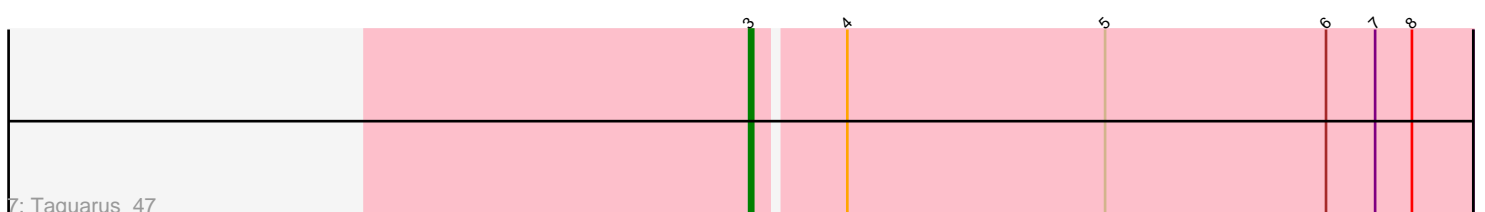
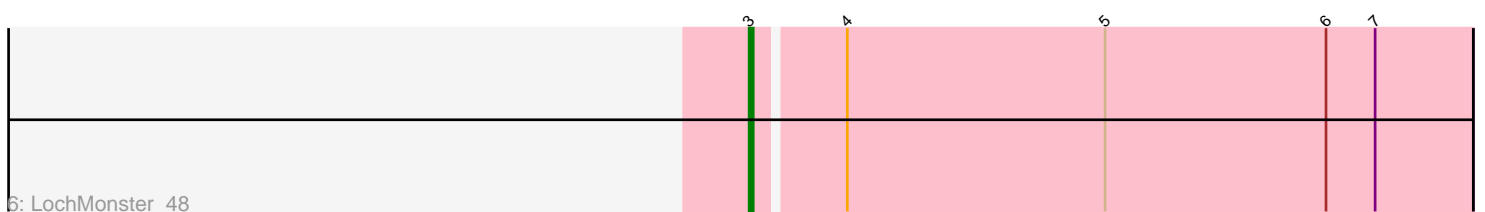
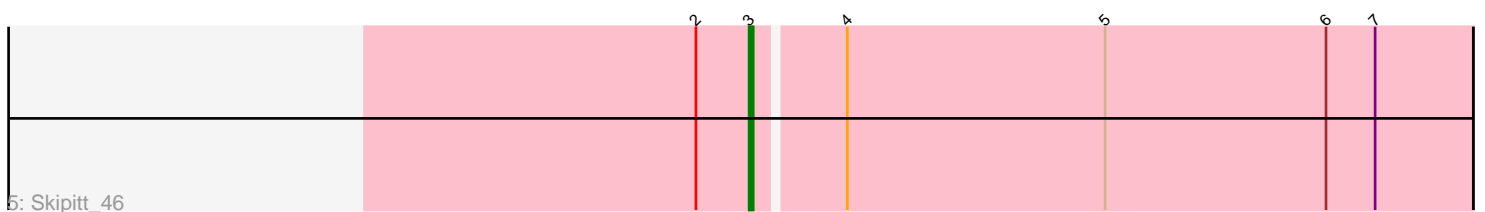
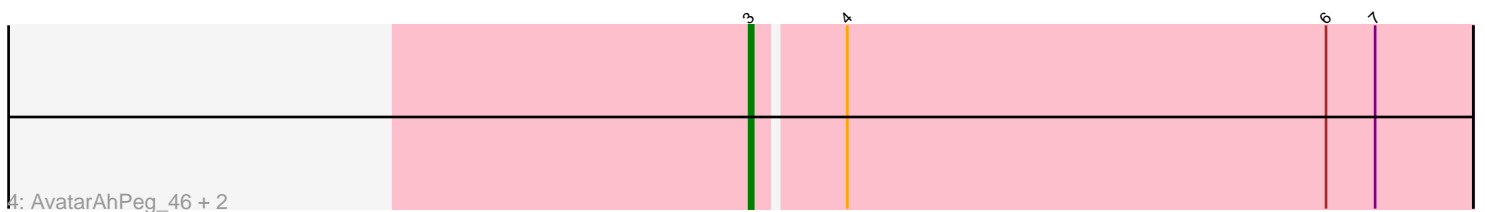
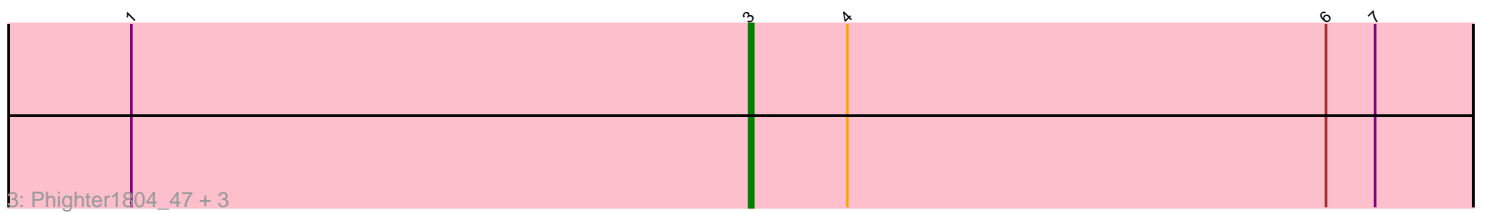
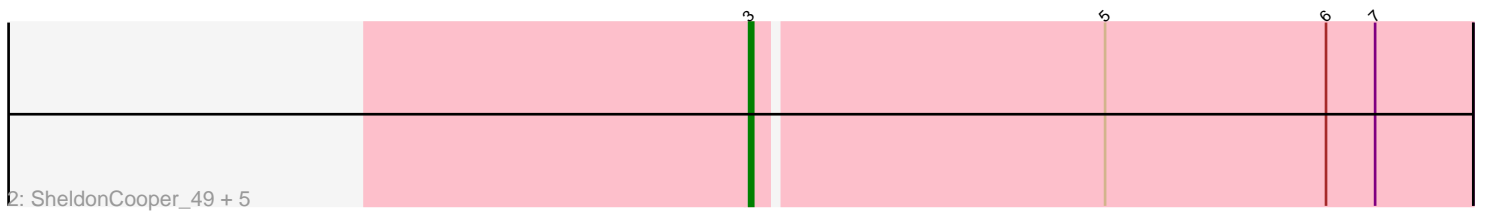
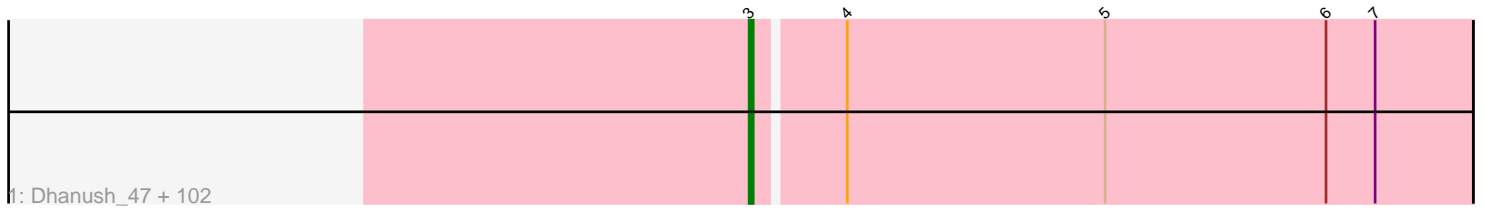


