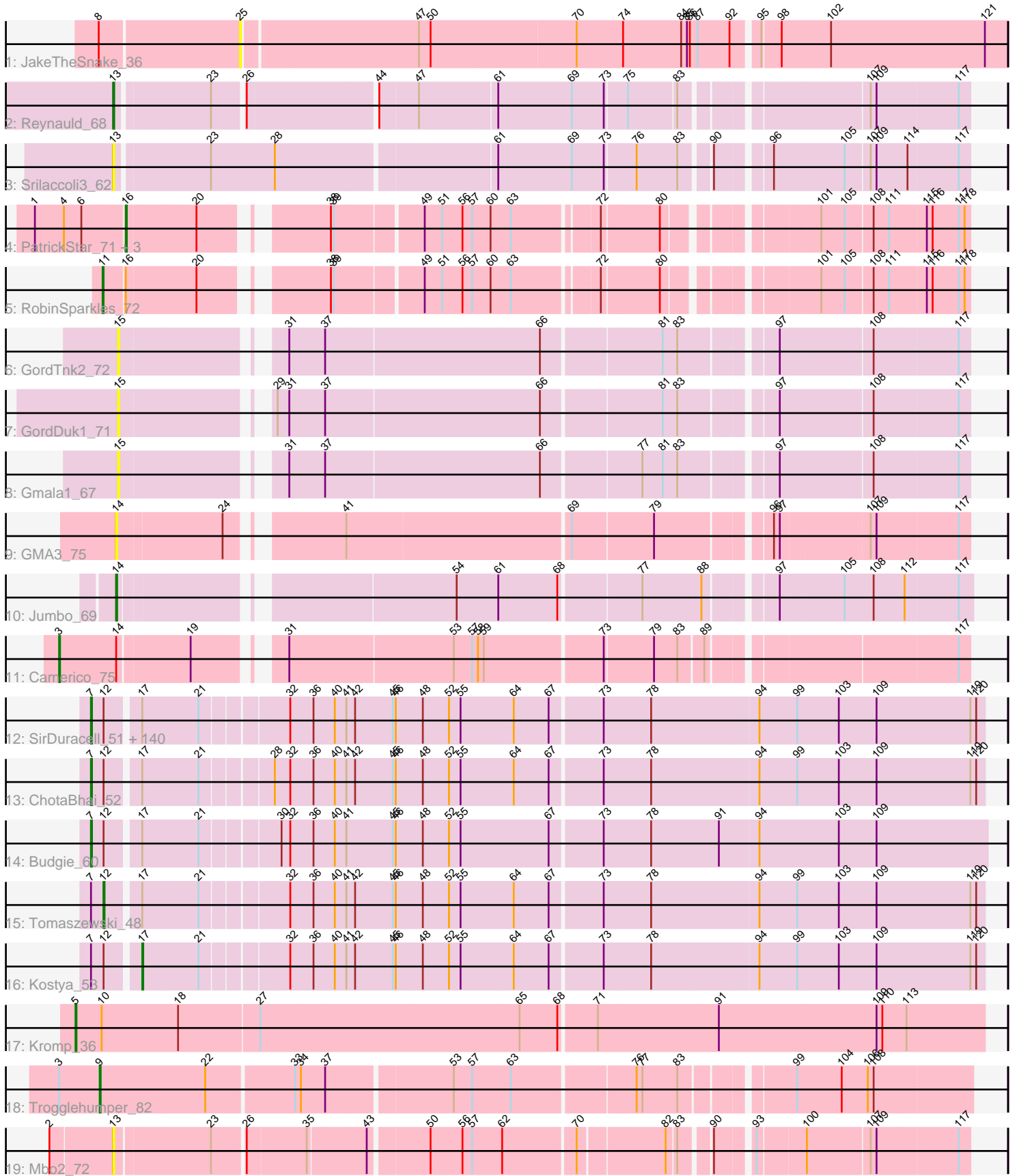


# Pham 311300



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 311300 Report

This analysis was run 06/27/26 on database version 652.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 311300 has 162 members, 20 are drafts.

Phages represented in each track:

- Track 1 : JakeTheSnake\_36
- Track 2 : Reynauld\_68
- Track 3 : Srilaccoli3\_62
- Track 4 : PatrickStar\_71, Gibbles\_68, Orchid\_70, Kampe\_71
- Track 5 : RobinSparkles\_72
- Track 6 : GordTnk2\_72
- Track 7 : GordDuk1\_71
- Track 8 : Gmala1\_67
- Track 9 : GMA3\_75
- Track 10 : Jumbo\_69
- Track 11 : Camerico\_75
- Track 12 : SirDuracell\_51, Henry\_51, Phaja\_50, ABCat\_50, Argent26\_55, RiverMonster\_53, Wiggins\_54, Simpliphy\_51, GooberAzure\_55, SophKB\_49, Xandras\_52, Youngblood\_54, Goldilocks\_54, Holt\_57, StolenFromERC\_55, Elph10\_52, Icee\_52, BugsBunny\_53, Paperbeatsrock\_51, Miniwave\_49, Murica\_54, Murphy\_54, Policronamos\_55, Nimrod\_55, Contagion\_49, Cookies\_49, BilboSwaggins\_51, MadamMonkfish\_52, TeamEdward\_54, MollyToe\_47, Saints25\_53, Pat3\_50, Bask21\_53, Barbarian\_52, Dumbo\_52, Gator\_50, Phrux\_50, PaddyBaddy\_52, NonchalantPear\_53, Inca\_49, Daikon\_53, Gemini\_56, Lilac\_55, Brewer\_47, Emmina\_52, FoghornLeghorn\_47, DrDrey\_52, JeTaime\_53, Bogg\_52, Greep\_56, MISSy\_52, Phaux\_54, Czyszczo1\_53, Porky\_51, Tarkin\_51, Gage\_55, Amao\_52, Bruin\_48, NoSleep\_54, Goku\_50, Glexan\_50, Kimchi\_55, Nala\_53, Asriel\_52, HuffyPuff\_54, Willez\_46, Adnama\_56, DoctorDiddles\_52, Petra64142\_57, Moldemort\_55, Lilpickle\_52, Palpatine\_55, BigBubba\_53, FireRed\_55, Lilizi\_52, Tuco\_53, Buck\_53, IHOP\_50, Hopey\_52, HanKaySha\_51, ShereKhan\_50, GoldenSpark\_55, Traaww1\_48, Thresher\_55, Ptowny\_51, OrionPax\_51, Harella\_52, Becksu\_53, Command613\_54, Quallification\_53, Rakim\_54, Terminus\_54, AmericanBeauty\_56, Sassay\_46, PhatBacter\_55, Bench\_54, Pharsalus\_50, Balomoji\_51, Mosby\_48, StellaBean\_50, Thimble\_54, xkcd\_56, Stank\_56, Easy2Say\_53, YassJohnny\_48, 244\_53, CrystalP\_52, Stark\_53, Mindy\_51, Hoonter\_55, Dusk\_50, Myrale\_52, Manda\_52, NelitzaMV\_49, FairyPath\_52, Misfit\_54, TBrady12\_55, StormChicken\_54, Cjw1\_52, Filch\_53, BadStone\_50, MPhalcon\_52, Maxxinista\_55, Marshmallow\_51, TeardropMSU\_48, Toto\_51,

Kanye\_48, Rimmer\_53, ChosenOne\_53, Teaspoon\_53, ShamWow\_52, Sotrice96\_53, Elite2014\_52, Pumpkin\_54, Highbury\_53, Flypotenuse\_47, Livilaughbron\_56, BaboJay\_48, Cactus\_54, Ukulele\_49, Eureka\_50

- Track 13 : ChotaBhai\_52
- Track 14 : Budgie\_60
- Track 15 : Tomaszewski\_48
- Track 16 : Kostya\_53
- Track 17 : Kromp\_36
- Track 18 : Trogglehumper\_82
- Track 19 : Mbo2\_72

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

The start number called the most often in the published annotations is 7, it was called in 130 of the 142 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244\_53, ABCat\_50, Adnama\_56, Amao\_52, AmericanBeauty\_56, Argent26\_55, Asriel\_52, BaboJay\_48, BadStone\_50, Balomoji\_51, Barbarian\_52, Bask21\_53, Becksu\_53, Bench\_54, BigBubba\_53, BilboSwaggins\_51, Bogg\_52, Brewer\_47, Bruin\_48, Buck\_53, Budgie\_60, BugsBunny\_53, Cactus\_54, ChosenOne\_53, ChotaBhai\_52, Cjw1\_52, Command613\_54, Contagion\_49, Cookies\_49, CrystalP\_52, Czyszczonek1\_53, Daikon\_53, DoctorDiddles\_52, DrDrey\_52, Dumbo\_52, Dusk\_50, Easy2Say\_53, Elite2014\_52, Elph10\_52, Emmina\_52, Eureka\_50, FairyPath\_52, Filch\_53, FireRed\_55, Flypotenuse\_47, FoghornLeghorn\_47, Gage\_55, Gator\_50, Gemini\_56, Glexan\_50, Goku\_50, GoldenSpark\_55, Goldilocks\_54, GooberAzure\_55, Greep\_56, HanKaySha\_51, Harella\_52, Henry\_51, Highbury\_53, Holt\_57, Hoonter\_55, Hopey\_52, HuffyPuff\_54, IHOP\_50, Icee\_52, Inca\_49, JeTaime\_53, Kanye\_48, Kimchi\_55, Lilac\_55, Lilizi\_52, Lilpickle\_52, Livilaughbron\_56, MISSy\_52, MPhalcon\_52, MadamMonkfish\_52, Manda\_52, Marshmallow\_51, Maxxinista\_55, Mindy\_51, Miniwave\_49, Misfit\_54, Moldemort\_55, MollyToe\_47, Mosby\_48, Murica\_54, Murphy\_54, Myrale\_52, Nala\_53, NelitzaMV\_49, Nimrod\_55, NoSleep\_54, NonchalantPear\_53, OrionPax\_51, PaddyBaddy\_52, Palpatine\_55, Paperbeatsrock\_51, Pat3\_50, Petra64142\_57, Phaja\_50, Pharsalus\_50, PhatBacter\_55, Phaux\_54, Phrux\_50, Policronamos\_55, Porky\_51, Ptowny\_51, Pumpkin\_54, Quallification\_53, Rakim\_54, Rimmer\_53, RiverMonster\_53, Saints25\_53, Sassay\_46, ShamWow\_52, ShereKhan\_50, Simpliphy\_51, SirDuracell\_51, SophKB\_49, Sotrice96\_53, Stank\_56, Stark\_53, StellaBean\_50, StolenFromERC\_55, StormChicken\_54, TBrady12\_55, Tarkin\_51, TeamEdward\_54, TeardropMSU\_48, Teaspoon\_53, Terminus\_54, Thimble\_54, Thresher\_55, Toto\_51, Traaww1\_48, Tuco\_53, Ukulele\_49, Wiggin\_54, Willez\_46, Xandras\_52, YassJohnny\_48, Youngblood\_54, xkcd\_56,

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

- Kostya\_53, Tomaszewski\_48,

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

- Camerico\_75, GMA3\_75, Gibbles\_68, Gmala1\_67, GordDuk1\_71, GordTnk2\_72, JakeTheSnake\_36, Jumbo\_69, Kampe\_71, Kromp\_36, Mbo2\_72, Orchid\_70, PatrickStar\_71, Reynauld\_68, RobinSparkles\_72, Srilaccoli3\_62, Trogglehumper\_82,

## Summary by start number:

### Start 3:

- Found in 2 of 162 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 142
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Camerico\_75 (DF4),

### Start 5:

- Found in 1 of 162 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 142
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kromp\_36 (singleton),

### Start 7:

- Found in 145 of 162 ( 89.5% ) of genes in pham
- Manual Annotations of this start: 130 of 142
- Called 98.6% of time when present
- Phage (with cluster) where this start called: 244\_53 (E), ABCat\_50 (E), Adnama\_56 (E), Amao\_52 (E), AmericanBeauty\_56 (E), Argent26\_55 (E), Asriel\_52 (E), BaboJay\_48 (E), BadStone\_50 (E), Balomoji\_51 (E), Barbarian\_52 (E), Bask21\_53 (E), Becksu\_53 (E), Bench\_54 (E), BigBubba\_53 (E), BilboSwaggins\_51 (E), Bogg\_52 (E), Brewer\_47 (E), Bruin\_48 (E), Buck\_53 (E), Budgie\_60 (E), BugsBunny\_53 (E), Cactus\_54 (E), ChosenOne\_53 (E), ChotaBhai\_52 (E), Cjw1\_52 (E), Command613\_54 (E), Contagion\_49 (E), Cookies\_49 (E), CrystalP\_52 (E), Czystczon1\_53 (E), Daikon\_53 (E), DoctorDiddles\_52 (E), DrDrey\_52 (E), Dumbo\_52 (E), Dusk\_50 (E), Easy2Say\_53 (E), Elite2014\_52 (E), Elph10\_52 (E), Emmina\_52 (E), Eureka\_50 (E), FairyPath\_52 (E), Filch\_53 (E), FireRed\_55 (E), Flypotenuse\_47 (E), FoghornLeghorn\_47 (E), Gage\_55 (E), Gator\_50 (E), Gemini\_56 (E), Glexan\_50 (E), Goku\_50 (E), GoldenSpark\_55 (E), Goldilocks\_54 (E), GooberAzure\_55 (E), Greep\_56 (E), HanKaySha\_51 (E), Harella\_52 (E), Henry\_51 (E), Highbury\_53 (E), Holt\_57 (E), Hoonter\_55 (E), Hopey\_52 (E), HufflyPuff\_54 (E), IHOP\_50 (E), Icee\_52 (E), Inca\_49 (E), JeTaime\_53 (E), Kanye\_48 (E), Kimchi\_55 (E), Lilac\_55 (E), Lilizi\_52 (E), Lilpickle\_52 (E), Liveloughbron\_56 (E), MISSy\_52 (E), MPhalcon\_52 (E), MadamMonkfish\_52 (E), Manda\_52 (E), Marshmallow\_51 (E), Maxxinista\_55 (E), Mindy\_51 (E), Miniwave\_49 (E), Misfit\_54 (E), Moldemort\_55 (E), MollyToe\_47 (E), Mosby\_48 (E), Murica\_54 (E), Murphy\_54 (E), Myrale\_52 (E), Nala\_53 (E), NelitzaMV\_49 (E), Nimrod\_55 (E), NoSleep\_54 (E), NonchalantPear\_53 (E), OrionPax\_51 (E), PaddyBaddy\_52 (E), Palpatine\_55 (E), Paperbeatsrock\_51 (E), Pat3\_50 (E), Petra64142\_57 (E), Phaja\_50 (E), Pharsalus\_50 (E), PhatBacter\_55 (E), Phaux\_54 (E), Phrux\_50 (E), Policronamos\_55 (E), Porky\_51 (E), Ptowny\_51 (E), Pumpkin\_54 (E), Quallification\_53 (E), Rakim\_54 (E), Rimmer\_53 (E), RiverMonster\_53 (E), Saints25\_53 (E), Sassay\_46 (E), ShamWow\_52 (E), ShereKhan\_50 (E), Simpliphy\_51 (E), SirDuracell\_51 (E), SophKB\_49 (E), Sotrice96\_53 (E), Stank\_56 (E), Stark\_53 (E), StellaBean\_50 (E), StolenFromERC\_55 (E), StormChicken\_54 (E), TBrady12\_55 (E), Tarkin\_51 (E), TeamEdward\_54 (E), TeardropMSU\_48 (E), Teaspoon\_53 (E), Terminus\_54 (E), Thimble\_54 (E), Thresher\_55 (E), Toto\_51 (E), Traaww1\_48 (E), Tuco\_53 (E), Ukulele\_49 (E), Wiggin\_54 (E), Willez\_46 (E), Xandras\_52 (E), YassJohnny\_48 (E), Youngblood\_54 (E), xkcd\_56 (E),

