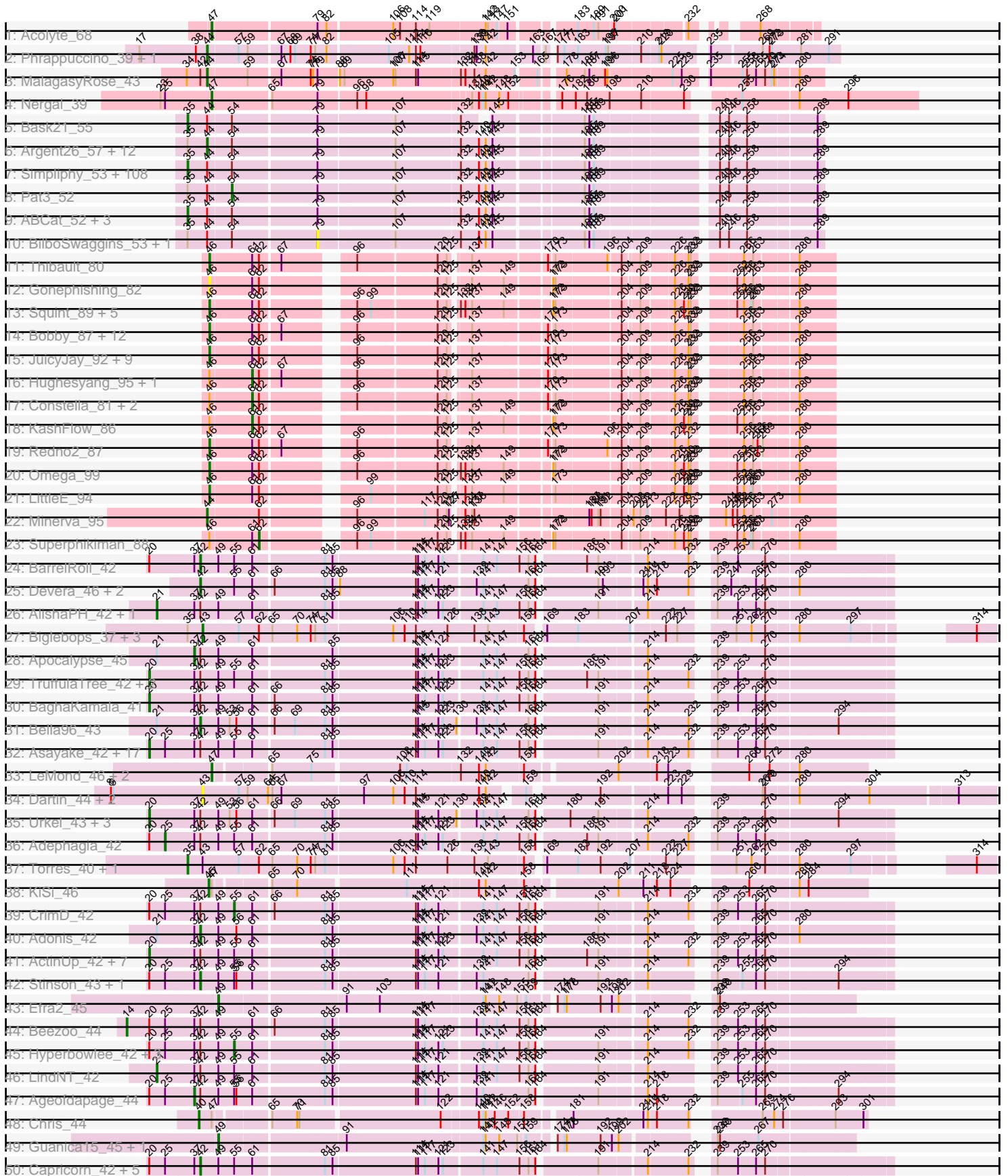
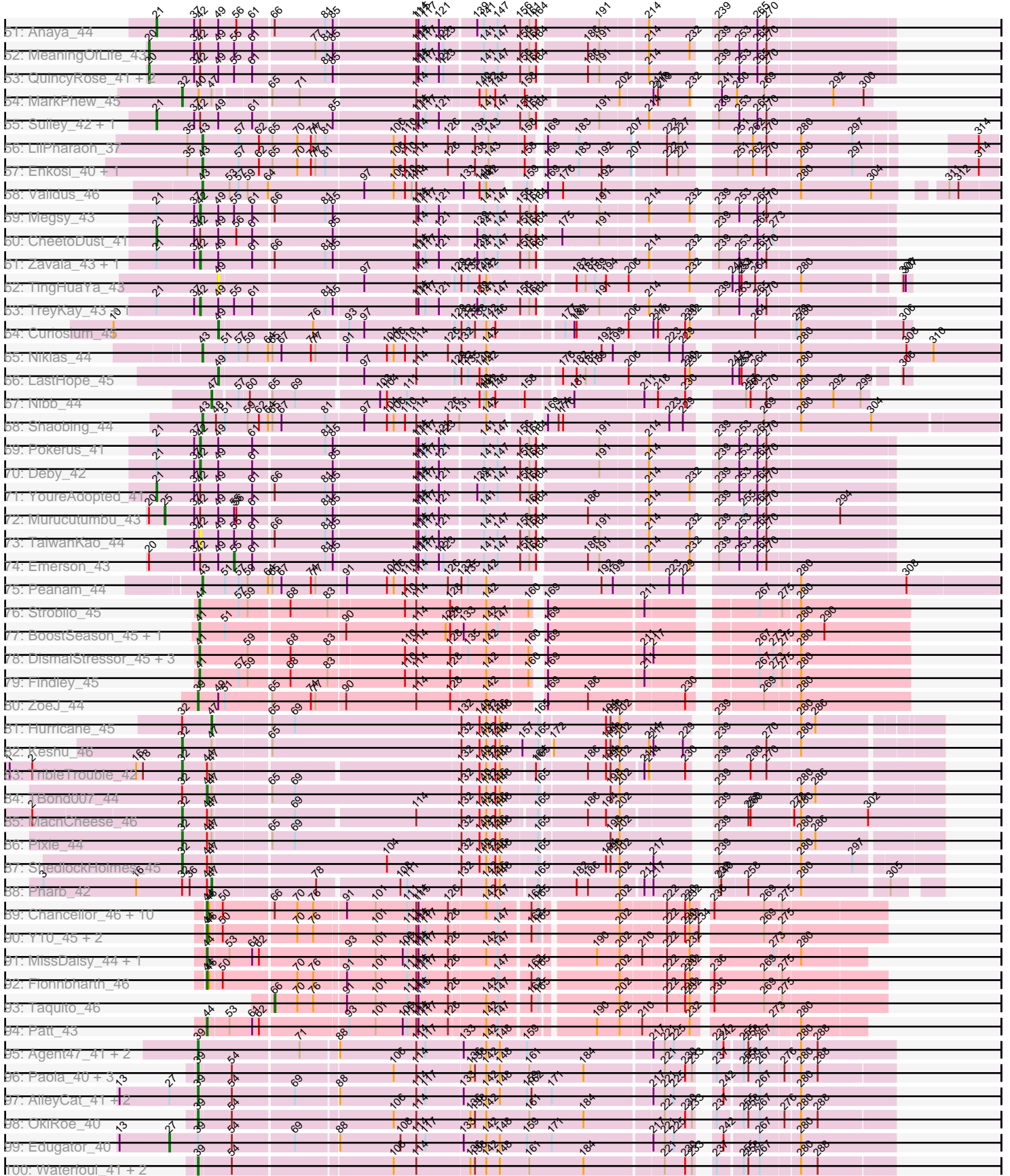


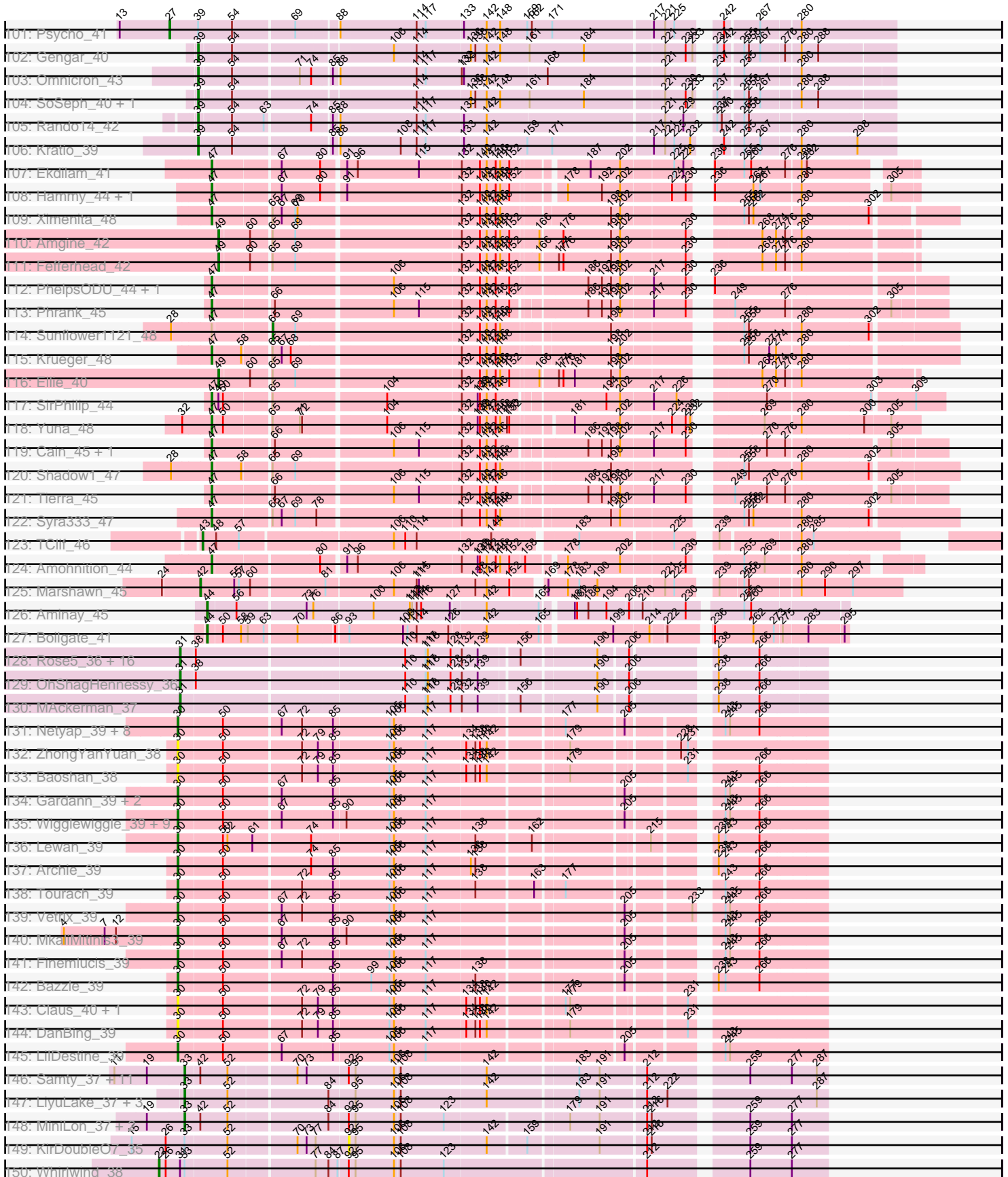
Pham 193643



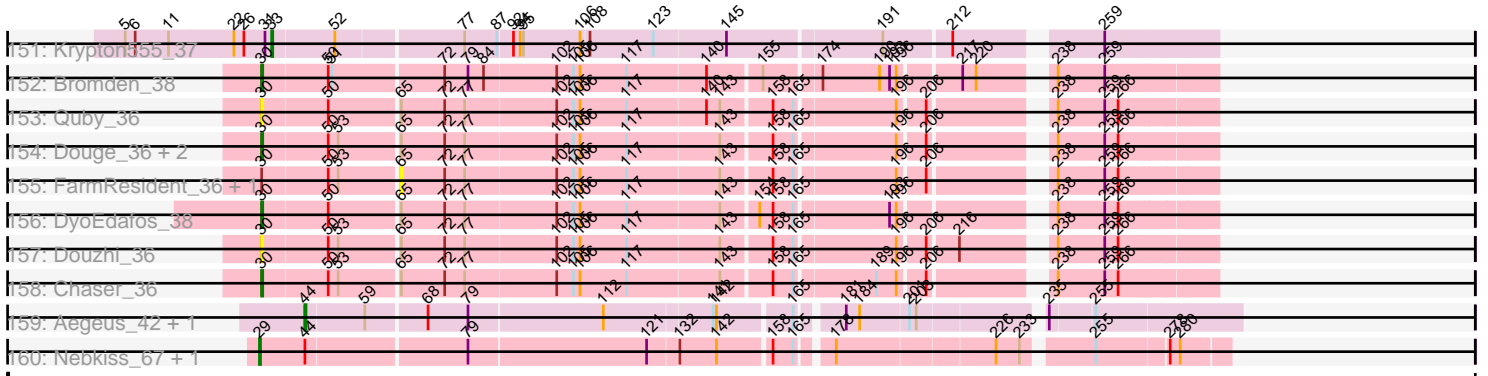
Pham 193643



Pham 193643



Pham 193643



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 193643 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193643 has 457 members, 36 are drafts.

Phages represented in each track:

- Track 1 : Acolyte\_68
- Track 2 : Phrappuccino\_39, Settecandela\_39
- Track 3 : MalagasyRose\_43
- Track 4 : Nergal\_39
- Track 5 : Bask21\_55
- Track 6 : Argent26\_57, Flypotenuse\_49, Toto\_53, Palpatine\_57, Emmina\_54, Teaspoon\_55, Rakim\_56, Petra64142\_59, TBrady12\_57, SirDuracell\_53, Kostya\_55, GoldenSpark\_57, YassJohnny\_50
- Track 7 : Simpliphy\_53, GooberAzure\_57, StolenFromERC\_57, Goldilocks\_56, Bench\_56, Tuco\_55, Dumbo\_54, Wiggin\_56, Phrux\_52, Lilac\_57, Phaux\_56, Kimchi\_57, Asriel\_54, Adnama\_58, BigBubba\_55, Hopey\_54, Bruin\_50, Easy2Say\_55, Quallification\_55, Terminus\_56, Cookies\_51, CrystalP\_54, Cjw1\_54, Filch\_55, BugsBunny\_55, Manda\_54, Goku\_52, ShamWow\_54, Sotrice96\_55, Pumpkin\_56, Czyszczo1\_55, Henry\_53, RiverMonster\_55, Xandras\_54, BaboJay\_50, Elph10\_54, Murphy\_56, Stank\_58, Barbarian\_54, Daikon\_55, Elite2014\_54, Contagion\_51, MadamMonkfish\_54, Porky\_53, Tarkin\_53, Amao\_54, SophKB\_51, xkcd\_58, Traaww1\_50, Willez\_48, DoctorDiddles\_54, FireRed\_57, OrionPax\_53, Command613\_56, AmericanBeauty\_58, Pharsalus\_52, Gator\_52, Stark\_55, Harella\_54, Misfit\_56, Maxxinista\_57, ChosenOne\_55, Buck\_55, Highbury\_55, TeardropMSU\_50, Sassay\_48, Thresher\_57, Holt\_59, ChotaBhai\_54, Paperbeatsrock\_53, Gemini\_58, Murica\_56, DrDrey\_54, MISSy\_54, Gage\_57, Glexan\_52, Nala\_55, HufflyPuff\_56, NelitzaMV\_51, Lilizi\_54, HanKaySha\_53, NoSleep\_56, StellaBean\_52, 244\_55, Tomaszewski\_50, Ukulele\_51, Nimrod\_57, Rimmer\_55, Moldemort\_57, Kanye\_50, Youngblood\_56, Saints25\_55, PhatBacter\_57, JeTaime\_55, BadStone\_52, Phaja\_52, Lilpickle\_54, IHOP\_52, ShereKhan\_52, Balomoji\_53, Dusk\_52, Miniwave\_51, Mindy\_53, Hoonter\_57, Mosby\_50, MPhalcon\_54, Icee\_54, Cactus\_56, Eureka\_52
- Track 8 : Pat3\_52
- Track 9 : ABCat\_52, Inca\_51, Myrale\_54, Marshmallow\_53
- Track 10 : BilboSwaggins\_53, Policronamos\_59
- Track 11 : Thibault\_80
- Track 12 : Gonephishing\_82
- Track 13 : Squint\_89, MiaZeal\_91, Ariel\_90, Courthouse\_86, Porcelain\_89, Lucky2013\_88
- Track 14 : Bobby\_87, Schatzie\_90, DmpstrDiver\_97, Phoebus\_97, Yeet\_88, Kalah2\_89, ThreeRngTarjay\_92, Halley\_97, Odette\_95, BAKA\_97, EricMillard\_89, Pound\_87, HokkenD\_84

- Track 15 : JuicyJay\_92, Wanda\_99, Duke13\_91, Ejimix\_89, Bombitas\_84, Beem\_96, NihilNomen\_97, Dallas\_97, Optimus\_89, Klein\_96
- Track 16 : Hughesyang\_95, Hannaconda\_82
- Track 17 : Constella\_81, Bagrid\_94, Zelink\_92
- Track 18 : KashFlow\_86
- Track 19 : Redno2\_87
- Track 20 : Omega\_99
- Track 21 : LittleE\_94
- Track 22 : Minerva\_95
- Track 23 : Superphikiman\_88
- Track 24 : BarrelRoll\_42
- Track 25 : Devera\_46, Dole\_45, Illumine\_45
- Track 26 : AlishaPH\_42, Geraldini\_44
- Track 27 : Biglebops\_37, SgtBeansprout\_37, Nutello\_37, Amelie\_37
- Track 28 : Apocalypse\_45
- Track 29 : TruffulaTree\_42, Rapunzel97\_42, Slimphazie\_42
- Track 30 : BaghaKamala\_41
- Track 31 : Bella96\_43
- Track 32 : Asayake\_42, JAWS\_42, CREW\_42, Spock\_42, Peel\_42, Durfee\_42, Padfoot\_42, Dalmuri\_42, Blizzard\_42, Belladonna\_42, Inky\_42, Lunahalos\_42, ShiaSurprise\_43, Jeckyll\_42, BGIlluviae\_42, BEEST\_42, Jarvi\_42, Twitch\_42
- Track 33 : LeMond\_46, Oscar\_46, Scarlett\_46
- Track 34 : Dartin\_44, McMater\_44, Richo\_44
- Track 35 : Urkel\_43, TiniBug\_43, SamuelLPlaqson\_43, DrHayes\_43
- Track 36 : Adephagia\_42
- Track 37 : Torres\_40, Nikao\_40
- Track 38 : KiSi\_46
- Track 39 : CrimD\_42
- Track 40 : Adonis\_42
- Track 41 : ActinUp\_42, Atiba\_42, Tachez\_42, Ramen\_42, Padpat\_43, HedwigODU\_42, Jayhawk\_43, Veliki\_42
- Track 42 : Stinson\_43, LaterM\_43
- Track 43 : Efra2\_45
- Track 44 : Beezoo\_44
- Track 45 : Hyperbowlee\_42, Topper\_42, Rosmarinus\_42, Piatt\_42
- Track 46 : LindNT\_42
- Track 47 : Ageofdapage\_44
- Track 48 : Chris\_44
- Track 49 : Guanica15\_45, Yunkel11\_45
- Track 50 : Capricorn\_42, Joy99\_42, Homura\_42, Llorens\_42, CaseJules\_43, Boiiii\_42
- Track 51 : Anaya\_44
- Track 52 : MeaningOfLife\_43
- Track 53 : QuincyRose\_41, Tiri\_43, Ganymede\_43
- Track 54 : MarkPhew\_45
- Track 55 : Sulley\_42, Angelica\_42
- Track 56 : LilPharaoh\_37
- Track 57 : Enkosi\_40, Mdavu\_38
- Track 58 : Validus\_46
- Track 59 : Megsy\_43
- Track 60 : CheetoDust\_41
- Track 61 : Zavala\_43, Mynx\_43
- Track 62 : TingHuaYa\_43

- Track 63 : TreyKay\_43, Prithvi\_43
- Track 64 : Curiosium\_45
- Track 65 : Niklas\_44
- Track 66 : LastHope\_45
- Track 67 : Nibb\_44
- Track 68 : Shaobing\_44
- Track 69 : Pokerus\_41
- Track 70 : Deby\_42
- Track 71 : YoureAdopted\_41
- Track 72 : Murucutumbu\_43
- Track 73 : TaiwanKao\_44
- Track 74 : Emerson\_43
- Track 75 : Peanam\_44
- Track 76 : Strobilo\_45
- Track 77 : BoostSeason\_45, Mufasa\_45
- Track 78 : DismalStressor\_45, Milly\_45, Marcoliusprime\_45, DismalFunk\_45
- Track 79 : Findley\_45
- Track 80 : ZoeJ\_44
- Track 81 : Hurricane\_45
- Track 82 : Keshu\_46
- Track 83 : TribbleTrouble\_42
- Track 84 : TBond007\_44
- Track 85 : MacnCheese\_46
- Track 86 : Pixie\_44
- Track 87 : ShedlockHolmes\_45
- Track 88 : Pharb\_42
- Track 89 : Chancellor\_46, Wintermute\_46, Cheetobro\_46, Malthus\_47, Eponine\_48, OmniCritical\_45, SamScheppers\_45, Slarp\_46, Mitti\_46, Juliette\_48, Ruthiejr\_47
- Track 90 : Y10\_45, Y2\_45, JF1\_46
- Track 91 : MissDaisy\_44, Reptar3000\_44
- Track 92 : Fionnbharth\_46
- Track 93 : Taquito\_46
- Track 94 : Patt\_43
- Track 95 : Agent47\_41, Collard\_40, InvictusManeo\_40
- Track 96 : Paola\_40, Feyre\_40, Guillsminger\_41, Miryou\_42
- Track 97 : AlleyCat\_41, Larva\_41, Dadosky\_41
- Track 98 : OkiRoe\_40
- Track 99 : Edugator\_40
- Track 100 : Waterfoul\_41, Leston\_40, Thyatira\_42
- Track 101 : Psycho\_41
- Track 102 : Gengar\_40
- Track 103 : Omnicron\_43
- Track 104 : SoSeph\_40, Heftyboy\_40
- Track 105 : Rando14\_42
- Track 106 : Kratio\_39
- Track 107 : Ekdilam\_41
- Track 108 : Hammy\_44, DARTH\_P\_44
- Track 109 : Ximenita\_48
- Track 110 : Amgine\_42
- Track 111 : Fefferhead\_42
- Track 112 : PhelpsODU\_44, Unicorn\_44
- Track 113 : Phrank\_45
- Track 114 : Sunflower1121\_48

- Track 115 : Krueger\_48
- Track 116 : Ellie\_40
- Track 117 : SirPhilip\_44
- Track 118 : Yuna\_48
- Track 119 : Cain\_45, Bryler\_45
- Track 120 : Shadow1\_47
- Track 121 : Tierra\_45
- Track 122 : Syra333\_47
- Track 123 : TClif\_46
- Track 124 : Amohnition\_44
- Track 125 : Marshawn\_45
- Track 126 : Aminay\_45
- Track 127 : Boilgate\_41
- Track 128 : Rose5\_36, Acquire49\_37, Enceladus\_36, DirkDirk\_36, Calm\_37, CicholasNage\_37, Zaria\_37, Wamburgexpress\_37, JoeDirt\_36, LeBron\_37, Halena\_36, Wyatt2\_37, Appletree2\_36, Tyson\_36, UPIE\_37, Silverleaf\_36, AvadaKedavra\_37
- Track 129 : OhShagHennessey\_36
- Track 130 : MAckerman\_37
- Track 131 : Netyap\_39, Winky\_39, Miley16\_39, Faith1\_39, Gabriela\_39, DrSeegs\_39, Breezona\_39, BigCheese\_39, BobsGarage\_39
- Track 132 : ZhongYanYuan\_38
- Track 133 : Baoshan\_38
- Track 134 : Gardann\_39, Rumpelstiltskin\_39, Nicholasp3\_39
- Track 135 : Wigglewiggles\_39, Zakai\_39, Wilder\_39, Kahlid\_39, Soap141\_39, Crossroads\_39, Loadrie\_39, Hafay\_39, GuuelaD\_39, Sarshaun\_39
- Track 136 : Lewan\_39
- Track 137 : Archie\_39
- Track 138 : Tourach\_39
- Track 139 : Vetrix\_39
- Track 140 : MkaliMitinis3\_39
- Track 141 : Finemlucis\_39
- Track 142 : Bazzle\_39
- Track 143 : Claus\_40, DHan\_40
- Track 144 : DanBing\_39
- Track 145 : LilDestine\_39
- Track 146 : Samty\_37, Clautastrophe\_37, Kingsolomon\_37, Nicholas\_37, Lumos\_37, Moostard\_37, Snenia\_37, Finnry\_37, MsGreen\_37, Jobypre\_37, Jubie\_37, Bellis\_37
- Track 147 : LiyuLake\_37, Ellson\_37, DuncansLeg\_37, BourbonZero\_36
- Track 148 : MiniLon\_37, MiniMac\_37, Lolly9\_37
- Track 149 : KirDoubleO7\_35
- Track 150 : Whirlwind\_38
- Track 151 : Krypton555\_37
- Track 152 : Bromden\_38
- Track 153 : Quby\_36
- Track 154 : Douge\_36, PYPDinur\_36, BrainDrainer\_37
- Track 155 : FarmResident\_36, Sheng711\_36
- Track 156 : DyoEdafos\_38
- Track 157 : Douzhi\_36
- Track 158 : Chaser\_36
- Track 159 : Aegeus\_42, Baudelaire\_42
- Track 160 : Nebkiss\_67, Gaia\_67



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

The start number called the most often in the published annotations is 35, it was called in 112 of the 421 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, 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, Nikao\_40, 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, Torres\_40, 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:

- Amelie\_37, Argent26\_57, Biglebops\_37, BilboSwaggins\_53, Emmina\_54, Enkosi\_40, Flypotenuse\_49, GoldenSpark\_57, Kostya\_55, LilPharaoh\_37, Mdavu\_38, Nutello\_37, Palpatine\_57, Pat3\_52, Petra64142\_59, Policronamos\_59, Rakim\_56, SgtBeansprout\_37, SirDuracell\_53, TBrady12\_57, Teaspoon\_55, Toto\_53, YassJohnny\_50,

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

- Acolyte\_68, Acquire49\_37, ActinUp\_42, Adephegia\_42, Adonis\_42, Aegeus\_42, Agent47\_41, Ageofdapage\_44, AlishaPH\_42, AlleyCat\_41, Amgine\_42, Aminay\_45, Amohntion\_44, Anaya\_44, Angelica\_42, Apocalypse\_45, Appletree2\_36, Archie\_39, Ariel\_90, Asayake\_42, Atiba\_42, AvadaKedavra\_37, BAKA\_97, BEEST\_42, BGlluvia\_42, BaghaKamala\_41, Bagrid\_94, Baoshan\_38, BarrelRoll\_42, Baudelaire\_42, Bazzle\_39, Beem\_96, Beezoo\_44, Bella96\_43, Belladonna\_42, Bellis\_37, BigCheese\_39, Blizzard\_42, Bobby\_87, BobsGarage\_39, Boiiii\_42, Boilgate\_41, Bombitas\_84, BoostSeason\_45, BourbonZero\_36, BrainDrainer\_37, Breezona\_39, Bromden\_38, Bryler\_45, CREW\_42, Cain\_45, Calm\_37, Capricorn\_42, CaseJules\_43, Chancellor\_46, Chaser\_36, CheetoDust\_41, Cheetobro\_46, Chris\_44, CicholasNage\_37, Claus\_40, Clautastrophe\_37, Collard\_40, Constella\_81, Courthouse\_86, CrimD\_42, Crossroads\_39, Curiosium\_45, DHan\_40, Dadosky\_41, Dallas\_97, Dalmuri\_42, DanBing\_39, DarthP\_44, Dartin\_44, Deby\_42, Devera\_46, DirkDirk\_36, DismalFunk\_45,

DismalStressor\_45, DmpstrDiver\_97, Dole\_45, Douge\_36, Douzhi\_36, DrHayes\_43, DrSeegs\_39, Duke13\_91, DuncansLeg\_37, Durfee\_42, DyoEdafos\_38, Edugator\_40, Efra2\_45, Ejimix\_89, Ekdilam\_41, Ellie\_40, Ellson\_37, Emerson\_43, Enceladus\_36, Eponine\_48, EricMillard\_89, Faith1\_39, FarmResident\_36, Fefferhead\_42, Feyre\_40, Findley\_45, Finemlucis\_39, Finnry\_37, Fionnbharth\_46, Gabriela\_39, Gaia\_67, Ganymede\_43, Gardann\_39, Gengar\_40, Geraldini\_44, Gonephishing\_82, Guanica15\_45, Guillsminger\_41, GuuelaD\_39, Hafay\_39, Halena\_36, Halley\_97, Hammy\_44, Hannaconda\_82, HedwigODU\_42, Heftyboy\_40, HokkenD\_84, Homura\_42, Hughesyang\_95, Hurricane\_45, Hyperbowlee\_42, Illumine\_45, Inky\_42, InvictusManeo\_40, JAWS\_42, JF1\_46, Jarvi\_42, Jayhawk\_43, Jeckyll\_42, Jobypre\_37, JoeDirt\_36, Joy99\_42, Jubie\_37, JuicyJay\_92, Juliette\_48, Kahlid\_39, Kalah2\_89, KashFlow\_86, Keshu\_46, KiSi\_46, Kingsolomon\_37, KirDoubleO7\_35, Klein\_96, Kratio\_39, Krueger\_48, Krypton555\_37, Larva\_41, LastHope\_45, LaterM\_43, LeBron\_37, LeMond\_46, Leston\_40, Lewan\_39, LilDestine\_39, LindNT\_42, LittleE\_94, LiyuLake\_37, Llorens\_42, Loadrie\_39, Lolly9\_37, Lucky2013\_88, Lumos\_37, Lunahalos\_42, MAckerman\_37, MacnCheese\_46, MalagasyRose\_43, Malthus\_47, Marcoliusprime\_45, MarkPhew\_45, Marshawn\_45, McMater\_44, MeaningOfLife\_43, Megsy\_43, MiaZeal\_91, Miley16\_39, Milly\_45, Minerva\_95, MiniLon\_37, MiniMac\_37, Miryou\_42, MissDaisy\_44, Mitti\_46, MkaliMinitis3\_39, Moostard\_37, MsGreen\_37, Mufasa\_45, Murucutumbu\_43, Mynx\_43, Nebkiss\_67, Nergal\_39, Netyap\_39, Nibb\_44, Nicholas\_37, Nicholasp3\_39, NihilNomen\_97, Niklas\_44, Odette\_95, OhShagHennessy\_36, OkiRoe\_40, Omega\_99, OmniCritical\_45, Omnicron\_43, Optimus\_89, Oscar\_46, PYPDinur\_36, Padfoot\_42, Padpat\_43, Paola\_40, Patt\_43, Peanam\_44, Peel\_42, Pharb\_42, PhelpsODU\_44, Phoebus\_97, Phrank\_45, Phrappuccino\_39, Piatt\_42, Pixie\_44, Pokerus\_41, Porcelain\_89, Pound\_87, Prithvi\_43, Psycho\_41, Quby\_36, QuincyRose\_41, Ramen\_42, Rando14\_42, Rapunzel97\_42, Redno2\_87, Reptar3000\_44, Richo\_44, Rose5\_36, Rosmarinus\_42, Rumpelstiltskin\_39, Ruthiejr\_47, SamScheppers\_45, Samty\_37, SamuelLPlaqson\_43, Sarshaun\_39, Scarlett\_46, Schatzie\_90, Settecandela\_39, Shadow1\_47, Shaobing\_44, ShedlockHolmes\_45, Sheng711\_36, ShiaSurprise\_43, Silverleaf\_36, SirPhilip\_44, Slarp\_46, Slimphazie\_42, Snenia\_37, SoSeph\_40, Soap141\_39, Spock\_42, Squint\_89, Stinson\_43, Strobilo\_45, Sulley\_42, Sunflower1121\_48, Superphikiman\_88, Syra333\_47, TBond007\_44, TClif\_46, Tachez\_42, TaiwanKao\_44, Taquito\_46, Thibault\_80, ThreeRngTarjay\_92, Thyatira\_42, Tierra\_45, TingHuaYa\_43, TiniBug\_43, Tiri\_43, Topper\_42, Tourach\_39, TreyKay\_43, TribbleTrouble\_42, TruffulaTree\_42, Twitch\_42, Tyson\_36, UPIE\_37, Unicorn\_44, Urkel\_43, Validus\_46, Veliki\_42, Vetrix\_39, Wamburgrxpress\_37, Wanda\_99, Waterfoul\_41, Whirlwind\_38, Wigglewiggles\_39, Wilder\_39, Winky\_39, Wintermute\_46, Wyatt2\_37, Ximenita\_48, Y10\_45, Y2\_45, Yeet\_88, YoureAdopted\_41, Yuna\_48, Yunkel11\_45, Zakai\_39, Zaria\_37, Zavala\_43, Zelink\_92, ZhongYanYuan\_38, ZoeJ\_44,

### Summary by start number:

#### Start 14:

- Found in 1 of 457 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 421
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beezoo\_44 (K1),

#### Start 20:

- Found in 57 of 457 ( 12.5% ) of genes in pham

- Manual Annotations of this start: 38 of 421
- 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 21:

- Found in 18 of 457 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 8 of 421
- 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 22:

- Found in 2 of 457 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 421
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Whirlwind\_38 (L3),

#### Start 25:

- Found in 36 of 457 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 2 of 421
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Adephagia\_42 (K1), Murucutumbu\_43 (K1),

#### Start 27:

- Found in 5 of 457 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 2 of 421
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Edugator\_40 (K5), Psycho\_41 (K5),

#### Start 29:

- Found in 2 of 457 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 2 of 421
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia\_67 (X), Nebkiss\_67 (X),

#### Start 30:

- Found in 45 of 457 ( 9.8% ) of genes in pham
- Manual Annotations of this start: 31 of 421
- Called 95.6% of time when present
- Phage (with cluster) where this start called: Archie\_39 (L2), Baoshan\_38 (L2), Bazzle\_39 (L2), BigCheese\_39 (L2), BobsGarage\_39 (L2), BrainDrainer\_37 (L4), Breezona\_39 (L2), Bromden\_38 (L4), Chaser\_36 (L4), Claus\_40 (L2),

Crossroads\_39 (L2), DHan\_40 (L2), DanBing\_39 (L2), Douge\_36 (L4), Douzhi\_36 (L4), DrSeegs\_39 (L2), DyoEdafos\_38 (L4), Faith1\_39 (L2), Finemlucis\_39 (L2), Gabriela\_39 (L2), Gardann\_39 (L2), GuuelaD\_39 (L2), Hafay\_39 (L2), Kahlid\_39 (L2), Lewan\_39 (L2), LilDestine\_39 (L2), Loadrie\_39 (L2), Miley16\_39 (L2), MkaliMitinis3\_39 (L2), Netyap\_39 (L2), Nicholasp3\_39 (L2), PYPDinur\_36 (L4), Quby\_36 (L4), Rumpelstiltskin\_39 (L2), Sarshaun\_39 (L2), Soap141\_39 (L2), Tourach\_39 (L2), Vetric\_39 (L2), Wigglewiggle\_39 (L2), Wilder\_39 (L2), Winky\_39 (L2), Zakai\_39 (L2), ZhongYanYuan\_38 (L2),