# Pham 171308



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 171308 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171308 has 119 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Dhanush\_47, Nebs\_48, Wilbur\_47, Avle17\_47, Bombshell\_47, Pipcraft\_45, Relief\_46, NotAPhaseMom\_47, Jaykayelowell\_45, Mazhar510\_47, JoongJeon\_46, Ulysses\_46, Chaph\_47, NorthStar\_46, CentreCat\_47, Melvin\_49, Ruin\_47, Nyxis\_47, TygerBlood\_47, HamSlice\_46, JetBlade\_47, Lemur\_47, Millski\_46, Caelakin\_47, Wander\_47, Cintron\_46, TroyPia\_48, Alberto7\_48, Morrow\_48, Bruiser\_46, Medusa\_47, BellusTerra\_48, Connomayer\_47, KFPoly\_46, Phacado\_47, Phelipe\_48, Romney\_47, Iracema64\_48, Sabertooth\_47, Shaka\_47, Camperdownii\_45, Scamp\_47, Clarenza\_46, Houdini22\_47, Lunsford\_48, Annyong\_47, Bartimeaus\_47, Peaches\_47, Iceman\_47, Eurydice\_48, Ohfah\_48, LeoAvram\_47, Druantia\_47, Burger\_45, Happiness\_46, Eros\_47, LittleGuy\_47, Sparxx\_48, Thanksgivukkah\_46, Wizard007\_47, Pumbaa\_47, Albee\_47, Holli\_46, LittleB\_47, Citius\_47, Eapen\_47, Deano\_46, Maxo\_48, Baby16\_47, Flux\_47, LappelDuVide\_46, BubbleTrouble\_46, Tinybot\_46, Kingmustik0402\_47, Palestino\_46, Phontbonne\_47, Maverick\_47, Eris\_46, TinaFeyge\_47, Kyee\_47, Kamy\_47, Eagle\_47, Kremtemulon\_45, Abdiel\_47, Broseidon\_47, Funston\_46, OKaNui\_47, Commander\_47, Lorenzo\_47, TiroTheta9\_47, Koreni\_46, Florean\_47, Polymorphads\_48, Cocoaberry\_47, MeeZee\_47, Roosevelt\_46, PeterPeter\_47, Nemo27\_47, ICleared\_47, Gadost\_47, YoSam321\_47, Blackmoor\_47, Spino\_46
- Track 2 : SheldonCooper\_49, BangNhom\_48, Cerulean\_48, LHTSCC\_49, Obama12\_48, ChampagnePapi\_49
- Track 3 : Phighter1804\_47, DirtyDunning\_46, Arturo\_46, Kratak\_47
- Track 4 : AvatarAhPeg\_46, Stink\_47, Miramae\_46
- Track 5 : Skipitt\_46
- Track 6 : LochMonster\_48
- Track 7 : Taquarus\_47

### ***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 117 of the 117 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abdiel\_47, Albee\_47, Alberto7\_48, Annyong\_47, Arturo\_46, AvatarAhPeg\_46, Avle17\_47, Baby16\_47, BangNhom\_48, Bartimeaus\_47, BellusTerra\_48,

