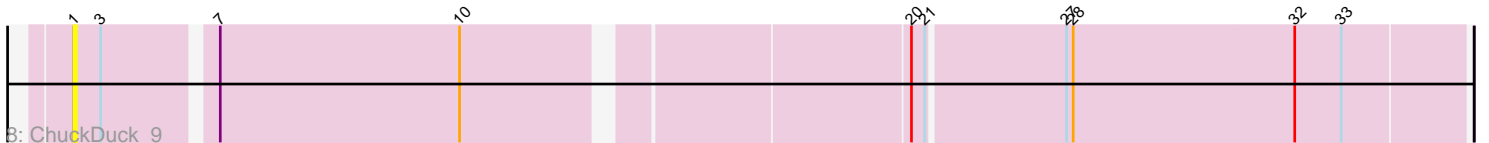
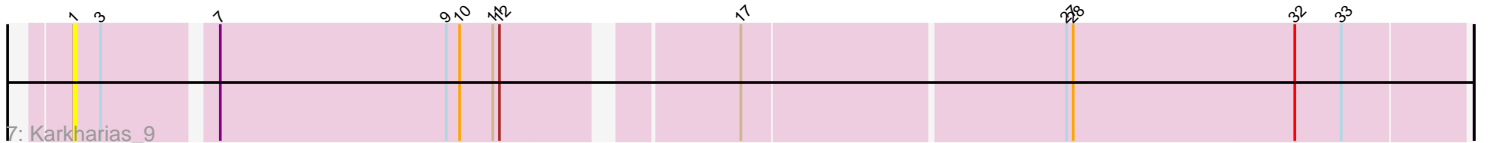
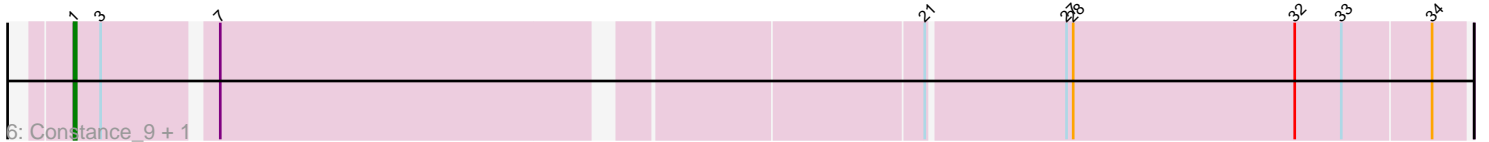
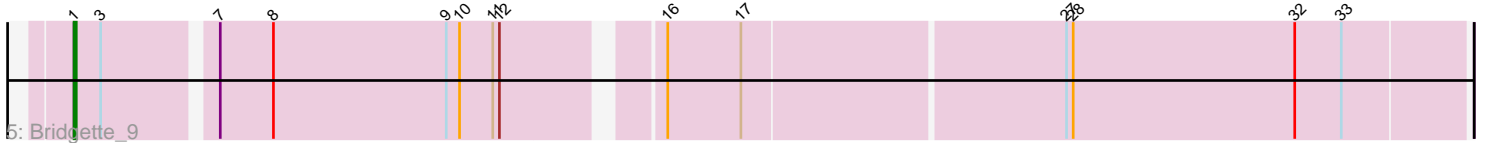
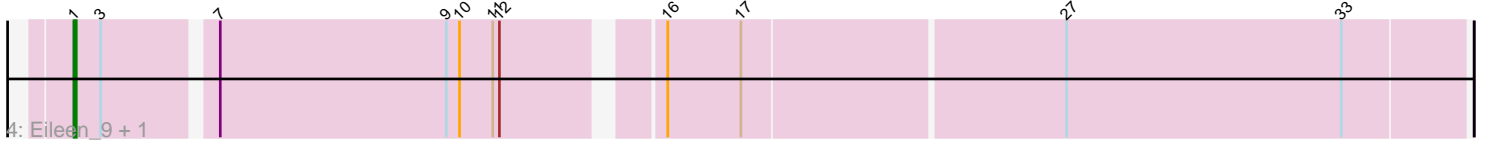
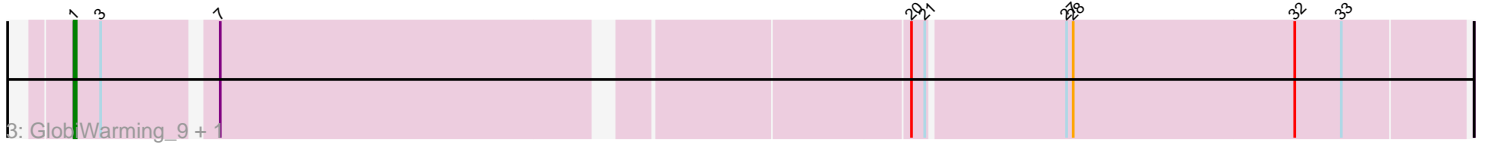
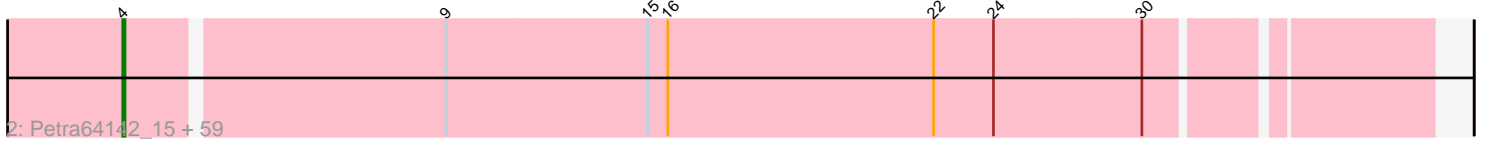
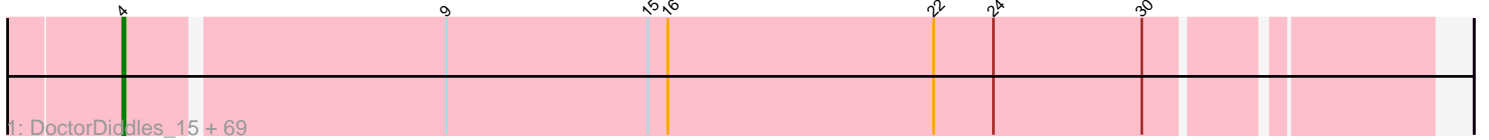


Pham 171263



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 171263 Report

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

Pham number 171263 has 142 members, 11 are drafts.

