaka\_82:

(Start: 3 @48803 has 124 MA's), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: Kingmustik0402\_85 Start: 48792, Stop: 48580, Start Num: 3

Candidate Starts for Kingmustik0402\_85:

(Start: 3 @48792 has 124 MA's), (5, 48750), (7, 48723), (10, 48675), (11, 48669), (12, 48615), (13, 48606),

Gene: Koan\_82 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for Koan\_82:

(Start: 3 @48803 has 124 MA's), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: Koreni\_84 Start: 48484, Stop: 48272, Start Num: 3

Candidate Starts for Koreni\_84:

(Start: 3 @48484 has 124 MA's), (7, 48415), (10, 48367), (11, 48361), (12, 48307), (13, 48298),

Gene: Kratak\_84 Start: 48837, Stop: 48625, Start Num: 3

Candidate Starts for Kratak\_84:

(Start: 3 @48837 has 124 MA's), (7, 48768), (10, 48720), (11, 48714), (12, 48660), (13, 48651),

Gene: Kyee\_85 Start: 48798, Stop: 48586, Start Num: 3

Candidate Starts for Kyee\_85:

(Start: 3 @48798 has 124 MA's), (7, 48729), (10, 48681), (11, 48675), (12, 48621), (13, 48612),

Gene: LHTSCC\_88 Start: 49244, Stop: 49032, Start Num: 3

Candidate Starts for LHTSCC\_88:

(Start: 3 @49244 has 124 MA's), (7, 49175), (10, 49127), (11, 49121), (12, 49067), (13, 49058),

Gene: LappelDuVide\_85 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for LappelDuVide\_85:

(Start: 3 @48803 has 124 MA's), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: Lemur\_85 Start: 48800, Stop: 48588, Start Num: 3

Candidate Starts for Lemur\_85:

(Start: 3 @48800 has 124 MA's), (7, 48731), (10, 48683), (11, 48677), (12, 48623), (13, 48614),

Gene: LittleB\_85 Start: 48804, Stop: 48592, Start Num: 3

Candidate Starts for LittleB\_85:

(Start: 3 @48804 has 124 MA's), (5, 48762), (7, 48735), (10, 48687), (11, 48681), (12, 48627), (13, 48618),

Gene: LittleGuy\_85 Start: 48694, Stop: 48482, Start Num: 3

Candidate Starts for LittleGuy\_85:

(Start: 3 @48694 has 124 MA's), (7, 48625), (10, 48577), (11, 48571), (12, 48517), (13, 48508),

Gene: LochMonster\_86 Start: 49040, Stop: 48828, Start Num: 3

Candidate Starts for LochMonster\_86:

(Start: 3 @49040 has 124 MA's), (5, 48998), (7, 48971), (10, 48923), (11, 48917), (12, 48863), (13, 48854),

Gene: Lorenzo\_85 Start: 48801, Stop: 48589, Start Num: 3

Candidate Starts for Lorenzo\_85:

(Start: 3 @48801 has 124 MA's), (7, 48732), (10, 48684), (11, 48678), (12, 48624), (13, 48615),

Gene: Lunsford\_85 Start: 48796, Stop: 48584, Start Num: 3

Candidate Starts for Lunsford\_85:

(Start: 3 @48796 has 124 MA's), (7, 48727), (10, 48679), (11, 48673), (12, 48619), (13, 48610),

Gene: Maverick\_84 Start: 48800, Stop: 48588, Start Num: 3

Candidate Starts for Maverick\_84:

(Start: 3 @48800 has 124 MA's), (7, 48731), (10, 48683), (11, 48677), (12, 48623), (13, 48614),

Gene: Maxo\_87 Start: 48806, Stop: 48594, Start Num: 3

Candidate Starts for Maxo\_87:

(Start: 3 @48806 has 124 MA's), (7, 48737), (10, 48689), (11, 48683), (12, 48629), (13, 48620),

