



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 167958 Report

This analysis was run 07/09/24 on database version 566.

Pham number 167958 has 254 members, 18 are drafts.

Phages represented in each track:

- Track 1 : DoctorDiddles\_16, Balomoji\_15, Palpatine\_15, IHOP\_15, Bruin\_15, Phaux\_14, Qualification\_17, Bask21\_15, Rakim\_17, Dusk\_15, StellaBean\_16, Command613\_17, Miniwave\_16, Holt\_17, Gator\_14, CrystalP\_16, Mindy\_16, Tomaszewski\_15, Myrale\_16, BugsBunny\_13, Harella\_14, Icee\_15, Marshmallow\_16, YassJohnny\_16, ShamWow\_16, Rimmer\_15, Sotrice96\_16, Buck\_15, NelitzaMV\_16, Kostya\_16, Cactus\_17, Phaja\_15, TeardropMSU\_15, Asriel\_15, Barbarian\_15, ABCat\_15, Mosby\_15, SophKB\_16, SirDuracell\_15, BilboSwaggins\_16, Goldilocks\_17, Sassay\_15, Amao\_16, Willez\_15, Henry\_16, Inca\_15, Traaww1\_14, BadStone\_15, Contagion\_15, Cookies\_16, Flypotenuse\_14, Daikon\_14, Manda\_16, Tuco\_16, Glexan\_14, xkcd\_16, Toto\_16, Nala\_15
- Track 2 : Lilpickle\_14, Adnama\_17, BigBubba\_15, FireRed\_15, TBrady12\_17, Petra64142\_16, GoldenSpark\_17, Kanye\_17, Lilizi\_17, HanKaySha\_16, ShereKhan\_17, Hopey\_16, JeTaime\_17, Terminus\_15, Filch\_16, Easy2Say\_16, AmericanBeauty\_17, Bench\_17, Gage\_17, 244\_16, Maxxinista\_16, Hoonter\_17, ChosenOne\_14, Cjw1\_15, Ukulele\_15, Misfit\_15, MPhalcon\_15, Pharsalus\_16, Pat3\_15, Moldemort\_16, BaboJay\_15, Goku\_16, Teaspoon\_15, Simpliphy\_16, Pumpkin\_16, Czyszczon1\_16, Highbury\_16, Stank\_17, RiverMonster\_15, Xandras\_17, GooberAzure\_17, Argent26\_17, Wiggin\_17, Nimrod\_15, OrionPax\_16, Emmina\_15, DrDrey\_16, Elph10\_16, StolenFromERC\_17, Paperbeatsrock\_17, ChotaBhai\_15, Elite2014\_14, Murica\_14, Youngblood\_15, Murphy\_15, Policronamos\_15, MISSy\_15, Gemini\_17, PhatBacter\_15, Phrux\_15, Lilac\_17, Porky\_14, Tarkin\_17, Thresher\_16, NoSleep\_16, Stark\_16, Dumbo\_15, HuffyPuff\_14, Kimchi\_17, Saints25\_16
- Track 3 : MadamMonkfish\_15
- Track 4 : Eureka\_16
- Track 5 : Cornie\_9
- Track 6 : Babsiella\_10
- Track 7 : QueenHazel\_10, HC\_10, Xula\_9
- Track 8 : Island3\_10, Brujita\_10
- Track 9 : Che9c\_9
- Track 10 : Sbash\_9
- Track 11 : Squint\_23, Porcelain\_24, Ariel\_24, Courthouse\_24, Gonephishing\_22, Superphikiman\_24, LittleE\_24, MiaZeal\_24
- Track 12 : ThreeRngTarjay\_25, HokkenD\_21, Yeet\_24, EricMillard\_26, Pound\_26, Kalah2\_27, Dallas\_26, Constella\_21, Odette\_25, Bobby\_27, Minerva\_26, Duke13\_23, Wanda\_27, Halley\_26, Redno2\_25, Bagrid\_24, Ejimix\_27, Klein\_26, Beem\_26, DmpstrDiver\_25, JuicyJay\_28, Zelink\_27, Phoebus\_26, BAKA\_23

- Track 13 : NihilNomen\_25, Schatzie\_24, Hughesyang\_25, Bombitas\_23, Dove\_25
- Track 14 : KashFlow\_18, Lucky2013\_24, Omega\_26
- Track 15 : Optimus\_24, Thibault\_22
- Track 16 : Hannaconda\_21
- Track 17 : Jamie19\_9, Snekmaggon\_9, Nенаe\_9, Phrann\_9, SkinnyPete\_9, Raymond7\_9, Shweta\_9, Redi\_9, PhancyPhin\_9, SpongeBob\_9, ShrimpFriedEgg\_9, Panchino\_9, Rebel\_9, BabeRuth\_9, Purgamenstris\_9
- Track 18 : Melville\_9, Xerxes\_9, Carcharodon\_9, Duplicity\_9, Bosection6\_9, Parmesanjohn\_9, Andies\_9, Scitech\_9, Xeno\_9, Fulbright\_9, Schnauzer\_9, Chewbacca\_9, Tapioca\_9, Journey\_9, Magsby\_9, Aggie\_9, Charlie\_9, Philonius\_9, Smurph\_9, Gex\_9, Pipsqueaks\_9, Phloss\_9, Silvafighter\_9, Silvy\_9
- Track 19 : MichelleMyBell\_9, Rubeelu\_9, Kevin1\_9, Butters\_9
- Track 20 : Bora\_40, Familton\_44, Mori\_42, Corndog\_45, Krili\_42, Winget\_44, Wildflower\_43, Dylan\_42, JangDynasty\_43, Firecracker\_43, MadKillah\_44, NiebruSaylor\_42, Shida\_43, Alkhayr\_41, Ashwin\_44, TelAviv\_40, Catdawg\_43, Blessica\_44, Ryadel\_47, Vorrrps\_42, YungJamal\_46, Zakhe101\_43, FoulBall\_40, Idergollasper\_43, SchoolBus\_43, Murai\_43, Schuy\_44
- Track 21 : Smooch\_45
- Track 22 : MooMoo\_8

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

The start number called the most often in the published annotations is 10, it was called in 225 of the 236 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244\_16, ABCat\_15, Adnama\_17, Aggie\_9, Alkhayr\_41, Amao\_16, AmericanBeauty\_17, Andies\_9, Argent26\_17, Ariel\_24, Ashwin\_44, Asriel\_15, BAKA\_23, BabeRuth\_9, BaboJay\_15, BadStone\_15, Bagrid\_24, Balomaji\_15, Barbarian\_15, Bask21\_15, Beem\_26, Bench\_17, BigBubba\_15, BilboSwaggins\_16, Blessica\_44, Bobby\_27, Bombitas\_23, Bora\_40, Bosection6\_9, Bruin\_15, Buck\_15, BugsBunny\_13, Butters\_9, Cactus\_17, Carcharodon\_9, Catdawg\_43, Charlie\_9, Chewbacca\_9, ChosenOne\_14, ChotaBhai\_15, Cjw1\_15, Command613\_17, Constella\_21, Contagion\_15, Cookies\_16, Corndog\_45, Courthouse\_24, CrystalP\_16, Czystoczon1\_16, Daikon\_14, Dallas\_26, DmpstrDiver\_25, DoctorDiddles\_16, Dove\_25, DrDrey\_16, Duke13\_23, Dumbo\_15, Duplicity\_9, Dusk\_15, Dylan\_42, Easy2Say\_16, Ejimix\_27, Elite2014\_14, Elph10\_16, Emmina\_15, EricMillard\_26, Eureka\_16, Familton\_44, Filch\_16, FireRed\_15, Firecracker\_43, Flypotenuse\_14, FoulBall\_40, Fulbright\_9, Gage\_17, Gator\_14, Gemini\_17, Gex\_9, Glexan\_14, Goku\_16, GoldenSpark\_17, Goldilocks\_17, Gonephishing\_22, GooberAzure\_17, Halley\_26, HanKaySha\_16, Harella\_14, Henry\_16, Highbury\_16, HokkenD\_21, Holt\_17, Hoonter\_17, Hopey\_16, HufflyPuff\_14, Hughesyang\_25, IHOP\_15, Icee\_15, Idergollasper\_43, Inca\_15, Jamie19\_9, JangDynasty\_43, JeTaime\_17, Journey\_9, JuicyJay\_28, Kalah2\_27, Kanye\_17, KashFlow\_18, Kevin1\_9, Kimchi\_17, Klein\_26, Kostya\_16, Krili\_42, Lilac\_17, Lilizi\_17, Lilpickle\_14, LittleE\_24, Lucky2013\_24, MISSy\_15, MPhalcon\_15, MadKillah\_44, MadamMonkfish\_15, Magsby\_9, Manda\_16, Marshmallow\_16, Maxxinista\_16, Melville\_9, MiaZeal\_24, MichelleMyBell\_9, Mindy\_16, Minerva\_26, Miniwave\_16, Misfit\_15, Moldemort\_16, Mori\_42, Mosby\_15, Murai\_43, Murica\_14, Murphy\_15, Myrale\_16, Nala\_15, NelitzaMV\_16, Nенаe\_9, NiebruSaylor\_42,

NihilNomen\_25, Nimrod\_15, NoSleep\_16, Odette\_25, Omega\_26, Optimus\_24, OrionPax\_16, Palpatine\_15, Panchino\_9, Paperbeatsrock\_17, Parmesanjohn\_9, Pat3\_15, Petra64142\_16, Phaja\_15, PhancyPhin\_9, Pharsalus\_16, PhatBacter\_15, Phaux\_14, Philonius\_9, Phloss\_9, Phoebus\_26, Phrann\_9, Phrux\_15, Pipsqueaks\_9, Policronamos\_15, Porcelain\_24, Porky\_14, Pound\_26, Pumpkin\_16, Purgamenstris\_9, Quallification\_17, Rakim\_17, Raymond7\_9, Rebel\_9, Redi\_9, Redno2\_25, Rimmer\_15, RiverMonster\_15, Rubeelu\_9, Ryadel\_47, Saints25\_16, Sassay\_15, Schatzie\_24, Schnauzer\_9, SchoolBus\_43, Schuy\_44, Scitech\_9, ShamWow\_16, ShereKhan\_17, Shida\_43, ShrimpFriedEgg\_9, Shweta\_9, Silvafighter\_9, Silvy\_9, Simpliphy\_16, SirDuracell\_15, SkinnyPete\_9, Smooch\_45, Smurph\_9, Snekmaggon\_9, SophKB\_16, Sotrice96\_16, SpongeBob\_9, Squint\_23, Stank\_17, Stark\_16, StellaBean\_16, StolenFromERC\_17, Superphikiman\_24, TBrady12\_17, Tapioca\_9, Tarkin\_17, TeardropMSU\_15, Teaspoon\_15, TelAviv\_40, Terminus\_15, Thibault\_22, ThreeRngTarjay\_25, Thresher\_16, Tomaszewski\_15, Toto\_16, Traaww1\_14, Tuco\_16, Ukulele\_15, Vorrrps\_42, Wanda\_27, Wiggin\_17, Wildflower\_43, Willez\_15, Winget\_44, Xandras\_17, Xeno\_9, Xerxes\_9, YassJohnny\_16, Yeet\_24, Youngblood\_15, YungJamal\_46, Zakhe101\_43, Zelink\_27, xkcd\_16,