### Start 9:

- Found in 1 of 162 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 142
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trogglehumper\_82 (singleton),

Start 11:

- Found in 1 of 162 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 142
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RobinSparkles\_72 (CX),

Start 12:

- Found in 145 of 162 ( 89.5% ) of genes in pham
- Manual Annotations of this start: 1 of 142
- Called 0.7% of time when present
- Phage (with cluster) where this start called: Tomaszewski\_48 (E),

Start 13:

- Found in 3 of 162 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 142
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mbo2\_72 (singleton), Reynauld\_68 (CH), Srilaccoli3\_62 (CH),

Start 14:

- Found in 3 of 162 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 142
- Called 66.7% of time when present
- Phage (with cluster) where this start called: GMA3\_75 (DF2), Jumbo\_69 (DF3),

Start 15:

- Found in 3 of 162 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gmala1\_67 (DF1), GordDuk1\_71 (DF1), GordTnk2\_72 (DF1),

Start 16:

- Found in 5 of 162 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 4 of 142
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Gibbles\_68 (CX), Kampe\_71 (CX), Orchid\_70 (CX), PatrickStar\_71 (CX),

Start 17:

- Found in 145 of 162 ( 89.5% ) of genes in pham
- Manual Annotations of this start: 1 of 142
- Called 0.7% of time when present
- Phage (with cluster) where this start called: Kostya\_53 (E),

Start 25:

- Found in 1 of 162 ( 0.6% ) of genes in pham
- No Manual Annotations of this start.

- Called 100.0% of time when present
- Phage (with cluster) where this start called: JakeTheSnake\_36 (AY),

### **Summary by clusters:**

There are 9 clusters represented in this pham: singleton, CH, E, DF4, DF1, DF3, DF2, CX, AY,

Info for manual annotations of cluster CH:

- Start number 13 was manually annotated 1 time for cluster CH.

Info for manual annotations of cluster CX:

- Start number 11 was manually annotated 1 time for cluster CX.
- Start number 16 was manually annotated 4 times for cluster CX.

Info for manual annotations of cluster DF3:

- Start number 14 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DF4:

- Start number 3 was manually annotated 1 time for cluster DF4.

Info for manual annotations of cluster E:

- Start number 7 was manually annotated 130 times for cluster E.
- Start number 12 was manually annotated 1 time for cluster E.
- Start number 17 was manually annotated 1 time for cluster E.

### **Gene Information:**

Gene: 244\_53 Start: 37711, Stop: 38592, Start Num: 7

Candidate Starts for 244\_53:

(Start: 7 @37711 has 130 MA's), (Start: 12 @37723 has 1 MA's), (Start: 17 @37753 has 1 MA's), (21, 37810), (32, 37891), (36, 37915), (40, 37936), (41, 37948), (42, 37957), (45, 37996), (46, 37999), (48, 38026), (52, 38053), (55, 38065), (64, 38119), (67, 38155), (73, 38206), (78, 38254), (94, 38362), (99, 38401), (103, 38443), (109, 38482), (119, 38578), (120, 38584),

Gene: ABCat\_50 Start: 38357, Stop: 39238, Start Num: 7

Candidate Starts for ABCat\_50:

(Start: 7 @38357 has 130 MA's), (Start: 12 @38369 has 1 MA's), (Start: 17 @38399 has 1 MA's), (21, 38456), (32, 38537), (36, 38561), (40, 38582), (41, 38594), (42, 38603), (45, 38642), (46, 38645), (48, 38672), (52, 38699), (55, 38711), (64, 38765), (67, 38801), (73, 38852), (78, 38900), (94, 39008), (99, 39047), (103, 39089), (109, 39128), (119, 39224), (120, 39230),

Gene: Adnama\_56 Start: 38380, Stop: 39261, Start Num: 7

Candidate Starts for Adnama\_56:

(Start: 7 @38380 has 130 MA's), (Start: 12 @38392 has 1 MA's), (Start: 17 @38422 has 1 MA's), (21, 38479), (32, 38560), (36, 38584), (40, 38605), (41, 38617), (42, 38626), (45, 38665), (46, 38668), (48, 38695), (52, 38722), (55, 38734), (64, 38788), (67, 38824), (73, 38875), (78, 38923), (94, 39031), (99, 39070), (103, 39112), (109, 39151), (119, 39247), (120, 39253),

Gene: Amao\_52 Start: 37475, Stop: 38356, Start Num: 7

Candidate Starts for Amao\_52:

(Start: 7 @37475 has 130 MA's), (Start: 12 @37487 has 1 MA's), (Start: 17 @37517 has 1 MA's), (21, 37574), (32, 37655), (36, 37679), (40, 37700), (41, 37712), (42, 37721), (45, 37760), (46, 37763), (48, 37790), (52, 37817), (55, 37829), (64, 37883), (67, 37919), (73, 37970), (78, 38018), (94, 38126), (99, 38165), (103, 38207), (109, 38246), (119, 38342), (120, 38348),

Gene: AmericanBeauty\_56 Start: 38225, Stop: 39106, Start Num: 7

Candidate Starts for AmericanBeauty\_56:

(Start: 7 @38225 has 130 MA's), (Start: 12 @38237 has 1 MA's), (Start: 17 @38267 has 1 MA's), (21, 38324), (32, 38405), (36, 38429), (40, 38450), (41, 38462), (42, 38471), (45, 38510), (46, 38513), (48, 38540), (52, 38567), (55, 38579), (64, 38633), (67, 38669), (73, 38720), (78, 38768), (94, 38876), (99, 38915), (103, 38957), (109, 38996), (119, 39092), (120, 39098),

Gene: Argent26\_55 Start: 37863, Stop: 38744, Start Num: 7

Candidate Starts for Argent26\_55:

(Start: 7 @37863 has 130 MA's), (Start: 12 @37875 has 1 MA's), (Start: 17 @37905 has 1 MA's), (21, 37962), (32, 38043), (36, 38067), (40, 38088), (41, 38100), (42, 38109), (45, 38148), (46, 38151), (48, 38178), (52, 38205), (55, 38217), (64, 38271), (67, 38307), (73, 38358), (78, 38406), (94, 38514), (99, 38553), (103, 38595), (109, 38634), (119, 38730), (120, 38736),

Gene: Asriel\_52 Start: 36717, Stop: 37598, Start Num: 7

Candidate Starts for Asriel\_52:

(Start: 7 @36717 has 130 MA's), (Start: 12 @36729 has 1 MA's), (Start: 17 @36759 has 1 MA's), (21, 36816), (32, 36897), (36, 36921), (40, 36942), (41, 36954), (42, 36963), (45, 37002), (46, 37005), (48, 37032), (52, 37059), (55, 37071), (64, 37125), (67, 37161), (73, 37212), (78, 37260), (94, 37368), (99, 37407), (103, 37449), (109, 37488), (119, 37584), (120, 37590),

Gene: BaboJay\_48 Start: 37263, Stop: 38144, Start Num: 7

Candidate Starts for BaboJay\_48:

(Start: 7 @37263 has 130 MA's), (Start: 12 @37275 has 1 MA's), (Start: 17 @37305 has 1 MA's), (21, 37362), (32, 37443), (36, 37467), (40, 37488), (41, 37500), (42, 37509), (45, 37548), (46, 37551), (48, 37578), (52, 37605), (55, 37617), (64, 37671), (67, 37707), (73, 37758), (78, 37806), (94, 37914), (99, 37953), (103, 37995), (109, 38034), (119, 38130), (120, 38136),

Gene: BadStone\_50 Start: 37926, Stop: 38807, Start Num: 7

Candidate Starts for BadStone\_50:

(Start: 7 @37926 has 130 MA's), (Start: 12 @37938 has 1 MA's), (Start: 17 @37968 has 1 MA's), (21, 38025), (32, 38106), (36, 38130), (40, 38151), (41, 38163), (42, 38172), (45, 38211), (46, 38214), (48, 38241), (52, 38268), (55, 38280), (64, 38334), (67, 38370), (73, 38421), (78, 38469), (94, 38577), (99, 38616), (103, 38658), (109, 38697), (119, 38793), (120, 38799),

Gene: Balomoji\_51 Start: 38194, Stop: 39075, Start Num: 7

Candidate Starts for Balomoji\_51:

(Start: 7 @38194 has 130 MA's), (Start: 12 @38206 has 1 MA's), (Start: 17 @38236 has 1 MA's), (21, 38293), (32, 38374), (36, 38398), (40, 38419), (41, 38431), (42, 38440), (45, 38479), (46, 38482), (48, 38509), (52, 38536), (55, 38548), (64, 38602), (67, 38638), (73, 38689), (78, 38737), (94, 38845), (99, 38884), (103, 38926), (109, 38965), (119, 39061), (120, 39067),

Gene: Barbarian\_52 Start: 36717, Stop: 37598, Start Num: 7

Candidate Starts for Barbarian\_52:

(Start: 7 @36717 has 130 MA's), (Start: 12 @36729 has 1 MA's), (Start: 17 @36759 has 1 MA's), (21, 36816), (32, 36897), (36, 36921), (40, 36942), (41, 36954), (42, 36963), (45, 37002), (46, 37005), (48, 37032), (52, 37059), (55, 37071), (64, 37125), (67, 37161), (73, 37212), (78, 37260), (94, 37368), (99, 37407), (103, 37449), (109, 37488), (119, 37584), (120, 37590),

Gene: Bask21\_53 Start: 37051, Stop: 37932, Start Num: 7

Candidate Starts for Bask21\_53:

(Start: 7 @37051 has 130 MA's), (Start: 12 @37063 has 1 MA's), (Start: 17 @37093 has 1 MA's), (21, 37150), (32, 37231), (36, 37255), (40, 37276), (41, 37288), (42, 37297), (45, 37336), (46, 37339), (48, 37366), (52, 37393), (55, 37405), (64, 37459), (67, 37495), (73, 37546), (78, 37594), (94, 37702), (99, 37741), (103, 37783), (109, 37822), (119, 37918), (120, 37924),

Gene: Becksu\_53 Start: 38260, Stop: 39141, Start Num: 7

Candidate Starts for Becksu\_53:

(Start: 7 @38260 has 130 MA's), (Start: 12 @38272 has 1 MA's), (Start: 17 @38302 has 1 MA's), (21, 38359), (32, 38440), (36, 38464), (40, 38485), (41, 38497), (42, 38506), (45, 38545), (46, 38548), (48, 38575), (52, 38602), (55, 38614), (64, 38668), (67, 38704), (73, 38755), (78, 38803), (94, 38911), (99, 38950), (103, 38992), (109, 39031), (119, 39127), (120, 39133),

Gene: Bench\_54 Start: 37695, Stop: 38576, Start Num: 7

Candidate Starts for Bench\_54:

(Start: 7 @37695 has 130 MA's), (Start: 12 @37707 has 1 MA's), (Start: 17 @37737 has 1 MA's), (21, 37794), (32, 37875), (36, 37899), (40, 37920), (41, 37932), (42, 37941), (45, 37980), (46, 37983), (48, 38010), (52, 38037), (55, 38049), (64, 38103), (67, 38139), (73, 38190), (78, 38238), (94, 38346), (99, 38385), (103, 38427), (109, 38466), (119, 38562), (120, 38568),

Gene: BigBubba\_53 Start: 37736, Stop: 38617, Start Num: 7

Candidate Starts for BigBubba\_53:

(Start: 7 @37736 has 130 MA's), (Start: 12 @37748 has 1 MA's), (Start: 17 @37778 has 1 MA's), (21, 37835), (32, 37916), (36, 37940), (40, 37961), (41, 37973), (42, 37982), (45, 38021), (46, 38024), (48, 38051), (52, 38078), (55, 38090), (64, 38144), (67, 38180), (73, 38231), (78, 38279), (94, 38387), (99, 38426), (103, 38468), (109, 38507), (119, 38603), (120, 38609),

Gene: BilboSwaggins\_51 Start: 38365, Stop: 39246, Start Num: 7

Candidate Starts for BilboSwaggins\_51:

(Start: 7 @38365 has 130 MA's), (Start: 12 @38377 has 1 MA's), (Start: 17 @38407 has 1 MA's), (21, 38464), (32, 38545), (36, 38569), (40, 38590), (41, 38602), (42, 38611), (45, 38650), (46, 38653), (48, 38680), (52, 38707), (55, 38719), (64, 38773), (67, 38809), (73, 38860), (78, 38908), (94, 39016), (99, 39055), (103, 39097), (109, 39136), (119, 39232), (120, 39238),

Gene: Bogg\_52 Start: 37009, Stop: 37890, Start Num: 7

Candidate Starts for Bogg\_52:

(Start: 7 @37009 has 130 MA's), (Start: 12 @37021 has 1 MA's), (Start: 17 @37051 has 1 MA's), (21, 37108), (32, 37189), (36, 37213), (40, 37234), (41, 37246), (42, 37255), (45, 37294), (46, 37297), (48, 37324), (52, 37351), (55, 37363), (64, 37417), (67, 37453), (73, 37504), (78, 37552), (94, 37660), (99, 37699), (103, 37741), (109, 37780), (119, 37876), (120, 37882),

Gene: Brewer\_47 Start: 36525, Stop: 37406, Start Num: 7

Candidate Starts for Brewer\_47:

(Start: 7 @36525 has 130 MA's), (Start: 12 @36537 has 1 MA's), (Start: 17 @36567 has 1 MA's), (21, 36624), (32, 36705), (36, 36729), (40, 36750), (41, 36762), (42, 36771), (45, 36810), (46, 36813), (48, 36840), (52, 36867), (55, 36879), (64, 36933), (67, 36969), (73, 37020), (78, 37068), (94, 37176), (99, 37215), (103, 37257), (109, 37296), (119, 37392), (120, 37398),

Gene: Bruin\_48 Start: 36604, Stop: 37485, Start Num: 7

Candidate Starts for Bruin\_48:

(Start: 7 @36604 has 130 MA's), (Start: 12 @36616 has 1 MA's), (Start: 17 @36646 has 1 MA's), (21, 36703), (32, 36784), (36, 36808), (40, 36829), (41, 36841), (42, 36850), (45, 36889), (46, 36892), (48, 36919), (52, 36946), (55, 36958), (64, 37012), (67, 37048), (73, 37099), (78, 37147), (94, 37255), (99, 37294), (103, 37336), (109, 37375), (119, 37471), (120, 37477),

Gene: Buck\_53 Start: 38311, Stop: 39192, Start Num: 7

Candidate Starts for Buck\_53:

(Start: 7 @38311 has 130 MA's), (Start: 12 @38323 has 1 MA's), (Start: 17 @38353 has 1 MA's), (21, 38410), (32, 38491), (36, 38515), (40, 38536), (41, 38548), (42, 38557), (45, 38596), (46, 38599), (48, 38626), (52, 38653), (55, 38665), (64, 38719), (67, 38755), (73, 38806), (78, 38854), (94, 38962), (99, 39001), (103, 39043), (109, 39082), (119, 39178), (120, 39184),

Gene: Budgie\_60 Start: 38853, Stop: 39737, Start Num: 7

Candidate Starts for Budgie\_60:

(Start: 7 @38853 has 130 MA's), (Start: 12 @38865 has 1 MA's), (Start: 17 @38895 has 1 MA's), (21, 38952), (30, 39024), (32, 39033), (36, 39057), (40, 39078), (41, 39090), (45, 39138), (46, 39141), (48, 39168), (52, 39195), (55, 39207), (67, 39297), (73, 39348), (78, 39396), (91, 39465), (94, 39504), (103, 39585), (109, 39624),

Gene: BugsBunny\_53 Start: 38142, Stop: 39023, Start Num: 7

Candidate Starts for BugsBunny\_53:

(Start: 7 @38142 has 130 MA's), (Start: 12 @38154 has 1 MA's), (Start: 17 @38184 has 1 MA's), (21, 38241), (32, 38322), (36, 38346), (40, 38367), (41, 38379), (42, 38388), (45, 38427), (46, 38430), (48, 38457), (52, 38484), (55, 38496), (64, 38550), (67, 38586), (73, 38637), (78, 38685), (94, 38793), (99, 38832), (103, 38874), (109, 38913), (119, 39009), (120, 39015),

Gene: Cactus\_54 Start: 37084, Stop: 37965, Start Num: 7

Candidate Starts for Cactus\_54:

(Start: 7 @37084 has 130 MA's), (Start: 12 @37096 has 1 MA's), (Start: 17 @37126 has 1 MA's), (21, 37183), (32, 37264), (36, 37288), (40, 37309), (41, 37321), (42, 37330), (45, 37369), (46, 37372), (48, 37399), (52, 37426), (55, 37438), (64, 37492), (67, 37528), (73, 37579), (78, 37627), (94, 37735), (99, 37774), (103, 37816), (109, 37855), (119, 37951), (120, 37957),

Gene: Camerico\_75 Start: 60592, Stop: 59744, Start Num: 3

Candidate Starts for Camerico\_75:

(Start: 3 @60592 has 1 MA's), (Start: 14 @60535 has 1 MA's), (19, 60466), (31, 60397), (53, 60232), (57, 60214), (58, 60208), (59, 60202), (73, 60085), (79, 60037), (83, 60013), (89, 59989), (117, 59755),

Gene: ChosenOne\_53 Start: 37384, Stop: 38265, Start Num: 7

Candidate Starts for ChosenOne\_53:

(Start: 7 @37384 has 130 MA's), (Start: 12 @37396 has 1 MA's), (Start: 17 @37426 has 1 MA's), (21, 37483), (32, 37564), (36, 37588), (40, 37609), (41, 37621), (42, 37630), (45, 37669), (46, 37672), (48, 37699), (52, 37726), (55, 37738), (64, 37792), (67, 37828), (73, 37879), (78, 37927), (94, 38035), (99, 38074), (103, 38116), (109, 38155), (119, 38251), (120, 38257),

Gene: ChotaBhai\_52 Start: 37406, Stop: 38287, Start Num: 7

Candidate Starts for ChotaBhai\_52:

(Start: 7 @37406 has 130 MA's), (Start: 12 @37418 has 1 MA's), (Start: 17 @37448 has 1 MA's), (21, 37505), (28, 37571), (32, 37586), (36, 37610), (40, 37631), (41, 37643), (42, 37652), (45, 37691), (46, 37694), (48, 37721), (52, 37748), (55, 37760), (64, 37814), (67, 37850), (73, 37901), (78, 37949), (94,

38057), (99, 38096), (103, 38138), (109, 38177), (119, 38273), (120, 38279),

Gene: Cjw1\_52 Start: 38785, Stop: 39666, Start Num: 7

Candidate Starts for Cjw1\_52:

(Start: 7 @38785 has 130 MA's), (Start: 12 @38797 has 1 MA's), (Start: 17 @38827 has 1 MA's), (21, 38884), (32, 38965), (36, 38989), (40, 39010), (41, 39022), (42, 39031), (45, 39070), (46, 39073), (48, 39100), (52, 39127), (55, 39139), (64, 39193), (67, 39229), (73, 39280), (78, 39328), (94, 39436), (99, 39475), (103, 39517), (109, 39556), (119, 39652), (120, 39658),

Gene: Command613\_54 Start: 38123, Stop: 39004, Start Num: 7

Candidate Starts for Command613\_54:

(Start: 7 @38123 has 130 MA's), (Start: 12 @38135 has 1 MA's), (Start: 17 @38165 has 1 MA's), (21, 38222), (32, 38303), (36, 38327), (40, 38348), (41, 38360), (42, 38369), (45, 38408), (46, 38411), (48, 38438), (52, 38465), (55, 38477), (64, 38531), (67, 38567), (73, 38618), (78, 38666), (94, 38774), (99, 38813), (103, 38855), (109, 38894), (119, 38990), (120, 38996),

Gene: Contagion\_49 Start: 36885, Stop: 37766, Start Num: 7

Candidate Starts for Contagion\_49:

(Start: 7 @36885 has 130 MA's), (Start: 12 @36897 has 1 MA's), (Start: 17 @36927 has 1 MA's), (21, 36984), (32, 37065), (36, 37089), (40, 37110), (41, 37122), (42, 37131), (45, 37170), (46, 37173), (48, 37200), (52, 37227), (55, 37239), (64, 37293), (67, 37329), (73, 37380), (78, 37428), (94, 37536), (99, 37575), (103, 37617), (109, 37656), (119, 37752), (120, 37758),

Gene: Cookies\_49 Start: 37256, Stop: 38137, Start Num: 7

Candidate Starts for Cookies\_49:

(Start: 7 @37256 has 130 MA's), (Start: 12 @37268 has 1 MA's), (Start: 17 @37298 has 1 MA's), (21, 37355), (32, 37436), (36, 37460), (40, 37481), (41, 37493), (42, 37502), (45, 37541), (46, 37544), (48, 37571), (52, 37598), (55, 37610), (64, 37664), (67, 37700), (73, 37751), (78, 37799), (94, 37907), (99, 37946), (103, 37988), (109, 38027), (119, 38123), (120, 38129),

Gene: CrystalP\_52 Start: 38365, Stop: 39246, Start Num: 7

Candidate Starts for CrystalP\_52:

(Start: 7 @38365 has 130 MA's), (Start: 12 @38377 has 1 MA's), (Start: 17 @38407 has 1 MA's), (21, 38464), (32, 38545), (36, 38569), (40, 38590), (41, 38602), (42, 38611), (45, 38650), (46, 38653), (48, 38680), (52, 38707), (55, 38719), (64, 38773), (67, 38809), (73, 38860), (78, 38908), (94, 39016), (99, 39055), (103, 39097), (109, 39136), (119, 39232), (120, 39238),

Gene: Czyszczone1\_53 Start: 37594, Stop: 38475, Start Num: 7

Candidate Starts for Czyszczone1\_53:

(Start: 7 @37594 has 130 MA's), (Start: 12 @37606 has 1 MA's), (Start: 17 @37636 has 1 MA's), (21, 37693), (32, 37774), (36, 37798), (40, 37819), (41, 37831), (42, 37840), (45, 37879), (46, 37882), (48, 37909), (52, 37936), (55, 37948), (64, 38002), (67, 38038), (73, 38089), (78, 38137), (94, 38245), (99, 38284), (103, 38326), (109, 38365), (119, 38461), (120, 38467),

Gene: Daikon\_53 Start: 38215, Stop: 39096, Start Num: 7

Candidate Starts for Daikon\_53:

(Start: 7 @38215 has 130 MA's), (Start: 12 @38227 has 1 MA's), (Start: 17 @38257 has 1 MA's), (21, 38314), (32, 38395), (36, 38419), (40, 38440), (41, 38452), (42, 38461), (45, 38500), (46, 38503), (48, 38530), (52, 38557), (55, 38569), (64, 38623), (67, 38659), (73, 38710), (78, 38758), (94, 38866), (99, 38905), (103, 38947), (109, 38986), (119, 39082), (120, 39088),

Gene: DoctorDiddles\_52 Start: 37442, Stop: 38323, Start Num: 7

Candidate Starts for DoctorDiddles\_52:

(Start: 7 @37442 has 130 MA's), (Start: 12 @37454 has 1 MA's), (Start: 17 @37484 has 1 MA's), (21, 37541), (32, 37622), (36, 37646), (40, 37667), (41, 37679), (42, 37688), (45, 37727), (46, 37730), (48, 37757), (52, 37784), (55, 37796), (64, 37850), (67, 37886), (73, 37937), (78, 37985), (94, 38093), (99, 38132), (103, 38174), (109, 38213), (119, 38309), (120, 38315),

Gene: DrDrey\_52 Start: 38513, Stop: 39394, Start Num: 7

Candidate Starts for DrDrey\_52:

(Start: 7 @38513 has 130 MA's), (Start: 12 @38525 has 1 MA's), (Start: 17 @38555 has 1 MA's), (21, 38612), (32, 38693), (36, 38717), (40, 38738), (41, 38750), (42, 38759), (45, 38798), (46, 38801), (48, 38828), (52, 38855), (55, 38867), (64, 38921), (67, 38957), (73, 39008), (78, 39056), (94, 39164), (99, 39203), (103, 39245), (109, 39284), (119, 39380), (120, 39386),

Gene: Dumbo\_52 Start: 37289, Stop: 38170, Start Num: 7

Candidate Starts for Dumbo\_52:

(Start: 7 @37289 has 130 MA's), (Start: 12 @37301 has 1 MA's), (Start: 17 @37331 has 1 MA's), (21, 37388), (32, 37469), (36, 37493), (40, 37514), (41, 37526), (42, 37535), (45, 37574), (46, 37577), (48, 37604), (52, 37631), (55, 37643), (64, 37697), (67, 37733), (73, 37784), (78, 37832), (94, 37940), (99, 37979), (103, 38021), (109, 38060), (119, 38156), (120, 38162),

Gene: Dusk\_50 Start: 37586, Stop: 38467, Start Num: 7

Candidate Starts for Dusk\_50:

(Start: 7 @37586 has 130 MA's), (Start: 12 @37598 has 1 MA's), (Start: 17 @37628 has 1 MA's), (21, 37685), (32, 37766), (36, 37790), (40, 37811), (41, 37823), (42, 37832), (45, 37871), (46, 37874), (48, 37901), (52, 37928), (55, 37940), (64, 37994), (67, 38030), (73, 38081), (78, 38129), (94, 38237), (99, 38276), (103, 38318), (109, 38357), (119, 38453), (120, 38459),

Gene: Easy2Say\_53 Start: 38827, Stop: 39708, Start Num: 7

Candidate Starts for Easy2Say\_53:

(Start: 7 @38827 has 130 MA's), (Start: 12 @38839 has 1 MA's), (Start: 17 @38869 has 1 MA's), (21, 38926), (32, 39007), (36, 39031), (40, 39052), (41, 39064), (42, 39073), (45, 39112), (46, 39115), (48, 39142), (52, 39169), (55, 39181), (64, 39235), (67, 39271), (73, 39322), (78, 39370), (94, 39478), (99, 39517), (103, 39559), (109, 39598), (119, 39694), (120, 39700),

Gene: Elite2014\_52 Start: 37383, Stop: 38264, Start Num: 7

Candidate Starts for Elite2014\_52:

(Start: 7 @37383 has 130 MA's), (Start: 12 @37395 has 1 MA's), (Start: 17 @37425 has 1 MA's), (21, 37482), (32, 37563), (36, 37587), (40, 37608), (41, 37620), (42, 37629), (45, 37668), (46, 37671), (48, 37698), (52, 37725), (55, 37737), (64, 37791), (67, 37827), (73, 37878), (78, 37926), (94, 38034), (99, 38073), (103, 38115), (109, 38154), (119, 38250), (120, 38256),

Gene: Elph10\_52 Start: 37092, Stop: 37973, Start Num: 7

Candidate Starts for Elph10\_52:

(Start: 7 @37092 has 130 MA's), (Start: 12 @37104 has 1 MA's), (Start: 17 @37134 has 1 MA's), (21, 37191), (32, 37272), (36, 37296), (40, 37317), (41, 37329), (42, 37338), (45, 37377), (46, 37380), (48, 37407), (52, 37434), (55, 37446), (64, 37500), (67, 37536), (73, 37587), (78, 37635), (94, 37743), (99, 37782), (103, 37824), (109, 37863), (119, 37959), (120, 37965),

Gene: Emmina\_52 Start: 37290, Stop: 38171, Start Num: 7

Candidate Starts for Emmina\_52:

(Start: 7 @37290 has 130 MA's), (Start: 12 @37302 has 1 MA's), (Start: 17 @37332 has 1 MA's), (21, 37389), (32, 37470), (36, 37494), (40, 37515), (41, 37527), (42, 37536), (45, 37575), (46, 37578), (48, 37605), (52, 37632), (55, 37644), (64, 37698), (67, 37734), (73, 37785), (78, 37833), (94, 37941), (99, 37980), (103, 38022), (109, 38061), (119, 38157), (120, 38163),