Gene: Mazhar510\_85 Start: 48801, Stop: 48589, Start Num: 3

Candidate Starts for Mazhar510\_85:

(Start: 3 @48801 has 124 MA's), (7, 48732), (10, 48684), (11, 48678), (12, 48624), (13, 48615),

Gene: Medusa\_84 Start: 48816, Stop: 48604, Start Num: 3

Candidate Starts for Medusa\_84:

(Start: 3 @48816 has 124 MA's), (7, 48747), (10, 48699), (11, 48693), (12, 48639), (13, 48630),

Gene: MeeZee\_84 Start: 48797, Stop: 48585, Start Num: 3

Candidate Starts for MeeZee\_84:

(Start: 3 @48797 has 124 MA's), (7, 48728), (10, 48680), (11, 48674), (12, 48620), (13, 48611),

Gene: Melvin\_87 Start: 48798, Stop: 48586, Start Num: 3

Candidate Starts for Melvin\_87:

(Start: 3 @48798 has 124 MA's), (7, 48729), (10, 48681), (11, 48675), (12, 48621), (13, 48612),

Gene: Millski\_84 Start: 48804, Stop: 48592, Start Num: 3

Candidate Starts for Millski\_84:

(Start: 3 @48804 has 124 MA's), (7, 48735), (10, 48687), (11, 48681), (12, 48627), (13, 48618),

Gene: Miramae\_85 Start: 48719, Stop: 48507, Start Num: 3

Candidate Starts for Miramae\_85:

(Start: 3 @48719 has 124 MA's), (7, 48650), (9, 48635), (10, 48602), (11, 48596), (12, 48542), (13, 48533),

Gene: Morrow\_87 Start: 48843, Stop: 48631, Start Num: 3

Candidate Starts for Morrow\_87:

(Start: 3 @48843 has 124 MA's), (7, 48774), (10, 48726), (11, 48720), (12, 48666), (13, 48657),

Gene: Mundrea\_83 Start: 48681, Stop: 48469, Start Num: 3

Candidate Starts for Mundrea\_83:

(Start: 3 @48681 has 124 MA's), (7, 48612), (10, 48564), (11, 48558), (12, 48504), (13, 48495),

Gene: Nebs\_86 Start: 48843, Stop: 48631, Start Num: 3

Candidate Starts for Nebs\_86:

(Start: 3 @48843 has 124 MA's), (7, 48774), (10, 48726), (11, 48720), (12, 48666), (13, 48657),

Gene: Nemo27\_84 Start: 48799, Stop: 48587, Start Num: 3

Candidate Starts for Nemo27\_84:

(Start: 3 @48799 has 124 MA's), (7, 48730), (10, 48682), (11, 48676), (12, 48622), (13, 48613),

Gene: Noelle\_84 Start: 48915, Stop: 48700, Start Num: 3

Candidate Starts for Noelle\_84:

(Start: 3 @48915 has 124 MA's), (4, 48903), (8, 48828), (10, 48789), (13, 48720), (14, 48708),

Gene: NorthStar\_82 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for NorthStar\_82:

(Start: 3 @48803 has 124 MA's), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: NotAPhaseMom\_84 Start: 48804, Stop: 48592, Start Num: 3

Candidate Starts for NotAPhaseMom\_84:

(Start: 3 @48804 has 124 MA's), (7, 48735), (10, 48687), (11, 48681), (12, 48627), (13, 48618),

Gene: Nyxis\_84 Start: 48688, Stop: 48476, Start Num: 3

Candidate Starts for Nyxis\_84:

(Start: 3 @48688 has 124 MA's), (7, 48619), (10, 48571), (11, 48565), (12, 48511), (13, 48502),

Gene: OKaNui\_84 Start: 48854, Stop: 48642, Start Num: 3

Candidate Starts for OKaNui\_84:

(Start: 3 @48854 has 124 MA's), (7, 48785), (10, 48737), (11, 48731), (12, 48677), (13, 48668),