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

- Hannaconda\_21,

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

- Babsiella\_10, Brujita\_10, Che9c\_9, Cornie\_9, HC\_10, Island3\_10, MooMoo\_8, QueenHazel\_10, Sbash\_9, Xula\_9,

### Summary by start number:

Start 8:

- Found in 1 of 254 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 236
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cornie\_9 (F5),

Start 9:

- Found in 9 of 254 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 8 of 236
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Babsiella\_10 (I1), Brujita\_10 (I1), Che9c\_9 (I2), HC\_10 (I1), Island3\_10 (I1), QueenHazel\_10 (I1), Sbash\_9 (I2), Xula\_9 (I1),

Start 10:

- Found in 244 of 254 ( 96.1% ) of genes in pham
- Manual Annotations of this start: 225 of 236
- Called 99.6% of time when present
- Phage (with cluster) where this start called: 244\_16 (E), ABCat\_15 (E), Adnama\_17 (E), Aggie\_9 (N), Alkhayr\_41 (O), Amao\_16 (E), AmericanBeauty\_17 (E), Andies\_9 (N), Argent26\_17 (E), Ariel\_24 (J), Ashwin\_44 (O), Asriel\_15 (E), BAKA\_23 (J), BabeRuth\_9 (N), BaboJay\_15 (E), BadStone\_15 (E), Bagrid\_24 (J), Balomoji\_15 (E), Barbarian\_15 (E), Bask21\_15 (E), Beem\_26 (J), Bench\_17 (E), BigBubba\_15 (E), BilboSwaggins\_16 (E), Blessica\_44 (O), Bobby\_27 (J), Bombitas\_23 (J), Bora\_40 (O), Bosection6\_9 (N), Bruin\_15 (E), Buck\_15 (E), BugsBunny\_13 (E), Butters\_9 (N),

Cactus\_17 (E), Carcharodon\_9 (N), Catdawg\_43 (O), Charlie\_9 (N), Chewbacca\_9 (N), ChosenOne\_14 (E), ChotaBhai\_15 (E), Cjw1\_15 (E), Command613\_17 (E), Constella\_21 (J), Contagion\_15 (E), Cookies\_16 (E), Corndog\_45 (O), Courthouse\_24 (J), CrystalP\_16 (E), Czyszczonek\_16 (E), Daikon\_14 (E), Dallas\_26 (J), DmpstrDiver\_25 (J), DoctorDiddles\_16 (E), Dove\_25 (J), DrDrey\_16 (E), Duke13\_23 (J), Dumbo\_15 (E), Duplicity\_9 (N), Dusk\_15 (E), Dylan\_42 (O), Easy2Say\_16 (E), Ejimix\_27 (J), Elite2014\_14 (E), Elph10\_16 (E), Emmina\_15 (E), EricMillard\_26 (J), Eureka\_16 (E), Familton\_44 (O), Filch\_16 (E), FireRed\_15 (E), Firecracker\_43 (O), Flypotenuse\_14 (E), FoulBall\_40 (O), Fulbright\_9 (N), Gage\_17 (E), Gator\_14 (E), Gemini\_17 (E), Gex\_9 (N), Glexan\_14 (E), Goku\_16 (E), GoldenSpark\_17 (E), Goldilocks\_17 (E), Gonephishing\_22 (J), GooberAzure\_17 (E), Halley\_26 (J), HankKaySha\_16 (E), Harella\_14 (E), Henry\_16 (E), Highbury\_16 (E), HokkenD\_21 (J), Holt\_17 (E), Hoonter\_17 (E), Hopey\_16 (E), HuffyPuff\_14 (E), Hughesyang\_25 (J), IHOP\_15 (E), Icee\_15 (E), Idergollasper\_43 (O), Inca\_15 (E), Jamie19\_9 (N), JangDynasty\_43 (O), JeTaimie\_17 (E), Journey\_9 (N), JuicyJay\_28 (J), Kalah2\_27 (J), Kanye\_17 (E), KashFlow\_18 (J), Kevin1\_9 (N), Kimchi\_17 (E), Klein\_26 (J), Kostya\_16 (E), Krili\_42 (O), Lilac\_17 (E), Lilizi\_17 (E), Lilpickle\_14 (E), LittleE\_24 (J), Lucky2013\_24 (J), MISSy\_15 (E), MPhalcon\_15 (E), MadKillah\_44 (O), MadamMonkfish\_15 (E), Magsby\_9 (N), Manda\_16 (E), Marshmallow\_16 (E), Maxxinista\_16 (E), Melville\_9 (N), MiaZeal\_24 (J), MichelleMyBell\_9 (N), Mindy\_16 (E), Minerva\_26 (J), Miniwave\_16 (E), Misfit\_15 (E), Moldemort\_16 (E), Mori\_42 (O), Mosby\_15 (E), Murai\_43 (O), Murica\_14 (E), Murphy\_15 (E), Myrale\_16 (E), Nala\_15 (E), NelitzaMV\_16 (E), Nenae\_9 (N), NiebruSaylor\_42 (O), NihilNomen\_25 (J), Nimrod\_15 (E), NoSleep\_16 (E), Odette\_25 (J), Omega\_26 (J), Optimus\_24 (J), OrionPax\_16 (E), Palpatine\_15 (E), Panchino\_9 (N), Paperbeatsrock\_17 (E), Parmesanjohn\_9 (N), Pat3\_15 (E), Petra64142\_16 (E), Phaja\_15 (E), PhancyPhin\_9 (N), Pharsalus\_16 (E), PhatBacter\_15 (E), Phaux\_14 (E), Philonius\_9 (N), Phloss\_9 (N), Phoebus\_26 (J), Phrann\_9 (N), Phrux\_15 (E), Pipsqueaks\_9 (N), Policronamos\_15 (E), Porcelain\_24 (J), Porky\_14 (E), Pound\_26 (J), Pumpkin\_16 (E), Purgamenstris\_9 (N), Quallification\_17 (E), Rakim\_17 (E), Raymond7\_9 (N), Rebel\_9 (N), Redi\_9 (N), Redno2\_25 (J), Rimmer\_15 (E), RiverMonster\_15 (E), Rubeelu\_9 (N), Ryadel\_47 (O), Saints25\_16 (E), Sassay\_15 (E), Schatzie\_24 (J), Schnauzer\_9 (N), SchoolBus\_43 (O), Schuy\_44 (O), Scitech\_9 (N), ShamWow\_16 (E), ShereKhan\_17 (E), Shida\_43 (O), ShrimpFriedEgg\_9 (N), Shweta\_9 (N), Silvafighter\_9 (N), Silvy\_9 (N), Simpliphy\_16 (E), SirDuracell\_15 (E), SkinnyPete\_9 (N), Smooch\_45 (O), Smurph\_9 (N), Snekmaggon\_9 (N), SophKB\_16 (E), Sotrice96\_16 (E), SpongeBob\_9 (N), Squint\_23 (J), Stank\_17 (E), Stark\_16 (E), StellaBean\_16 (E), StolenFromERC\_17 (E), Superphikiman\_24 (J), TBrady12\_17 (E), Tapioca\_9 (N), Tarkin\_17 (E), TeardropMSU\_15 (E), Teaspoon\_15 (E), TelAviv\_40 (O), Terminus\_15 (E), Thibault\_22 (J), ThreeRngTarjay\_25 (J), Thresher\_16 (E), Tomaszewski\_15 (E), Toto\_16 (E), Traaww1\_14 (E), Tuco\_16 (E), Ukulele\_15 (E), Vorrps\_42 (O), Wanda\_27 (J), Wiggin\_17 (E), Wildflower\_43 (O), Willez\_15 (E), Winget\_44 (O), Xandras\_17 (E), Xeno\_9 (N), Xerxes\_9 (N), YassJohnny\_16 (E), Yeet\_24 (J), Youngblood\_15 (E), YungJamal\_46 (O), Zakhe101\_43 (O), Zelink\_27 (J), xkcd\_16 (E),

Start 11:

- Found in 1 of 254 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 236
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MooMoo\_8 (singleton),

Start 15:

- Found in 124 of 254 ( 48.8% ) of genes in pham
- Manual Annotations of this start: 1 of 236
- Called 0.8% of time when present
- Phage (with cluster) where this start called: Hannaconda\_21 (J),

### **Summary by clusters:**

There are 8 clusters represented in this pham: singleton, I2, E, F5, I1, J, O, N,

Info for manual annotations of cluster E:

- Start number 10 was manually annotated 122 times for cluster E.

Info for manual annotations of cluster F5:

- Start number 8 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster I1:

- Start number 9 was manually annotated 6 times for cluster I1.

Info for manual annotations of cluster I2:

- Start number 9 was manually annotated 2 times for cluster I2.

Info for manual annotations of cluster J:

- Start number 10 was manually annotated 38 times for cluster J.
- Start number 15 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster N:

- Start number 10 was manually annotated 39 times for cluster N.

Info for manual annotations of cluster O:

- Start number 10 was manually annotated 26 times for cluster O.