Phages represented in each track:

- Track 1 : DoctorDiddles\_15, Henry\_15, Palpatine\_14, FireRed\_14, IHOP\_14, Bruin\_14, Contagion\_14, MISSy\_14, Willez\_14, Quallification\_16, Bask21\_14, Harella\_13, Rakim\_16, Balomoji\_14, Dusk\_14, StellaBean\_15, Murica\_13, Command613\_16, Miniwave\_15, Gator\_13, CrystalP\_15, Mindy\_15, Tomaszewski\_14, BaboJay\_14, Manda\_15, Mosby\_14, BugsBunny\_12, Icee\_14, Pat3\_14, MPhalcon\_14, Marshmallow\_15, YassJohnny\_15, ShamWow\_15, Rimmer\_14, Sotrice96\_15, Teaspoon\_14, SophKB\_15, Buck\_14, Kostya\_15, NelitzaMV\_15, Eureka\_15, Cactus\_16, Phaja\_14, TeardropMSU\_14, ABCat\_14, SirDuracell\_14, BilboSwaggins\_15, Tuco\_15, Goldilocks\_16, Toto\_15, Holt\_16, Sassay\_14, Policronamos\_14, Inca\_14, Asriel\_14, Barbarian\_14, Traaww1\_13, Flypotenuse\_13, PhatBacter\_14, Daikon\_13, Myrale\_15, Phaux\_13, Glexan\_13, Goku\_15, Amao\_15, xkcd\_15, BadStone\_14, HufflyPuff\_13, Nala\_14, Cookies\_15
- Track 2 : Petra64142\_15, Adnama\_16, Elite2014\_13, Lilpickle\_13, BigBubba\_14, Thresher\_15, GoldenSpark\_16, Lilizi\_16, OrionPax\_15, HanKaySha\_15, Hopey\_15, Terminus\_14, Filch\_15, Easy2Say\_15, Bench\_16, Maxxinista\_15, 244\_15, Stark\_15, Hoonter\_16, Cjw1\_14, Ukulele\_14, Misfit\_14, TBrady12\_16, ChosenOne\_13, Moldemort\_15, Pharsalus\_15, Simpliphy\_15, Pumpkin\_15, Czyszczone1\_15, Highbury\_15, Stank\_16, Kanye\_16, RiverMonster\_14, Xandras\_16, GooberAzure\_16, Argent26\_16, Wiggin\_16, Nimrod\_14, Youngblood\_14, Emmina\_14, DrDrey\_15, Elph10\_15, StolenFromERC\_16, Paperbeatsrock\_16, ChotaBhai\_14, ShereKhan\_16, MadamMonkfish\_14, Murphy\_14, Gemini\_16, Phrux\_14, Lilac\_16, Dumbo\_14, JeTaime\_16, AmericanBeauty\_16, Porky\_13, Gage\_16, Tarkin\_16, NoSleep\_15, Kimchi\_16, Saints25\_15
- Track 3 : GlobiWarming\_9, Judy\_9
- Track 4 : Eileen\_9, Peas\_9
- Track 5 : Bridgette\_9
- Track 6 : Constance\_9, PeggyLeg03\_9
- Track 7 : Karkharias\_9
- Track 8 : ChuckDuck\_9
- Track 9 : Pucara\_9
- Track 10 : Success\_54
- Track 11 : Ibantik\_72

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

The start number called the most often in the published annotations is 4, it was called in 122 of the 131 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244\_15, ABCat\_14, Adnama\_16, Amao\_15, AmericanBeauty\_16, Argent26\_16, Asriel\_14, BaboJay\_14, BadStone\_14, Balomoji\_14, Barbarian\_14, Bask21\_14, Bench\_16, BigBubba\_14, BilboSwaggins\_15, Bruin\_14, Buck\_14, BugsBunny\_12, Cactus\_16, ChosenOne\_13, ChotaBhai\_14, Cjw1\_14, Command613\_16, Contagion\_14, Cookies\_15, CrystalP\_15, Czystczon1\_15, Daikon\_13, DoctorDiddles\_15, DrDrey\_15, Dumbo\_14, Dusk\_14, Easy2Say\_15, Elite2014\_13, Elph10\_15, Emmina\_14, Eureka\_15, Filch\_15, FireRed\_14, Flypotenuse\_13, Gage\_16, Gator\_13, Gemini\_16, Glexan\_13, Goku\_15, GoldenSpark\_16, Goldilocks\_16, GooberAzure\_16, HanKaySha\_15, Harella\_13, Henry\_15, Highbury\_15, Holt\_16, Hoonter\_16, Hopey\_15, HufflyPuff\_13, IHOP\_14, Icee\_14, Inca\_14, JeTaime\_16, Kanye\_16, Kimchi\_16, Kostya\_15, Lilac\_16, Lilizi\_16, Lilpickle\_13, MISSy\_14, MPhalcon\_14, MadamMonkfish\_14, Manda\_15, Marshmallow\_15, Maxxinista\_15, Mindy\_15, Miniwave\_15, Misfit\_14, Moldemort\_15, Mosby\_14, Murica\_13, Murphy\_14, Myrale\_15, Nala\_14, NelitzaMV\_15, Nimrod\_14, NoSleep\_15, OrionPax\_15, Palpatine\_14, Paperbeatsrock\_16, Pat3\_14, Petra64142\_15, Phaja\_14, Pharsalus\_15, PhatBacter\_14, Phaux\_13, Phrux\_14, Policronamos\_14, Porky\_13, Pumpkin\_15, Quallification\_16, Rakim\_16, Rimmer\_14, RiverMonster\_14, Saints25\_15, Sassay\_14, ShamWow\_15, ShereKhan\_16, Simpliphy\_15, SirDuracell\_14, SophKB\_15, Sotrice96\_15, Stank\_16, Stark\_15, StellaBean\_15, StolenFromERC\_16, TBrady12\_16, Tarkin\_16, TeardropMSU\_14, Teaspoon\_14, Terminus\_14, Thresher\_15, Tomaszewski\_14, Toto\_15, Traaww1\_13, Tuco\_15, Ukulele\_14, Wiggin\_16, Willez\_14, Xandras\_16, YassJohnny\_15, Youngblood\_14, xkcd\_15,

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

- 

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

- Bridgette\_9, ChuckDuck\_9, Constance\_9, Eileen\_9, GlobiWarming\_9, Ibantik\_72, Judy\_9, Karkharias\_9, Peas\_9, PeggyLeg03\_9, Pucara\_9, Success\_54,

### Summary by start number:

Start 1:

- Found in 10 of 142 ( 7.0% ) of genes in pham
- Manual Annotations of this start: 7 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bridgette\_9 (FA), ChuckDuck\_9 (FA), Constance\_9 (FA), Eileen\_9 (FA), GlobiWarming\_9 (FA), Judy\_9 (FA), Karkharias\_9 (FA), Peas\_9 (FA), PeggyLeg03\_9 (FA), Pucara\_9 (FA),

Start 2:

- Found in 2 of 142 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 2 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ibantik\_72 (singleton), Success\_54 (singleton),

Start 4:

- Found in 130 of 142 ( 91.5% ) of genes in pham
- Manual Annotations of this start: 122 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 244\_15 (E), ABCat\_14 (E), Adnama\_16 (E), Amao\_15 (E), AmericanBeauty\_16 (E), Argent26\_16 (E), Asriel\_14 (E), BaboJay\_14 (E), BadStone\_14 (E), Balomoji\_14 (E), Barbarian\_14 (E), Bask21\_14 (E), Bench\_16 (E), BigBubba\_14 (E), BilboSwaggins\_15 (E), Bruin\_14 (E), Buck\_14 (E), BugsBunny\_12 (E), Cactus\_16 (E), ChosenOne\_13 (E), ChotaBhai\_14 (E), Cjw1\_14 (E), Command613\_16 (E), Contagion\_14 (E), Cookies\_15 (E), CrystalP\_15 (E), Czyszczonek\_15 (E), Daikon\_13 (E), DoctorDiddles\_15 (E), DrDrey\_15 (E), Dumbo\_14 (E), Dusk\_14 (E), Easy2Say\_15 (E), Elite2014\_13 (E), Elph10\_15 (E), Emmina\_14 (E), Eureka\_15 (E), Filch\_15 (E), FireRed\_14 (E), Flypotenuse\_13 (E), Gage\_16 (E), Gator\_13 (E), Gemini\_16 (E), Glexan\_13 (E), Goku\_15 (E), GoldenSpark\_16 (E), Goldilocks\_16 (E), GooberAzure\_16 (E), HanKaySha\_15 (E), Harella\_13 (E), Henry\_15 (E), Highbury\_15 (E), Holt\_16 (E), Hoonter\_16 (E), Hopey\_15 (E), HufflyPuff\_13 (E), IHOP\_14 (E), Icee\_14 (E), Inca\_14 (E), JeTaime\_16 (E), Kanye\_16 (E), Kimchi\_16 (E), Kostya\_15 (E), Lilac\_16 (E), Lilizi\_16 (E), Lilpickle\_13 (E), MISSy\_14 (E), MPhalcon\_14 (E), MadamMonkfish\_14 (E), Manda\_15 (E), Marshmallow\_15 (E), Maxxinista\_15 (E), Mindy\_15 (E), Miniwave\_15 (E), Misfit\_14 (E), Moldemort\_15 (E), Mosby\_14 (E), Murica\_13 (E), Murphy\_14 (E), Myrale\_15 (E), Nala\_14 (E), NelitzaMV\_15 (E), Nimrod\_14 (E), NoSleep\_15 (E), OrionPax\_15 (E), Palpatine\_14 (E), Paperbeatsrock\_16 (E), Pat3\_14 (E), Petra64142\_15 (E), Phaja\_14 (E), Pharsalus\_15 (E), PhatBacter\_14 (E), Phaux\_13 (E), Phrux\_14 (E), Policronamos\_14 (E), Porky\_13 (E), Pumpkin\_15 (E), Quallification\_16 (E), Rakim\_16 (E), Rimmer\_14 (E), RiverMonster\_14 (E), Saints25\_15 (E), Sassay\_14 (E), ShamWow\_15 (E), ShereKhan\_16 (E), Simpliphy\_15 (E), SirDuracell\_14 (E), SophKB\_15 (E), Sotrice96\_15 (E), Stank\_16 (E), Stark\_15 (E), StellaBean\_15 (E), StolenFromERC\_16 (E), TBrady12\_16 (E), Tarkin\_16 (E), TeardropMSU\_14 (E), Teaspoon\_14 (E), Terminus\_14 (E), Thresher\_15 (E), Tomaszewski\_14 (E), Toto\_15 (E), Traaww1\_13 (E), Tuco\_15 (E), Ukulele\_14 (E), Wiggin\_16 (E), Willez\_14 (E), Xandras\_16 (E), YassJohnny\_15 (E), Youngblood\_14 (E), xkcd\_15 (E),

### Summary by clusters:

There are 3 clusters represented in this pham: FA, singleton, E,

Info for manual annotations of cluster E:

- Start number 4 was manually annotated 122 times for cluster E.

Info for manual annotations of cluster FA:

- Start number 1 was manually annotated 7 times for cluster FA.

### Gene Information:

Gene: 244\_15 Start: 8901, Stop: 9467, Start Num: 4

Candidate Starts for 244\_15:

(Start: 4 @8901 has 122 MA's), (9, 9039), (15, 9129), (16, 9138), (22, 9258), (24, 9285), (30, 9351),

Gene: ABCat\_14 Start: 9678, Stop: 10244, Start Num: 4

Candidate Starts for ABCat\_14:

(Start: 4 @9678 has 122 MA's), (9, 9816), (15, 9906), (16, 9915), (22, 10035), (24, 10062), (30, 10128),

Gene: Adnama\_16 Start: 9133, Stop: 9699, Start Num: 4

Candidate Starts for Adnama\_16:

(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),

Gene: Amao\_15 Start: 8883, Stop: 9449, Start Num: 4

Candidate Starts for Amao\_15:

(Start: 4 @8883 has 122 MA's), (9, 9021), (15, 9111), (16, 9120), (22, 9240), (24, 9267), (30, 9333),

Gene: AmericanBeauty\_16 Start: 9130, Stop: 9696, Start Num: 4

Candidate Starts for AmericanBeauty\_16:

(Start: 4 @9130 has 122 MA's), (9, 9268), (15, 9358), (16, 9367), (22, 9487), (24, 9514), (30, 9580),

Gene: Argent26\_16 Start: 9133, Stop: 9699, Start Num: 4

Candidate Starts for Argent26\_16:

(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),

Gene: Asriel\_14 Start: 8550, Stop: 9116, Start Num: 4

Candidate Starts for Asriel\_14:

(Start: 4 @8550 has 122 MA's), (9, 8688), (15, 8778), (16, 8787), (22, 8907), (24, 8934), (30, 9000),

Gene: BaboJay\_14 Start: 9212, Stop: 9778, Start Num: 4

Candidate Starts for BaboJay\_14:

(Start: 4 @9212 has 122 MA's), (9, 9350), (15, 9440), (16, 9449), (22, 9569), (24, 9596), (30, 9662),

Gene: BadStone\_14 Start: 9678, Stop: 10244, Start Num: 4

Candidate Starts for BadStone\_14:

(Start: 4 @9678 has 122 MA's), (9, 9816), (15, 9906), (16, 9915), (22, 10035), (24, 10062), (30, 10128),

Gene: Balomoji\_14 Start: 9412, Stop: 9978, Start Num: 4

Candidate Starts for Balomoji\_14:

(Start: 4 @9412 has 122 MA's), (9, 9550), (15, 9640), (16, 9649), (22, 9769), (24, 9796), (30, 9862),

Gene: Barbarian\_14 Start: 8550, Stop: 9116, Start Num: 4

Candidate Starts for Barbarian\_14:

(Start: 4 @8550 has 122 MA's), (9, 8688), (15, 8778), (16, 8787), (22, 8907), (24, 8934), (30, 9000),

Gene: Bask21\_14 Start: 8345, Stop: 8911, Start Num: 4

Candidate Starts for Bask21\_14:

(Start: 4 @8345 has 122 MA's), (9, 8483), (15, 8573), (16, 8582), (22, 8702), (24, 8729), (30, 8795),

Gene: Bench\_16 Start: 9006, Stop: 9572, Start Num: 4

Candidate Starts for Bench\_16:

(Start: 4 @9006 has 122 MA's), (9, 9144), (15, 9234), (16, 9243), (22, 9363), (24, 9390), (30, 9456),

Gene: BigBubba\_14 Start: 8389, Stop: 8955, Start Num: 4

Candidate Starts for BigBubba\_14:

(Start: 4 @8389 has 122 MA's), (9, 8527), (15, 8617), (16, 8626), (22, 8746), (24, 8773), (30, 8839),

Gene: BilboSwaggins\_15 Start: 9679, Stop: 10245, Start Num: 4

Candidate Starts for BilboSwaggins\_15:

(Start: 4 @9679 has 122 MA's), (9, 9817), (15, 9907), (16, 9916), (22, 10036), (24, 10063), (30, 10129),

Gene: Bridgette\_9 Start: 7210, Stop: 7803, Start Num: 1

Candidate Starts for Bridgette\_9:

(Start: 1 @7210 has 7 MA's), (3, 7222), (7, 7267), (8, 7291), (9, 7369), (10, 7375), (11, 7390), (12, 7393), (16, 7453), (17, 7486), (27, 7627), (28, 7630), (32, 7729), (33, 7750),

Gene: Bruin\_14 Start: 9186, Stop: 9752, Start Num: 4

Candidate Starts for Bruin\_14:

(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: Buck\_14 Start: 9635, Stop: 10201, Start Num: 4

Candidate Starts for Buck\_14:

(Start: 4 @9635 has 122 MA's), (9, 9773), (15, 9863), (16, 9872), (22, 9992), (24, 10019), (30, 10085),

Gene: BugsBunny\_12 Start: 8752, Stop: 9318, Start Num: 4

Candidate Starts for BugsBunny\_12:

(Start: 4 @8752 has 122 MA's), (9, 8890), (15, 8980), (16, 8989), (22, 9109), (24, 9136), (30, 9202),

Gene: Cactus\_16 Start: 8891, Stop: 9457, Start Num: 4

Candidate Starts for Cactus\_16:

(Start: 4 @8891 has 122 MA's), (9, 9029), (15, 9119), (16, 9128), (22, 9248), (24, 9275), (30, 9341),

Gene: ChosenOne\_13 Start: 8353, Stop: 8919, Start Num: 4

Candidate Starts for ChosenOne\_13:

(Start: 4 @8353 has 122 MA's), (9, 8491), (15, 8581), (16, 8590), (22, 8710), (24, 8737), (30, 8803),

Gene: ChotaBhai\_14 Start: 8389, Stop: 8955, Start Num: 4

Candidate Starts for ChotaBhai\_14:

(Start: 4 @8389 has 122 MA's), (9, 8527), (15, 8617), (16, 8626), (22, 8746), (24, 8773), (30, 8839),

Gene: ChuckDuck\_9 Start: 7169, Stop: 7759, Start Num: 1

Candidate Starts for ChuckDuck\_9:

(Start: 1 @7169 has 7 MA's), (3, 7181), (7, 7226), (10, 7334), (20, 7517), (21, 7523), (27, 7583), (28, 7586), (32, 7685), (33, 7706),

Gene: Cjw1\_14 Start: 9903, Stop: 10469, Start Num: 4

Candidate Starts for Cjw1\_14:

(Start: 4 @9903 has 122 MA's), (9, 10041), (15, 10131), (16, 10140), (22, 10260), (24, 10287), (30, 10353),

Gene: Command613\_16 Start: 9947, Stop: 10513, Start Num: 4

Candidate Starts for Command613\_16:

(Start: 4 @9947 has 122 MA's), (9, 10085), (15, 10175), (16, 10184), (22, 10304), (24, 10331), (30, 10397),

Gene: Constance\_9 Start: 7215, Stop: 7805, Start Num: 1

Candidate Starts for Constance\_9:

(Start: 1 @7215 has 7 MA's), (3, 7227), (7, 7272), (21, 7569), (27, 7629), (28, 7632), (32, 7731), (33, 7752), (34, 7791),

Gene: Contagion\_14 Start: 9186, Stop: 9752, Start Num: 4

Candidate Starts for Contagion\_14:

(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: Cookies\_15 Start: 9551, Stop: 10117, Start Num: 4

Candidate Starts for Cookies\_15:

(Start: 4 @9551 has 122 MA's), (9, 9689), (15, 9779), (16, 9788), (22, 9908), (24, 9935), (30, 10001),

Gene: CrystalP\_15 Start: 9679, Stop: 10245, Start Num: 4

Candidate Starts for CrystalP\_15:

(Start: 4 @9679 has 122 MA's), (9, 9817), (15, 9907), (16, 9916), (22, 10036), (24, 10063), (30, 10129),

Gene: Czyszczone1\_15 Start: 8888, Stop: 9454, Start Num: 4

Candidate Starts for Czyszczone1\_15:

(Start: 4 @8888 has 122 MA's), (9, 9026), (15, 9116), (16, 9125), (22, 9245), (24, 9272), (30, 9338),

Gene: Daikon\_13 Start: 9413, Stop: 9979, Start Num: 4

Candidate Starts for Daikon\_13:

(Start: 4 @9413 has 122 MA's), (9, 9551), (15, 9641), (16, 9650), (22, 9770), (24, 9797), (30, 9863),

Gene: DoctorDiddles\_15 Start: 8844, Stop: 9410, Start Num: 4

Candidate Starts for DoctorDiddles\_15:

(Start: 4 @8844 has 122 MA's), (9, 8982), (15, 9072), (16, 9081), (22, 9201), (24, 9228), (30, 9294),

Gene: DrDrey\_15 Start: 9629, Stop: 10195, Start Num: 4

Candidate Starts for DrDrey\_15:

(Start: 4 @9629 has 122 MA's), (9, 9767), (15, 9857), (16, 9866), (22, 9986), (24, 10013), (30, 10079),

Gene: Dumbo\_14 Start: 8610, Stop: 9176, Start Num: 4

Candidate Starts for Dumbo\_14:

(Start: 4 @8610 has 122 MA's), (9, 8748), (15, 8838), (16, 8847), (22, 8967), (24, 8994), (30, 9060),

Gene: Dusk\_14 Start: 9338, Stop: 9904, Start Num: 4

Candidate Starts for Dusk\_14:

(Start: 4 @9338 has 122 MA's), (9, 9476), (15, 9566), (16, 9575), (22, 9695), (24, 9722), (30, 9788),

Gene: Easy2Say\_15 Start: 9876, Stop: 10442, Start Num: 4

Candidate Starts for Easy2Say\_15:

(Start: 4 @9876 has 122 MA's), (9, 10014), (15, 10104), (16, 10113), (22, 10233), (24, 10260), (30, 10326),

Gene: Eileen\_9 Start: 7175, Stop: 7768, Start Num: 1

Candidate Starts for Eileen\_9:

(Start: 1 @7175 has 7 MA's), (3, 7187), (7, 7232), (9, 7334), (10, 7340), (11, 7355), (12, 7358), (16, 7418), (17, 7451), (27, 7592), (33, 7715),

