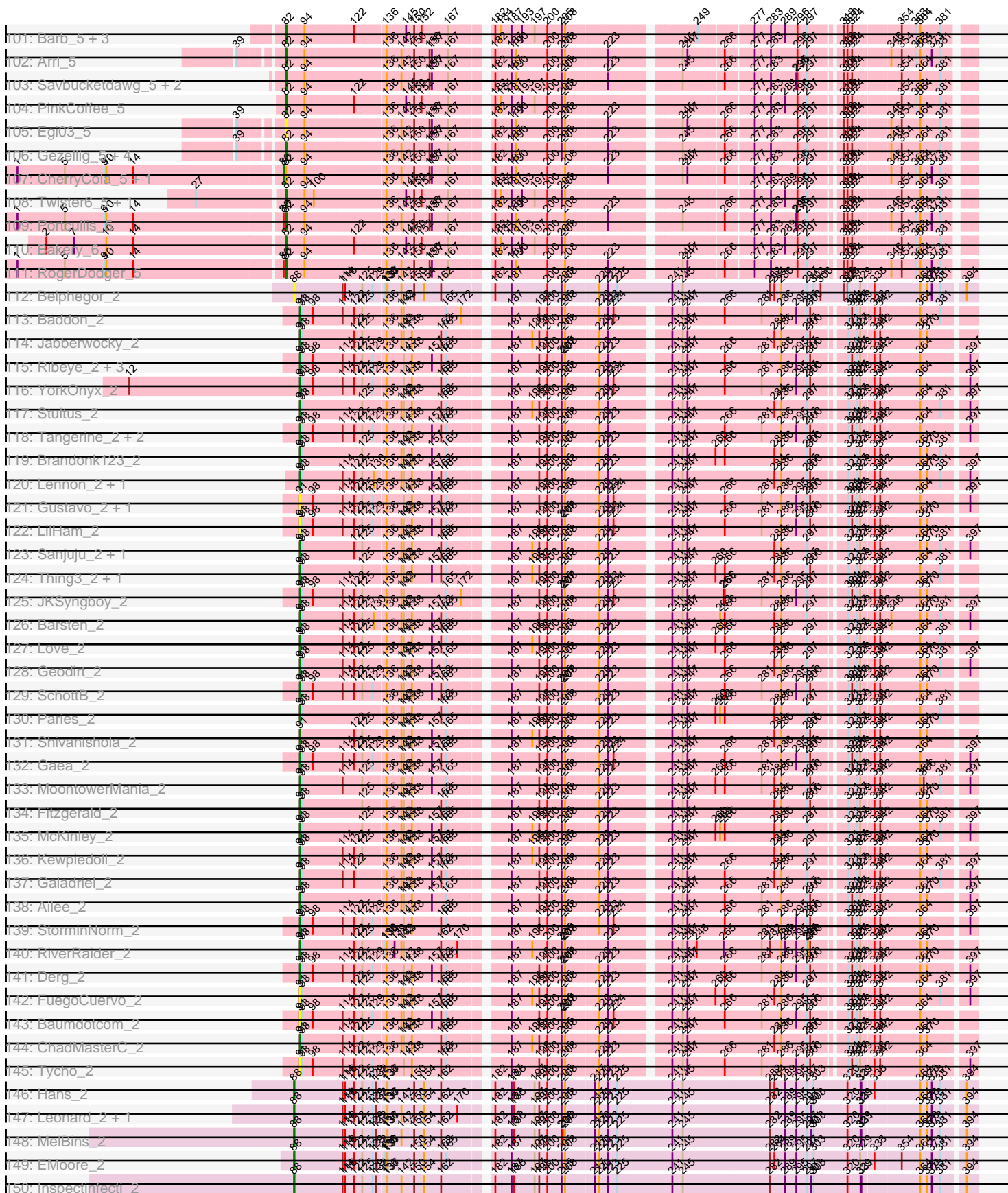
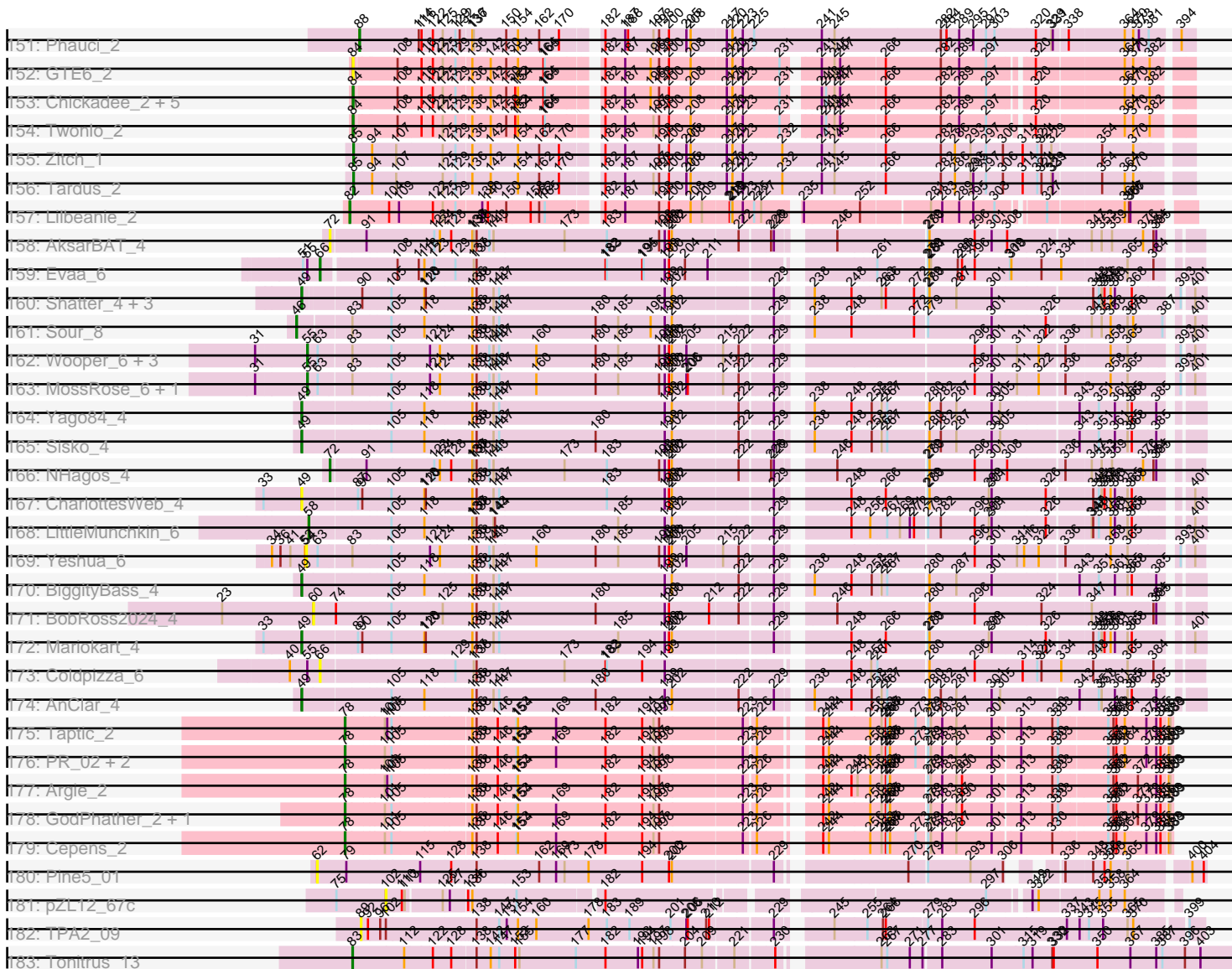




Pham 204632



Pham 204632



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 204632 Report

This analysis was run 02/22/25 on database version 588.

Pham number 204632 has 582 members, 89 are drafts.

Phages represented in each track:

- Track 1 : Mao1\_2
- Track 2 : Mask\_2, Sejanus\_2
- Track 3 : Dori\_3
- Track 4 : StAugustine\_10, Causa\_11
- Track 5 : Struggle\_2, MelsMeow\_2, Brilliant\_2, Weher20\_2, Chunky\_2, Veritas\_2, MichaelPhcott\_2, Soile\_2, LeiMonet\_2, PhrankReynolds\_2, AngelCake\_2, Trypo\_2, Wallhey\_2, Khan1\_2, Plata\_2, Inchworm\_2, Melc17\_2, Maskar\_2, Longacauda\_2, JakeO\_2, MrPhizzler\_2, Gwennie1\_2, Mag7\_2, Durga\_2, Swiphy\_2, Labeouficaum\_2, Phleuron\_2, Thunderbird\_2, Etaye\_2, Hartsy\_2, Oline\_2, Jiminy\_2, JDog\_2, CampRoach\_2, GeneCoco\_2, DaddyDaniels\_2, Derpp\_2, DelRivs\_2, PhenghisKhan\_2, Doddsville\_2, Zonia\_2, Jiraiya\_2, DuchessDung\_2, Duggie\_2, Ashraf\_2, Iridessa\_2, BatteryCK\_2, Magic8\_2, Sheila\_2, Dati\_2, Ricotta\_2, CharlieGBrown\_2, Pinkman\_2, TyrionL\_2, MiniBoss\_2, PhatLouie\_2, ImtiyazSitla\_2, Kwksand96\_2, Phergie\_2, Rimu\_2
- Track 6 : Virgeve\_2, Morty\_2, Childish\_2, RedMaple\_2, Yoshand\_2, Robyn\_2, Pops\_2, Buckeye\_2, UncleHowie\_2, DonSanchon\_2, KingVeVeVe\_2, LostAndPhound\_2, FriarPreacher\_2, Timmi\_2, Aelin\_2, Burr\_2, Eremos\_2, Boehler\_2, Hetaeria\_2, MitKao\_2, Badfish\_2, Lulwa\_2, Xavier\_2, FluffyNinja\_2, TallGrassMM\_2, Schadenfreude\_2, Pipsqueak\_2, Hocus\_2, Held\_2, Squiggle\_2, Simielle\_2, BlackStallion\_2, Vaishali24\_2, LemonSlice\_2, Jesabah\_2, Tooj\_2, Potter\_2, Altwerkus\_2, Caspiroi\_2, KlimbOn\_2, Daffy\_2, IsaacEli\_2, AltPhacts\_2, Carthage\_2, Toni\_2, Apizium\_2, FugateOSU\_2, Antonia\_2, Banjo\_2, Haleema\_2, Solosis\_2, Kikipoo\_2, Vortex\_2, Giraffe\_2, PinheadLarry\_2, Mosaic\_2, SDcharge11\_2, Cornbread\_2, Bluephacebaby\_2, Gareth\_2, Harvey\_2, Telesworld\_2, Jillium\_2, Fringe\_2, UAch1\_2, Waterdiva\_2, Murdoc\_2, Manad\_2, Phareon\_2, Pherdinand\_2, Schueller\_2, Cher\_2, Morgushi\_2, Kwadwo\_2, Cornobble\_2, Beaglebox\_2, Vivaldi\_2, Mcshane\_2, Slatt\_2, Inverness\_2, Horchata\_2
- Track 7 : Fozzie\_2, PhatCats2014\_2, Orion\_2, HenryJackson\_2, Swish\_2, Eugenia\_2, Adriana\_2, Skippy\_2, EmpTee\_2, Legolas\_2, ThreeOh3D2\_2, DoesntMatter\_2, Katniss\_2, ProfessorX\_2, Riggan\_2, PhrodoBaggins\_2, Orwigg\_2, Matalotodo\_2, Serendipity\_2, Craff\_2, Newman\_2, Grand2040\_2, Surely\_2, True\_2, Oosterbaan\_2, Spartan300\_2, Megatron\_2, Iridoclysis\_2, Mana\_2, DirtJuice\_2, Gophee\_2, Usavi\_2, Valjean\_2, Thora\_2, Haimas\_2, TomBombadil\_2, SilverBell\_2, Placalicious\_2, KingTut\_2, Hamish\_2, Lulumae\_2, Lego3393\_2, Cobra\_2, Gyarad\_002, Vista\_2, Roy17\_2, ElvisPhasley\_2, Cosmolli16\_2, Fang\_2, Sigman\_2, LeeLot\_2, Sophia\_2, Samaymay\_2, Nyala\_2, Emiris\_2, Mulan\_2, Chah\_2, Nicole21\_2, Andre\_2, ABU\_2, Kahve\_2, MRabcd\_2, YouGoGlencoco\_2, Nathan\_2

Mutante\_2, QueenBeane\_2, Scoot17C\_2, KLucky39\_2, Virapocalypse\_2,  
 SassyCat97\_2, Charles1\_2, Piglet\_002, Mesh1\_2, JangoPhett\_2, Olak\_2, Scrick\_2,  
 OSmaximus\_2, HighStump\_2, PG1\_2, Olive\_2, Megamind20\_2, Nacho\_002,  
 Chorkpop\_2, JacAttac\_2, Hertubise\_2, CheetO\_2, Serpentine\_002, Phamished\_2,  
 CamL\_2, Maru\_2, Cannibal\_2, Pacifista\_2, Vaticameos\_2, Quisquiliae\_2, Squid\_2,  
 Anderson\_2, Zelda\_2, Numberten\_2  
 • Track 8 : Plmatters\_2, Selr12\_2, Windsor\_2, Puhltonio\_2, ShiVal\_2, Tomlarah\_2,  
 Mesmerelda\_2, Kimbrough\_2, Lumine\_2, Phipps\_2, OliverWalter\_2, Freya\_2,  
 Dione\_2, Omniscient\_2, Coletti\_2, Dice\_2, Keitherie\_2, Phunky\_2, SirBeauregard\_2,  
 Podrick\_2, Chute\_2, Lasso\_2, Chaelin\_2, Orfeu\_2, LuckyMarjie\_2  
 • Track 9 : Kloppinator\_2  
 • Track 10 : HSavage\_2, Suffolk\_2, Colbert\_2  
 • Track 11 : Riverton\_2, Gwilliam\_2, AbsoluteMadLad\_2  
 • Track 12 : Basato\_3, Chipette\_3, Zaider\_3, Crownjwl\_3, Roscoe\_3,  
 TooFast2Furius\_3  
 • Track 13 : Roliet\_2, Soto\_2  
 • Track 14 : Prickles\_2, Frankicide\_2, Mikota\_2  
 • Track 15 : Lopsy\_2  
 • Track 16 : Bishoperium\_2, Mecca\_2  
 • Track 17 : LasagnaCat\_2  
 • Track 18 : Dingo\_2, BlueHusk\_2  
 • Track 19 : Daka\_2  
 • Track 20 : Kailash\_2  
 • Track 21 : Imvubu\_2  
 • Track 22 : Indlovu\_6  
 • Track 23 : LilMcDreamy\_6  
 • Track 24 : Hashim76\_8  
 • Track 25 : Zenteno07\_8  
 • Track 26 : BirdsNest\_8  
 • Track 27 : Boyle\_7, Vic9\_00007, Kolhan\_7, Eaglehorse\_7, MasterPo\_7,  
 ItsyBitsy1\_7, Calamitous\_7, Glass\_7, Holeinone\_7, Sabella\_7, Bananafish\_7,  
 West99\_7, FrenchFry\_7, LilSmirk\_7, PrinceCharming\_7, Rosebush\_7, Hedgerow\_7,  
 Lephleur\_7, Opia\_7, LizLemon\_7, Arbiter\_7, Faze9\_7, Lars\_7, Allegro\_7, Kaleb\_7,  
 Tres\_7, Phantasmagoria\_7, Coffee\_7  
 • Track 28 : Qyrzula\_7, Brownie5\_7, Laurie\_7, Ares\_7, Tinciduntolum\_8  
 • Track 29 : Kheth\_7, Rhinoforte\_7, Blocker23\_7  
 • Track 30 : Godines\_7  
 • Track 31 : TA17A\_7  
 • Track 32 : Yahalom\_6, Rita1961\_6, Baloo\_6, MmasiCarm\_6, Glubnar\_6,  
 Phaedrus\_5, Halfpint\_5, Yinz\_6, HarveySr\_6  
 • Track 33 : Marlia\_6, Gervas\_6, Ben11\_5, Obutu\_6  
 • Track 34 : Phayeta\_5, TinyTerror\_6, Olivio\_5, ChaChing\_6, LestyG\_6  
 • Track 35 : Audrey\_6  
 • Track 36 : RagingRooster\_6, SynergyX\_6  
 • Track 37 : SwainyDoc\_6, Corofin\_6, Daisy\_6  
 • Track 38 : Shenandoah\_6  
 • Track 39 : Devonte\_6  
 • Track 40 : Gadget\_6  
 • Track 41 : Casbah\_5  
 • Track 42 : Heathcliff\_6  
 • Track 43 : Akoma\_6  
 • Track 44 : Jackstina\_5, OrangeOswald\_6, GlenHope\_6, Compostia\_6, Abinghost\_6  
 • Track 45 : Kamiyu\_6

- Track 46 : Philly\_5
- Track 47 : Bernardo\_6
- Track 48 : Chentzyk\_5
- Track 49 : JAMaL\_5
- Track 50 : Fortunato\_4
- Track 51 : Antihero\_4, Epah\_4
- Track 52 : Frederick\_5
- Track 53 : Cooper\_4
- Track 54 : Magpie\_5
- Track 55 : Ahwei\_4, Poster\_4, Nanao\_4
- Track 56 : Stinger\_4
- Track 57 : Mudslide\_5
- Track 58 : Nigel\_4
- Track 59 : Apex\_5
- Track 60 : Zemanar\_5
- Track 61 : VioletZ\_5
- Track 62 : Lambano\_4, GinPorsche\_4, Hally898\_4
- Track 63 : Lolalove\_5, Hydro\_5
- Track 64 : Prince\_5, Austelle\_5
- Track 65 : JaguarMi\_5, Xincheng\_5
- Track 66 : BobbyK\_5
- Track 67 : Heath\_5, Mithril\_5, BrownCNA\_5
- Track 68 : Hangman\_5
- Track 69 : ChrisnMich\_4
- Track 70 : Waleliano\_5
- Track 71 : RawrgerThat\_5
- Track 72 : Fanaw\_5
- Track 73 : Nehemiah\_5, Phelemich\_6, Reprobate\_6, Mysterious\_6
- Track 74 : DigitDog\_6, Shenyu\_6, Nangang\_6
- Track 75 : SirJeffery\_6, Suigeneris\_6, Acadian\_6, Rita130\_6, EastView9101\_6, Donny\_6
- Track 76 : StinkyVeggy\_6, KarasumaRum\_6
- Track 77 : Bae\_6
- Track 78 : Serendipitous\_6
- Track 79 : Rich\_6
- Track 80 : 40BC\_04, 39HC\_04
- Track 81 : KayaCho\_4
- Track 82 : Hosp\_02
- Track 83 : Jolie1\_04
- Track 84 : ForDig\_4
- Track 85 : Saguaro\_8
- Track 86 : Thonko\_1
- Track 87 : Rinkes\_9
- Track 88 : Knocker\_10
- Track 89 : PenguinLover67\_8
- Track 90 : Quesadilla\_8
- Track 91 : Funsized\_9
- Track 92 : CRB2\_8
- Track 93 : Jollymon\_2, ColdSoup\_2, Amo99\_2
- Track 94 : DonTron\_2
- Track 95 : Clawz\_2
- Track 96 : Sting\_2
- Track 97 : KingstonB\_2