#### Start 31:

- Found in 21 of 457 ( 4.6% ) of genes in pham
- Manual Annotations of this start: 19 of 421
- Called 90.5% of time when present
- Phage (with cluster) where this start called: Acquire49\_37 (L1), Appletree2\_36 (L1), AvadaKedavra\_37 (L1), Calm\_37 (L1), CicholasNage\_37 (L1), DirkDirk\_36 (L1), Enceladus\_36 (L1), Halena\_36 (L1), JoeDirt\_36 (L1), LeBron\_37 (L1), MAckerman\_37 (L1), OhShagHennessy\_36 (L1), Rose5\_36 (L1), Silverleaf\_36 (L1), Tyson\_36 (L1), UPIE\_37 (L1), Wamburgxpress\_37 (L1), Wyatt2\_37 (L1), Zaria\_37 (L1),

#### Start 32:

- Found in 10 of 457 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 6 of 421
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Keshu\_46 (K3), MacnCheese\_46 (K3), MarkPhew\_45 (K1), Pixie\_44 (K3), ShedlockHolmes\_45 (K3), TribbleTrouble\_42 (K3),

#### Start 33:

- Found in 22 of 457 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 15 of 421
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Bellis\_37 (L3), BourbonZero\_36 (L3), Clautastrophe\_37 (L3), DuncansLeg\_37 (L3), Ellson\_37 (L3), Finnry\_37 (L3), Jobypre\_37 (L3), Jubie\_37 (L3), Kingsolomon\_37 (L3), Krypton555\_37 (L3), LiyuLake\_37 (L3), Lolly9\_37 (L3), Lumos\_37 (L3), MiniLon\_37 (L3), MiniMac\_37 (L3), Moostard\_37 (L3), MsGreen\_37 (L3), Nicholas\_37 (L3), Samty\_37 (L3), Snenia\_37 (L3),

#### Start 35:

- Found in 139 of 457 ( 30.4% ) of genes in pham
- Manual Annotations of this start: 112 of 421
- Called 83.5% 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), 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),

Hopey\_54 (E), HufflyPuff\_56 (E), IHOP\_52 (E), Icee\_54 (E), Inca\_51 (E), JeTaimé\_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), Maxxinsta\_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), Nikao\_40 (K1), 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), Torres\_40 (K1), 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 37:

- Found in 76 of 457 ( 16.6% ) of genes in pham
- Manual Annotations of this start: 2 of 421
- Called 2.6% of time when present
- Phage (with cluster) where this start called: Ageofdapage\_44 (K1), Apocalypse\_45 (K1),

#### Start 39:

- Found in 23 of 457 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 21 of 421
- Called 91.3% 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 40:

- Found in 2 of 457 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 421
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Chris\_44 (K1),

#### Start 41:

- Found in 8 of 457 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 8 of 421
- 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 42:

- Found in 96 of 457 ( 21.0% ) of genes in pham
- Manual Annotations of this start: 22 of 421
- Called 24.0% of time when present

- Phage (with cluster) where this start called: Adonis\_42 (K1), BarrelRoll\_42 (K1), Bella96\_43 (K1), Boiiii\_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 43:

- Found in 17 of 457 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 12 of 421
- Called 88.2% 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 44:

- Found in 164 of 457 ( 35.9% ) of genes in pham
- Manual Annotations of this start: 38 of 421
- Called 24.4% 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), MalagasyRose\_43 (AG), Malthus\_47 (K4), Minerva\_95 (J), 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), TBond007\_44 (K3), TBrady12\_57 (E), Teaspoon\_55 (E), Toto\_53 (E), Wintermute\_46 (K4), Y10\_45 (K4), Y2\_45 (K4), YassJohnny\_50 (E),

#### Start 45:

- Found in 1 of 457 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 421
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KiSi\_46 (K1),

#### Start 46:

- Found in 56 of 457 ( 12.3% ) of genes in pham
- Manual Annotations of this start: 32 of 421
- Called 60.7% 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), 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 47:

- Found in 34 of 457 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 24 of 421

- Called 70.6% of time when present
- Phage (with cluster) where this start called: Acolyte\_68 (A2), Amohnition\_44 (K6), Bryler\_45 (K6), Cain\_45 (K6), DarthP\_44 (K6), Ekdilam\_41 (K6), Hammy\_44 (K6), Hurricane\_45 (K3), Krueger\_48 (K6), LeMond\_46 (K1), Nergal\_39 (AG), Nibb\_44 (K1), Oscar\_46 (K1), Pharb\_42 (K3), PhelpsODU\_44 (K6), Phrank\_45 (K6), Scarlett\_46 (K1), Shadow1\_47 (K6), SirPhilip\_44 (K6), Syra333\_47 (K6), Tierra\_45 (K6), Unicorn\_44 (K6), Ximenita\_48 (K6), Yuna\_48 (K6),

#### Start 49:

- Found in 87 of 457 ( 19.0% ) of genes in pham
- Manual Annotations of this start: 8 of 421
- Called 10.3% of time when present
- Phage (with cluster) where this start called: Amgine\_42 (K6), Curiosium\_45 (K1), Efra2\_45 (K1), Ellie\_40 (K6), Fefferhead\_42 (K6), Guanica15\_45 (K1), LastHope\_45 (K1), TingHuaYa\_43 (K1), Yunkel11\_45 (K1),

#### Start 54:

- Found in 149 of 457 ( 32.6% ) of genes in pham
- Manual Annotations of this start: 1 of 421
- Called 0.7% of time when present
- Phage (with cluster) where this start called: Pat3\_52 (E),

#### Start 55:

- Found in 60 of 457 ( 13.1% ) of genes in pham
- Manual Annotations of this start: 6 of 421
- 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 61:

- Found in 124 of 457 ( 27.1% ) of genes in pham
- Manual Annotations of this start: 5 of 421
- Called 4.8% 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 62:

- Found in 55 of 457 ( 12.0% ) of genes in pham
- Manual Annotations of this start: 1 of 421
- Called 1.8% of time when present
- Phage (with cluster) where this start called: Superphikiman\_88 (J),

#### Start 65:

- Found in 47 of 457 ( 10.3% ) of genes in pham
- Manual Annotations of this start: 1 of 421
- Called 6.4% of time when present
- Phage (with cluster) where this start called: FarmResident\_36 (L4), Sheng711\_36 (L4), Sunflower1121\_48 (K6),

#### Start 66:

- Found in 33 of 457 ( 7.2% ) of genes in pham
- Manual Annotations of this start: 1 of 421
- Called 3.0% of time when present

- Phage (with cluster) where this start called: Taquito\_46 (K4),

Start 79:

- Found in 143 of 457 ( 31.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.4% of time when present
- Phage (with cluster) where this start called: BilboSwaggins\_53 (E), Policronamos\_59 (E),

Start 92:

- Found in 18 of 457 ( 3.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 5.6% of time when present
- Phage (with cluster) where this start called: KirDoubleO7\_35 (L3),

### **Summary by clusters:**

There are 19 clusters represented in this pham: AA, E, AG, J, L4, L5, K4, K3, K2, K1, A2, L2, K6, K5, L1, X, K8, K7, L3,

Info for manual annotations of cluster A2:

- Start number 47 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster AA:

- Start number 44 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AG:

- Start number 44 was manually annotated 1 time for cluster AG.
- Start number 47 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster E:

- Start number 35 was manually annotated 111 times for cluster E.
- Start number 44 was manually annotated 11 times for cluster E.
- Start number 54 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster J:

- Start number 44 was manually annotated 1 time for cluster J.
- Start number 46 was manually annotated 32 times for cluster J.
- Start number 61 was manually annotated 5 times for cluster J.
- Start number 62 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster K1:

- Start number 14 was manually annotated 1 time for cluster K1.
- Start number 20 was manually annotated 38 times for cluster K1.
- Start number 21 was manually annotated 8 times for cluster K1.
- Start number 25 was manually annotated 2 times for cluster K1.
- Start number 32 was manually annotated 1 time for cluster K1.
- Start number 35 was manually annotated 1 time for cluster K1.
- Start number 37 was manually annotated 2 times for cluster K1.
- Start number 40 was manually annotated 1 time for cluster K1.
- Start number 42 was manually annotated 21 times for cluster K1.
- Start number 43 was manually annotated 11 times for cluster K1.
- Start number 45 was manually annotated 1 time for cluster K1.



- Start number 47 was manually annotated 4 times for cluster K1.
- Start number 49 was manually annotated 5 times for cluster K1.
- Start number 55 was manually annotated 6 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 39 was manually annotated 1 time for cluster K2.
- Start number 41 was manually annotated 8 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 32 was manually annotated 5 times for cluster K3.
- Start number 44 was manually annotated 1 time for cluster K3.
- Start number 47 was manually annotated 2 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 44 was manually annotated 18 times for cluster K4.
- Start number 66 was manually annotated 1 time for cluster K4.

Info for manual annotations of cluster K5:

- Start number 27 was manually annotated 2 times for cluster K5.
- Start number 39 was manually annotated 20 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 42 was manually annotated 1 time for cluster K6.
- Start number 43 was manually annotated 1 time for cluster K6.
- Start number 47 was manually annotated 16 times for cluster K6.
- Start number 49 was manually annotated 3 times for cluster K6.
- Start number 65 was manually annotated 1 time for cluster K6.

Info for manual annotations of cluster K7:

- Start number 44 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 44 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster L1:

- Start number 31 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 30 was manually annotated 27 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 22 was manually annotated 1 time for cluster L3.
- Start number 33 was manually annotated 15 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 30 was manually annotated 4 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 44 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster X:

- Start number 29 was manually annotated 2 times for cluster X.

**Gene Information:**

Gene: 244\_55 Start: 39721, Stop: 38948, Start Num: 35

Candidate Starts for 244\_55:

(Start: 35 @39721 has 112 MA's), (Start: 44 @39697 has 38 MA's), (Start: 54 @39667 has 1 MA's), (79, 39559), (107, 39463), (132, 39382), (140, 39358), (142, 39349), (145, 39340), (185, 39235), (187, 39229), (189, 39223), (240, 39079), (246, 39067), (258, 39043), (289, 38956),

Gene: ABCat\_52 Start: 40367, Stop: 39594, Start Num: 35

Candidate Starts for ABCat\_52:

(Start: 35 @40367 has 112 MA's), (Start: 44 @40343 has 38 MA's), (Start: 54 @40313 has 1 MA's), (79, 40205), (107, 40109), (132, 40028), (140, 40004), (142, 39995), (145, 39986), (185, 39881), (187, 39875), (189, 39869), (240, 39725), (258, 39689), (289, 39602),

Gene: Acolyte\_68 Start: 43894, Stop: 44586, Start Num: 47

Candidate Starts for Acolyte\_68:

(Start: 47 @43894 has 24 MA's), (79, 44026), (82, 44038), (106, 44119), (108, 44128), (114, 44149), (119, 44167), (142, 44239), (143, 44242), (147, 44254), (151, 44263), (183, 44335), (189, 44356), (191, 44362), (200, 44380), (201, 44383), (232, 44464), (268, 44518),

Gene: Acquire49\_37 Start: 32374, Stop: 31592, Start Num: 31

Candidate Starts for Acquire49\_37:

(Start: 31 @32374 has 19 MA's), (38, 32356), (110, 32089), (117, 32062), (118, 32059), (128, 32029), (132, 32017), (139, 31996), (156, 31948), (190, 31855), (206, 31819), (238, 31729), (266, 31675),

Gene: ActinUp\_42 Start: 34574, Stop: 33672, Start Num: 20

Candidate Starts for ActinUp\_42:

(Start: 20 @34574 has 38 MA's), (Start: 37 @34517 has 2 MA's), (Start: 42 @34511 has 22 MA's), (Start: 49 @34487 has 8 MA's), (Start: 55 @34466 has 6 MA's), (Start: 61 @34442 has 5 MA's), (81, 34352), (85, 34343), (114, 34238), (115, 34235), (117, 34226), (121, 34208), (123, 34202), (141, 34154), (147, 34136), (156, 34106), (161, 34094), (164, 34085), (186, 34028), (191, 34013), (214, 33956), (232, 33905), (239, 33890), (253, 33863), (265, 33842), (270, 33830),

Gene: Adephagia\_42 Start: 34550, Stop: 33669, Start Num: 25

Candidate Starts for Adephagia\_42:

(Start: 20 @34571 has 38 MA's), (Start: 25 @34550 has 2 MA's), (Start: 37 @34514 has 2 MA's), (Start: 42 @34508 has 22 MA's), (Start: 49 @34484 has 8 MA's), (Start: 55 @34463 has 6 MA's), (Start: 61 @34439 has 5 MA's), (81, 34349), (85, 34340), (114, 34235), (115, 34232), (117, 34223), (121, 34205), (123, 34199), (141, 34151), (147, 34133), (156, 34103), (161, 34091), (164, 34082), (186, 34025), (191, 34010), (214, 33953), (232, 33902), (239, 33887), (253, 33860), (265, 33839), (270, 33827),

Gene: Adnama\_58 Start: 40390, Stop: 39617, Start Num: 35

Candidate Starts for Adnama\_58:

(Start: 35 @40390 has 112 MA's), (Start: 44 @40366 has 38 MA's), (Start: 54 @40336 has 1 MA's), (79, 40228), (107, 40132), (132, 40051), (140, 40027), (142, 40018), (145, 40009), (185, 39904), (187, 39898), (189, 39892), (240, 39748), (246, 39736), (258, 39712), (289, 39625),

Gene: Adonis\_42 Start: 34806, Stop: 33967, Start Num: 42

Candidate Starts for Adonis\_42:

(Start: 21 @34860 has 8 MA's), (Start: 37 @34812 has 2 MA's), (Start: 42 @34806 has 22 MA's), (Start: 49 @34782 has 8 MA's), (56, 34758), (Start: 61 @34737 has 5 MA's), (81, 34647), (85, 34638), (114, 34533), (115, 34530), (117, 34521), (121, 34503), (139, 34458), (141, 34449), (147, 34431), (156, 34401), (161, 34389), (164, 34380), (191, 34308), (214, 34251), (239, 34185), (265, 34137), (270, 34125), (280, 34086),

Gene: Aegeus\_42 Start: 36206, Stop: 35445, Start Num: 44

Candidate Starts for Aegeus\_42:

(Start: 44 @36206 has 38 MA's), (59, 36155), (68, 36104), (79, 36068), (112, 35954), (141, 35861), (142, 35858), (165, 35798), (181, 35765), (184, 35753), (201, 35711), (203, 35705), (235, 35606), (255, 35573),

Gene: Agent47\_41 Start: 34000, Stop: 33149, Start Num: 39

Candidate Starts for Agent47\_41:

(Start: 39 @34000 has 21 MA's), (71, 33871), (88, 33829), (114, 33730), (117, 33718), (133, 33670), (142, 33640), (148, 33622), (159, 33586), (217, 33427), (221, 33412), (225, 33400), (237, 33367), (242, 33358), (255, 33340), (258, 33334), (267, 33319), (280, 33271), (288, 33250),

Gene: Ageofdapage\_44 Start: 35489, Stop: 34644, Start Num: 37

Candidate Starts for Ageofdapage\_44:

(Start: 20 @35546 has 38 MA's), (Start: 25 @35525 has 2 MA's), (Start: 37 @35489 has 2 MA's), (Start: 42 @35483 has 22 MA's), (Start: 49 @35459 has 8 MA's), (Start: 55 @35438 has 6 MA's), (56, 35435), (Start: 61 @35414 has 5 MA's), (81, 35324), (85, 35315), (114, 35210), (115, 35207), (117, 35198), (121, 35180), (139, 35135), (141, 35126), (161, 35066), (164, 35057), (191, 34985), (214, 34928), (218, 34919), (239, 34862), (255, 34832), (265, 34814), (270, 34802), (294, 34712),

Gene: AlishaPH\_42 Start: 34836, Stop: 33943, Start Num: 21

Candidate Starts for AlishaPH\_42:

(Start: 21 @34836 has 8 MA's), (Start: 37 @34788 has 2 MA's), (Start: 42 @34782 has 22 MA's), (Start: 49 @34758 has 8 MA's), (Start: 61 @34713 has 5 MA's), (81, 34623), (85, 34614), (114, 34509), (115, 34506), (117, 34497), (121, 34479), (123, 34473), (141, 34425), (147, 34407), (156, 34377), (161, 34365), (164, 34356), (191, 34284), (214, 34227), (239, 34161), (253, 34134), (265, 34113), (270, 34101),

Gene: AlleyCat\_41 Start: 33853, Stop: 33002, Start Num: 39

Candidate Starts for AlleyCat\_41:

(13, 33955), (Start: 27 @33889 has 2 MA's), (Start: 39 @33853 has 21 MA's), (Start: 54 @33808 has 1 MA's), (69, 33730), (88, 33682), (114, 33583), (117, 33571), (133, 33523), (142, 33493), (148, 33475), (159, 33439), (162, 33433), (171, 33406), (217, 33280), (221, 33265), (225, 33253), (242, 33211), (267, 33172), (280, 33124),

Gene: Amao\_54 Start: 39485, Stop: 38712, Start Num: 35

Candidate Starts for Amao\_54:

(Start: 35 @39485 has 112 MA's), (Start: 44 @39461 has 38 MA's), (Start: 54 @39431 has 1 MA's), (79, 39323), (107, 39227), (132, 39146), (140, 39122), (142, 39113), (145, 39104), (185, 38999), (187, 38993), (189, 38987), (240, 38843), (246, 38831), (258, 38807), (289, 38720),

Gene: Amelie\_37 Start: 34082, Stop: 33180, Start Num: 43

Candidate Starts for Amelie\_37:

(Start: 35 @34100 has 112 MA's), (Start: 43 @34082 has 12 MA's), (57, 34034), (Start: 62 @34007 has 1 MA's), (Start: 65 @33989 has 1 MA's), (70, 33956), (74, 33938), (77, 33932), (81, 33920), (106, 33836), (110, 33821), (114, 33806), (126, 33764), (138, 33728), (143, 33710), (158, 33668), (169, 33650), (183, 33611), (207, 33542), (222, 33503), (227, 33488), (251, 33434), (262, 33416), (270,

33398), (280, 33359), (297, 33293), (314, 33203),

Gene: AmericanBeauty\_58 Start: 40235, Stop: 39462, Start Num: 35

Candidate Starts for AmericanBeauty\_58:

(Start: 35 @40235 has 112 MA's), (Start: 44 @40211 has 38 MA's), (Start: 54 @40181 has 1 MA's), (79, 40073), (107, 39977), (132, 39896), (140, 39872), (142, 39863), (145, 39854), (185, 39749), (187, 39743), (189, 39737), (240, 39593), (246, 39581), (258, 39557), (289, 39470),

Gene: Amgine\_42 Start: 35522, Stop: 34689, Start Num: 49

Candidate Starts for Amgine\_42:

(Start: 49 @35522 has 8 MA's), (60, 35483), (Start: 65 @35459 has 1 MA's), (69, 35429), (132, 35228), (140, 35204), (142, 35195), (146, 35183), (148, 35177), (152, 35165), (166, 35132), (176, 35105), (198, 35042), (202, 35030), (230, 34946), (268, 34877), (274, 34859), (276, 34847), (280, 34829),

Gene: Aminay\_45 Start: 36061, Stop: 35288, Start Num: 44

Candidate Starts for Aminay\_45:

(Start: 44 @36061 has 38 MA's), (56, 36025), (73, 35938), (76, 35929), (100, 35857), (112, 35809), (113, 35806), (114, 35800), (116, 35794), (127, 35758), (142, 35716), (165, 35647), (181, 35614), (182, 35611), (186, 35596), (194, 35572), (206, 35545), (210, 35530), (230, 35476), (255, 35416), (260, 35407),

Gene: Amohnition\_44 Start: 35581, Stop: 34757, Start Num: 47

Candidate Starts for Amohnition\_44:

(Start: 47 @35581 has 24 MA's), (80, 35452), (91, 35425), (96, 35413), (132, 35281), (139, 35260), (140, 35257), (142, 35248), (146, 35236), (148, 35230), (152, 35218), (158, 35203), (178, 35161), (202, 35092), (230, 35011), (255, 34966), (269, 34939), (280, 34894),

Gene: Anaya\_44 Start: 35172, Stop: 34279, Start Num: 21

Candidate Starts for Anaya\_44:

(Start: 21 @35172 has 8 MA's), (Start: 37 @35124 has 2 MA's), (Start: 42 @35118 has 22 MA's), (Start: 49 @35094 has 8 MA's), (56, 35070), (Start: 61 @35049 has 5 MA's), (Start: 66 @35025 has 1 MA's), (81, 34959), (85, 34950), (114, 34845), (115, 34842), (117, 34833), (121, 34815), (139, 34770), (141, 34761), (147, 34743), (156, 34713), (161, 34701), (164, 34692), (191, 34620), (214, 34563), (239, 34497), (265, 34449), (270, 34437),

Gene: Angelica\_42 Start: 34792, Stop: 33899, Start Num: 21

Candidate Starts for Angelica\_42:

(Start: 21 @34792 has 8 MA's), (Start: 37 @34744 has 2 MA's), (Start: 42 @34738 has 22 MA's), (Start: 49 @34714 has 8 MA's), (Start: 61 @34669 has 5 MA's), (85, 34570), (114, 34465), (115, 34462), (117, 34453), (121, 34435), (141, 34381), (147, 34363), (156, 34333), (161, 34321), (164, 34312), (191, 34240), (214, 34183), (239, 34117), (253, 34090), (265, 34069), (270, 34057),

Gene: Apocalypse\_45 Start: 35530, Stop: 34685, Start Num: 37

Candidate Starts for Apocalypse\_45:

(Start: 21 @35578 has 8 MA's), (Start: 37 @35530 has 2 MA's), (Start: 42 @35524 has 22 MA's), (Start: 49 @35500 has 8 MA's), (Start: 61 @35455 has 5 MA's), (85, 35356), (114, 35251), (115, 35248), (117, 35239), (121, 35221), (141, 35167), (147, 35149), (161, 35107), (164, 35098), (214, 34969), (239, 34903), (270, 34843),

Gene: Appletree2\_36 Start: 32316, Stop: 31534, Start Num: 31

Candidate Starts for Appletree2\_36:

(Start: 31 @32316 has 19 MA's), (38, 32298), (110, 32031), (117, 32004), (118, 32001), (128, 31971), (132, 31959), (139, 31938), (156, 31890), (190, 31797), (206, 31761), (238, 31671), (266, 31617),

Gene: Archie\_39 Start: 33946, Stop: 33167, Start Num: 30

Candidate Starts for Archie\_39:

(Start: 30 @33946 has 31 MA's), (50, 33889), (74, 33778), (85, 33751), (105, 33679), (106, 33673), (117, 33631), (136, 33574), (138, 33568), (238, 33307), (243, 33298), (266, 33253),

Gene: Argent26\_57 Start: 39849, Stop: 39100, Start Num: 44

Candidate Starts for Argent26\_57:

(Start: 35 @39873 has 112 MA's), (Start: 44 @39849 has 38 MA's), (Start: 54 @39819 has 1 MA's), (79, 39711), (107, 39615), (132, 39534), (140, 39510), (142, 39501), (145, 39492), (185, 39387), (187, 39381), (189, 39375), (240, 39231), (246, 39219), (258, 39195), (289, 39108),

Gene: Ariel\_90 Start: 53471, Stop: 52764, Start Num: 46

Candidate Starts for Ariel\_90:

(Start: 46 @53471 has 32 MA's), (Start: 61 @53417 has 5 MA's), (Start: 62 @53408 has 1 MA's), (96, 53312), (99, 53294), (120, 53213), (125, 53201), (132, 53195), (134, 53189), (137, 53180), (149, 53138), (172, 53087), (173, 53084), (204, 53003), (209, 52985), (226, 52946), (230, 52934), (232, 52928), (233, 52925), (252, 52883), (256, 52874), (261, 52865), (263, 52862), (280, 52811),

Gene: Asayake\_42 Start: 34886, Stop: 33984, Start Num: 20

Candidate Starts for Asayake\_42:

(Start: 20 @34886 has 38 MA's), (Start: 25 @34865 has 2 MA's), (Start: 37 @34829 has 2 MA's), (Start: 42 @34823 has 22 MA's), (Start: 49 @34799 has 8 MA's), (Start: 55 @34778 has 6 MA's), (Start: 61 @34754 has 5 MA's), (81, 34664), (85, 34655), (114, 34550), (115, 34547), (117, 34538), (121, 34520), (123, 34514), (141, 34466), (147, 34448), (156, 34418), (161, 34406), (164, 34397), (191, 34325), (214, 34268), (232, 34217), (239, 34202), (253, 34175), (265, 34154), (270, 34142),

Gene: Asriel\_54 Start: 38727, Stop: 37954, Start Num: 35

Candidate Starts for Asriel\_54:

(Start: 35 @38727 has 112 MA's), (Start: 44 @38703 has 38 MA's), (Start: 54 @38673 has 1 MA's), (79, 38565), (107, 38469), (132, 38388), (140, 38364), (142, 38355), (145, 38346), (185, 38241), (187, 38235), (189, 38229), (240, 38085), (246, 38073), (258, 38049), (289, 37962),

Gene: Atiba\_42 Start: 34534, Stop: 33632, Start Num: 20

Candidate Starts for Atiba\_42:

(Start: 20 @34534 has 38 MA's), (Start: 37 @34477 has 2 MA's), (Start: 42 @34471 has 22 MA's), (Start: 49 @34447 has 8 MA's), (Start: 55 @34426 has 6 MA's), (Start: 61 @34402 has 5 MA's), (81, 34312), (85, 34303), (114, 34198), (115, 34195), (117, 34186), (121, 34168), (123, 34162), (141, 34114), (147, 34096), (156, 34066), (161, 34054), (164, 34045), (186, 33988), (191, 33973), (214, 33916), (232, 33865), (239, 33850), (253, 33823), (265, 33802), (270, 33790),

Gene: AvadaKedavra\_37 Start: 32383, Stop: 31601, Start Num: 31

Candidate Starts for AvadaKedavra\_37:

(Start: 31 @32383 has 19 MA's), (38, 32365), (110, 32098), (117, 32071), (118, 32068), (128, 32038), (132, 32026), (139, 32005), (156, 31957), (190, 31864), (206, 31828), (238, 31738), (266, 31684),

Gene: BAKA\_97 Start: 59373, Stop: 58666, Start Num: 46

Candidate Starts for BAKA\_97:

(Start: 46 @59373 has 32 MA's), (Start: 61 @59319 has 5 MA's), (Start: 62 @59310 has 1 MA's), (67, 59286), (96, 59214), (120, 59115), (125, 59103), (137, 59082), (170, 58992), (173, 58986), (204, 58905), (209, 58887), (226, 58848), (232, 58830), (233, 58827), (256, 58776), (263, 58764), (280,

58713),

Gene: BEEST\_42 Start: 34886, Stop: 33984, Start Num: 20

Candidate Starts for BEEST\_42:

(Start: 20 @34886 has 38 MA's), (Start: 25 @34865 has 2 MA's), (Start: 37 @34829 has 2 MA's), (Start: 42 @34823 has 22 MA's), (Start: 49 @34799 has 8 MA's), (Start: 55 @34778 has 6 MA's), (Start: 61 @34754 has 5 MA's), (81, 34664), (85, 34655), (114, 34550), (115, 34547), (117, 34538), (121, 34520), (123, 34514), (141, 34466), (147, 34448), (156, 34418), (161, 34406), (164, 34397), (191, 34325), (214, 34268), (232, 34217), (239, 34202), (253, 34175), (265, 34154), (270, 34142),

Gene: BGlluviae\_42 Start: 34689, Stop: 33787, Start Num: 20

Candidate Starts for BGlluviae\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: BaboJay\_50 Start: 39273, Stop: 38500, Start Num: 35

Candidate Starts for BaboJay\_50:

(Start: 35 @39273 has 112 MA's), (Start: 44 @39249 has 38 MA's), (Start: 54 @39219 has 1 MA's), (79, 39111), (107, 39015), (132, 38934), (140, 38910), (142, 38901), (145, 38892), (185, 38787), (187, 38781), (189, 38775), (240, 38631), (246, 38619), (258, 38595), (289, 38508),

Gene: BadStone\_52 Start: 39936, Stop: 39163, Start Num: 35

Candidate Starts for BadStone\_52:

(Start: 35 @39936 has 112 MA's), (Start: 44 @39912 has 38 MA's), (Start: 54 @39882 has 1 MA's), (79, 39774), (107, 39678), (132, 39597), (140, 39573), (142, 39564), (145, 39555), (185, 39450), (187, 39444), (189, 39438), (240, 39294), (246, 39282), (258, 39258), (289, 39171),

Gene: BaghaKamala\_41 Start: 34011, Stop: 33109, Start Num: 20

Candidate Starts for BaghaKamala\_41:

(Start: 20 @34011 has 38 MA's), (Start: 37 @33954 has 2 MA's), (Start: 42 @33948 has 22 MA's), (Start: 49 @33924 has 8 MA's), (Start: 61 @33879 has 5 MA's), (Start: 66 @33855 has 1 MA's), (81, 33789), (85, 33780), (114, 33675), (115, 33672), (117, 33663), (121, 33645), (123, 33639), (141, 33591), (147, 33573), (156, 33543), (161, 33531), (164, 33522), (191, 33450), (214, 33393), (239, 33327), (253, 33300), (265, 33279), (270, 33267),

Gene: Bagrid\_94 Start: 58185, Stop: 57532, Start Num: 61

Candidate Starts for Bagrid\_94:

(Start: 46 @58239 has 32 MA's), (Start: 61 @58185 has 5 MA's), (Start: 62 @58176 has 1 MA's), (96, 58080), (120, 57981), (125, 57969), (137, 57948), (170, 57858), (173, 57852), (204, 57771), (209, 57753), (226, 57714), (232, 57696), (233, 57693), (256, 57642), (263, 57630), (280, 57579),

Gene: Balomoji\_53 Start: 40204, Stop: 39431, Start Num: 35

Candidate Starts for Balomoji\_53:

(Start: 35 @40204 has 112 MA's), (Start: 44 @40180 has 38 MA's), (Start: 54 @40150 has 1 MA's), (79, 40042), (107, 39946), (132, 39865), (140, 39841), (142, 39832), (145, 39823), (185, 39718), (187, 39712), (189, 39706), (240, 39562), (246, 39550), (258, 39526), (289, 39439),

Gene: Baoshan\_38 Start: 33577, Stop: 32798, Start Num: 30

Candidate Starts for Baoshan\_38:

(Start: 30 @33577 has 31 MA's), (50, 33520), (72, 33421), (79, 33400), (85, 33382), (105, 33310), (106, 33304), (117, 33262), (134, 33211), (138, 33199), (140, 33193), (142, 33184), (179, 33088), (231, 32956), (266, 32884),

Gene: Barbarian\_54 Start: 38727, Stop: 37954, Start Num: 35

Candidate Starts for Barbarian\_54:

(Start: 35 @38727 has 112 MA's), (Start: 44 @38703 has 38 MA's), (Start: 54 @38673 has 1 MA's), (79, 38565), (107, 38469), (132, 38388), (140, 38364), (142, 38355), (145, 38346), (185, 38241), (187, 38235), (189, 38229), (240, 38085), (246, 38073), (258, 38049), (289, 37962),

Gene: BarrelRoll\_42 Start: 34494, Stop: 33655, Start Num: 42

Candidate Starts for BarrelRoll\_42:

(Start: 20 @34557 has 38 MA's), (Start: 37 @34500 has 2 MA's), (Start: 42 @34494 has 22 MA's), (Start: 49 @34470 has 8 MA's), (Start: 55 @34449 has 6 MA's), (Start: 61 @34425 has 5 MA's), (81, 34335), (85, 34326), (114, 34221), (115, 34218), (117, 34209), (121, 34191), (123, 34185), (141, 34137), (147, 34119), (156, 34089), (161, 34077), (164, 34068), (186, 34011), (191, 33996), (214, 33939), (232, 33888), (239, 33873), (253, 33846), (270, 33813),

Gene: Bask21\_55 Start: 39043, Stop: 38288, Start Num: 35

Candidate Starts for Bask21\_55:

(Start: 35 @39043 has 112 MA's), (Start: 44 @39019 has 38 MA's), (Start: 54 @38989 has 1 MA's), (79, 38881), (107, 38785), (132, 38704), (145, 38680), (185, 38575), (187, 38569), (189, 38563), (240, 38419), (246, 38407), (258, 38383), (289, 38296),

Gene: Baudelaire\_42 Start: 36206, Stop: 35445, Start Num: 44

Candidate Starts for Baudelaire\_42:

(Start: 44 @36206 has 38 MA's), (59, 36155), (68, 36104), (79, 36068), (112, 35954), (141, 35861), (142, 35858), (165, 35798), (181, 35765), (184, 35753), (201, 35711), (203, 35705), (235, 35606), (255, 35573),

Gene: Bazzle\_39 Start: 33979, Stop: 33200, Start Num: 30

Candidate Starts for Bazzle\_39:

(Start: 30 @33979 has 31 MA's), (50, 33922), (85, 33784), (99, 33736), (105, 33712), (106, 33706), (117, 33664), (138, 33601), (205, 33424), (238, 33340), (243, 33331), (266, 33286),

Gene: Beem\_96 Start: 59100, Stop: 58393, Start Num: 46

Candidate Starts for Beem\_96:

(Start: 46 @59100 has 32 MA's), (Start: 61 @59046 has 5 MA's), (Start: 62 @59037 has 1 MA's), (96, 58941), (120, 58842), (125, 58830), (137, 58809), (170, 58719), (173, 58713), (204, 58632), (209, 58614), (226, 58575), (232, 58557), (233, 58554), (256, 58503), (263, 58491), (280, 58440),

Gene: Beezoo\_44 Start: 35566, Stop: 34634, Start Num: 14

Candidate Starts for Beezoo\_44:

(Start: 14 @35566 has 1 MA's), (Start: 20 @35536 has 38 MA's), (Start: 25 @35515 has 2 MA's), (Start: 37 @35479 has 2 MA's), (Start: 42 @35473 has 22 MA's), (Start: 49 @35449 has 8 MA's), (Start: 61 @35404 has 5 MA's), (Start: 66 @35380 has 1 MA's), (81, 35314), (85, 35305), (114, 35200), (115, 35197), (117, 35188), (139, 35125), (141, 35116), (147, 35098), (156, 35068), (161, 35056), (164, 35047), (214, 34918), (232, 34867), (239, 34852), (253, 34825), (265, 34804), (270, 34792),

Gene: Bella96\_43 Start: 35364, Stop: 34525, Start Num: 42

Candidate Starts for Bella96\_43:

(Start: 21 @35418 has 8 MA's), (Start: 37 @35370 has 2 MA's), (Start: 42 @35364 has 22 MA's), (Start: 49 @35340 has 8 MA's), (53, 35325), (56, 35316), (Start: 61 @35295 has 5 MA's), (Start: 66 @35271 has 1 MA's), (69, 35244), (81, 35205), (85, 35196), (114, 35091), (115, 35088), (121, 35061), (123, 35055), (130, 35037), (139, 35016), (141, 35007), (147, 34989), (161, 34947), (164, 34938), (191, 34866), (214, 34809), (232, 34758), (239, 34743), (265, 34695), (270, 34683), (294, 34593),