Gene: Obama12\_86 Start: 49227, Stop: 49015, Start Num: 3

Candidate Starts for Obama12\_86:

(Start: 3 @49227 has 124 MA's), (7, 49158), (10, 49110), (11, 49104), (12, 49050), (13, 49041),

Gene: Ohfah\_86 Start: 48843, Stop: 48631, Start Num: 3

Candidate Starts for Ohfah\_86:

(Start: 3 @48843 has 124 MA's), (7, 48774), (10, 48726), (11, 48720), (12, 48666), (13, 48657),

Gene: Palestino\_84 Start: 48800, Stop: 48588, Start Num: 3

Candidate Starts for Palestino\_84:

(Start: 3 @48800 has 124 MA's), (7, 48731), (10, 48683), (11, 48677), (12, 48623), (13, 48614),

Gene: Peaches\_83 Start: 48808, Stop: 48596, Start Num: 3

Candidate Starts for Peaches\_83:

(Start: 3 @48808 has 124 MA's), (7, 48739), (10, 48691), (11, 48685), (12, 48631), (13, 48622),

Gene: PeterPeter\_85 Start: 48797, Stop: 48585, Start Num: 3

Candidate Starts for PeterPeter\_85:

(Start: 3 @48797 has 124 MA's), (5, 48755), (7, 48728), (10, 48680), (11, 48674), (12, 48620), (13, 48611),

Gene: Phacado\_85 Start: 48799, Stop: 48587, Start Num: 3

Candidate Starts for Phacado\_85:

(Start: 3 @48799 has 124 MA's), (7, 48730), (10, 48682), (11, 48676), (12, 48622), (13, 48613),

Gene: Phelipe\_85 Start: 48764, Stop: 48552, Start Num: 3

Candidate Starts for Phelipe\_85:

(Start: 3 @48764 has 124 MA's), (7, 48695), (10, 48647), (11, 48641), (12, 48587), (13, 48578),

Gene: Phighter1804\_85 Start: 48864, Stop: 48652, Start Num: 3

Candidate Starts for Phighter1804\_85:

(Start: 3 @48864 has 124 MA's), (5, 48822), (7, 48795), (10, 48747), (11, 48741), (12, 48687), (13, 48678),

Gene: Phontbonne\_85 Start: 48704, Stop: 48492, Start Num: 3

Candidate Starts for Phontbonne\_85:

(Start: 3 @48704 has 124 MA's), (7, 48635), (10, 48587), (11, 48581), (12, 48527), (13, 48518),

Gene: Pipcraft\_81 Start: 48804, Stop: 48592, Start Num: 3

Candidate Starts for Pipcraft\_81:

(Start: 3 @48804 has 124 MA's), (7, 48735), (10, 48687), (11, 48681), (12, 48627), (13, 48618),

Gene: Polymorphads\_86 Start: 48824, Stop: 48612, Start Num: 3

Candidate Starts for Polymorphads\_86:

(Start: 3 @48824 has 124 MA's), (7, 48755), (10, 48707), (11, 48701), (12, 48647), (13, 48638),

Gene: Pumbaa\_85 Start: 48748, Stop: 48536, Start Num: 3

Candidate Starts for Pumbaa\_85:

(Start: 3 @48748 has 124 MA's), (5, 48706), (7, 48679), (10, 48631), (11, 48625), (12, 48571), (13, 48562),

Gene: Relief\_84 Start: 48800, Stop: 48588, Start Num: 3

Candidate Starts for Relief\_84:

(Start: 3 @48800 has 124 MA's), (5, 48758), (7, 48731), (10, 48683), (11, 48677), (12, 48623), (13, 48614),

Gene: RockieBear\_82 Start: 48808, Stop: 48596, Start Num: 3

Candidate Starts for RockieBear\_82:

(Start: 3 @48808 has 124 MA's), (7, 48739), (10, 48691), (11, 48685), (12, 48631), (13, 48622),