### **Gene Information:**

Gene: 244\_16 Start: 9482, Stop: 9817, Start Num: 10

Candidate Starts for 244\_16:

(Start: 10 @9482 has 225 MA's), (17, 9563), (28, 9677), (34, 9728), (35, 9740), (41, 9791),

Gene: ABCat\_15 Start: 10257, Stop: 10592, Start Num: 10

Candidate Starts for ABCat\_15:

(Start: 10 @10257 has 225 MA's), (17, 10338), (20, 10359), (28, 10452), (35, 10515), (41, 10566),

Gene: Adnama\_17 Start: 9714, Stop: 10049, Start Num: 10

Candidate Starts for Adnama\_17:

(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: Aggie\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Aggie\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Alkhayr\_41 Start: 22248, Stop: 22607, Start Num: 10

Candidate Starts for Alkhayr\_41:

(Start: 10 @22248 has 225 MA's), (Start: 15 @22278 has 1 MA's), (18, 22329), (19, 22341), (24, 22407), (34, 22515), (36, 22539),

Gene: Amao\_16 Start: 9462, Stop: 9797, Start Num: 10

Candidate Starts for Amao\_16:

(Start: 10 @9462 has 225 MA's), (17, 9543), (20, 9564), (28, 9657), (35, 9720), (41, 9771),

Gene: AmericanBeauty\_17 Start: 9711, Stop: 10046, Start Num: 10

Candidate Starts for AmericanBeauty\_17:

(Start: 10 @9711 has 225 MA's), (17, 9792), (28, 9906), (34, 9957), (35, 9969), (41, 10020),

Gene: Andies\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Andies\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Argent26\_17 Start: 9714, Stop: 10049, Start Num: 10

Candidate Starts for Argent26\_17:

(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: Ariel\_24 Start: 14093, Stop: 14437, Start Num: 10

Candidate Starts for Ariel\_24:

(Start: 10 @14093 has 225 MA's), (Start: 15 @14123 has 1 MA's), (19, 14189), (30, 14300), (31, 14303), (32, 14327), (40, 14405), (43, 14432),

Gene: Ashwin\_44 Start: 22246, Stop: 22605, Start Num: 10

Candidate Starts for Ashwin\_44:

(Start: 10 @22246 has 225 MA's), (Start: 15 @22276 has 1 MA's), (18, 22327), (19, 22339), (24, 22405), (34, 22513), (36, 22537),

Gene: Asriel\_15 Start: 9129, Stop: 9464, Start Num: 10

Candidate Starts for Asriel\_15:

(Start: 10 @9129 has 225 MA's), (17, 9210), (20, 9231), (28, 9324), (35, 9387), (41, 9438),

Gene: BAKA\_23 Start: 16200, Stop: 16544, Start Num: 10

Candidate Starts for BAKA\_23:

(Start: 10 @16200 has 225 MA's), (Start: 15 @16230 has 1 MA's), (22, 16344), (30, 16407), (31, 16410),

Gene: BabeRuth\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for BabeRuth\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: BaboJay\_15 Start: 9793, Stop: 10128, Start Num: 10

Candidate Starts for BaboJay\_15:

(Start: 10 @9793 has 225 MA's), (17, 9874), (28, 9988), (34, 10039), (35, 10051), (41, 10102),

Gene: Babsiella\_10 Start: 7526, Stop: 7921, Start Num: 9

Candidate Starts for Babsiella\_10:

(1, 7277), (5, 7454), (Start: 9 @7526 has 8 MA's), (Start: 15 @7562 has 1 MA's), (19, 7625), (20, 7631), (24, 7691), (30, 7736), (37, 7853), (39, 7880), (40, 7889), (42, 7898),

Gene: BadStone\_15 Start: 10257, Stop: 10592, Start Num: 10  
Candidate Starts for BadStone\_15:  
(Start: 10 @10257 has 225 MA's), (17, 10338), (20, 10359), (28, 10452), (35, 10515), (41, 10566),

Gene: Bagrid\_24 Start: 15989, Stop: 16333, Start Num: 10  
Candidate Starts for Bagrid\_24:  
(Start: 10 @15989 has 225 MA's), (Start: 15 @16019 has 1 MA's), (22, 16133), (30, 16196), (31, 16199),

Gene: Balomoji\_15 Start: 9991, Stop: 10326, Start Num: 10  
Candidate Starts for Balomoji\_15:  
(Start: 10 @9991 has 225 MA's), (17, 10072), (20, 10093), (28, 10186), (35, 10249), (41, 10300),

Gene: Barbarian\_15 Start: 9129, Stop: 9464, Start Num: 10  
Candidate Starts for Barbarian\_15:  
(Start: 10 @9129 has 225 MA's), (17, 9210), (20, 9231), (28, 9324), (35, 9387), (41, 9438),

Gene: Bask21\_15 Start: 8924, Stop: 9259, Start Num: 10  
Candidate Starts for Bask21\_15:  
(Start: 10 @8924 has 225 MA's), (17, 9005), (20, 9026), (28, 9119), (35, 9182), (41, 9233),

Gene: Beem\_26 Start: 16555, Stop: 16899, Start Num: 10  
Candidate Starts for Beem\_26:  
(Start: 10 @16555 has 225 MA's), (Start: 15 @16585 has 1 MA's), (22, 16699), (30, 16762), (31, 16765),

Gene: Bench\_17 Start: 9587, Stop: 9922, Start Num: 10  
Candidate Starts for Bench\_17:  
(Start: 10 @9587 has 225 MA's), (17, 9668), (28, 9782), (34, 9833), (35, 9845), (41, 9896),

Gene: BigBubba\_15 Start: 8970, Stop: 9305, Start Num: 10  
Candidate Starts for BigBubba\_15:  
(Start: 10 @8970 has 225 MA's), (17, 9051), (28, 9165), (34, 9216), (35, 9228), (41, 9279),

Gene: BilboSwaggins\_16 Start: 10258, Stop: 10593, Start Num: 10  
Candidate Starts for BilboSwaggins\_16:  
(Start: 10 @10258 has 225 MA's), (17, 10339), (20, 10360), (28, 10453), (35, 10516), (41, 10567),

Gene: Blessica\_44 Start: 22649, Stop: 23008, Start Num: 10  
Candidate Starts for Blessica\_44:  
(Start: 10 @22649 has 225 MA's), (Start: 15 @22679 has 1 MA's), (18, 22730), (19, 22742), (24, 22808), (34, 22916), (36, 22940),

Gene: Bobby\_27 Start: 16508, Stop: 16852, Start Num: 10  
Candidate Starts for Bobby\_27:  
(Start: 10 @16508 has 225 MA's), (Start: 15 @16538 has 1 MA's), (22, 16652), (30, 16715), (31, 16718),

Gene: Bombitas\_23 Start: 15865, Stop: 16209, Start Num: 10  
Candidate Starts for Bombitas\_23:  
(4, 15799), (Start: 10 @15865 has 225 MA's), (Start: 15 @15895 has 1 MA's), (22, 16009), (30, 16072), (31, 16075),



Gene: Bora\_40 Start: 21699, Stop: 22058, Start Num: 10

Candidate Starts for Bora\_40:

(Start: 10 @21699 has 225 MA's), (Start: 15 @21729 has 1 MA's), (18, 21780), (19, 21792), (24, 21858), (34, 21966), (36, 21990),

Gene: Bosection6\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Bosection6\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Bruin\_15 Start: 9765, Stop: 10100, Start Num: 10

Candidate Starts for Bruin\_15:

(Start: 10 @9765 has 225 MA's), (17, 9846), (20, 9867), (28, 9960), (35, 10023), (41, 10074),

Gene: Brujita\_10 Start: 7530, Stop: 7922, Start Num: 9

Candidate Starts for Brujita\_10:

(5, 7458), (Start: 9 @7530 has 8 MA's), (Start: 15 @7566 has 1 MA's), (19, 7629), (20, 7635), (24, 7695), (30, 7740), (37, 7857), (39, 7881), (40, 7890), (42, 7899),

Gene: Buck\_15 Start: 10214, Stop: 10549, Start Num: 10

Candidate Starts for Buck\_15:

(Start: 10 @10214 has 225 MA's), (17, 10295), (20, 10316), (28, 10409), (35, 10472), (41, 10523),

Gene: BugsBunny\_13 Start: 9331, Stop: 9666, Start Num: 10

Candidate Starts for BugsBunny\_13:

(Start: 10 @9331 has 225 MA's), (17, 9412), (20, 9433), (28, 9526), (35, 9589), (41, 9640),

Gene: Butters\_9 Start: 6458, Stop: 6799, Start Num: 10

Candidate Starts for Butters\_9:

(Start: 10 @6458 has 225 MA's), (Start: 15 @6488 has 1 MA's), (23, 6611), (30, 6662), (38, 6746), (40, 6767),

Gene: Cactus\_17 Start: 9470, Stop: 9805, Start Num: 10

Candidate Starts for Cactus\_17:

(Start: 10 @9470 has 225 MA's), (17, 9551), (20, 9572), (28, 9665), (35, 9728), (41, 9779),

Gene: Carcharodon\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Carcharodon\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Catdawg\_43 Start: 22338, Stop: 22697, Start Num: 10

Candidate Starts for Catdawg\_43:

(Start: 10 @22338 has 225 MA's), (Start: 15 @22368 has 1 MA's), (18, 22419), (19, 22431), (24, 22497), (34, 22605), (36, 22629),

Gene: Charlie\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Charlie\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Che9c\_9 Start: 7131, Stop: 7526, Start Num: 9

Candidate Starts for Che9c\_9:

(5, 7056), (Start: 9 @7131 has 8 MA's), (13, 7158), (14, 7164), (Start: 15 @7167 has 1 MA's), (21, 7245), (24, 7296), (30, 7341), (32, 7368), (37, 7458), (39, 7485), (40, 7494), (42, 7503),

Gene: Chewbacca\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Chewbacca\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: ChosenOne\_14 Start: 8934, Stop: 9269, Start Num: 10

Candidate Starts for ChosenOne\_14:

(Start: 10 @8934 has 225 MA's), (17, 9015), (28, 9129), (34, 9180), (35, 9192), (41, 9243),

Gene: ChotaBhai\_15 Start: 8970, Stop: 9305, Start Num: 10

Candidate Starts for ChotaBhai\_15:

(Start: 10 @8970 has 225 MA's), (17, 9051), (28, 9165), (34, 9216), (35, 9228), (41, 9279),

Gene: Cjw1\_15 Start: 10484, Stop: 10819, Start Num: 10

Candidate Starts for Cjw1\_15:

(Start: 10 @10484 has 225 MA's), (17, 10565), (28, 10679), (34, 10730), (35, 10742), (41, 10793),

Gene: Command613\_17 Start: 10526, Stop: 10861, Start Num: 10

Candidate Starts for Command613\_17:

(Start: 10 @10526 has 225 MA's), (17, 10607), (20, 10628), (28, 10721), (35, 10784), (41, 10835),

Gene: Constella\_21 Start: 15378, Stop: 15722, Start Num: 10

Candidate Starts for Constella\_21:

(Start: 10 @15378 has 225 MA's), (Start: 15 @15408 has 1 MA's), (22, 15522), (30, 15585), (31, 15588),

Gene: Contagion\_15 Start: 9765, Stop: 10100, Start Num: 10

Candidate Starts for Contagion\_15:

(Start: 10 @9765 has 225 MA's), (17, 9846), (20, 9867), (28, 9960), (35, 10023), (41, 10074),

Gene: Cookies\_16 Start: 10130, Stop: 10465, Start Num: 10

Candidate Starts for Cookies\_16:

(Start: 10 @10130 has 225 MA's), (17, 10211), (20, 10232), (28, 10325), (35, 10388), (41, 10439),

Gene: Corndog\_45 Start: 22796, Stop: 23155, Start Num: 10

Candidate Starts for Corndog\_45:

(Start: 10 @22796 has 225 MA's), (Start: 15 @22826 has 1 MA's), (18, 22877), (19, 22889), (24, 22955), (34, 23063), (36, 23087),

Gene: Cornie\_9 Start: 6660, Stop: 7010, Start Num: 8

Candidate Starts for Cornie\_9:

(6, 6645), (7, 6657), (Start: 8 @6660 has 1 MA's), (Start: 9 @6666 has 8 MA's), (Start: 15 @6702 has 1 MA's), (16, 6741), (23, 6822), (24, 6828), (28, 6864), (33, 6906), (41, 6984),

Gene: Courthouse\_24 Start: 14495, Stop: 14839, Start Num: 10

Candidate Starts for Courthouse\_24:

(Start: 10 @14495 has 225 MA's), (Start: 15 @14525 has 1 MA's), (19, 14591), (30, 14702), (31, 14705), (32, 14729), (40, 14807), (43, 14834),

Gene: CrystalP\_16 Start: 10258, Stop: 10593, Start Num: 10  
Candidate Starts for CrystalP\_16:  
(Start: 10 @10258 has 225 MA's), (17, 10339), (20, 10360), (28, 10453), (35, 10516), (41, 10567),

Gene: Czyszczone1\_16 Start: 9469, Stop: 9804, Start Num: 10  
Candidate Starts for Czyszczone1\_16:  
(Start: 10 @9469 has 225 MA's), (17, 9550), (28, 9664), (34, 9715), (35, 9727), (41, 9778),

Gene: Daikon\_14 Start: 9992, Stop: 10327, Start Num: 10  
Candidate Starts for Daikon\_14:  
(Start: 10 @9992 has 225 MA's), (17, 10073), (20, 10094), (28, 10187), (35, 10250), (41, 10301),

Gene: Dallas\_26 Start: 16095, Stop: 16439, Start Num: 10  
Candidate Starts for Dallas\_26:  
(Start: 10 @16095 has 225 MA's), (Start: 15 @16125 has 1 MA's), (22, 16239), (30, 16302), (31, 16305),

Gene: DmpstrDiver\_25 Start: 16731, Stop: 17075, Start Num: 10  
Candidate Starts for DmpstrDiver\_25:  
(Start: 10 @16731 has 225 MA's), (Start: 15 @16761 has 1 MA's), (22, 16875), (30, 16938), (31, 16941),

Gene: DoctorDiddles\_16 Start: 9423, Stop: 9758, Start Num: 10  
Candidate Starts for DoctorDiddles\_16:  
(Start: 10 @9423 has 225 MA's), (17, 9504), (20, 9525), (28, 9618), (35, 9681), (41, 9732),

Gene: Dove\_25 Start: 15864, Stop: 16208, Start Num: 10  
Candidate Starts for Dove\_25:  
(4, 15798), (Start: 10 @15864 has 225 MA's), (Start: 15 @15894 has 1 MA's), (22, 16008), (30, 16071), (31, 16074),

Gene: DrDrey\_16 Start: 10210, Stop: 10545, Start Num: 10  
Candidate Starts for DrDrey\_16:  
(Start: 10 @10210 has 225 MA's), (17, 10291), (28, 10405), (34, 10456), (35, 10468), (41, 10519),

Gene: Duke13\_23 Start: 16129, Stop: 16473, Start Num: 10  
Candidate Starts for Duke13\_23:  
(Start: 10 @16129 has 225 MA's), (Start: 15 @16159 has 1 MA's), (22, 16273), (30, 16336), (31, 16339),

Gene: Dumbo\_15 Start: 9191, Stop: 9526, Start Num: 10  
Candidate Starts for Dumbo\_15:  
(Start: 10 @9191 has 225 MA's), (17, 9272), (28, 9386), (34, 9437), (35, 9449), (41, 9500),

Gene: Duplicity\_9 Start: 6438, Stop: 6782, Start Num: 10  
Candidate Starts for Duplicity\_9:  
(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Dusk\_15 Start: 9917, Stop: 10252, Start Num: 10  
Candidate Starts for Dusk\_15:  
(Start: 10 @9917 has 225 MA's), (17, 9998), (20, 10019), (28, 10112), (35, 10175), (41, 10226),

Gene: Dylan\_42 Start: 22051, Stop: 22410, Start Num: 10

Candidate Starts for Dylan\_42:

(Start: 10 @22051 has 225 MA's), (Start: 15 @22081 has 1 MA's), (18, 22132), (19, 22144), (24, 22210), (34, 22318), (36, 22342),

Gene: Easy2Say\_16 Start: 10457, Stop: 10792, Start Num: 10

Candidate Starts for Easy2Say\_16:

(Start: 10 @10457 has 225 MA's), (17, 10538), (28, 10652), (34, 10703), (35, 10715), (41, 10766),

Gene: Ejimix\_27 Start: 17305, Stop: 17649, Start Num: 10

Candidate Starts for Ejimix\_27:

(Start: 10 @17305 has 225 MA's), (Start: 15 @17335 has 1 MA's), (22, 17449), (30, 17512), (31, 17515),

Gene: Elite2014\_14 Start: 8934, Stop: 9269, Start Num: 10

Candidate Starts for Elite2014\_14:

(Start: 10 @8934 has 225 MA's), (17, 9015), (28, 9129), (34, 9180), (35, 9192), (41, 9243),

Gene: Elph10\_16 Start: 9194, Stop: 9529, Start Num: 10

Candidate Starts for Elph10\_16:

(Start: 10 @9194 has 225 MA's), (17, 9275), (28, 9389), (34, 9440), (35, 9452), (41, 9503),

Gene: Emmina\_15 Start: 9039, Stop: 9374, Start Num: 10

Candidate Starts for Emmina\_15:

(Start: 10 @9039 has 225 MA's), (17, 9120), (28, 9234), (34, 9285), (35, 9297), (41, 9348),

Gene: EricMillard\_26 Start: 16841, Stop: 17185, Start Num: 10

Candidate Starts for EricMillard\_26:

(Start: 10 @16841 has 225 MA's), (Start: 15 @16871 has 1 MA's), (22, 16985), (30, 17048), (31, 17051),

Gene: Eureka\_16 Start: 10237, Stop: 10572, Start Num: 10

Candidate Starts for Eureka\_16:

(Start: 10 @10237 has 225 MA's), (17, 10318), (27, 10423), (28, 10432), (35, 10495), (41, 10546),

Gene: Familton\_44 Start: 22342, Stop: 22701, Start Num: 10

Candidate Starts for Familton\_44:

(Start: 10 @22342 has 225 MA's), (Start: 15 @22372 has 1 MA's), (18, 22423), (19, 22435), (24, 22501), (34, 22609), (36, 22633),

Gene: Filch\_16 Start: 9479, Stop: 9814, Start Num: 10

Candidate Starts for Filch\_16:

(Start: 10 @9479 has 225 MA's), (17, 9560), (28, 9674), (34, 9725), (35, 9737), (41, 9788),

Gene: FireRed\_15 Start: 9767, Stop: 10102, Start Num: 10

Candidate Starts for FireRed\_15:

(Start: 10 @9767 has 225 MA's), (17, 9848), (28, 9962), (34, 10013), (35, 10025), (41, 10076),

Gene: Firecracker\_43 Start: 21949, Stop: 22308, Start Num: 10

Candidate Starts for Firecracker\_43:

(Start: 10 @21949 has 225 MA's), (Start: 15 @21979 has 1 MA's), (18, 22030), (19, 22042), (24, 22108), (34, 22216), (36, 22240),

Gene: Flypotenuse\_14 Start: 9874, Stop: 10209, Start Num: 10  
Candidate Starts for Flypotenuse\_14:  
(Start: 10 @9874 has 225 MA's), (17, 9955), (20, 9976), (28, 10069), (35, 10132), (41, 10183),

Gene: FoulBall\_40 Start: 22336, Stop: 22695, Start Num: 10  
Candidate Starts for FoulBall\_40:  
(Start: 10 @22336 has 225 MA's), (Start: 15 @22366 has 1 MA's), (18, 22417), (19, 22429), (24, 22495), (34, 22603), (36, 22627),

Gene: Fulbright\_9 Start: 6438, Stop: 6782, Start Num: 10  
Candidate Starts for Fulbright\_9:  
(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Gage\_17 Start: 9714, Stop: 10049, Start Num: 10  
Candidate Starts for Gage\_17:  
(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: Gator\_14 Start: 9873, Stop: 10208, Start Num: 10  
Candidate Starts for Gator\_14:  
(Start: 10 @9873 has 225 MA's), (17, 9954), (20, 9975), (28, 10068), (35, 10131), (41, 10182),

Gene: Gemini\_17 Start: 9714, Stop: 10049, Start Num: 10  
Candidate Starts for Gemini\_17:  
(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: Gex\_9 Start: 6438, Stop: 6782, Start Num: 10  
Candidate Starts for Gex\_9:  
(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Glexan\_14 Start: 9874, Stop: 10209, Start Num: 10  
Candidate Starts for Glexan\_14:  
(Start: 10 @9874 has 225 MA's), (17, 9955), (20, 9976), (28, 10069), (35, 10132), (41, 10183),

Gene: Goku\_16 Start: 9966, Stop: 10301, Start Num: 10  
Candidate Starts for Goku\_16:  
(Start: 10 @9966 has 225 MA's), (17, 10047), (28, 10161), (34, 10212), (35, 10224), (41, 10275),