Gene: Elite2014\_13 Start: 8353, Stop: 8919, Start Num: 4

Candidate Starts for Elite2014\_13:

(Start: 4 @8353 has 122 MA's), (9, 8491), (15, 8581), (16, 8590), (22, 8710), (24, 8737), (30, 8803),

Gene: Elph10\_15 Start: 8613, Stop: 9179, Start Num: 4

Candidate Starts for Elph10\_15:

(Start: 4 @8613 has 122 MA's), (9, 8751), (15, 8841), (16, 8850), (22, 8970), (24, 8997), (30, 9063),

Gene: Emmina\_14 Start: 8458, Stop: 9024, Start Num: 4

Candidate Starts for Emmina\_14:

(Start: 4 @8458 has 122 MA's), (9, 8596), (15, 8686), (16, 8695), (22, 8815), (24, 8842), (30, 8908),

Gene: Eureka\_15 Start: 9658, Stop: 10224, Start Num: 4

Candidate Starts for Eureka\_15:

(Start: 4 @9658 has 122 MA's), (9, 9796), (15, 9886), (16, 9895), (22, 10015), (24, 10042), (30, 10108),

Gene: Filch\_15 Start: 8898, Stop: 9464, Start Num: 4

Candidate Starts for Filch\_15:

(Start: 4 @8898 has 122 MA's), (9, 9036), (15, 9126), (16, 9135), (22, 9255), (24, 9282), (30, 9348),

Gene: FireRed\_14 Start: 9186, Stop: 9752, Start Num: 4

Candidate Starts for FireRed\_14:

(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: Flypotenuse\_13 Start: 9295, Stop: 9861, Start Num: 4

Candidate Starts for Flypotenuse\_13:

(Start: 4 @9295 has 122 MA's), (9, 9433), (15, 9523), (16, 9532), (22, 9652), (24, 9679), (30, 9745),

Gene: Gage\_16 Start: 9133, Stop: 9699, Start Num: 4

Candidate Starts for Gage\_16:

(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),

Gene: Gator\_13 Start: 9294, Stop: 9860, Start Num: 4

Candidate Starts for Gator\_13:

(Start: 4 @9294 has 122 MA's), (9, 9432), (15, 9522), (16, 9531), (22, 9651), (24, 9678), (30, 9744),

Gene: Gemini\_16 Start: 9133, Stop: 9699, Start Num: 4

Candidate Starts for Gemini\_16:

(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),

Gene: Glexan\_13 Start: 9295, Stop: 9861, Start Num: 4

Candidate Starts for Glexan\_13:

(Start: 4 @9295 has 122 MA's), (9, 9433), (15, 9523), (16, 9532), (22, 9652), (24, 9679), (30, 9745),

Gene: GlobiWarming\_9 Start: 7170, Stop: 7760, Start Num: 1

Candidate Starts for GlobiWarming\_9:

(Start: 1 @7170 has 7 MA's), (3, 7182), (7, 7227), (20, 7518), (21, 7524), (27, 7584), (28, 7587), (32, 7686), (33, 7707),

Gene: Goku\_15 Start: 9385, Stop: 9951, Start Num: 4

Candidate Starts for Goku\_15:

(Start: 4 @9385 has 122 MA's), (9, 9523), (15, 9613), (16, 9622), (22, 9742), (24, 9769), (30, 9835),

Gene: GoldenSpark\_16 Start: 9133, Stop: 9699, Start Num: 4

Candidate Starts for GoldenSpark\_16:

(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),



Gene: Goldilocks\_16 Start: 9089, Stop: 9655, Start Num: 4  
Candidate Starts for Goldilocks\_16:  
(Start: 4 @9089 has 122 MA's), (9, 9227), (15, 9317), (16, 9326), (22, 9446), (24, 9473), (30, 9539),

Gene: GooberAzure\_16 Start: 9133, Stop: 9699, Start Num: 4  
Candidate Starts for GooberAzure\_16:  
(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),

Gene: HanKaySha\_15 Start: 8888, Stop: 9454, Start Num: 4  
Candidate Starts for HanKaySha\_15:  
(Start: 4 @8888 has 122 MA's), (9, 9026), (15, 9116), (16, 9125), (22, 9245), (24, 9272), (30, 9338),

Gene: Harella\_13 Start: 9295, Stop: 9861, Start Num: 4  
Candidate Starts for Harella\_13:  
(Start: 4 @9295 has 122 MA's), (9, 9433), (15, 9523), (16, 9532), (22, 9652), (24, 9679), (30, 9745),

Gene: Henry\_15 Start: 9678, Stop: 10244, Start Num: 4  
Candidate Starts for Henry\_15:  
(Start: 4 @9678 has 122 MA's), (9, 9816), (15, 9906), (16, 9915), (22, 10035), (24, 10062), (30, 10128),

Gene: Highbury\_15 Start: 8807, Stop: 9373, Start Num: 4  
Candidate Starts for Highbury\_15:  
(Start: 4 @8807 has 122 MA's), (9, 8945), (15, 9035), (16, 9044), (22, 9164), (24, 9191), (30, 9257),

Gene: Holt\_16 Start: 8962, Stop: 9528, Start Num: 4  
Candidate Starts for Holt\_16:  
(Start: 4 @8962 has 122 MA's), (9, 9100), (15, 9190), (16, 9199), (22, 9319), (24, 9346), (30, 9412),

Gene: Hoonter\_16 Start: 9133, Stop: 9699, Start Num: 4  
Candidate Starts for Hoonter\_16:  
(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),

Gene: Hokey\_15 Start: 8898, Stop: 9464, Start Num: 4  
Candidate Starts for Hokey\_15:  
(Start: 4 @8898 has 122 MA's), (9, 9036), (15, 9126), (16, 9135), (22, 9255), (24, 9282), (30, 9348),

Gene: HufflyPuff\_13 Start: 9142, Stop: 9708, Start Num: 4  
Candidate Starts for HufflyPuff\_13:  
(Start: 4 @9142 has 122 MA's), (9, 9280), (15, 9370), (16, 9379), (22, 9499), (24, 9526), (30, 9592),

Gene: IHOP\_14 Start: 9338, Stop: 9904, Start Num: 4  
Candidate Starts for IHOP\_14:  
(Start: 4 @9338 has 122 MA's), (9, 9476), (15, 9566), (16, 9575), (22, 9695), (24, 9722), (30, 9788),

Gene: Ibantik\_72 Start: 34097, Stop: 34657, Start Num: 2  
Candidate Starts for Ibantik\_72:  
(Start: 2 @34097 has 2 MA's), (5, 34121), (6, 34133), (14, 34331), (19, 34421), (24, 34496), (26, 34520), (31, 34592),

Gene: Icee\_14 Start: 9338, Stop: 9904, Start Num: 4  
Candidate Starts for Icee\_14:  
(Start: 4 @9338 has 122 MA's), (9, 9476), (15, 9566), (16, 9575), (22, 9695), (24, 9722), (30, 9788),