Gene: Romney\_84 Start: 48800, Stop: 48588, Start Num: 3

Candidate Starts for Romney\_84:

(Start: 3 @48800 has 124 MA's), (5, 48758), (7, 48731), (10, 48683), (11, 48677), (12, 48623), (13, 48614),

Gene: Roosevelt\_83 Start: 48805, Stop: 48593, Start Num: 3

Candidate Starts for Roosevelt\_83:

(Start: 3 @48805 has 124 MA's), (7, 48736), (10, 48688), (11, 48682), (12, 48628), (13, 48619),

Gene: Rosa24\_81 Start: 48831, Stop: 48619, Start Num: 3

Candidate Starts for Rosa24\_81:

(Start: 3 @48831 has 124 MA's), (7, 48762), (10, 48714), (11, 48708), (12, 48654), (13, 48645),

Gene: Ruin\_85 Start: 48796, Stop: 48584, Start Num: 3

Candidate Starts for Ruin\_85:

(Start: 3 @48796 has 124 MA's), (7, 48727), (10, 48679), (11, 48673), (12, 48619), (13, 48610),

Gene: Sabertooth\_85 Start: 48808, Stop: 48596, Start Num: 3

Candidate Starts for Sabertooth\_85:

(Start: 3 @48808 has 124 MA's), (7, 48739), (10, 48691), (11, 48685), (12, 48631), (13, 48622),

Gene: Scamp\_85 Start: 48805, Stop: 48593, Start Num: 3

Candidate Starts for Scamp\_85:

(Start: 3 @48805 has 124 MA's), (7, 48736), (10, 48688), (11, 48682), (12, 48628), (13, 48619),

Gene: SenorClean\_86 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for SenorClean\_86:

(Start: 3 @48803 has 124 MA's), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: Shaka\_83 Start: 48801, Stop: 48589, Start Num: 3

Candidate Starts for Shaka\_83:

(Start: 3 @48801 has 124 MA's), (7, 48732), (10, 48684), (11, 48678), (12, 48624), (13, 48615),

Gene: SheldonCooper\_85 Start: 49241, Stop: 49029, Start Num: 3

Candidate Starts for SheldonCooper\_85:

(Start: 3 @49241 has 124 MA's), (5, 49199), (7, 49172), (10, 49124), (11, 49118), (12, 49064), (13, 49055),

Gene: Shygu2\_83 Start: 48747, Stop: 48535, Start Num: 3

Candidate Starts for Shygu2\_83:

(Start: 2 @48783 has 1 MA's), (Start: 3 @48747 has 124 MA's), (7, 48678), (10, 48630), (11, 48624), (12, 48570), (13, 48561),

Gene: Skipitt\_84 Start: 48797, Stop: 48585, Start Num: 3

Candidate Starts for Skipitt\_84:

(Start: 3 @48797 has 124 MA's), (5, 48755), (7, 48728), (10, 48680), (11, 48674), (12, 48620), (13, 48611),

Gene: Sparxx\_86 Start: 48799, Stop: 48587, Start Num: 3

Candidate Starts for Sparxx\_86:

(Start: 3 @48799 has 124 MA's), (5, 48757), (7, 48730), (10, 48682), (11, 48676), (12, 48622), (13, 48613),

Gene: Spino\_84 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for Spino\_84:

(Start: 3 @48803 has 124 MA's), (5, 48761), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: Stasia\_82 Start: 48786, Stop: 48571, Start Num: 3

Candidate Starts for Stasia\_82:

(1, 48828), (Start: 3 @48786 has 124 MA's), (6, 48732), (8, 48702), (10, 48663), (11, 48657), (13, 48594), (14, 48582),

Gene: SteMason\_81 Start: 48800, Stop: 48588, Start Num: 3

Candidate Starts for SteMason\_81:

(Start: 3 @48800 has 124 MA's), (7, 48731), (10, 48683), (11, 48677), (12, 48623), (13, 48614),

