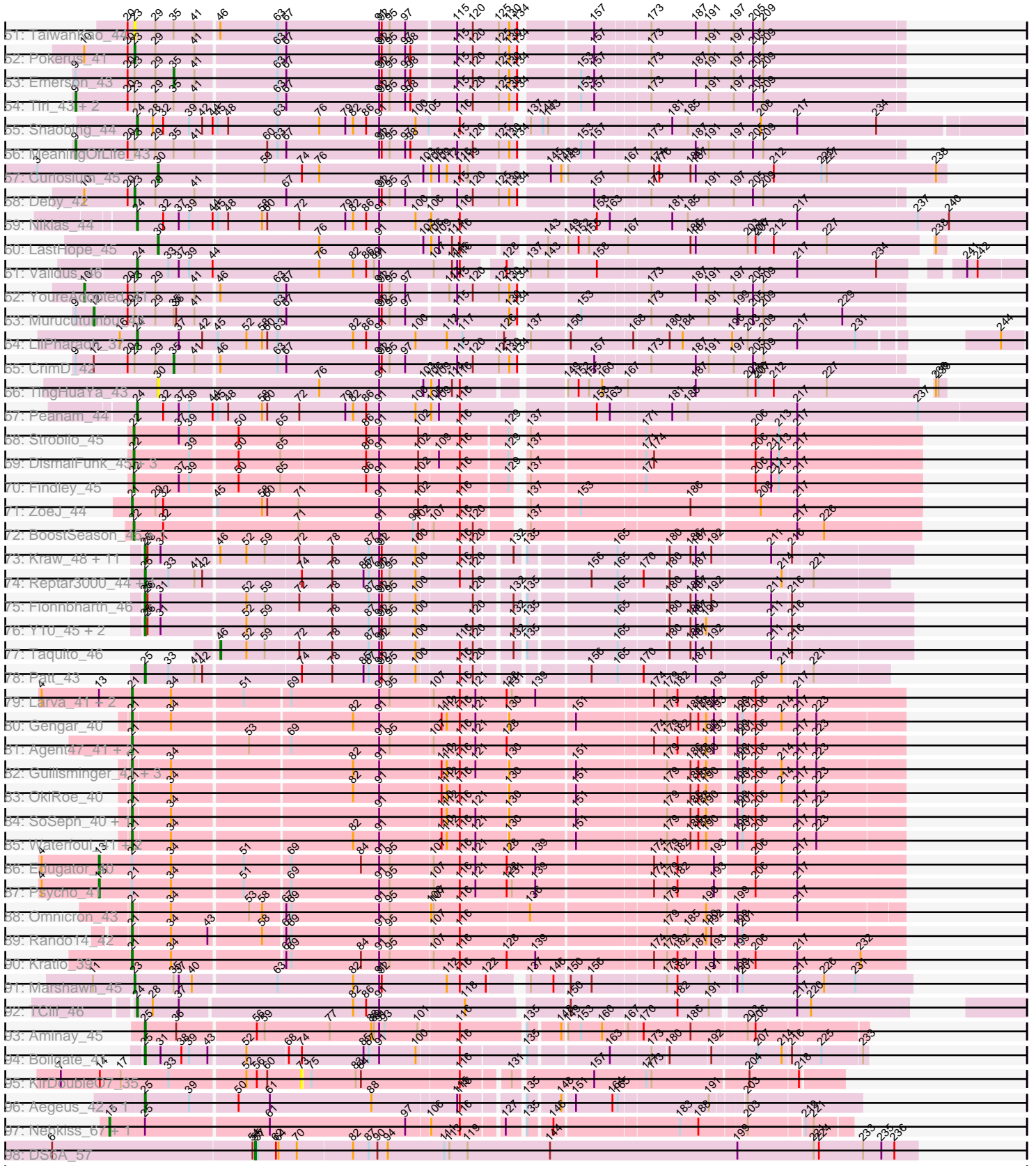


Pham 196221



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 196221 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196221 has 336 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Acolyte\_68
- Track 2 : Phrappuccino\_39, Settecandela\_39
- Track 3 : MalagasyRose\_43
- Track 4 : Kanye\_50, TeardropMSU\_50, Henry\_53, Lilac\_57, Simpliphy\_53, Xandras\_54, Filch\_55, Cookies\_51, StolenFromERC\_57, Goldilocks\_56, Holt\_59, Elph10\_54, Paperbeatsrock\_53, Murica\_56, DrDrey\_54, Balomoji\_53, BugsBunny\_55, Gemini\_58, Saints25\_55, NoSleep\_56, Barbarian\_54, PhatBacter\_57, Czyszczo1\_55, Dumbo\_54, Wiggin\_56, Dusk\_52, Phrux\_52, Daikon\_55, Elite2014\_54, Contagion\_51, MadamMonkfish\_54, BigBubba\_55, JeTaime\_55, Tucu\_55, Phaux\_56, Porky\_53, Tarkin\_53, Amao\_54, Gage\_57, Goku\_52, Murphy\_56, Buck\_55, Glexan\_52, Nala\_55, Stank\_58, BadStone\_52, GooberAzure\_57, Phaja\_52, HufflyPuff\_56, NelitzaMV\_51, Willez\_48, DoctorDiddles\_54, Sotrice96\_55, FireRed\_57, Lilizi\_54, Traaww1\_50, MISSy\_54, Bruin\_50, ShereKhan\_52, Thresher\_57, Mindy\_53, Youngblood\_56, OrionPax\_53, Easy2Say\_55, IHOP\_52, Quallification\_55, RiverMonster\_55, Hopey\_54, Terminus\_56, AmericanBeauty\_58, Hoonter\_57, Lilpickle\_54, Bench\_56, Pharsalus\_52, HanKaySha\_53, StellaBean\_52, Miniwave\_51, Pumpkin\_56, CrystalP\_54, 244\_55, Sassay\_48, Tomaszewski\_50, Stark\_55, Harella\_54, Command613\_56, Manda\_54, FairyPath\_54, Misfit\_56, Cjw1\_54, Ukulele\_51, MPhalcon\_54, Maxxinista\_57, Mosby\_50, Nimrod\_57, Kimchi\_57, Icee\_54, ChosenOne\_55, Rimmer\_55, ShamWow\_54, Moldemort\_57, xkcd\_58, SophKB\_51, Highbury\_55, BaboJay\_50, Asriel\_54, Cactus\_56, ChotaBhai\_54, Gator\_52, Adnama\_58, Eureka\_52
- Track 5 : ABCat\_52, Marshmallow\_53, Inca\_51, Myrale\_54
- Track 6 : Bask21\_55
- Track 7 : Argent26\_57, Toto\_53, Palpatine\_57, Flypotenuse\_49, Rakim\_56, Petra64142\_59, SirDuracell\_53, Emmina\_54, GoldenSpark\_57, TBrady12\_57, Kostya\_55, YassJohnny\_50, Teaspoon\_55
- Track 8 : BilboSwaggins\_53, Policronamos\_59
- Track 9 : Pat3\_52
- Track 10 : Optimus\_89, Bombitas\_84, Beem\_96, Duke13\_91, Ejimix\_89, Klein\_96, Dallas\_97, Wanda\_99, NihilNomen\_97, JuicyJay\_92
- Track 11 : Pound\_87, Odette\_95, BAKA\_97, EricMillard\_89, Kalah2\_89, Bobby\_87, Schatzie\_90, DmpstrDiver\_97, ThreeRngTarjay\_92, Halley\_97, Phoebus\_97, Yeet\_88, HokkenD\_84
- Track 12 : Porcelain\_89, Ariel\_90, Squint\_89, Courthouse\_86, Lucky2013\_88, MiaZeal\_91

- Track 13 : LittleE\_94
- Track 14 : Gonephishing\_82
- Track 15 : Constella\_81, Bagrid\_94, Zelink\_92
- Track 16 : Minerva\_95
- Track 17 : Thibault\_80
- Track 18 : KashFlow\_86
- Track 19 : Superphikiman\_88
- Track 20 : Hughesyang\_95, Hannaconda\_82
- Track 21 : Redno2\_87
- Track 22 : Omega\_99
- Track 23 : ActinUp\_42, Padpat\_43, Jayhawk\_43, Ramen\_42, Atiba\_42, Veliki\_42, HedwigODU\_42, Tachez\_42
- Track 24 : Padfoot\_42, BGIlluviae\_42, Dalmuri\_42, Jeckyll\_42, CREW\_42, Asayake\_42, Jarvi\_42, Blizzard\_42, BEEST\_42, Belladonna\_42, Inky\_42, Lunahalos\_42, Spock\_42, Peel\_42, ShiaSurprise\_43, Durfee\_42, Twitch\_42, JAWS\_42
- Track 25 : Anaya\_44
- Track 26 : BarrelRoll\_42
- Track 27 : CaseJules\_43, Llorens\_42, Boiiii\_42, Joy99\_42, Homura\_42, Capricorn\_42
- Track 28 : Devera\_46, Illumine\_45, Dole\_45
- Track 29 : Hyperbowlee\_42, Topper\_42, Rosmarinus\_42, Piatt\_42
- Track 30 : AlishaPH\_42, Geraldini\_44
- Track 31 : Amelie\_37, Binglebops\_37, SgtBeansprout\_37, Nutello\_37
- Track 32 : CheetoDust\_41
- Track 33 : Megsy\_43
- Track 34 : BaghaKamala\_41
- Track 35 : LaterM\_43, Stinson\_43
- Track 36 : Bella96\_43
- Track 37 : Slimphazie\_42, Rapunzel97\_42, TruffulaTree\_42
- Track 38 : Apocalypse\_45
- Track 39 : LindNT\_42
- Track 40 : Dartin\_44, McMater\_44, Richo\_44
- Track 41 : Ageofdapage\_44
- Track 42 : Prithvi\_43, TreyKay\_43
- Track 43 : Adonis\_42
- Track 44 : Urkel\_43, TiniBug\_43, DrHayes\_43, SamuelLPlaqson\_43
- Track 45 : Beezoo\_44
- Track 46 : Zavala\_43, Mynx\_43
- Track 47 : Adephegia\_42
- Track 48 : Torres\_40, Nikao\_40
- Track 49 : Mdavu\_38, Enkosi\_40
- Track 50 : Angelica\_42, Sulley\_42
- Track 51 : TaiwanKao\_44
- Track 52 : Pokerus\_41
- Track 53 : Emerson\_43
- Track 54 : Tiri\_43, Ganymede\_43, QuincyRose\_41
- Track 55 : Shaobing\_44
- Track 56 : MeaningOfLife\_43
- Track 57 : Curiosium\_45
- Track 58 : Deby\_42
- Track 59 : Niklas\_44
- Track 60 : LastHope\_45

- Track 61 : Validus\_46
- Track 62 : YoureAdopted\_41
- Track 63 : Murucutumbu\_43
- Track 64 : LilPharaoh\_37
- Track 65 : CrimD\_42
- Track 66 : TingHuaYa\_43
- Track 67 : Peanam\_44
- Track 68 : Strobilo\_45
- Track 69 : DismalFunk\_45, DismalStressor\_45, Milly\_45, Marcoliusprime\_45
- Track 70 : Findley\_45
- Track 71 : ZoeJ\_44
- Track 72 : BoostSeason\_45, Mufasa\_45
- Track 73 : Kraw\_48, OmniCritical\_45, SamScheppers\_45, Chancellor\_46, Juliette\_48, Slarp\_46, Cheetobro\_46, Ruthiejr\_47, Wintermute\_46, Mitti\_46, Malthus\_47, Eponine\_48
- Track 74 : Reptar3000\_44, MissDaisy\_44
- Track 75 : Fionnbharth\_46
- Track 76 : Y10\_45, JF1\_46, Y2\_45
- Track 77 : Taquito\_46
- Track 78 : Patt\_43
- Track 79 : Larva\_41, AlleyCat\_41, Dadosky\_41
- Track 80 : Gengar\_40
- Track 81 : Agent47\_41, Collard\_40, InvictusManeo\_40
- Track 82 : Guillsminger\_41, Paola\_40, Feyre\_40, Miryou\_42
- Track 83 : OkiRoe\_40
- Track 84 : SoSeph\_40, Heftyboy\_40
- Track 85 : Waterfoul\_41, Leston\_40, Thyatira\_42
- Track 86 : Edugator\_40
- Track 87 : Psycho\_41
- Track 88 : Omnicron\_43
- Track 89 : Rando14\_42
- Track 90 : Kratio\_39
- Track 91 : Marshawn\_45
- Track 92 : TClif\_46
- Track 93 : Aminay\_45
- Track 94 : Boilgate\_41
- Track 95 : KirDoubleO7\_35
- Track 96 : Aegeus\_42, Baudelaire\_42
- Track 97 : Nebkiss\_67, Gaia\_67
- Track 98 : DS6A\_57

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

The start number called the most often in the published annotations is 19, it was called in 111 of the 317 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244\_55, ABCat\_52, Adnama\_58, Amao\_54, AmericanBeauty\_58, Asriel\_54, BaboJay\_50, BadStone\_52, Balomoji\_53, Barbarian\_54, Bask21\_55, Bench\_56, BigBubba\_55, Bruin\_50, Buck\_55, BugsBunny\_55, Cactus\_56, ChosenOne\_55,

ChotaBhai\_54, Cjw1\_54, Command613\_56, Contagion\_51, Cookies\_51, CrystalP\_54, Czyszczonek\_55, Daikon\_55, DoctorDiddles\_54, DrDrey\_54, Dumbo\_54, Dusk\_52, Easy2Say\_55, Elite2014\_54, Elph10\_54, Eureka\_52, FairyPath\_54, Filch\_55, FireRed\_57, Gage\_57, Gator\_52, Gemini\_58, Glexan\_52, Goku\_52, Goldilocks\_56, GooberAzure\_57, HanKaySha\_53, Harella\_54, Henry\_53, Highbury\_55, Holt\_59, Hoonter\_57, Hopey\_54, HufflyPuff\_56, IHOP\_52, Icee\_54, Inca\_51, JeTaime\_55, Kanye\_50, Kimchi\_57, Lilac\_57, Lilizi\_54, Lilpickle\_54, MISSy\_54, MPhalcon\_54, MadamMonkfish\_54, Manda\_54, Marshmallow\_53, Maxxinista\_57, Mindy\_53, Miniwave\_51, Misfit\_56, Moldemort\_57, Mosby\_50, Murica\_56, Murphy\_56, Myrale\_54, Nala\_55, NelitzaMV\_51, Nimrod\_57, NoSleep\_56, OrionPax\_53, Paperbeatsrock\_53, Phaja\_52, Pharsalus\_52, PhatBacter\_57, Phaux\_56, Phrux\_52, Porky\_53, Pumpkin\_56, Quallification\_55, Rimmer\_55, RiverMonster\_55, Saints25\_55, Sassay\_48, ShamWow\_54, ShereKhan\_52, Simpliphy\_53, SophKB\_51, Sotrice96\_55, Stank\_58, Stark\_55, StellaBean\_52, StolenFromERC\_57, Tarkin\_53, TeardropMSU\_50, Terminus\_56, Thresher\_57, Tomaszewski\_50, Traaww1\_50, Tuco\_55, Ukulele\_51, Wiggin\_56, Willez\_48, Xandras\_54, Youngblood\_56, xkcd\_58,

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

- Argent26\_57, BilboSwaggins\_53, Emmina\_54, Flypotenuse\_49, GoldenSpark\_57, Kostya\_55, Palpatine\_57, Pat3\_52, Petra64142\_59, Policronamos\_59, Rakim\_56, SirDuracell\_53, TBrady12\_57, Teaspoon\_55, Toto\_53, YassJohnny\_50,

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

- Acolyte\_68, ActinUp\_42, Adephagia\_42, Adonis\_42, Aegeus\_42, Agent47\_41, Ageofdpage\_44, AlishaPH\_42, AlleyCat\_41, Amelie\_37, Aminay\_45, Anaya\_44, Angelica\_42, Apocalypse\_45, Ariel\_90, Asayake\_42, Atiba\_42, BAKA\_97, BEEST\_42, BGlluviae\_42, BaghaKamala\_41, Bagrid\_94, BarrelRoll\_42, Baudelaire\_42, Beem\_96, Beezoo\_44, Bella96\_43, Belladonna\_42, Biglebops\_37, Blizzard\_42, Bobby\_87, Boiii\_42, Boilgate\_41, Bombitas\_84, BoostSeason\_45, CREW\_42, Capricorn\_42, CaseJules\_43, Chancellor\_46, CheetoDust\_41, Cheetobro\_46, Collard\_40, Constella\_81, Courthouse\_86, CrimD\_42, Curiosium\_45, DS6A\_57, Dadosky\_41, Dallas\_97, Dalmuri\_42, Dartin\_44, Deby\_42, Devera\_46, DismalFunk\_45, DismalStressor\_45, DmpstrDiver\_97, Dole\_45, DrHayes\_43, Duke13\_91, Durfee\_42, Edugator\_40, Ejimix\_89, Emerson\_43, Enkosi\_40, Eponine\_48, EricMillard\_89, Feyre\_40, Findley\_45, Fionnbharth\_46, Gaia\_67, Ganymede\_43, Gengar\_40, Geraldini\_44, Gonephishing\_82, Guillsminger\_41, Halley\_97, Hannaconda\_82, HedwigODU\_42, Heftyboy\_40, HokkenD\_84, Homura\_42, Hughesyang\_95, Hyperbowlee\_42, Illumine\_45, Inky\_42, InvictusManeo\_40, JAWS\_42, JF1\_46, Jarvi\_42, Jayhawk\_43, Jeckyll\_42, Joy99\_42, JuicyJay\_92, Juliette\_48, Kalah2\_89, KashFlow\_86, KirDoubleO7\_35, Klein\_96, Kratio\_39, Kraw\_48, Larva\_41, LastHope\_45, LaterM\_43, Leston\_40, LilPharaoh\_37, LindNT\_42, LittleE\_94, Llorens\_42, Lucky2013\_88, Lunahalos\_42, MalagasyRose\_43, Malthus\_47, Marcoliusprime\_45, Marshawn\_45, McMater\_44, Mdavu\_38, MeaningOfLife\_43, Megsy\_43, MiaZeal\_91, Milly\_45, Minerva\_95, Miryou\_42, MissDaisy\_44, Mitti\_46, Mufasa\_45, Murucutumbu\_43, Mynx\_43, Nebkiss\_67, NihilNomen\_97, Nikao\_40, Niklas\_44, Nutello\_37, Odette\_95, OkiRoe\_40, Omega\_99, OmniCritical\_45, Omnicron\_43, Optimus\_89, Padfoot\_42, Padpat\_43, Paola\_40, Patt\_43, Peanam\_44, Peel\_42, Phoebus\_97, Phrappuccino\_39, Piatt\_42, Pokerus\_41, Porcelain\_89, Pound\_87, Prithvi\_43, Psycho\_41, QuincyRose\_41, Ramen\_42, Rando14\_42, Rapunzel97\_42, Redno2\_87, Reptar3000\_44, Richo\_44, Rosmarinus\_42, Ruthiejr\_47, SamScheppers\_45, SamuelLPlaqson\_43, Schatzie\_90, Settecandela\_39, SgtBeansprout\_37,

Shaobing\_44, ShiaSurprise\_43, Slarp\_46, Slimphazie\_42, SoSeph\_40, Spock\_42, Squint\_89, Stinson\_43, Strobilo\_45, Sulley\_42, Superphikiman\_88, TClif\_46, Tachez\_42, TaiwanKao\_44, Taquito\_46, Thibault\_80, ThreeRngTarjay\_92, Thyatira\_42, TingHuaYa\_43, TiniBug\_43, Tiri\_43, Topper\_42, Torres\_40, TreyKay\_43, TruffulaTree\_42, Twitch\_42, Urkel\_43, Validus\_46, Veliki\_42, Wanda\_99, Waterfoul\_41, Wintermute\_46, Y10\_45, Y2\_45, Yeet\_88, YoureAdopted\_41, Zavala\_43, Zelink\_92, ZoeJ\_44,

### Summary by start number:

#### Start 5:

- Found in 1 of 336 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 317
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beezoo\_44 (K1),

#### Start 9:

- Found in 57 of 336 ( 17.0% ) of genes in pham
- Manual Annotations of this start: 38 of 317
- Called 66.7% of time when present
- Phage (with cluster) where this start called: ActinUp\_42 (K1), Asayake\_42 (K1), Atiba\_42 (K1), BEEST\_42 (K1), BGlluviae\_42 (K1), BaghaKamala\_41 (K1), Belladonna\_42 (K1), Blizzard\_42 (K1), CREW\_42 (K1), Dalmuri\_42 (K1), DrHayes\_43 (K1), Durfee\_42 (K1), Ganymede\_43 (K1), HedwigODU\_42 (K1), Inky\_42 (K1), JAWS\_42 (K1), Jarvi\_42 (K1), Jayhawk\_43 (K1), Jeckyll\_42 (K1), Lunahalos\_42 (K1), MeaningOfLife\_43 (K1), Padfoot\_42 (K1), Padpat\_43 (K1), Peel\_42 (K1), QuincyRose\_41 (K1), Ramen\_42 (K1), Rapunzel97\_42 (K1), SamuelLPlaqson\_43 (K1), ShiaSurprise\_43 (K1), Slimphazie\_42 (K1), Spock\_42 (K1), Tachez\_42 (K1), TiniBug\_43 (K1), Tiri\_43 (K1), TruffulaTree\_42 (K1), Twitch\_42 (K1), Urkel\_43 (K1), Veliki\_42 (K1),

#### Start 10:

- Found in 18 of 336 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 8 of 317
- Called 44.4% of time when present
- Phage (with cluster) where this start called: AlishaPH\_42 (K1), Anaya\_44 (K1), Angelica\_42 (K1), CheetoDust\_41 (K1), Geraldini\_44 (K1), LindNT\_42 (K1), Sulley\_42 (K1), YoureAdopted\_41 (K1),

#### Start 12:

- Found in 35 of 336 ( 10.4% ) of genes in pham
- Manual Annotations of this start: 2 of 317
- Called 5.7% of time when present
- Phage (with cluster) where this start called: Adephagia\_42 (K1), Murucutumbu\_43 (K1),

#### Start 13:

- Found in 5 of 336 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 2 of 317
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Edugator\_40 (K5), Psycho\_41 (K5),

#### Start 15:

- Found in 2 of 336 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 317
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia\_67 (X), Nebkiss\_67 (X),

#### Start 16:

- Found in 9 of 336 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 1 of 317
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Nikao\_40 (K1), Torres\_40 (K1),

#### Start 19:

- Found in 131 of 336 ( 39.0% ) of genes in pham
- Manual Annotations of this start: 111 of 317
- Called 87.8% of time when present
- Phage (with cluster) where this start called: 244\_55 (E), ABCat\_52 (E), Adnama\_58 (E), Amao\_54 (E), AmericanBeauty\_58 (E), Asriel\_54 (E), BaboJay\_50 (E), BadStone\_52 (E), Balomoji\_53 (E), Barbarian\_54 (E), Bask21\_55 (E), Bench\_56 (E), BigBubba\_55 (E), Bruin\_50 (E), Buck\_55 (E), BugsBunny\_55 (E), Cactus\_56 (E), ChosenOne\_55 (E), ChotaBhai\_54 (E), Cjw1\_54 (E), Command613\_56 (E), Contagion\_51 (E), Cookies\_51 (E), CrystalP\_54 (E), Czyszczonek\_55 (E), Daikon\_55 (E), DoctorDiddles\_54 (E), DrDrey\_54 (E), Dumbo\_54 (E), Dusk\_52 (E), Easy2Say\_55 (E), Elite2014\_54 (E), Elph10\_54 (E), Eureka\_52 (E), FairyPath\_54 (E), Filch\_55 (E), FireRed\_57 (E), Gage\_57 (E), Gator\_52 (E), Gemini\_58 (E), Glexan\_52 (E), Goku\_52 (E), Goldilocks\_56 (E), GooberAzure\_57 (E), HanKaySha\_53 (E), Harella\_54 (E), Henry\_53 (E), Highbury\_55 (E), Holt\_59 (E), Hoonter\_57 (E), Hokey\_54 (E), HufflyPuff\_56 (E), IHOP\_52 (E), Icee\_54 (E), Inca\_51 (E), JeTaime\_55 (E), Kanye\_50 (E), Kimchi\_57 (E), Lilac\_57 (E), Lilizi\_54 (E), Lilpickle\_54 (E), MISSy\_54 (E), MPhalcon\_54 (E), MadamMonkfish\_54 (E), Manda\_54 (E), Marshmallow\_53 (E), Maxxinista\_57 (E), Mindy\_53 (E), Miniwave\_51 (E), Misfit\_56 (E), Moldemort\_57 (E), Mosby\_50 (E), Murica\_56 (E), Murphy\_56 (E), Myrale\_54 (E), Nala\_55 (E), NelitzaMV\_51 (E), Nimrod\_57 (E), NoSleep\_56 (E), OrionPax\_53 (E), Paperbeatsrock\_53 (E), Phaja\_52 (E), Pharsalus\_52 (E), PhatBacter\_57 (E), Phaux\_56 (E), Phrux\_52 (E), Porky\_53 (E), Pumpkin\_56 (E), Quallification\_55 (E), Rimmer\_55 (E), RiverMonster\_55 (E), Saints25\_55 (E), Sassay\_48 (E), ShamWow\_54 (E), ShereKhan\_52 (E), Simpliphy\_53 (E), SophKB\_51 (E), Sotrice96\_55 (E), Stank\_58 (E), Stark\_55 (E), StellaBean\_52 (E), StolenFromERC\_57 (E), Tarkin\_53 (E), TeardropMSU\_50 (E), Terminus\_56 (E), Thresher\_57 (E), Tomaszewski\_50 (E), Traaww1\_50 (E), Tuco\_55 (E), Ukulele\_51 (E), Wiggin\_56 (E), Willez\_48 (E), Xandras\_54 (E), Youngblood\_56 (E), xkcd\_58 (E),

#### Start 20:

- Found in 76 of 336 ( 22.6% ) of genes in pham
- Manual Annotations of this start: 2 of 317
- Called 2.6% of time when present
- Phage (with cluster) where this start called: Ageofdapage\_44 (K1), Apocalypse\_45 (K1),

#### Start 21:

- Found in 25 of 336 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 21 of 317
- Called 84.0% of time when present



- Phage (with cluster) where this start called: Agent47\_41 (K5), AlleyCat\_41 (K5), Collard\_40 (K5), Dadosky\_41 (K5), Feyre\_40 (K5), Gengar\_40 (K5), Guillsminger\_41 (K5), Heftyboy\_40 (K5), InvictusManeo\_40 (K5), Kratio\_39 (K5), Larva\_41 (K5), Leston\_40 (K5), Miryou\_42 (K5), OkiRoe\_40 (K5), Omnicron\_43 (K5), Paola\_40 (K5), Rando14\_42 (K5), SoSeph\_40 (K5), Thyatira\_42 (K5), Waterfoul\_41 (K5), ZoeJ\_44 (K2),