- Track 98 : Soos\_2
- Track 99 : Nubi\_5, Halo3\_5, CoveyB\_5, Danyall\_5, Mutzi\_5, Shinji\_5
- Track 100 : Evamon\_5, Togo\_5, Salvador\_5, SmokingBunny\_5
- Track 101 : Barb\_5, ClamChowder\_5, Fugax\_5, KimmyK\_5
- Track 102 : Arri\_5
- Track 103 : Savbucketdawg\_5, Jambalaya\_5, TillyBobJoe\_5
- Track 104 : PinkCoffee\_5
- Track 105 : Egi03\_5
- Track 106 : Gezellig\_5, PullumCavea\_5, Fireball\_5, Phlop\_5, Wizard\_5
- Track 107 : CherryCola\_5, Valary\_5
- Track 108 : Twister6\_5, VanDeWege\_5
- Track 109 : Portcullis\_5
- Track 110 : Bakery\_6
- Track 111 : RogerDodger\_5
- Track 112 : Belphegor\_2
- Track 113 : Baddon\_2
- Track 114 : Jabberwocky\_2
- Track 115 : Ribeye\_2, Kroos\_2, Bizzy\_2, Flatwoods\_2
- Track 116 : YorkOnyx\_2
- Track 117 : Stultus\_2
- Track 118 : Tangerine\_2, Kwobi\_2, Ashertheman\_2
- Track 119 : Brandonk123\_2
- Track 120 : Lennon\_2, Sitar\_2
- Track 121 : Gustavo\_2, Saronaya\_2
- Track 122 : LilHam\_2
- Track 123 : Sanjuju\_2, Bibwit\_2
- Track 124 : Thing3\_2, Kamashten\_2
- Track 125 : JKSyngboy\_2
- Track 126 : Barsten\_2
- Track 127 : Love\_2
- Track 128 : Geodirt\_2
- Track 129 : SchottB\_2
- Track 130 : Paries\_2
- Track 131 : Shivanishola\_2
- Track 132 : Gaea\_2
- Track 133 : MoontowerMania\_2
- Track 134 : Fitzgerald\_2
- Track 135 : McKinley\_2
- Track 136 : Kewpiedoll\_2
- Track 137 : Galadriel\_2
- Track 138 : Ailee\_2
- Track 139 : StorminNorm\_2
- Track 140 : RiverRaider\_2
- Track 141 : Derg\_2
- Track 142 : FuegoCuervo\_2
- Track 143 : Baumdotcom\_2
- Track 144 : ChadMasterC\_2
- Track 145 : Tycho\_2
- Track 146 : Hans\_2
- Track 147 : Leonard\_2, Phinally\_2
- Track 148 : MelBins\_2
- Track 149 : EMoore\_2
- Track 150 : Inspectinfecti\_2



- Track 151 : Phauci\_2
- Track 152 : GTE6\_2
- Track 153 : Chickadee\_2, Kwekel\_2, Tiamoceli\_2, RoadKill\_2, Dextert\_2, EdmundFerry\_2
- Track 154 : Twonlo\_2
- Track 155 : Zitch\_1
- Track 156 : Tardus\_2
- Track 157 : Lilbeanie\_2
- Track 158 : AksarBAT\_4
- Track 159 : Evaa\_6
- Track 160 : Shatter\_4, Ligma\_4, Fresco\_4, Axumite\_4
- Track 161 : Sour\_8
- Track 162 : Wooper\_6, CaiB\_6, AnarQue\_6, MakoManhole\_6
- Track 163 : MossRose\_6, CloverMinnie\_6
- Track 164 : Yago84\_4
- Track 165 : Sisko\_4
- Track 166 : NHagos\_4
- Track 167 : CharlottesWeb\_4
- Track 168 : LittleMunchkin\_6
- Track 169 : Yeshua\_6
- Track 170 : BiggityBass\_4
- Track 171 : BobRoss2024\_4
- Track 172 : Mariokart\_4
- Track 173 : Coldpizza\_6
- Track 174 : AnClar\_4
- Track 175 : Taptic\_2
- Track 176 : PR\_02, D12\_02, Megabear\_2
- Track 177 : Argie\_2
- Track 178 : GodPhather\_2, Jeon\_2
- Track 179 : Cepens\_2
- Track 180 : Pine5\_01
- Track 181 : pZL12\_67c
- Track 182 : TPA2\_09
- Track 183 : Tonitrus\_13

***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 267 of the 493 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABU\_2, AbsoluteMadLad\_2, Adriana\_2, Aelin\_2, AltPhacts\_2, Altwerkus\_2, Anderson\_2, Andre\_2, AngelCake\_2, Antonia\_2, Apizium\_2, Ashraf\_2, Badfish\_2, Banjo\_2, Basato\_3, BatteryCK\_2, Beaglebox\_2, Bishoperium\_2, BlackStallion\_2, BlueHusk\_2, Bluephacebaby\_2, Boehler\_2, Brilliant\_2, Buckeye\_2, Burr\_2, CamL\_2, CampRoach\_2, Cannibal\_2, Carthage\_2, Caspiboi\_2, Chaelin\_2, Chah\_2, Charles1\_2, CharlieGBrown\_2, CheetO\_2, Cher\_2, Childish\_2, Chipette\_3, Chorkpop\_2, Chunky\_2, Chute\_2, Cobra\_2, Colbert\_2, Coletti\_2, Cornbread\_2, Cornobble\_2, Cosmolli16\_2, Craff\_2, Crownjwl\_3, DaddyDaniels\_2, Daffy\_2, Daka\_2, Dati\_2, DelRivs\_2, Derpp\_2, Dice\_2, Dingo\_2, Dione\_2, DirtJuice\_2,

Doddsville\_2, DoesntMatter\_2, DonSanchon\_2, DuchessDung\_2, Duggie\_2, Durga\_2, ElvisPhasley\_2, Emiris\_2, EmpTee\_2, Eremos\_2, Etaye\_2, Eugenia\_2, Fang\_2, FluffyNinja\_2, Fozzie\_2, Frankicide\_2, Freya\_2, FriarPreacher\_2, Fringe\_2, FugateOSU\_2, Gareth\_2, GeneCoco\_2, Giraffe\_2, Gophee\_2, Grand2040\_2, Gwennie1\_2, Gwilliam\_2, Gyarad\_002, HSavage\_2, Haimas\_2, Haleema\_2, Hamish\_2, Hartsy\_2, Harvey\_2, Held\_2, HenryJackson\_2, Hertubise\_2, Hetaeria\_2, HighStump\_2, Hocus\_2, Horchata\_2, ImtiyazSitla\_2, Inchworm\_2, Inverness\_2, Iridessa\_2, Iridoclysis\_2, IsaacEli\_2, JDog\_2, JacAttac\_2, JakeO\_2, JangoPhett\_2, Jesabah\_2, Jillium\_2, Jiminy\_2, Jiraiya\_2, KLucky39\_2, Kahve\_2, Kailash\_2, Katniss\_2, Keitherie\_2, Khan1\_2, Kikipoo\_2, Kimbrough\_2, KingTut\_2, KingVeVeVe\_2, KlimbOn\_2, Kloppinator\_2, Kwadwo\_2, Kwksand96\_2, Labeouficaum\_2, LasagnaCat\_2, Lasso\_2, LeeLot\_2, Lego3393\_2, Legolas\_2, LeiMonet\_2, LemonSlice\_2, Longacauda\_2, Lopsy\_2, LostAndPhound\_2, LuckyMarjie\_2, Lulumae\_2, Lulwa\_2, Lumine\_2, MRabcd\_2, Mag7\_2, Magic8\_2, Mana\_2, Manad\_2, Maru\_2, Maskar\_2, Matalotodo\_2, Mcshane\_2, Mecca\_2, Megamind20\_2, Megatron\_2, Melc17\_2, MelsMeow\_2, Mesh1\_2, Mesmerelda\_2, MichaelPhcott\_2, Mikota\_2, MiniBoss\_2, MitKao\_2, Morgushi\_2, Morty\_2, Mosaic\_2, MrPhizzler\_2, Mulan\_2, Murdoc\_2, Mutante\_2, Nacho\_002, Nathan\_2, Newman\_2, Nicole21\_2, Numberten\_2, Nyala\_2, OSmaximus\_2, Olak\_2, Oline\_2, Olive\_2, OliverWalter\_2, Omniscient\_2, Oosterbaan\_2, Orfeu\_2, Orion\_2, Orwigg\_2, PG1\_2, Pacifista\_2, Phamished\_2, Phareon\_2, PhatCats2014\_2, PhatLouie\_2, PhenghisKhan\_2, Pherdinand\_2, Phergie\_2, Phipps\_2, Phleuron\_2, PhrankReynolds\_2, PhrodoBaggins\_2, Phunky\_2, Piglet\_002, PinheadLarry\_2, Pinkman\_2, Pipsqueak\_2, Placalicious\_2, Plata\_2, PImatters\_2, Podrick\_2, Pops\_2, Potter\_2, Prickles\_2, ProfessorX\_2, Puhltonio\_2, QueenBeane\_2, Quisquiliae\_2, RedMaple\_2, Ricotta\_2, Riggan\_2, Rimu\_2, Riverton\_2, Robyn\_2, Roliet\_2, Roscoe\_3, Roy17\_2, SDcharge11\_2, Samaymay\_2, SassyCat97\_2, Schadenfreude\_2, Schueller\_2, Scoot17C\_2, Scrick\_2, Selr12\_2, Serendipity\_2, Serpentine\_002, Sheila\_2, ShiVal\_2, Sigman\_2, SilverBell\_2, Simielle\_2, SirBeauregard\_2, Skippy\_2, Slatt\_2, Soile\_2, Solosis\_2, Sophia\_2, Soto\_2, Spartan300\_2, Squid\_2, Squiggle\_2, Struggle\_2, Suffolk\_2, Surely\_2, Swiphy\_2, Swish\_2, TallGrassMM\_2, Telesworld\_2, Thora\_2, ThreeOh3D2\_2, Thunderbird\_2, Timmi\_2, TomBombadil\_2, Tomlarah\_2, Toni\_2, TooFast2Furius\_3, Tooj\_2, True\_2, Trypo\_2, TyrionL\_2, UAch1\_2, UncleHowie\_2, Usavi\_2, Vaishali24\_2, Valjean\_2, Vaticameos\_2, Veritas\_2, Virapocalypse\_2, Virgeve\_2, Vista\_2, Vivaldi\_2, Vortex\_2, Wallhey\_2, Waterdiva\_2, Weher20\_2, Windsor\_2, Xavier\_2, Yoshand\_2, YouGoGlencoco\_2, Zaider\_3, Zelda\_2, Zonia\_2,

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

- 

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

- 39HC\_04, 40BC\_04, Abinghost\_6, Acadian\_6, Ahwei\_4, Ailee\_2, Akoma\_6, AksarBAT\_4, Allegro\_7, Amo99\_2, AnClar\_4, AnarQue\_6, Antihero\_4, Apex\_5, Arbiter\_7, Ares\_7, Argie\_2, Arri\_5, Ashertheman\_2, Audrey\_6, Austelle\_5, Axumite\_4, Baddon\_2, Bae\_6, Bakery\_6, Baloo\_6, Bananafish\_7, Barb\_5, Barsten\_2, Baumdotcom\_2, Belphegor\_2, Ben11\_5, Bernardo\_6, Bibwit\_2, BiggityBass\_4, BirdsNest\_8, Bizzy\_2, Blocker23\_7, BobRoss2024\_4, BobbyK\_5, Boyle\_7, Brandonk123\_2, BrownCNA\_5, Brownie5\_7, CRB2\_8, CaiB\_6, Calamitous\_7, Casbah\_5, Causa\_11, Cepens\_2, ChaChing\_6, ChadMasterC\_2, CharlottesWeb\_4, Chentzyk\_5, CherryCola\_5, Chickadee\_2, ChrisnMich\_4, ClamChowder\_5, Clawz\_2, CloverMinnie\_6, Coffee\_7, ColdSoup\_2, Coldpizza\_6, Compostia\_6, Cooper\_4, Corofin\_6, CoveyB\_5, D12\_02, Daisy\_6, Danyall\_5,

Derg\_2, Devonte\_6, Dextert\_2, DigitDog\_6, DonTron\_2, Donny\_6, Dori\_3, EMOore\_2, Eaglehorse\_7, EastView9101\_6, EdmundFerry\_2, Egi03\_5, Epah\_4, Evaa\_6, Evamon\_5, Fanaw\_5, Faze9\_7, Fireball\_5, Fitzgerald\_2, Flatwoods\_2, ForDig\_4, Fortunato\_4, Frederick\_5, FrenchFry\_7, Fresco\_4, FuegoCuervo\_2, Fugax\_5, Funsized\_9, GTE6\_2, Gadget\_6, Gaea\_2, Galadriel\_2, Geodirt\_2, Gervas\_6, Gezellig\_5, GinPorsche\_4, Glass\_7, GlenHope\_6, Glubnar\_6, GodPhather\_2, Godines\_7, Gustavo\_2, Halfpint\_5, Hally898\_4, Halo3\_5, Hangman\_5, Hans\_2, HarveySr\_6, Hashim76\_8, Heath\_5, Heathcliff\_6, Hedgerow\_7, Holeinone\_7, Hosp\_02, Hydro\_5, Imvubu\_2, Indlovu\_6, Inspectinfecti\_2, ItsyBitsy1\_7, JAMaL\_5, JKSyngboy\_2, Jabberwocky\_2, Jackstina\_5, JaguarMi\_5, Jambalaya\_5, Jeon\_2, Jolie1\_04, Jollymon\_2, Kaleb\_7, Kamashten\_2, Kamiyu\_6, KarasumaRum\_6, KayaCho\_4, Kewpiedoll\_2, Kheth\_7, KimmyK\_5, KingstonB\_2, Knocker\_10, Kolhan\_7, Kroos\_2, Kwekel\_2, Kwobi\_2, Lambano\_4, Lars\_7, Laurie\_7, Lennon\_2, Leonard\_2, Lephleur\_7, LestyG\_6, Ligma\_4, LilHam\_2, LilMcDreamy\_6, LilSmirk\_7, Lilbeanie\_2, LittleMunchkin\_6, LizLemon\_7, Lolalove\_5, Love\_2, Magpie\_5, MakoManhole\_6, Mao1\_2, Mariokart\_4, Marlia\_6, Mask\_2, MasterPo\_7, McKinley\_2, Megabear\_2, MelBins\_2, Mithril\_5, MmasiCarm\_6, MoontowerMania\_2, MossRose\_6, Mudslide\_5, Mutzi\_5, Mysterious\_6, NHagos\_4, Nanao\_4, Nangang\_6, Nehemiah\_5, Nigel\_4, Nubi\_5, Obutu\_6, Olivio\_5, Opia\_7, OrangeOswald\_6, PR\_02, Paries\_2, PenguinLover67\_8, Phaedrus\_5, Phantasmagoria\_7, Phauci\_2, Phayeta\_5, Phelemich\_6, Philly\_5, Phinally\_2, Phlop\_5, Pine5\_01, PinkCoffee\_5, Portcullis\_5, Poster\_4, PrinceCharming\_7, Prince\_5, PullumCavea\_5, Quesadilla\_8, Qyrzula\_7, RagingRooster\_6, RawrgerThat\_5, Reprobate\_6, Rhinoforte\_7, Ribeye\_2, Rich\_6, Rinkes\_9, Rita130\_6, Rita1961\_6, RiverRaider\_2, RoadKill\_2, RogerDodger\_5, Rosebush\_7, Sabella\_7, Saguaro\_8, Salvador\_5, Sanjuju\_2, Saronaya\_2, Savbucketdawg\_5, SchottB\_2, Sejanus\_2, Serendipitous\_6, Shatter\_4, Shenandoah\_6, Shenyu\_6, Shinji\_5, Shivanishola\_2, SirJeffery\_6, Sisko\_4, Sitar\_2, SmokingBunny\_5, Soos\_2, Sour\_8, StAugustine\_10, Sting\_2, Stinger\_4, StinkyVeggy\_6, StorminNorm\_2, Stultus\_2, Suigeneris\_6, SwainyDoc\_6, SynergyX\_6, TA17A\_7, TPA2\_09, Tangerine\_2, Taptic\_2, Tardus\_2, Thing3\_2, Thonko\_1, Tiamoceli\_2, TillyBobJoe\_5, Tinciduntolum\_8, TinyTerror\_6, Togo\_5, Tonitrus\_13, Tres\_7, Twister6\_5, Twonlo\_2, Tycho\_2, Valary\_5, VanDeWege\_5, Vic9\_00007, VioletZ\_5, Waleliano\_5, West99\_7, Wizard\_5, Wooper\_6, Xincheng\_5, Yago84\_4, Yahalom\_6, Yeshua\_6, Yinz\_6, YorkOnyx\_2, Zemanar\_5, Zenteno07\_8, Zitch\_1, pZL12\_67c,

### Summary by start number:

#### Start 32:

- Found in 1 of 582 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Imvubu\_2 (B10),

#### Start 37:

- Found in 1 of 582 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Knocker\_10 (B9),

#### Start 38:

- Found in 39 of 582 ( 6.7% ) of genes in pham
- Manual Annotations of this start: 4 of 493