Gene: Inca\_14 Start: 8358, Stop: 8924, Start Num: 4

Candidate Starts for Inca\_14:

(Start: 4 @8358 has 122 MA's), (9, 8496), (15, 8586), (16, 8595), (22, 8715), (24, 8742), (30, 8808),

Gene: JeTaime\_16 Start: 9938, Stop: 10504, Start Num: 4

Candidate Starts for JeTaime\_16:

(Start: 4 @9938 has 122 MA's), (9, 10076), (15, 10166), (16, 10175), (22, 10295), (24, 10322), (30, 10388),

Gene: Judy\_9 Start: 7214, Stop: 7804, Start Num: 1

Candidate Starts for Judy\_9:

(Start: 1 @7214 has 7 MA's), (3, 7226), (7, 7271), (20, 7562), (21, 7568), (27, 7628), (28, 7631), (32, 7730), (33, 7751),

Gene: Kanye\_16 Start: 10126, Stop: 10692, Start Num: 4

Candidate Starts for Kanye\_16:

(Start: 4 @10126 has 122 MA's), (9, 10264), (15, 10354), (16, 10363), (22, 10483), (24, 10510), (30, 10576),

Gene: Karkharias\_9 Start: 7171, Stop: 7764, Start Num: 1

Candidate Starts for Karkharias\_9:

(Start: 1 @7171 has 7 MA's), (3, 7183), (7, 7228), (9, 7330), (10, 7336), (11, 7351), (12, 7354), (17, 7447), (27, 7588), (28, 7591), (32, 7690), (33, 7711),

Gene: Kimchi\_16 Start: 9133, Stop: 9699, Start Num: 4

Candidate Starts for Kimchi\_16:

(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),

Gene: Kostya\_15 Start: 9678, Stop: 10244, Start Num: 4

Candidate Starts for Kostya\_15:

(Start: 4 @9678 has 122 MA's), (9, 9816), (15, 9906), (16, 9915), (22, 10035), (24, 10062), (30, 10128),

Gene: Lilac\_16 Start: 8634, Stop: 9200, Start Num: 4

Candidate Starts for Lilac\_16:

(Start: 4 @8634 has 122 MA's), (9, 8772), (15, 8862), (16, 8871), (22, 8991), (24, 9018), (30, 9084),

Gene: Lilizi\_16 Start: 8845, Stop: 9411, Start Num: 4

Candidate Starts for Lilizi\_16:

(Start: 4 @8845 has 122 MA's), (9, 8983), (15, 9073), (16, 9082), (22, 9202), (24, 9229), (30, 9295),

Gene: Lilpickle\_13 Start: 8353, Stop: 8919, Start Num: 4

Candidate Starts for Lilpickle\_13:

(Start: 4 @8353 has 122 MA's), (9, 8491), (15, 8581), (16, 8590), (22, 8710), (24, 8737), (30, 8803),

Gene: MISSy\_14 Start: 9186, Stop: 9752, Start Num: 4

Candidate Starts for MISSy\_14:

(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: MPhalcon\_14 Start: 9186, Stop: 9752, Start Num: 4

Candidate Starts for MPhalcon\_14:

(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: MadamMonkfish\_14 Start: 8564, Stop: 9130, Start Num: 4  
Candidate Starts for MadamMonkfish\_14:  
(Start: 4 @8564 has 122 MA's), (9, 8702), (15, 8792), (16, 8801), (22, 8921), (24, 8948), (30, 9014),

Gene: Manda\_15 Start: 9648, Stop: 10214, Start Num: 4  
Candidate Starts for Manda\_15:  
(Start: 4 @9648 has 122 MA's), (9, 9786), (15, 9876), (16, 9885), (22, 10005), (24, 10032), (30, 10098),

Gene: Marshmallow\_15 Start: 9678, Stop: 10244, Start Num: 4  
Candidate Starts for Marshmallow\_15:  
(Start: 4 @9678 has 122 MA's), (9, 9816), (15, 9906), (16, 9915), (22, 10035), (24, 10062), (30, 10128),

Gene: Maxxinista\_15 Start: 8613, Stop: 9179, Start Num: 4  
Candidate Starts for Maxxinista\_15:  
(Start: 4 @8613 has 122 MA's), (9, 8751), (15, 8841), (16, 8850), (22, 8970), (24, 8997), (30, 9063),

Gene: Mindy\_15 Start: 9457, Stop: 10023, Start Num: 4  
Candidate Starts for Mindy\_15:  
(Start: 4 @9457 has 122 MA's), (9, 9595), (15, 9685), (16, 9694), (22, 9814), (24, 9841), (30, 9907),

Gene: Miniwave\_15 Start: 9876, Stop: 10442, Start Num: 4  
Candidate Starts for Miniwave\_15:  
(Start: 4 @9876 has 122 MA's), (9, 10014), (15, 10104), (16, 10113), (22, 10233), (24, 10260), (30, 10326),

Gene: Misfit\_14 Start: 9230, Stop: 9796, Start Num: 4  
Candidate Starts for Misfit\_14:  
(Start: 4 @9230 has 122 MA's), (9, 9368), (15, 9458), (16, 9467), (22, 9587), (24, 9614), (30, 9680),

Gene: Moldemort\_15 Start: 8888, Stop: 9454, Start Num: 4  
Candidate Starts for Moldemort\_15:  
(Start: 4 @8888 has 122 MA's), (9, 9026), (15, 9116), (16, 9125), (22, 9245), (24, 9272), (30, 9338),

Gene: Mosby\_14 Start: 9186, Stop: 9752, Start Num: 4  
Candidate Starts for Mosby\_14:  
(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: Murica\_13 Start: 9142, Stop: 9708, Start Num: 4  
Candidate Starts for Murica\_13:  
(Start: 4 @9142 has 122 MA's), (9, 9280), (15, 9370), (16, 9379), (22, 9499), (24, 9526), (30, 9592),

Gene: Murphy\_14 Start: 8605, Stop: 9171, Start Num: 4  
Candidate Starts for Murphy\_14:  
(Start: 4 @8605 has 122 MA's), (9, 8743), (15, 8833), (16, 8842), (22, 8962), (24, 8989), (30, 9055),

Gene: Myrale\_15 Start: 9549, Stop: 10115, Start Num: 4  
Candidate Starts for Myrale\_15:  
(Start: 4 @9549 has 122 MA's), (9, 9687), (15, 9777), (16, 9786), (22, 9906), (24, 9933), (30, 9999),

Gene: Nala\_14 Start: 9186, Stop: 9752, Start Num: 4

Candidate Starts for Nala\_14:

(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: NelitzaMV\_15 Start: 9748, Stop: 10314, Start Num: 4

Candidate Starts for NelitzaMV\_15:

(Start: 4 @9748 has 122 MA's), (9, 9886), (15, 9976), (16, 9985), (22, 10105), (24, 10132), (30, 10198),

Gene: Nimrod\_14 Start: 9385, Stop: 9951, Start Num: 4

Candidate Starts for Nimrod\_14:

(Start: 4 @9385 has 122 MA's), (9, 9523), (15, 9613), (16, 9622), (22, 9742), (24, 9769), (30, 9835),

Gene: NoSleep\_15 Start: 8885, Stop: 9451, Start Num: 4

Candidate Starts for NoSleep\_15:

(Start: 4 @8885 has 122 MA's), (9, 9023), (15, 9113), (16, 9122), (22, 9242), (24, 9269), (30, 9335),

Gene: OrionPax\_15 Start: 8888, Stop: 9454, Start Num: 4

Candidate Starts for OrionPax\_15:

(Start: 4 @8888 has 122 MA's), (9, 9026), (15, 9116), (16, 9125), (22, 9245), (24, 9272), (30, 9338),

Gene: Palpatine\_14 Start: 9183, Stop: 9749, Start Num: 4

Candidate Starts for Palpatine\_14:

(Start: 4 @9183 has 122 MA's), (9, 9321), (15, 9411), (16, 9420), (22, 9540), (24, 9567), (30, 9633),

Gene: Paperbeatsrock\_16 Start: 10120, Stop: 10686, Start Num: 4

Candidate Starts for Paperbeatsrock\_16:

(Start: 4 @10120 has 122 MA's), (9, 10258), (15, 10348), (16, 10357), (22, 10477), (24, 10504), (30, 10570),

Gene: Pat3\_14 Start: 8388, Stop: 8954, Start Num: 4

Candidate Starts for Pat3\_14:

(Start: 4 @8388 has 122 MA's), (9, 8526), (15, 8616), (16, 8625), (22, 8745), (24, 8772), (30, 8838),

Gene: Peas\_9 Start: 7175, Stop: 7768, Start Num: 1

Candidate Starts for Peas\_9:

(Start: 1 @7175 has 7 MA's), (3, 7187), (7, 7232), (9, 7334), (10, 7340), (11, 7355), (12, 7358), (16, 7418), (17, 7451), (27, 7592), (33, 7715),

Gene: PeggyLeg03\_9 Start: 7215, Stop: 7805, Start Num: 1

Candidate Starts for PeggyLeg03\_9:

(Start: 1 @7215 has 7 MA's), (3, 7227), (7, 7272), (21, 7569), (27, 7629), (28, 7632), (32, 7731), (33, 7752), (34, 7791),

Gene: Petra64142\_15 Start: 9601, Stop: 10167, Start Num: 4

Candidate Starts for Petra64142\_15:

(Start: 4 @9601 has 122 MA's), (9, 9739), (15, 9829), (16, 9838), (22, 9958), (24, 9985), (30, 10051),

Gene: Phaja\_14 Start: 9338, Stop: 9904, Start Num: 4

Candidate Starts for Phaja\_14:

(Start: 4 @9338 has 122 MA's), (9, 9476), (15, 9566), (16, 9575), (22, 9695), (24, 9722), (30, 9788),

Gene: Pharsalus\_15 Start: 9920, Stop: 10486, Start Num: 4

Candidate Starts for Pharsalus\_15:

(Start: 4 @9920 has 122 MA's), (9, 10058), (15, 10148), (16, 10157), (22, 10277), (24, 10304), (30, 10370),

Gene: PhatBacter\_14 Start: 9186, Stop: 9752, Start Num: 4

Candidate Starts for PhatBacter\_14:

(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: Phaux\_13 Start: 9186, Stop: 9752, Start Num: 4

Candidate Starts for Phaux\_13:

(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: Phrux\_14 Start: 8884, Stop: 9450, Start Num: 4

Candidate Starts for Phrux\_14:

(Start: 4 @8884 has 122 MA's), (9, 9022), (15, 9112), (16, 9121), (22, 9241), (24, 9268), (30, 9334),

Gene: Policronamos\_14 Start: 9186, Stop: 9752, Start Num: 4

Candidate Starts for Policronamos\_14:

(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: Porky\_13 Start: 8458, Stop: 9024, Start Num: 4

Candidate Starts for Porky\_13:

(Start: 4 @8458 has 122 MA's), (9, 8596), (15, 8686), (16, 8695), (22, 8815), (24, 8842), (30, 8908),

Gene: Pucara\_9 Start: 7174, Stop: 7767, Start Num: 1

Candidate Starts for Pucara\_9:

(Start: 1 @7174 has 7 MA's), (3, 7186), (7, 7231), (9, 7333), (10, 7339), (11, 7354), (12, 7357), (16, 7417), (17, 7450), (27, 7591), (28, 7594), (33, 7714),

Gene: Pumpkin\_15 Start: 8701, Stop: 9267, Start Num: 4

Candidate Starts for Pumpkin\_15:

(Start: 4 @8701 has 122 MA's), (9, 8839), (15, 8929), (16, 8938), (22, 9058), (24, 9085), (30, 9151),

Gene: Quallification\_16 Start: 9885, Stop: 10451, Start Num: 4

Candidate Starts for Quallification\_16:

(Start: 4 @9885 has 122 MA's), (9, 10023), (15, 10113), (16, 10122), (22, 10242), (24, 10269), (30, 10335),

Gene: Rakim\_16 Start: 9792, Stop: 10358, Start Num: 4

Candidate Starts for Rakim\_16:

(Start: 4 @9792 has 122 MA's), (9, 9930), (15, 10020), (16, 10029), (22, 10149), (24, 10176), (30, 10242),

Gene: Rimmer\_14 Start: 9245, Stop: 9811, Start Num: 4

Candidate Starts for Rimmer\_14:

(Start: 4 @9245 has 122 MA's), (9, 9383), (15, 9473), (16, 9482), (22, 9602), (24, 9629), (30, 9695),

Gene: RiverMonster\_14 Start: 8898, Stop: 9464, Start Num: 4

Candidate Starts for RiverMonster\_14:

(Start: 4 @8898 has 122 MA's), (9, 9036), (15, 9126), (16, 9135), (22, 9255), (24, 9282), (30, 9348),

Gene: Saints25\_15 Start: 8807, Stop: 9373, Start Num: 4

Candidate Starts for Saints25\_15:

(Start: 4 @8807 has 122 MA's), (9, 8945), (15, 9035), (16, 9044), (22, 9164), (24, 9191), (30, 9257),

Gene: Sassay\_14 Start: 9186, Stop: 9752, Start Num: 4

Candidate Starts for Sassay\_14:

(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: ShamWow\_15 Start: 9679, Stop: 10245, Start Num: 4

Candidate Starts for ShamWow\_15:

(Start: 4 @9679 has 122 MA's), (9, 9817), (15, 9907), (16, 9916), (22, 10036), (24, 10063), (30, 10129),

Gene: ShereKhan\_16 Start: 10126, Stop: 10692, Start Num: 4

Candidate Starts for ShereKhan\_16:

(Start: 4 @10126 has 122 MA's), (9, 10264), (15, 10354), (16, 10363), (22, 10483), (24, 10510), (30, 10576),