#### Start 22:

- Found in 8 of 336 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 8 of 317
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BoostSeason\_45 (K2), DismalFunk\_45 (K2), DismalStressor\_45 (K2), Findley\_45 (K2), Marcoliusprime\_45 (K2), Milly\_45 (K2), Mufasa\_45 (K2), Strobilo\_45 (K2),

#### Start 23:

- Found in 80 of 336 ( 23.8% ) of genes in pham
- Manual Annotations of this start: 22 of 317
- Called 28.7% of time when present
- Phage (with cluster) where this start called: Adonis\_42 (K1), BarrelRoll\_42 (K1), Bella96\_43 (K1), Boiii\_42 (K1), Capricorn\_42 (K1), CaseJules\_43 (K1), Deby\_42 (K1), Devera\_46 (K1), Dole\_45 (K1), Homura\_42 (K1), Illumine\_45 (K1), Joy99\_42 (K1), LaterM\_43 (K1), Llorens\_42 (K1), Marshawn\_45 (K6), Megsy\_43 (K1), Mynx\_43 (K1), Pokerus\_41 (K1), Prithvi\_43 (K1), Stinson\_43 (K1), TaiwanKao\_44 (K1), TreyKay\_43 (K1), Zavala\_43 (K1),

#### Start 24:

- Found in 18 of 336 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 12 of 317
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Amelie\_37 (K1), Binglebops\_37 (K1), Dartin\_44 (K1), Enkosi\_40 (K1), LilPharaoh\_37 (K1), McMater\_44 (K1), Mdavu\_38 (K1), Niklas\_44 (K1), Nutello\_37 (K1), Peanam\_44 (K1), Richo\_44 (K1), SgtBeansprout\_37 (K1), Shaobing\_44 (K1), TClif\_46 (K6), Validus\_46 (K1),

#### Start 25:

- Found in 159 of 336 ( 47.3% ) of genes in pham
- Manual Annotations of this start: 36 of 317
- Called 24.5% of time when present
- Phage (with cluster) where this start called: Aegeus\_42 (L5), Aminay\_45 (K7), Argent26\_57 (E), Baudelaire\_42 (L5), Boilgate\_41 (K8), Chancellor\_46 (K4), Cheetobro\_46 (K4), Emmina\_54 (E), Eponine\_48 (K4), Fionnbharth\_46 (K4), Flypotenuse\_49 (E), GoldenSpark\_57 (E), JF1\_46 (K4), Juliette\_48 (K4), Kostya\_55 (E), Kraw\_48 (K4), MalagasyRose\_43 (AG), Malthus\_47 (K4), MissDaisy\_44 (K4), Mitti\_46 (K4), OmniCritical\_45 (K4), Palpatine\_57 (E), Patt\_43 (K4), Petra64142\_59 (E), Phrappuccino\_39 (AA), Rakim\_56 (E), Reptar3000\_44 (K4), Ruthiejr\_47 (K4), SamScheppers\_45 (K4), Settecandela\_39 (AA), SirDuracell\_53 (E), Slarp\_46 (K4), TBrady12\_57 (E), Teaspoon\_55 (E), Toto\_53 (E), Wintermute\_46 (K4), Y10\_45 (K4), Y2\_45 (K4), YassJohnny\_50 (E),

#### Start 27:

- Found in 1 of 336 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 317

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acolyte\_68 (A2),

#### Start 30:

- Found in 3 of 336 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 317
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Curiosium\_45 (K1), LastHope\_45 (K1), TingHuaYa\_43 (K1),

#### Start 33:

- Found in 11 of 336 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 1 of 317
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Minerva\_95 (J),

#### Start 34:

- Found in 191 of 336 ( 56.8% ) of genes in pham
- Manual Annotations of this start: 33 of 317
- Called 18.3% of time when present
- Phage (with cluster) where this start called: Ariel\_90 (J), BAKA\_97 (J), Beem\_96 (J), Bobby\_87 (J), Bombitas\_84 (J), Courthouse\_86 (J), Dallas\_97 (J), DmpstrDiver\_97 (J), Duke13\_91 (J), Ejimix\_89 (J), EricMillard\_89 (J), Gonephishing\_82 (J), Halley\_97 (J), HokkenD\_84 (J), JuicyJay\_92 (J), Kalah2\_89 (J), Klein\_96 (J), LittleE\_94 (J), Lucky2013\_88 (J), MiaZeal\_91 (J), NihilNomen\_97 (J), Odette\_95 (J), Omega\_99 (J), Optimus\_89 (J), Pat3\_52 (E), Phoebus\_97 (J), Porcelain\_89 (J), Pound\_87 (J), Redno2\_87 (J), Schatzie\_90 (J), Squint\_89 (J), Thibault\_80 (J), ThreeRngTarjay\_92 (J), Wanda\_99 (J), Yeet\_88 (J),

#### Start 35:

- Found in 60 of 336 ( 17.9% ) of genes in pham
- Manual Annotations of this start: 6 of 317
- Called 10.0% of time when present
- Phage (with cluster) where this start called: CrimD\_42 (K1), Emerson\_43 (K1), Hyperbowlee\_42 (K1), Piatt\_42 (K1), Rosmarinus\_42 (K1), Topper\_42 (K1),

#### Start 46:

- Found in 30 of 336 ( 8.9% ) of genes in pham
- Manual Annotations of this start: 1 of 317
- Called 3.3% of time when present
- Phage (with cluster) where this start called: Taquito\_46 (K4),

#### Start 47:

- Found in 41 of 336 ( 12.2% ) of genes in pham
- Manual Annotations of this start: 5 of 317
- Called 14.6% of time when present
- Phage (with cluster) where this start called: Bagrid\_94 (J), Constella\_81 (J), Hannaconda\_82 (J), Hughesyang\_95 (J), KashFlow\_86 (J), Zelink\_92 (J),

#### Start 49:

- Found in 42 of 336 ( 12.5% ) of genes in pham
- Manual Annotations of this start: 1 of 317
- Called 2.4% of time when present

- Phage (with cluster) where this start called: Superphikiman\_88 (J),

Start 55:

- Found in 18 of 336 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 1 of 317
- Called 5.6% of time when present
- Phage (with cluster) where this start called: DS6A\_57 (singleton),

Start 61:

- Found in 137 of 336 ( 40.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.5% of time when present
- Phage (with cluster) where this start called: BilboSwaggins\_53 (E), Policronamos\_59 (E),

Start 73:

- Found in 1 of 336 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KirDoubleO7\_35 (L3),

### **Summary by clusters:**

There are 16 clusters represented in this pham: AA, singleton, E, AG, J, L5, K2, K1, A2, K7, K6, K5, K4, X, K8, L3,

Info for manual annotations of cluster A2:

- Start number 27 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster AA:

- Start number 25 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AG:

- Start number 25 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster E:

- Start number 19 was manually annotated 111 times for cluster E.
- Start number 25 was manually annotated 11 times for cluster E.
- Start number 34 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster J:

- Start number 33 was manually annotated 1 time for cluster J.
- Start number 34 was manually annotated 32 times for cluster J.
- Start number 47 was manually annotated 5 times for cluster J.
- Start number 49 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster K1:

- Start number 5 was manually annotated 1 time for cluster K1.
- Start number 9 was manually annotated 38 times for cluster K1.
- Start number 10 was manually annotated 8 times for cluster K1.
- Start number 12 was manually annotated 2 times for cluster K1.
- Start number 16 was manually annotated 1 time for cluster K1.
- Start number 20 was manually annotated 2 times for cluster K1.

- Start number 23 was manually annotated 21 times for cluster K1.
- Start number 24 was manually annotated 11 times for cluster K1.
- Start number 30 was manually annotated 2 times for cluster K1.
- Start number 35 was manually annotated 6 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 21 was manually annotated 1 time for cluster K2.
- Start number 22 was manually annotated 8 times for cluster K2.

Info for manual annotations of cluster K4:

- Start number 25 was manually annotated 18 times for cluster K4.
- Start number 46 was manually annotated 1 time for cluster K4.

Info for manual annotations of cluster K5:

- Start number 13 was manually annotated 2 times for cluster K5.
- Start number 21 was manually annotated 20 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 23 was manually annotated 1 time for cluster K6.
- Start number 24 was manually annotated 1 time for cluster K6.

Info for manual annotations of cluster K7:

- Start number 25 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 25 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster L5:

- Start number 25 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster X:

- Start number 15 was manually annotated 2 times for cluster X.

### ***Gene Information:***

Gene: 244\_55 Start: 39721, Stop: 38948, Start Num: 19

Candidate Starts for 244\_55:

(Start: 19 @39721 has 111 MA's), (Start: 25 @39697 has 36 MA's), (Start: 34 @39667 has 33 MA's), (61, 39559), (83, 39463), (106, 39382), (114, 39358), (116, 39349), (119, 39340), (152, 39235), (154, 39229), (155, 39223), (194, 39079), (196, 39067), (205, 39043), (228, 38956),

Gene: ABCat\_52 Start: 40367, Stop: 39594, Start Num: 19

Candidate Starts for ABCat\_52:

(Start: 19 @40367 has 111 MA's), (Start: 25 @40343 has 36 MA's), (Start: 34 @40313 has 33 MA's), (61, 40205), (83, 40109), (106, 40028), (114, 40004), (116, 39995), (119, 39986), (152, 39881), (154, 39875), (155, 39869), (194, 39725), (205, 39689), (228, 39602),

Gene: Acolyte\_68 Start: 43894, Stop: 44586, Start Num: 27

Candidate Starts for Acolyte\_68:

(Start: 27 @43894 has 1 MA's), (61, 44026), (66, 44038), (82, 44119), (84, 44128), (91, 44149), (96, 44167), (116, 44239), (117, 44242), (120, 44254), (123, 44263), (150, 44335), (155, 44356), (157, 44362), (163, 44380), (164, 44383), (187, 44464), (210, 44518),

Gene: ActinUp\_42 Start: 34574, Stop: 33672, Start Num: 9

Candidate Starts for ActinUp\_42:

(Start: 9 @34574 has 38 MA's), (Start: 20 @34517 has 2 MA's), (Start: 23 @34511 has 22 MA's), (29, 34487), (Start: 35 @34466 has 6 MA's), (41, 34442), (63, 34352), (67, 34343), (91, 34238), (92, 34235), (95, 34226), (97, 34208), (98, 34202), (115, 34154), (120, 34136), (125, 34106), (130, 34094), (134, 34085), (153, 34028), (157, 34013), (173, 33956), (187, 33905), (191, 33890), (197, 33863), (205, 33842), (209, 33830),

Gene: Adephagia\_42 Start: 34550, Stop: 33669, Start Num: 12

Candidate Starts for Adephagia\_42:

(Start: 9 @34571 has 38 MA's), (Start: 12 @34550 has 2 MA's), (Start: 20 @34514 has 2 MA's), (Start: 23 @34508 has 22 MA's), (29, 34484), (Start: 35 @34463 has 6 MA's), (41, 34439), (63, 34349), (67, 34340), (91, 34235), (92, 34232), (95, 34223), (97, 34205), (98, 34199), (115, 34151), (120, 34133), (125, 34103), (130, 34091), (134, 34082), (153, 34025), (157, 34010), (173, 33953), (187, 33902), (191, 33887), (197, 33860), (205, 33839), (209, 33827),

Gene: Adnama\_58 Start: 40390, Stop: 39617, Start Num: 19

Candidate Starts for Adnama\_58:

(Start: 19 @40390 has 111 MA's), (Start: 25 @40366 has 36 MA's), (Start: 34 @40336 has 33 MA's), (61, 40228), (83, 40132), (106, 40051), (114, 40027), (116, 40018), (119, 40009), (152, 39904), (154, 39898), (155, 39892), (194, 39748), (196, 39736), (205, 39712), (228, 39625),

Gene: Adonis\_42 Start: 34806, Stop: 33967, Start Num: 23

Candidate Starts for Adonis\_42:

(Start: 10 @34860 has 8 MA's), (Start: 20 @34812 has 2 MA's), (Start: 23 @34806 has 22 MA's), (29, 34782), (36, 34758), (41, 34737), (63, 34647), (67, 34638), (91, 34533), (92, 34530), (95, 34521), (97, 34503), (113, 34458), (115, 34449), (120, 34431), (125, 34401), (130, 34389), (134, 34380), (157, 34308), (173, 34251), (191, 34185), (205, 34137), (209, 34125), (217, 34086),

Gene: Aegeus\_42 Start: 36206, Stop: 35445, Start Num: 25

Candidate Starts for Aegeus\_42:

(Start: 25 @36206 has 36 MA's), (39, 36155), (50, 36104), (61, 36068), (88, 35954), (115, 35861), (116, 35858), (135, 35798), (148, 35765), (151, 35753), (164, 35711), (165, 35705), (191, 35606), (203, 35573),

Gene: Agent47\_41 Start: 34000, Stop: 33149, Start Num: 21

Candidate Starts for Agent47\_41:

(Start: 21 @34000 has 21 MA's), (53, 33871), (69, 33829), (91, 33730), (95, 33718), (107, 33670), (116, 33640), (121, 33622), (128, 33586), (174, 33427), (179, 33412), (182, 33400), (190, 33367), (193, 33358), (199, 33340), (201, 33334), (206, 33319), (217, 33271), (223, 33250),

Gene: Ageofdapage\_44 Start: 35489, Stop: 34644, Start Num: 20

Candidate Starts for Ageofdapage\_44:

(Start: 9 @35546 has 38 MA's), (Start: 12 @35525 has 2 MA's), (Start: 20 @35489 has 2 MA's), (Start: 23 @35483 has 22 MA's), (29, 35459), (Start: 35 @35438 has 6 MA's), (36, 35435), (41, 35414), (63, 35324), (67, 35315), (91, 35210), (92, 35207), (95, 35198), (97, 35180), (113, 35135), (115, 35126), (130, 35066), (134, 35057), (157, 34985), (173, 34928), (176, 34919), (191, 34862), (199, 34832), (205, 34814), (209, 34802), (229, 34712),

Gene: AlishaPH\_42 Start: 34836, Stop: 33943, Start Num: 10

Candidate Starts for AlishaPH\_42:

(Start: 10 @34836 has 8 MA's), (Start: 20 @34788 has 2 MA's), (Start: 23 @34782 has 22 MA's), (29, 34758), (41, 34713), (63, 34623), (67, 34614), (91, 34509), (92, 34506), (95, 34497), (97, 34479), (98, 34473), (115, 34425), (120, 34407), (125, 34377), (130, 34365), (134, 34356), (157, 34284), (173, 34227), (191, 34161), (197, 34134), (205, 34113), (209, 34101),

Gene: AlleyCat\_41 Start: 33853, Stop: 33002, Start Num: 21

Candidate Starts for AlleyCat\_41:

(4, 33955), (Start: 13 @33889 has 2 MA's), (Start: 21 @33853 has 21 MA's), (Start: 34 @33808 has 33 MA's), (51, 33730), (69, 33682), (91, 33583), (95, 33571), (107, 33523), (116, 33493), (121, 33475), (128, 33439), (131, 33433), (139, 33406), (174, 33280), (179, 33265), (182, 33253), (193, 33211), (206, 33172), (217, 33124),

Gene: Amao\_54 Start: 39485, Stop: 38712, Start Num: 19

Candidate Starts for Amao\_54:

(Start: 19 @39485 has 111 MA's), (Start: 25 @39461 has 36 MA's), (Start: 34 @39431 has 33 MA's), (61, 39323), (83, 39227), (106, 39146), (114, 39122), (116, 39113), (119, 39104), (152, 38999), (154, 38993), (155, 38987), (194, 38843), (196, 38831), (205, 38807), (228, 38720),

Gene: Amelie\_37 Start: 34082, Stop: 33180, Start Num: 24

Candidate Starts for Amelie\_37:

(Start: 16 @34100 has 1 MA's), (Start: 24 @34082 has 12 MA's), (37, 34034), (42, 34007), (45, 33989), (52, 33956), (58, 33938), (60, 33932), (63, 33920), (82, 33836), (86, 33821), (91, 33806), (100, 33764), (112, 33728), (117, 33710), (126, 33668), (137, 33650), (150, 33611), (168, 33542), (180, 33503), (184, 33488), (196, 33434), (203, 33416), (209, 33398), (217, 33359), (231, 33293), (244, 33203),

Gene: AmericanBeauty\_58 Start: 40235, Stop: 39462, Start Num: 19

Candidate Starts for AmericanBeauty\_58:

(Start: 19 @40235 has 111 MA's), (Start: 25 @40211 has 36 MA's), (Start: 34 @40181 has 33 MA's), (61, 40073), (83, 39977), (106, 39896), (114, 39872), (116, 39863), (119, 39854), (152, 39749), (154, 39743), (155, 39737), (194, 39593), (196, 39581), (205, 39557), (228, 39470),

Gene: Aminay\_45 Start: 36061, Stop: 35288, Start Num: 25

Candidate Starts for Aminay\_45:

(Start: 25 @36061 has 36 MA's), (36, 36025), (56, 35938), (59, 35929), (77, 35857), (88, 35809), (89, 35806), (91, 35800), (93, 35794), (101, 35758), (116, 35716), (135, 35647), (148, 35614), (149, 35611), (153, 35596), (160, 35572), (167, 35545), (170, 35530), (186, 35476), (203, 35416), (206, 35407),

Gene: Anaya\_44 Start: 35172, Stop: 34279, Start Num: 10

Candidate Starts for Anaya\_44:

(Start: 10 @35172 has 8 MA's), (Start: 20 @35124 has 2 MA's), (Start: 23 @35118 has 22 MA's), (29, 35094), (36, 35070), (41, 35049), (Start: 46 @35025 has 1 MA's), (63, 34959), (67, 34950), (91, 34845), (92, 34842), (95, 34833), (97, 34815), (113, 34770), (115, 34761), (120, 34743), (125, 34713), (130, 34701), (134, 34692), (157, 34620), (173, 34563), (191, 34497), (205, 34449), (209, 34437),

Gene: Angelica\_42 Start: 34792, Stop: 33899, Start Num: 10

Candidate Starts for Angelica\_42:

(Start: 10 @34792 has 8 MA's), (Start: 20 @34744 has 2 MA's), (Start: 23 @34738 has 22 MA's), (29, 34714), (41, 34669), (67, 34570), (91, 34465), (92, 34462), (95, 34453), (97, 34435), (115, 34381), (120, 34363), (125, 34333), (130, 34321), (134, 34312), (157, 34240), (173, 34183), (191, 34117),

(197, 34090), (205, 34069), (209, 34057),

Gene: Apocalypse\_45 Start: 35530, Stop: 34685, Start Num: 20

Candidate Starts for Apocalypse\_45:

(Start: 10 @35578 has 8 MA's), (Start: 20 @35530 has 2 MA's), (Start: 23 @35524 has 22 MA's), (29, 35500), (41, 35455), (67, 35356), (91, 35251), (92, 35248), (95, 35239), (97, 35221), (115, 35167), (120, 35149), (130, 35107), (134, 35098), (173, 34969), (191, 34903), (209, 34843),

Gene: Argent26\_57 Start: 39849, Stop: 39100, Start Num: 25

Candidate Starts for Argent26\_57:

(Start: 19 @39873 has 111 MA's), (Start: 25 @39849 has 36 MA's), (Start: 34 @39819 has 33 MA's), (61, 39711), (83, 39615), (106, 39534), (114, 39510), (116, 39501), (119, 39492), (152, 39387), (154, 39381), (155, 39375), (194, 39231), (196, 39219), (205, 39195), (228, 39108),

Gene: Ariel\_90 Start: 53471, Stop: 52764, Start Num: 34

Candidate Starts for Ariel\_90:

(Start: 34 @53471 has 33 MA's), (Start: 47 @53417 has 5 MA's), (Start: 49 @53408 has 1 MA's), (78, 53312), (81, 53294), (106, 53213), (110, 53201), (112, 53195), (114, 53189), (116, 53180), (131, 53138), (149, 53087), (150, 53084), (169, 53003), (175, 52985), (186, 52946), (189, 52934), (190, 52928), (191, 52925), (202, 52883), (205, 52874), (208, 52865), (209, 52862), (221, 52811),

Gene: Asayake\_42 Start: 34886, Stop: 33984, Start Num: 9

Candidate Starts for Asayake\_42:

(Start: 9 @34886 has 38 MA's), (Start: 12 @34865 has 2 MA's), (Start: 20 @34829 has 2 MA's), (Start: 23 @34823 has 22 MA's), (29, 34799), (Start: 35 @34778 has 6 MA's), (41, 34754), (63, 34664), (67, 34655), (91, 34550), (92, 34547), (95, 34538), (97, 34520), (98, 34514), (115, 34466), (120, 34448), (125, 34418), (130, 34406), (134, 34397), (157, 34325), (173, 34268), (187, 34217), (191, 34202), (197, 34175), (205, 34154), (209, 34142),

Gene: Asriel\_54 Start: 38727, Stop: 37954, Start Num: 19

Candidate Starts for Asriel\_54:

(Start: 19 @38727 has 111 MA's), (Start: 25 @38703 has 36 MA's), (Start: 34 @38673 has 33 MA's), (61, 38565), (83, 38469), (106, 38388), (114, 38364), (116, 38355), (119, 38346), (152, 38241), (154, 38235), (155, 38229), (194, 38085), (196, 38073), (205, 38049), (228, 37962),

Gene: Atiba\_42 Start: 34534, Stop: 33632, Start Num: 9

Candidate Starts for Atiba\_42:

(Start: 9 @34534 has 38 MA's), (Start: 20 @34477 has 2 MA's), (Start: 23 @34471 has 22 MA's), (29, 34447), (Start: 35 @34426 has 6 MA's), (41, 34402), (63, 34312), (67, 34303), (91, 34198), (92, 34195), (95, 34186), (97, 34168), (98, 34162), (115, 34114), (120, 34096), (125, 34066), (130, 34054), (134, 34045), (153, 33988), (157, 33973), (173, 33916), (187, 33865), (191, 33850), (197, 33823), (205, 33802), (209, 33790),

Gene: BAKA\_97 Start: 59373, Stop: 58666, Start Num: 34

Candidate Starts for BAKA\_97:

(Start: 34 @59373 has 33 MA's), (Start: 47 @59319 has 5 MA's), (Start: 49 @59310 has 1 MA's), (Start: 55 @59286 has 1 MA's), (78, 59214), (106, 59115), (110, 59103), (116, 59082), (148, 58992), (150, 58986), (169, 58905), (175, 58887), (186, 58848), (190, 58830), (191, 58827), (205, 58776), (209, 58764), (221, 58713),

Gene: BEEST\_42 Start: 34886, Stop: 33984, Start Num: 9

Candidate Starts for BEEST\_42:

(Start: 9 @34886 has 38 MA's), (Start: 12 @34865 has 2 MA's), (Start: 20 @34829 has 2 MA's), (Start: 23 @34823 has 22 MA's), (29, 34799), (Start: 35 @34778 has 6 MA's), (41, 34754), (63, 34664), (67, 34655), (91, 34550), (92, 34547), (95, 34538), (97, 34520), (98, 34514), (115, 34466), (120, 34448), (125, 34418), (130, 34406), (134, 34397), (157, 34325), (173, 34268), (187, 34217), (191, 34202), (197, 34175), (205, 34154), (209, 34142),

Gene: BGlluviae\_42 Start: 34689, Stop: 33787, Start Num: 9

Candidate Starts for BGlluviae\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005), (197, 33978), (205, 33957), (209, 33945),

Gene: BaboJay\_50 Start: 39273, Stop: 38500, Start Num: 19

Candidate Starts for BaboJay\_50:

(Start: 19 @39273 has 111 MA's), (Start: 25 @39249 has 36 MA's), (Start: 34 @39219 has 33 MA's), (61, 39111), (83, 39015), (106, 38934), (114, 38910), (116, 38901), (119, 38892), (152, 38787), (154, 38781), (155, 38775), (194, 38631), (196, 38619), (205, 38595), (228, 38508),

Gene: BadStone\_52 Start: 39936, Stop: 39163, Start Num: 19

Candidate Starts for BadStone\_52:

(Start: 19 @39936 has 111 MA's), (Start: 25 @39912 has 36 MA's), (Start: 34 @39882 has 33 MA's), (61, 39774), (83, 39678), (106, 39597), (114, 39573), (116, 39564), (119, 39555), (152, 39450), (154, 39444), (155, 39438), (194, 39294), (196, 39282), (205, 39258), (228, 39171),

Gene: BaghaKamala\_41 Start: 34011, Stop: 33109, Start Num: 9

Candidate Starts for BaghaKamala\_41:

(Start: 9 @34011 has 38 MA's), (Start: 20 @33954 has 2 MA's), (Start: 23 @33948 has 22 MA's), (29, 33924), (41, 33879), (Start: 46 @33855 has 1 MA's), (63, 33789), (67, 33780), (91, 33675), (92, 33672), (95, 33663), (97, 33645), (98, 33639), (115, 33591), (120, 33573), (125, 33543), (130, 33531), (134, 33522), (157, 33450), (173, 33393), (191, 33327), (197, 33300), (205, 33279), (209, 33267),

Gene: Bagrid\_94 Start: 58185, Stop: 57532, Start Num: 47

Candidate Starts for Bagrid\_94:

(Start: 34 @58239 has 33 MA's), (Start: 47 @58185 has 5 MA's), (Start: 49 @58176 has 1 MA's), (78, 58080), (106, 57981), (110, 57969), (116, 57948), (148, 57858), (150, 57852), (169, 57771), (175, 57753), (186, 57714), (190, 57696), (191, 57693), (205, 57642), (209, 57630), (221, 57579),

Gene: Balomoji\_53 Start: 40204, Stop: 39431, Start Num: 19

Candidate Starts for Balomoji\_53:

(Start: 19 @40204 has 111 MA's), (Start: 25 @40180 has 36 MA's), (Start: 34 @40150 has 33 MA's), (61, 40042), (83, 39946), (106, 39865), (114, 39841), (116, 39832), (119, 39823), (152, 39718), (154, 39712), (155, 39706), (194, 39562), (196, 39550), (205, 39526), (228, 39439),

Gene: Barbarian\_54 Start: 38727, Stop: 37954, Start Num: 19

Candidate Starts for Barbarian\_54:

(Start: 19 @38727 has 111 MA's), (Start: 25 @38703 has 36 MA's), (Start: 34 @38673 has 33 MA's), (61, 38565), (83, 38469), (106, 38388), (114, 38364), (116, 38355), (119, 38346), (152, 38241), (154, 38235), (155, 38229), (194, 38085), (196, 38073), (205, 38049), (228, 37962),

Gene: BarrelRoll\_42 Start: 34494, Stop: 33655, Start Num: 23

Candidate Starts for BarrelRoll\_42:



(Start: 9 @34557 has 38 MA's), (Start: 20 @34500 has 2 MA's), (Start: 23 @34494 has 22 MA's), (29, 34470), (Start: 35 @34449 has 6 MA's), (41, 34425), (63, 34335), (67, 34326), (91, 34221), (92, 34218), (95, 34209), (97, 34191), (98, 34185), (115, 34137), (120, 34119), (125, 34089), (130, 34077), (134, 34068), (153, 34011), (157, 33996), (173, 33939), (187, 33888), (191, 33873), (197, 33846), (209, 33813),