Blackmoor\_47, Bombshell\_47, Broseidon\_47, Bruiser\_46, BubbleTrouble\_46, Burger\_45, Caelakin\_47, Camperdownii\_45, CentreCat\_47, Cerulean\_48, ChampagnePapi\_49, Chaph\_47, Cintron\_46, Citius\_47, Clarenza\_46, Cocoaberry\_47, Commander\_47, Connomayer\_47, Deano\_46, Dhanush\_47, DirtyDunning\_46, Druantia\_47, Eagle\_47, Eapen\_47, Eris\_46, Eros\_47, Eurydice\_48, Florean\_47, Flux\_47, Funston\_46, Gadost\_47, HamSlice\_46, Happiness\_46, Holli\_46, Houdini22\_47, ICleared\_47, Iceman\_47, Iracema64\_48, Jaykayelowell\_45, JetBlade\_47, JoongJeon\_46, KFPoly\_46, Kampy\_47, Kingmustik0402\_47, Koreni\_46, Kratark\_47, Kremtemulon\_45, Kyee\_47, LHTSCC\_49, LappelDuVide\_46, Lemur\_47, LeoAvram\_47, LittleB\_47, LittleGuy\_47, LochMonster\_48, Lorenzo\_47, Lunsford\_48, Maverick\_47, Maxo\_48, Mazhar510\_47, Medusa\_47, MeeZee\_47, Melvin\_49, Millski\_46, Miramae\_46, Morrow\_48, Nebs\_48, Nemo27\_47, NorthStar\_46, NotAPhaseMom\_47, Nyxis\_47, OKaNui\_47, Obama12\_48, Ohfah\_48, Palestino\_46, Peaches\_47, PeterPeter\_47, Phacado\_47, Phelipe\_48, Phighter1804\_47, Phontbonne\_47, Pipcraft\_45, Polymorphads\_48, Pumbaa\_47, Relief\_46, Romney\_47, Roosevelt\_46, Ruin\_47, Sabertooth\_47, Scamp\_47, Shaka\_47, SheldonCooper\_49, Skipitt\_46, Sparxx\_48, Spino\_46, Stink\_47, Taquarus\_47, Thanksgivukkah\_46, TinaFeyge\_47, Tinybot\_46, TiroTheta9\_47, TroyPia\_48, TygerBlood\_47, Ulysses\_46, Wander\_47, Wilbur\_47, Wizard007\_47, YoSam321\_47,

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

- 

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

- 

### Summary by start number:

Start 3:

- Found in 119 of 119 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 117 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abdiel\_47 (A4), Albee\_47 (A4), Alberto7\_48 (A4), Annyong\_47 (A4), Arturo\_46 (A4), AvatarAhPeg\_46 (A4), Avle17\_47 (A4), Baby16\_47 (A4), BangNhom\_48 (A4), Bartimeaus\_47 (A4), BellusTerra\_48 (A4), Blackmoor\_47 (A4), Bombshell\_47 (A4), Broseidon\_47 (A4), Bruiser\_46 (A4), BubbleTrouble\_46 (A4), Burger\_45 (A4), Caelakin\_47 (A4), Camperdownii\_45 (A4), CentreCat\_47 (A4), Cerulean\_48 (A4), ChampagnePapi\_49 (A4), Chaph\_47 (A4), Cintron\_46 (A4), Citius\_47 (A4), Clarenza\_46 (A4), Cocoaberry\_47 (A4), Commander\_47 (A4), Connomayer\_47 (A4), Deano\_46 (A4), Dhanush\_47 (A4), DirtyDunning\_46 (A4), Druantia\_47 (A4), Eagle\_47 (A4), Eapen\_47 (A4), Eris\_46 (A4), Eros\_47 (A4), Eurydice\_48 (A4), Florean\_47 (A4), Flux\_47 (A4), Funston\_46 (A4), Gadost\_47 (A4), HamSlice\_46 (A4), Happiness\_46 (A4), Holli\_46 (A4), Houdini22\_47 (A4), ICleared\_47 (A4), Iceman\_47 (A4), Iracema64\_48 (A4), Jaykayelowell\_45 (A4), JetBlade\_47 (A4), JoongJeon\_46 (A4), KFPoly\_46 (A4), Kampy\_47 (A4), Kingmustik0402\_47 (A4), Koreni\_46 (A4), Kratark\_47 (A4), Kremtemulon\_45 (A4), Kyee\_47 (A4), LHTSCC\_49 (A4), LappelDuVide\_46 (A4), Lemur\_47 (A4), LeoAvram\_47 (A4), LittleB\_47 (A4), LittleGuy\_47 (A4), LochMonster\_48 (A4), Lorenzo\_47 (A4), Lunsford\_48 (A4), Maverick\_47 (A4), Maxo\_48 (A4), Mazhar510\_47 (A4), Medusa\_47 (A4), MeeZee\_47 (A4), Melvin\_49 (A4), Millski\_46 (A4), Miramae\_46 (A4), Morrow\_48 (A4), Nebs\_48 (A4), Nemo27\_47 (A4), NorthStar\_46 (A4), NotAPhaseMom\_47 (A4), Nyxis\_47 (A4),

OKaNui\_47 (A4), Obama12\_48 (A4), Ohfah\_48 (A4), Palestino\_46 (A4), Peaches\_47 (A4), PeterPeter\_47 (A4), Phacado\_47 (A4), Phelipe\_48 (A4), Phighter1804\_47 (A4), Phontbonne\_47 (A4), Pipcraft\_45 (A4), Polymorphads\_48 (A4), Pumbaa\_47 (A4), Relief\_46 (A4), Romney\_47 (A4), Roosevelt\_46 (A4), Ruin\_47 (A4), Sabertooth\_47 (A4), Scamp\_47 (A4), Shaka\_47 (A4), SheldonCooper\_49 (A4), Skipitt\_46 (A4), Sparxx\_48 (A4), Spino\_46 (A4), Stink\_47 (A4), Taquarus\_47 (A4), Thanksgivukkah\_46 (A4), TinaFeyge\_47 (A4), Tinybot\_46 (A4), TiroTheta9\_47 (A4), TroyPia\_48 (A4), TygerBlood\_47 (A4), Ulysses\_46 (A4), Wander\_47 (A4), Wilbur\_47 (A4), Wizard007\_47 (A4), YoSam321\_47 (A4),

### **Summary by clusters:**

There is one cluster represented in this pham: A4

Info for manual annotations of cluster A4:

- Start number 3 was manually annotated 117 times for cluster A4.

