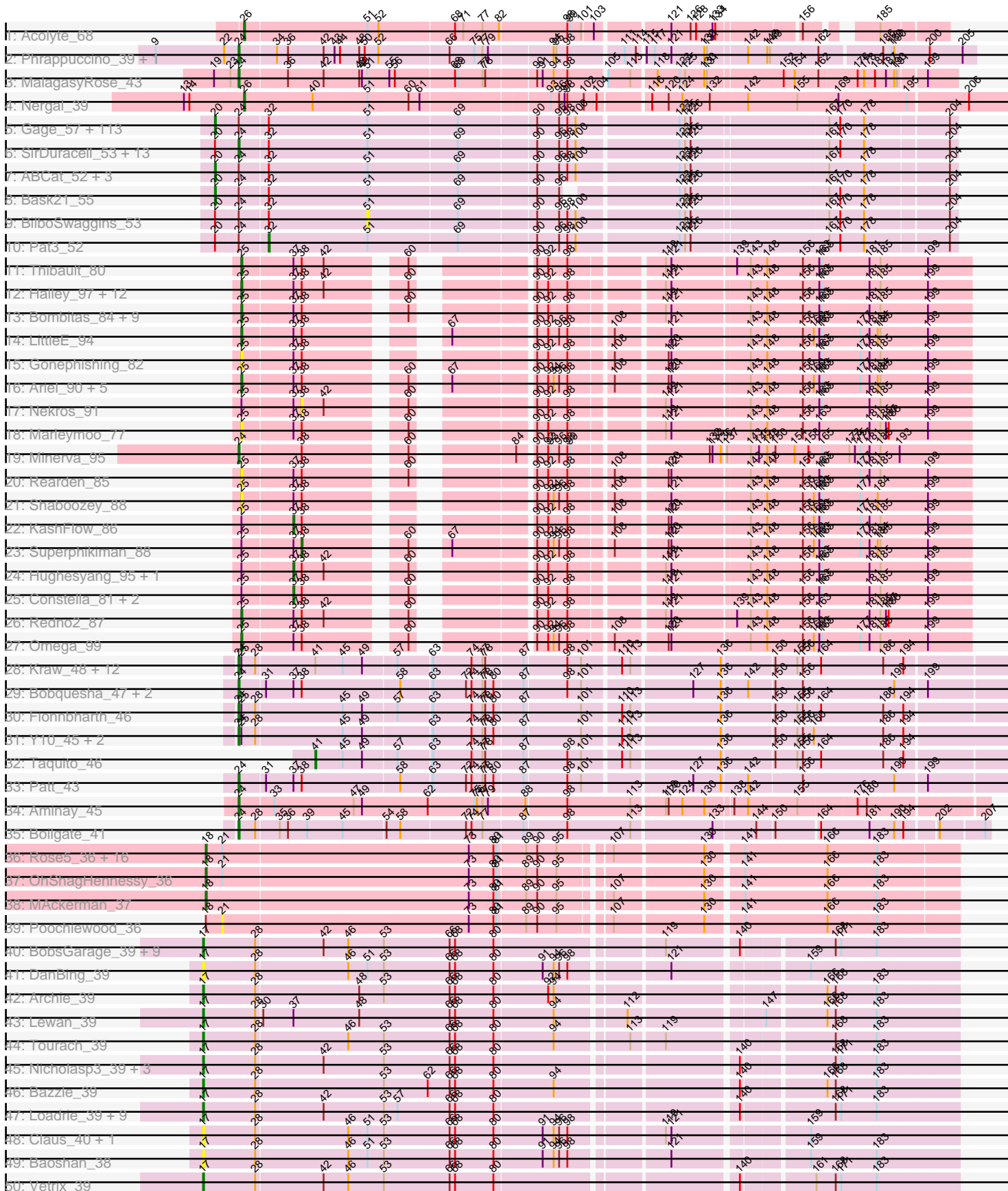
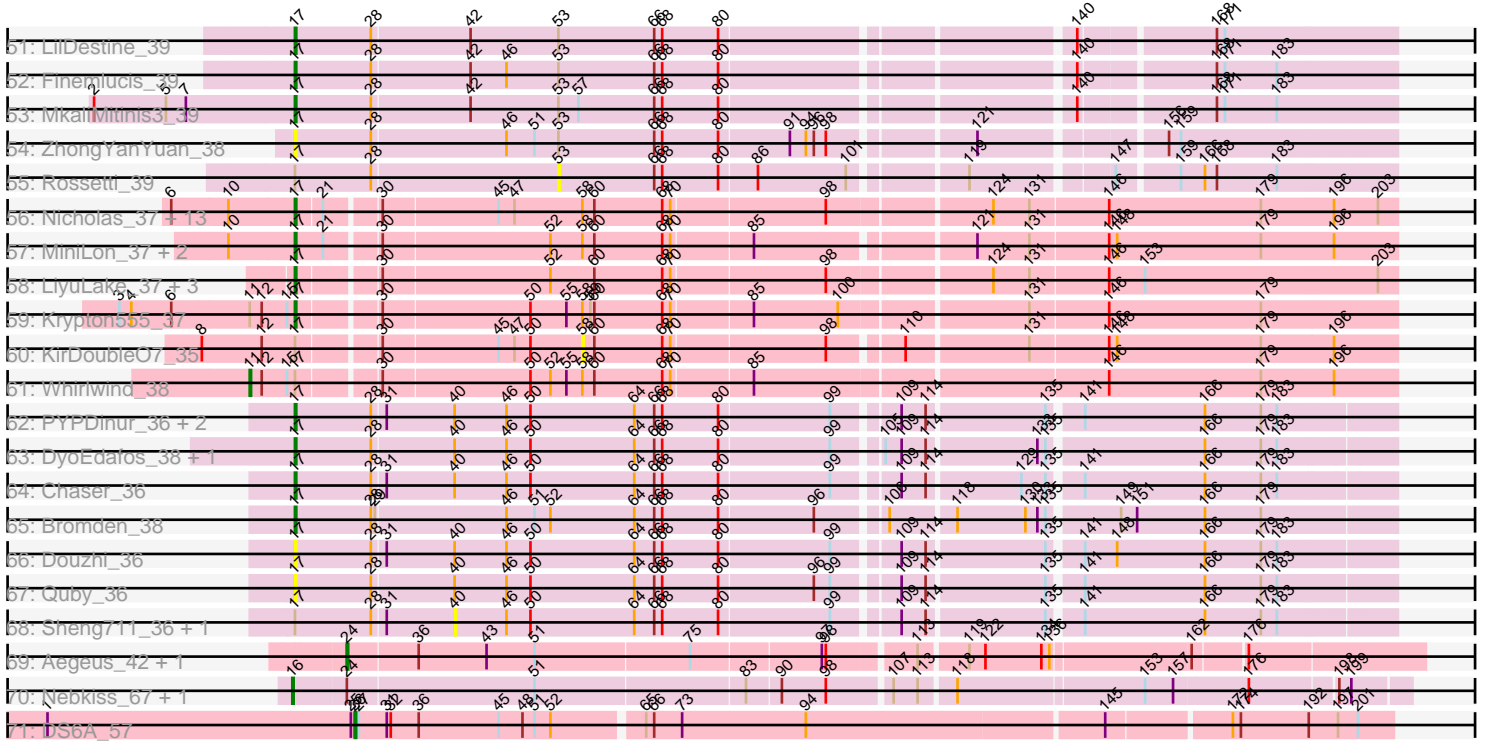


Pham 224219



Pham 224219



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 224219 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224219 has 308 members, 46 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 : Gage\_57, Kanye\_50, TeardropMSU\_50, Henry\_53, Lilac\_57, Wiggin\_56, Simpliphy\_53, GooberAzure\_57, Adnama\_58, DrDrey\_54, Youngblood\_56, BaboJay\_50, Goldilocks\_56, Holt\_59, Elph10\_54, Cookies\_51, ChotaBhai\_54, Paperbeatsrock\_53, Murica\_56, Policronamos\_57, Murphy\_56, Filch\_55, BugsBunny\_55, Stank\_58, Gemini\_58, Saints25\_55, Barbarian\_54, PhatBacter\_57, Dumbo\_54, StellaBean\_52, Daikon\_55, Elite2014\_54, Contagion\_51, MadamMonkfish\_54, FoghornLeghorn\_49, JeTaime\_55, Tuco\_55, MISSy\_54, Phaux\_56, Porky\_53, Tarkin\_53, Amao\_54, NoSleep\_56, Glexan\_52, Nala\_55, BadStone\_52, Phaja\_52, xkcd\_58, HuffyPuff\_56, Traaww1\_50, Hopey\_54, Asriel\_54, NelitzaMV\_51, Lilpickle\_54, Willez\_48, DoctorDiddles\_54, Goku\_52, BigBubba\_55, Buck\_55, FireRed\_57, Lilizi\_54, Bruin\_50, ShereKhan\_52, Thresher\_57, Xandras\_54, OrionPax\_53, Harella\_54, Easy2Say\_55, IHOP\_52, Quallification\_55, RiverMonster\_55, Terminus\_56, AmericanBeauty\_58, StolenFromERC\_57, Kimchi\_57, Bench\_56, Pharsalus\_52, Balomoji\_53, Thimble\_56, Becksu\_55, Dusk\_52, Stark\_55, CrystalP\_54, Mindy\_53, 244\_55, Sassay\_48, Tomaszewski\_50, Hoonter\_57, Command613\_56, Mosby\_50, FairyPath\_54, Misfit\_56, Cjw1\_54, Phrux\_52, Ukulele\_51, MPhalcon\_54, Icee\_54, Maxxinista\_57, Manda\_54, Nimrod\_57, ChosenOne\_55, Rimmer\_55, ShamWow\_54, HanKaySha\_53, Moldemort\_57, Sotrice96\_55, Miniwave\_51, SophKB\_51, Pumpkin\_56, Highbury\_55, Czyszczo1\_55, Cactus\_56, Gator\_52, Eureka\_52
- Track 6 : SirDuracell\_53, Argent26\_57, Toto\_53, Kostya\_55, StormChicken\_56, Flypotenuse\_49, Rakim\_56, Emmina\_54, Petra64142\_59, Palpatine\_57, GoldenSpark\_57, TBrady12\_57, YassJohnny\_50, Teaspoon\_55
- Track 7 : ABCat\_52, Inca\_51, Myrale\_54, Marshmallow\_53
- Track 8 : Bask21\_55
- Track 9 : BilboSwaggins\_53
- Track 10 : Pat3\_52
- Track 11 : Thibault\_80
- Track 12 : Halley\_97, BAKA\_97, EricMillard\_89, Pound\_87, Bobby\_87, Phoebus\_97, Schatzie\_90, DmpstrDiver\_97, ThreeRngTarjay\_92, Kalah2\_89, Yeet\_88, Odette\_95, HokkenD\_84
- Track 13 : Bombitas\_84, Duke13\_91, Optimus\_89, Ejimix\_89, Beem\_96, Klein\_96, JuicyJay\_92, Wanda\_99, NihilNomen\_97, Dallas\_97

- Track 14 : LittleE\_94
- Track 15 : Gonephishing\_82
- Track 16 : Ariel\_90, Courthouse\_86, Lucky2013\_88, Porcelain\_89, MiaZeal\_91, Squint\_89
- Track 17 : Nekros\_91
- Track 18 : Marleymoos\_77
- Track 19 : Minerva\_95
- Track 20 : Rearden\_85
- Track 21 : Shaboozey\_88
- Track 22 : KashFlow\_86
- Track 23 : Superphikiman\_88
- Track 24 : Hughesyang\_95, Hannaconda\_82
- Track 25 : Constella\_81, Bagrid\_94, Zelink\_92
- Track 26 : Redno2\_87
- Track 27 : Omega\_99
- Track 28 : Kraw\_48, SamScheppers\_45, Chancellor\_46, Lebo14\_48, Juliette\_48, Eponine\_48, Slarp\_46, Cheetobro\_46, OmniCritical\_45, Wintermute\_46, Ruthiejr\_47, Mitti\_46, Malthus\_47
- Track 29 : Bobquesha\_47, MissDaisy\_44, Reptar3000\_44
- Track 30 : Fionnbharth\_46
- Track 31 : Y10\_45, JF1\_46, Y2\_45
- Track 32 : Taquito\_46
- Track 33 : Patt\_43
- Track 34 : Aminay\_45
- Track 35 : Boilgate\_41
- Track 36 : Rose5\_36, Calm\_37, Tyson\_36, LeBron\_37, CicholasNage\_37, Halena\_36, Wyatt2\_37, Zaria\_37, Wamburggrxpress\_37, Acquire49\_37, Appletree2\_36, Enceladus\_36, DirkDirk\_36, UPIE\_37, JoeDirt\_36, AvadaKedavra\_37, Silverleaf\_36
- Track 37 : OhShagHennessy\_36
- Track 38 : MAckerman\_37
- Track 39 : Poochiewood\_36
- Track 40 : BobsGarage\_39, Netyap\_39, Faith1\_39, Breezona\_39, SoJulia\_40, Winky\_39, Gabriela\_39, BigCheese\_39, DrSeegs\_39, Miley16\_39
- Track 41 : DanBing\_39
- Track 42 : Archie\_39
- Track 43 : Lewan\_39
- Track 44 : Tourach\_39
- Track 45 : Nicholasp3\_39, Underpass\_39, Rumpelstiltskin\_39, Gardann\_39
- Track 46 : Bazzle\_39
- Track 47 : Loadrie\_39, Crossroads\_39, Kahlid\_39, GuuelaD\_39, Sarshaun\_39, Wigglewiggles\_39, Zakai\_39, Soap141\_39, Hafay\_39, Wilder\_39
- Track 48 : Claus\_40, DHan\_40
- Track 49 : Baoshan\_38
- Track 50 : Vetrix\_39
- Track 51 : LilDestine\_39
- Track 52 : Finemlucis\_39
- Track 53 : MkaliMitinis3\_39
- Track 54 : ZhongYanYuan\_38
- Track 55 : Rossetti\_39
- Track 56 : Nicholas\_37, Red305\_37, Jubie\_37, Lumos\_37, Snenia\_37, Clautastrophe\_37, Bellis\_37, Samty\_37, Finnry\_37, MsGreen\_37, Jobypre\_37, Kingsolomon\_37, TriFive\_37, Moostard\_37

- Track 57 : MiniLon\_37, MiniMac\_37, Lolly9\_37
- Track 58 : LiyuLake\_37, DuncansLeg\_37, BourbonZero\_36, Ellson\_37
- Track 59 : Krypton555\_37
- Track 60 : KirDoubleO7\_35
- Track 61 : Whirlwind\_38
- Track 62 : PYPDinur\_36, Douge\_36, BrainDrainer\_37
- Track 63 : DyoEdafos\_38, Kropertea\_36
- Track 64 : Chaser\_36
- Track 65 : Bromden\_38
- Track 66 : Douzhi\_36
- Track 67 : Quby\_36
- Track 68 : Sheng711\_36, FarmResident\_36
- Track 69 : Aegeus\_42, Baudelaire\_42
- Track 70 : Nebkiss\_67, Gaia\_67
- Track 71 : DS6A\_57

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

The start number called the most often in the published annotations is 20, it was called in 112 of the 262 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, Becksu\_55, Bench\_56, BigBubba\_55, Bruin\_50, Buck\_55, BugsBunny\_55, Cactus\_56, ChosenOne\_55, ChotaBhai\_54, Cjw1\_54, Command613\_56, Contagion\_51, Cookies\_51, CrystalP\_54, Czyszczonek\_55, Daikon\_55, DoctorDiddles\_54, DrDrey\_54, Dumbo\_54, Dusk\_52, Easy2Say\_55, Elite2014\_54, Elph10\_54, Eureka\_52, FairyPath\_54, Filch\_55, FireRed\_57, FoghornLeghorn\_49, Gage\_57, Gator\_52, Gemini\_58, Glexan\_52, Goku\_52, Goldilocks\_56, GooberAzure\_57, HanKaySha\_53, Harella\_54, Henry\_53, Highbury\_55, Holt\_59, Hoonter\_57, Hopey\_54, HufflyPuff\_56, IHOP\_52, Icee\_54, Inca\_51, JeTaime\_55, Kanye\_50, Kimchi\_57, Lilac\_57, Lilizi\_54, Lilpickle\_54, MISSy\_54, MPhalcon\_54, MadamMonkfish\_54, Manda\_54, Marshmallow\_53, Maxxinista\_57, Mindy\_53, Miniwave\_51, Misfit\_56, Moldemort\_57, Mosby\_50, Murica\_56, Murphy\_56, Myrale\_54, Nala\_55, NelitzaMV\_51, Nimrod\_57, NoSleep\_56, OrionPax\_53, Paperbeatsrock\_53, Phaja\_52, Pharsalus\_52, PhatBacter\_57, Phaux\_56, Phrux\_52, Policronamos\_57, 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, Thimble\_56, Thresher\_57, Tomaszewski\_50, Traaww1\_50, Tuco\_55, Ukulele\_51, Wiggin\_56, Willez\_48, Xandras\_54, Youngblood\_56, xkcd\_58,

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

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

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

- Acolyte\_68, Acquire49\_37, Aegeus\_42, Aminay\_45, Appletree2\_36, Archie\_39, Ariel\_90, AvadaKedavra\_37, BAKA\_97, Bagrid\_94, Baoshan\_38, Baudelaire\_42, Bazzle\_39, Beem\_96, Bellis\_37, BigCheese\_39, Bobby\_87, Bobquesha\_47, BobsGarage\_39, Boilgate\_41, Bombitas\_84, BourbonZero\_36, BrainDrainer\_37, Breezona\_39, Bromden\_38, Calm\_37, Chancellor\_46, Chaser\_36, Cheetobro\_46, CicholasNage\_37, Claus\_40, Clautastrophe\_37, Constella\_81, Courthouse\_86, Crossroads\_39, DHan\_40, DS6A\_57, Dallas\_97, DanBing\_39, DirkDirk\_36, DmpstrDiver\_97, Douge\_36, Douzhi\_36, DrSeegs\_39, Duke13\_91, DuncansLeg\_37, DyoEdafos\_38, Ejimix\_89, Ellson\_37, Enceladus\_36, Eponine\_48, EricMillard\_89, Faith1\_39, FarmResident\_36, Finemlucis\_39, Finnry\_37, Fionnbharth\_46, Gabriela\_39, Gaia\_67, Gardann\_39, Gonephishing\_82, GuuelaD\_39, Hafay\_39, Halena\_36, Halley\_97, Hannaconda\_82, HokkenD\_84, Hughesyang\_95, JF1\_46, Jobypre\_37, JoeDirt\_36, Jubie\_37, JuicyJay\_92, Juliette\_48, Kahlid\_39, Kalah2\_89, KashFlow\_86, Kingsolomon\_37, KirDoubleO7\_35, Klein\_96, Kraw\_48, Kropertea\_36, Krypton555\_37, LeBron\_37, Lebo14\_48, Lewan\_39, LilDestine\_39, LittleE\_94, LiyuLake\_37, Loadrie\_39, Lolly9\_37, Lucky2013\_88, Lumos\_37, MAckerman\_37, MalagasyRose\_43, Malthus\_47, Marleymoo\_77, MiaZeal\_91, Miley16\_39, Minerva\_95, MiniLon\_37, MiniMac\_37, MissDaisy\_44, Mitti\_46, MkaliMitinis3\_39, Moostard\_37, MsGreen\_37, Nebkiss\_67, Nekros\_91, Nergal\_39, Netyap\_39, Nicholas\_37, Nicholasp3\_39, NihilNomen\_97, Odette\_95, OhShagHennessy\_36, Omega\_99, OmniCritical\_45, Optimus\_89, PYPDinur\_36, Patt\_43, Phoebus\_97, Phrappuccino\_39, Poochiewood\_36, Porcelain\_89, Pound\_87, Quby\_36, Rearden\_85, Red305\_37, Redno2\_87, Reptar3000\_44, Rose5\_36, Rossetti\_39, Rumpelstiltskin\_39, Ruthiejr\_47, SamScheppers\_45, Samty\_37, Sarshaun\_39, Schatzie\_90, Settecandela\_39, Shaboozey\_88, Sheng711\_36, Silverleaf\_36, Slarp\_46, Snenia\_37, SoJulia\_40, Soap141\_39, Squint\_89, Superphikiman\_88, Taquito\_46, Thibault\_80, ThreeRngTarjay\_92, Tourach\_39, TriFive\_37, Tyson\_36, UPIE\_37, Underpass\_39, Vetrix\_39, Wamburggrxpress\_37, Wanda\_99, Whirlwind\_38, Wigglewiggles\_39, Wilder\_39, Winky\_39, Wintermute\_46, Wyatt2\_37, Y10\_45, Y2\_45, Yeet\_88, Zakai\_39, Zaria\_37, Zelink\_92, ZhongYanYuan\_38,

### Summary by start number:

#### Start 11:

- Found in 2 of 308 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 262
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Whirlwind\_38 (L3),

#### Start 16:

- Found in 2 of 308 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 262
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia\_67 (X), Nebkiss\_67 (X),

#### Start 17:

- Found in 73 of 308 ( 23.7% ) of genes in pham
- Manual Annotations of this start: 47 of 262
- Called 93.2% of time when present
- Phage (with cluster) where this start called: Archie\_39 (L2), Baoshan\_38 (L2), Bazzle\_39 (L2), Bellis\_37 (L3), BigCheese\_39 (L2), BobsGarage\_39 (L2), BourbonZero\_36 (L3), BrainDrainer\_37 (L4), Breezona\_39 (L2), Bromden\_38 (L4), Chaser\_36 (L4), Claus\_40 (L2), Clautastrophe\_37 (L3), Crossroads\_39 (L2),