Gene: GoldenSpark\_17 Start: 9714, Stop: 10049, Start Num: 10  
Candidate Starts for GoldenSpark\_17:  
(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: Goldilocks\_17 Start: 9668, Stop: 10003, Start Num: 10  
Candidate Starts for Goldilocks\_17:  
(Start: 10 @9668 has 225 MA's), (17, 9749), (20, 9770), (28, 9863), (35, 9926), (41, 9977),

Gene: Gonephishing\_22 Start: 14668, Stop: 15012, Start Num: 10  
Candidate Starts for Gonephishing\_22:  
(Start: 10 @14668 has 225 MA's), (Start: 15 @14698 has 1 MA's), (19, 14764), (30, 14875), (31, 14878), (32, 14902), (40, 14980), (43, 15007),

Gene: GooberAzure\_17 Start: 9714, Stop: 10049, Start Num: 10

Candidate Starts for GooberAzure\_17:

(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: HC\_10 Start: 7529, Stop: 7921, Start Num: 9

Candidate Starts for HC\_10:

(1, 7280), (5, 7457), (Start: 9 @7529 has 8 MA's), (Start: 15 @7565 has 1 MA's), (19, 7628), (20, 7634), (24, 7694), (30, 7739), (37, 7856), (39, 7880), (40, 7889), (42, 7898),

Gene: Halley\_26 Start: 16554, Stop: 16898, Start Num: 10

Candidate Starts for Halley\_26:

(Start: 10 @16554 has 225 MA's), (Start: 15 @16584 has 1 MA's), (22, 16698), (30, 16761), (31, 16764),

Gene: HanKaySha\_16 Start: 9469, Stop: 9804, Start Num: 10

Candidate Starts for HanKaySha\_16:

(Start: 10 @9469 has 225 MA's), (17, 9550), (28, 9664), (34, 9715), (35, 9727), (41, 9778),

Gene: Hannaconda\_21 Start: 13205, Stop: 13519, Start Num: 15

Candidate Starts for Hannaconda\_21:

(Start: 10 @13175 has 225 MA's), (Start: 15 @13205 has 1 MA's), (19, 13271), (30, 13382), (31, 13385), (32, 13409), (40, 13487), (43, 13514),

Gene: Harella\_14 Start: 9874, Stop: 10209, Start Num: 10

Candidate Starts for Harella\_14:

(Start: 10 @9874 has 225 MA's), (17, 9955), (20, 9976), (28, 10069), (35, 10132), (41, 10183),

Gene: Henry\_16 Start: 10257, Stop: 10592, Start Num: 10

Candidate Starts for Henry\_16:

(Start: 10 @10257 has 225 MA's), (17, 10338), (20, 10359), (28, 10452), (35, 10515), (41, 10566),

Gene: Highbury\_16 Start: 9388, Stop: 9723, Start Num: 10

Candidate Starts for Highbury\_16:

(Start: 10 @9388 has 225 MA's), (17, 9469), (28, 9583), (34, 9634), (35, 9646), (41, 9697),

Gene: HokkenD\_21 Start: 16124, Stop: 16468, Start Num: 10

Candidate Starts for HokkenD\_21:

(Start: 10 @16124 has 225 MA's), (Start: 15 @16154 has 1 MA's), (22, 16268), (30, 16331), (31, 16334),

Gene: Holt\_17 Start: 9541, Stop: 9876, Start Num: 10

Candidate Starts for Holt\_17:

(Start: 10 @9541 has 225 MA's), (17, 9622), (20, 9643), (28, 9736), (35, 9799), (41, 9850),

Gene: Hoonter\_17 Start: 9714, Stop: 10049, Start Num: 10

Candidate Starts for Hoonter\_17:

(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: Hokey\_16 Start: 9479, Stop: 9814, Start Num: 10

Candidate Starts for Hokey\_16:

(Start: 10 @9479 has 225 MA's), (17, 9560), (28, 9674), (34, 9725), (35, 9737), (41, 9788),

Gene: HuffyPuff\_14 Start: 9723, Stop: 10058, Start Num: 10

Candidate Starts for HuffyPuff\_14:

(Start: 10 @9723 has 225 MA's), (17, 9804), (28, 9918), (34, 9969), (35, 9981), (41, 10032),

Gene: Hughesyang\_25 Start: 16737, Stop: 17081, Start Num: 10

Candidate Starts for Hughesyang\_25:

(4, 16671), (Start: 10 @16737 has 225 MA's), (Start: 15 @16767 has 1 MA's), (22, 16881), (30, 16944), (31, 16947),

Gene: IHOP\_15 Start: 9917, Stop: 10252, Start Num: 10

Candidate Starts for IHOP\_15:

(Start: 10 @9917 has 225 MA's), (17, 9998), (20, 10019), (28, 10112), (35, 10175), (41, 10226),

Gene: Icee\_15 Start: 9917, Stop: 10252, Start Num: 10

Candidate Starts for Icee\_15:

(Start: 10 @9917 has 225 MA's), (17, 9998), (20, 10019), (28, 10112), (35, 10175), (41, 10226),

Gene: Idergollasper\_43 Start: 22336, Stop: 22695, Start Num: 10

Candidate Starts for Idergollasper\_43:

(Start: 10 @22336 has 225 MA's), (Start: 15 @22366 has 1 MA's), (18, 22417), (19, 22429), (24, 22495), (34, 22603), (36, 22627),

Gene: Inca\_15 Start: 8937, Stop: 9272, Start Num: 10

Candidate Starts for Inca\_15:

(Start: 10 @8937 has 225 MA's), (17, 9018), (20, 9039), (28, 9132), (35, 9195), (41, 9246),

Gene: Island3\_10 Start: 7530, Stop: 7922, Start Num: 9

Candidate Starts for Island3\_10:

(5, 7458), (Start: 9 @7530 has 8 MA's), (Start: 15 @7566 has 1 MA's), (19, 7629), (20, 7635), (24, 7695), (30, 7740), (37, 7857), (39, 7881), (40, 7890), (42, 7899),

Gene: Jamie19\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for Jamie19\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: JangDynasty\_43 Start: 22431, Stop: 22790, Start Num: 10

Candidate Starts for JangDynasty\_43:

(Start: 10 @22431 has 225 MA's), (Start: 15 @22461 has 1 MA's), (18, 22512), (19, 22524), (24, 22590), (34, 22698), (36, 22722),

Gene: JeTaime\_17 Start: 10519, Stop: 10854, Start Num: 10

Candidate Starts for JeTaime\_17:

(Start: 10 @10519 has 225 MA's), (17, 10600), (28, 10714), (34, 10765), (35, 10777), (41, 10828),

Gene: Journey\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Journey\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: JuicyJay\_28 Start: 17388, Stop: 17732, Start Num: 10

Candidate Starts for JuicyJay\_28:

(Start: 10 @17388 has 225 MA's), (Start: 15 @17418 has 1 MA's), (22, 17532), (30, 17595), (31, 17598),

Gene: Kalah2\_27 Start: 17156, Stop: 17500, Start Num: 10

Candidate Starts for Kalah2\_27:

(Start: 10 @17156 has 225 MA's), (Start: 15 @17186 has 1 MA's), (22, 17300), (30, 17363), (31, 17366),

Gene: Kanye\_17 Start: 10707, Stop: 11042, Start Num: 10

Candidate Starts for Kanye\_17:

(Start: 10 @10707 has 225 MA's), (17, 10788), (28, 10902), (34, 10953), (35, 10965), (41, 11016),

Gene: KashFlow\_18 Start: 12741, Stop: 13085, Start Num: 10

Candidate Starts for KashFlow\_18:

(Start: 10 @12741 has 225 MA's), (Start: 15 @12771 has 1 MA's), (19, 12837), (22, 12885), (30, 12948), (31, 12951), (32, 12975), (40, 13053), (43, 13080),

Gene: Kevin1\_9 Start: 6458, Stop: 6799, Start Num: 10

Candidate Starts for Kevin1\_9:

(Start: 10 @6458 has 225 MA's), (Start: 15 @6488 has 1 MA's), (23, 6611), (30, 6662), (38, 6746), (40, 6767),

Gene: Kimchi\_17 Start: 9714, Stop: 10049, Start Num: 10

Candidate Starts for Kimchi\_17:

(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: Klein\_26 Start: 16134, Stop: 16478, Start Num: 10

Candidate Starts for Klein\_26:

(Start: 10 @16134 has 225 MA's), (Start: 15 @16164 has 1 MA's), (22, 16278), (30, 16341), (31, 16344),

Gene: Kostya\_16 Start: 10257, Stop: 10592, Start Num: 10

Candidate Starts for Kostya\_16:

(Start: 10 @10257 has 225 MA's), (17, 10338), (20, 10359), (28, 10452), (35, 10515), (41, 10566),

Gene: Krili\_42 Start: 22053, Stop: 22412, Start Num: 10

Candidate Starts for Krili\_42:

(Start: 10 @22053 has 225 MA's), (Start: 15 @22083 has 1 MA's), (18, 22134), (19, 22146), (24, 22212), (34, 22320), (36, 22344),

Gene: Lilac\_17 Start: 9215, Stop: 9550, Start Num: 10

Candidate Starts for Lilac\_17:

(Start: 10 @9215 has 225 MA's), (17, 9296), (28, 9410), (34, 9461), (35, 9473), (41, 9524),

Gene: Lilizi\_17 Start: 9426, Stop: 9761, Start Num: 10

Candidate Starts for Lilizi\_17:

(Start: 10 @9426 has 225 MA's), (17, 9507), (28, 9621), (34, 9672), (35, 9684), (41, 9735),

Gene: Lilpickle\_14 Start: 8934, Stop: 9269, Start Num: 10

Candidate Starts for Lilpickle\_14:

(Start: 10 @8934 has 225 MA's), (17, 9015), (28, 9129), (34, 9180), (35, 9192), (41, 9243),

Gene: LittleE\_24 Start: 15880, Stop: 16224, Start Num: 10

Candidate Starts for LittleE\_24:

(Start: 10 @15880 has 225 MA's), (Start: 15 @15910 has 1 MA's), (19, 15976), (30, 16087), (31, 16090), (32, 16114), (40, 16192), (43, 16219),



Gene: Lucky2013\_24 Start: 14623, Stop: 14967, Start Num: 10

Candidate Starts for Lucky2013\_24:

(Start: 10 @14623 has 225 MA's), (Start: 15 @14653 has 1 MA's), (19, 14719), (22, 14767), (30, 14830), (31, 14833), (32, 14857), (40, 14935), (43, 14962),

Gene: MISSy\_15 Start: 9767, Stop: 10102, Start Num: 10

Candidate Starts for MISSy\_15:

(Start: 10 @9767 has 225 MA's), (17, 9848), (28, 9962), (34, 10013), (35, 10025), (41, 10076),

Gene: MPhalcon\_15 Start: 9767, Stop: 10102, Start Num: 10

Candidate Starts for MPhalcon\_15:

(Start: 10 @9767 has 225 MA's), (17, 9848), (28, 9962), (34, 10013), (35, 10025), (41, 10076),

Gene: MadKillah\_44 Start: 22275, Stop: 22634, Start Num: 10

Candidate Starts for MadKillah\_44:

(Start: 10 @22275 has 225 MA's), (Start: 15 @22305 has 1 MA's), (18, 22356), (19, 22368), (24, 22434), (34, 22542), (36, 22566),

Gene: MadamMonkfish\_15 Start: 9145, Stop: 9480, Start Num: 10

Candidate Starts for MadamMonkfish\_15:

(Start: 10 @9145 has 225 MA's), (17, 9226), (28, 9340), (34, 9391), (35, 9403),

Gene: Magsby\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Magsby\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Manda\_16 Start: 10227, Stop: 10562, Start Num: 10

Candidate Starts for Manda\_16:

(Start: 10 @10227 has 225 MA's), (17, 10308), (20, 10329), (28, 10422), (35, 10485), (41, 10536),

Gene: Marshmallow\_16 Start: 10257, Stop: 10592, Start Num: 10

Candidate Starts for Marshmallow\_16:

(Start: 10 @10257 has 225 MA's), (17, 10338), (20, 10359), (28, 10452), (35, 10515), (41, 10566),

Gene: Maxxinista\_16 Start: 9194, Stop: 9529, Start Num: 10

Candidate Starts for Maxxinista\_16:

(Start: 10 @9194 has 225 MA's), (17, 9275), (28, 9389), (34, 9440), (35, 9452), (41, 9503),

Gene: Melville\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Melville\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: MiaZeal\_24 Start: 14314, Stop: 14658, Start Num: 10

Candidate Starts for MiaZeal\_24:

(Start: 10 @14314 has 225 MA's), (Start: 15 @14344 has 1 MA's), (19, 14410), (30, 14521), (31, 14524), (32, 14548), (40, 14626), (43, 14653),

Gene: MichelleMyBell\_9 Start: 6478, Stop: 6819, Start Num: 10

Candidate Starts for MichelleMyBell\_9:

(Start: 10 @6478 has 225 MA's), (Start: 15 @6508 has 1 MA's), (23, 6631), (30, 6682), (38, 6766), (40, 6787),

Gene: Mindy\_16 Start: 10036, Stop: 10371, Start Num: 10

Candidate Starts for Mindy\_16:

(Start: 10 @10036 has 225 MA's), (17, 10117), (20, 10138), (28, 10231), (35, 10294), (41, 10345),

Gene: Minerva\_26 Start: 16619, Stop: 16963, Start Num: 10

Candidate Starts for Minerva\_26:

(Start: 10 @16619 has 225 MA's), (Start: 15 @16649 has 1 MA's), (22, 16763), (30, 16826), (31, 16829),

Gene: Miniwave\_16 Start: 10455, Stop: 10790, Start Num: 10

Candidate Starts for Miniwave\_16:

(Start: 10 @10455 has 225 MA's), (17, 10536), (20, 10557), (28, 10650), (35, 10713), (41, 10764),

Gene: Misfit\_15 Start: 9811, Stop: 10146, Start Num: 10

Candidate Starts for Misfit\_15:

(Start: 10 @9811 has 225 MA's), (17, 9892), (28, 10006), (34, 10057), (35, 10069), (41, 10120),

Gene: Moldemort\_16 Start: 9469, Stop: 9804, Start Num: 10

Candidate Starts for Moldemort\_16:

(Start: 10 @9469 has 225 MA's), (17, 9550), (28, 9664), (34, 9715), (35, 9727), (41, 9778),

Gene: MooMoo\_8 Start: 5816, Stop: 6202, Start Num: 11

Candidate Starts for MooMoo\_8:

(2, 5720), (Start: 11 @5816 has 1 MA's), (Start: 15 @5846 has 1 MA's), (19, 5909), (30, 6020), (41, 6176), (42, 6179),

Gene: Mori\_42 Start: 21924, Stop: 22283, Start Num: 10

Candidate Starts for Mori\_42:

(Start: 10 @21924 has 225 MA's), (Start: 15 @21954 has 1 MA's), (18, 22005), (19, 22017), (24, 22083), (34, 22191), (36, 22215),

Gene: Mosby\_15 Start: 9765, Stop: 10100, Start Num: 10

Candidate Starts for Mosby\_15:

(Start: 10 @9765 has 225 MA's), (17, 9846), (20, 9867), (28, 9960), (35, 10023), (41, 10074),

Gene: Murai\_43 Start: 22114, Stop: 22473, Start Num: 10

Candidate Starts for Murai\_43:

(Start: 10 @22114 has 225 MA's), (Start: 15 @22144 has 1 MA's), (18, 22195), (19, 22207), (24, 22273), (34, 22381), (36, 22405),

Gene: Murica\_14 Start: 9723, Stop: 10058, Start Num: 10

Candidate Starts for Murica\_14:

(Start: 10 @9723 has 225 MA's), (17, 9804), (28, 9918), (34, 9969), (35, 9981), (41, 10032),

Gene: Murphy\_15 Start: 9186, Stop: 9521, Start Num: 10

Candidate Starts for Murphy\_15:

(Start: 10 @9186 has 225 MA's), (17, 9267), (28, 9381), (34, 9432), (35, 9444), (41, 9495),

Gene: Myrale\_16 Start: 10128, Stop: 10463, Start Num: 10

Candidate Starts for Myrale\_16:

(Start: 10 @10128 has 225 MA's), (17, 10209), (20, 10230), (28, 10323), (35, 10386), (41, 10437),

Gene: Nala\_15 Start: 9765, Stop: 10100, Start Num: 10

Candidate Starts for Nala\_15:

(Start: 10 @9765 has 225 MA's), (17, 9846), (20, 9867), (28, 9960), (35, 10023), (41, 10074),

Gene: NelitzaMV\_16 Start: 10327, Stop: 10662, Start Num: 10

Candidate Starts for NelitzaMV\_16:

(Start: 10 @10327 has 225 MA's), (17, 10408), (20, 10429), (28, 10522), (35, 10585), (41, 10636),

Gene: Nenae\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for Nenae\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: NiebruSaylor\_42 Start: 21925, Stop: 22284, Start Num: 10

Candidate Starts for NiebruSaylor\_42:

(Start: 10 @21925 has 225 MA's), (Start: 15 @21955 has 1 MA's), (18, 22006), (19, 22018), (24, 22084), (34, 22192), (36, 22216),

Gene: NihilNomen\_25 Start: 16616, Stop: 16960, Start Num: 10

Candidate Starts for NihilNomen\_25:

(4, 16550), (Start: 10 @16616 has 225 MA's), (Start: 15 @16646 has 1 MA's), (22, 16760), (30, 16823), (31, 16826),

Gene: Nimrod\_15 Start: 9966, Stop: 10301, Start Num: 10

Candidate Starts for Nimrod\_15:

(Start: 10 @9966 has 225 MA's), (17, 10047), (28, 10161), (34, 10212), (35, 10224), (41, 10275),

Gene: NoSleep\_16 Start: 9466, Stop: 9801, Start Num: 10

Candidate Starts for NoSleep\_16:

(Start: 10 @9466 has 225 MA's), (17, 9547), (28, 9661), (34, 9712), (35, 9724), (41, 9775),

Gene: Odette\_25 Start: 16097, Stop: 16441, Start Num: 10

Candidate Starts for Odette\_25:

(Start: 10 @16097 has 225 MA's), (Start: 15 @16127 has 1 MA's), (22, 16241), (30, 16304), (31, 16307),

Gene: Omega\_26 Start: 18240, Stop: 18584, Start Num: 10

Candidate Starts for Omega\_26:

(Start: 10 @18240 has 225 MA's), (Start: 15 @18270 has 1 MA's), (19, 18336), (22, 18384), (30, 18447), (31, 18450), (32, 18474), (40, 18552), (43, 18579),

Gene: Optimus\_24 Start: 16194, Stop: 16538, Start Num: 10

Candidate Starts for Optimus\_24:

(Start: 10 @16194 has 225 MA's), (Start: 15 @16224 has 1 MA's), (30, 16401), (31, 16404),

Gene: OrionPax\_16 Start: 9469, Stop: 9804, Start Num: 10

Candidate Starts for OrionPax\_16:

(Start: 10 @9469 has 225 MA's), (17, 9550), (28, 9664), (34, 9715), (35, 9727), (41, 9778),

Gene: Palpatine\_15 Start: 9762, Stop: 10097, Start Num: 10

Candidate Starts for Palpatine\_15:

(Start: 10 @9762 has 225 MA's), (17, 9843), (20, 9864), (28, 9957), (35, 10020), (41, 10071),

Gene: Panchino\_9 Start: 6455, Stop: 6799, Start Num: 10

Candidate Starts for Panchino\_9:

(3, 6377), (Start: 10 @6455 has 225 MA's), (Start: 15 @6488 has 1 MA's), (20, 6557), (23, 6611), (25, 6626), (26, 6629), (29, 6659), (30, 6662), (38, 6746), (40, 6767),

Gene: Paperbeatsrock\_17 Start: 10701, Stop: 11036, Start Num: 10

Candidate Starts for Paperbeatsrock\_17:

(Start: 10 @10701 has 225 MA's), (17, 10782), (28, 10896), (34, 10947), (35, 10959), (41, 11010),

Gene: Parmesanjohn\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Parmesanjohn\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Pat3\_15 Start: 8969, Stop: 9304, Start Num: 10

Candidate Starts for Pat3\_15:

(Start: 10 @8969 has 225 MA's), (17, 9050), (28, 9164), (34, 9215), (35, 9227), (41, 9278),