### **Gene Information:**

Gene: Abdiel\_47 Start: 32054, Stop: 31881, Start Num: 3

Candidate Starts for Abdiel\_47:

(Start: 3 @32054 has 117 MA's), (4, 32033), (5, 31970), (6, 31916), (7, 31904),

Gene: Albee\_47 Start: 32053, Stop: 31880, Start Num: 3

Candidate Starts for Albee\_47:

(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Alberto7\_48 Start: 32390, Stop: 32217, Start Num: 3

Candidate Starts for Alberto7\_48:

(Start: 3 @32390 has 117 MA's), (4, 32369), (5, 32306), (6, 32252), (7, 32240),

Gene: Annyong\_47 Start: 32098, Stop: 31925, Start Num: 3

Candidate Starts for Annyong\_47:

(Start: 3 @32098 has 117 MA's), (4, 32077), (5, 32014), (6, 31960), (7, 31948),

Gene: Arturo\_46 Start: 32333, Stop: 32157, Start Num: 3

Candidate Starts for Arturo\_46:

(1, 32483), (Start: 3 @32333 has 117 MA's), (4, 32309), (6, 32192), (7, 32180),

Gene: AvatarAhPeg\_46 Start: 32552, Stop: 32379, Start Num: 3

Candidate Starts for AvatarAhPeg\_46:

(Start: 3 @32552 has 117 MA's), (4, 32531), (6, 32414), (7, 32402),

Gene: Avle17\_47 Start: 32050, Stop: 31877, Start Num: 3

Candidate Starts for Avle17\_47:

(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: Baby16\_47 Start: 32064, Stop: 31891, Start Num: 3

Candidate Starts for Baby16\_47:

(Start: 3 @32064 has 117 MA's), (4, 32043), (5, 31980), (6, 31926), (7, 31914),

Gene: BangNhom\_48 Start: 32475, Stop: 32302, Start Num: 3  
Candidate Starts for BangNhom\_48:  
(Start: 3 @32475 has 117 MA's), (5, 32391), (6, 32337), (7, 32325),

Gene: Bartimeaus\_47 Start: 32055, Stop: 31882, Start Num: 3  
Candidate Starts for Bartimeaus\_47:  
(Start: 3 @32055 has 117 MA's), (4, 32034), (5, 31971), (6, 31917), (7, 31905),

Gene: BellusTerra\_48 Start: 32054, Stop: 31881, Start Num: 3  
Candidate Starts for BellusTerra\_48:  
(Start: 3 @32054 has 117 MA's), (4, 32033), (5, 31970), (6, 31916), (7, 31904),

Gene: Blackmoor\_47 Start: 32055, Stop: 31882, Start Num: 3  
Candidate Starts for Blackmoor\_47:  
(Start: 3 @32055 has 117 MA's), (4, 32034), (5, 31971), (6, 31917), (7, 31905),

Gene: Bombshell\_47 Start: 32050, Stop: 31877, Start Num: 3  
Candidate Starts for Bombshell\_47:  
(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: Broseidon\_47 Start: 32055, Stop: 31882, Start Num: 3  
Candidate Starts for Broseidon\_47:  
(Start: 3 @32055 has 117 MA's), (4, 32034), (5, 31971), (6, 31917), (7, 31905),

Gene: Bruiser\_46 Start: 32053, Stop: 31880, Start Num: 3  
Candidate Starts for Bruiser\_46:  
(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: BubbleTrouble\_46 Start: 32053, Stop: 31880, Start Num: 3  
Candidate Starts for BubbleTrouble\_46:  
(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Burger\_45 Start: 32053, Stop: 31880, Start Num: 3  
Candidate Starts for Burger\_45:  
(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Caelakin\_47 Start: 32053, Stop: 31880, Start Num: 3  
Candidate Starts for Caelakin\_47:  
(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Camperdownii\_45 Start: 31726, Stop: 31553, Start Num: 3  
Candidate Starts for Camperdownii\_45:  
(Start: 3 @31726 has 117 MA's), (4, 31705), (5, 31642), (6, 31588), (7, 31576),

Gene: CentreCat\_47 Start: 32056, Stop: 31883, Start Num: 3  
Candidate Starts for CentreCat\_47:  
(Start: 3 @32056 has 117 MA's), (4, 32035), (5, 31972), (6, 31918), (7, 31906),

Gene: Cerulean\_48 Start: 32476, Stop: 32303, Start Num: 3  
Candidate Starts for Cerulean\_48:  
(Start: 3 @32476 has 117 MA's), (5, 32392), (6, 32338), (7, 32326),

Gene: ChampagnePapi\_49 Start: 32475, Stop: 32302, Start Num: 3

Candidate Starts for ChampagnePapi\_49:  
(Start: 3 @32475 has 117 MA's), (5, 32391), (6, 32337), (7, 32325),