DHan\_40 (L2), DanBing\_39 (L2), Douge\_36 (L4), Douzhi\_36 (L4), DrSeegs\_39 (L2), DuncansLeg\_37 (L3), DyoEdafos\_38 (L4), Ellison\_37 (L3), Faith1\_39 (L2), Finemlucis\_39 (L2), Finnry\_37 (L3), Gabriela\_39 (L2), Gardann\_39 (L2), GuuelaD\_39 (L2), Hafay\_39 (L2), Jobypre\_37 (L3), Jubie\_37 (L3), Kahlid\_39 (L2), Kingsolomon\_37 (L3), Kropertea\_36 (L4), Krypton555\_37 (L3), Lewan\_39 (L2), LilDestine\_39 (L2), LiyuLake\_37 (L3), Loadrie\_39 (L2), Lolly9\_37 (L3), Lumos\_37 (L3), Miley16\_39 (L2), MiniLon\_37 (L3), MiniMac\_37 (L3), MkaliMitinis3\_39 (L2), Moostard\_37 (L3), MsGreen\_37 (L3), Netyap\_39 (L2), Nicholas\_37 (L3), Nicholasp3\_39 (L2), PYPDinur\_36 (L4), Quby\_36 (L4), Red305\_37 (L3), Rumpelstiltskin\_39 (L2), Samty\_37 (L3), Sarshaun\_39 (L2), Snenia\_37 (L3), SoJulia\_40 (L2), Soap141\_39 (L2), Tourach\_39 (L2), TriFive\_37 (L3), Underpass\_39 (L2), Vetrix\_39 (L2), Wigglewiggle\_39 (L2), Wilder\_39 (L2), Winky\_39 (L2), Zakai\_39 (L2), ZhongYanYuan\_38 (L2),

Start 18:

- Found in 20 of 308 ( 6.5% ) of genes in pham
- Manual Annotations of this start: 19 of 262
- Called 95.0% 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 20:

- Found in 135 of 308 ( 43.8% ) of genes in pham
- Manual Annotations of this start: 112 of 262
- Called 88.1% 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), Becksu\_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), Czyszczon1\_55 (E), Daikon\_55 (E), DoctorDiddles\_54 (E), DrDrey\_54 (E), Dumbo\_54 (E), Dusk\_52 (E), Easy2Say\_55 (E), Elite2014\_54 (E), Elph10\_54 (E), Eureka\_52 (E), FairyPath\_54 (E), Filch\_55 (E), FireRed\_57 (E), FoghornLeghorn\_49 (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), JeTaimie\_55 (E), Kanye\_50 (E), Kimchi\_57 (E), Lilac\_57 (E), Lilizi\_54 (E), Lilpickle\_54 (E), MISSy\_54 (E), MPhalcon\_54 (E), MadamMonkfish\_54 (E), Manda\_54 (E), Marshmallow\_53 (E), Maxxinista\_57 (E), Mindy\_53 (E), Miniwave\_51 (E), Misfit\_56 (E), Moldemort\_57 (E), Mosby\_50 (E), Murica\_56 (E), Murphy\_56 (E), Myrale\_54 (E), Nala\_55 (E), NelitzaMV\_51 (E), Nimrod\_57 (E), NoSleep\_56 (E), OrionPax\_53 (E), Paperbeatsrock\_53 (E), Phaja\_52 (E), Pharsalus\_52 (E), PhatBacter\_57 (E), Phaux\_56 (E), Phrux\_52 (E), Policronamos\_57 (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),

Thimble\_56 (E), Thresher\_57 (E), Tomaszewski\_50 (E), Traaww1\_50 (E), Tuco\_55 (E), Ukulele\_51 (E), Wiggin\_56 (E), Willez\_48 (E), Xandras\_54 (E), Youngblood\_56 (E), xkcd\_58 (E),

Start 21:

- Found in 36 of 308 ( 11.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Poochiewood\_36 (L1),

Start 24:

- Found in 166 of 308 ( 53.9% ) of genes in pham
- Manual Annotations of this start: 38 of 262
- Called 25.9% of time when present
- Phage (with cluster) where this start called: Aegeus\_42 (L5), Aminay\_45 (K7), Argent26\_57 (E), Baudelaire\_42 (L5), Bobquesha\_47 (K4), Boilgate\_41 (K8), Chancellor\_46 (K4), Cheetobro\_46 (K4), Emmina\_54 (E), Eponine\_48 (K4), Fionnbharth\_46 (K4), Flypotenuse\_49 (E), GoldenSpark\_57 (E), JF1\_46 (K4), Juliette\_48 (K4), Kostya\_55 (E), Kraw\_48 (K4), Lebo14\_48 (K4), 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), StormChicken\_56 (E), TBrady12\_57 (E), Teaspoon\_55 (E), Toto\_53 (E), Wintermute\_46 (K4), Y10\_45 (K4), Y2\_45 (K4), YassJohnny\_50 (E),

Start 25:

- Found in 63 of 308 ( 20.5% ) of genes in pham
- Manual Annotations of this start: 32 of 262
- Called 58.7% 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), Marleymoo\_77 (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), Rearden\_85 (J), Redno2\_87 (J), Schatzie\_90 (J), Shaboozey\_88 (J), Squint\_89 (J), Thibault\_80 (J), ThreeRngTarjay\_92 (J), Wanda\_99 (J), Yeet\_88 (J),

Start 26:

- Found in 3 of 308 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 3 of 262
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acolyte\_68 (A2), DS6A\_57 (singleton), Nergal\_39 (AG),

Start 32:

- Found in 136 of 308 ( 44.2% ) of genes in pham
- Manual Annotations of this start: 1 of 262
- Called 0.7% of time when present
- Phage (with cluster) where this start called: Pat3\_52 (E),

Start 37:



- Found in 50 of 308 ( 16.2% ) of genes in pham
- Manual Annotations of this start: 5 of 262
- Called 12.0% 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 38:

- Found in 50 of 308 ( 16.2% ) of genes in pham
- Manual Annotations of this start: 1 of 262
- Called 4.0% of time when present
- Phage (with cluster) where this start called: Nekros\_91 (J), Superphikiman\_88 (J),

#### Start 40:

- Found in 11 of 308 ( 3.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 18.2% of time when present
- Phage (with cluster) where this start called: FarmResident\_36 (L4), Sheng711\_36 (L4),

#### Start 41:

- Found in 14 of 308 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 262
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Taquito\_46 (K4),

#### Start 51:

- Found in 149 of 308 ( 48.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.7% of time when present
- Phage (with cluster) where this start called: BilboSwaggins\_53 (E),

#### Start 53:

- Found in 37 of 308 ( 12.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Rossetti\_39 (L2),

#### Start 58:

- Found in 25 of 308 ( 8.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 4.0% of time when present
- Phage (with cluster) where this start called: KirDoubleO7\_35 (L3),

### Summary by clusters:

There are 15 clusters represented in this pham: AA, singleton, J, E, AG, L1, L5, L4, A2, L2, L3, K7, K4, X, K8,

Info for manual annotations of cluster A2:

- Start number 26 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster AA:

- Start number 24 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AG:

- Start number 24 was manually annotated 1 time for cluster AG.
- Start number 26 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster E:

- Start number 20 was manually annotated 112 times for cluster E.
- Start number 24 was manually annotated 12 times for cluster E.
- Start number 32 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster J:

- Start number 24 was manually annotated 1 time for cluster J.
- Start number 25 was manually annotated 32 times for cluster J.
- Start number 37 was manually annotated 5 times for cluster J.
- Start number 38 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster K4:

- Start number 24 was manually annotated 18 times for cluster K4.
- Start number 41 was manually annotated 1 time for cluster K4.

Info for manual annotations of cluster K7:

- Start number 24 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 24 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster L1:

- Start number 18 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 17 was manually annotated 27 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 11 was manually annotated 1 time for cluster L3.
- Start number 17 was manually annotated 16 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 17 was manually annotated 4 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 24 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster X:

- Start number 16 was manually annotated 2 times for cluster X.

**Gene Information:**

Gene: 244\_55 Start: 39721, Stop: 38948, Start Num: 20

Candidate Starts for 244\_55:

(Start: 20 @39721 has 112 MA's), (Start: 24 @39697 has 38 MA's), (Start: 32 @39667 has 1 MA's), (51, 39559), (69, 39463), (90, 39382), (96, 39358), (98, 39349), (100, 39340), (123, 39235), (125,

39229), (126, 39223), (167, 39079), (170, 39067), (178, 39043), (204, 38956),

Gene: ABCat\_52 Start: 40367, Stop: 39594, Start Num: 20

Candidate Starts for ABCat\_52:

(Start: 20 @40367 has 112 MA's), (Start: 24 @40343 has 38 MA's), (Start: 32 @40313 has 1 MA's), (51, 40205), (69, 40109), (90, 40028), (96, 40004), (98, 39995), (100, 39986), (123, 39881), (125, 39875), (126, 39869), (167, 39725), (178, 39689), (204, 39602),

Gene: Acolyte\_68 Start: 43894, Stop: 44586, Start Num: 26

Candidate Starts for Acolyte\_68:

(Start: 26 @43894 has 3 MA's), (51, 44026), (52, 44038), (68, 44119), (71, 44128), (77, 44149), (82, 44167), (98, 44239), (99, 44242), (101, 44254), (103, 44263), (121, 44335), (126, 44356), (128, 44362), (133, 44380), (134, 44383), (156, 44464), (185, 44518),

Gene: Acquire49\_37 Start: 32374, Stop: 31592, Start Num: 18

Candidate Starts for Acquire49\_37:

(Start: 18 @32374 has 19 MA's), (21, 32356), (73, 32089), (80, 32062), (81, 32059), (89, 32029), (90, 32017), (95, 31996), (107, 31948), (130, 31855), (141, 31819), (166, 31729), (183, 31675),

Gene: Adnama\_58 Start: 40390, Stop: 39617, Start Num: 20

Candidate Starts for Adnama\_58:

(Start: 20 @40390 has 112 MA's), (Start: 24 @40366 has 38 MA's), (Start: 32 @40336 has 1 MA's), (51, 40228), (69, 40132), (90, 40051), (96, 40027), (98, 40018), (100, 40009), (123, 39904), (125, 39898), (126, 39892), (167, 39748), (170, 39736), (178, 39712), (204, 39625),

Gene: Aegeus\_42 Start: 36206, Stop: 35445, Start Num: 24

Candidate Starts for Aegeus\_42:

(Start: 24 @36206 has 38 MA's), (36, 36155), (43, 36104), (51, 36068), (75, 35954), (97, 35861), (98, 35858), (113, 35798), (119, 35765), (122, 35753), (134, 35711), (136, 35705), (162, 35606), (176, 35573),

Gene: Amao\_54 Start: 39485, Stop: 38712, Start Num: 20

Candidate Starts for Amao\_54:

(Start: 20 @39485 has 112 MA's), (Start: 24 @39461 has 38 MA's), (Start: 32 @39431 has 1 MA's), (51, 39323), (69, 39227), (90, 39146), (96, 39122), (98, 39113), (100, 39104), (123, 38999), (125, 38993), (126, 38987), (167, 38843), (170, 38831), (178, 38807), (204, 38720),

Gene: AmericanBeauty\_58 Start: 40235, Stop: 39462, Start Num: 20

Candidate Starts for AmericanBeauty\_58:

(Start: 20 @40235 has 112 MA's), (Start: 24 @40211 has 38 MA's), (Start: 32 @40181 has 1 MA's), (51, 40073), (69, 39977), (90, 39896), (96, 39872), (98, 39863), (100, 39854), (123, 39749), (125, 39743), (126, 39737), (167, 39593), (170, 39581), (178, 39557), (204, 39470),

Gene: Aminay\_45 Start: 36061, Stop: 35288, Start Num: 24

Candidate Starts for Aminay\_45:

(Start: 24 @36061 has 38 MA's), (33, 36025), (47, 35938), (49, 35929), (62, 35857), (75, 35809), (76, 35806), (77, 35800), (79, 35794), (88, 35758), (98, 35716), (113, 35647), (119, 35614), (120, 35611), (124, 35596), (130, 35572), (138, 35545), (142, 35530), (155, 35476), (176, 35416), (180, 35407),

Gene: Appletree2\_36 Start: 32316, Stop: 31534, Start Num: 18

Candidate Starts for Appletree2\_36:

(Start: 18 @32316 has 19 MA's), (21, 32298), (73, 32031), (80, 32004), (81, 32001), (89, 31971), (90, 31959), (95, 31938), (107, 31890), (130, 31797), (141, 31761), (166, 31671), (183, 31617),

Gene: Archie\_39 Start: 33946, Stop: 33167, Start Num: 17

Candidate Starts for Archie\_39:

(Start: 17 @33946 has 47 MA's), (28, 33889), (48, 33778), (53, 33751), (66, 33679), (68, 33673), (80, 33631), (92, 33574), (94, 33568), (166, 33307), (168, 33298), (183, 33253),

Gene: Argent26\_57 Start: 39849, Stop: 39100, Start Num: 24

Candidate Starts for Argent26\_57:

(Start: 20 @39873 has 112 MA's), (Start: 24 @39849 has 38 MA's), (Start: 32 @39819 has 1 MA's), (51, 39711), (69, 39615), (90, 39534), (96, 39510), (98, 39501), (100, 39492), (123, 39387), (125, 39381), (126, 39375), (167, 39231), (170, 39219), (178, 39195), (204, 39108),

Gene: Ariel\_90 Start: 53471, Stop: 52764, Start Num: 25

Candidate Starts for Ariel\_90:

(Start: 25 @53471 has 32 MA's), (Start: 37 @53417 has 5 MA's), (Start: 38 @53408 has 1 MA's), (60, 53312), (67, 53294), (90, 53213), (92, 53201), (94, 53195), (96, 53189), (98, 53180), (108, 53138), (120, 53087), (121, 53084), (143, 53003), (148, 52985), (156, 52946), (160, 52934), (163, 52928), (165, 52925), (177, 52883), (181, 52874), (184, 52865), (185, 52862), (199, 52811),

Gene: Asriel\_54 Start: 38727, Stop: 37954, Start Num: 20

Candidate Starts for Asriel\_54:

(Start: 20 @38727 has 112 MA's), (Start: 24 @38703 has 38 MA's), (Start: 32 @38673 has 1 MA's), (51, 38565), (69, 38469), (90, 38388), (96, 38364), (98, 38355), (100, 38346), (123, 38241), (125, 38235), (126, 38229), (167, 38085), (170, 38073), (178, 38049), (204, 37962),

Gene: AvadaKedavra\_37 Start: 32383, Stop: 31601, Start Num: 18

Candidate Starts for AvadaKedavra\_37:

(Start: 18 @32383 has 19 MA's), (21, 32365), (73, 32098), (80, 32071), (81, 32068), (89, 32038), (90, 32026), (95, 32005), (107, 31957), (130, 31864), (141, 31828), (166, 31738), (183, 31684),

Gene: BAKA\_97 Start: 59373, Stop: 58666, Start Num: 25

Candidate Starts for BAKA\_97:

(Start: 25 @59373 has 32 MA's), (Start: 37 @59319 has 5 MA's), (Start: 38 @59310 has 1 MA's), (42, 59286), (60, 59214), (90, 59115), (92, 59103), (98, 59082), (119, 58992), (121, 58986), (143, 58905), (148, 58887), (156, 58848), (163, 58830), (165, 58827), (181, 58776), (185, 58764), (199, 58713),

Gene: BaboJay\_50 Start: 39273, Stop: 38500, Start Num: 20

Candidate Starts for BaboJay\_50:

(Start: 20 @39273 has 112 MA's), (Start: 24 @39249 has 38 MA's), (Start: 32 @39219 has 1 MA's), (51, 39111), (69, 39015), (90, 38934), (96, 38910), (98, 38901), (100, 38892), (123, 38787), (125, 38781), (126, 38775), (167, 38631), (170, 38619), (178, 38595), (204, 38508),

Gene: BadStone\_52 Start: 39936, Stop: 39163, Start Num: 20

Candidate Starts for BadStone\_52:

(Start: 20 @39936 has 112 MA's), (Start: 24 @39912 has 38 MA's), (Start: 32 @39882 has 1 MA's), (51, 39774), (69, 39678), (90, 39597), (96, 39573), (98, 39564), (100, 39555), (123, 39450), (125, 39444), (126, 39438), (167, 39294), (170, 39282), (178, 39258), (204, 39171),

Gene: Bagrid\_94 Start: 58185, Stop: 57532, Start Num: 37

Candidate Starts for Bagrid\_94:

(Start: 25 @58239 has 32 MA's), (Start: 37 @58185 has 5 MA's), (Start: 38 @58176 has 1 MA's), (60, 58080), (90, 57981), (92, 57969), (98, 57948), (119, 57858), (121, 57852), (143, 57771), (148, 57753), (156, 57714), (163, 57696), (165, 57693), (181, 57642), (185, 57630), (199, 57579),

Gene: Balomoji\_53 Start: 40204, Stop: 39431, Start Num: 20

Candidate Starts for Balomoji\_53:

(Start: 20 @40204 has 112 MA's), (Start: 24 @40180 has 38 MA's), (Start: 32 @40150 has 1 MA's), (51, 40042), (69, 39946), (90, 39865), (96, 39841), (98, 39832), (100, 39823), (123, 39718), (125, 39712), (126, 39706), (167, 39562), (170, 39550), (178, 39526), (204, 39439),

Gene: Baoshan\_38 Start: 33577, Stop: 32798, Start Num: 17

Candidate Starts for Baoshan\_38:

(Start: 17 @33577 has 47 MA's), (28, 33520), (46, 33421), (51, 33400), (53, 33382), (66, 33310), (68, 33304), (80, 33262), (91, 33211), (94, 33199), (96, 33193), (98, 33184), (121, 33088), (159, 32956), (183, 32884),

Gene: Barbarian\_54 Start: 38727, Stop: 37954, Start Num: 20

Candidate Starts for Barbarian\_54:

(Start: 20 @38727 has 112 MA's), (Start: 24 @38703 has 38 MA's), (Start: 32 @38673 has 1 MA's), (51, 38565), (69, 38469), (90, 38388), (96, 38364), (98, 38355), (100, 38346), (123, 38241), (125, 38235), (126, 38229), (167, 38085), (170, 38073), (178, 38049), (204, 37962),

Gene: Bask21\_55 Start: 39043, Stop: 38288, Start Num: 20

Candidate Starts for Bask21\_55:

(Start: 20 @39043 has 112 MA's), (Start: 24 @39019 has 38 MA's), (Start: 32 @38989 has 1 MA's), (51, 38881), (69, 38785), (90, 38704), (96, 38680), (123, 38575), (125, 38569), (126, 38563), (167, 38419), (170, 38407), (178, 38383), (204, 38296),

Gene: Baudelaire\_42 Start: 36206, Stop: 35445, Start Num: 24

Candidate Starts for Baudelaire\_42:

(Start: 24 @36206 has 38 MA's), (36, 36155), (43, 36104), (51, 36068), (75, 35954), (97, 35861), (98, 35858), (113, 35798), (119, 35765), (122, 35753), (134, 35711), (136, 35705), (162, 35606), (176, 35573),

Gene: Bazzle\_39 Start: 33979, Stop: 33200, Start Num: 17

Candidate Starts for Bazzle\_39:

(Start: 17 @33979 has 47 MA's), (28, 33922), (53, 33784), (62, 33736), (66, 33712), (68, 33706), (80, 33664), (94, 33601), (140, 33424), (166, 33340), (168, 33331), (183, 33286),

Gene: Becksu\_55 Start: 40270, Stop: 39497, Start Num: 20

Candidate Starts for Becksu\_55:

(Start: 20 @40270 has 112 MA's), (Start: 24 @40246 has 38 MA's), (Start: 32 @40216 has 1 MA's), (51, 40108), (69, 40012), (90, 39931), (96, 39907), (98, 39898), (100, 39889), (123, 39784), (125, 39778), (126, 39772), (167, 39628), (170, 39616), (178, 39592), (204, 39505),

Gene: Beem\_96 Start: 59100, Stop: 58393, Start Num: 25

Candidate Starts for Beem\_96:

(Start: 25 @59100 has 32 MA's), (Start: 37 @59046 has 5 MA's), (Start: 38 @59037 has 1 MA's), (60, 58941), (90, 58842), (92, 58830), (98, 58809), (119, 58719), (121, 58713), (143, 58632), (148, 58614), (156, 58575), (163, 58557), (165, 58554), (181, 58503), (185, 58491), (199, 58440),

Gene: Bellis\_37 Start: 33980, Stop: 33189, Start Num: 17

Candidate Starts for Bellis\_37:

(6, 34070), (10, 34028), (Start: 17 @33980 has 47 MA's), (21, 33962), (30, 33926), (45, 33842), (47, 33830), (58, 33779), (60, 33770), (68, 33719), (70, 33713), (98, 33602), (124, 33488), (131, 33461), (146, 33404), (179, 33290), (196, 33236), (203, 33203),

Gene: Bench\_56 Start: 39705, Stop: 38932, Start Num: 20

Candidate Starts for Bench\_56:

(Start: 20 @39705 has 112 MA's), (Start: 24 @39681 has 38 MA's), (Start: 32 @39651 has 1 MA's), (51, 39543), (69, 39447), (90, 39366), (96, 39342), (98, 39333), (100, 39324), (123, 39219), (125, 39213), (126, 39207), (167, 39063), (170, 39051), (178, 39027), (204, 38940),

Gene: BigBubba\_55 Start: 39746, Stop: 38973, Start Num: 20

Candidate Starts for BigBubba\_55:

(Start: 20 @39746 has 112 MA's), (Start: 24 @39722 has 38 MA's), (Start: 32 @39692 has 1 MA's), (51, 39584), (69, 39488), (90, 39407), (96, 39383), (98, 39374), (100, 39365), (123, 39260), (125, 39254), (126, 39248), (167, 39104), (170, 39092), (178, 39068), (204, 38981),

Gene: BigCheese\_39 Start: 33739, Stop: 32960, Start Num: 17

Candidate Starts for BigCheese\_39:

(Start: 17 @33739 has 47 MA's), (28, 33682), (42, 33610), (46, 33583), (53, 33544), (66, 33472), (68, 33466), (80, 33424), (119, 33256), (140, 33184), (168, 33091), (171, 33085), (183, 33046),

Gene: BilboSwaggins\_53 Start: 40213, Stop: 39602, Start Num: 51

Candidate Starts for BilboSwaggins\_53:

(Start: 20 @40375 has 112 MA's), (Start: 24 @40351 has 38 MA's), (Start: 32 @40321 has 1 MA's), (51, 40213), (69, 40117), (90, 40036), (96, 40012), (98, 40003), (100, 39994), (123, 39889), (125, 39883), (126, 39877), (167, 39733), (170, 39721), (178, 39697), (204, 39610),

Gene: Bobby\_87 Start: 57466, Stop: 56759, Start Num: 25

Candidate Starts for Bobby\_87:

(Start: 25 @57466 has 32 MA's), (Start: 37 @57412 has 5 MA's), (Start: 38 @57403 has 1 MA's), (42, 57379), (60, 57307), (90, 57208), (92, 57196), (98, 57175), (119, 57085), (121, 57079), (143, 56998), (148, 56980), (156, 56941), (163, 56923), (165, 56920), (181, 56869), (185, 56857), (199, 56806),

Gene: Bobquesha\_47 Start: 34969, Stop: 34178, Start Num: 24

Candidate Starts for Bobquesha\_47:

(Start: 24 @34969 has 38 MA's), (31, 34942), (Start: 37 @34912 has 5 MA's), (Start: 38 @34903 has 1 MA's), (58, 34798), (63, 34765), (72, 34729), (74, 34723), (77, 34711), (78, 34708), (80, 34699), (87, 34669), (98, 34624), (101, 34609), (127, 34501), (136, 34471), (142, 34444), (150, 34417), (156, 34387), (190, 34291), (199, 34261),

Gene: BobsGarage\_39 Start: 33739, Stop: 32960, Start Num: 17

Candidate Starts for BobsGarage\_39:

(Start: 17 @33739 has 47 MA's), (28, 33682), (42, 33610), (46, 33583), (53, 33544), (66, 33472), (68, 33466), (80, 33424), (119, 33256), (140, 33184), (168, 33091), (171, 33085), (183, 33046),

Gene: Boilgate\_41 Start: 35761, Stop: 34991, Start Num: 24

Candidate Starts for Boilgate\_41:

(Start: 24 @35761 has 38 MA's), (28, 35743), (35, 35719), (36, 35710), (39, 35689), (45, 35650), (54, 35605), (58, 35590), (72, 35521), (74, 35515), (77, 35503), (87, 35461), (98, 35416), (113, 35350), (133, 35266), (144, 35221), (150, 35203), (164, 35158), (181, 35107), (190, 35080), (194, 35071), (202, 35041), (207, 34996),

Gene: Bombitas\_84 Start: 56263, Stop: 55556, Start Num: 25

Candidate Starts for Bombitas\_84:

(Start: 25 @56263 has 32 MA's), (Start: 37 @56209 has 5 MA's), (Start: 38 @56200 has 1 MA's), (60, 56104), (90, 56005), (92, 55993), (98, 55972), (119, 55882), (121, 55876), (143, 55795), (148, 55777),

(156, 55738), (163, 55720), (165, 55717), (181, 55666), (185, 55654), (199, 55603),

Gene: BourbonZero\_36 Start: 33952, Stop: 33161, Start Num: 17

Candidate Starts for BourbonZero\_36:

(Start: 17 @33952 has 47 MA's), (30, 33898), (52, 33775), (60, 33742), (68, 33691), (70, 33685), (98, 33574), (124, 33460), (131, 33433), (146, 33376), (153, 33349), (203, 33175),

Gene: BrainDrainer\_37 Start: 32627, Stop: 31839, Start Num: 17

Candidate Starts for BrainDrainer\_37:

(Start: 17 @32627 has 47 MA's), (28, 32570), (31, 32561), (40, 32510), (46, 32471), (50, 32453), (64, 32375), (66, 32360), (68, 32354), (80, 32312), (99, 32231), (109, 32189), (114, 32171), (135, 32087), (141, 32066), (166, 31976), (179, 31934), (183, 31922),

Gene: Breezona\_39 Start: 33739, Stop: 32960, Start Num: 17

Candidate Starts for Breezona\_39:

(Start: 17 @33739 has 47 MA's), (28, 33682), (42, 33610), (46, 33583), (53, 33544), (66, 33472), (68, 33466), (80, 33424), (119, 33256), (140, 33184), (168, 33091), (171, 33085), (183, 33046),

Gene: Bromden\_38 Start: 33174, Stop: 32386, Start Num: 17

Candidate Starts for Bromden\_38:

(Start: 17 @33174 has 47 MA's), (28, 33117), (29, 33114), (46, 33018), (51, 32997), (52, 32985), (64, 32922), (66, 32907), (68, 32901), (80, 32859), (96, 32790), (106, 32745), (118, 32700), (130, 32649), (133, 32640), (135, 32634), (149, 32586), (151, 32574), (166, 32523), (179, 32481),

Gene: Bruin\_50 Start: 38614, Stop: 37841, Start Num: 20

Candidate Starts for Bruin\_50:

(Start: 20 @38614 has 112 MA's), (Start: 24 @38590 has 38 MA's), (Start: 32 @38560 has 1 MA's), (51, 38452), (69, 38356), (90, 38275), (96, 38251), (98, 38242), (100, 38233), (123, 38128), (125, 38122), (126, 38116), (167, 37972), (170, 37960), (178, 37936), (204, 37849),

Gene: Buck\_55 Start: 40321, Stop: 39548, Start Num: 20

Candidate Starts for Buck\_55:

(Start: 20 @40321 has 112 MA's), (Start: 24 @40297 has 38 MA's), (Start: 32 @40267 has 1 MA's), (51, 40159), (69, 40063), (90, 39982), (96, 39958), (98, 39949), (100, 39940), (123, 39835), (125, 39829), (126, 39823), (167, 39679), (170, 39667), (178, 39643), (204, 39556),

Gene: BugsBunny\_55 Start: 40152, Stop: 39379, Start Num: 20

Candidate Starts for BugsBunny\_55:

(Start: 20 @40152 has 112 MA's), (Start: 24 @40128 has 38 MA's), (Start: 32 @40098 has 1 MA's), (51, 39990), (69, 39894), (90, 39813), (96, 39789), (98, 39780), (100, 39771), (123, 39666), (125, 39660), (126, 39654), (167, 39510), (170, 39498), (178, 39474), (204, 39387),

Gene: Cactus\_56 Start: 39094, Stop: 38321, Start Num: 20

Candidate Starts for Cactus\_56:

(Start: 20 @39094 has 112 MA's), (Start: 24 @39070 has 38 MA's), (Start: 32 @39040 has 1 MA's), (51, 38932), (69, 38836), (90, 38755), (96, 38731), (98, 38722), (100, 38713), (123, 38608), (125, 38602), (126, 38596), (167, 38452), (170, 38440), (178, 38416), (204, 38329),

Gene: Calm\_37 Start: 32389, Stop: 31607, Start Num: 18

Candidate Starts for Calm\_37:

(Start: 18 @32389 has 19 MA's), (21, 32371), (73, 32104), (80, 32077), (81, 32074), (89, 32044), (90, 32032), (95, 32011), (107, 31963), (130, 31870), (141, 31834), (166, 31744), (183, 31690),

Gene: Chancellor\_46 Start: 35595, Stop: 34777, Start Num: 24

Candidate Starts for Chancellor\_46:

(Start: 24 @35595 has 38 MA's), (Start: 25 @35592 has 32 MA's), (28, 35577), (Start: 41 @35514 has 1 MA's), (45, 35484), (49, 35463), (57, 35427), (63, 35391), (74, 35349), (77, 35337), (78, 35334), (87, 35295), (98, 35250), (101, 35235), (110, 35199), (113, 35190), (136, 35097), (150, 35043), (155, 35019), (156, 35013), (164, 34995), (186, 34929), (194, 34908),

Gene: Chaser\_36 Start: 32444, Stop: 31656, Start Num: 17

Candidate Starts for Chaser\_36:

(Start: 17 @32444 has 47 MA's), (28, 32387), (31, 32378), (40, 32327), (46, 32288), (50, 32270), (64, 32192), (66, 32177), (68, 32171), (80, 32129), (99, 32048), (109, 32006), (114, 31988), (129, 31922), (135, 31904), (141, 31883), (166, 31793), (179, 31751), (183, 31739),

Gene: Cheetobro\_46 Start: 35592, Stop: 34774, Start Num: 24

Candidate Starts for Cheetobro\_46:

(Start: 24 @35592 has 38 MA's), (Start: 25 @35589 has 32 MA's), (28, 35574), (Start: 41 @35511 has 1 MA's), (45, 35481), (49, 35460), (57, 35424), (63, 35388), (74, 35346), (77, 35334), (78, 35331), (87, 35292), (98, 35247), (101, 35232), (110, 35196), (113, 35187), (136, 35094), (150, 35040), (155, 35016), (156, 35010), (164, 34992), (186, 34926), (194, 34905),

Gene: ChosenOne\_55 Start: 39394, Stop: 38621, Start Num: 20

Candidate Starts for ChosenOne\_55:

(Start: 20 @39394 has 112 MA's), (Start: 24 @39370 has 38 MA's), (Start: 32 @39340 has 1 MA's), (51, 39232), (69, 39136), (90, 39055), (96, 39031), (98, 39022), (100, 39013), (123, 38908), (125, 38902), (126, 38896), (167, 38752), (170, 38740), (178, 38716), (204, 38629),

Gene: ChotaBhai\_54 Start: 39416, Stop: 38643, Start Num: 20

Candidate Starts for ChotaBhai\_54:

(Start: 20 @39416 has 112 MA's), (Start: 24 @39392 has 38 MA's), (Start: 32 @39362 has 1 MA's), (51, 39254), (69, 39158), (90, 39077), (96, 39053), (98, 39044), (100, 39035), (123, 38930), (125, 38924), (126, 38918), (167, 38774), (170, 38762), (178, 38738), (204, 38651),

Gene: CicholasNage\_37 Start: 32410, Stop: 31628, Start Num: 18

Candidate Starts for CicholasNage\_37:

(Start: 18 @32410 has 19 MA's), (21, 32392), (73, 32125), (80, 32098), (81, 32095), (89, 32065), (90, 32053), (95, 32032), (107, 31984), (130, 31891), (141, 31855), (166, 31765), (183, 31711),

Gene: Cjw1\_54 Start: 40795, Stop: 40022, Start Num: 20

Candidate Starts for Cjw1\_54:

(Start: 20 @40795 has 112 MA's), (Start: 24 @40771 has 38 MA's), (Start: 32 @40741 has 1 MA's), (51, 40633), (69, 40537), (90, 40456), (96, 40432), (98, 40423), (100, 40414), (123, 40309), (125, 40303), (126, 40297), (167, 40153), (170, 40141), (178, 40117), (204, 40030),

Gene: Claus\_40 Start: 33735, Stop: 32956, Start Num: 17

Candidate Starts for Claus\_40:

(Start: 17 @33735 has 47 MA's), (28, 33678), (46, 33579), (51, 33558), (53, 33540), (66, 33468), (68, 33462), (80, 33420), (91, 33369), (94, 33357), (96, 33351), (98, 33342), (119, 33252), (121, 33246), (159, 33114),

Gene: Clautastrophe\_37 Start: 33978, Stop: 33187, Start Num: 17

Candidate Starts for Clautastrophe\_37:

(6, 34068), (10, 34026), (Start: 17 @33978 has 47 MA's), (21, 33960), (30, 33924), (45, 33840), (47, 33828), (58, 33777), (60, 33768), (68, 33717), (70, 33711), (98, 33600), (124, 33486), (131, 33459),



(146, 33402), (179, 33288), (196, 33234), (203, 33201),

Gene: Command613\_56 Start: 40133, Stop: 39360, Start Num: 20

Candidate Starts for Command613\_56:

(Start: 20 @40133 has 112 MA's), (Start: 24 @40109 has 38 MA's), (Start: 32 @40079 has 1 MA's), (51, 39971), (69, 39875), (90, 39794), (96, 39770), (98, 39761), (100, 39752), (123, 39647), (125, 39641), (126, 39635), (167, 39491), (170, 39479), (178, 39455), (204, 39368),

Gene: Constella\_81 Start: 53215, Stop: 52562, Start Num: 37

Candidate Starts for Constella\_81:

(Start: 25 @53269 has 32 MA's), (Start: 37 @53215 has 5 MA's), (Start: 38 @53206 has 1 MA's), (60, 53110), (90, 53011), (92, 52999), (98, 52978), (119, 52888), (121, 52882), (143, 52801), (148, 52783), (156, 52744), (163, 52726), (165, 52723), (181, 52672), (185, 52660), (199, 52609),

Gene: Contagion\_51 Start: 38895, Stop: 38122, Start Num: 20

Candidate Starts for Contagion\_51:

(Start: 20 @38895 has 112 MA's), (Start: 24 @38871 has 38 MA's), (Start: 32 @38841 has 1 MA's), (51, 38733), (69, 38637), (90, 38556), (96, 38532), (98, 38523), (100, 38514), (123, 38409), (125, 38403), (126, 38397), (167, 38253), (170, 38241), (178, 38217), (204, 38130),

Gene: Cookies\_51 Start: 39266, Stop: 38493, Start Num: 20

Candidate Starts for Cookies\_51:

(Start: 20 @39266 has 112 MA's), (Start: 24 @39242 has 38 MA's), (Start: 32 @39212 has 1 MA's), (51, 39104), (69, 39008), (90, 38927), (96, 38903), (98, 38894), (100, 38885), (123, 38780), (125, 38774), (126, 38768), (167, 38624), (170, 38612), (178, 38588), (204, 38501),

Gene: Courthouse\_86 Start: 53071, Stop: 52364, Start Num: 25

Candidate Starts for Courthouse\_86:

(Start: 25 @53071 has 32 MA's), (Start: 37 @53017 has 5 MA's), (Start: 38 @53008 has 1 MA's), (60, 52912), (67, 52894), (90, 52813), (92, 52801), (94, 52795), (96, 52789), (98, 52780), (108, 52738), (120, 52687), (121, 52684), (143, 52603), (148, 52585), (156, 52546), (160, 52534), (163, 52528), (165, 52525), (177, 52483), (181, 52474), (184, 52465), (185, 52462), (199, 52411),

Gene: Crossroads\_39 Start: 33740, Stop: 32961, Start Num: 17

Candidate Starts for Crossroads\_39:

(Start: 17 @33740 has 47 MA's), (28, 33683), (42, 33611), (53, 33545), (57, 33530), (66, 33473), (68, 33467), (80, 33425), (140, 33185), (168, 33092), (171, 33086), (183, 33047),

Gene: CrystalP\_54 Start: 40375, Stop: 39602, Start Num: 20

Candidate Starts for CrystalP\_54:

(Start: 20 @40375 has 112 MA's), (Start: 24 @40351 has 38 MA's), (Start: 32 @40321 has 1 MA's), (51, 40213), (69, 40117), (90, 40036), (96, 40012), (98, 40003), (100, 39994), (123, 39889), (125, 39883), (126, 39877), (167, 39733), (170, 39721), (178, 39697), (204, 39610),

Gene: Czyszczone1\_55 Start: 39604, Stop: 38831, Start Num: 20

Candidate Starts for Czyszczone1\_55:

(Start: 20 @39604 has 112 MA's), (Start: 24 @39580 has 38 MA's), (Start: 32 @39550 has 1 MA's), (51, 39442), (69, 39346), (90, 39265), (96, 39241), (98, 39232), (100, 39223), (123, 39118), (125, 39112), (126, 39106), (167, 38962), (170, 38950), (178, 38926), (204, 38839),

Gene: DHan\_40 Start: 33676, Stop: 32897, Start Num: 17

Candidate Starts for DHan\_40:

(Start: 17 @33676 has 47 MA's), (28, 33619), (46, 33520), (51, 33499), (53, 33481), (66, 33409), (68, 33403), (80, 33361), (91, 33310), (94, 33298), (96, 33292), (98, 33283), (119, 33193), (121, 33187), (159, 33055),

Gene: DS6A\_57 Start: 40555, Stop: 39803, Start Num: 26

Candidate Starts for DS6A\_57:

(1, 40786), (Start: 25 @40558 has 32 MA's), (Start: 26 @40555 has 3 MA's), (27, 40552), (31, 40531), (Start: 32 @40528 has 1 MA's), (36, 40507), (45, 40447), (48, 40429), (51, 40420), (52, 40408), (65, 40345), (66, 40339), (73, 40318), (94, 40225), (145, 40009), (172, 39922), (174, 39916), (192, 39865), (197, 39844), (201, 39829),

Gene: Daikon\_55 Start: 40225, Stop: 39452, Start Num: 20

Candidate Starts for Daikon\_55:

(Start: 20 @40225 has 112 MA's), (Start: 24 @40201 has 38 MA's), (Start: 32 @40171 has 1 MA's), (51, 40063), (69, 39967), (90, 39886), (96, 39862), (98, 39853), (100, 39844), (123, 39739), (125, 39733), (126, 39727), (167, 39583), (170, 39571), (178, 39547), (204, 39460),

Gene: Dallas\_97 Start: 59108, Stop: 58401, Start Num: 25

Candidate Starts for Dallas\_97:

(Start: 25 @59108 has 32 MA's), (Start: 37 @59054 has 5 MA's), (Start: 38 @59045 has 1 MA's), (60, 58949), (90, 58850), (92, 58838), (98, 58817), (119, 58727), (121, 58721), (143, 58640), (148, 58622), (156, 58583), (163, 58565), (165, 58562), (181, 58511), (185, 58499), (199, 58448),

Gene: DanBing\_39 Start: 33568, Stop: 32789, Start Num: 17

Candidate Starts for DanBing\_39:

(Start: 17 @33568 has 47 MA's), (28, 33511), (46, 33412), (51, 33391), (53, 33373), (66, 33301), (68, 33295), (80, 33253), (91, 33202), (94, 33190), (96, 33184), (98, 33175), (121, 33079), (159, 32947),

Gene: DirkDirk\_36 Start: 32376, Stop: 31594, Start Num: 18

Candidate Starts for DirkDirk\_36:

(Start: 18 @32376 has 19 MA's), (21, 32358), (73, 32091), (80, 32064), (81, 32061), (89, 32031), (90, 32019), (95, 31998), (107, 31950), (130, 31857), (141, 31821), (166, 31731), (183, 31677),

Gene: DmpstrDiver\_97 Start: 58533, Stop: 57826, Start Num: 25

Candidate Starts for DmpstrDiver\_97:

(Start: 25 @58533 has 32 MA's), (Start: 37 @58479 has 5 MA's), (Start: 38 @58470 has 1 MA's), (42, 58446), (60, 58374), (90, 58275), (92, 58263), (98, 58242), (119, 58152), (121, 58146), (143, 58065), (148, 58047), (156, 58008), (163, 57990), (165, 57987), (181, 57936), (185, 57924), (199, 57873),

Gene: DoctorDiddles\_54 Start: 39452, Stop: 38679, Start Num: 20

Candidate Starts for DoctorDiddles\_54:

(Start: 20 @39452 has 112 MA's), (Start: 24 @39428 has 38 MA's), (Start: 32 @39398 has 1 MA's), (51, 39290), (69, 39194), (90, 39113), (96, 39089), (98, 39080), (100, 39071), (123, 38966), (125, 38960), (126, 38954), (167, 38810), (170, 38798), (178, 38774), (204, 38687),

Gene: Douge\_36 Start: 32382, Stop: 31594, Start Num: 17

Candidate Starts for Douge\_36:

(Start: 17 @32382 has 47 MA's), (28, 32325), (31, 32316), (40, 32265), (46, 32226), (50, 32208), (64, 32130), (66, 32115), (68, 32109), (80, 32067), (99, 31986), (109, 31944), (114, 31926), (135, 31842), (141, 31821), (166, 31731), (179, 31689), (183, 31677),

Gene: Douzhi\_36 Start: 32488, Stop: 31700, Start Num: 17

Candidate Starts for Douzhi\_36:

(Start: 17 @32488 has 47 MA's), (28, 32431), (31, 32422), (40, 32371), (46, 32332), (50, 32314), (64, 32236), (66, 32221), (68, 32215), (80, 32173), (99, 32092), (109, 32050), (114, 32032), (135, 31948), (141, 31927), (148, 31903), (166, 31837), (179, 31795), (183, 31783),

Gene: DrDrey\_54 Start: 40523, Stop: 39750, Start Num: 20

Candidate Starts for DrDrey\_54:

(Start: 20 @40523 has 112 MA's), (Start: 24 @40499 has 38 MA's), (Start: 32 @40469 has 1 MA's), (51, 40361), (69, 40265), (90, 40184), (96, 40160), (98, 40151), (100, 40142), (123, 40037), (125, 40031), (126, 40025), (167, 39881), (170, 39869), (178, 39845), (204, 39758),

Gene: DrSeegs\_39 Start: 33739, Stop: 32960, Start Num: 17

Candidate Starts for DrSeegs\_39:

(Start: 17 @33739 has 47 MA's), (28, 33682), (42, 33610), (46, 33583), (53, 33544), (66, 33472), (68, 33466), (80, 33424), (119, 33256), (140, 33184), (168, 33091), (171, 33085), (183, 33046),

Gene: Duke13\_91 Start: 57040, Stop: 56333, Start Num: 25

Candidate Starts for Duke13\_91:

(Start: 25 @57040 has 32 MA's), (Start: 37 @56986 has 5 MA's), (Start: 38 @56977 has 1 MA's), (60, 56881), (90, 56782), (92, 56770), (98, 56749), (119, 56659), (121, 56653), (143, 56572), (148, 56554), (156, 56515), (163, 56497), (165, 56494), (181, 56443), (185, 56431), (199, 56380),

Gene: Dumbo\_54 Start: 39299, Stop: 38526, Start Num: 20

Candidate Starts for Dumbo\_54:

(Start: 20 @39299 has 112 MA's), (Start: 24 @39275 has 38 MA's), (Start: 32 @39245 has 1 MA's), (51, 39137), (69, 39041), (90, 38960), (96, 38936), (98, 38927), (100, 38918), (123, 38813), (125, 38807), (126, 38801), (167, 38657), (170, 38645), (178, 38621), (204, 38534),

Gene: DuncansLeg\_37 Start: 33989, Stop: 33198, Start Num: 17

Candidate Starts for DuncansLeg\_37:

(Start: 17 @33989 has 47 MA's), (30, 33935), (52, 33812), (60, 33779), (68, 33728), (70, 33722), (98, 33611), (124, 33497), (131, 33470), (146, 33413), (153, 33386), (203, 33212),

Gene: Dusk\_52 Start: 39596, Stop: 38823, Start Num: 20

Candidate Starts for Dusk\_52:

(Start: 20 @39596 has 112 MA's), (Start: 24 @39572 has 38 MA's), (Start: 32 @39542 has 1 MA's), (51, 39434), (69, 39338), (90, 39257), (96, 39233), (98, 39224), (100, 39215), (123, 39110), (125, 39104), (126, 39098), (167, 38954), (170, 38942), (178, 38918), (204, 38831),