Gene: Belladonna\_42 Start: 34689, Stop: 33787, Start Num: 20

Candidate Starts for Belladonna\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: Bellis\_37 Start: 33980, Stop: 33189, Start Num: 33

Candidate Starts for Bellis\_37:

(11, 34070), (19, 34028), (Start: 33 @33980 has 15 MA's), (Start: 42 @33962 has 22 MA's), (52, 33926), (70, 33842), (73, 33830), (92, 33779), (95, 33770), (106, 33719), (108, 33713), (142, 33602), (183, 33488), (191, 33461), (212, 33404), (259, 33290), (277, 33236), (287, 33203),

Gene: Bench\_56 Start: 39705, Stop: 38932, Start Num: 35

Candidate Starts for Bench\_56:

(Start: 35 @39705 has 112 MA's), (Start: 44 @39681 has 38 MA's), (Start: 54 @39651 has 1 MA's), (79, 39543), (107, 39447), (132, 39366), (140, 39342), (142, 39333), (145, 39324), (185, 39219), (187, 39213), (189, 39207), (240, 39063), (246, 39051), (258, 39027), (289, 38940),

Gene: BigBubba\_55 Start: 39746, Stop: 38973, Start Num: 35

Candidate Starts for BigBubba\_55:

(Start: 35 @39746 has 112 MA's), (Start: 44 @39722 has 38 MA's), (Start: 54 @39692 has 1 MA's), (79, 39584), (107, 39488), (132, 39407), (140, 39383), (142, 39374), (145, 39365), (185, 39260), (187, 39254), (189, 39248), (240, 39104), (246, 39092), (258, 39068), (289, 38981),

Gene: BigCheese\_39 Start: 33739, Stop: 32960, Start Num: 30

Candidate Starts for BigCheese\_39:

(Start: 30 @33739 has 31 MA's), (50, 33682), (67, 33610), (72, 33583), (85, 33544), (105, 33472), (106, 33466), (117, 33424), (177, 33256), (205, 33184), (243, 33091), (245, 33085), (266, 33046),

Gene: Biglebops\_37 Start: 34082, Stop: 33180, Start Num: 43

Candidate Starts for Biglebops\_37:

(Start: 35 @34100 has 112 MA's), (Start: 43 @34082 has 12 MA's), (57, 34034), (Start: 62 @34007 has 1 MA's), (Start: 65 @33989 has 1 MA's), (70, 33956), (74, 33938), (77, 33932), (81, 33920), (106, 33836), (110, 33821), (114, 33806), (126, 33764), (138, 33728), (143, 33710), (158, 33668), (169, 33650), (183, 33611), (207, 33542), (222, 33503), (227, 33488), (251, 33434), (262, 33416), (270, 33398), (280, 33359), (297, 33293), (314, 33203),

Gene: BilboSwaggins\_53 Start: 40213, Stop: 39602, Start Num: 79

Candidate Starts for BilboSwaggins\_53:

(Start: 35 @40375 has 112 MA's), (Start: 44 @40351 has 38 MA's), (Start: 54 @40321 has 1 MA's), (79, 40213), (107, 40117), (132, 40036), (140, 40012), (142, 40003), (145, 39994), (185, 39889), (187, 39883), (189, 39877), (240, 39733), (246, 39721), (258, 39697), (289, 39610),

Gene: Blizzard\_42 Start: 34886, Stop: 33984, Start Num: 20

Candidate Starts for Blizzard\_42:



(Start: 20 @34886 has 38 MA's), (Start: 25 @34865 has 2 MA's), (Start: 37 @34829 has 2 MA's), (Start: 42 @34823 has 22 MA's), (Start: 49 @34799 has 8 MA's), (Start: 55 @34778 has 6 MA's), (Start: 61 @34754 has 5 MA's), (81, 34664), (85, 34655), (114, 34550), (115, 34547), (117, 34538), (121, 34520), (123, 34514), (141, 34466), (147, 34448), (156, 34418), (161, 34406), (164, 34397), (191, 34325), (214, 34268), (232, 34217), (239, 34202), (253, 34175), (265, 34154), (270, 34142),

Gene: Bobby\_87 Start: 57466, Stop: 56759, Start Num: 46

Candidate Starts for Bobby\_87:

(Start: 46 @57466 has 32 MA's), (Start: 61 @57412 has 5 MA's), (Start: 62 @57403 has 1 MA's), (67, 57379), (96, 57307), (120, 57208), (125, 57196), (137, 57175), (170, 57085), (173, 57079), (204, 56998), (209, 56980), (226, 56941), (232, 56923), (233, 56920), (256, 56869), (263, 56857), (280, 56806),

Gene: BobsGarage\_39 Start: 33739, Stop: 32960, Start Num: 30

Candidate Starts for BobsGarage\_39:

(Start: 30 @33739 has 31 MA's), (50, 33682), (67, 33610), (72, 33583), (85, 33544), (105, 33472), (106, 33466), (117, 33424), (177, 33256), (205, 33184), (243, 33091), (245, 33085), (266, 33046),

Gene: Boiiii\_42 Start: 34825, Stop: 33986, Start Num: 42

Candidate Starts for Boiiii\_42:

(Start: 20 @34888 has 38 MA's), (Start: 25 @34867 has 2 MA's), (Start: 37 @34831 has 2 MA's), (Start: 42 @34825 has 22 MA's), (Start: 49 @34801 has 8 MA's), (Start: 55 @34780 has 6 MA's), (Start: 61 @34756 has 5 MA's), (81, 34666), (85, 34657), (114, 34552), (115, 34549), (117, 34540), (121, 34522), (123, 34516), (141, 34468), (147, 34450), (156, 34420), (161, 34408), (164, 34399), (191, 34327), (214, 34270), (232, 34219), (239, 34204), (253, 34177), (265, 34156), (270, 34144),

Gene: Boilgate\_41 Start: 35761, Stop: 34991, Start Num: 44

Candidate Starts for Boilgate\_41:

(Start: 44 @35761 has 38 MA's), (50, 35743), (58, 35719), (59, 35710), (63, 35689), (70, 35650), (86, 35605), (93, 35590), (109, 35521), (111, 35515), (114, 35503), (126, 35461), (142, 35416), (165, 35350), (199, 35266), (214, 35221), (222, 35203), (236, 35158), (262, 35107), (273, 35080), (275, 35071), (283, 35041), (295, 34996),

Gene: Bombitas\_84 Start: 56263, Stop: 55556, Start Num: 46

Candidate Starts for Bombitas\_84:

(Start: 46 @56263 has 32 MA's), (Start: 61 @56209 has 5 MA's), (Start: 62 @56200 has 1 MA's), (96, 56104), (120, 56005), (125, 55993), (137, 55972), (170, 55882), (173, 55876), (204, 55795), (209, 55777), (226, 55738), (232, 55720), (233, 55717), (256, 55666), (263, 55654), (280, 55603),

Gene: BoostSeason\_45 Start: 36162, Stop: 35314, Start Num: 41

Candidate Starts for BoostSeason\_45:

(Start: 41 @36162 has 8 MA's), (51, 36129), (90, 35979), (114, 35886), (124, 35847), (128, 35841), (133, 35826), (142, 35796), (147, 35781), (169, 35736), (280, 35451), (290, 35421),

Gene: BourbonZero\_36 Start: 33952, Stop: 33161, Start Num: 33

Candidate Starts for BourbonZero\_36:

(Start: 33 @33952 has 15 MA's), (52, 33898), (84, 33775), (95, 33742), (106, 33691), (108, 33685), (142, 33574), (183, 33460), (191, 33433), (212, 33376), (222, 33349), (287, 33175),

Gene: BrainDrainer\_37 Start: 32627, Stop: 31839, Start Num: 30

Candidate Starts for BrainDrainer\_37:

(Start: 30 @32627 has 31 MA's), (50, 32570), (53, 32561), (Start: 65 @32510 has 1 MA's), (72, 32471), (77, 32453), (102, 32375), (105, 32360), (106, 32354), (117, 32312), (143, 32231), (158,

32189), (165, 32171), (196, 32087), (206, 32066), (238, 31976), (259, 31934), (266, 31922),

Gene: Breezona\_39 Start: 33739, Stop: 32960, Start Num: 30

Candidate Starts for Breezona\_39:

(Start: 30 @33739 has 31 MA's), (50, 33682), (67, 33610), (72, 33583), (85, 33544), (105, 33472), (106, 33466), (117, 33424), (177, 33256), (205, 33184), (243, 33091), (245, 33085), (266, 33046),

Gene: Bromden\_38 Start: 33174, Stop: 32386, Start Num: 30

Candidate Starts for Bromden\_38:

(Start: 30 @33174 has 31 MA's), (50, 33117), (51, 33114), (72, 33018), (79, 32997), (84, 32985), (102, 32922), (105, 32907), (106, 32901), (117, 32859), (140, 32790), (155, 32745), (174, 32700), (190, 32649), (193, 32640), (196, 32634), (217, 32586), (220, 32574), (238, 32523), (259, 32481),

Gene: Bruin\_50 Start: 38614, Stop: 37841, Start Num: 35

Candidate Starts for Bruin\_50:

(Start: 35 @38614 has 112 MA's), (Start: 44 @38590 has 38 MA's), (Start: 54 @38560 has 1 MA's), (79, 38452), (107, 38356), (132, 38275), (140, 38251), (142, 38242), (145, 38233), (185, 38128), (187, 38122), (189, 38116), (240, 37972), (246, 37960), (258, 37936), (289, 37849),

Gene: Bryler\_45 Start: 34405, Stop: 33539, Start Num: 47

Candidate Starts for Bryler\_45:

(Start: 47 @34405 has 24 MA's), (Start: 66 @34333 has 1 MA's), (106, 34189), (115, 34156), (132, 34105), (140, 34081), (142, 34072), (146, 34060), (186, 33955), (192, 33937), (198, 33925), (202, 33913), (217, 33874), (230, 33832), (270, 33757), (276, 33733), (305, 33607),

Gene: Buck\_55 Start: 40321, Stop: 39548, Start Num: 35

Candidate Starts for Buck\_55:

(Start: 35 @40321 has 112 MA's), (Start: 44 @40297 has 38 MA's), (Start: 54 @40267 has 1 MA's), (79, 40159), (107, 40063), (132, 39982), (140, 39958), (142, 39949), (145, 39940), (185, 39835), (187, 39829), (189, 39823), (240, 39679), (246, 39667), (258, 39643), (289, 39556),

Gene: BugsBunny\_55 Start: 40152, Stop: 39379, Start Num: 35

Candidate Starts for BugsBunny\_55:

(Start: 35 @40152 has 112 MA's), (Start: 44 @40128 has 38 MA's), (Start: 54 @40098 has 1 MA's), (79, 39990), (107, 39894), (132, 39813), (140, 39789), (142, 39780), (145, 39771), (185, 39666), (187, 39660), (189, 39654), (240, 39510), (246, 39498), (258, 39474), (289, 39387),

Gene: CREW\_42 Start: 34689, Stop: 33787, Start Num: 20

Candidate Starts for CREW\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: Cactus\_56 Start: 39094, Stop: 38321, Start Num: 35

Candidate Starts for Cactus\_56:

(Start: 35 @39094 has 112 MA's), (Start: 44 @39070 has 38 MA's), (Start: 54 @39040 has 1 MA's), (79, 38932), (107, 38836), (132, 38755), (140, 38731), (142, 38722), (145, 38713), (185, 38608), (187, 38602), (189, 38596), (240, 38452), (246, 38440), (258, 38416), (289, 38329),

Gene: Cain\_45 Start: 34393, Stop: 33527, Start Num: 47

Candidate Starts for Cain\_45:

(Start: 47 @34393 has 24 MA's), (Start: 66 @34321 has 1 MA's), (106, 34177), (115, 34144), (132, 34093), (140, 34069), (142, 34060), (146, 34048), (186, 33943), (192, 33925), (198, 33913), (202, 33901), (217, 33862), (230, 33820), (270, 33745), (276, 33721), (305, 33595),

Gene: Calm\_37 Start: 32389, Stop: 31607, Start Num: 31

Candidate Starts for Calm\_37:

(Start: 31 @32389 has 19 MA's), (38, 32371), (110, 32104), (117, 32077), (118, 32074), (128, 32044), (132, 32032), (139, 32011), (156, 31963), (190, 31870), (206, 31834), (238, 31744), (266, 31690),

Gene: Capricorn\_42 Start: 34626, Stop: 33787, Start Num: 42

Candidate Starts for Capricorn\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: CaseJules\_43 Start: 34823, Stop: 33984, Start Num: 42

Candidate Starts for CaseJules\_43:

(Start: 20 @34886 has 38 MA's), (Start: 25 @34865 has 2 MA's), (Start: 37 @34829 has 2 MA's), (Start: 42 @34823 has 22 MA's), (Start: 49 @34799 has 8 MA's), (Start: 55 @34778 has 6 MA's), (Start: 61 @34754 has 5 MA's), (81, 34664), (85, 34655), (114, 34550), (115, 34547), (117, 34538), (121, 34520), (123, 34514), (141, 34466), (147, 34448), (156, 34418), (161, 34406), (164, 34397), (191, 34325), (214, 34268), (232, 34217), (239, 34202), (253, 34175), (265, 34154), (270, 34142),

Gene: Chancellor\_46 Start: 35595, Stop: 34777, Start Num: 44

Candidate Starts for Chancellor\_46:

(Start: 44 @35595 has 38 MA's), (Start: 46 @35592 has 32 MA's), (50, 35577), (Start: 66 @35514 has 1 MA's), (70, 35484), (76, 35463), (91, 35427), (101, 35391), (111, 35349), (114, 35337), (115, 35334), (126, 35295), (142, 35250), (147, 35235), (162, 35199), (165, 35190), (202, 35097), (222, 35043), (230, 35019), (232, 35013), (236, 34995), (269, 34929), (275, 34908),

Gene: Chaser\_36 Start: 32444, Stop: 31656, Start Num: 30

Candidate Starts for Chaser\_36:

(Start: 30 @32444 has 31 MA's), (50, 32387), (53, 32378), (Start: 65 @32327 has 1 MA's), (72, 32288), (77, 32270), (102, 32192), (105, 32177), (106, 32171), (117, 32129), (143, 32048), (158, 32006), (165, 31988), (189, 31922), (196, 31904), (206, 31883), (238, 31793), (259, 31751), (266, 31739),

Gene: CheetoDust\_41 Start: 34052, Stop: 33159, Start Num: 21

Candidate Starts for CheetoDust\_41:

(Start: 21 @34052 has 8 MA's), (Start: 37 @34004 has 2 MA's), (Start: 42 @33998 has 22 MA's), (Start: 49 @33974 has 8 MA's), (56, 33950), (Start: 61 @33929 has 5 MA's), (85, 33830), (114, 33725), (121, 33695), (139, 33650), (141, 33641), (147, 33623), (156, 33593), (161, 33581), (164, 33572), (175, 33548), (191, 33500), (239, 33377), (265, 33329), (273, 33308),

Gene: Cheetobro\_46 Start: 35592, Stop: 34774, Start Num: 44

Candidate Starts for Cheetobro\_46:

(Start: 44 @35592 has 38 MA's), (Start: 46 @35589 has 32 MA's), (50, 35574), (Start: 66 @35511 has 1 MA's), (70, 35481), (76, 35460), (91, 35424), (101, 35388), (111, 35346), (114, 35334), (115, 35331), (126, 35292), (142, 35247), (147, 35232), (162, 35196), (165, 35187), (202, 35094), (222, 35040), (230, 35016), (232, 35010), (236, 34992), (269, 34926), (275, 34905),

Gene: ChosenOne\_55 Start: 39394, Stop: 38621, Start Num: 35

Candidate Starts for ChosenOne\_55:

(Start: 35 @39394 has 112 MA's), (Start: 44 @39370 has 38 MA's), (Start: 54 @39340 has 1 MA's), (79, 39232), (107, 39136), (132, 39055), (140, 39031), (142, 39022), (145, 39013), (185, 38908), (187, 38902), (189, 38896), (240, 38752), (246, 38740), (258, 38716), (289, 38629),

Gene: ChotaBhai\_54 Start: 39416, Stop: 38643, Start Num: 35

Candidate Starts for ChotaBhai\_54:

(Start: 35 @39416 has 112 MA's), (Start: 44 @39392 has 38 MA's), (Start: 54 @39362 has 1 MA's), (79, 39254), (107, 39158), (132, 39077), (140, 39053), (142, 39044), (145, 39035), (185, 38930), (187, 38924), (189, 38918), (240, 38774), (246, 38762), (258, 38738), (289, 38651),

Gene: Chris\_44 Start: 35259, Stop: 34477, Start Num: 40

Candidate Starts for Chris\_44:

(Start: 40 @35259 has 1 MA's), (Start: 47 @35244 has 24 MA's), (Start: 65 @35181 has 1 MA's), (70, 35148), (71, 35145), (122, 34971), (140, 34926), (141, 34920), (142, 34917), (146, 34905), (152, 34887), (158, 34872), (181, 34821), (211, 34731), (214, 34725), (218, 34716), (232, 34674), (269, 34608), (274, 34593), (276, 34581), (293, 34518), (301, 34482),

Gene: CicholasNage\_37 Start: 32410, Stop: 31628, Start Num: 31

Candidate Starts for CicholasNage\_37:

(Start: 31 @32410 has 19 MA's), (38, 32392), (110, 32125), (117, 32098), (118, 32095), (128, 32065), (132, 32053), (139, 32032), (156, 31984), (190, 31891), (206, 31855), (238, 31765), (266, 31711),

Gene: Cjw1\_54 Start: 40795, Stop: 40022, Start Num: 35

Candidate Starts for Cjw1\_54:

(Start: 35 @40795 has 112 MA's), (Start: 44 @40771 has 38 MA's), (Start: 54 @40741 has 1 MA's), (79, 40633), (107, 40537), (132, 40456), (140, 40432), (142, 40423), (145, 40414), (185, 40309), (187, 40303), (189, 40297), (240, 40153), (246, 40141), (258, 40117), (289, 40030),

Gene: Claus\_40 Start: 33735, Stop: 32956, Start Num: 30

Candidate Starts for Claus\_40:

(Start: 30 @33735 has 31 MA's), (50, 33678), (72, 33579), (79, 33558), (85, 33540), (105, 33468), (106, 33462), (117, 33420), (134, 33369), (138, 33357), (140, 33351), (142, 33342), (177, 33252), (179, 33246), (231, 33114),

Gene: Clautastrophe\_37 Start: 33978, Stop: 33187, Start Num: 33

Candidate Starts for Clautastrophe\_37:

(11, 34068), (19, 34026), (Start: 33 @33978 has 15 MA's), (Start: 42 @33960 has 22 MA's), (52, 33924), (70, 33840), (73, 33828), (92, 33777), (95, 33768), (106, 33717), (108, 33711), (142, 33600), (183, 33486), (191, 33459), (212, 33402), (259, 33288), (277, 33234), (287, 33201),

Gene: Collard\_40 Start: 33961, Stop: 33110, Start Num: 39

Candidate Starts for Collard\_40:

(Start: 39 @33961 has 21 MA's), (71, 33832), (88, 33790), (114, 33691), (117, 33679), (133, 33631), (142, 33601), (148, 33583), (159, 33547), (217, 33388), (221, 33373), (225, 33361), (237, 33328), (242, 33319), (255, 33301), (258, 33295), (267, 33280), (280, 33232), (288, 33211),

Gene: Command613\_56 Start: 40133, Stop: 39360, Start Num: 35

Candidate Starts for Command613\_56:

(Start: 35 @40133 has 112 MA's), (Start: 44 @40109 has 38 MA's), (Start: 54 @40079 has 1 MA's), (79, 39971), (107, 39875), (132, 39794), (140, 39770), (142, 39761), (145, 39752), (185, 39647), (187, 39641), (189, 39635), (240, 39491), (246, 39479), (258, 39455), (289, 39368),

Gene: Constella\_81 Start: 53215, Stop: 52562, Start Num: 61

Candidate Starts for Constella\_81:

(Start: 46 @53269 has 32 MA's), (Start: 61 @53215 has 5 MA's), (Start: 62 @53206 has 1 MA's), (96, 53110), (120, 53011), (125, 52999), (137, 52978), (170, 52888), (173, 52882), (204, 52801), (209, 52783), (226, 52744), (232, 52726), (233, 52723), (256, 52672), (263, 52660), (280, 52609),

Gene: Contagion\_51 Start: 38895, Stop: 38122, Start Num: 35

Candidate Starts for Contagion\_51:

(Start: 35 @38895 has 112 MA's), (Start: 44 @38871 has 38 MA's), (Start: 54 @38841 has 1 MA's), (79, 38733), (107, 38637), (132, 38556), (140, 38532), (142, 38523), (145, 38514), (185, 38409), (187, 38403), (189, 38397), (240, 38253), (246, 38241), (258, 38217), (289, 38130),

Gene: Cookies\_51 Start: 39266, Stop: 38493, Start Num: 35

Candidate Starts for Cookies\_51:

(Start: 35 @39266 has 112 MA's), (Start: 44 @39242 has 38 MA's), (Start: 54 @39212 has 1 MA's), (79, 39104), (107, 39008), (132, 38927), (140, 38903), (142, 38894), (145, 38885), (185, 38780), (187, 38774), (189, 38768), (240, 38624), (246, 38612), (258, 38588), (289, 38501),

Gene: Courthouse\_86 Start: 53071, Stop: 52364, Start Num: 46

Candidate Starts for Courthouse\_86:

(Start: 46 @53071 has 32 MA's), (Start: 61 @53017 has 5 MA's), (Start: 62 @53008 has 1 MA's), (96, 52912), (99, 52894), (120, 52813), (125, 52801), (132, 52795), (134, 52789), (137, 52780), (149, 52738), (172, 52687), (173, 52684), (204, 52603), (209, 52585), (226, 52546), (230, 52534), (232, 52528), (233, 52525), (252, 52483), (256, 52474), (261, 52465), (263, 52462), (280, 52411),

Gene: CrimD\_42 Start: 34709, Stop: 33915, Start Num: 55

Candidate Starts for CrimD\_42:

(Start: 20 @34817 has 38 MA's), (Start: 25 @34796 has 2 MA's), (Start: 37 @34760 has 2 MA's), (Start: 42 @34754 has 22 MA's), (Start: 49 @34730 has 8 MA's), (Start: 55 @34709 has 6 MA's), (Start: 61 @34685 has 5 MA's), (Start: 66 @34661 has 1 MA's), (81, 34595), (85, 34586), (114, 34481), (115, 34478), (117, 34469), (121, 34451), (141, 34397), (147, 34379), (156, 34349), (161, 34337), (164, 34328), (191, 34256), (214, 34199), (232, 34148), (239, 34133), (253, 34106), (265, 34085), (270, 34073),

Gene: Crossroads\_39 Start: 33740, Stop: 32961, Start Num: 30

Candidate Starts for Crossroads\_39:

(Start: 30 @33740 has 31 MA's), (50, 33683), (67, 33611), (85, 33545), (90, 33530), (105, 33473), (106, 33467), (117, 33425), (205, 33185), (243, 33092), (245, 33086), (266, 33047),

Gene: CrystalP\_54 Start: 40375, Stop: 39602, Start Num: 35

Candidate Starts for CrystalP\_54:

(Start: 35 @40375 has 112 MA's), (Start: 44 @40351 has 38 MA's), (Start: 54 @40321 has 1 MA's), (79, 40213), (107, 40117), (132, 40036), (140, 40012), (142, 40003), (145, 39994), (185, 39889), (187, 39883), (189, 39877), (240, 39733), (246, 39721), (258, 39697), (289, 39610),

Gene: Curiosium\_45 Start: 33580, Stop: 32717, Start Num: 49

Candidate Starts for Curiosium\_45:

(10, 33718), (Start: 49 @33580 has 8 MA's), (76, 33463), (93, 33421), (97, 33403), (129, 33286), (132, 33280), (135, 33271), (138, 33262), (142, 33247), (146, 33238), (177, 33160), (181, 33148), (182, 33145), (206, 33076), (217, 33046), (218, 33040), (230, 33004), (232, 32998), (264, 32911), (279, 32860), (280, 32854), (306, 32728),

Gene: Czyszczone1\_55 Start: 39604, Stop: 38831, Start Num: 35

Candidate Starts for Czyszczone1\_55:

(Start: 35 @39604 has 112 MA's), (Start: 44 @39580 has 38 MA's), (Start: 54 @39550 has 1 MA's), (79, 39442), (107, 39346), (132, 39265), (140, 39241), (142, 39232), (145, 39223), (185, 39118), (187, 39112), (189, 39106), (240, 38962), (246, 38950), (258, 38926), (289, 38839),

Gene: DHan\_40 Start: 33676, Stop: 32897, Start Num: 30

Candidate Starts for DHan\_40:

(Start: 30 @33676 has 31 MA's), (50, 33619), (72, 33520), (79, 33499), (85, 33481), (105, 33409), (106, 33403), (117, 33361), (134, 33310), (138, 33298), (140, 33292), (142, 33283), (177, 33193), (179, 33187), (231, 33055),

Gene: Dadosky\_41 Start: 33855, Stop: 33004, Start Num: 39

Candidate Starts for Dadosky\_41:

(13, 33957), (Start: 27 @33891 has 2 MA's), (Start: 39 @33855 has 21 MA's), (Start: 54 @33810 has 1 MA's), (69, 33732), (88, 33684), (114, 33585), (117, 33573), (133, 33525), (142, 33495), (148, 33477), (159, 33441), (162, 33435), (171, 33408), (217, 33282), (221, 33267), (225, 33255), (242, 33213), (267, 33174), (280, 33126),

Gene: Daikon\_55 Start: 40225, Stop: 39452, Start Num: 35

Candidate Starts for Daikon\_55:

(Start: 35 @40225 has 112 MA's), (Start: 44 @40201 has 38 MA's), (Start: 54 @40171 has 1 MA's), (79, 40063), (107, 39967), (132, 39886), (140, 39862), (142, 39853), (145, 39844), (185, 39739), (187, 39733), (189, 39727), (240, 39583), (246, 39571), (258, 39547), (289, 39460),

Gene: Dallas\_97 Start: 59108, Stop: 58401, Start Num: 46

Candidate Starts for Dallas\_97:

(Start: 46 @59108 has 32 MA's), (Start: 61 @59054 has 5 MA's), (Start: 62 @59045 has 1 MA's), (96, 58949), (120, 58850), (125, 58838), (137, 58817), (170, 58727), (173, 58721), (204, 58640), (209, 58622), (226, 58583), (232, 58565), (233, 58562), (256, 58511), (263, 58499), (280, 58448),

Gene: Dalmuri\_42 Start: 34689, Stop: 33787, Start Num: 20

Candidate Starts for Dalmuri\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: DanBing\_39 Start: 33568, Stop: 32789, Start Num: 30

Candidate Starts for DanBing\_39:

(Start: 30 @33568 has 31 MA's), (50, 33511), (72, 33412), (79, 33391), (85, 33373), (105, 33301), (106, 33295), (117, 33253), (134, 33202), (138, 33190), (140, 33184), (142, 33175), (179, 33079), (231, 32947),

Gene: DarthP\_44 Start: 35487, Stop: 34669, Start Num: 47

Candidate Starts for DarthP\_44:

(Start: 47 @35487 has 24 MA's), (67, 35406), (80, 35358), (91, 35331), (132, 35187), (140, 35163), (142, 35154), (146, 35142), (148, 35136), (152, 35124), (178, 35067), (192, 35022), (202, 34998), (224, 34935), (230, 34917), (236, 34908), (262, 34860), (267, 34851), (280, 34800), (305, 34704),

Gene: Dartin\_44 Start: 35155, Stop: 34205, Start Num: 43

Candidate Starts for Dartin\_44:

(8, 35275), (9, 35272), (Start: 43 @35155 has 12 MA's), (57, 35107), (59, 35095), (64, 35068), (Start: 65 @35062 has 1 MA's), (67, 35050), (97, 34948), (106, 34909), (110, 34894), (114, 34879), (140, 34795), (142, 34786), (159, 34750), (192, 34669), (223, 34588), (229, 34570), (269, 34492), (270, 34489), (280, 34450), (304, 34360), (313, 34252),

Gene: Deby\_42 Start: 34754, Stop: 33915, Start Num: 42

Candidate Starts for Deby\_42:

(Start: 21 @34808 has 8 MA's), (Start: 37 @34760 has 2 MA's), (Start: 42 @34754 has 22 MA's), (Start: 49 @34730 has 8 MA's), (Start: 61 @34685 has 5 MA's), (85, 34586), (114, 34481), (115, 34478), (117, 34469), (121, 34451), (141, 34397), (147, 34379), (156, 34349), (161, 34337), (164, 34328), (191, 34256), (214, 34199), (239, 34133), (253, 34106), (265, 34085), (270, 34073),

Gene: Devera\_46 Start: 35291, Stop: 34452, Start Num: 42

Candidate Starts for Devera\_46:

(Start: 42 @35291 has 22 MA's), (Start: 55 @35246 has 6 MA's), (Start: 61 @35222 has 5 MA's), (Start: 66 @35198 has 1 MA's), (81, 35132), (85, 35123), (88, 35117), (114, 35018), (115, 35015), (117, 35006), (121, 34988), (139, 34943), (141, 34934), (161, 34874), (164, 34865), (191, 34793), (193, 34787), (211, 34742), (214, 34736), (218, 34727), (232, 34685), (239, 34670), (247, 34652), (265, 34622), (270, 34610), (280, 34571),

Gene: DirkDirk\_36 Start: 32376, Stop: 31594, Start Num: 31

Candidate Starts for DirkDirk\_36:

(Start: 31 @32376 has 19 MA's), (38, 32358), (110, 32091), (117, 32064), (118, 32061), (128, 32031), (132, 32019), (139, 31998), (156, 31950), (190, 31857), (206, 31821), (238, 31731), (266, 31677),

Gene: DismalFunk\_45 Start: 36592, Stop: 35744, Start Num: 41

Candidate Starts for DismalFunk\_45:

(Start: 41 @36592 has 8 MA's), (59, 36529), (68, 36478), (83, 36430), (110, 36334), (114, 36319), (128, 36274), (135, 36253), (142, 36229), (160, 36178), (169, 36169), (211, 36049), (217, 36040), (267, 35932), (273, 35914), (275, 35905), (280, 35884),

Gene: DismalStressor\_45 Start: 36592, Stop: 35744, Start Num: 41

Candidate Starts for DismalStressor\_45:

(Start: 41 @36592 has 8 MA's), (59, 36529), (68, 36478), (83, 36430), (110, 36334), (114, 36319), (128, 36274), (135, 36253), (142, 36229), (160, 36178), (169, 36169), (211, 36049), (217, 36040), (267, 35932), (273, 35914), (275, 35905), (280, 35884),

Gene: DmpstrDiver\_97 Start: 58533, Stop: 57826, Start Num: 46

Candidate Starts for DmpstrDiver\_97:

(Start: 46 @58533 has 32 MA's), (Start: 61 @58479 has 5 MA's), (Start: 62 @58470 has 1 MA's), (67, 58446), (96, 58374), (120, 58275), (125, 58263), (137, 58242), (170, 58152), (173, 58146), (204, 58065), (209, 58047), (226, 58008), (232, 57990), (233, 57987), (256, 57936), (263, 57924), (280, 57873),

Gene: DoctorDiddles\_54 Start: 39452, Stop: 38679, Start Num: 35

Candidate Starts for DoctorDiddles\_54:

(Start: 35 @39452 has 112 MA's), (Start: 44 @39428 has 38 MA's), (Start: 54 @39398 has 1 MA's), (79, 39290), (107, 39194), (132, 39113), (140, 39089), (142, 39080), (145, 39071), (185, 38966), (187, 38960), (189, 38954), (240, 38810), (246, 38798), (258, 38774), (289, 38687),

Gene: Dole\_45 Start: 35293, Stop: 34454, Start Num: 42

Candidate Starts for Dole\_45:

(Start: 42 @35293 has 22 MA's), (Start: 55 @35248 has 6 MA's), (Start: 61 @35224 has 5 MA's), (Start: 66 @35200 has 1 MA's), (81, 35134), (85, 35125), (88, 35119), (114, 35020), (115, 35017), (117, 35008), (121, 34990), (139, 34945), (141, 34936), (161, 34876), (164, 34867), (191, 34795), (193, 34789), (211, 34744), (214, 34738), (218, 34729), (232, 34687), (239, 34672), (247, 34654), (265, 34624), (270, 34612), (280, 34573),

Gene: Douge\_36 Start: 32382, Stop: 31594, Start Num: 30

Candidate Starts for Douge\_36:

(Start: 30 @32382 has 31 MA's), (50, 32325), (53, 32316), (Start: 65 @32265 has 1 MA's), (72, 32226), (77, 32208), (102, 32130), (105, 32115), (106, 32109), (117, 32067), (143, 31986), (158, 31944), (165, 31926), (196, 31842), (206, 31821), (238, 31731), (259, 31689), (266, 31677),

Gene: Douzhi\_36 Start: 32488, Stop: 31700, Start Num: 30

Candidate Starts for Douzhi\_36:

(Start: 30 @32488 has 31 MA's), (50, 32431), (53, 32422), (Start: 65 @32371 has 1 MA's), (72, 32332), (77, 32314), (102, 32236), (105, 32221), (106, 32215), (117, 32173), (143, 32092), (158, 32050), (165, 32032), (196, 31948), (206, 31927), (216, 31903), (238, 31837), (259, 31795), (266, 31783),

Gene: DrDrey\_54 Start: 40523, Stop: 39750, Start Num: 35

Candidate Starts for DrDrey\_54:

(Start: 35 @40523 has 112 MA's), (Start: 44 @40499 has 38 MA's), (Start: 54 @40469 has 1 MA's), (79, 40361), (107, 40265), (132, 40184), (140, 40160), (142, 40151), (145, 40142), (185, 40037), (187, 40031), (189, 40025), (240, 39881), (246, 39869), (258, 39845), (289, 39758),

Gene: DrHayes\_43 Start: 35473, Stop: 34568, Start Num: 20

Candidate Starts for DrHayes\_43:

(Start: 20 @35473 has 38 MA's), (Start: 37 @35413 has 2 MA's), (Start: 42 @35407 has 22 MA's), (Start: 49 @35383 has 8 MA's), (53, 35368), (56, 35359), (Start: 61 @35338 has 5 MA's), (Start: 66 @35314 has 1 MA's), (69, 35287), (81, 35248), (85, 35239), (114, 35134), (115, 35131), (121, 35104), (130, 35080), (139, 35059), (141, 35050), (147, 35032), (161, 34990), (164, 34981), (180, 34945), (191, 34909), (214, 34852), (239, 34786), (270, 34726), (294, 34636),

Gene: DrSeegs\_39 Start: 33739, Stop: 32960, Start Num: 30

Candidate Starts for DrSeegs\_39:

(Start: 30 @33739 has 31 MA's), (50, 33682), (67, 33610), (72, 33583), (85, 33544), (105, 33472), (106, 33466), (117, 33424), (177, 33256), (205, 33184), (243, 33091), (245, 33085), (266, 33046),

Gene: Duke13\_91 Start: 57040, Stop: 56333, Start Num: 46

Candidate Starts for Duke13\_91:

(Start: 46 @57040 has 32 MA's), (Start: 61 @56986 has 5 MA's), (Start: 62 @56977 has 1 MA's), (96, 56881), (120, 56782), (125, 56770), (137, 56749), (170, 56659), (173, 56653), (204, 56572), (209, 56554), (226, 56515), (232, 56497), (233, 56494), (256, 56443), (263, 56431), (280, 56380),

Gene: Dumbo\_54 Start: 39299, Stop: 38526, Start Num: 35

Candidate Starts for Dumbo\_54:

(Start: 35 @39299 has 112 MA's), (Start: 44 @39275 has 38 MA's), (Start: 54 @39245 has 1 MA's), (79, 39137), (107, 39041), (132, 38960), (140, 38936), (142, 38927), (145, 38918), (185, 38813), (187, 38807), (189, 38801), (240, 38657), (246, 38645), (258, 38621), (289, 38534),

Gene: DuncansLeg\_37 Start: 33989, Stop: 33198, Start Num: 33

Candidate Starts for DuncansLeg\_37:



(Start: 33 @33989 has 15 MA's), (52, 33935), (84, 33812), (95, 33779), (106, 33728), (108, 33722), (142, 33611), (183, 33497), (191, 33470), (212, 33413), (222, 33386), (287, 33212),

Gene: Durfee\_42 Start: 34886, Stop: 33984, Start Num: 20

Candidate Starts for Durfee\_42:

(Start: 20 @34886 has 38 MA's), (Start: 25 @34865 has 2 MA's), (Start: 37 @34829 has 2 MA's), (Start: 42 @34823 has 22 MA's), (Start: 49 @34799 has 8 MA's), (Start: 55 @34778 has 6 MA's), (Start: 61 @34754 has 5 MA's), (81, 34664), (85, 34655), (114, 34550), (115, 34547), (117, 34538), (121, 34520), (123, 34514), (141, 34466), (147, 34448), (156, 34418), (161, 34406), (164, 34397), (191, 34325), (214, 34268), (232, 34217), (239, 34202), (253, 34175), (265, 34154), (270, 34142),

Gene: Dusk\_52 Start: 39596, Stop: 38823, Start Num: 35

Candidate Starts for Dusk\_52:

(Start: 35 @39596 has 112 MA's), (Start: 44 @39572 has 38 MA's), (Start: 54 @39542 has 1 MA's), (79, 39434), (107, 39338), (132, 39257), (140, 39233), (142, 39224), (145, 39215), (185, 39110), (187, 39104), (189, 39098), (240, 38954), (246, 38942), (258, 38918), (289, 38831),

Gene: DyoEdafos\_38 Start: 32716, Stop: 31928, Start Num: 30

Candidate Starts for DyoEdafos\_38:

(Start: 30 @32716 has 31 MA's), (50, 32659), (Start: 65 @32599 has 1 MA's), (72, 32560), (77, 32542), (102, 32464), (105, 32449), (106, 32443), (117, 32401), (143, 32320), (154, 32290), (158, 32278), (165, 32260), (193, 32182), (196, 32176), (238, 32065), (259, 32023), (266, 32011),

Gene: Easy2Say\_55 Start: 40837, Stop: 40064, Start Num: 35

Candidate Starts for Easy2Say\_55:

(Start: 35 @40837 has 112 MA's), (Start: 44 @40813 has 38 MA's), (Start: 54 @40783 has 1 MA's), (79, 40675), (107, 40579), (132, 40498), (140, 40474), (142, 40465), (145, 40456), (185, 40351), (187, 40345), (189, 40339), (240, 40195), (246, 40183), (258, 40159), (289, 40072),

Gene: Edugator\_40 Start: 34316, Stop: 33429, Start Num: 27

Candidate Starts for Edugator\_40:

(13, 34382), (Start: 27 @34316 has 2 MA's), (Start: 39 @34280 has 21 MA's), (Start: 54 @34235 has 1 MA's), (69, 34157), (88, 34109), (108, 34031), (114, 34010), (117, 33998), (133, 33950), (142, 33920), (148, 33902), (159, 33866), (171, 33833), (217, 33707), (221, 33692), (225, 33680), (242, 33638), (267, 33599), (280, 33551),

Gene: Efra2\_45 Start: 34522, Stop: 33767, Start Num: 49

Candidate Starts for Efra2\_45:

(Start: 49 @34522 has 8 MA's), (91, 34366), (103, 34324), (141, 34192), (142, 34189), (148, 34171), (155, 34147), (159, 34141), (174, 34114), (177, 34105), (178, 34102), (192, 34057), (199, 34042), (202, 34033), (239, 33943), (240, 33940),

Gene: Ejimix\_89 Start: 58827, Stop: 58120, Start Num: 46

Candidate Starts for Ejimix\_89:

(Start: 46 @58827 has 32 MA's), (Start: 61 @58773 has 5 MA's), (Start: 62 @58764 has 1 MA's), (96, 58668), (120, 58569), (125, 58557), (137, 58536), (170, 58446), (173, 58440), (204, 58359), (209, 58341), (226, 58302), (232, 58284), (233, 58281), (256, 58230), (263, 58218), (280, 58167),

Gene: Ekdilam\_41 Start: 35048, Stop: 34230, Start Num: 47

Candidate Starts for Ekdilam\_41:

(Start: 47 @35048 has 24 MA's), (67, 34967), (80, 34919), (91, 34892), (96, 34880), (115, 34799), (132, 34748), (140, 34724), (142, 34715), (146, 34703), (148, 34697), (152, 34685), (187, 34598), (202, 34559), (225, 34493), (229, 34481), (236, 34469), (255, 34433), (260, 34424), (276, 34379),

(280, 34361), (282, 34355),

Gene: Elite2014\_54 Start: 39393, Stop: 38620, Start Num: 35

Candidate Starts for Elite2014\_54:

(Start: 35 @39393 has 112 MA's), (Start: 44 @39369 has 38 MA's), (Start: 54 @39339 has 1 MA's), (79, 39231), (107, 39135), (132, 39054), (140, 39030), (142, 39021), (145, 39012), (185, 38907), (187, 38901), (189, 38895), (240, 38751), (246, 38739), (258, 38715), (289, 38628),

Gene: Ellie\_40 Start: 34710, Stop: 33877, Start Num: 49

Candidate Starts for Ellie\_40:

(Start: 49 @34710 has 8 MA's), (60, 34671), (Start: 65 @34647 has 1 MA's), (69, 34617), (132, 34416), (140, 34392), (142, 34383), (146, 34371), (148, 34365), (152, 34353), (166, 34320), (174, 34299), (176, 34293), (181, 34278), (198, 34230), (202, 34218), (268, 34065), (274, 34047), (276, 34035), (280, 34017),

Gene: Ellson\_37 Start: 33965, Stop: 33174, Start Num: 33

Candidate Starts for Ellson\_37:

(Start: 33 @33965 has 15 MA's), (52, 33911), (84, 33788), (95, 33755), (106, 33704), (108, 33698), (142, 33587), (183, 33473), (191, 33446), (212, 33389), (222, 33362), (287, 33188),

Gene: Elph10\_54 Start: 39102, Stop: 38329, Start Num: 35

Candidate Starts for Elph10\_54:

(Start: 35 @39102 has 112 MA's), (Start: 44 @39078 has 38 MA's), (Start: 54 @39048 has 1 MA's), (79, 38940), (107, 38844), (132, 38763), (140, 38739), (142, 38730), (145, 38721), (185, 38616), (187, 38610), (189, 38604), (240, 38460), (246, 38448), (258, 38424), (289, 38337),

Gene: Emerson\_43 Start: 34457, Stop: 33663, Start Num: 55

Candidate Starts for Emerson\_43:

(Start: 20 @34565 has 38 MA's), (Start: 37 @34508 has 2 MA's), (Start: 42 @34502 has 22 MA's), (Start: 49 @34478 has 8 MA's), (Start: 55 @34457 has 6 MA's), (Start: 61 @34433 has 5 MA's), (81, 34343), (85, 34334), (114, 34229), (115, 34226), (117, 34217), (121, 34199), (123, 34193), (141, 34145), (147, 34127), (156, 34097), (161, 34085), (164, 34076), (186, 34019), (191, 34004), (214, 33947), (232, 33896), (239, 33881), (253, 33854), (265, 33833), (270, 33821),

Gene: Emmina\_54 Start: 39276, Stop: 38527, Start Num: 44

Candidate Starts for Emmina\_54:

(Start: 35 @39300 has 112 MA's), (Start: 44 @39276 has 38 MA's), (Start: 54 @39246 has 1 MA's), (79, 39138), (107, 39042), (132, 38961), (140, 38937), (142, 38928), (145, 38919), (185, 38814), (187, 38808), (189, 38802), (240, 38658), (246, 38646), (258, 38622), (289, 38535),

Gene: Enceladus\_36 Start: 32359, Stop: 31577, Start Num: 31

Candidate Starts for Enceladus\_36:

(Start: 31 @32359 has 19 MA's), (38, 32341), (110, 32074), (117, 32047), (118, 32044), (128, 32014), (132, 32002), (139, 31981), (156, 31933), (190, 31840), (206, 31804), (238, 31714), (266, 31660),

Gene: Enkosi\_40 Start: 36695, Stop: 35793, Start Num: 43

Candidate Starts for Enkosi\_40:

(Start: 35 @36713 has 112 MA's), (Start: 43 @36695 has 12 MA's), (57, 36647), (Start: 62 @36620 has 1 MA's), (Start: 65 @36602 has 1 MA's), (70, 36569), (74, 36551), (77, 36545), (81, 36533), (106, 36449), (110, 36434), (114, 36419), (126, 36377), (138, 36341), (143, 36323), (158, 36281), (169, 36263), (183, 36224), (192, 36194), (207, 36155), (222, 36116), (227, 36101), (251, 36047), (262, 36029), (270, 36011), (280, 35972), (297, 35906), (314, 35816),

Gene: Eponine\_48 Start: 36348, Stop: 35530, Start Num: 44

Candidate Starts for Eponine\_48:

(Start: 44 @36348 has 38 MA's), (Start: 46 @36345 has 32 MA's), (50, 36330), (Start: 66 @36267 has 1 MA's), (70, 36237), (76, 36216), (91, 36180), (101, 36144), (111, 36102), (114, 36090), (115, 36087), (126, 36048), (142, 36003), (147, 35988), (162, 35952), (165, 35943), (202, 35850), (222, 35796), (230, 35772), (232, 35766), (236, 35748), (269, 35682), (275, 35661),

Gene: EricMillard\_89 Start: 58168, Stop: 57461, Start Num: 46

Candidate Starts for EricMillard\_89:

(Start: 46 @58168 has 32 MA's), (Start: 61 @58114 has 5 MA's), (Start: 62 @58105 has 1 MA's), (67, 58081), (96, 58009), (120, 57910), (125, 57898), (137, 57877), (170, 57787), (173, 57781), (204, 57700), (209, 57682), (226, 57643), (232, 57625), (233, 57622), (256, 57571), (263, 57559), (280, 57508),

Gene: Eureka\_52 Start: 39864, Stop: 39091, Start Num: 35

Candidate Starts for Eureka\_52:

(Start: 35 @39864 has 112 MA's), (Start: 44 @39840 has 38 MA's), (Start: 54 @39810 has 1 MA's), (79, 39702), (107, 39606), (132, 39525), (140, 39501), (142, 39492), (145, 39483), (185, 39378), (187, 39372), (189, 39366), (240, 39222), (246, 39210), (258, 39186), (289, 39099),

Gene: Faith1\_39 Start: 33739, Stop: 32960, Start Num: 30

Candidate Starts for Faith1\_39:

(Start: 30 @33739 has 31 MA's), (50, 33682), (67, 33610), (72, 33583), (85, 33544), (105, 33472), (106, 33466), (117, 33424), (177, 33256), (205, 33184), (243, 33091), (245, 33085), (266, 33046),

Gene: FarmResident\_36 Start: 32309, Stop: 31638, Start Num: 65

Candidate Starts for FarmResident\_36:

(Start: 30 @32426 has 31 MA's), (50, 32369), (53, 32360), (Start: 65 @32309 has 1 MA's), (72, 32270), (77, 32252), (102, 32174), (105, 32159), (106, 32153), (117, 32111), (143, 32030), (158, 31988), (165, 31970), (196, 31886), (206, 31865), (238, 31775), (259, 31733), (266, 31721),

Gene: Fefferhead\_42 Start: 34661, Stop: 33828, Start Num: 49

Candidate Starts for Fefferhead\_42:

(Start: 49 @34661 has 8 MA's), (60, 34622), (Start: 65 @34598 has 1 MA's), (69, 34568), (132, 34367), (140, 34343), (142, 34334), (146, 34322), (148, 34316), (152, 34304), (166, 34271), (174, 34250), (176, 34244), (198, 34181), (202, 34169), (230, 34085), (268, 34016), (274, 33998), (276, 33986), (280, 33968),

Gene: Feyre\_40 Start: 33712, Stop: 32870, Start Num: 39

Candidate Starts for Feyre\_40:

(Start: 39 @33712 has 21 MA's), (Start: 54 @33670 has 1 MA's), (106, 33475), (114, 33445), (136, 33376), (138, 33370), (142, 33355), (148, 33337), (161, 33301), (184, 33229), (221, 33130), (230, 33103), (233, 33094), (237, 33085), (255, 33058), (258, 33052), (267, 33037), (276, 33007), (280, 32989), (288, 32968),

Gene: Filch\_55 Start: 39325, Stop: 38552, Start Num: 35

Candidate Starts for Filch\_55:

(Start: 35 @39325 has 112 MA's), (Start: 44 @39301 has 38 MA's), (Start: 54 @39271 has 1 MA's), (79, 39163), (107, 39067), (132, 38986), (140, 38962), (142, 38953), (145, 38944), (185, 38839), (187, 38833), (189, 38827), (240, 38683), (246, 38671), (258, 38647), (289, 38560),

Gene: Findley\_45 Start: 36585, Stop: 35737, Start Num: 41

Candidate Starts for Findley\_45:

(Start: 41 @36585 has 8 MA's), (57, 36534), (59, 36522), (68, 36471), (83, 36423), (110, 36327), (114, 36312), (128, 36267), (142, 36222), (160, 36171), (169, 36162), (211, 36042), (267, 35925), (273, 35907), (275, 35898), (280, 35877),

Gene: Finemlucis\_39 Start: 34015, Stop: 33236, Start Num: 30

Candidate Starts for Finemlucis\_39:

(Start: 30 @34015 has 31 MA's), (50, 33958), (67, 33886), (72, 33859), (85, 33820), (105, 33748), (106, 33742), (117, 33700), (205, 33460), (243, 33367), (245, 33361), (266, 33322),

Gene: Finnry\_37 Start: 33981, Stop: 33190, Start Num: 33

Candidate Starts for Finnry\_37:

(11, 34071), (19, 34029), (Start: 33 @33981 has 15 MA's), (Start: 42 @33963 has 22 MA's), (52, 33927), (70, 33843), (73, 33831), (92, 33780), (95, 33771), (106, 33720), (108, 33714), (142, 33603), (183, 33489), (191, 33462), (212, 33405), (259, 33291), (277, 33237), (287, 33204),

Gene: Fionnbharth\_46 Start: 35745, Stop: 34927, Start Num: 44

Candidate Starts for Fionnbharth\_46:

(Start: 44 @35745 has 38 MA's), (Start: 46 @35742 has 32 MA's), (50, 35727), (70, 35634), (76, 35613), (91, 35577), (101, 35541), (111, 35499), (114, 35487), (115, 35484), (117, 35475), (126, 35445), (147, 35385), (162, 35349), (165, 35340), (202, 35247), (222, 35193), (230, 35169), (232, 35163), (236, 35145), (269, 35079), (275, 35058),

Gene: FireRed\_57 Start: 40591, Stop: 39818, Start Num: 35

Candidate Starts for FireRed\_57:

(Start: 35 @40591 has 112 MA's), (Start: 44 @40567 has 38 MA's), (Start: 54 @40537 has 1 MA's), (79, 40429), (107, 40333), (132, 40252), (140, 40228), (142, 40219), (145, 40210), (185, 40105), (187, 40099), (189, 40093), (240, 39949), (246, 39937), (258, 39913), (289, 39826),

Gene: Flypotenuse\_49 Start: 39064, Stop: 38315, Start Num: 44

Candidate Starts for Flypotenuse\_49:

(Start: 35 @39088 has 112 MA's), (Start: 44 @39064 has 38 MA's), (Start: 54 @39034 has 1 MA's), (79, 38926), (107, 38830), (132, 38749), (140, 38725), (142, 38716), (145, 38707), (185, 38602), (187, 38596), (189, 38590), (240, 38446), (246, 38434), (258, 38410), (289, 38323),

Gene: Gabriela\_39 Start: 34001, Stop: 33222, Start Num: 30

Candidate Starts for Gabriela\_39:

(Start: 30 @34001 has 31 MA's), (50, 33944), (67, 33872), (72, 33845), (85, 33806), (105, 33734), (106, 33728), (117, 33686), (177, 33518), (205, 33446), (243, 33353), (245, 33347), (266, 33308),

Gene: Gage\_57 Start: 39873, Stop: 39100, Start Num: 35

Candidate Starts for Gage\_57:

(Start: 35 @39873 has 112 MA's), (Start: 44 @39849 has 38 MA's), (Start: 54 @39819 has 1 MA's), (79, 39711), (107, 39615), (132, 39534), (140, 39510), (142, 39501), (145, 39492), (185, 39387), (187, 39381), (189, 39375), (240, 39231), (246, 39219), (258, 39195), (289, 39108),

Gene: Gaia\_67 Start: 44826, Stop: 44038, Start Num: 29

Candidate Starts for Gaia\_67:

(Start: 29 @44826 has 2 MA's), (Start: 44 @44787 has 38 MA's), (79, 44649), (121, 44496), (132, 44472), (142, 44439), (158, 44397), (165, 44379), (178, 44355), (226, 44220), (233, 44199), (255, 44148), (278, 44088), (280, 44079),

Gene: Ganymede\_43 Start: 35009, Stop: 34107, Start Num: 20

Candidate Starts for Ganymede\_43:

(Start: 20 @35009 has 38 MA's), (Start: 37 @34952 has 2 MA's), (Start: 42 @34946 has 22 MA's), (Start: 49 @34922 has 8 MA's), (Start: 55 @34901 has 6 MA's), (Start: 61 @34877 has 5 MA's), (81, 34787), (85, 34778), (114, 34673), (115, 34670), (117, 34661), (121, 34643), (123, 34637), (141, 34589), (147, 34571), (156, 34541), (161, 34529), (164, 34520), (186, 34463), (191, 34448), (214, 34391), (239, 34325), (253, 34298), (265, 34277), (270, 34265),

Gene: Gardann\_39 Start: 33740, Stop: 32961, Start Num: 30

Candidate Starts for Gardann\_39:

(Start: 30 @33740 has 31 MA's), (50, 33683), (67, 33611), (85, 33545), (105, 33473), (106, 33467), (117, 33425), (205, 33185), (243, 33092), (245, 33086), (266, 33047),

Gene: Gator\_52 Start: 40227, Stop: 39454, Start Num: 35

Candidate Starts for Gator\_52:

(Start: 35 @40227 has 112 MA's), (Start: 44 @40203 has 38 MA's), (Start: 54 @40173 has 1 MA's), (79, 40065), (107, 39969), (132, 39888), (140, 39864), (142, 39855), (145, 39846), (185, 39741), (187, 39735), (189, 39729), (240, 39585), (246, 39573), (258, 39549), (289, 39462),

Gene: Gemini\_58 Start: 40390, Stop: 39617, Start Num: 35

Candidate Starts for Gemini\_58:

(Start: 35 @40390 has 112 MA's), (Start: 44 @40366 has 38 MA's), (Start: 54 @40336 has 1 MA's), (79, 40228), (107, 40132), (132, 40051), (140, 40027), (142, 40018), (145, 40009), (185, 39904), (187, 39898), (189, 39892), (240, 39748), (246, 39736), (258, 39712), (289, 39625),

Gene: Gengar\_40 Start: 33822, Stop: 32980, Start Num: 39

Candidate Starts for Gengar\_40:

(Start: 39 @33822 has 21 MA's), (Start: 54 @33780 has 1 MA's), (106, 33585), (114, 33555), (136, 33486), (138, 33480), (142, 33465), (148, 33447), (161, 33411), (184, 33339), (221, 33240), (230, 33213), (233, 33204), (237, 33195), (242, 33186), (255, 33168), (258, 33162), (267, 33147), (276, 33117), (280, 33099), (288, 33078),

Gene: Geraldini\_44 Start: 35613, Stop: 34720, Start Num: 21

Candidate Starts for Geraldini\_44:

(Start: 21 @35613 has 8 MA's), (Start: 37 @35565 has 2 MA's), (Start: 42 @35559 has 22 MA's), (Start: 49 @35535 has 8 MA's), (Start: 61 @35490 has 5 MA's), (81, 35400), (85, 35391), (114, 35286), (115, 35283), (117, 35274), (121, 35256), (123, 35250), (141, 35202), (147, 35184), (156, 35154), (161, 35142), (164, 35133), (191, 35061), (214, 35004), (239, 34938), (253, 34911), (265, 34890), (270, 34878),

Gene: Glexan\_52 Start: 40215, Stop: 39442, Start Num: 35

Candidate Starts for Glexan\_52:

(Start: 35 @40215 has 112 MA's), (Start: 44 @40191 has 38 MA's), (Start: 54 @40161 has 1 MA's), (79, 40053), (107, 39957), (132, 39876), (140, 39852), (142, 39843), (145, 39834), (185, 39729), (187, 39723), (189, 39717), (240, 39573), (246, 39561), (258, 39537), (289, 39450),

Gene: Goku\_52 Start: 39593, Stop: 38820, Start Num: 35

Candidate Starts for Goku\_52:

(Start: 35 @39593 has 112 MA's), (Start: 44 @39569 has 38 MA's), (Start: 54 @39539 has 1 MA's), (79, 39431), (107, 39335), (132, 39254), (140, 39230), (142, 39221), (145, 39212), (185, 39107), (187, 39101), (189, 39095), (240, 38951), (246, 38939), (258, 38915), (289, 38828),

Gene: GoldenSpark\_57 Start: 39849, Stop: 39100, Start Num: 44

Candidate Starts for GoldenSpark\_57:

(Start: 35 @39873 has 112 MA's), (Start: 44 @39849 has 38 MA's), (Start: 54 @39819 has 1 MA's), (79, 39711), (107, 39615), (132, 39534), (140, 39510), (142, 39501), (145, 39492), (185, 39387), (187, 39381), (189, 39375), (240, 39231), (246, 39219), (258, 39195), (289, 39108),

Gene: Goldilocks\_56 Start: 39375, Stop: 38602, Start Num: 35

Candidate Starts for Goldilocks\_56:

(Start: 35 @39375 has 112 MA's), (Start: 44 @39351 has 38 MA's), (Start: 54 @39321 has 1 MA's), (79, 39213), (107, 39117), (132, 39036), (140, 39012), (142, 39003), (145, 38994), (185, 38889), (187, 38883), (189, 38877), (240, 38733), (246, 38721), (258, 38697), (289, 38610),

Gene: Gonephishing\_82 Start: 52633, Stop: 51926, Start Num: 46

Candidate Starts for Gonephishing\_82:

(Start: 46 @52633 has 32 MA's), (Start: 61 @52579 has 5 MA's), (Start: 62 @52570 has 1 MA's), (120, 52375), (125, 52363), (137, 52342), (149, 52300), (172, 52249), (173, 52246), (204, 52165), (209, 52147), (226, 52108), (232, 52090), (233, 52087), (252, 52045), (256, 52036), (263, 52024), (280, 51973),

Gene: GooberAzure\_57 Start: 39873, Stop: 39100, Start Num: 35

Candidate Starts for GooberAzure\_57:

(Start: 35 @39873 has 112 MA's), (Start: 44 @39849 has 38 MA's), (Start: 54 @39819 has 1 MA's), (79, 39711), (107, 39615), (132, 39534), (140, 39510), (142, 39501), (145, 39492), (185, 39387), (187, 39381), (189, 39375), (240, 39231), (246, 39219), (258, 39195), (289, 39108),

Gene: Guanica15\_45 Start: 34479, Stop: 33724, Start Num: 49

Candidate Starts for Guanica15\_45:

(Start: 49 @34479 has 8 MA's), (91, 34323), (141, 34149), (142, 34146), (148, 34128), (155, 34104), (159, 34098), (174, 34071), (177, 34062), (178, 34059), (192, 34014), (199, 33999), (202, 33990), (239, 33900), (240, 33897), (267, 33846),

Gene: Guillsminger\_41 Start: 33793, Stop: 32951, Start Num: 39

Candidate Starts for Guillsminger\_41:

(Start: 39 @33793 has 21 MA's), (Start: 54 @33751 has 1 MA's), (106, 33556), (114, 33526), (136, 33457), (138, 33451), (142, 33436), (148, 33418), (161, 33382), (184, 33310), (221, 33211), (230, 33184), (233, 33175), (237, 33166), (255, 33139), (258, 33133), (267, 33118), (276, 33088), (280, 33070), (288, 33049),

Gene: GuuelaD\_39 Start: 33777, Stop: 32998, Start Num: 30

Candidate Starts for GuuelaD\_39:

(Start: 30 @33777 has 31 MA's), (50, 33720), (67, 33648), (85, 33582), (90, 33567), (105, 33510), (106, 33504), (117, 33462), (205, 33222), (243, 33129), (245, 33123), (266, 33084),

Gene: Hafay\_39 Start: 33772, Stop: 32993, Start Num: 30

Candidate Starts for Hafay\_39:

(Start: 30 @33772 has 31 MA's), (50, 33715), (67, 33643), (85, 33577), (90, 33562), (105, 33505), (106, 33499), (117, 33457), (205, 33217), (243, 33124), (245, 33118), (266, 33079),

Gene: Halena\_36 Start: 32385, Stop: 31603, Start Num: 31

Candidate Starts for Halena\_36:

(Start: 31 @32385 has 19 MA's), (38, 32367), (110, 32100), (117, 32073), (118, 32070), (128, 32040), (132, 32028), (139, 32007), (156, 31959), (190, 31866), (206, 31830), (238, 31740), (266, 31686),

Gene: Halley\_97 Start: 59101, Stop: 58394, Start Num: 46

Candidate Starts for Halley\_97:

(Start: 46 @59101 has 32 MA's), (Start: 61 @59047 has 5 MA's), (Start: 62 @59038 has 1 MA's), (67, 59014), (96, 58942), (120, 58843), (125, 58831), (137, 58810), (170, 58720), (173, 58714), (204, 58633), (209, 58615), (226, 58576), (232, 58558), (233, 58555), (256, 58504), (263, 58492), (280, 58441),

Gene: Hammy\_44 Start: 35475, Stop: 34657, Start Num: 47

Candidate Starts for Hammy\_44:

(Start: 47 @35475 has 24 MA's), (67, 35394), (80, 35346), (91, 35319), (132, 35175), (140, 35151), (142, 35142), (146, 35130), (148, 35124), (152, 35112), (178, 35055), (192, 35010), (202, 34986), (224, 34923), (230, 34905), (236, 34896), (262, 34848), (267, 34839), (280, 34788), (305, 34692),

Gene: HanKaySha\_53 Start: 39183, Stop: 38410, Start Num: 35

Candidate Starts for HanKaySha\_53:

(Start: 35 @39183 has 112 MA's), (Start: 44 @39159 has 38 MA's), (Start: 54 @39129 has 1 MA's), (79, 39021), (107, 38925), (132, 38844), (140, 38820), (142, 38811), (145, 38802), (185, 38697), (187, 38691), (189, 38685), (240, 38541), (246, 38529), (258, 38505), (289, 38418),

Gene: Hannaconda\_82 Start: 51989, Stop: 51336, Start Num: 61

Candidate Starts for Hannaconda\_82:

(Start: 46 @52043 has 32 MA's), (Start: 61 @51989 has 5 MA's), (Start: 62 @51980 has 1 MA's), (67, 51956), (96, 51884), (120, 51785), (125, 51773), (137, 51752), (170, 51662), (173, 51656), (204, 51575), (209, 51557), (226, 51518), (232, 51500), (233, 51497), (256, 51446), (263, 51434), (280, 51383),

Gene: Harella\_54 Start: 40731, Stop: 39958, Start Num: 35

Candidate Starts for Harella\_54:

(Start: 35 @40731 has 112 MA's), (Start: 44 @40707 has 38 MA's), (Start: 54 @40677 has 1 MA's), (79, 40569), (107, 40473), (132, 40392), (140, 40368), (142, 40359), (145, 40350), (185, 40245), (187, 40239), (189, 40233), (240, 40089), (246, 40077), (258, 40053), (289, 39966),

Gene: HedwigODU\_42 Start: 34574, Stop: 33672, Start Num: 20

Candidate Starts for HedwigODU\_42:

(Start: 20 @34574 has 38 MA's), (Start: 37 @34517 has 2 MA's), (Start: 42 @34511 has 22 MA's), (Start: 49 @34487 has 8 MA's), (Start: 55 @34466 has 6 MA's), (Start: 61 @34442 has 5 MA's), (81, 34352), (85, 34343), (114, 34238), (115, 34235), (117, 34226), (121, 34208), (123, 34202), (141, 34154), (147, 34136), (156, 34106), (161, 34094), (164, 34085), (186, 34028), (191, 34013), (214, 33956), (232, 33905), (239, 33890), (253, 33863), (265, 33842), (270, 33830),

Gene: Heftyboy\_40 Start: 33939, Stop: 33097, Start Num: 39

Candidate Starts for Heftyboy\_40:

(Start: 39 @33939 has 21 MA's), (Start: 54 @33897 has 1 MA's), (114, 33672), (136, 33603), (138, 33597), (142, 33582), (148, 33564), (161, 33528), (184, 33456), (221, 33357), (230, 33330), (233, 33321), (237, 33312), (255, 33285), (258, 33279), (267, 33264), (280, 33216), (288, 33195),

Gene: Henry\_53 Start: 39815, Stop: 39042, Start Num: 35

Candidate Starts for Henry\_53:

(Start: 35 @39815 has 112 MA's), (Start: 44 @39791 has 38 MA's), (Start: 54 @39761 has 1 MA's), (79, 39653), (107, 39557), (132, 39476), (140, 39452), (142, 39443), (145, 39434), (185, 39329), (187, 39323), (189, 39317), (240, 39173), (246, 39161), (258, 39137), (289, 39050),

Gene: Highbury\_55 Start: 39472, Stop: 38699, Start Num: 35

Candidate Starts for Highbury\_55:

(Start: 35 @39472 has 112 MA's), (Start: 44 @39448 has 38 MA's), (Start: 54 @39418 has 1 MA's), (79, 39310), (107, 39214), (132, 39133), (140, 39109), (142, 39100), (145, 39091), (185, 38986), (187, 38980), (189, 38974), (240, 38830), (246, 38818), (258, 38794), (289, 38707),

Gene: HokkenD\_84 Start: 57370, Stop: 56663, Start Num: 46

Candidate Starts for HokkenD\_84:

(Start: 46 @57370 has 32 MA's), (Start: 61 @57316 has 5 MA's), (Start: 62 @57307 has 1 MA's), (67, 57283), (96, 57211), (120, 57112), (125, 57100), (137, 57079), (170, 56989), (173, 56983), (204, 56902), (209, 56884), (226, 56845), (232, 56827), (233, 56824), (256, 56773), (263, 56761), (280, 56710),

Gene: Holt\_59 Start: 40287, Stop: 39514, Start Num: 35

Candidate Starts for Holt\_59:

(Start: 35 @40287 has 112 MA's), (Start: 44 @40263 has 38 MA's), (Start: 54 @40233 has 1 MA's), (79, 40125), (107, 40029), (132, 39948), (140, 39924), (142, 39915), (145, 39906), (185, 39801), (187, 39795), (189, 39789), (240, 39645), (246, 39633), (258, 39609), (289, 39522),

Gene: Homura\_42 Start: 34626, Stop: 33787, Start Num: 42

Candidate Starts for Homura\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: Hoonter\_57 Start: 39873, Stop: 39100, Start Num: 35

Candidate Starts for Hoonter\_57:

(Start: 35 @39873 has 112 MA's), (Start: 44 @39849 has 38 MA's), (Start: 54 @39819 has 1 MA's), (79, 39711), (107, 39615), (132, 39534), (140, 39510), (142, 39501), (145, 39492), (185, 39387), (187, 39381), (189, 39375), (240, 39231), (246, 39219), (258, 39195), (289, 39108),

Gene: Hokey\_54 Start: 39717, Stop: 38944, Start Num: 35

Candidate Starts for Hokey\_54:

(Start: 35 @39717 has 112 MA's), (Start: 44 @39693 has 38 MA's), (Start: 54 @39663 has 1 MA's), (79, 39555), (107, 39459), (132, 39378), (140, 39354), (142, 39345), (145, 39336), (185, 39231), (187, 39225), (189, 39219), (240, 39075), (246, 39063), (258, 39039), (289, 38952),

Gene: HufflyPuff\_56 Start: 40547, Stop: 39774, Start Num: 35

Candidate Starts for HufflyPuff\_56:

(Start: 35 @40547 has 112 MA's), (Start: 44 @40523 has 38 MA's), (Start: 54 @40493 has 1 MA's), (79, 40385), (107, 40289), (132, 40208), (140, 40184), (142, 40175), (145, 40166), (185, 40061), (187, 40055), (189, 40049), (240, 39905), (246, 39893), (258, 39869), (289, 39782),

Gene: Hughesyang\_95 Start: 59005, Stop: 58352, Start Num: 61

Candidate Starts for Hughesyang\_95:

(Start: 46 @59059 has 32 MA's), (Start: 61 @59005 has 5 MA's), (Start: 62 @58996 has 1 MA's), (67, 58972), (96, 58900), (120, 58801), (125, 58789), (137, 58768), (170, 58678), (173, 58672), (204, 58591), (209, 58573), (226, 58534), (232, 58516), (233, 58513), (256, 58462), (263, 58450), (280, 58399),

Gene: Hurricane\_45 Start: 35158, Stop: 34283, Start Num: 47

Candidate Starts for Hurricane\_45:



(Start: 32 @35194 has 6 MA's), (Start: 47 @35158 has 24 MA's), (Start: 65 @35089 has 1 MA's), (69, 35059), (132, 34849), (140, 34825), (142, 34816), (146, 34804), (148, 34798), (165, 34750), (194, 34669), (198, 34663), (202, 34651), (239, 34552), (280, 34447), (286, 34429),

Gene: Hyperbowlee\_42 Start: 34778, Stop: 33984, Start Num: 55

Candidate Starts for Hyperbowlee\_42:

(Start: 20 @34886 has 38 MA's), (Start: 25 @34865 has 2 MA's), (Start: 37 @34829 has 2 MA's), (Start: 42 @34823 has 22 MA's), (Start: 49 @34799 has 8 MA's), (Start: 55 @34778 has 6 MA's), (Start: 61 @34754 has 5 MA's), (81, 34664), (85, 34655), (114, 34550), (115, 34547), (117, 34538), (121, 34520), (123, 34514), (141, 34466), (147, 34448), (156, 34418), (161, 34406), (164, 34397), (191, 34325), (214, 34268), (232, 34217), (239, 34202), (253, 34175), (265, 34154), (270, 34142),

Gene: IHOP\_52 Start: 39939, Stop: 39166, Start Num: 35

Candidate Starts for IHOP\_52:

(Start: 35 @39939 has 112 MA's), (Start: 44 @39915 has 38 MA's), (Start: 54 @39885 has 1 MA's), (79, 39777), (107, 39681), (132, 39600), (140, 39576), (142, 39567), (145, 39558), (185, 39453), (187, 39447), (189, 39441), (240, 39297), (246, 39285), (258, 39261), (289, 39174),

Gene: Icee\_54 Start: 39541, Stop: 38768, Start Num: 35

Candidate Starts for Icee\_54:

(Start: 35 @39541 has 112 MA's), (Start: 44 @39517 has 38 MA's), (Start: 54 @39487 has 1 MA's), (79, 39379), (107, 39283), (132, 39202), (140, 39178), (142, 39169), (145, 39160), (185, 39055), (187, 39049), (189, 39043), (240, 38899), (246, 38887), (258, 38863), (289, 38776),

Gene: Illumine\_45 Start: 35293, Stop: 34454, Start Num: 42

Candidate Starts for Illumine\_45:

(Start: 42 @35293 has 22 MA's), (Start: 55 @35248 has 6 MA's), (Start: 61 @35224 has 5 MA's), (Start: 66 @35200 has 1 MA's), (81, 35134), (85, 35125), (88, 35119), (114, 35020), (115, 35017), (117, 35008), (121, 34990), (139, 34945), (141, 34936), (161, 34876), (164, 34867), (191, 34795), (193, 34789), (211, 34744), (214, 34738), (218, 34729), (232, 34687), (239, 34672), (247, 34654), (265, 34624), (270, 34612), (280, 34573),

Gene: Inca\_51 Start: 38464, Stop: 37691, Start Num: 35

Candidate Starts for Inca\_51:

(Start: 35 @38464 has 112 MA's), (Start: 44 @38440 has 38 MA's), (Start: 54 @38410 has 1 MA's), (79, 38302), (107, 38206), (132, 38125), (140, 38101), (142, 38092), (145, 38083), (185, 37978), (187, 37972), (189, 37966), (240, 37822), (258, 37786), (289, 37699),

Gene: Inky\_42 Start: 34689, Stop: 33787, Start Num: 20

Candidate Starts for Inky\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: InvictusManeo\_40 Start: 34004, Stop: 33153, Start Num: 39

Candidate Starts for InvictusManeo\_40:

(Start: 39 @34004 has 21 MA's), (71, 33875), (88, 33833), (114, 33734), (117, 33722), (133, 33674), (142, 33644), (148, 33626), (159, 33590), (217, 33431), (221, 33416), (225, 33404), (237, 33371), (242, 33362), (255, 33344), (258, 33338), (267, 33323), (280, 33275), (288, 33254),

Gene: JAWS\_42 Start: 34563, Stop: 33661, Start Num: 20

Candidate Starts for JAWS\_42:

(Start: 20 @34563 has 38 MA's), (Start: 25 @34542 has 2 MA's), (Start: 37 @34506 has 2 MA's), (Start: 42 @34500 has 22 MA's), (Start: 49 @34476 has 8 MA's), (Start: 55 @34455 has 6 MA's), (Start: 61 @34431 has 5 MA's), (81, 34341), (85, 34332), (114, 34227), (115, 34224), (117, 34215), (121, 34197), (123, 34191), (141, 34143), (147, 34125), (156, 34095), (161, 34083), (164, 34074), (191, 34002), (214, 33945), (232, 33894), (239, 33879), (253, 33852), (265, 33831), (270, 33819),

Gene: JF1\_46 Start: 35662, Stop: 34841, Start Num: 44

Candidate Starts for JF1\_46:

(Start: 44 @35662 has 38 MA's), (Start: 46 @35659 has 32 MA's), (50, 35644), (70, 35551), (76, 35530), (101, 35458), (111, 35416), (114, 35404), (115, 35401), (117, 35392), (126, 35362), (147, 35302), (162, 35266), (165, 35257), (202, 35164), (222, 35110), (230, 35086), (232, 35080), (234, 35068), (269, 34996), (275, 34975),

Gene: Jarvi\_42 Start: 34689, Stop: 33787, Start Num: 20

Candidate Starts for Jarvi\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: Jayhawk\_43 Start: 34572, Stop: 33670, Start Num: 20

Candidate Starts for Jayhawk\_43:

(Start: 20 @34572 has 38 MA's), (Start: 37 @34515 has 2 MA's), (Start: 42 @34509 has 22 MA's), (Start: 49 @34485 has 8 MA's), (Start: 55 @34464 has 6 MA's), (Start: 61 @34440 has 5 MA's), (81, 34350), (85, 34341), (114, 34236), (115, 34233), (117, 34224), (121, 34206), (123, 34200), (141, 34152), (147, 34134), (156, 34104), (161, 34092), (164, 34083), (186, 34026), (191, 34011), (214, 33954), (232, 33903), (239, 33888), (253, 33861), (265, 33840), (270, 33828),

Gene: JeTaime\_55 Start: 40367, Stop: 39594, Start Num: 35

Candidate Starts for JeTaime\_55:

(Start: 35 @40367 has 112 MA's), (Start: 44 @40343 has 38 MA's), (Start: 54 @40313 has 1 MA's), (79, 40205), (107, 40109), (132, 40028), (140, 40004), (142, 39995), (145, 39986), (185, 39881), (187, 39875), (189, 39869), (240, 39725), (246, 39713), (258, 39689), (289, 39602),

Gene: Jeckyll\_42 Start: 34689, Stop: 33787, Start Num: 20

Candidate Starts for Jeckyll\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: Jobypre\_37 Start: 33978, Stop: 33187, Start Num: 33

Candidate Starts for Jobypre\_37:

(11, 34068), (19, 34026), (Start: 33 @33978 has 15 MA's), (Start: 42 @33960 has 22 MA's), (52, 33924), (70, 33840), (73, 33828), (92, 33777), (95, 33768), (106, 33717), (108, 33711), (142, 33600), (183, 33486), (191, 33459), (212, 33402), (259, 33288), (277, 33234), (287, 33201),

Gene: JoeDirt\_36 Start: 32357, Stop: 31575, Start Num: 31

Candidate Starts for JoeDirt\_36:

(Start: 31 @32357 has 19 MA's), (38, 32339), (110, 32072), (117, 32045), (118, 32042), (128, 32012), (132, 32000), (139, 31979), (156, 31931), (190, 31838), (206, 31802), (238, 31712), (266, 31658),

Gene: Joy99\_42 Start: 34555, Stop: 33716, Start Num: 42

Candidate Starts for Joy99\_42:

(Start: 20 @34618 has 38 MA's), (Start: 25 @34597 has 2 MA's), (Start: 37 @34561 has 2 MA's), (Start: 42 @34555 has 22 MA's), (Start: 49 @34531 has 8 MA's), (Start: 55 @34510 has 6 MA's), (Start: 61 @34486 has 5 MA's), (81, 34396), (85, 34387), (114, 34282), (115, 34279), (117, 34270), (121, 34252), (123, 34246), (141, 34198), (147, 34180), (156, 34150), (161, 34138), (164, 34129), (191, 34057), (214, 34000), (232, 33949), (239, 33934), (253, 33907), (265, 33886), (270, 33874),

Gene: Jubie\_37 Start: 33979, Stop: 33188, Start Num: 33

Candidate Starts for Jubie\_37:

(11, 34069), (19, 34027), (Start: 33 @33979 has 15 MA's), (Start: 42 @33961 has 22 MA's), (52, 33925), (70, 33841), (73, 33829), (92, 33778), (95, 33769), (106, 33718), (108, 33712), (142, 33601), (183, 33487), (191, 33460), (212, 33403), (259, 33289), (277, 33235), (287, 33202),

Gene: JuicyJay\_92 Start: 60235, Stop: 59528, Start Num: 46

Candidate Starts for JuicyJay\_92:

(Start: 46 @60235 has 32 MA's), (Start: 61 @60181 has 5 MA's), (Start: 62 @60172 has 1 MA's), (96, 60076), (120, 59977), (125, 59965), (137, 59944), (170, 59854), (173, 59848), (204, 59767), (209, 59749), (226, 59710), (232, 59692), (233, 59689), (256, 59638), (263, 59626), (280, 59575),

Gene: Juliette\_48 Start: 35819, Stop: 35001, Start Num: 44

Candidate Starts for Juliette\_48:

(Start: 44 @35819 has 38 MA's), (Start: 46 @35816 has 32 MA's), (50, 35801), (Start: 66 @35738 has 1 MA's), (70, 35708), (76, 35687), (91, 35651), (101, 35615), (111, 35573), (114, 35561), (115, 35558), (126, 35519), (142, 35474), (147, 35459), (162, 35423), (165, 35414), (202, 35321), (222, 35267), (230, 35243), (232, 35237), (236, 35219), (269, 35153), (275, 35132),

Gene: Kahlid\_39 Start: 33744, Stop: 32965, Start Num: 30

Candidate Starts for Kahlid\_39:

(Start: 30 @33744 has 31 MA's), (50, 33687), (67, 33615), (85, 33549), (90, 33534), (105, 33477), (106, 33471), (117, 33429), (205, 33189), (243, 33096), (245, 33090), (266, 33051),

Gene: Kalah2\_89 Start: 58394, Stop: 57687, Start Num: 46

Candidate Starts for Kalah2\_89:

(Start: 46 @58394 has 32 MA's), (Start: 61 @58340 has 5 MA's), (Start: 62 @58331 has 1 MA's), (67, 58307), (96, 58235), (120, 58136), (125, 58124), (137, 58103), (170, 58013), (173, 58007), (204, 57926), (209, 57908), (226, 57869), (232, 57851), (233, 57848), (256, 57797), (263, 57785), (280, 57734),

Gene: Kanye\_50 Start: 39227, Stop: 38454, Start Num: 35

Candidate Starts for Kanye\_50:

(Start: 35 @39227 has 112 MA's), (Start: 44 @39203 has 38 MA's), (Start: 54 @39173 has 1 MA's), (79, 39065), (107, 38969), (132, 38888), (140, 38864), (142, 38855), (145, 38846), (185, 38741), (187, 38735), (189, 38729), (240, 38585), (246, 38573), (258, 38549), (289, 38462),

Gene: KashFlow\_86 Start: 53547, Stop: 52894, Start Num: 61

Candidate Starts for KashFlow\_86:

(Start: 46 @53601 has 32 MA's), (Start: 61 @53547 has 5 MA's), (Start: 62 @53538 has 1 MA's), (120, 53343), (125, 53331), (137, 53310), (149, 53268), (172, 53217), (173, 53214), (204, 53133), (209, 53115), (226, 53076), (230, 53064), (232, 53058), (233, 53055), (252, 53013), (256, 53004),

(263, 52992), (280, 52941),

Gene: Keshu\_46 Start: 35253, Stop: 34336, Start Num: 32

Candidate Starts for Keshu\_46:

(Start: 32 @35253 has 6 MA's), (Start: 47 @35217 has 24 MA's), (Start: 65 @35148 has 1 MA's), (132, 34908), (140, 34884), (142, 34875), (146, 34863), (148, 34857), (157, 34830), (165, 34809), (172, 34797), (194, 34728), (198, 34722), (202, 34710), (214, 34671), (217, 34668), (229, 34629), (239, 34611), (270, 34548), (280, 34506),

Gene: KiSi\_46 Start: 35654, Stop: 34881, Start Num: 45

Candidate Starts for KiSi\_46:

(Start: 45 @35654 has 1 MA's), (Start: 47 @35651 has 24 MA's), (Start: 65 @35588 has 1 MA's), (70, 35555), (111, 35423), (140, 35333), (142, 35324), (158, 35279), (202, 35168), (211, 35135), (218, 35120), (224, 35102), (260, 35030), (280, 34967), (284, 34955),

Gene: Kimchi\_57 Start: 39876, Stop: 39103, Start Num: 35

Candidate Starts for Kimchi\_57:

(Start: 35 @39876 has 112 MA's), (Start: 44 @39852 has 38 MA's), (Start: 54 @39822 has 1 MA's), (79, 39714), (107, 39618), (132, 39537), (140, 39513), (142, 39504), (145, 39495), (185, 39390), (187, 39384), (189, 39378), (240, 39234), (246, 39222), (258, 39198), (289, 39111),

Gene: Kingsolomon\_37 Start: 33978, Stop: 33187, Start Num: 33

Candidate Starts for Kingsolomon\_37:

(11, 34068), (19, 34026), (Start: 33 @33978 has 15 MA's), (Start: 42 @33960 has 22 MA's), (52, 33924), (70, 33840), (73, 33828), (92, 33777), (95, 33768), (106, 33717), (108, 33711), (142, 33600), (183, 33486), (191, 33459), (212, 33402), (259, 33288), (277, 33234), (287, 33201),

Gene: KirDoubleO7\_35 Start: 33790, Stop: 33206, Start Num: 92

Candidate Starts for KirDoubleO7\_35:

(15, 34060), (26, 34015), (Start: 33 @33991 has 15 MA's), (52, 33937), (70, 33853), (73, 33841), (77, 33829), (92, 33790), (95, 33781), (106, 33730), (108, 33724), (142, 33613), (159, 33565), (191, 33478), (212, 33421), (216, 33415), (259, 33307), (277, 33253),

Gene: Klein\_96 Start: 58101, Stop: 57394, Start Num: 46

Candidate Starts for Klein\_96:

(Start: 46 @58101 has 32 MA's), (Start: 61 @58047 has 5 MA's), (Start: 62 @58038 has 1 MA's), (96, 57942), (120, 57843), (125, 57831), (137, 57810), (170, 57720), (173, 57714), (204, 57633), (209, 57615), (226, 57576), (232, 57558), (233, 57555), (256, 57504), (263, 57492), (280, 57441),

Gene: Kostya\_55 Start: 40014, Stop: 39265, Start Num: 44

Candidate Starts for Kostya\_55:

(Start: 35 @40038 has 112 MA's), (Start: 44 @40014 has 38 MA's), (Start: 54 @39984 has 1 MA's), (79, 39876), (107, 39780), (132, 39699), (140, 39675), (142, 39666), (145, 39657), (185, 39552), (187, 39546), (189, 39540), (240, 39396), (246, 39384), (258, 39360), (289, 39273),

Gene: Kratio\_39 Start: 33552, Stop: 32701, Start Num: 39

Candidate Starts for Kratio\_39:

(Start: 39 @33552 has 21 MA's), (Start: 54 @33507 has 1 MA's), (85, 33387), (88, 33381), (108, 33303), (114, 33282), (117, 33270), (133, 33222), (142, 33192), (159, 33138), (171, 33105), (217, 32979), (221, 32964), (225, 32952), (232, 32931), (242, 32910), (255, 32892), (267, 32871), (280, 32823), (298, 32751),

Gene: Krueger\_48 Start: 35401, Stop: 34511, Start Num: 47

Candidate Starts for Krueger\_48:

(Start: 47 @35401 has 24 MA's), (58, 35365), (Start: 65 @35332 has 1 MA's), (67, 35320), (68, 35308), (132, 35101), (140, 35077), (142, 35068), (146, 35056), (148, 35050), (198, 34918), (202, 34906), (255, 34780), (258, 34774), (271, 34747), (274, 34738), (280, 34708),

Gene: Krypton555\_37 Start: 33883, Stop: 33092, Start Num: 33

Candidate Starts for Krypton555\_37:

(5, 34012), (6, 34003), (11, 33973), (Start: 22 @33916 has 1 MA's), (26, 33907), (Start: 31 @33889 has 19 MA's), (Start: 33 @33883 has 15 MA's), (52, 33829), (77, 33721), (87, 33694), (92, 33682), (94, 33676), (95, 33673), (106, 33622), (108, 33616), (123, 33559), (145, 33496), (191, 33364), (212, 33307), (259, 33193),

Gene: Larva\_41 Start: 33722, Stop: 32871, Start Num: 39

Candidate Starts for Larva\_41:

(13, 33824), (Start: 27 @33758 has 2 MA's), (Start: 39 @33722 has 21 MA's), (Start: 54 @33677 has 1 MA's), (69, 33599), (88, 33551), (114, 33452), (117, 33440), (133, 33392), (142, 33362), (148, 33344), (159, 33308), (162, 33302), (171, 33275), (217, 33149), (221, 33134), (225, 33122), (242, 33080), (267, 33041), (280, 32993),

Gene: LastHope\_45 Start: 33885, Stop: 33040, Start Num: 49

Candidate Starts for LastHope\_45:

(Start: 49 @33885 has 8 MA's), (97, 33708), (114, 33639), (129, 33591), (132, 33585), (135, 33576), (140, 33561), (142, 33552), (176, 33468), (182, 33450), (185, 33438), (189, 33426), (206, 33381), (230, 33309), (232, 33303), (247, 33246), (253, 33237), (254, 33234), (264, 33216), (280, 33159), (306, 33051),

Gene: LaterM\_43 Start: 35407, Stop: 34568, Start Num: 42

Candidate Starts for LaterM\_43:

(Start: 20 @35470 has 38 MA's), (Start: 25 @35449 has 2 MA's), (Start: 37 @35413 has 2 MA's), (Start: 42 @35407 has 22 MA's), (Start: 49 @35383 has 8 MA's), (Start: 55 @35362 has 6 MA's), (56, 35359), (Start: 61 @35338 has 5 MA's), (81, 35248), (85, 35239), (114, 35134), (115, 35131), (117, 35122), (121, 35104), (139, 35059), (141, 35050), (161, 34990), (164, 34981), (191, 34909), (214, 34852), (239, 34786), (255, 34756), (265, 34738), (270, 34726), (294, 34636),

Gene: LeBron\_37 Start: 32401, Stop: 31619, Start Num: 31

Candidate Starts for LeBron\_37:

(Start: 31 @32401 has 19 MA's), (38, 32383), (110, 32116), (117, 32089), (118, 32086), (128, 32056), (132, 32044), (139, 32023), (156, 31975), (190, 31882), (206, 31846), (238, 31756), (266, 31702),

Gene: LeMond\_46 Start: 35651, Stop: 34884, Start Num: 47

Candidate Starts for LeMond\_46:

(Start: 47 @35651 has 24 MA's), (Start: 65 @35588 has 1 MA's), (75, 35537), (108, 35432), (111, 35423), (132, 35357), (140, 35333), (142, 35324), (158, 35279), (202, 35168), (218, 35120), (223, 35105), (260, 35030), (272, 35003), (280, 34967),

Gene: Leston\_40 Start: 33923, Stop: 33081, Start Num: 39

Candidate Starts for Leston\_40:

(Start: 39 @33923 has 21 MA's), (Start: 54 @33881 has 1 MA's), (106, 33686), (114, 33656), (136, 33587), (138, 33581), (142, 33566), (148, 33548), (161, 33512), (184, 33440), (221, 33341), (230, 33314), (233, 33305), (237, 33296), (255, 33269), (258, 33263), (267, 33248), (280, 33200), (288, 33179),

Gene: Lewan\_39 Start: 33732, Stop: 32953, Start Num: 30

Candidate Starts for Lewan\_39:

(Start: 30 @33732 has 31 MA's), (50, 33675), (52, 33669), (Start: 61 @33636 has 5 MA's), (74, 33564), (105, 33465), (106, 33459), (117, 33417), (138, 33354), (162, 33285), (215, 33153), (238, 33093), (243, 33084), (266, 33039),

Gene: LilDestine\_39 Start: 33737, Stop: 32958, Start Num: 30

Candidate Starts for LilDestine\_39:

(Start: 30 @33737 has 31 MA's), (50, 33680), (67, 33608), (85, 33542), (105, 33470), (106, 33464), (117, 33422), (205, 33182), (243, 33089), (245, 33083),

Gene: LilPharaoh\_37 Start: 34082, Stop: 33180, Start Num: 43

Candidate Starts for LilPharaoh\_37:

(Start: 35 @34100 has 112 MA's), (Start: 43 @34082 has 12 MA's), (57, 34034), (Start: 62 @34007 has 1 MA's), (Start: 65 @33989 has 1 MA's), (70, 33956), (74, 33938), (77, 33932), (81, 33920), (106, 33836), (110, 33821), (114, 33806), (126, 33764), (138, 33728), (143, 33710), (158, 33668), (169, 33650), (183, 33611), (207, 33542), (222, 33503), (227, 33488), (251, 33434), (262, 33416), (270, 33398), (280, 33359), (297, 33293), (314, 33203),

Gene: Lilac\_57 Start: 39502, Stop: 38729, Start Num: 35

Candidate Starts for Lilac\_57:

(Start: 35 @39502 has 112 MA's), (Start: 44 @39478 has 38 MA's), (Start: 54 @39448 has 1 MA's), (79, 39340), (107, 39244), (132, 39163), (140, 39139), (142, 39130), (145, 39121), (185, 39016), (187, 39010), (189, 39004), (240, 38860), (246, 38848), (258, 38824), (289, 38737),

Gene: Lilizi\_54 Start: 39176, Stop: 38403, Start Num: 35

Candidate Starts for Lilizi\_54:

(Start: 35 @39176 has 112 MA's), (Start: 44 @39152 has 38 MA's), (Start: 54 @39122 has 1 MA's), (79, 39014), (107, 38918), (132, 38837), (140, 38813), (142, 38804), (145, 38795), (185, 38690), (187, 38684), (189, 38678), (240, 38534), (246, 38522), (258, 38498), (289, 38411),

Gene: Lilpickle\_54 Start: 39393, Stop: 38620, Start Num: 35

Candidate Starts for Lilpickle\_54:

(Start: 35 @39393 has 112 MA's), (Start: 44 @39369 has 38 MA's), (Start: 54 @39339 has 1 MA's), (79, 39231), (107, 39135), (132, 39054), (140, 39030), (142, 39021), (145, 39012), (185, 38907), (187, 38901), (189, 38895), (240, 38751), (246, 38739), (258, 38715), (289, 38628),

Gene: LindNT\_42 Start: 34750, Stop: 33857, Start Num: 21

Candidate Starts for LindNT\_42:

(Start: 21 @34750 has 8 MA's), (Start: 37 @34702 has 2 MA's), (Start: 42 @34696 has 22 MA's), (Start: 49 @34672 has 8 MA's), (Start: 55 @34651 has 6 MA's), (Start: 61 @34627 has 5 MA's), (81, 34537), (85, 34528), (114, 34423), (115, 34420), (117, 34411), (121, 34393), (139, 34348), (141, 34339), (147, 34321), (156, 34291), (161, 34279), (164, 34270), (191, 34198), (214, 34141), (239, 34075), (253, 34048), (265, 34027), (270, 34015),

Gene: LittleE\_94 Start: 57167, Stop: 56460, Start Num: 46

Candidate Starts for LittleE\_94:

(Start: 46 @57167 has 32 MA's), (Start: 61 @57113 has 5 MA's), (Start: 62 @57104 has 1 MA's), (99, 56990), (120, 56909), (125, 56897), (134, 56885), (137, 56876), (149, 56834), (173, 56780), (204, 56699), (209, 56681), (226, 56642), (230, 56630), (232, 56624), (233, 56621), (252, 56579), (256, 56570), (261, 56561), (263, 56558), (280, 56507),

Gene: LiyuLake\_37 Start: 33955, Stop: 33164, Start Num: 33

Candidate Starts for LiyuLake\_37:

(Start: 33 @33955 has 15 MA's), (52, 33901), (84, 33778), (95, 33745), (106, 33694), (108, 33688), (142, 33577), (183, 33463), (191, 33436), (212, 33379), (222, 33352), (287, 33178),

Gene: Llorens\_42 Start: 34626, Stop: 33787, Start Num: 42

Candidate Starts for Llorens\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: Loadrie\_39 Start: 33770, Stop: 32991, Start Num: 30

Candidate Starts for Loadrie\_39:

(Start: 30 @33770 has 31 MA's), (50, 33713), (67, 33641), (85, 33575), (90, 33560), (105, 33503), (106, 33497), (117, 33455), (205, 33215), (243, 33122), (245, 33116), (266, 33077),

Gene: Lolly9\_37 Start: 33775, Stop: 32987, Start Num: 33

Candidate Starts for Lolly9\_37:

(19, 33823), (Start: 33 @33775 has 15 MA's), (Start: 42 @33754 has 22 MA's), (52, 33718), (84, 33595), (92, 33571), (95, 33562), (106, 33511), (108, 33505), (123, 33448), (179, 33298), (191, 33259), (212, 33202), (216, 33196), (259, 33088), (277, 33034),

Gene: Lucky2013\_88 Start: 53487, Stop: 52780, Start Num: 46

Candidate Starts for Lucky2013\_88:

(Start: 46 @53487 has 32 MA's), (Start: 61 @53433 has 5 MA's), (Start: 62 @53424 has 1 MA's), (96, 53328), (99, 53310), (120, 53229), (125, 53217), (132, 53211), (134, 53205), (137, 53196), (149, 53154), (172, 53103), (173, 53100), (204, 53019), (209, 53001), (226, 52962), (230, 52950), (232, 52944), (233, 52941), (252, 52899), (256, 52890), (261, 52881), (263, 52878), (280, 52827),

Gene: Lumos\_37 Start: 33975, Stop: 33184, Start Num: 33

Candidate Starts for Lumos\_37:

(11, 34065), (19, 34023), (Start: 33 @33975 has 15 MA's), (Start: 42 @33957 has 22 MA's), (52, 33921), (70, 33837), (73, 33825), (92, 33774), (95, 33765), (106, 33714), (108, 33708), (142, 33597), (183, 33483), (191, 33456), (212, 33399), (259, 33285), (277, 33231), (287, 33198),

Gene: Lunahalos\_42 Start: 34689, Stop: 33787, Start Num: 20

Candidate Starts for Lunahalos\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: MAckerman\_37 Start: 32379, Stop: 31597, Start Num: 31

Candidate Starts for MAckerman\_37:

(Start: 31 @32379 has 19 MA's), (110, 32094), (117, 32067), (118, 32064), (128, 32034), (132, 32022), (139, 32001), (156, 31953), (190, 31860), (206, 31824), (238, 31734), (266, 31680),

Gene: MISSy\_54 Start: 39600, Stop: 38827, Start Num: 35

Candidate Starts for MISSy\_54:

(Start: 35 @39600 has 112 MA's), (Start: 44 @39576 has 38 MA's), (Start: 54 @39546 has 1 MA's), (79, 39438), (107, 39342), (132, 39261), (140, 39237), (142, 39228), (145, 39219), (185, 39114), (187, 39108), (189, 39102), (240, 38958), (246, 38946), (258, 38922), (289, 38835),

Gene: MPhalcon\_54 Start: 39593, Stop: 38820, Start Num: 35

Candidate Starts for MPhalcon\_54:

(Start: 35 @39593 has 112 MA's), (Start: 44 @39569 has 38 MA's), (Start: 54 @39539 has 1 MA's), (79, 39431), (107, 39335), (132, 39254), (140, 39230), (142, 39221), (145, 39212), (185, 39107), (187, 39101), (189, 39095), (240, 38951), (246, 38939), (258, 38915), (289, 38828),

Gene: MacnCheese\_46 Start: 36148, Stop: 35237, Start Num: 32

Candidate Starts for MacnCheese\_46:

(2, 36340), (Start: 32 @36148 has 6 MA's), (Start: 44 @36118 has 38 MA's), (Start: 47 @36112 has 24 MA's), (69, 36013), (114, 35866), (132, 35812), (140, 35788), (142, 35779), (146, 35767), (148, 35761), (165, 35719), (186, 35662), (194, 35638), (202, 35620), (239, 35527), (258, 35491), (260, 35488), (278, 35434), (280, 35425), (302, 35338),

Gene: MadamMonkfish\_54 Start: 39117, Stop: 38344, Start Num: 35

Candidate Starts for MadamMonkfish\_54:

(Start: 35 @39117 has 112 MA's), (Start: 44 @39093 has 38 MA's), (Start: 54 @39063 has 1 MA's), (79, 38955), (107, 38859), (132, 38778), (140, 38754), (142, 38745), (145, 38736), (185, 38631), (187, 38625), (189, 38619), (240, 38475), (246, 38463), (258, 38439), (289, 38352),

Gene: MalagasyRose\_43 Start: 32679, Stop: 33419, Start Num: 44

Candidate Starts for MalagasyRose\_43:

(34, 32652), (Start: 42 @32670 has 22 MA's), (Start: 44 @32679 has 38 MA's), (59, 32730), (67, 32769), (74, 32808), (76, 32811), (79, 32817), (88, 32841), (89, 32847), (106, 32910), (107, 32913), (114, 32940), (115, 32943), (132, 32994), (134, 33000), (138, 33012), (142, 33027), (153, 33063), (165, 33087), (178, 33111), (185, 33135), (187, 33141), (194, 33162), (196, 33165), (225, 33243), (229, 33255), (235, 33279), (255, 33318), (258, 33324), (265, 33336), (270, 33348), (273, 33357), (274, 33360), (280, 33387),

Gene: Malthus\_47 Start: 35507, Stop: 34689, Start Num: 44

Candidate Starts for Malthus\_47:

(Start: 44 @35507 has 38 MA's), (Start: 46 @35504 has 32 MA's), (50, 35489), (Start: 66 @35426 has 1 MA's), (70, 35396), (76, 35375), (91, 35339), (101, 35303), (111, 35261), (114, 35249), (115, 35246), (126, 35207), (142, 35162), (147, 35147), (162, 35111), (165, 35102), (202, 35009), (222, 34955), (230, 34931), (232, 34925), (236, 34907), (269, 34841), (275, 34820),

Gene: Manda\_54 Start: 40398, Stop: 39625, Start Num: 35

Candidate Starts for Manda\_54:

(Start: 35 @40398 has 112 MA's), (Start: 44 @40374 has 38 MA's), (Start: 54 @40344 has 1 MA's), (79, 40236), (107, 40140), (132, 40059), (140, 40035), (142, 40026), (145, 40017), (185, 39912), (187, 39906), (189, 39900), (240, 39756), (246, 39744), (258, 39720), (289, 39633),

Gene: Marcoliusprime\_45 Start: 36592, Stop: 35744, Start Num: 41

Candidate Starts for Marcoliusprime\_45:

(Start: 41 @36592 has 8 MA's), (59, 36529), (68, 36478), (83, 36430), (110, 36334), (114, 36319), (128, 36274), (135, 36253), (142, 36229), (160, 36178), (169, 36169), (211, 36049), (217, 36040), (267, 35932), (273, 35914), (275, 35905), (280, 35884),

Gene: MarkPhew\_45 Start: 35124, Stop: 34315, Start Num: 32

Candidate Starts for MarkPhew\_45:

(Start: 32 @35124 has 6 MA's), (Start: 40 @35103 has 1 MA's), (Start: 47 @35088 has 24 MA's), (Start: 65 @35025 has 1 MA's), (71, 34989), (114, 34848), (140, 34770), (142, 34761), (146, 34749), (158, 34716), (202, 34605), (217, 34563), (218, 34557), (219, 34554), (232, 34515), (241, 34503),



(250, 34485), (269, 34449), (292, 34362), (300, 34326),

Gene: Marshawn\_45 Start: 35460, Stop: 34612, Start Num: 42

Candidate Starts for Marshawn\_45:

(24, 35508), (Start: 42 @35460 has 22 MA's), (Start: 55 @35415 has 6 MA's), (57, 35409), (60, 35394), (81, 35301), (106, 35217), (114, 35187), (115, 35184), (138, 35109), (142, 35094), (152, 35064), (169, 35031), (178, 35007), (183, 34992), (190, 34968), (221, 34887), (225, 34875), (239, 34839), (255, 34812), (258, 34806), (280, 34743), (290, 34713), (297, 34677),

Gene: Marshmallow\_53 Start: 40373, Stop: 39600, Start Num: 35

Candidate Starts for Marshmallow\_53:

(Start: 35 @40373 has 112 MA's), (Start: 44 @40349 has 38 MA's), (Start: 54 @40319 has 1 MA's), (79, 40211), (107, 40115), (132, 40034), (140, 40010), (142, 40001), (145, 39992), (185, 39887), (187, 39881), (189, 39875), (240, 39731), (258, 39695), (289, 39608),

Gene: Maxxinista\_57 Start: 39472, Stop: 38699, Start Num: 35

Candidate Starts for Maxxinista\_57:

(Start: 35 @39472 has 112 MA's), (Start: 44 @39448 has 38 MA's), (Start: 54 @39418 has 1 MA's), (79, 39310), (107, 39214), (132, 39133), (140, 39109), (142, 39100), (145, 39091), (185, 38986), (187, 38980), (189, 38974), (240, 38830), (246, 38818), (258, 38794), (289, 38707),

Gene: McMater\_44 Start: 35155, Stop: 34205, Start Num: 43

Candidate Starts for McMater\_44:

(8, 35275), (9, 35272), (Start: 43 @35155 has 12 MA's), (57, 35107), (59, 35095), (64, 35068), (Start: 65 @35062 has 1 MA's), (67, 35050), (97, 34948), (106, 34909), (110, 34894), (114, 34879), (140, 34795), (142, 34786), (159, 34750), (192, 34669), (223, 34588), (229, 34570), (269, 34492), (270, 34489), (280, 34450), (304, 34360), (313, 34252),

Gene: Mdavu\_38 Start: 34071, Stop: 33169, Start Num: 43

Candidate Starts for Mdavu\_38:

(Start: 35 @34089 has 112 MA's), (Start: 43 @34071 has 12 MA's), (57, 34023), (Start: 62 @33996 has 1 MA's), (Start: 65 @33978 has 1 MA's), (70, 33945), (74, 33927), (77, 33921), (81, 33909), (106, 33825), (110, 33810), (114, 33795), (126, 33753), (138, 33717), (143, 33699), (158, 33657), (169, 33639), (183, 33600), (192, 33570), (207, 33531), (222, 33492), (227, 33477), (251, 33423), (262, 33405), (270, 33387), (280, 33348), (297, 33282), (314, 33192),

Gene: MeaningOfLife\_43 Start: 35503, Stop: 34601, Start Num: 20

Candidate Starts for MeaningOfLife\_43:

(Start: 20 @35503 has 38 MA's), (Start: 37 @35446 has 2 MA's), (Start: 42 @35440 has 22 MA's), (Start: 49 @35416 has 8 MA's), (Start: 55 @35395 has 6 MA's), (Start: 61 @35371 has 5 MA's), (77, 35293), (81, 35281), (85, 35272), (114, 35167), (115, 35164), (117, 35155), (121, 35137), (123, 35131), (141, 35083), (147, 35065), (156, 35035), (161, 35023), (164, 35014), (186, 34957), (191, 34942), (214, 34885), (232, 34834), (239, 34819), (253, 34792), (265, 34771), (270, 34759),

Gene: Megsy\_43 Start: 34755, Stop: 33916, Start Num: 42

Candidate Starts for Megsy\_43:

(Start: 21 @34809 has 8 MA's), (Start: 37 @34761 has 2 MA's), (Start: 42 @34755 has 22 MA's), (Start: 49 @34731 has 8 MA's), (Start: 55 @34710 has 6 MA's), (Start: 61 @34686 has 5 MA's), (Start: 66 @34662 has 1 MA's), (81, 34596), (85, 34587), (114, 34482), (115, 34479), (117, 34470), (121, 34452), (141, 34398), (147, 34380), (156, 34350), (161, 34338), (164, 34329), (191, 34257), (214, 34200), (232, 34149), (239, 34134), (253, 34107), (265, 34086), (270, 34074),

Gene: MiaZeal\_91 Start: 54143, Stop: 53436, Start Num: 46

Candidate Starts for MiaZeal\_91:

(Start: 46 @54143 has 32 MA's), (Start: 61 @54089 has 5 MA's), (Start: 62 @54080 has 1 MA's), (96, 53984), (99, 53966), (120, 53885), (125, 53873), (132, 53867), (134, 53861), (137, 53852), (149, 53810), (172, 53759), (173, 53756), (204, 53675), (209, 53657), (226, 53618), (230, 53606), (232, 53600), (233, 53597), (252, 53555), (256, 53546), (261, 53537), (263, 53534), (280, 53483),

Gene: Miley16\_39 Start: 33739, Stop: 32960, Start Num: 30

Candidate Starts for Miley16\_39:

(Start: 30 @33739 has 31 MA's), (50, 33682), (67, 33610), (72, 33583), (85, 33544), (105, 33472), (106, 33466), (117, 33424), (177, 33256), (205, 33184), (243, 33091), (245, 33085), (266, 33046),

Gene: Milly\_45 Start: 36565, Stop: 35717, Start Num: 41

Candidate Starts for Milly\_45:

(Start: 41 @36565 has 8 MA's), (59, 36502), (68, 36451), (83, 36403), (110, 36307), (114, 36292), (128, 36247), (135, 36226), (142, 36202), (160, 36151), (169, 36142), (211, 36022), (217, 36013), (267, 35905), (273, 35887), (275, 35878), (280, 35857),

Gene: Mindy\_53 Start: 38981, Stop: 38208, Start Num: 35

Candidate Starts for Mindy\_53:

(Start: 35 @38981 has 112 MA's), (Start: 44 @38957 has 38 MA's), (Start: 54 @38927 has 1 MA's), (79, 38819), (107, 38723), (132, 38642), (140, 38618), (142, 38609), (145, 38600), (185, 38495), (187, 38489), (189, 38483), (240, 38339), (246, 38327), (258, 38303), (289, 38216),

Gene: Minerva\_95 Start: 59047, Stop: 58340, Start Num: 44

Candidate Starts for Minerva\_95:

(Start: 44 @59047 has 38 MA's), (Start: 62 @58984 has 1 MA's), (96, 58888), (117, 58804), (120, 58789), (125, 58777), (127, 58774), (134, 58765), (137, 58756), (138, 58753), (187, 58618), (188, 58615), (191, 58606), (192, 58603), (204, 58579), (208, 58570), (209, 58561), (213, 58552), (222, 58531), (228, 58516), (233, 58501), (244, 58471), (248, 58465), (252, 58459), (256, 58450), (263, 58438), (273, 58417),

Gene: MiniLon\_37 Start: 33776, Stop: 32988, Start Num: 33

Candidate Starts for MiniLon\_37:

(19, 33824), (Start: 33 @33776 has 15 MA's), (Start: 42 @33755 has 22 MA's), (52, 33719), (84, 33596), (92, 33572), (95, 33563), (106, 33512), (108, 33506), (123, 33449), (179, 33299), (191, 33260), (212, 33203), (216, 33197), (259, 33089), (277, 33035),

Gene: MiniMac\_37 Start: 33773, Stop: 32985, Start Num: 33

Candidate Starts for MiniMac\_37:

(19, 33821), (Start: 33 @33773 has 15 MA's), (Start: 42 @33752 has 22 MA's), (52, 33716), (84, 33593), (92, 33569), (95, 33560), (106, 33509), (108, 33503), (123, 33446), (179, 33296), (191, 33257), (212, 33200), (216, 33194), (259, 33086), (277, 33032),

Gene: Miniwave\_51 Start: 39434, Stop: 38661, Start Num: 35

Candidate Starts for Miniwave\_51:

(Start: 35 @39434 has 112 MA's), (Start: 44 @39410 has 38 MA's), (Start: 54 @39380 has 1 MA's), (79, 39272), (107, 39176), (132, 39095), (140, 39071), (142, 39062), (145, 39053), (185, 38948), (187, 38942), (189, 38936), (240, 38792), (246, 38780), (258, 38756), (289, 38669),

Gene: Miryou\_42 Start: 36125, Stop: 35283, Start Num: 39

Candidate Starts for Miryou\_42:

(Start: 39 @36125 has 21 MA's), (Start: 54 @36083 has 1 MA's), (106, 35888), (114, 35858), (136, 35789), (138, 35783), (142, 35768), (148, 35750), (161, 35714), (184, 35642), (221, 35543), (230,

35516), (233, 35507), (237, 35498), (255, 35471), (258, 35465), (267, 35450), (276, 35420), (280, 35402), (288, 35381),

Gene: Misfit\_56 Start: 40612, Stop: 39839, Start Num: 35

Candidate Starts for Misfit\_56:

(Start: 35 @40612 has 112 MA's), (Start: 44 @40588 has 38 MA's), (Start: 54 @40558 has 1 MA's), (79, 40450), (107, 40354), (132, 40273), (140, 40249), (142, 40240), (145, 40231), (185, 40126), (187, 40120), (189, 40114), (240, 39970), (246, 39958), (258, 39934), (289, 39847),

Gene: MissDaisy\_44 Start: 34981, Stop: 34190, Start Num: 44

Candidate Starts for MissDaisy\_44:

(Start: 44 @34981 has 38 MA's), (53, 34954), (Start: 61 @34924 has 5 MA's), (Start: 62 @34915 has 1 MA's), (93, 34810), (101, 34777), (109, 34741), (111, 34735), (114, 34723), (115, 34720), (117, 34711), (126, 34681), (142, 34636), (147, 34621), (190, 34513), (202, 34483), (210, 34456), (222, 34429), (232, 34399), (273, 34303), (280, 34273),

Gene: Mitti\_46 Start: 35683, Stop: 34865, Start Num: 44

Candidate Starts for Mitti\_46:

(Start: 44 @35683 has 38 MA's), (Start: 46 @35680 has 32 MA's), (50, 35665), (Start: 66 @35602 has 1 MA's), (70, 35572), (76, 35551), (91, 35515), (101, 35479), (111, 35437), (114, 35425), (115, 35422), (126, 35383), (142, 35338), (147, 35323), (162, 35287), (165, 35278), (202, 35185), (222, 35131), (230, 35107), (232, 35101), (236, 35083), (269, 35017), (275, 34996),

Gene: MkaliMitinis3\_39 Start: 33739, Stop: 32960, Start Num: 30

Candidate Starts for MkaliMitinis3\_39:

(4, 33889), (7, 33835), (12, 33820), (Start: 30 @33739 has 31 MA's), (50, 33682), (67, 33610), (85, 33544), (90, 33529), (105, 33472), (106, 33466), (117, 33424), (205, 33184), (243, 33091), (245, 33085), (266, 33046),

Gene: Moldemort\_57 Start: 39990, Stop: 39217, Start Num: 35

Candidate Starts for Moldemort\_57:

(Start: 35 @39990 has 112 MA's), (Start: 44 @39966 has 38 MA's), (Start: 54 @39936 has 1 MA's), (79, 39828), (107, 39732), (132, 39651), (140, 39627), (142, 39618), (145, 39609), (185, 39504), (187, 39498), (189, 39492), (240, 39348), (246, 39336), (258, 39312), (289, 39225),

Gene: Moostard\_37 Start: 33980, Stop: 33189, Start Num: 33

Candidate Starts for Moostard\_37:

(11, 34070), (19, 34028), (Start: 33 @33980 has 15 MA's), (Start: 42 @33962 has 22 MA's), (52, 33926), (70, 33842), (73, 33830), (92, 33779), (95, 33770), (106, 33719), (108, 33713), (142, 33602), (183, 33488), (191, 33461), (212, 33404), (259, 33290), (277, 33236), (287, 33203),

Gene: Mosby\_50 Start: 38895, Stop: 38122, Start Num: 35

Candidate Starts for Mosby\_50:

(Start: 35 @38895 has 112 MA's), (Start: 44 @38871 has 38 MA's), (Start: 54 @38841 has 1 MA's), (79, 38733), (107, 38637), (132, 38556), (140, 38532), (142, 38523), (145, 38514), (185, 38409), (187, 38403), (189, 38397), (240, 38253), (246, 38241), (258, 38217), (289, 38130),

Gene: MsGreen\_37 Start: 33978, Stop: 33187, Start Num: 33

Candidate Starts for MsGreen\_37:

(11, 34068), (19, 34026), (Start: 33 @33978 has 15 MA's), (Start: 42 @33960 has 22 MA's), (52, 33924), (70, 33840), (73, 33828), (92, 33777), (95, 33768), (106, 33717), (108, 33711), (142, 33600), (183, 33486), (191, 33459), (212, 33402), (259, 33288), (277, 33234), (287, 33201),

Gene: Mufasa\_45 Start: 36153, Stop: 35305, Start Num: 41

Candidate Starts for Mufasa\_45:

(Start: 41 @36153 has 8 MA's), (51, 36120), (90, 35970), (114, 35877), (124, 35838), (128, 35832), (133, 35817), (142, 35787), (147, 35772), (169, 35727), (280, 35442), (290, 35412),

Gene: Murica\_56 Start: 40547, Stop: 39774, Start Num: 35

Candidate Starts for Murica\_56:

(Start: 35 @40547 has 112 MA's), (Start: 44 @40523 has 38 MA's), (Start: 54 @40493 has 1 MA's), (79, 40385), (107, 40289), (132, 40208), (140, 40184), (142, 40175), (145, 40166), (185, 40061), (187, 40055), (189, 40049), (240, 39905), (246, 39893), (258, 39869), (289, 39782),

Gene: Murphy\_56 Start: 39984, Stop: 39211, Start Num: 35

Candidate Starts for Murphy\_56:

(Start: 35 @39984 has 112 MA's), (Start: 44 @39960 has 38 MA's), (Start: 54 @39930 has 1 MA's), (79, 39822), (107, 39726), (132, 39645), (140, 39621), (142, 39612), (145, 39603), (185, 39498), (187, 39492), (189, 39486), (240, 39342), (246, 39330), (258, 39306), (289, 39219),

Gene: Murucutumbu\_43 Start: 35542, Stop: 34661, Start Num: 25

Candidate Starts for Murucutumbu\_43:

(Start: 20 @35563 has 38 MA's), (Start: 25 @35542 has 2 MA's), (Start: 37 @35506 has 2 MA's), (Start: 42 @35500 has 22 MA's), (Start: 49 @35476 has 8 MA's), (Start: 55 @35455 has 6 MA's), (56, 35452), (Start: 61 @35431 has 5 MA's), (81, 35341), (85, 35332), (114, 35227), (115, 35224), (117, 35215), (121, 35197), (141, 35143), (161, 35083), (164, 35074), (186, 35017), (214, 34945), (239, 34879), (255, 34849), (265, 34831), (270, 34819), (294, 34729),

Gene: Mynx\_43 Start: 34830, Stop: 33991, Start Num: 42

Candidate Starts for Mynx\_43:

(Start: 21 @34884 has 8 MA's), (Start: 37 @34836 has 2 MA's), (Start: 42 @34830 has 22 MA's), (Start: 49 @34806 has 8 MA's), (Start: 61 @34761 has 5 MA's), (Start: 66 @34737 has 1 MA's), (81, 34671), (85, 34662), (114, 34557), (115, 34554), (117, 34545), (121, 34527), (139, 34482), (141, 34473), (147, 34455), (156, 34425), (161, 34413), (164, 34404), (214, 34275), (232, 34224), (239, 34209), (253, 34182), (265, 34161), (270, 34149),

Gene: Myrale\_54 Start: 40238, Stop: 39465, Start Num: 35

Candidate Starts for Myrale\_54:

(Start: 35 @40238 has 112 MA's), (Start: 44 @40214 has 38 MA's), (Start: 54 @40184 has 1 MA's), (79, 40076), (107, 39980), (132, 39899), (140, 39875), (142, 39866), (145, 39857), (185, 39752), (187, 39746), (189, 39740), (240, 39596), (258, 39560), (289, 39473),

Gene: Nala\_55 Start: 40105, Stop: 39332, Start Num: 35

Candidate Starts for Nala\_55:

(Start: 35 @40105 has 112 MA's), (Start: 44 @40081 has 38 MA's), (Start: 54 @40051 has 1 MA's), (79, 39943), (107, 39847), (132, 39766), (140, 39742), (142, 39733), (145, 39724), (185, 39619), (187, 39613), (189, 39607), (240, 39463), (246, 39451), (258, 39427), (289, 39340),

Gene: Nebkiss\_67 Start: 43437, Stop: 42649, Start Num: 29

Candidate Starts for Nebkiss\_67:

(Start: 29 @43437 has 2 MA's), (Start: 44 @43398 has 38 MA's), (79, 43260), (121, 43107), (132, 43083), (142, 43050), (158, 43008), (165, 42990), (178, 42966), (226, 42831), (233, 42810), (255, 42759), (278, 42699), (280, 42690),

Gene: NelitzaMV\_51 Start: 39182, Stop: 38409, Start Num: 35

Candidate Starts for NelitzaMV\_51:

(Start: 35 @39182 has 112 MA's), (Start: 44 @39158 has 38 MA's), (Start: 54 @39128 has 1 MA's), (79, 39020), (107, 38924), (132, 38843), (140, 38819), (142, 38810), (145, 38801), (185, 38696), (187, 38690), (189, 38684), (240, 38540), (246, 38528), (258, 38504), (289, 38417),

Gene: Nergal\_39 Start: 33105, Stop: 32251, Start Num: 47

Candidate Starts for Nergal\_39:

(23, 33171), (Start: 25 @33165 has 2 MA's), (Start: 47 @33105 has 24 MA's), (Start: 65 @33030 has 1 MA's), (79, 32970), (96, 32925), (98, 32913), (137, 32781), (140, 32772), (141, 32766), (142, 32763), (148, 32745), (152, 32733), (176, 32682), (182, 32664), (186, 32649), (198, 32619), (210, 32577), (230, 32523), (255, 32478), (280, 32406), (296, 32343),

Gene: Netyap\_39 Start: 33739, Stop: 32960, Start Num: 30

Candidate Starts for Netyap\_39:

(Start: 30 @33739 has 31 MA's), (50, 33682), (67, 33610), (72, 33583), (85, 33544), (105, 33472), (106, 33466), (117, 33424), (177, 33256), (205, 33184), (243, 33091), (245, 33085), (266, 33046),

Gene: Nibb\_44 Start: 34807, Stop: 34040, Start Num: 47

Candidate Starts for Nibb\_44:

(Start: 47 @34807 has 24 MA's), (57, 34780), (60, 34768), (Start: 65 @34744 has 1 MA's), (69, 34714), (103, 34615), (104, 34606), (111, 34579), (140, 34489), (141, 34483), (142, 34480), (146, 34468), (158, 34435), (181, 34384), (211, 34294), (218, 34279), (230, 34243), (257, 34195), (260, 34189), (270, 34168), (280, 34126), (292, 34084), (299, 34051),

Gene: Nicholas\_37 Start: 33978, Stop: 33187, Start Num: 33

Candidate Starts for Nicholas\_37:

(11, 34068), (19, 34026), (Start: 33 @33978 has 15 MA's), (Start: 42 @33960 has 22 MA's), (52, 33924), (70, 33840), (73, 33828), (92, 33777), (95, 33768), (106, 33717), (108, 33711), (142, 33600), (183, 33486), (191, 33459), (212, 33402), (259, 33288), (277, 33234), (287, 33201),

Gene: Nicholasp3\_39 Start: 33740, Stop: 32961, Start Num: 30

Candidate Starts for Nicholasp3\_39:

(Start: 30 @33740 has 31 MA's), (50, 33683), (67, 33611), (85, 33545), (105, 33473), (106, 33467), (117, 33425), (205, 33185), (243, 33092), (245, 33086), (266, 33047),

Gene: NihilNomen\_97 Start: 59187, Stop: 58480, Start Num: 46

Candidate Starts for NihilNomen\_97:

(Start: 46 @59187 has 32 MA's), (Start: 61 @59133 has 5 MA's), (Start: 62 @59124 has 1 MA's), (96, 59028), (120, 58929), (125, 58917), (137, 58896), (170, 58806), (173, 58800), (204, 58719), (209, 58701), (226, 58662), (232, 58644), (233, 58641), (256, 58590), (263, 58578), (280, 58527),

Gene: Nikao\_40 Start: 36713, Stop: 35793, Start Num: 35

Candidate Starts for Nikao\_40:

(Start: 35 @36713 has 112 MA's), (Start: 43 @36695 has 12 MA's), (57, 36647), (Start: 62 @36620 has 1 MA's), (Start: 65 @36602 has 1 MA's), (70, 36569), (74, 36551), (77, 36545), (81, 36533), (106, 36449), (110, 36434), (114, 36419), (126, 36377), (138, 36341), (143, 36323), (158, 36281), (169, 36263), (183, 36224), (192, 36194), (207, 36155), (222, 36116), (227, 36101), (251, 36047), (262, 36029), (270, 36011), (280, 35972), (297, 35906), (314, 35816),

Gene: Niklas\_44 Start: 35225, Stop: 34236, Start Num: 43

Candidate Starts for Niklas\_44:

(Start: 43 @35225 has 12 MA's), (51, 35195), (57, 35177), (59, 35165), (64, 35138), (Start: 65 @35132 has 1 MA's), (67, 35120), (74, 35081), (77, 35075), (91, 35039), (104, 34988), (106, 34979), (110, 34964), (114, 34949), (126, 34907), (132, 34889), (142, 34856), (192, 34709), (199, 34694),

(223, 34628), (229, 34610), (280, 34490), (308, 34355), (310, 34319),

Gene: Nimrod\_57 Start: 40805, Stop: 40032, Start Num: 35

Candidate Starts for Nimrod\_57:

(Start: 35 @40805 has 112 MA's), (Start: 44 @40781 has 38 MA's), (Start: 54 @40751 has 1 MA's), (79, 40643), (107, 40547), (132, 40466), (140, 40442), (142, 40433), (145, 40424), (185, 40319), (187, 40313), (189, 40307), (240, 40163), (246, 40151), (258, 40127), (289, 40040),

Gene: NoSleep\_56 Start: 39744, Stop: 38971, Start Num: 35

Candidate Starts for NoSleep\_56:

(Start: 35 @39744 has 112 MA's), (Start: 44 @39720 has 38 MA's), (Start: 54 @39690 has 1 MA's), (79, 39582), (107, 39486), (132, 39405), (140, 39381), (142, 39372), (145, 39363), (185, 39258), (187, 39252), (189, 39246), (240, 39102), (246, 39090), (258, 39066), (289, 38979),

Gene: Nutello\_37 Start: 34082, Stop: 33180, Start Num: 43

Candidate Starts for Nutello\_37:

(Start: 35 @34100 has 112 MA's), (Start: 43 @34082 has 12 MA's), (57, 34034), (Start: 62 @34007 has 1 MA's), (Start: 65 @33989 has 1 MA's), (70, 33956), (74, 33938), (77, 33932), (81, 33920), (106, 33836), (110, 33821), (114, 33806), (126, 33764), (138, 33728), (143, 33710), (158, 33668), (169, 33650), (183, 33611), (207, 33542), (222, 33503), (227, 33488), (251, 33434), (262, 33416), (270, 33398), (280, 33359), (297, 33293), (314, 33203),

Gene: Odette\_95 Start: 58230, Stop: 57523, Start Num: 46

Candidate Starts for Odette\_95:

(Start: 46 @58230 has 32 MA's), (Start: 61 @58176 has 5 MA's), (Start: 62 @58167 has 1 MA's), (67, 58143), (96, 58071), (120, 57972), (125, 57960), (137, 57939), (170, 57849), (173, 57843), (204, 57762), (209, 57744), (226, 57705), (232, 57687), (233, 57684), (256, 57633), (263, 57621), (280, 57570),

Gene: OhShagHennessey\_36 Start: 32347, Stop: 31565, Start Num: 31

Candidate Starts for OhShagHennessey\_36:

(Start: 31 @32347 has 19 MA's), (38, 32329), (110, 32062), (117, 32035), (118, 32032), (128, 32002), (132, 31990), (139, 31969), (190, 31828), (206, 31792), (238, 31702), (266, 31648),

Gene: OkiRoe\_40 Start: 33795, Stop: 32953, Start Num: 39

Candidate Starts for OkiRoe\_40:

(Start: 39 @33795 has 21 MA's), (Start: 54 @33753 has 1 MA's), (106, 33558), (114, 33528), (136, 33459), (138, 33453), (142, 33438), (161, 33384), (184, 33312), (221, 33213), (230, 33186), (233, 33177), (237, 33168), (255, 33141), (258, 33135), (267, 33120), (276, 33090), (280, 33072), (288, 33051),

Gene: Omega\_99 Start: 58940, Stop: 58233, Start Num: 46

Candidate Starts for Omega\_99:

(Start: 46 @58940 has 32 MA's), (Start: 61 @58886 has 5 MA's), (Start: 62 @58877 has 1 MA's), (96, 58781), (120, 58682), (125, 58670), (132, 58664), (134, 58658), (137, 58649), (149, 58607), (172, 58556), (173, 58553), (204, 58472), (209, 58454), (226, 58415), (230, 58403), (232, 58397), (233, 58394), (252, 58352), (256, 58343), (263, 58331), (280, 58280),

Gene: OmniCritical\_45 Start: 35490, Stop: 34672, Start Num: 44

Candidate Starts for OmniCritical\_45:

(Start: 44 @35490 has 38 MA's), (Start: 46 @35487 has 32 MA's), (50, 35472), (Start: 66 @35409 has 1 MA's), (70, 35379), (76, 35358), (91, 35322), (101, 35286), (111, 35244), (114, 35232), (115, 35229), (126, 35190), (142, 35145), (147, 35130), (162, 35094), (165, 35085), (202, 34992), (222, 34938),

(230, 34914), (232, 34908), (236, 34890), (269, 34824), (275, 34803),

Gene: Omnicron\_43 Start: 33409, Stop: 32570, Start Num: 39

Candidate Starts for Omnicron\_43:

(Start: 39 @33409 has 21 MA's), (Start: 54 @33367 has 1 MA's), (71, 33283), (74, 33268), (85, 33247), (88, 33241), (114, 33142), (117, 33130), (132, 33085), (133, 33082), (142, 33052), (168, 32974), (221, 32827), (237, 32782), (255, 32755), (280, 32686),

Gene: Optimus\_89 Start: 57722, Stop: 57015, Start Num: 46

Candidate Starts for Optimus\_89:

(Start: 46 @57722 has 32 MA's), (Start: 61 @57668 has 5 MA's), (Start: 62 @57659 has 1 MA's), (96, 57563), (120, 57464), (125, 57452), (137, 57431), (170, 57341), (173, 57335), (204, 57254), (209, 57236), (226, 57197), (232, 57179), (233, 57176), (256, 57125), (263, 57113), (280, 57062),

Gene: OrionPax\_53 Start: 39189, Stop: 38416, Start Num: 35

Candidate Starts for OrionPax\_53:

(Start: 35 @39189 has 112 MA's), (Start: 44 @39165 has 38 MA's), (Start: 54 @39135 has 1 MA's), (79, 39027), (107, 38931), (132, 38850), (140, 38826), (142, 38817), (145, 38808), (185, 38703), (187, 38697), (189, 38691), (240, 38547), (246, 38535), (258, 38511), (289, 38424),

Gene: Oscar\_46 Start: 35554, Stop: 34787, Start Num: 47

Candidate Starts for Oscar\_46:

(Start: 47 @35554 has 24 MA's), (Start: 65 @35491 has 1 MA's), (75, 35440), (108, 35335), (111, 35326), (132, 35260), (140, 35236), (142, 35227), (158, 35182), (202, 35071), (218, 35023), (223, 35008), (260, 34933), (272, 34906), (280, 34870),

Gene: PYPDinur\_36 Start: 32488, Stop: 31700, Start Num: 30

Candidate Starts for PYPDinur\_36:

(Start: 30 @32488 has 31 MA's), (50, 32431), (53, 32422), (Start: 65 @32371 has 1 MA's), (72, 32332), (77, 32314), (102, 32236), (105, 32221), (106, 32215), (117, 32173), (143, 32092), (158, 32050), (165, 32032), (196, 31948), (206, 31927), (238, 31837), (259, 31795), (266, 31783),

Gene: Padfoot\_42 Start: 34886, Stop: 33984, Start Num: 20

Candidate Starts for Padfoot\_42:

(Start: 20 @34886 has 38 MA's), (Start: 25 @34865 has 2 MA's), (Start: 37 @34829 has 2 MA's), (Start: 42 @34823 has 22 MA's), (Start: 49 @34799 has 8 MA's), (Start: 55 @34778 has 6 MA's), (Start: 61 @34754 has 5 MA's), (81, 34664), (85, 34655), (114, 34550), (115, 34547), (117, 34538), (121, 34520), (123, 34514), (141, 34466), (147, 34448), (156, 34418), (161, 34406), (164, 34397), (191, 34325), (214, 34268), (232, 34217), (239, 34202), (253, 34175), (265, 34154), (270, 34142),

Gene: Padpat\_43 Start: 34565, Stop: 33663, Start Num: 20

Candidate Starts for Padpat\_43:

(Start: 20 @34565 has 38 MA's), (Start: 37 @34508 has 2 MA's), (Start: 42 @34502 has 22 MA's), (Start: 49 @34478 has 8 MA's), (Start: 55 @34457 has 6 MA's), (Start: 61 @34433 has 5 MA's), (81, 34343), (85, 34334), (114, 34229), (115, 34226), (117, 34217), (121, 34199), (123, 34193), (141, 34145), (147, 34127), (156, 34097), (161, 34085), (164, 34076), (186, 34019), (191, 34004), (214, 33947), (232, 33896), (239, 33881), (253, 33854), (265, 33833), (270, 33821),

Gene: Palpatine\_57 Start: 40553, Stop: 39804, Start Num: 44

Candidate Starts for Palpatine\_57:

(Start: 35 @40577 has 112 MA's), (Start: 44 @40553 has 38 MA's), (Start: 54 @40523 has 1 MA's), (79, 40415), (107, 40319), (132, 40238), (140, 40214), (142, 40205), (145, 40196), (185, 40091), (187, 40085), (189, 40079), (240, 39935), (246, 39923), (258, 39899), (289, 39812),

Gene: Paola\_40 Start: 33793, Stop: 32951, Start Num: 39

Candidate Starts for Paola\_40:

(Start: 39 @33793 has 21 MA's), (Start: 54 @33751 has 1 MA's), (106, 33556), (114, 33526), (136, 33457), (138, 33451), (142, 33436), (148, 33418), (161, 33382), (184, 33310), (221, 33211), (230, 33184), (233, 33175), (237, 33166), (255, 33139), (258, 33133), (267, 33118), (276, 33088), (280, 33070), (288, 33049),

Gene: Paperbeatsrock\_53 Start: 40112, Stop: 39339, Start Num: 35

Candidate Starts for Paperbeatsrock\_53:

(Start: 35 @40112 has 112 MA's), (Start: 44 @40088 has 38 MA's), (Start: 54 @40058 has 1 MA's), (79, 39950), (107, 39854), (132, 39773), (140, 39749), (142, 39740), (145, 39731), (185, 39626), (187, 39620), (189, 39614), (240, 39470), (246, 39458), (258, 39434), (289, 39347),

Gene: Pat3\_52 Start: 38288, Stop: 37569, Start Num: 54

Candidate Starts for Pat3\_52:

(Start: 35 @38342 has 112 MA's), (Start: 44 @38318 has 38 MA's), (Start: 54 @38288 has 1 MA's), (79, 38180), (107, 38084), (132, 38003), (140, 37979), (142, 37970), (145, 37961), (185, 37856), (187, 37850), (189, 37844), (240, 37700), (246, 37688), (258, 37664), (289, 37577),

Gene: Patt\_43 Start: 34705, Stop: 33914, Start Num: 44

Candidate Starts for Patt\_43:

(Start: 44 @34705 has 38 MA's), (53, 34678), (Start: 61 @34648 has 5 MA's), (Start: 62 @34639 has 1 MA's), (93, 34534), (101, 34501), (109, 34465), (111, 34459), (114, 34447), (115, 34444), (117, 34435), (126, 34405), (142, 34360), (147, 34345), (190, 34237), (202, 34207), (210, 34180), (232, 34123), (273, 34027), (280, 33997),

Gene: Peanam\_44 Start: 35181, Stop: 34210, Start Num: 43

Candidate Starts for Peanam\_44:

(Start: 43 @35181 has 12 MA's), (51, 35151), (57, 35133), (59, 35121), (64, 35094), (Start: 65 @35088 has 1 MA's), (67, 35076), (74, 35037), (77, 35031), (91, 34995), (104, 34944), (106, 34935), (110, 34920), (114, 34905), (126, 34863), (132, 34845), (135, 34836), (142, 34812), (192, 34680), (199, 34665), (223, 34599), (229, 34581), (280, 34461), (308, 34326),

Gene: Peel\_42 Start: 34691, Stop: 33789, Start Num: 20

Candidate Starts for Peel\_42:

(Start: 20 @34691 has 38 MA's), (Start: 25 @34670 has 2 MA's), (Start: 37 @34634 has 2 MA's), (Start: 42 @34628 has 22 MA's), (Start: 49 @34604 has 8 MA's), (Start: 55 @34583 has 6 MA's), (Start: 61 @34559 has 5 MA's), (81, 34469), (85, 34460), (114, 34355), (115, 34352), (117, 34343), (121, 34325), (123, 34319), (141, 34271), (147, 34253), (156, 34223), (161, 34211), (164, 34202), (191, 34130), (214, 34073), (232, 34022), (239, 34007), (253, 33980), (265, 33959), (270, 33947),

Gene: Petra64142\_59 Start: 41017, Stop: 40268, Start Num: 44

Candidate Starts for Petra64142\_59:

(Start: 35 @41041 has 112 MA's), (Start: 44 @41017 has 38 MA's), (Start: 54 @40987 has 1 MA's), (79, 40879), (107, 40783), (132, 40702), (140, 40678), (142, 40669), (145, 40660), (185, 40555), (187, 40549), (189, 40543), (240, 40399), (246, 40387), (258, 40363), (289, 40276),

Gene: Phaja\_52 Start: 39938, Stop: 39165, Start Num: 35

Candidate Starts for Phaja\_52:

(Start: 35 @39938 has 112 MA's), (Start: 44 @39914 has 38 MA's), (Start: 54 @39884 has 1 MA's), (79, 39776), (107, 39680), (132, 39599), (140, 39575), (142, 39566), (145, 39557), (185, 39452), (187, 39446), (189, 39440), (240, 39296), (246, 39284), (258, 39260), (289, 39173),



Gene: Pharb\_42 Start: 33912, Stop: 33067, Start Num: 47

Candidate Starts for Pharb\_42:

(3, 34131), (16, 34008), (Start: 32 @33948 has 6 MA's), (36, 33939), (Start: 44 @33918 has 38 MA's), (Start: 47 @33912 has 24 MA's), (78, 33786), (108, 33687), (111, 33678), (132, 33612), (142, 33579), (146, 33567), (148, 33561), (165, 33519), (182, 33477), (186, 33462), (202, 33420), (211, 33393), (217, 33384), (239, 33327), (240, 33324), (258, 33291), (280, 33225), (305, 33117),

Gene: Pharsalus\_52 Start: 39912, Stop: 39139, Start Num: 35

Candidate Starts for Pharsalus\_52:

(Start: 35 @39912 has 112 MA's), (Start: 44 @39888 has 38 MA's), (Start: 54 @39858 has 1 MA's), (79, 39750), (107, 39654), (132, 39573), (140, 39549), (142, 39540), (145, 39531), (185, 39426), (187, 39420), (189, 39414), (240, 39270), (246, 39258), (258, 39234), (289, 39147),

Gene: PhatBacter\_57 Start: 40591, Stop: 39818, Start Num: 35

Candidate Starts for PhatBacter\_57:

(Start: 35 @40591 has 112 MA's), (Start: 44 @40567 has 38 MA's), (Start: 54 @40537 has 1 MA's), (79, 40429), (107, 40333), (132, 40252), (140, 40228), (142, 40219), (145, 40210), (185, 40105), (187, 40099), (189, 40093), (240, 39949), (246, 39937), (258, 39913), (289, 39826),

Gene: Phaux\_56 Start: 40589, Stop: 39816, Start Num: 35

Candidate Starts for Phaux\_56:

(Start: 35 @40589 has 112 MA's), (Start: 44 @40565 has 38 MA's), (Start: 54 @40535 has 1 MA's), (79, 40427), (107, 40331), (132, 40250), (140, 40226), (142, 40217), (145, 40208), (185, 40103), (187, 40097), (189, 40091), (240, 39947), (246, 39935), (258, 39911), (289, 39824),

Gene: PhelpsODU\_44 Start: 34427, Stop: 33552, Start Num: 47

Candidate Starts for PhelpsODU\_44:

(Start: 47 @34427 has 24 MA's), (106, 34211), (132, 34127), (140, 34103), (142, 34094), (146, 34082), (152, 34064), (186, 33971), (192, 33953), (198, 33941), (202, 33929), (217, 33890), (230, 33848), (236, 33839),

Gene: Phoebus\_97 Start: 60370, Stop: 59663, Start Num: 46

Candidate Starts for Phoebus\_97:

(Start: 46 @60370 has 32 MA's), (Start: 61 @60316 has 5 MA's), (Start: 62 @60307 has 1 MA's), (67, 60283), (96, 60211), (120, 60112), (125, 60100), (137, 60079), (170, 59989), (173, 59983), (204, 59902), (209, 59884), (226, 59845), (232, 59827), (233, 59824), (256, 59773), (263, 59761), (280, 59710),

Gene: Phrank\_45 Start: 34384, Stop: 33518, Start Num: 47

Candidate Starts for Phrank\_45:

(Start: 47 @34384 has 24 MA's), (Start: 66 @34312 has 1 MA's), (106, 34168), (115, 34135), (132, 34084), (140, 34060), (142, 34051), (146, 34039), (152, 34021), (186, 33934), (192, 33916), (198, 33904), (202, 33892), (217, 33853), (230, 33811), (249, 33778), (276, 33712), (305, 33586),

Gene: Phrappuccino\_39 Start: 21883, Stop: 22644, Start Num: 44

Candidate Starts for Phrappuccino\_39:

(17, 21793), (38, 21868), (Start: 44 @21883 has 38 MA's), (57, 21922), (59, 21934), (67, 21973), (68, 21985), (69, 21991), (74, 22012), (77, 22018), (82, 22033), (105, 22108), (112, 22135), (114, 22144), (116, 22150), (138, 22216), (139, 22219), (142, 22231), (163, 22285), (167, 22297), (174, 22303), (177, 22312), (183, 22330), (195, 22366), (197, 22369), (210, 22408), (219, 22429), (220, 22432), (235, 22480), (269, 22543), (272, 22552), (273, 22555), (281, 22594), (291, 22630),

Gene: Phrux\_52 Start: 39182, Stop: 38409, Start Num: 35

Candidate Starts for Phrux\_52:

(Start: 35 @39182 has 112 MA's), (Start: 44 @39158 has 38 MA's), (Start: 54 @39128 has 1 MA's), (79, 39020), (107, 38924), (132, 38843), (140, 38819), (142, 38810), (145, 38801), (185, 38696), (187, 38690), (189, 38684), (240, 38540), (246, 38528), (258, 38504), (289, 38417),

Gene: Piatt\_42 Start: 34778, Stop: 33984, Start Num: 55

Candidate Starts for Piatt\_42:

(Start: 20 @34886 has 38 MA's), (Start: 25 @34865 has 2 MA's), (Start: 37 @34829 has 2 MA's), (Start: 42 @34823 has 22 MA's), (Start: 49 @34799 has 8 MA's), (Start: 55 @34778 has 6 MA's), (Start: 61 @34754 has 5 MA's), (81, 34664), (85, 34655), (114, 34550), (115, 34547), (117, 34538), (121, 34520), (123, 34514), (141, 34466), (147, 34448), (156, 34418), (161, 34406), (164, 34397), (191, 34325), (214, 34268), (232, 34217), (239, 34202), (253, 34175), (265, 34154), (270, 34142),

Gene: Pixie\_44 Start: 34706, Stop: 33786, Start Num: 32

Candidate Starts for Pixie\_44:

(Start: 32 @34706 has 6 MA's), (Start: 44 @34676 has 38 MA's), (Start: 47 @34670 has 24 MA's), (Start: 65 @34601 has 1 MA's), (69, 34571), (132, 34361), (140, 34337), (142, 34328), (146, 34316), (148, 34310), (165, 34262), (198, 34175), (202, 34163), (239, 34064), (280, 33959), (286, 33941),

Gene: Pokerus\_41 Start: 34547, Stop: 33708, Start Num: 42

Candidate Starts for Pokerus\_41:

(Start: 21 @34601 has 8 MA's), (Start: 37 @34553 has 2 MA's), (Start: 42 @34547 has 22 MA's), (Start: 49 @34523 has 8 MA's), (Start: 61 @34478 has 5 MA's), (81, 34388), (85, 34379), (114, 34274), (115, 34271), (117, 34262), (121, 34244), (123, 34238), (141, 34190), (147, 34172), (156, 34142), (161, 34130), (164, 34121), (191, 34049), (214, 33992), (239, 33926), (253, 33899), (265, 33878), (270, 33866),

Gene: Policronamos\_59 Start: 40427, Stop: 39816, Start Num: 79

Candidate Starts for Policronamos\_59:

(Start: 35 @40589 has 112 MA's), (Start: 44 @40565 has 38 MA's), (Start: 54 @40535 has 1 MA's), (79, 40427), (107, 40331), (132, 40250), (140, 40226), (142, 40217), (145, 40208), (185, 40103), (187, 40097), (189, 40091), (240, 39947), (246, 39935), (258, 39911), (289, 39824),

Gene: Porcelain\_89 Start: 54143, Stop: 53436, Start Num: 46

Candidate Starts for Porcelain\_89:

(Start: 46 @54143 has 32 MA's), (Start: 61 @54089 has 5 MA's), (Start: 62 @54080 has 1 MA's), (96, 53984), (99, 53966), (120, 53885), (125, 53873), (132, 53867), (134, 53861), (137, 53852), (149, 53810), (172, 53759), (173, 53756), (204, 53675), (209, 53657), (226, 53618), (230, 53606), (232, 53600), (233, 53597), (252, 53555), (256, 53546), (261, 53537), (263, 53534), (280, 53483),

Gene: Porky\_53 Start: 39308, Stop: 38535, Start Num: 35

Candidate Starts for Porky\_53:

(Start: 35 @39308 has 112 MA's), (Start: 44 @39284 has 38 MA's), (Start: 54 @39254 has 1 MA's), (79, 39146), (107, 39050), (132, 38969), (140, 38945), (142, 38936), (145, 38927), (185, 38822), (187, 38816), (189, 38810), (240, 38666), (246, 38654), (258, 38630), (289, 38543),

Gene: Pound\_87 Start: 58399, Stop: 57692, Start Num: 46

Candidate Starts for Pound\_87:

(Start: 46 @58399 has 32 MA's), (Start: 61 @58345 has 5 MA's), (Start: 62 @58336 has 1 MA's), (67, 58312), (96, 58240), (120, 58141), (125, 58129), (137, 58108), (170, 58018), (173, 58012), (204, 57931), (209, 57913), (226, 57874), (232, 57856), (233, 57853), (256, 57802), (263, 57790), (280, 57739),

Gene: Prithvi\_43 Start: 34696, Stop: 33857, Start Num: 42

Candidate Starts for Prithvi\_43:

(Start: 21 @34750 has 8 MA's), (Start: 37 @34702 has 2 MA's), (Start: 42 @34696 has 22 MA's), (Start: 49 @34672 has 8 MA's), (Start: 55 @34651 has 6 MA's), (Start: 61 @34627 has 5 MA's), (81, 34537), (85, 34528), (114, 34423), (115, 34420), (117, 34411), (121, 34393), (139, 34348), (141, 34339), (147, 34321), (156, 34291), (161, 34279), (164, 34270), (191, 34198), (214, 34141), (239, 34075), (253, 34048), (265, 34027), (270, 34015),

Gene: Psycho\_41 Start: 33888, Stop: 33001, Start Num: 27

Candidate Starts for Psycho\_41:

(13, 33954), (Start: 27 @33888 has 2 MA's), (Start: 39 @33852 has 21 MA's), (Start: 54 @33807 has 1 MA's), (69, 33729), (88, 33681), (114, 33582), (117, 33570), (133, 33522), (142, 33492), (148, 33474), (159, 33438), (162, 33432), (171, 33405), (217, 33279), (221, 33264), (225, 33252), (242, 33210), (267, 33171), (280, 33123),

Gene: Pumpkin\_56 Start: 40239, Stop: 39466, Start Num: 35

Candidate Starts for Pumpkin\_56:

(Start: 35 @40239 has 112 MA's), (Start: 44 @40215 has 38 MA's), (Start: 54 @40185 has 1 MA's), (79, 40077), (107, 39981), (132, 39900), (140, 39876), (142, 39867), (145, 39858), (185, 39753), (187, 39747), (189, 39741), (240, 39597), (246, 39585), (258, 39561), (289, 39474),

Gene: Quallification\_55 Start: 40227, Stop: 39454, Start Num: 35

Candidate Starts for Quallification\_55:

(Start: 35 @40227 has 112 MA's), (Start: 44 @40203 has 38 MA's), (Start: 54 @40173 has 1 MA's), (79, 40065), (107, 39969), (132, 39888), (140, 39864), (142, 39855), (145, 39846), (185, 39741), (187, 39735), (189, 39729), (240, 39585), (246, 39573), (258, 39549), (289, 39462),

Gene: Quby\_36 Start: 32381, Stop: 31593, Start Num: 30

Candidate Starts for Quby\_36:

(Start: 30 @32381 has 31 MA's), (50, 32324), (Start: 65 @32264 has 1 MA's), (72, 32225), (77, 32207), (102, 32129), (105, 32114), (106, 32108), (117, 32066), (140, 31997), (143, 31985), (158, 31943), (165, 31925), (196, 31841), (206, 31820), (238, 31730), (259, 31688), (266, 31676),

Gene: QuincyRose\_41 Start: 35009, Stop: 34107, Start Num: 20

Candidate Starts for QuincyRose\_41:

(Start: 20 @35009 has 38 MA's), (Start: 37 @34952 has 2 MA's), (Start: 42 @34946 has 22 MA's), (Start: 49 @34922 has 8 MA's), (Start: 55 @34901 has 6 MA's), (Start: 61 @34877 has 5 MA's), (81, 34787), (85, 34778), (114, 34673), (115, 34670), (117, 34661), (121, 34643), (123, 34637), (141, 34589), (147, 34571), (156, 34541), (161, 34529), (164, 34520), (186, 34463), (191, 34448), (214, 34391), (239, 34325), (253, 34298), (265, 34277), (270, 34265),

Gene: Rakim\_56 Start: 39965, Stop: 39216, Start Num: 44

Candidate Starts for Rakim\_56:

(Start: 35 @39989 has 112 MA's), (Start: 44 @39965 has 38 MA's), (Start: 54 @39935 has 1 MA's), (79, 39827), (107, 39731), (132, 39650), (140, 39626), (142, 39617), (145, 39608), (185, 39503), (187, 39497), (189, 39491), (240, 39347), (246, 39335), (258, 39311), (289, 39224),

Gene: Ramen\_42 Start: 34576, Stop: 33674, Start Num: 20

Candidate Starts for Ramen\_42:

(Start: 20 @34576 has 38 MA's), (Start: 37 @34519 has 2 MA's), (Start: 42 @34513 has 22 MA's), (Start: 49 @34489 has 8 MA's), (Start: 55 @34468 has 6 MA's), (Start: 61 @34444 has 5 MA's), (81, 34354), (85, 34345), (114, 34240), (115, 34237), (117, 34228), (121, 34210), (123, 34204), (141,

34156), (147, 34138), (156, 34108), (161, 34096), (164, 34087), (186, 34030), (191, 34015), (214, 33958), (232, 33907), (239, 33892), (253, 33865), (265, 33844), (270, 33832),

Gene: Rando14\_42 Start: 32984, Stop: 32142, Start Num: 39

Candidate Starts for Rando14\_42:

(Start: 39 @32984 has 21 MA's), (Start: 54 @32942 has 1 MA's), (63, 32900), (74, 32843), (85, 32822), (88, 32816), (114, 32717), (117, 32705), (133, 32657), (142, 32627), (221, 32402), (229, 32378), (237, 32357), (240, 32351), (255, 32330), (258, 32324),

Gene: Rapunzel97\_42 Start: 34572, Stop: 33670, Start Num: 20

Candidate Starts for Rapunzel97\_42:

(Start: 20 @34572 has 38 MA's), (Start: 37 @34515 has 2 MA's), (Start: 42 @34509 has 22 MA's), (Start: 49 @34485 has 8 MA's), (Start: 55 @34464 has 6 MA's), (Start: 61 @34440 has 5 MA's), (81, 34350), (85, 34341), (114, 34236), (115, 34233), (117, 34224), (121, 34206), (123, 34200), (141, 34152), (147, 34134), (156, 34104), (161, 34092), (164, 34083), (186, 34026), (191, 34011), (214, 33954), (232, 33903), (239, 33888), (253, 33861), (270, 33828),

Gene: Redno2\_87 Start: 54921, Stop: 54214, Start Num: 46

Candidate Starts for Redno2\_87:

(Start: 46 @54921 has 32 MA's), (Start: 61 @54867 has 5 MA's), (Start: 62 @54858 has 1 MA's), (67, 54834), (96, 54762), (120, 54663), (125, 54651), (137, 54630), (170, 54540), (173, 54534), (196, 54468), (204, 54453), (209, 54435), (226, 54396), (232, 54378), (256, 54324), (263, 54312), (266, 54306), (269, 54303), (280, 54261),

Gene: Reptar3000\_44 Start: 34696, Stop: 33905, Start Num: 44

Candidate Starts for Reptar3000\_44:

(Start: 44 @34696 has 38 MA's), (53, 34669), (Start: 61 @34639 has 5 MA's), (Start: 62 @34630 has 1 MA's), (93, 34525), (101, 34492), (109, 34456), (111, 34450), (114, 34438), (115, 34435), (117, 34426), (126, 34396), (142, 34351), (147, 34336), (190, 34228), (202, 34198), (210, 34171), (222, 34144), (232, 34114), (273, 34018), (280, 33988),

Gene: Richo\_44 Start: 35155, Stop: 34205, Start Num: 43

Candidate Starts for Richo\_44:

(8, 35275), (9, 35272), (Start: 43 @35155 has 12 MA's), (57, 35107), (59, 35095), (64, 35068), (Start: 65 @35062 has 1 MA's), (67, 35050), (97, 34948), (106, 34909), (110, 34894), (114, 34879), (140, 34795), (142, 34786), (159, 34750), (192, 34669), (223, 34588), (229, 34570), (269, 34492), (270, 34489), (280, 34450), (304, 34360), (313, 34252),

Gene: Rimmer\_55 Start: 39931, Stop: 39158, Start Num: 35

Candidate Starts for Rimmer\_55:

(Start: 35 @39931 has 112 MA's), (Start: 44 @39907 has 38 MA's), (Start: 54 @39877 has 1 MA's), (79, 39769), (107, 39673), (132, 39592), (140, 39568), (142, 39559), (145, 39550), (185, 39445), (187, 39439), (189, 39433), (240, 39289), (246, 39277), (258, 39253), (289, 39166),

Gene: RiverMonster\_55 Start: 39760, Stop: 38987, Start Num: 35

Candidate Starts for RiverMonster\_55:

(Start: 35 @39760 has 112 MA's), (Start: 44 @39736 has 38 MA's), (Start: 54 @39706 has 1 MA's), (79, 39598), (107, 39502), (132, 39421), (140, 39397), (142, 39388), (145, 39379), (185, 39274), (187, 39268), (189, 39262), (240, 39118), (246, 39106), (258, 39082), (289, 38995),

Gene: Rose5\_36 Start: 32374, Stop: 31592, Start Num: 31

Candidate Starts for Rose5\_36:

(Start: 31 @32374 has 19 MA's), (38, 32356), (110, 32089), (117, 32062), (118, 32059), (128, 32029), (132, 32017), (139, 31996), (156, 31948), (190, 31855), (206, 31819), (238, 31729), (266, 31675),

Gene: Rosmarinus\_42 Start: 34569, Stop: 33775, Start Num: 55

Candidate Starts for Rosmarinus\_42:

(Start: 20 @34677 has 38 MA's), (Start: 25 @34656 has 2 MA's), (Start: 37 @34620 has 2 MA's), (Start: 42 @34614 has 22 MA's), (Start: 49 @34590 has 8 MA's), (Start: 55 @34569 has 6 MA's), (Start: 61 @34545 has 5 MA's), (81, 34455), (85, 34446), (114, 34341), (115, 34338), (117, 34329), (121, 34311), (123, 34305), (141, 34257), (147, 34239), (156, 34209), (161, 34197), (164, 34188), (191, 34116), (214, 34059), (232, 34008), (239, 33993), (253, 33966), (265, 33945), (270, 33933),

Gene: Rumpelstiltskin\_39 Start: 34006, Stop: 33227, Start Num: 30

Candidate Starts for Rumpelstiltskin\_39:

(Start: 30 @34006 has 31 MA's), (50, 33949), (67, 33877), (85, 33811), (105, 33739), (106, 33733), (117, 33691), (205, 33451), (243, 33358), (245, 33352), (266, 33313),

Gene: Ruthiejr\_47 Start: 35557, Stop: 34739, Start Num: 44

Candidate Starts for Ruthiejr\_47:

(Start: 44 @35557 has 38 MA's), (Start: 46 @35554 has 32 MA's), (50, 35539), (Start: 66 @35476 has 1 MA's), (70, 35446), (76, 35425), (91, 35389), (101, 35353), (111, 35311), (114, 35299), (115, 35296), (126, 35257), (142, 35212), (147, 35197), (162, 35161), (165, 35152), (202, 35059), (222, 35005), (230, 34981), (232, 34975), (236, 34957), (269, 34891), (275, 34870),

Gene: Saints25\_55 Start: 39472, Stop: 38699, Start Num: 35

Candidate Starts for Saints25\_55:

(Start: 35 @39472 has 112 MA's), (Start: 44 @39448 has 38 MA's), (Start: 54 @39418 has 1 MA's), (79, 39310), (107, 39214), (132, 39133), (140, 39109), (142, 39100), (145, 39091), (185, 38986), (187, 38980), (189, 38974), (240, 38830), (246, 38818), (258, 38794), (289, 38707),

Gene: SamScheppers\_45 Start: 35986, Stop: 35168, Start Num: 44

Candidate Starts for SamScheppers\_45:

(Start: 44 @35986 has 38 MA's), (Start: 46 @35983 has 32 MA's), (50, 35968), (Start: 66 @35905 has 1 MA's), (70, 35875), (76, 35854), (91, 35818), (101, 35782), (111, 35740), (114, 35728), (115, 35725), (126, 35686), (142, 35641), (147, 35626), (162, 35590), (165, 35581), (202, 35488), (222, 35434), (230, 35410), (232, 35404), (236, 35386), (269, 35320), (275, 35299),

Gene: Samty\_37 Start: 33979, Stop: 33188, Start Num: 33

Candidate Starts for Samty\_37:

(11, 34069), (19, 34027), (Start: 33 @33979 has 15 MA's), (Start: 42 @33961 has 22 MA's), (52, 33925), (70, 33841), (73, 33829), (92, 33778), (95, 33769), (106, 33718), (108, 33712), (142, 33601), (183, 33487), (191, 33460), (212, 33403), (259, 33289), (277, 33235), (287, 33202),

Gene: SamuelLPlaqson\_43 Start: 35473, Stop: 34568, Start Num: 20

Candidate Starts for SamuelLPlaqson\_43:

(Start: 20 @35473 has 38 MA's), (Start: 37 @35413 has 2 MA's), (Start: 42 @35407 has 22 MA's), (Start: 49 @35383 has 8 MA's), (53, 35368), (56, 35359), (Start: 61 @35338 has 5 MA's), (Start: 66 @35314 has 1 MA's), (69, 35287), (81, 35248), (85, 35239), (114, 35134), (115, 35131), (121, 35104), (130, 35080), (139, 35059), (141, 35050), (147, 35032), (161, 34990), (164, 34981), (180, 34945), (191, 34909), (214, 34852), (239, 34786), (270, 34726), (294, 34636),

Gene: Sarshaun\_39 Start: 33772, Stop: 32993, Start Num: 30

Candidate Starts for Sarshaun\_39:

(Start: 30 @33772 has 31 MA's), (50, 33715), (67, 33643), (85, 33577), (90, 33562), (105, 33505), (106, 33499), (117, 33457), (205, 33217), (243, 33124), (245, 33118), (266, 33079),

Gene: Sassay\_48 Start: 37859, Stop: 37086, Start Num: 35

Candidate Starts for Sassay\_48:

(Start: 35 @37859 has 112 MA's), (Start: 44 @37835 has 38 MA's), (Start: 54 @37805 has 1 MA's), (79, 37697), (107, 37601), (132, 37520), (140, 37496), (142, 37487), (145, 37478), (185, 37373), (187, 37367), (189, 37361), (240, 37217), (246, 37205), (258, 37181), (289, 37094),

Gene: Scarlett\_46 Start: 35546, Stop: 34779, Start Num: 47

Candidate Starts for Scarlett\_46:

(Start: 47 @35546 has 24 MA's), (Start: 65 @35483 has 1 MA's), (75, 35432), (108, 35327), (111, 35318), (132, 35252), (140, 35228), (142, 35219), (158, 35174), (202, 35063), (218, 35015), (223, 35000), (260, 34925), (272, 34898), (280, 34862),

Gene: Schatzie\_90 Start: 57977, Stop: 57270, Start Num: 46

Candidate Starts for Schatzie\_90:

(Start: 46 @57977 has 32 MA's), (Start: 61 @57923 has 5 MA's), (Start: 62 @57914 has 1 MA's), (67, 57890), (96, 57818), (120, 57719), (125, 57707), (137, 57686), (170, 57596), (173, 57590), (204, 57509), (209, 57491), (226, 57452), (232, 57434), (233, 57431), (256, 57380), (263, 57368), (280, 57317),

Gene: Settecandela\_39 Start: 21883, Stop: 22644, Start Num: 44

Candidate Starts for Settecandela\_39:

(17, 21793), (38, 21868), (Start: 44 @21883 has 38 MA's), (57, 21922), (59, 21934), (67, 21973), (68, 21985), (69, 21991), (74, 22012), (77, 22018), (82, 22033), (105, 22108), (112, 22135), (114, 22144), (116, 22150), (138, 22216), (139, 22219), (142, 22231), (163, 22285), (167, 22297), (174, 22303), (177, 22312), (183, 22330), (195, 22366), (197, 22369), (210, 22408), (219, 22429), (220, 22432), (235, 22480), (269, 22543), (272, 22552), (273, 22555), (281, 22594), (291, 22630),

Gene: SgtBeansprout\_37 Start: 34082, Stop: 33180, Start Num: 43

Candidate Starts for SgtBeansprout\_37:

(Start: 35 @34100 has 112 MA's), (Start: 43 @34082 has 12 MA's), (57, 34034), (Start: 62 @34007 has 1 MA's), (Start: 65 @33989 has 1 MA's), (70, 33956), (74, 33938), (77, 33932), (81, 33920), (106, 33836), (110, 33821), (114, 33806), (126, 33764), (138, 33728), (143, 33710), (158, 33668), (169, 33650), (183, 33611), (207, 33542), (222, 33503), (227, 33488), (251, 33434), (262, 33416), (270, 33398), (280, 33359), (297, 33293), (314, 33203),

Gene: Shadow1\_47 Start: 35548, Stop: 34661, Start Num: 47

Candidate Starts for Shadow1\_47:

(28, 35599), (Start: 47 @35548 has 24 MA's), (58, 35512), (Start: 65 @35479 has 1 MA's), (69, 35449), (132, 35248), (140, 35224), (142, 35215), (146, 35203), (148, 35197), (198, 35065), (255, 34927), (258, 34921), (280, 34855), (302, 34768),

Gene: ShamWow\_54 Start: 40375, Stop: 39602, Start Num: 35

Candidate Starts for ShamWow\_54:

(Start: 35 @40375 has 112 MA's), (Start: 44 @40351 has 38 MA's), (Start: 54 @40321 has 1 MA's), (79, 40213), (107, 40117), (132, 40036), (140, 40012), (142, 40003), (145, 39994), (185, 39889), (187, 39883), (189, 39877), (240, 39733), (246, 39721), (258, 39697), (289, 39610),

Gene: Shaobing\_44 Start: 35188, Stop: 34232, Start Num: 43

Candidate Starts for Shaobing\_44:

(Start: 43 @35188 has 12 MA's), (48, 35170), (51, 35158), (59, 35128), (Start: 62 @35113 has 1 MA's), (64, 35101), (Start: 65 @35095 has 1 MA's), (67, 35083), (81, 35026), (97, 34981), (104, 34951), (106, 34942), (110, 34927), (114, 34912), (126, 34870), (131, 34855), (142, 34819), (169, 34765), (174, 34753), (176, 34747), (223, 34615), (229, 34597), (269, 34519), (280, 34477), (304, 34387),

Gene: ShedlockHolmes\_45 Start: 35232, Stop: 34315, Start Num: 32

Candidate Starts for ShedlockHolmes\_45:

(Start: 32 @35232 has 6 MA's), (Start: 44 @35202 has 38 MA's), (Start: 47 @35196 has 24 MA's), (104, 34980), (132, 34887), (140, 34863), (142, 34854), (146, 34842), (148, 34836), (165, 34788), (194, 34707), (198, 34701), (202, 34689), (217, 34647), (239, 34590), (280, 34485), (297, 34419),

Gene: Sheng711\_36 Start: 32371, Stop: 31700, Start Num: 65

Candidate Starts for Sheng711\_36:

(Start: 30 @32488 has 31 MA's), (50, 32431), (53, 32422), (Start: 65 @32371 has 1 MA's), (72, 32332), (77, 32314), (102, 32236), (105, 32221), (106, 32215), (117, 32173), (143, 32092), (158, 32050), (165, 32032), (196, 31948), (206, 31927), (238, 31837), (259, 31795), (266, 31783),

Gene: ShereKhan\_52 Start: 40151, Stop: 39378, Start Num: 35

Candidate Starts for ShereKhan\_52:

(Start: 35 @40151 has 112 MA's), (Start: 44 @40127 has 38 MA's), (Start: 54 @40097 has 1 MA's), (79, 39989), (107, 39893), (132, 39812), (140, 39788), (142, 39779), (145, 39770), (185, 39665), (187, 39659), (189, 39653), (240, 39509), (246, 39497), (258, 39473), (289, 39386),

Gene: ShiaSurprise\_43 Start: 34886, Stop: 33984, Start Num: 20

Candidate Starts for ShiaSurprise\_43:

(Start: 20 @34886 has 38 MA's), (Start: 25 @34865 has 2 MA's), (Start: 37 @34829 has 2 MA's), (Start: 42 @34823 has 22 MA's), (Start: 49 @34799 has 8 MA's), (Start: 55 @34778 has 6 MA's), (Start: 61 @34754 has 5 MA's), (81, 34664), (85, 34655), (114, 34550), (115, 34547), (117, 34538), (121, 34520), (123, 34514), (141, 34466), (147, 34448), (156, 34418), (161, 34406), (164, 34397), (191, 34325), (214, 34268), (232, 34217), (239, 34202), (253, 34175), (265, 34154), (270, 34142),

Gene: Silverleaf\_36 Start: 32374, Stop: 31592, Start Num: 31

Candidate Starts for Silverleaf\_36:

(Start: 31 @32374 has 19 MA's), (38, 32356), (110, 32089), (117, 32062), (118, 32059), (128, 32029), (132, 32017), (139, 31996), (156, 31948), (190, 31855), (206, 31819), (238, 31729), (266, 31675),

Gene: Simpliphy\_53 Start: 39456, Stop: 38683, Start Num: 35

Candidate Starts for Simpliphy\_53:

(Start: 35 @39456 has 112 MA's), (Start: 44 @39432 has 38 MA's), (Start: 54 @39402 has 1 MA's), (79, 39294), (107, 39198), (132, 39117), (140, 39093), (142, 39084), (145, 39075), (185, 38970), (187, 38964), (189, 38958), (240, 38814), (246, 38802), (258, 38778), (289, 38691),

Gene: SirDuracell\_53 Start: 38408, Stop: 37659, Start Num: 44

Candidate Starts for SirDuracell\_53:

(Start: 35 @38432 has 112 MA's), (Start: 44 @38408 has 38 MA's), (Start: 54 @38378 has 1 MA's), (79, 38270), (107, 38174), (132, 38093), (140, 38069), (142, 38060), (145, 38051), (185, 37946), (187, 37940), (189, 37934), (240, 37790), (246, 37778), (258, 37754), (289, 37667),

Gene: SirPhilip\_44 Start: 35758, Stop: 34889, Start Num: 47

Candidate Starts for SirPhilip\_44:

(Start: 47 @35758 has 24 MA's), (Start: 49 @35752 has 8 MA's), (50, 35746), (Start: 65 @35689 has 1 MA's), (104, 35551), (132, 35458), (139, 35437), (140, 35434), (142, 35425), (146, 35413), (194,

35284), (202, 35266), (217, 35227), (226, 35197), (270, 35110), (303, 34978), (309, 34927),

Gene: Slarp\_46 Start: 35595, Stop: 34777, Start Num: 44

Candidate Starts for Slarp\_46:

(Start: 44 @35595 has 38 MA's), (Start: 46 @35592 has 32 MA's), (50, 35577), (Start: 66 @35514 has 1 MA's), (70, 35484), (76, 35463), (91, 35427), (101, 35391), (111, 35349), (114, 35337), (115, 35334), (126, 35295), (142, 35250), (147, 35235), (162, 35199), (165, 35190), (202, 35097), (222, 35043), (230, 35019), (232, 35013), (236, 34995), (269, 34929), (275, 34908),

Gene: Slimphazie\_42 Start: 34572, Stop: 33670, Start Num: 20

Candidate Starts for Slimphazie\_42:

(Start: 20 @34572 has 38 MA's), (Start: 37 @34515 has 2 MA's), (Start: 42 @34509 has 22 MA's), (Start: 49 @34485 has 8 MA's), (Start: 55 @34464 has 6 MA's), (Start: 61 @34440 has 5 MA's), (81, 34350), (85, 34341), (114, 34236), (115, 34233), (117, 34224), (121, 34206), (123, 34200), (141, 34152), (147, 34134), (156, 34104), (161, 34092), (164, 34083), (186, 34026), (191, 34011), (214, 33954), (232, 33903), (239, 33888), (253, 33861), (270, 33828),

Gene: Snenia\_37 Start: 33979, Stop: 33188, Start Num: 33

Candidate Starts for Snenia\_37:

(11, 34069), (19, 34027), (Start: 33 @33979 has 15 MA's), (Start: 42 @33961 has 22 MA's), (52, 33925), (70, 33841), (73, 33829), (92, 33778), (95, 33769), (106, 33718), (108, 33712), (142, 33601), (183, 33487), (191, 33460), (212, 33403), (259, 33289), (277, 33235), (287, 33202),

Gene: SoSeph\_40 Start: 33939, Stop: 33097, Start Num: 39

Candidate Starts for SoSeph\_40:

(Start: 39 @33939 has 21 MA's), (Start: 54 @33897 has 1 MA's), (114, 33672), (136, 33603), (138, 33597), (142, 33582), (148, 33564), (161, 33528), (184, 33456), (221, 33357), (230, 33330), (233, 33321), (237, 33312), (255, 33285), (258, 33279), (267, 33264), (280, 33216), (288, 33195),

Gene: Soap141\_39 Start: 33772, Stop: 32993, Start Num: 30

Candidate Starts for Soap141\_39:

(Start: 30 @33772 has 31 MA's), (50, 33715), (67, 33643), (85, 33577), (90, 33562), (105, 33505), (106, 33499), (117, 33457), (205, 33217), (243, 33124), (245, 33118), (266, 33079),

Gene: SophKB\_51 Start: 39131, Stop: 38358, Start Num: 35

Candidate Starts for SophKB\_51:

(Start: 35 @39131 has 112 MA's), (Start: 44 @39107 has 38 MA's), (Start: 54 @39077 has 1 MA's), (79, 38969), (107, 38873), (132, 38792), (140, 38768), (142, 38759), (145, 38750), (185, 38645), (187, 38639), (189, 38633), (240, 38489), (246, 38477), (258, 38453), (289, 38366),

Gene: Sotrice96\_55 Start: 39837, Stop: 39064, Start Num: 35

Candidate Starts for Sotrice96\_55:

(Start: 35 @39837 has 112 MA's), (Start: 44 @39813 has 38 MA's), (Start: 54 @39783 has 1 MA's), (79, 39675), (107, 39579), (132, 39498), (140, 39474), (142, 39465), (145, 39456), (185, 39351), (187, 39345), (189, 39339), (240, 39195), (246, 39183), (258, 39159), (289, 39072),

Gene: Spock\_42 Start: 34690, Stop: 33788, Start Num: 20

Candidate Starts for Spock\_42:

(Start: 20 @34690 has 38 MA's), (Start: 25 @34669 has 2 MA's), (Start: 37 @34633 has 2 MA's), (Start: 42 @34627 has 22 MA's), (Start: 49 @34603 has 8 MA's), (Start: 55 @34582 has 6 MA's), (Start: 61 @34558 has 5 MA's), (81, 34468), (85, 34459), (114, 34354), (115, 34351), (117, 34342), (121, 34324), (123, 34318), (141, 34270), (147, 34252), (156, 34222), (161, 34210), (164, 34201), (191, 34129), (214, 34072), (232, 34021), (239, 34006), (253, 33979), (265, 33958), (270, 33946),



Gene: Squint\_89 Start: 54262, Stop: 53555, Start Num: 46

Candidate Starts for Squint\_89:

(Start: 46 @54262 has 32 MA's), (Start: 61 @54208 has 5 MA's), (Start: 62 @54199 has 1 MA's), (96, 54103), (99, 54085), (120, 54004), (125, 53992), (132, 53986), (134, 53980), (137, 53971), (149, 53929), (172, 53878), (173, 53875), (204, 53794), (209, 53776), (226, 53737), (230, 53725), (232, 53719), (233, 53716), (252, 53674), (256, 53665), (261, 53656), (263, 53653), (280, 53602),

Gene: Stank\_58 Start: 40389, Stop: 39616, Start Num: 35

Candidate Starts for Stank\_58:

(Start: 35 @40389 has 112 MA's), (Start: 44 @40365 has 38 MA's), (Start: 54 @40335 has 1 MA's), (79, 40227), (107, 40131), (132, 40050), (140, 40026), (142, 40017), (145, 40008), (185, 39903), (187, 39897), (189, 39891), (240, 39747), (246, 39735), (258, 39711), (289, 39624),

Gene: Stark\_55 Start: 39644, Stop: 38871, Start Num: 35

Candidate Starts for Stark\_55:

(Start: 35 @39644 has 112 MA's), (Start: 44 @39620 has 38 MA's), (Start: 54 @39590 has 1 MA's), (79, 39482), (107, 39386), (132, 39305), (140, 39281), (142, 39272), (145, 39263), (185, 39158), (187, 39152), (189, 39146), (240, 39002), (246, 38990), (258, 38966), (289, 38879),

Gene: StellaBean\_52 Start: 39699, Stop: 38926, Start Num: 35

Candidate Starts for StellaBean\_52:

(Start: 35 @39699 has 112 MA's), (Start: 44 @39675 has 38 MA's), (Start: 54 @39645 has 1 MA's), (79, 39537), (107, 39441), (132, 39360), (140, 39336), (142, 39327), (145, 39318), (185, 39213), (187, 39207), (189, 39201), (240, 39057), (246, 39045), (258, 39021), (289, 38934),

Gene: Stinson\_43 Start: 35020, Stop: 34181, Start Num: 42

Candidate Starts for Stinson\_43:

(Start: 20 @35083 has 38 MA's), (Start: 25 @35062 has 2 MA's), (Start: 37 @35026 has 2 MA's), (Start: 42 @35020 has 22 MA's), (Start: 49 @34996 has 8 MA's), (Start: 55 @34975 has 6 MA's), (56, 34972), (Start: 61 @34951 has 5 MA's), (81, 34861), (85, 34852), (114, 34747), (115, 34744), (117, 34735), (121, 34717), (139, 34672), (141, 34663), (161, 34603), (164, 34594), (191, 34522), (214, 34465), (239, 34399), (255, 34369), (265, 34351), (270, 34339), (294, 34249),

Gene: StolenFromERC\_57 Start: 39873, Stop: 39100, Start Num: 35

Candidate Starts for StolenFromERC\_57:

(Start: 35 @39873 has 112 MA's), (Start: 44 @39849 has 38 MA's), (Start: 54 @39819 has 1 MA's), (79, 39711), (107, 39615), (132, 39534), (140, 39510), (142, 39501), (145, 39492), (185, 39387), (187, 39381), (189, 39375), (240, 39231), (246, 39219), (258, 39195), (289, 39108),

Gene: Strobilo\_45 Start: 36567, Stop: 35719, Start Num: 41

Candidate Starts for Strobilo\_45:

(Start: 41 @36567 has 8 MA's), (57, 36516), (59, 36504), (68, 36453), (83, 36405), (110, 36309), (114, 36294), (128, 36249), (142, 36204), (160, 36153), (169, 36144), (211, 36024), (267, 35907), (275, 35880), (280, 35859),

Gene: Sulley\_42 Start: 34807, Stop: 33914, Start Num: 21

Candidate Starts for Sulley\_42:

(Start: 21 @34807 has 8 MA's), (Start: 37 @34759 has 2 MA's), (Start: 42 @34753 has 22 MA's), (Start: 49 @34729 has 8 MA's), (Start: 61 @34684 has 5 MA's), (85, 34585), (114, 34480), (115, 34477), (117, 34468), (121, 34450), (141, 34396), (147, 34378), (156, 34348), (161, 34336), (164, 34327), (191, 34255), (214, 34198), (239, 34132), (253, 34105), (265, 34084), (270, 34072),

Gene: Sunflower1121\_48 Start: 35580, Stop: 34762, Start Num: 65

Candidate Starts for Sunflower1121\_48:

(28, 35700), (Start: 47 @35649 has 24 MA's), (Start: 65 @35580 has 1 MA's), (69, 35550), (132, 35349), (140, 35325), (142, 35316), (146, 35304), (148, 35298), (198, 35166), (255, 35028), (258, 35022), (280, 34956), (302, 34869),