Gene: Chaph\_47 Start: 32064, Stop: 31891, Start Num: 3  
Candidate Starts for Chaph\_47:  
(Start: 3 @32064 has 117 MA's), (4, 32043), (5, 31980), (6, 31926), (7, 31914),

Gene: Cintron\_46 Start: 32033, Stop: 31860, Start Num: 3  
Candidate Starts for Cintron\_46:  
(Start: 3 @32033 has 117 MA's), (4, 32012), (5, 31949), (6, 31895), (7, 31883),

Gene: Citius\_47 Start: 32074, Stop: 31901, Start Num: 3  
Candidate Starts for Citius\_47:  
(Start: 3 @32074 has 117 MA's), (4, 32053), (5, 31990), (6, 31936), (7, 31924),

Gene: Clarenza\_46 Start: 32050, Stop: 31877, Start Num: 3  
Candidate Starts for Clarenza\_46:  
(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: Cocoaberry\_47 Start: 32057, Stop: 31884, Start Num: 3  
Candidate Starts for Cocoaberry\_47:  
(Start: 3 @32057 has 117 MA's), (4, 32036), (5, 31973), (6, 31919), (7, 31907),

Gene: Commander\_47 Start: 32052, Stop: 31879, Start Num: 3  
Candidate Starts for Commander\_47:  
(Start: 3 @32052 has 117 MA's), (4, 32031), (5, 31968), (6, 31914), (7, 31902),

Gene: Connomayer\_47 Start: 32053, Stop: 31880, Start Num: 3  
Candidate Starts for Connomayer\_47:  
(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Deano\_46 Start: 32061, Stop: 31888, Start Num: 3  
Candidate Starts for Deano\_46:  
(Start: 3 @32061 has 117 MA's), (4, 32040), (5, 31977), (6, 31923), (7, 31911),

Gene: Dhanush\_47 Start: 32056, Stop: 31883, Start Num: 3  
Candidate Starts for Dhanush\_47:  
(Start: 3 @32056 has 117 MA's), (4, 32035), (5, 31972), (6, 31918), (7, 31906),

Gene: DirtyDunning\_46 Start: 32074, Stop: 31898, Start Num: 3  
Candidate Starts for DirtyDunning\_46:  
(1, 32224), (Start: 3 @32074 has 117 MA's), (4, 32050), (6, 31933), (7, 31921),

Gene: Druantia\_47 Start: 32056, Stop: 31883, Start Num: 3  
Candidate Starts for Druantia\_47:  
(Start: 3 @32056 has 117 MA's), (4, 32035), (5, 31972), (6, 31918), (7, 31906),

Gene: Eagle\_47 Start: 32078, Stop: 31905, Start Num: 3  
Candidate Starts for Eagle\_47:  
(Start: 3 @32078 has 117 MA's), (4, 32057), (5, 31994), (6, 31940), (7, 31928),

Gene: Eapen\_47 Start: 32048, Stop: 31875, Start Num: 3  
Candidate Starts for Eapen\_47:

(Start: 3 @32048 has 117 MA's), (4, 32027), (5, 31964), (6, 31910), (7, 31898),

Gene: Eris\_46 Start: 32053, Stop: 31880, Start Num: 3

Candidate Starts for Eris\_46:

(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Eros\_47 Start: 32055, Stop: 31882, Start Num: 3

Candidate Starts for Eros\_47:

(Start: 3 @32055 has 117 MA's), (4, 32034), (5, 31971), (6, 31917), (7, 31905),

Gene: Eurydice\_48 Start: 32050, Stop: 31877, Start Num: 3

Candidate Starts for Eurydice\_48:

(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: Florean\_47 Start: 32052, Stop: 31879, Start Num: 3

Candidate Starts for Florean\_47:

(Start: 3 @32052 has 117 MA's), (4, 32031), (5, 31968), (6, 31914), (7, 31902),

Gene: Flux\_47 Start: 32052, Stop: 31879, Start Num: 3

Candidate Starts for Flux\_47:

(Start: 3 @32052 has 117 MA's), (4, 32031), (5, 31968), (6, 31914), (7, 31902),

Gene: Funston\_46 Start: 32053, Stop: 31880, Start Num: 3

Candidate Starts for Funston\_46:

(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Gadost\_47 Start: 32057, Stop: 31884, Start Num: 3

Candidate Starts for Gadost\_47:

(Start: 3 @32057 has 117 MA's), (4, 32036), (5, 31973), (6, 31919), (7, 31907),

Gene: HamSlice\_46 Start: 32051, Stop: 31878, Start Num: 3

Candidate Starts for HamSlice\_46:

(Start: 3 @32051 has 117 MA's), (4, 32030), (5, 31967), (6, 31913), (7, 31901),

Gene: Happiness\_46 Start: 32058, Stop: 31885, Start Num: 3

Candidate Starts for Happiness\_46:

(Start: 3 @32058 has 117 MA's), (4, 32037), (5, 31974), (6, 31920), (7, 31908),

Gene: Holli\_46 Start: 31843, Stop: 31670, Start Num: 3

Candidate Starts for Holli\_46:

(Start: 3 @31843 has 117 MA's), (4, 31822), (5, 31759), (6, 31705), (7, 31693),

Gene: Houdini22\_47 Start: 32057, Stop: 31884, Start Num: 3

Candidate Starts for Houdini22\_47:

(Start: 3 @32057 has 117 MA's), (4, 32036), (5, 31973), (6, 31919), (7, 31907),

Gene: ICleared\_47 Start: 32082, Stop: 31909, Start Num: 3

Candidate Starts for ICleared\_47:

(Start: 3 @32082 has 117 MA's), (4, 32061), (5, 31998), (6, 31944), (7, 31932),

Gene: Iceman\_47 Start: 32339, Stop: 32166, Start Num: 3

Candidate Starts for Iceman\_47:

(Start: 3 @32339 has 117 MA's), (4, 32318), (5, 32255), (6, 32201), (7, 32189),

Gene: Iracema64\_48 Start: 32317, Stop: 32144, Start Num: 3  
Candidate Starts for Iracema64\_48:  
(Start: 3 @32317 has 117 MA's), (4, 32296), (5, 32233), (6, 32179), (7, 32167),

Gene: Jaykayelowell\_45 Start: 32046, Stop: 31873, Start Num: 3  
Candidate Starts for Jaykayelowell\_45:  
(Start: 3 @32046 has 117 MA's), (4, 32025), (5, 31962), (6, 31908), (7, 31896),

Gene: JetBlade\_47 Start: 32047, Stop: 31874, Start Num: 3  
Candidate Starts for JetBlade\_47:  
(Start: 3 @32047 has 117 MA's), (4, 32026), (5, 31963), (6, 31909), (7, 31897),

Gene: JoongJeon\_46 Start: 32050, Stop: 31877, Start Num: 3  
Candidate Starts for JoongJeon\_46:  
(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: KFPoly\_46 Start: 32047, Stop: 31874, Start Num: 3  
Candidate Starts for KFPoly\_46:  
(Start: 3 @32047 has 117 MA's), (4, 32026), (5, 31963), (6, 31909), (7, 31897),

Gene: Kamy\_47 Start: 32055, Stop: 31882, Start Num: 3  
Candidate Starts for Kamy\_47:  
(Start: 3 @32055 has 117 MA's), (4, 32034), (5, 31971), (6, 31917), (7, 31905),

Gene: Kingmustik0402\_47 Start: 32042, Stop: 31869, Start Num: 3  
Candidate Starts for Kingmustik0402\_47:  
(Start: 3 @32042 has 117 MA's), (4, 32021), (5, 31958), (6, 31904), (7, 31892),

Gene: Koreni\_46 Start: 31734, Stop: 31561, Start Num: 3  
Candidate Starts for Koreni\_46:  
(Start: 3 @31734 has 117 MA's), (4, 31713), (5, 31650), (6, 31596), (7, 31584),

Gene: Kratak\_47 Start: 32216, Stop: 32040, Start Num: 3  
Candidate Starts for Kratak\_47:  
(1, 32366), (Start: 3 @32216 has 117 MA's), (4, 32192), (6, 32075), (7, 32063),

Gene: Kremtemulon\_45 Start: 32004, Stop: 31831, Start Num: 3  
Candidate Starts for Kremtemulon\_45:  
(Start: 3 @32004 has 117 MA's), (4, 31983), (5, 31920), (6, 31866), (7, 31854),

Gene: Kyee\_47 Start: 32051, Stop: 31878, Start Num: 3  
Candidate Starts for Kyee\_47:  
(Start: 3 @32051 has 117 MA's), (4, 32030), (5, 31967), (6, 31913), (7, 31901),

Gene: LHTSCC\_49 Start: 32475, Stop: 32302, Start Num: 3  
Candidate Starts for LHTSCC\_49:  
(Start: 3 @32475 has 117 MA's), (5, 32391), (6, 32337), (7, 32325),

Gene: LappelDuVide\_46 Start: 32052, Stop: 31879, Start Num: 3  
Candidate Starts for LappelDuVide\_46:  
(Start: 3 @32052 has 117 MA's), (4, 32031), (5, 31968), (6, 31914), (7, 31902),



Gene: Lemur\_47 Start: 32050, Stop: 31877, Start Num: 3  
Candidate Starts for Lemur\_47:  
(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: LeoAvram\_47 Start: 32053, Stop: 31880, Start Num: 3  
Candidate Starts for LeoAvram\_47:  
(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: LittleB\_47 Start: 32054, Stop: 31881, Start Num: 3  
Candidate Starts for LittleB\_47:  
(Start: 3 @32054 has 117 MA's), (4, 32033), (5, 31970), (6, 31916), (7, 31904),

Gene: LittleGuy\_47 Start: 31949, Stop: 31776, Start Num: 3  
Candidate Starts for LittleGuy\_47:  
(Start: 3 @31949 has 117 MA's), (4, 31928), (5, 31865), (6, 31811), (7, 31799),

Gene: LochMonster\_48 Start: 32289, Stop: 32116, Start Num: 3  
Candidate Starts for LochMonster\_48:  
(Start: 3 @32289 has 117 MA's), (4, 32268), (5, 32205), (6, 32151), (7, 32139),

Gene: Lorenzo\_47 Start: 32053, Stop: 31880, Start Num: 3  
Candidate Starts for Lorenzo\_47:  
(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Lunsford\_48 Start: 32047, Stop: 31874, Start Num: 3  
Candidate Starts for Lunsford\_48:  
(Start: 3 @32047 has 117 MA's), (4, 32026), (5, 31963), (6, 31909), (7, 31897),

Gene: Maverick\_47 Start: 32053, Stop: 31880, Start Num: 3  
Candidate Starts for Maverick\_47:  
(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Maxo\_48 Start: 32055, Stop: 31882, Start Num: 3  
Candidate Starts for Maxo\_48:  
(Start: 3 @32055 has 117 MA's), (4, 32034), (5, 31971), (6, 31917), (7, 31905),