Gene: DyoEdafos\_38 Start: 32716, Stop: 31928, Start Num: 17

Candidate Starts for DyoEdafos\_38:

(Start: 17 @32716 has 47 MA's), (28, 32659), (40, 32599), (46, 32560), (50, 32542), (64, 32464), (66, 32449), (68, 32443), (80, 32401), (99, 32320), (105, 32290), (109, 32278), (114, 32260), (133, 32182), (135, 32176), (166, 32065), (179, 32023), (183, 32011),

Gene: Easy2Say\_55 Start: 40837, Stop: 40064, Start Num: 20

Candidate Starts for Easy2Say\_55:

(Start: 20 @40837 has 112 MA's), (Start: 24 @40813 has 38 MA's), (Start: 32 @40783 has 1 MA's), (51, 40675), (69, 40579), (90, 40498), (96, 40474), (98, 40465), (100, 40456), (123, 40351), (125, 40345), (126, 40339), (167, 40195), (170, 40183), (178, 40159), (204, 40072),

Gene: Ejimix\_89 Start: 58827, Stop: 58120, Start Num: 25

Candidate Starts for Ejimix\_89:

(Start: 25 @58827 has 32 MA's), (Start: 37 @58773 has 5 MA's), (Start: 38 @58764 has 1 MA's), (60, 58668), (90, 58569), (92, 58557), (98, 58536), (119, 58446), (121, 58440), (143, 58359), (148, 58341), (156, 58302), (163, 58284), (165, 58281), (181, 58230), (185, 58218), (199, 58167),

Gene: Elite2014\_54 Start: 39393, Stop: 38620, Start Num: 20

Candidate Starts for Elite2014\_54:

(Start: 20 @39393 has 112 MA's), (Start: 24 @39369 has 38 MA's), (Start: 32 @39339 has 1 MA's), (51, 39231), (69, 39135), (90, 39054), (96, 39030), (98, 39021), (100, 39012), (123, 38907), (125, 38901), (126, 38895), (167, 38751), (170, 38739), (178, 38715), (204, 38628),

Gene: Ellson\_37 Start: 33965, Stop: 33174, Start Num: 17

Candidate Starts for Ellson\_37:

(Start: 17 @33965 has 47 MA's), (30, 33911), (52, 33788), (60, 33755), (68, 33704), (70, 33698), (98, 33587), (124, 33473), (131, 33446), (146, 33389), (153, 33362), (203, 33188),

Gene: Elph10\_54 Start: 39102, Stop: 38329, Start Num: 20

Candidate Starts for Elph10\_54:

(Start: 20 @39102 has 112 MA's), (Start: 24 @39078 has 38 MA's), (Start: 32 @39048 has 1 MA's), (51, 38940), (69, 38844), (90, 38763), (96, 38739), (98, 38730), (100, 38721), (123, 38616), (125, 38610), (126, 38604), (167, 38460), (170, 38448), (178, 38424), (204, 38337),

Gene: Emmina\_54 Start: 39276, Stop: 38527, Start Num: 24

Candidate Starts for Emmina\_54:

(Start: 20 @39300 has 112 MA's), (Start: 24 @39276 has 38 MA's), (Start: 32 @39246 has 1 MA's), (51, 39138), (69, 39042), (90, 38961), (96, 38937), (98, 38928), (100, 38919), (123, 38814), (125, 38808), (126, 38802), (167, 38658), (170, 38646), (178, 38622), (204, 38535),

Gene: Enceladus\_36 Start: 32359, Stop: 31577, Start Num: 18

Candidate Starts for Enceladus\_36:

(Start: 18 @32359 has 19 MA's), (21, 32341), (73, 32074), (80, 32047), (81, 32044), (89, 32014), (90, 32002), (95, 31981), (107, 31933), (130, 31840), (141, 31804), (166, 31714), (183, 31660),

Gene: Eponine\_48 Start: 36348, Stop: 35530, Start Num: 24

Candidate Starts for Eponine\_48:

(Start: 24 @36348 has 38 MA's), (Start: 25 @36345 has 32 MA's), (28, 36330), (Start: 41 @36267 has 1 MA's), (45, 36237), (49, 36216), (57, 36180), (63, 36144), (74, 36102), (77, 36090), (78, 36087), (87, 36048), (98, 36003), (101, 35988), (110, 35952), (113, 35943), (136, 35850), (150, 35796), (155, 35772), (156, 35766), (164, 35748), (186, 35682), (194, 35661),

Gene: EricMillard\_89 Start: 58168, Stop: 57461, Start Num: 25

Candidate Starts for EricMillard\_89:

(Start: 25 @58168 has 32 MA's), (Start: 37 @58114 has 5 MA's), (Start: 38 @58105 has 1 MA's), (42, 58081), (60, 58009), (90, 57910), (92, 57898), (98, 57877), (119, 57787), (121, 57781), (143, 57700), (148, 57682), (156, 57643), (163, 57625), (165, 57622), (181, 57571), (185, 57559), (199, 57508),

Gene: Eureka\_52 Start: 39864, Stop: 39091, Start Num: 20

Candidate Starts for Eureka\_52:

(Start: 20 @39864 has 112 MA's), (Start: 24 @39840 has 38 MA's), (Start: 32 @39810 has 1 MA's), (51, 39702), (69, 39606), (90, 39525), (96, 39501), (98, 39492), (100, 39483), (123, 39378), (125, 39372), (126, 39366), (167, 39222), (170, 39210), (178, 39186), (204, 39099),

Gene: FairyPath\_54 Start: 40216, Stop: 39443, Start Num: 20

Candidate Starts for FairyPath\_54:

(Start: 20 @40216 has 112 MA's), (Start: 24 @40192 has 38 MA's), (Start: 32 @40162 has 1 MA's), (51, 40054), (69, 39958), (90, 39877), (96, 39853), (98, 39844), (100, 39835), (123, 39730), (125, 39724), (126, 39718), (167, 39574), (170, 39562), (178, 39538), (204, 39451),

Gene: Faith1\_39 Start: 33739, Stop: 32960, Start Num: 17

Candidate Starts for Faith1\_39:

(Start: 17 @33739 has 47 MA's), (28, 33682), (42, 33610), (46, 33583), (53, 33544), (66, 33472), (68, 33466), (80, 33424), (119, 33256), (140, 33184), (168, 33091), (171, 33085), (183, 33046),

Gene: FarmResident\_36 Start: 32309, Stop: 31638, Start Num: 40

Candidate Starts for FarmResident\_36:

(Start: 17 @32426 has 47 MA's), (28, 32369), (31, 32360), (40, 32309), (46, 32270), (50, 32252), (64, 32174), (66, 32159), (68, 32153), (80, 32111), (99, 32030), (109, 31988), (114, 31970), (135, 31886), (141, 31865), (166, 31775), (179, 31733), (183, 31721),

Gene: Filch\_55 Start: 39325, Stop: 38552, Start Num: 20

Candidate Starts for Filch\_55:

(Start: 20 @39325 has 112 MA's), (Start: 24 @39301 has 38 MA's), (Start: 32 @39271 has 1 MA's), (51, 39163), (69, 39067), (90, 38986), (96, 38962), (98, 38953), (100, 38944), (123, 38839), (125, 38833), (126, 38827), (167, 38683), (170, 38671), (178, 38647), (204, 38560),

Gene: Finemlucis\_39 Start: 34015, Stop: 33236, Start Num: 17

Candidate Starts for Finemlucis\_39:

(Start: 17 @34015 has 47 MA's), (28, 33958), (42, 33886), (46, 33859), (53, 33820), (66, 33748), (68, 33742), (80, 33700), (140, 33460), (168, 33367), (171, 33361), (183, 33322),

Gene: Finnry\_37 Start: 33981, Stop: 33190, Start Num: 17

Candidate Starts for Finnry\_37:

(6, 34071), (10, 34029), (Start: 17 @33981 has 47 MA's), (21, 33963), (30, 33927), (45, 33843), (47, 33831), (58, 33780), (60, 33771), (68, 33720), (70, 33714), (98, 33603), (124, 33489), (131, 33462), (146, 33405), (179, 33291), (196, 33237), (203, 33204),

Gene: Fionnbharth\_46 Start: 35745, Stop: 34927, Start Num: 24

Candidate Starts for Fionnbharth\_46:

(Start: 24 @35745 has 38 MA's), (Start: 25 @35742 has 32 MA's), (28, 35727), (45, 35634), (49, 35613), (57, 35577), (63, 35541), (74, 35499), (77, 35487), (78, 35484), (80, 35475), (87, 35445), (101, 35385), (110, 35349), (113, 35340), (136, 35247), (150, 35193), (155, 35169), (156, 35163), (164, 35145), (186, 35079), (194, 35058),

Gene: FireRed\_57 Start: 40591, Stop: 39818, Start Num: 20

Candidate Starts for FireRed\_57:

(Start: 20 @40591 has 112 MA's), (Start: 24 @40567 has 38 MA's), (Start: 32 @40537 has 1 MA's), (51, 40429), (69, 40333), (90, 40252), (96, 40228), (98, 40219), (100, 40210), (123, 40105), (125, 40099), (126, 40093), (167, 39949), (170, 39937), (178, 39913), (204, 39826),

Gene: Flypotenuse\_49 Start: 39064, Stop: 38315, Start Num: 24

Candidate Starts for Flypotenuse\_49:

(Start: 20 @39088 has 112 MA's), (Start: 24 @39064 has 38 MA's), (Start: 32 @39034 has 1 MA's), (51, 38926), (69, 38830), (90, 38749), (96, 38725), (98, 38716), (100, 38707), (123, 38602), (125, 38596), (126, 38590), (167, 38446), (170, 38434), (178, 38410), (204, 38323),

Gene: FoghornLeghorn\_49 Start: 38098, Stop: 37325, Start Num: 20

Candidate Starts for FoghornLeghorn\_49:

(Start: 20 @38098 has 112 MA's), (Start: 24 @38074 has 38 MA's), (Start: 32 @38044 has 1 MA's), (51, 37936), (69, 37840), (90, 37759), (96, 37735), (98, 37726), (100, 37717), (123, 37612), (125, 37606), (126, 37600), (167, 37456), (170, 37444), (178, 37420), (204, 37333),

Gene: Gabriela\_39 Start: 34001, Stop: 33222, Start Num: 17

Candidate Starts for Gabriela\_39:

(Start: 17 @34001 has 47 MA's), (28, 33944), (42, 33872), (46, 33845), (53, 33806), (66, 33734), (68, 33728), (80, 33686), (119, 33518), (140, 33446), (168, 33353), (171, 33347), (183, 33308),

Gene: Gage\_57 Start: 39873, Stop: 39100, Start Num: 20

Candidate Starts for Gage\_57:

(Start: 20 @39873 has 112 MA's), (Start: 24 @39849 has 38 MA's), (Start: 32 @39819 has 1 MA's), (51, 39711), (69, 39615), (90, 39534), (96, 39510), (98, 39501), (100, 39492), (123, 39387), (125, 39381), (126, 39375), (167, 39231), (170, 39219), (178, 39195), (204, 39108),

Gene: Gaia\_67 Start: 44826, Stop: 44038, Start Num: 16

Candidate Starts for Gaia\_67:

(Start: 16 @44826 has 2 MA's), (Start: 24 @44787 has 38 MA's), (51, 44649), (83, 44496), (90, 44472), (98, 44439), (107, 44397), (113, 44379), (118, 44355), (153, 44220), (157, 44199), (176, 44148), (198, 44088), (199, 44079),

Gene: Gardann\_39 Start: 33740, Stop: 32961, Start Num: 17

Candidate Starts for Gardann\_39:

(Start: 17 @33740 has 47 MA's), (28, 33683), (42, 33611), (53, 33545), (66, 33473), (68, 33467), (80, 33425), (140, 33185), (168, 33092), (171, 33086), (183, 33047),

Gene: Gator\_52 Start: 40227, Stop: 39454, Start Num: 20

Candidate Starts for Gator\_52:

(Start: 20 @40227 has 112 MA's), (Start: 24 @40203 has 38 MA's), (Start: 32 @40173 has 1 MA's), (51, 40065), (69, 39969), (90, 39888), (96, 39864), (98, 39855), (100, 39846), (123, 39741), (125, 39735), (126, 39729), (167, 39585), (170, 39573), (178, 39549), (204, 39462),

Gene: Gemini\_58 Start: 40390, Stop: 39617, Start Num: 20

Candidate Starts for Gemini\_58:

(Start: 20 @40390 has 112 MA's), (Start: 24 @40366 has 38 MA's), (Start: 32 @40336 has 1 MA's), (51, 40228), (69, 40132), (90, 40051), (96, 40027), (98, 40018), (100, 40009), (123, 39904), (125, 39898), (126, 39892), (167, 39748), (170, 39736), (178, 39712), (204, 39625),

Gene: Glexan\_52 Start: 40215, Stop: 39442, Start Num: 20

Candidate Starts for Glexan\_52:

(Start: 20 @40215 has 112 MA's), (Start: 24 @40191 has 38 MA's), (Start: 32 @40161 has 1 MA's), (51, 40053), (69, 39957), (90, 39876), (96, 39852), (98, 39843), (100, 39834), (123, 39729), (125, 39723), (126, 39717), (167, 39573), (170, 39561), (178, 39537), (204, 39450),

Gene: Goku\_52 Start: 39593, Stop: 38820, Start Num: 20

Candidate Starts for Goku\_52:

(Start: 20 @39593 has 112 MA's), (Start: 24 @39569 has 38 MA's), (Start: 32 @39539 has 1 MA's), (51, 39431), (69, 39335), (90, 39254), (96, 39230), (98, 39221), (100, 39212), (123, 39107), (125, 39101), (126, 39095), (167, 38951), (170, 38939), (178, 38915), (204, 38828),

Gene: GoldenSpark\_57 Start: 39849, Stop: 39100, Start Num: 24

Candidate Starts for GoldenSpark\_57:

(Start: 20 @39873 has 112 MA's), (Start: 24 @39849 has 38 MA's), (Start: 32 @39819 has 1 MA's), (51, 39711), (69, 39615), (90, 39534), (96, 39510), (98, 39501), (100, 39492), (123, 39387), (125, 39381), (126, 39375), (167, 39231), (170, 39219), (178, 39195), (204, 39108),

Gene: Goldilocks\_56 Start: 39375, Stop: 38602, Start Num: 20

Candidate Starts for Goldilocks\_56:

(Start: 20 @39375 has 112 MA's), (Start: 24 @39351 has 38 MA's), (Start: 32 @39321 has 1 MA's), (51, 39213), (69, 39117), (90, 39036), (96, 39012), (98, 39003), (100, 38994), (123, 38889), (125, 38883), (126, 38877), (167, 38733), (170, 38721), (178, 38697), (204, 38610),

Gene: Gonephishing\_82 Start: 52633, Stop: 51926, Start Num: 25

Candidate Starts for Gonephishing\_82:

(Start: 25 @52633 has 32 MA's), (Start: 37 @52579 has 5 MA's), (Start: 38 @52570 has 1 MA's), (90, 52375), (92, 52363), (98, 52342), (108, 52300), (120, 52249), (121, 52246), (143, 52165), (148, 52147), (156, 52108), (163, 52090), (165, 52087), (177, 52045), (181, 52036), (185, 52024), (199, 51973),

Gene: GooberAzure\_57 Start: 39873, Stop: 39100, Start Num: 20

Candidate Starts for GooberAzure\_57:

(Start: 20 @39873 has 112 MA's), (Start: 24 @39849 has 38 MA's), (Start: 32 @39819 has 1 MA's), (51, 39711), (69, 39615), (90, 39534), (96, 39510), (98, 39501), (100, 39492), (123, 39387), (125, 39381), (126, 39375), (167, 39231), (170, 39219), (178, 39195), (204, 39108),

Gene: GuuelaD\_39 Start: 33777, Stop: 32998, Start Num: 17

Candidate Starts for GuuelaD\_39:

(Start: 17 @33777 has 47 MA's), (28, 33720), (42, 33648), (53, 33582), (57, 33567), (66, 33510), (68, 33504), (80, 33462), (140, 33222), (168, 33129), (171, 33123), (183, 33084),

Gene: Hafay\_39 Start: 33772, Stop: 32993, Start Num: 17

Candidate Starts for Hafay\_39:

(Start: 17 @33772 has 47 MA's), (28, 33715), (42, 33643), (53, 33577), (57, 33562), (66, 33505), (68, 33499), (80, 33457), (140, 33217), (168, 33124), (171, 33118), (183, 33079),

Gene: Halena\_36 Start: 32385, Stop: 31603, Start Num: 18

Candidate Starts for Halena\_36:

(Start: 18 @32385 has 19 MA's), (21, 32367), (73, 32100), (80, 32073), (81, 32070), (89, 32040), (90, 32028), (95, 32007), (107, 31959), (130, 31866), (141, 31830), (166, 31740), (183, 31686),

Gene: Halley\_97 Start: 59101, Stop: 58394, Start Num: 25

Candidate Starts for Halley\_97:

(Start: 25 @59101 has 32 MA's), (Start: 37 @59047 has 5 MA's), (Start: 38 @59038 has 1 MA's), (42, 59014), (60, 58942), (90, 58843), (92, 58831), (98, 58810), (119, 58720), (121, 58714), (143, 58633), (148, 58615), (156, 58576), (163, 58558), (165, 58555), (181, 58504), (185, 58492), (199, 58441),

Gene: HanKaySha\_53 Start: 39183, Stop: 38410, Start Num: 20

Candidate Starts for HanKaySha\_53:

(Start: 20 @39183 has 112 MA's), (Start: 24 @39159 has 38 MA's), (Start: 32 @39129 has 1 MA's), (51, 39021), (69, 38925), (90, 38844), (96, 38820), (98, 38811), (100, 38802), (123, 38697), (125, 38691), (126, 38685), (167, 38541), (170, 38529), (178, 38505), (204, 38418),

Gene: Hannaconda\_82 Start: 51989, Stop: 51336, Start Num: 37

Candidate Starts for Hannaconda\_82:

(Start: 25 @52043 has 32 MA's), (Start: 37 @51989 has 5 MA's), (Start: 38 @51980 has 1 MA's), (42, 51956), (60, 51884), (90, 51785), (92, 51773), (98, 51752), (119, 51662), (121, 51656), (143, 51575), (148, 51557), (156, 51518), (163, 51500), (165, 51497), (181, 51446), (185, 51434), (199, 51383),

Gene: Harella\_54 Start: 40731, Stop: 39958, Start Num: 20

Candidate Starts for Harella\_54:

(Start: 20 @40731 has 112 MA's), (Start: 24 @40707 has 38 MA's), (Start: 32 @40677 has 1 MA's), (51, 40569), (69, 40473), (90, 40392), (96, 40368), (98, 40359), (100, 40350), (123, 40245), (125, 40239), (126, 40233), (167, 40089), (170, 40077), (178, 40053), (204, 39966),

Gene: Henry\_53 Start: 39815, Stop: 39042, Start Num: 20

Candidate Starts for Henry\_53:

(Start: 20 @39815 has 112 MA's), (Start: 24 @39791 has 38 MA's), (Start: 32 @39761 has 1 MA's), (51, 39653), (69, 39557), (90, 39476), (96, 39452), (98, 39443), (100, 39434), (123, 39329), (125, 39323), (126, 39317), (167, 39173), (170, 39161), (178, 39137), (204, 39050),

Gene: Highbury\_55 Start: 39472, Stop: 38699, Start Num: 20

Candidate Starts for Highbury\_55:

(Start: 20 @39472 has 112 MA's), (Start: 24 @39448 has 38 MA's), (Start: 32 @39418 has 1 MA's), (51, 39310), (69, 39214), (90, 39133), (96, 39109), (98, 39100), (100, 39091), (123, 38986), (125, 38980), (126, 38974), (167, 38830), (170, 38818), (178, 38794), (204, 38707),

Gene: HokkenD\_84 Start: 57370, Stop: 56663, Start Num: 25

Candidate Starts for HokkenD\_84:

(Start: 25 @57370 has 32 MA's), (Start: 37 @57316 has 5 MA's), (Start: 38 @57307 has 1 MA's), (42, 57283), (60, 57211), (90, 57112), (92, 57100), (98, 57079), (119, 56989), (121, 56983), (143, 56902), (148, 56884), (156, 56845), (163, 56827), (165, 56824), (181, 56773), (185, 56761), (199, 56710),

Gene: Holt\_59 Start: 40287, Stop: 39514, Start Num: 20

Candidate Starts for Holt\_59:

(Start: 20 @40287 has 112 MA's), (Start: 24 @40263 has 38 MA's), (Start: 32 @40233 has 1 MA's), (51, 40125), (69, 40029), (90, 39948), (96, 39924), (98, 39915), (100, 39906), (123, 39801), (125, 39795), (126, 39789), (167, 39645), (170, 39633), (178, 39609), (204, 39522),

Gene: Hoonter\_57 Start: 39873, Stop: 39100, Start Num: 20

Candidate Starts for Hoonter\_57:

(Start: 20 @39873 has 112 MA's), (Start: 24 @39849 has 38 MA's), (Start: 32 @39819 has 1 MA's), (51, 39711), (69, 39615), (90, 39534), (96, 39510), (98, 39501), (100, 39492), (123, 39387), (125, 39381), (126, 39375), (167, 39231), (170, 39219), (178, 39195), (204, 39108),

Gene: Hokey\_54 Start: 39717, Stop: 38944, Start Num: 20

Candidate Starts for Hokey\_54:

(Start: 20 @39717 has 112 MA's), (Start: 24 @39693 has 38 MA's), (Start: 32 @39663 has 1 MA's), (51, 39555), (69, 39459), (90, 39378), (96, 39354), (98, 39345), (100, 39336), (123, 39231), (125, 39225), (126, 39219), (167, 39075), (170, 39063), (178, 39039), (204, 38952),

Gene: HufflyPuff\_56 Start: 40547, Stop: 39774, Start Num: 20

Candidate Starts for HufflyPuff\_56:

(Start: 20 @40547 has 112 MA's), (Start: 24 @40523 has 38 MA's), (Start: 32 @40493 has 1 MA's), (51, 40385), (69, 40289), (90, 40208), (96, 40184), (98, 40175), (100, 40166), (123, 40061), (125, 40055), (126, 40049), (167, 39905), (170, 39893), (178, 39869), (204, 39782),