- Called 10.3% of time when present
- Phage (with cluster) where this start called: Akoma\_6 (B3), Gadget\_6 (B3), Heathcliff\_6 (B3), Kamiyu\_6 (B3),

#### Start 43:

- Found in 10 of 582 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 2 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ahwei\_4 (B4), Antihero\_4 (B4), ChrisnMich\_4 (B4), Epah\_4 (B4), GinPorsche\_4 (B4), Hally898\_4 (B4), Lambano\_4 (B4), Nanao\_4 (B4), Poster\_4 (B4), Thonko\_1 (B8),

#### Start 44:

- Found in 2 of 582 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Funsized\_9 (B9), Rinkes\_9 (B9),

#### Start 45:

- Found in 39 of 582 ( 6.7% ) of genes in pham
- Manual Annotations of this start: 27 of 493
- Called 89.7% of time when present
- Phage (with cluster) where this start called: Abinghost\_6 (B3), Audrey\_6 (B3), Baloo\_6 (B3), Ben11\_5 (B3), Bernardo\_6 (B3), Casbah\_5 (B3), ChaChing\_6 (B3), Chentzyk\_5 (B3), Compostia\_6 (B3), Corofin\_6 (B3), Daisy\_6 (B3), Devonte\_6 (B3), Gervas\_6 (B3), GlenHope\_6 (B3), Glubnar\_6 (B3), Halfpint\_5 (B3), HarveySr\_6 (B3), Jackstina\_5 (B3), LestyG\_6 (B3), Marlia\_6 (B3), MmasiCarm\_6 (B3), Obutu\_6 (B3), Olivio\_5 (B3), OrangeOswald\_6 (B3), Phaedrus\_5 (B3), Phayeta\_5 (B3), Philly\_5 (B3), RagingRooster\_6 (B3), Rita1961\_6 (B3), Shenandoah\_6 (B3), SwainyDoc\_6 (B3), SynergyX\_6 (B3), TinyTerror\_6 (B3), Yahalom\_6 (B3), Yinz\_6 (B3),

#### Start 46:

- Found in 3 of 582 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 493
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Sour\_8 (DR), Stinger\_4 (B4),

#### Start 47:

- Found in 3 of 582 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 3 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BirdsNest\_8 (B13), Hashim76\_8 (B13), Zenteno07\_8 (B13),

#### Start 48:

- Found in 31 of 582 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 22 of 493
- Called 96.8% of time when present
- Phage (with cluster) where this start called: 39HC\_04 (B6), 40BC\_04 (B6), Apex\_5 (B4), Austelle\_5 (B4), BobbyK\_5 (B4), BrownCNA\_5 (B4), Cooper\_4 (B4), Fanaw\_5 (B4), ForDig\_4 (B6), Fortunato\_4 (B4), Frederick\_5 (B4), Hangman\_5 (B4), Heath\_5 (B4), Hosp\_02 (B6), Hydro\_5 (B4), JAMaL\_5 (B4), JaguarMi\_5 (B4), Jolie1\_04 (B6), KayaCho\_4 (B6), Lolalove\_5 (B4), Magpie\_5 (B4), Mithril\_5 (B4), Mudslide\_5 (B4),

Nigel\_4 (B4), Prince\_5 (B4), RawrgerThat\_5 (B4), VioletZ\_5 (B4), Waleliano\_5 (B4), Xincheng\_5 (B4), Zemanar\_5 (B4),

Start 49:

- Found in 10 of 582 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 9 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnClar\_4 (DR), Axumite\_4 (DR), BiggityBass\_4 (DR), CharlottesWeb\_4 (DR), Fresco\_4 (DR), Ligma\_4 (DR), Mariokart\_4 (DR), Shatter\_4 (DR), Sisko\_4 (DR), Yago84\_4 (DR),

Start 50:

- Found in 2 of 582 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CRB2\_8 (B9), Quesadilla\_8 (B9),

Start 54:

- Found in 1 of 582 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yeshua\_6 (DR),

Start 55:

- Found in 8 of 582 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 6 of 493
- Called 75.0% of time when present
- Phage (with cluster) where this start called: AnarQue\_6 (DR), CaiB\_6 (DR), CloverMinnie\_6 (DR), MakoManhole\_6 (DR), MossRose\_6 (DR), Wooper\_6 (DR),

Start 56:

- Found in 290 of 582 ( 49.8% ) of genes in pham
- Manual Annotations of this start: 267 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ABU\_2 (B1), AbsoluteMadLad\_2 (B1), Adriana\_2 (B1), Aelin\_2 (B1), AltPhacts\_2 (B1), Altwerkus\_2 (B1), Anderson\_2 (B1), Andre\_2 (B1), AngelCake\_2 (B1), Antonia\_2 (B1), Apizium\_2 (B1), Ashraf\_2 (B1), Badfish\_2 (B1), Banjo\_2 (B1), Basato\_3 (B1), BatteryCK\_2 (B1), Beaglebox\_2 (B1), Bishoperium\_2 (B1), BlackStallion\_2 (B1), BlueHusk\_2 (B1), Bluephacebaby\_2 (B1), Boehler\_2 (B1), Brilliant\_2 (B1), Buckeye\_2 (B1), Burr\_2 (B1), CamL\_2 (B1), CampRoach\_2 (B1), Cannibal\_2 (B1), Carthage\_2 (B1), Caspiboi\_2 (B1), Chaelin\_2 (B1), Chah\_2 (B1), Charles1\_2 (B1), CharlieGBrown\_2 (B1), CheetO\_2 (B1), Cher\_2 (B1), Childish\_2 (B1), Chipette\_3 (B1), Chorkpop\_2 (B1), Chunky\_2 (B1), Chute\_2 (B1), Cobra\_2 (B1), Colbert\_2 (B1), Coletti\_2 (B1), Cornbread\_2 (B1), Cornobble\_2 (B1), Cosmolli16\_2 (B1), Craff\_2 (B1), Crownjwl\_3 (B1), DaddyDaniels\_2 (B1), Daffy\_2 (B1), Daka\_2 (B1), Dati\_2 (B1), DelRivs\_2 (B1), Derpp\_2 (B1), Dice\_2 (B1), Dingo\_2 (B1), Dione\_2 (B1), DirtJuice\_2 (B1), Doddsville\_2 (B1), DoesntMatter\_2 (B1), DonSanchon\_2 (B1), DuchessDung\_2 (B1), Duggie\_2 (B1), Durga\_2 (B1), ElvisPhasley\_2 (B1), Emiris\_2 (B1), EmpTee\_2 (B1), Eremos\_2 (B1), Etaye\_2 (B1), Eugenia\_2 (B1), Fang\_2 (B1), FluffyNinja\_2 (B1), Fozzie\_2 (B1), Frankicide\_2 (B1), Freya\_2 (B1), FriarPreacher\_2 (B1), Fringe\_2 (B1), FugateOSU\_2 (B1), Gareth\_2 (B1), GeneCoco\_2 (B1), Giraffe\_2 (B1), Gophee\_2 (B1), Grand2040\_2 (B1), Gwennie1\_2 (B1), Gwilliam\_2 (B1), Gyarad\_002 (B1), HSavage\_2 (B1), Haimas\_2

(B1), Haleema\_2 (B1), Hamish\_2 (B1), Hartsy\_2 (B1), Harvey\_2 (B1), Held\_2 (B1), HenryJackson\_2 (B1), Hertubise\_2 (B1), Hetaeria\_2 (B1), HighStump\_2 (B1), Hocus\_2 (B1), Horchata\_2 (B1), ImtiyazSitla\_2 (B1), Inchworm\_2 (B1), Inverness\_2 (B1), Iridessa\_2 (B1), Iridoclysis\_2 (B1), IsaacEli\_2 (B1), JDog\_2 (B1), JacAttac\_2 (B1), JakeO\_2 (B1), JangoPhett\_2 (B1), Jesabah\_2 (B1), Jillium\_2 (B1), Jiminy\_2 (B1), Jiraiya\_2 (B1), KLucky39\_2 (B1), Kahve\_2 (B1), Kailash\_2 (B1), Katniss\_2 (B1), Keitherie\_2 (B1), Khan1\_2 (B1), Kikipoo\_2 (B1), Kimbrough\_2 (B1), KingTut\_2 (B1), KingVeVeVe\_2 (B1), KlimbOn\_2 (B1), Kloppinator\_2 (B1), Kwadwo\_2 (B1), Kwksand96\_2 (B1), Labeouficaum\_2 (B1), LasagnaCat\_2 (B1), Lasso\_2 (B1), LeeLot\_2 (B1), Lego3393\_2 (B1), Legolas\_2 (B1), LeiMonet\_2 (B1), LemonSlice\_2 (B1), Longacauda\_2 (B1), Lopsy\_2 (B1), LostAndPhound\_2 (B1), LuckyMarjie\_2 (B1), Lulumae\_2 (B1), Lulwa\_2 (B1), Lumine\_2 (B1), MRabcd\_2 (B1), Mag7\_2 (B1), Magic8\_2 (B1), Mana\_2 (B1), Manad\_2 (B1), Maru\_2 (B1), Maskar\_2 (B1), Matalotodo\_2 (B1), Mcshane\_2 (B1), Mecca\_2 (B1), Megamind20\_2 (B1), Megatron\_2 (B1), Melc17\_2 (B1), MelsMeow\_2 (B1), Mesh1\_2 (B1), Mesmerelda\_2 (B1), MichaelPhcott\_2 (B1), Mikota\_2 (B1), MiniBoss\_2 (B1), MitKao\_2 (B1), Morgushi\_2 (B1), Morty\_2 (B1), Mosaic\_2 (B1), MrPhizzler\_2 (B1), Mulan\_2 (B1), Murdoc\_2 (B1), Mutante\_2 (B1), Nacho\_002 (B1), Nathan\_2 (B1), Newman\_2 (B1), Nicole21\_2 (B1), Numberten\_2 (B1), Nyala\_2 (B1), OSmaximus\_2 (B1), Olak\_2 (B1), Oline\_2 (B1), Olive\_2 (B1), OliverWalter\_2 (B1), Omniscient\_2 (B1), Oosterbaan\_2 (B1), Orfeu\_2 (B1), Orion\_2 (B1), Orwigg\_2 (B1), PG1\_2 (B1), Pacifista\_2 (B1), Phamished\_2 (B1), Phareon\_2 (B1), PhatCats2014\_2 (B1), PhatLouie\_2 (B1), PhenghisKhan\_2 (B1), Pherdinand\_2 (B1), Phergie\_2 (B1), Phipps\_2 (B1), Phleuron\_2 (B1), PhrankReynolds\_2 (B1), PhrodoBaggins\_2 (B1), Phunky\_2 (B1), Piglet\_002 (B1), PinheadLarry\_2 (B1), Pinkman\_2 (B1), Pipsqueak\_2 (B1), Placalicious\_2 (B1), Plata\_2 (B1), Plmatters\_2 (B1), Podrick\_2 (B1), Pops\_2 (B1), Potter\_2 (B1), Prickles\_2 (B1), ProfessorX\_2 (B1), Puhltonio\_2 (B1), QueenBeane\_2 (B1), Quisquiliae\_2 (B1), RedMaple\_2 (B1), Ricotta\_2 (B1), Riggan\_2 (B1), Rimu\_2 (B1), Riverton\_2 (B1), Robyn\_2 (B1), Roliet\_2 (B1), Roscoe\_3 (B1), Roy17\_2 (B1), SDcharge11\_2 (B1), Samaymay\_2 (B1), SassyCat97\_2 (B1), Schadenfreude\_2 (B1), Schueller\_2 (B1), Scoot17C\_2 (B1), Scrick\_2 (B1), Selr12\_2 (B1), Serendipity\_2 (B1), Serpentine\_002 (B1), Sheila\_2 (B1), ShiVal\_2 (B1), Sigman\_2 (B1), SilverBell\_2 (B1), Simielle\_2 (B1), SirBeauregard\_2 (B1), Skippy\_2 (B1), Slatt\_2 (B1), Soile\_2 (B1), Solosis\_2 (B1), Sophia\_2 (B1), Soto\_2 (B1), Spartan300\_2 (B1), Squid\_2 (B1), Squiggle\_2 (B1), Struggle\_2 (B1), Suffolk\_2 (B1), Surely\_2 (B1), Swiphy\_2 (B1), Swish\_2 (B1), TallGrassMM\_2 (B1), Telesworld\_2 (B1), Thora\_2 (B1), ThreeOh3D2\_2 (B1), Thunderbird\_2 (B1), Timmi\_2 (B1), TomBombadil\_2 (B1), Tomlarah\_2 (B1), Toni\_2 (B1), TooFast2Furius\_3 (B1), Tooj\_2 (B1), True\_2 (B1), Trypo\_2 (B1), TyrionL\_2 (B1), UAch1\_2 (B1), UncleHowie\_2 (B1), Usavi\_2 (B1), Vaishali24\_2 (B1), Valjean\_2 (B1), Vaticameos\_2 (B1), Veritas\_2 (B1), Virapocalypse\_2 (B1), Virgeve\_2 (B1), Vista\_2 (B1), Vivaldi\_2 (B1), Vortex\_2 (B1), Wallhey\_2 (B1), Waterdiva\_2 (B1), Weher20\_2 (B1), Windsor\_2 (B1), Xavier\_2 (B1), Yoshand\_2 (B1), YouGoGlencoco\_2 (B1), Zaider\_3 (B1), Zelda\_2 (B1), Zonia\_2 (B1),

Start 57:

- Found in 19 of 582 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 10 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acadian\_6 (B5), Bae\_6 (B5), DigitDog\_6 (B5), Donny\_6 (B5), EastView9101\_6 (B5), KarasumaRum\_6 (B5), LilMcDreamy\_6 (B12), Mysterious\_6 (B5), Nangang\_6 (B5), Nehemiah\_5 (B5), Phelemich\_6 (B5), Reprobate\_6 (B5), Rich\_6 (B5), Rita130\_6 (B5), Serendipitous\_6 (B5), Shenyu\_6 (B5), SirJeffery\_6 (B5), StinkyVeggy\_6 (B5), Suigeneris\_6 (B5),

Start 58:

- Found in 1 of 582 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LittleMunchkin\_6 (DR),

Start 59:

- Found in 1 of 582 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PenguinLover67\_8 (B9),

Start 60:

- Found in 1 of 582 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BobRoss2024\_4 (DR),

Start 61:

- Found in 2 of 582 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Indlovu\_6 (B11), Saguaro\_8 (B7),

Start 62:

- Found in 1 of 582 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pine5\_01 (singleton),

Start 66:

- Found in 2 of 582 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Coldpizza\_6 (DR), Evaa\_6 (DR),

Start 70:

- Found in 2 of 582 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Causa\_11 (AI), StAugustine\_10 (AI),

Start 71:

- Found in 38 of 582 ( 6.5% ) of genes in pham
- Manual Annotations of this start: 6 of 493
- Called 15.8% of time when present
- Phage (with cluster) where this start called: Ares\_7 (B2), Brownie5\_7 (B2), Laurie\_7 (B2), Qyrzula\_7 (B2), TA17A\_7 (B2), Tinciduntolum\_8 (B2),

Start 72:

- Found in 2 of 582 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 493

- Called 100.0% of time when present
- Phage (with cluster) where this start called: AksarBAT\_4 (DR), NHagos\_4 (DR),

#### Start 73:

- Found in 38 of 582 ( 6.5% ) of genes in pham
- Manual Annotations of this start: 28 of 493
- Called 84.2% of time when present
- Phage (with cluster) where this start called: Allegro\_7 (B2), Arbiter\_7 (B2), Bananafish\_7 (B2), Blocker23\_7 (B2), Boyle\_7 (B2), Calamitous\_7 (B2), Coffee\_7 (B2), Eaglehorse\_7 (B2), Faze9\_7 (B2), FrenchFry\_7 (B2), Glass\_7 (B2), Godines\_7 (B2), Hedgerow\_7 (B2), Holeinone\_7 (B2), ItsyBitsy1\_7 (B2), Kaleb\_7 (B2), Kheth\_7 (B2), Kolhan\_7 (B2), Lars\_7 (B2), Lephleur\_7 (B2), LilSmirk\_7 (B2), LizLemon\_7 (B2), MasterPo\_7 (B2), Opia\_7 (B2), Phantasmagoria\_7 (B2), PrinceCharming\_7 (B2), Rhinoforte\_7 (B2), Rosebush\_7 (B2), Sabella\_7 (B2), Tres\_7 (B2), Vic9\_00007 (B2), West99\_7 (B2),

#### Start 78:

- Found in 8 of 582 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 8 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Argie\_2 (W), Cepens\_2 (W), D12\_02 (W), GodPhather\_2 (W), Jeon\_2 (W), Megabear\_2 (W), PR\_02 (W), Taptic\_2 (W),

#### Start 79:

- Found in 9 of 582 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 3 of 493
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Amo99\_2 (CP), Clawz\_2 (CP), ColdSoup\_2 (CP), DonTron\_2 (CP), Jollymon\_2 (CP), KingstonB\_2 (CP), Soos\_2 (CP), Sting\_2 (CP),

#### Start 80:

- Found in 4 of 582 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 493
- Called 50.0% of time when present
- Phage (with cluster) where this start called: CherryCola\_5 (DC1), Valary\_5 (DC1),

#### Start 82:

- Found in 33 of 582 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 27 of 493
- Called 93.9% of time when present
- Phage (with cluster) where this start called: Arri\_5 (DC1), Bakery\_6 (DC1), Barb\_5 (DC1), ClamChowder\_5 (DC1), CoveyB\_5 (DC1), Danyall\_5 (DC1), Egi03\_5 (DC1), Evamon\_5 (DC1), Fireball\_5 (DC1), Fugax\_5 (DC1), Gezellig\_5 (DC1), Halo3\_5 (DC1), Jambalaya\_5 (DC1), KimmyK\_5 (DC1), Lilbeanie\_2 (DE5), Mutzi\_5 (DC1), Nubi\_5 (DC1), Phlop\_5 (DC1), PinkCoffee\_5 (DC1), Portcullis\_5 (DC1), PullumCavea\_5 (DC1), RogerDodger\_5 (DC1), Salvador\_5 (DC1), Savbucketdawg\_5 (DC1), Shinji\_5 (DC1), SmokingBunny\_5 (DC1), TillyBobJoe\_5 (DC1), Togo\_5 (DC1), Twister6\_5 (DC1), VanDeWege\_5 (DC1), Wizard\_5 (DC1),