Gene: Mazhar510\_47 Start: 32054, Stop: 31881, Start Num: 3  
Candidate Starts for Mazhar510\_47:  
(Start: 3 @32054 has 117 MA's), (4, 32033), (5, 31970), (6, 31916), (7, 31904),

Gene: Medusa\_47 Start: 32052, Stop: 31879, Start Num: 3  
Candidate Starts for Medusa\_47:  
(Start: 3 @32052 has 117 MA's), (4, 32031), (5, 31968), (6, 31914), (7, 31902),

Gene: MeeZee\_47 Start: 32050, Stop: 31877, Start Num: 3  
Candidate Starts for MeeZee\_47:  
(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: Melvin\_49 Start: 32048, Stop: 31875, Start Num: 3  
Candidate Starts for Melvin\_49:  
(Start: 3 @32048 has 117 MA's), (4, 32027), (5, 31964), (6, 31910), (7, 31898),

Gene: Millski\_46 Start: 32054, Stop: 31881, Start Num: 3

Candidate Starts for Millski\_46:

(Start: 3 @32054 has 117 MA's), (4, 32033), (5, 31970), (6, 31916), (7, 31904),

Gene: Miramae\_46 Start: 32214, Stop: 32041, Start Num: 3

Candidate Starts for Miramae\_46:

(Start: 3 @32214 has 117 MA's), (4, 32193), (6, 32076), (7, 32064),

Gene: Morrow\_48 Start: 32059, Stop: 31886, Start Num: 3

Candidate Starts for Morrow\_48:

(Start: 3 @32059 has 117 MA's), (4, 32038), (5, 31975), (6, 31921), (7, 31909),

Gene: Nebs\_48 Start: 32053, Stop: 31880, Start Num: 3

Candidate Starts for Nebs\_48:

(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Nemo27\_47 Start: 32052, Stop: 31879, Start Num: 3

Candidate Starts for Nemo27\_47:

(Start: 3 @32052 has 117 MA's), (4, 32031), (5, 31968), (6, 31914), (7, 31902),

Gene: NorthStar\_46 Start: 32053, Stop: 31880, Start Num: 3

Candidate Starts for NorthStar\_46:

(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: NotAPhaseMom\_47 Start: 32057, Stop: 31884, Start Num: 3

Candidate Starts for NotAPhaseMom\_47:

(Start: 3 @32057 has 117 MA's), (4, 32036), (5, 31973), (6, 31919), (7, 31907),

Gene: Nyxis\_47 Start: 31943, Stop: 31770, Start Num: 3

Candidate Starts for Nyxis\_47:

(Start: 3 @31943 has 117 MA's), (4, 31922), (5, 31859), (6, 31805), (7, 31793),

Gene: OKaNui\_47 Start: 32103, Stop: 31930, Start Num: 3

Candidate Starts for OKaNui\_47:

(Start: 3 @32103 has 117 MA's), (4, 32082), (5, 32019), (6, 31965), (7, 31953),

Gene: Obama12\_48 Start: 32477, Stop: 32304, Start Num: 3

Candidate Starts for Obama12\_48:

(Start: 3 @32477 has 117 MA's), (5, 32393), (6, 32339), (7, 32327),

Gene: Ohfah\_48 Start: 32053, Stop: 31880, Start Num: 3

Candidate Starts for Ohfah\_48:

(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Palestino\_46 Start: 32053, Stop: 31880, Start Num: 3

Candidate Starts for Palestino\_46:

(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Peaches\_47 Start: 32052, Stop: 31879, Start Num: 3

Candidate Starts for Peaches\_47:

(Start: 3 @32052 has 117 MA's), (4, 32031), (5, 31968), (6, 31914), (7, 31902),

Gene: PeterPeter\_47 Start: 32050, Stop: 31877, Start Num: 3

Candidate Starts for PeterPeter\_47:

(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: Phacado\_47 Start: 32052, Stop: 31879, Start Num: 3

Candidate Starts for Phacado\_47:

(Start: 3 @32052 has 117 MA's), (4, 32031), (5, 31968), (6, 31914), (7, 31902),

Gene: Phelipe\_48 Start: 32053, Stop: 31880, Start Num: 3

Candidate Starts for Phelipe\_48:

(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Phighter1804\_47 Start: 32119, Stop: 31943, Start Num: 3

Candidate Starts for Phighter1804\_47:

(1, 32269), (Start: 3 @32119 has 117 MA's), (4, 32095), (6, 31978), (7, 31966),

Gene: Phontbonne\_47 Start: 31944, Stop: 31771, Start Num: 3

Candidate Starts for Phontbonne\_47:

(Start: 3 @31944 has 117 MA's), (4, 31923), (5, 31860), (6, 31806), (7, 31794),

Gene: Pipcraft\_45 Start: 32053, Stop: 31880, Start Num: 3

Candidate Starts for Pipcraft\_45:

(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Polymorphads\_48 Start: 32046, Stop: 31873, Start Num: 3

Candidate Starts for Polymorphads\_48:

(Start: 3 @32046 has 117 MA's), (4, 32025), (5, 31962), (6, 31908), (7, 31896),

Gene: Pumbaa\_47 Start: 31998, Stop: 31825, Start Num: 3

Candidate Starts for Pumbaa\_47:

(Start: 3 @31998 has 117 MA's), (4, 31977), (5, 31914), (6, 31860), (7, 31848),

Gene: Relief\_46 Start: 32050, Stop: 31877, Start Num: 3

Candidate Starts for Relief\_46:

(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: Romney\_47 Start: 32050, Stop: 31877, Start Num: 3

Candidate Starts for Romney\_47:

(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: Roosevelt\_46 Start: 32055, Stop: 31882, Start Num: 3

Candidate Starts for Roosevelt\_46:

(Start: 3 @32055 has 117 MA's), (4, 32034), (5, 31971), (6, 31917), (7, 31905),

Gene: Ruin\_47 Start: 32046, Stop: 31873, Start Num: 3

Candidate Starts for Ruin\_47:

(Start: 3 @32046 has 117 MA's), (4, 32025), (5, 31962), (6, 31908), (7, 31896),

Gene: Sabertooth\_47 Start: 32055, Stop: 31882, Start Num: 3

Candidate Starts for Sabertooth\_47:

(Start: 3 @32055 has 117 MA's), (4, 32034), (5, 31971), (6, 31917), (7, 31905),

Gene: Scamp\_47 Start: 32055, Stop: 31882, Start Num: 3

Candidate Starts for Scamp\_47:

(Start: 3 @32055 has 117 MA's), (4, 32034), (5, 31971), (6, 31917), (7, 31905),

Gene: Shaka\_47 Start: 32050, Stop: 31877, Start Num: 3

Candidate Starts for Shaka\_47:

(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: SheldonCooper\_49 Start: 32476, Stop: 32303, Start Num: 3

Candidate Starts for SheldonCooper\_49:

(Start: 3 @32476 has 117 MA's), (5, 32392), (6, 32338), (7, 32326),

Gene: Skipitt\_46 Start: 32047, Stop: 31874, Start Num: 3

Candidate Starts for Skipitt\_46:

(2, 32059), (Start: 3 @32047 has 117 MA's), (4, 32026), (5, 31963), (6, 31909), (7, 31897),

Gene: Sparxx\_48 Start: 32048, Stop: 31875, Start Num: 3

Candidate Starts for Sparxx\_48:

(Start: 3 @32048 has 117 MA's), (4, 32027), (5, 31964), (6, 31910), (7, 31898),

Gene: Spino\_46 Start: 32053, Stop: 31880, Start Num: 3

Candidate Starts for Spino\_46:

(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Stink\_47 Start: 32494, Stop: 32321, Start Num: 3

Candidate Starts for Stink\_47:

(Start: 3 @32494 has 117 MA's), (4, 32473), (6, 32356), (7, 32344),

Gene: Taquarus\_47 Start: 32056, Stop: 31883, Start Num: 3

Candidate Starts for Taquarus\_47:

(Start: 3 @32056 has 117 MA's), (4, 32035), (5, 31972), (6, 31918), (7, 31906), (8, 31897),

Gene: Thanksgivukkah\_46 Start: 32051, Stop: 31878, Start Num: 3

Candidate Starts for Thanksgivukkah\_46:

(Start: 3 @32051 has 117 MA's), (4, 32030), (5, 31967), (6, 31913), (7, 31901),

Gene: TinaFeyge\_47 Start: 32048, Stop: 31875, Start Num: 3

Candidate Starts for TinaFeyge\_47:

(Start: 3 @32048 has 117 MA's), (4, 32027), (5, 31964), (6, 31910), (7, 31898),

Gene: Tinybot\_46 Start: 32080, Stop: 31907, Start Num: 3

Candidate Starts for Tinybot\_46:

(Start: 3 @32080 has 117 MA's), (4, 32059), (5, 31996), (6, 31942), (7, 31930),

Gene: TiroTheta9\_47 Start: 32047, Stop: 31874, Start Num: 3

Candidate Starts for TiroTheta9\_47:

(Start: 3 @32047 has 117 MA's), (4, 32026), (5, 31963), (6, 31909), (7, 31897),

Gene: TroyPia\_48 Start: 32051, Stop: 31878, Start Num: 3

Candidate Starts for TroyPia\_48:

(Start: 3 @32051 has 117 MA's), (4, 32030), (5, 31967), (6, 31913), (7, 31901),

Gene: TygerBlood\_47 Start: 32053, Stop: 31880, Start Num: 3

Candidate Starts for TygerBlood\_47:

(Start: 3 @32053 has 117 MA's), (4, 32032), (5, 31969), (6, 31915), (7, 31903),

Gene: Ulysses\_46 Start: 31730, Stop: 31557, Start Num: 3

Candidate Starts for Ulysses\_46:

(Start: 3 @31730 has 117 MA's), (4, 31709), (5, 31646), (6, 31592), (7, 31580),

Gene: Wander\_47 Start: 32050, Stop: 31877, Start Num: 3

Candidate Starts for Wander\_47:

(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: Wilbur\_47 Start: 32050, Stop: 31877, Start Num: 3

Candidate Starts for Wilbur\_47:

(Start: 3 @32050 has 117 MA's), (4, 32029), (5, 31966), (6, 31912), (7, 31900),

Gene: Wizard007\_47 Start: 32058, Stop: 31885, Start Num: 3

Candidate Starts for Wizard007\_47:

(Start: 3 @32058 has 117 MA's), (4, 32037), (5, 31974), (6, 31920), (7, 31908),

Gene: YoSam321\_47 Start: 32047, Stop: 31874, Start Num: 3

Candidate Starts for YoSam321\_47:

(Start: 3 @32047 has 117 MA's), (4, 32026), (5, 31963), (6, 31909), (7, 31897),