Gene: Superphikiman\_88 Start: 53290, Stop: 52646, Start Num: 62

Candidate Starts for Superphikiman\_88:

(Start: 46 @53353 has 32 MA's), (Start: 61 @53299 has 5 MA's), (Start: 62 @53290 has 1 MA's), (96, 53194), (99, 53176), (120, 53095), (125, 53083), (132, 53077), (134, 53071), (137, 53062), (149, 53020), (172, 52969), (173, 52966), (204, 52885), (209, 52867), (226, 52828), (230, 52816), (232, 52810), (233, 52807), (252, 52765), (256, 52756), (261, 52747), (263, 52744), (280, 52693),

Gene: Syra333\_47 Start: 35315, Stop: 34425, Start Num: 47

Candidate Starts for Syra333\_47:

(Start: 47 @35315 has 24 MA's), (Start: 65 @35246 has 1 MA's), (67, 35234), (69, 35216), (78, 35189), (132, 35015), (140, 34991), (142, 34982), (146, 34970), (148, 34964), (198, 34832), (202, 34820), (255, 34694), (258, 34688), (262, 34682), (280, 34622), (302, 34535),

Gene: TBond007\_44 Start: 34675, Stop: 33785, Start Num: 44

Candidate Starts for TBond007\_44:

(Start: 32 @34705 has 6 MA's), (Start: 44 @34675 has 38 MA's), (Start: 47 @34669 has 24 MA's), (Start: 65 @34600 has 1 MA's), (69, 34570), (132, 34360), (140, 34336), (142, 34327), (146, 34315), (148, 34309), (165, 34261), (198, 34174), (202, 34162), (239, 34063), (280, 33958), (286, 33940),

Gene: TBrady12\_57 Start: 39849, Stop: 39100, Start Num: 44

Candidate Starts for TBrady12\_57:

(Start: 35 @39873 has 112 MA's), (Start: 44 @39849 has 38 MA's), (Start: 54 @39819 has 1 MA's), (79, 39711), (107, 39615), (132, 39534), (140, 39510), (142, 39501), (145, 39492), (185, 39387), (187, 39381), (189, 39375), (240, 39231), (246, 39219), (258, 39195), (289, 39108),

Gene: TClif\_46 Start: 35608, Stop: 34700, Start Num: 43

Candidate Starts for TClif\_46:

(Start: 43 @35608 has 12 MA's), (48, 35590), (57, 35560), (106, 35368), (110, 35353), (114, 35338), (144, 35242), (183, 35140), (225, 35023), (239, 34987), (280, 34894), (285, 34879),

Gene: Tachez\_42 Start: 34534, Stop: 33632, Start Num: 20

Candidate Starts for Tachez\_42:

(Start: 20 @34534 has 38 MA's), (Start: 37 @34477 has 2 MA's), (Start: 42 @34471 has 22 MA's), (Start: 49 @34447 has 8 MA's), (Start: 55 @34426 has 6 MA's), (Start: 61 @34402 has 5 MA's), (81, 34312), (85, 34303), (114, 34198), (115, 34195), (117, 34186), (121, 34168), (123, 34162), (141, 34114), (147, 34096), (156, 34066), (161, 34054), (164, 34045), (186, 33988), (191, 33973), (214, 33916), (232, 33865), (239, 33850), (253, 33823), (265, 33802), (270, 33790),

Gene: TaiwanKao\_44 Start: 34752, Stop: 33913, Start Num: 42

Candidate Starts for TaiwanKao\_44:

(Start: 37 @34758 has 2 MA's), (Start: 42 @34752 has 22 MA's), (Start: 49 @34728 has 8 MA's), (Start: 55 @34707 has 6 MA's), (Start: 61 @34683 has 5 MA's), (Start: 66 @34659 has 1 MA's), (81, 34593), (85, 34584), (114, 34479), (115, 34476), (117, 34467), (121, 34449), (141, 34395), (147, 34377), (156, 34347), (161, 34335), (164, 34326), (191, 34254), (214, 34197), (232, 34146), (239, 34131), (253, 34104), (265, 34083), (270, 34071),

Gene: Taquito\_46 Start: 35901, Stop: 35164, Start Num: 66

Candidate Starts for Taquito\_46:

(Start: 66 @35901 has 1 MA's), (70, 35871), (76, 35850), (91, 35814), (101, 35778), (111, 35736), (114, 35724), (115, 35721), (126, 35682), (142, 35637), (147, 35622), (162, 35586), (165, 35577), (202, 35484), (222, 35430), (230, 35406), (232, 35400), (236, 35382), (269, 35316), (275, 35295),

Gene: Tarkin\_53 Start: 40121, Stop: 39348, Start Num: 35

Candidate Starts for Tarkin\_53:

(Start: 35 @40121 has 112 MA's), (Start: 44 @40097 has 38 MA's), (Start: 54 @40067 has 1 MA's), (79, 39959), (107, 39863), (132, 39782), (140, 39758), (142, 39749), (145, 39740), (185, 39635), (187, 39629), (189, 39623), (240, 39479), (246, 39467), (258, 39443), (289, 39356),

Gene: TeardropMSU\_50 Start: 39121, Stop: 38348, Start Num: 35

Candidate Starts for TeardropMSU\_50:

(Start: 35 @39121 has 112 MA's), (Start: 44 @39097 has 38 MA's), (Start: 54 @39067 has 1 MA's), (79, 38959), (107, 38863), (132, 38782), (140, 38758), (142, 38749), (145, 38740), (185, 38635), (187, 38629), (189, 38623), (240, 38479), (246, 38467), (258, 38443), (289, 38356),

Gene: Teaspoon\_55 Start: 39991, Stop: 39242, Start Num: 44

Candidate Starts for Teaspoon\_55:

(Start: 35 @40015 has 112 MA's), (Start: 44 @39991 has 38 MA's), (Start: 54 @39961 has 1 MA's), (79, 39853), (107, 39757), (132, 39676), (140, 39652), (142, 39643), (145, 39634), (185, 39529), (187, 39523), (189, 39517), (240, 39373), (246, 39361), (258, 39337), (289, 39250),

Gene: Terminus\_56 Start: 40612, Stop: 39839, Start Num: 35

Candidate Starts for Terminus\_56:

(Start: 35 @40612 has 112 MA's), (Start: 44 @40588 has 38 MA's), (Start: 54 @40558 has 1 MA's), (79, 40450), (107, 40354), (132, 40273), (140, 40249), (142, 40240), (145, 40231), (185, 40126), (187, 40120), (189, 40114), (240, 39970), (246, 39958), (258, 39934), (289, 39847),

Gene: Thibault\_80 Start: 53886, Stop: 53179, Start Num: 46

Candidate Starts for Thibault\_80:

(Start: 46 @53886 has 32 MA's), (Start: 61 @53832 has 5 MA's), (Start: 62 @53823 has 1 MA's), (67, 53799), (96, 53727), (120, 53628), (125, 53616), (137, 53595), (170, 53505), (173, 53499), (196, 53433), (204, 53418), (209, 53400), (226, 53361), (232, 53343), (233, 53340), (256, 53289), (263, 53277), (280, 53226),

Gene: ThreeRngTarjay\_92 Start: 59262, Stop: 58555, Start Num: 46

Candidate Starts for ThreeRngTarjay\_92:

(Start: 46 @59262 has 32 MA's), (Start: 61 @59208 has 5 MA's), (Start: 62 @59199 has 1 MA's), (67, 59175), (96, 59103), (120, 59004), (125, 58992), (137, 58971), (170, 58881), (173, 58875), (204, 58794), (209, 58776), (226, 58737), (232, 58719), (233, 58716), (256, 58665), (263, 58653), (280, 58602),

Gene: Thresher\_57 Start: 40998, Stop: 40225, Start Num: 35

Candidate Starts for Thresher\_57:

(Start: 35 @40998 has 112 MA's), (Start: 44 @40974 has 38 MA's), (Start: 54 @40944 has 1 MA's), (79, 40836), (107, 40740), (132, 40659), (140, 40635), (142, 40626), (145, 40617), (185, 40512), (187, 40506), (189, 40500), (240, 40356), (246, 40344), (258, 40320), (289, 40233),

Gene: Thyatira\_42 Start: 36140, Stop: 35298, Start Num: 39

Candidate Starts for Thyatira\_42:

(Start: 39 @36140 has 21 MA's), (Start: 54 @36098 has 1 MA's), (106, 35903), (114, 35873), (136, 35804), (138, 35798), (142, 35783), (148, 35765), (161, 35729), (184, 35657), (221, 35558), (230,

35531), (233, 35522), (237, 35513), (255, 35486), (258, 35480), (267, 35465), (280, 35417), (288, 35396),

Gene: Tierra\_45 Start: 35195, Stop: 34329, Start Num: 47

Candidate Starts for Tierra\_45:

(Start: 47 @35195 has 24 MA's), (Start: 66 @35123 has 1 MA's), (106, 34979), (115, 34946), (132, 34895), (140, 34871), (142, 34862), (146, 34850), (186, 34745), (192, 34727), (198, 34715), (202, 34703), (217, 34664), (230, 34622), (249, 34589), (270, 34547), (276, 34523), (305, 34397),

Gene: TingHuaYa\_43 Start: 33668, Stop: 32823, Start Num: 49

Candidate Starts for TingHuaYa\_43:

(Start: 49 @33668 has 8 MA's), (97, 33491), (114, 33422), (129, 33374), (132, 33368), (135, 33359), (140, 33344), (142, 33335), (182, 33233), (185, 33221), (189, 33209), (194, 33194), (206, 33164), (232, 33086), (247, 33029), (253, 33020), (254, 33017), (264, 32999), (280, 32942), (306, 32834), (307, 32831),

Gene: TiniBug\_43 Start: 35469, Stop: 34564, Start Num: 20

Candidate Starts for TiniBug\_43:

(Start: 20 @35469 has 38 MA's), (Start: 37 @35409 has 2 MA's), (Start: 42 @35403 has 22 MA's), (Start: 49 @35379 has 8 MA's), (53, 35364), (56, 35355), (Start: 61 @35334 has 5 MA's), (Start: 66 @35310 has 1 MA's), (69, 35283), (81, 35244), (85, 35235), (114, 35130), (115, 35127), (121, 35100), (130, 35076), (139, 35055), (141, 35046), (147, 35028), (161, 34986), (164, 34977), (180, 34941), (191, 34905), (214, 34848), (239, 34782), (270, 34722), (294, 34632),

Gene: Tiri\_43 Start: 34869, Stop: 33967, Start Num: 20

Candidate Starts for Tiri\_43:

(Start: 20 @34869 has 38 MA's), (Start: 37 @34812 has 2 MA's), (Start: 42 @34806 has 22 MA's), (Start: 49 @34782 has 8 MA's), (Start: 55 @34761 has 6 MA's), (Start: 61 @34737 has 5 MA's), (81, 34647), (85, 34638), (114, 34533), (115, 34530), (117, 34521), (121, 34503), (123, 34497), (141, 34449), (147, 34431), (156, 34401), (161, 34389), (164, 34380), (186, 34323), (191, 34308), (214, 34251), (239, 34185), (253, 34158), (265, 34137), (270, 34125),

Gene: Tomaszewski\_50 Start: 38994, Stop: 38221, Start Num: 35

Candidate Starts for Tomaszewski\_50:

(Start: 35 @38994 has 112 MA's), (Start: 44 @38970 has 38 MA's), (Start: 54 @38940 has 1 MA's), (79, 38832), (107, 38736), (132, 38655), (140, 38631), (142, 38622), (145, 38613), (185, 38508), (187, 38502), (189, 38496), (240, 38352), (246, 38340), (258, 38316), (289, 38229),

Gene: Topper\_42 Start: 34581, Stop: 33787, Start Num: 55

Candidate Starts for Topper\_42:

(Start: 20 @34689 has 38 MA's), (Start: 25 @34668 has 2 MA's), (Start: 37 @34632 has 2 MA's), (Start: 42 @34626 has 22 MA's), (Start: 49 @34602 has 8 MA's), (Start: 55 @34581 has 6 MA's), (Start: 61 @34557 has 5 MA's), (81, 34467), (85, 34458), (114, 34353), (115, 34350), (117, 34341), (121, 34323), (123, 34317), (141, 34269), (147, 34251), (156, 34221), (161, 34209), (164, 34200), (191, 34128), (214, 34071), (232, 34020), (239, 34005), (253, 33978), (265, 33957), (270, 33945),

Gene: Torres\_40 Start: 36714, Stop: 35794, Start Num: 35

Candidate Starts for Torres\_40:

(Start: 35 @36714 has 112 MA's), (Start: 43 @36696 has 12 MA's), (57, 36648), (Start: 62 @36621 has 1 MA's), (Start: 65 @36603 has 1 MA's), (70, 36570), (74, 36552), (77, 36546), (81, 36534), (106, 36450), (110, 36435), (114, 36420), (126, 36378), (138, 36342), (143, 36324), (158, 36282), (169, 36264), (183, 36225), (192, 36195), (207, 36156), (222, 36117), (227, 36102), (251, 36048), (262, 36030), (270, 36012), (280, 35973), (297, 35907), (314, 35817),

Gene: Toto\_53 Start: 40351, Stop: 39602, Start Num: 44

Candidate Starts for Toto\_53:

(Start: 35 @40375 has 112 MA's), (Start: 44 @40351 has 38 MA's), (Start: 54 @40321 has 1 MA's), (79, 40213), (107, 40117), (132, 40036), (140, 40012), (142, 40003), (145, 39994), (185, 39889), (187, 39883), (189, 39877), (240, 39733), (246, 39721), (258, 39697), (289, 39610),

Gene: Tourach\_39 Start: 33734, Stop: 32955, Start Num: 30

Candidate Starts for Tourach\_39:

(Start: 30 @33734 has 31 MA's), (50, 33677), (72, 33578), (85, 33539), (105, 33467), (106, 33461), (117, 33419), (138, 33356), (163, 33284), (177, 33251), (243, 33086), (266, 33041),

Gene: Traaww1\_50 Start: 39556, Stop: 38783, Start Num: 35

Candidate Starts for Traaww1\_50:

(Start: 35 @39556 has 112 MA's), (Start: 44 @39532 has 38 MA's), (Start: 54 @39502 has 1 MA's), (79, 39394), (107, 39298), (132, 39217), (140, 39193), (142, 39184), (145, 39175), (185, 39070), (187, 39064), (189, 39058), (240, 38914), (246, 38902), (258, 38878), (289, 38791),

Gene: TreyKay\_43 Start: 34696, Stop: 33857, Start Num: 42

Candidate Starts for TreyKay\_43:

(Start: 21 @34750 has 8 MA's), (Start: 37 @34702 has 2 MA's), (Start: 42 @34696 has 22 MA's), (Start: 49 @34672 has 8 MA's), (Start: 55 @34651 has 6 MA's), (Start: 61 @34627 has 5 MA's), (81, 34537), (85, 34528), (114, 34423), (115, 34420), (117, 34411), (121, 34393), (139, 34348), (141, 34339), (147, 34321), (156, 34291), (161, 34279), (164, 34270), (191, 34198), (214, 34141), (239, 34075), (253, 34048), (265, 34027), (270, 34015),

Gene: TribbleTrouble\_42 Start: 34597, Stop: 33695, Start Num: 32

Candidate Starts for TribbleTrouble\_42:

(1, 34825), (2, 34795), (16, 34657), (18, 34648), (Start: 32 @34597 has 6 MA's), (Start: 44 @34567 has 38 MA's), (Start: 47 @34561 has 24 MA's), (132, 34261), (140, 34237), (142, 34228), (146, 34216), (148, 34210), (164, 34171), (165, 34168), (186, 34111), (194, 34087), (198, 34081), (202, 34069), (211, 34042), (214, 34036), (230, 33991), (239, 33976), (260, 33934), (270, 33913),

Gene: TruffulaTree\_42 Start: 34568, Stop: 33666, Start Num: 20

Candidate Starts for TruffulaTree\_42:

(Start: 20 @34568 has 38 MA's), (Start: 37 @34511 has 2 MA's), (Start: 42 @34505 has 22 MA's), (Start: 49 @34481 has 8 MA's), (Start: 55 @34460 has 6 MA's), (Start: 61 @34436 has 5 MA's), (81, 34346), (85, 34337), (114, 34232), (115, 34229), (117, 34220), (121, 34202), (123, 34196), (141, 34148), (147, 34130), (156, 34100), (161, 34088), (164, 34079), (186, 34022), (191, 34007), (214, 33950), (232, 33899), (239, 33884), (253, 33857), (270, 33824),

Gene: Tuco\_55 Start: 40883, Stop: 40110, Start Num: 35

Candidate Starts for Tuco\_55:

(Start: 35 @40883 has 112 MA's), (Start: 44 @40859 has 38 MA's), (Start: 54 @40829 has 1 MA's), (79, 40721), (107, 40625), (132, 40544), (140, 40520), (142, 40511), (145, 40502), (185, 40397), (187, 40391), (189, 40385), (240, 40241), (246, 40229), (258, 40205), (289, 40118),

Gene: Twitch\_42 Start: 34691, Stop: 33789, Start Num: 20

Candidate Starts for Twitch\_42:

(Start: 20 @34691 has 38 MA's), (Start: 25 @34670 has 2 MA's), (Start: 37 @34634 has 2 MA's), (Start: 42 @34628 has 22 MA's), (Start: 49 @34604 has 8 MA's), (Start: 55 @34583 has 6 MA's), (Start: 61 @34559 has 5 MA's), (81, 34469), (85, 34460), (114, 34355), (115, 34352), (117, 34343), (121, 34325), (123, 34319), (141, 34271), (147, 34253), (156, 34223), (161, 34211), (164, 34202),

(191, 34130), (214, 34073), (232, 34022), (239, 34007), (253, 33980), (265, 33959), (270, 33947),

Gene: Tyson\_36 Start: 32375, Stop: 31593, Start Num: 31

Candidate Starts for Tyson\_36:

(Start: 31 @32375 has 19 MA's), (38, 32357), (110, 32090), (117, 32063), (118, 32060), (128, 32030), (132, 32018), (139, 31997), (156, 31949), (190, 31856), (206, 31820), (238, 31730), (266, 31676),

Gene: UPIE\_37 Start: 32373, Stop: 31591, Start Num: 31

Candidate Starts for UPIE\_37:

(Start: 31 @32373 has 19 MA's), (38, 32355), (110, 32088), (117, 32061), (118, 32058), (128, 32028), (132, 32016), (139, 31995), (156, 31947), (190, 31854), (206, 31818), (238, 31728), (266, 31674),

Gene: Ukulele\_51 Start: 39269, Stop: 38496, Start Num: 35

Candidate Starts for Ukulele\_51:

(Start: 35 @39269 has 112 MA's), (Start: 44 @39245 has 38 MA's), (Start: 54 @39215 has 1 MA's), (79, 39107), (107, 39011), (132, 38930), (140, 38906), (142, 38897), (145, 38888), (185, 38783), (187, 38777), (189, 38771), (240, 38627), (246, 38615), (258, 38591), (289, 38504),

Gene: Unicorn\_44 Start: 34427, Stop: 33552, Start Num: 47

Candidate Starts for Unicorn\_44:

(Start: 47 @34427 has 24 MA's), (106, 34211), (132, 34127), (140, 34103), (142, 34094), (146, 34082), (152, 34064), (186, 33971), (192, 33953), (198, 33941), (202, 33929), (217, 33890), (230, 33848), (236, 33839),

Gene: Urkel\_43 Start: 35473, Stop: 34568, Start Num: 20

Candidate Starts for Urkel\_43:

(Start: 20 @35473 has 38 MA's), (Start: 37 @35413 has 2 MA's), (Start: 42 @35407 has 22 MA's), (Start: 49 @35383 has 8 MA's), (53, 35368), (56, 35359), (Start: 61 @35338 has 5 MA's), (Start: 66 @35314 has 1 MA's), (69, 35287), (81, 35248), (85, 35239), (114, 35134), (115, 35131), (121, 35104), (130, 35080), (139, 35059), (141, 35050), (147, 35032), (161, 34990), (164, 34981), (180, 34945), (191, 34909), (214, 34852), (239, 34786), (270, 34726), (294, 34636),

Gene: Validus\_46 Start: 35225, Stop: 34305, Start Num: 43

Candidate Starts for Validus\_46:

(Start: 43 @35225 has 12 MA's), (53, 35189), (57, 35177), (59, 35165), (64, 35138), (97, 35018), (106, 34979), (110, 34964), (113, 34955), (114, 34949), (133, 34886), (140, 34865), (141, 34859), (142, 34856), (159, 34817), (169, 34805), (176, 34787), (192, 34736), (280, 34517), (304, 34427), (311, 34364), (312, 34352),

Gene: Veliki\_42 Start: 34608, Stop: 33706, Start Num: 20

Candidate Starts for Veliki\_42:

(Start: 20 @34608 has 38 MA's), (Start: 37 @34551 has 2 MA's), (Start: 42 @34545 has 22 MA's), (Start: 49 @34521 has 8 MA's), (Start: 55 @34500 has 6 MA's), (Start: 61 @34476 has 5 MA's), (81, 34386), (85, 34377), (114, 34272), (115, 34269), (117, 34260), (121, 34242), (123, 34236), (141, 34188), (147, 34170), (156, 34140), (161, 34128), (164, 34119), (186, 34062), (191, 34047), (214, 33990), (232, 33939), (239, 33924), (253, 33897), (265, 33876), (270, 33864),

Gene: Vetrrix\_39 Start: 33745, Stop: 32966, Start Num: 30

Candidate Starts for Vetrrix\_39:

(Start: 30 @33745 has 31 MA's), (50, 33688), (67, 33616), (72, 33589), (85, 33550), (105, 33478), (106, 33472), (117, 33430), (205, 33190), (233, 33118), (243, 33097), (245, 33091), (266, 33052),

Gene: Wamburgrxpress\_37 Start: 32388, Stop: 31606, Start Num: 31

Candidate Starts for Wamburgxpress\_37:

(Start: 31 @32388 has 19 MA's), (38, 32370), (110, 32103), (117, 32076), (118, 32073), (128, 32043), (132, 32031), (139, 32010), (156, 31962), (190, 31869), (206, 31833), (238, 31743), (266, 31689),

Gene: Wanda\_99 Start: 58379, Stop: 57672, Start Num: 46

Candidate Starts for Wanda\_99:

(Start: 46 @58379 has 32 MA's), (Start: 61 @58325 has 5 MA's), (Start: 62 @58316 has 1 MA's), (96, 58220), (120, 58121), (125, 58109), (137, 58088), (170, 57998), (173, 57992), (204, 57911), (209, 57893), (226, 57854), (232, 57836), (233, 57833), (256, 57782), (263, 57770), (280, 57719),

Gene: Waterfoul\_41 Start: 34034, Stop: 33192, Start Num: 39

Candidate Starts for Waterfoul\_41:

(Start: 39 @34034 has 21 MA's), (Start: 54 @33992 has 1 MA's), (106, 33797), (114, 33767), (136, 33698), (138, 33692), (142, 33677), (148, 33659), (161, 33623), (184, 33551), (221, 33452), (230, 33425), (233, 33416), (237, 33407), (255, 33380), (258, 33374), (267, 33359), (280, 33311), (288, 33290),

Gene: Whirlwind\_38 Start: 33757, Stop: 32933, Start Num: 22

Candidate Starts for Whirlwind\_38:

(Start: 22 @33757 has 1 MA's), (26, 33748), (Start: 31 @33730 has 19 MA's), (Start: 33 @33724 has 15 MA's), (52, 33670), (77, 33562), (84, 33547), (87, 33535), (92, 33523), (95, 33514), (106, 33463), (108, 33457), (123, 33400), (212, 33148), (259, 33034), (277, 32980),

Gene: Wiggin\_56 Start: 39957, Stop: 39184, Start Num: 35

Candidate Starts for Wiggin\_56:

(Start: 35 @39957 has 112 MA's), (Start: 44 @39933 has 38 MA's), (Start: 54 @39903 has 1 MA's), (79, 39795), (107, 39699), (132, 39618), (140, 39594), (142, 39585), (145, 39576), (185, 39471), (187, 39465), (189, 39459), (240, 39315), (246, 39303), (258, 39279), (289, 39192),

Gene: Wigglewigggle\_39 Start: 33771, Stop: 32992, Start Num: 30

Candidate Starts for Wigglewigggle\_39:

(Start: 30 @33771 has 31 MA's), (50, 33714), (67, 33642), (85, 33576), (90, 33561), (105, 33504), (106, 33498), (117, 33456), (205, 33216), (243, 33123), (245, 33117), (266, 33078),

Gene: Wilder\_39 Start: 33744, Stop: 32965, Start Num: 30

Candidate Starts for Wilder\_39:

(Start: 30 @33744 has 31 MA's), (50, 33687), (67, 33615), (85, 33549), (90, 33534), (105, 33477), (106, 33471), (117, 33429), (205, 33189), (243, 33096), (245, 33090), (266, 33051),

Gene: Willez\_48 Start: 37859, Stop: 37086, Start Num: 35

Candidate Starts for Willez\_48:

(Start: 35 @37859 has 112 MA's), (Start: 44 @37835 has 38 MA's), (Start: 54 @37805 has 1 MA's), (79, 37697), (107, 37601), (132, 37520), (140, 37496), (142, 37487), (145, 37478), (185, 37373), (187, 37367), (189, 37361), (240, 37217), (246, 37205), (258, 37181), (289, 37094),

Gene: Winky\_39 Start: 33739, Stop: 32960, Start Num: 30

Candidate Starts for Winky\_39:

(Start: 30 @33739 has 31 MA's), (50, 33682), (67, 33610), (72, 33583), (85, 33544), (105, 33472), (106, 33466), (117, 33424), (177, 33256), (205, 33184), (243, 33091), (245, 33085), (266, 33046),

Gene: Wintermute\_46 Start: 35744, Stop: 34926, Start Num: 44

Candidate Starts for Wintermute\_46:

(Start: 44 @35744 has 38 MA's), (Start: 46 @35741 has 32 MA's), (50, 35726), (Start: 66 @35663 has 1 MA's), (70, 35633), (76, 35612), (91, 35576), (101, 35540), (111, 35498), (114, 35486), (115, 35483), (126, 35444), (142, 35399), (147, 35384), (162, 35348), (165, 35339), (202, 35246), (222, 35192), (230, 35168), (232, 35162), (236, 35144), (269, 35078), (275, 35057),

Gene: Wyatt2\_37 Start: 32374, Stop: 31592, Start Num: 31

Candidate Starts for Wyatt2\_37:

(Start: 31 @32374 has 19 MA's), (38, 32356), (110, 32089), (117, 32062), (118, 32059), (128, 32029), (132, 32017), (139, 31996), (156, 31948), (190, 31855), (206, 31819), (238, 31729), (266, 31675),

Gene: Xandras\_54 Start: 39368, Stop: 38595, Start Num: 35

Candidate Starts for Xandras\_54:

(Start: 35 @39368 has 112 MA's), (Start: 44 @39344 has 38 MA's), (Start: 54 @39314 has 1 MA's), (79, 39206), (107, 39110), (132, 39029), (140, 39005), (142, 38996), (145, 38987), (185, 38882), (187, 38876), (189, 38870), (240, 38726), (246, 38714), (258, 38690), (289, 38603),

Gene: Ximenita\_48 Start: 35501, Stop: 34620, Start Num: 47

Candidate Starts for Ximenita\_48:

(Start: 47 @35501 has 24 MA's), (Start: 65 @35432 has 1 MA's), (67, 35420), (69, 35402), (70, 35399), (132, 35201), (140, 35177), (142, 35168), (146, 35156), (148, 35150), (198, 35018), (202, 35006), (255, 34880), (258, 34874), (262, 34868), (280, 34808), (302, 34721),

Gene: Y10\_45 Start: 35662, Stop: 34841, Start Num: 44

Candidate Starts for Y10\_45:

(Start: 44 @35662 has 38 MA's), (Start: 46 @35659 has 32 MA's), (50, 35644), (70, 35551), (76, 35530), (101, 35458), (111, 35416), (114, 35404), (115, 35401), (117, 35392), (126, 35362), (147, 35302), (162, 35266), (165, 35257), (202, 35164), (222, 35110), (230, 35086), (232, 35080), (234, 35068), (269, 34996), (275, 34975),

Gene: Y2\_45 Start: 35662, Stop: 34841, Start Num: 44

Candidate Starts for Y2\_45:

(Start: 44 @35662 has 38 MA's), (Start: 46 @35659 has 32 MA's), (50, 35644), (70, 35551), (76, 35530), (101, 35458), (111, 35416), (114, 35404), (115, 35401), (117, 35392), (126, 35362), (147, 35302), (162, 35266), (165, 35257), (202, 35164), (222, 35110), (230, 35086), (232, 35080), (234, 35068), (269, 34996), (275, 34975),

Gene: YassJohnny\_50 Start: 39010, Stop: 38261, Start Num: 44

Candidate Starts for YassJohnny\_50:

(Start: 35 @39034 has 112 MA's), (Start: 44 @39010 has 38 MA's), (Start: 54 @38980 has 1 MA's), (79, 38872), (107, 38776), (132, 38695), (140, 38671), (142, 38662), (145, 38653), (185, 38548), (187, 38542), (189, 38536), (240, 38392), (246, 38380), (258, 38356), (289, 38269),

Gene: Yeet\_88 Start: 57479, Stop: 56772, Start Num: 46

Candidate Starts for Yeet\_88:

(Start: 46 @57479 has 32 MA's), (Start: 61 @57425 has 5 MA's), (Start: 62 @57416 has 1 MA's), (67, 57392), (96, 57320), (120, 57221), (125, 57209), (137, 57188), (170, 57098), (173, 57092), (204, 57011), (209, 56993), (226, 56954), (232, 56936), (233, 56933), (256, 56882), (263, 56870), (280, 56819),

Gene: Youngblood\_56 Start: 40542, Stop: 39769, Start Num: 35

Candidate Starts for Youngblood\_56:

(Start: 35 @40542 has 112 MA's), (Start: 44 @40518 has 38 MA's), (Start: 54 @40488 has 1 MA's), (79, 40380), (107, 40284), (132, 40203), (140, 40179), (142, 40170), (145, 40161), (185, 40056), (187,



40050), (189, 40044), (240, 39900), (246, 39888), (258, 39864), (289, 39777),

Gene: YoureAdopted\_41 Start: 34767, Stop: 33874, Start Num: 21

Candidate Starts for YoureAdopted\_41:

(Start: 21 @34767 has 8 MA's), (Start: 37 @34719 has 2 MA's), (Start: 42 @34713 has 22 MA's), (Start: 49 @34689 has 8 MA's), (Start: 61 @34644 has 5 MA's), (Start: 66 @34620 has 1 MA's), (81, 34554), (85, 34545), (114, 34440), (115, 34437), (117, 34428), (121, 34410), (139, 34365), (141, 34356), (147, 34338), (156, 34308), (161, 34296), (164, 34287), (214, 34158), (232, 34107), (239, 34092), (253, 34065), (265, 34044), (270, 34032),

Gene: Yuna\_48 Start: 36294, Stop: 35452, Start Num: 47

Candidate Starts for Yuna\_48:

(Start: 32 @36330 has 6 MA's), (Start: 47 @36294 has 24 MA's), (50, 36282), (Start: 65 @36225 has 1 MA's), (71, 36189), (72, 36186), (104, 36087), (132, 35994), (139, 35973), (140, 35970), (142, 35961), (146, 35949), (148, 35943), (150, 35934), (152, 35931), (181, 35862), (202, 35802), (224, 35739), (230, 35721), (232, 35715), (269, 35649), (280, 35604), (300, 35523), (305, 35490),

Gene: Yunkel11\_45 Start: 34478, Stop: 33723, Start Num: 49

Candidate Starts for Yunkel11\_45:

(Start: 49 @34478 has 8 MA's), (91, 34322), (141, 34148), (142, 34145), (148, 34127), (155, 34103), (159, 34097), (174, 34070), (177, 34061), (178, 34058), (192, 34013), (199, 33998), (202, 33989), (239, 33899), (240, 33896), (267, 33845),

Gene: Zakai\_39 Start: 33996, Stop: 33217, Start Num: 30

Candidate Starts for Zakai\_39:

(Start: 30 @33996 has 31 MA's), (50, 33939), (67, 33867), (85, 33801), (90, 33786), (105, 33729), (106, 33723), (117, 33681), (205, 33441), (243, 33348), (245, 33342), (266, 33303),

Gene: Zaria\_37 Start: 32389, Stop: 31607, Start Num: 31

Candidate Starts for Zaria\_37:

(Start: 31 @32389 has 19 MA's), (38, 32371), (110, 32104), (117, 32077), (118, 32074), (128, 32044), (132, 32032), (139, 32011), (156, 31963), (190, 31870), (206, 31834), (238, 31744), (266, 31690),

Gene: Zavala\_43 Start: 34790, Stop: 33951, Start Num: 42

Candidate Starts for Zavala\_43:

(Start: 21 @34844 has 8 MA's), (Start: 37 @34796 has 2 MA's), (Start: 42 @34790 has 22 MA's), (Start: 49 @34766 has 8 MA's), (Start: 61 @34721 has 5 MA's), (Start: 66 @34697 has 1 MA's), (81, 34631), (85, 34622), (114, 34517), (115, 34514), (117, 34505), (121, 34487), (139, 34442), (141, 34433), (147, 34415), (156, 34385), (161, 34373), (164, 34364), (214, 34235), (232, 34184), (239, 34169), (253, 34142), (265, 34121), (270, 34109),

Gene: Zelink\_92 Start: 59519, Stop: 58866, Start Num: 61

Candidate Starts for Zelink\_92:

(Start: 46 @59573 has 32 MA's), (Start: 61 @59519 has 5 MA's), (Start: 62 @59510 has 1 MA's), (96, 59414), (120, 59315), (125, 59303), (137, 59282), (170, 59192), (173, 59186), (204, 59105), (209, 59087), (226, 59048), (232, 59030), (233, 59027), (256, 58976), (263, 58964), (280, 58913),

Gene: ZhongYanYuan\_38 Start: 33577, Stop: 32798, Start Num: 30

Candidate Starts for ZhongYanYuan\_38:

(Start: 30 @33577 has 31 MA's), (50, 33520), (72, 33421), (79, 33400), (85, 33382), (105, 33310), (106, 33304), (117, 33262), (134, 33211), (138, 33199), (140, 33193), (142, 33184), (179, 33088), (228, 32965), (231, 32956),

Gene: ZoeJ\_44 Start: 36029, Stop: 35175, Start Num: 39

Candidate Starts for ZoeJ\_44:

(Start: 39 @36029 has 21 MA's), (Start: 49 @36002 has 8 MA's), (51, 35993), (Start: 65 @35936 has 1 MA's), (74, 35885), (77, 35879), (90, 35843), (114, 35750), (128, 35705), (142, 35660), (169, 35600), (186, 35549), (230, 35429), (269, 35357), (280, 35315),

Gene: xkcd\_58 Start: 40732, Stop: 39959, Start Num: 35

Candidate Starts for xkcd\_58:

(Start: 35 @40732 has 112 MA's), (Start: 44 @40708 has 38 MA's), (Start: 54 @40678 has 1 MA's), (79, 40570), (107, 40474), (132, 40393), (140, 40369), (142, 40360), (145, 40351), (185, 40246), (187, 40240), (189, 40234), (240, 40090), (246, 40078), (258, 40054), (289, 39967),