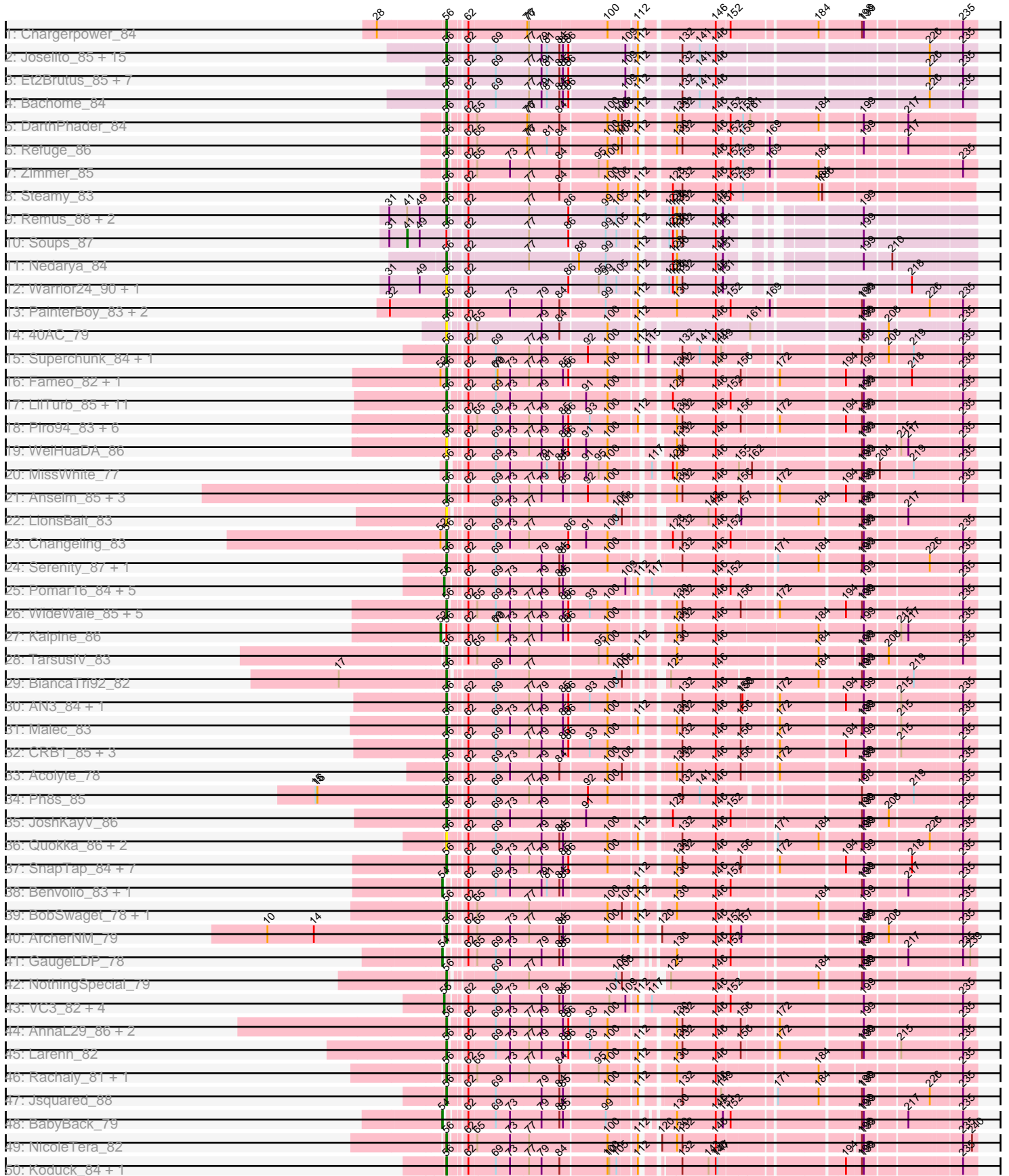
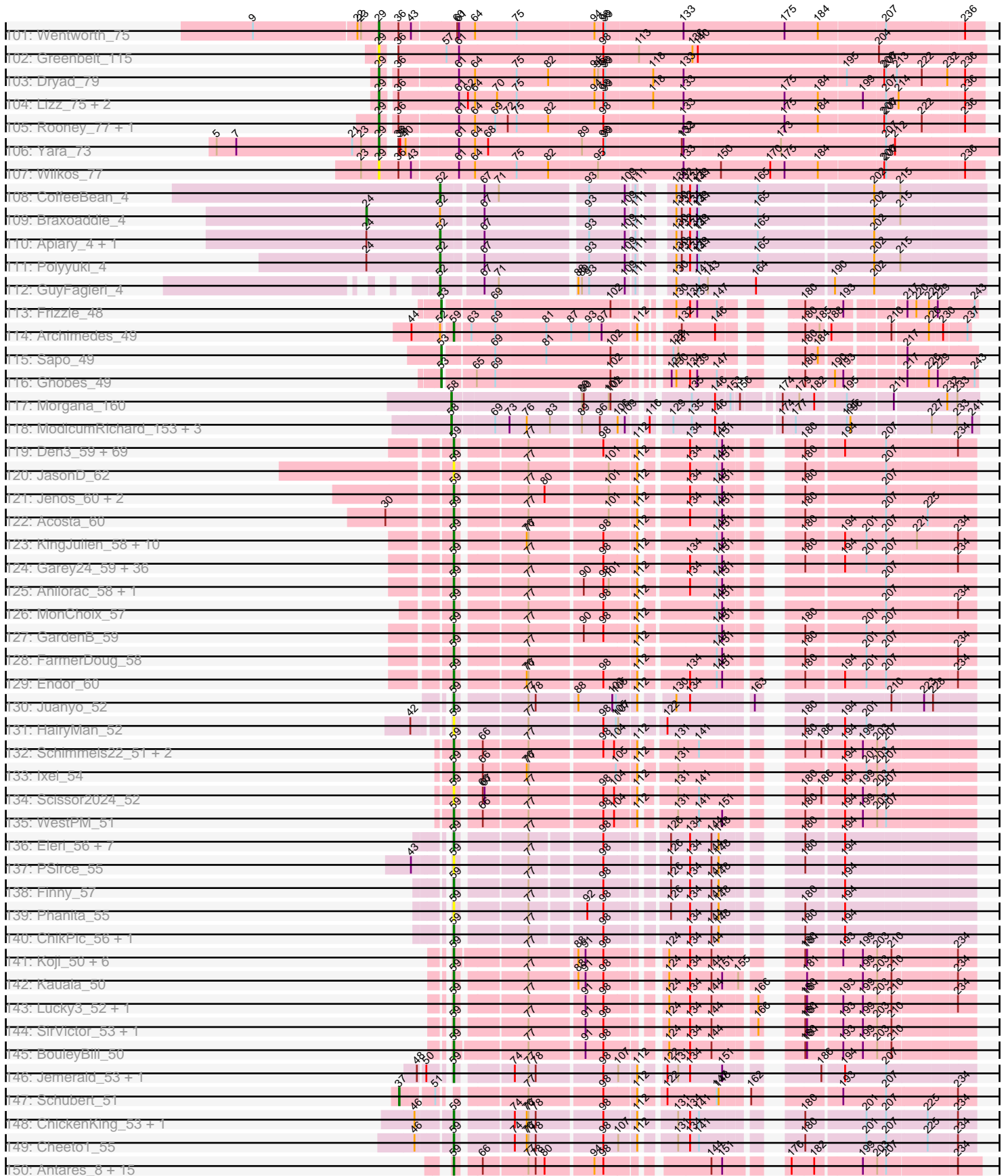


Pham 222751





Pham 222751





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 222751 Report

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

Pham number 222751 has 529 members, 59 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_84
- Track 2 : Joselito\_85, Lucivia\_87, Orange\_86, Gilberta\_83, Timothy\_86, Aneem\_87, MaCh\_86, Petersenfast\_80, Bud\_81, Bowtie\_83, Mabel\_86, Munch\_86, Ebony\_86, TinyTimmy\_84, Flaverint\_87, Snape\_86
- Track 3 : Et2Brutus\_85, Fibonacci\_85, Salz\_81, Sham4\_82, Insomnia\_85, Jabith\_85, Mulciber\_84, Hutc2\_82
- Track 4 : Bachome\_84
- Track 5 : DarthPhader\_84
- Track 6 : Refuge\_86
- Track 7 : Zimmer\_85
- Track 8 : Steamy\_83
- Track 9 : Remus\_88, Epsocamisio\_85, Strosahl\_88
- Track 10 : Soups\_87
- Track 11 : Nedarya\_84
- Track 12 : Warrior24\_90, Oofda\_88
- Track 13 : PainterBoy\_83, Lucyedi\_83, EagleEye\_84
- Track 14 : 40AC\_79
- Track 15 : Superchunk\_84, Caraxes\_85
- Track 16 : Fameo\_82, QueenB2\_81
- Track 17 : LilTurb\_85, KingCyrus\_83, ChipMunk\_85, AbbyPaige\_86, Leviathan\_86, Jerm\_86, Turbido\_85, EvilGenius\_84, Agape74\_86, Whabigail7\_84, Dignity\_86, Smeagan\_87
- Track 18 : Piro94\_83, NaSiaTalie\_85, HarryHoudini\_84, Drake55\_85, Sknot\_84, Terrific\_85, Centaur\_84
- Track 19 : WeiHuaDA\_86
- Track 20 : MissWhite\_77
- Track 21 : Anselm\_85, DudeLittle\_82, Retro23\_84, Dalmatian\_84
- Track 22 : LionsBait\_83
- Track 23 : Changeling\_83
- Track 24 : Serenity\_87, TipsytheTRex\_83
- Track 25 : Pomar16\_84, Duplo\_85, Tomathan\_84, StarStuff\_84, Kerberos\_84, DBQu4n\_84
- Track 26 : WideWale\_85, Updawg\_85, MiculUcigas\_84, Gratitude\_82, Flare16\_84, Equemioh13\_84
- Track 27 : Kalpine\_86
- Track 28 : TarsusIV\_83
- Track 29 : BiancaTri92\_82

- Track 30 : AN3\_84, VA6\_84
- Track 31 : Malec\_83
- Track 32 : CRB1\_85, Deloris\_86, BengiVuitton\_86, LadyBird\_88
- Track 33 : Acolyte\_78
- Track 34 : Ph8s\_85
- Track 35 : JoshKayV\_86
- Track 36 : Quokka\_86, MajorMajor\_81, Bradman\_87
- Track 37 : SnapTap\_84, Crucio\_84, QueenBeesly\_84, Georgie2\_86, SweetiePie\_84, SemperFi\_84, Power\_84, FiringLine\_84
- Track 38 : Benvolio\_83, Echild\_87
- Track 39 : BobSwaget\_78, Miko\_79
- Track 40 : ArcherNM\_79
- Track 41 : GaugeLDP\_78
- Track 42 : NothingSpecial\_79
- Track 43 : VC3\_82, ANI8\_83, Travvers\_84, AN9\_83, C3\_76
- Track 44 : AnnaL29\_86, Loser\_87, RedRock\_84
- Track 45 : Larenn\_82
- Track 46 : Rachaly\_81, Lokk\_79
- Track 47 : Jsquared\_88
- Track 48 : BabyBack\_79
- Track 49 : NicoleTera\_82
- Track 50 : Koduck\_84, L5\_77
- Track 51 : Baehexic\_83
- Track 52 : Heffalump\_81
- Track 53 : Odin\_83
- Track 54 : Trooper\_83
- Track 55 : First\_0085, 20ES\_86
- Track 56 : Trixie\_84
- Track 57 : Che12\_86
- Track 58 : SwirlSquare\_87
- Track 59 : EZMoney23\_80
- Track 60 : Adzzy\_85
- Track 61 : Colin\_83
- Track 62 : XianYue\_83
- Track 63 : FatCactus\_76
- Track 64 : Anthony\_78
- Track 65 : JHC117\_79, Daishi\_83, Grum1\_84, Louie6\_83, Hercules11\_84, Colbster\_80, P28Green\_84, Phoebe\_85, Anubis\_88, Beauxregard13\_83, Tiffany\_83, Dieselweasel\_85, Rummer\_83, Sabinator\_82, LarryKay\_84, Bxz2\_79, Wooldri\_86, Grif\_82, SoYo\_81, Penny1\_84, Soshari\_86, Methuselah\_77, EpicPhail\_85, PotatoSplit\_85, MarQuardt\_84, Vix\_80, KADY\_81, BuzzBuzz\_78, TinyPebbles\_80
- Track 66 : LugYA\_87, Microwolf\_80, HashRod\_85, Pembroke\_84, Mainiac\_83, Stagni\_81, PGHhamlin\_86, Watson\_83, Lowa\_81, Bigflo\_81, BreSam8\_84, Jobu08\_80, Snickers\_80, Grub\_82, Malinsilva\_87, JenCasNa\_85, Lilith\_82, Sabia\_82, Taurus\_85, DaHudson\_83, StepMih\_84, GtownJaz\_84, Cullens\_85, LBerry\_85, Spike509\_84, Marie\_82, MoneyMay\_84, Ollie\_84, MadMarie\_82, Aglet\_85, GingkoMaracino\_84, Fernando\_85
- Track 67 : Gemma\_81
- Track 68 : Kalb97\_84, HaveUMetTed\_84, Groupthink\_84, Pawn\_82, Marius\_84, Manu\_83, Kalnoky\_84, Heliosoles\_81, PhishRPhriends\_80, Reba\_79, Calvinny\_81
- Track 69 : SoilDragon\_84
- Track 70 : Phoxy\_84
- Track 71 : OlanP\_82

- Track 72 : JeppNRM\_84
- Track 73 : AugsMagnumOpus\_87, MuchMore\_87
- Track 74 : Scherzo\_86, Pioneer\_88, RyeScarlet\_89, Horex\_87, Ugenie5\_75, Lilleskat\_85, Phonnegut\_88, Beemo\_88, Hanray\_86, EdogawaKiddo\_87, Onglai\_86, Jiawan\_86, Alma\_86, Sachima\_84
- Track 75 : Keziacharles14\_85
- Track 76 : Arissanae\_83
- Track 77 : Qobbit\_86, Spouty\_86, ExplosioNervosa\_86, Eidsmoe\_86, Fayely\_86, EmyBug\_85, Priya\_86
- Track 78 : Elephantoan\_88
- Track 79 : Darrell\_86
- Track 80 : Tubs\_88, Aliter\_81, Phaeder\_88, Myxus\_88, HortumSL17\_89, Catalina\_90
- Track 81 : SheaKeira\_83
- Track 82 : LoneWolf\_88
- Track 83 : Vanisoa\_83
- Track 84 : Yecey3\_89
- Track 85 : Maminiaina\_87, BogosyJay\_87
- Track 86 : Conquerage\_86
- Track 87 : DreamTeam1\_83, Charm\_83
- Track 88 : Rahalelujah\_87
- Track 89 : Toaka\_86
- Track 90 : Settecandela\_184
- Track 91 : BartholomewSD\_70
- Track 92 : GirlDinner\_65, Janus\_66, SqueakyClean\_66
- Track 93 : Bowden\_66
- Track 94 : Issmi\_67
- Track 95 : TinaBelcher\_66
- Track 96 : Animus\_65
- Track 97 : Alvy\_70
- Track 98 : Thestral\_68
- Track 99 : TrvxScott\_65
- Track 100 : Paedore\_70
- Track 101 : Wentworth\_75
- Track 102 : Greenbelt\_115
- Track 103 : Dryad\_79
- Track 104 : Lizz\_75, PHTowN\_75, ShakeNBake\_75
- Track 105 : Rooney\_77, Gibson\_77
- Track 106 : Yara\_73
- Track 107 : Wilkos\_77
- Track 108 : CoffeeBean\_4
- Track 109 : Braxoaddie\_4
- Track 110 : Apiary\_4, Maselop\_4
- Track 111 : Polyuyuki\_4
- Track 112 : GuyFagieri\_4
- Track 113 : Frizzle\_48
- Track 114 : Archimedes\_49
- Track 115 : Sapo\_49
- Track 116 : Ghobes\_49
- Track 117 : Morgana\_160
- Track 118 : ModicumRichard\_153, ObLaDi\_153, Cafasso\_153, Aleemily\_151
- Track 119 : Den3\_59, TinSulphur\_60, Thompsone\_59, BonesMcCoy\_59, Stanktossa\_58, Blage\_59, ParleG\_59, Byron23\_60, Peep\_59, Velene\_59, Zada\_60,

Papafritta\_58, Sedgewig\_58, Ilzat\_58, Janus167\_58, Phiderman\_59, Inventa\_59, StingRay\_58, NickSell\_59, Martin\_60, Bandik\_59, Kurt1\_59, Thorongil\_59, Winzigespinne\_58, Superfresh\_59, JeriBeth\_60, MillyPhilly\_59, Symere\_60, Robinson\_59, KannH\_58, Knox\_59, MrWorldwide\_59, AlexAdler\_59, StirfryIV\_58, Riyhil\_59, OldNelly\_59, Chako\_58, Renzie\_59, Dothraki\_59, Delphidian\_58, Raptor\_59, Antoinette\_59, BeautPeep30\_59, Convict\_59, Baines\_58, Phireproof\_59, Dave\_59, HanSolo\_58, HankSprout\_59, Oxtober96\_60, Shee\_59, Etta\_58, JasperRussell\_58, MaeLinda\_59, TatarkaPM\_59, PhredFlintston\_59, Ioannes\_59, SoilGremlin\_59, Greys\_59, BigRedClifford\_59, Rappheph\_59, AranulaLuti\_58, WildNOut\_59, Clancy\_58, Phriends\_58, Lovelyunicorn\_59, Teagan\_59, Figueroism\_59, Pherferi\_59, Duocatuli\_58

- Track 120 : JasonD\_62
- Track 121 : Jenos\_60, McGalleon\_59, CarisSwetlik\_59
- Track 122 : Acosta\_60
- Track 123 : KingJulien\_58, Balsa\_57, Peppino\_58, BeeBee8\_59, Leafus\_58, Stormbreaker8\_57, Hamlet\_58, Redfield\_58, Raccoon\_58, Etna\_58, Schnapsidee\_58
- Track 124 : Garey24\_59, Chamuel\_58, Gershwin\_58, ShaiHulud\_60, AxiPup\_59, Calix\_58, Nagem\_59, Aubergine\_58, Ludgate\_59, SJay\_59, Espinosa\_58, RosieMae\_60, Oats\_58, Jerbirus\_60, Christoph\_58, Tenda\_58, Alyxandracam\_59, TeddyBear\_58, Benjalauen\_59, Rog141\_58, Gelo\_58, Pocket\_58, PuppyEggo\_59, Gubbabump\_58, Kale\_58, Klimt\_59, Erla\_58, Exploradora\_58, Bonino\_58, Nattles\_58, Asta\_58, ManRay\_58, HungryHenry\_58, SonOfLevi\_59, Strathdee\_59, Gargoyle\_59, Vispistious\_59
- Track 125 : Anilorac\_58, Agente005\_58
- Track 126 : MonChoix\_57
- Track 127 : GardenB\_59
- Track 128 : FarmerDoug\_58
- Track 129 : Endor\_60
- Track 130 : Juanyo\_52
- Track 131 : HairyMan\_52
- Track 132 : Schimmels22\_51, Tinyman4\_51, HerculesXL\_52
- Track 133 : Ixel\_54
- Track 134 : Scissor2024\_52
- Track 135 : WestPM\_51
- Track 136 : Eleri\_56, ColaCorta\_56, MCubed\_56, Glamour\_55, Zenitsu\_56, Andromedas\_56, Shamu\_56, Saratos\_56
- Track 137 : PSirce\_55
- Track 138 : Finny\_57
- Track 139 : Phanita\_55
- Track 140 : ChikPic\_56, Sansa\_54
- Track 141 : Koji\_50, Sinatra\_52, Pherbot\_51, Bustleton\_51, Jingles\_50, RenegadeRaider\_53, PrincePhergus\_51
- Track 142 : Kauala\_50
- Track 143 : Lucky3\_52, Golden\_52
- Track 144 : SirVictor\_53, Guetzie\_53
- Track 145 : BouleyBill\_50
- Track 146 : Jemerald\_53, Juicer\_53
- Track 147 : Schubert\_51
- Track 148 : ChickenKing\_53, GaeCeo\_55
- Track 149 : Cheeto1\_55
- Track 150 : Antares\_8, Savannah\_7, Ramiel05\_7, Shotgun\_7, BrazzalePHS\_7, Jollipop\_7, CrazyRich\_7, Onika\_7, Paschalis\_7, Hermeonysus\_7, Phorgeous\_7, SirFrank\_7, Kowalski\_7, LittleFortune\_8, Jefe\_8, PiperSansNom\_8



- Track 151 : Scumberland\_8
- Track 152 : Busephilis\_8, Ganandorf\_7, NoodlelyBoi\_7
- Track 153 : Smarties\_11, Ariadne\_11
- Track 154 : Merry\_, Sunny\_
- Track 155 : Teamocil\_5, Gina\_5
- Track 156 : Metamorphoo\_5
- Track 157 : Quhwah\_8, Phrancesco\_8, Selwyn23\_8, Honeyfin\_8, Cranjis\_7, ClearAsMud\_7, Pulchra\_8, Piperis\_7, Yeti\_7, KaiHaiDragon\_7, Glorp\_7
- Track 158 : Shrubaron\_5, Fireman\_5
- Track 159 : Crisis\_7, PierreOrion\_7
- Track 160 : PhedwardCullen\_7
- Track 161 : Tyumbra\_5, Jayden\_6
- Track 162 : EarickHC\_7
- Track 163 : RobsFeet\_6
- Track 164 : Mufasa8\_99
- Track 165 : DelaGarza\_62
- Track 166 : Gingerbug\_61
- Track 167 : Lesiram\_63
- Track 168 : Teng\_66
- Track 169 : VanLee\_161

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

The start number called the most often in the published annotations is 56, it was called in 216 of the 470 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_86, 40AC\_79, AN3\_84, AbbyPaige\_86, Acolyte\_78, Adzzy\_85, Agape74\_86, Aglet\_85, Aliter\_81, Alma\_86, Aneem\_87, AnnaL29\_86, Anselm\_85, Anthony\_78, Anubis\_88, ArcherNM\_79, Arissanae\_83, Bachome\_84, Baehexic\_83, Beauxregard13\_83, Beemo\_88, BengiVuitton\_86, BiancaTri92\_82, Bigflo\_81, BobSwaget\_78, BogosyJay\_87, Bowtie\_83, Bradman\_87, BreSam8\_84, Bud\_81, BuzzBuzz\_78, Bxz2\_79, CRB1\_85, Calvinny\_81, Caraxes\_85, Catalina\_90, Centaur\_84, Changeling\_83, Chargerpower\_84, Charm\_83, Che12\_86, ChipMunk\_85, Colbster\_80, Colin\_83, Conquerage\_86, Crucio\_84, Cullens\_85, DaHudson\_83, Daishi\_83, Dalmatian\_84, Darrell\_86, DarthPhader\_84, Deloris\_86, Dieselweasel\_85, Dignity\_86, Drake55\_85, DreamTeam1\_83, DudeLittle\_82, EZMoney23\_80, EagleEye\_84, Ebony\_86, EdogawaKiddo\_87, Eidsmoe\_86, Elephantoon\_88, EmyBug\_85, EpicPhail\_85, Epsocamisio\_85, Equemioh13\_84, Et2Brutus\_85, EvilGenius\_84, ExplosioNervosa\_86, Fameo\_82, FatCactus\_76, Fayely\_86, Fernando\_85, Fibonacci\_85, FiringLine\_84, First\_0085, Flare16\_84, Flaverint\_87, Gemma\_81, Georgie2\_86, Gilberta\_83, Gina\_5, GingkoMaracino\_84, Gratitude\_82, Grif\_82, Groupthink\_84, Grub\_82, Grum1\_84, GtownJaz\_84, Hanray\_86, HarryHoudini\_84, HashRod\_85, HaveUMetTed\_84, Heliosoles\_81, Hercules11\_84, Halex\_87, HortumSL17\_89, Hutc2\_82, Insomnia\_85, JHC117\_79, Jabith\_85, Jayden\_6, JenCasNa\_85, JeppNRM\_84, Jerm\_86, Jiawan\_86, Jobu08\_80, Joselito\_85, JoshKayV\_86, Jsquared\_88, KADY\_81, Kalb97\_84, Kalnoky\_84, Keziacharles14\_85, KingCyrus\_83, Koduck\_84, L5\_77, LBerry\_85, LadyBird\_88, Larenn\_82, LarryKay\_84, Leviathan\_86, LilTurb\_85, Lilith\_82, Lilleskat\_85, LionsBait\_83, Lokk\_79, LoneWolf\_88, Loser\_87, Louie6\_83, Lowa\_81,

Lucivia\_87, Lucyedi\_83, LugYA\_87, MaCh\_86, Mabel\_86, MadMarie\_82, Mainiac\_83, MajorMajor\_81, Malec\_83, Malinsilva\_87, Maminaiaina\_87, Manu\_83, MarQuardt\_84, Marie\_82, Marius\_84, Methuselah\_77, Microwolf\_80, MiculUcigas\_84, Miko\_79, MissWhite\_77, MoneyMay\_84, Mulciber\_84, Munch\_86, Myxus\_88, NaSiaTalie\_85, Nedarya\_84, NicoleTera\_82, NothingSpecial\_79, Odin\_83, OlanP\_82, Ollie\_84, Onglai\_86, Oofda\_88, Orange\_86, P28Green\_84, PGHhamlin\_86, PainterBoy\_83, Pawn\_82, Pembroke\_84, Penny1\_84, Petersenfast\_80, Ph8s\_85, Phaeder\_88, PhishRPhriends\_80, Phoebe\_85, Phonnegut\_88, Pioneer\_88, Piro94\_83, PotatoSplit\_85, Power\_84, Priya\_86, Qobbit\_86, QueenB2\_81, QueenBeesly\_84, Quokka\_86, Rachaly\_81, Rahalelujah\_87, Reba\_79, RedRock\_84, Refuge\_86, Remus\_88, Retro23\_84, Rummer\_83, RyeScarlet\_89, Sabia\_82, Sabinator\_82, Sachima\_84, Salz\_81, Scherzo\_86, SemperFi\_84, Serenity\_87, Sham4\_82, SheaKeira\_83, Sknot\_84, Smeagan\_87, SnapTap\_84, Snape\_86, Snickers\_80, SoYo\_81, Soshari\_86, Spike509\_84, Spouty\_86, Stagni\_81, Steamy\_83, StepMih\_84, Strosahl\_88, Superchunk\_84, SweetiePie\_84, SwirlSquare\_87, TarsusIV\_83, Taurus\_85, Teamocil\_5, Terrific\_85, Tiffany\_83, Timothy\_86, TinyPebbles\_80, TinyTimmy\_84, TipsytheTRex\_83, Toaka\_86, Trooper\_83, Tubs\_88, Turbido\_85, Tyumbra\_5, Ugenie5\_75, Updawg\_85, VA6\_84, Vanisoa\_83, Vix\_80, Warrior24\_90, Watson\_83, WeiHuaDA\_86, Whabigail7\_84, WideWale\_85, Wooldri\_86, XianYue\_83, Yecy3\_89, Zimmer\_85,

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

• Heffalump\_81, Kalpine\_86, SoilDragon\_84, Soups\_87, Trixie\_84,

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

• AN9\_83, ANI8\_83, Acosta\_60, Agente005\_58, Aleemily\_151, AlexAdler\_59, Alvy\_70, Alyxandracam\_59, Andromedas\_56, Anilorac\_58, Animus\_65, Antares\_8, Antoinette\_59, Apiary\_4, AranulaLuti\_58, Archimedes\_49, Ariadne\_11, Asta\_58, Aubergine\_58, AugsMagnumOpus\_87, AxiPup\_59, BabyBack\_79, Baines\_58, Balsa\_57, Bandik\_59, BartholomewSD\_70, BeautPeep30\_59, BeeBee8\_59, Benjalauen\_59, Benvolio\_83, BigRedClifford\_59, Blage\_59, BonesMcCoy\_59, Bonino\_58, BouleyBill\_50, Bowden\_66, Braxoaddie\_4, BrazzalePHS\_7, Busephilis\_8, Bustleton\_51, Byron23\_60, C3\_76, Cafasso\_153, Calix\_58, CarisSwetlik\_59, Chako\_58, Chamuel\_58, Cheeto1\_55, ChickenKing\_53, ChikPic\_56, Christoph\_58, Clancy\_58, ClearAsMud\_7, CoffeeBean\_4, ColaCorta\_56, Convict\_59, Cranjis\_7, CrazyRich\_7, Crisis\_7, DBQu4n\_84, Dave\_59, DelaGarza\_62, Delphidian\_58, Den3\_59, Dothraki\_59, Dryad\_79, Duocatuli\_58, Duplo\_85, EarickHC\_7, Echild\_87, Eleri\_56, Endor\_60, Erla\_58, Espinosa\_58, Etna\_58, Etta\_58, Exploradora\_58, FarmerDoug\_58, Figueroism\_59, Finny\_57, Fireman\_5, Frizzle\_48, GaeCeo\_55, Ganandorf\_7, GardenB\_59, Garey24\_59, Gargoyle\_59, GaugeLDP\_78, Gelo\_58, Gershwin\_58, Ghobes\_49, Gibson\_77, Gingerbug\_61, GirlDinner\_65, Glamour\_55, Glorp\_7, Golden\_52, Greenbelt\_115, Greys\_59, Gubbabump\_58, Guetzie\_53, GuyFagieri\_4, HairyMan\_52, Hamlet\_58, HanSolo\_58, HankSprout\_59, HerculesXL\_52, Hermeonysus\_7, Honeyfin\_8, HungryHenry\_58, Ilzat\_58, Inventa\_59, Ioannes\_59, Issmi\_67, Ixel\_54, Janus167\_58, Janus\_66, JasonD\_62, JasperRussell\_58, Jefe\_8, Jemerald\_53, Jenos\_60, Jerbirus\_60, JeriBeth\_60, Jingles\_50, Jollipop\_7, Juanyo\_52, Juicer\_53, KaiHaiDragon\_7, Kale\_58, KannH\_58, Kauala\_50, Kerberos\_84, KingJulien\_58, Klimt\_59, Knox\_59, Koji\_50, Kowalski\_7, Kurt1\_59, Leafus\_58, Lesiram\_63, LittleFortune\_8, Lizz\_75, Lovelyunicorn\_59, Lucky3\_52, Ludgate\_59, MCubed\_56, MaeLinda\_59, ManRay\_58, Martin\_60, Maselop\_4, McGalleon\_59, Merry\_, Metamorphoo\_5, MillyPhilly\_59, ModicumRichard\_153, MonChoix\_57, Morgana\_160,

MrWorldwide\_59, MuchMore\_87, Mufasa8\_99, Nagem\_59, Nattles\_58, NickSell\_59, NoodlelyBoi\_7, Oats\_58, ObLaDi\_153, OldNelly\_59, Onika\_7, Oxtober96\_60, PHTown\_75, PSirce\_55, Paedore\_70, Papafritta\_58, ParleG\_59, Paschalis\_7, Peep\_59, Peppino\_58, Phanita\_55, PhedwardCullen\_7, Pherbot\_51, Pherferi\_59, Phiderman\_59, Phireproof\_59, Phorgeous\_7, Phoxy\_84, Phrancesco\_8, PhredFlintston\_59, Phriends\_58, PierreOrion\_7, PiperSansNom\_8, Piperis\_7, Pocket\_58, Polyuyuki\_4, Pomar16\_84, PrincePhergus\_51, Pulchra\_8, PuppyEggo\_59, Quhwah\_8, Raccoon\_58, Ramiel05\_7, Rapheph\_59, Raptor\_59, Redfield\_58, RenegadeRaider\_53, Renzie\_59, Riyhil\_59, Robinson\_59, RobsFeet\_6, Rog141\_58, Rooney\_77, RosieMae\_60, SJay\_59, Sansa\_54, Sapo\_49, Saratos\_56, Savannah\_7, Schimmels22\_51, Schnapsidee\_58, Schubert\_51, Scissor2024\_52, Scumberland\_8, Sedgewig\_58, Selwyn23\_8, Settecandela\_184, ShaiHulud\_60, ShakeNBake\_75, Shamu\_56, Shee\_59, Shotgun\_7, Shrubaron\_5, Sinatra\_52, SirFrank\_7, SirVictor\_53, Smarties\_11, SoilGremlin\_59, SonOfLevi\_59, SqueakyClean\_66, Stanktossa\_58, StarStuff\_84, StingRay\_58, StirfryIV\_58, Stormbreaker8\_57, Strathdee\_59, Sunny\_, Superfresh\_59, Symere\_60, TatarkaPM\_59, Teagan\_59, TeddyBear\_58, Tenda\_58, Teng\_66, Thestral\_68, Thompsone\_59, Thorongil\_59, TinSulphur\_60, TinaBelcher\_66, Tinyman4\_51, Tomathan\_84, Travvers\_84, TrvxScott\_65, VC3\_82, VanLee\_161, Velene\_59, Vispistious\_59, Wentworth\_75, WestPM\_51, WildNOut\_59, Wilkos\_77, Winzigespinne\_58, Yara\_73, Yeti\_7, Zada\_60, Zenitsu\_56,

### Summary by start number:

#### Start 24:

- Found in 19 of 529 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 1 of 470
- Called 5.3% of time when present
- Phage (with cluster) where this start called: Braxoaddie\_4 (CR6),

#### Start 29:

- Found in 10 of 529 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 8 of 470
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dryad\_79 (BN), Gibson\_77 (BN), Greenbelt\_115 (BN), Lizz\_75 (BN), PHTown\_75 (BN), Rooney\_77 (BN), ShakeNBake\_75 (BN), Wentworth\_75 (BN), Wilkos\_77 (BN), Yara\_73 (BN),

#### Start 34:

- Found in 5 of 529 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 470
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Alvy\_70 (BD2), TrvxScott\_65 (BD2),

#### Start 37:

- Found in 1 of 529 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 470
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Schubert\_51 (EA8),

#### Start 39:

- Found in 1 of 529 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 470

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gingerbug\_61 (GF),

Start 41:

- Found in 4 of 529 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 470
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Soups\_87 (A15),

Start 47:

- Found in 35 of 529 ( 6.6% ) of genes in pham
- Manual Annotations of this start: 1 of 470
- Called 2.9% of time when present
- Phage (with cluster) where this start called: SoilDragon\_84 (A3),

Start 49:

- Found in 14 of 529 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 470
- Called 7.1% of time when present
- Phage (with cluster) where this start called: TinaBelcher\_66 (BD2),

Start 52:

- Found in 13 of 529 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 8 of 470
- Called 61.5% of time when present
- Phage (with cluster) where this start called: Apiary\_4 (CR6), CoffeeBean\_4 (CR6), GuyFagieri\_4 (CR6), Heffalump\_81 (A2), Kalpine\_86 (A2), Maselop\_4 (CR6), Polyyuki\_4 (CR6), Trixie\_84 (A2),

Start 53:

- Found in 3 of 529 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 3 of 470
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Frizzle\_48 (DA), Ghobes\_49 (DA), Sapo\_49 (DA),

Start 54:

- Found in 4 of 529 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 4 of 470
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BabyBack\_79 (A2), Benvolio\_83 (A2), Echild\_87 (A2), GaugeLDP\_78 (A2),

Start 55:

- Found in 11 of 529 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 10 of 470
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AN9\_83 (A2), ANI8\_83 (A2), C3\_76 (A2), DBQu4n\_84 (A2), Duplo\_85 (A2), Kerberos\_84 (A2), Pomar16\_84 (A2), StarStuff\_84 (A2), Tomathan\_84 (A2), Travvers\_84 (A2), VC3\_82 (A2),

Start 56:

- Found in 255 of 529 ( 48.2% ) of genes in pham

- Manual Annotations of this start: 216 of 470
- Called 98.0% of time when present
- Phage (with cluster) where this start called: 20ES\_86 (A2), 40AC\_79 (A17), AN3\_84 (A2), AbbyPaige\_86 (A2), Acolyte\_78 (A2), Adzzy\_85 (A2), Agape74\_86 (A2), Aglet\_85 (A3), Aliter\_81 (A9), Alma\_86 (A9), Aneem\_87 (A11), AnnaL29\_86 (A2), Anselm\_85 (A2), Anthony\_78 (A20), Anubis\_88 (A3), ArcherNM\_79 (A2), Arissanae\_83 (A9), Bachome\_84 (A11), Baehexic\_83 (A2), Beauxregard13\_83 (A3), Beemo\_88 (A9), BengiVuitton\_86 (A2), BiancaTri92\_82 (A2), Bigflo\_81 (A3), BobSwaget\_78 (A2), BogosyJay\_87 (A9), Bowtie\_83 (A11), Bradman\_87 (A2), BreSam8\_84 (A3), Bud\_81 (A11), BuzzBuzz\_78 (A3), Bxz2\_79 (A3), CRB1\_85 (A2), Calvinny\_81 (A3), Caraxes\_85 (A2), Catalina\_90 (A9), Centaur\_84 (A2), Changeling\_83 (A2), Chargerpower\_84 (A), Charm\_83 (A9), Che12\_86 (A2), ChipMunk\_85 (A2), Colbster\_80 (A3), Colin\_83 (A2), Conquerage\_86 (A9), Crucio\_84 (A2), Cullens\_85 (A3), DaHudson\_83 (A3), Daishi\_83 (A3), Dalmatian\_84 (A2), Darrell\_86 (A9), DARTHPhader\_84 (A12), Deloris\_86 (A2), Dieselweasel\_85 (A3), Dignity\_86 (A2), Drake55\_85 (A2), DreamTeam1\_83 (A9), DudeLittle\_82 (A2), EZMoney23\_80 (A2), EagleEye\_84 (A16), Ebony\_86 (A11), EdogawaKiddo\_87 (A9), Eidsmoe\_86 (A9), Elephantoon\_88 (A9), EmyBug\_85 (A9), EpicPhail\_85 (A3), Epsocamisio\_85 (A15), Equemioh13\_84 (A2), Et2Brutus\_85 (A11), EvilGenius\_84 (A2), ExplosioNervosa\_86 (A9), Fameo\_82 (A2), FatCactus\_76 (A20), Fayely\_86 (A9), Fernando\_85 (A3), Fibonacci\_85 (A11), FiringLine\_84 (A2), First\_0085 (A2), Flare16\_84 (A2), Flaverint\_87 (A11), Gemma\_81 (A3), Georgie2\_86 (A2), Gilberta\_83 (A11), Gina\_5 (EC), GingkoMaracino\_84 (A3), Gratitude\_82 (A2), Grif\_82 (A3), Groupthink\_84 (A3), Grub\_82 (A3), Grum1\_84 (A3), GtownJaz\_84 (A3), Hanray\_86 (A9), HarryHoudini\_84 (A2), HashRod\_85 (A3), HaveUMetTed\_84 (A3), Heliosoles\_81 (A3), Hercules11\_84 (A3), Halex\_87 (A9), HortumSL17\_89 (A9), Hutc2\_82 (A11), Insomnia\_85 (A11), JHC117\_79 (A3), Jabith\_85 (A11), Jayden\_6 (EC), JenCasNa\_85 (A3), JeppNRM\_84 (A3), Jerm\_86 (A2), Jiawan\_86 (A9), Jobu08\_80 (A3), Joselito\_85 (A11), JoshKayV\_86 (A2), Jsquared\_88 (A2), KADY\_81 (A3), Kalb97\_84 (A3), Kalnoky\_84 (A3), Keziacharles14\_85 (A9), KingCyrus\_83 (A2), Koduck\_84 (A2), L5\_77 (A2), LBerry\_85 (A3), LadyBird\_88 (A2), Larenn\_82 (A2), LarryKay\_84 (A3), Leviathan\_86 (A2), LiITurb\_85 (A2), Lilith\_82 (A3), Lilleskat\_85 (A9), LionsBait\_83 (A2), Lokk\_79 (A2), LoneWolf\_88 (A9), Loser\_87 (A2), Louie6\_83 (A3), Iowa\_81 (A3), Lucivia\_87 (A11), Lucyedi\_83 (A16), LugYA\_87 (A3), MaCh\_86 (A11), Mabel\_86 (A11), MadMarie\_82 (A3), Mainiac\_83 (A3), MajorMajor\_81 (A2), Malec\_83 (A2), Malinsilva\_87 (A3), Maminiaina\_87 (A9), Manu\_83 (A3), MarQuardt\_84 (A3), Marie\_82 (A3), Marius\_84 (A3), Methuselah\_77 (A3), Microwolf\_80 (A3), MiculUcigas\_84 (A2), Miko\_79 (A2), MissWhite\_77 (A2), MoneyMay\_84 (A3), Mulciber\_84 (A11), Munch\_86 (A11), Myxus\_88 (A9), NaSiaTalie\_85 (A2), Nedarya\_84 (A15), NicoleTera\_82 (A2), NothingSpecial\_79 (A2), Odin\_83 (A2), OlanP\_82 (A3), Ollie\_84 (A3), Onglai\_86 (A9), Oofda\_88 (A15), Orange\_86 (A11), P28Green\_84 (A3), PGHhamlin\_86 (A3), PainterBoy\_83 (A16), Pawn\_82 (A3), Pembroke\_84 (A3), Penny1\_84 (A3), Petersenfast\_80 (A11), Ph8s\_85 (A2), Phaeder\_88 (A9), PhishRPhriends\_80 (A3), Phoebe\_85 (A3), Phonnegut\_88 (A9), Pioneer\_88 (A9), Piro94\_83 (A2), PotatoSplit\_85 (A3), Power\_84 (A2), Priya\_86 (A9), Qobbit\_86 (A9), QueenB2\_81 (A2), QueenBeesly\_84 (A2), Quokka\_86 (A2), Rachaly\_81 (A2), Rahalelujah\_87 (A9), Reba\_79 (A3), RedRock\_84 (A2), Refuge\_86 (A12), Remus\_88 (A15), Retro23\_84 (A2), Rummer\_83 (A3), RyeScarlet\_89 (A9), Sabia\_82 (A3), Sabinator\_82 (A3), Sachima\_84 (A9), Salz\_81 (A11), Scherzo\_86 (A9), SemperFi\_84 (A2), Serenity\_87 (A2), Sham4\_82 (A11), SheaKeira\_83 (A9), Sknot\_84 (A2), Smeagan\_87 (A2), SnapTap\_84 (A2), Snape\_86 (A11), Snickers\_80 (A3), SoYo\_81 (A3), Soshari\_86 (A3), Spike509\_84 (A3), Spouty\_86 (A9), Stagni\_81 (A3), Steamy\_83 (A12), StepMih\_84 (A3), Strosahl\_88

(A15), Superchunk\_84 (A2), SweetiePie\_84 (A2), SwirlSquare\_87 (A2), TarsusIV\_83 (A2), Taurus\_85 (A3), Teamocil\_5 (EC), Terrific\_85 (A2), Tiffany\_83 (A3), Timothy\_86 (A11), TinyPebbles\_80 (A3), TinyTimmy\_84 (A11), TipsytheTRex\_83 (A2), Toaka\_86 (A9), Trooper\_83 (A2), Tubs\_88 (A9), Turbido\_85 (A2), Tyumbra\_5 (EC), Ugenie5\_75 (A9), Updawg\_85 (A2), VA6\_84 (A2), Vanisoa\_83 (A9), Vix\_80 (A3), Warrior24\_90 (A15), Watson\_83 (A3), WeiHuaDA\_86 (A2), Whabigail7\_84 (A2), WideWale\_85 (A2), Wooldri\_86 (A3), XianYue\_83 (A2), Yecey3\_89 (A9), Zimmer\_85 (A12),

#### Start 58:

- Found in 6 of 529 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 5 of 470
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aleemily\_151 (DZ), Cafasso\_153 (DZ), ModicumRichard\_153 (DZ), Morgana\_160 (DZ), ObLaDi\_153 (DZ), VanLee\_161 (singleton),

#### Start 59:

- Found in 228 of 529 ( 43.1% ) of genes in pham
- Manual Annotations of this start: 201 of 470
- Called 97.4% of time when present
- Phage (with cluster) where this start called: Acosta\_60 (EA1), Agente005\_58 (EA1), AlexAdler\_59 (EA1), Alyxandracam\_59 (EA1), Andromedas\_56 (EA2), Anilorac\_58 (EA1), Animus\_65 (BD2), Antares\_8 (EC), Antoinette\_59 (EA1), AranulaLuti\_58 (EA1), Archimedes\_49 (DA), Ariadne\_11 (EC), Asta\_58 (EA1), Aubergine\_58 (EA1), AxiPup\_59 (EA1), Baines\_58 (EA1), Balsa\_57 (EA1), Bandik\_59 (EA1), BartholomewSD\_70 (BD2), BeautPeep30\_59 (EA1), BeeBee8\_59 (EA1), Benjalauen\_59 (EA1), BigRedClifford\_59 (EA1), Blage\_59 (EA1), BonesMcCoy\_59 (EA1), Bonino\_58 (EA1), BouleyBill\_50 (EA4), Bowden\_66 (BD2), BrazzalePHS\_7 (EC), Busephillis\_8 (EC), Bustleton\_51 (EA4), Byron23\_60 (EA1), Calix\_58 (EA1), CarisSwetlik\_59 (EA1), Chako\_58 (EA1), Chamuel\_58 (EA1), Cheeto1\_55 (EA9), ChickenKing\_53 (EA9), ChikPic\_56 (EA2), Christoph\_58 (EA1), Clancy\_58 (EA1), ClearAsMud\_7 (EC), ColaCorta\_56 (EA2), Convict\_59 (EA1), Cranjis\_7 (EC), CrazyRich\_7 (EC), Crisis\_7 (EC), Dave\_59 (EA1), DelaGarza\_62 (GF), Delphidian\_58 (EA1), Den3\_59 (EA1), Dothraki\_59 (EA1), Duocatuli\_58 (EA1), EarickHC\_7 (EC), Eleri\_56 (EA2), Endor\_60 (EA1), Erla\_58 (EA1), Espinosa\_58 (EA1), Etna\_58 (EA1), Etta\_58 (EA1), Exploradora\_58 (EA1), FarmerDoug\_58 (EA1), Figueroism\_59 (EA1), Finny\_57 (EA2), Fireman\_5 (EC), GaeCeo\_55 (EA9), Ganandorf\_7 (EC), GardenB\_59 (EA1), Garey24\_59 (EA1), Gargoyle\_59 (EA1), Gelo\_58 (EA1), Gershwin\_58 (EA1), GirlDinner\_65 (BD2), Glamour\_55 (EA2), Glorp\_7 (EC), Golden\_52 (EA4), Greys\_59 (EA1), Gubbabump\_58 (EA1), Guetzie\_53 (EA4), HairyMan\_52 (EA10), Hamlet\_58 (EA1), HanSolo\_58 (EA1), HankSprout\_59 (EA1), HerculesXL\_52 (EA11), Hermeonysus\_7 (EC), Honeyfin\_8 (EC), HungryHenry\_58 (EA1), Ilzat\_58 (EA1), Inventa\_59 (EA1), Ioannes\_59 (EA1), Issmi\_67 (BD2), Ixel\_54 (EA11), Janus167\_58 (EA1), Janus\_66 (BD2), JasonD\_62 (EA1), JasperRussell\_58 (EA1), Jefe\_8 (EC), Jemerald\_53 (EA6), Jenos\_60 (EA1), Jerbirus\_60 (EA1), JeriBeth\_60 (EA1), Jingles\_50 (EA4), Jollipop\_7 (EC), Juanyo\_52 (EA10), Juicer\_53 (EA6), KaiHaiDragon\_7 (EC), Kale\_58 (EA1), KannH\_58 (EA1), Kauala\_50 (EA4), KingJulien\_58 (EA1), Klimt\_59 (EA1), Knox\_59 (EA1), Koji\_50 (EA4), Kowalski\_7 (EC), Kurt1\_59 (EA1), Leafus\_58 (EA1), Lesiram\_63 (GF), LittleFortune\_8 (EC), Lovelyunicorn\_59 (EA1), Lucky3\_52 (EA4), Ludgate\_59 (EA1), MCubed\_56 (EA2), MaeLinda\_59 (EA1), ManRay\_58 (EA1), Martin\_60 (EA1), McGalleon\_59 (EA1), Metamorphoo\_5 (EC), MillyPhilly\_59 (EA1), MonChoix\_57

(EA1), MrWorldwide\_59 (EA1), Nagem\_59 (EA1), Nattles\_58 (EA1), NickSell\_59 (EA1), NoodlelyBoi\_7 (EC), Oats\_58 (EA1), OldNelly\_59 (EA1), Onika\_7 (EC), Oxtober96\_60 (EA1), PSirce\_55 (EA2), Paedore\_70 (BD2), Papafritta\_58 (EA1), ParleG\_59 (EA1), Paschalis\_7 (EC), Peep\_59 (EA1), Peppino\_58 (EA1), Phanita\_55 (EA2), PhedwardCullen\_7 (EC), Pherbot\_51 (EA4), Pherferi\_59 (EA1), Phiderman\_59 (EA1), Phireproof\_59 (EA1), Phorgeous\_7 (EC), Phrancesco\_8 (EC), PhredFlintston\_59 (EA1), Phriends\_58 (EA1), PierreOrion\_7 (EC), PiperSansNom\_8 (EC), Piperis\_7 (EC), Pocket\_58 (EA1), PrincePhergus\_51 (EA4), Pulchra\_8 (EC), PuppyEggo\_59 (EA1), Quhwah\_8 (EC), Raccoon\_58 (EA1), Ramiel05\_7 (EC), Rappheph\_59 (EA1), Raptor\_59 (EA1), Redfield\_58 (EA1), RenegadeRaider\_53 (EA4), Renzie\_59 (EA1), Rihhil\_59 (EA1), Robinson\_59 (EA1), RobsFeet\_6 (EC), Rog141\_58 (EA1), RosieMae\_60 (EA1), SJay\_59 (EA1), Sansa\_54 (EA2), Saratos\_56 (EA2), Savannah\_7 (EC), Schimmels22\_51 (EA11), Schnapsidee\_58 (EA1), Scissor2024\_52 (EA11), Scumberland\_8 (EC), Sedgewig\_58 (EA1), Selwyn23\_8 (EC), ShaiHulud\_60 (EA1), Shamu\_56 (EA2), Shee\_59 (EA1), Shotgun\_7 (EC), Shrubaron\_5 (EC), Sinatra\_52 (EA4), SirFrank\_7 (EC), SirVictor\_53 (EA4), Smarties\_11 (EC), SoilGremlin\_59 (EA1), SonOfLevi\_59 (EA1), SqueakyClean\_66 (BD2), Stanktossa\_58 (EA1), StingRay\_58 (EA1), StirfryIV\_58 (EA1), Stormbreaker8\_57 (EA1), Strathdee\_59 (EA1), Superfresh\_59 (EA1), Symere\_60 (EA1), TatarkaPM\_59 (EA1), Teagan\_59 (EA1), TeddyBear\_58 (EA1), Tenda\_58 (EA1), Teng\_66 (GF), Thestral\_68 (BD2), Thompsone\_59 (EA1), Thorongil\_59 (EA1), TinSulphur\_60 (EA1), Tinyman4\_51 (EA11), Velene\_59 (EA1), Vispistious\_59 (EA1), WestPM\_51 (EA11), WildNOut\_59 (EA1), Winzigespinne\_58 (EA1), Yeti\_7 (EC), Zada\_60 (EA1), Zenitsu\_56 (EA2),

#### Start 61:

- Found in 15 of 529 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 2 of 470
- Called 13.3% of time when present
- Phage (with cluster) where this start called: Mufasa8\_99 (FG), Settecandela\_184 (AA),

#### Start 74:

- Found in 83 of 529 ( 15.7% ) of genes in pham
- Manual Annotations of this start: 1 of 470
- Called 1.2% of time when present
- Phage (with cluster) where this start called: Phoxy\_84 (A3),

#### Start 77:

- Found in 380 of 529 ( 71.8% ) of genes in pham
- Manual Annotations of this start: 2 of 470
- Called 0.5% of time when present
- Phage (with cluster) where this start called: Merry\_ (EC), Sunny\_ (EC),

#### Start 79:

- Found in 198 of 529 ( 37.4% ) of genes in pham
- Manual Annotations of this start: 2 of 470
- Called 1.0% of time when present
- Phage (with cluster) where this start called: AugsMagnumOpus\_87 (A3), MuchMore\_87 (A3),

#### Summary by clusters:

There are 28 clusters represented in this pham: AA, singleton, BN, DA, DZ, FG, A15, A17, A16, A11, A12, A3, A2, BD2, A9, A, EC, EA9, GF, EA1, EA11, EA2, EA4, EA6, A20, CR6, EA10, EA8,

Info for manual annotations of cluster A:

- Start number 56 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A11:

- Start number 56 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 56 was manually annotated 4 times for cluster A12.

Info for manual annotations of cluster A15:

- Start number 41 was manually annotated 1 time for cluster A15.
- Start number 56 was manually annotated 4 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 56 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A2:

- Start number 52 was manually annotated 3 times for cluster A2.
- Start number 54 was manually annotated 4 times for cluster A2.
- Start number 55 was manually annotated 10 times for cluster A2.
- Start number 56 was manually annotated 71 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 56 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 47 was manually annotated 1 time for cluster A3.
- Start number 56 was manually annotated 70 times for cluster A3.
- Start number 74 was manually annotated 1 time for cluster A3.
- Start number 79 was manually annotated 2 times for cluster A3.

Info for manual annotations of cluster A9:

- Start number 56 was manually annotated 34 times for cluster A9.

Info for manual annotations of cluster AA:

- Start number 61 was manually annotated 1 time for cluster AA.

Info for manual annotations of cluster BD2:

- Start number 34 was manually annotated 2 times for cluster BD2.
- Start number 49 was manually annotated 1 time for cluster BD2.
- Start number 59 was manually annotated 9 times for cluster BD2.

Info for manual annotations of cluster BN:

- Start number 29 was manually annotated 8 times for cluster BN.

Info for manual annotations of cluster CR6:

- Start number 24 was manually annotated 1 time for cluster CR6.
- Start number 52 was manually annotated 5 times for cluster CR6.



Info for manual annotations of cluster DA:

- Start number 53 was manually annotated 3 times for cluster DA.
- Start number 59 was manually annotated 1 time for cluster DA.

Info for manual annotations of cluster DZ:

- Start number 58 was manually annotated 4 times for cluster DZ.

Info for manual annotations of cluster EA1:

- Start number 59 was manually annotated 120 times for cluster EA1.

Info for manual annotations of cluster EA10:

- Start number 59 was manually annotated 1 time for cluster EA10.

Info for manual annotations of cluster EA11:

- Start number 59 was manually annotated 5 times for cluster EA11.

Info for manual annotations of cluster EA2:

- Start number 59 was manually annotated 11 times for cluster EA2.

Info for manual annotations of cluster EA4:

- Start number 59 was manually annotated 11 times for cluster EA4.

Info for manual annotations of cluster EA6:

- Start number 59 was manually annotated 2 times for cluster EA6.

Info for manual annotations of cluster EA8:

- Start number 37 was manually annotated 1 time for cluster EA8.

Info for manual annotations of cluster EA9:

- Start number 59 was manually annotated 3 times for cluster EA9.

Info for manual annotations of cluster EC:

- Start number 56 was manually annotated 4 times for cluster EC.
- Start number 59 was manually annotated 36 times for cluster EC.
- Start number 77 was manually annotated 2 times for cluster EC.

Info for manual annotations of cluster FG:

- Start number 61 was manually annotated 1 time for cluster FG.

Info for manual annotations of cluster GF:

- Start number 39 was manually annotated 1 time for cluster GF.
- Start number 59 was manually annotated 2 times for cluster GF.

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

Gene: 20ES\_86 Start: 48476, Stop: 47718, Start Num: 56

Candidate Starts for 20ES\_86:

(Start: 56 @48476 has 216 MA's), (62, 48455), (65, 48443), (69, 48413), (Start: 77 @48362 has 2 MA's), (Start: 79 @48341 has 2 MA's), (85, 48305), (86, 48296), (100, 48236), (130, 48152), (132, 48143), (146, 48089), (156, 48053), (172, 48005), (194, 47906), (199, 47879), (215, 47831), (235,

47741),

Gene: 40AC\_79 Start: 47860, Stop: 47102, Start Num: 56

Candidate Starts for 40AC\_79:

(Start: 56 @47860 has 216 MA's), (62, 47839), (65, 47827), (Start: 79 @47725 has 2 MA's), (84, 47695), (100, 47620), (112, 47578), (146, 47473), (161, 47422), (198, 47263), (199, 47260), (208, 47227), (235, 47125),

Gene: AN3\_84 Start: 46734, Stop: 45979, Start Num: 56

Candidate Starts for AN3\_84:

(Start: 56 @46734 has 216 MA's), (62, 46713), (69, 46671), (Start: 77 @46620 has 2 MA's), (Start: 79 @46599 has 2 MA's), (85, 46563), (86, 46554), (93, 46524), (100, 46494), (132, 46401), (146, 46347), (156, 46311), (158, 46308), (172, 46263), (194, 46164), (199, 46137), (215, 46089), (235, 45999),

Gene: AN9\_83 Start: 46905, Stop: 46132, Start Num: 55

Candidate Starts for AN9\_83:

(Start: 55 @46905 has 10 MA's), (62, 46881), (69, 46839), (73, 46815), (Start: 79 @46767 has 2 MA's), (84, 46737), (85, 46731), (101, 46659), (109, 46635), (112, 46620), (117, 46608), (146, 46506), (152, 46485), (199, 46293), (235, 46155),

Gene: ANI8\_83 Start: 46905, Stop: 46132, Start Num: 55

Candidate Starts for ANI8\_83:

(Start: 55 @46905 has 10 MA's), (62, 46881), (69, 46839), (73, 46815), (Start: 79 @46767 has 2 MA's), (84, 46737), (85, 46731), (101, 46659), (109, 46635), (112, 46620), (117, 46608), (146, 46506), (152, 46485), (199, 46293), (235, 46155),

Gene: AbbyPaige\_86 Start: 48733, Stop: 47978, Start Num: 56

Candidate Starts for AbbyPaige\_86:

(Start: 56 @48733 has 216 MA's), (62, 48712), (69, 48670), (73, 48646), (Start: 79 @48598 has 2 MA's), (91, 48529), (100, 48493), (128, 48415), (146, 48346), (152, 48325), (198, 48139), (199, 48136), (235, 47998),

Gene: Acolyte\_78 Start: 47431, Stop: 46673, Start Num: 56

Candidate Starts for Acolyte\_78:

(Start: 56 @47431 has 216 MA's), (62, 47407), (69, 47365), (73, 47341), (Start: 79 @47293 has 2 MA's), (84, 47263), (100, 47188), (108, 47167), (130, 47107), (132, 47098), (146, 47044), (156, 47008), (172, 46960), (198, 46837), (199, 46834), (235, 46696),

Gene: Acosta\_60 Start: 39620, Stop: 38892, Start Num: 59

Candidate Starts for Acosta\_60:

(30, 39701), (Start: 59 @39620 has 201 MA's), (Start: 77 @39521 has 2 MA's), (101, 39395), (112, 39353), (134, 39290), (147, 39245), (151, 39236), (180, 39155), (207, 39032), (225, 38966),

Gene: Adzzy\_85 Start: 47246, Stop: 46503, Start Num: 56

Candidate Starts for Adzzy\_85:

(16, 47456), (Start: 56 @47246 has 216 MA's), (62, 47228), (69, 47186), (Start: 77 @47135 has 2 MA's), (Start: 79 @47114 has 2 MA's), (92, 47042), (100, 47009), (115, 46961), (132, 46916), (141, 46889), (146, 46862), (198, 46667), (219, 46595), (235, 46526),

Gene: Agape74\_86 Start: 48709, Stop: 47954, Start Num: 56

Candidate Starts for Agape74\_86:

(Start: 56 @48709 has 216 MA's), (62, 48688), (69, 48646), (73, 48622), (Start: 79 @48574 has 2 MA's), (91, 48505), (100, 48469), (128, 48391), (146, 48322), (152, 48301), (198, 48115), (199,

48112), (235, 47974),

Gene: Agente005\_58 Start: 39399, Stop: 38668, Start Num: 59

Candidate Starts for Agente005\_58:

(Start: 59 @39399 has 201 MA's), (Start: 77 @39300 has 2 MA's), (90, 39216), (98, 39183), (101, 39174), (112, 39132), (134, 39066), (147, 39021), (151, 39012), (207, 38808),

Gene: Aglet\_85 Start: 47041, Stop: 46274, Start Num: 56

Candidate Starts for Aglet\_85:

(Start: 47 @47074 has 1 MA's), (Start: 56 @47041 has 216 MA's), (62, 47020), (70, 46975), (73, 46954), (Start: 74 @46948 has 1 MA's), (Start: 79 @46906 has 2 MA's), (84, 46876), (86, 46861), (112, 46759), (114, 46756), (125, 46720), (146, 46648), (152, 46627), (184, 46498), (193, 46465), (198, 46438),

Gene: Aleemily\_151 Start: 79896, Stop: 79123, Start Num: 58

Candidate Starts for Aleemily\_151:

(Start: 58 @79896 has 5 MA's), (69, 79830), (73, 79806), (76, 79782), (83, 79743), (89, 79698), (96, 79668), (106, 79638), (109, 79629), (116, 79605), (129, 79578), (135, 79551), (146, 79512), (174, 79413), (177, 79392), (195, 79320), (196, 79314), (227, 79197), (233, 79158), (241, 79134),

Gene: AlexAdler\_59 Start: 39579, Stop: 38848, Start Num: 59

Candidate Starts for AlexAdler\_59:

(Start: 59 @39579 has 201 MA's), (Start: 77 @39477 has 2 MA's), (98, 39360), (112, 39309), (134, 39246), (147, 39201), (151, 39192), (180, 39111), (194, 39054), (207, 38988), (234, 38877),

Gene: Aliter\_81 Start: 45863, Stop: 45102, Start Num: 56

Candidate Starts for Aliter\_81:

(Start: 56 @45863 has 216 MA's), (69, 45803), (Start: 77 @45752 has 2 MA's), (80, 45725), (88, 45671), (100, 45623), (106, 45605), (112, 45581), (132, 45530), (141, 45503), (146, 45476), (198, 45263), (199, 45260), (208, 45227), (235, 45125),

Gene: Alma\_86 Start: 48703, Stop: 47942, Start Num: 56

Candidate Starts for Alma\_86:

(Start: 24 @48829 has 1 MA's), (Start: 56 @48703 has 216 MA's), (69, 48643), (73, 48619), (Start: 77 @48592 has 2 MA's), (80, 48565), (88, 48511), (100, 48463), (106, 48445), (112, 48421), (132, 48370), (141, 48343), (146, 48316), (198, 48103), (199, 48100), (208, 48067), (235, 47965),

Gene: Alvy\_70 Start: 45833, Stop: 45003, Start Num: 34

Candidate Starts for Alvy\_70:

(20, 45899), (Start: 34 @45833 has 2 MA's), (35, 45827), (Start: 49 @45791 has 1 MA's), (Start: 59 @45734 has 201 MA's), (60, 45728), (Start: 77 @45623 has 2 MA's), (80, 45596), (156, 45380), (167, 45341), (172, 45323), (180, 45284), (184, 45263),

Gene: Alyxandracam\_59 Start: 39516, Stop: 38785, Start Num: 59

Candidate Starts for Alyxandracam\_59:

(Start: 59 @39516 has 201 MA's), (Start: 77 @39414 has 2 MA's), (98, 39297), (112, 39246), (134, 39183), (147, 39138), (151, 39129), (180, 39048), (194, 38991), (201, 38955), (207, 38925), (234, 38814),

Gene: Andromedas\_56 Start: 37751, Stop: 37026, Start Num: 59

Candidate Starts for Andromedas\_56:

(Start: 59 @37751 has 201 MA's), (Start: 77 @37649 has 2 MA's), (98, 37541), (126, 37454), (134, 37424), (144, 37388), (148, 37376), (180, 37289), (194, 37232),

Gene: Aneem\_87 Start: 47779, Stop: 47021, Start Num: 56

Candidate Starts for Aneem\_87:

(Start: 56 @47779 has 216 MA's), (62, 47755), (69, 47713), (Start: 77 @47662 has 2 MA's), (Start: 79 @47641 has 2 MA's), (81, 47632), (84, 47611), (85, 47605), (86, 47596), (109, 47509), (112, 47494), (132, 47446), (141, 47419), (146, 47392), (226, 47089), (235, 47044),

Gene: Anilorac\_58 Start: 39306, Stop: 38575, Start Num: 59

Candidate Starts for Anilorac\_58:

(Start: 59 @39306 has 201 MA's), (Start: 77 @39207 has 2 MA's), (90, 39123), (98, 39090), (101, 39081), (112, 39039), (134, 38973), (147, 38928), (151, 38919), (207, 38715),

Gene: Animus\_65 Start: 44661, Stop: 43927, Start Num: 59

Candidate Starts for Animus\_65:

(Start: 59 @44661 has 201 MA's), (Start: 77 @44547 has 2 MA's), (130, 44394), (167, 44265), (180, 44208), (183, 44190), (184, 44187), (204, 44100),

Gene: AnnaL29\_86 Start: 48866, Stop: 48111, Start Num: 56

Candidate Starts for AnnaL29\_86:

(Start: 56 @48866 has 216 MA's), (62, 48845), (69, 48803), (73, 48779), (Start: 77 @48752 has 2 MA's), (Start: 79 @48731 has 2 MA's), (85, 48695), (86, 48686), (93, 48656), (100, 48626), (130, 48542), (132, 48533), (146, 48479), (156, 48443), (172, 48395), (199, 48269), (235, 48131),

Gene: Anselm\_85 Start: 48617, Stop: 47859, Start Num: 56

Candidate Starts for Anselm\_85:

(Start: 56 @48617 has 216 MA's), (62, 48596), (69, 48554), (73, 48530), (Start: 77 @48503 has 2 MA's), (Start: 79 @48482 has 2 MA's), (85, 48446), (92, 48410), (100, 48377), (130, 48293), (132, 48284), (146, 48230), (156, 48194), (172, 48146), (194, 48047), (198, 48023), (199, 48020), (235, 47882),

Gene: Antares\_8 Start: 3682, Stop: 4422, Start Num: 59

Candidate Starts for Antares\_8:

(Start: 59 @3682 has 201 MA's), (66, 3715), (Start: 77 @3784 has 2 MA's), (78, 3796), (80, 3811), (94, 3886), (98, 3901), (144, 4045), (151, 4063), (176, 4129), (182, 4165), (199, 4237), (203, 4261), (207, 4273), (234, 4384),

Gene: Anthony\_78 Start: 46673, Stop: 45921, Start Num: 56

Candidate Starts for Anthony\_78:

(Start: 49 @46715 has 1 MA's), (Start: 56 @46673 has 216 MA's), (62, 46652), (69, 46610), (73, 46586), (84, 46508), (99, 46436), (105, 46418), (125, 46361), (130, 46355), (132, 46346), (138, 46325), (146, 46292), (147, 46289), (194, 46106), (208, 46046),

Gene: Antoinette\_59 Start: 39604, Stop: 38873, Start Num: 59

Candidate Starts for Antoinette\_59:

(Start: 59 @39604 has 201 MA's), (Start: 77 @39502 has 2 MA's), (98, 39385), (112, 39334), (134, 39271), (147, 39226), (151, 39217), (180, 39136), (194, 39079), (207, 39013), (234, 38902),

Gene: Anubis\_88 Start: 46927, Stop: 46160, Start Num: 56

Candidate Starts for Anubis\_88:

(45, 46972), (Start: 56 @46927 has 216 MA's), (62, 46906), (70, 46861), (73, 46840), (Start: 74 @46834 has 1 MA's), (Start: 79 @46792 has 2 MA's), (84, 46762), (86, 46747), (112, 46645), (114, 46642), (125, 46606), (146, 46534), (152, 46513), (184, 46384), (193, 46351), (198, 46324),

Gene: Apiary\_4 Start: 2670, Stop: 3488, Start Num: 52

Candidate Starts for Apiary\_4:

(Start: 24 @2547 has 1 MA's), (Start: 52 @2670 has 8 MA's), (67, 2730), (93, 2889), (109, 2946), (111, 2958), (130, 2991), (132, 3000), (134, 3012), (139, 3024), (141, 3027), (165, 3126), (202, 3306),

Gene: AranulaLuti\_58 Start: 39296, Stop: 38565, Start Num: 59

Candidate Starts for AranulaLuti\_58:

(Start: 59 @39296 has 201 MA's), (Start: 77 @39194 has 2 MA's), (98, 39077), (112, 39026), (134, 38963), (147, 38918), (151, 38909), (180, 38828), (194, 38771), (207, 38705), (234, 38594),

Gene: ArcherNM\_79 Start: 48007, Stop: 47249, Start Num: 56

Candidate Starts for ArcherNM\_79:

(10, 48298), (14, 48220), (Start: 56 @48007 has 216 MA's), (62, 47986), (65, 47974), (73, 47920), (Start: 77 @47893 has 2 MA's), (84, 47842), (85, 47836), (100, 47767), (112, 47725), (120, 47707), (146, 47620), (152, 47599), (157, 47581), (198, 47410), (199, 47407), (208, 47374), (235, 47272),

Gene: Archimedes\_49 Start: 39781, Stop: 40470, Start Num: 59

Candidate Starts for Archimedes\_49:

(44, 39721), (Start: 52 @39766 has 8 MA's), (Start: 59 @39781 has 201 MA's), (63, 39805), (69, 39844), (81, 39925), (87, 39964), (93, 39994), (97, 40015), (112, 40066), (132, 40102), (146, 40156), (180, 40240), (185, 40264), (188, 40276), (210, 40357), (226, 40411), (230, 40429), (237, 40465),

Gene: Ariadne\_11 Start: 4460, Stop: 5197, Start Num: 59

Candidate Starts for Ariadne\_11:

(Start: 59 @4460 has 201 MA's), (66, 4493), (Start: 77 @4562 has 2 MA's), (78, 4574), (80, 4589), (94, 4664), (98, 4679), (111, 4727), (134, 4787), (144, 4823), (176, 4907), (199, 5015), (207, 5051), (210, 5060), (234, 5162),

Gene: Arissanae\_83 Start: 48580, Stop: 47822, Start Num: 56

Candidate Starts for Arissanae\_83:

(Start: 56 @48580 has 216 MA's), (62, 48562), (76, 48472), (Start: 77 @48469 has 2 MA's), (80, 48442), (95, 48358), (100, 48343), (106, 48325), (112, 48301), (132, 48250), (141, 48223), (146, 48196), (151, 48184), (152, 48175), (161, 48145), (199, 47980), (208, 47947), (235, 47845),

Gene: Asta\_58 Start: 39301, Stop: 38570, Start Num: 59

Candidate Starts for Asta\_58:

(Start: 59 @39301 has 201 MA's), (Start: 77 @39199 has 2 MA's), (98, 39082), (112, 39031), (134, 38968), (147, 38923), (151, 38914), (180, 38833), (194, 38776), (201, 38740), (207, 38710), (234, 38599),

Gene: Aubergine\_58 Start: 39301, Stop: 38570, Start Num: 59

Candidate Starts for Aubergine\_58:

(Start: 59 @39301 has 201 MA's), (Start: 77 @39199 has 2 MA's), (98, 39082), (112, 39031), (134, 38968), (147, 38923), (151, 38914), (180, 38833), (194, 38776), (201, 38740), (207, 38710), (234, 38599),

Gene: AugsMagnumOpus\_87 Start: 46894, Stop: 46262, Start Num: 79

Candidate Starts for AugsMagnumOpus\_87:

(Start: 79 @46894 has 2 MA's), (84, 46864), (86, 46849), (112, 46747), (114, 46744), (125, 46708), (146, 46636), (152, 46615), (184, 46486), (193, 46453), (198, 46426),

Gene: AxiPup\_59 Start: 39515, Stop: 38784, Start Num: 59

Candidate Starts for AxiPup\_59:

(Start: 59 @39515 has 201 MA's), (Start: 77 @39413 has 2 MA's), (98, 39296), (112, 39245), (134, 39182), (147, 39137), (151, 39128), (180, 39047), (194, 38990), (201, 38954), (207, 38924), (234, 38813),

Gene: BabyBack\_79 Start: 47854, Stop: 47102, Start Num: 54

Candidate Starts for BabyBack\_79:

(Start: 54 @47854 has 4 MA's), (62, 47833), (69, 47791), (73, 47767), (Start: 79 @47719 has 2 MA's), (84, 47689), (85, 47683), (99, 47617), (130, 47536), (146, 47473), (151, 47461), (152, 47452), (198, 47266), (199, 47263), (217, 47203), (235, 47125),

Gene: Bachome\_84 Start: 46659, Stop: 45901, Start Num: 56

Candidate Starts for Bachome\_84:

(Start: 56 @46659 has 216 MA's), (62, 46635), (69, 46593), (Start: 77 @46542 has 2 MA's), (Start: 79 @46521 has 2 MA's), (81, 46512), (84, 46491), (85, 46485), (86, 46476), (109, 46389), (112, 46374), (132, 46326), (141, 46299), (146, 46272), (226, 45969), (235, 45924),

Gene: Baehexic\_83 Start: 48100, Stop: 47342, Start Num: 56

Candidate Starts for Baehexic\_83:

(Start: 56 @48100 has 216 MA's), (62, 48079), (69, 48037), (73, 48013), (Start: 77 @47986 has 2 MA's), (Start: 79 @47965 has 2 MA's), (85, 47929), (86, 47920), (93, 47890), (100, 47860), (130, 47776), (132, 47767), (146, 47713), (156, 47677), (172, 47629), (194, 47530), (198, 47506), (199, 47503), (235, 47365),