Gene: Hughesyang\_95 Start: 59005, Stop: 58352, Start Num: 37



Candidate Starts for Hughesyang\_95:

(Start: 25 @59059 has 32 MA's), (Start: 37 @59005 has 5 MA's), (Start: 38 @58996 has 1 MA's), (42, 58972), (60, 58900), (90, 58801), (92, 58789), (98, 58768), (119, 58678), (121, 58672), (143, 58591), (148, 58573), (156, 58534), (163, 58516), (165, 58513), (181, 58462), (185, 58450), (199, 58399),

Gene: IHOP\_52 Start: 39939, Stop: 39166, Start Num: 20

Candidate Starts for IHOP\_52:

(Start: 20 @39939 has 112 MA's), (Start: 24 @39915 has 38 MA's), (Start: 32 @39885 has 1 MA's), (51, 39777), (69, 39681), (90, 39600), (96, 39576), (98, 39567), (100, 39558), (123, 39453), (125, 39447), (126, 39441), (167, 39297), (170, 39285), (178, 39261), (204, 39174),

Gene: Icee\_54 Start: 39541, Stop: 38768, Start Num: 20

Candidate Starts for Icee\_54:

(Start: 20 @39541 has 112 MA's), (Start: 24 @39517 has 38 MA's), (Start: 32 @39487 has 1 MA's), (51, 39379), (69, 39283), (90, 39202), (96, 39178), (98, 39169), (100, 39160), (123, 39055), (125, 39049), (126, 39043), (167, 38899), (170, 38887), (178, 38863), (204, 38776),

Gene: Inca\_51 Start: 38464, Stop: 37691, Start Num: 20

Candidate Starts for Inca\_51:

(Start: 20 @38464 has 112 MA's), (Start: 24 @38440 has 38 MA's), (Start: 32 @38410 has 1 MA's), (51, 38302), (69, 38206), (90, 38125), (96, 38101), (98, 38092), (100, 38083), (123, 37978), (125, 37972), (126, 37966), (167, 37822), (178, 37786), (204, 37699),

Gene: JF1\_46 Start: 35662, Stop: 34841, Start Num: 24

Candidate Starts for JF1\_46:

(Start: 24 @35662 has 38 MA's), (Start: 25 @35659 has 32 MA's), (28, 35644), (45, 35551), (49, 35530), (63, 35458), (74, 35416), (77, 35404), (78, 35401), (80, 35392), (87, 35362), (101, 35302), (110, 35266), (113, 35257), (136, 35164), (150, 35110), (155, 35086), (156, 35080), (160, 35068), (186, 34996), (194, 34975),

Gene: JeTaime\_55 Start: 40367, Stop: 39594, Start Num: 20

Candidate Starts for JeTaime\_55:

(Start: 20 @40367 has 112 MA's), (Start: 24 @40343 has 38 MA's), (Start: 32 @40313 has 1 MA's), (51, 40205), (69, 40109), (90, 40028), (96, 40004), (98, 39995), (100, 39986), (123, 39881), (125, 39875), (126, 39869), (167, 39725), (170, 39713), (178, 39689), (204, 39602),

Gene: Jobypre\_37 Start: 33978, Stop: 33187, Start Num: 17

Candidate Starts for Jobypre\_37:

(6, 34068), (10, 34026), (Start: 17 @33978 has 47 MA's), (21, 33960), (30, 33924), (45, 33840), (47, 33828), (58, 33777), (60, 33768), (68, 33717), (70, 33711), (98, 33600), (124, 33486), (131, 33459), (146, 33402), (179, 33288), (196, 33234), (203, 33201),

Gene: JoeDirt\_36 Start: 32357, Stop: 31575, Start Num: 18

Candidate Starts for JoeDirt\_36:

(Start: 18 @32357 has 19 MA's), (21, 32339), (73, 32072), (80, 32045), (81, 32042), (89, 32012), (90, 32000), (95, 31979), (107, 31931), (130, 31838), (141, 31802), (166, 31712), (183, 31658),

Gene: Jubie\_37 Start: 33979, Stop: 33188, Start Num: 17

Candidate Starts for Jubie\_37:

(6, 34069), (10, 34027), (Start: 17 @33979 has 47 MA's), (21, 33961), (30, 33925), (45, 33841), (47, 33829), (58, 33778), (60, 33769), (68, 33718), (70, 33712), (98, 33601), (124, 33487), (131, 33460), (146, 33403), (179, 33289), (196, 33235), (203, 33202),

Gene: JuicyJay\_92 Start: 60235, Stop: 59528, Start Num: 25

Candidate Starts for JuicyJay\_92:

(Start: 25 @60235 has 32 MA's), (Start: 37 @60181 has 5 MA's), (Start: 38 @60172 has 1 MA's), (60, 60076), (90, 59977), (92, 59965), (98, 59944), (119, 59854), (121, 59848), (143, 59767), (148, 59749), (156, 59710), (163, 59692), (165, 59689), (181, 59638), (185, 59626), (199, 59575),

Gene: Juliette\_48 Start: 35819, Stop: 35001, Start Num: 24

Candidate Starts for Juliette\_48:

(Start: 24 @35819 has 38 MA's), (Start: 25 @35816 has 32 MA's), (28, 35801), (Start: 41 @35738 has 1 MA's), (45, 35708), (49, 35687), (57, 35651), (63, 35615), (74, 35573), (77, 35561), (78, 35558), (87, 35519), (98, 35474), (101, 35459), (110, 35423), (113, 35414), (136, 35321), (150, 35267), (155, 35243), (156, 35237), (164, 35219), (186, 35153), (194, 35132),

Gene: Kahlid\_39 Start: 33744, Stop: 32965, Start Num: 17

Candidate Starts for Kahlid\_39:

(Start: 17 @33744 has 47 MA's), (28, 33687), (42, 33615), (53, 33549), (57, 33534), (66, 33477), (68, 33471), (80, 33429), (140, 33189), (168, 33096), (171, 33090), (183, 33051),

Gene: Kalah2\_89 Start: 58394, Stop: 57687, Start Num: 25

Candidate Starts for Kalah2\_89:

(Start: 25 @58394 has 32 MA's), (Start: 37 @58340 has 5 MA's), (Start: 38 @58331 has 1 MA's), (42, 58307), (60, 58235), (90, 58136), (92, 58124), (98, 58103), (119, 58013), (121, 58007), (143, 57926), (148, 57908), (156, 57869), (163, 57851), (165, 57848), (181, 57797), (185, 57785), (199, 57734),

Gene: Kanye\_50 Start: 39227, Stop: 38454, Start Num: 20

Candidate Starts for Kanye\_50:

(Start: 20 @39227 has 112 MA's), (Start: 24 @39203 has 38 MA's), (Start: 32 @39173 has 1 MA's), (51, 39065), (69, 38969), (90, 38888), (96, 38864), (98, 38855), (100, 38846), (123, 38741), (125, 38735), (126, 38729), (167, 38585), (170, 38573), (178, 38549), (204, 38462),

Gene: KashFlow\_86 Start: 53547, Stop: 52894, Start Num: 37

Candidate Starts for KashFlow\_86:

(Start: 25 @53601 has 32 MA's), (Start: 37 @53547 has 5 MA's), (Start: 38 @53538 has 1 MA's), (90, 53343), (92, 53331), (98, 53310), (108, 53268), (120, 53217), (121, 53214), (143, 53133), (148, 53115), (156, 53076), (160, 53064), (163, 53058), (165, 53055), (177, 53013), (181, 53004), (185, 52992), (199, 52941),

Gene: Kimchi\_57 Start: 39876, Stop: 39103, Start Num: 20

Candidate Starts for Kimchi\_57:

(Start: 20 @39876 has 112 MA's), (Start: 24 @39852 has 38 MA's), (Start: 32 @39822 has 1 MA's), (51, 39714), (69, 39618), (90, 39537), (96, 39513), (98, 39504), (100, 39495), (123, 39390), (125, 39384), (126, 39378), (167, 39234), (170, 39222), (178, 39198), (204, 39111),

Gene: Kingsolomon\_37 Start: 33978, Stop: 33187, Start Num: 17

Candidate Starts for Kingsolomon\_37:

(6, 34068), (10, 34026), (Start: 17 @33978 has 47 MA's), (21, 33960), (30, 33924), (45, 33840), (47, 33828), (58, 33777), (60, 33768), (68, 33717), (70, 33711), (98, 33600), (124, 33486), (131, 33459), (146, 33402), (179, 33288), (196, 33234), (203, 33201),

Gene: KirDoubleO7\_35 Start: 33790, Stop: 33206, Start Num: 58

Candidate Starts for KirDoubleO7\_35:

(8, 34060), (12, 34015), (Start: 17 @33991 has 47 MA's), (30, 33937), (45, 33853), (47, 33841), (50, 33829), (58, 33790), (60, 33781), (68, 33730), (70, 33724), (98, 33613), (110, 33565), (131, 33478),

(146, 33421), (148, 33415), (179, 33307), (196, 33253),

Gene: Klein\_96 Start: 58101, Stop: 57394, Start Num: 25

Candidate Starts for Klein\_96:

(Start: 25 @58101 has 32 MA's), (Start: 37 @58047 has 5 MA's), (Start: 38 @58038 has 1 MA's), (60, 57942), (90, 57843), (92, 57831), (98, 57810), (119, 57720), (121, 57714), (143, 57633), (148, 57615), (156, 57576), (163, 57558), (165, 57555), (181, 57504), (185, 57492), (199, 57441),

Gene: Kostya\_55 Start: 40014, Stop: 39265, Start Num: 24

Candidate Starts for Kostya\_55:

(Start: 20 @40038 has 112 MA's), (Start: 24 @40014 has 38 MA's), (Start: 32 @39984 has 1 MA's), (51, 39876), (69, 39780), (90, 39699), (96, 39675), (98, 39666), (100, 39657), (123, 39552), (125, 39546), (126, 39540), (167, 39396), (170, 39384), (178, 39360), (204, 39273),

Gene: Kraw\_48 Start: 35507, Stop: 34689, Start Num: 24

Candidate Starts for Kraw\_48:

(Start: 24 @35507 has 38 MA's), (Start: 25 @35504 has 32 MA's), (28, 35489), (Start: 41 @35426 has 1 MA's), (45, 35396), (49, 35375), (57, 35339), (63, 35303), (74, 35261), (77, 35249), (78, 35246), (87, 35207), (98, 35162), (101, 35147), (110, 35111), (113, 35102), (136, 35009), (150, 34955), (155, 34931), (156, 34925), (164, 34907), (186, 34841), (194, 34820),

Gene: Kropertea\_36 Start: 32524, Stop: 31736, Start Num: 17

Candidate Starts for Kropertea\_36:

(Start: 17 @32524 has 47 MA's), (28, 32467), (40, 32407), (46, 32368), (50, 32350), (64, 32272), (66, 32257), (68, 32251), (80, 32209), (99, 32128), (105, 32098), (109, 32086), (114, 32068), (133, 31990), (135, 31984), (166, 31873), (179, 31831), (183, 31819),

Gene: Krypton555\_37 Start: 33883, Stop: 33092, Start Num: 17

Candidate Starts for Krypton555\_37:

(3, 34012), (4, 34003), (6, 33973), (Start: 11 @33916 has 1 MA's), (12, 33907), (15, 33889), (Start: 17 @33883 has 47 MA's), (30, 33829), (50, 33721), (55, 33694), (58, 33682), (59, 33676), (60, 33673), (68, 33622), (70, 33616), (85, 33559), (100, 33496), (131, 33364), (146, 33307), (179, 33193),

Gene: LeBron\_37 Start: 32401, Stop: 31619, Start Num: 18

Candidate Starts for LeBron\_37:

(Start: 18 @32401 has 19 MA's), (21, 32383), (73, 32116), (80, 32089), (81, 32086), (89, 32056), (90, 32044), (95, 32023), (107, 31975), (130, 31882), (141, 31846), (166, 31756), (183, 31702),

Gene: Lebo14\_48 Start: 35771, Stop: 34953, Start Num: 24

Candidate Starts for Lebo14\_48:

(Start: 24 @35771 has 38 MA's), (Start: 25 @35768 has 32 MA's), (28, 35753), (Start: 41 @35690 has 1 MA's), (45, 35660), (49, 35639), (57, 35603), (63, 35567), (74, 35525), (77, 35513), (78, 35510), (87, 35471), (98, 35426), (101, 35411), (110, 35375), (113, 35366), (136, 35273), (150, 35219), (155, 35195), (156, 35189), (164, 35171), (186, 35105), (194, 35084),

Gene: Lewan\_39 Start: 33732, Stop: 32953, Start Num: 17

Candidate Starts for Lewan\_39:

(Start: 17 @33732 has 47 MA's), (28, 33675), (30, 33669), (Start: 37 @33636 has 5 MA's), (48, 33564), (66, 33465), (68, 33459), (80, 33417), (94, 33354), (112, 33285), (147, 33153), (166, 33093), (168, 33084), (183, 33039),

Gene: LilDestine\_39 Start: 33737, Stop: 32958, Start Num: 17

Candidate Starts for LilDestine\_39:

(Start: 17 @33737 has 47 MA's), (28, 33680), (42, 33608), (53, 33542), (66, 33470), (68, 33464), (80, 33422), (140, 33182), (168, 33089), (171, 33083),

Gene: Lilac\_57 Start: 39502, Stop: 38729, Start Num: 20

Candidate Starts for Lilac\_57:

(Start: 20 @39502 has 112 MA's), (Start: 24 @39478 has 38 MA's), (Start: 32 @39448 has 1 MA's), (51, 39340), (69, 39244), (90, 39163), (96, 39139), (98, 39130), (100, 39121), (123, 39016), (125, 39010), (126, 39004), (167, 38860), (170, 38848), (178, 38824), (204, 38737),

Gene: Lilizi\_54 Start: 39176, Stop: 38403, Start Num: 20

Candidate Starts for Lilizi\_54:

(Start: 20 @39176 has 112 MA's), (Start: 24 @39152 has 38 MA's), (Start: 32 @39122 has 1 MA's), (51, 39014), (69, 38918), (90, 38837), (96, 38813), (98, 38804), (100, 38795), (123, 38690), (125, 38684), (126, 38678), (167, 38534), (170, 38522), (178, 38498), (204, 38411),

Gene: Lilpickle\_54 Start: 39393, Stop: 38620, Start Num: 20

Candidate Starts for Lilpickle\_54:

(Start: 20 @39393 has 112 MA's), (Start: 24 @39369 has 38 MA's), (Start: 32 @39339 has 1 MA's), (51, 39231), (69, 39135), (90, 39054), (96, 39030), (98, 39021), (100, 39012), (123, 38907), (125, 38901), (126, 38895), (167, 38751), (170, 38739), (178, 38715), (204, 38628),

Gene: LittleE\_94 Start: 57167, Stop: 56460, Start Num: 25

Candidate Starts for LittleE\_94:

(Start: 25 @57167 has 32 MA's), (Start: 37 @57113 has 5 MA's), (Start: 38 @57104 has 1 MA's), (67, 56990), (90, 56909), (92, 56897), (96, 56885), (98, 56876), (108, 56834), (121, 56780), (143, 56699), (148, 56681), (156, 56642), (160, 56630), (163, 56624), (165, 56621), (177, 56579), (181, 56570), (184, 56561), (185, 56558), (199, 56507),

Gene: LiyuLake\_37 Start: 33955, Stop: 33164, Start Num: 17

Candidate Starts for LiyuLake\_37:

(Start: 17 @33955 has 47 MA's), (30, 33901), (52, 33778), (60, 33745), (68, 33694), (70, 33688), (98, 33577), (124, 33463), (131, 33436), (146, 33379), (153, 33352), (203, 33178),

Gene: Loadrie\_39 Start: 33770, Stop: 32991, Start Num: 17

Candidate Starts for Loadrie\_39:

(Start: 17 @33770 has 47 MA's), (28, 33713), (42, 33641), (53, 33575), (57, 33560), (66, 33503), (68, 33497), (80, 33455), (140, 33215), (168, 33122), (171, 33116), (183, 33077),

Gene: Lolly9\_37 Start: 33775, Stop: 32987, Start Num: 17

Candidate Starts for Lolly9\_37:

(10, 33823), (Start: 17 @33775 has 47 MA's), (21, 33754), (30, 33718), (52, 33595), (58, 33571), (60, 33562), (68, 33511), (70, 33505), (85, 33448), (121, 33298), (131, 33259), (146, 33202), (148, 33196), (179, 33088), (196, 33034),

Gene: Lucky2013\_88 Start: 53487, Stop: 52780, Start Num: 25

Candidate Starts for Lucky2013\_88:

(Start: 25 @53487 has 32 MA's), (Start: 37 @53433 has 5 MA's), (Start: 38 @53424 has 1 MA's), (60, 53328), (67, 53310), (90, 53229), (92, 53217), (94, 53211), (96, 53205), (98, 53196), (108, 53154), (120, 53103), (121, 53100), (143, 53019), (148, 53001), (156, 52962), (160, 52950), (163, 52944), (165, 52941), (177, 52899), (181, 52890), (184, 52881), (185, 52878), (199, 52827),

Gene: Lumos\_37 Start: 33975, Stop: 33184, Start Num: 17

Candidate Starts for Lumos\_37:

(6, 34065), (10, 34023), (Start: 17 @33975 has 47 MA's), (21, 33957), (30, 33921), (45, 33837), (47, 33825), (58, 33774), (60, 33765), (68, 33714), (70, 33708), (98, 33597), (124, 33483), (131, 33456), (146, 33399), (179, 33285), (196, 33231), (203, 33198),

Gene: MAckerman\_37 Start: 32379, Stop: 31597, Start Num: 18

Candidate Starts for MAckerman\_37:

(Start: 18 @32379 has 19 MA's), (73, 32094), (80, 32067), (81, 32064), (89, 32034), (90, 32022), (95, 32001), (107, 31953), (130, 31860), (141, 31824), (166, 31734), (183, 31680),

Gene: MISSy\_54 Start: 39600, Stop: 38827, Start Num: 20

Candidate Starts for MISSy\_54:

(Start: 20 @39600 has 112 MA's), (Start: 24 @39576 has 38 MA's), (Start: 32 @39546 has 1 MA's), (51, 39438), (69, 39342), (90, 39261), (96, 39237), (98, 39228), (100, 39219), (123, 39114), (125, 39108), (126, 39102), (167, 38958), (170, 38946), (178, 38922), (204, 38835),

Gene: MPhalcon\_54 Start: 39593, Stop: 38820, Start Num: 20

Candidate Starts for MPhalcon\_54:

(Start: 20 @39593 has 112 MA's), (Start: 24 @39569 has 38 MA's), (Start: 32 @39539 has 1 MA's), (51, 39431), (69, 39335), (90, 39254), (96, 39230), (98, 39221), (100, 39212), (123, 39107), (125, 39101), (126, 39095), (167, 38951), (170, 38939), (178, 38915), (204, 38828),

Gene: MadamMonkfish\_54 Start: 39117, Stop: 38344, Start Num: 20

Candidate Starts for MadamMonkfish\_54:

(Start: 20 @39117 has 112 MA's), (Start: 24 @39093 has 38 MA's), (Start: 32 @39063 has 1 MA's), (51, 38955), (69, 38859), (90, 38778), (96, 38754), (98, 38745), (100, 38736), (123, 38631), (125, 38625), (126, 38619), (167, 38475), (170, 38463), (178, 38439), (204, 38352),

Gene: MalagasyRose\_43 Start: 32679, Stop: 33419, Start Num: 24

Candidate Starts for MalagasyRose\_43:

(19, 32652), (23, 32670), (Start: 24 @32679 has 38 MA's), (36, 32730), (42, 32769), (48, 32808), (49, 32811), (51, 32817), (55, 32841), (56, 32847), (68, 32910), (69, 32913), (77, 32940), (78, 32943), (90, 32994), (91, 33000), (94, 33012), (98, 33027), (105, 33063), (113, 33087), (118, 33111), (123, 33135), (125, 33141), (130, 33162), (131, 33165), (152, 33243), (154, 33255), (162, 33279), (176, 33318), (178, 33324), (182, 33336), (187, 33348), (190, 33357), (191, 33360), (199, 33387),

Gene: Malthus\_47 Start: 35507, Stop: 34689, Start Num: 24

Candidate Starts for Malthus\_47:

(Start: 24 @35507 has 38 MA's), (Start: 25 @35504 has 32 MA's), (28, 35489), (Start: 41 @35426 has 1 MA's), (45, 35396), (49, 35375), (57, 35339), (63, 35303), (74, 35261), (77, 35249), (78, 35246), (87, 35207), (98, 35162), (101, 35147), (110, 35111), (113, 35102), (136, 35009), (150, 34955), (155, 34931), (156, 34925), (164, 34907), (186, 34841), (194, 34820),

Gene: Manda\_54 Start: 40398, Stop: 39625, Start Num: 20

Candidate Starts for Manda\_54:

(Start: 20 @40398 has 112 MA's), (Start: 24 @40374 has 38 MA's), (Start: 32 @40344 has 1 MA's), (51, 40236), (69, 40140), (90, 40059), (96, 40035), (98, 40026), (100, 40017), (123, 39912), (125, 39906), (126, 39900), (167, 39756), (170, 39744), (178, 39720), (204, 39633),

Gene: Marleymoo\_77 Start: 55256, Stop: 54549, Start Num: 25

Candidate Starts for Marleymoo\_77:

(Start: 25 @55256 has 32 MA's), (Start: 37 @55202 has 5 MA's), (Start: 38 @55193 has 1 MA's), (60, 55097), (90, 54998), (92, 54986), (98, 54965), (119, 54875), (121, 54869), (143, 54788), (148, 54770), (156, 54731), (163, 54713), (181, 54659), (185, 54647), (187, 54641), (188, 54638), (199, 54596),

Gene: Marshmallow\_53 Start: 40373, Stop: 39600, Start Num: 20

Candidate Starts for Marshmallow\_53:

(Start: 20 @40373 has 112 MA's), (Start: 24 @40349 has 38 MA's), (Start: 32 @40319 has 1 MA's), (51, 40211), (69, 40115), (90, 40034), (96, 40010), (98, 40001), (100, 39992), (123, 39887), (125, 39881), (126, 39875), (167, 39731), (178, 39695), (204, 39608),