Gene: Bask21\_55 Start: 39043, Stop: 38288, Start Num: 19

Candidate Starts for Bask21\_55:

(Start: 19 @39043 has 111 MA's), (Start: 25 @39019 has 36 MA's), (Start: 34 @38989 has 33 MA's), (61, 38881), (83, 38785), (106, 38704), (114, 38680), (152, 38575), (154, 38569), (155, 38563), (194, 38419), (196, 38407), (205, 38383), (228, 38296),

Gene: Baudelaire\_42 Start: 36206, Stop: 35445, Start Num: 25

Candidate Starts for Baudelaire\_42:

(Start: 25 @36206 has 36 MA's), (39, 36155), (50, 36104), (61, 36068), (88, 35954), (115, 35861), (116, 35858), (135, 35798), (148, 35765), (151, 35753), (164, 35711), (165, 35705), (191, 35606), (203, 35573),

Gene: Beem\_96 Start: 59100, Stop: 58393, Start Num: 34

Candidate Starts for Beem\_96:

(Start: 34 @59100 has 33 MA's), (Start: 47 @59046 has 5 MA's), (Start: 49 @59037 has 1 MA's), (78, 58941), (106, 58842), (110, 58830), (116, 58809), (148, 58719), (150, 58713), (169, 58632), (175, 58614), (186, 58575), (190, 58557), (191, 58554), (205, 58503), (209, 58491), (221, 58440),

Gene: Beezoo\_44 Start: 35566, Stop: 34634, Start Num: 5

Candidate Starts for Beezoo\_44:

(Start: 5 @35566 has 1 MA's), (Start: 9 @35536 has 38 MA's), (Start: 12 @35515 has 2 MA's), (Start: 20 @35479 has 2 MA's), (Start: 23 @35473 has 22 MA's), (29, 35449), (41, 35404), (Start: 46 @35380 has 1 MA's), (63, 35314), (67, 35305), (91, 35200), (92, 35197), (95, 35188), (113, 35125), (115, 35116), (120, 35098), (125, 35068), (130, 35056), (134, 35047), (173, 34918), (187, 34867), (191, 34852), (197, 34825), (205, 34804), (209, 34792),

Gene: Bella96\_43 Start: 35364, Stop: 34525, Start Num: 23

Candidate Starts for Bella96\_43:

(Start: 10 @35418 has 8 MA's), (Start: 20 @35370 has 2 MA's), (Start: 23 @35364 has 22 MA's), (29, 35340), (Start: 33 @35325 has 1 MA's), (36, 35316), (41, 35295), (Start: 46 @35271 has 1 MA's), (51, 35244), (63, 35205), (67, 35196), (91, 35091), (92, 35088), (97, 35061), (98, 35055), (104, 35037), (113, 35016), (115, 35007), (120, 34989), (130, 34947), (134, 34938), (157, 34866), (173, 34809), (187, 34758), (191, 34743), (205, 34695), (209, 34683), (229, 34593),

Gene: Belladonna\_42 Start: 34689, Stop: 33787, Start Num: 9

Candidate Starts for Belladonna\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005), (197, 33978), (205, 33957), (209, 33945),

Gene: Bench\_56 Start: 39705, Stop: 38932, Start Num: 19

Candidate Starts for Bench\_56:

(Start: 19 @39705 has 111 MA's), (Start: 25 @39681 has 36 MA's), (Start: 34 @39651 has 33 MA's), (61, 39543), (83, 39447), (106, 39366), (114, 39342), (116, 39333), (119, 39324), (152, 39219), (154, 39213), (155, 39207), (194, 39063), (196, 39051), (205, 39027), (228, 38940),

Gene: BigBubba\_55 Start: 39746, Stop: 38973, Start Num: 19

Candidate Starts for BigBubba\_55:

(Start: 19 @39746 has 111 MA's), (Start: 25 @39722 has 36 MA's), (Start: 34 @39692 has 33 MA's), (61, 39584), (83, 39488), (106, 39407), (114, 39383), (116, 39374), (119, 39365), (152, 39260), (154, 39254), (155, 39248), (194, 39104), (196, 39092), (205, 39068), (228, 38981),

Gene: Biglebops\_37 Start: 34082, Stop: 33180, Start Num: 24

Candidate Starts for Biglebops\_37:

(Start: 16 @34100 has 1 MA's), (Start: 24 @34082 has 12 MA's), (37, 34034), (42, 34007), (45, 33989), (52, 33956), (58, 33938), (60, 33932), (63, 33920), (82, 33836), (86, 33821), (91, 33806), (100, 33764), (112, 33728), (117, 33710), (126, 33668), (137, 33650), (150, 33611), (168, 33542), (180, 33503), (184, 33488), (196, 33434), (203, 33416), (209, 33398), (217, 33359), (231, 33293), (244, 33203),

Gene: BilboSwaggins\_53 Start: 40213, Stop: 39602, Start Num: 61

Candidate Starts for BilboSwaggins\_53:

(Start: 19 @40375 has 111 MA's), (Start: 25 @40351 has 36 MA's), (Start: 34 @40321 has 33 MA's), (61, 40213), (83, 40117), (106, 40036), (114, 40012), (116, 40003), (119, 39994), (152, 39889), (154, 39883), (155, 39877), (194, 39733), (196, 39721), (205, 39697), (228, 39610),

Gene: Blizzard\_42 Start: 34886, Stop: 33984, Start Num: 9

Candidate Starts for Blizzard\_42:

(Start: 9 @34886 has 38 MA's), (Start: 12 @34865 has 2 MA's), (Start: 20 @34829 has 2 MA's), (Start: 23 @34823 has 22 MA's), (29, 34799), (Start: 35 @34778 has 6 MA's), (41, 34754), (63, 34664), (67, 34655), (91, 34550), (92, 34547), (95, 34538), (97, 34520), (98, 34514), (115, 34466), (120, 34448), (125, 34418), (130, 34406), (134, 34397), (157, 34325), (173, 34268), (187, 34217), (191, 34202), (197, 34175), (205, 34154), (209, 34142),

Gene: Bobby\_87 Start: 57466, Stop: 56759, Start Num: 34

Candidate Starts for Bobby\_87:

(Start: 34 @57466 has 33 MA's), (Start: 47 @57412 has 5 MA's), (Start: 49 @57403 has 1 MA's), (Start: 55 @57379 has 1 MA's), (78, 57307), (106, 57208), (110, 57196), (116, 57175), (148, 57085), (150, 57079), (169, 56998), (175, 56980), (186, 56941), (190, 56923), (191, 56920), (205, 56869), (209, 56857), (221, 56806),

Gene: Boiiii\_42 Start: 34825, Stop: 33986, Start Num: 23

Candidate Starts for Boiiii\_42:

(Start: 9 @34888 has 38 MA's), (Start: 12 @34867 has 2 MA's), (Start: 20 @34831 has 2 MA's), (Start: 23 @34825 has 22 MA's), (29, 34801), (Start: 35 @34780 has 6 MA's), (41, 34756), (63, 34666), (67, 34657), (91, 34552), (92, 34549), (95, 34540), (97, 34522), (98, 34516), (115, 34468), (120, 34450), (125, 34420), (130, 34408), (134, 34399), (157, 34327), (173, 34270), (187, 34219), (191, 34204), (197, 34177), (205, 34156), (209, 34144),

Gene: Boilgate\_41 Start: 35761, Stop: 34991, Start Num: 25

Candidate Starts for Boilgate\_41:

(Start: 25 @35761 has 36 MA's), (31, 35743), (38, 35719), (39, 35710), (43, 35689), (52, 35650), (68, 35605), (74, 35590), (85, 35521), (87, 35515), (91, 35503), (100, 35461), (116, 35416), (135, 35350), (163, 35266), (173, 35221), (180, 35203), (192, 35158), (207, 35107), (214, 35080), (216, 35071), (225, 35041), (233, 34996),

Gene: Bombitas\_84 Start: 56263, Stop: 55556, Start Num: 34

Candidate Starts for Bombitas\_84:

(Start: 34 @56263 has 33 MA's), (Start: 47 @56209 has 5 MA's), (Start: 49 @56200 has 1 MA's), (78, 56104), (106, 56005), (110, 55993), (116, 55972), (148, 55882), (150, 55876), (169, 55795), (175, 55777), (186, 55738), (190, 55720), (191, 55717), (205, 55666), (209, 55654), (221, 55603),

Gene: BoostSeason\_45 Start: 36162, Stop: 35314, Start Num: 22

Candidate Starts for BoostSeason\_45:

(Start: 22 @36162 has 8 MA's), (32, 36129), (71, 35979), (91, 35886), (99, 35847), (102, 35841), (107, 35826), (116, 35796), (120, 35781), (137, 35736), (217, 35451), (226, 35421),

Gene: Bruin\_50 Start: 38614, Stop: 37841, Start Num: 19

Candidate Starts for Bruin\_50:

(Start: 19 @38614 has 111 MA's), (Start: 25 @38590 has 36 MA's), (Start: 34 @38560 has 33 MA's), (61, 38452), (83, 38356), (106, 38275), (114, 38251), (116, 38242), (119, 38233), (152, 38128), (154, 38122), (155, 38116), (194, 37972), (196, 37960), (205, 37936), (228, 37849),

Gene: Buck\_55 Start: 40321, Stop: 39548, Start Num: 19

Candidate Starts for Buck\_55:

(Start: 19 @40321 has 111 MA's), (Start: 25 @40297 has 36 MA's), (Start: 34 @40267 has 33 MA's), (61, 40159), (83, 40063), (106, 39982), (114, 39958), (116, 39949), (119, 39940), (152, 39835), (154, 39829), (155, 39823), (194, 39679), (196, 39667), (205, 39643), (228, 39556),

Gene: BugsBunny\_55 Start: 40152, Stop: 39379, Start Num: 19

Candidate Starts for BugsBunny\_55:

(Start: 19 @40152 has 111 MA's), (Start: 25 @40128 has 36 MA's), (Start: 34 @40098 has 33 MA's), (61, 39990), (83, 39894), (106, 39813), (114, 39789), (116, 39780), (119, 39771), (152, 39666), (154, 39660), (155, 39654), (194, 39510), (196, 39498), (205, 39474), (228, 39387),

Gene: CREW\_42 Start: 34689, Stop: 33787, Start Num: 9

Candidate Starts for CREW\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005), (197, 33978), (205, 33957), (209, 33945),

Gene: Cactus\_56 Start: 39094, Stop: 38321, Start Num: 19

Candidate Starts for Cactus\_56:

(Start: 19 @39094 has 111 MA's), (Start: 25 @39070 has 36 MA's), (Start: 34 @39040 has 33 MA's), (61, 38932), (83, 38836), (106, 38755), (114, 38731), (116, 38722), (119, 38713), (152, 38608), (154, 38602), (155, 38596), (194, 38452), (196, 38440), (205, 38416), (228, 38329),

Gene: Capricorn\_42 Start: 34626, Stop: 33787, Start Num: 23

Candidate Starts for Capricorn\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005), (197, 33978), (205, 33957), (209, 33945),

Gene: CaseJules\_43 Start: 34823, Stop: 33984, Start Num: 23

Candidate Starts for CaseJules\_43:

(Start: 9 @34886 has 38 MA's), (Start: 12 @34865 has 2 MA's), (Start: 20 @34829 has 2 MA's), (Start: 23 @34823 has 22 MA's), (29, 34799), (Start: 35 @34778 has 6 MA's), (41, 34754), (63, 34664), (67,

34655), (91, 34550), (92, 34547), (95, 34538), (97, 34520), (98, 34514), (115, 34466), (120, 34448), (125, 34418), (130, 34406), (134, 34397), (157, 34325), (173, 34268), (187, 34217), (191, 34202), (197, 34175), (205, 34154), (209, 34142),

Gene: Chancellor\_46 Start: 35595, Stop: 34777, Start Num: 25

Candidate Starts for Chancellor\_46:

(Start: 25 @35595 has 36 MA's), (26, 35592), (31, 35577), (Start: 46 @35514 has 1 MA's), (52, 35484), (59, 35463), (72, 35427), (78, 35391), (87, 35349), (91, 35337), (92, 35334), (100, 35295), (116, 35250), (120, 35235), (132, 35199), (135, 35190), (165, 35097), (180, 35043), (186, 35019), (187, 35013), (192, 34995), (211, 34929), (216, 34908),

Gene: CheetoDust\_41 Start: 34052, Stop: 33159, Start Num: 10

Candidate Starts for CheetoDust\_41:

(Start: 10 @34052 has 8 MA's), (Start: 20 @34004 has 2 MA's), (Start: 23 @33998 has 22 MA's), (29, 33974), (36, 33950), (41, 33929), (67, 33830), (91, 33725), (97, 33695), (113, 33650), (115, 33641), (120, 33623), (125, 33593), (130, 33581), (134, 33572), (142, 33548), (157, 33500), (191, 33377), (205, 33329), (211, 33308),

Gene: Cheetobro\_46 Start: 35592, Stop: 34774, Start Num: 25

Candidate Starts for Cheetobro\_46:

(Start: 25 @35592 has 36 MA's), (26, 35589), (31, 35574), (Start: 46 @35511 has 1 MA's), (52, 35481), (59, 35460), (72, 35424), (78, 35388), (87, 35346), (91, 35334), (92, 35331), (100, 35292), (116, 35247), (120, 35232), (132, 35196), (135, 35187), (165, 35094), (180, 35040), (186, 35016), (187, 35010), (192, 34992), (211, 34926), (216, 34905),

Gene: ChosenOne\_55 Start: 39394, Stop: 38621, Start Num: 19

Candidate Starts for ChosenOne\_55:

(Start: 19 @39394 has 111 MA's), (Start: 25 @39370 has 36 MA's), (Start: 34 @39340 has 33 MA's), (61, 39232), (83, 39136), (106, 39055), (114, 39031), (116, 39022), (119, 39013), (152, 38908), (154, 38902), (155, 38896), (194, 38752), (196, 38740), (205, 38716), (228, 38629),

Gene: ChotaBhai\_54 Start: 39416, Stop: 38643, Start Num: 19

Candidate Starts for ChotaBhai\_54:

(Start: 19 @39416 has 111 MA's), (Start: 25 @39392 has 36 MA's), (Start: 34 @39362 has 33 MA's), (61, 39254), (83, 39158), (106, 39077), (114, 39053), (116, 39044), (119, 39035), (152, 38930), (154, 38924), (155, 38918), (194, 38774), (196, 38762), (205, 38738), (228, 38651),

Gene: Cjw1\_54 Start: 40795, Stop: 40022, Start Num: 19

Candidate Starts for Cjw1\_54:

(Start: 19 @40795 has 111 MA's), (Start: 25 @40771 has 36 MA's), (Start: 34 @40741 has 33 MA's), (61, 40633), (83, 40537), (106, 40456), (114, 40432), (116, 40423), (119, 40414), (152, 40309), (154, 40303), (155, 40297), (194, 40153), (196, 40141), (205, 40117), (228, 40030),

Gene: Collard\_40 Start: 33961, Stop: 33110, Start Num: 21

Candidate Starts for Collard\_40:

(Start: 21 @33961 has 21 MA's), (53, 33832), (69, 33790), (91, 33691), (95, 33679), (107, 33631), (116, 33601), (121, 33583), (128, 33547), (174, 33388), (179, 33373), (182, 33361), (190, 33328), (193, 33319), (199, 33301), (201, 33295), (206, 33280), (217, 33232), (223, 33211),

Gene: Command613\_56 Start: 40133, Stop: 39360, Start Num: 19

Candidate Starts for Command613\_56:

(Start: 19 @40133 has 111 MA's), (Start: 25 @40109 has 36 MA's), (Start: 34 @40079 has 33 MA's), (61, 39971), (83, 39875), (106, 39794), (114, 39770), (116, 39761), (119, 39752), (152, 39647), (154,

39641), (155, 39635), (194, 39491), (196, 39479), (205, 39455), (228, 39368),

Gene: Constella\_81 Start: 53215, Stop: 52562, Start Num: 47

Candidate Starts for Constella\_81:

(Start: 34 @53269 has 33 MA's), (Start: 47 @53215 has 5 MA's), (Start: 49 @53206 has 1 MA's), (78, 53110), (106, 53011), (110, 52999), (116, 52978), (148, 52888), (150, 52882), (169, 52801), (175, 52783), (186, 52744), (190, 52726), (191, 52723), (205, 52672), (209, 52660), (221, 52609),

Gene: Contagion\_51 Start: 38895, Stop: 38122, Start Num: 19

Candidate Starts for Contagion\_51:

(Start: 19 @38895 has 111 MA's), (Start: 25 @38871 has 36 MA's), (Start: 34 @38841 has 33 MA's), (61, 38733), (83, 38637), (106, 38556), (114, 38532), (116, 38523), (119, 38514), (152, 38409), (154, 38403), (155, 38397), (194, 38253), (196, 38241), (205, 38217), (228, 38130),

Gene: Cookies\_51 Start: 39266, Stop: 38493, Start Num: 19

Candidate Starts for Cookies\_51:

(Start: 19 @39266 has 111 MA's), (Start: 25 @39242 has 36 MA's), (Start: 34 @39212 has 33 MA's), (61, 39104), (83, 39008), (106, 38927), (114, 38903), (116, 38894), (119, 38885), (152, 38780), (154, 38774), (155, 38768), (194, 38624), (196, 38612), (205, 38588), (228, 38501),

Gene: Courthouse\_86 Start: 53071, Stop: 52364, Start Num: 34

Candidate Starts for Courthouse\_86:

(Start: 34 @53071 has 33 MA's), (Start: 47 @53017 has 5 MA's), (Start: 49 @53008 has 1 MA's), (78, 52912), (81, 52894), (106, 52813), (110, 52801), (112, 52795), (114, 52789), (116, 52780), (131, 52738), (149, 52687), (150, 52684), (169, 52603), (175, 52585), (186, 52546), (189, 52534), (190, 52528), (191, 52525), (202, 52483), (205, 52474), (208, 52465), (209, 52462), (221, 52411),

Gene: CrimD\_42 Start: 34709, Stop: 33915, Start Num: 35

Candidate Starts for CrimD\_42:

(Start: 9 @34817 has 38 MA's), (Start: 12 @34796 has 2 MA's), (Start: 20 @34760 has 2 MA's), (Start: 23 @34754 has 22 MA's), (29, 34730), (Start: 35 @34709 has 6 MA's), (41, 34685), (Start: 46 @34661 has 1 MA's), (63, 34595), (67, 34586), (91, 34481), (92, 34478), (95, 34469), (97, 34451), (115, 34397), (120, 34379), (125, 34349), (130, 34337), (134, 34328), (157, 34256), (173, 34199), (187, 34148), (191, 34133), (197, 34106), (205, 34085), (209, 34073),

Gene: CrystalP\_54 Start: 40375, Stop: 39602, Start Num: 19

Candidate Starts for CrystalP\_54:

(Start: 19 @40375 has 111 MA's), (Start: 25 @40351 has 36 MA's), (Start: 34 @40321 has 33 MA's), (61, 40213), (83, 40117), (106, 40036), (114, 40012), (116, 40003), (119, 39994), (152, 39889), (154, 39883), (155, 39877), (194, 39733), (196, 39721), (205, 39697), (228, 39610),

Gene: Curiosium\_45 Start: 33580, Stop: 32717, Start Num: 30

Candidate Starts for Curiosium\_45:

(3, 33718), (Start: 30 @33580 has 2 MA's), (59, 33463), (74, 33421), (76, 33403), (103, 33286), (106, 33280), (109, 33271), (112, 33262), (116, 33247), (119, 33238), (145, 33160), (148, 33148), (149, 33145), (167, 33076), (174, 33046), (176, 33040), (186, 33004), (187, 32998), (212, 32911), (225, 32860), (227, 32854), (238, 32728),

Gene: Czyszczone1\_55 Start: 39604, Stop: 38831, Start Num: 19

Candidate Starts for Czyszczone1\_55:

(Start: 19 @39604 has 111 MA's), (Start: 25 @39580 has 36 MA's), (Start: 34 @39550 has 33 MA's), (61, 39442), (83, 39346), (106, 39265), (114, 39241), (116, 39232), (119, 39223), (152, 39118), (154, 39112), (155, 39106), (194, 38962), (196, 38950), (205, 38926), (228, 38839),

Gene: DS6A\_57 Start: 40555, Stop: 39803, Start Num: 55

Candidate Starts for DS6A\_57:

(6, 40786), (54, 40558), (Start: 55 @40555 has 1 MA's), (57, 40552), (62, 40531), (64, 40528), (70, 40507), (82, 40447), (87, 40429), (90, 40420), (94, 40408), (111, 40345), (113, 40339), (119, 40318), (144, 40225), (199, 40009), (221, 39922), (224, 39916), (233, 39865), (235, 39844), (236, 39829),

Gene: Dadosky\_41 Start: 33855, Stop: 33004, Start Num: 21

Candidate Starts for Dadosky\_41:

(4, 33957), (Start: 13 @33891 has 2 MA's), (Start: 21 @33855 has 21 MA's), (Start: 34 @33810 has 33 MA's), (51, 33732), (69, 33684), (91, 33585), (95, 33573), (107, 33525), (116, 33495), (121, 33477), (128, 33441), (131, 33435), (139, 33408), (174, 33282), (179, 33267), (182, 33255), (193, 33213), (206, 33174), (217, 33126),

Gene: Daikon\_55 Start: 40225, Stop: 39452, Start Num: 19

Candidate Starts for Daikon\_55:

(Start: 19 @40225 has 111 MA's), (Start: 25 @40201 has 36 MA's), (Start: 34 @40171 has 33 MA's), (61, 40063), (83, 39967), (106, 39886), (114, 39862), (116, 39853), (119, 39844), (152, 39739), (154, 39733), (155, 39727), (194, 39583), (196, 39571), (205, 39547), (228, 39460),

Gene: Dallas\_97 Start: 59108, Stop: 58401, Start Num: 34

Candidate Starts for Dallas\_97:

(Start: 34 @59108 has 33 MA's), (Start: 47 @59054 has 5 MA's), (Start: 49 @59045 has 1 MA's), (78, 58949), (106, 58850), (110, 58838), (116, 58817), (148, 58727), (150, 58721), (169, 58640), (175, 58622), (186, 58583), (190, 58565), (191, 58562), (205, 58511), (209, 58499), (221, 58448),

Gene: Dalmuri\_42 Start: 34689, Stop: 33787, Start Num: 9

Candidate Starts for Dalmuri\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005), (197, 33978), (205, 33957), (209, 33945),

Gene: Dartin\_44 Start: 35155, Stop: 34205, Start Num: 24

Candidate Starts for Dartin\_44:

(1, 35275), (2, 35272), (Start: 24 @35155 has 12 MA's), (37, 35107), (39, 35095), (44, 35068), (45, 35062), (48, 35050), (76, 34948), (82, 34909), (86, 34894), (91, 34879), (114, 34795), (116, 34786), (128, 34750), (158, 34669), (181, 34588), (185, 34570), (208, 34492), (209, 34489), (217, 34450), (234, 34360), (243, 34252),

Gene: Deby\_42 Start: 34754, Stop: 33915, Start Num: 23

Candidate Starts for Deby\_42:

(Start: 10 @34808 has 8 MA's), (Start: 20 @34760 has 2 MA's), (Start: 23 @34754 has 22 MA's), (29, 34730), (41, 34685), (67, 34586), (91, 34481), (92, 34478), (95, 34469), (97, 34451), (115, 34397), (120, 34379), (125, 34349), (130, 34337), (134, 34328), (157, 34256), (173, 34199), (191, 34133), (197, 34106), (205, 34085), (209, 34073),

Gene: Devera\_46 Start: 35291, Stop: 34452, Start Num: 23

Candidate Starts for Devera\_46:

(Start: 23 @35291 has 22 MA's), (Start: 35 @35246 has 6 MA's), (41, 35222), (Start: 46 @35198 has 1 MA's), (63, 35132), (67, 35123), (69, 35117), (91, 35018), (92, 35015), (95, 35006), (97, 34988), (113, 34943), (115, 34934), (130, 34874), (134, 34865), (157, 34793), (159, 34787), (171, 34742),

(173, 34736), (176, 34727), (187, 34685), (191, 34670), (195, 34652), (205, 34622), (209, 34610), (217, 34571),

Gene: DismalFunk\_45 Start: 36592, Stop: 35744, Start Num: 22

Candidate Starts for DismalFunk\_45:

(Start: 22 @36592 has 8 MA's), (39, 36529), (50, 36478), (65, 36430), (86, 36334), (91, 36319), (102, 36274), (109, 36253), (116, 36229), (129, 36178), (137, 36169), (171, 36049), (174, 36040), (206, 35932), (211, 35914), (213, 35905), (217, 35884),

Gene: DismalStressor\_45 Start: 36592, Stop: 35744, Start Num: 22

Candidate Starts for DismalStressor\_45:

(Start: 22 @36592 has 8 MA's), (39, 36529), (50, 36478), (65, 36430), (86, 36334), (91, 36319), (102, 36274), (109, 36253), (116, 36229), (129, 36178), (137, 36169), (171, 36049), (174, 36040), (206, 35932), (211, 35914), (213, 35905), (217, 35884),

Gene: DmpstrDiver\_97 Start: 58533, Stop: 57826, Start Num: 34

Candidate Starts for DmpstrDiver\_97:

(Start: 34 @58533 has 33 MA's), (Start: 47 @58479 has 5 MA's), (Start: 49 @58470 has 1 MA's), (Start: 55 @58446 has 1 MA's), (78, 58374), (106, 58275), (110, 58263), (116, 58242), (148, 58152), (150, 58146), (169, 58065), (175, 58047), (186, 58008), (190, 57990), (191, 57987), (205, 57936), (209, 57924), (221, 57873),

Gene: DoctorDiddles\_54 Start: 39452, Stop: 38679, Start Num: 19

Candidate Starts for DoctorDiddles\_54:

(Start: 19 @39452 has 111 MA's), (Start: 25 @39428 has 36 MA's), (Start: 34 @39398 has 33 MA's), (61, 39290), (83, 39194), (106, 39113), (114, 39089), (116, 39080), (119, 39071), (152, 38966), (154, 38960), (155, 38954), (194, 38810), (196, 38798), (205, 38774), (228, 38687),

Gene: Dole\_45 Start: 35293, Stop: 34454, Start Num: 23

Candidate Starts for Dole\_45:

(Start: 23 @35293 has 22 MA's), (Start: 35 @35248 has 6 MA's), (41, 35224), (Start: 46 @35200 has 1 MA's), (63, 35134), (67, 35125), (69, 35119), (91, 35020), (92, 35017), (95, 35008), (97, 34990), (113, 34945), (115, 34936), (130, 34876), (134, 34867), (157, 34795), (159, 34789), (171, 34744), (173, 34738), (176, 34729), (187, 34687), (191, 34672), (195, 34654), (205, 34624), (209, 34612), (217, 34573),

Gene: DrDrey\_54 Start: 40523, Stop: 39750, Start Num: 19

Candidate Starts for DrDrey\_54:

(Start: 19 @40523 has 111 MA's), (Start: 25 @40499 has 36 MA's), (Start: 34 @40469 has 33 MA's), (61, 40361), (83, 40265), (106, 40184), (114, 40160), (116, 40151), (119, 40142), (152, 40037), (154, 40031), (155, 40025), (194, 39881), (196, 39869), (205, 39845), (228, 39758),

Gene: DrHayes\_43 Start: 35473, Stop: 34568, Start Num: 9

Candidate Starts for DrHayes\_43:

(Start: 9 @35473 has 38 MA's), (Start: 20 @35413 has 2 MA's), (Start: 23 @35407 has 22 MA's), (29, 35383), (Start: 33 @35368 has 1 MA's), (36, 35359), (41, 35338), (Start: 46 @35314 has 1 MA's), (51, 35287), (63, 35248), (67, 35239), (91, 35134), (92, 35131), (97, 35104), (104, 35080), (113, 35059), (115, 35050), (120, 35032), (130, 34990), (134, 34981), (147, 34945), (157, 34909), (173, 34852), (191, 34786), (209, 34726), (229, 34636),

Gene: Duke13\_91 Start: 57040, Stop: 56333, Start Num: 34

Candidate Starts for Duke13\_91:

(Start: 34 @57040 has 33 MA's), (Start: 47 @56986 has 5 MA's), (Start: 49 @56977 has 1 MA's), (78, 56881), (106, 56782), (110, 56770), (116, 56749), (148, 56659), (150, 56653), (169, 56572), (175, 56554), (186, 56515), (190, 56497), (191, 56494), (205, 56443), (209, 56431), (221, 56380),

Gene: Dumbo\_54 Start: 39299, Stop: 38526, Start Num: 19

Candidate Starts for Dumbo\_54:

(Start: 19 @39299 has 111 MA's), (Start: 25 @39275 has 36 MA's), (Start: 34 @39245 has 33 MA's), (61, 39137), (83, 39041), (106, 38960), (114, 38936), (116, 38927), (119, 38918), (152, 38813), (154, 38807), (155, 38801), (194, 38657), (196, 38645), (205, 38621), (228, 38534),

Gene: Durfee\_42 Start: 34886, Stop: 33984, Start Num: 9

Candidate Starts for Durfee\_42:

(Start: 9 @34886 has 38 MA's), (Start: 12 @34865 has 2 MA's), (Start: 20 @34829 has 2 MA's), (Start: 23 @34823 has 22 MA's), (29, 34799), (Start: 35 @34778 has 6 MA's), (41, 34754), (63, 34664), (67, 34655), (91, 34550), (92, 34547), (95, 34538), (97, 34520), (98, 34514), (115, 34466), (120, 34448), (125, 34418), (130, 34406), (134, 34397), (157, 34325), (173, 34268), (187, 34217), (191, 34202), (197, 34175), (205, 34154), (209, 34142),

Gene: Dusk\_52 Start: 39596, Stop: 38823, Start Num: 19

Candidate Starts for Dusk\_52:

(Start: 19 @39596 has 111 MA's), (Start: 25 @39572 has 36 MA's), (Start: 34 @39542 has 33 MA's), (61, 39434), (83, 39338), (106, 39257), (114, 39233), (116, 39224), (119, 39215), (152, 39110), (154, 39104), (155, 39098), (194, 38954), (196, 38942), (205, 38918), (228, 38831),

Gene: Easy2Say\_55 Start: 40837, Stop: 40064, Start Num: 19

Candidate Starts for Easy2Say\_55:

(Start: 19 @40837 has 111 MA's), (Start: 25 @40813 has 36 MA's), (Start: 34 @40783 has 33 MA's), (61, 40675), (83, 40579), (106, 40498), (114, 40474), (116, 40465), (119, 40456), (152, 40351), (154, 40345), (155, 40339), (194, 40195), (196, 40183), (205, 40159), (228, 40072),

Gene: Edugator\_40 Start: 34316, Stop: 33429, Start Num: 13

Candidate Starts for Edugator\_40:

(4, 34382), (Start: 13 @34316 has 2 MA's), (Start: 21 @34280 has 21 MA's), (Start: 34 @34235 has 33 MA's), (51, 34157), (69, 34109), (84, 34031), (91, 34010), (95, 33998), (107, 33950), (116, 33920), (121, 33902), (128, 33866), (139, 33833), (174, 33707), (179, 33692), (182, 33680), (193, 33638), (206, 33599), (217, 33551),

Gene: Ejimix\_89 Start: 58827, Stop: 58120, Start Num: 34

Candidate Starts for Ejimix\_89:

(Start: 34 @58827 has 33 MA's), (Start: 47 @58773 has 5 MA's), (Start: 49 @58764 has 1 MA's), (78, 58668), (106, 58569), (110, 58557), (116, 58536), (148, 58446), (150, 58440), (169, 58359), (175, 58341), (186, 58302), (190, 58284), (191, 58281), (205, 58230), (209, 58218), (221, 58167),

Gene: Elite2014\_54 Start: 39393, Stop: 38620, Start Num: 19

Candidate Starts for Elite2014\_54:

(Start: 19 @39393 has 111 MA's), (Start: 25 @39369 has 36 MA's), (Start: 34 @39339 has 33 MA's), (61, 39231), (83, 39135), (106, 39054), (114, 39030), (116, 39021), (119, 39012), (152, 38907), (154, 38901), (155, 38895), (194, 38751), (196, 38739), (205, 38715), (228, 38628),

Gene: Elph10\_54 Start: 39102, Stop: 38329, Start Num: 19

Candidate Starts for Elph10\_54:

(Start: 19 @39102 has 111 MA's), (Start: 25 @39078 has 36 MA's), (Start: 34 @39048 has 33 MA's), (61, 38940), (83, 38844), (106, 38763), (114, 38739), (116, 38730), (119, 38721), (152, 38616), (154,



38610), (155, 38604), (194, 38460), (196, 38448), (205, 38424), (228, 38337),

Gene: Emerson\_43 Start: 34457, Stop: 33663, Start Num: 35

Candidate Starts for Emerson\_43:

(Start: 9 @34565 has 38 MA's), (Start: 20 @34508 has 2 MA's), (Start: 23 @34502 has 22 MA's), (29, 34478), (Start: 35 @34457 has 6 MA's), (41, 34433), (63, 34343), (67, 34334), (91, 34229), (92, 34226), (95, 34217), (97, 34199), (98, 34193), (115, 34145), (120, 34127), (125, 34097), (130, 34085), (134, 34076), (153, 34019), (157, 34004), (173, 33947), (187, 33896), (191, 33881), (197, 33854), (205, 33833), (209, 33821),

Gene: Emmina\_54 Start: 39276, Stop: 38527, Start Num: 25

Candidate Starts for Emmina\_54:

(Start: 19 @39300 has 111 MA's), (Start: 25 @39276 has 36 MA's), (Start: 34 @39246 has 33 MA's), (61, 39138), (83, 39042), (106, 38961), (114, 38937), (116, 38928), (119, 38919), (152, 38814), (154, 38808), (155, 38802), (194, 38658), (196, 38646), (205, 38622), (228, 38535),

Gene: Enkosi\_40 Start: 36695, Stop: 35793, Start Num: 24

Candidate Starts for Enkosi\_40:

(Start: 16 @36713 has 1 MA's), (Start: 24 @36695 has 12 MA's), (37, 36647), (42, 36620), (45, 36602), (52, 36569), (58, 36551), (60, 36545), (63, 36533), (82, 36449), (86, 36434), (91, 36419), (100, 36377), (112, 36341), (117, 36323), (126, 36281), (137, 36263), (150, 36224), (158, 36194), (168, 36155), (180, 36116), (184, 36101), (196, 36047), (203, 36029), (209, 36011), (217, 35972), (231, 35906), (244, 35816),

Gene: Eponine\_48 Start: 36348, Stop: 35530, Start Num: 25

Candidate Starts for Eponine\_48:

(Start: 25 @36348 has 36 MA's), (26, 36345), (31, 36330), (Start: 46 @36267 has 1 MA's), (52, 36237), (59, 36216), (72, 36180), (78, 36144), (87, 36102), (91, 36090), (92, 36087), (100, 36048), (116, 36003), (120, 35988), (132, 35952), (135, 35943), (165, 35850), (180, 35796), (186, 35772), (187, 35766), (192, 35748), (211, 35682), (216, 35661),

Gene: EricMillard\_89 Start: 58168, Stop: 57461, Start Num: 34

Candidate Starts for EricMillard\_89:

(Start: 34 @58168 has 33 MA's), (Start: 47 @58114 has 5 MA's), (Start: 49 @58105 has 1 MA's), (Start: 55 @58081 has 1 MA's), (78, 58009), (106, 57910), (110, 57898), (116, 57877), (148, 57787), (150, 57781), (169, 57700), (175, 57682), (186, 57643), (190, 57625), (191, 57622), (205, 57571), (209, 57559), (221, 57508),

Gene: Eureka\_52 Start: 39864, Stop: 39091, Start Num: 19

Candidate Starts for Eureka\_52:

(Start: 19 @39864 has 111 MA's), (Start: 25 @39840 has 36 MA's), (Start: 34 @39810 has 33 MA's), (61, 39702), (83, 39606), (106, 39525), (114, 39501), (116, 39492), (119, 39483), (152, 39378), (154, 39372), (155, 39366), (194, 39222), (196, 39210), (205, 39186), (228, 39099),

Gene: FairyPath\_54 Start: 40216, Stop: 39443, Start Num: 19

Candidate Starts for FairyPath\_54:

(Start: 19 @40216 has 111 MA's), (Start: 25 @40192 has 36 MA's), (Start: 34 @40162 has 33 MA's), (61, 40054), (83, 39958), (106, 39877), (114, 39853), (116, 39844), (119, 39835), (152, 39730), (154, 39724), (155, 39718), (194, 39574), (196, 39562), (205, 39538), (228, 39451),

Gene: Feyre\_40 Start: 33712, Stop: 32870, Start Num: 21

Candidate Starts for Feyre\_40:

(Start: 21 @33712 has 21 MA's), (Start: 34 @33670 has 33 MA's), (82, 33475), (91, 33445), (110, 33376), (112, 33370), (116, 33355), (121, 33337), (130, 33301), (151, 33229), (179, 33130), (186, 33103), (188, 33094), (190, 33085), (199, 33058), (201, 33052), (206, 33037), (214, 33007), (217, 32989), (223, 32968),

Gene: Filch\_55 Start: 39325, Stop: 38552, Start Num: 19

Candidate Starts for Filch\_55:

(Start: 19 @39325 has 111 MA's), (Start: 25 @39301 has 36 MA's), (Start: 34 @39271 has 33 MA's), (61, 39163), (83, 39067), (106, 38986), (114, 38962), (116, 38953), (119, 38944), (152, 38839), (154, 38833), (155, 38827), (194, 38683), (196, 38671), (205, 38647), (228, 38560),

Gene: Findley\_45 Start: 36585, Stop: 35737, Start Num: 22

Candidate Starts for Findley\_45:

(Start: 22 @36585 has 8 MA's), (37, 36534), (39, 36522), (50, 36471), (65, 36423), (86, 36327), (91, 36312), (102, 36267), (116, 36222), (129, 36171), (137, 36162), (171, 36042), (206, 35925), (211, 35907), (213, 35898), (217, 35877),

Gene: Fionnbharth\_46 Start: 35745, Stop: 34927, Start Num: 25

Candidate Starts for Fionnbharth\_46:

(Start: 25 @35745 has 36 MA's), (26, 35742), (31, 35727), (52, 35634), (59, 35613), (72, 35577), (78, 35541), (87, 35499), (91, 35487), (92, 35484), (95, 35475), (100, 35445), (120, 35385), (132, 35349), (135, 35340), (165, 35247), (180, 35193), (186, 35169), (187, 35163), (192, 35145), (211, 35079), (216, 35058),

Gene: FireRed\_57 Start: 40591, Stop: 39818, Start Num: 19

Candidate Starts for FireRed\_57:

(Start: 19 @40591 has 111 MA's), (Start: 25 @40567 has 36 MA's), (Start: 34 @40537 has 33 MA's), (61, 40429), (83, 40333), (106, 40252), (114, 40228), (116, 40219), (119, 40210), (152, 40105), (154, 40099), (155, 40093), (194, 39949), (196, 39937), (205, 39913), (228, 39826),

Gene: Flypotenuse\_49 Start: 39064, Stop: 38315, Start Num: 25

Candidate Starts for Flypotenuse\_49:

(Start: 19 @39088 has 111 MA's), (Start: 25 @39064 has 36 MA's), (Start: 34 @39034 has 33 MA's), (61, 38926), (83, 38830), (106, 38749), (114, 38725), (116, 38716), (119, 38707), (152, 38602), (154, 38596), (155, 38590), (194, 38446), (196, 38434), (205, 38410), (228, 38323),

Gene: Gage\_57 Start: 39873, Stop: 39100, Start Num: 19

Candidate Starts for Gage\_57:

(Start: 19 @39873 has 111 MA's), (Start: 25 @39849 has 36 MA's), (Start: 34 @39819 has 33 MA's), (61, 39711), (83, 39615), (106, 39534), (114, 39510), (116, 39501), (119, 39492), (152, 39387), (154, 39381), (155, 39375), (194, 39231), (196, 39219), (205, 39195), (228, 39108),

Gene: Gaia\_67 Start: 44826, Stop: 44038, Start Num: 15

Candidate Starts for Gaia\_67:

(Start: 15 @44826 has 2 MA's), (Start: 25 @44787 has 36 MA's), (61, 44649), (97, 44496), (106, 44472), (116, 44439), (127, 44397), (135, 44379), (146, 44355), (183, 44220), (188, 44199), (203, 44148), (219, 44088), (221, 44079),

Gene: Ganymede\_43 Start: 35009, Stop: 34107, Start Num: 9

Candidate Starts for Ganymede\_43:

(Start: 9 @35009 has 38 MA's), (Start: 20 @34952 has 2 MA's), (Start: 23 @34946 has 22 MA's), (29, 34922), (Start: 35 @34901 has 6 MA's), (41, 34877), (63, 34787), (67, 34778), (91, 34673), (92, 34670), (95, 34661), (97, 34643), (98, 34637), (115, 34589), (120, 34571), (125, 34541), (130, 34529),

(134, 34520), (153, 34463), (157, 34448), (173, 34391), (191, 34325), (197, 34298), (205, 34277), (209, 34265),

Gene: Gator\_52 Start: 40227, Stop: 39454, Start Num: 19

Candidate Starts for Gator\_52:

(Start: 19 @40227 has 111 MA's), (Start: 25 @40203 has 36 MA's), (Start: 34 @40173 has 33 MA's), (61, 40065), (83, 39969), (106, 39888), (114, 39864), (116, 39855), (119, 39846), (152, 39741), (154, 39735), (155, 39729), (194, 39585), (196, 39573), (205, 39549), (228, 39462),

Gene: Gemini\_58 Start: 40390, Stop: 39617, Start Num: 19

Candidate Starts for Gemini\_58:

(Start: 19 @40390 has 111 MA's), (Start: 25 @40366 has 36 MA's), (Start: 34 @40336 has 33 MA's), (61, 40228), (83, 40132), (106, 40051), (114, 40027), (116, 40018), (119, 40009), (152, 39904), (154, 39898), (155, 39892), (194, 39748), (196, 39736), (205, 39712), (228, 39625),

Gene: Gengar\_40 Start: 33822, Stop: 32980, Start Num: 21

Candidate Starts for Gengar\_40:

(Start: 21 @33822 has 21 MA's), (Start: 34 @33780 has 33 MA's), (82, 33585), (91, 33555), (110, 33486), (112, 33480), (116, 33465), (121, 33447), (130, 33411), (151, 33339), (179, 33240), (186, 33213), (188, 33204), (190, 33195), (193, 33186), (199, 33168), (201, 33162), (206, 33147), (214, 33117), (217, 33099), (223, 33078),

Gene: Geraldini\_44 Start: 35613, Stop: 34720, Start Num: 10

Candidate Starts for Geraldini\_44:

(Start: 10 @35613 has 8 MA's), (Start: 20 @35565 has 2 MA's), (Start: 23 @35559 has 22 MA's), (29, 35535), (41, 35490), (63, 35400), (67, 35391), (91, 35286), (92, 35283), (95, 35274), (97, 35256), (98, 35250), (115, 35202), (120, 35184), (125, 35154), (130, 35142), (134, 35133), (157, 35061), (173, 35004), (191, 34938), (197, 34911), (205, 34890), (209, 34878),

Gene: Glexan\_52 Start: 40215, Stop: 39442, Start Num: 19

Candidate Starts for Glexan\_52:

(Start: 19 @40215 has 111 MA's), (Start: 25 @40191 has 36 MA's), (Start: 34 @40161 has 33 MA's), (61, 40053), (83, 39957), (106, 39876), (114, 39852), (116, 39843), (119, 39834), (152, 39729), (154, 39723), (155, 39717), (194, 39573), (196, 39561), (205, 39537), (228, 39450),

Gene: Goku\_52 Start: 39593, Stop: 38820, Start Num: 19

Candidate Starts for Goku\_52:

(Start: 19 @39593 has 111 MA's), (Start: 25 @39569 has 36 MA's), (Start: 34 @39539 has 33 MA's), (61, 39431), (83, 39335), (106, 39254), (114, 39230), (116, 39221), (119, 39212), (152, 39107), (154, 39101), (155, 39095), (194, 38951), (196, 38939), (205, 38915), (228, 38828),

Gene: GoldenSpark\_57 Start: 39849, Stop: 39100, Start Num: 25

Candidate Starts for GoldenSpark\_57:

(Start: 19 @39873 has 111 MA's), (Start: 25 @39849 has 36 MA's), (Start: 34 @39819 has 33 MA's), (61, 39711), (83, 39615), (106, 39534), (114, 39510), (116, 39501), (119, 39492), (152, 39387), (154, 39381), (155, 39375), (194, 39231), (196, 39219), (205, 39195), (228, 39108),

Gene: Goldilocks\_56 Start: 39375, Stop: 38602, Start Num: 19

Candidate Starts for Goldilocks\_56:

(Start: 19 @39375 has 111 MA's), (Start: 25 @39351 has 36 MA's), (Start: 34 @39321 has 33 MA's), (61, 39213), (83, 39117), (106, 39036), (114, 39012), (116, 39003), (119, 38994), (152, 38889), (154, 38883), (155, 38877), (194, 38733), (196, 38721), (205, 38697), (228, 38610),

Gene: Gonephishing\_82 Start: 52633, Stop: 51926, Start Num: 34

Candidate Starts for Gonephishing\_82:

(Start: 34 @52633 has 33 MA's), (Start: 47 @52579 has 5 MA's), (Start: 49 @52570 has 1 MA's), (106, 52375), (110, 52363), (116, 52342), (131, 52300), (149, 52249), (150, 52246), (169, 52165), (175, 52147), (186, 52108), (190, 52090), (191, 52087), (202, 52045), (205, 52036), (209, 52024), (221, 51973),

Gene: GooberAzure\_57 Start: 39873, Stop: 39100, Start Num: 19

Candidate Starts for GooberAzure\_57:

(Start: 19 @39873 has 111 MA's), (Start: 25 @39849 has 36 MA's), (Start: 34 @39819 has 33 MA's), (61, 39711), (83, 39615), (106, 39534), (114, 39510), (116, 39501), (119, 39492), (152, 39387), (154, 39381), (155, 39375), (194, 39231), (196, 39219), (205, 39195), (228, 39108),

Gene: Guillsminger\_41 Start: 33793, Stop: 32951, Start Num: 21

Candidate Starts for Guillsminger\_41:

(Start: 21 @33793 has 21 MA's), (Start: 34 @33751 has 33 MA's), (82, 33556), (91, 33526), (110, 33457), (112, 33451), (116, 33436), (121, 33418), (130, 33382), (151, 33310), (179, 33211), (186, 33184), (188, 33175), (190, 33166), (199, 33139), (201, 33133), (206, 33118), (214, 33088), (217, 33070), (223, 33049),

Gene: Halley\_97 Start: 59101, Stop: 58394, Start Num: 34

Candidate Starts for Halley\_97:

(Start: 34 @59101 has 33 MA's), (Start: 47 @59047 has 5 MA's), (Start: 49 @59038 has 1 MA's), (Start: 55 @59014 has 1 MA's), (78, 58942), (106, 58843), (110, 58831), (116, 58810), (148, 58720), (150, 58714), (169, 58633), (175, 58615), (186, 58576), (190, 58558), (191, 58555), (205, 58504), (209, 58492), (221, 58441),

Gene: HanKaySha\_53 Start: 39183, Stop: 38410, Start Num: 19

Candidate Starts for HanKaySha\_53:

(Start: 19 @39183 has 111 MA's), (Start: 25 @39159 has 36 MA's), (Start: 34 @39129 has 33 MA's), (61, 39021), (83, 38925), (106, 38844), (114, 38820), (116, 38811), (119, 38802), (152, 38697), (154, 38691), (155, 38685), (194, 38541), (196, 38529), (205, 38505), (228, 38418),

Gene: Hannaconda\_82 Start: 51989, Stop: 51336, Start Num: 47

Candidate Starts for Hannaconda\_82:

(Start: 34 @52043 has 33 MA's), (Start: 47 @51989 has 5 MA's), (Start: 49 @51980 has 1 MA's), (Start: 55 @51956 has 1 MA's), (78, 51884), (106, 51785), (110, 51773), (116, 51752), (148, 51662), (150, 51656), (169, 51575), (175, 51557), (186, 51518), (190, 51500), (191, 51497), (205, 51446), (209, 51434), (221, 51383),

Gene: Harella\_54 Start: 40731, Stop: 39958, Start Num: 19

Candidate Starts for Harella\_54:

(Start: 19 @40731 has 111 MA's), (Start: 25 @40707 has 36 MA's), (Start: 34 @40677 has 33 MA's), (61, 40569), (83, 40473), (106, 40392), (114, 40368), (116, 40359), (119, 40350), (152, 40245), (154, 40239), (155, 40233), (194, 40089), (196, 40077), (205, 40053), (228, 39966),

Gene: HedwigODU\_42 Start: 34574, Stop: 33672, Start Num: 9

Candidate Starts for HedwigODU\_42:

(Start: 9 @34574 has 38 MA's), (Start: 20 @34517 has 2 MA's), (Start: 23 @34511 has 22 MA's), (29, 34487), (Start: 35 @34466 has 6 MA's), (41, 34442), (63, 34352), (67, 34343), (91, 34238), (92, 34235), (95, 34226), (97, 34208), (98, 34202), (115, 34154), (120, 34136), (125, 34106), (130, 34094), (134, 34085), (153, 34028), (157, 34013), (173, 33956), (187, 33905), (191, 33890), (197, 33863), (205, 33842), (209, 33830),

Gene: Heftyboy\_40 Start: 33939, Stop: 33097, Start Num: 21

Candidate Starts for Heftyboy\_40:

(Start: 21 @33939 has 21 MA's), (Start: 34 @33897 has 33 MA's), (91, 33672), (110, 33603), (112, 33597), (116, 33582), (121, 33564), (130, 33528), (151, 33456), (179, 33357), (186, 33330), (188, 33321), (190, 33312), (199, 33285), (201, 33279), (206, 33264), (217, 33216), (223, 33195),

Gene: Henry\_53 Start: 39815, Stop: 39042, Start Num: 19

Candidate Starts for Henry\_53:

(Start: 19 @39815 has 111 MA's), (Start: 25 @39791 has 36 MA's), (Start: 34 @39761 has 33 MA's), (61, 39653), (83, 39557), (106, 39476), (114, 39452), (116, 39443), (119, 39434), (152, 39329), (154, 39323), (155, 39317), (194, 39173), (196, 39161), (205, 39137), (228, 39050),

Gene: Highbury\_55 Start: 39472, Stop: 38699, Start Num: 19

Candidate Starts for Highbury\_55:

(Start: 19 @39472 has 111 MA's), (Start: 25 @39448 has 36 MA's), (Start: 34 @39418 has 33 MA's), (61, 39310), (83, 39214), (106, 39133), (114, 39109), (116, 39100), (119, 39091), (152, 38986), (154, 38980), (155, 38974), (194, 38830), (196, 38818), (205, 38794), (228, 38707),

Gene: HokkenD\_84 Start: 57370, Stop: 56663, Start Num: 34

Candidate Starts for HokkenD\_84:

(Start: 34 @57370 has 33 MA's), (Start: 47 @57316 has 5 MA's), (Start: 49 @57307 has 1 MA's), (Start: 55 @57283 has 1 MA's), (78, 57211), (106, 57112), (110, 57100), (116, 57079), (148, 56989), (150, 56983), (169, 56902), (175, 56884), (186, 56845), (190, 56827), (191, 56824), (205, 56773), (209, 56761), (221, 56710),

Gene: Holt\_59 Start: 40287, Stop: 39514, Start Num: 19

Candidate Starts for Holt\_59:

(Start: 19 @40287 has 111 MA's), (Start: 25 @40263 has 36 MA's), (Start: 34 @40233 has 33 MA's), (61, 40125), (83, 40029), (106, 39948), (114, 39924), (116, 39915), (119, 39906), (152, 39801), (154, 39795), (155, 39789), (194, 39645), (196, 39633), (205, 39609), (228, 39522),

Gene: Homura\_42 Start: 34626, Stop: 33787, Start Num: 23

Candidate Starts for Homura\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005), (197, 33978), (205, 33957), (209, 33945),

Gene: Hoonter\_57 Start: 39873, Stop: 39100, Start Num: 19

Candidate Starts for Hoonter\_57:

(Start: 19 @39873 has 111 MA's), (Start: 25 @39849 has 36 MA's), (Start: 34 @39819 has 33 MA's), (61, 39711), (83, 39615), (106, 39534), (114, 39510), (116, 39501), (119, 39492), (152, 39387), (154, 39381), (155, 39375), (194, 39231), (196, 39219), (205, 39195), (228, 39108),

Gene: Hokey\_54 Start: 39717, Stop: 38944, Start Num: 19

Candidate Starts for Hokey\_54:

(Start: 19 @39717 has 111 MA's), (Start: 25 @39693 has 36 MA's), (Start: 34 @39663 has 33 MA's), (61, 39555), (83, 39459), (106, 39378), (114, 39354), (116, 39345), (119, 39336), (152, 39231), (154, 39225), (155, 39219), (194, 39075), (196, 39063), (205, 39039), (228, 38952),

Gene: HufflyPuff\_56 Start: 40547, Stop: 39774, Start Num: 19

Candidate Starts for HufflyPuff\_56:

(Start: 19 @40547 has 111 MA's), (Start: 25 @40523 has 36 MA's), (Start: 34 @40493 has 33 MA's), (61, 40385), (83, 40289), (106, 40208), (114, 40184), (116, 40175), (119, 40166), (152, 40061), (154, 40055), (155, 40049), (194, 39905), (196, 39893), (205, 39869), (228, 39782),

Gene: Hughesyang\_95 Start: 59005, Stop: 58352, Start Num: 47

Candidate Starts for Hughesyang\_95:

(Start: 34 @59059 has 33 MA's), (Start: 47 @59005 has 5 MA's), (Start: 49 @58996 has 1 MA's), (Start: 55 @58972 has 1 MA's), (78, 58900), (106, 58801), (110, 58789), (116, 58768), (148, 58678), (150, 58672), (169, 58591), (175, 58573), (186, 58534), (190, 58516), (191, 58513), (205, 58462), (209, 58450), (221, 58399),

Gene: Hyperbowlee\_42 Start: 34778, Stop: 33984, Start Num: 35

Candidate Starts for Hyperbowlee\_42:

(Start: 9 @34886 has 38 MA's), (Start: 12 @34865 has 2 MA's), (Start: 20 @34829 has 2 MA's), (Start: 23 @34823 has 22 MA's), (29, 34799), (Start: 35 @34778 has 6 MA's), (41, 34754), (63, 34664), (67, 34655), (91, 34550), (92, 34547), (95, 34538), (97, 34520), (98, 34514), (115, 34466), (120, 34448), (125, 34418), (130, 34406), (134, 34397), (157, 34325), (173, 34268), (187, 34217), (191, 34202), (197, 34175), (205, 34154), (209, 34142),

Gene: IHOP\_52 Start: 39939, Stop: 39166, Start Num: 19

Candidate Starts for IHOP\_52:

(Start: 19 @39939 has 111 MA's), (Start: 25 @39915 has 36 MA's), (Start: 34 @39885 has 33 MA's), (61, 39777), (83, 39681), (106, 39600), (114, 39576), (116, 39567), (119, 39558), (152, 39453), (154, 39447), (155, 39441), (194, 39297), (196, 39285), (205, 39261), (228, 39174),

Gene: Icee\_54 Start: 39541, Stop: 38768, Start Num: 19

Candidate Starts for Icee\_54:

(Start: 19 @39541 has 111 MA's), (Start: 25 @39517 has 36 MA's), (Start: 34 @39487 has 33 MA's), (61, 39379), (83, 39283), (106, 39202), (114, 39178), (116, 39169), (119, 39160), (152, 39055), (154, 39049), (155, 39043), (194, 38899), (196, 38887), (205, 38863), (228, 38776),

Gene: Illumine\_45 Start: 35293, Stop: 34454, Start Num: 23

Candidate Starts for Illumine\_45:

(Start: 23 @35293 has 22 MA's), (Start: 35 @35248 has 6 MA's), (41, 35224), (Start: 46 @35200 has 1 MA's), (63, 35134), (67, 35125), (69, 35119), (91, 35020), (92, 35017), (95, 35008), (97, 34990), (113, 34945), (115, 34936), (130, 34876), (134, 34867), (157, 34795), (159, 34789), (171, 34744), (173, 34738), (176, 34729), (187, 34687), (191, 34672), (195, 34654), (205, 34624), (209, 34612), (217, 34573),

Gene: Inca\_51 Start: 38464, Stop: 37691, Start Num: 19

Candidate Starts for Inca\_51:

(Start: 19 @38464 has 111 MA's), (Start: 25 @38440 has 36 MA's), (Start: 34 @38410 has 33 MA's), (61, 38302), (83, 38206), (106, 38125), (114, 38101), (116, 38092), (119, 38083), (152, 37978), (154, 37972), (155, 37966), (194, 37822), (205, 37786), (228, 37699),

Gene: Inky\_42 Start: 34689, Stop: 33787, Start Num: 9

Candidate Starts for Inky\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005), (197, 33978), (205, 33957), (209, 33945),

Gene: InvictusManeo\_40 Start: 34004, Stop: 33153, Start Num: 21

Candidate Starts for InvictusManeo\_40:

(Start: 21 @34004 has 21 MA's), (53, 33875), (69, 33833), (91, 33734), (95, 33722), (107, 33674), (116, 33644), (121, 33626), (128, 33590), (174, 33431), (179, 33416), (182, 33404), (190, 33371), (193, 33362), (199, 33344), (201, 33338), (206, 33323), (217, 33275), (223, 33254),

Gene: JAWS\_42 Start: 34563, Stop: 33661, Start Num: 9

Candidate Starts for JAWS\_42:

(Start: 9 @34563 has 38 MA's), (Start: 12 @34542 has 2 MA's), (Start: 20 @34506 has 2 MA's), (Start: 23 @34500 has 22 MA's), (29, 34476), (Start: 35 @34455 has 6 MA's), (41, 34431), (63, 34341), (67, 34332), (91, 34227), (92, 34224), (95, 34215), (97, 34197), (98, 34191), (115, 34143), (120, 34125), (125, 34095), (130, 34083), (134, 34074), (157, 34002), (173, 33945), (187, 33894), (191, 33879), (197, 33852), (205, 33831), (209, 33819),

Gene: JF1\_46 Start: 35662, Stop: 34841, Start Num: 25

Candidate Starts for JF1\_46:

(Start: 25 @35662 has 36 MA's), (26, 35659), (31, 35644), (52, 35551), (59, 35530), (78, 35458), (87, 35416), (91, 35404), (92, 35401), (95, 35392), (100, 35362), (120, 35302), (132, 35266), (135, 35257), (165, 35164), (180, 35110), (186, 35086), (187, 35080), (190, 35068), (211, 34996), (216, 34975),

Gene: Jarvi\_42 Start: 34689, Stop: 33787, Start Num: 9

Candidate Starts for Jarvi\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005), (197, 33978), (205, 33957), (209, 33945),

Gene: Jayhawk\_43 Start: 34572, Stop: 33670, Start Num: 9

Candidate Starts for Jayhawk\_43:

(Start: 9 @34572 has 38 MA's), (Start: 20 @34515 has 2 MA's), (Start: 23 @34509 has 22 MA's), (29, 34485), (Start: 35 @34464 has 6 MA's), (41, 34440), (63, 34350), (67, 34341), (91, 34236), (92, 34233), (95, 34224), (97, 34206), (98, 34200), (115, 34152), (120, 34134), (125, 34104), (130, 34092), (134, 34083), (153, 34026), (157, 34011), (173, 33954), (187, 33903), (191, 33888), (197, 33861), (205, 33840), (209, 33828),

Gene: JeTaime\_55 Start: 40367, Stop: 39594, Start Num: 19

Candidate Starts for JeTaime\_55:

(Start: 19 @40367 has 111 MA's), (Start: 25 @40343 has 36 MA's), (Start: 34 @40313 has 33 MA's), (61, 40205), (83, 40109), (106, 40028), (114, 40004), (116, 39995), (119, 39986), (152, 39881), (154, 39875), (155, 39869), (194, 39725), (196, 39713), (205, 39689), (228, 39602),

Gene: Jeckyll\_42 Start: 34689, Stop: 33787, Start Num: 9

Candidate Starts for Jeckyll\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005), (197, 33978), (205, 33957), (209, 33945),

Gene: Joy99\_42 Start: 34555, Stop: 33716, Start Num: 23

Candidate Starts for Joy99\_42:

(Start: 9 @34618 has 38 MA's), (Start: 12 @34597 has 2 MA's), (Start: 20 @34561 has 2 MA's), (Start: 23 @34555 has 22 MA's), (29, 34531), (Start: 35 @34510 has 6 MA's), (41, 34486), (63, 34396), (67, 34387), (91, 34282), (92, 34279), (95, 34270), (97, 34252), (98, 34246), (115, 34198), (120, 34180), (125, 34150), (130, 34138), (134, 34129), (157, 34057), (173, 34000), (187, 33949), (191, 33934), (197, 33907), (205, 33886), (209, 33874),

Gene: JuicyJay\_92 Start: 60235, Stop: 59528, Start Num: 34

Candidate Starts for JuicyJay\_92:

(Start: 34 @60235 has 33 MA's), (Start: 47 @60181 has 5 MA's), (Start: 49 @60172 has 1 MA's), (78, 60076), (106, 59977), (110, 59965), (116, 59944), (148, 59854), (150, 59848), (169, 59767), (175, 59749), (186, 59710), (190, 59692), (191, 59689), (205, 59638), (209, 59626), (221, 59575),

Gene: Juliette\_48 Start: 35819, Stop: 35001, Start Num: 25

Candidate Starts for Juliette\_48:

(Start: 25 @35819 has 36 MA's), (26, 35816), (31, 35801), (Start: 46 @35738 has 1 MA's), (52, 35708), (59, 35687), (72, 35651), (78, 35615), (87, 35573), (91, 35561), (92, 35558), (100, 35519), (116, 35474), (120, 35459), (132, 35423), (135, 35414), (165, 35321), (180, 35267), (186, 35243), (187, 35237), (192, 35219), (211, 35153), (216, 35132),

Gene: Kalah2\_89 Start: 58394, Stop: 57687, Start Num: 34

Candidate Starts for Kalah2\_89:

(Start: 34 @58394 has 33 MA's), (Start: 47 @58340 has 5 MA's), (Start: 49 @58331 has 1 MA's), (Start: 55 @58307 has 1 MA's), (78, 58235), (106, 58136), (110, 58124), (116, 58103), (148, 58013), (150, 58007), (169, 57926), (175, 57908), (186, 57869), (190, 57851), (191, 57848), (205, 57797), (209, 57785), (221, 57734),

Gene: Kanye\_50 Start: 39227, Stop: 38454, Start Num: 19

Candidate Starts for Kanye\_50:

(Start: 19 @39227 has 111 MA's), (Start: 25 @39203 has 36 MA's), (Start: 34 @39173 has 33 MA's), (61, 39065), (83, 38969), (106, 38888), (114, 38864), (116, 38855), (119, 38846), (152, 38741), (154, 38735), (155, 38729), (194, 38585), (196, 38573), (205, 38549), (228, 38462),

Gene: KashFlow\_86 Start: 53547, Stop: 52894, Start Num: 47

Candidate Starts for KashFlow\_86:

(Start: 34 @53601 has 33 MA's), (Start: 47 @53547 has 5 MA's), (Start: 49 @53538 has 1 MA's), (106, 53343), (110, 53331), (116, 53310), (131, 53268), (149, 53217), (150, 53214), (169, 53133), (175, 53115), (186, 53076), (189, 53064), (190, 53058), (191, 53055), (202, 53013), (205, 53004), (209, 52992), (221, 52941),

Gene: Kimchi\_57 Start: 39876, Stop: 39103, Start Num: 19

Candidate Starts for Kimchi\_57:

(Start: 19 @39876 has 111 MA's), (Start: 25 @39852 has 36 MA's), (Start: 34 @39822 has 33 MA's), (61, 39714), (83, 39618), (106, 39537), (114, 39513), (116, 39504), (119, 39495), (152, 39390), (154, 39384), (155, 39378), (194, 39234), (196, 39222), (205, 39198), (228, 39111),

Gene: KirDoubleO7\_35 Start: 33790, Stop: 33206, Start Num: 73

Candidate Starts for KirDoubleO7\_35:

(7, 34060), (14, 34015), (17, 33991), (Start: 33 @33937 has 1 MA's), (52, 33853), (56, 33841), (60, 33829), (73, 33790), (75, 33781), (83, 33730), (84, 33724), (116, 33613), (131, 33565), (157, 33478), (171, 33421), (173, 33415), (204, 33307), (218, 33253),

Gene: Klein\_96 Start: 58101, Stop: 57394, Start Num: 34

Candidate Starts for Klein\_96:



(Start: 34 @58101 has 33 MA's), (Start: 47 @58047 has 5 MA's), (Start: 49 @58038 has 1 MA's), (78, 57942), (106, 57843), (110, 57831), (116, 57810), (148, 57720), (150, 57714), (169, 57633), (175, 57615), (186, 57576), (190, 57558), (191, 57555), (205, 57504), (209, 57492), (221, 57441),

Gene: Kostya\_55 Start: 40014, Stop: 39265, Start Num: 25

Candidate Starts for Kostya\_55:

(Start: 19 @40038 has 111 MA's), (Start: 25 @40014 has 36 MA's), (Start: 34 @39984 has 33 MA's), (61, 39876), (83, 39780), (106, 39699), (114, 39675), (116, 39666), (119, 39657), (152, 39552), (154, 39546), (155, 39540), (194, 39396), (196, 39384), (205, 39360), (228, 39273),

Gene: Kratio\_39 Start: 33552, Stop: 32701, Start Num: 21

Candidate Starts for Kratio\_39:

(Start: 21 @33552 has 21 MA's), (Start: 34 @33507 has 33 MA's), (67, 33387), (69, 33381), (84, 33303), (91, 33282), (95, 33270), (107, 33222), (116, 33192), (128, 33138), (139, 33105), (174, 32979), (179, 32964), (182, 32952), (187, 32931), (193, 32910), (199, 32892), (206, 32871), (217, 32823), (232, 32751),

Gene: Kraw\_48 Start: 35507, Stop: 34689, Start Num: 25

Candidate Starts for Kraw\_48:

(Start: 25 @35507 has 36 MA's), (26, 35504), (31, 35489), (Start: 46 @35426 has 1 MA's), (52, 35396), (59, 35375), (72, 35339), (78, 35303), (87, 35261), (91, 35249), (92, 35246), (100, 35207), (116, 35162), (120, 35147), (132, 35111), (135, 35102), (165, 35009), (180, 34955), (186, 34931), (187, 34925), (192, 34907), (211, 34841), (216, 34820),

Gene: Larva\_41 Start: 33722, Stop: 32871, Start Num: 21

Candidate Starts for Larva\_41:

(4, 33824), (Start: 13 @33758 has 2 MA's), (Start: 21 @33722 has 21 MA's), (Start: 34 @33677 has 33 MA's), (51, 33599), (69, 33551), (91, 33452), (95, 33440), (107, 33392), (116, 33362), (121, 33344), (128, 33308), (131, 33302), (139, 33275), (174, 33149), (179, 33134), (182, 33122), (193, 33080), (206, 33041), (217, 32993),

Gene: LastHope\_45 Start: 33885, Stop: 33040, Start Num: 30

Candidate Starts for LastHope\_45:

(Start: 30 @33885 has 2 MA's), (76, 33708), (91, 33639), (103, 33591), (106, 33585), (109, 33576), (114, 33561), (116, 33552), (143, 33468), (149, 33450), (152, 33438), (155, 33426), (167, 33381), (186, 33309), (187, 33303), (203, 33246), (206, 33237), (207, 33234), (212, 33216), (227, 33159), (238, 33051),

Gene: LaterM\_43 Start: 35407, Stop: 34568, Start Num: 23

Candidate Starts for LaterM\_43:

(Start: 9 @35470 has 38 MA's), (Start: 12 @35449 has 2 MA's), (Start: 20 @35413 has 2 MA's), (Start: 23 @35407 has 22 MA's), (29, 35383), (Start: 35 @35362 has 6 MA's), (36, 35359), (41, 35338), (63, 35248), (67, 35239), (91, 35134), (92, 35131), (95, 35122), (97, 35104), (113, 35059), (115, 35050), (130, 34990), (134, 34981), (157, 34909), (173, 34852), (191, 34786), (199, 34756), (205, 34738), (209, 34726), (229, 34636),

Gene: Leston\_40 Start: 33923, Stop: 33081, Start Num: 21

Candidate Starts for Leston\_40:

(Start: 21 @33923 has 21 MA's), (Start: 34 @33881 has 33 MA's), (82, 33686), (91, 33656), (110, 33587), (112, 33581), (116, 33566), (121, 33548), (130, 33512), (151, 33440), (179, 33341), (186, 33314), (188, 33305), (190, 33296), (199, 33269), (201, 33263), (206, 33248), (217, 33200), (223, 33179),

Gene: LilPharaoh\_37 Start: 34082, Stop: 33180, Start Num: 24

Candidate Starts for LilPharaoh\_37:

(Start: 16 @34100 has 1 MA's), (Start: 24 @34082 has 12 MA's), (37, 34034), (42, 34007), (45, 33989), (52, 33956), (58, 33938), (60, 33932), (63, 33920), (82, 33836), (86, 33821), (91, 33806), (100, 33764), (112, 33728), (117, 33710), (126, 33668), (137, 33650), (150, 33611), (168, 33542), (180, 33503), (184, 33488), (196, 33434), (203, 33416), (209, 33398), (217, 33359), (231, 33293), (244, 33203),

Gene: Lilac\_57 Start: 39502, Stop: 38729, Start Num: 19

Candidate Starts for Lilac\_57:

(Start: 19 @39502 has 111 MA's), (Start: 25 @39478 has 36 MA's), (Start: 34 @39448 has 33 MA's), (61, 39340), (83, 39244), (106, 39163), (114, 39139), (116, 39130), (119, 39121), (152, 39016), (154, 39010), (155, 39004), (194, 38860), (196, 38848), (205, 38824), (228, 38737),

Gene: Lilizi\_54 Start: 39176, Stop: 38403, Start Num: 19

Candidate Starts for Lilizi\_54:

(Start: 19 @39176 has 111 MA's), (Start: 25 @39152 has 36 MA's), (Start: 34 @39122 has 33 MA's), (61, 39014), (83, 38918), (106, 38837), (114, 38813), (116, 38804), (119, 38795), (152, 38690), (154, 38684), (155, 38678), (194, 38534), (196, 38522), (205, 38498), (228, 38411),

Gene: Lilpickle\_54 Start: 39393, Stop: 38620, Start Num: 19

Candidate Starts for Lilpickle\_54:

(Start: 19 @39393 has 111 MA's), (Start: 25 @39369 has 36 MA's), (Start: 34 @39339 has 33 MA's), (61, 39231), (83, 39135), (106, 39054), (114, 39030), (116, 39021), (119, 39012), (152, 38907), (154, 38901), (155, 38895), (194, 38751), (196, 38739), (205, 38715), (228, 38628),

Gene: LindNT\_42 Start: 34750, Stop: 33857, Start Num: 10

Candidate Starts for LindNT\_42:

(Start: 10 @34750 has 8 MA's), (Start: 20 @34702 has 2 MA's), (Start: 23 @34696 has 22 MA's), (29, 34672), (Start: 35 @34651 has 6 MA's), (41, 34627), (63, 34537), (67, 34528), (91, 34423), (92, 34420), (95, 34411), (97, 34393), (113, 34348), (115, 34339), (120, 34321), (125, 34291), (130, 34279), (134, 34270), (157, 34198), (173, 34141), (191, 34075), (197, 34048), (205, 34027), (209, 34015),

Gene: LittleE\_94 Start: 57167, Stop: 56460, Start Num: 34

Candidate Starts for LittleE\_94:

(Start: 34 @57167 has 33 MA's), (Start: 47 @57113 has 5 MA's), (Start: 49 @57104 has 1 MA's), (81, 56990), (106, 56909), (110, 56897), (114, 56885), (116, 56876), (131, 56834), (150, 56780), (169, 56699), (175, 56681), (186, 56642), (189, 56630), (190, 56624), (191, 56621), (202, 56579), (205, 56570), (208, 56561), (209, 56558), (221, 56507),

Gene: Llorens\_42 Start: 34626, Stop: 33787, Start Num: 23

Candidate Starts for Llorens\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005), (197, 33978), (205, 33957), (209, 33945),

Gene: Lucky2013\_88 Start: 53487, Stop: 52780, Start Num: 34

Candidate Starts for Lucky2013\_88:

(Start: 34 @53487 has 33 MA's), (Start: 47 @53433 has 5 MA's), (Start: 49 @53424 has 1 MA's), (78, 53328), (81, 53310), (106, 53229), (110, 53217), (112, 53211), (114, 53205), (116, 53196), (131,

53154), (149, 53103), (150, 53100), (169, 53019), (175, 53001), (186, 52962), (189, 52950), (190, 52944), (191, 52941), (202, 52899), (205, 52890), (208, 52881), (209, 52878), (221, 52827),

Gene: Lunahalos\_42 Start: 34689, Stop: 33787, Start Num: 9

Candidate Starts for Lunahalos\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005), (197, 33978), (205, 33957), (209, 33945),

Gene: MISSy\_54 Start: 39600, Stop: 38827, Start Num: 19

Candidate Starts for MISSy\_54:

(Start: 19 @39600 has 111 MA's), (Start: 25 @39576 has 36 MA's), (Start: 34 @39546 has 33 MA's), (61, 39438), (83, 39342), (106, 39261), (114, 39237), (116, 39228), (119, 39219), (152, 39114), (154, 39108), (155, 39102), (194, 38958), (196, 38946), (205, 38922), (228, 38835),

Gene: MPhalcon\_54 Start: 39593, Stop: 38820, Start Num: 19

Candidate Starts for MPhalcon\_54:

(Start: 19 @39593 has 111 MA's), (Start: 25 @39569 has 36 MA's), (Start: 34 @39539 has 33 MA's), (61, 39431), (83, 39335), (106, 39254), (114, 39230), (116, 39221), (119, 39212), (152, 39107), (154, 39101), (155, 39095), (194, 38951), (196, 38939), (205, 38915), (228, 38828),

Gene: MadamMonkfish\_54 Start: 39117, Stop: 38344, Start Num: 19

Candidate Starts for MadamMonkfish\_54:

(Start: 19 @39117 has 111 MA's), (Start: 25 @39093 has 36 MA's), (Start: 34 @39063 has 33 MA's), (61, 38955), (83, 38859), (106, 38778), (114, 38754), (116, 38745), (119, 38736), (152, 38631), (154, 38625), (155, 38619), (194, 38475), (196, 38463), (205, 38439), (228, 38352),

Gene: MalagasyRose\_43 Start: 32679, Stop: 33419, Start Num: 25

Candidate Starts for MalagasyRose\_43:

(18, 32652), (Start: 24 @32670 has 12 MA's), (Start: 25 @32679 has 36 MA's), (39, 32730), (48, 32769), (58, 32808), (59, 32811), (61, 32817), (69, 32841), (70, 32847), (82, 32910), (83, 32913), (91, 32940), (92, 32943), (106, 32994), (108, 33000), (112, 33012), (116, 33027), (124, 33063), (135, 33087), (146, 33111), (152, 33135), (154, 33141), (160, 33162), (161, 33165), (182, 33243), (185, 33255), (191, 33279), (203, 33318), (205, 33324), (209, 33336), (212, 33348), (214, 33357), (215, 33360), (221, 33387),

Gene: Malthus\_47 Start: 35507, Stop: 34689, Start Num: 25

Candidate Starts for Malthus\_47:

(Start: 25 @35507 has 36 MA's), (26, 35504), (31, 35489), (Start: 46 @35426 has 1 MA's), (52, 35396), (59, 35375), (72, 35339), (78, 35303), (87, 35261), (91, 35249), (92, 35246), (100, 35207), (116, 35162), (120, 35147), (132, 35111), (135, 35102), (165, 35009), (180, 34955), (186, 34931), (187, 34925), (192, 34907), (211, 34841), (216, 34820),

Gene: Manda\_54 Start: 40398, Stop: 39625, Start Num: 19

Candidate Starts for Manda\_54:

(Start: 19 @40398 has 111 MA's), (Start: 25 @40374 has 36 MA's), (Start: 34 @40344 has 33 MA's), (61, 40236), (83, 40140), (106, 40059), (114, 40035), (116, 40026), (119, 40017), (152, 39912), (154, 39906), (155, 39900), (194, 39756), (196, 39744), (205, 39720), (228, 39633),

Gene: Marcoliusprime\_45 Start: 36592, Stop: 35744, Start Num: 22

Candidate Starts for Marcoliusprime\_45:

(Start: 22 @36592 has 8 MA's), (39, 36529), (50, 36478), (65, 36430), (86, 36334), (91, 36319), (102, 36274), (109, 36253), (116, 36229), (129, 36178), (137, 36169), (171, 36049), (174, 36040), (206, 35932), (211, 35914), (213, 35905), (217, 35884),

Gene: Marshawn\_45 Start: 35460, Stop: 34612, Start Num: 23

Candidate Starts for Marshawn\_45:

(11, 35508), (Start: 23 @35460 has 22 MA's), (Start: 35 @35415 has 6 MA's), (37, 35409), (40, 35394), (63, 35301), (82, 35217), (91, 35187), (92, 35184), (112, 35109), (116, 35094), (122, 35064), (137, 35031), (146, 35007), (150, 34992), (156, 34968), (179, 34887), (182, 34875), (191, 34839), (199, 34812), (201, 34806), (217, 34743), (226, 34713), (231, 34677),

Gene: Marshmallow\_53 Start: 40373, Stop: 39600, Start Num: 19

Candidate Starts for Marshmallow\_53:

(Start: 19 @40373 has 111 MA's), (Start: 25 @40349 has 36 MA's), (Start: 34 @40319 has 33 MA's), (61, 40211), (83, 40115), (106, 40034), (114, 40010), (116, 40001), (119, 39992), (152, 39887), (154, 39881), (155, 39875), (194, 39731), (205, 39695), (228, 39608),

Gene: Maxxinista\_57 Start: 39472, Stop: 38699, Start Num: 19

Candidate Starts for Maxxinista\_57:

(Start: 19 @39472 has 111 MA's), (Start: 25 @39448 has 36 MA's), (Start: 34 @39418 has 33 MA's), (61, 39310), (83, 39214), (106, 39133), (114, 39109), (116, 39100), (119, 39091), (152, 38986), (154, 38980), (155, 38974), (194, 38830), (196, 38818), (205, 38794), (228, 38707),

Gene: McMater\_44 Start: 35155, Stop: 34205, Start Num: 24

Candidate Starts for McMater\_44:

(1, 35275), (2, 35272), (Start: 24 @35155 has 12 MA's), (37, 35107), (39, 35095), (44, 35068), (45, 35062), (48, 35050), (76, 34948), (82, 34909), (86, 34894), (91, 34879), (114, 34795), (116, 34786), (128, 34750), (158, 34669), (181, 34588), (185, 34570), (208, 34492), (209, 34489), (217, 34450), (234, 34360), (243, 34252),

Gene: Mdavu\_38 Start: 34071, Stop: 33169, Start Num: 24

Candidate Starts for Mdavu\_38:

(Start: 16 @34089 has 1 MA's), (Start: 24 @34071 has 12 MA's), (37, 34023), (42, 33996), (45, 33978), (52, 33945), (58, 33927), (60, 33921), (63, 33909), (82, 33825), (86, 33810), (91, 33795), (100, 33753), (112, 33717), (117, 33699), (126, 33657), (137, 33639), (150, 33600), (158, 33570), (168, 33531), (180, 33492), (184, 33477), (196, 33423), (203, 33405), (209, 33387), (217, 33348), (231, 33282), (244, 33192),

Gene: MeaningOfLife\_43 Start: 35503, Stop: 34601, Start Num: 9

Candidate Starts for MeaningOfLife\_43:

(Start: 9 @35503 has 38 MA's), (Start: 20 @35446 has 2 MA's), (Start: 23 @35440 has 22 MA's), (29, 35416), (Start: 35 @35395 has 6 MA's), (41, 35371), (60, 35293), (63, 35281), (67, 35272), (91, 35167), (92, 35164), (95, 35155), (97, 35137), (98, 35131), (115, 35083), (120, 35065), (125, 35035), (130, 35023), (134, 35014), (153, 34957), (157, 34942), (173, 34885), (187, 34834), (191, 34819), (197, 34792), (205, 34771), (209, 34759),