Gene: Petra64142\_16 Start: 10182, Stop: 10517, Start Num: 10

Candidate Starts for Petra64142\_16:

(Start: 10 @10182 has 225 MA's), (17, 10263), (28, 10377), (34, 10428), (35, 10440), (41, 10491),

Gene: Phaja\_15 Start: 9917, Stop: 10252, Start Num: 10

Candidate Starts for Phaja\_15:

(Start: 10 @9917 has 225 MA's), (17, 9998), (20, 10019), (28, 10112), (35, 10175), (41, 10226),

Gene: PhancyPhin\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for PhancyPhin\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: Pharsalus\_16 Start: 10501, Stop: 10836, Start Num: 10

Candidate Starts for Pharsalus\_16:

(Start: 10 @10501 has 225 MA's), (17, 10582), (28, 10696), (34, 10747), (35, 10759), (41, 10810),

Gene: PhatBacter\_15 Start: 9767, Stop: 10102, Start Num: 10

Candidate Starts for PhatBacter\_15:

(Start: 10 @9767 has 225 MA's), (17, 9848), (28, 9962), (34, 10013), (35, 10025), (41, 10076),

Gene: Phaux\_14 Start: 9765, Stop: 10100, Start Num: 10

Candidate Starts for Phaux\_14:

(Start: 10 @9765 has 225 MA's), (17, 9846), (20, 9867), (28, 9960), (35, 10023), (41, 10074),

Gene: Philonius\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Philonius\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Phloss\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Phloss\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Phoebus\_26 Start: 16841, Stop: 17185, Start Num: 10

Candidate Starts for Phoebus\_26:

(Start: 10 @16841 has 225 MA's), (Start: 15 @16871 has 1 MA's), (22, 16985), (30, 17048), (31, 17051),

Gene: Phrann\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for Phrann\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: Phrux\_15 Start: 9465, Stop: 9800, Start Num: 10

Candidate Starts for Phrux\_15:

(Start: 10 @9465 has 225 MA's), (17, 9546), (28, 9660), (34, 9711), (35, 9723), (41, 9774),

Gene: Pipsqueaks\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Pipsqueaks\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Policronamos\_15 Start: 9767, Stop: 10102, Start Num: 10

Candidate Starts for Policronamos\_15:

(Start: 10 @9767 has 225 MA's), (17, 9848), (28, 9962), (34, 10013), (35, 10025), (41, 10076),

Gene: Porcelain\_24 Start: 14314, Stop: 14658, Start Num: 10

Candidate Starts for Porcelain\_24:

(Start: 10 @14314 has 225 MA's), (Start: 15 @14344 has 1 MA's), (19, 14410), (30, 14521), (31, 14524), (32, 14548), (40, 14626), (43, 14653),

Gene: Porky\_14 Start: 9039, Stop: 9374, Start Num: 10

Candidate Starts for Porky\_14:

(Start: 10 @9039 has 225 MA's), (17, 9120), (28, 9234), (34, 9285), (35, 9297), (41, 9348),

Gene: Pound\_26 Start: 16933, Stop: 17277, Start Num: 10

Candidate Starts for Pound\_26:

(Start: 10 @16933 has 225 MA's), (Start: 15 @16963 has 1 MA's), (22, 17077), (30, 17140), (31, 17143),

Gene: Pumpkin\_16 Start: 9282, Stop: 9617, Start Num: 10

Candidate Starts for Pumpkin\_16:

(Start: 10 @9282 has 225 MA's), (17, 9363), (28, 9477), (34, 9528), (35, 9540), (41, 9591),

Gene: Purgamenstris\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for Purgamenstris\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: Quallification\_17 Start: 10464, Stop: 10799, Start Num: 10

Candidate Starts for Quallification\_17:

(Start: 10 @10464 has 225 MA's), (17, 10545), (20, 10566), (28, 10659), (35, 10722), (41, 10773),

Gene: QueenHazel\_10 Start: 7532, Stop: 7927, Start Num: 9

Candidate Starts for QueenHazel\_10:

(1, 7283), (5, 7460), (Start: 9 @7532 has 8 MA's), (Start: 15 @7568 has 1 MA's), (19, 7631), (20, 7637), (24, 7697), (30, 7742), (37, 7859), (39, 7886), (40, 7895), (42, 7904),

Gene: Rakim\_17 Start: 10371, Stop: 10706, Start Num: 10

Candidate Starts for Rakim\_17:

(Start: 10 @10371 has 225 MA's), (17, 10452), (20, 10473), (28, 10566), (35, 10629), (41, 10680),

Gene: Raymond7\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for Raymond7\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: Rebel\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for Rebel\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: Redi\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for Redi\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: Redno2\_25 Start: 16325, Stop: 16669, Start Num: 10

Candidate Starts for Redno2\_25:

(Start: 10 @16325 has 225 MA's), (Start: 15 @16355 has 1 MA's), (22, 16469), (30, 16532), (31, 16535),

Gene: Rimmer\_15 Start: 9824, Stop: 10159, Start Num: 10

Candidate Starts for Rimmer\_15:

(Start: 10 @9824 has 225 MA's), (17, 9905), (20, 9926), (28, 10019), (35, 10082), (41, 10133),

Gene: RiverMonster\_15 Start: 9479, Stop: 9814, Start Num: 10

Candidate Starts for RiverMonster\_15:

(Start: 10 @9479 has 225 MA's), (17, 9560), (28, 9674), (34, 9725), (35, 9737), (41, 9788),

Gene: Rubeelu\_9 Start: 6458, Stop: 6799, Start Num: 10

Candidate Starts for Rubeelu\_9:

(Start: 10 @6458 has 225 MA's), (Start: 15 @6488 has 1 MA's), (23, 6611), (30, 6662), (38, 6746), (40, 6767),

Gene: Ryadel\_47 Start: 23398, Stop: 23757, Start Num: 10

Candidate Starts for Ryadel\_47:

(Start: 10 @23398 has 225 MA's), (Start: 15 @23428 has 1 MA's), (18, 23479), (19, 23491), (24, 23557), (34, 23665), (36, 23689),

Gene: Saints25\_16 Start: 9388, Stop: 9723, Start Num: 10

Candidate Starts for Saints25\_16:

(Start: 10 @9388 has 225 MA's), (17, 9469), (28, 9583), (34, 9634), (35, 9646), (41, 9697),

Gene: Sassay\_15 Start: 9765, Stop: 10100, Start Num: 10

Candidate Starts for Sassay\_15:

(Start: 10 @9765 has 225 MA's), (17, 9846), (20, 9867), (28, 9960), (35, 10023), (41, 10074),

Gene: Sbash\_9 Start: 7109, Stop: 7504, Start Num: 9

Candidate Starts for Sbash\_9:

(5, 7034), (Start: 9 @7109 has 8 MA's), (12, 7133), (Start: 15 @7145 has 1 MA's), (39, 7463), (40, 7472), (42, 7481),

Gene: Schatzie\_24 Start: 15866, Stop: 16210, Start Num: 10

Candidate Starts for Schatzie\_24:

(4, 15800), (Start: 10 @15866 has 225 MA's), (Start: 15 @15896 has 1 MA's), (22, 16010), (30, 16073), (31, 16076),

Gene: Schnauzer\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Schnauzer\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: SchoolBus\_43 Start: 22339, Stop: 22698, Start Num: 10

Candidate Starts for SchoolBus\_43:

(Start: 10 @22339 has 225 MA's), (Start: 15 @22369 has 1 MA's), (18, 22420), (19, 22432), (24, 22498), (34, 22606), (36, 22630),

Gene: Schuy\_44 Start: 22272, Stop: 22631, Start Num: 10

Candidate Starts for Schuy\_44:

(Start: 10 @22272 has 225 MA's), (Start: 15 @22302 has 1 MA's), (18, 22353), (19, 22365), (24, 22431), (34, 22539), (36, 22563),

Gene: Scitech\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Scitech\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: ShamWow\_16 Start: 10258, Stop: 10593, Start Num: 10

Candidate Starts for ShamWow\_16:

(Start: 10 @10258 has 225 MA's), (17, 10339), (20, 10360), (28, 10453), (35, 10516), (41, 10567),

Gene: ShereKhan\_17 Start: 10707, Stop: 11042, Start Num: 10

Candidate Starts for ShereKhan\_17:

(Start: 10 @10707 has 225 MA's), (17, 10788), (28, 10902), (34, 10953), (35, 10965), (41, 11016),

Gene: Shida\_43 Start: 22179, Stop: 22538, Start Num: 10

Candidate Starts for Shida\_43:

(Start: 10 @22179 has 225 MA's), (Start: 15 @22209 has 1 MA's), (18, 22260), (19, 22272), (24, 22338), (34, 22446), (36, 22470),

Gene: ShrimpFriedEgg\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for ShrimpFriedEgg\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: Shweta\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for Shweta\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: Silvafighter\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Silvafighter\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Silvy\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Silvy\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Simpliphy\_16 Start: 9469, Stop: 9804, Start Num: 10

Candidate Starts for Simpliphy\_16:

(Start: 10 @9469 has 225 MA's), (17, 9550), (28, 9664), (34, 9715), (35, 9727), (41, 9778),

Gene: SirDuracell\_15 Start: 8924, Stop: 9259, Start Num: 10

Candidate Starts for SirDuracell\_15:

(Start: 10 @8924 has 225 MA's), (17, 9005), (20, 9026), (28, 9119), (35, 9182), (41, 9233),

Gene: SkinnyPete\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for SkinnyPete\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: Smooch\_45 Start: 23467, Stop: 23826, Start Num: 10

Candidate Starts for Smooch\_45:

(Start: 10 @23467 has 225 MA's), (Start: 15 @23497 has 1 MA's), (18, 23548), (19, 23560), (24, 23626), (34, 23734), (36, 23758),

Gene: Smurph\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Smurph\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Snekmaggedon\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for Snekmaggedon\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),

Gene: SophKB\_16 Start: 10257, Stop: 10592, Start Num: 10

Candidate Starts for SophKB\_16:

(Start: 10 @10257 has 225 MA's), (17, 10338), (20, 10359), (28, 10452), (35, 10515), (41, 10566),

Gene: Sotrice96\_16 Start: 10213, Stop: 10548, Start Num: 10

Candidate Starts for Sotrice96\_16:

(Start: 10 @10213 has 225 MA's), (17, 10294), (20, 10315), (28, 10408), (35, 10471), (41, 10522),