Gene: Maxxinista\_57 Start: 39472, Stop: 38699, Start Num: 20

Candidate Starts for Maxxinista\_57:

(Start: 20 @39472 has 112 MA's), (Start: 24 @39448 has 38 MA's), (Start: 32 @39418 has 1 MA's), (51, 39310), (69, 39214), (90, 39133), (96, 39109), (98, 39100), (100, 39091), (123, 38986), (125, 38980), (126, 38974), (167, 38830), (170, 38818), (178, 38794), (204, 38707),

Gene: MiaZeal\_91 Start: 54143, Stop: 53436, Start Num: 25

Candidate Starts for MiaZeal\_91:

(Start: 25 @54143 has 32 MA's), (Start: 37 @54089 has 5 MA's), (Start: 38 @54080 has 1 MA's), (60, 53984), (67, 53966), (90, 53885), (92, 53873), (94, 53867), (96, 53861), (98, 53852), (108, 53810), (120, 53759), (121, 53756), (143, 53675), (148, 53657), (156, 53618), (160, 53606), (163, 53600), (165, 53597), (177, 53555), (181, 53546), (184, 53537), (185, 53534), (199, 53483),

Gene: Miley16\_39 Start: 33739, Stop: 32960, Start Num: 17

Candidate Starts for Miley16\_39:

(Start: 17 @33739 has 47 MA's), (28, 33682), (42, 33610), (46, 33583), (53, 33544), (66, 33472), (68, 33466), (80, 33424), (119, 33256), (140, 33184), (168, 33091), (171, 33085), (183, 33046),

Gene: Mindy\_53 Start: 38981, Stop: 38208, Start Num: 20

Candidate Starts for Mindy\_53:

(Start: 20 @38981 has 112 MA's), (Start: 24 @38957 has 38 MA's), (Start: 32 @38927 has 1 MA's), (51, 38819), (69, 38723), (90, 38642), (96, 38618), (98, 38609), (100, 38600), (123, 38495), (125, 38489), (126, 38483), (167, 38339), (170, 38327), (178, 38303), (204, 38216),

Gene: Minerva\_95 Start: 59047, Stop: 58340, Start Num: 24

Candidate Starts for Minerva\_95:

(Start: 24 @59047 has 38 MA's), (Start: 38 @58984 has 1 MA's), (60, 58888), (84, 58804), (90, 58789), (92, 58777), (93, 58774), (96, 58765), (98, 58756), (99, 58753), (132, 58618), (133, 58615), (136, 58606), (137, 58603), (143, 58579), (145, 58570), (148, 58561), (150, 58552), (154, 58531), (158, 58516), (165, 58501), (173, 58471), (175, 58465), (177, 58459), (181, 58450), (185, 58438), (193, 58417),

Gene: MiniLon\_37 Start: 33776, Stop: 32988, Start Num: 17

Candidate Starts for MiniLon\_37:

(10, 33824), (Start: 17 @33776 has 47 MA's), (21, 33755), (30, 33719), (52, 33596), (58, 33572), (60, 33563), (68, 33512), (70, 33506), (85, 33449), (121, 33299), (131, 33260), (146, 33203), (148, 33197), (179, 33089), (196, 33035),

Gene: MiniMac\_37 Start: 33773, Stop: 32985, Start Num: 17

Candidate Starts for MiniMac\_37:

(10, 33821), (Start: 17 @33773 has 47 MA's), (21, 33752), (30, 33716), (52, 33593), (58, 33569), (60, 33560), (68, 33509), (70, 33503), (85, 33446), (121, 33296), (131, 33257), (146, 33200), (148, 33194), (179, 33086), (196, 33032),

Gene: Miniwave\_51 Start: 39434, Stop: 38661, Start Num: 20

Candidate Starts for Miniwave\_51:

(Start: 20 @39434 has 112 MA's), (Start: 24 @39410 has 38 MA's), (Start: 32 @39380 has 1 MA's), (51, 39272), (69, 39176), (90, 39095), (96, 39071), (98, 39062), (100, 39053), (123, 38948), (125, 38942), (126, 38936), (167, 38792), (170, 38780), (178, 38756), (204, 38669),

Gene: Misfit\_56 Start: 40612, Stop: 39839, Start Num: 20

Candidate Starts for Misfit\_56:

(Start: 20 @40612 has 112 MA's), (Start: 24 @40588 has 38 MA's), (Start: 32 @40558 has 1 MA's), (51, 40450), (69, 40354), (90, 40273), (96, 40249), (98, 40240), (100, 40231), (123, 40126), (125, 40120), (126, 40114), (167, 39970), (170, 39958), (178, 39934), (204, 39847),

Gene: MissDaisy\_44 Start: 34981, Stop: 34190, Start Num: 24

Candidate Starts for MissDaisy\_44:

(Start: 24 @34981 has 38 MA's), (31, 34954), (Start: 37 @34924 has 5 MA's), (Start: 38 @34915 has 1 MA's), (58, 34810), (63, 34777), (72, 34741), (74, 34735), (77, 34723), (78, 34720), (80, 34711), (87, 34681), (98, 34636), (101, 34621), (127, 34513), (136, 34483), (142, 34456), (150, 34429), (156, 34399), (190, 34303), (199, 34273),

Gene: Mitti\_46 Start: 35683, Stop: 34865, Start Num: 24

Candidate Starts for Mitti\_46:

(Start: 24 @35683 has 38 MA's), (Start: 25 @35680 has 32 MA's), (28, 35665), (Start: 41 @35602 has 1 MA's), (45, 35572), (49, 35551), (57, 35515), (63, 35479), (74, 35437), (77, 35425), (78, 35422), (87, 35383), (98, 35338), (101, 35323), (110, 35287), (113, 35278), (136, 35185), (150, 35131), (155, 35107), (156, 35101), (164, 35083), (186, 35017), (194, 34996),

Gene: MkaliMitinis3\_39 Start: 33739, Stop: 32960, Start Num: 17

Candidate Starts for MkaliMitinis3\_39:

(2, 33889), (5, 33835), (7, 33820), (Start: 17 @33739 has 47 MA's), (28, 33682), (42, 33610), (53, 33544), (57, 33529), (66, 33472), (68, 33466), (80, 33424), (140, 33184), (168, 33091), (171, 33085), (183, 33046),

Gene: Moldemort\_57 Start: 39990, Stop: 39217, Start Num: 20

Candidate Starts for Moldemort\_57:

(Start: 20 @39990 has 112 MA's), (Start: 24 @39966 has 38 MA's), (Start: 32 @39936 has 1 MA's), (51, 39828), (69, 39732), (90, 39651), (96, 39627), (98, 39618), (100, 39609), (123, 39504), (125, 39498), (126, 39492), (167, 39348), (170, 39336), (178, 39312), (204, 39225),

Gene: Moostard\_37 Start: 33980, Stop: 33189, Start Num: 17

Candidate Starts for Moostard\_37:

(6, 34070), (10, 34028), (Start: 17 @33980 has 47 MA's), (21, 33962), (30, 33926), (45, 33842), (47, 33830), (58, 33779), (60, 33770), (68, 33719), (70, 33713), (98, 33602), (124, 33488), (131, 33461), (146, 33404), (179, 33290), (196, 33236), (203, 33203),

Gene: Mosby\_50 Start: 38895, Stop: 38122, Start Num: 20

Candidate Starts for Mosby\_50:

(Start: 20 @38895 has 112 MA's), (Start: 24 @38871 has 38 MA's), (Start: 32 @38841 has 1 MA's), (51, 38733), (69, 38637), (90, 38556), (96, 38532), (98, 38523), (100, 38514), (123, 38409), (125, 38403), (126, 38397), (167, 38253), (170, 38241), (178, 38217), (204, 38130),

Gene: MsGreen\_37 Start: 33978, Stop: 33187, Start Num: 17

Candidate Starts for MsGreen\_37:

(6, 34068), (10, 34026), (Start: 17 @33978 has 47 MA's), (21, 33960), (30, 33924), (45, 33840), (47, 33828), (58, 33777), (60, 33768), (68, 33717), (70, 33711), (98, 33600), (124, 33486), (131, 33459), (146, 33402), (179, 33288), (196, 33234), (203, 33201),

Gene: Murica\_56 Start: 40547, Stop: 39774, Start Num: 20

Candidate Starts for Murica\_56:

(Start: 20 @40547 has 112 MA's), (Start: 24 @40523 has 38 MA's), (Start: 32 @40493 has 1 MA's), (51, 40385), (69, 40289), (90, 40208), (96, 40184), (98, 40175), (100, 40166), (123, 40061), (125, 40055), (126, 40049), (167, 39905), (170, 39893), (178, 39869), (204, 39782),

Gene: Murphy\_56 Start: 39984, Stop: 39211, Start Num: 20

Candidate Starts for Murphy\_56:

(Start: 20 @39984 has 112 MA's), (Start: 24 @39960 has 38 MA's), (Start: 32 @39930 has 1 MA's), (51, 39822), (69, 39726), (90, 39645), (96, 39621), (98, 39612), (100, 39603), (123, 39498), (125, 39492), (126, 39486), (167, 39342), (170, 39330), (178, 39306), (204, 39219),

Gene: Myrale\_54 Start: 40238, Stop: 39465, Start Num: 20

Candidate Starts for Myrale\_54:

(Start: 20 @40238 has 112 MA's), (Start: 24 @40214 has 38 MA's), (Start: 32 @40184 has 1 MA's), (51, 40076), (69, 39980), (90, 39899), (96, 39875), (98, 39866), (100, 39857), (123, 39752), (125, 39746), (126, 39740), (167, 39596), (178, 39560), (204, 39473),

Gene: Nala\_55 Start: 40105, Stop: 39332, Start Num: 20

Candidate Starts for Nala\_55:

(Start: 20 @40105 has 112 MA's), (Start: 24 @40081 has 38 MA's), (Start: 32 @40051 has 1 MA's), (51, 39943), (69, 39847), (90, 39766), (96, 39742), (98, 39733), (100, 39724), (123, 39619), (125, 39613), (126, 39607), (167, 39463), (170, 39451), (178, 39427), (204, 39340),

Gene: Nebkiss\_67 Start: 43437, Stop: 42649, Start Num: 16

Candidate Starts for Nebkiss\_67:

(Start: 16 @43437 has 2 MA's), (Start: 24 @43398 has 38 MA's), (51, 43260), (83, 43107), (90, 43083), (98, 43050), (107, 43008), (113, 42990), (118, 42966), (153, 42831), (157, 42810), (176, 42759), (198, 42699), (199, 42690),

Gene: Nekros\_91 Start: 57042, Stop: 56398, Start Num: 38

Candidate Starts for Nekros\_91:

(Start: 25 @57105 has 32 MA's), (Start: 37 @57051 has 5 MA's), (Start: 38 @57042 has 1 MA's), (42, 57018), (60, 56946), (90, 56847), (92, 56835), (98, 56814), (119, 56724), (121, 56718), (143, 56637), (148, 56619), (156, 56580), (163, 56562), (165, 56559), (181, 56508), (185, 56496), (199, 56445),

Gene: NelitzaMV\_51 Start: 39182, Stop: 38409, Start Num: 20

Candidate Starts for NelitzaMV\_51:

(Start: 20 @39182 has 112 MA's), (Start: 24 @39158 has 38 MA's), (Start: 32 @39128 has 1 MA's), (51, 39020), (69, 38924), (90, 38843), (96, 38819), (98, 38810), (100, 38801), (123, 38696), (125, 38690), (126, 38684), (167, 38540), (170, 38528), (178, 38504), (204, 38417),

Gene: Nergal\_39 Start: 33105, Stop: 32251, Start Num: 26

Candidate Starts for Nergal\_39:

(13, 33171), (14, 33165), (Start: 26 @33105 has 3 MA's), (40, 33030), (51, 32970), (60, 32925), (61, 32913), (93, 32781), (96, 32772), (97, 32766), (98, 32763), (102, 32745), (104, 32733), (116, 32682), (120, 32664), (124, 32649), (132, 32619), (142, 32577), (155, 32523), (169, 32478), (195, 32406), (206, 32343),

Gene: Netyap\_39 Start: 33739, Stop: 32960, Start Num: 17

Candidate Starts for Netyap\_39:



(Start: 17 @33739 has 47 MA's), (28, 33682), (42, 33610), (46, 33583), (53, 33544), (66, 33472), (68, 33466), (80, 33424), (119, 33256), (140, 33184), (168, 33091), (171, 33085), (183, 33046),

Gene: Nicholas\_37 Start: 33978, Stop: 33187, Start Num: 17

Candidate Starts for Nicholas\_37:

(6, 34068), (10, 34026), (Start: 17 @33978 has 47 MA's), (21, 33960), (30, 33924), (45, 33840), (47, 33828), (58, 33777), (60, 33768), (68, 33717), (70, 33711), (98, 33600), (124, 33486), (131, 33459), (146, 33402), (179, 33288), (196, 33234), (203, 33201),

Gene: Nicholasp3\_39 Start: 33740, Stop: 32961, Start Num: 17

Candidate Starts for Nicholasp3\_39:

(Start: 17 @33740 has 47 MA's), (28, 33683), (42, 33611), (53, 33545), (66, 33473), (68, 33467), (80, 33425), (140, 33185), (168, 33092), (171, 33086), (183, 33047),

Gene: NihilNomen\_97 Start: 59187, Stop: 58480, Start Num: 25

Candidate Starts for NihilNomen\_97:

(Start: 25 @59187 has 32 MA's), (Start: 37 @59133 has 5 MA's), (Start: 38 @59124 has 1 MA's), (60, 59028), (90, 58929), (92, 58917), (98, 58896), (119, 58806), (121, 58800), (143, 58719), (148, 58701), (156, 58662), (163, 58644), (165, 58641), (181, 58590), (185, 58578), (199, 58527),

Gene: Nimrod\_57 Start: 40805, Stop: 40032, Start Num: 20

Candidate Starts for Nimrod\_57:

(Start: 20 @40805 has 112 MA's), (Start: 24 @40781 has 38 MA's), (Start: 32 @40751 has 1 MA's), (51, 40643), (69, 40547), (90, 40466), (96, 40442), (98, 40433), (100, 40424), (123, 40319), (125, 40313), (126, 40307), (167, 40163), (170, 40151), (178, 40127), (204, 40040),

Gene: NoSleep\_56 Start: 39744, Stop: 38971, Start Num: 20

Candidate Starts for NoSleep\_56:

(Start: 20 @39744 has 112 MA's), (Start: 24 @39720 has 38 MA's), (Start: 32 @39690 has 1 MA's), (51, 39582), (69, 39486), (90, 39405), (96, 39381), (98, 39372), (100, 39363), (123, 39258), (125, 39252), (126, 39246), (167, 39102), (170, 39090), (178, 39066), (204, 38979),

Gene: Odette\_95 Start: 58230, Stop: 57523, Start Num: 25

Candidate Starts for Odette\_95:

(Start: 25 @58230 has 32 MA's), (Start: 37 @58176 has 5 MA's), (Start: 38 @58167 has 1 MA's), (42, 58143), (60, 58071), (90, 57972), (92, 57960), (98, 57939), (119, 57849), (121, 57843), (143, 57762), (148, 57744), (156, 57705), (163, 57687), (165, 57684), (181, 57633), (185, 57621), (199, 57570),

Gene: OhShagHennessy\_36 Start: 32347, Stop: 31565, Start Num: 18

Candidate Starts for OhShagHennessy\_36:

(Start: 18 @32347 has 19 MA's), (21, 32329), (73, 32062), (80, 32035), (81, 32032), (89, 32002), (90, 31990), (95, 31969), (130, 31828), (141, 31792), (166, 31702), (183, 31648),

Gene: Omega\_99 Start: 58940, Stop: 58233, Start Num: 25

Candidate Starts for Omega\_99:

(Start: 25 @58940 has 32 MA's), (Start: 37 @58886 has 5 MA's), (Start: 38 @58877 has 1 MA's), (60, 58781), (90, 58682), (92, 58670), (94, 58664), (96, 58658), (98, 58649), (108, 58607), (120, 58556), (121, 58553), (143, 58472), (148, 58454), (156, 58415), (160, 58403), (163, 58397), (165, 58394), (177, 58352), (181, 58343), (185, 58331), (199, 58280),

Gene: OmniCritical\_45 Start: 35490, Stop: 34672, Start Num: 24

Candidate Starts for OmniCritical\_45:

(Start: 24 @35490 has 38 MA's), (Start: 25 @35487 has 32 MA's), (28, 35472), (Start: 41 @35409 has 1 MA's), (45, 35379), (49, 35358), (57, 35322), (63, 35286), (74, 35244), (77, 35232), (78, 35229), (87, 35190), (98, 35145), (101, 35130), (110, 35094), (113, 35085), (136, 34992), (150, 34938), (155, 34914), (156, 34908), (164, 34890), (186, 34824), (194, 34803),

Gene: Optimus\_89 Start: 57722, Stop: 57015, Start Num: 25

Candidate Starts for Optimus\_89:

(Start: 25 @57722 has 32 MA's), (Start: 37 @57668 has 5 MA's), (Start: 38 @57659 has 1 MA's), (60, 57563), (90, 57464), (92, 57452), (98, 57431), (119, 57341), (121, 57335), (143, 57254), (148, 57236), (156, 57197), (163, 57179), (165, 57176), (181, 57125), (185, 57113), (199, 57062),

Gene: OrionPax\_53 Start: 39189, Stop: 38416, Start Num: 20

Candidate Starts for OrionPax\_53:

(Start: 20 @39189 has 112 MA's), (Start: 24 @39165 has 38 MA's), (Start: 32 @39135 has 1 MA's), (51, 39027), (69, 38931), (90, 38850), (96, 38826), (98, 38817), (100, 38808), (123, 38703), (125, 38697), (126, 38691), (167, 38547), (170, 38535), (178, 38511), (204, 38424),

Gene: PYPDinur\_36 Start: 32488, Stop: 31700, Start Num: 17

Candidate Starts for PYPDinur\_36:

(Start: 17 @32488 has 47 MA's), (28, 32431), (31, 32422), (40, 32371), (46, 32332), (50, 32314), (64, 32236), (66, 32221), (68, 32215), (80, 32173), (99, 32092), (109, 32050), (114, 32032), (135, 31948), (141, 31927), (166, 31837), (179, 31795), (183, 31783),

Gene: Palpatine\_57 Start: 40553, Stop: 39804, Start Num: 24

Candidate Starts for Palpatine\_57:

(Start: 20 @40577 has 112 MA's), (Start: 24 @40553 has 38 MA's), (Start: 32 @40523 has 1 MA's), (51, 40415), (69, 40319), (90, 40238), (96, 40214), (98, 40205), (100, 40196), (123, 40091), (125, 40085), (126, 40079), (167, 39935), (170, 39923), (178, 39899), (204, 39812),

Gene: Paperbeatsrock\_53 Start: 40112, Stop: 39339, Start Num: 20

Candidate Starts for Paperbeatsrock\_53:

(Start: 20 @40112 has 112 MA's), (Start: 24 @40088 has 38 MA's), (Start: 32 @40058 has 1 MA's), (51, 39950), (69, 39854), (90, 39773), (96, 39749), (98, 39740), (100, 39731), (123, 39626), (125, 39620), (126, 39614), (167, 39470), (170, 39458), (178, 39434), (204, 39347),

Gene: Pat3\_52 Start: 38288, Stop: 37569, Start Num: 32

Candidate Starts for Pat3\_52:

(Start: 20 @38342 has 112 MA's), (Start: 24 @38318 has 38 MA's), (Start: 32 @38288 has 1 MA's), (51, 38180), (69, 38084), (90, 38003), (96, 37979), (98, 37970), (100, 37961), (123, 37856), (125, 37850), (126, 37844), (167, 37700), (170, 37688), (178, 37664), (204, 37577),

Gene: Patt\_43 Start: 34705, Stop: 33914, Start Num: 24

Candidate Starts for Patt\_43:

(Start: 24 @34705 has 38 MA's), (31, 34678), (Start: 37 @34648 has 5 MA's), (Start: 38 @34639 has 1 MA's), (58, 34534), (63, 34501), (72, 34465), (74, 34459), (77, 34447), (78, 34444), (80, 34435), (87, 34405), (98, 34360), (101, 34345), (127, 34237), (136, 34207), (142, 34180), (156, 34123), (190, 34027), (199, 33997),

Gene: Petra64142\_59 Start: 41017, Stop: 40268, Start Num: 24

Candidate Starts for Petra64142\_59:

(Start: 20 @41041 has 112 MA's), (Start: 24 @41017 has 38 MA's), (Start: 32 @40987 has 1 MA's), (51, 40879), (69, 40783), (90, 40702), (96, 40678), (98, 40669), (100, 40660), (123, 40555), (125, 40549), (126, 40543), (167, 40399), (170, 40387), (178, 40363), (204, 40276),

Gene: Phaja\_52 Start: 39938, Stop: 39165, Start Num: 20

Candidate Starts for Phaja\_52:

(Start: 20 @39938 has 112 MA's), (Start: 24 @39914 has 38 MA's), (Start: 32 @39884 has 1 MA's), (51, 39776), (69, 39680), (90, 39599), (96, 39575), (98, 39566), (100, 39557), (123, 39452), (125, 39446), (126, 39440), (167, 39296), (170, 39284), (178, 39260), (204, 39173),

Gene: Pharsalus\_52 Start: 39912, Stop: 39139, Start Num: 20

Candidate Starts for Pharsalus\_52:

(Start: 20 @39912 has 112 MA's), (Start: 24 @39888 has 38 MA's), (Start: 32 @39858 has 1 MA's), (51, 39750), (69, 39654), (90, 39573), (96, 39549), (98, 39540), (100, 39531), (123, 39426), (125, 39420), (126, 39414), (167, 39270), (170, 39258), (178, 39234), (204, 39147),

Gene: PhatBacter\_57 Start: 40591, Stop: 39818, Start Num: 20

Candidate Starts for PhatBacter\_57:

(Start: 20 @40591 has 112 MA's), (Start: 24 @40567 has 38 MA's), (Start: 32 @40537 has 1 MA's), (51, 40429), (69, 40333), (90, 40252), (96, 40228), (98, 40219), (100, 40210), (123, 40105), (125, 40099), (126, 40093), (167, 39949), (170, 39937), (178, 39913), (204, 39826),

Gene: Phaux\_56 Start: 40589, Stop: 39816, Start Num: 20

Candidate Starts for Phaux\_56:

(Start: 20 @40589 has 112 MA's), (Start: 24 @40565 has 38 MA's), (Start: 32 @40535 has 1 MA's), (51, 40427), (69, 40331), (90, 40250), (96, 40226), (98, 40217), (100, 40208), (123, 40103), (125, 40097), (126, 40091), (167, 39947), (170, 39935), (178, 39911), (204, 39824),

Gene: Phoebus\_97 Start: 60370, Stop: 59663, Start Num: 25

Candidate Starts for Phoebus\_97:

(Start: 25 @60370 has 32 MA's), (Start: 37 @60316 has 5 MA's), (Start: 38 @60307 has 1 MA's), (42, 60283), (60, 60211), (90, 60112), (92, 60100), (98, 60079), (119, 59989), (121, 59983), (143, 59902), (148, 59884), (156, 59845), (163, 59827), (165, 59824), (181, 59773), (185, 59761), (199, 59710),

Gene: Phrappuccino\_39 Start: 21883, Stop: 22644, Start Num: 24

Candidate Starts for Phrappuccino\_39:

(9, 21793), (22, 21868), (Start: 24 @21883 has 38 MA's), (34, 21922), (36, 21934), (42, 21973), (43, 21985), (44, 21991), (48, 22012), (50, 22018), (52, 22033), (66, 22108), (75, 22135), (77, 22144), (79, 22150), (94, 22216), (95, 22219), (98, 22231), (111, 22285), (114, 22297), (115, 22303), (117, 22312), (121, 22330), (130, 22366), (131, 22369), (142, 22408), (148, 22429), (149, 22432), (162, 22480), (186, 22543), (189, 22552), (190, 22555), (200, 22594), (205, 22630),

Gene: Phrux\_52 Start: 39182, Stop: 38409, Start Num: 20

Candidate Starts for Phrux\_52:

(Start: 20 @39182 has 112 MA's), (Start: 24 @39158 has 38 MA's), (Start: 32 @39128 has 1 MA's), (51, 39020), (69, 38924), (90, 38843), (96, 38819), (98, 38810), (100, 38801), (123, 38696), (125, 38690), (126, 38684), (167, 38540), (170, 38528), (178, 38504), (204, 38417),

Gene: Policronamos\_57 Start: 40589, Stop: 39816, Start Num: 20

Candidate Starts for Policronamos\_57:

(Start: 20 @40589 has 112 MA's), (Start: 24 @40565 has 38 MA's), (Start: 32 @40535 has 1 MA's), (51, 40427), (69, 40331), (90, 40250), (96, 40226), (98, 40217), (100, 40208), (123, 40103), (125, 40097), (126, 40091), (167, 39947), (170, 39935), (178, 39911), (204, 39824),

Gene: Pochiewood\_36 Start: 32357, Stop: 31593, Start Num: 21

Candidate Starts for Pochiewood\_36:

(Start: 18 @32375 has 19 MA's), (21, 32357), (73, 32090), (80, 32063), (81, 32060), (89, 32030), (90, 32018), (95, 31997), (107, 31949), (130, 31856), (141, 31820), (166, 31730), (183, 31676),

Gene: Porcelain\_89 Start: 54143, Stop: 53436, Start Num: 25

Candidate Starts for Porcelain\_89:

(Start: 25 @54143 has 32 MA's), (Start: 37 @54089 has 5 MA's), (Start: 38 @54080 has 1 MA's), (60, 53984), (67, 53966), (90, 53885), (92, 53873), (94, 53867), (96, 53861), (98, 53852), (108, 53810), (120, 53759), (121, 53756), (143, 53675), (148, 53657), (156, 53618), (160, 53606), (163, 53600), (165, 53597), (177, 53555), (181, 53546), (184, 53537), (185, 53534), (199, 53483),

Gene: Porky\_53 Start: 39308, Stop: 38535, Start Num: 20

Candidate Starts for Porky\_53:

(Start: 20 @39308 has 112 MA's), (Start: 24 @39284 has 38 MA's), (Start: 32 @39254 has 1 MA's), (51, 39146), (69, 39050), (90, 38969), (96, 38945), (98, 38936), (100, 38927), (123, 38822), (125, 38816), (126, 38810), (167, 38666), (170, 38654), (178, 38630), (204, 38543),

Gene: Pound\_87 Start: 58399, Stop: 57692, Start Num: 25

Candidate Starts for Pound\_87:

(Start: 25 @58399 has 32 MA's), (Start: 37 @58345 has 5 MA's), (Start: 38 @58336 has 1 MA's), (42, 58312), (60, 58240), (90, 58141), (92, 58129), (98, 58108), (119, 58018), (121, 58012), (143, 57931), (148, 57913), (156, 57874), (163, 57856), (165, 57853), (181, 57802), (185, 57790), (199, 57739),

Gene: Pumpkin\_56 Start: 40239, Stop: 39466, Start Num: 20

Candidate Starts for Pumpkin\_56:

(Start: 20 @40239 has 112 MA's), (Start: 24 @40215 has 38 MA's), (Start: 32 @40185 has 1 MA's), (51, 40077), (69, 39981), (90, 39900), (96, 39876), (98, 39867), (100, 39858), (123, 39753), (125, 39747), (126, 39741), (167, 39597), (170, 39585), (178, 39561), (204, 39474),

Gene: Quallification\_55 Start: 40227, Stop: 39454, Start Num: 20

Candidate Starts for Quallification\_55:

(Start: 20 @40227 has 112 MA's), (Start: 24 @40203 has 38 MA's), (Start: 32 @40173 has 1 MA's), (51, 40065), (69, 39969), (90, 39888), (96, 39864), (98, 39855), (100, 39846), (123, 39741), (125, 39735), (126, 39729), (167, 39585), (170, 39573), (178, 39549), (204, 39462),

Gene: Quby\_36 Start: 32381, Stop: 31593, Start Num: 17

Candidate Starts for Quby\_36:

(Start: 17 @32381 has 47 MA's), (28, 32324), (40, 32264), (46, 32225), (50, 32207), (64, 32129), (66, 32114), (68, 32108), (80, 32066), (96, 31997), (99, 31985), (109, 31943), (114, 31925), (135, 31841), (141, 31820), (166, 31730), (179, 31688), (183, 31676),

Gene: Rakim\_56 Start: 39965, Stop: 39216, Start Num: 24

Candidate Starts for Rakim\_56:

(Start: 20 @39989 has 112 MA's), (Start: 24 @39965 has 38 MA's), (Start: 32 @39935 has 1 MA's), (51, 39827), (69, 39731), (90, 39650), (96, 39626), (98, 39617), (100, 39608), (123, 39503), (125, 39497), (126, 39491), (167, 39347), (170, 39335), (178, 39311), (204, 39224),

Gene: Rearden\_85 Start: 54332, Stop: 53625, Start Num: 25

Candidate Starts for Rearden\_85:

(Start: 25 @54332 has 32 MA's), (Start: 37 @54278 has 5 MA's), (Start: 38 @54269 has 1 MA's), (60, 54173), (90, 54074), (92, 54062), (98, 54041), (108, 53999), (120, 53948), (121, 53945), (143, 53864), (148, 53846), (156, 53807), (163, 53789), (165, 53786), (177, 53744), (181, 53735), (185, 53723), (199, 53672),

Gene: Red305\_37 Start: 33978, Stop: 33187, Start Num: 17

Candidate Starts for Red305\_37:

(6, 34068), (10, 34026), (Start: 17 @33978 has 47 MA's), (21, 33960), (30, 33924), (45, 33840), (47, 33828), (58, 33777), (60, 33768), (68, 33717), (70, 33711), (98, 33600), (124, 33486), (131, 33459), (146, 33402), (179, 33288), (196, 33234), (203, 33201),

Gene: Redno2\_87 Start: 54921, Stop: 54214, Start Num: 25

Candidate Starts for Redno2\_87:

(Start: 25 @54921 has 32 MA's), (Start: 37 @54867 has 5 MA's), (Start: 38 @54858 has 1 MA's), (42, 54834), (60, 54762), (90, 54663), (92, 54651), (98, 54630), (119, 54540), (121, 54534), (139, 54468), (143, 54453), (148, 54435), (156, 54396), (163, 54378), (181, 54324), (185, 54312), (187, 54306), (188, 54303), (199, 54261),

Gene: Reptar3000\_44 Start: 34696, Stop: 33905, Start Num: 24

Candidate Starts for Reptar3000\_44:

(Start: 24 @34696 has 38 MA's), (31, 34669), (Start: 37 @34639 has 5 MA's), (Start: 38 @34630 has 1 MA's), (58, 34525), (63, 34492), (72, 34456), (74, 34450), (77, 34438), (78, 34435), (80, 34426), (87, 34396), (98, 34351), (101, 34336), (127, 34228), (136, 34198), (142, 34171), (150, 34144), (156, 34114), (190, 34018), (199, 33988),

Gene: Rimmer\_55 Start: 39931, Stop: 39158, Start Num: 20

Candidate Starts for Rimmer\_55:

(Start: 20 @39931 has 112 MA's), (Start: 24 @39907 has 38 MA's), (Start: 32 @39877 has 1 MA's), (51, 39769), (69, 39673), (90, 39592), (96, 39568), (98, 39559), (100, 39550), (123, 39445), (125, 39439), (126, 39433), (167, 39289), (170, 39277), (178, 39253), (204, 39166),

Gene: RiverMonster\_55 Start: 39760, Stop: 38987, Start Num: 20

Candidate Starts for RiverMonster\_55:

(Start: 20 @39760 has 112 MA's), (Start: 24 @39736 has 38 MA's), (Start: 32 @39706 has 1 MA's), (51, 39598), (69, 39502), (90, 39421), (96, 39397), (98, 39388), (100, 39379), (123, 39274), (125, 39268), (126, 39262), (167, 39118), (170, 39106), (178, 39082), (204, 38995),

Gene: Rose5\_36 Start: 32374, Stop: 31592, Start Num: 18

Candidate Starts for Rose5\_36:

(Start: 18 @32374 has 19 MA's), (21, 32356), (73, 32089), (80, 32062), (81, 32059), (89, 32029), (90, 32017), (95, 31996), (107, 31948), (130, 31855), (141, 31819), (166, 31729), (183, 31675),

Gene: Rossetti\_39 Start: 33812, Stop: 33228, Start Num: 53

Candidate Starts for Rossetti\_39:

(Start: 17 @34007 has 47 MA's), (28, 33950), (53, 33812), (66, 33740), (68, 33734), (80, 33692), (86, 33665), (101, 33599), (119, 33524), (147, 33428), (159, 33386), (166, 33368), (168, 33359), (183, 33314),

Gene: Rumpelstiltskin\_39 Start: 34006, Stop: 33227, Start Num: 17

Candidate Starts for Rumpelstiltskin\_39:

(Start: 17 @34006 has 47 MA's), (28, 33949), (42, 33877), (53, 33811), (66, 33739), (68, 33733), (80, 33691), (140, 33451), (168, 33358), (171, 33352), (183, 33313),

Gene: Ruthiejr\_47 Start: 35557, Stop: 34739, Start Num: 24

Candidate Starts for Ruthiejr\_47:

(Start: 24 @35557 has 38 MA's), (Start: 25 @35554 has 32 MA's), (28, 35539), (Start: 41 @35476 has 1 MA's), (45, 35446), (49, 35425), (57, 35389), (63, 35353), (74, 35311), (77, 35299), (78, 35296), (87, 35257), (98, 35212), (101, 35197), (110, 35161), (113, 35152), (136, 35059), (150, 35005), (155,

34981), (156, 34975), (164, 34957), (186, 34891), (194, 34870),

Gene: Saints25\_55 Start: 39472, Stop: 38699, Start Num: 20

Candidate Starts for Saints25\_55:

(Start: 20 @39472 has 112 MA's), (Start: 24 @39448 has 38 MA's), (Start: 32 @39418 has 1 MA's), (51, 39310), (69, 39214), (90, 39133), (96, 39109), (98, 39100), (100, 39091), (123, 38986), (125, 38980), (126, 38974), (167, 38830), (170, 38818), (178, 38794), (204, 38707),

Gene: SamScheppers\_45 Start: 35986, Stop: 35168, Start Num: 24

Candidate Starts for SamScheppers\_45:

(Start: 24 @35986 has 38 MA's), (Start: 25 @35983 has 32 MA's), (28, 35968), (Start: 41 @35905 has 1 MA's), (45, 35875), (49, 35854), (57, 35818), (63, 35782), (74, 35740), (77, 35728), (78, 35725), (87, 35686), (98, 35641), (101, 35626), (110, 35590), (113, 35581), (136, 35488), (150, 35434), (155, 35410), (156, 35404), (164, 35386), (186, 35320), (194, 35299),

Gene: Samty\_37 Start: 33979, Stop: 33188, Start Num: 17

Candidate Starts for Samty\_37:

(6, 34069), (10, 34027), (Start: 17 @33979 has 47 MA's), (21, 33961), (30, 33925), (45, 33841), (47, 33829), (58, 33778), (60, 33769), (68, 33718), (70, 33712), (98, 33601), (124, 33487), (131, 33460), (146, 33403), (179, 33289), (196, 33235), (203, 33202),

Gene: Sarshaun\_39 Start: 33772, Stop: 32993, Start Num: 17

Candidate Starts for Sarshaun\_39:

(Start: 17 @33772 has 47 MA's), (28, 33715), (42, 33643), (53, 33577), (57, 33562), (66, 33505), (68, 33499), (80, 33457), (140, 33217), (168, 33124), (171, 33118), (183, 33079),

Gene: Sassay\_48 Start: 37859, Stop: 37086, Start Num: 20

Candidate Starts for Sassay\_48:

(Start: 20 @37859 has 112 MA's), (Start: 24 @37835 has 38 MA's), (Start: 32 @37805 has 1 MA's), (51, 37697), (69, 37601), (90, 37520), (96, 37496), (98, 37487), (100, 37478), (123, 37373), (125, 37367), (126, 37361), (167, 37217), (170, 37205), (178, 37181), (204, 37094),

Gene: Schatzie\_90 Start: 57977, Stop: 57270, Start Num: 25

Candidate Starts for Schatzie\_90:

(Start: 25 @57977 has 32 MA's), (Start: 37 @57923 has 5 MA's), (Start: 38 @57914 has 1 MA's), (42, 57890), (60, 57818), (90, 57719), (92, 57707), (98, 57686), (119, 57596), (121, 57590), (143, 57509), (148, 57491), (156, 57452), (163, 57434), (165, 57431), (181, 57380), (185, 57368), (199, 57317),

Gene: Settecandela\_39 Start: 21883, Stop: 22644, Start Num: 24

Candidate Starts for Settecandela\_39:

(9, 21793), (22, 21868), (Start: 24 @21883 has 38 MA's), (34, 21922), (36, 21934), (42, 21973), (43, 21985), (44, 21991), (48, 22012), (50, 22018), (52, 22033), (66, 22108), (75, 22135), (77, 22144), (79, 22150), (94, 22216), (95, 22219), (98, 22231), (111, 22285), (114, 22297), (115, 22303), (117, 22312), (121, 22330), (130, 22366), (131, 22369), (142, 22408), (148, 22429), (149, 22432), (162, 22480), (186, 22543), (189, 22552), (190, 22555), (200, 22594), (205, 22630),

Gene: Shaboozey\_88 Start: 53974, Stop: 53267, Start Num: 25

Candidate Starts for Shaboozey\_88:

(Start: 25 @53974 has 32 MA's), (Start: 37 @53920 has 5 MA's), (Start: 38 @53911 has 1 MA's), (90, 53716), (92, 53704), (94, 53698), (96, 53692), (98, 53683), (108, 53641), (121, 53587), (143, 53506), (148, 53488), (156, 53449), (160, 53437), (163, 53431), (165, 53428), (177, 53386), (184, 53368), (199, 53314),

Gene: ShamWow\_54 Start: 40375, Stop: 39602, Start Num: 20

Candidate Starts for ShamWow\_54:

(Start: 20 @40375 has 112 MA's), (Start: 24 @40351 has 38 MA's), (Start: 32 @40321 has 1 MA's), (51, 40213), (69, 40117), (90, 40036), (96, 40012), (98, 40003), (100, 39994), (123, 39889), (125, 39883), (126, 39877), (167, 39733), (170, 39721), (178, 39697), (204, 39610),

Gene: Sheng711\_36 Start: 32371, Stop: 31700, Start Num: 40

Candidate Starts for Sheng711\_36:

(Start: 17 @32488 has 47 MA's), (28, 32431), (31, 32422), (40, 32371), (46, 32332), (50, 32314), (64, 32236), (66, 32221), (68, 32215), (80, 32173), (99, 32092), (109, 32050), (114, 32032), (135, 31948), (141, 31927), (166, 31837), (179, 31795), (183, 31783),

Gene: ShereKhan\_52 Start: 40151, Stop: 39378, Start Num: 20

Candidate Starts for ShereKhan\_52:

(Start: 20 @40151 has 112 MA's), (Start: 24 @40127 has 38 MA's), (Start: 32 @40097 has 1 MA's), (51, 39989), (69, 39893), (90, 39812), (96, 39788), (98, 39779), (100, 39770), (123, 39665), (125, 39659), (126, 39653), (167, 39509), (170, 39497), (178, 39473), (204, 39386),

Gene: Silverleaf\_36 Start: 32374, Stop: 31592, Start Num: 18

Candidate Starts for Silverleaf\_36:

(Start: 18 @32374 has 19 MA's), (21, 32356), (73, 32089), (80, 32062), (81, 32059), (89, 32029), (90, 32017), (95, 31996), (107, 31948), (130, 31855), (141, 31819), (166, 31729), (183, 31675),

Gene: Simpliphy\_53 Start: 39456, Stop: 38683, Start Num: 20

Candidate Starts for Simpliphy\_53:

(Start: 20 @39456 has 112 MA's), (Start: 24 @39432 has 38 MA's), (Start: 32 @39402 has 1 MA's), (51, 39294), (69, 39198), (90, 39117), (96, 39093), (98, 39084), (100, 39075), (123, 38970), (125, 38964), (126, 38958), (167, 38814), (170, 38802), (178, 38778), (204, 38691),

Gene: SirDuracell\_53 Start: 38408, Stop: 37659, Start Num: 24

Candidate Starts for SirDuracell\_53:

(Start: 20 @38432 has 112 MA's), (Start: 24 @38408 has 38 MA's), (Start: 32 @38378 has 1 MA's), (51, 38270), (69, 38174), (90, 38093), (96, 38069), (98, 38060), (100, 38051), (123, 37946), (125, 37940), (126, 37934), (167, 37790), (170, 37778), (178, 37754), (204, 37667),

Gene: Slarp\_46 Start: 35595, Stop: 34777, Start Num: 24

Candidate Starts for Slarp\_46:

(Start: 24 @35595 has 38 MA's), (Start: 25 @35592 has 32 MA's), (28, 35577), (Start: 41 @35514 has 1 MA's), (45, 35484), (49, 35463), (57, 35427), (63, 35391), (74, 35349), (77, 35337), (78, 35334), (87, 35295), (98, 35250), (101, 35235), (110, 35199), (113, 35190), (136, 35097), (150, 35043), (155, 35019), (156, 35013), (164, 34995), (186, 34929), (194, 34908),

Gene: Snenia\_37 Start: 33979, Stop: 33188, Start Num: 17

Candidate Starts for Snenia\_37:

(6, 34069), (10, 34027), (Start: 17 @33979 has 47 MA's), (21, 33961), (30, 33925), (45, 33841), (47, 33829), (58, 33778), (60, 33769), (68, 33718), (70, 33712), (98, 33601), (124, 33487), (131, 33460), (146, 33403), (179, 33289), (196, 33235), (203, 33202),

Gene: SoJulia\_40 Start: 33999, Stop: 33220, Start Num: 17

Candidate Starts for SoJulia\_40:

(Start: 17 @33999 has 47 MA's), (28, 33942), (42, 33870), (46, 33843), (53, 33804), (66, 33732), (68, 33726), (80, 33684), (119, 33516), (140, 33444), (168, 33351), (171, 33345), (183, 33306),

Gene: Soap141\_39 Start: 33772, Stop: 32993, Start Num: 17

Candidate Starts for Soap141\_39:

(Start: 17 @33772 has 47 MA's), (28, 33715), (42, 33643), (53, 33577), (57, 33562), (66, 33505), (68, 33499), (80, 33457), (140, 33217), (168, 33124), (171, 33118), (183, 33079),

Gene: SophKB\_51 Start: 39131, Stop: 38358, Start Num: 20

Candidate Starts for SophKB\_51:

(Start: 20 @39131 has 112 MA's), (Start: 24 @39107 has 38 MA's), (Start: 32 @39077 has 1 MA's), (51, 38969), (69, 38873), (90, 38792), (96, 38768), (98, 38759), (100, 38750), (123, 38645), (125, 38639), (126, 38633), (167, 38489), (170, 38477), (178, 38453), (204, 38366),

Gene: Sotrice96\_55 Start: 39837, Stop: 39064, Start Num: 20

Candidate Starts for Sotrice96\_55:

(Start: 20 @39837 has 112 MA's), (Start: 24 @39813 has 38 MA's), (Start: 32 @39783 has 1 MA's), (51, 39675), (69, 39579), (90, 39498), (96, 39474), (98, 39465), (100, 39456), (123, 39351), (125, 39345), (126, 39339), (167, 39195), (170, 39183), (178, 39159), (204, 39072),

Gene: Squint\_89 Start: 54262, Stop: 53555, Start Num: 25

Candidate Starts for Squint\_89:

(Start: 25 @54262 has 32 MA's), (Start: 37 @54208 has 5 MA's), (Start: 38 @54199 has 1 MA's), (60, 54103), (67, 54085), (90, 54004), (92, 53992), (94, 53986), (96, 53980), (98, 53971), (108, 53929), (120, 53878), (121, 53875), (143, 53794), (148, 53776), (156, 53737), (160, 53725), (163, 53719), (165, 53716), (177, 53674), (181, 53665), (184, 53656), (185, 53653), (199, 53602),

Gene: Stank\_58 Start: 40389, Stop: 39616, Start Num: 20

Candidate Starts for Stank\_58:

(Start: 20 @40389 has 112 MA's), (Start: 24 @40365 has 38 MA's), (Start: 32 @40335 has 1 MA's), (51, 40227), (69, 40131), (90, 40050), (96, 40026), (98, 40017), (100, 40008), (123, 39903), (125, 39897), (126, 39891), (167, 39747), (170, 39735), (178, 39711), (204, 39624),