Gene: Megsy\_43 Start: 34755, Stop: 33916, Start Num: 23

Candidate Starts for Megsy\_43:

(Start: 10 @34809 has 8 MA's), (Start: 20 @34761 has 2 MA's), (Start: 23 @34755 has 22 MA's), (29, 34731), (Start: 35 @34710 has 6 MA's), (41, 34686), (Start: 46 @34662 has 1 MA's), (63, 34596), (67, 34587), (91, 34482), (92, 34479), (95, 34470), (97, 34452), (115, 34398), (120, 34380), (125, 34350), (130, 34338), (134, 34329), (157, 34257), (173, 34200), (187, 34149), (191, 34134), (197, 34107), (205, 34086), (209, 34074),

Gene: MiaZeal\_91 Start: 54143, Stop: 53436, Start Num: 34

Candidate Starts for MiaZeal\_91:

(Start: 34 @54143 has 33 MA's), (Start: 47 @54089 has 5 MA's), (Start: 49 @54080 has 1 MA's), (78, 53984), (81, 53966), (106, 53885), (110, 53873), (112, 53867), (114, 53861), (116, 53852), (131, 53810), (149, 53759), (150, 53756), (169, 53675), (175, 53657), (186, 53618), (189, 53606), (190, 53600), (191, 53597), (202, 53555), (205, 53546), (208, 53537), (209, 53534), (221, 53483),

Gene: Milly\_45 Start: 36565, Stop: 35717, Start Num: 22

Candidate Starts for Milly\_45:

(Start: 22 @36565 has 8 MA's), (39, 36502), (50, 36451), (65, 36403), (86, 36307), (91, 36292), (102, 36247), (109, 36226), (116, 36202), (129, 36151), (137, 36142), (171, 36022), (174, 36013), (206, 35905), (211, 35887), (213, 35878), (217, 35857),

Gene: Mindy\_53 Start: 38981, Stop: 38208, Start Num: 19

Candidate Starts for Mindy\_53:

(Start: 19 @38981 has 111 MA's), (Start: 25 @38957 has 36 MA's), (Start: 34 @38927 has 33 MA's), (61, 38819), (83, 38723), (106, 38642), (114, 38618), (116, 38609), (119, 38600), (152, 38495), (154, 38489), (155, 38483), (194, 38339), (196, 38327), (205, 38303), (228, 38216),

Gene: Minerva\_95 Start: 59047, Stop: 58340, Start Num: 33

Candidate Starts for Minerva\_95:

(Start: 33 @59047 has 1 MA's), (Start: 49 @58984 has 1 MA's), (78, 58888), (100, 58804), (106, 58789), (110, 58777), (111, 58774), (114, 58765), (116, 58756), (117, 58753), (162, 58618), (163, 58615), (165, 58606), (166, 58603), (169, 58579), (172, 58570), (175, 58561), (178, 58552), (184, 58531), (187, 58516), (191, 58501), (198, 58471), (200, 58465), (202, 58459), (205, 58450), (209, 58438), (214, 58417),

Gene: Miniwave\_51 Start: 39434, Stop: 38661, Start Num: 19

Candidate Starts for Miniwave\_51:

(Start: 19 @39434 has 111 MA's), (Start: 25 @39410 has 36 MA's), (Start: 34 @39380 has 33 MA's), (61, 39272), (83, 39176), (106, 39095), (114, 39071), (116, 39062), (119, 39053), (152, 38948), (154, 38942), (155, 38936), (194, 38792), (196, 38780), (205, 38756), (228, 38669),

Gene: Miryou\_42 Start: 36125, Stop: 35283, Start Num: 21

Candidate Starts for Miryou\_42:

(Start: 21 @36125 has 21 MA's), (Start: 34 @36083 has 33 MA's), (82, 35888), (91, 35858), (110, 35789), (112, 35783), (116, 35768), (121, 35750), (130, 35714), (151, 35642), (179, 35543), (186, 35516), (188, 35507), (190, 35498), (199, 35471), (201, 35465), (206, 35450), (214, 35420), (217, 35402), (223, 35381),

Gene: Misfit\_56 Start: 40612, Stop: 39839, Start Num: 19

Candidate Starts for Misfit\_56:

(Start: 19 @40612 has 111 MA's), (Start: 25 @40588 has 36 MA's), (Start: 34 @40558 has 33 MA's), (61, 40450), (83, 40354), (106, 40273), (114, 40249), (116, 40240), (119, 40231), (152, 40126), (154, 40120), (155, 40114), (194, 39970), (196, 39958), (205, 39934), (228, 39847),

Gene: MissDaisy\_44 Start: 34981, Stop: 34190, Start Num: 25

Candidate Starts for MissDaisy\_44:

(Start: 25 @34981 has 36 MA's), (Start: 33 @34954 has 1 MA's), (41, 34924), (42, 34915), (74, 34810), (78, 34777), (85, 34741), (87, 34735), (91, 34723), (92, 34720), (95, 34711), (100, 34681), (116, 34636), (120, 34621), (156, 34513), (165, 34483), (170, 34456), (180, 34429), (187, 34399), (214, 34303), (221, 34273),

Gene: Mitti\_46 Start: 35683, Stop: 34865, Start Num: 25

Candidate Starts for Mitti\_46:

(Start: 25 @35683 has 36 MA's), (26, 35680), (31, 35665), (Start: 46 @35602 has 1 MA's), (52, 35572), (59, 35551), (72, 35515), (78, 35479), (87, 35437), (91, 35425), (92, 35422), (100, 35383), (116, 35338), (120, 35323), (132, 35287), (135, 35278), (165, 35185), (180, 35131), (186, 35107), (187, 35101), (192, 35083), (211, 35017), (216, 34996),

Gene: Moldemort\_57 Start: 39990, Stop: 39217, Start Num: 19

Candidate Starts for Moldemort\_57:

(Start: 19 @39990 has 111 MA's), (Start: 25 @39966 has 36 MA's), (Start: 34 @39936 has 33 MA's), (61, 39828), (83, 39732), (106, 39651), (114, 39627), (116, 39618), (119, 39609), (152, 39504), (154, 39498), (155, 39492), (194, 39348), (196, 39336), (205, 39312), (228, 39225),

Gene: Mosby\_50 Start: 38895, Stop: 38122, Start Num: 19

Candidate Starts for Mosby\_50:

(Start: 19 @38895 has 111 MA's), (Start: 25 @38871 has 36 MA's), (Start: 34 @38841 has 33 MA's), (61, 38733), (83, 38637), (106, 38556), (114, 38532), (116, 38523), (119, 38514), (152, 38409), (154, 38403), (155, 38397), (194, 38253), (196, 38241), (205, 38217), (228, 38130),

Gene: Mufasa\_45 Start: 36153, Stop: 35305, Start Num: 22

Candidate Starts for Mufasa\_45:

(Start: 22 @36153 has 8 MA's), (32, 36120), (71, 35970), (91, 35877), (99, 35838), (102, 35832), (107, 35817), (116, 35787), (120, 35772), (137, 35727), (217, 35442), (226, 35412),

Gene: Murica\_56 Start: 40547, Stop: 39774, Start Num: 19

Candidate Starts for Murica\_56:

(Start: 19 @40547 has 111 MA's), (Start: 25 @40523 has 36 MA's), (Start: 34 @40493 has 33 MA's), (61, 40385), (83, 40289), (106, 40208), (114, 40184), (116, 40175), (119, 40166), (152, 40061), (154, 40055), (155, 40049), (194, 39905), (196, 39893), (205, 39869), (228, 39782),

Gene: Murphy\_56 Start: 39984, Stop: 39211, Start Num: 19

Candidate Starts for Murphy\_56:

(Start: 19 @39984 has 111 MA's), (Start: 25 @39960 has 36 MA's), (Start: 34 @39930 has 33 MA's), (61, 39822), (83, 39726), (106, 39645), (114, 39621), (116, 39612), (119, 39603), (152, 39498), (154, 39492), (155, 39486), (194, 39342), (196, 39330), (205, 39306), (228, 39219),

Gene: Murucutumbu\_43 Start: 35542, Stop: 34661, Start Num: 12

Candidate Starts for Murucutumbu\_43:

(Start: 9 @35563 has 38 MA's), (Start: 12 @35542 has 2 MA's), (Start: 20 @35506 has 2 MA's), (Start: 23 @35500 has 22 MA's), (29, 35476), (Start: 35 @35455 has 6 MA's), (36, 35452), (41, 35431), (63, 35341), (67, 35332), (91, 35227), (92, 35224), (95, 35215), (97, 35197), (115, 35143), (130, 35083), (134, 35074), (153, 35017), (173, 34945), (191, 34879), (199, 34849), (205, 34831), (209, 34819), (229, 34729),

Gene: Mynx\_43 Start: 34830, Stop: 33991, Start Num: 23

Candidate Starts for Mynx\_43:

(Start: 10 @34884 has 8 MA's), (Start: 20 @34836 has 2 MA's), (Start: 23 @34830 has 22 MA's), (29, 34806), (41, 34761), (Start: 46 @34737 has 1 MA's), (63, 34671), (67, 34662), (91, 34557), (92, 34554), (95, 34545), (97, 34527), (113, 34482), (115, 34473), (120, 34455), (125, 34425), (130, 34413), (134, 34404), (173, 34275), (187, 34224), (191, 34209), (197, 34182), (205, 34161), (209, 34149),

Gene: Myrale\_54 Start: 40238, Stop: 39465, Start Num: 19

Candidate Starts for Myrale\_54:

(Start: 19 @40238 has 111 MA's), (Start: 25 @40214 has 36 MA's), (Start: 34 @40184 has 33 MA's), (61, 40076), (83, 39980), (106, 39899), (114, 39875), (116, 39866), (119, 39857), (152, 39752), (154, 39746), (155, 39740), (194, 39596), (205, 39560), (228, 39473),

Gene: Nala\_55 Start: 40105, Stop: 39332, Start Num: 19

Candidate Starts for Nala\_55:

(Start: 19 @40105 has 111 MA's), (Start: 25 @40081 has 36 MA's), (Start: 34 @40051 has 33 MA's), (61, 39943), (83, 39847), (106, 39766), (114, 39742), (116, 39733), (119, 39724), (152, 39619), (154, 39613), (155, 39607), (194, 39463), (196, 39451), (205, 39427), (228, 39340),

Gene: Nebkiss\_67 Start: 43437, Stop: 42649, Start Num: 15

Candidate Starts for Nebkiss\_67:

(Start: 15 @43437 has 2 MA's), (Start: 25 @43398 has 36 MA's), (61, 43260), (97, 43107), (106, 43083), (116, 43050), (127, 43008), (135, 42990), (146, 42966), (183, 42831), (188, 42810), (203, 42759), (219, 42699), (221, 42690),

Gene: NelitzaMV\_51 Start: 39182, Stop: 38409, Start Num: 19

Candidate Starts for NelitzaMV\_51:

(Start: 19 @39182 has 111 MA's), (Start: 25 @39158 has 36 MA's), (Start: 34 @39128 has 33 MA's), (61, 39020), (83, 38924), (106, 38843), (114, 38819), (116, 38810), (119, 38801), (152, 38696), (154, 38690), (155, 38684), (194, 38540), (196, 38528), (205, 38504), (228, 38417),

Gene: NihilNomen\_97 Start: 59187, Stop: 58480, Start Num: 34

Candidate Starts for NihilNomen\_97:

(Start: 34 @59187 has 33 MA's), (Start: 47 @59133 has 5 MA's), (Start: 49 @59124 has 1 MA's), (78, 59028), (106, 58929), (110, 58917), (116, 58896), (148, 58806), (150, 58800), (169, 58719), (175, 58701), (186, 58662), (190, 58644), (191, 58641), (205, 58590), (209, 58578), (221, 58527),

Gene: Nikao\_40 Start: 36713, Stop: 35793, Start Num: 16

Candidate Starts for Nikao\_40:

(Start: 16 @36713 has 1 MA's), (Start: 24 @36695 has 12 MA's), (37, 36647), (42, 36620), (45, 36602), (52, 36569), (58, 36551), (60, 36545), (63, 36533), (82, 36449), (86, 36434), (91, 36419), (100, 36377), (112, 36341), (117, 36323), (126, 36281), (137, 36263), (150, 36224), (158, 36194), (168, 36155), (180, 36116), (184, 36101), (196, 36047), (203, 36029), (209, 36011), (217, 35972), (231, 35906), (244, 35816),

Gene: Niklas\_44 Start: 35225, Stop: 34236, Start Num: 24

Candidate Starts for Niklas\_44:

(Start: 24 @35225 has 12 MA's), (32, 35195), (37, 35177), (39, 35165), (44, 35138), (45, 35132), (48, 35120), (58, 35081), (60, 35075), (72, 35039), (79, 34988), (82, 34979), (86, 34964), (91, 34949), (100, 34907), (106, 34889), (116, 34856), (158, 34709), (163, 34694), (181, 34628), (185, 34610), (217, 34490), (237, 34355), (240, 34319),

Gene: Nimrod\_57 Start: 40805, Stop: 40032, Start Num: 19

Candidate Starts for Nimrod\_57:

(Start: 19 @40805 has 111 MA's), (Start: 25 @40781 has 36 MA's), (Start: 34 @40751 has 33 MA's), (61, 40643), (83, 40547), (106, 40466), (114, 40442), (116, 40433), (119, 40424), (152, 40319), (154, 40313), (155, 40307), (194, 40163), (196, 40151), (205, 40127), (228, 40040),

Gene: NoSleep\_56 Start: 39744, Stop: 38971, Start Num: 19

Candidate Starts for NoSleep\_56:

(Start: 19 @39744 has 111 MA's), (Start: 25 @39720 has 36 MA's), (Start: 34 @39690 has 33 MA's), (61, 39582), (83, 39486), (106, 39405), (114, 39381), (116, 39372), (119, 39363), (152, 39258), (154, 39252), (155, 39246), (194, 39102), (196, 39090), (205, 39066), (228, 38979),

Gene: Nutello\_37 Start: 34082, Stop: 33180, Start Num: 24

Candidate Starts for Nutello\_37:

(Start: 16 @34100 has 1 MA's), (Start: 24 @34082 has 12 MA's), (37, 34034), (42, 34007), (45, 33989), (52, 33956), (58, 33938), (60, 33932), (63, 33920), (82, 33836), (86, 33821), (91, 33806), (100, 33764), (112, 33728), (117, 33710), (126, 33668), (137, 33650), (150, 33611), (168, 33542), (180, 33503), (184, 33488), (196, 33434), (203, 33416), (209, 33398), (217, 33359), (231, 33293), (244, 33203),

Gene: Odette\_95 Start: 58230, Stop: 57523, Start Num: 34

Candidate Starts for Odette\_95:

(Start: 34 @58230 has 33 MA's), (Start: 47 @58176 has 5 MA's), (Start: 49 @58167 has 1 MA's), (Start: 55 @58143 has 1 MA's), (78, 58071), (106, 57972), (110, 57960), (116, 57939), (148, 57849), (150, 57843), (169, 57762), (175, 57744), (186, 57705), (190, 57687), (191, 57684), (205, 57633), (209, 57621), (221, 57570),

Gene: OkiRoe\_40 Start: 33795, Stop: 32953, Start Num: 21

Candidate Starts for OkiRoe\_40:

(Start: 21 @33795 has 21 MA's), (Start: 34 @33753 has 33 MA's), (82, 33558), (91, 33528), (110, 33459), (112, 33453), (116, 33438), (130, 33384), (151, 33312), (179, 33213), (186, 33186), (188, 33177), (190, 33168), (199, 33141), (201, 33135), (206, 33120), (214, 33090), (217, 33072), (223, 33051),

Gene: Omega\_99 Start: 58940, Stop: 58233, Start Num: 34

Candidate Starts for Omega\_99:

(Start: 34 @58940 has 33 MA's), (Start: 47 @58886 has 5 MA's), (Start: 49 @58877 has 1 MA's), (78, 58781), (106, 58682), (110, 58670), (112, 58664), (114, 58658), (116, 58649), (131, 58607), (149, 58556), (150, 58553), (169, 58472), (175, 58454), (186, 58415), (189, 58403), (190, 58397), (191, 58394), (202, 58352), (205, 58343), (209, 58331), (221, 58280),

Gene: OmniCritical\_45 Start: 35490, Stop: 34672, Start Num: 25

Candidate Starts for OmniCritical\_45:

(Start: 25 @35490 has 36 MA's), (26, 35487), (31, 35472), (Start: 46 @35409 has 1 MA's), (52, 35379), (59, 35358), (72, 35322), (78, 35286), (87, 35244), (91, 35232), (92, 35229), (100, 35190), (116, 35145), (120, 35130), (132, 35094), (135, 35085), (165, 34992), (180, 34938), (186, 34914), (187, 34908), (192, 34890), (211, 34824), (216, 34803),

Gene: Omnicron\_43 Start: 33409, Stop: 32570, Start Num: 21

Candidate Starts for Omnicron\_43:

(Start: 21 @33409 has 21 MA's), (Start: 34 @33367 has 33 MA's), (53, 33283), (58, 33268), (67, 33247), (69, 33241), (91, 33142), (95, 33130), (106, 33085), (107, 33082), (116, 33052), (136, 32974), (179, 32827), (190, 32782), (199, 32755), (217, 32686),

Gene: Optimus\_89 Start: 57722, Stop: 57015, Start Num: 34

Candidate Starts for Optimus\_89:

(Start: 34 @57722 has 33 MA's), (Start: 47 @57668 has 5 MA's), (Start: 49 @57659 has 1 MA's), (78, 57563), (106, 57464), (110, 57452), (116, 57431), (148, 57341), (150, 57335), (169, 57254), (175, 57236), (186, 57197), (190, 57179), (191, 57176), (205, 57125), (209, 57113), (221, 57062),

Gene: OrionPax\_53 Start: 39189, Stop: 38416, Start Num: 19



Candidate Starts for OrionPax\_53:

(Start: 19 @39189 has 111 MA's), (Start: 25 @39165 has 36 MA's), (Start: 34 @39135 has 33 MA's), (61, 39027), (83, 38931), (106, 38850), (114, 38826), (116, 38817), (119, 38808), (152, 38703), (154, 38697), (155, 38691), (194, 38547), (196, 38535), (205, 38511), (228, 38424),

Gene: Padfoot\_42 Start: 34886, Stop: 33984, Start Num: 9

Candidate Starts for Padfoot\_42:

(Start: 9 @34886 has 38 MA's), (Start: 12 @34865 has 2 MA's), (Start: 20 @34829 has 2 MA's), (Start: 23 @34823 has 22 MA's), (29, 34799), (Start: 35 @34778 has 6 MA's), (41, 34754), (63, 34664), (67, 34655), (91, 34550), (92, 34547), (95, 34538), (97, 34520), (98, 34514), (115, 34466), (120, 34448), (125, 34418), (130, 34406), (134, 34397), (157, 34325), (173, 34268), (187, 34217), (191, 34202), (197, 34175), (205, 34154), (209, 34142),

Gene: Padpat\_43 Start: 34565, Stop: 33663, Start Num: 9

Candidate Starts for Padpat\_43:

(Start: 9 @34565 has 38 MA's), (Start: 20 @34508 has 2 MA's), (Start: 23 @34502 has 22 MA's), (29, 34478), (Start: 35 @34457 has 6 MA's), (41, 34433), (63, 34343), (67, 34334), (91, 34229), (92, 34226), (95, 34217), (97, 34199), (98, 34193), (115, 34145), (120, 34127), (125, 34097), (130, 34085), (134, 34076), (153, 34019), (157, 34004), (173, 33947), (187, 33896), (191, 33881), (197, 33854), (205, 33833), (209, 33821),

Gene: Palpatine\_57 Start: 40553, Stop: 39804, Start Num: 25

Candidate Starts for Palpatine\_57:

(Start: 19 @40577 has 111 MA's), (Start: 25 @40553 has 36 MA's), (Start: 34 @40523 has 33 MA's), (61, 40415), (83, 40319), (106, 40238), (114, 40214), (116, 40205), (119, 40196), (152, 40091), (154, 40085), (155, 40079), (194, 39935), (196, 39923), (205, 39899), (228, 39812),

Gene: Paola\_40 Start: 33793, Stop: 32951, Start Num: 21

Candidate Starts for Paola\_40:

(Start: 21 @33793 has 21 MA's), (Start: 34 @33751 has 33 MA's), (82, 33556), (91, 33526), (110, 33457), (112, 33451), (116, 33436), (121, 33418), (130, 33382), (151, 33310), (179, 33211), (186, 33184), (188, 33175), (190, 33166), (199, 33139), (201, 33133), (206, 33118), (214, 33088), (217, 33070), (223, 33049),

Gene: Paperbeatsrock\_53 Start: 40112, Stop: 39339, Start Num: 19

Candidate Starts for Paperbeatsrock\_53:

(Start: 19 @40112 has 111 MA's), (Start: 25 @40088 has 36 MA's), (Start: 34 @40058 has 33 MA's), (61, 39950), (83, 39854), (106, 39773), (114, 39749), (116, 39740), (119, 39731), (152, 39626), (154, 39620), (155, 39614), (194, 39470), (196, 39458), (205, 39434), (228, 39347),

Gene: Pat3\_52 Start: 38288, Stop: 37569, Start Num: 34

Candidate Starts for Pat3\_52:

(Start: 19 @38342 has 111 MA's), (Start: 25 @38318 has 36 MA's), (Start: 34 @38288 has 33 MA's), (61, 38180), (83, 38084), (106, 38003), (114, 37979), (116, 37970), (119, 37961), (152, 37856), (154, 37850), (155, 37844), (194, 37700), (196, 37688), (205, 37664), (228, 37577),

Gene: Patt\_43 Start: 34705, Stop: 33914, Start Num: 25

Candidate Starts for Patt\_43:

(Start: 25 @34705 has 36 MA's), (Start: 33 @34678 has 1 MA's), (41, 34648), (42, 34639), (74, 34534), (78, 34501), (85, 34465), (87, 34459), (91, 34447), (92, 34444), (95, 34435), (100, 34405), (116, 34360), (120, 34345), (156, 34237), (165, 34207), (170, 34180), (187, 34123), (214, 34027), (221, 33997),

Gene: Peanam\_44 Start: 35181, Stop: 34210, Start Num: 24

Candidate Starts for Peanam\_44:

(Start: 24 @35181 has 12 MA's), (32, 35151), (37, 35133), (39, 35121), (44, 35094), (45, 35088), (48, 35076), (58, 35037), (60, 35031), (72, 34995), (79, 34944), (82, 34935), (86, 34920), (91, 34905), (100, 34863), (106, 34845), (109, 34836), (116, 34812), (158, 34680), (163, 34665), (181, 34599), (185, 34581), (217, 34461), (237, 34326),

Gene: Peel\_42 Start: 34691, Stop: 33789, Start Num: 9

Candidate Starts for Peel\_42:

(Start: 9 @34691 has 38 MA's), (Start: 12 @34670 has 2 MA's), (Start: 20 @34634 has 2 MA's), (Start: 23 @34628 has 22 MA's), (29, 34604), (Start: 35 @34583 has 6 MA's), (41, 34559), (63, 34469), (67, 34460), (91, 34355), (92, 34352), (95, 34343), (97, 34325), (98, 34319), (115, 34271), (120, 34253), (125, 34223), (130, 34211), (134, 34202), (157, 34130), (173, 34073), (187, 34022), (191, 34007), (197, 33980), (205, 33959), (209, 33947),

Gene: Petra64142\_59 Start: 41017, Stop: 40268, Start Num: 25

Candidate Starts for Petra64142\_59:

(Start: 19 @41041 has 111 MA's), (Start: 25 @41017 has 36 MA's), (Start: 34 @40987 has 33 MA's), (61, 40879), (83, 40783), (106, 40702), (114, 40678), (116, 40669), (119, 40660), (152, 40555), (154, 40549), (155, 40543), (194, 40399), (196, 40387), (205, 40363), (228, 40276),

Gene: Phaja\_52 Start: 39938, Stop: 39165, Start Num: 19

Candidate Starts for Phaja\_52:

(Start: 19 @39938 has 111 MA's), (Start: 25 @39914 has 36 MA's), (Start: 34 @39884 has 33 MA's), (61, 39776), (83, 39680), (106, 39599), (114, 39575), (116, 39566), (119, 39557), (152, 39452), (154, 39446), (155, 39440), (194, 39296), (196, 39284), (205, 39260), (228, 39173),

Gene: Pharsalus\_52 Start: 39912, Stop: 39139, Start Num: 19

Candidate Starts for Pharsalus\_52:

(Start: 19 @39912 has 111 MA's), (Start: 25 @39888 has 36 MA's), (Start: 34 @39858 has 33 MA's), (61, 39750), (83, 39654), (106, 39573), (114, 39549), (116, 39540), (119, 39531), (152, 39426), (154, 39420), (155, 39414), (194, 39270), (196, 39258), (205, 39234), (228, 39147),

Gene: PhatBacter\_57 Start: 40591, Stop: 39818, Start Num: 19

Candidate Starts for PhatBacter\_57:

(Start: 19 @40591 has 111 MA's), (Start: 25 @40567 has 36 MA's), (Start: 34 @40537 has 33 MA's), (61, 40429), (83, 40333), (106, 40252), (114, 40228), (116, 40219), (119, 40210), (152, 40105), (154, 40099), (155, 40093), (194, 39949), (196, 39937), (205, 39913), (228, 39826),

Gene: Phaux\_56 Start: 40589, Stop: 39816, Start Num: 19

Candidate Starts for Phaux\_56:

(Start: 19 @40589 has 111 MA's), (Start: 25 @40565 has 36 MA's), (Start: 34 @40535 has 33 MA's), (61, 40427), (83, 40331), (106, 40250), (114, 40226), (116, 40217), (119, 40208), (152, 40103), (154, 40097), (155, 40091), (194, 39947), (196, 39935), (205, 39911), (228, 39824),

Gene: Phoebus\_97 Start: 60370, Stop: 59663, Start Num: 34

Candidate Starts for Phoebus\_97:

(Start: 34 @60370 has 33 MA's), (Start: 47 @60316 has 5 MA's), (Start: 49 @60307 has 1 MA's), (Start: 55 @60283 has 1 MA's), (78, 60211), (106, 60112), (110, 60100), (116, 60079), (148, 59989), (150, 59983), (169, 59902), (175, 59884), (186, 59845), (190, 59827), (191, 59824), (205, 59773), (209, 59761), (221, 59710),

Gene: Phrappuccino\_39 Start: 21883, Stop: 22644, Start Num: 25

Candidate Starts for Phrappuccino\_39:

(8, 21793), (Start: 21 @21868 has 21 MA's), (Start: 25 @21883 has 36 MA's), (37, 21922), (39, 21934), (48, 21973), (50, 21985), (51, 21991), (58, 22012), (60, 22018), (66, 22033), (80, 22108), (88, 22135), (91, 22144), (93, 22150), (112, 22216), (113, 22219), (116, 22231), (133, 22285), (138, 22297), (140, 22303), (145, 22312), (150, 22330), (160, 22366), (161, 22369), (170, 22408), (177, 22429), (178, 22432), (191, 22480), (211, 22543), (213, 22552), (214, 22555), (222, 22594), (230, 22630),