Gene: Baines\_58 Start: 39300, Stop: 38569, Start Num: 59

Candidate Starts for Baines\_58:

(Start: 59 @39300 has 201 MA's), (Start: 77 @39198 has 2 MA's), (98, 39081), (112, 39030), (134, 38967), (147, 38922), (151, 38913), (180, 38832), (194, 38775), (207, 38709), (234, 38598),

Gene: Balsa\_57 Start: 39430, Stop: 38699, Start Num: 59

Candidate Starts for Balsa\_57:

(Start: 59 @39430 has 201 MA's), (76, 39331), (Start: 77 @39328 has 2 MA's), (98, 39211), (112, 39160), (147, 39052), (151, 39043), (180, 38962), (194, 38905), (201, 38869), (207, 38839), (221, 38791), (234, 38728),

Gene: Bandik\_59 Start: 39548, Stop: 38817, Start Num: 59

Candidate Starts for Bandik\_59:

(Start: 59 @39548 has 201 MA's), (Start: 77 @39446 has 2 MA's), (98, 39329), (112, 39278), (134, 39215), (147, 39170), (151, 39161), (180, 39080), (194, 39023), (207, 38957), (234, 38846),

Gene: BartholomewSD\_70 Start: 44853, Stop: 44122, Start Num: 59

Candidate Starts for BartholomewSD\_70:

(20, 45018), (Start: 34 @44952 has 2 MA's), (35, 44946), (Start: 49 @44910 has 1 MA's), (Start: 59 @44853 has 201 MA's), (60, 44847), (Start: 77 @44742 has 2 MA's), (80, 44715), (156, 44499), (167, 44460), (172, 44442), (180, 44403), (184, 44382),

Gene: BeautPeep30\_59 Start: 39554, Stop: 38823, Start Num: 59

Candidate Starts for BeautPeep30\_59:

(Start: 59 @39554 has 201 MA's), (Start: 77 @39452 has 2 MA's), (98, 39335), (112, 39284), (134, 39221), (147, 39176), (151, 39167), (180, 39086), (194, 39029), (207, 38963), (234, 38852),

Gene: Beauxregard13\_83 Start: 47044, Stop: 46277, Start Num: 56

Candidate Starts for Beauxregard13\_83:

(45, 47089), (Start: 56 @47044 has 216 MA's), (62, 47023), (70, 46978), (73, 46957), (Start: 74 @46951 has 1 MA's), (Start: 79 @46909 has 2 MA's), (84, 46879), (86, 46864), (112, 46762), (114, 46759), (125, 46723), (146, 46651), (152, 46630), (184, 46501), (193, 46468), (198, 46441),

Gene: BeeBee8\_59 Start: 39604, Stop: 38873, Start Num: 59

Candidate Starts for BeeBee8\_59:

(Start: 59 @39604 has 201 MA's), (76, 39505), (Start: 77 @39502 has 2 MA's), (98, 39385), (112, 39334), (147, 39226), (151, 39217), (180, 39136), (194, 39079), (201, 39043), (207, 39013), (221, 38965), (234, 38902),

Gene: Beemo\_88 Start: 48697, Stop: 47936, Start Num: 56

Candidate Starts for Beemo\_88:

(Start: 24 @48823 has 1 MA's), (Start: 56 @48697 has 216 MA's), (69, 48637), (73, 48613), (Start: 77 @48586 has 2 MA's), (80, 48559), (88, 48505), (100, 48457), (106, 48439), (112, 48415), (132, 48364), (141, 48337), (146, 48310), (198, 48097), (199, 48094), (208, 48061), (235, 47959),

Gene: BengiVuitton\_86 Start: 48581, Stop: 47823, Start Num: 56

Candidate Starts for BengiVuitton\_86:

(Start: 56 @48581 has 216 MA's), (62, 48560), (69, 48518), (Start: 77 @48467 has 2 MA's), (Start: 79 @48446 has 2 MA's), (85, 48410), (86, 48401), (93, 48371), (100, 48341), (132, 48248), (146, 48194), (156, 48158), (172, 48110), (194, 48011), (199, 47984), (215, 47936), (235, 47846),

Gene: Benjalauren\_59 Start: 39307, Stop: 38576, Start Num: 59

Candidate Starts for Benjalauren\_59:

(Start: 59 @39307 has 201 MA's), (Start: 77 @39205 has 2 MA's), (98, 39088), (112, 39037), (134, 38974), (147, 38929), (151, 38920), (180, 38839), (194, 38782), (201, 38746), (207, 38716), (234, 38605),

Gene: Benvolio\_83 Start: 48347, Stop: 47592, Start Num: 54

Candidate Starts for Benvolio\_83:

(Start: 54 @48347 has 4 MA's), (62, 48326), (69, 48284), (73, 48260), (Start: 79 @48212 has 2 MA's), (81, 48203), (84, 48182), (85, 48176), (112, 48065), (130, 48023), (146, 47960), (152, 47939), (198, 47753), (199, 47750), (217, 47690), (235, 47612),

Gene: BiancaTri92\_82 Start: 48189, Stop: 47455, Start Num: 56

Candidate Starts for BiancaTri92\_82:

(17, 48357), (Start: 56 @48189 has 216 MA's), (69, 48132), (Start: 77 @48081 has 2 MA's), (105, 47940), (108, 47934), (125, 47892), (146, 47820), (184, 47673), (198, 47613), (199, 47610), (219, 47541),

Gene: BigRedClifford\_59 Start: 39542, Stop: 38811, Start Num: 59

Candidate Starts for BigRedClifford\_59:

(Start: 59 @39542 has 201 MA's), (Start: 77 @39440 has 2 MA's), (98, 39323), (112, 39272), (134, 39209), (147, 39164), (151, 39155), (180, 39074), (194, 39017), (207, 38951), (234, 38840),

Gene: Bigflo\_81 Start: 47040, Stop: 46273, Start Num: 56

Candidate Starts for Bigflo\_81:

(Start: 47 @47073 has 1 MA's), (Start: 56 @47040 has 216 MA's), (62, 47019), (70, 46974), (73, 46953), (Start: 74 @46947 has 1 MA's), (Start: 79 @46905 has 2 MA's), (84, 46875), (86, 46860), (112, 46758), (114, 46755), (125, 46719), (146, 46647), (152, 46626), (184, 46497), (193, 46464), (198, 46437),

Gene: Blage\_59 Start: 39542, Stop: 38811, Start Num: 59

Candidate Starts for Blage\_59:

(Start: 59 @39542 has 201 MA's), (Start: 77 @39440 has 2 MA's), (98, 39323), (112, 39272), (134, 39209), (147, 39164), (151, 39155), (180, 39074), (194, 39017), (207, 38951), (234, 38840),

Gene: BobSwaget\_78 Start: 46119, Stop: 45361, Start Num: 56

Candidate Starts for BobSwaget\_78:

(Start: 56 @46119 has 216 MA's), (62, 46098), (65, 46086), (Start: 77 @46005 has 2 MA's), (100, 45879), (108, 45858), (112, 45837), (130, 45795), (146, 45732), (184, 45582), (199, 45519), (235, 45384),

Gene: BogosyJay\_87 Start: 48744, Stop: 47986, Start Num: 56

Candidate Starts for BogosyJay\_87:

(Start: 56 @48744 has 216 MA's), (62, 48726), (76, 48636), (Start: 77 @48633 has 2 MA's), (80, 48606), (88, 48555), (100, 48507), (106, 48489), (112, 48465), (132, 48414), (141, 48387), (146, 48360), (151, 48348), (161, 48309), (199, 48144), (208, 48111), (235, 48009),

Gene: BonesMcCoy\_59 Start: 39543, Stop: 38812, Start Num: 59

Candidate Starts for BonesMcCoy\_59:

(Start: 59 @39543 has 201 MA's), (Start: 77 @39441 has 2 MA's), (98, 39324), (112, 39273), (134, 39210), (147, 39165), (151, 39156), (180, 39075), (194, 39018), (207, 38952), (234, 38841),

Gene: Bonino\_58 Start: 39280, Stop: 38549, Start Num: 59

Candidate Starts for Bonino\_58:

(Start: 59 @39280 has 201 MA's), (Start: 77 @39178 has 2 MA's), (98, 39061), (112, 39010), (134, 38947), (147, 38902), (151, 38893), (180, 38812), (194, 38755), (201, 38719), (207, 38689), (234, 38578),

Gene: BouleyBill\_50 Start: 36149, Stop: 35412, Start Num: 59

Candidate Starts for BouleyBill\_50:

(Start: 59 @36149 has 201 MA's), (Start: 77 @36038 has 2 MA's), (91, 35951), (98, 35921), (124, 35843), (134, 35810), (144, 35774), (180, 35675), (181, 35672), (193, 35621), (199, 35588), (203, 35564), (210, 35543),

Gene: Bowden\_66 Start: 45374, Stop: 44640, Start Num: 59

Candidate Starts for Bowden\_66:

(Start: 34 @45473 has 2 MA's), (35, 45467), (Start: 49 @45431 has 1 MA's), (Start: 59 @45374 has 201 MA's), (Start: 61 @45365 has 2 MA's), (Start: 77 @45260 has 2 MA's), (80, 45233), (156, 45017), (167, 44978), (172, 44960), (180, 44921), (184, 44900),

Gene: Bowtie\_83 Start: 46386, Stop: 45628, Start Num: 56

Candidate Starts for Bowtie\_83:

(Start: 56 @46386 has 216 MA's), (62, 46362), (69, 46320), (Start: 77 @46269 has 2 MA's), (Start: 79 @46248 has 2 MA's), (81, 46239), (84, 46218), (85, 46212), (86, 46203), (109, 46116), (112, 46101), (132, 46053), (141, 46026), (146, 45999), (226, 45696), (235, 45651),

Gene: Bradman\_87 Start: 47575, Stop: 46814, Start Num: 56

Candidate Starts for Bradman\_87:

(Start: 56 @47575 has 216 MA's), (62, 47551), (69, 47509), (Start: 79 @47437 has 2 MA's), (84, 47407), (85, 47401), (100, 47332), (112, 47290), (132, 47242), (146, 47188), (171, 47104), (184, 47038), (198, 46978), (199, 46975), (226, 46882), (235, 46837),

Gene: Braxoaddie\_4 Start: 2547, Stop: 3488, Start Num: 24

Candidate Starts for Braxoaddie\_4:



(Start: 24 @2547 has 1 MA's), (Start: 52 @2670 has 8 MA's), (67, 2730), (93, 2889), (109, 2946), (111, 2958), (130, 2991), (132, 3000), (134, 3012), (139, 3024), (141, 3027), (165, 3126), (202, 3306), (215, 3348),

Gene: BrazzalePHS\_7 Start: 3470, Stop: 4210, Start Num: 59

Candidate Starts for BrazzalePHS\_7:

(Start: 59 @3470 has 201 MA's), (66, 3503), (Start: 77 @3572 has 2 MA's), (78, 3584), (80, 3599), (94, 3674), (98, 3689), (144, 3833), (151, 3851), (176, 3917), (182, 3953), (199, 4025), (203, 4049), (207, 4061), (234, 4172),

Gene: BreSam8\_84 Start: 47034, Stop: 46267, Start Num: 56

Candidate Starts for BreSam8\_84:

(Start: 47 @47067 has 1 MA's), (Start: 56 @47034 has 216 MA's), (62, 47013), (70, 46968), (73, 46947), (Start: 74 @46941 has 1 MA's), (Start: 79 @46899 has 2 MA's), (84, 46869), (86, 46854), (112, 46752), (114, 46749), (125, 46713), (146, 46641), (152, 46620), (184, 46491), (193, 46458), (198, 46431),

Gene: Bud\_81 Start: 46216, Stop: 45458, Start Num: 56

Candidate Starts for Bud\_81:

(Start: 56 @46216 has 216 MA's), (62, 46192), (69, 46150), (Start: 77 @46099 has 2 MA's), (Start: 79 @46078 has 2 MA's), (81, 46069), (84, 46048), (85, 46042), (86, 46033), (109, 45946), (112, 45931), (132, 45883), (141, 45856), (146, 45829), (226, 45526), (235, 45481),

Gene: Busephilis\_8 Start: 3691, Stop: 4431, Start Num: 59

Candidate Starts for Busephilis\_8:

(Start: 59 @3691 has 201 MA's), (66, 3724), (Start: 77 @3793 has 2 MA's), (78, 3805), (80, 3820), (94, 3895), (98, 3910), (144, 4054), (151, 4072), (176, 4138), (182, 4174), (199, 4246), (203, 4270), (207, 4282), (212, 4297), (234, 4393),

Gene: Bustleton\_51 Start: 36138, Stop: 35401, Start Num: 59

Candidate Starts for Bustleton\_51:

(Start: 59 @36138 has 201 MA's), (Start: 77 @36027 has 2 MA's), (88, 35952), (91, 35940), (98, 35910), (124, 35832), (134, 35799), (144, 35763), (180, 35664), (181, 35661), (193, 35610), (199, 35577), (203, 35553), (210, 35532), (234, 35430),

Gene: BuzzBuzz\_78 Start: 47069, Stop: 46302, Start Num: 56

Candidate Starts for BuzzBuzz\_78:

(45, 47114), (Start: 56 @47069 has 216 MA's), (62, 47048), (70, 47003), (73, 46982), (Start: 74 @46976 has 1 MA's), (Start: 79 @46934 has 2 MA's), (84, 46904), (86, 46889), (112, 46787), (114, 46784), (125, 46748), (146, 46676), (152, 46655), (184, 46526), (193, 46493), (198, 46466),

Gene: Bxz2\_79 Start: 47076, Stop: 46309, Start Num: 56

Candidate Starts for Bxz2\_79:

(45, 47121), (Start: 56 @47076 has 216 MA's), (62, 47055), (70, 47010), (73, 46989), (Start: 74 @46983 has 1 MA's), (Start: 79 @46941 has 2 MA's), (84, 46911), (86, 46896), (112, 46794), (114, 46791), (125, 46755), (146, 46683), (152, 46662), (184, 46533), (193, 46500), (198, 46473),

Gene: Byron23\_60 Start: 39551, Stop: 38820, Start Num: 59

Candidate Starts for Byron23\_60:

(Start: 59 @39551 has 201 MA's), (Start: 77 @39449 has 2 MA's), (98, 39332), (112, 39281), (134, 39218), (147, 39173), (151, 39164), (180, 39083), (194, 39026), (207, 38960), (234, 38849),

Gene: C3\_76 Start: 46905, Stop: 46132, Start Num: 55

Candidate Starts for C3\_76:

(Start: 55 @46905 has 10 MA's), (62, 46881), (69, 46839), (73, 46815), (Start: 79 @46767 has 2 MA's), (84, 46737), (85, 46731), (101, 46659), (109, 46635), (112, 46620), (117, 46608), (146, 46506), (152, 46485), (199, 46293), (235, 46155),

Gene: CRB1\_85 Start: 48729, Stop: 47971, Start Num: 56

Candidate Starts for CRB1\_85:

(Start: 56 @48729 has 216 MA's), (62, 48708), (69, 48666), (Start: 77 @48615 has 2 MA's), (Start: 79 @48594 has 2 MA's), (85, 48558), (86, 48549), (93, 48519), (100, 48489), (132, 48396), (146, 48342), (156, 48306), (172, 48258), (194, 48159), (199, 48132), (215, 48084), (235, 47994),

Gene: Cafasso\_153 Start: 80306, Stop: 79533, Start Num: 58

Candidate Starts for Cafasso\_153:

(Start: 58 @80306 has 5 MA's), (69, 80240), (73, 80216), (76, 80192), (83, 80153), (89, 80108), (96, 80078), (106, 80048), (109, 80039), (116, 80015), (129, 79988), (135, 79961), (146, 79922), (174, 79823), (177, 79802), (195, 79730), (196, 79724), (227, 79607), (233, 79568), (241, 79544),

Gene: Calix\_58 Start: 39287, Stop: 38556, Start Num: 59

Candidate Starts for Calix\_58:

(Start: 59 @39287 has 201 MA's), (Start: 77 @39185 has 2 MA's), (98, 39068), (112, 39017), (134, 38954), (147, 38909), (151, 38900), (180, 38819), (194, 38762), (201, 38726), (207, 38696), (234, 38585),

Gene: Calvinny\_81 Start: 46852, Stop: 46085, Start Num: 56

Candidate Starts for Calvinny\_81:

(45, 46897), (Start: 56 @46852 has 216 MA's), (62, 46831), (69, 46789), (70, 46786), (73, 46765), (Start: 74 @46759 has 1 MA's), (Start: 79 @46717 has 2 MA's), (84, 46687), (86, 46672), (112, 46570), (125, 46531), (130, 46522), (143, 46471), (146, 46459), (184, 46309), (198, 46249),

Gene: Caraxes\_85 Start: 47204, Stop: 46461, Start Num: 56

Candidate Starts for Caraxes\_85:

(Start: 56 @47204 has 216 MA's), (62, 47186), (69, 47144), (Start: 77 @47093 has 2 MA's), (Start: 79 @47072 has 2 MA's), (92, 47000), (100, 46967), (112, 46925), (115, 46919), (132, 46874), (141, 46847), (146, 46820), (149, 46811), (198, 46625), (208, 46589), (219, 46553), (235, 46484),

Gene: CarisSwetlik\_59 Start: 39888, Stop: 39160, Start Num: 59

Candidate Starts for CarisSwetlik\_59:

(Start: 59 @39888 has 201 MA's), (Start: 77 @39789 has 2 MA's), (80, 39762), (101, 39663), (112, 39621), (134, 39558), (147, 39513), (151, 39504), (180, 39423), (207, 39300),

Gene: Catalina\_90 Start: 48810, Stop: 48049, Start Num: 56

Candidate Starts for Catalina\_90:

(Start: 56 @48810 has 216 MA's), (69, 48750), (Start: 77 @48699 has 2 MA's), (80, 48672), (88, 48618), (100, 48570), (106, 48552), (112, 48528), (132, 48477), (141, 48450), (146, 48423), (198, 48210), (199, 48207), (208, 48174), (235, 48072),

Gene: Centaur\_84 Start: 47978, Stop: 47220, Start Num: 56

Candidate Starts for Centaur\_84:

(Start: 56 @47978 has 216 MA's), (62, 47957), (65, 47945), (69, 47915), (73, 47891), (Start: 77 @47864 has 2 MA's), (Start: 79 @47843 has 2 MA's), (85, 47807), (86, 47798), (93, 47768), (100, 47738), (112, 47696), (130, 47654), (132, 47645), (146, 47591), (156, 47555), (172, 47507), (194, 47408), (198, 47384), (199, 47381), (235, 47243),

Gene: Chako\_58 Start: 39296, Stop: 38565, Start Num: 59

Candidate Starts for Chako\_58:

(Start: 59 @39296 has 201 MA's), (Start: 77 @39194 has 2 MA's), (98, 39077), (112, 39026), (134, 38963), (147, 38918), (151, 38909), (180, 38828), (194, 38771), (207, 38705), (234, 38594),

Gene: Chamuel\_58 Start: 39313, Stop: 38582, Start Num: 59

Candidate Starts for Chamuel\_58:

(Start: 59 @39313 has 201 MA's), (Start: 77 @39211 has 2 MA's), (98, 39094), (112, 39043), (134, 38980), (147, 38935), (151, 38926), (180, 38845), (194, 38788), (201, 38752), (207, 38722), (234, 38611),

Gene: Changeling\_83 Start: 48672, Stop: 47914, Start Num: 56

Candidate Starts for Changeling\_83:

(Start: 52 @48675 has 8 MA's), (Start: 56 @48672 has 216 MA's), (62, 48648), (69, 48606), (73, 48582), (Start: 77 @48555 has 2 MA's), (86, 48489), (91, 48465), (100, 48429), (128, 48351), (132, 48336), (146, 48282), (152, 48261), (198, 48075), (199, 48072), (235, 47934),

Gene: Chargerpower\_84 Start: 46758, Stop: 45994, Start Num: 56

Candidate Starts for Chargerpower\_84:

(28, 46863), (Start: 56 @46758 has 216 MA's), (62, 46731), (76, 46641), (Start: 77 @46638 has 2 MA's), (100, 46512), (112, 46470), (146, 46365), (152, 46344), (184, 46215), (198, 46155), (199, 46152), (235, 46017),

Gene: Charm\_83 Start: 48094, Stop: 47330, Start Num: 56

Candidate Starts for Charm\_83:

(Start: 56 @48094 has 216 MA's), (62, 48070), (Start: 77 @47977 has 2 MA's), (80, 47950), (100, 47851), (112, 47809), (132, 47758), (141, 47731), (146, 47704), (152, 47683), (199, 47488), (208, 47455), (235, 47353),

Gene: Che12\_86 Start: 47324, Stop: 46581, Start Num: 56

Candidate Starts for Che12\_86:

(Start: 56 @47324 has 216 MA's), (62, 47306), (69, 47264), (Start: 77 @47213 has 2 MA's), (Start: 79 @47192 has 2 MA's), (92, 47120), (100, 47087), (109, 47060), (115, 47039), (132, 46994), (141, 46967), (146, 46940), (198, 46745), (219, 46673), (235, 46604),

Gene: Cheeto1\_55 Start: 37748, Stop: 37017, Start Num: 59

Candidate Starts for Cheeto1\_55:

(46, 37787), (Start: 59 @37748 has 201 MA's), (Start: 74 @37667 has 1 MA's), (76, 37649), (Start: 77 @37646 has 2 MA's), (78, 37634), (98, 37529), (107, 37505), (112, 37478), (131, 37433), (134, 37415), (141, 37400), (180, 37280), (201, 37187), (207, 37157), (225, 37091), (234, 37046),

Gene: ChickenKing\_53 Start: 37901, Stop: 37170, Start Num: 59

Candidate Starts for ChickenKing\_53:

(46, 37940), (Start: 59 @37901 has 201 MA's), (Start: 74 @37820 has 1 MA's), (76, 37802), (Start: 77 @37799 has 2 MA's), (78, 37787), (98, 37682), (112, 37631), (131, 37586), (134, 37568), (141, 37553), (180, 37433), (201, 37340), (207, 37310), (225, 37244), (234, 37199),

Gene: ChikPic\_56 Start: 37560, Stop: 36835, Start Num: 59

Candidate Starts for ChikPic\_56:

(Start: 59 @37560 has 201 MA's), (Start: 77 @37458 has 2 MA's), (98, 37350), (134, 37233), (144, 37197), (148, 37185), (180, 37098), (194, 37041),

Gene: ChipMunk\_85 Start: 49636, Stop: 48881, Start Num: 56

Candidate Starts for ChipMunk\_85:

(Start: 56 @49636 has 216 MA's), (62, 49615), (69, 49573), (73, 49549), (Start: 79 @49501 has 2 MA's), (91, 49432), (100, 49396), (128, 49318), (146, 49249), (152, 49228), (198, 49042), (199, 49039), (235, 48901),

Gene: Christoph\_58 Start: 39300, Stop: 38569, Start Num: 59

Candidate Starts for Christoph\_58:

(Start: 59 @39300 has 201 MA's), (Start: 77 @39198 has 2 MA's), (98, 39081), (112, 39030), (134, 38967), (147, 38922), (151, 38913), (180, 38832), (194, 38775), (201, 38739), (207, 38709), (234, 38598),

Gene: Clancy\_58 Start: 39300, Stop: 38569, Start Num: 59

Candidate Starts for Clancy\_58:

(Start: 59 @39300 has 201 MA's), (Start: 77 @39198 has 2 MA's), (98, 39081), (112, 39030), (134, 38967), (147, 38922), (151, 38913), (180, 38832), (194, 38775), (207, 38709), (234, 38598),

Gene: ClearAsMud\_7 Start: 3748, Stop: 4488, Start Num: 59

Candidate Starts for ClearAsMud\_7:

(Start: 59 @3748 has 201 MA's), (66, 3781), (Start: 77 @3850 has 2 MA's), (78, 3862), (80, 3877), (94, 3952), (98, 3967), (144, 4111), (151, 4129), (176, 4195), (182, 4231), (203, 4327), (207, 4339), (234, 4450), (244, 4480),

Gene: CoffeeBean\_4 Start: 2679, Stop: 3497, Start Num: 52

Candidate Starts for CoffeeBean\_4:

(Start: 52 @2679 has 8 MA's), (67, 2739), (71, 2763), (93, 2898), (109, 2955), (111, 2967), (130, 3000), (132, 3009), (134, 3021), (139, 3033), (141, 3036), (165, 3135), (202, 3315), (215, 3357),

Gene: ColaCorta\_56 Start: 37751, Stop: 37026, Start Num: 59

Candidate Starts for ColaCorta\_56:

(Start: 59 @37751 has 201 MA's), (Start: 77 @37649 has 2 MA's), (98, 37541), (126, 37454), (134, 37424), (144, 37388), (148, 37376), (180, 37289), (194, 37232),

Gene: Colbster\_80 Start: 47044, Stop: 46277, Start Num: 56

Candidate Starts for Colbster\_80:

(45, 47089), (Start: 56 @47044 has 216 MA's), (62, 47023), (70, 46978), (73, 46957), (Start: 74 @46951 has 1 MA's), (Start: 79 @46909 has 2 MA's), (84, 46879), (86, 46864), (112, 46762), (114, 46759), (125, 46723), (146, 46651), (152, 46630), (184, 46501), (193, 46468), (198, 46441),

Gene: Colin\_83 Start: 49050, Stop: 48295, Start Num: 56

Candidate Starts for Colin\_83:

(Start: 56 @49050 has 216 MA's), (62, 49029), (65, 49017), (69, 48987), (73, 48963), (76, 48939), (Start: 77 @48936 has 2 MA's), (100, 48810), (112, 48768), (132, 48717), (146, 48663), (152, 48642), (187, 48501), (198, 48456), (199, 48453), (208, 48420), (235, 48318),

Gene: Conquerage\_86 Start: 48472, Stop: 47711, Start Num: 56

Candidate Starts for Conquerage\_86:

(Start: 24 @48598 has 1 MA's), (Start: 56 @48472 has 216 MA's), (69, 48412), (73, 48388), (Start: 77 @48361 has 2 MA's), (80, 48334), (88, 48280), (100, 48232), (106, 48214), (112, 48190), (132, 48139), (141, 48112), (142, 48109), (146, 48085), (198, 47872), (199, 47869), (208, 47836), (235, 47734),

Gene: Convict\_59 Start: 39543, Stop: 38812, Start Num: 59

Candidate Starts for Convict\_59:

(Start: 59 @39543 has 201 MA's), (Start: 77 @39441 has 2 MA's), (98, 39324), (112, 39273), (134, 39210), (147, 39165), (151, 39156), (180, 39075), (194, 39018), (207, 38952), (234, 38841),

Gene: Cranjis\_7 Start: 3479, Stop: 4219, Start Num: 59

Candidate Starts for Cranjis\_7:

(Start: 59 @3479 has 201 MA's), (66, 3512), (Start: 77 @3581 has 2 MA's), (78, 3593), (80, 3608), (94, 3683), (98, 3698), (144, 3842), (151, 3860), (176, 3926), (182, 3962), (203, 4058), (207, 4070), (234, 4181), (244, 4211),

Gene: CrazyRich\_7 Start: 3470, Stop: 4210, Start Num: 59

Candidate Starts for CrazyRich\_7:

(Start: 59 @3470 has 201 MA's), (66, 3503), (Start: 77 @3572 has 2 MA's), (78, 3584), (80, 3599), (94, 3674), (98, 3689), (144, 3833), (151, 3851), (176, 3917), (182, 3953), (199, 4025), (203, 4049), (207, 4061), (234, 4172),

Gene: Crisis\_7 Start: 3479, Stop: 4219, Start Num: 59

Candidate Starts for Crisis\_7:

(Start: 59 @3479 has 201 MA's), (66, 3512), (Start: 77 @3581 has 2 MA's), (78, 3593), (80, 3608), (94, 3683), (98, 3698), (144, 3842), (151, 3860), (176, 3926), (182, 3962), (199, 4034), (203, 4058), (207, 4070), (234, 4181), (244, 4211),

Gene: Crucio\_84 Start: 48580, Stop: 47822, Start Num: 56

Candidate Starts for Crucio\_84:

(Start: 56 @48580 has 216 MA's), (62, 48559), (69, 48517), (73, 48493), (Start: 77 @48466 has 2 MA's), (Start: 79 @48445 has 2 MA's), (85, 48409), (86, 48400), (100, 48340), (130, 48256), (132, 48247), (146, 48193), (156, 48157), (172, 48109), (194, 48010), (199, 47983), (218, 47917), (235, 47845),

Gene: Cullens\_85 Start: 47043, Stop: 46276, Start Num: 56

Candidate Starts for Cullens\_85:

(Start: 47 @47076 has 1 MA's), (Start: 56 @47043 has 216 MA's), (62, 47022), (70, 46977), (73, 46956), (Start: 74 @46950 has 1 MA's), (Start: 79 @46908 has 2 MA's), (84, 46878), (86, 46863), (112, 46761), (114, 46758), (125, 46722), (146, 46650), (152, 46629), (184, 46500), (193, 46467), (198, 46440),

Gene: DBQu4n\_84 Start: 47950, Stop: 47177, Start Num: 55

Candidate Starts for DBQu4n\_84:

(Start: 55 @47950 has 10 MA's), (62, 47926), (69, 47884), (73, 47860), (Start: 79 @47812 has 2 MA's), (84, 47782), (85, 47776), (109, 47680), (112, 47665), (117, 47653), (146, 47551), (152, 47530), (199, 47338), (235, 47200),

Gene: DaHudson\_83 Start: 47033, Stop: 46266, Start Num: 56

Candidate Starts for DaHudson\_83:

(Start: 47 @47066 has 1 MA's), (Start: 56 @47033 has 216 MA's), (62, 47012), (70, 46967), (73, 46946), (Start: 74 @46940 has 1 MA's), (Start: 79 @46898 has 2 MA's), (84, 46868), (86, 46853), (112, 46751), (114, 46748), (125, 46712), (146, 46640), (152, 46619), (184, 46490), (193, 46457), (198, 46430),

Gene: Daishi\_83 Start: 45910, Stop: 45143, Start Num: 56

Candidate Starts for Daishi\_83:

(45, 45955), (Start: 56 @45910 has 216 MA's), (62, 45889), (70, 45844), (73, 45823), (Start: 74 @45817 has 1 MA's), (Start: 79 @45775 has 2 MA's), (84, 45745), (86, 45730), (112, 45628), (114, 45625), (125, 45589), (146, 45517), (152, 45496), (184, 45367), (193, 45334), (198, 45307),

Gene: Dalmatian\_84 Start: 48402, Stop: 47644, Start Num: 56

Candidate Starts for Dalmatian\_84:

(Start: 56 @48402 has 216 MA's), (62, 48381), (69, 48339), (73, 48315), (Start: 77 @48288 has 2 MA's), (Start: 79 @48267 has 2 MA's), (85, 48231), (92, 48195), (100, 48162), (130, 48078), (132, 48069), (146, 48015), (156, 47979), (172, 47931), (194, 47832), (198, 47808), (199, 47805), (235, 47667),

Gene: Darrell\_86 Start: 47900, Stop: 47139, Start Num: 56

Candidate Starts for Darrell\_86:

(Start: 56 @47900 has 216 MA's), (69, 47840), (73, 47816), (Start: 77 @47789 has 2 MA's), (80, 47762), (90, 47699), (95, 47675), (100, 47660), (108, 47639), (112, 47618), (130, 47576), (132, 47567), (141, 47540), (146, 47513), (161, 47462), (198, 47300), (199, 47297), (235, 47162),

Gene: DarthPhader\_84 Start: 49603, Stop: 48851, Start Num: 56

Candidate Starts for DarthPhader\_84:

(Start: 56 @49603 has 216 MA's), (62, 49582), (65, 49570), (76, 49492), (Start: 77 @49489 has 2 MA's), (84, 49438), (100, 49363), (106, 49345), (108, 49342), (112, 49321), (130, 49279), (132, 49270), (146, 49216), (152, 49195), (159, 49177), (161, 49165), (184, 49066), (199, 49006), (217, 48946),

Gene: Dave\_59 Start: 39604, Stop: 38873, Start Num: 59

Candidate Starts for Dave\_59:

(Start: 59 @39604 has 201 MA's), (Start: 77 @39502 has 2 MA's), (98, 39385), (112, 39334), (134, 39271), (147, 39226), (151, 39217), (180, 39136), (194, 39079), (207, 39013), (234, 38902),

Gene: DelaGarza\_62 Start: 35949, Stop: 36692, Start Num: 59

Candidate Starts for DelaGarza\_62:

(1, 35244), (2, 35247), (3, 35286), (6, 35598), (8, 35622), (11, 35661), (12, 35706), (13, 35730), (42, 35895), (Start: 59 @35949 has 201 MA's), (Start: 77 @36063 has 2 MA's), (88, 36138), (101, 36189), (110, 36222), (111, 36228), (134, 36288), (147, 36333), (151, 36342), (193, 36477), (199, 36510), (201, 36516), (207, 36546), (210, 36555), (231, 36639), (242, 36681),

Gene: Deloris\_86 Start: 48274, Stop: 47516, Start Num: 56

Candidate Starts for Deloris\_86:

(Start: 56 @48274 has 216 MA's), (62, 48253), (69, 48211), (Start: 77 @48160 has 2 MA's), (Start: 79 @48139 has 2 MA's), (85, 48103), (86, 48094), (93, 48064), (100, 48034), (132, 47941), (146, 47887), (156, 47851), (172, 47803), (194, 47704), (199, 47677), (215, 47629), (235, 47539),

Gene: Delphidian\_58 Start: 39340, Stop: 38609, Start Num: 59

Candidate Starts for Delphidian\_58:

(Start: 59 @39340 has 201 MA's), (Start: 77 @39238 has 2 MA's), (98, 39121), (112, 39070), (134, 39007), (147, 38962), (151, 38953), (180, 38872), (194, 38815), (207, 38749), (234, 38638),

Gene: Den3\_59 Start: 39547, Stop: 38816, Start Num: 59

Candidate Starts for Den3\_59:

(Start: 59 @39547 has 201 MA's), (Start: 77 @39445 has 2 MA's), (98, 39328), (112, 39277), (134, 39214), (147, 39169), (151, 39160), (180, 39079), (194, 39022), (207, 38956), (234, 38845),

Gene: Dieselweasel\_85 Start: 47042, Stop: 46275, Start Num: 56

Candidate Starts for Dieselweasel\_85:

(45, 47087), (Start: 56 @47042 has 216 MA's), (62, 47021), (70, 46976), (73, 46955), (Start: 74 @46949 has 1 MA's), (Start: 79 @46907 has 2 MA's), (84, 46877), (86, 46862), (112, 46760), (114,

46757), (125, 46721), (146, 46649), (152, 46628), (184, 46499), (193, 46466), (198, 46439),

Gene: Dignity\_86 Start: 48816, Stop: 48061, Start Num: 56

Candidate Starts for Dignity\_86:

(Start: 56 @48816 has 216 MA's), (62, 48795), (69, 48753), (73, 48729), (Start: 79 @48681 has 2 MA's), (91, 48612), (100, 48576), (128, 48498), (146, 48429), (152, 48408), (198, 48222), (199, 48219), (235, 48081),

Gene: Dothraki\_59 Start: 39551, Stop: 38820, Start Num: 59

Candidate Starts for Dothraki\_59:

(Start: 59 @39551 has 201 MA's), (Start: 77 @39449 has 2 MA's), (98, 39332), (112, 39281), (134, 39218), (147, 39173), (151, 39164), (180, 39083), (194, 39026), (207, 38960), (234, 38849),

Gene: Drake55\_85 Start: 48229, Stop: 47471, Start Num: 56

Candidate Starts for Drake55\_85:

(Start: 56 @48229 has 216 MA's), (62, 48208), (65, 48196), (69, 48166), (73, 48142), (Start: 77 @48115 has 2 MA's), (Start: 79 @48094 has 2 MA's), (85, 48058), (86, 48049), (93, 48019), (100, 47989), (112, 47947), (130, 47905), (132, 47896), (146, 47842), (156, 47806), (172, 47758), (194, 47659), (198, 47635), (199, 47632), (235, 47494),

Gene: DreamTeam1\_83 Start: 47942, Stop: 47178, Start Num: 56

Candidate Starts for DreamTeam1\_83:

(Start: 56 @47942 has 216 MA's), (62, 47918), (Start: 77 @47825 has 2 MA's), (80, 47798), (100, 47699), (112, 47657), (132, 47606), (141, 47579), (146, 47552), (152, 47531), (199, 47336), (208, 47303), (235, 47201),

Gene: Dryad\_79 Start: 53594, Stop: 52629, Start Num: 29

Candidate Starts for Dryad\_79:

(Start: 29 @53594 has 8 MA's), (36, 53573), (Start: 61 @53480 has 2 MA's), (64, 53453), (75, 53384), (82, 53333), (94, 53258), (95, 53252), (98, 53243), (99, 53240), (118, 53162), (133, 53111), (195, 52844), (206, 52784), (207, 52781), (213, 52763), (222, 52721), (232, 52682), (236, 52658),

Gene: DudeLittle\_82 Start: 48120, Stop: 47362, Start Num: 56

Candidate Starts for DudeLittle\_82:

(Start: 56 @48120 has 216 MA's), (62, 48099), (69, 48057), (73, 48033), (Start: 77 @48006 has 2 MA's), (Start: 79 @47985 has 2 MA's), (85, 47949), (92, 47913), (100, 47880), (130, 47796), (132, 47787), (146, 47733), (156, 47697), (172, 47649), (194, 47550), (198, 47526), (199, 47523), (235, 47385),

Gene: Duocatuli\_58 Start: 39296, Stop: 38565, Start Num: 59

Candidate Starts for Duocatuli\_58:

(Start: 59 @39296 has 201 MA's), (Start: 77 @39194 has 2 MA's), (98, 39077), (112, 39026), (134, 38963), (147, 38918), (151, 38909), (180, 38828), (194, 38771), (207, 38705), (234, 38594),

Gene: Duplo\_85 Start: 48007, Stop: 47234, Start Num: 55

Candidate Starts for Duplo\_85:

(Start: 55 @48007 has 10 MA's), (62, 47983), (69, 47941), (73, 47917), (Start: 79 @47869 has 2 MA's), (84, 47839), (85, 47833), (109, 47737), (112, 47722), (117, 47710), (146, 47608), (152, 47587), (199, 47395), (235, 47257),

Gene: EZMoney23\_80 Start: 47682, Stop: 46924, Start Num: 56

Candidate Starts for EZMoney23\_80:

(Start: 56 @47682 has 216 MA's), (62, 47661), (65, 47649), (73, 47595), (Start: 77 @47568 has 2 MA's), (88, 47490), (100, 47442), (112, 47400), (120, 47382), (130, 47358), (132, 47349), (146, 47295), (149, 47286), (152, 47274), (198, 47085), (199, 47082), (208, 47049), (235, 46947),

Gene: EagleEye\_84 Start: 47602, Stop: 46832, Start Num: 56

Candidate Starts for EagleEye\_84:

(32, 47695), (Start: 56 @47602 has 216 MA's), (62, 47581), (73, 47515), (Start: 79 @47467 has 2 MA's), (84, 47437), (99, 47365), (112, 47320), (130, 47269), (146, 47206), (152, 47185), (169, 47128), (198, 46996), (199, 46993), (226, 46900), (235, 46855),

Gene: EarickHC\_7 Start: 3479, Stop: 4219, Start Num: 59

Candidate Starts for EarickHC\_7:

(Start: 59 @3479 has 201 MA's), (66, 3512), (Start: 77 @3581 has 2 MA's), (78, 3593), (80, 3608), (94, 3683), (98, 3698), (144, 3842), (176, 3926), (182, 3962), (203, 4058), (207, 4070), (234, 4181), (244, 4211),

Gene: Ebony\_86 Start: 47350, Stop: 46592, Start Num: 56

Candidate Starts for Ebony\_86:

(Start: 56 @47350 has 216 MA's), (62, 47326), (69, 47284), (Start: 77 @47233 has 2 MA's), (Start: 79 @47212 has 2 MA's), (81, 47203), (84, 47182), (85, 47176), (86, 47167), (109, 47080), (112, 47065), (132, 47017), (141, 46990), (146, 46963), (226, 46660), (235, 46615),

Gene: Echild\_87 Start: 48371, Stop: 47616, Start Num: 54

Candidate Starts for Echild\_87:

(Start: 54 @48371 has 4 MA's), (62, 48350), (69, 48308), (73, 48284), (Start: 79 @48236 has 2 MA's), (81, 48227), (84, 48206), (85, 48200), (112, 48089), (130, 48047), (146, 47984), (152, 47963), (198, 47777), (199, 47774), (217, 47714), (235, 47636),

Gene: EdogawaKiddo\_87 Start: 48774, Stop: 48013, Start Num: 56

Candidate Starts for EdogawaKiddo\_87:

(Start: 24 @48900 has 1 MA's), (Start: 56 @48774 has 216 MA's), (69, 48714), (73, 48690), (Start: 77 @48663 has 2 MA's), (80, 48636), (88, 48582), (100, 48534), (106, 48516), (112, 48492), (132, 48441), (141, 48414), (146, 48387), (198, 48174), (199, 48171), (208, 48138), (235, 48036),

Gene: Eidsmoe\_86 Start: 48464, Stop: 47703, Start Num: 56

Candidate Starts for Eidsmoe\_86:

(Start: 56 @48464 has 216 MA's), (69, 48404), (Start: 77 @48353 has 2 MA's), (80, 48326), (88, 48272), (100, 48224), (106, 48206), (112, 48182), (132, 48131), (141, 48104), (142, 48101), (146, 48077), (198, 47864), (199, 47861), (208, 47828), (235, 47726),

Gene: Elephantoon\_88 Start: 48624, Stop: 47866, Start Num: 56

Candidate Starts for Elephantoon\_88:

(Start: 56 @48624 has 216 MA's), (62, 48606), (76, 48516), (Start: 77 @48513 has 2 MA's), (80, 48486), (100, 48387), (106, 48369), (112, 48345), (132, 48294), (141, 48267), (146, 48240), (151, 48228), (161, 48189), (198, 48027), (199, 48024), (208, 47991), (235, 47889),

Gene: Eleri\_56 Start: 37596, Stop: 36871, Start Num: 59

Candidate Starts for Eleri\_56:

(Start: 59 @37596 has 201 MA's), (Start: 77 @37494 has 2 MA's), (98, 37386), (126, 37299), (134, 37269), (144, 37233), (148, 37221), (180, 37134), (194, 37077),

Gene: EmyBug\_85 Start: 48466, Stop: 47705, Start Num: 56

Candidate Starts for EmyBug\_85:



(Start: 56 @48466 has 216 MA's), (69, 48406), (Start: 77 @48355 has 2 MA's), (80, 48328), (88, 48274), (100, 48226), (106, 48208), (112, 48184), (132, 48133), (141, 48106), (142, 48103), (146, 48079), (198, 47866), (199, 47863), (208, 47830), (235, 47728),

Gene: Endor\_60 Start: 39867, Stop: 39136, Start Num: 59

Candidate Starts for Endor\_60:

(Start: 59 @39867 has 201 MA's), (76, 39768), (Start: 77 @39765 has 2 MA's), (98, 39648), (112, 39597), (134, 39534), (147, 39489), (151, 39480), (180, 39399), (194, 39342), (201, 39306), (207, 39276), (234, 39165),

Gene: EpicPhail\_85 Start: 47044, Stop: 46277, Start Num: 56

Candidate Starts for EpicPhail\_85:

(45, 47089), (Start: 56 @47044 has 216 MA's), (62, 47023), (70, 46978), (73, 46957), (Start: 74 @46951 has 1 MA's), (Start: 79 @46909 has 2 MA's), (84, 46879), (86, 46864), (112, 46762), (114, 46759), (125, 46723), (146, 46651), (152, 46630), (184, 46501), (193, 46468), (198, 46441),

Gene: Epsocamisio\_85 Start: 46956, Stop: 46240, Start Num: 56

Candidate Starts for Epsocamisio\_85:

(31, 47052), (Start: 41 @47022 has 1 MA's), (Start: 49 @47001 has 1 MA's), (Start: 56 @46956 has 216 MA's), (62, 46932), (Start: 77 @46839 has 2 MA's), (86, 46773), (99, 46716), (105, 46698), (112, 46671), (123, 46641), (128, 46635), (130, 46629), (132, 46620), (146, 46566), (151, 46554), (199, 46398),

Gene: Equemioh13\_84 Start: 48207, Stop: 47449, Start Num: 56

Candidate Starts for Equemioh13\_84:

(Start: 56 @48207 has 216 MA's), (62, 48186), (65, 48174), (69, 48144), (73, 48120), (Start: 77 @48093 has 2 MA's), (Start: 79 @48072 has 2 MA's), (85, 48036), (86, 48027), (93, 47997), (100, 47967), (130, 47883), (132, 47874), (146, 47820), (156, 47784), (172, 47736), (194, 47637), (198, 47613), (199, 47610), (235, 47472),

Gene: Erla\_58 Start: 39284, Stop: 38553, Start Num: 59

Candidate Starts for Erla\_58:

(Start: 59 @39284 has 201 MA's), (Start: 77 @39182 has 2 MA's), (98, 39065), (112, 39014), (134, 38951), (147, 38906), (151, 38897), (180, 38816), (194, 38759), (201, 38723), (207, 38693), (234, 38582),

Gene: Espinosa\_58 Start: 39299, Stop: 38568, Start Num: 59

Candidate Starts for Espinosa\_58:

(Start: 59 @39299 has 201 MA's), (Start: 77 @39197 has 2 MA's), (98, 39080), (112, 39029), (134, 38966), (147, 38921), (151, 38912), (180, 38831), (194, 38774), (201, 38738), (207, 38708), (234, 38597),

Gene: Et2Brutus\_85 Start: 47313, Stop: 46555, Start Num: 56

Candidate Starts for Et2Brutus\_85:

(Start: 56 @47313 has 216 MA's), (62, 47289), (69, 47247), (Start: 77 @47196 has 2 MA's), (Start: 79 @47175 has 2 MA's), (81, 47166), (84, 47145), (85, 47139), (86, 47130), (109, 47043), (112, 47028), (132, 46980), (141, 46953), (146, 46926), (226, 46623), (235, 46578),

Gene: Etna\_58 Start: 39477, Stop: 38746, Start Num: 59

Candidate Starts for Etna\_58:

(Start: 59 @39477 has 201 MA's), (76, 39378), (Start: 77 @39375 has 2 MA's), (98, 39258), (112, 39207), (147, 39099), (151, 39090), (180, 39009), (194, 38952), (201, 38916), (207, 38886), (221, 38838), (234, 38775),

Gene: Etta\_58 Start: 39288, Stop: 38557, Start Num: 59

Candidate Starts for Etta\_58:

(Start: 59 @39288 has 201 MA's), (Start: 77 @39186 has 2 MA's), (98, 39069), (112, 39018), (134, 38955), (147, 38910), (151, 38901), (180, 38820), (194, 38763), (207, 38697), (234, 38586),

Gene: EvilGenius\_84 Start: 49637, Stop: 48882, Start Num: 56

Candidate Starts for EvilGenius\_84:

(Start: 56 @49637 has 216 MA's), (62, 49616), (69, 49574), (73, 49550), (Start: 79 @49502 has 2 MA's), (91, 49433), (100, 49397), (128, 49319), (146, 49250), (152, 49229), (198, 49043), (199, 49040), (235, 48902),

Gene: Exploradora\_58 Start: 39249, Stop: 38518, Start Num: 59

Candidate Starts for Exploradora\_58:

(Start: 59 @39249 has 201 MA's), (Start: 77 @39147 has 2 MA's), (98, 39030), (112, 38979), (134, 38916), (147, 38871), (151, 38862), (180, 38781), (194, 38724), (201, 38688), (207, 38658), (234, 38547),

Gene: ExplosioNervosa\_86 Start: 48532, Stop: 47771, Start Num: 56

Candidate Starts for ExplosioNervosa\_86:

(Start: 56 @48532 has 216 MA's), (69, 48472), (Start: 77 @48421 has 2 MA's), (80, 48394), (88, 48340), (100, 48292), (106, 48274), (112, 48250), (132, 48199), (141, 48172), (142, 48169), (146, 48145), (198, 47932), (199, 47929), (208, 47896), (235, 47794),

Gene: Fameo\_82 Start: 48132, Stop: 47374, Start Num: 56

Candidate Starts for Fameo\_82:

(Start: 52 @48135 has 8 MA's), (Start: 56 @48132 has 216 MA's), (62, 48111), (69, 48069), (70, 48066), (73, 48045), (Start: 77 @48018 has 2 MA's), (Start: 79 @47997 has 2 MA's), (85, 47961), (86, 47952), (100, 47892), (130, 47808), (132, 47799), (146, 47745), (156, 47709), (172, 47661), (194, 47562), (199, 47535), (218, 47469), (235, 47397),

Gene: FarmerDoug\_58 Start: 39300, Stop: 38569, Start Num: 59

Candidate Starts for FarmerDoug\_58:

(Start: 59 @39300 has 201 MA's), (Start: 77 @39198 has 2 MA's), (112, 39030), (147, 38922), (151, 38913), (180, 38832), (201, 38739), (207, 38709), (234, 38598),

Gene: FatCactus\_76 Start: 46136, Stop: 45384, Start Num: 56

Candidate Starts for FatCactus\_76:

(Start: 49 @46178 has 1 MA's), (Start: 56 @46136 has 216 MA's), (62, 46115), (69, 46073), (73, 46049), (Start: 77 @46022 has 2 MA's), (81, 45992), (84, 45971), (85, 45965), (91, 45932), (99, 45899), (105, 45881), (125, 45824), (130, 45818), (132, 45809), (146, 45755), (147, 45752), (151, 45743), (194, 45569), (198, 45545), (199, 45542), (208, 45509),

Gene: Fayely\_86 Start: 48440, Stop: 47679, Start Num: 56

Candidate Starts for Fayely\_86:

(Start: 56 @48440 has 216 MA's), (69, 48380), (Start: 77 @48329 has 2 MA's), (80, 48302), (88, 48248), (100, 48200), (106, 48182), (112, 48158), (132, 48107), (141, 48080), (142, 48077), (146, 48053), (198, 47840), (199, 47837), (208, 47804), (235, 47702),

Gene: Fernando\_85 Start: 47043, Stop: 46276, Start Num: 56

Candidate Starts for Fernando\_85:

(Start: 47 @47076 has 1 MA's), (Start: 56 @47043 has 216 MA's), (62, 47022), (70, 46977), (73, 46956), (Start: 74 @46950 has 1 MA's), (Start: 79 @46908 has 2 MA's), (84, 46878), (86, 46863),

(112, 46761), (114, 46758), (125, 46722), (146, 46650), (152, 46629), (184, 46500), (193, 46467), (198, 46440),

Gene: Fibonacci\_85 Start: 47319, Stop: 46561, Start Num: 56

Candidate Starts for Fibonacci\_85:

(Start: 56 @47319 has 216 MA's), (62, 47295), (69, 47253), (Start: 77 @47202 has 2 MA's), (Start: 79 @47181 has 2 MA's), (81, 47172), (84, 47151), (85, 47145), (86, 47136), (109, 47049), (112, 47034), (132, 46986), (141, 46959), (146, 46932), (226, 46629), (235, 46584),

Gene: Figueroism\_59 Start: 39593, Stop: 38862, Start Num: 59

Candidate Starts for Figueroism\_59:

(Start: 59 @39593 has 201 MA's), (Start: 77 @39491 has 2 MA's), (98, 39374), (112, 39323), (134, 39260), (147, 39215), (151, 39206), (180, 39125), (194, 39068), (207, 39002), (234, 38891),

Gene: Finny\_57 Start: 37544, Stop: 36819, Start Num: 59

Candidate Starts for Finny\_57:

(Start: 59 @37544 has 201 MA's), (Start: 77 @37442 has 2 MA's), (98, 37334), (126, 37247), (134, 37217), (144, 37181), (148, 37169), (194, 37025),

Gene: Fireman\_5 Start: 2970, Stop: 3710, Start Num: 59

Candidate Starts for Fireman\_5:

(33, 2892), (Start: 59 @2970 has 201 MA's), (66, 3003), (Start: 77 @3072 has 2 MA's), (78, 3084), (94, 3174), (98, 3189), (134, 3297), (144, 3333), (151, 3351), (176, 3417), (199, 3525), (207, 3561), (210, 3570), (234, 3672), (235, 3678),

Gene: FiringLine\_84 Start: 48520, Stop: 47762, Start Num: 56

Candidate Starts for FiringLine\_84:

(Start: 56 @48520 has 216 MA's), (62, 48499), (69, 48457), (73, 48433), (Start: 77 @48406 has 2 MA's), (Start: 79 @48385 has 2 MA's), (85, 48349), (86, 48340), (100, 48280), (130, 48196), (132, 48187), (146, 48133), (156, 48097), (172, 48049), (194, 47950), (199, 47923), (218, 47857), (235, 47785),

Gene: First\_0085 Start: 48376, Stop: 47618, Start Num: 56

Candidate Starts for First\_0085:

(Start: 56 @48376 has 216 MA's), (62, 48355), (65, 48343), (69, 48313), (Start: 77 @48262 has 2 MA's), (Start: 79 @48241 has 2 MA's), (85, 48205), (86, 48196), (100, 48136), (130, 48052), (132, 48043), (146, 47989), (156, 47953), (172, 47905), (194, 47806), (199, 47779), (215, 47731), (235, 47641),

Gene: Flare16\_84 Start: 48022, Stop: 47264, Start Num: 56

Candidate Starts for Flare16\_84:

(Start: 56 @48022 has 216 MA's), (62, 48001), (65, 47989), (69, 47959), (73, 47935), (Start: 77 @47908 has 2 MA's), (Start: 79 @47887 has 2 MA's), (85, 47851), (86, 47842), (93, 47812), (100, 47782), (130, 47698), (132, 47689), (146, 47635), (156, 47599), (172, 47551), (194, 47452), (198, 47428), (199, 47425), (235, 47287),

Gene: Flaverint\_87 Start: 47777, Stop: 47019, Start Num: 56

Candidate Starts for Flaverint\_87:

(Start: 56 @47777 has 216 MA's), (62, 47753), (69, 47711), (Start: 77 @47660 has 2 MA's), (Start: 79 @47639 has 2 MA's), (81, 47630), (84, 47609), (85, 47603), (86, 47594), (109, 47507), (112, 47492), (132, 47444), (141, 47417), (146, 47390), (226, 47087), (235, 47042),

Gene: Frizzle\_48 Start: 39896, Stop: 40612, Start Num: 53

Candidate Starts for Frizzle\_48:

(Start: 53 @39896 has 3 MA's), (69, 39971), (102, 40160), (130, 40226), (134, 40247), (139, 40259), (147, 40292), (180, 40373), (193, 40427), (217, 40511), (220, 40523), (226, 40541), (229, 40550), (243, 40607),

Gene: GaeCeo\_55 Start: 38134, Stop: 37403, Start Num: 59

Candidate Starts for GaeCeo\_55:

(46, 38173), (Start: 59 @38134 has 201 MA's), (Start: 74 @38053 has 1 MA's), (76, 38035), (Start: 77 @38032 has 2 MA's), (78, 38020), (98, 37915), (112, 37864), (131, 37819), (134, 37801), (141, 37786), (180, 37666), (201, 37573), (207, 37543), (225, 37477), (234, 37432),

Gene: Ganandorf\_7 Start: 3698, Stop: 4438, Start Num: 59

Candidate Starts for Ganandorf\_7:

(Start: 59 @3698 has 201 MA's), (66, 3731), (Start: 77 @3800 has 2 MA's), (78, 3812), (80, 3827), (94, 3902), (98, 3917), (144, 4061), (151, 4079), (176, 4145), (182, 4181), (199, 4253), (203, 4277), (207, 4289), (212, 4304), (234, 4400),

Gene: GardenB\_59 Start: 39672, Stop: 38938, Start Num: 59

Candidate Starts for GardenB\_59:

(Start: 59 @39672 has 201 MA's), (Start: 77 @39570 has 2 MA's), (90, 39486), (98, 39453), (112, 39402), (147, 39291), (151, 39282), (180, 39201), (201, 39108), (207, 39078),

Gene: Garey24\_59 Start: 39267, Stop: 38536, Start Num: 59

Candidate Starts for Garey24\_59:

(Start: 59 @39267 has 201 MA's), (Start: 77 @39165 has 2 MA's), (98, 39048), (112, 38997), (134, 38934), (147, 38889), (151, 38880), (180, 38799), (194, 38742), (201, 38706), (207, 38676), (234, 38565),

Gene: Gargoyle\_59 Start: 39548, Stop: 38817, Start Num: 59

Candidate Starts for Gargoyle\_59:

(Start: 59 @39548 has 201 MA's), (Start: 77 @39446 has 2 MA's), (98, 39329), (112, 39278), (134, 39215), (147, 39170), (151, 39161), (180, 39080), (194, 39023), (201, 38987), (207, 38957), (234, 38846),

Gene: GaugeLDP\_78 Start: 47413, Stop: 46661, Start Num: 54

Candidate Starts for GaugeLDP\_78:

(Start: 54 @47413 has 4 MA's), (62, 47392), (65, 47380), (69, 47350), (73, 47326), (Start: 79 @47278 has 2 MA's), (84, 47248), (85, 47242), (130, 47095), (146, 47032), (152, 47011), (198, 46825), (199, 46822), (217, 46762), (235, 46684), (239, 46672),

Gene: Gelo\_58 Start: 39294, Stop: 38563, Start Num: 59

Candidate Starts for Gelo\_58:

(Start: 59 @39294 has 201 MA's), (Start: 77 @39192 has 2 MA's), (98, 39075), (112, 39024), (134, 38961), (147, 38916), (151, 38907), (180, 38826), (194, 38769), (201, 38733), (207, 38703), (234, 38592),

Gene: Gemma\_81 Start: 46850, Stop: 46083, Start Num: 56

Candidate Starts for Gemma\_81:

(Start: 47 @46889 has 1 MA's), (Start: 56 @46850 has 216 MA's), (62, 46829), (69, 46787), (70, 46784), (73, 46763), (Start: 74 @46757 has 1 MA's), (Start: 79 @46715 has 2 MA's), (84, 46685), (86, 46670), (112, 46568), (125, 46529), (130, 46520), (143, 46469), (146, 46457), (184, 46307), (198, 46247),

Gene: Georgie2\_86 Start: 48724, Stop: 47966, Start Num: 56

Candidate Starts for Georgie2\_86:

(Start: 56 @48724 has 216 MA's), (62, 48703), (69, 48661), (73, 48637), (Start: 77 @48610 has 2 MA's), (Start: 79 @48589 has 2 MA's), (85, 48553), (86, 48544), (100, 48484), (130, 48400), (132, 48391), (146, 48337), (156, 48301), (172, 48253), (194, 48154), (199, 48127), (218, 48061), (235, 47989),

Gene: Gershwin\_58 Start: 39301, Stop: 38570, Start Num: 59

Candidate Starts for Gershwin\_58:

(Start: 59 @39301 has 201 MA's), (Start: 77 @39199 has 2 MA's), (98, 39082), (112, 39031), (134, 38968), (147, 38923), (151, 38914), (180, 38833), (194, 38776), (201, 38740), (207, 38710), (234, 38599),

Gene: Ghobes\_49 Start: 39896, Stop: 40612, Start Num: 53

Candidate Starts for Ghobes\_49:

(Start: 53 @39896 has 3 MA's), (65, 39941), (69, 39971), (102, 40160), (127, 40220), (130, 40226), (134, 40247), (139, 40259), (147, 40292), (180, 40373), (190, 40415), (193, 40427), (217, 40511), (226, 40541), (229, 40550), (243, 40607),

Gene: Gibson\_77 Start: 53215, Stop: 52250, Start Num: 29

Candidate Starts for Gibson\_77:

(Start: 29 @53215 has 8 MA's), (36, 53194), (Start: 61 @53101 has 2 MA's), (64, 53074), (69, 53041), (72, 53020), (75, 53005), (82, 52954), (98, 52864), (133, 52732), (175, 52564), (184, 52510), (206, 52405), (207, 52402), (222, 52342), (236, 52279),

Gene: Gilberta\_83 Start: 46653, Stop: 45895, Start Num: 56

Candidate Starts for Gilberta\_83:

(Start: 56 @46653 has 216 MA's), (62, 46629), (69, 46587), (Start: 77 @46536 has 2 MA's), (Start: 79 @46515 has 2 MA's), (81, 46506), (84, 46485), (85, 46479), (86, 46470), (109, 46383), (112, 46368), (132, 46320), (141, 46293), (146, 46266), (226, 45963), (235, 45918),

Gene: Gina\_5 Start: 2600, Stop: 3349, Start Num: 56

Candidate Starts for Gina\_5:

(Start: 56 @2600 has 216 MA's), (Start: 77 @2714 has 2 MA's), (78, 2726), (84, 2765), (94, 2816), (98, 2831), (99, 2834), (107, 2855), (110, 2873), (134, 2939), (141, 2954), (144, 2975), (151, 2993), (160, 3026), (176, 3059), (182, 3095), (199, 3167), (207, 3203), (210, 3212), (224, 3263), (234, 3311), (235, 3317),

Gene: Gingerbug\_61 Start: 36388, Stop: 37182, Start Num: 39

Candidate Starts for Gingerbug\_61:

(Start: 39 @36388 has 1 MA's), (Start: 59 @36451 has 201 MA's), (Start: 77 @36553 has 2 MA's), (80, 36580), (101, 36679), (110, 36712), (134, 36778), (151, 36832), (194, 36970), (199, 37000), (207, 37036), (210, 37045), (216, 37060),

Gene: GingkoMaracino\_84 Start: 46926, Stop: 46159, Start Num: 56

Candidate Starts for GingkoMaracino\_84:

(Start: 47 @46959 has 1 MA's), (Start: 56 @46926 has 216 MA's), (62, 46905), (70, 46860), (73, 46839), (Start: 74 @46833 has 1 MA's), (Start: 79 @46791 has 2 MA's), (84, 46761), (86, 46746), (112, 46644), (114, 46641), (125, 46605), (146, 46533), (152, 46512), (184, 46383), (193, 46350), (198, 46323),

Gene: GirlDinner\_65 Start: 44150, Stop: 43422, Start Num: 59

Candidate Starts for GirlDinner\_65:

(Start: 59 @44150 has 201 MA's), (Start: 77 @44036 has 2 MA's), (135, 43859), (184, 43676), (204, 43595), (209, 43577), (245, 43439),

Gene: Glamour\_55 Start: 37454, Stop: 36729, Start Num: 59

Candidate Starts for Glamour\_55:

(Start: 59 @37454 has 201 MA's), (Start: 77 @37352 has 2 MA's), (98, 37244), (126, 37157), (134, 37127), (144, 37091), (148, 37079), (180, 36992), (194, 36935),

Gene: Glorp\_7 Start: 3479, Stop: 4219, Start Num: 59

Candidate Starts for Glorp\_7:

(Start: 59 @3479 has 201 MA's), (66, 3512), (Start: 77 @3581 has 2 MA's), (78, 3593), (80, 3608), (94, 3683), (98, 3698), (144, 3842), (151, 3860), (176, 3926), (182, 3962), (203, 4058), (207, 4070), (234, 4181), (244, 4211),

Gene: Golden\_52 Start: 36611, Stop: 35883, Start Num: 59

Candidate Starts for Golden\_52:

(Start: 59 @36611 has 201 MA's), (Start: 77 @36509 has 2 MA's), (91, 36422), (98, 36392), (124, 36314), (134, 36281), (144, 36245), (166, 36185), (180, 36146), (181, 36143), (193, 36092), (199, 36059), (203, 36035), (210, 36014), (234, 35912),

Gene: Gratitude\_82 Start: 48207, Stop: 47449, Start Num: 56

Candidate Starts for Gratitude\_82:

(Start: 56 @48207 has 216 MA's), (62, 48186), (65, 48174), (69, 48144), (73, 48120), (Start: 77 @48093 has 2 MA's), (Start: 79 @48072 has 2 MA's), (85, 48036), (86, 48027), (93, 47997), (100, 47967), (130, 47883), (132, 47874), (146, 47820), (156, 47784), (172, 47736), (194, 47637), (198, 47613), (199, 47610), (235, 47472),

Gene: Greenbelt\_115 Start: 49034, Stop: 48066, Start Num: 29

Candidate Starts for Greenbelt\_115:

(Start: 29 @49034 has 8 MA's), (36, 49022), (57, 48941), (Start: 61 @48920 has 2 MA's), (98, 48683), (113, 48626), (136, 48536), (140, 48527), (204, 48233),

Gene: Greys\_59 Start: 39543, Stop: 38812, Start Num: 59

Candidate Starts for Greys\_59:

(Start: 59 @39543 has 201 MA's), (Start: 77 @39441 has 2 MA's), (98, 39324), (112, 39273), (134, 39210), (147, 39165), (151, 39156), (180, 39075), (194, 39018), (207, 38952), (234, 38841),

Gene: Grif\_82 Start: 47117, Stop: 46350, Start Num: 56

Candidate Starts for Grif\_82:

(45, 47162), (Start: 56 @47117 has 216 MA's), (62, 47096), (70, 47051), (73, 47030), (Start: 74 @47024 has 1 MA's), (Start: 79 @46982 has 2 MA's), (84, 46952), (86, 46937), (112, 46835), (114, 46832), (125, 46796), (146, 46724), (152, 46703), (184, 46574), (193, 46541), (198, 46514),

Gene: Groupthink\_84 Start: 46851, Stop: 46084, Start Num: 56

Candidate Starts for Groupthink\_84:

(45, 46896), (Start: 56 @46851 has 216 MA's), (62, 46830), (69, 46788), (70, 46785), (73, 46764), (Start: 74 @46758 has 1 MA's), (Start: 79 @46716 has 2 MA's), (84, 46686), (86, 46671), (112, 46569), (125, 46530), (130, 46521), (143, 46470), (146, 46458), (184, 46308), (198, 46248),

Gene: Grub\_82 Start: 47033, Stop: 46266, Start Num: 56

Candidate Starts for Grub\_82:

(Start: 47 @47066 has 1 MA's), (Start: 56 @47033 has 216 MA's), (62, 47012), (70, 46967), (73, 46946), (Start: 74 @46940 has 1 MA's), (Start: 79 @46898 has 2 MA's), (84, 46868), (86, 46853),

(112, 46751), (114, 46748), (125, 46712), (146, 46640), (152, 46619), (184, 46490), (193, 46457), (198, 46430),

Gene: Grum1\_84 Start: 47043, Stop: 46276, Start Num: 56

Candidate Starts for Grum1\_84:

(45, 47088), (Start: 56 @47043 has 216 MA's), (62, 47022), (70, 46977), (73, 46956), (Start: 74 @46950 has 1 MA's), (Start: 79 @46908 has 2 MA's), (84, 46878), (86, 46863), (112, 46761), (114, 46758), (125, 46722), (146, 46650), (152, 46629), (184, 46500), (193, 46467), (198, 46440),

Gene: GtownJaz\_84 Start: 47041, Stop: 46274, Start Num: 56

Candidate Starts for GtownJaz\_84:

(Start: 47 @47074 has 1 MA's), (Start: 56 @47041 has 216 MA's), (62, 47020), (70, 46975), (73, 46954), (Start: 74 @46948 has 1 MA's), (Start: 79 @46906 has 2 MA's), (84, 46876), (86, 46861), (112, 46759), (114, 46756), (125, 46720), (146, 46648), (152, 46627), (184, 46498), (193, 46465), (198, 46438),

Gene: Gubbabump\_58 Start: 39238, Stop: 38507, Start Num: 59

Candidate Starts for Gubbabump\_58:

(Start: 59 @39238 has 201 MA's), (Start: 77 @39136 has 2 MA's), (98, 39019), (112, 38968), (134, 38905), (147, 38860), (151, 38851), (180, 38770), (194, 38713), (201, 38677), (207, 38647), (234, 38536),

Gene: Guetzie\_53 Start: 36703, Stop: 35975, Start Num: 59

Candidate Starts for Guetzie\_53:

(Start: 59 @36703 has 201 MA's), (Start: 77 @36601 has 2 MA's), (91, 36514), (98, 36484), (124, 36406), (134, 36373), (144, 36337), (166, 36277), (180, 36238), (181, 36235), (193, 36184), (199, 36151), (203, 36127), (210, 36106),

Gene: GuyFagieri\_4 Start: 2567, Stop: 3388, Start Num: 52

Candidate Starts for GuyFagieri\_4:

(Start: 52 @2567 has 8 MA's), (67, 2630), (71, 2654), (88, 2771), (89, 2777), (93, 2789), (109, 2846), (111, 2858), (130, 2891), (141, 2927), (143, 2942), (164, 3023), (190, 3146), (202, 3206),

Gene: HairyMan\_52 Start: 37192, Stop: 36458, Start Num: 59

Candidate Starts for HairyMan\_52:

(42, 37234), (Start: 59 @37192 has 201 MA's), (Start: 77 @37090 has 2 MA's), (98, 36973), (105, 36952), (107, 36949), (122, 36895), (180, 36724), (194, 36667), (201, 36631),

Gene: Hamlet\_58 Start: 39523, Stop: 38792, Start Num: 59

Candidate Starts for Hamlet\_58:

(Start: 59 @39523 has 201 MA's), (76, 39424), (Start: 77 @39421 has 2 MA's), (98, 39304), (112, 39253), (147, 39145), (151, 39136), (180, 39055), (194, 38998), (201, 38962), (207, 38932), (221, 38884), (234, 38821),

Gene: HanSolo\_58 Start: 39248, Stop: 38517, Start Num: 59

Candidate Starts for HanSolo\_58:

(Start: 59 @39248 has 201 MA's), (Start: 77 @39146 has 2 MA's), (98, 39029), (112, 38978), (134, 38915), (147, 38870), (151, 38861), (180, 38780), (194, 38723), (207, 38657), (234, 38546),

Gene: HankSprout\_59 Start: 39167, Stop: 38436, Start Num: 59

Candidate Starts for HankSprout\_59:

(Start: 59 @39167 has 201 MA's), (Start: 77 @39065 has 2 MA's), (98, 38948), (112, 38897), (134, 38834), (147, 38789), (151, 38780), (180, 38699), (194, 38642), (207, 38576), (234, 38465),

Gene: Hanray\_86 Start: 48753, Stop: 47992, Start Num: 56

Candidate Starts for Hanray\_86:

(Start: 24 @48879 has 1 MA's), (Start: 56 @48753 has 216 MA's), (69, 48693), (73, 48669), (Start: 77 @48642 has 2 MA's), (80, 48615), (88, 48561), (100, 48513), (106, 48495), (112, 48471), (132, 48420), (141, 48393), (146, 48366), (198, 48153), (199, 48150), (208, 48117), (235, 48015),

Gene: HarryHoudini\_84 Start: 48232, Stop: 47474, Start Num: 56

Candidate Starts for HarryHoudini\_84:

(Start: 56 @48232 has 216 MA's), (62, 48211), (65, 48199), (69, 48169), (73, 48145), (Start: 77 @48118 has 2 MA's), (Start: 79 @48097 has 2 MA's), (85, 48061), (86, 48052), (93, 48022), (100, 47992), (112, 47950), (130, 47908), (132, 47899), (146, 47845), (156, 47809), (172, 47761), (194, 47662), (198, 47638), (199, 47635), (235, 47497),

Gene: HashRod\_85 Start: 47070, Stop: 46303, Start Num: 56

Candidate Starts for HashRod\_85:

(Start: 47 @47103 has 1 MA's), (Start: 56 @47070 has 216 MA's), (62, 47049), (70, 47004), (73, 46983), (Start: 74 @46977 has 1 MA's), (Start: 79 @46935 has 2 MA's), (84, 46905), (86, 46890), (112, 46788), (114, 46785), (125, 46749), (146, 46677), (152, 46656), (184, 46527), (193, 46494), (198, 46467),

Gene: HaveUMetTed\_84 Start: 46839, Stop: 46072, Start Num: 56

Candidate Starts for HaveUMetTed\_84:

(45, 46884), (Start: 56 @46839 has 216 MA's), (62, 46818), (69, 46776), (70, 46773), (73, 46752), (Start: 74 @46746 has 1 MA's), (Start: 79 @46704 has 2 MA's), (84, 46674), (86, 46659), (112, 46557), (125, 46518), (130, 46509), (143, 46458), (146, 46446), (184, 46296), (198, 46236),

Gene: Heffalump\_81 Start: 48603, Stop: 47842, Start Num: 52

Candidate Starts for Heffalump\_81:

(Start: 52 @48603 has 8 MA's), (Start: 56 @48600 has 216 MA's), (62, 48579), (69, 48537), (70, 48534), (73, 48513), (Start: 77 @48486 has 2 MA's), (Start: 79 @48465 has 2 MA's), (85, 48429), (86, 48420), (100, 48360), (130, 48276), (132, 48267), (146, 48213), (156, 48177), (172, 48129), (194, 48030), (199, 48003), (218, 47937), (235, 47865),

Gene: Heliosoles\_81 Start: 46855, Stop: 46088, Start Num: 56

Candidate Starts for Heliosoles\_81:

(45, 46900), (Start: 56 @46855 has 216 MA's), (62, 46834), (69, 46792), (70, 46789), (73, 46768), (Start: 74 @46762 has 1 MA's), (Start: 79 @46720 has 2 MA's), (84, 46690), (86, 46675), (112, 46573), (125, 46534), (130, 46525), (143, 46474), (146, 46462), (184, 46312), (198, 46252),