Gene: Stark\_55 Start: 39644, Stop: 38871, Start Num: 20

Candidate Starts for Stark\_55:

(Start: 20 @39644 has 112 MA's), (Start: 24 @39620 has 38 MA's), (Start: 32 @39590 has 1 MA's), (51, 39482), (69, 39386), (90, 39305), (96, 39281), (98, 39272), (100, 39263), (123, 39158), (125, 39152), (126, 39146), (167, 39002), (170, 38990), (178, 38966), (204, 38879),

Gene: StellaBean\_52 Start: 39699, Stop: 38926, Start Num: 20

Candidate Starts for StellaBean\_52:

(Start: 20 @39699 has 112 MA's), (Start: 24 @39675 has 38 MA's), (Start: 32 @39645 has 1 MA's), (51, 39537), (69, 39441), (90, 39360), (96, 39336), (98, 39327), (100, 39318), (123, 39213), (125, 39207), (126, 39201), (167, 39057), (170, 39045), (178, 39021), (204, 38934),

Gene: StolenFromERC\_57 Start: 39873, Stop: 39100, Start Num: 20

Candidate Starts for StolenFromERC\_57:

(Start: 20 @39873 has 112 MA's), (Start: 24 @39849 has 38 MA's), (Start: 32 @39819 has 1 MA's), (51, 39711), (69, 39615), (90, 39534), (96, 39510), (98, 39501), (100, 39492), (123, 39387), (125, 39381), (126, 39375), (167, 39231), (170, 39219), (178, 39195), (204, 39108),

Gene: StormChicken\_56 Start: 40515, Stop: 39766, Start Num: 24

Candidate Starts for StormChicken\_56:

(Start: 20 @40539 has 112 MA's), (Start: 24 @40515 has 38 MA's), (Start: 32 @40485 has 1 MA's), (51, 40377), (69, 40281), (90, 40200), (96, 40176), (98, 40167), (100, 40158), (123, 40053), (125, 40047), (126, 40041), (167, 39897), (170, 39885), (178, 39861), (204, 39774),



Gene: Superphikiman\_88 Start: 53290, Stop: 52646, Start Num: 38

Candidate Starts for Superphikiman\_88:

(Start: 25 @53353 has 32 MA's), (Start: 37 @53299 has 5 MA's), (Start: 38 @53290 has 1 MA's), (60, 53194), (67, 53176), (90, 53095), (92, 53083), (94, 53077), (96, 53071), (98, 53062), (108, 53020), (120, 52969), (121, 52966), (143, 52885), (148, 52867), (156, 52828), (160, 52816), (163, 52810), (165, 52807), (177, 52765), (181, 52756), (184, 52747), (185, 52744), (199, 52693),

Gene: TBrady12\_57 Start: 39849, Stop: 39100, Start Num: 24

Candidate Starts for TBrady12\_57:

(Start: 20 @39873 has 112 MA's), (Start: 24 @39849 has 38 MA's), (Start: 32 @39819 has 1 MA's), (51, 39711), (69, 39615), (90, 39534), (96, 39510), (98, 39501), (100, 39492), (123, 39387), (125, 39381), (126, 39375), (167, 39231), (170, 39219), (178, 39195), (204, 39108),

Gene: Taquito\_46 Start: 35901, Stop: 35164, Start Num: 41

Candidate Starts for Taquito\_46:

(Start: 41 @35901 has 1 MA's), (45, 35871), (49, 35850), (57, 35814), (63, 35778), (74, 35736), (77, 35724), (78, 35721), (87, 35682), (98, 35637), (101, 35622), (110, 35586), (113, 35577), (136, 35484), (150, 35430), (155, 35406), (156, 35400), (164, 35382), (186, 35316), (194, 35295),

Gene: Tarkin\_53 Start: 40121, Stop: 39348, Start Num: 20

Candidate Starts for Tarkin\_53:

(Start: 20 @40121 has 112 MA's), (Start: 24 @40097 has 38 MA's), (Start: 32 @40067 has 1 MA's), (51, 39959), (69, 39863), (90, 39782), (96, 39758), (98, 39749), (100, 39740), (123, 39635), (125, 39629), (126, 39623), (167, 39479), (170, 39467), (178, 39443), (204, 39356),

Gene: TeardropMSU\_50 Start: 39121, Stop: 38348, Start Num: 20

Candidate Starts for TeardropMSU\_50:

(Start: 20 @39121 has 112 MA's), (Start: 24 @39097 has 38 MA's), (Start: 32 @39067 has 1 MA's), (51, 38959), (69, 38863), (90, 38782), (96, 38758), (98, 38749), (100, 38740), (123, 38635), (125, 38629), (126, 38623), (167, 38479), (170, 38467), (178, 38443), (204, 38356),

Gene: Teaspoon\_55 Start: 39991, Stop: 39242, Start Num: 24

Candidate Starts for Teaspoon\_55:

(Start: 20 @40015 has 112 MA's), (Start: 24 @39991 has 38 MA's), (Start: 32 @39961 has 1 MA's), (51, 39853), (69, 39757), (90, 39676), (96, 39652), (98, 39643), (100, 39634), (123, 39529), (125, 39523), (126, 39517), (167, 39373), (170, 39361), (178, 39337), (204, 39250),

Gene: Terminus\_56 Start: 40612, Stop: 39839, Start Num: 20

Candidate Starts for Terminus\_56:

(Start: 20 @40612 has 112 MA's), (Start: 24 @40588 has 38 MA's), (Start: 32 @40558 has 1 MA's), (51, 40450), (69, 40354), (90, 40273), (96, 40249), (98, 40240), (100, 40231), (123, 40126), (125, 40120), (126, 40114), (167, 39970), (170, 39958), (178, 39934), (204, 39847),

Gene: Thibault\_80 Start: 53886, Stop: 53179, Start Num: 25

Candidate Starts for Thibault\_80:

(Start: 25 @53886 has 32 MA's), (Start: 37 @53832 has 5 MA's), (Start: 38 @53823 has 1 MA's), (42, 53799), (60, 53727), (90, 53628), (92, 53616), (98, 53595), (119, 53505), (121, 53499), (139, 53433), (143, 53418), (148, 53400), (156, 53361), (163, 53343), (165, 53340), (181, 53289), (185, 53277), (199, 53226),

Gene: Thimble\_56 Start: 39055, Stop: 38282, Start Num: 20

Candidate Starts for Thimble\_56:

(Start: 20 @39055 has 112 MA's), (Start: 24 @39031 has 38 MA's), (Start: 32 @39001 has 1 MA's), (51, 38893), (69, 38797), (90, 38716), (96, 38692), (98, 38683), (100, 38674), (123, 38569), (125, 38563), (126, 38557), (167, 38413), (170, 38401), (178, 38377), (204, 38290),

Gene: ThreeRngTarjay\_92 Start: 59262, Stop: 58555, Start Num: 25

Candidate Starts for ThreeRngTarjay\_92:

(Start: 25 @59262 has 32 MA's), (Start: 37 @59208 has 5 MA's), (Start: 38 @59199 has 1 MA's), (42, 59175), (60, 59103), (90, 59004), (92, 58992), (98, 58971), (119, 58881), (121, 58875), (143, 58794), (148, 58776), (156, 58737), (163, 58719), (165, 58716), (181, 58665), (185, 58653), (199, 58602),

Gene: Thresher\_57 Start: 40998, Stop: 40225, Start Num: 20

Candidate Starts for Thresher\_57:

(Start: 20 @40998 has 112 MA's), (Start: 24 @40974 has 38 MA's), (Start: 32 @40944 has 1 MA's), (51, 40836), (69, 40740), (90, 40659), (96, 40635), (98, 40626), (100, 40617), (123, 40512), (125, 40506), (126, 40500), (167, 40356), (170, 40344), (178, 40320), (204, 40233),

Gene: Tomaszewski\_50 Start: 38994, Stop: 38221, Start Num: 20

Candidate Starts for Tomaszewski\_50:

(Start: 20 @38994 has 112 MA's), (Start: 24 @38970 has 38 MA's), (Start: 32 @38940 has 1 MA's), (51, 38832), (69, 38736), (90, 38655), (96, 38631), (98, 38622), (100, 38613), (123, 38508), (125, 38502), (126, 38496), (167, 38352), (170, 38340), (178, 38316), (204, 38229),

Gene: Toto\_53 Start: 40351, Stop: 39602, Start Num: 24

Candidate Starts for Toto\_53:

(Start: 20 @40375 has 112 MA's), (Start: 24 @40351 has 38 MA's), (Start: 32 @40321 has 1 MA's), (51, 40213), (69, 40117), (90, 40036), (96, 40012), (98, 40003), (100, 39994), (123, 39889), (125, 39883), (126, 39877), (167, 39733), (170, 39721), (178, 39697), (204, 39610),

Gene: Tourach\_39 Start: 33734, Stop: 32955, Start Num: 17

Candidate Starts for Tourach\_39:

(Start: 17 @33734 has 47 MA's), (28, 33677), (46, 33578), (53, 33539), (66, 33467), (68, 33461), (80, 33419), (94, 33356), (113, 33284), (119, 33251), (168, 33086), (183, 33041),

Gene: Traaww1\_50 Start: 39556, Stop: 38783, Start Num: 20

Candidate Starts for Traaww1\_50:

(Start: 20 @39556 has 112 MA's), (Start: 24 @39532 has 38 MA's), (Start: 32 @39502 has 1 MA's), (51, 39394), (69, 39298), (90, 39217), (96, 39193), (98, 39184), (100, 39175), (123, 39070), (125, 39064), (126, 39058), (167, 38914), (170, 38902), (178, 38878), (204, 38791),

Gene: TriFive\_37 Start: 33978, Stop: 33187, Start Num: 17

Candidate Starts for TriFive\_37:

(6, 34068), (10, 34026), (Start: 17 @33978 has 47 MA's), (21, 33960), (30, 33924), (45, 33840), (47, 33828), (58, 33777), (60, 33768), (68, 33717), (70, 33711), (98, 33600), (124, 33486), (131, 33459), (146, 33402), (179, 33288), (196, 33234), (203, 33201),

Gene: Tuco\_55 Start: 40883, Stop: 40110, Start Num: 20

Candidate Starts for Tuco\_55:

(Start: 20 @40883 has 112 MA's), (Start: 24 @40859 has 38 MA's), (Start: 32 @40829 has 1 MA's), (51, 40721), (69, 40625), (90, 40544), (96, 40520), (98, 40511), (100, 40502), (123, 40397), (125, 40391), (126, 40385), (167, 40241), (170, 40229), (178, 40205), (204, 40118),

Gene: Tyson\_36 Start: 32375, Stop: 31593, Start Num: 18

Candidate Starts for Tyson\_36:

(Start: 18 @32375 has 19 MA's), (21, 32357), (73, 32090), (80, 32063), (81, 32060), (89, 32030), (90, 32018), (95, 31997), (107, 31949), (130, 31856), (141, 31820), (166, 31730), (183, 31676),

Gene: UPIE\_37 Start: 32373, Stop: 31591, Start Num: 18

Candidate Starts for UPIE\_37:

(Start: 18 @32373 has 19 MA's), (21, 32355), (73, 32088), (80, 32061), (81, 32058), (89, 32028), (90, 32016), (95, 31995), (107, 31947), (130, 31854), (141, 31818), (166, 31728), (183, 31674),

Gene: Ukulele\_51 Start: 39269, Stop: 38496, Start Num: 20

Candidate Starts for Ukulele\_51:

(Start: 20 @39269 has 112 MA's), (Start: 24 @39245 has 38 MA's), (Start: 32 @39215 has 1 MA's), (51, 39107), (69, 39011), (90, 38930), (96, 38906), (98, 38897), (100, 38888), (123, 38783), (125, 38777), (126, 38771), (167, 38627), (170, 38615), (178, 38591), (204, 38504),

Gene: Underpass\_39 Start: 33740, Stop: 32961, Start Num: 17

Candidate Starts for Underpass\_39:

(Start: 17 @33740 has 47 MA's), (28, 33683), (42, 33611), (53, 33545), (66, 33473), (68, 33467), (80, 33425), (140, 33185), (168, 33092), (171, 33086), (183, 33047),

Gene: Vetrrix\_39 Start: 33745, Stop: 32966, Start Num: 17

Candidate Starts for Vetrrix\_39:

(Start: 17 @33745 has 47 MA's), (28, 33688), (42, 33616), (46, 33589), (53, 33550), (66, 33478), (68, 33472), (80, 33430), (140, 33190), (161, 33118), (168, 33097), (171, 33091), (183, 33052),

Gene: Wamburgexpress\_37 Start: 32388, Stop: 31606, Start Num: 18

Candidate Starts for Wamburgexpress\_37:

(Start: 18 @32388 has 19 MA's), (21, 32370), (73, 32103), (80, 32076), (81, 32073), (89, 32043), (90, 32031), (95, 32010), (107, 31962), (130, 31869), (141, 31833), (166, 31743), (183, 31689),

Gene: Wanda\_99 Start: 58379, Stop: 57672, Start Num: 25

Candidate Starts for Wanda\_99:

(Start: 25 @58379 has 32 MA's), (Start: 37 @58325 has 5 MA's), (Start: 38 @58316 has 1 MA's), (60, 58220), (90, 58121), (92, 58109), (98, 58088), (119, 57998), (121, 57992), (143, 57911), (148, 57893), (156, 57854), (163, 57836), (165, 57833), (181, 57782), (185, 57770), (199, 57719),

Gene: Whirlwind\_38 Start: 33757, Stop: 32933, Start Num: 11

Candidate Starts for Whirlwind\_38:

(Start: 11 @33757 has 1 MA's), (12, 33748), (15, 33730), (Start: 17 @33724 has 47 MA's), (30, 33670), (50, 33562), (52, 33547), (55, 33535), (58, 33523), (60, 33514), (68, 33463), (70, 33457), (85, 33400), (146, 33148), (179, 33034), (196, 32980),

Gene: Wiggin\_56 Start: 39957, Stop: 39184, Start Num: 20

Candidate Starts for Wiggin\_56:

(Start: 20 @39957 has 112 MA's), (Start: 24 @39933 has 38 MA's), (Start: 32 @39903 has 1 MA's), (51, 39795), (69, 39699), (90, 39618), (96, 39594), (98, 39585), (100, 39576), (123, 39471), (125, 39465), (126, 39459), (167, 39315), (170, 39303), (178, 39279), (204, 39192),

Gene: Wigglewigggle\_39 Start: 33771, Stop: 32992, Start Num: 17

Candidate Starts for Wigglewigggle\_39:

(Start: 17 @33771 has 47 MA's), (28, 33714), (42, 33642), (53, 33576), (57, 33561), (66, 33504), (68, 33498), (80, 33456), (140, 33216), (168, 33123), (171, 33117), (183, 33078),

Gene: Wilder\_39 Start: 33744, Stop: 32965, Start Num: 17

Candidate Starts for Wilder\_39:

(Start: 17 @33744 has 47 MA's), (28, 33687), (42, 33615), (53, 33549), (57, 33534), (66, 33477), (68, 33471), (80, 33429), (140, 33189), (168, 33096), (171, 33090), (183, 33051),

Gene: Willez\_48 Start: 37859, Stop: 37086, Start Num: 20

Candidate Starts for Willez\_48:

(Start: 20 @37859 has 112 MA's), (Start: 24 @37835 has 38 MA's), (Start: 32 @37805 has 1 MA's), (51, 37697), (69, 37601), (90, 37520), (96, 37496), (98, 37487), (100, 37478), (123, 37373), (125, 37367), (126, 37361), (167, 37217), (170, 37205), (178, 37181), (204, 37094),

Gene: Winky\_39 Start: 33739, Stop: 32960, Start Num: 17

Candidate Starts for Winky\_39:

(Start: 17 @33739 has 47 MA's), (28, 33682), (42, 33610), (46, 33583), (53, 33544), (66, 33472), (68, 33466), (80, 33424), (119, 33256), (140, 33184), (168, 33091), (171, 33085), (183, 33046),

Gene: Wintermute\_46 Start: 35744, Stop: 34926, Start Num: 24

Candidate Starts for Wintermute\_46:

(Start: 24 @35744 has 38 MA's), (Start: 25 @35741 has 32 MA's), (28, 35726), (Start: 41 @35663 has 1 MA's), (45, 35633), (49, 35612), (57, 35576), (63, 35540), (74, 35498), (77, 35486), (78, 35483), (87, 35444), (98, 35399), (101, 35384), (110, 35348), (113, 35339), (136, 35246), (150, 35192), (155, 35168), (156, 35162), (164, 35144), (186, 35078), (194, 35057),

Gene: Wyatt2\_37 Start: 32374, Stop: 31592, Start Num: 18

Candidate Starts for Wyatt2\_37:

(Start: 18 @32374 has 19 MA's), (21, 32356), (73, 32089), (80, 32062), (81, 32059), (89, 32029), (90, 32017), (95, 31996), (107, 31948), (130, 31855), (141, 31819), (166, 31729), (183, 31675),

Gene: Xandras\_54 Start: 39368, Stop: 38595, Start Num: 20

Candidate Starts for Xandras\_54:

(Start: 20 @39368 has 112 MA's), (Start: 24 @39344 has 38 MA's), (Start: 32 @39314 has 1 MA's), (51, 39206), (69, 39110), (90, 39029), (96, 39005), (98, 38996), (100, 38987), (123, 38882), (125, 38876), (126, 38870), (167, 38726), (170, 38714), (178, 38690), (204, 38603),

Gene: Y10\_45 Start: 35662, Stop: 34841, Start Num: 24

Candidate Starts for Y10\_45:

(Start: 24 @35662 has 38 MA's), (Start: 25 @35659 has 32 MA's), (28, 35644), (45, 35551), (49, 35530), (63, 35458), (74, 35416), (77, 35404), (78, 35401), (80, 35392), (87, 35362), (101, 35302), (110, 35266), (113, 35257), (136, 35164), (150, 35110), (155, 35086), (156, 35080), (160, 35068), (186, 34996), (194, 34975),

Gene: Y2\_45 Start: 35662, Stop: 34841, Start Num: 24

Candidate Starts for Y2\_45:

(Start: 24 @35662 has 38 MA's), (Start: 25 @35659 has 32 MA's), (28, 35644), (45, 35551), (49, 35530), (63, 35458), (74, 35416), (77, 35404), (78, 35401), (80, 35392), (87, 35362), (101, 35302), (110, 35266), (113, 35257), (136, 35164), (150, 35110), (155, 35086), (156, 35080), (160, 35068), (186, 34996), (194, 34975),

Gene: YassJohnny\_50 Start: 39010, Stop: 38261, Start Num: 24

Candidate Starts for YassJohnny\_50:

(Start: 20 @39034 has 112 MA's), (Start: 24 @39010 has 38 MA's), (Start: 32 @38980 has 1 MA's), (51, 38872), (69, 38776), (90, 38695), (96, 38671), (98, 38662), (100, 38653), (123, 38548), (125, 38542), (126, 38536), (167, 38392), (170, 38380), (178, 38356), (204, 38269),

Gene: Yeet\_88 Start: 57479, Stop: 56772, Start Num: 25

Candidate Starts for Yeet\_88:

(Start: 25 @57479 has 32 MA's), (Start: 37 @57425 has 5 MA's), (Start: 38 @57416 has 1 MA's), (42, 57392), (60, 57320), (90, 57221), (92, 57209), (98, 57188), (119, 57098), (121, 57092), (143, 57011), (148, 56993), (156, 56954), (163, 56936), (165, 56933), (181, 56882), (185, 56870), (199, 56819),

Gene: Youngblood\_56 Start: 40542, Stop: 39769, Start Num: 20

Candidate Starts for Youngblood\_56:

(Start: 20 @40542 has 112 MA's), (Start: 24 @40518 has 38 MA's), (Start: 32 @40488 has 1 MA's), (51, 40380), (69, 40284), (90, 40203), (96, 40179), (98, 40170), (100, 40161), (123, 40056), (125, 40050), (126, 40044), (167, 39900), (170, 39888), (178, 39864), (204, 39777),

Gene: Zakai\_39 Start: 33996, Stop: 33217, Start Num: 17

Candidate Starts for Zakai\_39:

(Start: 17 @33996 has 47 MA's), (28, 33939), (42, 33867), (53, 33801), (57, 33786), (66, 33729), (68, 33723), (80, 33681), (140, 33441), (168, 33348), (171, 33342), (183, 33303),

Gene: Zaria\_37 Start: 32389, Stop: 31607, Start Num: 18

Candidate Starts for Zaria\_37:

(Start: 18 @32389 has 19 MA's), (21, 32371), (73, 32104), (80, 32077), (81, 32074), (89, 32044), (90, 32032), (95, 32011), (107, 31963), (130, 31870), (141, 31834), (166, 31744), (183, 31690),

Gene: Zelink\_92 Start: 59519, Stop: 58866, Start Num: 37

Candidate Starts for Zelink\_92:

(Start: 25 @59573 has 32 MA's), (Start: 37 @59519 has 5 MA's), (Start: 38 @59510 has 1 MA's), (60, 59414), (90, 59315), (92, 59303), (98, 59282), (119, 59192), (121, 59186), (143, 59105), (148, 59087), (156, 59048), (163, 59030), (165, 59027), (181, 58976), (185, 58964), (199, 58913),

Gene: ZhongYanYuan\_38 Start: 33577, Stop: 32798, Start Num: 17

Candidate Starts for ZhongYanYuan\_38:

(Start: 17 @33577 has 47 MA's), (28, 33520), (46, 33421), (51, 33400), (53, 33382), (66, 33310), (68, 33304), (80, 33262), (91, 33211), (94, 33199), (96, 33193), (98, 33184), (121, 33088), (156, 32965), (159, 32956),

Gene: xkcd\_58 Start: 40732, Stop: 39959, Start Num: 20

Candidate Starts for xkcd\_58:

(Start: 20 @40732 has 112 MA's), (Start: 24 @40708 has 38 MA's), (Start: 32 @40678 has 1 MA's), (51, 40570), (69, 40474), (90, 40393), (96, 40369), (98, 40360), (100, 40351), (123, 40246), (125, 40240), (126, 40234), (167, 40090), (170, 40078), (178, 40054), (204, 39967),