Gene: Eureka\_50 Start: 37854, Stop: 38735, Start Num: 7

Candidate Starts for Eureka\_50:

(Start: 7 @37854 has 130 MA's), (Start: 12 @37866 has 1 MA's), (Start: 17 @37896 has 1 MA's), (21, 37953), (32, 38034), (36, 38058), (40, 38079), (41, 38091), (42, 38100), (45, 38139), (46, 38142), (48, 38169), (52, 38196), (55, 38208), (64, 38262), (67, 38298), (73, 38349), (78, 38397), (94, 38505), (99, 38544), (103, 38586), (109, 38625), (119, 38721), (120, 38727),

Gene: FairyPath\_52 Start: 38206, Stop: 39087, Start Num: 7

Candidate Starts for FairyPath\_52:

(Start: 7 @38206 has 130 MA's), (Start: 12 @38218 has 1 MA's), (Start: 17 @38248 has 1 MA's), (21, 38305), (32, 38386), (36, 38410), (40, 38431), (41, 38443), (42, 38452), (45, 38491), (46, 38494), (48, 38521), (52, 38548), (55, 38560), (64, 38614), (67, 38650), (73, 38701), (78, 38749), (94, 38857), (99, 38896), (103, 38938), (109, 38977), (119, 39073), (120, 39079),

Gene: Filch\_53 Start: 37315, Stop: 38196, Start Num: 7

Candidate Starts for Filch\_53:

(Start: 7 @37315 has 130 MA's), (Start: 12 @37327 has 1 MA's), (Start: 17 @37357 has 1 MA's), (21, 37414), (32, 37495), (36, 37519), (40, 37540), (41, 37552), (42, 37561), (45, 37600), (46, 37603), (48, 37630), (52, 37657), (55, 37669), (64, 37723), (67, 37759), (73, 37810), (78, 37858), (94, 37966), (99, 38005), (103, 38047), (109, 38086), (119, 38182), (120, 38188),

Gene: FireRed\_55 Start: 38581, Stop: 39462, Start Num: 7

Candidate Starts for FireRed\_55:

(Start: 7 @38581 has 130 MA's), (Start: 12 @38593 has 1 MA's), (Start: 17 @38623 has 1 MA's), (21, 38680), (32, 38761), (36, 38785), (40, 38806), (41, 38818), (42, 38827), (45, 38866), (46, 38869), (48, 38896), (52, 38923), (55, 38935), (64, 38989), (67, 39025), (73, 39076), (78, 39124), (94, 39232), (99, 39271), (103, 39313), (109, 39352), (119, 39448), (120, 39454),

Gene: Flypotenuse\_47 Start: 37078, Stop: 37959, Start Num: 7

Candidate Starts for Flypotenuse\_47:

(Start: 7 @37078 has 130 MA's), (Start: 12 @37090 has 1 MA's), (Start: 17 @37120 has 1 MA's), (21, 37177), (32, 37258), (36, 37282), (40, 37303), (41, 37315), (42, 37324), (45, 37363), (46, 37366), (48, 37393), (52, 37420), (55, 37432), (64, 37486), (67, 37522), (73, 37573), (78, 37621), (94, 37729), (99, 37768), (103, 37810), (109, 37849), (119, 37945), (120, 37951),

Gene: FoghornLeghorn\_47 Start: 36088, Stop: 36969, Start Num: 7

Candidate Starts for FoghornLeghorn\_47:

(Start: 7 @36088 has 130 MA's), (Start: 12 @36100 has 1 MA's), (Start: 17 @36130 has 1 MA's), (21, 36187), (32, 36268), (36, 36292), (40, 36313), (41, 36325), (42, 36334), (45, 36373), (46, 36376), (48, 36403), (52, 36430), (55, 36442), (64, 36496), (67, 36532), (73, 36583), (78, 36631), (94, 36739), (99, 36778), (103, 36820), (109, 36859), (119, 36955), (120, 36961),

Gene: GMA3\_75 Start: 57620, Stop: 56823, Start Num: 14

Candidate Starts for GMA3\_75:

(Start: 14 @57620 has 1 MA's), (24, 57515), (41, 57422), (69, 57200), (79, 57119), (96, 57014), (97, 57008), (107, 56921), (109, 56915), (117, 56834),

Gene: Gage\_55 Start: 37863, Stop: 38744, Start Num: 7

Candidate Starts for Gage\_55:

(Start: 7 @37863 has 130 MA's), (Start: 12 @37875 has 1 MA's), (Start: 17 @37905 has 1 MA's), (21, 37962), (32, 38043), (36, 38067), (40, 38088), (41, 38100), (42, 38109), (45, 38148), (46, 38151), (48, 38178), (52, 38205), (55, 38217), (64, 38271), (67, 38307), (73, 38358), (78, 38406), (94, 38514), (99,

38553), (103, 38595), (109, 38634), (119, 38730), (120, 38736),

Gene: Gator\_50 Start: 38217, Stop: 39098, Start Num: 7

Candidate Starts for Gator\_50:

(Start: 7 @38217 has 130 MA's), (Start: 12 @38229 has 1 MA's), (Start: 17 @38259 has 1 MA's), (21, 38316), (32, 38397), (36, 38421), (40, 38442), (41, 38454), (42, 38463), (45, 38502), (46, 38505), (48, 38532), (52, 38559), (55, 38571), (64, 38625), (67, 38661), (73, 38712), (78, 38760), (94, 38868), (99, 38907), (103, 38949), (109, 38988), (119, 39084), (120, 39090),

Gene: Gemini\_56 Start: 38380, Stop: 39261, Start Num: 7

Candidate Starts for Gemini\_56:

(Start: 7 @38380 has 130 MA's), (Start: 12 @38392 has 1 MA's), (Start: 17 @38422 has 1 MA's), (21, 38479), (32, 38560), (36, 38584), (40, 38605), (41, 38617), (42, 38626), (45, 38665), (46, 38668), (48, 38695), (52, 38722), (55, 38734), (64, 38788), (67, 38824), (73, 38875), (78, 38923), (94, 39031), (99, 39070), (103, 39112), (109, 39151), (119, 39247), (120, 39253),

Gene: Gibbles\_68 Start: 56757, Stop: 55996, Start Num: 16

Candidate Starts for Gibbles\_68:

(1, 56847), (4, 56817), (6, 56799), (Start: 16 @56757 has 4 MA's), (20, 56688), (38, 56586), (39, 56583), (49, 56499), (51, 56481), (56, 56460), (57, 56451), (60, 56433), (63, 56412), (72, 56331), (80, 56274), (101, 56142), (105, 56118), (108, 56091), (111, 56076), (115, 56040), (116, 56034), (117, 56007), (118, 56001),

Gene: Glexan\_50 Start: 38205, Stop: 39086, Start Num: 7

Candidate Starts for Glexan\_50:

(Start: 7 @38205 has 130 MA's), (Start: 12 @38217 has 1 MA's), (Start: 17 @38247 has 1 MA's), (21, 38304), (32, 38385), (36, 38409), (40, 38430), (41, 38442), (42, 38451), (45, 38490), (46, 38493), (48, 38520), (52, 38547), (55, 38559), (64, 38613), (67, 38649), (73, 38700), (78, 38748), (94, 38856), (99, 38895), (103, 38937), (109, 38976), (119, 39072), (120, 39078),

Gene: Gmala1\_67 Start: 54450, Stop: 53653, Start Num: 15

Candidate Starts for Gmala1\_67:

(15, 54450), (31, 54309), (37, 54273), (66, 54057), (77, 53961), (81, 53940), (83, 53925), (97, 53838), (108, 53748), (117, 53664),

Gene: Goku\_50 Start: 37583, Stop: 38464, Start Num: 7

Candidate Starts for Goku\_50:

(Start: 7 @37583 has 130 MA's), (Start: 12 @37595 has 1 MA's), (Start: 17 @37625 has 1 MA's), (21, 37682), (32, 37763), (36, 37787), (40, 37808), (41, 37820), (42, 37829), (45, 37868), (46, 37871), (48, 37898), (52, 37925), (55, 37937), (64, 37991), (67, 38027), (73, 38078), (78, 38126), (94, 38234), (99, 38273), (103, 38315), (109, 38354), (119, 38450), (120, 38456),

Gene: GoldenSpark\_55 Start: 37863, Stop: 38744, Start Num: 7

Candidate Starts for GoldenSpark\_55:

(Start: 7 @37863 has 130 MA's), (Start: 12 @37875 has 1 MA's), (Start: 17 @37905 has 1 MA's), (21, 37962), (32, 38043), (36, 38067), (40, 38088), (41, 38100), (42, 38109), (45, 38148), (46, 38151), (48, 38178), (52, 38205), (55, 38217), (64, 38271), (67, 38307), (73, 38358), (78, 38406), (94, 38514), (99, 38553), (103, 38595), (109, 38634), (119, 38730), (120, 38736),

Gene: Goldilocks\_54 Start: 37365, Stop: 38246, Start Num: 7

Candidate Starts for Goldilocks\_54:

(Start: 7 @37365 has 130 MA's), (Start: 12 @37377 has 1 MA's), (Start: 17 @37407 has 1 MA's), (21, 37464), (32, 37545), (36, 37569), (40, 37590), (41, 37602), (42, 37611), (45, 37650), (46, 37653), (48,

37680), (52, 37707), (55, 37719), (64, 37773), (67, 37809), (73, 37860), (78, 37908), (94, 38016), (99, 38055), (103, 38097), (109, 38136), (119, 38232), (120, 38238),

Gene: GooberAzure\_55 Start: 37863, Stop: 38744, Start Num: 7  
Candidate Starts for GooberAzure\_55:

(Start: 7 @37863 has 130 MA's), (Start: 12 @37875 has 1 MA's), (Start: 17 @37905 has 1 MA's), (21, 37962), (32, 38043), (36, 38067), (40, 38088), (41, 38100), (42, 38109), (45, 38148), (46, 38151), (48, 38178), (52, 38205), (55, 38217), (64, 38271), (67, 38307), (73, 38358), (78, 38406), (94, 38514), (99, 38553), (103, 38595), (109, 38634), (119, 38730), (120, 38736),

Gene: GordDuk1\_71 Start: 55008, Stop: 54211, Start Num: 15  
Candidate Starts for GordDuk1\_71:

(15, 55008), (29, 54879), (31, 54867), (37, 54831), (66, 54615), (81, 54498), (83, 54483), (97, 54396), (108, 54306), (117, 54222),

Gene: GordTnk2\_72 Start: 55169, Stop: 54372, Start Num: 15  
Candidate Starts for GordTnk2\_72:

(15, 55169), (31, 55028), (37, 54992), (66, 54776), (81, 54659), (83, 54644), (97, 54557), (108, 54467), (117, 54383),

Gene: Greep\_56 Start: 38873, Stop: 39754, Start Num: 7  
Candidate Starts for Greep\_56:

(Start: 7 @38873 has 130 MA's), (Start: 12 @38885 has 1 MA's), (Start: 17 @38915 has 1 MA's), (21, 38972), (32, 39053), (36, 39077), (40, 39098), (41, 39110), (42, 39119), (45, 39158), (46, 39161), (48, 39188), (52, 39215), (55, 39227), (64, 39281), (67, 39317), (73, 39368), (78, 39416), (94, 39524), (99, 39563), (103, 39605), (109, 39644), (119, 39740), (120, 39746),

Gene: HanKaySha\_51 Start: 37173, Stop: 38054, Start Num: 7  
Candidate Starts for HanKaySha\_51:

(Start: 7 @37173 has 130 MA's), (Start: 12 @37185 has 1 MA's), (Start: 17 @37215 has 1 MA's), (21, 37272), (32, 37353), (36, 37377), (40, 37398), (41, 37410), (42, 37419), (45, 37458), (46, 37461), (48, 37488), (52, 37515), (55, 37527), (64, 37581), (67, 37617), (73, 37668), (78, 37716), (94, 37824), (99, 37863), (103, 37905), (109, 37944), (119, 38040), (120, 38046),

Gene: Harella\_52 Start: 38721, Stop: 39602, Start Num: 7  
Candidate Starts for Harella\_52:

(Start: 7 @38721 has 130 MA's), (Start: 12 @38733 has 1 MA's), (Start: 17 @38763 has 1 MA's), (21, 38820), (32, 38901), (36, 38925), (40, 38946), (41, 38958), (42, 38967), (45, 39006), (46, 39009), (48, 39036), (52, 39063), (55, 39075), (64, 39129), (67, 39165), (73, 39216), (78, 39264), (94, 39372), (99, 39411), (103, 39453), (109, 39492), (119, 39588), (120, 39594),

Gene: Henry\_51 Start: 37805, Stop: 38686, Start Num: 7  
Candidate Starts for Henry\_51:

(Start: 7 @37805 has 130 MA's), (Start: 12 @37817 has 1 MA's), (Start: 17 @37847 has 1 MA's), (21, 37904), (32, 37985), (36, 38009), (40, 38030), (41, 38042), (42, 38051), (45, 38090), (46, 38093), (48, 38120), (52, 38147), (55, 38159), (64, 38213), (67, 38249), (73, 38300), (78, 38348), (94, 38456), (99, 38495), (103, 38537), (109, 38576), (119, 38672), (120, 38678),

Gene: Highbury\_53 Start: 37462, Stop: 38343, Start Num: 7  
Candidate Starts for Highbury\_53:

(Start: 7 @37462 has 130 MA's), (Start: 12 @37474 has 1 MA's), (Start: 17 @37504 has 1 MA's), (21, 37561), (32, 37642), (36, 37666), (40, 37687), (41, 37699), (42, 37708), (45, 37747), (46, 37750), (48, 37777), (52, 37804), (55, 37816), (64, 37870), (67, 37906), (73, 37957), (78, 38005), (94, 38113), (99,

38152), (103, 38194), (109, 38233), (119, 38329), (120, 38335),

Gene: Holt\_57 Start: 38277, Stop: 39158, Start Num: 7

Candidate Starts for Holt\_57:

(Start: 7 @38277 has 130 MA's), (Start: 12 @38289 has 1 MA's), (Start: 17 @38319 has 1 MA's), (21, 38376), (32, 38457), (36, 38481), (40, 38502), (41, 38514), (42, 38523), (45, 38562), (46, 38565), (48, 38592), (52, 38619), (55, 38631), (64, 38685), (67, 38721), (73, 38772), (78, 38820), (94, 38928), (99, 38967), (103, 39009), (109, 39048), (119, 39144), (120, 39150),

Gene: Hoonter\_55 Start: 37863, Stop: 38744, Start Num: 7

Candidate Starts for Hoonter\_55:

(Start: 7 @37863 has 130 MA's), (Start: 12 @37875 has 1 MA's), (Start: 17 @37905 has 1 MA's), (21, 37962), (32, 38043), (36, 38067), (40, 38088), (41, 38100), (42, 38109), (45, 38148), (46, 38151), (48, 38178), (52, 38205), (55, 38217), (64, 38271), (67, 38307), (73, 38358), (78, 38406), (94, 38514), (99, 38553), (103, 38595), (109, 38634), (119, 38730), (120, 38736),

Gene: Hokey\_52 Start: 37707, Stop: 38588, Start Num: 7

Candidate Starts for Hokey\_52:

(Start: 7 @37707 has 130 MA's), (Start: 12 @37719 has 1 MA's), (Start: 17 @37749 has 1 MA's), (21, 37806), (32, 37887), (36, 37911), (40, 37932), (41, 37944), (42, 37953), (45, 37992), (46, 37995), (48, 38022), (52, 38049), (55, 38061), (64, 38115), (67, 38151), (73, 38202), (78, 38250), (94, 38358), (99, 38397), (103, 38439), (109, 38478), (119, 38574), (120, 38580),

Gene: HufflyPuff\_54 Start: 38537, Stop: 39418, Start Num: 7

Candidate Starts for HufflyPuff\_54:

(Start: 7 @38537 has 130 MA's), (Start: 12 @38549 has 1 MA's), (Start: 17 @38579 has 1 MA's), (21, 38636), (32, 38717), (36, 38741), (40, 38762), (41, 38774), (42, 38783), (45, 38822), (46, 38825), (48, 38852), (52, 38879), (55, 38891), (64, 38945), (67, 38981), (73, 39032), (78, 39080), (94, 39188), (99, 39227), (103, 39269), (109, 39308), (119, 39404), (120, 39410),

Gene: IHOP\_50 Start: 37929, Stop: 38810, Start Num: 7

Candidate Starts for IHOP\_50:

(Start: 7 @37929 has 130 MA's), (Start: 12 @37941 has 1 MA's), (Start: 17 @37971 has 1 MA's), (21, 38028), (32, 38109), (36, 38133), (40, 38154), (41, 38166), (42, 38175), (45, 38214), (46, 38217), (48, 38244), (52, 38271), (55, 38283), (64, 38337), (67, 38373), (73, 38424), (78, 38472), (94, 38580), (99, 38619), (103, 38661), (109, 38700), (119, 38796), (120, 38802),

Gene: Icee\_52 Start: 37531, Stop: 38412, Start Num: 7

Candidate Starts for Icee\_52:

(Start: 7 @37531 has 130 MA's), (Start: 12 @37543 has 1 MA's), (Start: 17 @37573 has 1 MA's), (21, 37630), (32, 37711), (36, 37735), (40, 37756), (41, 37768), (42, 37777), (45, 37816), (46, 37819), (48, 37846), (52, 37873), (55, 37885), (64, 37939), (67, 37975), (73, 38026), (78, 38074), (94, 38182), (99, 38221), (103, 38263), (109, 38302), (119, 38398), (120, 38404),

Gene: Inca\_49 Start: 36454, Stop: 37335, Start Num: 7

Candidate Starts for Inca\_49:

(Start: 7 @36454 has 130 MA's), (Start: 12 @36466 has 1 MA's), (Start: 17 @36496 has 1 MA's), (21, 36553), (32, 36634), (36, 36658), (40, 36679), (41, 36691), (42, 36700), (45, 36739), (46, 36742), (48, 36769), (52, 36796), (55, 36808), (64, 36862), (67, 36898), (73, 36949), (78, 36997), (94, 37105), (99, 37144), (103, 37186), (109, 37225), (119, 37321), (120, 37327),

Gene: JakeTheSnake\_36 Start: 25235, Stop: 25999, Start Num: 25

Candidate Starts for JakeTheSnake\_36:

(8, 25094), (25, 25235), (47, 25409), (50, 25421), (70, 25568), (74, 25616), (84, 25676), (85, 25682), (86, 25685), (87, 25691), (92, 25724), (95, 25748), (98, 25766), (102, 25817), (121, 25976),

Gene: JeTaime\_53 Start: 38357, Stop: 39238, Start Num: 7

Candidate Starts for JeTaime\_53:

(Start: 7 @38357 has 130 MA's), (Start: 12 @38369 has 1 MA's), (Start: 17 @38399 has 1 MA's), (21, 38456), (32, 38537), (36, 38561), (40, 38582), (41, 38594), (42, 38603), (45, 38642), (46, 38645), (48, 38672), (52, 38699), (55, 38711), (64, 38765), (67, 38801), (73, 38852), (78, 38900), (94, 39008), (99, 39047), (103, 39089), (109, 39128), (119, 39224), (120, 39230),

Gene: Jumbo\_69 Start: 59172, Stop: 58372, Start Num: 14

Candidate Starts for Jumbo\_69:

(Start: 14 @59172 has 1 MA's), (54, 58866), (61, 58824), (68, 58764), (77, 58686), (88, 58626), (97, 58563), (105, 58500), (108, 58470), (112, 58440), (117, 58386),

Gene: Kampe\_71 Start: 57027, Stop: 56266, Start Num: 16

Candidate Starts for Kampe\_71:

(1, 57117), (4, 57087), (6, 57069), (Start: 16 @57027 has 4 MA's), (20, 56958), (38, 56856), (39, 56853), (49, 56769), (51, 56751), (56, 56730), (57, 56721), (60, 56703), (63, 56682), (72, 56601), (80, 56544), (101, 56412), (105, 56388), (108, 56361), (111, 56346), (115, 56310), (116, 56304), (117, 56277), (118, 56271),

Gene: Kanye\_48 Start: 37217, Stop: 38098, Start Num: 7

Candidate Starts for Kanye\_48:

(Start: 7 @37217 has 130 MA's), (Start: 12 @37229 has 1 MA's), (Start: 17 @37259 has 1 MA's), (21, 37316), (32, 37397), (36, 37421), (40, 37442), (41, 37454), (42, 37463), (45, 37502), (46, 37505), (48, 37532), (52, 37559), (55, 37571), (64, 37625), (67, 37661), (73, 37712), (78, 37760), (94, 37868), (99, 37907), (103, 37949), (109, 37988), (119, 38084), (120, 38090),

Gene: Kimchi\_55 Start: 37866, Stop: 38747, Start Num: 7

Candidate Starts for Kimchi\_55:

(Start: 7 @37866 has 130 MA's), (Start: 12 @37878 has 1 MA's), (Start: 17 @37908 has 1 MA's), (21, 37965), (32, 38046), (36, 38070), (40, 38091), (41, 38103), (42, 38112), (45, 38151), (46, 38154), (48, 38181), (52, 38208), (55, 38220), (64, 38274), (67, 38310), (73, 38361), (78, 38409), (94, 38517), (99, 38556), (103, 38598), (109, 38637), (119, 38733), (120, 38739),

Gene: Kostya\_53 Start: 38070, Stop: 38909, Start Num: 17

Candidate Starts for Kostya\_53:

(Start: 7 @38028 has 130 MA's), (Start: 12 @38040 has 1 MA's), (Start: 17 @38070 has 1 MA's), (21, 38127), (32, 38208), (36, 38232), (40, 38253), (41, 38265), (42, 38274), (45, 38313), (46, 38316), (48, 38343), (52, 38370), (55, 38382), (64, 38436), (67, 38472), (73, 38523), (78, 38571), (94, 38679), (99, 38718), (103, 38760), (109, 38799), (119, 38895), (120, 38901),

Gene: Kromp\_36 Start: 29237, Stop: 28317, Start Num: 5

Candidate Starts for Kromp\_36:

(Start: 5 @29237 has 1 MA's), (10, 29210), (18, 29132), (27, 29051), (65, 28787), (68, 28748), (71, 28712), (91, 28589), (109, 28427), (110, 28421), (113, 28397),

Gene: Lilac\_55 Start: 37492, Stop: 38373, Start Num: 7

Candidate Starts for Lilac\_55:

(Start: 7 @37492 has 130 MA's), (Start: 12 @37504 has 1 MA's), (Start: 17 @37534 has 1 MA's), (21, 37591), (32, 37672), (36, 37696), (40, 37717), (41, 37729), (42, 37738), (45, 37777), (46, 37780), (48, 37807), (52, 37834), (55, 37846), (64, 37900), (67, 37936), (73, 37987), (78, 38035), (94, 38143), (99,

38182), (103, 38224), (109, 38263), (119, 38359), (120, 38365),

Gene: Lilizi\_52 Start: 37166, Stop: 38047, Start Num: 7

Candidate Starts for Lilizi\_52:

(Start: 7 @37166 has 130 MA's), (Start: 12 @37178 has 1 MA's), (Start: 17 @37208 has 1 MA's), (21, 37265), (32, 37346), (36, 37370), (40, 37391), (41, 37403), (42, 37412), (45, 37451), (46, 37454), (48, 37481), (52, 37508), (55, 37520), (64, 37574), (67, 37610), (73, 37661), (78, 37709), (94, 37817), (99, 37856), (103, 37898), (109, 37937), (119, 38033), (120, 38039),

Gene: Lilpickle\_52 Start: 37383, Stop: 38264, Start Num: 7

Candidate Starts for Lilpickle\_52:

(Start: 7 @37383 has 130 MA's), (Start: 12 @37395 has 1 MA's), (Start: 17 @37425 has 1 MA's), (21, 37482), (32, 37563), (36, 37587), (40, 37608), (41, 37620), (42, 37629), (45, 37668), (46, 37671), (48, 37698), (52, 37725), (55, 37737), (64, 37791), (67, 37827), (73, 37878), (78, 37926), (94, 38034), (99, 38073), (103, 38115), (109, 38154), (119, 38250), (120, 38256),

Gene: Liveloughbron\_56 Start: 38667, Stop: 39548, Start Num: 7

Candidate Starts for Liveloughbron\_56:

(Start: 7 @38667 has 130 MA's), (Start: 12 @38679 has 1 MA's), (Start: 17 @38709 has 1 MA's), (21, 38766), (32, 38847), (36, 38871), (40, 38892), (41, 38904), (42, 38913), (45, 38952), (46, 38955), (48, 38982), (52, 39009), (55, 39021), (64, 39075), (67, 39111), (73, 39162), (78, 39210), (94, 39318), (99, 39357), (103, 39399), (109, 39438), (119, 39534), (120, 39540),

Gene: MISSy\_52 Start: 37590, Stop: 38471, Start Num: 7

Candidate Starts for MISSy\_52:

(Start: 7 @37590 has 130 MA's), (Start: 12 @37602 has 1 MA's), (Start: 17 @37632 has 1 MA's), (21, 37689), (32, 37770), (36, 37794), (40, 37815), (41, 37827), (42, 37836), (45, 37875), (46, 37878), (48, 37905), (52, 37932), (55, 37944), (64, 37998), (67, 38034), (73, 38085), (78, 38133), (94, 38241), (99, 38280), (103, 38322), (109, 38361), (119, 38457), (120, 38463),

Gene: MPhalcon\_52 Start: 37583, Stop: 38464, Start Num: 7

Candidate Starts for MPhalcon\_52:

(Start: 7 @37583 has 130 MA's), (Start: 12 @37595 has 1 MA's), (Start: 17 @37625 has 1 MA's), (21, 37682), (32, 37763), (36, 37787), (40, 37808), (41, 37820), (42, 37829), (45, 37868), (46, 37871), (48, 37898), (52, 37925), (55, 37937), (64, 37991), (67, 38027), (73, 38078), (78, 38126), (94, 38234), (99, 38273), (103, 38315), (109, 38354), (119, 38450), (120, 38456),

Gene: MadamMonkfish\_52 Start: 37107, Stop: 37988, Start Num: 7

Candidate Starts for MadamMonkfish\_52:

(Start: 7 @37107 has 130 MA's), (Start: 12 @37119 has 1 MA's), (Start: 17 @37149 has 1 MA's), (21, 37206), (32, 37287), (36, 37311), (40, 37332), (41, 37344), (42, 37353), (45, 37392), (46, 37395), (48, 37422), (52, 37449), (55, 37461), (64, 37515), (67, 37551), (73, 37602), (78, 37650), (94, 37758), (99, 37797), (103, 37839), (109, 37878), (119, 37974), (120, 37980),

Gene: Manda\_52 Start: 38388, Stop: 39269, Start Num: 7

Candidate Starts for Manda\_52:

(Start: 7 @38388 has 130 MA's), (Start: 12 @38400 has 1 MA's), (Start: 17 @38430 has 1 MA's), (21, 38487), (32, 38568), (36, 38592), (40, 38613), (41, 38625), (42, 38634), (45, 38673), (46, 38676), (48, 38703), (52, 38730), (55, 38742), (64, 38796), (67, 38832), (73, 38883), (78, 38931), (94, 39039), (99, 39078), (103, 39120), (109, 39159), (119, 39255), (120, 39261),

Gene: Marshmallow\_51 Start: 38363, Stop: 39244, Start Num: 7

Candidate Starts for Marshmallow\_51:

(Start: 7 @38363 has 130 MA's), (Start: 12 @38375 has 1 MA's), (Start: 17 @38405 has 1 MA's), (21, 38462), (32, 38543), (36, 38567), (40, 38588), (41, 38600), (42, 38609), (45, 38648), (46, 38651), (48, 38678), (52, 38705), (55, 38717), (64, 38771), (67, 38807), (73, 38858), (78, 38906), (94, 39014), (99, 39053), (103, 39095), (109, 39134), (119, 39230), (120, 39236),

Gene: Maxxinista\_55 Start: 37462, Stop: 38343, Start Num: 7

Candidate Starts for Maxxinista\_55:

(Start: 7 @37462 has 130 MA's), (Start: 12 @37474 has 1 MA's), (Start: 17 @37504 has 1 MA's), (21, 37561), (32, 37642), (36, 37666), (40, 37687), (41, 37699), (42, 37708), (45, 37747), (46, 37750), (48, 37777), (52, 37804), (55, 37816), (64, 37870), (67, 37906), (73, 37957), (78, 38005), (94, 38113), (99, 38152), (103, 38194), (109, 38233), (119, 38329), (120, 38335),

Gene: Mbo2\_72 Start: 53083, Stop: 52283, Start Num: 13

Candidate Starts for Mbo2\_72:

(2, 53146), (Start: 13 @53083 has 1 MA's), (23, 52990), (26, 52960), (35, 52900), (43, 52843), (50, 52786), (56, 52753), (57, 52744), (62, 52714), (70, 52642), (82, 52558), (83, 52549), (90, 52522), (93, 52489), (100, 52444), (107, 52381), (109, 52375), (117, 52294),

Gene: Mindy\_51 Start: 36971, Stop: 37852, Start Num: 7

Candidate Starts for Mindy\_51:

(Start: 7 @36971 has 130 MA's), (Start: 12 @36983 has 1 MA's), (Start: 17 @37013 has 1 MA's), (21, 37070), (32, 37151), (36, 37175), (40, 37196), (41, 37208), (42, 37217), (45, 37256), (46, 37259), (48, 37286), (52, 37313), (55, 37325), (64, 37379), (67, 37415), (73, 37466), (78, 37514), (94, 37622), (99, 37661), (103, 37703), (109, 37742), (119, 37838), (120, 37844),

Gene: Miniwave\_49 Start: 37424, Stop: 38305, Start Num: 7

Candidate Starts for Miniwave\_49:

(Start: 7 @37424 has 130 MA's), (Start: 12 @37436 has 1 MA's), (Start: 17 @37466 has 1 MA's), (21, 37523), (32, 37604), (36, 37628), (40, 37649), (41, 37661), (42, 37670), (45, 37709), (46, 37712), (48, 37739), (52, 37766), (55, 37778), (64, 37832), (67, 37868), (73, 37919), (78, 37967), (94, 38075), (99, 38114), (103, 38156), (109, 38195), (119, 38291), (120, 38297),

Gene: Misfit\_54 Start: 38602, Stop: 39483, Start Num: 7

Candidate Starts for Misfit\_54:

(Start: 7 @38602 has 130 MA's), (Start: 12 @38614 has 1 MA's), (Start: 17 @38644 has 1 MA's), (21, 38701), (32, 38782), (36, 38806), (40, 38827), (41, 38839), (42, 38848), (45, 38887), (46, 38890), (48, 38917), (52, 38944), (55, 38956), (64, 39010), (67, 39046), (73, 39097), (78, 39145), (94, 39253), (99, 39292), (103, 39334), (109, 39373), (119, 39469), (120, 39475),

Gene: Moldemort\_55 Start: 37980, Stop: 38861, Start Num: 7

Candidate Starts for Moldemort\_55:

(Start: 7 @37980 has 130 MA's), (Start: 12 @37992 has 1 MA's), (Start: 17 @38022 has 1 MA's), (21, 38079), (32, 38160), (36, 38184), (40, 38205), (41, 38217), (42, 38226), (45, 38265), (46, 38268), (48, 38295), (52, 38322), (55, 38334), (64, 38388), (67, 38424), (73, 38475), (78, 38523), (94, 38631), (99, 38670), (103, 38712), (109, 38751), (119, 38847), (120, 38853),

Gene: MollyToe\_47 Start: 36431, Stop: 37312, Start Num: 7

Candidate Starts for MollyToe\_47:

(Start: 7 @36431 has 130 MA's), (Start: 12 @36443 has 1 MA's), (Start: 17 @36473 has 1 MA's), (21, 36530), (32, 36611), (36, 36635), (40, 36656), (41, 36668), (42, 36677), (45, 36716), (46, 36719), (48, 36746), (52, 36773), (55, 36785), (64, 36839), (67, 36875), (73, 36926), (78, 36974), (94, 37082), (99, 37121), (103, 37163), (109, 37202), (119, 37298), (120, 37304),

Gene: Mosby\_48 Start: 36885, Stop: 37766, Start Num: 7

Candidate Starts for Mosby\_48:

(Start: 7 @36885 has 130 MA's), (Start: 12 @36897 has 1 MA's), (Start: 17 @36927 has 1 MA's), (21, 36984), (32, 37065), (36, 37089), (40, 37110), (41, 37122), (42, 37131), (45, 37170), (46, 37173), (48, 37200), (52, 37227), (55, 37239), (64, 37293), (67, 37329), (73, 37380), (78, 37428), (94, 37536), (99, 37575), (103, 37617), (109, 37656), (119, 37752), (120, 37758),

Gene: Murica\_54 Start: 38537, Stop: 39418, Start Num: 7

Candidate Starts for Murica\_54:

(Start: 7 @38537 has 130 MA's), (Start: 12 @38549 has 1 MA's), (Start: 17 @38579 has 1 MA's), (21, 38636), (32, 38717), (36, 38741), (40, 38762), (41, 38774), (42, 38783), (45, 38822), (46, 38825), (48, 38852), (52, 38879), (55, 38891), (64, 38945), (67, 38981), (73, 39032), (78, 39080), (94, 39188), (99, 39227), (103, 39269), (109, 39308), (119, 39404), (120, 39410),

Gene: Murphy\_54 Start: 37974, Stop: 38855, Start Num: 7

Candidate Starts for Murphy\_54:

(Start: 7 @37974 has 130 MA's), (Start: 12 @37986 has 1 MA's), (Start: 17 @38016 has 1 MA's), (21, 38073), (32, 38154), (36, 38178), (40, 38199), (41, 38211), (42, 38220), (45, 38259), (46, 38262), (48, 38289), (52, 38316), (55, 38328), (64, 38382), (67, 38418), (73, 38469), (78, 38517), (94, 38625), (99, 38664), (103, 38706), (109, 38745), (119, 38841), (120, 38847),

Gene: Myrale\_52 Start: 38228, Stop: 39109, Start Num: 7

Candidate Starts for Myrale\_52:

(Start: 7 @38228 has 130 MA's), (Start: 12 @38240 has 1 MA's), (Start: 17 @38270 has 1 MA's), (21, 38327), (32, 38408), (36, 38432), (40, 38453), (41, 38465), (42, 38474), (45, 38513), (46, 38516), (48, 38543), (52, 38570), (55, 38582), (64, 38636), (67, 38672), (73, 38723), (78, 38771), (94, 38879), (99, 38918), (103, 38960), (109, 38999), (119, 39095), (120, 39101),

Gene: Nala\_53 Start: 38095, Stop: 38976, Start Num: 7

Candidate Starts for Nala\_53:

(Start: 7 @38095 has 130 MA's), (Start: 12 @38107 has 1 MA's), (Start: 17 @38137 has 1 MA's), (21, 38194), (32, 38275), (36, 38299), (40, 38320), (41, 38332), (42, 38341), (45, 38380), (46, 38383), (48, 38410), (52, 38437), (55, 38449), (64, 38503), (67, 38539), (73, 38590), (78, 38638), (94, 38746), (99, 38785), (103, 38827), (109, 38866), (119, 38962), (120, 38968),

Gene: NelitzaMV\_49 Start: 37172, Stop: 38053, Start Num: 7

Candidate Starts for NelitzaMV\_49:

(Start: 7 @37172 has 130 MA's), (Start: 12 @37184 has 1 MA's), (Start: 17 @37214 has 1 MA's), (21, 37271), (32, 37352), (36, 37376), (40, 37397), (41, 37409), (42, 37418), (45, 37457), (46, 37460), (48, 37487), (52, 37514), (55, 37526), (64, 37580), (67, 37616), (73, 37667), (78, 37715), (94, 37823), (99, 37862), (103, 37904), (109, 37943), (119, 38039), (120, 38045),

Gene: Nimrod\_55 Start: 38795, Stop: 39676, Start Num: 7

Candidate Starts for Nimrod\_55:

(Start: 7 @38795 has 130 MA's), (Start: 12 @38807 has 1 MA's), (Start: 17 @38837 has 1 MA's), (21, 38894), (32, 38975), (36, 38999), (40, 39020), (41, 39032), (42, 39041), (45, 39080), (46, 39083), (48, 39110), (52, 39137), (55, 39149), (64, 39203), (67, 39239), (73, 39290), (78, 39338), (94, 39446), (99, 39485), (103, 39527), (109, 39566), (119, 39662), (120, 39668),

Gene: NoSleep\_54 Start: 37734, Stop: 38615, Start Num: 7

Candidate Starts for NoSleep\_54:

(Start: 7 @37734 has 130 MA's), (Start: 12 @37746 has 1 MA's), (Start: 17 @37776 has 1 MA's), (21, 37833), (32, 37914), (36, 37938), (40, 37959), (41, 37971), (42, 37980), (45, 38019), (46, 38022), (48,

38049), (52, 38076), (55, 38088), (64, 38142), (67, 38178), (73, 38229), (78, 38277), (94, 38385), (99, 38424), (103, 38466), (109, 38505), (119, 38601), (120, 38607),

Gene: NonchalantPear\_53 Start: 37578, Stop: 38459, Start Num: 7

Candidate Starts for NonchalantPear\_53:

(Start: 7 @37578 has 130 MA's), (Start: 12 @37590 has 1 MA's), (Start: 17 @37620 has 1 MA's), (21, 37677), (32, 37758), (36, 37782), (40, 37803), (41, 37815), (42, 37824), (45, 37863), (46, 37866), (48, 37893), (52, 37920), (55, 37932), (64, 37986), (67, 38022), (73, 38073), (78, 38121), (94, 38229), (99, 38268), (103, 38310), (109, 38349), (119, 38445), (120, 38451),

Gene: Orchid\_70 Start: 57028, Stop: 56267, Start Num: 16

Candidate Starts for Orchid\_70:

(1, 57118), (4, 57088), (6, 57070), (Start: 16 @57028 has 4 MA's), (20, 56959), (38, 56857), (39, 56854), (49, 56770), (51, 56752), (56, 56731), (57, 56722), (60, 56704), (63, 56683), (72, 56602), (80, 56545), (101, 56413), (105, 56389), (108, 56362), (111, 56347), (115, 56311), (116, 56305), (117, 56278), (118, 56272),

Gene: OrionPax\_51 Start: 37179, Stop: 38060, Start Num: 7

Candidate Starts for OrionPax\_51:

(Start: 7 @37179 has 130 MA's), (Start: 12 @37191 has 1 MA's), (Start: 17 @37221 has 1 MA's), (21, 37278), (32, 37359), (36, 37383), (40, 37404), (41, 37416), (42, 37425), (45, 37464), (46, 37467), (48, 37494), (52, 37521), (55, 37533), (64, 37587), (67, 37623), (73, 37674), (78, 37722), (94, 37830), (99, 37869), (103, 37911), (109, 37950), (119, 38046), (120, 38052),

Gene: PaddyBaddy\_52 Start: 37186, Stop: 38067, Start Num: 7

Candidate Starts for PaddyBaddy\_52:

(Start: 7 @37186 has 130 MA's), (Start: 12 @37198 has 1 MA's), (Start: 17 @37228 has 1 MA's), (21, 37285), (32, 37366), (36, 37390), (40, 37411), (41, 37423), (42, 37432), (45, 37471), (46, 37474), (48, 37501), (52, 37528), (55, 37540), (64, 37594), (67, 37630), (73, 37681), (78, 37729), (94, 37837), (99, 37876), (103, 37918), (109, 37957), (119, 38053), (120, 38059),

Gene: Palpatine\_55 Start: 38567, Stop: 39448, Start Num: 7

Candidate Starts for Palpatine\_55:

(Start: 7 @38567 has 130 MA's), (Start: 12 @38579 has 1 MA's), (Start: 17 @38609 has 1 MA's), (21, 38666), (32, 38747), (36, 38771), (40, 38792), (41, 38804), (42, 38813), (45, 38852), (46, 38855), (48, 38882), (52, 38909), (55, 38921), (64, 38975), (67, 39011), (73, 39062), (78, 39110), (94, 39218), (99, 39257), (103, 39299), (109, 39338), (119, 39434), (120, 39440),

Gene: Paperbeatsrock\_51 Start: 38102, Stop: 38983, Start Num: 7

Candidate Starts for Paperbeatsrock\_51:

(Start: 7 @38102 has 130 MA's), (Start: 12 @38114 has 1 MA's), (Start: 17 @38144 has 1 MA's), (21, 38201), (32, 38282), (36, 38306), (40, 38327), (41, 38339), (42, 38348), (45, 38387), (46, 38390), (48, 38417), (52, 38444), (55, 38456), (64, 38510), (67, 38546), (73, 38597), (78, 38645), (94, 38753), (99, 38792), (103, 38834), (109, 38873), (119, 38969), (120, 38975),

Gene: Pat3\_50 Start: 36332, Stop: 37213, Start Num: 7

Candidate Starts for Pat3\_50:

(Start: 7 @36332 has 130 MA's), (Start: 12 @36344 has 1 MA's), (Start: 17 @36374 has 1 MA's), (21, 36431), (32, 36512), (36, 36536), (40, 36557), (41, 36569), (42, 36578), (45, 36617), (46, 36620), (48, 36647), (52, 36674), (55, 36686), (64, 36740), (67, 36776), (73, 36827), (78, 36875), (94, 36983), (99, 37022), (103, 37064), (109, 37103), (119, 37199), (120, 37205),

Gene: PatrickStar\_71 Start: 57027, Stop: 56266, Start Num: 16

Candidate Starts for PatrickStar\_71:

(1, 57117), (4, 57087), (6, 57069), (Start: 16 @57027 has 4 MA's), (20, 56958), (38, 56856), (39, 56853), (49, 56769), (51, 56751), (56, 56730), (57, 56721), (60, 56703), (63, 56682), (72, 56601), (80, 56544), (101, 56412), (105, 56388), (108, 56361), (111, 56346), (115, 56310), (116, 56304), (117, 56277), (118, 56271),

Gene: Petra64142\_57 Start: 39031, Stop: 39912, Start Num: 7

Candidate Starts for Petra64142\_57:

(Start: 7 @39031 has 130 MA's), (Start: 12 @39043 has 1 MA's), (Start: 17 @39073 has 1 MA's), (21, 39130), (32, 39211), (36, 39235), (40, 39256), (41, 39268), (42, 39277), (45, 39316), (46, 39319), (48, 39346), (52, 39373), (55, 39385), (64, 39439), (67, 39475), (73, 39526), (78, 39574), (94, 39682), (99, 39721), (103, 39763), (109, 39802), (119, 39898), (120, 39904),

Gene: Phaja\_50 Start: 37928, Stop: 38809, Start Num: 7

Candidate Starts for Phaja\_50:

(Start: 7 @37928 has 130 MA's), (Start: 12 @37940 has 1 MA's), (Start: 17 @37970 has 1 MA's), (21, 38027), (32, 38108), (36, 38132), (40, 38153), (41, 38165), (42, 38174), (45, 38213), (46, 38216), (48, 38243), (52, 38270), (55, 38282), (64, 38336), (67, 38372), (73, 38423), (78, 38471), (94, 38579), (99, 38618), (103, 38660), (109, 38699), (119, 38795), (120, 38801),

Gene: Pharsalus\_50 Start: 37902, Stop: 38783, Start Num: 7

Candidate Starts for Pharsalus\_50:

(Start: 7 @37902 has 130 MA's), (Start: 12 @37914 has 1 MA's), (Start: 17 @37944 has 1 MA's), (21, 38001), (32, 38082), (36, 38106), (40, 38127), (41, 38139), (42, 38148), (45, 38187), (46, 38190), (48, 38217), (52, 38244), (55, 38256), (64, 38310), (67, 38346), (73, 38397), (78, 38445), (94, 38553), (99, 38592), (103, 38634), (109, 38673), (119, 38769), (120, 38775),

Gene: PhatBacter\_55 Start: 38581, Stop: 39462, Start Num: 7

Candidate Starts for PhatBacter\_55:

(Start: 7 @38581 has 130 MA's), (Start: 12 @38593 has 1 MA's), (Start: 17 @38623 has 1 MA's), (21, 38680), (32, 38761), (36, 38785), (40, 38806), (41, 38818), (42, 38827), (45, 38866), (46, 38869), (48, 38896), (52, 38923), (55, 38935), (64, 38989), (67, 39025), (73, 39076), (78, 39124), (94, 39232), (99, 39271), (103, 39313), (109, 39352), (119, 39448), (120, 39454),

Gene: Phaux\_54 Start: 38579, Stop: 39460, Start Num: 7

Candidate Starts for Phaux\_54:

(Start: 7 @38579 has 130 MA's), (Start: 12 @38591 has 1 MA's), (Start: 17 @38621 has 1 MA's), (21, 38678), (32, 38759), (36, 38783), (40, 38804), (41, 38816), (42, 38825), (45, 38864), (46, 38867), (48, 38894), (52, 38921), (55, 38933), (64, 38987), (67, 39023), (73, 39074), (78, 39122), (94, 39230), (99, 39269), (103, 39311), (109, 39350), (119, 39446), (120, 39452),

Gene: Phrux\_50 Start: 37172, Stop: 38053, Start Num: 7

Candidate Starts for Phrux\_50:

(Start: 7 @37172 has 130 MA's), (Start: 12 @37184 has 1 MA's), (Start: 17 @37214 has 1 MA's), (21, 37271), (32, 37352), (36, 37376), (40, 37397), (41, 37409), (42, 37418), (45, 37457), (46, 37460), (48, 37487), (52, 37514), (55, 37526), (64, 37580), (67, 37616), (73, 37667), (78, 37715), (94, 37823), (99, 37862), (103, 37904), (109, 37943), (119, 38039), (120, 38045),

Gene: Policronamos\_55 Start: 38579, Stop: 39460, Start Num: 7

Candidate Starts for Policronamos\_55:

(Start: 7 @38579 has 130 MA's), (Start: 12 @38591 has 1 MA's), (Start: 17 @38621 has 1 MA's), (21, 38678), (32, 38759), (36, 38783), (40, 38804), (41, 38816), (42, 38825), (45, 38864), (46, 38867), (48, 38894), (52, 38921), (55, 38933), (64, 38987), (67, 39023), (73, 39074), (78, 39122), (94, 39230), (99,

39269), (103, 39311), (109, 39350), (119, 39446), (120, 39452),

Gene: Porky\_51 Start: 37298, Stop: 38179, Start Num: 7

Candidate Starts for Porky\_51:

(Start: 7 @37298 has 130 MA's), (Start: 12 @37310 has 1 MA's), (Start: 17 @37340 has 1 MA's), (21, 37397), (32, 37478), (36, 37502), (40, 37523), (41, 37535), (42, 37544), (45, 37583), (46, 37586), (48, 37613), (52, 37640), (55, 37652), (64, 37706), (67, 37742), (73, 37793), (78, 37841), (94, 37949), (99, 37988), (103, 38030), (109, 38069), (119, 38165), (120, 38171),

Gene: Ptowny\_51 Start: 36764, Stop: 37645, Start Num: 7

Candidate Starts for Ptowny\_51:

(Start: 7 @36764 has 130 MA's), (Start: 12 @36776 has 1 MA's), (Start: 17 @36806 has 1 MA's), (21, 36863), (32, 36944), (36, 36968), (40, 36989), (41, 37001), (42, 37010), (45, 37049), (46, 37052), (48, 37079), (52, 37106), (55, 37118), (64, 37172), (67, 37208), (73, 37259), (78, 37307), (94, 37415), (99, 37454), (103, 37496), (109, 37535), (119, 37631), (120, 37637),

Gene: Pumpkin\_54 Start: 38229, Stop: 39110, Start Num: 7

Candidate Starts for Pumpkin\_54:

(Start: 7 @38229 has 130 MA's), (Start: 12 @38241 has 1 MA's), (Start: 17 @38271 has 1 MA's), (21, 38328), (32, 38409), (36, 38433), (40, 38454), (41, 38466), (42, 38475), (45, 38514), (46, 38517), (48, 38544), (52, 38571), (55, 38583), (64, 38637), (67, 38673), (73, 38724), (78, 38772), (94, 38880), (99, 38919), (103, 38961), (109, 39000), (119, 39096), (120, 39102),

Gene: Quallification\_53 Start: 38217, Stop: 39098, Start Num: 7

Candidate Starts for Quallification\_53:

(Start: 7 @38217 has 130 MA's), (Start: 12 @38229 has 1 MA's), (Start: 17 @38259 has 1 MA's), (21, 38316), (32, 38397), (36, 38421), (40, 38442), (41, 38454), (42, 38463), (45, 38502), (46, 38505), (48, 38532), (52, 38559), (55, 38571), (64, 38625), (67, 38661), (73, 38712), (78, 38760), (94, 38868), (99, 38907), (103, 38949), (109, 38988), (119, 39084), (120, 39090),

Gene: Rakim\_54 Start: 37979, Stop: 38860, Start Num: 7

Candidate Starts for Rakim\_54:

(Start: 7 @37979 has 130 MA's), (Start: 12 @37991 has 1 MA's), (Start: 17 @38021 has 1 MA's), (21, 38078), (32, 38159), (36, 38183), (40, 38204), (41, 38216), (42, 38225), (45, 38264), (46, 38267), (48, 38294), (52, 38321), (55, 38333), (64, 38387), (67, 38423), (73, 38474), (78, 38522), (94, 38630), (99, 38669), (103, 38711), (109, 38750), (119, 38846), (120, 38852),

Gene: Reynauld\_68 Start: 57456, Stop: 56647, Start Num: 13

Candidate Starts for Reynauld\_68:

(Start: 13 @57456 has 1 MA's), (23, 57366), (26, 57336), (44, 57210), (47, 57171), (61, 57093), (69, 57018), (73, 56985), (75, 56964), (83, 56916), (107, 56745), (109, 56739), (117, 56658),

Gene: Rimmer\_53 Start: 37921, Stop: 38802, Start Num: 7

Candidate Starts for Rimmer\_53:

(Start: 7 @37921 has 130 MA's), (Start: 12 @37933 has 1 MA's), (Start: 17 @37963 has 1 MA's), (21, 38020), (32, 38101), (36, 38125), (40, 38146), (41, 38158), (42, 38167), (45, 38206), (46, 38209), (48, 38236), (52, 38263), (55, 38275), (64, 38329), (67, 38365), (73, 38416), (78, 38464), (94, 38572), (99, 38611), (103, 38653), (109, 38692), (119, 38788), (120, 38794),

Gene: RiverMonster\_53 Start: 37750, Stop: 38631, Start Num: 7

Candidate Starts for RiverMonster\_53:

(Start: 7 @37750 has 130 MA's), (Start: 12 @37762 has 1 MA's), (Start: 17 @37792 has 1 MA's), (21, 37849), (32, 37930), (36, 37954), (40, 37975), (41, 37987), (42, 37996), (45, 38035), (46, 38038), (48,

38065), (52, 38092), (55, 38104), (64, 38158), (67, 38194), (73, 38245), (78, 38293), (94, 38401), (99, 38440), (103, 38482), (109, 38521), (119, 38617), (120, 38623),

Gene: RobinSparkles\_72 Start: 56946, Stop: 56164, Start Num: 11

Candidate Starts for RobinSparkles\_72:

(Start: 11 @56946 has 1 MA's), (Start: 16 @56925 has 4 MA's), (20, 56856), (38, 56754), (39, 56751), (49, 56667), (51, 56649), (56, 56628), (57, 56619), (60, 56601), (63, 56580), (72, 56499), (80, 56442), (101, 56310), (105, 56286), (108, 56259), (111, 56244), (115, 56208), (116, 56202), (117, 56175), (118, 56169),

Gene: Saints25\_53 Start: 37462, Stop: 38343, Start Num: 7

Candidate Starts for Saints25\_53:

(Start: 7 @37462 has 130 MA's), (Start: 12 @37474 has 1 MA's), (Start: 17 @37504 has 1 MA's), (21, 37561), (32, 37642), (36, 37666), (40, 37687), (41, 37699), (42, 37708), (45, 37747), (46, 37750), (48, 37777), (52, 37804), (55, 37816), (64, 37870), (67, 37906), (73, 37957), (78, 38005), (94, 38113), (99, 38152), (103, 38194), (109, 38233), (119, 38329), (120, 38335),

Gene: Sassay\_46 Start: 35849, Stop: 36730, Start Num: 7

Candidate Starts for Sassay\_46:

(Start: 7 @35849 has 130 MA's), (Start: 12 @35861 has 1 MA's), (Start: 17 @35891 has 1 MA's), (21, 35948), (32, 36029), (36, 36053), (40, 36074), (41, 36086), (42, 36095), (45, 36134), (46, 36137), (48, 36164), (52, 36191), (55, 36203), (64, 36257), (67, 36293), (73, 36344), (78, 36392), (94, 36500), (99, 36539), (103, 36581), (109, 36620), (119, 36716), (120, 36722),

Gene: ShamWow\_52 Start: 38365, Stop: 39246, Start Num: 7

Candidate Starts for ShamWow\_52:

(Start: 7 @38365 has 130 MA's), (Start: 12 @38377 has 1 MA's), (Start: 17 @38407 has 1 MA's), (21, 38464), (32, 38545), (36, 38569), (40, 38590), (41, 38602), (42, 38611), (45, 38650), (46, 38653), (48, 38680), (52, 38707), (55, 38719), (64, 38773), (67, 38809), (73, 38860), (78, 38908), (94, 39016), (99, 39055), (103, 39097), (109, 39136), (119, 39232), (120, 39238),

Gene: ShereKhan\_50 Start: 38141, Stop: 39022, Start Num: 7

Candidate Starts for ShereKhan\_50:

(Start: 7 @38141 has 130 MA's), (Start: 12 @38153 has 1 MA's), (Start: 17 @38183 has 1 MA's), (21, 38240), (32, 38321), (36, 38345), (40, 38366), (41, 38378), (42, 38387), (45, 38426), (46, 38429), (48, 38456), (52, 38483), (55, 38495), (64, 38549), (67, 38585), (73, 38636), (78, 38684), (94, 38792), (99, 38831), (103, 38873), (109, 38912), (119, 39008), (120, 39014),

Gene: Simpliphy\_51 Start: 37446, Stop: 38327, Start Num: 7

Candidate Starts for Simpliphy\_51:

(Start: 7 @37446 has 130 MA's), (Start: 12 @37458 has 1 MA's), (Start: 17 @37488 has 1 MA's), (21, 37545), (32, 37626), (36, 37650), (40, 37671), (41, 37683), (42, 37692), (45, 37731), (46, 37734), (48, 37761), (52, 37788), (55, 37800), (64, 37854), (67, 37890), (73, 37941), (78, 37989), (94, 38097), (99, 38136), (103, 38178), (109, 38217), (119, 38313), (120, 38319),

Gene: SirDuracell\_51 Start: 36422, Stop: 37303, Start Num: 7

Candidate Starts for SirDuracell\_51:

(Start: 7 @36422 has 130 MA's), (Start: 12 @36434 has 1 MA's), (Start: 17 @36464 has 1 MA's), (21, 36521), (32, 36602), (36, 36626), (40, 36647), (41, 36659), (42, 36668), (45, 36707), (46, 36710), (48, 36737), (52, 36764), (55, 36776), (64, 36830), (67, 36866), (73, 36917), (78, 36965), (94, 37073), (99, 37112), (103, 37154), (109, 37193), (119, 37289), (120, 37295),

Gene: SophKB\_49 Start: 37121, Stop: 38002, Start Num: 7

Candidate Starts for SophKB\_49:

(Start: 7 @37121 has 130 MA's), (Start: 12 @37133 has 1 MA's), (Start: 17 @37163 has 1 MA's), (21, 37220), (32, 37301), (36, 37325), (40, 37346), (41, 37358), (42, 37367), (45, 37406), (46, 37409), (48, 37436), (52, 37463), (55, 37475), (64, 37529), (67, 37565), (73, 37616), (78, 37664), (94, 37772), (99, 37811), (103, 37853), (109, 37892), (119, 37988), (120, 37994),

Gene: Sotrice96\_53 Start: 37827, Stop: 38708, Start Num: 7

Candidate Starts for Sotrice96\_53:

(Start: 7 @37827 has 130 MA's), (Start: 12 @37839 has 1 MA's), (Start: 17 @37869 has 1 MA's), (21, 37926), (32, 38007), (36, 38031), (40, 38052), (41, 38064), (42, 38073), (45, 38112), (46, 38115), (48, 38142), (52, 38169), (55, 38181), (64, 38235), (67, 38271), (73, 38322), (78, 38370), (94, 38478), (99, 38517), (103, 38559), (109, 38598), (119, 38694), (120, 38700),

Gene: Srilaccoli3\_62 Start: 56496, Stop: 55675, Start Num: 13

Candidate Starts for Srilaccoli3\_62:

(Start: 13 @56496 has 1 MA's), (23, 56406), (28, 56340), (61, 56124), (69, 56049), (73, 56016), (76, 55986), (83, 55944), (90, 55917), (96, 55869), (105, 55797), (107, 55773), (109, 55767), (114, 55737), (117, 55686),

Gene: Stank\_56 Start: 38379, Stop: 39260, Start Num: 7

Candidate Starts for Stank\_56:

(Start: 7 @38379 has 130 MA's), (Start: 12 @38391 has 1 MA's), (Start: 17 @38421 has 1 MA's), (21, 38478), (32, 38559), (36, 38583), (40, 38604), (41, 38616), (42, 38625), (45, 38664), (46, 38667), (48, 38694), (52, 38721), (55, 38733), (64, 38787), (67, 38823), (73, 38874), (78, 38922), (94, 39030), (99, 39069), (103, 39111), (109, 39150), (119, 39246), (120, 39252),

Gene: Stark\_53 Start: 37634, Stop: 38515, Start Num: 7

Candidate Starts for Stark\_53:

(Start: 7 @37634 has 130 MA's), (Start: 12 @37646 has 1 MA's), (Start: 17 @37676 has 1 MA's), (21, 37733), (32, 37814), (36, 37838), (40, 37859), (41, 37871), (42, 37880), (45, 37919), (46, 37922), (48, 37949), (52, 37976), (55, 37988), (64, 38042), (67, 38078), (73, 38129), (78, 38177), (94, 38285), (99, 38324), (103, 38366), (109, 38405), (119, 38501), (120, 38507),

Gene: StellaBean\_50 Start: 37689, Stop: 38570, Start Num: 7

Candidate Starts for StellaBean\_50:

(Start: 7 @37689 has 130 MA's), (Start: 12 @37701 has 1 MA's), (Start: 17 @37731 has 1 MA's), (21, 37788), (32, 37869), (36, 37893), (40, 37914), (41, 37926), (42, 37935), (45, 37974), (46, 37977), (48, 38004), (52, 38031), (55, 38043), (64, 38097), (67, 38133), (73, 38184), (78, 38232), (94, 38340), (99, 38379), (103, 38421), (109, 38460), (119, 38556), (120, 38562),

Gene: StolenFromERC\_55 Start: 37863, Stop: 38744, Start Num: 7

Candidate Starts for StolenFromERC\_55:

(Start: 7 @37863 has 130 MA's), (Start: 12 @37875 has 1 MA's), (Start: 17 @37905 has 1 MA's), (21, 37962), (32, 38043), (36, 38067), (40, 38088), (41, 38100), (42, 38109), (45, 38148), (46, 38151), (48, 38178), (52, 38205), (55, 38217), (64, 38271), (67, 38307), (73, 38358), (78, 38406), (94, 38514), (99, 38553), (103, 38595), (109, 38634), (119, 38730), (120, 38736),

Gene: StormChicken\_54 Start: 38529, Stop: 39410, Start Num: 7

Candidate Starts for StormChicken\_54:

(Start: 7 @38529 has 130 MA's), (Start: 12 @38541 has 1 MA's), (Start: 17 @38571 has 1 MA's), (21, 38628), (32, 38709), (36, 38733), (40, 38754), (41, 38766), (42, 38775), (45, 38814), (46, 38817), (48, 38844), (52, 38871), (55, 38883), (64, 38937), (67, 38973), (73, 39024), (78, 39072), (94, 39180), (99, 39219), (103, 39261), (109, 39300), (119, 39396), (120, 39402),

Gene: TBrady12\_55 Start: 37863, Stop: 38744, Start Num: 7

Candidate Starts for TBrady12\_55:

(Start: 7 @37863 has 130 MA's), (Start: 12 @37875 has 1 MA's), (Start: 17 @37905 has 1 MA's), (21, 37962), (32, 38043), (36, 38067), (40, 38088), (41, 38100), (42, 38109), (45, 38148), (46, 38151), (48, 38178), (52, 38205), (55, 38217), (64, 38271), (67, 38307), (73, 38358), (78, 38406), (94, 38514), (99, 38553), (103, 38595), (109, 38634), (119, 38730), (120, 38736),

Gene: Tarkin\_51 Start: 38111, Stop: 38992, Start Num: 7

Candidate Starts for Tarkin\_51:

(Start: 7 @38111 has 130 MA's), (Start: 12 @38123 has 1 MA's), (Start: 17 @38153 has 1 MA's), (21, 38210), (32, 38291), (36, 38315), (40, 38336), (41, 38348), (42, 38357), (45, 38396), (46, 38399), (48, 38426), (52, 38453), (55, 38465), (64, 38519), (67, 38555), (73, 38606), (78, 38654), (94, 38762), (99, 38801), (103, 38843), (109, 38882), (119, 38978), (120, 38984),

Gene: TeamEdward\_54 Start: 38526, Stop: 39407, Start Num: 7

Candidate Starts for TeamEdward\_54:

(Start: 7 @38526 has 130 MA's), (Start: 12 @38538 has 1 MA's), (Start: 17 @38568 has 1 MA's), (21, 38625), (32, 38706), (36, 38730), (40, 38751), (41, 38763), (42, 38772), (45, 38811), (46, 38814), (48, 38841), (52, 38868), (55, 38880), (64, 38934), (67, 38970), (73, 39021), (78, 39069), (94, 39177), (99, 39216), (103, 39258), (109, 39297), (119, 39393), (120, 39399),

Gene: TeardropMSU\_48 Start: 37111, Stop: 37992, Start Num: 7

Candidate Starts for TeardropMSU\_48:

(Start: 7 @37111 has 130 MA's), (Start: 12 @37123 has 1 MA's), (Start: 17 @37153 has 1 MA's), (21, 37210), (32, 37291), (36, 37315), (40, 37336), (41, 37348), (42, 37357), (45, 37396), (46, 37399), (48, 37426), (52, 37453), (55, 37465), (64, 37519), (67, 37555), (73, 37606), (78, 37654), (94, 37762), (99, 37801), (103, 37843), (109, 37882), (119, 37978), (120, 37984),

Gene: Teaspoon\_53 Start: 38005, Stop: 38886, Start Num: 7

Candidate Starts for Teaspoon\_53:

(Start: 7 @38005 has 130 MA's), (Start: 12 @38017 has 1 MA's), (Start: 17 @38047 has 1 MA's), (21, 38104), (32, 38185), (36, 38209), (40, 38230), (41, 38242), (42, 38251), (45, 38290), (46, 38293), (48, 38320), (52, 38347), (55, 38359), (64, 38413), (67, 38449), (73, 38500), (78, 38548), (94, 38656), (99, 38695), (103, 38737), (109, 38776), (119, 38872), (120, 38878),

Gene: Terminus\_54 Start: 38602, Stop: 39483, Start Num: 7

Candidate Starts for Terminus\_54:

(Start: 7 @38602 has 130 MA's), (Start: 12 @38614 has 1 MA's), (Start: 17 @38644 has 1 MA's), (21, 38701), (32, 38782), (36, 38806), (40, 38827), (41, 38839), (42, 38848), (45, 38887), (46, 38890), (48, 38917), (52, 38944), (55, 38956), (64, 39010), (67, 39046), (73, 39097), (78, 39145), (94, 39253), (99, 39292), (103, 39334), (109, 39373), (119, 39469), (120, 39475),

Gene: Thimble\_54 Start: 37045, Stop: 37926, Start Num: 7

Candidate Starts for Thimble\_54:

(Start: 7 @37045 has 130 MA's), (Start: 12 @37057 has 1 MA's), (Start: 17 @37087 has 1 MA's), (21, 37144), (32, 37225), (36, 37249), (40, 37270), (41, 37282), (42, 37291), (45, 37330), (46, 37333), (48, 37360), (52, 37387), (55, 37399), (64, 37453), (67, 37489), (73, 37540), (78, 37588), (94, 37696), (99, 37735), (103, 37777), (109, 37816), (119, 37912), (120, 37918),

Gene: Thresher\_55 Start: 38988, Stop: 39869, Start Num: 7

Candidate Starts for Thresher\_55:

(Start: 7 @38988 has 130 MA's), (Start: 12 @39000 has 1 MA's), (Start: 17 @39030 has 1 MA's), (21, 39087), (32, 39168), (36, 39192), (40, 39213), (41, 39225), (42, 39234), (45, 39273), (46, 39276), (48, 39303), (52, 39330), (55, 39342), (64, 39396), (67, 39432), (73, 39483), (78, 39531), (94, 39639), (99, 39678), (103, 39720), (109, 39759), (119, 39855), (120, 39861),

Gene: Tomaszewski\_48 Start: 36996, Stop: 37865, Start Num: 12

Candidate Starts for Tomaszewski\_48:

(Start: 7 @36984 has 130 MA's), (Start: 12 @36996 has 1 MA's), (Start: 17 @37026 has 1 MA's), (21, 37083), (32, 37164), (36, 37188), (40, 37209), (41, 37221), (42, 37230), (45, 37269), (46, 37272), (48, 37299), (52, 37326), (55, 37338), (64, 37392), (67, 37428), (73, 37479), (78, 37527), (94, 37635), (99, 37674), (103, 37716), (109, 37755), (119, 37851), (120, 37857),

Gene: Toto\_51 Start: 38365, Stop: 39246, Start Num: 7

Candidate Starts for Toto\_51:

(Start: 7 @38365 has 130 MA's), (Start: 12 @38377 has 1 MA's), (Start: 17 @38407 has 1 MA's), (21, 38464), (32, 38545), (36, 38569), (40, 38590), (41, 38602), (42, 38611), (45, 38650), (46, 38653), (48, 38680), (52, 38707), (55, 38719), (64, 38773), (67, 38809), (73, 38860), (78, 38908), (94, 39016), (99, 39055), (103, 39097), (109, 39136), (119, 39232), (120, 39238),

Gene: Traaww1\_48 Start: 37546, Stop: 38427, Start Num: 7

Candidate Starts for Traaww1\_48:

(Start: 7 @37546 has 130 MA's), (Start: 12 @37558 has 1 MA's), (Start: 17 @37588 has 1 MA's), (21, 37645), (32, 37726), (36, 37750), (40, 37771), (41, 37783), (42, 37792), (45, 37831), (46, 37834), (48, 37861), (52, 37888), (55, 37900), (64, 37954), (67, 37990), (73, 38041), (78, 38089), (94, 38197), (99, 38236), (103, 38278), (109, 38317), (119, 38413), (120, 38419),

Gene: Trogglehumper\_82 Start: 64380, Stop: 63535, Start Num: 9

Candidate Starts for Trogglehumper\_82:

(Start: 3 @64422 has 1 MA's), (Start: 9 @64380 has 1 MA's), (22, 64272), (33, 64185), (34, 64179), (37, 64155), (53, 64032), (57, 64014), (63, 63975), (76, 63855), (77, 63849), (83, 63813), (99, 63711), (104, 63666), (106, 63639), (108, 63633),

Gene: Tuco\_53 Start: 38873, Stop: 39754, Start Num: 7

Candidate Starts for Tuco\_53:

(Start: 7 @38873 has 130 MA's), (Start: 12 @38885 has 1 MA's), (Start: 17 @38915 has 1 MA's), (21, 38972), (32, 39053), (36, 39077), (40, 39098), (41, 39110), (42, 39119), (45, 39158), (46, 39161), (48, 39188), (52, 39215), (55, 39227), (64, 39281), (67, 39317), (73, 39368), (78, 39416), (94, 39524), (99, 39563), (103, 39605), (109, 39644), (119, 39740), (120, 39746),

Gene: Ukulele\_49 Start: 37259, Stop: 38140, Start Num: 7

Candidate Starts for Ukulele\_49:

(Start: 7 @37259 has 130 MA's), (Start: 12 @37271 has 1 MA's), (Start: 17 @37301 has 1 MA's), (21, 37358), (32, 37439), (36, 37463), (40, 37484), (41, 37496), (42, 37505), (45, 37544), (46, 37547), (48, 37574), (52, 37601), (55, 37613), (64, 37667), (67, 37703), (73, 37754), (78, 37802), (94, 37910), (99, 37949), (103, 37991), (109, 38030), (119, 38126), (120, 38132),

Gene: Wiggin\_54 Start: 37947, Stop: 38828, Start Num: 7

Candidate Starts for Wiggin\_54:

(Start: 7 @37947 has 130 MA's), (Start: 12 @37959 has 1 MA's), (Start: 17 @37989 has 1 MA's), (21, 38046), (32, 38127), (36, 38151), (40, 38172), (41, 38184), (42, 38193), (45, 38232), (46, 38235), (48, 38262), (52, 38289), (55, 38301), (64, 38355), (67, 38391), (73, 38442), (78, 38490), (94, 38598), (99, 38637), (103, 38679), (109, 38718), (119, 38814), (120, 38820),

Gene: Willez\_46 Start: 35849, Stop: 36730, Start Num: 7

Candidate Starts for Willez\_46:

(Start: 7 @35849 has 130 MA's), (Start: 12 @35861 has 1 MA's), (Start: 17 @35891 has 1 MA's), (21, 35948), (32, 36029), (36, 36053), (40, 36074), (41, 36086), (42, 36095), (45, 36134), (46, 36137), (48, 36164), (52, 36191), (55, 36203), (64, 36257), (67, 36293), (73, 36344), (78, 36392), (94, 36500), (99, 36539), (103, 36581), (109, 36620), (119, 36716), (120, 36722),

Gene: Xandras\_52 Start: 37358, Stop: 38239, Start Num: 7

Candidate Starts for Xandras\_52:

(Start: 7 @37358 has 130 MA's), (Start: 12 @37370 has 1 MA's), (Start: 17 @37400 has 1 MA's), (21, 37457), (32, 37538), (36, 37562), (40, 37583), (41, 37595), (42, 37604), (45, 37643), (46, 37646), (48, 37673), (52, 37700), (55, 37712), (64, 37766), (67, 37802), (73, 37853), (78, 37901), (94, 38009), (99, 38048), (103, 38090), (109, 38129), (119, 38225), (120, 38231),

Gene: YassJohnny\_48 Start: 37024, Stop: 37905, Start Num: 7

Candidate Starts for YassJohnny\_48:

(Start: 7 @37024 has 130 MA's), (Start: 12 @37036 has 1 MA's), (Start: 17 @37066 has 1 MA's), (21, 37123), (32, 37204), (36, 37228), (40, 37249), (41, 37261), (42, 37270), (45, 37309), (46, 37312), (48, 37339), (52, 37366), (55, 37378), (64, 37432), (67, 37468), (73, 37519), (78, 37567), (94, 37675), (99, 37714), (103, 37756), (109, 37795), (119, 37891), (120, 37897),

Gene: Youngblood\_54 Start: 38532, Stop: 39413, Start Num: 7

Candidate Starts for Youngblood\_54:

(Start: 7 @38532 has 130 MA's), (Start: 12 @38544 has 1 MA's), (Start: 17 @38574 has 1 MA's), (21, 38631), (32, 38712), (36, 38736), (40, 38757), (41, 38769), (42, 38778), (45, 38817), (46, 38820), (48, 38847), (52, 38874), (55, 38886), (64, 38940), (67, 38976), (73, 39027), (78, 39075), (94, 39183), (99, 39222), (103, 39264), (109, 39303), (119, 39399), (120, 39405),

Gene: xkcd\_56 Start: 38722, Stop: 39603, Start Num: 7

Candidate Starts for xkcd\_56:

(Start: 7 @38722 has 130 MA's), (Start: 12 @38734 has 1 MA's), (Start: 17 @38764 has 1 MA's), (21, 38821), (32, 38902), (36, 38926), (40, 38947), (41, 38959), (42, 38968), (45, 39007), (46, 39010), (48, 39037), (52, 39064), (55, 39076), (64, 39130), (67, 39166), (73, 39217), (78, 39265), (94, 39373), (99, 39412), (103, 39454), (109, 39493), (119, 39589), (120, 39595),