#### Start 83:

- Found in 16 of 582 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 1 of 493



- Called 6.2% of time when present
- Phage (with cluster) where this start called: Tonitrus\_13 (singleton),

#### Start 84:

- Found in 8 of 582 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 7 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chickadee\_2 (DE3), Dextert\_2 (DE3), EdmundFerry\_2 (DE3), GTE6\_2 (DE3), Kwekel\_2 (DE3), RoadKill\_2 (DE3), Tiamoceli\_2 (DE3), Twonlo\_2 (DE3),

#### Start 85:

- Found in 2 of 582 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tardus\_2 (DE4), Zitch\_1 (DE4),

#### Start 88:

- Found in 8 of 582 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 7 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Belphegor\_2 (DE), EMoore\_2 (DE2), Hans\_2 (DE2), Inspectinfecti\_2 (DE2), Leonard\_2 (DE2), MelBins\_2 (DE2), Phauci\_2 (DE2), Phinally\_2 (DE2),

#### Start 89:

- Found in 1 of 582 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA2\_09 (singleton),

#### Start 91:

- Found in 44 of 582 ( 7.6% ) of genes in pham
- Manual Annotations of this start: 34 of 493
- Called 95.5% of time when present
- Phage (with cluster) where this start called: Ailee\_2 (DE1), Ashertheman\_2 (DE1), Baddon\_2 (DE1), Barsten\_2 (DE1), Baumdotcom\_2 (DE1), Bibwit\_2 (DE1), Bizzy\_2 (DE1), Brandonk123\_2 (DE1), ChadMasterC\_2 (DE1), Derg\_2 (DE1), Fitzgerald\_2 (DE1), Flatwoods\_2 (DE1), FuegoCuervo\_2 (DE1), Gaea\_2 (DE1), Galadriel\_2 (DE1), Geodirt\_2 (DE1), Gustavo\_2 (DE1), JKSyngboy\_2 (DE1), Jabberwocky\_2 (DE1), Kamashten\_2 (DE1), Kewpiedoll\_2 (DE1), Kroos\_2 (DE1), Kwobi\_2 (DE1), Lennon\_2 (DE1), LilHam\_2 (DE1), Love\_2 (DE1), McKinley\_2 (DE1), MoontowerMania\_2 (DE1), Paries\_2 (DE1), Ribeye\_2 (DE1), RiverRaider\_2 (DE1), Sanjuju\_2 (DE1), Saronaya\_2 (DE1), SchottB\_2 (DE1), Shivanishola\_2 (DE1), Sitar\_2 (DE1), StorminNorm\_2 (DE1), Stultus\_2 (DE1), Tangerine\_2 (DE1), Thing3\_2 (DE1), Tycho\_2 (DE1), YorkOnyx\_2 (DE1),

#### Start 95:

- Found in 4 of 582 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 4 of 493
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dori\_3 (AD), Mao1\_2 (AD), Mask\_2 (AD), Sejanus\_2 (AD),

Start 102:

- Found in 366 of 582 ( 62.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.3% of time when present
- Phage (with cluster) where this start called: pZL12\_67c (singleton),

### **Summary by clusters:**

There are 26 clusters represented in this pham: singleton, DE, B12, B13, B10, B11, DR, AD, AI, W, CP, DC1, DE1, DE2, DE3, DE4, DE5, B4, B5, B6, B7, B1, B2, B3, B8, B9,

Info for manual annotations of cluster AD:

- Start number 95 was manually annotated 4 times for cluster AD.

Info for manual annotations of cluster AI:

- Start number 70 was manually annotated 1 time for cluster AI.

Info for manual annotations of cluster B1:

- Start number 56 was manually annotated 267 times for cluster B1.

Info for manual annotations of cluster B10:

- Start number 32 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:

- Start number 61 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 57 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 47 was manually annotated 3 times for cluster B13.

Info for manual annotations of cluster B2:

- Start number 71 was manually annotated 6 times for cluster B2.
- Start number 73 was manually annotated 28 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 38 was manually annotated 4 times for cluster B3.
- Start number 45 was manually annotated 27 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 43 was manually annotated 1 time for cluster B4.
- Start number 46 was manually annotated 1 time for cluster B4.
- Start number 48 was manually annotated 21 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 57 was manually annotated 9 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 48 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 61 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

- Start number 43 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

- Start number 37 was manually annotated 1 time for cluster B9.
- Start number 44 was manually annotated 2 times for cluster B9.
- Start number 50 was manually annotated 2 times for cluster B9.
- Start number 59 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster CP:

- Start number 79 was manually annotated 3 times for cluster CP.

Info for manual annotations of cluster DC1:

- Start number 80 was manually annotated 1 time for cluster DC1.
- Start number 82 was manually annotated 26 times for cluster DC1.

Info for manual annotations of cluster DE1:

- Start number 91 was manually annotated 34 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 88 was manually annotated 7 times for cluster DE2.

Info for manual annotations of cluster DE3:

- Start number 84 was manually annotated 7 times for cluster DE3.

Info for manual annotations of cluster DE4:

- Start number 85 was manually annotated 2 times for cluster DE4.

Info for manual annotations of cluster DE5:

- Start number 82 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DR:

- Start number 46 was manually annotated 1 time for cluster DR.
- Start number 49 was manually annotated 9 times for cluster DR.
- Start number 55 was manually annotated 6 times for cluster DR.
- Start number 58 was manually annotated 1 time for cluster DR.
- Start number 66 was manually annotated 1 time for cluster DR.
- Start number 72 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster W:

- Start number 78 was manually annotated 8 times for cluster W.

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

Gene: 39HC\_04 Start: 2384, Stop: 4144, Start Num: 48

Candidate Starts for 39HC\_04:

(Start: 48 @2384 has 22 MA's), (99, 2543), (102, 2549), (122, 2645), (129, 2690), (138, 2729), (143, 2765), (162, 2858), (168, 2891), (175, 2918), (182, 2999), (183, 3002), (189, 3050), (194, 3077), (195, 3080), (198, 3113), (200, 3134), (204, 3167), (229, 3332), (239, 3377), (259, 3491), (263, 3506), (266, 3515), (272, 3575), (274, 3581), (285, 3650), (293, 3686), (296, 3695), (301, 3731), (310, 3770), (317, 3806), (328, 3848), (336, 3881), (348, 3935), (353, 3953), (370, 4019), (384, 4061), (401, 4115),

Gene: 40BC\_04 Start: 2384, Stop: 4144, Start Num: 48

Candidate Starts for 40BC\_04:

(Start: 48 @2384 has 22 MA's), (99, 2543), (102, 2549), (122, 2645), (129, 2690), (138, 2729), (143, 2765), (162, 2858), (168, 2891), (175, 2918), (182, 2999), (183, 3002), (189, 3050), (194, 3077), (195, 3080), (198, 3113), (200, 3134), (204, 3167), (229, 3332), (239, 3377), (259, 3491), (263, 3506), (266, 3515), (272, 3575), (274, 3581), (285, 3650), (293, 3686), (296, 3695), (301, 3731), (310, 3770), (317, 3806), (328, 3848), (336, 3881), (348, 3935), (353, 3953), (370, 4019), (384, 4061), (401, 4115),

Gene: ABU\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for ABU\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Abinghost\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Abinghost\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (296, 4028), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (365, 4334), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: AbsoluteMadLad\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for AbsoluteMadLad\_2:

(22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Acadian\_6 Start: 3581, Stop: 5347, Start Num: 57

Candidate Starts for Acadian\_6:

(16, 3347), (17, 3356), (19, 3368), (28, 3440), (42, 3545), (Start: 57 @3581 has 10 MA's), (65, 3602), (68, 3608), (97, 3722), (102, 3731), (138, 3908), (163, 4046), (164, 4049), (168, 4073), (171, 4085), (175, 4100), (194, 4259), (195, 4262), (201, 4319), (202, 4322), (203, 4331), (209, 4385), (211, 4397), (229, 4514), (233, 4535), (255, 4679), (292, 4871), (296, 4892), (306, 4952), (309, 4964), (314, 4991), (320, 5018), (336, 5078), (343, 5108), (347, 5129), (351, 5144), (353, 5150), (365, 5204), (384, 5258),

Gene: Adriana\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Adriana\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380,

2238), (384, 2250), (401, 2328),

Gene: Aelin\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Aelin\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Ahwei\_4 Start: 2364, Stop: 4109, Start Num: 43

Candidate Starts for Ahwei\_4:

(Start: 43 @2364 has 2 MA's), (76, 2424), (102, 2514), (113, 2553), (114, 2583), (119, 2595), (125, 2631), (129, 2655), (137, 2688), (138, 2694), (143, 2730), (159, 2811), (175, 2886), (180, 2946), (186, 3003), (194, 3045), (195, 3048), (200, 3102), (209, 3171), (211, 3183), (213, 3201), (229, 3300), (230, 3303), (242, 3360), (255, 3450), (263, 3474), (266, 3483), (272, 3543), (282, 3597), (287, 3630), (293, 3660), (296, 3669), (299, 3699), (301, 3705), (302, 3708), (317, 3780), (336, 3855), (348, 3909), (353, 3927), (362, 3957), (376, 4014), (378, 4020), (384, 4035), (401, 4086),

Gene: Ailee\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Ailee\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (165, 877), (187, 1006), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (266, 1513), (281, 1606), (286, 1657), (297, 1723), (300, 1732), (321, 1804), (324, 1813), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (370, 1996), (397, 2086),

Gene: Akoma\_6 Start: 2696, Stop: 4474, Start Num: 38

Candidate Starts for Akoma\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (296, 4028), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (365, 4334), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: AksarBAT\_4 Start: 2460, Stop: 4139, Start Num: 72

Candidate Starts for AksarBAT\_4:

(Start: 72 @2460 has 1 MA's), (Start: 91 @2529 has 34 MA's), (123, 2664), (124, 2676), (128, 2697), (136, 2733), (137, 2736), (138, 2742), (141, 2769), (143, 2778), (173, 2928), (183, 3018), (198, 3129), (199, 3141), (200, 3150), (202, 3156), (222, 3288), (228, 3342), (229, 3348), (246, 3438), (279, 3612), (280, 3615), (296, 3711), (301, 3747), (308, 3777), (347, 3939), (353, 3960), (359, 3981), (376, 4047), (384, 4068), (385, 4074),

Gene: Allegro\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Allegro\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: AltPhacts\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for AltPhacts\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Altwerkus\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Altwerkus\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Amo99\_2 Start: 1099, Stop: 2844, Start Num: 79

Candidate Starts for Amo99\_2:

(69, 1063), (Start: 79 @1099 has 3 MA's), (Start: 83 @1108 has 1 MA's), (86, 1111), (92, 1138), (101, 1171), (135, 1336), (136, 1339), (138, 1348), (142, 1378), (169, 1516), (173, 1534), (191, 1678), (194, 1699), (198, 1735), (204, 1789), (221, 1894), (229, 1960), (230, 1963), (244, 2026), (247, 2050), (267, 2140), (279, 2218), (280, 2221), (283, 2248), (287, 2278), (292, 2296), (301, 2353), (315, 2419), (350, 2566), (385, 2689), (387, 2701), (391, 2722), (396, 2746), (402, 2773), (405, 2809), (407, 2821), (408, 2824),

Gene: AnClar\_4 Start: 2946, Stop: 4685, Start Num: 49

Candidate Starts for AnClar\_4:

(Start: 49 @2946 has 9 MA's), (105, 3123), (118, 3192), (136, 3279), (138, 3288), (143, 3324), (147, 3336), (180, 3540), (199, 3687), (202, 3702), (222, 3834), (229, 3894), (238, 3936), (248, 4014), (258, 4053), (263, 4065), (267, 4077), (280, 4158), (282, 4182), (287, 4215), (301, 4290), (305, 4308), (343, 4461), (351, 4497), (353, 4503), (361, 4530), (365, 4557), (368, 4566), (385, 4617),

Gene: AnarQue\_6 Start: 3931, Stop: 5652, Start Num: 55

Candidate Starts for AnarQue\_6:

(31, 3829), (Start: 55 @3931 has 6 MA's), (63, 3949), (Start: 83 @4012 has 1 MA's), (105, 4090), (121, 4168), (124, 4189), (136, 4246), (138, 4255), (141, 4282), (143, 4291), (147, 4303), (160, 4381), (180, 4507), (185, 4555), (198, 4642), (199, 4654), (200, 4663), (202, 4669), (205, 4699), (215, 4771), (222, 4801), (229, 4861), (296, 5224), (301, 5260), (311, 5311), (322, 5353), (336, 5401), (358, 5491), (365, 5527), (393, 5614), (401, 5632),

Gene: Anderson\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Anderson\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Andre\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Andre\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380,

2238), (384, 2250), (401, 2328),

Gene: AngelCake\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for AngelCake\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Antihero\_4 Start: 2364, Stop: 4109, Start Num: 43

Candidate Starts for Antihero\_4:

(Start: 43 @2364 has 2 MA's), (76, 2424), (102, 2514), (113, 2553), (114, 2583), (119, 2595), (125, 2631), (129, 2655), (137, 2688), (138, 2694), (143, 2730), (159, 2811), (175, 2886), (180, 2946), (186, 3003), (194, 3045), (195, 3048), (200, 3102), (209, 3171), (211, 3183), (213, 3201), (229, 3300), (230, 3303), (242, 3360), (255, 3450), (263, 3474), (266, 3483), (272, 3543), (282, 3597), (287, 3630), (293, 3660), (296, 3669), (299, 3699), (301, 3705), (302, 3708), (317, 3780), (336, 3855), (348, 3909), (353, 3927), (362, 3957), (376, 4014), (378, 4020), (384, 4035), (401, 4086),

Gene: Antonia\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Antonia\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Apex\_5 Start: 3455, Stop: 5206, Start Num: 48

Candidate Starts for Apex\_5:

(Start: 48 @3455 has 22 MA's), (76, 3515), (102, 3605), (113, 3644), (114, 3674), (119, 3686), (125, 3722), (129, 3746), (137, 3779), (138, 3785), (147, 3833), (159, 3902), (175, 3977), (180, 4037), (186, 4094), (194, 4136), (195, 4139), (198, 4172), (200, 4193), (211, 4274), (229, 4391), (255, 4541), (263, 4565), (266, 4574), (267, 4577), (271, 4625), (279, 4661), (282, 4688), (287, 4721), (293, 4751), (296, 4760), (299, 4790), (301, 4796), (302, 4799), (336, 4946), (348, 5000), (353, 5018), (362, 5048), (365, 5072), (371, 5090), (376, 5105), (378, 5111), (384, 5126), (401, 5177),

Gene: Apizium\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Apizium\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Arbiter\_7 Start: 4320, Stop: 6014, Start Num: 73

Candidate Starts for Arbiter\_7:

(Start: 71 @4314 has 6 MA's), (Start: 73 @4320 has 28 MA's), (118, 4500), (133, 4581), (141, 4632), (143, 4641), (148, 4662), (168, 4770), (171, 4782), (194, 4956), (198, 4992), (199, 5004), (200, 5013), (211, 5094), (229, 5211), (230, 5214), (245, 5289), (248, 5325), (263, 5382), (283, 5502), (287, 5532), (292, 5550), (296, 5571), (299, 5601), (301, 5607), (310, 5646), (317, 5682), (324, 5709), (336, 5751), (348, 5805), (353, 5823), (365, 5877), (387, 5949),

Gene: Ares\_7 Start: 4224, Stop: 5924, Start Num: 71

Candidate Starts for Ares\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: Argie\_2 Start: 348, Stop: 1952, Start Num: 78

Candidate Starts for Argie\_2:

(Start: 78 @348 has 8 MA's), (101, 426), (103, 429), (105, 438), (136, 594), (138, 603), (146, 648), (153, 687), (154, 690), (182, 876), (194, 954), (197, 978), (198, 990), (223, 1158), (226, 1176), (242, 1263), (244, 1275), (248, 1323), (251, 1335), (256, 1359), (263, 1380), (266, 1389), (267, 1392), (268, 1398), (279, 1470), (281, 1476), (283, 1500), (287, 1530), (290, 1542), (301, 1605), (313, 1656), (330, 1719), (333, 1731), (357, 1824), (360, 1833), (362, 1839), (372, 1884), (385, 1923), (386, 1932), (388, 1944), (389, 1947),

Gene: Arri\_5 Start: 1770, Stop: 3377, Start Num: 82

Candidate Starts for Arri\_5:

(39, 1671), (Start: 82 @1770 has 27 MA's), (94, 1818), (136, 2016), (142, 2055), (150, 2088), (156, 2127), (157, 2133), (167, 2175), (182, 2256), (187, 2298), (190, 2310), (200, 2391), (205, 2427), (208, 2436), (223, 2541), (245, 2700), (247, 2712), (266, 2799), (277, 2865), (283, 2907), (296, 2976), (297, 3000), (318, 3069), (320, 3078), (324, 3090), (346, 3180), (354, 3207), (363, 3243), (364, 3255), (373, 3285), (381, 3303),

Gene: Ashertheman\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Ashertheman\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (208, 1142), (220, 1226), (223, 1247), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: Ashraf\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Ashraf\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Audrey\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Audrey\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (365, 4334), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Austelle\_5 Start: 3458, Stop: 5206, Start Num: 48

Candidate Starts for Austelle\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (147, 3836), (159, 3905), (175, 3980), (180, 4040), (186,



4097), (194, 4139), (195, 4142), (200, 4196), (209, 4265), (229, 4394), (242, 4454), (255, 4544), (263, 4568), (266, 4577), (272, 4637), (279, 4664), (282, 4691), (287, 4724), (293, 4754), (296, 4763), (299, 4793), (301, 4799), (302, 4802), (310, 4838), (317, 4874), (336, 4949), (348, 5003), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: Axumite\_4 Start: 2439, Stop: 4172, Start Num: 49

Candidate Starts for Axumite\_4:

(Start: 49 @2439 has 9 MA's), (90, 2550), (105, 2607), (118, 2676), (120, 2679), (136, 2763), (138, 2772), (143, 2808), (147, 2820), (199, 3171), (202, 3186), (229, 3378), (238, 3420), (248, 3498), (263, 3552), (266, 3561), (272, 3621), (279, 3642), (280, 3645), (287, 3702), (301, 3777), (348, 3972), (351, 3984), (353, 3990), (356, 3996), (358, 4008), (361, 4017), (368, 4053), (393, 4131), (401, 4149),

Gene: Baddon\_2 Start: 509, Stop: 2101, Start Num: 91

Candidate Starts for Baddon\_2:

(Start: 91 @509 has 34 MA's), (93, 515), (98, 542), (114, 617), (122, 647), (125, 668), (136, 719), (142, 758), (143, 764), (165, 872), (172, 908), (187, 1001), (198, 1073), (200, 1094), (205, 1130), (208, 1139), (220, 1223), (223, 1244), (224, 1259), (241, 1376), (245, 1403), (247, 1415), (266, 1508), (281, 1601), (286, 1652), (295, 1691), (297, 1718), (300, 1727), (321, 1799), (324, 1808), (327, 1820), (329, 1829), (338, 1859), (342, 1874), (364, 1973), (381, 2021),

Gene: Badfish\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Badfish\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Bae6\_6 Start: 3587, Stop: 5353, Start Num: 57

Candidate Starts for Bae6\_6:

(16, 3353), (17, 3362), (19, 3374), (28, 3446), (42, 3551), (Start: 57 @3587 has 10 MA's), (68, 3614), (97, 3728), (102, 3737), (138, 3914), (164, 4055), (171, 4091), (173, 4100), (194, 4265), (195, 4268), (201, 4325), (202, 4328), (203, 4337), (209, 4391), (211, 4403), (229, 4520), (233, 4541), (255, 4685), (292, 4877), (296, 4898), (306, 4958), (309, 4970), (314, 4997), (320, 5024), (336, 5084), (343, 5114), (347, 5135), (351, 5150), (353, 5156), (365, 5210), (384, 5264), (385, 5270),

Gene: Bakery\_6 Start: 1904, Stop: 3508, Start Num: 82

Candidate Starts for Bakery\_6:

(2, 1301), (7, 1373), (10, 1457), (14, 1526), (Start: 82 @1904 has 27 MA's), (94, 1952), (122, 2075), (136, 2147), (145, 2198), (150, 2219), (152, 2237), (167, 2306), (182, 2387), (184, 2402), (187, 2429), (193, 2456), (197, 2489), (200, 2522), (205, 2558), (208, 2567), (277, 2996), (283, 3038), (289, 3074), (296, 3107), (297, 3131), (318, 3200), (320, 3209), (324, 3221), (354, 3338), (363, 3374), (364, 3386), (381, 3434),

Gene: Baloo\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Baloo\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Bananafish\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Bananafish\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: Banjo\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Banjo\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Barb\_5 Start: 1791, Stop: 3395, Start Num: 82

Candidate Starts for Barb\_5:

(Start: 82 @1791 has 27 MA's), (94, 1839), (122, 1962), (136, 2034), (145, 2085), (150, 2106), (152, 2124), (167, 2193), (182, 2274), (184, 2289), (187, 2316), (193, 2343), (197, 2376), (200, 2409), (205, 2445), (208, 2454), (249, 2757), (277, 2883), (283, 2925), (289, 2961), (296, 2994), (297, 3018), (318, 3087), (320, 3096), (324, 3108), (354, 3225), (363, 3261), (364, 3273), (381, 3321),

Gene: Barsten\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Barsten\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (114, 622), (122, 652), (125, 673), (130, 700), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (162, 865), (165, 877), (187, 1006), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (262, 1501), (266, 1513), (284, 1639), (286, 1657), (297, 1723), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (346, 1903), (364, 1978), (370, 1996), (381, 2026), (397, 2086),

Gene: Basato\_3 Start: 797, Stop: 2584, Start Num: 56

Candidate Starts for Basato\_3:

(Start: 56 @797 has 267 MA's), (102, 956), (113, 995), (129, 1097), (138, 1136), (143, 1172), (162, 1268), (168, 1301), (180, 1388), (183, 1412), (186, 1445), (189, 1460), (194, 1487), (195, 1490), (200, 1544), (206, 1583), (211, 1625), (229, 1742), (230, 1745), (266, 1928), (272, 1988), (280, 2021), (293, 2108), (302, 2156), (336, 2303), (341, 2321), (365, 2429), (371, 2447), (380, 2471), (384, 2483), (401, 2561),

Gene: BatteryCK\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for BatteryCK\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Baumdotcom\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Baumdotcom\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (142, 761), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (207, 1139), (208, 1142), (220, 1226), (223, 1247), (224, 1262), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730),

(321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976),

Gene: Beaglebox\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Beaglebox\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Belphegor\_2 Start: 531, Stop: 2186, Start Num: 88

Candidate Starts for Belphegor\_2:

(Start: 88 @531 has 7 MA's), (114, 654), (116, 660), (125, 705), (129, 729), (135, 753), (136, 756), (137, 759), (142, 795), (150, 828), (154, 852), (162, 897), (182, 996), (187, 1038), (200, 1131), (205, 1167), (208, 1176), (220, 1260), (223, 1281), (225, 1305), (241, 1443), (245, 1470), (282, 1689), (284, 1701), (286, 1719), (297, 1785), (303, 1803), (306, 1821), (318, 1875), (320, 1884), (321, 1887), (329, 1917), (338, 1947), (364, 2061), (370, 2079), (373, 2091), (381, 2109), (394, 2160),

Gene: Ben11\_5 Start: 2562, Stop: 4322, Start Num: 45

Candidate Starts for Ben11\_5:

(3, 2088), (6, 2121), (8, 2187), (15, 2283), (Start: 38 @2544 has 4 MA's), (Start: 45 @2562 has 27 MA's), (53, 2580), (81, 2661), (129, 2874), (137, 2904), (138, 2910), (141, 2937), (151, 2973), (166, 3057), (182, 3183), (194, 3261), (200, 3318), (204, 3351), (207, 3360), (209, 3387), (223, 3465), (229, 3519), (250, 3639), (254, 3660), (272, 3756), (283, 3807), (287, 3837), (288, 3840), (301, 3912), (317, 3987), (324, 4014), (326, 4023), (341, 4074), (347, 4107), (351, 4122), (356, 4134), (370, 4194), (383, 4233), (384, 4236), (401, 4287),

Gene: Bernardo\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Bernardo\_6:

(Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (365, 4334), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Bibwit\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Bibwit\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (122, 652), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (162, 865), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (284, 1639), (286, 1657), (297, 1723), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (370, 1996), (381, 2026), (397, 2086),

Gene: BiggityBass\_4 Start: 2457, Stop: 4196, Start Num: 49

Candidate Starts for BiggityBass\_4:

(Start: 49 @2457 has 9 MA's), (105, 2634), (118, 2703), (136, 2790), (138, 2799), (143, 2835), (147, 2847), (199, 3198), (202, 3213), (222, 3345), (229, 3405), (238, 3447), (248, 3525), (258, 3564), (263, 3576), (267, 3588), (280, 3669), (287, 3726), (301, 3801), (343, 3972), (351, 4008), (361, 4041), (365, 4068), (368, 4077), (385, 4128),

Gene: BirdsNest\_8 Start: 2005, Stop: 3777, Start Num: 47

Candidate Starts for BirdsNest\_8:

(Start: 47 @2005 has 3 MA's), (97, 2161), (102, 2170), (113, 2209), (129, 2311), (138, 2350), (176, 2551), (179, 2593), (186, 2659), (206, 2797), (209, 2827), (211, 2839), (229, 2956), (266, 3139), (272, 3199), (276, 3211), (293, 3319), (310, 3403), (336, 3514), (348, 3568), (365, 3640), (376, 3673), (380, 3682), (384, 3694), (401, 3757),

Gene: Bishoperium\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Bishoperium\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (214, 1413), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Bizzy\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Bizzy\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (207, 1139), (208, 1142), (220, 1226), (223, 1247), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: BlackStallion\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for BlackStallion\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Blocker23\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for Blocker23\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (113, 4485), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: BlueHusk\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for BlueHusk\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (299, 1914), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Bluephacebaby\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Bluephacebaby\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: BobRoss2024\_4 Start: 2454, Stop: 4184, Start Num: 60

Candidate Starts for BobRoss2024\_4:

(23, 2265), (60, 2454), (74, 2502), (105, 2613), (125, 2718), (136, 2769), (138, 2778), (143, 2814), (147, 2826), (180, 3030), (199, 3177), (200, 3186), (212, 3270), (222, 3324), (229, 3384), (246, 3471), (280, 3648), (296, 3744), (324, 3879), (347, 3981), (384, 4110), (385, 4116),

Gene: BobbyK\_5 Start: 3455, Stop: 5203, Start Num: 48

Candidate Starts for BobbyK\_5:

(Start: 48 @3455 has 22 MA's), (76, 3515), (102, 3605), (113, 3644), (114, 3674), (119, 3686), (125, 3722), (129, 3746), (137, 3779), (138, 3785), (143, 3821), (147, 3833), (159, 3902), (175, 3977), (180, 4037), (186, 4094), (194, 4136), (195, 4139), (200, 4193), (209, 4262), (211, 4274), (229, 4391), (242, 4451), (255, 4541), (263, 4565), (266, 4574), (279, 4661), (282, 4688), (293, 4751), (296, 4760), (299, 4790), (301, 4796), (302, 4799), (310, 4835), (317, 4871), (336, 4946), (353, 5018), (362, 5048), (365, 5072), (376, 5105), (378, 5111), (384, 5126), (401, 5177),

Gene: Boehler\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Boehler\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Boyle\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for Boyle\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: Brandonk123\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Brandonk123\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (165, 877), (187, 1006), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (260, 1489), (266, 1513), (284, 1639), (286, 1657), (297, 1723), (300, 1732), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (370, 1996), (381, 2026),

Gene: Brilliant\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Brilliant\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: BrownCNA\_5 Start: 3458, Stop: 5206, Start Num: 48

Candidate Starts for BrownCNA\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (143, 3824), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (209, 4265), (211, 4277), (229, 4394), (230, 4397), (242, 4454), (263, 4568), (266, 4577), (279, 4664), (282, 4691), (287, 4724), (293, 4754), (296, 4763), (299,

4793), (301, 4799), (302, 4802), (310, 4838), (317, 4874), (336, 4949), (348, 5003), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: Brownie5\_7 Start: 4341, Stop: 6041, Start Num: 71

Candidate Starts for Brownie5\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: Buckeye\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Buckeye\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Burr\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Burr\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: CRB2\_8 Start: 4591, Stop: 6345, Start Num: 50

Candidate Starts for CRB2\_8:

(Start: 50 @4591 has 2 MA's), (67, 4627), (74, 4648), (76, 4657), (81, 4675), (102, 4747), (109, 4774), (122, 4843), (129, 4888), (136, 4918), (138, 4927), (162, 5059), (168, 5092), (178, 5164), (180, 5179), (194, 5278), (195, 5281), (200, 5335), (204, 5368), (209, 5404), (211, 5416), (229, 5533), (258, 5689), (267, 5719), (272, 5776), (279, 5806), (287, 5866), (301, 5941), (310, 5980), (314, 6004), (336, 6091), (343, 6121), (348, 6145), (353, 6163), (365, 6217), (376, 6250), (401, 6325),

Gene: CaiB\_6 Start: 3931, Stop: 5652, Start Num: 55

Candidate Starts for CaiB\_6:

(31, 3829), (Start: 55 @3931 has 6 MA's), (63, 3949), (Start: 83 @4012 has 1 MA's), (105, 4090), (121, 4168), (124, 4189), (136, 4246), (138, 4255), (141, 4282), (143, 4291), (147, 4303), (160, 4381), (180, 4507), (185, 4555), (198, 4642), (199, 4654), (200, 4663), (202, 4669), (205, 4699), (215, 4771), (222, 4801), (229, 4861), (296, 5224), (301, 5260), (311, 5311), (322, 5353), (336, 5401), (358, 5491), (365, 5527), (393, 5614), (401, 5632),

Gene: Calamitous\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Calamitous\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: CamL\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for CamL\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: CampRoach\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for CampRoach\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Cannibal\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Cannibal\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Carthage\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Carthage\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Casbah\_5 Start: 2562, Stop: 4322, Start Num: 45

Candidate Starts for Casbah\_5:

(Start: 38 @2544 has 4 MA's), (Start: 45 @2562 has 27 MA's), (53, 2580), (81, 2661), (129, 2874), (137, 2904), (138, 2910), (141, 2937), (151, 2973), (166, 3057), (182, 3183), (194, 3261), (200, 3318), (204, 3351), (207, 3360), (209, 3387), (223, 3465), (229, 3519), (250, 3639), (254, 3660), (272, 3756), (283, 3807), (287, 3837), (288, 3840), (301, 3912), (317, 3987), (324, 4014), (326, 4023), (341, 4074), (347, 4107), (351, 4122), (356, 4134), (370, 4194), (383, 4233), (384, 4236), (401, 4287),

Gene: Caspiboi\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Caspiboi\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Causa\_11 Start: 6101, Stop: 7822, Start Num: 70

Candidate Starts for Causa\_11:

(Start: 70 @6101 has 1 MA's), (102, 6212), (136, 6380), (138, 6389), (162, 6521), (171, 6566), (180, 6641), (189, 6713), (194, 6740), (199, 6788), (223, 6944), (229, 6995), (256, 7133), (292, 7322), (296, 7343), (301, 7379), (310, 7418), (324, 7481), (376, 7688),

Gene: Cepens\_2 Start: 348, Stop: 1952, Start Num: 78

Candidate Starts for Cepens\_2:

(Start: 78 @348 has 8 MA's), (101, 426), (105, 438), (136, 594), (138, 603), (146, 648), (153, 687), (154, 690), (169, 771), (182, 876), (194, 954), (197, 978), (198, 990), (223, 1158), (226, 1176), (242, 1263), (244, 1275), (256, 1359), (263, 1380), (266, 1389), (267, 1392), (268, 1398), (273, 1452), (279, 1470), (281, 1476), (283, 1500), (287, 1530), (301, 1605), (313, 1656), (330, 1719), (357, 1824), (360, 1833), (362, 1839), (364, 1857), (379, 1902), (385, 1923), (386, 1932), (388, 1944), (389, 1947),

Gene: ChaChing\_6 Start: 2714, Stop: 4471, Start Num: 45

Candidate Starts for ChaChing\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2810), (129, 3023), (137, 3053), (138, 3059), (141, 3086), (151, 3122), (166, 3206), (182, 3332), (194, 3410), (200, 3467), (204, 3500), (223, 3614), (229, 3668), (250, 3788), (254, 3809), (272, 3905), (283, 3956), (287, 3986), (288, 3989), (301, 4061), (317, 4136), (324, 4163), (326, 4172), (341, 4223), (347, 4256), (351, 4271), (356, 4283), (370, 4343), (383, 4382), (384, 4385), (401, 4436),

Gene: ChadMasterC\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for ChadMasterC\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (114, 622), (122, 652), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (162, 865), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (284, 1639), (286, 1657), (297, 1723), (300, 1732), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (370, 1996),

Gene: Chaelin\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Chaelin\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Chah\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Chah\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Charles1\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Charles1\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: CharlieGBrown\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for CharlieGBrown\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266,



1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: CharlottesWeb\_4 Start: 2433, Stop: 4175, Start Num: 49

Candidate Starts for CharlottesWeb\_4:

(33, 2358), (Start: 49 @2433 has 9 MA's), (87, 2544), (90, 2553), (105, 2610), (118, 2679), (120, 2682), (136, 2766), (138, 2775), (143, 2811), (147, 2823), (183, 3051), (199, 3174), (200, 3183), (202, 3189), (229, 3381), (248, 3501), (266, 3564), (279, 3645), (280, 3648), (299, 3774), (301, 3780), (326, 3888), (348, 3975), (351, 3987), (353, 3993), (356, 3999), (358, 4011), (361, 4020), (365, 4047), (368, 4056), (401, 4152),

Gene: CheetO\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for CheetO\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Chentzyk\_5 Start: 2562, Stop: 4322, Start Num: 45

Candidate Starts for Chentzyk\_5:

(3, 2088), (6, 2121), (8, 2187), (15, 2283), (Start: 38 @2544 has 4 MA's), (Start: 45 @2562 has 27 MA's), (53, 2580), (81, 2661), (129, 2874), (137, 2904), (138, 2910), (141, 2937), (151, 2973), (166, 3057), (182, 3183), (194, 3261), (200, 3318), (204, 3351), (207, 3360), (209, 3387), (223, 3465), (229, 3519), (250, 3639), (254, 3660), (272, 3756), (283, 3807), (287, 3837), (288, 3840), (301, 3912), (317, 3987), (324, 4014), (326, 4023), (341, 4074), (347, 4107), (351, 4122), (356, 4134), (370, 4194), (383, 4233), (384, 4236), (401, 4287),

Gene: Cher\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Cher\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: CherryCola\_5 Start: 1809, Stop: 3422, Start Num: 80

Candidate Starts for CherryCola\_5:

(1, 1137), (5, 1260), (9, 1365), (10, 1368), (14, 1437), (Start: 80 @1809 has 1 MA's), (Start: 82 @1815 has 27 MA's), (94, 1863), (136, 2061), (142, 2100), (150, 2133), (156, 2172), (157, 2178), (167, 2220), (182, 2301), (187, 2343), (190, 2355), (200, 2436), (208, 2481), (223, 2586), (245, 2745), (247, 2757), (266, 2844), (277, 2910), (283, 2952), (296, 3021), (297, 3045), (318, 3114), (320, 3123), (324, 3135), (346, 3225), (354, 3252), (363, 3288), (364, 3300), (373, 3330), (381, 3348),

Gene: Chickadee\_2 Start: 558, Stop: 2156, Start Num: 84

Candidate Starts for Chickadee\_2:

(Start: 84 @558 has 7 MA's), (108, 642), (116, 690), (122, 714), (125, 735), (129, 759), (136, 786), (142, 825), (150, 858), (152, 876), (154, 882), (164, 936), (165, 939), (182, 1026), (187, 1068), (196, 1122), (198, 1140), (200, 1161), (208, 1206), (217, 1278), (220, 1290), (223, 1311), (231, 1386), (241, 1443), (243, 1452), (245, 1470), (247, 1482), (266, 1569), (282, 1683), (289, 1722), (297, 1779), (320, 1857), (364, 2034), (370, 2052), (382, 2085),