Gene: Stink\_85 Start: 49027, Stop: 48815, Start Num: 3

Candidate Starts for Stink\_85:

(Start: 3 @49027 has 124 MA's), (7, 48958), (9, 48943), (10, 48910), (11, 48904), (12, 48850), (13, 48841),

Gene: Sultana\_85 Start: 48800, Stop: 48588, Start Num: 3

Candidate Starts for Sultana\_85:

(Start: 3 @48800 has 124 MA's), (7, 48731), (10, 48683), (11, 48677), (12, 48623), (13, 48614),

Gene: Taquarus\_84 Start: 48812, Stop: 48600, Start Num: 3

Candidate Starts for Taquarus\_84:

(Start: 3 @48812 has 124 MA's), (7, 48743), (10, 48695), (11, 48689), (12, 48635), (13, 48626),

Gene: Thanksgivukkah\_84 Start: 48801, Stop: 48589, Start Num: 3

Candidate Starts for Thanksgivukkah\_84:

(Start: 3 @48801 has 124 MA's), (7, 48732), (10, 48684), (11, 48678), (12, 48624), (13, 48615),

Gene: TinaFeyge\_83 Start: 48798, Stop: 48586, Start Num: 3

Candidate Starts for TinaFeyge\_83:

(Start: 3 @48798 has 124 MA's), (7, 48729), (10, 48681), (11, 48675), (12, 48621), (13, 48612),

Gene: Tinybot\_84 Start: 48830, Stop: 48618, Start Num: 3

Candidate Starts for Tinybot\_84:

(Start: 3 @48830 has 124 MA's), (7, 48761), (10, 48713), (11, 48707), (12, 48653), (13, 48644),

Gene: TiroTheta9\_84 Start: 48797, Stop: 48585, Start Num: 3

Candidate Starts for TiroTheta9\_84:

(Start: 3 @48797 has 124 MA's), (7, 48728), (10, 48680), (11, 48674), (12, 48620), (13, 48611),

Gene: TroyPia\_86 Start: 48838, Stop: 48626, Start Num: 3

Candidate Starts for TroyPia\_86:

(Start: 3 @48838 has 124 MA's), (7, 48769), (10, 48721), (11, 48715), (12, 48661), (13, 48652),

Gene: TygerBlood\_85 Start: 48803, Stop: 48591, Start Num: 3

Candidate Starts for TygerBlood\_85:

(Start: 3 @48803 has 124 MA's), (7, 48734), (10, 48686), (11, 48680), (12, 48626), (13, 48617),

Gene: Ulysses\_84 Start: 48486, Stop: 48274, Start Num: 3

Candidate Starts for Ulysses\_84:

(Start: 3 @48486 has 124 MA's), (7, 48417), (10, 48369), (11, 48363), (12, 48309), (13, 48300),

Gene: Wander\_85 Start: 48797, Stop: 48585, Start Num: 3

Candidate Starts for Wander\_85:

(Start: 3 @48797 has 124 MA's), (7, 48728), (10, 48680), (11, 48674), (12, 48620), (13, 48611),

Gene: Wilbur\_85 Start: 48800, Stop: 48588, Start Num: 3

Candidate Starts for Wilbur\_85:

(Start: 3 @48800 has 124 MA's), (5, 48758), (7, 48731), (10, 48683), (11, 48677), (12, 48623), (13, 48614),

Gene: Xena\_81 Start: 48622, Stop: 48410, Start Num: 3

Candidate Starts for Xena\_81:

(Start: 2 @48658 has 1 MA's), (Start: 3 @48622 has 124 MA's), (7, 48553), (10, 48505), (11, 48499), (12, 48445), (13, 48436),

Gene: YoSam321\_85 Start: 48798, Stop: 48586, Start Num: 3

Candidate Starts for YoSam321\_85:

(Start: 3 @48798 has 124 MA's), (7, 48729), (10, 48681), (11, 48675), (12, 48621), (13, 48612),