Gene: SpongeBob\_9 Start: 6479, Stop: 6823, Start Num: 10

Candidate Starts for SpongeBob\_9:

(3, 6401), (Start: 10 @6479 has 225 MA's), (Start: 15 @6512 has 1 MA's), (20, 6581), (23, 6635), (25, 6650), (26, 6653), (29, 6683), (30, 6686), (38, 6770), (40, 6791),



Gene: Squint\_23 Start: 14441, Stop: 14785, Start Num: 10

Candidate Starts for Squint\_23:

(Start: 10 @14441 has 225 MA's), (Start: 15 @14471 has 1 MA's), (19, 14537), (30, 14648), (31, 14651), (32, 14675), (40, 14753), (43, 14780),

Gene: Stank\_17 Start: 9714, Stop: 10049, Start Num: 10

Candidate Starts for Stank\_17:

(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: Stark\_16 Start: 9482, Stop: 9817, Start Num: 10

Candidate Starts for Stark\_16:

(Start: 10 @9482 has 225 MA's), (17, 9563), (28, 9677), (34, 9728), (35, 9740), (41, 9791),

Gene: StellaBean\_16 Start: 10257, Stop: 10592, Start Num: 10

Candidate Starts for StellaBean\_16:

(Start: 10 @10257 has 225 MA's), (17, 10338), (20, 10359), (28, 10452), (35, 10515), (41, 10566),

Gene: StolenFromERC\_17 Start: 9714, Stop: 10049, Start Num: 10

Candidate Starts for StolenFromERC\_17:

(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: Superphikiman\_24 Start: 14495, Stop: 14839, Start Num: 10

Candidate Starts for Superphikiman\_24:

(Start: 10 @14495 has 225 MA's), (Start: 15 @14525 has 1 MA's), (19, 14591), (30, 14702), (31, 14705), (32, 14729), (40, 14807), (43, 14834),

Gene: TBrady12\_17 Start: 9711, Stop: 10046, Start Num: 10

Candidate Starts for TBrady12\_17:

(Start: 10 @9711 has 225 MA's), (17, 9792), (28, 9906), (34, 9957), (35, 9969), (41, 10020),

Gene: Tapioca\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Tapioca\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Tarkin\_17 Start: 10710, Stop: 11045, Start Num: 10

Candidate Starts for Tarkin\_17:

(Start: 10 @10710 has 225 MA's), (17, 10791), (28, 10905), (34, 10956), (35, 10968), (41, 11019),

Gene: TeardropMSU\_15 Start: 10165, Stop: 10500, Start Num: 10

Candidate Starts for TeardropMSU\_15:

(Start: 10 @10165 has 225 MA's), (17, 10246), (20, 10267), (28, 10360), (35, 10423), (41, 10474),

Gene: Teaspoon\_15 Start: 9164, Stop: 9499, Start Num: 10

Candidate Starts for Teaspoon\_15:

(Start: 10 @9164 has 225 MA's), (17, 9245), (28, 9359), (34, 9410), (35, 9422), (41, 9473),

Gene: TelAviv\_40 Start: 22333, Stop: 22692, Start Num: 10

Candidate Starts for TelAviv\_40:

(Start: 10 @22333 has 225 MA's), (Start: 15 @22363 has 1 MA's), (18, 22414), (19, 22426), (24, 22492), (34, 22600), (36, 22624),

Gene: Terminus\_15 Start: 9811, Stop: 10146, Start Num: 10  
Candidate Starts for Terminus\_15:  
(Start: 10 @9811 has 225 MA's), (17, 9892), (28, 10006), (34, 10057), (35, 10069), (41, 10120),

Gene: Thibault\_22 Start: 16125, Stop: 16469, Start Num: 10  
Candidate Starts for Thibault\_22:  
(Start: 10 @16125 has 225 MA's), (Start: 15 @16155 has 1 MA's), (30, 16332), (31, 16335),

Gene: ThreeRngTarjay\_25 Start: 16691, Stop: 17035, Start Num: 10  
Candidate Starts for ThreeRngTarjay\_25:  
(Start: 10 @16691 has 225 MA's), (Start: 15 @16721 has 1 MA's), (22, 16835), (30, 16898), (31, 16901),

Gene: Thresher\_16 Start: 10472, Stop: 10807, Start Num: 10  
Candidate Starts for Thresher\_16:  
(Start: 10 @10472 has 225 MA's), (17, 10553), (28, 10667), (34, 10718), (35, 10730), (41, 10781),

Gene: Tomaszewski\_15 Start: 9858, Stop: 10193, Start Num: 10  
Candidate Starts for Tomaszewski\_15:  
(Start: 10 @9858 has 225 MA's), (17, 9939), (20, 9960), (28, 10053), (35, 10116), (41, 10167),

Gene: Toto\_16 Start: 10258, Stop: 10593, Start Num: 10  
Candidate Starts for Toto\_16:  
(Start: 10 @10258 has 225 MA's), (17, 10339), (20, 10360), (28, 10453), (35, 10516), (41, 10567),

Gene: Traaww1\_14 Start: 9903, Stop: 10238, Start Num: 10  
Candidate Starts for Traaww1\_14:  
(Start: 10 @9903 has 225 MA's), (17, 9984), (20, 10005), (28, 10098), (35, 10161), (41, 10212),

Gene: Tuco\_16 Start: 10257, Stop: 10592, Start Num: 10  
Candidate Starts for Tuco\_16:  
(Start: 10 @10257 has 225 MA's), (17, 10338), (20, 10359), (28, 10452), (35, 10515), (41, 10566),

Gene: Ukulele\_15 Start: 9482, Stop: 9817, Start Num: 10  
Candidate Starts for Ukulele\_15:  
(Start: 10 @9482 has 225 MA's), (17, 9563), (28, 9677), (34, 9728), (35, 9740), (41, 9791),

Gene: Vorrps\_42 Start: 21925, Stop: 22284, Start Num: 10  
Candidate Starts for Vorrps\_42:  
(Start: 10 @21925 has 225 MA's), (Start: 15 @21955 has 1 MA's), (18, 22006), (19, 22018), (24, 22084), (34, 22192), (36, 22216),

Gene: Wanda\_27 Start: 16134, Stop: 16478, Start Num: 10  
Candidate Starts for Wanda\_27:  
(Start: 10 @16134 has 225 MA's), (Start: 15 @16164 has 1 MA's), (22, 16278), (30, 16341), (31, 16344),

Gene: Wiggin\_17 Start: 9714, Stop: 10049, Start Num: 10  
Candidate Starts for Wiggin\_17:  
(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: Wildflower\_43 Start: 21911, Stop: 22270, Start Num: 10  
Candidate Starts for Wildflower\_43:

(Start: 10 @21911 has 225 MA's), (Start: 15 @21941 has 1 MA's), (18, 21992), (19, 22004), (24, 22070), (34, 22178), (36, 22202),

Gene: Willez\_15 Start: 9765, Stop: 10100, Start Num: 10

Candidate Starts for Willez\_15:

(Start: 10 @9765 has 225 MA's), (17, 9846), (20, 9867), (28, 9960), (35, 10023), (41, 10074),

Gene: Winget\_44 Start: 22605, Stop: 22964, Start Num: 10

Candidate Starts for Winget\_44:

(Start: 10 @22605 has 225 MA's), (Start: 15 @22635 has 1 MA's), (18, 22686), (19, 22698), (24, 22764), (34, 22872), (36, 22896),

Gene: Xandras\_17 Start: 9714, Stop: 10049, Start Num: 10

Candidate Starts for Xandras\_17:

(Start: 10 @9714 has 225 MA's), (17, 9795), (28, 9909), (34, 9960), (35, 9972), (41, 10023),

Gene: Xeno\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Xeno\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Xerxes\_9 Start: 6438, Stop: 6782, Start Num: 10

Candidate Starts for Xerxes\_9:

(3, 6360), (Start: 10 @6438 has 225 MA's), (Start: 15 @6471 has 1 MA's), (20, 6540), (23, 6594), (25, 6609), (26, 6612), (30, 6645), (38, 6729), (40, 6750),

Gene: Xula\_9 Start: 7161, Stop: 7556, Start Num: 9

Candidate Starts for Xula\_9:

(1, 6912), (5, 7089), (Start: 9 @7161 has 8 MA's), (Start: 15 @7197 has 1 MA's), (19, 7260), (20, 7266), (24, 7326), (30, 7371), (37, 7488), (39, 7515), (40, 7524), (42, 7533),

Gene: YassJohnny\_16 Start: 10257, Stop: 10592, Start Num: 10

Candidate Starts for YassJohnny\_16:

(Start: 10 @10257 has 225 MA's), (17, 10338), (20, 10359), (28, 10452), (35, 10515), (41, 10566),

Gene: Yeet\_24 Start: 15867, Stop: 16211, Start Num: 10

Candidate Starts for Yeet\_24:

(Start: 10 @15867 has 225 MA's), (Start: 15 @15897 has 1 MA's), (22, 16011), (30, 16074), (31, 16077),

Gene: Youngblood\_15 Start: 9892, Stop: 10227, Start Num: 10

Candidate Starts for Youngblood\_15:

(Start: 10 @9892 has 225 MA's), (17, 9973), (28, 10087), (34, 10138), (35, 10150), (41, 10201),

Gene: YungJamal\_46 Start: 22644, Stop: 23003, Start Num: 10

Candidate Starts for YungJamal\_46:

(Start: 10 @22644 has 225 MA's), (Start: 15 @22674 has 1 MA's), (18, 22725), (19, 22737), (24, 22803), (34, 22911), (36, 22935),

Gene: Zakhe101\_43 Start: 22055, Stop: 22414, Start Num: 10

Candidate Starts for Zakhe101\_43:

(Start: 10 @22055 has 225 MA's), (Start: 15 @22085 has 1 MA's), (18, 22136), (19, 22148), (24, 22214), (34, 22322), (36, 22346),

Gene: Zelink\_27 Start: 16719, Stop: 17063, Start Num: 10

Candidate Starts for Zelink\_27:

(Start: 10 @16719 has 225 MA's), (Start: 15 @16749 has 1 MA's), (22, 16863), (30, 16926), (31, 16929),

Gene: xkcd\_16 Start: 9917, Stop: 10252, Start Num: 10

Candidate Starts for xkcd\_16:

(Start: 10 @9917 has 225 MA's), (17, 9998), (20, 10019), (28, 10112), (35, 10175), (41, 10226),