Gene: Childish\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Childish\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Chipette\_3 Start: 797, Stop: 2584, Start Num: 56

Candidate Starts for Chipette\_3:

(Start: 56 @797 has 267 MA's), (102, 956), (113, 995), (129, 1097), (138, 1136), (143, 1172), (162, 1268), (168, 1301), (180, 1388), (183, 1412), (186, 1445), (189, 1460), (194, 1487), (195, 1490), (200, 1544), (206, 1583), (211, 1625), (229, 1742), (230, 1745), (266, 1928), (272, 1988), (280, 2021), (293, 2108), (302, 2156), (336, 2303), (341, 2321), (365, 2429), (371, 2447), (380, 2471), (384, 2483), (401, 2561),

Gene: Chorkpop\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Chorkpop\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: ChrisnMich\_4 Start: 2364, Stop: 4109, Start Num: 43

Candidate Starts for ChrisnMich\_4:

(Start: 43 @2364 has 2 MA's), (76, 2424), (102, 2514), (113, 2553), (114, 2583), (119, 2595), (125, 2631), (129, 2655), (137, 2688), (138, 2694), (143, 2730), (147, 2742), (159, 2811), (175, 2886), (180, 2946), (186, 3003), (194, 3045), (195, 3048), (200, 3102), (209, 3171), (211, 3183), (229, 3300), (230, 3303), (242, 3360), (255, 3450), (266, 3483), (272, 3543), (282, 3597), (287, 3630), (293, 3660), (296, 3669), (299, 3699), (301, 3705), (302, 3708), (317, 3780), (336, 3855), (348, 3909), (353, 3927), (362, 3957), (365, 3981), (376, 4014), (378, 4020), (384, 4035), (401, 4086),

Gene: Chunky\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Chunky\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Chute\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Chute\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: ClamChowder\_5 Start: 1791, Stop: 3395, Start Num: 82

Candidate Starts for ClamChowder\_5:

(Start: 82 @1791 has 27 MA's), (94, 1839), (122, 1962), (136, 2034), (145, 2085), (150, 2106), (152, 2124), (167, 2193), (182, 2274), (184, 2289), (187, 2316), (193, 2343), (197, 2376), (200, 2409), (205, 2445), (208, 2454), (249, 2757), (277, 2883), (283, 2925), (289, 2961), (296, 2994), (297, 3018), (318,

3087), (320, 3096), (324, 3108), (354, 3225), (363, 3261), (364, 3273), (381, 3321),

Gene: Clawz\_2 Start: 1099, Stop: 2844, Start Num: 79

Candidate Starts for Clawz\_2:

(69, 1063), (Start: 79 @1099 has 3 MA's), (86, 1111), (92, 1138), (101, 1171), (135, 1336), (136, 1339), (138, 1348), (142, 1378), (161, 1477), (191, 1678), (194, 1699), (204, 1789), (221, 1894), (229, 1960), (242, 2014), (244, 2026), (247, 2050), (280, 2221), (283, 2248), (287, 2278), (292, 2296), (301, 2353), (315, 2419), (350, 2566), (367, 2635), (369, 2638), (374, 2653), (377, 2665), (385, 2689), (391, 2722), (396, 2746), (398, 2755), (402, 2773), (405, 2809), (406, 2818), (407, 2821), (409, 2836),

Gene: CloverMinnie\_6 Start: 3931, Stop: 5652, Start Num: 55

Candidate Starts for CloverMinnie\_6:

(31, 3829), (Start: 55 @3931 has 6 MA's), (63, 3949), (Start: 83 @4012 has 1 MA's), (105, 4090), (121, 4168), (124, 4189), (136, 4246), (138, 4255), (141, 4282), (143, 4291), (147, 4303), (160, 4381), (180, 4507), (185, 4555), (198, 4642), (199, 4654), (200, 4663), (202, 4669), (205, 4699), (206, 4702), (215, 4771), (222, 4801), (229, 4861), (296, 5224), (301, 5260), (311, 5311), (322, 5353), (336, 5401), (358, 5491), (365, 5527), (393, 5614), (401, 5632),

Gene: Cobra\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Cobra\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Coffee\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for Coffee\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: Colbert\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Colbert\_2:

(22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: ColdSoup\_2 Start: 1099, Stop: 2844, Start Num: 79

Candidate Starts for ColdSoup\_2:

(69, 1063), (Start: 79 @1099 has 3 MA's), (Start: 83 @1108 has 1 MA's), (86, 1111), (92, 1138), (101, 1171), (135, 1336), (136, 1339), (138, 1348), (142, 1378), (169, 1516), (173, 1534), (191, 1678), (194, 1699), (198, 1735), (204, 1789), (221, 1894), (229, 1960), (230, 1963), (244, 2026), (247, 2050), (267, 2140), (279, 2218), (280, 2221), (283, 2248), (287, 2278), (292, 2296), (301, 2353), (315, 2419), (350, 2566), (385, 2689), (387, 2701), (391, 2722), (396, 2746), (402, 2773), (405, 2809), (407, 2821), (408, 2824),

Gene: Coldpizza\_6 Start: 4474, Stop: 6183, Start Num: 66

Candidate Starts for Coldpizza\_6:

(40, 4411), (Start: 55 @4447 has 6 MA's), (Start: 66 @4474 has 1 MA's), (129, 4741), (137, 4771), (138, 4777), (173, 4963), (182, 5050), (183, 5053), (194, 5128), (199, 5176), (248, 5497), (257, 5533), (261, 5545), (280, 5644), (296, 5740), (314, 5839), (321, 5869), (324, 5878), (334, 5920), (348, 5983), (365, 6055), (384, 6109),

Gene: Coletti\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Coletti\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Compostia\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Compostia\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (296, 4028), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (365, 4334), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Cooper\_4 Start: 2380, Stop: 4131, Start Num: 48

Candidate Starts for Cooper\_4:

(30, 2281), (Start: 46 @2374 has 2 MA's), (Start: 48 @2380 has 22 MA's), (76, 2440), (102, 2530), (113, 2569), (114, 2599), (119, 2611), (125, 2647), (129, 2671), (137, 2704), (138, 2710), (141, 2737), (159, 2827), (175, 2902), (180, 2962), (186, 3019), (194, 3061), (195, 3064), (200, 3118), (209, 3187), (211, 3199), (213, 3217), (229, 3316), (230, 3319), (242, 3376), (266, 3499), (271, 3550), (278, 3577), (279, 3586), (282, 3613), (287, 3646), (293, 3676), (296, 3685), (299, 3715), (301, 3721), (302, 3724), (317, 3796), (336, 3871), (348, 3925), (353, 3943), (362, 3973), (371, 4015), (376, 4030), (378, 4036), (384, 4051), (385, 4057), (401, 4102),

Gene: Cornbread\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Cornbread\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Cornobble\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Cornobble\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Corofin\_6 Start: 2714, Stop: 4471, Start Num: 45

Candidate Starts for Corofin\_6:

(Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2810), (129, 3023), (137, 3053), (138, 3059), (141, 3086), (151, 3122), (166, 3206), (182, 3332), (194, 3410), (200, 3467), (204, 3500), (223, 3614), (229, 3668), (250, 3788), (254, 3809), (272, 3905), (283, 3956), (287, 3986),

(288, 3989), (301, 4061), (317, 4136), (324, 4163), (326, 4172), (341, 4223), (347, 4256), (351, 4271), (356, 4283), (370, 4343), (383, 4382), (384, 4385), (401, 4436),

Gene: Cosmolli16\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Cosmolli16\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: CoveyB\_5 Start: 1791, Stop: 3395, Start Num: 82

Candidate Starts for CoveyB\_5:

(Start: 82 @1791 has 27 MA's), (94, 1839), (122, 1962), (136, 2034), (145, 2085), (150, 2106), (152, 2124), (167, 2193), (182, 2274), (184, 2289), (187, 2316), (193, 2343), (197, 2376), (200, 2409), (205, 2445), (208, 2454), (249, 2757), (276, 2877), (277, 2883), (283, 2925), (289, 2961), (296, 2994), (297, 3018), (318, 3087), (320, 3096), (324, 3108), (349, 3207), (354, 3225), (364, 3273), (373, 3303), (381, 3321),

Gene: Craff\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Craff\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Crownjwl\_3 Start: 797, Stop: 2584, Start Num: 56

Candidate Starts for Crownjwl\_3:

(Start: 56 @797 has 267 MA's), (102, 956), (113, 995), (129, 1097), (138, 1136), (143, 1172), (162, 1268), (168, 1301), (180, 1388), (183, 1412), (186, 1445), (189, 1460), (194, 1487), (195, 1490), (200, 1544), (206, 1583), (211, 1625), (229, 1742), (230, 1745), (266, 1928), (272, 1988), (280, 2021), (293, 2108), (302, 2156), (336, 2303), (341, 2321), (365, 2429), (371, 2447), (380, 2471), (384, 2483), (401, 2561),

Gene: D12\_02 Start: 348, Stop: 1952, Start Num: 78

Candidate Starts for D12\_02:

(Start: 78 @348 has 8 MA's), (101, 426), (105, 438), (136, 594), (138, 603), (146, 648), (153, 687), (154, 690), (169, 771), (182, 876), (194, 954), (197, 978), (198, 990), (223, 1158), (226, 1176), (242, 1263), (244, 1275), (256, 1359), (263, 1380), (266, 1389), (267, 1392), (268, 1398), (273, 1452), (279, 1470), (281, 1476), (283, 1500), (287, 1530), (301, 1605), (313, 1656), (330, 1719), (333, 1731), (357, 1824), (360, 1833), (362, 1839), (364, 1857), (379, 1902), (385, 1923), (386, 1932), (388, 1944), (389, 1947),

Gene: DaddyDaniels\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for DaddyDaniels\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Daffy\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Daffy\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Daisy\_6 Start: 2714, Stop: 4477, Start Num: 45

Candidate Starts for Daisy\_6:

(Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2735), (81, 2816), (129, 3029), (137, 3059), (138, 3065), (141, 3092), (151, 3128), (166, 3212), (182, 3338), (194, 3416), (200, 3473), (204, 3506), (223, 3620), (229, 3674), (250, 3794), (254, 3815), (272, 3911), (283, 3962), (287, 3992), (288, 3995), (301, 4067), (317, 4142), (324, 4169), (326, 4178), (341, 4229), (347, 4262), (351, 4277), (356, 4289), (370, 4349), (383, 4388), (384, 4391), (401, 4442),

Gene: Daka\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Daka\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (299, 1914), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Danyall\_5 Start: 1791, Stop: 3395, Start Num: 82

Candidate Starts for Danyall\_5:

(Start: 82 @1791 has 27 MA's), (94, 1839), (122, 1962), (136, 2034), (145, 2085), (150, 2106), (152, 2124), (167, 2193), (182, 2274), (184, 2289), (187, 2316), (193, 2343), (197, 2376), (200, 2409), (205, 2445), (208, 2454), (249, 2757), (276, 2877), (277, 2883), (283, 2925), (289, 2961), (296, 2994), (297, 3018), (318, 3087), (320, 3096), (324, 3108), (349, 3207), (354, 3225), (364, 3273), (373, 3303), (381, 3321),

Gene: Dati\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Dati\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: DelRivs\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for DelRivs\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Derg\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Derg\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (207, 1139), (208, 1142), (220, 1226), (223, 1247), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811),

(327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (370, 1994), (397, 2084),

Gene: Derpp\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Derpp\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Devonte\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Devonte\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (207, 3512), (209, 3539), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (365, 4334), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Dexdert\_2 Start: 558, Stop: 2156, Start Num: 84

Candidate Starts for Dexdert\_2:

(Start: 84 @558 has 7 MA's), (108, 642), (116, 690), (122, 714), (125, 735), (129, 759), (136, 786), (142, 825), (150, 858), (152, 876), (154, 882), (164, 936), (165, 939), (182, 1026), (187, 1068), (196, 1122), (198, 1140), (200, 1161), (208, 1206), (217, 1278), (220, 1290), (223, 1311), (231, 1386), (241, 1443), (243, 1452), (245, 1470), (247, 1482), (266, 1569), (282, 1683), (289, 1722), (297, 1779), (320, 1857), (364, 2034), (370, 2052), (382, 2085),

Gene: Dice\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Dice\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: DigitDog\_6 Start: 3572, Stop: 5338, Start Num: 57

Candidate Starts for DigitDog\_6:

(16, 3338), (17, 3347), (19, 3359), (28, 3431), (42, 3536), (Start: 57 @3572 has 10 MA's), (68, 3599), (97, 3713), (102, 3722), (138, 3899), (163, 4037), (164, 4040), (168, 4064), (171, 4076), (175, 4091), (188, 4220), (194, 4250), (195, 4253), (201, 4310), (202, 4313), (203, 4322), (209, 4376), (211, 4388), (229, 4505), (233, 4526), (255, 4670), (292, 4862), (296, 4883), (306, 4943), (309, 4955), (320, 5009), (336, 5069), (343, 5099), (347, 5120), (351, 5135), (353, 5141), (365, 5195), (384, 5249),

Gene: Dingo\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Dingo\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (299, 1914), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Dione\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Dione\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: DirtJuice\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for DirtJuice\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Doddsville\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Doddsville\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: DoesntMatter\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for DoesntMatter\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: DonSanchon\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for DonSanchon\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: DonTron\_2 Start: 1096, Stop: 2841, Start Num: 79

Candidate Starts for DonTron\_2:

(Start: 79 @1096 has 3 MA's), (Start: 83 @1105 has 1 MA's), (86, 1108), (92, 1135), (101, 1168), (135, 1333), (136, 1336), (138, 1345), (142, 1375), (169, 1513), (173, 1531), (191, 1675), (194, 1696), (204, 1786), (221, 1891), (229, 1957), (244, 2023), (247, 2047), (267, 2137), (279, 2215), (280, 2218), (283, 2245), (287, 2275), (292, 2293), (301, 2350), (315, 2416), (385, 2686), (387, 2698), (391, 2719), (396, 2743), (402, 2770), (405, 2806), (407, 2818),

Gene: Donny\_6 Start: 3581, Stop: 5347, Start Num: 57

Candidate Starts for Donny\_6:

(16, 3347), (17, 3356), (19, 3368), (28, 3440), (42, 3545), (Start: 57 @3581 has 10 MA's), (65, 3602), (68, 3608), (97, 3722), (102, 3731), (138, 3908), (163, 4046), (164, 4049), (168, 4073), (171, 4085), (175, 4100), (194, 4259), (195, 4262), (201, 4319), (202, 4322), (203, 4331), (209, 4385), (211, 4397), (229, 4514), (233, 4535), (255, 4679), (292, 4871), (296, 4892), (306, 4952), (309, 4964), (314, 4991), (320, 5018), (336, 5078), (343, 5108), (347, 5129), (351, 5144), (353, 5150), (365, 5204), (384, 5258),



Gene: Dori\_3 Start: 815, Stop: 2365, Start Num: 95

Candidate Starts for Dori\_3:

(Start: 95 @815 has 4 MA's), (106, 842), (123, 926), (129, 971), (136, 998), (147, 1052), (148, 1061), (149, 1064), (153, 1088), (155, 1094), (162, 1136), (166, 1148), (181, 1238), (189, 1289), (192, 1304), (201, 1376), (206, 1412), (208, 1418), (211, 1454), (212, 1457), (223, 1502), (227, 1529), (228, 1547), (229, 1553), (230, 1556), (240, 1595), (245, 1631), (246, 1637), (247, 1643), (249, 1670), (253, 1685), (255, 1700), (258, 1706), (263, 1724), (266, 1733), (267, 1736), (271, 1784), (277, 1811), (281, 1820), (283, 1844), (287, 1874), (292, 1892), (296, 1913), (301, 1949), (302, 1952), (304, 1964), (307, 1976), (310, 1991), (312, 2009), (321, 2042), (325, 2054), (330, 2072), (332, 2075), (333, 2084), (335, 2090), (339, 2105), (357, 2177), (360, 2186), (361, 2189), (364, 2210), (382, 2261), (393, 2327),

Gene: DuchessDung\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for DuchessDung\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Duggie\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Duggie\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Durga\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Durga\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: EMoore\_2 Start: 534, Stop: 2189, Start Num: 88

Candidate Starts for EMoore\_2:

(Start: 88 @534 has 7 MA's), (114, 657), (116, 663), (122, 687), (125, 708), (129, 732), (132, 741), (135, 756), (136, 759), (137, 762), (150, 831), (154, 855), (162, 900), (165, 912), (182, 999), (187, 1041), (197, 1101), (198, 1113), (200, 1134), (205, 1170), (208, 1179), (217, 1251), (220, 1263), (223, 1284), (225, 1308), (241, 1446), (245, 1473), (282, 1692), (284, 1704), (289, 1731), (295, 1761), (297, 1788), (303, 1806), (320, 1887), (329, 1920), (338, 1950), (354, 2016), (364, 2064), (373, 2094), (381, 2112), (394, 2163),

Gene: Eaglehorse\_7 Start: 4248, Stop: 5942, Start Num: 73

Candidate Starts for Eaglehorse\_7:

(Start: 71 @4242 has 6 MA's), (Start: 73 @4248 has 28 MA's), (118, 4428), (133, 4509), (141, 4560), (143, 4569), (148, 4590), (168, 4698), (171, 4710), (194, 4884), (198, 4920), (199, 4932), (200, 4941), (211, 5022), (229, 5139), (230, 5142), (245, 5217), (248, 5253), (263, 5310), (283, 5430), (287, 5460), (292, 5478), (296, 5499), (299, 5529), (301, 5535), (310, 5574), (317, 5610), (324, 5637), (336, 5679), (348, 5733), (353, 5751), (365, 5805), (387, 5877),

Gene: EastView9101\_6 Start: 3581, Stop: 5347, Start Num: 57

Candidate Starts for EastView9101\_6:

(16, 3347), (17, 3356), (19, 3368), (28, 3440), (42, 3545), (Start: 57 @3581 has 10 MA's), (65, 3602), (68, 3608), (97, 3722), (102, 3731), (138, 3908), (163, 4046), (164, 4049), (168, 4073), (171, 4085), (175, 4100), (194, 4259), (195, 4262), (201, 4319), (202, 4322), (203, 4331), (209, 4385), (211, 4397), (229, 4514), (233, 4535), (255, 4679), (292, 4871), (296, 4892), (306, 4952), (309, 4964), (314, 4991), (320, 5018), (336, 5078), (343, 5108), (347, 5129), (351, 5144), (353, 5150), (365, 5204), (384, 5258),

Gene: EdmundFerry\_2 Start: 558, Stop: 2156, Start Num: 84

Candidate Starts for EdmundFerry\_2:

(Start: 84 @558 has 7 MA's), (108, 642), (116, 690), (122, 714), (125, 735), (129, 759), (136, 786), (142, 825), (150, 858), (152, 876), (154, 882), (164, 936), (165, 939), (182, 1026), (187, 1068), (196, 1122), (198, 1140), (200, 1161), (208, 1206), (217, 1278), (220, 1290), (223, 1311), (231, 1386), (241, 1443), (243, 1452), (245, 1470), (247, 1482), (266, 1569), (282, 1683), (289, 1722), (297, 1779), (320, 1857), (364, 2034), (370, 2052), (382, 2085),

Gene: Egi03\_5 Start: 1770, Stop: 3377, Start Num: 82

Candidate Starts for Egi03\_5:

(39, 1671), (Start: 82 @1770 has 27 MA's), (94, 1818), (136, 2016), (142, 2055), (150, 2088), (156, 2127), (157, 2133), (167, 2175), (182, 2256), (187, 2298), (190, 2310), (200, 2391), (205, 2427), (208, 2436), (223, 2541), (245, 2700), (247, 2712), (266, 2799), (277, 2865), (283, 2907), (296, 2976), (297, 3000), (318, 3069), (320, 3078), (324, 3090), (346, 3180), (354, 3207), (364, 3255), (381, 3303),

Gene: ElvisPhasley\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for ElvisPhasley\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Emiris\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Emiris\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: EmpTee\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for EmpTee\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Epah\_4 Start: 2364, Stop: 4109, Start Num: 43

Candidate Starts for Epah\_4:

(Start: 43 @2364 has 2 MA's), (76, 2424), (102, 2514), (113, 2553), (114, 2583), (119, 2595), (125, 2631), (129, 2655), (137, 2688), (138, 2694), (143, 2730), (159, 2811), (175, 2886), (180, 2946), (186, 3003), (194, 3045), (195, 3048), (200, 3102), (209, 3171), (211, 3183), (213, 3201), (229, 3300), (230, 3303), (242, 3360), (255, 3450), (263, 3474), (266, 3483), (272, 3543), (282, 3597), (287, 3630), (293,

3660), (296, 3669), (299, 3699), (301, 3705), (302, 3708), (317, 3780), (336, 3855), (348, 3909), (353, 3927), (362, 3957), (376, 4014), (378, 4020), (384, 4035), (401, 4086),

Gene: Eremos\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Eremos\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Etaye\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Etaye\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Eugenia\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Eugenia\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Evaa\_6 Start: 3949, Stop: 5649, Start Num: 66

Candidate Starts for Evaa\_6:

(51, 3913), (Start: 55 @3922 has 6 MA's), (Start: 66 @3949 has 1 MA's), (108, 4090), (114, 4135), (118, 4147), (123, 4165), (129, 4207), (137, 4237), (138, 4243), (182, 4516), (183, 4519), (194, 4594), (195, 4597), (199, 4642), (200, 4651), (204, 4684), (211, 4732), (261, 5011), (279, 5107), (280, 5110), (281, 5113), (288, 5170), (290, 5179), (296, 5206), (309, 5278), (310, 5281), (324, 5344), (334, 5386), (365, 5521), (384, 5575),

Gene: Evamon\_5 Start: 1655, Stop: 3259, Start Num: 82

Candidate Starts for Evamon\_5:

(4, 1079), (13, 1250), (18, 1352), (21, 1367), (24, 1394), (77, 1637), (Start: 82 @1655 has 27 MA's), (94, 1703), (122, 1826), (136, 1898), (145, 1949), (150, 1970), (152, 1988), (167, 2057), (182, 2138), (184, 2153), (187, 2180), (193, 2207), (197, 2240), (200, 2273), (205, 2309), (208, 2318), (248, 2618), (276, 2741), (277, 2747), (283, 2789), (289, 2825), (296, 2858), (297, 2882), (318, 2951), (320, 2960), (324, 2972), (354, 3089), (364, 3137), (381, 3185),

Gene: Fanaw\_5 Start: 3458, Stop: 5206, Start Num: 48

Candidate Starts for Fanaw\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (103, 3611), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (138, 3788), (147, 3836), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (209, 4265), (211, 4277), (229, 4394), (242, 4454), (255, 4544), (263, 4568), (266, 4577), (279, 4664), (282, 4691), (287, 4724), (293, 4754), (296, 4763), (299, 4793), (301, 4799), (302, 4802), (310, 4838), (317, 4874), (336, 4949), (348, 5003), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: Fang\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Fang\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Faze9\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for Faze9\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: Fireball\_5 Start: 1770, Stop: 3377, Start Num: 82

Candidate Starts for Fireball\_5:

(39, 1671), (Start: 82 @1770 has 27 MA's), (94, 1818), (136, 2016), (142, 2055), (150, 2088), (156, 2127), (157, 2133), (167, 2175), (182, 2256), (187, 2298), (190, 2310), (200, 2391), (205, 2427), (208, 2436), (223, 2541), (245, 2700), (266, 2799), (277, 2865), (283, 2907), (296, 2976), (297, 3000), (318, 3069), (320, 3078), (324, 3090), (346, 3180), (354, 3207), (364, 3255), (381, 3303),

Gene: Fitzgerald\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Fitzgerald\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (162, 865), (165, 877), (187, 1006), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (284, 1639), (286, 1657), (297, 1723), (300, 1732), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (370, 1996),

Gene: Flatwoods\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Flatwoods\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (207, 1139), (208, 1142), (220, 1226), (223, 1247), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: FluffyNinja\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for FluffyNinja\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: ForDig\_4 Start: 2384, Stop: 4144, Start Num: 48

Candidate Starts for ForDig\_4:

(Start: 48 @2384 has 22 MA's), (99, 2543), (102, 2549), (122, 2645), (129, 2690), (138, 2729), (143, 2765), (162, 2858), (168, 2891), (175, 2918), (182, 2999), (183, 3002), (189, 3050), (194, 3077), (195, 3080), (200, 3134), (204, 3167), (229, 3332), (239, 3377), (259, 3491), (263, 3506), (266, 3515), (267, 3518), (272, 3575), (274, 3581), (285, 3650), (293, 3686), (296, 3695), (301, 3731), (310, 3770), (317, 3806), (328, 3848), (336, 3881), (348, 3935), (370, 4019), (376, 4040), (378, 4046), (384, 4061), (401, 4115),

Gene: Fortunato\_4 Start: 3455, Stop: 5203, Start Num: 48

Candidate Starts for Fortunato\_4:

(Start: 48 @3455 has 22 MA's), (76, 3515), (102, 3605), (113, 3644), (114, 3674), (119, 3686), (125, 3722), (129, 3746), (137, 3779), (138, 3785), (159, 3902), (175, 3977), (180, 4037), (186, 4094), (194, 4136), (195, 4139), (200, 4193), (209, 4262), (211, 4274), (229, 4391), (242, 4451), (263, 4565), (266, 4574), (272, 4634), (279, 4661), (282, 4688), (287, 4721), (293, 4751), (296, 4760), (301, 4796), (302, 4799), (310, 4835), (317, 4871), (336, 4946), (348, 5000), (353, 5018), (362, 5048), (365, 5072), (376, 5105), (378, 5111), (384, 5126), (401, 5177),

Gene: Fozzie\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Fozzie\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Frankicide\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Frankicide\_2:

(22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (299, 1914), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Frederick\_5 Start: 3458, Stop: 5206, Start Num: 48

Candidate Starts for Frederick\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (147, 3836), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (209, 4265), (211, 4277), (229, 4394), (242, 4454), (255, 4544), (263, 4568), (266, 4577), (279, 4664), (282, 4691), (293, 4754), (296, 4763), (299, 4793), (301, 4799), (302, 4802), (310, 4838), (317, 4874), (336, 4949), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: FrenchFry\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for FrenchFry\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: Fresco\_4 Start: 2439, Stop: 4172, Start Num: 49

Candidate Starts for Fresco\_4:

(Start: 49 @2439 has 9 MA's), (90, 2550), (105, 2607), (118, 2676), (120, 2679), (136, 2763), (138, 2772), (143, 2808), (147, 2820), (199, 3171), (202, 3186), (229, 3378), (238, 3420), (248, 3498), (263, 3552), (266, 3561), (272, 3621), (279, 3642), (280, 3645), (287, 3702), (301, 3777), (348, 3972), (351, 3984), (353, 3990), (356, 3996), (358, 4008), (361, 4017), (368, 4053), (393, 4131), (401, 4149),

Gene: Freya\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Freya\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: FriarPreacher\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for FriarPreacher\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Fringe\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Fringe\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: FuegoCuervo\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for FuegoCuervo\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (122, 652), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (162, 865), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (260, 1489), (266, 1513), (284, 1639), (286, 1657), (297, 1723), (321, 1804), (324, 1813), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (381, 2026), (397, 2086),

Gene: FugateOSU\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for FugateOSU\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Fugax\_5 Start: 1791, Stop: 3395, Start Num: 82

Candidate Starts for Fugax\_5:

(Start: 82 @1791 has 27 MA's), (94, 1839), (122, 1962), (136, 2034), (145, 2085), (150, 2106), (152, 2124), (167, 2193), (182, 2274), (184, 2289), (187, 2316), (193, 2343), (197, 2376), (200, 2409), (205, 2445), (208, 2454), (249, 2757), (277, 2883), (283, 2925), (289, 2961), (296, 2994), (297, 3018), (318, 3087), (320, 3096), (324, 3108), (354, 3225), (363, 3261), (364, 3273), (381, 3321),

Gene: Funsized\_9 Start: 5517, Stop: 7280, Start Num: 44

Candidate Starts for Funsized\_9:

(11, 5205), (18, 5340), (25, 5388), (Start: 44 @5517 has 2 MA's), (76, 5595), (81, 5613), (102, 5685), (105, 5697), (129, 5826), (138, 5865), (143, 5901), (159, 5982), (164, 6006), (168, 6030), (178, 6102), (180, 6117), (186, 6174), (189, 6189), (194, 6216), (195, 6219), (204, 6306), (212, 6357), (229, 6471), (230, 6474), (239, 6516), (242, 6531), (267, 6657), (268, 6663), (272, 6714), (279, 6744), (287, 6804), (290, 6816), (296, 6843), (301, 6879), (310, 6918), (343, 7059), (353, 7101), (358, 7119), (365, 7155), (371, 7173), (375, 7185), (376, 7188), (384, 7209), (401, 7260),

Gene: GTE6\_2 Start: 622, Stop: 2220, Start Num: 84

Candidate Starts for GTE6\_2:

(Start: 84 @622 has 7 MA's), (108, 706), (116, 754), (122, 778), (125, 799), (129, 823), (136, 850), (142, 889), (150, 922), (154, 946), (164, 1000), (165, 1003), (182, 1090), (187, 1132), (196, 1186), (198, 1204), (200, 1225), (208, 1270), (217, 1342), (220, 1354), (223, 1375), (231, 1450), (241, 1507), (245, 1534), (247, 1546), (266, 1633), (282, 1747), (289, 1786), (297, 1843), (320, 1921), (364, 2098), (370, 2116), (382, 2149),

Gene: Gadjet\_6 Start: 2696, Stop: 4471, Start Num: 38

Candidate Starts for Gadjet\_6:

(Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2810), (129, 3023), (137, 3053), (138, 3059), (141, 3086), (151, 3122), (166, 3206), (182, 3332), (194, 3410), (200, 3467), (204, 3500), (223, 3614), (229, 3668), (250, 3788), (254, 3809), (272, 3905), (283, 3956), (287, 3986), (288, 3989), (296, 4025), (301, 4061), (317, 4136), (324, 4163), (326, 4172), (341, 4223), (347, 4256), (351, 4271), (356, 4283), (365, 4331), (370, 4343), (383, 4382), (384, 4385), (401, 4436),

Gene: Gaea\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Gaea\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (142, 761), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (208, 1142), (220, 1226), (223, 1247), (224, 1262), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: Galadriel\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Galadriel\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (114, 622), (122, 652), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (162, 865), (165, 877), (187, 1006), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (266, 1513), (284, 1639), (286, 1657), (297, 1723), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (381, 2026), (397, 2086),

Gene: Gareth\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Gareth\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: GeneCoco\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for GeneCoco\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Geodirt\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Geodirt\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (114, 622), (122, 652), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (165, 877), (187, 1006), (198, 1078), (200, 1099), (205, 1135), (208,

1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (266, 1513), (284, 1639), (286, 1657), (297, 1723), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (370, 1996), (381, 2026), (397, 2086),

Gene: Gervas\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Gervas\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (207, 3512), (209, 3539), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Gezellig\_5 Start: 1770, Stop: 3377, Start Num: 82

Candidate Starts for Gezellig\_5:

(39, 1671), (Start: 82 @1770 has 27 MA's), (94, 1818), (136, 2016), (142, 2055), (150, 2088), (156, 2127), (157, 2133), (167, 2175), (182, 2256), (187, 2298), (190, 2310), (200, 2391), (205, 2427), (208, 2436), (223, 2541), (245, 2700), (266, 2799), (277, 2865), (283, 2907), (296, 2976), (297, 3000), (318, 3069), (320, 3078), (324, 3090), (346, 3180), (354, 3207), (364, 3255), (381, 3303),

Gene: GinPorsche\_4 Start: 2364, Stop: 4109, Start Num: 43

Candidate Starts for GinPorsche\_4:

(Start: 43 @2364 has 2 MA's), (76, 2424), (102, 2514), (105, 2526), (113, 2553), (114, 2583), (119, 2595), (125, 2631), (129, 2655), (137, 2688), (138, 2694), (143, 2730), (159, 2811), (175, 2886), (180, 2946), (186, 3003), (194, 3045), (195, 3048), (200, 3102), (209, 3171), (211, 3183), (213, 3201), (229, 3300), (230, 3303), (242, 3360), (255, 3450), (263, 3474), (266, 3483), (272, 3543), (282, 3597), (287, 3630), (293, 3660), (296, 3669), (299, 3699), (301, 3705), (302, 3708), (317, 3780), (336, 3855), (348, 3909), (353, 3927), (362, 3957), (376, 4014), (378, 4020), (384, 4035), (401, 4086),

Gene: Giraffe\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Giraffe\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Glass\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for Glass\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: GlenHope\_6 Start: 2717, Stop: 4480, Start Num: 45

Candidate Starts for GlenHope\_6:

(3, 2243), (6, 2276), (8, 2342), (15, 2438), (Start: 38 @2699 has 4 MA's), (Start: 45 @2717 has 27 MA's), (53, 2738), (81, 2819), (129, 3032), (137, 3062), (138, 3068), (141, 3095), (151, 3131), (166, 3215), (182, 3341), (194, 3419), (200, 3476), (204, 3509), (223, 3623), (229, 3677), (250, 3797), (254, 3818), (272, 3914), (283, 3965), (287, 3995), (288, 3998), (296, 4034), (301, 4070), (317, 4145), (324, 4172), (326, 4181), (341, 4232), (347, 4265), (351, 4280), (356, 4292), (365, 4340), (370, 4352), (383, 4391), (384, 4394), (401, 4445),



Gene: Glubnar\_6 Start: 2717, Stop: 4477, Start Num: 45

Candidate Starts for Glubnar\_6:

(3, 2243), (6, 2276), (8, 2342), (15, 2438), (Start: 38 @2699 has 4 MA's), (Start: 45 @2717 has 27 MA's), (53, 2735), (81, 2816), (129, 3029), (137, 3059), (138, 3065), (141, 3092), (151, 3128), (166, 3212), (182, 3338), (194, 3416), (200, 3473), (204, 3506), (223, 3620), (229, 3674), (250, 3794), (254, 3815), (272, 3911), (283, 3962), (287, 3992), (288, 3995), (301, 4067), (317, 4142), (324, 4169), (326, 4178), (341, 4229), (347, 4262), (351, 4277), (356, 4289), (370, 4349), (383, 4388), (384, 4391), (401, 4442),

Gene: GodPhather\_2 Start: 348, Stop: 1952, Start Num: 78

Candidate Starts for GodPhather\_2:

(Start: 78 @348 has 8 MA's), (101, 426), (105, 438), (136, 594), (138, 603), (146, 648), (153, 687), (154, 690), (169, 771), (182, 876), (194, 954), (197, 978), (198, 990), (223, 1158), (226, 1176), (242, 1263), (244, 1275), (256, 1359), (263, 1380), (266, 1389), (267, 1392), (268, 1398), (279, 1470), (281, 1476), (283, 1500), (287, 1530), (290, 1542), (301, 1605), (313, 1656), (330, 1719), (333, 1731), (357, 1824), (360, 1833), (362, 1839), (372, 1884), (379, 1902), (385, 1923), (386, 1932), (388, 1944), (389, 1947),

Gene: Godines\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Godines\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (188, 4836), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: Gophee\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Gophee\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Grand2040\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Grand2040\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Gustavo\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Gustavo\_2:

(Start: 91 @512 has 34 MA's), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (208, 1142), (220, 1226), (223, 1247), (224, 1262), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: Gwennie1\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Gwennie1\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Gwilliam\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Gwilliam\_2:

(22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Gyarad\_002 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Gyarad\_002:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: HSavage\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for HSavage\_2:

(22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Haimas\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Haimas\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Haleema\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Haleema\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Halfpint\_5 Start: 2562, Stop: 4322, Start Num: 45

Candidate Starts for Halfpint\_5:

(3, 2088), (6, 2121), (8, 2187), (15, 2283), (Start: 38 @2544 has 4 MA's), (Start: 45 @2562 has 27 MA's), (53, 2580), (81, 2661), (129, 2874), (137, 2904), (138, 2910), (141, 2937), (151, 2973), (166, 3057), (182, 3183), (194, 3261), (200, 3318), (204, 3351), (223, 3465), (229, 3519), (250, 3639), (254, 3660), (272, 3756), (283, 3807), (287, 3837), (288, 3840), (301, 3912), (317, 3987), (324, 4014), (326, 4023), (341, 4074), (347, 4107), (351, 4122), (356, 4134), (370, 4194), (383, 4233), (384, 4236), (401,