Gene: Phrux\_52 Start: 39182, Stop: 38409, Start Num: 19

Candidate Starts for Phrux\_52:

(Start: 19 @39182 has 111 MA's), (Start: 25 @39158 has 36 MA's), (Start: 34 @39128 has 33 MA's), (61, 39020), (83, 38924), (106, 38843), (114, 38819), (116, 38810), (119, 38801), (152, 38696), (154, 38690), (155, 38684), (194, 38540), (196, 38528), (205, 38504), (228, 38417),

Gene: Piatt\_42 Start: 34778, Stop: 33984, Start Num: 35

Candidate Starts for Piatt\_42:

(Start: 9 @34886 has 38 MA's), (Start: 12 @34865 has 2 MA's), (Start: 20 @34829 has 2 MA's), (Start: 23 @34823 has 22 MA's), (29, 34799), (Start: 35 @34778 has 6 MA's), (41, 34754), (63, 34664), (67, 34655), (91, 34550), (92, 34547), (95, 34538), (97, 34520), (98, 34514), (115, 34466), (120, 34448), (125, 34418), (130, 34406), (134, 34397), (157, 34325), (173, 34268), (187, 34217), (191, 34202), (197, 34175), (205, 34154), (209, 34142),

Gene: Pokerus\_41 Start: 34547, Stop: 33708, Start Num: 23

Candidate Starts for Pokerus\_41:

(Start: 10 @34601 has 8 MA's), (Start: 20 @34553 has 2 MA's), (Start: 23 @34547 has 22 MA's), (29, 34523), (41, 34478), (63, 34388), (67, 34379), (91, 34274), (92, 34271), (95, 34262), (97, 34244), (98, 34238), (115, 34190), (120, 34172), (125, 34142), (130, 34130), (134, 34121), (157, 34049), (173, 33992), (191, 33926), (197, 33899), (205, 33878), (209, 33866),

Gene: Policronamos\_59 Start: 40427, Stop: 39816, Start Num: 61

Candidate Starts for Policronamos\_59:

(Start: 19 @40589 has 111 MA's), (Start: 25 @40565 has 36 MA's), (Start: 34 @40535 has 33 MA's), (61, 40427), (83, 40331), (106, 40250), (114, 40226), (116, 40217), (119, 40208), (152, 40103), (154, 40097), (155, 40091), (194, 39947), (196, 39935), (205, 39911), (228, 39824),

Gene: Porcelain\_89 Start: 54143, Stop: 53436, Start Num: 34

Candidate Starts for Porcelain\_89:

(Start: 34 @54143 has 33 MA's), (Start: 47 @54089 has 5 MA's), (Start: 49 @54080 has 1 MA's), (78, 53984), (81, 53966), (106, 53885), (110, 53873), (112, 53867), (114, 53861), (116, 53852), (131, 53810), (149, 53759), (150, 53756), (169, 53675), (175, 53657), (186, 53618), (189, 53606), (190, 53600), (191, 53597), (202, 53555), (205, 53546), (208, 53537), (209, 53534), (221, 53483),

Gene: Porky\_53 Start: 39308, Stop: 38535, Start Num: 19

Candidate Starts for Porky\_53:

(Start: 19 @39308 has 111 MA's), (Start: 25 @39284 has 36 MA's), (Start: 34 @39254 has 33 MA's), (61, 39146), (83, 39050), (106, 38969), (114, 38945), (116, 38936), (119, 38927), (152, 38822), (154, 38816), (155, 38810), (194, 38666), (196, 38654), (205, 38630), (228, 38543),

Gene: Pound\_87 Start: 58399, Stop: 57692, Start Num: 34

Candidate Starts for Pound\_87:

(Start: 34 @58399 has 33 MA's), (Start: 47 @58345 has 5 MA's), (Start: 49 @58336 has 1 MA's), (Start: 55 @58312 has 1 MA's), (78, 58240), (106, 58141), (110, 58129), (116, 58108), (148, 58018), (150, 58012), (169, 57931), (175, 57913), (186, 57874), (190, 57856), (191, 57853), (205, 57802),

(209, 57790), (221, 57739),

Gene: Prithvi\_43 Start: 34696, Stop: 33857, Start Num: 23

Candidate Starts for Prithvi\_43:

(Start: 10 @34750 has 8 MA's), (Start: 20 @34702 has 2 MA's), (Start: 23 @34696 has 22 MA's), (29, 34672), (Start: 35 @34651 has 6 MA's), (41, 34627), (63, 34537), (67, 34528), (91, 34423), (92, 34420), (95, 34411), (97, 34393), (113, 34348), (115, 34339), (120, 34321), (125, 34291), (130, 34279), (134, 34270), (157, 34198), (173, 34141), (191, 34075), (197, 34048), (205, 34027), (209, 34015),

Gene: Psycho\_41 Start: 33888, Stop: 33001, Start Num: 13

Candidate Starts for Psycho\_41:

(4, 33954), (Start: 13 @33888 has 2 MA's), (Start: 21 @33852 has 21 MA's), (Start: 34 @33807 has 33 MA's), (51, 33729), (69, 33681), (91, 33582), (95, 33570), (107, 33522), (116, 33492), (121, 33474), (128, 33438), (131, 33432), (139, 33405), (174, 33279), (179, 33264), (182, 33252), (193, 33210), (206, 33171), (217, 33123),

Gene: Pumpkin\_56 Start: 40239, Stop: 39466, Start Num: 19

Candidate Starts for Pumpkin\_56:

(Start: 19 @40239 has 111 MA's), (Start: 25 @40215 has 36 MA's), (Start: 34 @40185 has 33 MA's), (61, 40077), (83, 39981), (106, 39900), (114, 39876), (116, 39867), (119, 39858), (152, 39753), (154, 39747), (155, 39741), (194, 39597), (196, 39585), (205, 39561), (228, 39474),

Gene: Quallification\_55 Start: 40227, Stop: 39454, Start Num: 19

Candidate Starts for Quallification\_55:

(Start: 19 @40227 has 111 MA's), (Start: 25 @40203 has 36 MA's), (Start: 34 @40173 has 33 MA's), (61, 40065), (83, 39969), (106, 39888), (114, 39864), (116, 39855), (119, 39846), (152, 39741), (154, 39735), (155, 39729), (194, 39585), (196, 39573), (205, 39549), (228, 39462),

Gene: QuincyRose\_41 Start: 35009, Stop: 34107, Start Num: 9

Candidate Starts for QuincyRose\_41:

(Start: 9 @35009 has 38 MA's), (Start: 20 @34952 has 2 MA's), (Start: 23 @34946 has 22 MA's), (29, 34922), (Start: 35 @34901 has 6 MA's), (41, 34877), (63, 34787), (67, 34778), (91, 34673), (92, 34670), (95, 34661), (97, 34643), (98, 34637), (115, 34589), (120, 34571), (125, 34541), (130, 34529), (134, 34520), (153, 34463), (157, 34448), (173, 34391), (191, 34325), (197, 34298), (205, 34277), (209, 34265),

Gene: Rakim\_56 Start: 39965, Stop: 39216, Start Num: 25

Candidate Starts for Rakim\_56:

(Start: 19 @39989 has 111 MA's), (Start: 25 @39965 has 36 MA's), (Start: 34 @39935 has 33 MA's), (61, 39827), (83, 39731), (106, 39650), (114, 39626), (116, 39617), (119, 39608), (152, 39503), (154, 39497), (155, 39491), (194, 39347), (196, 39335), (205, 39311), (228, 39224),

Gene: Ramen\_42 Start: 34576, Stop: 33674, Start Num: 9

Candidate Starts for Ramen\_42:

(Start: 9 @34576 has 38 MA's), (Start: 20 @34519 has 2 MA's), (Start: 23 @34513 has 22 MA's), (29, 34489), (Start: 35 @34468 has 6 MA's), (41, 34444), (63, 34354), (67, 34345), (91, 34240), (92, 34237), (95, 34228), (97, 34210), (98, 34204), (115, 34156), (120, 34138), (125, 34108), (130, 34096), (134, 34087), (153, 34030), (157, 34015), (173, 33958), (187, 33907), (191, 33892), (197, 33865), (205, 33844), (209, 33832),

Gene: Rando14\_42 Start: 32984, Stop: 32142, Start Num: 21

Candidate Starts for Rando14\_42:

(Start: 21 @32984 has 21 MA's), (Start: 34 @32942 has 33 MA's), (43, 32900), (58, 32843), (67, 32822), (69, 32816), (91, 32717), (95, 32705), (107, 32657), (116, 32627), (179, 32402), (185, 32378), (190, 32357), (192, 32351), (199, 32330), (201, 32324),

Gene: Rapunzel97\_42 Start: 34572, Stop: 33670, Start Num: 9

Candidate Starts for Rapunzel97\_42:

(Start: 9 @34572 has 38 MA's), (Start: 20 @34515 has 2 MA's), (Start: 23 @34509 has 22 MA's), (29, 34485), (Start: 35 @34464 has 6 MA's), (41, 34440), (63, 34350), (67, 34341), (91, 34236), (92, 34233), (95, 34224), (97, 34206), (98, 34200), (115, 34152), (120, 34134), (125, 34104), (130, 34092), (134, 34083), (153, 34026), (157, 34011), (173, 33954), (187, 33903), (191, 33888), (197, 33861), (209, 33828),

Gene: Redno2\_87 Start: 54921, Stop: 54214, Start Num: 34

Candidate Starts for Redno2\_87:

(Start: 34 @54921 has 33 MA's), (Start: 47 @54867 has 5 MA's), (Start: 49 @54858 has 1 MA's), (Start: 55 @54834 has 1 MA's), (78, 54762), (106, 54663), (110, 54651), (116, 54630), (148, 54540), (150, 54534), (167, 54468), (169, 54453), (175, 54435), (186, 54396), (190, 54378), (205, 54324), (209, 54312), (210, 54306), (211, 54303), (221, 54261),

Gene: Reptar3000\_44 Start: 34696, Stop: 33905, Start Num: 25

Candidate Starts for Reptar3000\_44:

(Start: 25 @34696 has 36 MA's), (Start: 33 @34669 has 1 MA's), (41, 34639), (42, 34630), (74, 34525), (78, 34492), (85, 34456), (87, 34450), (91, 34438), (92, 34435), (95, 34426), (100, 34396), (116, 34351), (120, 34336), (156, 34228), (165, 34198), (170, 34171), (180, 34144), (187, 34114), (214, 34018), (221, 33988),

Gene: Richo\_44 Start: 35155, Stop: 34205, Start Num: 24

Candidate Starts for Richo\_44:

(1, 35275), (2, 35272), (Start: 24 @35155 has 12 MA's), (37, 35107), (39, 35095), (44, 35068), (45, 35062), (48, 35050), (76, 34948), (82, 34909), (86, 34894), (91, 34879), (114, 34795), (116, 34786), (128, 34750), (158, 34669), (181, 34588), (185, 34570), (208, 34492), (209, 34489), (217, 34450), (234, 34360), (243, 34252),

Gene: Rimmer\_55 Start: 39931, Stop: 39158, Start Num: 19

Candidate Starts for Rimmer\_55:

(Start: 19 @39931 has 111 MA's), (Start: 25 @39907 has 36 MA's), (Start: 34 @39877 has 33 MA's), (61, 39769), (83, 39673), (106, 39592), (114, 39568), (116, 39559), (119, 39550), (152, 39445), (154, 39439), (155, 39433), (194, 39289), (196, 39277), (205, 39253), (228, 39166),

Gene: RiverMonster\_55 Start: 39760, Stop: 38987, Start Num: 19

Candidate Starts for RiverMonster\_55:

(Start: 19 @39760 has 111 MA's), (Start: 25 @39736 has 36 MA's), (Start: 34 @39706 has 33 MA's), (61, 39598), (83, 39502), (106, 39421), (114, 39397), (116, 39388), (119, 39379), (152, 39274), (154, 39268), (155, 39262), (194, 39118), (196, 39106), (205, 39082), (228, 38995),

Gene: Rosmarinus\_42 Start: 34569, Stop: 33775, Start Num: 35

Candidate Starts for Rosmarinus\_42:

(Start: 9 @34677 has 38 MA's), (Start: 12 @34656 has 2 MA's), (Start: 20 @34620 has 2 MA's), (Start: 23 @34614 has 22 MA's), (29, 34590), (Start: 35 @34569 has 6 MA's), (41, 34545), (63, 34455), (67, 34446), (91, 34341), (92, 34338), (95, 34329), (97, 34311), (98, 34305), (115, 34257), (120, 34239), (125, 34209), (130, 34197), (134, 34188), (157, 34116), (173, 34059), (187, 34008), (191, 33993), (197, 33966), (205, 33945), (209, 33933),

Gene: Ruthiejr\_47 Start: 35557, Stop: 34739, Start Num: 25

Candidate Starts for Ruthiejr\_47:

(Start: 25 @35557 has 36 MA's), (26, 35554), (31, 35539), (Start: 46 @35476 has 1 MA's), (52, 35446), (59, 35425), (72, 35389), (78, 35353), (87, 35311), (91, 35299), (92, 35296), (100, 35257), (116, 35212), (120, 35197), (132, 35161), (135, 35152), (165, 35059), (180, 35005), (186, 34981), (187, 34975), (192, 34957), (211, 34891), (216, 34870),

Gene: Saints25\_55 Start: 39472, Stop: 38699, Start Num: 19

Candidate Starts for Saints25\_55:

(Start: 19 @39472 has 111 MA's), (Start: 25 @39448 has 36 MA's), (Start: 34 @39418 has 33 MA's), (61, 39310), (83, 39214), (106, 39133), (114, 39109), (116, 39100), (119, 39091), (152, 38986), (154, 38980), (155, 38974), (194, 38830), (196, 38818), (205, 38794), (228, 38707),

Gene: SamScheppers\_45 Start: 35986, Stop: 35168, Start Num: 25

Candidate Starts for SamScheppers\_45:

(Start: 25 @35986 has 36 MA's), (26, 35983), (31, 35968), (Start: 46 @35905 has 1 MA's), (52, 35875), (59, 35854), (72, 35818), (78, 35782), (87, 35740), (91, 35728), (92, 35725), (100, 35686), (116, 35641), (120, 35626), (132, 35590), (135, 35581), (165, 35488), (180, 35434), (186, 35410), (187, 35404), (192, 35386), (211, 35320), (216, 35299),

Gene: SamuelLPlaqson\_43 Start: 35473, Stop: 34568, Start Num: 9

Candidate Starts for SamuelLPlaqson\_43:

(Start: 9 @35473 has 38 MA's), (Start: 20 @35413 has 2 MA's), (Start: 23 @35407 has 22 MA's), (29, 35383), (Start: 33 @35368 has 1 MA's), (36, 35359), (41, 35338), (Start: 46 @35314 has 1 MA's), (51, 35287), (63, 35248), (67, 35239), (91, 35134), (92, 35131), (97, 35104), (104, 35080), (113, 35059), (115, 35050), (120, 35032), (130, 34990), (134, 34981), (147, 34945), (157, 34909), (173, 34852), (191, 34786), (209, 34726), (229, 34636),

Gene: Sassay\_48 Start: 37859, Stop: 37086, Start Num: 19

Candidate Starts for Sassay\_48:

(Start: 19 @37859 has 111 MA's), (Start: 25 @37835 has 36 MA's), (Start: 34 @37805 has 33 MA's), (61, 37697), (83, 37601), (106, 37520), (114, 37496), (116, 37487), (119, 37478), (152, 37373), (154, 37367), (155, 37361), (194, 37217), (196, 37205), (205, 37181), (228, 37094),

Gene: Schatzie\_90 Start: 57977, Stop: 57270, Start Num: 34

Candidate Starts for Schatzie\_90:

(Start: 34 @57977 has 33 MA's), (Start: 47 @57923 has 5 MA's), (Start: 49 @57914 has 1 MA's), (Start: 55 @57890 has 1 MA's), (78, 57818), (106, 57719), (110, 57707), (116, 57686), (148, 57596), (150, 57590), (169, 57509), (175, 57491), (186, 57452), (190, 57434), (191, 57431), (205, 57380), (209, 57368), (221, 57317),

Gene: Settecandela\_39 Start: 21883, Stop: 22644, Start Num: 25

Candidate Starts for Settecandela\_39:

(8, 21793), (Start: 21 @21868 has 21 MA's), (Start: 25 @21883 has 36 MA's), (37, 21922), (39, 21934), (48, 21973), (50, 21985), (51, 21991), (58, 22012), (60, 22018), (66, 22033), (80, 22108), (88, 22135), (91, 22144), (93, 22150), (112, 22216), (113, 22219), (116, 22231), (133, 22285), (138, 22297), (140, 22303), (145, 22312), (150, 22330), (160, 22366), (161, 22369), (170, 22408), (177, 22429), (178, 22432), (191, 22480), (211, 22543), (213, 22552), (214, 22555), (222, 22594), (230, 22630),

Gene: SgtBeansprout\_37 Start: 34082, Stop: 33180, Start Num: 24

Candidate Starts for SgtBeansprout\_37:

(Start: 16 @34100 has 1 MA's), (Start: 24 @34082 has 12 MA's), (37, 34034), (42, 34007), (45, 33989), (52, 33956), (58, 33938), (60, 33932), (63, 33920), (82, 33836), (86, 33821), (91, 33806), (100, 33764), (112, 33728), (117, 33710), (126, 33668), (137, 33650), (150, 33611), (168, 33542), (180, 33503), (184, 33488), (196, 33434), (203, 33416), (209, 33398), (217, 33359), (231, 33293), (244, 33203),

Gene: ShamWow\_54 Start: 40375, Stop: 39602, Start Num: 19

Candidate Starts for ShamWow\_54:

(Start: 19 @40375 has 111 MA's), (Start: 25 @40351 has 36 MA's), (Start: 34 @40321 has 33 MA's), (61, 40213), (83, 40117), (106, 40036), (114, 40012), (116, 40003), (119, 39994), (152, 39889), (154, 39883), (155, 39877), (194, 39733), (196, 39721), (205, 39697), (228, 39610),

Gene: Shaobing\_44 Start: 35188, Stop: 34232, Start Num: 24

Candidate Starts for Shaobing\_44:

(Start: 24 @35188 has 12 MA's), (28, 35170), (32, 35158), (39, 35128), (42, 35113), (44, 35101), (45, 35095), (48, 35083), (63, 35026), (76, 34981), (79, 34951), (82, 34942), (86, 34927), (91, 34912), (100, 34870), (105, 34855), (116, 34819), (137, 34765), (141, 34753), (143, 34747), (181, 34615), (185, 34597), (208, 34519), (217, 34477), (234, 34387),

Gene: ShereKhan\_52 Start: 40151, Stop: 39378, Start Num: 19

Candidate Starts for ShereKhan\_52:

(Start: 19 @40151 has 111 MA's), (Start: 25 @40127 has 36 MA's), (Start: 34 @40097 has 33 MA's), (61, 39989), (83, 39893), (106, 39812), (114, 39788), (116, 39779), (119, 39770), (152, 39665), (154, 39659), (155, 39653), (194, 39509), (196, 39497), (205, 39473), (228, 39386),

Gene: ShiaSurprise\_43 Start: 34886, Stop: 33984, Start Num: 9

Candidate Starts for ShiaSurprise\_43:

(Start: 9 @34886 has 38 MA's), (Start: 12 @34865 has 2 MA's), (Start: 20 @34829 has 2 MA's), (Start: 23 @34823 has 22 MA's), (29, 34799), (Start: 35 @34778 has 6 MA's), (41, 34754), (63, 34664), (67, 34655), (91, 34550), (92, 34547), (95, 34538), (97, 34520), (98, 34514), (115, 34466), (120, 34448), (125, 34418), (130, 34406), (134, 34397), (157, 34325), (173, 34268), (187, 34217), (191, 34202), (197, 34175), (205, 34154), (209, 34142),

Gene: Simpliphy\_53 Start: 39456, Stop: 38683, Start Num: 19

Candidate Starts for Simpliphy\_53:

(Start: 19 @39456 has 111 MA's), (Start: 25 @39432 has 36 MA's), (Start: 34 @39402 has 33 MA's), (61, 39294), (83, 39198), (106, 39117), (114, 39093), (116, 39084), (119, 39075), (152, 38970), (154, 38964), (155, 38958), (194, 38814), (196, 38802), (205, 38778), (228, 38691),

Gene: SirDuracell\_53 Start: 38408, Stop: 37659, Start Num: 25

Candidate Starts for SirDuracell\_53:

(Start: 19 @38432 has 111 MA's), (Start: 25 @38408 has 36 MA's), (Start: 34 @38378 has 33 MA's), (61, 38270), (83, 38174), (106, 38093), (114, 38069), (116, 38060), (119, 38051), (152, 37946), (154, 37940), (155, 37934), (194, 37790), (196, 37778), (205, 37754), (228, 37667),

Gene: Slarp\_46 Start: 35595, Stop: 34777, Start Num: 25

Candidate Starts for Slarp\_46:

(Start: 25 @35595 has 36 MA's), (26, 35592), (31, 35577), (Start: 46 @35514 has 1 MA's), (52, 35484), (59, 35463), (72, 35427), (78, 35391), (87, 35349), (91, 35337), (92, 35334), (100, 35295), (116, 35250), (120, 35235), (132, 35199), (135, 35190), (165, 35097), (180, 35043), (186, 35019), (187, 35013), (192, 34995), (211, 34929), (216, 34908),

Gene: Slimphazie\_42 Start: 34572, Stop: 33670, Start Num: 9

Candidate Starts for Slimphazie\_42:

(Start: 9 @34572 has 38 MA's), (Start: 20 @34515 has 2 MA's), (Start: 23 @34509 has 22 MA's), (29, 34485), (Start: 35 @34464 has 6 MA's), (41, 34440), (63, 34350), (67, 34341), (91, 34236), (92, 34233), (95, 34224), (97, 34206), (98, 34200), (115, 34152), (120, 34134), (125, 34104), (130, 34092), (134, 34083), (153, 34026), (157, 34011), (173, 33954), (187, 33903), (191, 33888), (197, 33861), (209, 33828),

Gene: SoSeph\_40 Start: 33939, Stop: 33097, Start Num: 21

Candidate Starts for SoSeph\_40:

(Start: 21 @33939 has 21 MA's), (Start: 34 @33897 has 33 MA's), (91, 33672), (110, 33603), (112, 33597), (116, 33582), (121, 33564), (130, 33528), (151, 33456), (179, 33357), (186, 33330), (188, 33321), (190, 33312), (199, 33285), (201, 33279), (206, 33264), (217, 33216), (223, 33195),

Gene: SophKB\_51 Start: 39131, Stop: 38358, Start Num: 19

Candidate Starts for SophKB\_51:

(Start: 19 @39131 has 111 MA's), (Start: 25 @39107 has 36 MA's), (Start: 34 @39077 has 33 MA's), (61, 38969), (83, 38873), (106, 38792), (114, 38768), (116, 38759), (119, 38750), (152, 38645), (154, 38639), (155, 38633), (194, 38489), (196, 38477), (205, 38453), (228, 38366),

Gene: Sotrice96\_55 Start: 39837, Stop: 39064, Start Num: 19

Candidate Starts for Sotrice96\_55:

(Start: 19 @39837 has 111 MA's), (Start: 25 @39813 has 36 MA's), (Start: 34 @39783 has 33 MA's), (61, 39675), (83, 39579), (106, 39498), (114, 39474), (116, 39465), (119, 39456), (152, 39351), (154, 39345), (155, 39339), (194, 39195), (196, 39183), (205, 39159), (228, 39072),

Gene: Spock\_42 Start: 34690, Stop: 33788, Start Num: 9

Candidate Starts for Spock\_42:

(Start: 9 @34690 has 38 MA's), (Start: 12 @34669 has 2 MA's), (Start: 20 @34633 has 2 MA's), (Start: 23 @34627 has 22 MA's), (29, 34603), (Start: 35 @34582 has 6 MA's), (41, 34558), (63, 34468), (67, 34459), (91, 34354), (92, 34351), (95, 34342), (97, 34324), (98, 34318), (115, 34270), (120, 34252), (125, 34222), (130, 34210), (134, 34201), (157, 34129), (173, 34072), (187, 34021), (191, 34006), (197, 33979), (205, 33958), (209, 33946),

Gene: Squint\_89 Start: 54262, Stop: 53555, Start Num: 34

Candidate Starts for Squint\_89:

(Start: 34 @54262 has 33 MA's), (Start: 47 @54208 has 5 MA's), (Start: 49 @54199 has 1 MA's), (78, 54103), (81, 54085), (106, 54004), (110, 53992), (112, 53986), (114, 53980), (116, 53971), (131, 53929), (149, 53878), (150, 53875), (169, 53794), (175, 53776), (186, 53737), (189, 53725), (190, 53719), (191, 53716), (202, 53674), (205, 53665), (208, 53656), (209, 53653), (221, 53602),

Gene: Stank\_58 Start: 40389, Stop: 39616, Start Num: 19

Candidate Starts for Stank\_58:

(Start: 19 @40389 has 111 MA's), (Start: 25 @40365 has 36 MA's), (Start: 34 @40335 has 33 MA's), (61, 40227), (83, 40131), (106, 40050), (114, 40026), (116, 40017), (119, 40008), (152, 39903), (154, 39897), (155, 39891), (194, 39747), (196, 39735), (205, 39711), (228, 39624),

Gene: Stark\_55 Start: 39644, Stop: 38871, Start Num: 19

Candidate Starts for Stark\_55:

(Start: 19 @39644 has 111 MA's), (Start: 25 @39620 has 36 MA's), (Start: 34 @39590 has 33 MA's), (61, 39482), (83, 39386), (106, 39305), (114, 39281), (116, 39272), (119, 39263), (152, 39158), (154, 39152), (155, 39146), (194, 39002), (196, 38990), (205, 38966), (228, 38879),

Gene: StellaBean\_52 Start: 39699, Stop: 38926, Start Num: 19



Candidate Starts for StellaBean\_52:

(Start: 19 @39699 has 111 MA's), (Start: 25 @39675 has 36 MA's), (Start: 34 @39645 has 33 MA's), (61, 39537), (83, 39441), (106, 39360), (114, 39336), (116, 39327), (119, 39318), (152, 39213), (154, 39207), (155, 39201), (194, 39057), (196, 39045), (205, 39021), (228, 38934),

Gene: Stinson\_43 Start: 35020, Stop: 34181, Start Num: 23

Candidate Starts for Stinson\_43:

(Start: 9 @35083 has 38 MA's), (Start: 12 @35062 has 2 MA's), (Start: 20 @35026 has 2 MA's), (Start: 23 @35020 has 22 MA's), (29, 34996), (Start: 35 @34975 has 6 MA's), (36, 34972), (41, 34951), (63, 34861), (67, 34852), (91, 34747), (92, 34744), (95, 34735), (97, 34717), (113, 34672), (115, 34663), (130, 34603), (134, 34594), (157, 34522), (173, 34465), (191, 34399), (199, 34369), (205, 34351), (209, 34339), (229, 34249),