Gene: Hercules11\_84 Start: 47052, Stop: 46285, Start Num: 56

Candidate Starts for Hercules11\_84:

(45, 47097), (Start: 56 @47052 has 216 MA's), (62, 47031), (70, 46986), (73, 46965), (Start: 74 @46959 has 1 MA's), (Start: 79 @46917 has 2 MA's), (84, 46887), (86, 46872), (112, 46770), (114, 46767), (125, 46731), (146, 46659), (152, 46638), (184, 46509), (193, 46476), (198, 46449),

Gene: HerculesXL\_52 Start: 35965, Stop: 35231, Start Num: 59

Candidate Starts for HerculesXL\_52:

(Start: 59 @35965 has 201 MA's), (66, 35932), (Start: 77 @35863 has 2 MA's), (98, 35746), (104, 35728), (112, 35695), (131, 35650), (141, 35617), (180, 35494), (186, 35467), (194, 35437), (199, 35407), (203, 35383), (207, 35371),

Gene: Hermeonysus\_7 Start: 3470, Stop: 4210, Start Num: 59



Candidate Starts for Hermeonysus\_7:

(Start: 59 @3470 has 201 MA's), (66, 3503), (Start: 77 @3572 has 2 MA's), (78, 3584), (80, 3599), (94, 3674), (98, 3689), (144, 3833), (151, 3851), (176, 3917), (182, 3953), (199, 4025), (203, 4049), (207, 4061), (234, 4172),

Gene: Holec\_87 Start: 48766, Stop: 48005, Start Num: 56

Candidate Starts for Holec\_87:

(Start: 24 @48892 has 1 MA's), (Start: 56 @48766 has 216 MA's), (69, 48706), (73, 48682), (Start: 77 @48655 has 2 MA's), (80, 48628), (88, 48574), (100, 48526), (106, 48508), (112, 48484), (132, 48433), (141, 48406), (146, 48379), (198, 48166), (199, 48163), (208, 48130), (235, 48028),

Gene: Honeyfin\_8 Start: 3688, Stop: 4428, Start Num: 59

Candidate Starts for Honeyfin\_8:

(Start: 59 @3688 has 201 MA's), (66, 3721), (Start: 77 @3790 has 2 MA's), (78, 3802), (80, 3817), (94, 3892), (98, 3907), (144, 4051), (151, 4069), (176, 4135), (182, 4171), (203, 4267), (207, 4279), (234, 4390), (244, 4420),

Gene: HortumSL17\_89 Start: 48808, Stop: 48047, Start Num: 56

Candidate Starts for HortumSL17\_89:

(Start: 56 @48808 has 216 MA's), (69, 48748), (Start: 77 @48697 has 2 MA's), (80, 48670), (88, 48616), (100, 48568), (106, 48550), (112, 48526), (132, 48475), (141, 48448), (146, 48421), (198, 48208), (199, 48205), (208, 48172), (235, 48070),

Gene: HungryHenry\_58 Start: 39261, Stop: 38530, Start Num: 59

Candidate Starts for HungryHenry\_58:

(Start: 59 @39261 has 201 MA's), (Start: 77 @39159 has 2 MA's), (98, 39042), (112, 38991), (134, 38928), (147, 38883), (151, 38874), (180, 38793), (194, 38736), (201, 38700), (207, 38670), (234, 38559),

Gene: Hutc2\_82 Start: 46203, Stop: 45445, Start Num: 56

Candidate Starts for Hutc2\_82:

(Start: 56 @46203 has 216 MA's), (62, 46179), (69, 46137), (Start: 77 @46086 has 2 MA's), (Start: 79 @46065 has 2 MA's), (81, 46056), (84, 46035), (85, 46029), (86, 46020), (109, 45933), (112, 45918), (132, 45870), (141, 45843), (146, 45816), (226, 45513), (235, 45468),

Gene: Ilzat\_58 Start: 39271, Stop: 38540, Start Num: 59

Candidate Starts for Ilzat\_58:

(Start: 59 @39271 has 201 MA's), (Start: 77 @39169 has 2 MA's), (98, 39052), (112, 39001), (134, 38938), (147, 38893), (151, 38884), (180, 38803), (194, 38746), (207, 38680), (234, 38569),

Gene: Insomnia\_85 Start: 47497, Stop: 46739, Start Num: 56

Candidate Starts for Insomnia\_85:

(Start: 56 @47497 has 216 MA's), (62, 47473), (69, 47431), (Start: 77 @47380 has 2 MA's), (Start: 79 @47359 has 2 MA's), (81, 47350), (84, 47329), (85, 47323), (86, 47314), (109, 47227), (112, 47212), (132, 47164), (141, 47137), (146, 47110), (226, 46807), (235, 46762),

Gene: Inventa\_59 Start: 39548, Stop: 38817, Start Num: 59

Candidate Starts for Inventa\_59:

(Start: 59 @39548 has 201 MA's), (Start: 77 @39446 has 2 MA's), (98, 39329), (112, 39278), (134, 39215), (147, 39170), (151, 39161), (180, 39080), (194, 39023), (207, 38957), (234, 38846),

Gene: loannes\_59 Start: 39625, Stop: 38894, Start Num: 59

Candidate Starts for loannes\_59:

(Start: 59 @39625 has 201 MA's), (Start: 77 @39523 has 2 MA's), (98, 39406), (112, 39355), (134, 39292), (147, 39247), (151, 39238), (180, 39157), (194, 39100), (207, 39034), (234, 38923),

Gene: Issmi\_67 Start: 44348, Stop: 43623, Start Num: 59

Candidate Starts for Issmi\_67:

(Start: 59 @44348 has 201 MA's), (Start: 77 @44240 has 2 MA's), (80, 44213), (95, 44144), (130, 44087), (143, 44039), (145, 44033), (167, 43958), (180, 43901), (184, 43880), (194, 43844), (200, 43817), (204, 43796), (238, 43655),

Gene: Ixel\_54 Start: 37422, Stop: 36688, Start Num: 59

Candidate Starts for Ixel\_54:

(Start: 59 @37422 has 201 MA's), (66, 37389), (76, 37323), (Start: 77 @37320 has 2 MA's), (105, 37182), (112, 37152), (131, 37104), (194, 36894), (201, 36858), (203, 36840), (207, 36828),

Gene: JHC117\_79 Start: 47038, Stop: 46271, Start Num: 56

Candidate Starts for JHC117\_79:

(45, 47083), (Start: 56 @47038 has 216 MA's), (62, 47017), (70, 46972), (73, 46951), (Start: 74 @46945 has 1 MA's), (Start: 79 @46903 has 2 MA's), (84, 46873), (86, 46858), (112, 46756), (114, 46753), (125, 46717), (146, 46645), (152, 46624), (184, 46495), (193, 46462), (198, 46435),

Gene: Jabith\_85 Start: 47511, Stop: 46753, Start Num: 56

Candidate Starts for Jabith\_85:

(Start: 56 @47511 has 216 MA's), (62, 47487), (69, 47445), (Start: 77 @47394 has 2 MA's), (Start: 79 @47373 has 2 MA's), (81, 47364), (84, 47343), (85, 47337), (86, 47328), (109, 47241), (112, 47226), (132, 47178), (141, 47151), (146, 47124), (226, 46821), (235, 46776),

Gene: Janus\_66 Start: 44490, Stop: 43762, Start Num: 59

Candidate Starts for Janus\_66:

(Start: 59 @44490 has 201 MA's), (Start: 77 @44376 has 2 MA's), (135, 44199), (184, 44016), (204, 43935), (209, 43917), (245, 43779),

Gene: Janus167\_58 Start: 39276, Stop: 38545, Start Num: 59

Candidate Starts for Janus167\_58:

(Start: 59 @39276 has 201 MA's), (Start: 77 @39174 has 2 MA's), (98, 39057), (112, 39006), (134, 38943), (147, 38898), (151, 38889), (180, 38808), (194, 38751), (207, 38685), (234, 38574),

Gene: JasonD\_62 Start: 39835, Stop: 39107, Start Num: 59

Candidate Starts for JasonD\_62:

(Start: 59 @39835 has 201 MA's), (Start: 77 @39736 has 2 MA's), (101, 39610), (112, 39568), (134, 39505), (147, 39460), (151, 39451), (180, 39370), (207, 39247),

Gene: JasperRussell\_58 Start: 39296, Stop: 38565, Start Num: 59

Candidate Starts for JasperRussell\_58:

(Start: 59 @39296 has 201 MA's), (Start: 77 @39194 has 2 MA's), (98, 39077), (112, 39026), (134, 38963), (147, 38918), (151, 38909), (180, 38828), (194, 38771), (207, 38705), (234, 38594),

Gene: Jayden\_6 Start: 3181, Stop: 3930, Start Num: 56

Candidate Starts for Jayden\_6:

(27, 3067), (Start: 56 @3181 has 216 MA's), (Start: 77 @3295 has 2 MA's), (78, 3307), (94, 3397), (98, 3412), (110, 3454), (144, 3556), (151, 3574), (176, 3640), (182, 3676), (199, 3748), (207, 3784), (210, 3793), (234, 3892), (235, 3898),

Gene: Jefe\_8 Start: 3682, Stop: 4422, Start Num: 59

Candidate Starts for Jefe\_8:

(Start: 59 @3682 has 201 MA's), (66, 3715), (Start: 77 @3784 has 2 MA's), (78, 3796), (80, 3811), (94, 3886), (98, 3901), (144, 4045), (151, 4063), (176, 4129), (182, 4165), (199, 4237), (203, 4261), (207, 4273), (234, 4384),

Gene: Jemerald\_53 Start: 37321, Stop: 36590, Start Num: 59

Candidate Starts for Jemerald\_53:

(48, 37357), (50, 37348), (Start: 59 @37321 has 201 MA's), (Start: 74 @37240 has 1 MA's), (Start: 77 @37219 has 2 MA's), (78, 37207), (98, 37102), (107, 37078), (112, 37051), (122, 37027), (131, 37009), (134, 36991), (151, 36937), (186, 36829), (194, 36799), (207, 36733),

Gene: JenCasNa\_85 Start: 47043, Stop: 46276, Start Num: 56

Candidate Starts for JenCasNa\_85:

(Start: 47 @47076 has 1 MA's), (Start: 56 @47043 has 216 MA's), (62, 47022), (70, 46977), (73, 46956), (Start: 74 @46950 has 1 MA's), (Start: 79 @46908 has 2 MA's), (84, 46878), (86, 46863), (112, 46761), (114, 46758), (125, 46722), (146, 46650), (152, 46629), (184, 46500), (193, 46467), (198, 46440),

Gene: Jenos\_60 Start: 40133, Stop: 39405, Start Num: 59

Candidate Starts for Jenos\_60:

(Start: 59 @40133 has 201 MA's), (Start: 77 @40034 has 2 MA's), (80, 40007), (101, 39908), (112, 39866), (134, 39803), (147, 39758), (151, 39749), (180, 39668), (207, 39545),

Gene: JeppNRM\_84 Start: 46853, Stop: 46086, Start Num: 56

Candidate Starts for JeppNRM\_84:

(45, 46898), (Start: 56 @46853 has 216 MA's), (62, 46832), (70, 46787), (73, 46766), (Start: 74 @46760 has 1 MA's), (Start: 79 @46718 has 2 MA's), (84, 46688), (112, 46571), (125, 46532), (143, 46472), (146, 46460), (184, 46310), (198, 46250),

Gene: Jerbirus\_60 Start: 39291, Stop: 38560, Start Num: 59

Candidate Starts for Jerbirus\_60:

(Start: 59 @39291 has 201 MA's), (Start: 77 @39189 has 2 MA's), (98, 39072), (112, 39021), (134, 38958), (147, 38913), (151, 38904), (180, 38823), (194, 38766), (201, 38730), (207, 38700), (234, 38589),

Gene: JeriBeth\_60 Start: 39179, Stop: 38448, Start Num: 59

Candidate Starts for JeriBeth\_60:

(Start: 59 @39179 has 201 MA's), (Start: 77 @39077 has 2 MA's), (98, 38960), (112, 38909), (134, 38846), (147, 38801), (151, 38792), (180, 38711), (194, 38654), (207, 38588), (234, 38477),

Gene: Jerm\_86 Start: 48784, Stop: 48029, Start Num: 56

Candidate Starts for Jerm\_86:

(Start: 56 @48784 has 216 MA's), (62, 48763), (69, 48721), (73, 48697), (Start: 79 @48649 has 2 MA's), (91, 48580), (100, 48544), (128, 48466), (146, 48397), (152, 48376), (198, 48190), (199, 48187), (235, 48049),

Gene: Jiawan\_86 Start: 48783, Stop: 48022, Start Num: 56

Candidate Starts for Jiawan\_86:

(Start: 24 @48909 has 1 MA's), (Start: 56 @48783 has 216 MA's), (69, 48723), (73, 48699), (Start: 77 @48672 has 2 MA's), (80, 48645), (88, 48591), (100, 48543), (106, 48525), (112, 48501), (132, 48450), (141, 48423), (146, 48396), (198, 48183), (199, 48180), (208, 48147), (235, 48045),

Gene: Jingles\_50 Start: 36236, Stop: 35499, Start Num: 59

Candidate Starts for Jingles\_50:

(Start: 59 @36236 has 201 MA's), (Start: 77 @36125 has 2 MA's), (88, 36050), (91, 36038), (98, 36008), (124, 35930), (134, 35897), (144, 35861), (180, 35762), (181, 35759), (193, 35708), (199, 35675), (203, 35651), (210, 35630), (234, 35528),

Gene: Jobu08\_80 Start: 46867, Stop: 46100, Start Num: 56

Candidate Starts for Jobu08\_80:

(Start: 47 @46900 has 1 MA's), (Start: 56 @46867 has 216 MA's), (62, 46846), (70, 46801), (73, 46780), (Start: 74 @46774 has 1 MA's), (Start: 79 @46732 has 2 MA's), (84, 46702), (86, 46687), (112, 46585), (114, 46582), (125, 46546), (146, 46474), (152, 46453), (184, 46324), (193, 46291), (198, 46264),

Gene: Jollipop\_7 Start: 3470, Stop: 4210, Start Num: 59

Candidate Starts for Jollipop\_7:

(Start: 59 @3470 has 201 MA's), (66, 3503), (Start: 77 @3572 has 2 MA's), (78, 3584), (80, 3599), (94, 3674), (98, 3689), (144, 3833), (151, 3851), (176, 3917), (182, 3953), (199, 4025), (203, 4049), (207, 4061), (234, 4172),

Gene: Joselito\_85 Start: 47531, Stop: 46773, Start Num: 56

Candidate Starts for Joselito\_85:

(Start: 56 @47531 has 216 MA's), (62, 47507), (69, 47465), (Start: 77 @47414 has 2 MA's), (Start: 79 @47393 has 2 MA's), (81, 47384), (84, 47363), (85, 47357), (86, 47348), (109, 47261), (112, 47246), (132, 47198), (141, 47171), (146, 47144), (226, 46841), (235, 46796),

Gene: JoshKayV\_86 Start: 48952, Stop: 48197, Start Num: 56

Candidate Starts for JoshKayV\_86:

(Start: 56 @48952 has 216 MA's), (62, 48931), (69, 48889), (73, 48865), (Start: 79 @48817 has 2 MA's), (91, 48748), (128, 48634), (146, 48565), (152, 48544), (198, 48358), (199, 48355), (208, 48322), (235, 48217),

Gene: Jsquared\_88 Start: 47818, Stop: 47057, Start Num: 56

Candidate Starts for Jsquared\_88:

(Start: 56 @47818 has 216 MA's), (62, 47794), (69, 47752), (Start: 79 @47680 has 2 MA's), (84, 47650), (85, 47644), (100, 47575), (112, 47533), (132, 47485), (146, 47431), (149, 47422), (171, 47347), (184, 47281), (198, 47221), (199, 47218), (226, 47125), (235, 47080),

Gene: Juanyo\_52 Start: 36366, Stop: 35638, Start Num: 59

Candidate Starts for Juanyo\_52:

(Start: 59 @36366 has 201 MA's), (Start: 77 @36264 has 2 MA's), (78, 36252), (88, 36189), (103, 36132), (105, 36126), (112, 36096), (130, 36057), (134, 36036), (163, 35946), (210, 35769), (223, 35718), (228, 35706),

Gene: Juicer\_53 Start: 37321, Stop: 36590, Start Num: 59

Candidate Starts for Juicer\_53:

(48, 37357), (50, 37348), (Start: 59 @37321 has 201 MA's), (Start: 74 @37240 has 1 MA's), (Start: 77 @37219 has 2 MA's), (78, 37207), (98, 37102), (107, 37078), (112, 37051), (122, 37027), (131, 37009), (134, 36991), (151, 36937), (186, 36829), (194, 36799), (207, 36733),

Gene: KADY\_81 Start: 47070, Stop: 46303, Start Num: 56

Candidate Starts for KADY\_81:

(45, 47115), (Start: 56 @47070 has 216 MA's), (62, 47049), (70, 47004), (73, 46983), (Start: 74 @46977 has 1 MA's), (Start: 79 @46935 has 2 MA's), (84, 46905), (86, 46890), (112, 46788), (114, 46785), (125, 46749), (146, 46677), (152, 46656), (184, 46527), (193, 46494), (198, 46467),

Gene: KaiHaiDragon\_7 Start: 3479, Stop: 4219, Start Num: 59

Candidate Starts for KaiHaiDragon\_7:

(Start: 59 @3479 has 201 MA's), (66, 3512), (Start: 77 @3581 has 2 MA's), (78, 3593), (80, 3608), (94, 3683), (98, 3698), (144, 3842), (151, 3860), (176, 3926), (182, 3962), (203, 4058), (207, 4070), (234, 4181), (244, 4211),

Gene: Kalb97\_84 Start: 46221, Stop: 45454, Start Num: 56

Candidate Starts for Kalb97\_84:

(45, 46266), (Start: 56 @46221 has 216 MA's), (62, 46200), (69, 46158), (70, 46155), (73, 46134), (Start: 74 @46128 has 1 MA's), (Start: 79 @46086 has 2 MA's), (84, 46056), (86, 46041), (112, 45939), (125, 45900), (130, 45891), (143, 45840), (146, 45828), (184, 45678), (198, 45618),

Gene: Kale\_58 Start: 39303, Stop: 38572, Start Num: 59

Candidate Starts for Kale\_58:

(Start: 59 @39303 has 201 MA's), (Start: 77 @39201 has 2 MA's), (98, 39084), (112, 39033), (134, 38970), (147, 38925), (151, 38916), (180, 38835), (194, 38778), (201, 38742), (207, 38712), (234, 38601),

Gene: Kalnoky\_84 Start: 46848, Stop: 46081, Start Num: 56

Candidate Starts for Kalnoky\_84:

(45, 46893), (Start: 56 @46848 has 216 MA's), (62, 46827), (69, 46785), (70, 46782), (73, 46761), (Start: 74 @46755 has 1 MA's), (Start: 79 @46713 has 2 MA's), (84, 46683), (86, 46668), (112, 46566), (125, 46527), (130, 46518), (143, 46467), (146, 46455), (184, 46305), (198, 46245),

Gene: Kalpine\_86 Start: 48951, Stop: 48190, Start Num: 52

Candidate Starts for Kalpine\_86:

(Start: 52 @48951 has 8 MA's), (Start: 56 @48948 has 216 MA's), (62, 48924), (69, 48882), (70, 48879), (73, 48858), (Start: 77 @48831 has 2 MA's), (Start: 79 @48810 has 2 MA's), (85, 48774), (86, 48765), (100, 48705), (130, 48627), (132, 48618), (146, 48564), (184, 48408), (199, 48348), (215, 48300), (217, 48288), (235, 48210),

Gene: KannH\_58 Start: 39296, Stop: 38565, Start Num: 59

Candidate Starts for KannH\_58:

(Start: 59 @39296 has 201 MA's), (Start: 77 @39194 has 2 MA's), (98, 39077), (112, 39026), (134, 38963), (147, 38918), (151, 38909), (180, 38828), (194, 38771), (207, 38705), (234, 38594),

Gene: Kauala\_50 Start: 36328, Stop: 35600, Start Num: 59

Candidate Starts for Kauala\_50:

(Start: 59 @36328 has 201 MA's), (Start: 77 @36226 has 2 MA's), (88, 36151), (91, 36139), (98, 36109), (124, 36031), (134, 35998), (144, 35962), (151, 35944), (155, 35923), (181, 35860), (199, 35776), (203, 35752), (210, 35731), (234, 35629),

Gene: Kerberos\_84 Start: 47970, Stop: 47197, Start Num: 55

Candidate Starts for Kerberos\_84:

(Start: 55 @47970 has 10 MA's), (62, 47946), (69, 47904), (73, 47880), (Start: 79 @47832 has 2 MA's), (84, 47802), (85, 47796), (109, 47700), (112, 47685), (117, 47673), (146, 47571), (152, 47550), (199, 47358), (235, 47220),

Gene: Keziacharles14\_85 Start: 49281, Stop: 48520, Start Num: 56

Candidate Starts for Keziacharles14\_85:

(Start: 56 @49281 has 216 MA's), (62, 49260), (65, 49248), (Start: 77 @49167 has 2 MA's), (80, 49140), (88, 49089), (100, 49041), (112, 48999), (128, 48963), (132, 48948), (141, 48921), (146,

48894), (152, 48873), (199, 48678), (208, 48645), (235, 48543),

Gene: KingCyrus\_83 Start: 49650, Stop: 48895, Start Num: 56

Candidate Starts for KingCyrus\_83:

(Start: 56 @49650 has 216 MA's), (62, 49629), (69, 49587), (73, 49563), (Start: 79 @49515 has 2 MA's), (91, 49446), (100, 49410), (128, 49332), (146, 49263), (152, 49242), (198, 49056), (199, 49053), (235, 48915),

Gene: KingJulien\_58 Start: 39318, Stop: 38587, Start Num: 59

Candidate Starts for KingJulien\_58:

(Start: 59 @39318 has 201 MA's), (76, 39219), (Start: 77 @39216 has 2 MA's), (98, 39099), (112, 39048), (147, 38940), (151, 38931), (180, 38850), (194, 38793), (201, 38757), (207, 38727), (221, 38679), (234, 38616),

Gene: Klimt\_59 Start: 39319, Stop: 38588, Start Num: 59

Candidate Starts for Klimt\_59:

(Start: 59 @39319 has 201 MA's), (Start: 77 @39217 has 2 MA's), (98, 39100), (112, 39049), (134, 38986), (147, 38941), (151, 38932), (180, 38851), (194, 38794), (201, 38758), (207, 38728), (234, 38617),

Gene: Knox\_59 Start: 39543, Stop: 38812, Start Num: 59

Candidate Starts for Knox\_59:

(Start: 59 @39543 has 201 MA's), (Start: 77 @39441 has 2 MA's), (98, 39324), (112, 39273), (134, 39210), (147, 39165), (151, 39156), (180, 39075), (194, 39018), (207, 38952), (234, 38841),

Gene: Koduck\_84 Start: 47157, Stop: 46399, Start Num: 56

Candidate Starts for Koduck\_84:

(Start: 56 @47157 has 216 MA's), (62, 47133), (69, 47091), (73, 47067), (Start: 77 @47040 has 2 MA's), (Start: 79 @47019 has 2 MA's), (84, 46989), (100, 46914), (101, 46911), (105, 46899), (112, 46872), (132, 46827), (143, 46785), (146, 46773), (147, 46770), (194, 46587), (198, 46563), (199, 46560), (235, 46422),

Gene: Koji\_50 Start: 36330, Stop: 35593, Start Num: 59

Candidate Starts for Koji\_50:

(Start: 59 @36330 has 201 MA's), (Start: 77 @36219 has 2 MA's), (88, 36144), (91, 36132), (98, 36102), (124, 36024), (134, 35991), (144, 35955), (180, 35856), (181, 35853), (193, 35802), (199, 35769), (203, 35745), (210, 35724), (234, 35622),

Gene: Kowalski\_7 Start: 3470, Stop: 4210, Start Num: 59

Candidate Starts for Kowalski\_7:

(Start: 59 @3470 has 201 MA's), (66, 3503), (Start: 77 @3572 has 2 MA's), (78, 3584), (80, 3599), (94, 3674), (98, 3689), (144, 3833), (151, 3851), (176, 3917), (182, 3953), (199, 4025), (203, 4049), (207, 4061), (234, 4172),

Gene: Kurt1\_59 Start: 39548, Stop: 38817, Start Num: 59

Candidate Starts for Kurt1\_59:

(Start: 59 @39548 has 201 MA's), (Start: 77 @39446 has 2 MA's), (98, 39329), (112, 39278), (134, 39215), (147, 39170), (151, 39161), (180, 39080), (194, 39023), (207, 38957), (234, 38846),

Gene: L5\_77 Start: 47048, Stop: 46290, Start Num: 56

Candidate Starts for L5\_77:

(Start: 56 @47048 has 216 MA's), (62, 47024), (69, 46982), (73, 46958), (Start: 77 @46931 has 2 MA's), (Start: 79 @46910 has 2 MA's), (84, 46880), (100, 46805), (101, 46802), (105, 46790), (112,

46763), (132, 46718), (143, 46676), (146, 46664), (147, 46661), (194, 46478), (198, 46454), (199, 46451), (235, 46313),

Gene: LBerry\_85 Start: 47044, Stop: 46277, Start Num: 56

Candidate Starts for LBerry\_85:

(Start: 47 @47077 has 1 MA's), (Start: 56 @47044 has 216 MA's), (62, 47023), (70, 46978), (73, 46957), (Start: 74 @46951 has 1 MA's), (Start: 79 @46909 has 2 MA's), (84, 46879), (86, 46864), (112, 46762), (114, 46759), (125, 46723), (146, 46651), (152, 46630), (184, 46501), (193, 46468), (198, 46441),

Gene: LadyBird\_88 Start: 48874, Stop: 48116, Start Num: 56

Candidate Starts for LadyBird\_88:

(Start: 56 @48874 has 216 MA's), (62, 48853), (69, 48811), (Start: 77 @48760 has 2 MA's), (Start: 79 @48739 has 2 MA's), (85, 48703), (86, 48694), (93, 48664), (100, 48634), (132, 48541), (146, 48487), (156, 48451), (172, 48403), (194, 48304), (199, 48277), (215, 48229), (235, 48139),

Gene: Larenn\_82 Start: 48228, Stop: 47470, Start Num: 56

Candidate Starts for Larenn\_82:

(Start: 56 @48228 has 216 MA's), (62, 48207), (69, 48165), (73, 48141), (Start: 77 @48114 has 2 MA's), (Start: 79 @48093 has 2 MA's), (85, 48057), (86, 48048), (93, 48018), (100, 47988), (112, 47946), (130, 47904), (132, 47895), (146, 47841), (156, 47805), (172, 47757), (198, 47634), (199, 47631), (215, 47583), (235, 47493),

Gene: LarryKay\_84 Start: 47074, Stop: 46307, Start Num: 56

Candidate Starts for LarryKay\_84:

(45, 47119), (Start: 56 @47074 has 216 MA's), (62, 47053), (70, 47008), (73, 46987), (Start: 74 @46981 has 1 MA's), (Start: 79 @46939 has 2 MA's), (84, 46909), (86, 46894), (112, 46792), (114, 46789), (125, 46753), (146, 46681), (152, 46660), (184, 46531), (193, 46498), (198, 46471),

Gene: Leafus\_58 Start: 39580, Stop: 38849, Start Num: 59

Candidate Starts for Leafus\_58:

(Start: 59 @39580 has 201 MA's), (76, 39481), (Start: 77 @39478 has 2 MA's), (98, 39361), (112, 39310), (147, 39202), (151, 39193), (180, 39112), (194, 39055), (201, 39019), (207, 38989), (221, 38941), (234, 38878),

Gene: Lesiram\_63 Start: 36202, Stop: 36945, Start Num: 59

Candidate Starts for Lesiram\_63:

(1, 35497), (2, 35500), (3, 35539), (6, 35851), (8, 35875), (11, 35914), (12, 35959), (13, 35983), (42, 36148), (Start: 59 @36202 has 201 MA's), (66, 36247), (Start: 77 @36316 has 2 MA's), (88, 36391), (101, 36442), (110, 36475), (111, 36481), (134, 36541), (147, 36586), (151, 36595), (193, 36730), (199, 36763), (201, 36769), (207, 36799), (210, 36808), (231, 36892), (242, 36934),

Gene: Leviathan\_86 Start: 48865, Stop: 48110, Start Num: 56

Candidate Starts for Leviathan\_86:

(Start: 56 @48865 has 216 MA's), (62, 48844), (69, 48802), (73, 48778), (Start: 79 @48730 has 2 MA's), (91, 48661), (100, 48625), (128, 48547), (146, 48478), (152, 48457), (198, 48271), (199, 48268), (235, 48130),

Gene: LilTurb\_85 Start: 48661, Stop: 47906, Start Num: 56

Candidate Starts for LilTurb\_85:

(Start: 56 @48661 has 216 MA's), (62, 48640), (69, 48598), (73, 48574), (Start: 79 @48526 has 2 MA's), (91, 48457), (100, 48421), (128, 48343), (146, 48274), (152, 48253), (198, 48067), (199, 48064), (235, 47926),

Gene: Lilith\_82 Start: 47033, Stop: 46266, Start Num: 56

Candidate Starts for Lilith\_82:

(Start: 47 @47066 has 1 MA's), (Start: 56 @47033 has 216 MA's), (62, 47012), (70, 46967), (73, 46946), (Start: 74 @46940 has 1 MA's), (Start: 79 @46898 has 2 MA's), (84, 46868), (86, 46853), (112, 46751), (114, 46748), (125, 46712), (146, 46640), (152, 46619), (184, 46490), (193, 46457), (198, 46430),

Gene: Lilleskat\_85 Start: 48763, Stop: 48002, Start Num: 56

Candidate Starts for Lilleskat\_85:

(Start: 24 @48889 has 1 MA's), (Start: 56 @48763 has 216 MA's), (69, 48703), (73, 48679), (Start: 77 @48652 has 2 MA's), (80, 48625), (88, 48571), (100, 48523), (106, 48505), (112, 48481), (132, 48430), (141, 48403), (146, 48376), (198, 48163), (199, 48160), (208, 48127), (235, 48025),

Gene: LionsBait\_83 Start: 49178, Stop: 48444, Start Num: 56

Candidate Starts for LionsBait\_83:

(Start: 56 @49178 has 216 MA's), (69, 49121), (73, 49097), (Start: 77 @49070 has 2 MA's), (105, 48929), (108, 48923), (143, 48821), (146, 48809), (157, 48776), (184, 48662), (198, 48602), (199, 48599), (217, 48539),

Gene: LittleFortune\_8 Start: 3688, Stop: 4428, Start Num: 59

Candidate Starts for LittleFortune\_8:

(Start: 59 @3688 has 201 MA's), (66, 3721), (Start: 77 @3790 has 2 MA's), (78, 3802), (80, 3817), (94, 3892), (98, 3907), (144, 4051), (151, 4069), (176, 4135), (182, 4171), (199, 4243), (203, 4267), (207, 4279), (234, 4390),

Gene: Lizz\_75 Start: 52769, Stop: 51798, Start Num: 29

Candidate Starts for Lizz\_75:

(Start: 29 @52769 has 8 MA's), (36, 52748), (Start: 61 @52649 has 2 MA's), (62, 52634), (64, 52622), (70, 52586), (75, 52553), (94, 52427), (98, 52412), (99, 52409), (118, 52331), (133, 52280), (175, 52112), (184, 52058), (199, 51986), (207, 51950), (214, 51929), (236, 51827),

Gene: Lokk\_79 Start: 46740, Stop: 45985, Start Num: 56

Candidate Starts for Lokk\_79:

(Start: 56 @46740 has 216 MA's), (62, 46719), (65, 46707), (73, 46653), (Start: 77 @46626 has 2 MA's), (84, 46575), (95, 46515), (100, 46500), (112, 46458), (130, 46416), (146, 46353), (184, 46203), (235, 46008),

Gene: LoneWolf\_88 Start: 48806, Stop: 48045, Start Num: 56

Candidate Starts for LoneWolf\_88:

(Start: 56 @48806 has 216 MA's), (69, 48746), (73, 48722), (Start: 77 @48695 has 2 MA's), (80, 48668), (88, 48614), (100, 48566), (112, 48524), (130, 48482), (132, 48473), (141, 48446), (146, 48419), (161, 48368), (184, 48269), (198, 48206), (199, 48203), (208, 48170), (235, 48068),

Gene: Loser\_87 Start: 49116, Stop: 48361, Start Num: 56

Candidate Starts for Loser\_87:

(Start: 56 @49116 has 216 MA's), (62, 49095), (69, 49053), (73, 49029), (Start: 77 @49002 has 2 MA's), (Start: 79 @48981 has 2 MA's), (85, 48945), (86, 48936), (93, 48906), (100, 48876), (130, 48792), (132, 48783), (146, 48729), (156, 48693), (172, 48645), (199, 48519), (235, 48381),

Gene: Louie6\_83 Start: 47071, Stop: 46304, Start Num: 56

Candidate Starts for Louie6\_83:



(45, 47116), (Start: 56 @47071 has 216 MA's), (62, 47050), (70, 47005), (73, 46984), (Start: 74 @46978 has 1 MA's), (Start: 79 @46936 has 2 MA's), (84, 46906), (86, 46891), (112, 46789), (114, 46786), (125, 46750), (146, 46678), (152, 46657), (184, 46528), (193, 46495), (198, 46468),

Gene: Lovelyunicorn\_59 Start: 39543, Stop: 38812, Start Num: 59

Candidate Starts for Lovelyunicorn\_59:

(Start: 59 @39543 has 201 MA's), (Start: 77 @39441 has 2 MA's), (98, 39324), (112, 39273), (134, 39210), (147, 39165), (151, 39156), (180, 39075), (194, 39018), (207, 38952), (234, 38841),

Gene: Lowa\_81 Start: 47032, Stop: 46265, Start Num: 56

Candidate Starts for Lowa\_81:

(Start: 47 @47065 has 1 MA's), (Start: 56 @47032 has 216 MA's), (62, 47011), (70, 46966), (73, 46945), (Start: 74 @46939 has 1 MA's), (Start: 79 @46897 has 2 MA's), (84, 46867), (86, 46852), (112, 46750), (114, 46747), (125, 46711), (146, 46639), (152, 46618), (184, 46489), (193, 46456), (198, 46429),

Gene: Lucivia\_87 Start: 47810, Stop: 47052, Start Num: 56

Candidate Starts for Lucivia\_87:

(Start: 56 @47810 has 216 MA's), (62, 47786), (69, 47744), (Start: 77 @47693 has 2 MA's), (Start: 79 @47672 has 2 MA's), (81, 47663), (84, 47642), (85, 47636), (86, 47627), (109, 47540), (112, 47525), (132, 47477), (141, 47450), (146, 47423), (226, 47120), (235, 47075),

Gene: Lucky3\_52 Start: 36611, Stop: 35883, Start Num: 59

Candidate Starts for Lucky3\_52:

(Start: 59 @36611 has 201 MA's), (Start: 77 @36509 has 2 MA's), (91, 36422), (98, 36392), (124, 36314), (134, 36281), (144, 36245), (166, 36185), (180, 36146), (181, 36143), (193, 36092), (199, 36059), (203, 36035), (210, 36014), (234, 35912),

Gene: Lucyedi\_83 Start: 47801, Stop: 47031, Start Num: 56

Candidate Starts for Lucyedi\_83:

(32, 47894), (Start: 56 @47801 has 216 MA's), (62, 47780), (73, 47714), (Start: 79 @47666 has 2 MA's), (84, 47636), (99, 47564), (112, 47519), (130, 47468), (146, 47405), (152, 47384), (169, 47327), (198, 47195), (199, 47192), (226, 47099), (235, 47054),

Gene: Ludgate\_59 Start: 39544, Stop: 38813, Start Num: 59

Candidate Starts for Ludgate\_59:

(Start: 59 @39544 has 201 MA's), (Start: 77 @39442 has 2 MA's), (98, 39325), (112, 39274), (134, 39211), (147, 39166), (151, 39157), (180, 39076), (194, 39019), (201, 38983), (207, 38953), (234, 38842),

Gene: LugYA\_87 Start: 47044, Stop: 46277, Start Num: 56

Candidate Starts for LugYA\_87:

(Start: 47 @47077 has 1 MA's), (Start: 56 @47044 has 216 MA's), (62, 47023), (70, 46978), (73, 46957), (Start: 74 @46951 has 1 MA's), (Start: 79 @46909 has 2 MA's), (84, 46879), (86, 46864), (112, 46762), (114, 46759), (125, 46723), (146, 46651), (152, 46630), (184, 46501), (193, 46468), (198, 46441),

Gene: MCubed\_56 Start: 37611, Stop: 36886, Start Num: 59

Candidate Starts for MCubed\_56:

(Start: 59 @37611 has 201 MA's), (Start: 77 @37509 has 2 MA's), (98, 37401), (126, 37314), (134, 37284), (144, 37248), (148, 37236), (180, 37149), (194, 37092),

Gene: MaCh\_86 Start: 47774, Stop: 47016, Start Num: 56

Candidate Starts for MaCh\_86:

(Start: 56 @47774 has 216 MA's), (62, 47750), (69, 47708), (Start: 77 @47657 has 2 MA's), (Start: 79 @47636 has 2 MA's), (81, 47627), (84, 47606), (85, 47600), (86, 47591), (109, 47504), (112, 47489), (132, 47441), (141, 47414), (146, 47387), (226, 47084), (235, 47039),

Gene: Mabel\_86 Start: 47775, Stop: 47017, Start Num: 56

Candidate Starts for Mabel\_86:

(Start: 56 @47775 has 216 MA's), (62, 47751), (69, 47709), (Start: 77 @47658 has 2 MA's), (Start: 79 @47637 has 2 MA's), (81, 47628), (84, 47607), (85, 47601), (86, 47592), (109, 47505), (112, 47490), (132, 47442), (141, 47415), (146, 47388), (226, 47085), (235, 47040),

Gene: MadMarie\_82 Start: 47041, Stop: 46274, Start Num: 56

Candidate Starts for MadMarie\_82:

(Start: 47 @47074 has 1 MA's), (Start: 56 @47041 has 216 MA's), (62, 47020), (70, 46975), (73, 46954), (Start: 74 @46948 has 1 MA's), (Start: 79 @46906 has 2 MA's), (84, 46876), (86, 46861), (112, 46759), (114, 46756), (125, 46720), (146, 46648), (152, 46627), (184, 46498), (193, 46465), (198, 46438),

Gene: MaeLinda\_59 Start: 39555, Stop: 38824, Start Num: 59

Candidate Starts for MaeLinda\_59:

(Start: 59 @39555 has 201 MA's), (Start: 77 @39453 has 2 MA's), (98, 39336), (112, 39285), (134, 39222), (147, 39177), (151, 39168), (180, 39087), (194, 39030), (207, 38964), (234, 38853),

Gene: Mainiac\_83 Start: 47033, Stop: 46266, Start Num: 56

Candidate Starts for Mainiac\_83:

(Start: 47 @47066 has 1 MA's), (Start: 56 @47033 has 216 MA's), (62, 47012), (70, 46967), (73, 46946), (Start: 74 @46940 has 1 MA's), (Start: 79 @46898 has 2 MA's), (84, 46868), (86, 46853), (112, 46751), (114, 46748), (125, 46712), (146, 46640), (152, 46619), (184, 46490), (193, 46457), (198, 46430),

Gene: MajorMajor\_81 Start: 45867, Stop: 45106, Start Num: 56

Candidate Starts for MajorMajor\_81:

(Start: 56 @45867 has 216 MA's), (62, 45843), (69, 45801), (Start: 79 @45729 has 2 MA's), (84, 45699), (85, 45693), (100, 45624), (112, 45582), (132, 45534), (146, 45480), (171, 45396), (184, 45330), (198, 45270), (199, 45267), (226, 45174), (235, 45129),

Gene: Malec\_83 Start: 48798, Stop: 48040, Start Num: 56

Candidate Starts for Malec\_83:

(Start: 56 @48798 has 216 MA's), (62, 48777), (69, 48735), (73, 48711), (Start: 77 @48684 has 2 MA's), (Start: 79 @48663 has 2 MA's), (85, 48627), (86, 48618), (100, 48558), (112, 48516), (130, 48474), (132, 48465), (146, 48411), (156, 48375), (172, 48327), (198, 48204), (199, 48201), (215, 48153), (235, 48063),

Gene: Malinsilva\_87 Start: 47032, Stop: 46265, Start Num: 56

Candidate Starts for Malinsilva\_87:

(Start: 47 @47065 has 1 MA's), (Start: 56 @47032 has 216 MA's), (62, 47011), (70, 46966), (73, 46945), (Start: 74 @46939 has 1 MA's), (Start: 79 @46897 has 2 MA's), (84, 46867), (86, 46852), (112, 46750), (114, 46747), (125, 46711), (146, 46639), (152, 46618), (184, 46489), (193, 46456), (198, 46429),

Gene: Maminaiaina\_87 Start: 48726, Stop: 47968, Start Num: 56

Candidate Starts for Maminaiaina\_87:

(Start: 56 @48726 has 216 MA's), (62, 48708), (76, 48618), (Start: 77 @48615 has 2 MA's), (80, 48588), (88, 48537), (100, 48489), (106, 48471), (112, 48447), (132, 48396), (141, 48369), (146, 48342), (151, 48330), (161, 48291), (199, 48126), (208, 48093), (235, 47991),

Gene: ManRay\_58 Start: 39301, Stop: 38570, Start Num: 59

Candidate Starts for ManRay\_58:

(Start: 59 @39301 has 201 MA's), (Start: 77 @39199 has 2 MA's), (98, 39082), (112, 39031), (134, 38968), (147, 38923), (151, 38914), (180, 38833), (194, 38776), (201, 38740), (207, 38710), (234, 38599),

Gene: Manu\_83 Start: 46855, Stop: 46088, Start Num: 56

Candidate Starts for Manu\_83:

(45, 46900), (Start: 56 @46855 has 216 MA's), (62, 46834), (69, 46792), (70, 46789), (73, 46768), (Start: 74 @46762 has 1 MA's), (Start: 79 @46720 has 2 MA's), (84, 46690), (86, 46675), (112, 46573), (125, 46534), (130, 46525), (143, 46474), (146, 46462), (184, 46312), (198, 46252),

Gene: MarQuardt\_84 Start: 47042, Stop: 46275, Start Num: 56

Candidate Starts for MarQuardt\_84:

(45, 47087), (Start: 56 @47042 has 216 MA's), (62, 47021), (70, 46976), (73, 46955), (Start: 74 @46949 has 1 MA's), (Start: 79 @46907 has 2 MA's), (84, 46877), (86, 46862), (112, 46760), (114, 46757), (125, 46721), (146, 46649), (152, 46628), (184, 46499), (193, 46466), (198, 46439),

Gene: Marie\_82 Start: 47043, Stop: 46276, Start Num: 56

Candidate Starts for Marie\_82:

(Start: 47 @47076 has 1 MA's), (Start: 56 @47043 has 216 MA's), (62, 47022), (70, 46977), (73, 46956), (Start: 74 @46950 has 1 MA's), (Start: 79 @46908 has 2 MA's), (84, 46878), (86, 46863), (112, 46761), (114, 46758), (125, 46722), (146, 46650), (152, 46629), (184, 46500), (193, 46467), (198, 46440),

Gene: Marius\_84 Start: 46848, Stop: 46081, Start Num: 56

Candidate Starts for Marius\_84:

(45, 46893), (Start: 56 @46848 has 216 MA's), (62, 46827), (69, 46785), (70, 46782), (73, 46761), (Start: 74 @46755 has 1 MA's), (Start: 79 @46713 has 2 MA's), (84, 46683), (86, 46668), (112, 46566), (125, 46527), (130, 46518), (143, 46467), (146, 46455), (184, 46305), (198, 46245),

Gene: Martin\_60 Start: 39557, Stop: 38826, Start Num: 59

Candidate Starts for Martin\_60:

(Start: 59 @39557 has 201 MA's), (Start: 77 @39455 has 2 MA's), (98, 39338), (112, 39287), (134, 39224), (147, 39179), (151, 39170), (180, 39089), (194, 39032), (207, 38966), (234, 38855),

Gene: Maselop\_4 Start: 2670, Stop: 3488, Start Num: 52

Candidate Starts for Maselop\_4:

(Start: 24 @2547 has 1 MA's), (Start: 52 @2670 has 8 MA's), (67, 2730), (93, 2889), (109, 2946), (111, 2958), (130, 2991), (132, 3000), (134, 3012), (139, 3024), (141, 3027), (165, 3126), (202, 3306),

Gene: McGalleon\_59 Start: 40271, Stop: 39543, Start Num: 59

Candidate Starts for McGalleon\_59:

(Start: 59 @40271 has 201 MA's), (Start: 77 @40172 has 2 MA's), (80, 40145), (101, 40046), (112, 40004), (134, 39941), (147, 39896), (151, 39887), (180, 39806), (207, 39683),

Gene: Merry\_ Start: 3722, Stop: 4393, Start Num: 77

Candidate Starts for Merry\_:

(Start: 59 @3620 has 201 MA's), (66, 3653), (Start: 77 @3722 has 2 MA's), (99, 3842), (100, 3845), (101, 3848), (119, 3923), (144, 4016), (151, 4034), (193, 4172), (199, 4205), (203, 4229), (210, 4250), (234, 4352),

Gene: Metamorphoo\_5 Start: 2863, Stop: 3603, Start Num: 59

Candidate Starts for Metamorphoo\_5:

(33, 2785), (Start: 59 @2863 has 201 MA's), (66, 2896), (Start: 77 @2965 has 2 MA's), (78, 2977), (94, 3067), (98, 3082), (134, 3190), (144, 3226), (176, 3310), (182, 3346), (193, 3385), (199, 3418), (207, 3454), (234, 3565), (235, 3571),

Gene: Methuselah\_77 Start: 47064, Stop: 46297, Start Num: 56

Candidate Starts for Methuselah\_77:

(45, 47109), (Start: 56 @47064 has 216 MA's), (62, 47043), (70, 46998), (73, 46977), (Start: 74 @46971 has 1 MA's), (Start: 79 @46929 has 2 MA's), (84, 46899), (86, 46884), (112, 46782), (114, 46779), (125, 46743), (146, 46671), (152, 46650), (184, 46521), (193, 46488), (198, 46461),

Gene: Microwolf\_80 Start: 47056, Stop: 46289, Start Num: 56

Candidate Starts for Microwolf\_80:

(Start: 47 @47089 has 1 MA's), (Start: 56 @47056 has 216 MA's), (62, 47035), (70, 46990), (73, 46969), (Start: 74 @46963 has 1 MA's), (Start: 79 @46921 has 2 MA's), (84, 46891), (86, 46876), (112, 46774), (114, 46771), (125, 46735), (146, 46663), (152, 46642), (184, 46513), (193, 46480), (198, 46453),

Gene: MiculUcigas\_84 Start: 47925, Stop: 47167, Start Num: 56

Candidate Starts for MiculUcigas\_84:

(Start: 56 @47925 has 216 MA's), (62, 47904), (65, 47892), (69, 47862), (73, 47838), (Start: 77 @47811 has 2 MA's), (Start: 79 @47790 has 2 MA's), (85, 47754), (86, 47745), (93, 47715), (100, 47685), (130, 47601), (132, 47592), (146, 47538), (156, 47502), (172, 47454), (194, 47355), (198, 47331), (199, 47328), (235, 47190),

Gene: Miko\_79 Start: 47505, Stop: 46747, Start Num: 56

Candidate Starts for Miko\_79:

(Start: 56 @47505 has 216 MA's), (62, 47484), (65, 47472), (Start: 77 @47391 has 2 MA's), (100, 47265), (108, 47244), (112, 47223), (130, 47181), (146, 47118), (184, 46968), (199, 46905), (235, 46770),

Gene: MillyPhilly\_59 Start: 39545, Stop: 38814, Start Num: 59

Candidate Starts for MillyPhilly\_59:

(Start: 59 @39545 has 201 MA's), (Start: 77 @39443 has 2 MA's), (98, 39326), (112, 39275), (134, 39212), (147, 39167), (151, 39158), (180, 39077), (194, 39020), (207, 38954), (234, 38843),

Gene: MissWhite\_77 Start: 44789, Stop: 44034, Start Num: 56

Candidate Starts for MissWhite\_77:

(Start: 56 @44789 has 216 MA's), (62, 44771), (69, 44729), (73, 44705), (Start: 79 @44657 has 2 MA's), (81, 44648), (84, 44627), (85, 44621), (91, 44588), (95, 44567), (100, 44552), (117, 44498), (128, 44474), (130, 44468), (146, 44405), (155, 44372), (162, 44354), (198, 44198), (199, 44195), (204, 44177), (219, 44126), (235, 44057),

Gene: ModicumRichard\_153 Start: 80567, Stop: 79794, Start Num: 58

Candidate Starts for ModicumRichard\_153:

(Start: 58 @80567 has 5 MA's), (69, 80501), (73, 80477), (76, 80453), (83, 80414), (89, 80369), (96, 80339), (106, 80309), (109, 80300), (116, 80276), (129, 80249), (135, 80222), (146, 80183), (174, 80084), (177, 80063), (195, 79991), (196, 79985), (227, 79868), (233, 79829), (241, 79805),

Gene: MonChoix\_57 Start: 39226, Stop: 38495, Start Num: 59

Candidate Starts for MonChoix\_57:

(Start: 59 @39226 has 201 MA's), (Start: 77 @39124 has 2 MA's), (98, 39007), (112, 38956), (147, 38848), (151, 38839), (207, 38635), (234, 38524),

Gene: MoneyMay\_84 Start: 47043, Stop: 46276, Start Num: 56

Candidate Starts for MoneyMay\_84:

(Start: 47 @47076 has 1 MA's), (Start: 56 @47043 has 216 MA's), (62, 47022), (70, 46977), (73, 46956), (Start: 74 @46950 has 1 MA's), (Start: 79 @46908 has 2 MA's), (84, 46878), (86, 46863), (112, 46761), (114, 46758), (125, 46722), (146, 46650), (152, 46629), (184, 46500), (193, 46467), (198, 46440),

Gene: Morgana\_160 Start: 81269, Stop: 80511, Start Num: 58

Candidate Starts for Morgana\_160:

(Start: 58 @81269 has 5 MA's), (89, 81071), (90, 81068), (101, 81026), (102, 81023), (135, 80924), (146, 80885), (153, 80864), (156, 80852), (174, 80801), (179, 80774), (182, 80753), (195, 80708), (211, 80639), (232, 80561), (233, 80546),

Gene: MrWorldwide\_59 Start: 39555, Stop: 38824, Start Num: 59

Candidate Starts for MrWorldwide\_59:

(Start: 59 @39555 has 201 MA's), (Start: 77 @39453 has 2 MA's), (98, 39336), (112, 39285), (134, 39222), (147, 39177), (151, 39168), (180, 39087), (194, 39030), (207, 38964), (234, 38853),

Gene: MuchMore\_87 Start: 46894, Stop: 46262, Start Num: 79

Candidate Starts for MuchMore\_87:

(Start: 79 @46894 has 2 MA's), (84, 46864), (86, 46849), (112, 46747), (114, 46744), (125, 46708), (146, 46636), (152, 46615), (184, 46486), (193, 46453), (198, 46426),

Gene: Mufasa8\_99 Start: 57992, Stop: 57228, Start Num: 61

Candidate Starts for Mufasa8\_99:

(4, 58640), (18, 58187), (Start: 61 @57992 has 2 MA's), (Start: 77 @57881 has 2 MA's), (83, 57845), (91, 57794), (126, 57680), (131, 57668), (134, 57650), (138, 57641), (166, 57554), (180, 57515), (191, 57470), (232, 57290), (234, 57275), (246, 57236),

Gene: Mulciber\_84 Start: 47316, Stop: 46558, Start Num: 56

Candidate Starts for Mulciber\_84:

(Start: 56 @47316 has 216 MA's), (62, 47292), (69, 47250), (Start: 77 @47199 has 2 MA's), (Start: 79 @47178 has 2 MA's), (81, 47169), (84, 47148), (85, 47142), (86, 47133), (109, 47046), (112, 47031), (132, 46983), (141, 46956), (146, 46929), (226, 46626), (235, 46581),

Gene: Munch\_86 Start: 47779, Stop: 47021, Start Num: 56

Candidate Starts for Munch\_86:

(Start: 56 @47779 has 216 MA's), (62, 47755), (69, 47713), (Start: 77 @47662 has 2 MA's), (Start: 79 @47641 has 2 MA's), (81, 47632), (84, 47611), (85, 47605), (86, 47596), (109, 47509), (112, 47494), (132, 47446), (141, 47419), (146, 47392), (226, 47089), (235, 47044),

Gene: Myxus\_88 Start: 48808, Stop: 48047, Start Num: 56

Candidate Starts for Myxus\_88:

(Start: 56 @48808 has 216 MA's), (69, 48748), (Start: 77 @48697 has 2 MA's), (80, 48670), (88, 48616), (100, 48568), (106, 48550), (112, 48526), (132, 48475), (141, 48448), (146, 48421), (198, 48208), (199, 48205), (208, 48172), (235, 48070),

Gene: NaSiaTalie\_85 Start: 48212, Stop: 47454, Start Num: 56

Candidate Starts for NaSiaTalie\_85:

(Start: 56 @48212 has 216 MA's), (62, 48191), (65, 48179), (69, 48149), (73, 48125), (Start: 77 @48098 has 2 MA's), (Start: 79 @48077 has 2 MA's), (85, 48041), (86, 48032), (93, 48002), (100, 47972), (112, 47930), (130, 47888), (132, 47879), (146, 47825), (156, 47789), (172, 47741), (194, 47642), (198, 47618), (199, 47615), (235, 47477),

Gene: Nagem\_59 Start: 39591, Stop: 38860, Start Num: 59

Candidate Starts for Nagem\_59:

(Start: 59 @39591 has 201 MA's), (Start: 77 @39489 has 2 MA's), (98, 39372), (112, 39321), (134, 39258), (147, 39213), (151, 39204), (180, 39123), (194, 39066), (201, 39030), (207, 39000), (234, 38889),

Gene: Nattles\_58 Start: 39288, Stop: 38557, Start Num: 59

Candidate Starts for Nattles\_58:

(Start: 59 @39288 has 201 MA's), (Start: 77 @39186 has 2 MA's), (98, 39069), (112, 39018), (134, 38955), (147, 38910), (151, 38901), (180, 38820), (194, 38763), (201, 38727), (207, 38697), (234, 38586),

Gene: Nedarya\_84 Start: 47378, Stop: 46665, Start Num: 56

Candidate Starts for Nedarya\_84:

(Start: 56 @47378 has 216 MA's), (62, 47354), (Start: 77 @47261 has 2 MA's), (88, 47183), (99, 47138), (112, 47093), (128, 47060), (130, 47054), (146, 46991), (151, 46979), (199, 46823), (210, 46784),

Gene: NickSell\_59 Start: 39558, Stop: 38827, Start Num: 59

Candidate Starts for NickSell\_59:

(Start: 59 @39558 has 201 MA's), (Start: 77 @39456 has 2 MA's), (98, 39339), (112, 39288), (134, 39225), (147, 39180), (151, 39171), (180, 39090), (194, 39033), (207, 38967), (234, 38856),

Gene: NicoleTera\_82 Start: 48143, Stop: 47388, Start Num: 56

Candidate Starts for NicoleTera\_82:

(Start: 56 @48143 has 216 MA's), (62, 48122), (65, 48110), (73, 48056), (Start: 77 @48029 has 2 MA's), (100, 47903), (112, 47861), (120, 47843), (130, 47819), (132, 47810), (146, 47756), (198, 47549), (199, 47546), (235, 47411), (240, 47396),

Gene: NoodlelyBoi\_7 Start: 3482, Stop: 4222, Start Num: 59

Candidate Starts for NoodlelyBoi\_7:

(Start: 59 @3482 has 201 MA's), (66, 3515), (Start: 77 @3584 has 2 MA's), (78, 3596), (80, 3611), (94, 3686), (98, 3701), (144, 3845), (151, 3863), (176, 3929), (182, 3965), (199, 4037), (203, 4061), (207, 4073), (212, 4088), (234, 4184),

Gene: NothingSpecial\_79 Start: 48082, Stop: 47348, Start Num: 56

Candidate Starts for NothingSpecial\_79:

(Start: 56 @48082 has 216 MA's), (69, 48025), (Start: 77 @47974 has 2 MA's), (105, 47833), (108, 47827), (125, 47785), (146, 47713), (184, 47566), (198, 47506), (199, 47503),

Gene: Oats\_58 Start: 39301, Stop: 38570, Start Num: 59

Candidate Starts for Oats\_58:

(Start: 59 @39301 has 201 MA's), (Start: 77 @39199 has 2 MA's), (98, 39082), (112, 39031), (134, 38968), (147, 38923), (151, 38914), (180, 38833), (194, 38776), (201, 38740), (207, 38710), (234, 38599),

Gene: ObLaDi\_153 Start: 80566, Stop: 79793, Start Num: 58

Candidate Starts for ObLaDi\_153:

(Start: 58 @80566 has 5 MA's), (69, 80500), (73, 80476), (76, 80452), (83, 80413), (89, 80368), (96, 80338), (106, 80308), (109, 80299), (116, 80275), (129, 80248), (135, 80221), (146, 80182), (174, 80083), (177, 80062), (195, 79990), (196, 79984), (227, 79867), (233, 79828), (241, 79804),

Gene: Odin\_83 Start: 47677, Stop: 46934, Start Num: 56

Candidate Starts for Odin\_83:

(Start: 56 @47677 has 216 MA's), (62, 47659), (69, 47617), (Start: 77 @47566 has 2 MA's), (Start: 79 @47545 has 2 MA's), (92, 47473), (100, 47440), (132, 47347), (141, 47320), (146, 47293), (198, 47098), (235, 46957), (239, 46945),

Gene: OlanP\_82 Start: 47027, Stop: 46260, Start Num: 56

Candidate Starts for OlanP\_82:

(Start: 47 @47066 has 1 MA's), (Start: 56 @47027 has 216 MA's), (62, 47006), (69, 46964), (70, 46961), (73, 46940), (Start: 74 @46934 has 1 MA's), (Start: 79 @46892 has 2 MA's), (84, 46862), (86, 46847), (112, 46745), (121, 46712), (125, 46706), (130, 46697), (143, 46646), (146, 46634), (184, 46484), (198, 46424),

Gene: OldNelly\_59 Start: 39344, Stop: 38613, Start Num: 59

Candidate Starts for OldNelly\_59:

(Start: 59 @39344 has 201 MA's), (Start: 77 @39242 has 2 MA's), (98, 39125), (112, 39074), (134, 39011), (147, 38966), (151, 38957), (180, 38876), (194, 38819), (207, 38753), (234, 38642),

Gene: Ollie\_84 Start: 46911, Stop: 46144, Start Num: 56

Candidate Starts for Ollie\_84:

(Start: 47 @46944 has 1 MA's), (Start: 56 @46911 has 216 MA's), (62, 46890), (70, 46845), (73, 46824), (Start: 74 @46818 has 1 MA's), (Start: 79 @46776 has 2 MA's), (84, 46746), (86, 46731), (112, 46629), (114, 46626), (125, 46590), (146, 46518), (152, 46497), (184, 46368), (193, 46335), (198, 46308),

Gene: Onglai\_86 Start: 46955, Stop: 46194, Start Num: 56

Candidate Starts for Onglai\_86:

(Start: 24 @47081 has 1 MA's), (Start: 56 @46955 has 216 MA's), (69, 46895), (73, 46871), (Start: 77 @46844 has 2 MA's), (80, 46817), (88, 46763), (100, 46715), (106, 46697), (112, 46673), (132, 46622), (141, 46595), (146, 46568), (198, 46355), (199, 46352), (208, 46319), (235, 46217),

Gene: Onika\_7 Start: 3470, Stop: 4210, Start Num: 59

Candidate Starts for Onika\_7:

(Start: 59 @3470 has 201 MA's), (66, 3503), (Start: 77 @3572 has 2 MA's), (78, 3584), (80, 3599), (94, 3674), (98, 3689), (144, 3833), (151, 3851), (176, 3917), (182, 3953), (199, 4025), (203, 4049), (207, 4061), (234, 4172),

Gene: Oofda\_88 Start: 47536, Stop: 46820, Start Num: 56

Candidate Starts for Oofda\_88:

(31, 47632), (Start: 49 @47581 has 1 MA's), (Start: 56 @47536 has 216 MA's), (62, 47512), (86, 47353), (95, 47308), (99, 47296), (105, 47278), (112, 47251), (123, 47221), (128, 47215), (130, 47209), (132, 47200), (146, 47146), (151, 47134), (218, 46912),

Gene: Orange\_86 Start: 47329, Stop: 46571, Start Num: 56

Candidate Starts for Orange\_86:

(Start: 56 @47329 has 216 MA's), (62, 47305), (69, 47263), (Start: 77 @47212 has 2 MA's), (Start: 79 @47191 has 2 MA's), (81, 47182), (84, 47161), (85, 47155), (86, 47146), (109, 47059), (112, 47044),

(132, 46996), (141, 46969), (146, 46942), (226, 46639), (235, 46594),

Gene: Oxtober96\_60 Start: 39543, Stop: 38812, Start Num: 59

Candidate Starts for Oxtober96\_60:

(Start: 59 @39543 has 201 MA's), (Start: 77 @39441 has 2 MA's), (98, 39324), (112, 39273), (134, 39210), (147, 39165), (151, 39156), (180, 39075), (194, 39018), (207, 38952), (234, 38841),

Gene: P28Green\_84 Start: 47046, Stop: 46279, Start Num: 56

Candidate Starts for P28Green\_84:

(45, 47091), (Start: 56 @47046 has 216 MA's), (62, 47025), (70, 46980), (73, 46959), (Start: 74 @46953 has 1 MA's), (Start: 79 @46911 has 2 MA's), (84, 46881), (86, 46866), (112, 46764), (114, 46761), (125, 46725), (146, 46653), (152, 46632), (184, 46503), (193, 46470), (198, 46443),

Gene: PGHhamlin\_86 Start: 47032, Stop: 46265, Start Num: 56

Candidate Starts for PGHhamlin\_86:

(Start: 47 @47065 has 1 MA's), (Start: 56 @47032 has 216 MA's), (62, 47011), (70, 46966), (73, 46945), (Start: 74 @46939 has 1 MA's), (Start: 79 @46897 has 2 MA's), (84, 46867), (86, 46852), (112, 46750), (114, 46747), (125, 46711), (146, 46639), (152, 46618), (184, 46489), (193, 46456), (198, 46429),

Gene: PHTowN\_75 Start: 52767, Stop: 51796, Start Num: 29

Candidate Starts for PHTowN\_75:

(Start: 29 @52767 has 8 MA's), (36, 52746), (Start: 61 @52647 has 2 MA's), (62, 52632), (64, 52620), (70, 52584), (75, 52551), (94, 52425), (98, 52410), (99, 52407), (118, 52329), (133, 52278), (175, 52110), (184, 52056), (199, 51984), (207, 51948), (214, 51927), (236, 51825),

Gene: PSirce\_55 Start: 37750, Stop: 37025, Start Num: 59

Candidate Starts for PSirce\_55:

(43, 37798), (Start: 59 @37750 has 201 MA's), (Start: 77 @37648 has 2 MA's), (98, 37540), (126, 37453), (134, 37423), (144, 37387), (148, 37375), (180, 37288), (194, 37231),

Gene: Paedore\_70 Start: 45492, Stop: 44761, Start Num: 59

Candidate Starts for Paedore\_70:

(Start: 59 @45492 has 201 MA's), (Start: 77 @45378 has 2 MA's), (80, 45351), (84, 45327), (105, 45252), (167, 45096), (184, 45018), (202, 44940), (231, 44832),

Gene: PainterBoy\_83 Start: 47511, Stop: 46741, Start Num: 56

Candidate Starts for PainterBoy\_83:

(32, 47604), (Start: 56 @47511 has 216 MA's), (62, 47490), (73, 47424), (Start: 79 @47376 has 2 MA's), (84, 47346), (99, 47274), (112, 47229), (130, 47178), (146, 47115), (152, 47094), (169, 47037), (198, 46905), (199, 46902), (226, 46809), (235, 46764),

Gene: Papafritta\_58 Start: 39306, Stop: 38575, Start Num: 59

Candidate Starts for Papafritta\_58:

(Start: 59 @39306 has 201 MA's), (Start: 77 @39204 has 2 MA's), (98, 39087), (112, 39036), (134, 38973), (147, 38928), (151, 38919), (180, 38838), (194, 38781), (207, 38715), (234, 38604),

Gene: ParleG\_59 Start: 39555, Stop: 38824, Start Num: 59

Candidate Starts for ParleG\_59:

(Start: 59 @39555 has 201 MA's), (Start: 77 @39453 has 2 MA's), (98, 39336), (112, 39285), (134, 39222), (147, 39177), (151, 39168), (180, 39087), (194, 39030), (207, 38964), (234, 38853),

Gene: Paschalis\_7 Start: 3479, Stop: 4219, Start Num: 59



Candidate Starts for Paschalis\_7:

(Start: 59 @3479 has 201 MA's), (66, 3512), (Start: 77 @3581 has 2 MA's), (78, 3593), (80, 3608), (94, 3683), (98, 3698), (144, 3842), (151, 3860), (176, 3926), (182, 3962), (199, 4034), (203, 4058), (207, 4070), (234, 4181),

Gene: Pawn\_82 Start: 46855, Stop: 46088, Start Num: 56

Candidate Starts for Pawn\_82:

(45, 46900), (Start: 56 @46855 has 216 MA's), (62, 46834), (69, 46792), (70, 46789), (73, 46768), (Start: 74 @46762 has 1 MA's), (Start: 79 @46720 has 2 MA's), (84, 46690), (86, 46675), (112, 46573), (125, 46534), (130, 46525), (143, 46474), (146, 46462), (184, 46312), (198, 46252),

Gene: Peep\_59 Start: 39601, Stop: 38870, Start Num: 59

Candidate Starts for Peep\_59:

(Start: 59 @39601 has 201 MA's), (Start: 77 @39499 has 2 MA's), (98, 39382), (112, 39331), (134, 39268), (147, 39223), (151, 39214), (180, 39133), (194, 39076), (207, 39010), (234, 38899),

Gene: Pembroke\_84 Start: 47041, Stop: 46274, Start Num: 56

Candidate Starts for Pembroke\_84:

(Start: 47 @47074 has 1 MA's), (Start: 56 @47041 has 216 MA's), (62, 47020), (70, 46975), (73, 46954), (Start: 74 @46948 has 1 MA's), (Start: 79 @46906 has 2 MA's), (84, 46876), (86, 46861), (112, 46759), (114, 46756), (125, 46720), (146, 46648), (152, 46627), (184, 46498), (193, 46465), (198, 46438),

Gene: Penny1\_84 Start: 47044, Stop: 46277, Start Num: 56

Candidate Starts for Penny1\_84:

(45, 47089), (Start: 56 @47044 has 216 MA's), (62, 47023), (70, 46978), (73, 46957), (Start: 74 @46951 has 1 MA's), (Start: 79 @46909 has 2 MA's), (84, 46879), (86, 46864), (112, 46762), (114, 46759), (125, 46723), (146, 46651), (152, 46630), (184, 46501), (193, 46468), (198, 46441),

Gene: Peppino\_58 Start: 39500, Stop: 38769, Start Num: 59

Candidate Starts for Peppino\_58:

(Start: 59 @39500 has 201 MA's), (76, 39401), (Start: 77 @39398 has 2 MA's), (98, 39281), (112, 39230), (147, 39122), (151, 39113), (180, 39032), (194, 38975), (201, 38939), (207, 38909), (221, 38861), (234, 38798),

Gene: Petersenfast\_80 Start: 46210, Stop: 45452, Start Num: 56

Candidate Starts for Petersenfast\_80:

(Start: 56 @46210 has 216 MA's), (62, 46186), (69, 46144), (Start: 77 @46093 has 2 MA's), (Start: 79 @46072 has 2 MA's), (81, 46063), (84, 46042), (85, 46036), (86, 46027), (109, 45940), (112, 45925), (132, 45877), (141, 45850), (146, 45823), (226, 45520), (235, 45475),

Gene: Ph8s\_85 Start: 47459, Stop: 46716, Start Num: 56

Candidate Starts for Ph8s\_85:

(15, 47672), (16, 47669), (Start: 56 @47459 has 216 MA's), (62, 47441), (69, 47399), (Start: 77 @47348 has 2 MA's), (Start: 79 @47327 has 2 MA's), (92, 47255), (100, 47222), (132, 47129), (141, 47102), (146, 47075), (198, 46880), (219, 46808), (235, 46739),

Gene: Phaeder\_88 Start: 48683, Stop: 47922, Start Num: 56

Candidate Starts for Phaeder\_88:

(Start: 56 @48683 has 216 MA's), (69, 48623), (Start: 77 @48572 has 2 MA's), (80, 48545), (88, 48491), (100, 48443), (106, 48425), (112, 48401), (132, 48350), (141, 48323), (146, 48296), (198, 48083), (199, 48080), (208, 48047), (235, 47945),

Gene: Phanita\_55 Start: 37523, Stop: 36798, Start Num: 59

Candidate Starts for Phanita\_55:

(Start: 59 @37523 has 201 MA's), (Start: 77 @37421 has 2 MA's), (92, 37340), (98, 37313), (126, 37226), (134, 37196), (144, 37160), (148, 37148), (180, 37061), (194, 37004),

Gene: PhedwardCullen\_7 Start: 3479, Stop: 4219, Start Num: 59

Candidate Starts for PhedwardCullen\_7:

(Start: 59 @3479 has 201 MA's), (66, 3512), (Start: 77 @3581 has 2 MA's), (78, 3593), (80, 3608), (94, 3683), (98, 3698), (144, 3842), (151, 3860), (176, 3926), (199, 4034), (203, 4058), (207, 4070), (212, 4085), (234, 4181),

Gene: Pherbot\_51 Start: 36125, Stop: 35388, Start Num: 59

Candidate Starts for Pherbot\_51:

(Start: 59 @36125 has 201 MA's), (Start: 77 @36014 has 2 MA's), (88, 35939), (91, 35927), (98, 35897), (124, 35819), (134, 35786), (144, 35750), (180, 35651), (181, 35648), (193, 35597), (199, 35564), (203, 35540), (210, 35519), (234, 35417),

Gene: Pherferi\_59 Start: 39548, Stop: 38817, Start Num: 59

Candidate Starts for Pherferi\_59:

(Start: 59 @39548 has 201 MA's), (Start: 77 @39446 has 2 MA's), (98, 39329), (112, 39278), (134, 39215), (147, 39170), (151, 39161), (180, 39080), (194, 39023), (207, 38957), (234, 38846),

Gene: Phiderman\_59 Start: 39545, Stop: 38814, Start Num: 59

Candidate Starts for Phiderman\_59:

(Start: 59 @39545 has 201 MA's), (Start: 77 @39443 has 2 MA's), (98, 39326), (112, 39275), (134, 39212), (147, 39167), (151, 39158), (180, 39077), (194, 39020), (207, 38954), (234, 38843),

Gene: Phireproof\_59 Start: 39554, Stop: 38823, Start Num: 59

Candidate Starts for Phireproof\_59:

(Start: 59 @39554 has 201 MA's), (Start: 77 @39452 has 2 MA's), (98, 39335), (112, 39284), (134, 39221), (147, 39176), (151, 39167), (180, 39086), (194, 39029), (207, 38963), (234, 38852),

Gene: PhishRPhriends\_80 Start: 46035, Stop: 45268, Start Num: 56

Candidate Starts for PhishRPhriends\_80:

(45, 46080), (Start: 56 @46035 has 216 MA's), (62, 46014), (69, 45972), (70, 45969), (73, 45948), (Start: 74 @45942 has 1 MA's), (Start: 79 @45900 has 2 MA's), (84, 45870), (86, 45855), (112, 45753), (125, 45714), (130, 45705), (143, 45654), (146, 45642), (184, 45492), (198, 45432),

Gene: Phoebe\_85 Start: 47036, Stop: 46269, Start Num: 56

Candidate Starts for Phoebe\_85:

(45, 47081), (Start: 56 @47036 has 216 MA's), (62, 47015), (70, 46970), (73, 46949), (Start: 74 @46943 has 1 MA's), (Start: 79 @46901 has 2 MA's), (84, 46871), (86, 46856), (112, 46754), (114, 46751), (125, 46715), (146, 46643), (152, 46622), (184, 46493), (193, 46460), (198, 46433),

Gene: Phonnegut\_88 Start: 48696, Stop: 47935, Start Num: 56

Candidate Starts for Phonnegut\_88:

(Start: 24 @48822 has 1 MA's), (Start: 56 @48696 has 216 MA's), (69, 48636), (73, 48612), (Start: 77 @48585 has 2 MA's), (80, 48558), (88, 48504), (100, 48456), (106, 48438), (112, 48414), (132, 48363), (141, 48336), (146, 48309), (198, 48096), (199, 48093), (208, 48060), (235, 47958),

Gene: Phorgeous\_7 Start: 3479, Stop: 4219, Start Num: 59

Candidate Starts for Phorgeous\_7:

(Start: 59 @3479 has 201 MA's), (66, 3512), (Start: 77 @3581 has 2 MA's), (78, 3593), (80, 3608), (94, 3683), (98, 3698), (144, 3842), (151, 3860), (176, 3926), (182, 3962), (199, 4034), (203, 4058), (207, 4070), (234, 4181),