Gene: Simpliphy\_15 Start: 8888, Stop: 9454, Start Num: 4

Candidate Starts for Simpliphy\_15:

(Start: 4 @8888 has 122 MA's), (9, 9026), (15, 9116), (16, 9125), (22, 9245), (24, 9272), (30, 9338),

Gene: SirDuracell\_14 Start: 8345, Stop: 8911, Start Num: 4

Candidate Starts for SirDuracell\_14:

(Start: 4 @8345 has 122 MA's), (9, 8483), (15, 8573), (16, 8582), (22, 8702), (24, 8729), (30, 8795),

Gene: SophKB\_15 Start: 9678, Stop: 10244, Start Num: 4

Candidate Starts for SophKB\_15:

(Start: 4 @9678 has 122 MA's), (9, 9816), (15, 9906), (16, 9915), (22, 10035), (24, 10062), (30, 10128),

Gene: Sotrice96\_15 Start: 9634, Stop: 10200, Start Num: 4

Candidate Starts for Sotrice96\_15:

(Start: 4 @9634 has 122 MA's), (9, 9772), (15, 9862), (16, 9871), (22, 9991), (24, 10018), (30, 10084),

Gene: Stank\_16 Start: 9133, Stop: 9699, Start Num: 4

Candidate Starts for Stank\_16:

(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),

Gene: Stark\_15 Start: 8901, Stop: 9467, Start Num: 4

Candidate Starts for Stark\_15:

(Start: 4 @8901 has 122 MA's), (9, 9039), (15, 9129), (16, 9138), (22, 9258), (24, 9285), (30, 9351),

Gene: StellaBean\_15 Start: 9678, Stop: 10244, Start Num: 4

Candidate Starts for StellaBean\_15:

(Start: 4 @9678 has 122 MA's), (9, 9816), (15, 9906), (16, 9915), (22, 10035), (24, 10062), (30, 10128),

Gene: StolenFromERC\_16 Start: 9133, Stop: 9699, Start Num: 4

Candidate Starts for StolenFromERC\_16:

(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),

Gene: Success\_54 Start: 30512, Stop: 31111, Start Num: 2

Candidate Starts for Success\_54:

(Start: 2 @30512 has 2 MA's), (5, 30536), (13, 30731), (18, 30824), (23, 30893), (25, 30923), (29, 30953), (33, 31052),

Gene: TBrady12\_16 Start: 9130, Stop: 9696, Start Num: 4

Candidate Starts for TBrady12\_16:

(Start: 4 @9130 has 122 MA's), (9, 9268), (15, 9358), (16, 9367), (22, 9487), (24, 9514), (30, 9580),

Gene: Tarkin\_16 Start: 10129, Stop: 10695, Start Num: 4

Candidate Starts for Tarkin\_16:

(Start: 4 @10129 has 122 MA's), (9, 10267), (15, 10357), (16, 10366), (22, 10486), (24, 10513), (30, 10579),

Gene: TeardropMSU\_14 Start: 9586, Stop: 10152, Start Num: 4

Candidate Starts for TeardropMSU\_14:

(Start: 4 @9586 has 122 MA's), (9, 9724), (15, 9814), (16, 9823), (22, 9943), (24, 9970), (30, 10036),

Gene: Teaspoon\_14 Start: 8583, Stop: 9149, Start Num: 4

Candidate Starts for Teaspoon\_14:

(Start: 4 @8583 has 122 MA's), (9, 8721), (15, 8811), (16, 8820), (22, 8940), (24, 8967), (30, 9033),

Gene: Terminus\_14 Start: 9230, Stop: 9796, Start Num: 4

Candidate Starts for Terminus\_14:

(Start: 4 @9230 has 122 MA's), (9, 9368), (15, 9458), (16, 9467), (22, 9587), (24, 9614), (30, 9680),

Gene: Thresher\_15 Start: 9891, Stop: 10457, Start Num: 4

Candidate Starts for Thresher\_15:

(Start: 4 @9891 has 122 MA's), (9, 10029), (15, 10119), (16, 10128), (22, 10248), (24, 10275), (30, 10341),

Gene: Tomaszewski\_14 Start: 9279, Stop: 9845, Start Num: 4

Candidate Starts for Tomaszewski\_14:

(Start: 4 @9279 has 122 MA's), (9, 9417), (15, 9507), (16, 9516), (22, 9636), (24, 9663), (30, 9729),

Gene: Toto\_15 Start: 9679, Stop: 10245, Start Num: 4

Candidate Starts for Toto\_15:

(Start: 4 @9679 has 122 MA's), (9, 9817), (15, 9907), (16, 9916), (22, 10036), (24, 10063), (30, 10129),

Gene: Traaww1\_13 Start: 9324, Stop: 9890, Start Num: 4

Candidate Starts for Traaww1\_13:

(Start: 4 @9324 has 122 MA's), (9, 9462), (15, 9552), (16, 9561), (22, 9681), (24, 9708), (30, 9774),

Gene: Tuco\_15 Start: 9678, Stop: 10244, Start Num: 4

Candidate Starts for Tuco\_15:

(Start: 4 @9678 has 122 MA's), (9, 9816), (15, 9906), (16, 9915), (22, 10035), (24, 10062), (30, 10128),

Gene: Ukulele\_14 Start: 8901, Stop: 9467, Start Num: 4

Candidate Starts for Ukulele\_14:

(Start: 4 @8901 has 122 MA's), (9, 9039), (15, 9129), (16, 9138), (22, 9258), (24, 9285), (30, 9351),

Gene: Wiggin\_16 Start: 9133, Stop: 9699, Start Num: 4

Candidate Starts for Wiggin\_16:

(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),

Gene: Willez\_14 Start: 9186, Stop: 9752, Start Num: 4

Candidate Starts for Willez\_14:

(Start: 4 @9186 has 122 MA's), (9, 9324), (15, 9414), (16, 9423), (22, 9543), (24, 9570), (30, 9636),

Gene: Xandras\_16 Start: 9133, Stop: 9699, Start Num: 4

Candidate Starts for Xandras\_16:

(Start: 4 @9133 has 122 MA's), (9, 9271), (15, 9361), (16, 9370), (22, 9490), (24, 9517), (30, 9583),

Gene: YassJohnny\_15 Start: 9678, Stop: 10244, Start Num: 4

Candidate Starts for YassJohnny\_15:

(Start: 4 @9678 has 122 MA's), (9, 9816), (15, 9906), (16, 9915), (22, 10035), (24, 10062), (30, 10128),

Gene: Youngblood\_14 Start: 9311, Stop: 9877, Start Num: 4

Candidate Starts for Youngblood\_14:

(Start: 4 @9311 has 122 MA's), (9, 9449), (15, 9539), (16, 9548), (22, 9668), (24, 9695), (30, 9761),

Gene: xkcd\_15 Start: 9338, Stop: 9904, Start Num: 4

Candidate Starts for xkcd\_15:

(Start: 4 @9338 has 122 MA's), (9, 9476), (15, 9566), (16, 9575), (22, 9695), (24, 9722), (30, 9788),