Gene: StolenFromERC\_57 Start: 39873, Stop: 39100, Start Num: 19

Candidate Starts for StolenFromERC\_57:

(Start: 19 @39873 has 111 MA's), (Start: 25 @39849 has 36 MA's), (Start: 34 @39819 has 33 MA's), (61, 39711), (83, 39615), (106, 39534), (114, 39510), (116, 39501), (119, 39492), (152, 39387), (154, 39381), (155, 39375), (194, 39231), (196, 39219), (205, 39195), (228, 39108),

Gene: Strobilo\_45 Start: 36567, Stop: 35719, Start Num: 22

Candidate Starts for Strobilo\_45:

(Start: 22 @36567 has 8 MA's), (37, 36516), (39, 36504), (50, 36453), (65, 36405), (86, 36309), (91, 36294), (102, 36249), (116, 36204), (129, 36153), (137, 36144), (171, 36024), (206, 35907), (213, 35880), (217, 35859),

Gene: Sulley\_42 Start: 34807, Stop: 33914, Start Num: 10

Candidate Starts for Sulley\_42:

(Start: 10 @34807 has 8 MA's), (Start: 20 @34759 has 2 MA's), (Start: 23 @34753 has 22 MA's), (29, 34729), (41, 34684), (67, 34585), (91, 34480), (92, 34477), (95, 34468), (97, 34450), (115, 34396), (120, 34378), (125, 34348), (130, 34336), (134, 34327), (157, 34255), (173, 34198), (191, 34132), (197, 34105), (205, 34084), (209, 34072),

Gene: Superphikiman\_88 Start: 53290, Stop: 52646, Start Num: 49

Candidate Starts for Superphikiman\_88:

(Start: 34 @53353 has 33 MA's), (Start: 47 @53299 has 5 MA's), (Start: 49 @53290 has 1 MA's), (78, 53194), (81, 53176), (106, 53095), (110, 53083), (112, 53077), (114, 53071), (116, 53062), (131, 53020), (149, 52969), (150, 52966), (169, 52885), (175, 52867), (186, 52828), (189, 52816), (190, 52810), (191, 52807), (202, 52765), (205, 52756), (208, 52747), (209, 52744), (221, 52693),

Gene: TBrady12\_57 Start: 39849, Stop: 39100, Start Num: 25

Candidate Starts for TBrady12\_57:

(Start: 19 @39873 has 111 MA's), (Start: 25 @39849 has 36 MA's), (Start: 34 @39819 has 33 MA's), (61, 39711), (83, 39615), (106, 39534), (114, 39510), (116, 39501), (119, 39492), (152, 39387), (154, 39381), (155, 39375), (194, 39231), (196, 39219), (205, 39195), (228, 39108),

Gene: TClif\_46 Start: 35608, Stop: 34700, Start Num: 24

Candidate Starts for TClif\_46:

(Start: 24 @35608 has 12 MA's), (28, 35590), (37, 35560), (82, 35368), (86, 35353), (91, 35338), (118, 35242), (150, 35140), (182, 35023), (191, 34987), (217, 34894), (220, 34879),

Gene: Tachez\_42 Start: 34534, Stop: 33632, Start Num: 9

Candidate Starts for Tachez\_42:

(Start: 9 @34534 has 38 MA's), (Start: 20 @34477 has 2 MA's), (Start: 23 @34471 has 22 MA's), (29, 34447), (Start: 35 @34426 has 6 MA's), (41, 34402), (63, 34312), (67, 34303), (91, 34198), (92, 34195), (95, 34186), (97, 34168), (98, 34162), (115, 34114), (120, 34096), (125, 34066), (130, 34054), (134, 34045), (153, 33988), (157, 33973), (173, 33916), (187, 33865), (191, 33850), (197, 33823), (205, 33802), (209, 33790),

Gene: TaiwanKao\_44 Start: 34752, Stop: 33913, Start Num: 23

Candidate Starts for TaiwanKao\_44:

(Start: 20 @34758 has 2 MA's), (Start: 23 @34752 has 22 MA's), (29, 34728), (Start: 35 @34707 has 6 MA's), (41, 34683), (Start: 46 @34659 has 1 MA's), (63, 34593), (67, 34584), (91, 34479), (92, 34476), (95, 34467), (97, 34449), (115, 34395), (120, 34377), (125, 34347), (130, 34335), (134, 34326), (157, 34254), (173, 34197), (187, 34146), (191, 34131), (197, 34104), (205, 34083), (209, 34071),

Gene: Taquito\_46 Start: 35901, Stop: 35164, Start Num: 46

Candidate Starts for Taquito\_46:

(Start: 46 @35901 has 1 MA's), (52, 35871), (59, 35850), (72, 35814), (78, 35778), (87, 35736), (91, 35724), (92, 35721), (100, 35682), (116, 35637), (120, 35622), (132, 35586), (135, 35577), (165, 35484), (180, 35430), (186, 35406), (187, 35400), (192, 35382), (211, 35316), (216, 35295),

Gene: Tarkin\_53 Start: 40121, Stop: 39348, Start Num: 19

Candidate Starts for Tarkin\_53:

(Start: 19 @40121 has 111 MA's), (Start: 25 @40097 has 36 MA's), (Start: 34 @40067 has 33 MA's), (61, 39959), (83, 39863), (106, 39782), (114, 39758), (116, 39749), (119, 39740), (152, 39635), (154, 39629), (155, 39623), (194, 39479), (196, 39467), (205, 39443), (228, 39356),

Gene: TeardropMSU\_50 Start: 39121, Stop: 38348, Start Num: 19

Candidate Starts for TeardropMSU\_50:

(Start: 19 @39121 has 111 MA's), (Start: 25 @39097 has 36 MA's), (Start: 34 @39067 has 33 MA's), (61, 38959), (83, 38863), (106, 38782), (114, 38758), (116, 38749), (119, 38740), (152, 38635), (154, 38629), (155, 38623), (194, 38479), (196, 38467), (205, 38443), (228, 38356),

Gene: Teaspoon\_55 Start: 39991, Stop: 39242, Start Num: 25

Candidate Starts for Teaspoon\_55:

(Start: 19 @40015 has 111 MA's), (Start: 25 @39991 has 36 MA's), (Start: 34 @39961 has 33 MA's), (61, 39853), (83, 39757), (106, 39676), (114, 39652), (116, 39643), (119, 39634), (152, 39529), (154, 39523), (155, 39517), (194, 39373), (196, 39361), (205, 39337), (228, 39250),

Gene: Terminus\_56 Start: 40612, Stop: 39839, Start Num: 19

Candidate Starts for Terminus\_56:

(Start: 19 @40612 has 111 MA's), (Start: 25 @40588 has 36 MA's), (Start: 34 @40558 has 33 MA's), (61, 40450), (83, 40354), (106, 40273), (114, 40249), (116, 40240), (119, 40231), (152, 40126), (154, 40120), (155, 40114), (194, 39970), (196, 39958), (205, 39934), (228, 39847),

Gene: Thibault\_80 Start: 53886, Stop: 53179, Start Num: 34

Candidate Starts for Thibault\_80:

(Start: 34 @53886 has 33 MA's), (Start: 47 @53832 has 5 MA's), (Start: 49 @53823 has 1 MA's), (Start: 55 @53799 has 1 MA's), (78, 53727), (106, 53628), (110, 53616), (116, 53595), (148, 53505), (150, 53499), (167, 53433), (169, 53418), (175, 53400), (186, 53361), (190, 53343), (191, 53340), (205, 53289), (209, 53277), (221, 53226),

Gene: ThreeRngTarjay\_92 Start: 59262, Stop: 58555, Start Num: 34

Candidate Starts for ThreeRngTarjay\_92:

(Start: 34 @59262 has 33 MA's), (Start: 47 @59208 has 5 MA's), (Start: 49 @59199 has 1 MA's), (Start: 55 @59175 has 1 MA's), (78, 59103), (106, 59004), (110, 58992), (116, 58971), (148, 58881), (150, 58875), (169, 58794), (175, 58776), (186, 58737), (190, 58719), (191, 58716), (205, 58665), (209, 58653), (221, 58602),

Gene: Thresher\_57 Start: 40998, Stop: 40225, Start Num: 19

Candidate Starts for Thresher\_57:

(Start: 19 @40998 has 111 MA's), (Start: 25 @40974 has 36 MA's), (Start: 34 @40944 has 33 MA's), (61, 40836), (83, 40740), (106, 40659), (114, 40635), (116, 40626), (119, 40617), (152, 40512), (154, 40506), (155, 40500), (194, 40356), (196, 40344), (205, 40320), (228, 40233),

Gene: Thyatira\_42 Start: 36140, Stop: 35298, Start Num: 21

Candidate Starts for Thyatira\_42:

(Start: 21 @36140 has 21 MA's), (Start: 34 @36098 has 33 MA's), (82, 35903), (91, 35873), (110, 35804), (112, 35798), (116, 35783), (121, 35765), (130, 35729), (151, 35657), (179, 35558), (186, 35531), (188, 35522), (190, 35513), (199, 35486), (201, 35480), (206, 35465), (217, 35417), (223, 35396),

Gene: TingHuaYa\_43 Start: 33668, Stop: 32823, Start Num: 30

Candidate Starts for TingHuaYa\_43:

(Start: 30 @33668 has 2 MA's), (76, 33491), (91, 33422), (103, 33374), (106, 33368), (109, 33359), (114, 33344), (116, 33335), (149, 33233), (152, 33221), (155, 33209), (160, 33194), (167, 33164), (187, 33086), (203, 33029), (206, 33020), (207, 33017), (212, 32999), (227, 32942), (238, 32834), (239, 32831),

Gene: TiniBug\_43 Start: 35469, Stop: 34564, Start Num: 9

Candidate Starts for TiniBug\_43:

(Start: 9 @35469 has 38 MA's), (Start: 20 @35409 has 2 MA's), (Start: 23 @35403 has 22 MA's), (29, 35379), (Start: 33 @35364 has 1 MA's), (36, 35355), (41, 35334), (Start: 46 @35310 has 1 MA's), (51, 35283), (63, 35244), (67, 35235), (91, 35130), (92, 35127), (97, 35100), (104, 35076), (113, 35055), (115, 35046), (120, 35028), (130, 34986), (134, 34977), (147, 34941), (157, 34905), (173, 34848), (191, 34782), (209, 34722), (229, 34632),

Gene: Tiri\_43 Start: 34869, Stop: 33967, Start Num: 9

Candidate Starts for Tiri\_43:

(Start: 9 @34869 has 38 MA's), (Start: 20 @34812 has 2 MA's), (Start: 23 @34806 has 22 MA's), (29, 34782), (Start: 35 @34761 has 6 MA's), (41, 34737), (63, 34647), (67, 34638), (91, 34533), (92, 34530), (95, 34521), (97, 34503), (98, 34497), (115, 34449), (120, 34431), (125, 34401), (130, 34389), (134, 34380), (153, 34323), (157, 34308), (173, 34251), (191, 34185), (197, 34158), (205, 34137), (209, 34125),

Gene: Tomaszewski\_50 Start: 38994, Stop: 38221, Start Num: 19

Candidate Starts for Tomaszewski\_50:

(Start: 19 @38994 has 111 MA's), (Start: 25 @38970 has 36 MA's), (Start: 34 @38940 has 33 MA's), (61, 38832), (83, 38736), (106, 38655), (114, 38631), (116, 38622), (119, 38613), (152, 38508), (154, 38502), (155, 38496), (194, 38352), (196, 38340), (205, 38316), (228, 38229),

Gene: Topper\_42 Start: 34581, Stop: 33787, Start Num: 35

Candidate Starts for Topper\_42:

(Start: 9 @34689 has 38 MA's), (Start: 12 @34668 has 2 MA's), (Start: 20 @34632 has 2 MA's), (Start: 23 @34626 has 22 MA's), (29, 34602), (Start: 35 @34581 has 6 MA's), (41, 34557), (63, 34467), (67, 34458), (91, 34353), (92, 34350), (95, 34341), (97, 34323), (98, 34317), (115, 34269), (120, 34251), (125, 34221), (130, 34209), (134, 34200), (157, 34128), (173, 34071), (187, 34020), (191, 34005),

(197, 33978), (205, 33957), (209, 33945),

Gene: Torres\_40 Start: 36714, Stop: 35794, Start Num: 16

Candidate Starts for Torres\_40:

(Start: 16 @36714 has 1 MA's), (Start: 24 @36696 has 12 MA's), (37, 36648), (42, 36621), (45, 36603), (52, 36570), (58, 36552), (60, 36546), (63, 36534), (82, 36450), (86, 36435), (91, 36420), (100, 36378), (112, 36342), (117, 36324), (126, 36282), (137, 36264), (150, 36225), (158, 36195), (168, 36156), (180, 36117), (184, 36102), (196, 36048), (203, 36030), (209, 36012), (217, 35973), (231, 35907), (244, 35817),

Gene: Toto\_53 Start: 40351, Stop: 39602, Start Num: 25

Candidate Starts for Toto\_53:

(Start: 19 @40375 has 111 MA's), (Start: 25 @40351 has 36 MA's), (Start: 34 @40321 has 33 MA's), (61, 40213), (83, 40117), (106, 40036), (114, 40012), (116, 40003), (119, 39994), (152, 39889), (154, 39883), (155, 39877), (194, 39733), (196, 39721), (205, 39697), (228, 39610),

Gene: Traaww1\_50 Start: 39556, Stop: 38783, Start Num: 19

Candidate Starts for Traaww1\_50:

(Start: 19 @39556 has 111 MA's), (Start: 25 @39532 has 36 MA's), (Start: 34 @39502 has 33 MA's), (61, 39394), (83, 39298), (106, 39217), (114, 39193), (116, 39184), (119, 39175), (152, 39070), (154, 39064), (155, 39058), (194, 38914), (196, 38902), (205, 38878), (228, 38791),

Gene: TreyKay\_43 Start: 34696, Stop: 33857, Start Num: 23

Candidate Starts for TreyKay\_43:

(Start: 10 @34750 has 8 MA's), (Start: 20 @34702 has 2 MA's), (Start: 23 @34696 has 22 MA's), (29, 34672), (Start: 35 @34651 has 6 MA's), (41, 34627), (63, 34537), (67, 34528), (91, 34423), (92, 34420), (95, 34411), (97, 34393), (113, 34348), (115, 34339), (120, 34321), (125, 34291), (130, 34279), (134, 34270), (157, 34198), (173, 34141), (191, 34075), (197, 34048), (205, 34027), (209, 34015),

Gene: TruffulaTree\_42 Start: 34568, Stop: 33666, Start Num: 9

Candidate Starts for TruffulaTree\_42:

(Start: 9 @34568 has 38 MA's), (Start: 20 @34511 has 2 MA's), (Start: 23 @34505 has 22 MA's), (29, 34481), (Start: 35 @34460 has 6 MA's), (41, 34436), (63, 34346), (67, 34337), (91, 34232), (92, 34229), (95, 34220), (97, 34202), (98, 34196), (115, 34148), (120, 34130), (125, 34100), (130, 34088), (134, 34079), (153, 34022), (157, 34007), (173, 33950), (187, 33899), (191, 33884), (197, 33857), (209, 33824),

Gene: Tuco\_55 Start: 40883, Stop: 40110, Start Num: 19

Candidate Starts for Tuco\_55:

(Start: 19 @40883 has 111 MA's), (Start: 25 @40859 has 36 MA's), (Start: 34 @40829 has 33 MA's), (61, 40721), (83, 40625), (106, 40544), (114, 40520), (116, 40511), (119, 40502), (152, 40397), (154, 40391), (155, 40385), (194, 40241), (196, 40229), (205, 40205), (228, 40118),

Gene: Twitch\_42 Start: 34691, Stop: 33789, Start Num: 9

Candidate Starts for Twitch\_42:

(Start: 9 @34691 has 38 MA's), (Start: 12 @34670 has 2 MA's), (Start: 20 @34634 has 2 MA's), (Start: 23 @34628 has 22 MA's), (29, 34604), (Start: 35 @34583 has 6 MA's), (41, 34559), (63, 34469), (67, 34460), (91, 34355), (92, 34352), (95, 34343), (97, 34325), (98, 34319), (115, 34271), (120, 34253), (125, 34223), (130, 34211), (134, 34202), (157, 34130), (173, 34073), (187, 34022), (191, 34007), (197, 33980), (205, 33959), (209, 33947),

Gene: Ukulele\_51 Start: 39269, Stop: 38496, Start Num: 19

Candidate Starts for Ukulele\_51:

(Start: 19 @39269 has 111 MA's), (Start: 25 @39245 has 36 MA's), (Start: 34 @39215 has 33 MA's), (61, 39107), (83, 39011), (106, 38930), (114, 38906), (116, 38897), (119, 38888), (152, 38783), (154, 38777), (155, 38771), (194, 38627), (196, 38615), (205, 38591), (228, 38504),

Gene: Urkel\_43 Start: 35473, Stop: 34568, Start Num: 9

Candidate Starts for Urkel\_43:

(Start: 9 @35473 has 38 MA's), (Start: 20 @35413 has 2 MA's), (Start: 23 @35407 has 22 MA's), (29, 35383), (Start: 33 @35368 has 1 MA's), (36, 35359), (41, 35338), (Start: 46 @35314 has 1 MA's), (51, 35287), (63, 35248), (67, 35239), (91, 35134), (92, 35131), (97, 35104), (104, 35080), (113, 35059), (115, 35050), (120, 35032), (130, 34990), (134, 34981), (147, 34945), (157, 34909), (173, 34852), (191, 34786), (209, 34726), (229, 34636),

Gene: Validus\_46 Start: 35225, Stop: 34305, Start Num: 24

Candidate Starts for Validus\_46:

(Start: 24 @35225 has 12 MA's), (Start: 33 @35189 has 1 MA's), (37, 35177), (39, 35165), (44, 35138), (76, 35018), (82, 34979), (86, 34964), (89, 34955), (91, 34949), (107, 34886), (114, 34865), (115, 34859), (116, 34856), (128, 34817), (137, 34805), (143, 34787), (158, 34736), (217, 34517), (234, 34427), (241, 34364), (242, 34352),

Gene: Veliki\_42 Start: 34608, Stop: 33706, Start Num: 9

Candidate Starts for Veliki\_42:

(Start: 9 @34608 has 38 MA's), (Start: 20 @34551 has 2 MA's), (Start: 23 @34545 has 22 MA's), (29, 34521), (Start: 35 @34500 has 6 MA's), (41, 34476), (63, 34386), (67, 34377), (91, 34272), (92, 34269), (95, 34260), (97, 34242), (98, 34236), (115, 34188), (120, 34170), (125, 34140), (130, 34128), (134, 34119), (153, 34062), (157, 34047), (173, 33990), (187, 33939), (191, 33924), (197, 33897), (205, 33876), (209, 33864),

Gene: Wanda\_99 Start: 58379, Stop: 57672, Start Num: 34

Candidate Starts for Wanda\_99:

(Start: 34 @58379 has 33 MA's), (Start: 47 @58325 has 5 MA's), (Start: 49 @58316 has 1 MA's), (78, 58220), (106, 58121), (110, 58109), (116, 58088), (148, 57998), (150, 57992), (169, 57911), (175, 57893), (186, 57854), (190, 57836), (191, 57833), (205, 57782), (209, 57770), (221, 57719),

Gene: Waterfoul\_41 Start: 34034, Stop: 33192, Start Num: 21

Candidate Starts for Waterfoul\_41:

(Start: 21 @34034 has 21 MA's), (Start: 34 @33992 has 33 MA's), (82, 33797), (91, 33767), (110, 33698), (112, 33692), (116, 33677), (121, 33659), (130, 33623), (151, 33551), (179, 33452), (186, 33425), (188, 33416), (190, 33407), (199, 33380), (201, 33374), (206, 33359), (217, 33311), (223, 33290),

Gene: Wiggin\_56 Start: 39957, Stop: 39184, Start Num: 19

Candidate Starts for Wiggin\_56:

(Start: 19 @39957 has 111 MA's), (Start: 25 @39933 has 36 MA's), (Start: 34 @39903 has 33 MA's), (61, 39795), (83, 39699), (106, 39618), (114, 39594), (116, 39585), (119, 39576), (152, 39471), (154, 39465), (155, 39459), (194, 39315), (196, 39303), (205, 39279), (228, 39192),

Gene: Willez\_48 Start: 37859, Stop: 37086, Start Num: 19

Candidate Starts for Willez\_48:

(Start: 19 @37859 has 111 MA's), (Start: 25 @37835 has 36 MA's), (Start: 34 @37805 has 33 MA's), (61, 37697), (83, 37601), (106, 37520), (114, 37496), (116, 37487), (119, 37478), (152, 37373), (154, 37367), (155, 37361), (194, 37217), (196, 37205), (205, 37181), (228, 37094),

Gene: Wintermute\_46 Start: 35744, Stop: 34926, Start Num: 25

Candidate Starts for Wintermute\_46:

(Start: 25 @35744 has 36 MA's), (26, 35741), (31, 35726), (Start: 46 @35663 has 1 MA's), (52, 35633), (59, 35612), (72, 35576), (78, 35540), (87, 35498), (91, 35486), (92, 35483), (100, 35444), (116, 35399), (120, 35384), (132, 35348), (135, 35339), (165, 35246), (180, 35192), (186, 35168), (187, 35162), (192, 35144), (211, 35078), (216, 35057),

Gene: Xandras\_54 Start: 39368, Stop: 38595, Start Num: 19

Candidate Starts for Xandras\_54:

(Start: 19 @39368 has 111 MA's), (Start: 25 @39344 has 36 MA's), (Start: 34 @39314 has 33 MA's), (61, 39206), (83, 39110), (106, 39029), (114, 39005), (116, 38996), (119, 38987), (152, 38882), (154, 38876), (155, 38870), (194, 38726), (196, 38714), (205, 38690), (228, 38603),

Gene: Y10\_45 Start: 35662, Stop: 34841, Start Num: 25

Candidate Starts for Y10\_45:

(Start: 25 @35662 has 36 MA's), (26, 35659), (31, 35644), (52, 35551), (59, 35530), (78, 35458), (87, 35416), (91, 35404), (92, 35401), (95, 35392), (100, 35362), (120, 35302), (132, 35266), (135, 35257), (165, 35164), (180, 35110), (186, 35086), (187, 35080), (190, 35068), (211, 34996), (216, 34975),

Gene: Y2\_45 Start: 35662, Stop: 34841, Start Num: 25

Candidate Starts for Y2\_45:

(Start: 25 @35662 has 36 MA's), (26, 35659), (31, 35644), (52, 35551), (59, 35530), (78, 35458), (87, 35416), (91, 35404), (92, 35401), (95, 35392), (100, 35362), (120, 35302), (132, 35266), (135, 35257), (165, 35164), (180, 35110), (186, 35086), (187, 35080), (190, 35068), (211, 34996), (216, 34975),

Gene: YassJohnny\_50 Start: 39010, Stop: 38261, Start Num: 25

Candidate Starts for YassJohnny\_50:

(Start: 19 @39034 has 111 MA's), (Start: 25 @39010 has 36 MA's), (Start: 34 @38980 has 33 MA's), (61, 38872), (83, 38776), (106, 38695), (114, 38671), (116, 38662), (119, 38653), (152, 38548), (154, 38542), (155, 38536), (194, 38392), (196, 38380), (205, 38356), (228, 38269),

Gene: Yeet\_88 Start: 57479, Stop: 56772, Start Num: 34

Candidate Starts for Yeet\_88:

(Start: 34 @57479 has 33 MA's), (Start: 47 @57425 has 5 MA's), (Start: 49 @57416 has 1 MA's), (Start: 55 @57392 has 1 MA's), (78, 57320), (106, 57221), (110, 57209), (116, 57188), (148, 57098), (150, 57092), (169, 57011), (175, 56993), (186, 56954), (190, 56936), (191, 56933), (205, 56882), (209, 56870), (221, 56819),

Gene: Youngblood\_56 Start: 40542, Stop: 39769, Start Num: 19

Candidate Starts for Youngblood\_56:

(Start: 19 @40542 has 111 MA's), (Start: 25 @40518 has 36 MA's), (Start: 34 @40488 has 33 MA's), (61, 40380), (83, 40284), (106, 40203), (114, 40179), (116, 40170), (119, 40161), (152, 40056), (154, 40050), (155, 40044), (194, 39900), (196, 39888), (205, 39864), (228, 39777),

Gene: YoureAdopted\_41 Start: 34767, Stop: 33874, Start Num: 10

Candidate Starts for YoureAdopted\_41:

(Start: 10 @34767 has 8 MA's), (Start: 20 @34719 has 2 MA's), (Start: 23 @34713 has 22 MA's), (29, 34689), (41, 34644), (Start: 46 @34620 has 1 MA's), (63, 34554), (67, 34545), (91, 34440), (92, 34437), (95, 34428), (97, 34410), (113, 34365), (115, 34356), (120, 34338), (125, 34308), (130, 34296), (134, 34287), (173, 34158), (187, 34107), (191, 34092), (197, 34065), (205, 34044), (209, 34032),

Gene: Zavala\_43 Start: 34790, Stop: 33951, Start Num: 23

Candidate Starts for Zavala\_43:

(Start: 10 @34844 has 8 MA's), (Start: 20 @34796 has 2 MA's), (Start: 23 @34790 has 22 MA's), (29, 34766), (41, 34721), (Start: 46 @34697 has 1 MA's), (63, 34631), (67, 34622), (91, 34517), (92, 34514), (95, 34505), (97, 34487), (113, 34442), (115, 34433), (120, 34415), (125, 34385), (130, 34373), (134, 34364), (173, 34235), (187, 34184), (191, 34169), (197, 34142), (205, 34121), (209, 34109),

Gene: Zelink\_92 Start: 59519, Stop: 58866, Start Num: 47

Candidate Starts for Zelink\_92:

(Start: 34 @59573 has 33 MA's), (Start: 47 @59519 has 5 MA's), (Start: 49 @59510 has 1 MA's), (78, 59414), (106, 59315), (110, 59303), (116, 59282), (148, 59192), (150, 59186), (169, 59105), (175, 59087), (186, 59048), (190, 59030), (191, 59027), (205, 58976), (209, 58964), (221, 58913),

Gene: ZoeJ\_44 Start: 36029, Stop: 35175, Start Num: 21

Candidate Starts for ZoeJ\_44:

(Start: 21 @36029 has 21 MA's), (29, 36002), (32, 35993), (45, 35936), (58, 35885), (60, 35879), (71, 35843), (91, 35750), (102, 35705), (116, 35660), (137, 35600), (153, 35549), (186, 35429), (208, 35357), (217, 35315),

Gene: xkcd\_58 Start: 40732, Stop: 39959, Start Num: 19

Candidate Starts for xkcd\_58:

(Start: 19 @40732 has 111 MA's), (Start: 25 @40708 has 36 MA's), (Start: 34 @40678 has 33 MA's), (61, 40570), (83, 40474), (106, 40393), (114, 40369), (116, 40360), (119, 40351), (152, 40246), (154, 40240), (155, 40234), (194, 40090), (196, 40078), (205, 40054), (228, 39967),