Gene: Phoxy\_84 Start: 46972, Stop: 46298, Start Num: 74

Candidate Starts for Phoxy\_84:

(70, 46999), (73, 46978), (Start: 74 @46972 has 1 MA's), (Start: 79 @46930 has 2 MA's), (84, 46900), (86, 46885), (112, 46783), (114, 46780), (125, 46744), (146, 46672), (152, 46651), (184, 46522), (193, 46489), (198, 46462),

Gene: Phrancesco\_8 Start: 3697, Stop: 4437, Start Num: 59

Candidate Starts for Phrancesco\_8:

(Start: 59 @3697 has 201 MA's), (66, 3730), (Start: 77 @3799 has 2 MA's), (78, 3811), (80, 3826), (94, 3901), (98, 3916), (144, 4060), (151, 4078), (176, 4144), (182, 4180), (203, 4276), (207, 4288), (234, 4399), (244, 4429),

Gene: PhredFlintston\_59 Start: 39548, Stop: 38817, Start Num: 59

Candidate Starts for PhredFlintston\_59:

(Start: 59 @39548 has 201 MA's), (Start: 77 @39446 has 2 MA's), (98, 39329), (112, 39278), (134, 39215), (147, 39170), (151, 39161), (180, 39080), (194, 39023), (207, 38957), (234, 38846),

Gene: Phriends\_58 Start: 39348, Stop: 38617, Start Num: 59

Candidate Starts for Phriends\_58:

(Start: 59 @39348 has 201 MA's), (Start: 77 @39246 has 2 MA's), (98, 39129), (112, 39078), (134, 39015), (147, 38970), (151, 38961), (180, 38880), (194, 38823), (207, 38757), (234, 38646),

Gene: PierreOrion\_7 Start: 3479, Stop: 4219, Start Num: 59

Candidate Starts for PierreOrion\_7:

(Start: 59 @3479 has 201 MA's), (66, 3512), (Start: 77 @3581 has 2 MA's), (78, 3593), (80, 3608), (94, 3683), (98, 3698), (144, 3842), (151, 3860), (176, 3926), (182, 3962), (199, 4034), (203, 4058), (207, 4070), (234, 4181), (244, 4211),

Gene: Pioneer\_88 Start: 48696, Stop: 47935, Start Num: 56

Candidate Starts for Pioneer\_88:

(Start: 24 @48822 has 1 MA's), (Start: 56 @48696 has 216 MA's), (69, 48636), (73, 48612), (Start: 77 @48585 has 2 MA's), (80, 48558), (88, 48504), (100, 48456), (106, 48438), (112, 48414), (132, 48363), (141, 48336), (146, 48309), (198, 48096), (199, 48093), (208, 48060), (235, 47958),

Gene: PiperSansNom\_8 Start: 3783, Stop: 4523, Start Num: 59

Candidate Starts for PiperSansNom\_8:

(Start: 59 @3783 has 201 MA's), (66, 3816), (Start: 77 @3885 has 2 MA's), (78, 3897), (80, 3912), (94, 3987), (98, 4002), (144, 4146), (151, 4164), (176, 4230), (182, 4266), (199, 4338), (203, 4362), (207, 4374), (234, 4485),

Gene: Piperis\_7 Start: 3479, Stop: 4219, Start Num: 59

Candidate Starts for Piperis\_7:

(Start: 59 @3479 has 201 MA's), (66, 3512), (Start: 77 @3581 has 2 MA's), (78, 3593), (80, 3608), (94, 3683), (98, 3698), (144, 3842), (151, 3860), (176, 3926), (182, 3962), (203, 4058), (207, 4070), (234, 4181), (244, 4211),

Gene: Piro94\_83 Start: 48160, Stop: 47402, Start Num: 56

Candidate Starts for Piro94\_83:

(Start: 56 @48160 has 216 MA's), (62, 48139), (65, 48127), (69, 48097), (73, 48073), (Start: 77 @48046 has 2 MA's), (Start: 79 @48025 has 2 MA's), (85, 47989), (86, 47980), (93, 47950), (100, 47920), (112, 47878), (130, 47836), (132, 47827), (146, 47773), (156, 47737), (172, 47689), (194, 47590), (198, 47566), (199, 47563), (235, 47425),

Gene: Pocket\_58 Start: 39328, Stop: 38597, Start Num: 59

Candidate Starts for Pocket\_58:

(Start: 59 @39328 has 201 MA's), (Start: 77 @39226 has 2 MA's), (98, 39109), (112, 39058), (134, 38995), (147, 38950), (151, 38941), (180, 38860), (194, 38803), (201, 38767), (207, 38737), (234, 38626),

Gene: Polyuyki\_4 Start: 2672, Stop: 3490, Start Num: 52

Candidate Starts for Polyuyki\_4:

(Start: 24 @2549 has 1 MA's), (Start: 52 @2672 has 8 MA's), (67, 2732), (93, 2891), (109, 2948), (111, 2960), (130, 2993), (132, 3002), (134, 3014), (139, 3026), (141, 3029), (165, 3128), (202, 3308), (215, 3350),

Gene: Pomar16\_84 Start: 48043, Stop: 47270, Start Num: 55

Candidate Starts for Pomar16\_84:

(Start: 55 @48043 has 10 MA's), (62, 48019), (69, 47977), (73, 47953), (Start: 79 @47905 has 2 MA's), (84, 47875), (85, 47869), (109, 47773), (112, 47758), (117, 47746), (146, 47644), (152, 47623), (199, 47431), (235, 47293),

Gene: PotatoSplit\_85 Start: 47044, Stop: 46277, Start Num: 56

Candidate Starts for PotatoSplit\_85:

(45, 47089), (Start: 56 @47044 has 216 MA's), (62, 47023), (70, 46978), (73, 46957), (Start: 74 @46951 has 1 MA's), (Start: 79 @46909 has 2 MA's), (84, 46879), (86, 46864), (112, 46762), (114, 46759), (125, 46723), (146, 46651), (152, 46630), (184, 46501), (193, 46468), (198, 46441),

Gene: Power\_84 Start: 48723, Stop: 47965, Start Num: 56

Candidate Starts for Power\_84:

(Start: 56 @48723 has 216 MA's), (62, 48702), (69, 48660), (73, 48636), (Start: 77 @48609 has 2 MA's), (Start: 79 @48588 has 2 MA's), (85, 48552), (86, 48543), (100, 48483), (130, 48399), (132, 48390), (146, 48336), (156, 48300), (172, 48252), (194, 48153), (199, 48126), (218, 48060), (235, 47988),

Gene: PrincePhergus\_51 Start: 36141, Stop: 35404, Start Num: 59

Candidate Starts for PrincePhergus\_51:

(Start: 59 @36141 has 201 MA's), (Start: 77 @36030 has 2 MA's), (88, 35955), (91, 35943), (98, 35913), (124, 35835), (134, 35802), (144, 35766), (180, 35667), (181, 35664), (193, 35613), (199, 35580), (203, 35556), (210, 35535), (234, 35433),

Gene: Priya\_86 Start: 48467, Stop: 47706, Start Num: 56

Candidate Starts for Priya\_86:

(Start: 56 @48467 has 216 MA's), (69, 48407), (Start: 77 @48356 has 2 MA's), (80, 48329), (88, 48275), (100, 48227), (106, 48209), (112, 48185), (132, 48134), (141, 48107), (142, 48104), (146, 48080), (198, 47867), (199, 47864), (208, 47831), (235, 47729),

Gene: Pulchra\_8 Start: 3709, Stop: 4449, Start Num: 59

Candidate Starts for Pulchra\_8:

(Start: 59 @3709 has 201 MA's), (66, 3742), (Start: 77 @3811 has 2 MA's), (78, 3823), (80, 3838), (94, 3913), (98, 3928), (144, 4072), (151, 4090), (176, 4156), (182, 4192), (203, 4288), (207, 4300), (234, 4411), (244, 4441),

Gene: PuppyEggo\_59 Start: 39548, Stop: 38817, Start Num: 59

Candidate Starts for PuppyEggo\_59:

(Start: 59 @39548 has 201 MA's), (Start: 77 @39446 has 2 MA's), (98, 39329), (112, 39278), (134, 39215), (147, 39170), (151, 39161), (180, 39080), (194, 39023), (201, 38987), (207, 38957), (234, 38846),

Gene: Qobbit\_86 Start: 48429, Stop: 47668, Start Num: 56

Candidate Starts for Qobbit\_86:

(Start: 56 @48429 has 216 MA's), (69, 48369), (Start: 77 @48318 has 2 MA's), (80, 48291), (88, 48237), (100, 48189), (106, 48171), (112, 48147), (132, 48096), (141, 48069), (142, 48066), (146, 48042), (198, 47829), (199, 47826), (208, 47793), (235, 47691),

Gene: QueenB2\_81 Start: 47813, Stop: 47055, Start Num: 56

Candidate Starts for QueenB2\_81:

(Start: 52 @47816 has 8 MA's), (Start: 56 @47813 has 216 MA's), (62, 47792), (69, 47750), (70, 47747), (73, 47726), (Start: 77 @47699 has 2 MA's), (Start: 79 @47678 has 2 MA's), (85, 47642), (86, 47633), (100, 47573), (130, 47489), (132, 47480), (146, 47426), (156, 47390), (172, 47342), (194, 47243), (199, 47216), (218, 47150), (235, 47078),

Gene: QueenBeesly\_84 Start: 48520, Stop: 47762, Start Num: 56

Candidate Starts for QueenBeesly\_84:

(Start: 56 @48520 has 216 MA's), (62, 48499), (69, 48457), (73, 48433), (Start: 77 @48406 has 2 MA's), (Start: 79 @48385 has 2 MA's), (85, 48349), (86, 48340), (100, 48280), (130, 48196), (132, 48187), (146, 48133), (156, 48097), (172, 48049), (194, 47950), (199, 47923), (218, 47857), (235, 47785),

Gene: Quhwah\_8 Start: 3691, Stop: 4431, Start Num: 59

Candidate Starts for Quhwah\_8:

(Start: 59 @3691 has 201 MA's), (66, 3724), (Start: 77 @3793 has 2 MA's), (78, 3805), (80, 3820), (94, 3895), (98, 3910), (144, 4054), (151, 4072), (176, 4138), (182, 4174), (203, 4270), (207, 4282), (234, 4393), (244, 4423),

Gene: Quokka\_86 Start: 47576, Stop: 46815, Start Num: 56

Candidate Starts for Quokka\_86:

(Start: 56 @47576 has 216 MA's), (62, 47552), (69, 47510), (Start: 79 @47438 has 2 MA's), (84, 47408), (85, 47402), (100, 47333), (112, 47291), (132, 47243), (146, 47189), (171, 47105), (184, 47039), (198, 46979), (199, 46976), (226, 46883), (235, 46838),

Gene: Raccoon\_58 Start: 39471, Stop: 38740, Start Num: 59

Candidate Starts for Raccoon\_58:

(Start: 59 @39471 has 201 MA's), (76, 39372), (Start: 77 @39369 has 2 MA's), (98, 39252), (112, 39201), (147, 39093), (151, 39084), (180, 39003), (194, 38946), (201, 38910), (207, 38880), (221, 38832), (234, 38769),

Gene: Rachaly\_81 Start: 47648, Stop: 46893, Start Num: 56

Candidate Starts for Rachaly\_81:

(Start: 56 @47648 has 216 MA's), (62, 47627), (65, 47615), (73, 47561), (Start: 77 @47534 has 2 MA's), (84, 47483), (95, 47423), (100, 47408), (112, 47366), (130, 47324), (146, 47261), (184, 47111), (235, 46916),

Gene: Rahalelujah\_87 Start: 48224, Stop: 47463, Start Num: 56

Candidate Starts for Rahalelujah\_87:

(Start: 56 @48224 has 216 MA's), (69, 48164), (73, 48140), (Start: 77 @48113 has 2 MA's), (80, 48086), (88, 48032), (100, 47984), (112, 47942), (132, 47891), (141, 47864), (146, 47837), (152, 47816), (161, 47786), (199, 47621), (235, 47486),

Gene: Ramiel05\_7 Start: 3470, Stop: 4210, Start Num: 59

Candidate Starts for Ramiel05\_7:

(Start: 59 @3470 has 201 MA's), (66, 3503), (Start: 77 @3572 has 2 MA's), (78, 3584), (80, 3599), (94, 3674), (98, 3689), (144, 3833), (151, 3851), (176, 3917), (182, 3953), (199, 4025), (203, 4049), (207, 4061), (234, 4172),

Gene: Rapheph\_59 Start: 39548, Stop: 38817, Start Num: 59

Candidate Starts for Rapheph\_59:

(Start: 59 @39548 has 201 MA's), (Start: 77 @39446 has 2 MA's), (98, 39329), (112, 39278), (134, 39215), (147, 39170), (151, 39161), (180, 39080), (194, 39023), (207, 38957), (234, 38846),

Gene: Raptor\_59 Start: 39546, Stop: 38815, Start Num: 59

Candidate Starts for Raptor\_59:

(Start: 59 @39546 has 201 MA's), (Start: 77 @39444 has 2 MA's), (98, 39327), (112, 39276), (134, 39213), (147, 39168), (151, 39159), (180, 39078), (194, 39021), (207, 38955), (234, 38844),

Gene: Reba\_79 Start: 45691, Stop: 44924, Start Num: 56

Candidate Starts for Reba\_79:

(45, 45736), (Start: 56 @45691 has 216 MA's), (62, 45670), (69, 45628), (70, 45625), (73, 45604), (Start: 74 @45598 has 1 MA's), (Start: 79 @45556 has 2 MA's), (84, 45526), (86, 45511), (112, 45409), (125, 45370), (130, 45361), (143, 45310), (146, 45298), (184, 45148), (198, 45088),

Gene: RedRock\_84 Start: 48769, Stop: 48014, Start Num: 56

Candidate Starts for RedRock\_84:

(Start: 56 @48769 has 216 MA's), (62, 48748), (69, 48706), (73, 48682), (Start: 77 @48655 has 2 MA's), (Start: 79 @48634 has 2 MA's), (85, 48598), (86, 48589), (93, 48559), (100, 48529), (130, 48445), (132, 48436), (146, 48382), (156, 48346), (172, 48298), (199, 48172), (235, 48034),

Gene: Redfield\_58 Start: 39510, Stop: 38779, Start Num: 59

Candidate Starts for Redfield\_58:

(Start: 59 @39510 has 201 MA's), (76, 39411), (Start: 77 @39408 has 2 MA's), (98, 39291), (112, 39240), (147, 39132), (151, 39123), (180, 39042), (194, 38985), (201, 38949), (207, 38919), (221, 38871), (234, 38808),

Gene: Refuge\_86 Start: 50447, Stop: 49695, Start Num: 56

Candidate Starts for Refuge\_86:

(Start: 56 @50447 has 216 MA's), (62, 50426), (65, 50414), (76, 50336), (Start: 77 @50333 has 2 MA's), (81, 50303), (84, 50282), (100, 50207), (106, 50189), (108, 50186), (112, 50165), (130, 50123), (132, 50114), (146, 50060), (152, 50039), (159, 50021), (169, 49982), (199, 49850), (217, 49790),

Gene: Remus\_88 Start: 47411, Stop: 46695, Start Num: 56

Candidate Starts for Remus\_88:

(31, 47507), (Start: 41 @47477 has 1 MA's), (Start: 49 @47456 has 1 MA's), (Start: 56 @47411 has 216 MA's), (62, 47387), (Start: 77 @47294 has 2 MA's), (86, 47228), (99, 47171), (105, 47153), (112, 47126), (123, 47096), (128, 47090), (130, 47084), (132, 47075), (146, 47021), (151, 47009), (199, 46853),

Gene: RenegadeRaider\_53 Start: 36035, Stop: 35298, Start Num: 59

Candidate Starts for RenegadeRaider\_53:

(Start: 59 @36035 has 201 MA's), (Start: 77 @35924 has 2 MA's), (88, 35849), (91, 35837), (98, 35807), (124, 35729), (134, 35696), (144, 35660), (180, 35561), (181, 35558), (193, 35507), (199, 35474), (203, 35450), (210, 35429), (234, 35327),

Gene: Renzie\_59 Start: 39604, Stop: 38873, Start Num: 59

Candidate Starts for Renzie\_59:

(Start: 59 @39604 has 201 MA's), (Start: 77 @39502 has 2 MA's), (98, 39385), (112, 39334), (134, 39271), (147, 39226), (151, 39217), (180, 39136), (194, 39079), (207, 39013), (234, 38902),

Gene: Retro23\_84 Start: 48244, Stop: 47486, Start Num: 56

Candidate Starts for Retro23\_84:

(Start: 56 @48244 has 216 MA's), (62, 48223), (69, 48181), (73, 48157), (Start: 77 @48130 has 2 MA's), (Start: 79 @48109 has 2 MA's), (85, 48073), (92, 48037), (100, 48004), (130, 47920), (132, 47911), (146, 47857), (156, 47821), (172, 47773), (194, 47674), (198, 47650), (199, 47647), (235, 47509),

Gene: Riyhil\_59 Start: 39558, Stop: 38827, Start Num: 59

Candidate Starts for Riyhil\_59:

(Start: 59 @39558 has 201 MA's), (Start: 77 @39456 has 2 MA's), (98, 39339), (112, 39288), (134, 39225), (147, 39180), (151, 39171), (180, 39090), (194, 39033), (207, 38967), (234, 38856),

Gene: Robinson\_59 Start: 39620, Stop: 38889, Start Num: 59

Candidate Starts for Robinson\_59:

(Start: 59 @39620 has 201 MA's), (Start: 77 @39518 has 2 MA's), (98, 39401), (112, 39350), (134, 39287), (147, 39242), (151, 39233), (180, 39152), (194, 39095), (207, 39029), (234, 38918),

Gene: RobsFeet\_6 Start: 2970, Stop: 3710, Start Num: 59

Candidate Starts for RobsFeet\_6:

(33, 2892), (Start: 59 @2970 has 201 MA's), (66, 3003), (Start: 77 @3072 has 2 MA's), (78, 3084), (94, 3174), (98, 3189), (144, 3333), (151, 3351), (176, 3417), (182, 3453), (199, 3525), (203, 3549), (207, 3561), (212, 3576), (234, 3672),

Gene: Rog141\_58 Start: 39291, Stop: 38560, Start Num: 59

Candidate Starts for Rog141\_58:

(Start: 59 @39291 has 201 MA's), (Start: 77 @39189 has 2 MA's), (98, 39072), (112, 39021), (134, 38958), (147, 38913), (151, 38904), (180, 38823), (194, 38766), (201, 38730), (207, 38700), (234, 38589),

Gene: Rooney\_77 Start: 53191, Stop: 52226, Start Num: 29

Candidate Starts for Rooney\_77:

(Start: 29 @53191 has 8 MA's), (36, 53170), (Start: 61 @53077 has 2 MA's), (64, 53050), (69, 53017), (72, 52996), (75, 52981), (82, 52930), (98, 52840), (133, 52708), (175, 52540), (184, 52486), (206, 52381), (207, 52378), (222, 52318), (236, 52255),

Gene: RosieMae\_60 Start: 39352, Stop: 38621, Start Num: 59

Candidate Starts for RosieMae\_60:

(Start: 59 @39352 has 201 MA's), (Start: 77 @39250 has 2 MA's), (98, 39133), (112, 39082), (134, 39019), (147, 38974), (151, 38965), (180, 38884), (194, 38827), (201, 38791), (207, 38761), (234, 38650),

Gene: Rummer\_83 Start: 47068, Stop: 46301, Start Num: 56

Candidate Starts for Rummer\_83:

(45, 47113), (Start: 56 @47068 has 216 MA's), (62, 47047), (70, 47002), (73, 46981), (Start: 74 @46975 has 1 MA's), (Start: 79 @46933 has 2 MA's), (84, 46903), (86, 46888), (112, 46786), (114, 46783), (125, 46747), (146, 46675), (152, 46654), (184, 46525), (193, 46492), (198, 46465),

Gene: RyeScarlet\_89 Start: 48673, Stop: 47912, Start Num: 56

Candidate Starts for RyeScarlet\_89:

(Start: 24 @48799 has 1 MA's), (Start: 56 @48673 has 216 MA's), (69, 48613), (73, 48589), (Start: 77 @48562 has 2 MA's), (80, 48535), (88, 48481), (100, 48433), (106, 48415), (112, 48391), (132, 48340), (141, 48313), (146, 48286), (198, 48073), (199, 48070), (208, 48037), (235, 47935),

Gene: SJay\_59 Start: 39592, Stop: 38861, Start Num: 59

Candidate Starts for SJay\_59:

(Start: 59 @39592 has 201 MA's), (Start: 77 @39490 has 2 MA's), (98, 39373), (112, 39322), (134, 39259), (147, 39214), (151, 39205), (180, 39124), (194, 39067), (201, 39031), (207, 39001), (234, 38890),

Gene: Sabia\_82 Start: 47048, Stop: 46281, Start Num: 56

Candidate Starts for Sabia\_82:

(Start: 47 @47081 has 1 MA's), (Start: 56 @47048 has 216 MA's), (62, 47027), (70, 46982), (73, 46961), (Start: 74 @46955 has 1 MA's), (Start: 79 @46913 has 2 MA's), (84, 46883), (86, 46868), (112, 46766), (114, 46763), (125, 46727), (146, 46655), (152, 46634), (184, 46505), (193, 46472), (198, 46445),

Gene: Sabinator\_82 Start: 47042, Stop: 46275, Start Num: 56

Candidate Starts for Sabinator\_82:

(45, 47087), (Start: 56 @47042 has 216 MA's), (62, 47021), (70, 46976), (73, 46955), (Start: 74 @46949 has 1 MA's), (Start: 79 @46907 has 2 MA's), (84, 46877), (86, 46862), (112, 46760), (114, 46757), (125, 46721), (146, 46649), (152, 46628), (184, 46499), (193, 46466), (198, 46439),

Gene: Sachima\_84 Start: 48711, Stop: 47950, Start Num: 56

Candidate Starts for Sachima\_84:

(Start: 24 @48837 has 1 MA's), (Start: 56 @48711 has 216 MA's), (69, 48651), (73, 48627), (Start: 77 @48600 has 2 MA's), (80, 48573), (88, 48519), (100, 48471), (106, 48453), (112, 48429), (132, 48378), (141, 48351), (146, 48324), (198, 48111), (199, 48108), (208, 48075), (235, 47973),

Gene: Salz\_81 Start: 46125, Stop: 45367, Start Num: 56

Candidate Starts for Salz\_81:

(Start: 56 @46125 has 216 MA's), (62, 46101), (69, 46059), (Start: 77 @46008 has 2 MA's), (Start: 79 @45987 has 2 MA's), (81, 45978), (84, 45957), (85, 45951), (86, 45942), (109, 45855), (112, 45840), (132, 45792), (141, 45765), (146, 45738), (226, 45435), (235, 45390),

Gene: Sansa\_54 Start: 37536, Stop: 36811, Start Num: 59

Candidate Starts for Sansa\_54:

(Start: 59 @37536 has 201 MA's), (Start: 77 @37434 has 2 MA's), (98, 37326), (134, 37209), (144, 37173), (148, 37161), (180, 37074), (194, 37017),

Gene: Sapo\_49 Start: 39622, Stop: 40341, Start Num: 53

Candidate Starts for Sapo\_49:

(Start: 53 @39622 has 3 MA's), (69, 39697), (81, 39778), (102, 39886), (129, 39949), (131, 39955), (180, 40099), (184, 40120), (217, 40237),

Gene: Saratos\_56 Start: 37580, Stop: 36855, Start Num: 59

Candidate Starts for Saratos\_56:



(Start: 59 @37580 has 201 MA's), (Start: 77 @37478 has 2 MA's), (98, 37370), (126, 37283), (134, 37253), (144, 37217), (148, 37205), (180, 37118), (194, 37061),

Gene: Savannah\_7 Start: 3494, Stop: 4234, Start Num: 59

Candidate Starts for Savannah\_7:

(Start: 59 @3494 has 201 MA's), (66, 3527), (Start: 77 @3596 has 2 MA's), (78, 3608), (80, 3623), (94, 3698), (98, 3713), (144, 3857), (151, 3875), (176, 3941), (182, 3977), (199, 4049), (203, 4073), (207, 4085), (234, 4196),

Gene: Scherzo\_86 Start: 48728, Stop: 47967, Start Num: 56

Candidate Starts for Scherzo\_86:

(Start: 24 @48854 has 1 MA's), (Start: 56 @48728 has 216 MA's), (69, 48668), (73, 48644), (Start: 77 @48617 has 2 MA's), (80, 48590), (88, 48536), (100, 48488), (106, 48470), (112, 48446), (132, 48395), (141, 48368), (146, 48341), (198, 48128), (199, 48125), (208, 48092), (235, 47990),

Gene: Schimmels22\_51 Start: 36265, Stop: 35531, Start Num: 59

Candidate Starts for Schimmels22\_51:

(Start: 59 @36265 has 201 MA's), (66, 36232), (Start: 77 @36163 has 2 MA's), (98, 36046), (104, 36028), (112, 35995), (131, 35950), (141, 35917), (180, 35794), (186, 35767), (194, 35737), (199, 35707), (203, 35683), (207, 35671),

Gene: Schnapsidee\_58 Start: 39452, Stop: 38721, Start Num: 59

Candidate Starts for Schnapsidee\_58:

(Start: 59 @39452 has 201 MA's), (76, 39353), (Start: 77 @39350 has 2 MA's), (98, 39233), (112, 39182), (147, 39074), (151, 39065), (180, 38984), (194, 38927), (201, 38891), (207, 38861), (221, 38813), (234, 38750),

Gene: Schubert\_51 Start: 36743, Stop: 35955, Start Num: 37

Candidate Starts for Schubert\_51:

(Start: 37 @36743 has 1 MA's), (51, 36695), (Start: 77 @36584 has 2 MA's), (98, 36467), (112, 36416), (122, 36389), (147, 36308), (148, 36305), (162, 36269), (193, 36164), (207, 36095), (234, 35984),

Gene: Scissor2024\_52 Start: 35911, Stop: 35177, Start Num: 59

Candidate Starts for Scissor2024\_52:

(Start: 59 @35911 has 201 MA's), (66, 35878), (67, 35875), (Start: 77 @35809 has 2 MA's), (98, 35692), (104, 35674), (112, 35641), (131, 35596), (141, 35563), (180, 35440), (186, 35413), (194, 35383), (199, 35353), (203, 35329), (207, 35317),

Gene: Scumberland\_8 Start: 3697, Stop: 4437, Start Num: 59

Candidate Starts for Scumberland\_8:

(Start: 59 @3697 has 201 MA's), (66, 3730), (Start: 77 @3799 has 2 MA's), (78, 3811), (80, 3826), (94, 3901), (98, 3916), (144, 4060), (151, 4078), (176, 4144), (182, 4180), (203, 4276), (207, 4288), (212, 4303), (234, 4399), (244, 4429),

Gene: Sedgewig\_58 Start: 39252, Stop: 38521, Start Num: 59

Candidate Starts for Sedgewig\_58:

(Start: 59 @39252 has 201 MA's), (Start: 77 @39150 has 2 MA's), (98, 39033), (112, 38982), (134, 38919), (147, 38874), (151, 38865), (180, 38784), (194, 38727), (207, 38661), (234, 38550),

Gene: Selwyn23\_8 Start: 3709, Stop: 4449, Start Num: 59

Candidate Starts for Selwyn23\_8:

(Start: 59 @3709 has 201 MA's), (66, 3742), (Start: 77 @3811 has 2 MA's), (78, 3823), (80, 3838), (94, 3913), (98, 3928), (144, 4072), (151, 4090), (176, 4156), (182, 4192), (203, 4288), (207, 4300), (234,

4411), (244, 4441),

Gene: SemperFi\_84 Start: 48408, Stop: 47650, Start Num: 56

Candidate Starts for SemperFi\_84:

(Start: 56 @48408 has 216 MA's), (62, 48387), (69, 48345), (73, 48321), (Start: 77 @48294 has 2 MA's), (Start: 79 @48273 has 2 MA's), (85, 48237), (86, 48228), (100, 48168), (130, 48084), (132, 48075), (146, 48021), (156, 47985), (172, 47937), (194, 47838), (199, 47811), (218, 47745), (235, 47673),

Gene: Serenity\_87 Start: 47616, Stop: 46855, Start Num: 56

Candidate Starts for Serenity\_87:

(Start: 56 @47616 has 216 MA's), (62, 47592), (69, 47550), (Start: 79 @47478 has 2 MA's), (84, 47448), (85, 47442), (100, 47373), (132, 47283), (146, 47229), (171, 47145), (184, 47079), (198, 47019), (199, 47016), (226, 46923), (235, 46878),

Gene: Settecandela\_184 Start: 119829, Stop: 120656, Start Num: 61

Candidate Starts for Settecandela\_184:

(28, 119691), (Start: 61 @119829 has 2 MA's), (73, 119907), (Start: 74 @119913 has 1 MA's), (87, 120003), (91, 120027), (98, 120057), (137, 120189), (140, 120195), (154, 120255), (179, 120366), (192, 120435), (199, 120471),

Gene: ShaiHulud\_60 Start: 39557, Stop: 38826, Start Num: 59

Candidate Starts for ShaiHulud\_60:

(Start: 59 @39557 has 201 MA's), (Start: 77 @39455 has 2 MA's), (98, 39338), (112, 39287), (134, 39224), (147, 39179), (151, 39170), (180, 39089), (194, 39032), (201, 38996), (207, 38966), (234, 38855),

Gene: ShakeNBake\_75 Start: 52794, Stop: 51823, Start Num: 29

Candidate Starts for ShakeNBake\_75:

(Start: 29 @52794 has 8 MA's), (36, 52773), (Start: 61 @52674 has 2 MA's), (62, 52659), (64, 52647), (70, 52611), (75, 52578), (94, 52452), (98, 52437), (99, 52434), (118, 52356), (133, 52305), (175, 52137), (184, 52083), (199, 52011), (207, 51975), (214, 51954), (236, 51852),

Gene: Sham4\_82 Start: 46211, Stop: 45453, Start Num: 56

Candidate Starts for Sham4\_82:

(Start: 56 @46211 has 216 MA's), (62, 46187), (69, 46145), (Start: 77 @46094 has 2 MA's), (Start: 79 @46073 has 2 MA's), (81, 46064), (84, 46043), (85, 46037), (86, 46028), (109, 45941), (112, 45926), (132, 45878), (141, 45851), (146, 45824), (226, 45521), (235, 45476),

Gene: Shamu\_56 Start: 37469, Stop: 36744, Start Num: 59

Candidate Starts for Shamu\_56:

(Start: 59 @37469 has 201 MA's), (Start: 77 @37367 has 2 MA's), (98, 37259), (126, 37172), (134, 37142), (144, 37106), (148, 37094), (180, 37007), (194, 36950),

Gene: SheaKeira\_83 Start: 47967, Stop: 47209, Start Num: 56

Candidate Starts for SheaKeira\_83:

(Start: 56 @47967 has 216 MA's), (62, 47949), (Start: 77 @47856 has 2 MA's), (80, 47829), (100, 47730), (112, 47688), (132, 47637), (141, 47610), (146, 47583), (152, 47562), (199, 47367), (208, 47334), (235, 47232),

Gene: Shee\_59 Start: 39545, Stop: 38814, Start Num: 59

Candidate Starts for Shee\_59:

(Start: 59 @39545 has 201 MA's), (Start: 77 @39443 has 2 MA's), (98, 39326), (112, 39275), (134, 39212), (147, 39167), (151, 39158), (180, 39077), (194, 39020), (207, 38954), (234, 38843),

Gene: Shotgun\_7 Start: 3470, Stop: 4210, Start Num: 59

Candidate Starts for Shotgun\_7:

(Start: 59 @3470 has 201 MA's), (66, 3503), (Start: 77 @3572 has 2 MA's), (78, 3584), (80, 3599), (94, 3674), (98, 3689), (144, 3833), (151, 3851), (176, 3917), (182, 3953), (199, 4025), (203, 4049), (207, 4061), (234, 4172),

Gene: Shrubaron\_5 Start: 2863, Stop: 3603, Start Num: 59

Candidate Starts for Shrubaron\_5:

(33, 2785), (Start: 59 @2863 has 201 MA's), (66, 2896), (Start: 77 @2965 has 2 MA's), (78, 2977), (94, 3067), (98, 3082), (134, 3190), (144, 3226), (151, 3244), (176, 3310), (199, 3418), (207, 3454), (210, 3463), (234, 3565), (235, 3571),

Gene: Sinatra\_52 Start: 36136, Stop: 35399, Start Num: 59

Candidate Starts for Sinatra\_52:

(Start: 59 @36136 has 201 MA's), (Start: 77 @36025 has 2 MA's), (88, 35950), (91, 35938), (98, 35908), (124, 35830), (134, 35797), (144, 35761), (180, 35662), (181, 35659), (193, 35608), (199, 35575), (203, 35551), (210, 35530), (234, 35428),

Gene: SirFrank\_7 Start: 3530, Stop: 4270, Start Num: 59

Candidate Starts for SirFrank\_7:

(Start: 59 @3530 has 201 MA's), (66, 3563), (Start: 77 @3632 has 2 MA's), (78, 3644), (80, 3659), (94, 3734), (98, 3749), (144, 3893), (151, 3911), (176, 3977), (182, 4013), (199, 4085), (203, 4109), (207, 4121), (234, 4232),

Gene: SirVictor\_53 Start: 36703, Stop: 35975, Start Num: 59

Candidate Starts for SirVictor\_53:

(Start: 59 @36703 has 201 MA's), (Start: 77 @36601 has 2 MA's), (91, 36514), (98, 36484), (124, 36406), (134, 36373), (144, 36337), (166, 36277), (180, 36238), (181, 36235), (193, 36184), (199, 36151), (203, 36127), (210, 36106),

Gene: Sknot\_84 Start: 48019, Stop: 47261, Start Num: 56

Candidate Starts for Sknot\_84:

(Start: 56 @48019 has 216 MA's), (62, 47998), (65, 47986), (69, 47956), (73, 47932), (Start: 77 @47905 has 2 MA's), (Start: 79 @47884 has 2 MA's), (85, 47848), (86, 47839), (93, 47809), (100, 47779), (112, 47737), (130, 47695), (132, 47686), (146, 47632), (156, 47596), (172, 47548), (194, 47449), (198, 47425), (199, 47422), (235, 47284),

Gene: Smarties\_11 Start: 4460, Stop: 5197, Start Num: 59

Candidate Starts for Smarties\_11:

(Start: 59 @4460 has 201 MA's), (66, 4493), (Start: 77 @4562 has 2 MA's), (78, 4574), (80, 4589), (94, 4664), (98, 4679), (111, 4727), (134, 4787), (144, 4823), (176, 4907), (199, 5015), (207, 5051), (210, 5060), (234, 5162),

Gene: Smeagan\_87 Start: 48956, Stop: 48201, Start Num: 56

Candidate Starts for Smeagan\_87:

(Start: 56 @48956 has 216 MA's), (62, 48935), (69, 48893), (73, 48869), (Start: 79 @48821 has 2 MA's), (91, 48752), (100, 48716), (128, 48638), (146, 48569), (152, 48548), (198, 48362), (199, 48359), (235, 48221),

Gene: SnapTap\_84 Start: 48379, Stop: 47621, Start Num: 56

Candidate Starts for SnapTap\_84:

(Start: 56 @48379 has 216 MA's), (62, 48358), (69, 48316), (73, 48292), (Start: 77 @48265 has 2 MA's), (Start: 79 @48244 has 2 MA's), (85, 48208), (86, 48199), (100, 48139), (130, 48055), (132, 48046), (146, 47992), (156, 47956), (172, 47908), (194, 47809), (199, 47782), (218, 47716), (235, 47644),

Gene: Snape\_86 Start: 47318, Stop: 46560, Start Num: 56

Candidate Starts for Snape\_86:

(Start: 56 @47318 has 216 MA's), (62, 47294), (69, 47252), (Start: 77 @47201 has 2 MA's), (Start: 79 @47180 has 2 MA's), (81, 47171), (84, 47150), (85, 47144), (86, 47135), (109, 47048), (112, 47033), (132, 46985), (141, 46958), (146, 46931), (226, 46628), (235, 46583),

Gene: Snickers\_80 Start: 47013, Stop: 46246, Start Num: 56

Candidate Starts for Snickers\_80:

(Start: 47 @47046 has 1 MA's), (Start: 56 @47013 has 216 MA's), (62, 46992), (70, 46947), (73, 46926), (Start: 74 @46920 has 1 MA's), (Start: 79 @46878 has 2 MA's), (84, 46848), (86, 46833), (112, 46731), (114, 46728), (125, 46692), (146, 46620), (152, 46599), (184, 46470), (193, 46437), (198, 46410),

Gene: SoYo\_81 Start: 46956, Stop: 46189, Start Num: 56

Candidate Starts for SoYo\_81:

(45, 47001), (Start: 56 @46956 has 216 MA's), (62, 46935), (70, 46890), (73, 46869), (Start: 74 @46863 has 1 MA's), (Start: 79 @46821 has 2 MA's), (84, 46791), (86, 46776), (112, 46674), (114, 46671), (125, 46635), (146, 46563), (152, 46542), (184, 46413), (193, 46380), (198, 46353),

Gene: SoilDragon\_84 Start: 46516, Stop: 45716, Start Num: 47

Candidate Starts for SoilDragon\_84:

(Start: 47 @46516 has 1 MA's), (Start: 56 @46483 has 216 MA's), (62, 46462), (70, 46417), (73, 46396), (Start: 74 @46390 has 1 MA's), (Start: 79 @46348 has 2 MA's), (84, 46318), (86, 46303), (112, 46201), (114, 46198), (125, 46162), (146, 46090), (152, 46069), (184, 45940), (193, 45907), (198, 45880),

Gene: SoilGremlin\_59 Start: 39341, Stop: 38610, Start Num: 59

Candidate Starts for SoilGremlin\_59:

(Start: 59 @39341 has 201 MA's), (Start: 77 @39239 has 2 MA's), (98, 39122), (112, 39071), (134, 39008), (147, 38963), (151, 38954), (180, 38873), (194, 38816), (207, 38750), (234, 38639),

Gene: SonOfLevi\_59 Start: 39319, Stop: 38588, Start Num: 59

Candidate Starts for SonOfLevi\_59:

(Start: 59 @39319 has 201 MA's), (Start: 77 @39217 has 2 MA's), (98, 39100), (112, 39049), (134, 38986), (147, 38941), (151, 38932), (180, 38851), (194, 38794), (201, 38758), (207, 38728), (234, 38617),

Gene: Soshari\_86 Start: 47064, Stop: 46297, Start Num: 56

Candidate Starts for Soshari\_86:

(45, 47109), (Start: 56 @47064 has 216 MA's), (62, 47043), (70, 46998), (73, 46977), (Start: 74 @46971 has 1 MA's), (Start: 79 @46929 has 2 MA's), (84, 46899), (86, 46884), (112, 46782), (114, 46779), (125, 46743), (146, 46671), (152, 46650), (184, 46521), (193, 46488), (198, 46461),

Gene: Soups\_87 Start: 47266, Stop: 46484, Start Num: 41

Candidate Starts for Soups\_87:

(31, 47296), (Start: 41 @47266 has 1 MA's), (Start: 49 @47245 has 1 MA's), (Start: 56 @47200 has 216 MA's), (62, 47176), (Start: 77 @47083 has 2 MA's), (86, 47017), (99, 46960), (105, 46942), (112,

46915), (123, 46885), (128, 46879), (130, 46873), (132, 46864), (146, 46810), (151, 46798), (199, 46642),

Gene: Spike509\_84 Start: 47065, Stop: 46298, Start Num: 56

Candidate Starts for Spike509\_84:

(Start: 47 @47098 has 1 MA's), (Start: 56 @47065 has 216 MA's), (62, 47044), (70, 46999), (73, 46978), (Start: 74 @46972 has 1 MA's), (Start: 79 @46930 has 2 MA's), (84, 46900), (86, 46885), (112, 46783), (114, 46780), (125, 46744), (146, 46672), (152, 46651), (184, 46522), (193, 46489), (198, 46462),

Gene: Spouty\_86 Start: 48466, Stop: 47705, Start Num: 56

Candidate Starts for Spouty\_86:

(Start: 56 @48466 has 216 MA's), (69, 48406), (Start: 77 @48355 has 2 MA's), (80, 48328), (88, 48274), (100, 48226), (106, 48208), (112, 48184), (132, 48133), (141, 48106), (142, 48103), (146, 48079), (198, 47866), (199, 47863), (208, 47830), (235, 47728),

Gene: SqueakyClean\_66 Start: 44668, Stop: 43940, Start Num: 59

Candidate Starts for SqueakyClean\_66:

(Start: 59 @44668 has 201 MA's), (Start: 77 @44554 has 2 MA's), (135, 44377), (184, 44194), (204, 44113), (209, 44095), (245, 43957),

Gene: Stagni\_81 Start: 47043, Stop: 46276, Start Num: 56

Candidate Starts for Stagni\_81:

(Start: 47 @47076 has 1 MA's), (Start: 56 @47043 has 216 MA's), (62, 47022), (70, 46977), (73, 46956), (Start: 74 @46950 has 1 MA's), (Start: 79 @46908 has 2 MA's), (84, 46878), (86, 46863), (112, 46761), (114, 46758), (125, 46722), (146, 46650), (152, 46629), (184, 46500), (193, 46467), (198, 46440),

Gene: Stanktossa\_58 Start: 39548, Stop: 38817, Start Num: 59

Candidate Starts for Stanktossa\_58:

(Start: 59 @39548 has 201 MA's), (Start: 77 @39446 has 2 MA's), (98, 39329), (112, 39278), (134, 39215), (147, 39170), (151, 39161), (180, 39080), (194, 39023), (207, 38957), (234, 38846),

Gene: StarStuff\_84 Start: 48005, Stop: 47232, Start Num: 55

Candidate Starts for StarStuff\_84:

(Start: 55 @48005 has 10 MA's), (62, 47981), (69, 47939), (73, 47915), (Start: 79 @47867 has 2 MA's), (84, 47837), (85, 47831), (109, 47735), (112, 47720), (117, 47708), (146, 47606), (152, 47585), (199, 47393), (235, 47255),

Gene: Steamy\_83 Start: 49417, Stop: 48665, Start Num: 56

Candidate Starts for Steamy\_83:

(Start: 56 @49417 has 216 MA's), (62, 49399), (Start: 77 @49306 has 2 MA's), (84, 49255), (100, 49180), (106, 49162), (112, 49138), (128, 49102), (132, 49087), (146, 49033), (152, 49012), (159, 48994), (184, 48883), (186, 48877),

Gene: StepMih\_84 Start: 47034, Stop: 46267, Start Num: 56

Candidate Starts for StepMih\_84:

(Start: 47 @47067 has 1 MA's), (Start: 56 @47034 has 216 MA's), (62, 47013), (70, 46968), (73, 46947), (Start: 74 @46941 has 1 MA's), (Start: 79 @46899 has 2 MA's), (84, 46869), (86, 46854), (112, 46752), (114, 46749), (125, 46713), (146, 46641), (152, 46620), (184, 46491), (193, 46458), (198, 46431),

Gene: StingRay\_58 Start: 39342, Stop: 38611, Start Num: 59

Candidate Starts for StingRay\_58:

(Start: 59 @39342 has 201 MA's), (Start: 77 @39240 has 2 MA's), (98, 39123), (112, 39072), (134, 39009), (147, 38964), (151, 38955), (180, 38874), (194, 38817), (207, 38751), (234, 38640),

Gene: StirfryIV\_58 Start: 39264, Stop: 38533, Start Num: 59

Candidate Starts for StirfryIV\_58:

(Start: 59 @39264 has 201 MA's), (Start: 77 @39162 has 2 MA's), (98, 39045), (112, 38994), (134, 38931), (147, 38886), (151, 38877), (180, 38796), (194, 38739), (207, 38673), (234, 38562),

Gene: Stormbreaker8\_57 Start: 39319, Stop: 38588, Start Num: 59

Candidate Starts for Stormbreaker8\_57:

(Start: 59 @39319 has 201 MA's), (76, 39220), (Start: 77 @39217 has 2 MA's), (98, 39100), (112, 39049), (147, 38941), (151, 38932), (180, 38851), (194, 38794), (201, 38758), (207, 38728), (221, 38680), (234, 38617),

Gene: Strathdee\_59 Start: 39547, Stop: 38816, Start Num: 59

Candidate Starts for Strathdee\_59:

(Start: 59 @39547 has 201 MA's), (Start: 77 @39445 has 2 MA's), (98, 39328), (112, 39277), (134, 39214), (147, 39169), (151, 39160), (180, 39079), (194, 39022), (201, 38986), (207, 38956), (234, 38845),

Gene: Strosahl\_88 Start: 47411, Stop: 46695, Start Num: 56

Candidate Starts for Strosahl\_88:

(31, 47507), (Start: 41 @47477 has 1 MA's), (Start: 49 @47456 has 1 MA's), (Start: 56 @47411 has 216 MA's), (62, 47387), (Start: 77 @47294 has 2 MA's), (86, 47228), (99, 47171), (105, 47153), (112, 47126), (123, 47096), (128, 47090), (130, 47084), (132, 47075), (146, 47021), (151, 47009), (199, 46853),

Gene: Sunny\_ Start: 3722, Stop: 4393, Start Num: 77

Candidate Starts for Sunny\_:

(Start: 59 @3620 has 201 MA's), (66, 3653), (Start: 77 @3722 has 2 MA's), (99, 3842), (100, 3845), (101, 3848), (119, 3923), (144, 4016), (151, 4034), (193, 4172), (199, 4205), (203, 4229), (210, 4250), (234, 4352),

Gene: Superchunk\_84 Start: 47204, Stop: 46461, Start Num: 56

Candidate Starts for Superchunk\_84:

(Start: 56 @47204 has 216 MA's), (62, 47186), (69, 47144), (Start: 77 @47093 has 2 MA's), (Start: 79 @47072 has 2 MA's), (92, 47000), (100, 46967), (112, 46925), (115, 46919), (132, 46874), (141, 46847), (146, 46820), (149, 46811), (198, 46625), (208, 46589), (219, 46553), (235, 46484),

Gene: Superfresh\_59 Start: 39604, Stop: 38873, Start Num: 59

Candidate Starts for Superfresh\_59:

(Start: 59 @39604 has 201 MA's), (Start: 77 @39502 has 2 MA's), (98, 39385), (112, 39334), (134, 39271), (147, 39226), (151, 39217), (180, 39136), (194, 39079), (207, 39013), (234, 38902),

Gene: SweetiePie\_84 Start: 48512, Stop: 47754, Start Num: 56

Candidate Starts for SweetiePie\_84:

(Start: 56 @48512 has 216 MA's), (62, 48491), (69, 48449), (73, 48425), (Start: 77 @48398 has 2 MA's), (Start: 79 @48377 has 2 MA's), (85, 48341), (86, 48332), (100, 48272), (130, 48188), (132, 48179), (146, 48125), (156, 48089), (172, 48041), (194, 47942), (199, 47915), (218, 47849), (235, 47777),

Gene: SwirlSquare\_87 Start: 46934, Stop: 46176, Start Num: 56

Candidate Starts for SwirlSquare\_87:

(19, 47099), (Start: 56 @46934 has 216 MA's), (62, 46910), (69, 46868), (73, 46844), (Start: 77 @46817 has 2 MA's), (Start: 79 @46796 has 2 MA's), (84, 46766), (86, 46751), (100, 46691), (101, 46688), (105, 46676), (112, 46649), (132, 46604), (146, 46550), (147, 46547), (194, 46364), (198, 46340), (199, 46337), (217, 46277), (235, 46199),

Gene: Symere\_60 Start: 39262, Stop: 38531, Start Num: 59

Candidate Starts for Symere\_60:

(Start: 59 @39262 has 201 MA's), (Start: 77 @39160 has 2 MA's), (98, 39043), (112, 38992), (134, 38929), (147, 38884), (151, 38875), (180, 38794), (194, 38737), (207, 38671), (234, 38560),

Gene: TarsusIV\_83 Start: 48405, Stop: 47653, Start Num: 56

Candidate Starts for TarsusIV\_83:

(Start: 56 @48405 has 216 MA's), (62, 48384), (65, 48372), (73, 48318), (Start: 77 @48291 has 2 MA's), (95, 48180), (100, 48165), (112, 48123), (130, 48081), (146, 48018), (184, 47868), (198, 47811), (199, 47808), (208, 47775), (235, 47673),

Gene: TatarkaPM\_59 Start: 39558, Stop: 38827, Start Num: 59

Candidate Starts for TatarkaPM\_59:

(Start: 59 @39558 has 201 MA's), (Start: 77 @39456 has 2 MA's), (98, 39339), (112, 39288), (134, 39225), (147, 39180), (151, 39171), (180, 39090), (194, 39033), (207, 38967), (234, 38856),

Gene: Taurus\_85 Start: 47043, Stop: 46276, Start Num: 56

Candidate Starts for Taurus\_85:

(Start: 47 @47076 has 1 MA's), (Start: 56 @47043 has 216 MA's), (62, 47022), (70, 46977), (73, 46956), (Start: 74 @46950 has 1 MA's), (Start: 79 @46908 has 2 MA's), (84, 46878), (86, 46863), (112, 46761), (114, 46758), (125, 46722), (146, 46650), (152, 46629), (184, 46500), (193, 46467), (198, 46440),

Gene: Teagan\_59 Start: 39538, Stop: 38807, Start Num: 59

Candidate Starts for Teagan\_59:

(Start: 59 @39538 has 201 MA's), (Start: 77 @39436 has 2 MA's), (98, 39319), (112, 39268), (134, 39205), (147, 39160), (151, 39151), (180, 39070), (194, 39013), (207, 38947), (234, 38836),

Gene: Teamocil\_5 Start: 2600, Stop: 3349, Start Num: 56

Candidate Starts for Teamocil\_5:

(Start: 56 @2600 has 216 MA's), (Start: 77 @2714 has 2 MA's), (78, 2726), (84, 2765), (94, 2816), (98, 2831), (99, 2834), (107, 2855), (110, 2873), (134, 2939), (141, 2954), (144, 2975), (151, 2993), (160, 3026), (176, 3059), (182, 3095), (199, 3167), (207, 3203), (210, 3212), (224, 3263), (234, 3311), (235, 3317),

Gene: TeddyBear\_58 Start: 39301, Stop: 38570, Start Num: 59

Candidate Starts for TeddyBear\_58:

(Start: 59 @39301 has 201 MA's), (Start: 77 @39199 has 2 MA's), (98, 39082), (112, 39031), (134, 38968), (147, 38923), (151, 38914), (180, 38833), (194, 38776), (201, 38740), (207, 38710), (234, 38599),

Gene: Tenda\_58 Start: 39299, Stop: 38568, Start Num: 59

Candidate Starts for Tenda\_58:

(Start: 59 @39299 has 201 MA's), (Start: 77 @39197 has 2 MA's), (98, 39080), (112, 39029), (134, 38966), (147, 38921), (151, 38912), (180, 38831), (194, 38774), (201, 38738), (207, 38708), (234, 38597),

Gene: Teng\_66 Start: 35741, Stop: 36484, Start Num: 59

Candidate Starts for Teng\_66:

(1, 35036), (2, 35039), (3, 35078), (6, 35390), (8, 35414), (11, 35453), (12, 35498), (13, 35522), (42, 35687), (Start: 59 @35741 has 201 MA's), (66, 35786), (Start: 77 @35855 has 2 MA's), (88, 35930), (101, 35981), (110, 36014), (111, 36020), (134, 36080), (147, 36125), (151, 36134), (189, 36254), (193, 36269), (199, 36302), (201, 36308), (207, 36338), (210, 36347), (231, 36431), (242, 36473),

Gene: Terrific\_85 Start: 47993, Stop: 47235, Start Num: 56

Candidate Starts for Terrific\_85:

(Start: 56 @47993 has 216 MA's), (62, 47972), (65, 47960), (69, 47930), (73, 47906), (Start: 77 @47879 has 2 MA's), (Start: 79 @47858 has 2 MA's), (85, 47822), (86, 47813), (93, 47783), (100, 47753), (112, 47711), (130, 47669), (132, 47660), (146, 47606), (156, 47570), (172, 47522), (194, 47423), (198, 47399), (199, 47396), (235, 47258),

Gene: Thestral\_68 Start: 45402, Stop: 44662, Start Num: 59

Candidate Starts for Thestral\_68:

(25, 45543), (Start: 49 @45459 has 1 MA's), (Start: 59 @45402 has 201 MA's), (Start: 77 @45282 has 2 MA's), (80, 45255), (130, 45129), (156, 45039), (167, 45000), (172, 44982), (180, 44943), (184, 44922),

Gene: Thompsone\_59 Start: 39545, Stop: 38814, Start Num: 59

Candidate Starts for Thompsone\_59:

(Start: 59 @39545 has 201 MA's), (Start: 77 @39443 has 2 MA's), (98, 39326), (112, 39275), (134, 39212), (147, 39167), (151, 39158), (180, 39077), (194, 39020), (207, 38954), (234, 38843),

Gene: Thorongil\_59 Start: 39062, Stop: 38331, Start Num: 59

Candidate Starts for Thorongil\_59:

(Start: 59 @39062 has 201 MA's), (Start: 77 @38960 has 2 MA's), (98, 38843), (112, 38792), (134, 38729), (147, 38684), (151, 38675), (180, 38594), (194, 38537), (207, 38471), (234, 38360),

Gene: Tiffany\_83 Start: 46928, Stop: 46161, Start Num: 56

Candidate Starts for Tiffany\_83:

(45, 46973), (Start: 56 @46928 has 216 MA's), (62, 46907), (70, 46862), (73, 46841), (Start: 74 @46835 has 1 MA's), (Start: 79 @46793 has 2 MA's), (84, 46763), (86, 46748), (112, 46646), (114, 46643), (125, 46607), (146, 46535), (152, 46514), (184, 46385), (193, 46352), (198, 46325),

Gene: Timothy\_86 Start: 47295, Stop: 46537, Start Num: 56

Candidate Starts for Timothy\_86:

(Start: 56 @47295 has 216 MA's), (62, 47271), (69, 47229), (Start: 77 @47178 has 2 MA's), (Start: 79 @47157 has 2 MA's), (81, 47148), (84, 47127), (85, 47121), (86, 47112), (109, 47025), (112, 47010), (132, 46962), (141, 46935), (146, 46908), (226, 46605), (235, 46560),

Gene: TinSulphur\_60 Start: 39554, Stop: 38823, Start Num: 59

Candidate Starts for TinSulphur\_60:

(Start: 59 @39554 has 201 MA's), (Start: 77 @39452 has 2 MA's), (98, 39335), (112, 39284), (134, 39221), (147, 39176), (151, 39167), (180, 39086), (194, 39029), (207, 38963), (234, 38852),

Gene: TinaBelcher\_66 Start: 45320, Stop: 44529, Start Num: 49

Candidate Starts for TinaBelcher\_66:

(Start: 34 @45362 has 2 MA's), (35, 45356), (Start: 49 @45320 has 1 MA's), (Start: 59 @45263 has 201 MA's), (Start: 61 @45254 has 2 MA's), (Start: 77 @45149 has 2 MA's), (80, 45122), (130, 44996), (156, 44906), (167, 44867), (172, 44849), (180, 44810), (184, 44789),



Gene: TinyPebbles\_80 Start: 47072, Stop: 46305, Start Num: 56

Candidate Starts for TinyPebbles\_80:

(45, 47117), (Start: 56 @47072 has 216 MA's), (62, 47051), (70, 47006), (73, 46985), (Start: 74 @46979 has 1 MA's), (Start: 79 @46937 has 2 MA's), (84, 46907), (86, 46892), (112, 46790), (114, 46787), (125, 46751), (146, 46679), (152, 46658), (184, 46529), (193, 46496), (198, 46469),

Gene: TinyTimmy\_84 Start: 47024, Stop: 46266, Start Num: 56

Candidate Starts for TinyTimmy\_84:

(Start: 56 @47024 has 216 MA's), (62, 47000), (69, 46958), (Start: 77 @46907 has 2 MA's), (Start: 79 @46886 has 2 MA's), (81, 46877), (84, 46856), (85, 46850), (86, 46841), (109, 46754), (112, 46739), (132, 46691), (141, 46664), (146, 46637), (226, 46334), (235, 46289),

Gene: Tinyman4\_51 Start: 35961, Stop: 35227, Start Num: 59

Candidate Starts for Tinyman4\_51:

(Start: 59 @35961 has 201 MA's), (66, 35928), (Start: 77 @35859 has 2 MA's), (98, 35742), (104, 35724), (112, 35691), (131, 35646), (141, 35613), (180, 35490), (186, 35463), (194, 35433), (199, 35403), (203, 35379), (207, 35367),

Gene: TopsytheTRex\_83 Start: 47618, Stop: 46857, Start Num: 56

Candidate Starts for TopsytheTRex\_83:

(Start: 56 @47618 has 216 MA's), (62, 47594), (69, 47552), (Start: 79 @47480 has 2 MA's), (84, 47450), (85, 47444), (100, 47375), (132, 47285), (146, 47231), (171, 47147), (184, 47081), (198, 47021), (199, 47018), (226, 46925), (235, 46880),

Gene: Toaka\_86 Start: 48570, Stop: 47812, Start Num: 56

Candidate Starts for Toaka\_86:

(Start: 56 @48570 has 216 MA's), (62, 48552), (73, 48486), (Start: 77 @48459 has 2 MA's), (80, 48432), (100, 48333), (112, 48291), (132, 48240), (141, 48213), (146, 48186), (151, 48174), (159, 48147), (161, 48135), (199, 47970), (235, 47835),

Gene: Tomathan\_84 Start: 48083, Stop: 47310, Start Num: 55

Candidate Starts for Tomathan\_84:

(Start: 55 @48083 has 10 MA's), (62, 48059), (69, 48017), (73, 47993), (Start: 79 @47945 has 2 MA's), (84, 47915), (85, 47909), (109, 47813), (112, 47798), (117, 47786), (146, 47684), (152, 47663), (199, 47471), (235, 47333),

Gene: Travvers\_84 Start: 48000, Stop: 47227, Start Num: 55

Candidate Starts for Travvers\_84:

(Start: 55 @48000 has 10 MA's), (62, 47976), (69, 47934), (73, 47910), (Start: 79 @47862 has 2 MA's), (84, 47832), (85, 47826), (101, 47754), (109, 47730), (112, 47715), (117, 47703), (146, 47601), (152, 47580), (199, 47388), (235, 47250),

Gene: Trixie\_84 Start: 48979, Stop: 48218, Start Num: 52

Candidate Starts for Trixie\_84:

(Start: 52 @48979 has 8 MA's), (Start: 56 @48976 has 216 MA's), (62, 48952), (69, 48910), (73, 48886), (Start: 77 @48859 has 2 MA's), (85, 48802), (86, 48793), (91, 48769), (100, 48733), (130, 48655), (132, 48646), (146, 48592), (168, 48517), (184, 48436), (199, 48376), (215, 48328), (217, 48316), (235, 48238),

Gene: Trooper\_83 Start: 47964, Stop: 47212, Start Num: 56

Candidate Starts for Trooper\_83:

(Start: 56 @47964 has 216 MA's), (62, 47943), (65, 47931), (73, 47877), (Start: 77 @47850 has 2 MA's), (100, 47724), (112, 47682), (130, 47640), (146, 47577), (198, 47370), (199, 47367), (208,

47334), (235, 47232),

Gene: TrvxScott\_65 Start: 45467, Stop: 44634, Start Num: 34

Candidate Starts for TrvxScott\_65:

(Start: 34 @45467 has 2 MA's), (35, 45461), (Start: 49 @45425 has 1 MA's), (Start: 59 @45368 has 201 MA's), (Start: 61 @45359 has 2 MA's), (Start: 77 @45254 has 2 MA's), (80, 45227), (156, 45011), (167, 44972), (172, 44954), (180, 44915), (184, 44894),

Gene: Tubs\_88 Start: 48683, Stop: 47922, Start Num: 56

Candidate Starts for Tubs\_88:

(Start: 56 @48683 has 216 MA's), (69, 48623), (Start: 77 @48572 has 2 MA's), (80, 48545), (88, 48491), (100, 48443), (106, 48425), (112, 48401), (132, 48350), (141, 48323), (146, 48296), (198, 48083), (199, 48080), (208, 48047), (235, 47945),

Gene: Turbido\_85 Start: 48677, Stop: 47922, Start Num: 56

Candidate Starts for Turbido\_85:

(Start: 56 @48677 has 216 MA's), (62, 48656), (69, 48614), (73, 48590), (Start: 79 @48542 has 2 MA's), (91, 48473), (100, 48437), (128, 48359), (146, 48290), (152, 48269), (198, 48083), (199, 48080), (235, 47942),

Gene: Tyrumbra\_5 Start: 2866, Stop: 3615, Start Num: 56

Candidate Starts for Tyrumbra\_5:

(27, 2752), (Start: 56 @2866 has 216 MA's), (Start: 77 @2980 has 2 MA's), (78, 2992), (94, 3082), (98, 3097), (110, 3139), (144, 3241), (151, 3259), (176, 3325), (182, 3361), (199, 3433), (207, 3469), (210, 3478), (234, 3577), (235, 3583),

Gene: Ugenie5\_75 Start: 46172, Stop: 45411, Start Num: 56

Candidate Starts for Ugenie5\_75:

(Start: 24 @46298 has 1 MA's), (Start: 56 @46172 has 216 MA's), (69, 46112), (73, 46088), (Start: 77 @46061 has 2 MA's), (80, 46034), (88, 45980), (100, 45932), (106, 45914), (112, 45890), (132, 45839), (141, 45812), (146, 45785), (198, 45572), (199, 45569), (208, 45536), (235, 45434),

Gene: Updawg\_85 Start: 48207, Stop: 47449, Start Num: 56

Candidate Starts for Updawg\_85:

(Start: 56 @48207 has 216 MA's), (62, 48186), (65, 48174), (69, 48144), (73, 48120), (Start: 77 @48093 has 2 MA's), (Start: 79 @48072 has 2 MA's), (85, 48036), (86, 48027), (93, 47997), (100, 47967), (130, 47883), (132, 47874), (146, 47820), (156, 47784), (172, 47736), (194, 47637), (198, 47613), (199, 47610), (235, 47472),

Gene: VA6\_84 Start: 48305, Stop: 47550, Start Num: 56

Candidate Starts for VA6\_84:

(Start: 56 @48305 has 216 MA's), (62, 48284), (69, 48242), (Start: 77 @48191 has 2 MA's), (Start: 79 @48170 has 2 MA's), (85, 48134), (86, 48125), (93, 48095), (100, 48065), (132, 47972), (146, 47918), (156, 47882), (158, 47879), (172, 47834), (194, 47735), (199, 47708), (215, 47660), (235, 47570),

Gene: VC3\_82 Start: 46905, Stop: 46132, Start Num: 55

Candidate Starts for VC3\_82:

(Start: 55 @46905 has 10 MA's), (62, 46881), (69, 46839), (73, 46815), (Start: 79 @46767 has 2 MA's), (84, 46737), (85, 46731), (101, 46659), (109, 46635), (112, 46620), (117, 46608), (146, 46506), (152, 46485), (199, 46293), (235, 46155),

Gene: VanLee\_161 Start: 81358, Stop: 80615, Start Num: 58

Candidate Starts for VanLee\_161:

(Start: 58 @81358 has 5 MA's), (73, 81268), (82, 81208), (101, 81124), (108, 81106), (115, 81079), (116, 81076), (127, 81052), (134, 81025), (146, 80983), (153, 80962), (174, 80896), (177, 80875), (178, 80872), (196, 80797), (197, 80788), (205, 80758),

Gene: Vanisoa\_83 Start: 48902, Stop: 48144, Start Num: 56

Candidate Starts for Vanisoa\_83:

(Start: 56 @48902 has 216 MA's), (62, 48884), (Start: 77 @48791 has 2 MA's), (80, 48764), (100, 48665), (106, 48647), (112, 48623), (132, 48572), (141, 48545), (146, 48518), (199, 48302), (208, 48269), (235, 48167),

Gene: Velene\_59 Start: 39544, Stop: 38813, Start Num: 59

Candidate Starts for Velene\_59:

(Start: 59 @39544 has 201 MA's), (Start: 77 @39442 has 2 MA's), (98, 39325), (112, 39274), (134, 39211), (147, 39166), (151, 39157), (180, 39076), (194, 39019), (207, 38953), (234, 38842),

Gene: Vispitious\_59 Start: 39548, Stop: 38817, Start Num: 59

Candidate Starts for Vispitious\_59:

(Start: 59 @39548 has 201 MA's), (Start: 77 @39446 has 2 MA's), (98, 39329), (112, 39278), (134, 39215), (147, 39170), (151, 39161), (180, 39080), (194, 39023), (201, 38987), (207, 38957), (234, 38846),

Gene: Vix\_80 Start: 47123, Stop: 46356, Start Num: 56

Candidate Starts for Vix\_80:

(45, 47168), (Start: 56 @47123 has 216 MA's), (62, 47102), (70, 47057), (73, 47036), (Start: 74 @47030 has 1 MA's), (Start: 79 @46988 has 2 MA's), (84, 46958), (86, 46943), (112, 46841), (114, 46838), (125, 46802), (146, 46730), (152, 46709), (184, 46580), (193, 46547), (198, 46520),

Gene: Warrior24\_90 Start: 47992, Stop: 47276, Start Num: 56

Candidate Starts for Warrior24\_90:

(31, 48088), (Start: 49 @48037 has 1 MA's), (Start: 56 @47992 has 216 MA's), (62, 47968), (86, 47809), (95, 47764), (99, 47752), (105, 47734), (112, 47707), (123, 47677), (128, 47671), (130, 47665), (132, 47656), (146, 47602), (151, 47590), (218, 47368),

Gene: Watson\_83 Start: 47032, Stop: 46265, Start Num: 56

Candidate Starts for Watson\_83:

(Start: 47 @47065 has 1 MA's), (Start: 56 @47032 has 216 MA's), (62, 47011), (70, 46966), (73, 46945), (Start: 74 @46939 has 1 MA's), (Start: 79 @46897 has 2 MA's), (84, 46867), (86, 46852), (112, 46750), (114, 46747), (125, 46711), (146, 46639), (152, 46618), (184, 46489), (193, 46456), (198, 46429),

Gene: WeiHuaDA\_86 Start: 49232, Stop: 48477, Start Num: 56

Candidate Starts for WeiHuaDA\_86:

(Start: 56 @49232 has 216 MA's), (62, 49211), (69, 49169), (73, 49145), (Start: 77 @49118 has 2 MA's), (Start: 79 @49097 has 2 MA's), (85, 49061), (86, 49052), (91, 49028), (100, 48992), (130, 48914), (132, 48905), (146, 48851), (198, 48638), (199, 48635), (215, 48587), (217, 48575), (235, 48497),

Gene: Wentworth\_75 Start: 52818, Stop: 51838, Start Num: 29

Candidate Starts for Wentworth\_75:

(9, 53025), (22, 52854), (23, 52848), (Start: 29 @52818 has 8 MA's), (36, 52785), (43, 52764), (60, 52695), (Start: 61 @52692 has 2 MA's), (64, 52665), (75, 52596), (94, 52470), (98, 52455), (99, 52452), (133, 52323), (175, 52155), (184, 52101), (207, 51993), (236, 51870),

Gene: WestPM\_51 Start: 36179, Stop: 35445, Start Num: 59

Candidate Starts for WestPM\_51:

(Start: 59 @36179 has 201 MA's), (66, 36146), (Start: 77 @36077 has 2 MA's), (98, 35960), (104, 35942), (112, 35909), (131, 35864), (141, 35831), (151, 35792), (180, 35708), (194, 35651), (199, 35621), (203, 35597), (207, 35585),

Gene: Whabigail7\_84 Start: 48675, Stop: 47920, Start Num: 56

Candidate Starts for Whabigail7\_84:

(Start: 56 @48675 has 216 MA's), (62, 48654), (69, 48612), (73, 48588), (Start: 79 @48540 has 2 MA's), (91, 48471), (100, 48435), (128, 48357), (146, 48288), (152, 48267), (198, 48081), (199, 48078), (235, 47940),

Gene: WideWale\_85 Start: 48207, Stop: 47449, Start Num: 56

Candidate Starts for WideWale\_85:

(Start: 56 @48207 has 216 MA's), (62, 48186), (65, 48174), (69, 48144), (73, 48120), (Start: 77 @48093 has 2 MA's), (Start: 79 @48072 has 2 MA's), (85, 48036), (86, 48027), (93, 47997), (100, 47967), (130, 47883), (132, 47874), (146, 47820), (156, 47784), (172, 47736), (194, 47637), (198, 47613), (199, 47610), (235, 47472),

Gene: WildNOut\_59 Start: 39541, Stop: 38810, Start Num: 59

Candidate Starts for WildNOut\_59:

(Start: 59 @39541 has 201 MA's), (Start: 77 @39439 has 2 MA's), (98, 39322), (112, 39271), (134, 39208), (147, 39163), (151, 39154), (180, 39073), (194, 39016), (207, 38950), (234, 38839),

Gene: Wilkos\_77 Start: 52984, Stop: 52007, Start Num: 29

Candidate Starts for Wilkos\_77:

(23, 53014), (Start: 29 @52984 has 8 MA's), (36, 52951), (43, 52930), (Start: 61 @52858 has 2 MA's), (64, 52831), (75, 52762), (82, 52711), (95, 52630), (133, 52489), (150, 52426), (170, 52345), (175, 52321), (184, 52267), (206, 52162), (207, 52159), (236, 52036),

Gene: Winzigespinne\_58 Start: 39287, Stop: 38556, Start Num: 59

Candidate Starts for Winzigespinne\_58:

(Start: 59 @39287 has 201 MA's), (Start: 77 @39185 has 2 MA's), (98, 39068), (112, 39017), (134, 38954), (147, 38909), (151, 38900), (180, 38819), (194, 38762), (207, 38696), (234, 38585),

Gene: Wooldri\_86 Start: 46949, Stop: 46182, Start Num: 56

Candidate Starts for Wooldri\_86:

(45, 46994), (Start: 56 @46949 has 216 MA's), (62, 46928), (70, 46883), (73, 46862), (Start: 74 @46856 has 1 MA's), (Start: 79 @46814 has 2 MA's), (84, 46784), (86, 46769), (112, 46667), (114, 46664), (125, 46628), (146, 46556), (152, 46535), (184, 46406), (193, 46373), (198, 46346),

Gene: XianYue\_83 Start: 48459, Stop: 47704, Start Num: 56

Candidate Starts for XianYue\_83:

(Start: 56 @48459 has 216 MA's), (62, 48438), (69, 48396), (73, 48372), (Start: 77 @48345 has 2 MA's), (Start: 79 @48324 has 2 MA's), (85, 48288), (86, 48279), (93, 48249), (100, 48219), (130, 48135), (132, 48126), (146, 48072), (155, 48039), (172, 47988), (198, 47865), (199, 47862), (235, 47724),

Gene: Yara\_73 Start: 52131, Stop: 51136, Start Num: 29

Candidate Starts for Yara\_73:

(5, 52404), (7, 52371), (21, 52176), (23, 52161), (Start: 29 @52131 has 8 MA's), (36, 52119), (38, 52116), (40, 52107), (Start: 61 @52026 has 2 MA's), (64, 51999), (68, 51981), (89, 51828), (98, 51792), (99, 51789), (132, 51663), (133, 51660), (173, 51504), (207, 51333), (212, 51318),

Gene: Yecey3\_89 Start: 48441, Stop: 47680, Start Num: 56

Candidate Starts for Yecey3\_89:

(26, 48561), (Start: 56 @48441 has 216 MA's), (69, 48381), (73, 48357), (Start: 77 @48330 has 2 MA's), (80, 48303), (88, 48249), (100, 48201), (106, 48183), (108, 48180), (112, 48159), (132, 48108), (141, 48081), (146, 48054), (159, 48015), (198, 47841), (199, 47838), (235, 47703),

Gene: Yeti\_7 Start: 3479, Stop: 4219, Start Num: 59

Candidate Starts for Yeti\_7:

(Start: 59 @3479 has 201 MA's), (66, 3512), (Start: 77 @3581 has 2 MA's), (78, 3593), (80, 3608), (94, 3683), (98, 3698), (144, 3842), (151, 3860), (176, 3926), (182, 3962), (203, 4058), (207, 4070), (234, 4181), (244, 4211),

Gene: Zada\_60 Start: 39560, Stop: 38829, Start Num: 59

Candidate Starts for Zada\_60:

(Start: 59 @39560 has 201 MA's), (Start: 77 @39458 has 2 MA's), (98, 39341), (112, 39290), (134, 39227), (147, 39182), (151, 39173), (180, 39092), (194, 39035), (207, 38969), (234, 38858),

Gene: Zenitsu\_56 Start: 37616, Stop: 36891, Start Num: 59

Candidate Starts for Zenitsu\_56:

(Start: 59 @37616 has 201 MA's), (Start: 77 @37514 has 2 MA's), (98, 37406), (126, 37319), (134, 37289), (144, 37253), (148, 37241), (180, 37154), (194, 37097),

Gene: Zimmer\_85 Start: 49879, Stop: 49121, Start Num: 56

Candidate Starts for Zimmer\_85:

(Start: 56 @49879 has 216 MA's), (62, 49858), (65, 49846), (73, 49792), (Start: 77 @49765 has 2 MA's), (84, 49714), (95, 49654), (100, 49639), (146, 49492), (152, 49471), (159, 49453), (169, 49414), (184, 49342), (235, 49144),