4287),

Gene: Hally898\_4 Start: 2364, Stop: 4109, Start Num: 43

Candidate Starts for Hally898\_4:

(Start: 43 @2364 has 2 MA's), (76, 2424), (102, 2514), (105, 2526), (113, 2553), (114, 2583), (119, 2595), (125, 2631), (129, 2655), (137, 2688), (138, 2694), (143, 2730), (159, 2811), (175, 2886), (180, 2946), (186, 3003), (194, 3045), (195, 3048), (200, 3102), (209, 3171), (211, 3183), (213, 3201), (229, 3300), (230, 3303), (242, 3360), (255, 3450), (263, 3474), (266, 3483), (272, 3543), (282, 3597), (287, 3630), (293, 3660), (296, 3669), (299, 3699), (301, 3705), (302, 3708), (317, 3780), (336, 3855), (348, 3909), (353, 3927), (362, 3957), (376, 4014), (378, 4020), (384, 4035), (401, 4086),

Gene: Halo3\_5 Start: 1764, Stop: 3368, Start Num: 82

Candidate Starts for Halo3\_5:

(Start: 82 @1764 has 27 MA's), (94, 1812), (122, 1935), (136, 2007), (145, 2058), (150, 2079), (152, 2097), (167, 2166), (182, 2247), (184, 2262), (187, 2289), (193, 2316), (197, 2349), (200, 2382), (205, 2418), (208, 2427), (249, 2730), (276, 2850), (277, 2856), (283, 2898), (289, 2934), (296, 2967), (297, 2991), (318, 3060), (320, 3069), (324, 3081), (349, 3180), (354, 3198), (364, 3246), (373, 3276), (381, 3294),

Gene: Hamish\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Hamish\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Hangman\_5 Start: 3458, Stop: 5206, Start Num: 48

Candidate Starts for Hangman\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (143, 3824), (147, 3836), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (209, 4265), (211, 4277), (229, 4394), (242, 4454), (255, 4544), (263, 4568), (266, 4577), (279, 4664), (282, 4691), (293, 4754), (296, 4763), (299, 4793), (301, 4799), (302, 4802), (310, 4838), (317, 4874), (336, 4949), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: Hans\_2 Start: 534, Stop: 2189, Start Num: 88

Candidate Starts for Hans\_2:

(Start: 88 @534 has 7 MA's), (114, 657), (116, 663), (122, 687), (125, 708), (129, 732), (132, 741), (136, 759), (137, 762), (150, 831), (154, 855), (162, 900), (182, 999), (187, 1041), (188, 1047), (197, 1101), (198, 1113), (200, 1134), (205, 1170), (208, 1179), (217, 1251), (220, 1263), (223, 1284), (225, 1308), (241, 1446), (245, 1473), (282, 1692), (284, 1704), (289, 1731), (295, 1761), (297, 1788), (303, 1806), (320, 1887), (329, 1920), (331, 1923), (338, 1950), (364, 2064), (370, 2082), (373, 2094), (381, 2112), (394, 2163),

Gene: Hartsy\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Hartsy\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Harvey\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Harvey\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: HarveySr\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for HarveySr\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Hashim76\_8 Start: 2053, Stop: 3825, Start Num: 47

Candidate Starts for Hashim76\_8:

(Start: 47 @2053 has 3 MA's), (74, 2119), (97, 2209), (102, 2218), (103, 2221), (113, 2257), (129, 2359), (138, 2398), (176, 2599), (179, 2641), (186, 2707), (206, 2845), (209, 2875), (229, 3004), (266, 3187), (272, 3247), (276, 3259), (293, 3367), (310, 3451), (336, 3562), (348, 3616), (365, 3688), (376, 3721), (380, 3730), (384, 3742), (401, 3805),

Gene: Heath\_5 Start: 3458, Stop: 5206, Start Num: 48

Candidate Starts for Heath\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (143, 3824), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (209, 4265), (211, 4277), (229, 4394), (230, 4397), (242, 4454), (263, 4568), (266, 4577), (279, 4664), (282, 4691), (287, 4724), (293, 4754), (296, 4763), (299, 4793), (301, 4799), (302, 4802), (310, 4838), (317, 4874), (336, 4949), (348, 5003), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: Heathcliff\_6 Start: 2696, Stop: 4474, Start Num: 38

Candidate Starts for Heathcliff\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Hedgerow\_7 Start: 4329, Stop: 6023, Start Num: 73

Candidate Starts for Hedgerow\_7:

(Start: 71 @4323 has 6 MA's), (Start: 73 @4329 has 28 MA's), (118, 4509), (133, 4590), (141, 4641), (143, 4650), (148, 4671), (168, 4779), (171, 4791), (194, 4965), (198, 5001), (199, 5013), (200, 5022), (211, 5103), (229, 5220), (230, 5223), (245, 5298), (248, 5334), (263, 5391), (283, 5511), (287, 5541), (292, 5559), (296, 5580), (299, 5610), (301, 5616), (310, 5655), (317, 5691), (324, 5718), (336, 5760), (348, 5814), (353, 5832), (365, 5886), (387, 5958),

Gene: Held\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Held\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: HenryJackson\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for HenryJackson\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Hertubise\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Hertubise\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Hetaeria\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Hetaeria\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: HighStump\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for HighStump\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Hocus\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Hocus\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Holeinone\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Holeinone\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: Horchata\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Horchata\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Hosp\_02 Start: 586, Stop: 2346, Start Num: 48

Candidate Starts for Hosp\_02:

(Start: 48 @586 has 22 MA's), (99, 745), (102, 751), (122, 847), (129, 892), (138, 931), (143, 967), (162, 1060), (168, 1093), (175, 1120), (182, 1201), (183, 1204), (189, 1252), (194, 1279), (195, 1282), (198, 1315), (200, 1336), (204, 1369), (229, 1534), (239, 1579), (259, 1693), (263, 1708), (266, 1717), (272, 1777), (274, 1783), (285, 1852), (293, 1888), (296, 1897), (301, 1933), (310, 1972), (317, 2008), (328, 2050), (336, 2083), (348, 2137), (370, 2221), (384, 2263), (401, 2317),

Gene: Hydro\_5 Start: 3455, Stop: 5203, Start Num: 48

Candidate Starts for Hydro\_5:

(Start: 48 @3455 has 22 MA's), (76, 3515), (102, 3605), (113, 3644), (114, 3674), (119, 3686), (125, 3722), (129, 3746), (137, 3779), (138, 3785), (147, 3833), (159, 3902), (175, 3977), (180, 4037), (186, 4094), (194, 4136), (195, 4139), (200, 4193), (209, 4262), (229, 4391), (242, 4451), (255, 4541), (263, 4565), (266, 4574), (272, 4634), (279, 4661), (282, 4688), (287, 4721), (293, 4751), (296, 4760), (299, 4790), (301, 4796), (302, 4799), (310, 4835), (317, 4871), (336, 4946), (348, 5000), (353, 5018), (362, 5048), (365, 5072), (376, 5105), (378, 5111), (384, 5126), (401, 5177),

Gene: ImtiyazSitla\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for ImtiyazSitla\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Imvubu\_2 Start: 579, Stop: 2414, Start Num: 32

Candidate Starts for Imvubu\_2:

(Start: 32 @579 has 1 MA's), (81, 747), (102, 819), (108, 843), (109, 846), (126, 939), (138, 999), (143, 1035), (159, 1116), (168, 1164), (169, 1167), (173, 1185), (175, 1191), (178, 1236), (180, 1251), (183, 1275), (185, 1299), (186, 1308), (189, 1323), (195, 1353), (198, 1386), (229, 1605), (230, 1608), (239, 1650), (242, 1665), (268, 1797), (287, 1938), (296, 1977), (301, 2013), (302, 2016), (310, 2052), (317, 2088), (344, 2199), (348, 2217), (351, 2229), (353, 2235), (361, 2262), (365, 2289), (376, 2322), (384, 2343), (385, 2349), (401, 2394),

Gene: Inchworm\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Inchworm\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Indlovu\_6 Start: 3604, Stop: 5331, Start Num: 61

Candidate Starts for Indlovu\_6:

(Start: 61 @3604 has 2 MA's), (74, 3637), (102, 3733), (109, 3760), (111, 3769), (122, 3829), (129, 3874), (138, 3913), (194, 4264), (195, 4267), (204, 4354), (209, 4390), (211, 4402), (221, 4453), (229, 4519), (268, 4711), (272, 4762), (274, 4768), (279, 4783), (287, 4843), (294, 4876), (301, 4918), (310, 4957), (326, 5029), (327, 5032), (336, 5068), (351, 5134), (353, 5140), (365, 5194), (384, 5248),

Gene: Inspectinfecti\_2 Start: 534, Stop: 2189, Start Num: 88

Candidate Starts for Inspectinfecti\_2:

(Start: 88 @534 has 7 MA's), (114, 657), (116, 663), (122, 687), (125, 708), (129, 732), (132, 741), (136, 759), (137, 762), (142, 798), (150, 831), (154, 855), (162, 900), (182, 999), (187, 1041), (188, 1047), (197, 1101), (198, 1113), (200, 1134), (205, 1170), (208, 1179), (217, 1251), (220, 1263), (223, 1284), (225, 1308), (241, 1446), (245, 1473), (282, 1692), (289, 1731), (295, 1761), (297, 1788), (301, 1800), (303, 1806), (320, 1887), (329, 1920), (331, 1923), (364, 2064), (370, 2082), (373, 2094), (381, 2112), (394, 2163),

Gene: Inverness\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Inverness\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Iridessa\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Iridessa\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Iridoclysis\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Iridoclysis\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: IsaacEli\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for IsaacEli\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: ItsyBitsy1\_7 Start: 4221, Stop: 5915, Start Num: 73

Candidate Starts for ItsyBitsy1\_7:

(Start: 71 @4215 has 6 MA's), (Start: 73 @4221 has 28 MA's), (118, 4401), (133, 4482), (141, 4533), (143, 4542), (148, 4563), (168, 4671), (171, 4683), (194, 4857), (198, 4893), (199, 4905), (200, 4914), (211, 4995), (229, 5112), (230, 5115), (245, 5190), (248, 5226), (263, 5283), (283, 5403), (287, 5433), (292, 5451), (296, 5472), (299, 5502), (301, 5508), (310, 5547), (317, 5583), (324, 5610), (336, 5652), (348, 5706), (353, 5724), (365, 5778), (387, 5850),

Gene: JAMaL\_5 Start: 3453, Stop: 5207, Start Num: 48

Candidate Starts for JAMaL\_5:

(30, 3354), (Start: 48 @3453 has 22 MA's), (76, 3522), (102, 3612), (113, 3651), (114, 3681), (119, 3693), (125, 3729), (129, 3753), (137, 3786), (138, 3792), (143, 3828), (159, 3909), (175, 3984), (180, 4044), (186, 4101), (194, 4143), (195, 4146), (200, 4200), (211, 4281), (229, 4398), (230, 4401), (242, 4458), (263, 4572), (278, 4659), (279, 4668), (282, 4695), (287, 4728), (293, 4758), (296, 4767), (299, 4797), (301, 4803), (302, 4806), (317, 4878), (336, 4953), (348, 5007), (362, 5055), (376, 5112), (378, 5118), (384, 5133), (401, 5184),

Gene: JDog\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for JDog\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: JKSyngboy\_2 Start: 509, Stop: 2101, Start Num: 91

Candidate Starts for JKSyngboy\_2:

(Start: 91 @509 has 34 MA's), (93, 515), (98, 542), (114, 617), (122, 647), (125, 668), (136, 719), (142, 758), (143, 764), (165, 872), (172, 908), (187, 1001), (198, 1073), (200, 1094), (205, 1130), (207, 1136), (208, 1139), (220, 1223), (223, 1244), (224, 1259), (241, 1376), (245, 1403), (247, 1415), (265, 1505), (266, 1508), (281, 1601), (286, 1652), (295, 1691), (297, 1718), (321, 1799), (324, 1808), (327, 1820), (329, 1829), (338, 1859), (342, 1874), (364, 1973), (370, 1991),

Gene: Jabberwocky\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Jabberwocky\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (122, 652), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (162, 865), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (284, 1639), (286, 1657), (297, 1723), (300, 1732), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (370, 1996),

Gene: JacAttac\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for JacAttac\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Jackstina\_5 Start: 2603, Stop: 4363, Start Num: 45

Candidate Starts for Jackstina\_5:

(3, 2129), (6, 2162), (8, 2228), (15, 2324), (Start: 38 @2585 has 4 MA's), (Start: 45 @2603 has 27 MA's), (53, 2621), (81, 2702), (129, 2915), (137, 2945), (138, 2951), (141, 2978), (151, 3014), (166, 3098), (182, 3224), (194, 3302), (200, 3359), (204, 3392), (223, 3506), (229, 3560), (250, 3680), (254, 3701), (272, 3797), (283, 3848), (287, 3878), (288, 3881), (296, 3917), (301, 3953), (317, 4028), (324, 4055), (326, 4064), (341, 4115), (347, 4148), (351, 4163), (356, 4175), (365, 4223), (370, 4235), (383, 4274), (384, 4277), (401, 4328),

Gene: JaguarMi\_5 Start: 3458, Stop: 5203, Start Num: 48

Candidate Starts for JaguarMi\_5:



(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (143, 3824), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (211, 4277), (229, 4394), (242, 4454), (263, 4568), (266, 4577), (272, 4637), (279, 4664), (282, 4691), (287, 4724), (293, 4754), (296, 4763), (299, 4793), (302, 4802), (317, 4874), (336, 4949), (348, 5003), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: JakeO\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for JakeO\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Jambalaya\_5 Start: 1785, Stop: 3392, Start Num: 82

Candidate Starts for Jambalaya\_5:

(Start: 82 @1785 has 27 MA's), (94, 1833), (136, 2031), (142, 2070), (150, 2103), (156, 2142), (157, 2148), (167, 2190), (182, 2271), (187, 2313), (190, 2325), (200, 2406), (205, 2442), (208, 2451), (223, 2556), (245, 2715), (266, 2814), (277, 2880), (283, 2922), (295, 2988), (296, 2991), (297, 3015), (318, 3084), (320, 3093), (324, 3105), (354, 3222), (364, 3270), (381, 3318),

Gene: JangoPhett\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for JangoPhett\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Jeon\_2 Start: 348, Stop: 1952, Start Num: 78

Candidate Starts for Jeon\_2:

(Start: 78 @348 has 8 MA's), (101, 426), (105, 438), (136, 594), (138, 603), (146, 648), (153, 687), (154, 690), (169, 771), (182, 876), (194, 954), (197, 978), (198, 990), (223, 1158), (226, 1176), (242, 1263), (244, 1275), (256, 1359), (263, 1380), (266, 1389), (267, 1392), (268, 1398), (279, 1470), (281, 1476), (283, 1500), (287, 1530), (290, 1542), (301, 1605), (313, 1656), (330, 1719), (333, 1731), (357, 1824), (360, 1833), (362, 1839), (372, 1884), (379, 1902), (385, 1923), (386, 1932), (388, 1944), (389, 1947),

Gene: Jesabah\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Jesabah\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Jillium\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Jillium\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Jiminy\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Jiminy\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Jiraiya\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Jiraiya\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Jolie1\_04 Start: 2384, Stop: 4144, Start Num: 48

Candidate Starts for Jolie1\_04:

(Start: 48 @2384 has 22 MA's), (99, 2543), (102, 2549), (122, 2645), (129, 2690), (138, 2729), (143, 2765), (162, 2858), (168, 2891), (175, 2918), (182, 2999), (183, 3002), (189, 3050), (194, 3077), (195, 3080), (200, 3134), (229, 3332), (239, 3377), (259, 3491), (263, 3506), (266, 3515), (272, 3575), (274, 3581), (285, 3650), (293, 3686), (296, 3695), (301, 3731), (310, 3770), (317, 3806), (328, 3848), (336, 3881), (348, 3935), (370, 4019), (376, 4040), (378, 4046), (384, 4061), (401, 4115),

Gene: Jollymon\_2 Start: 1099, Stop: 2844, Start Num: 79

Candidate Starts for Jollymon\_2:

(69, 1063), (Start: 79 @1099 has 3 MA's), (Start: 83 @1108 has 1 MA's), (86, 1111), (92, 1138), (101, 1171), (135, 1336), (136, 1339), (138, 1348), (142, 1378), (169, 1516), (173, 1534), (191, 1678), (194, 1699), (198, 1735), (204, 1789), (221, 1894), (229, 1960), (230, 1963), (244, 2026), (247, 2050), (267, 2140), (279, 2218), (280, 2221), (283, 2248), (287, 2278), (292, 2296), (301, 2353), (315, 2419), (350, 2566), (385, 2689), (387, 2701), (391, 2722), (396, 2746), (402, 2773), (405, 2809), (407, 2821), (408, 2824),

Gene: KLucky39\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for KLucky39\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Kahve\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Kahve\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Kailash\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Kailash\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Kaleb\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for Kaleb\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: Kamashten\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Kamashten\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (162, 865), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (260, 1489), (266, 1513), (284, 1639), (286, 1657), (297, 1723), (300, 1732), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (381, 2026),

Gene: Kamiyu\_6 Start: 2699, Stop: 4474, Start Num: 38

Candidate Starts for Kamiyu\_6:

(Start: 38 @2699 has 4 MA's), (Start: 45 @2717 has 27 MA's), (53, 2735), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: KarasumaRum\_6 Start: 3572, Stop: 5335, Start Num: 57

Candidate Starts for KarasumaRum\_6:

(17, 3347), (19, 3359), (28, 3431), (42, 3536), (Start: 57 @3572 has 10 MA's), (68, 3599), (97, 3713), (102, 3722), (138, 3899), (163, 4037), (164, 4040), (168, 4064), (171, 4076), (175, 4091), (194, 4250), (195, 4253), (201, 4310), (202, 4313), (203, 4322), (209, 4376), (211, 4388), (229, 4505), (233, 4526), (255, 4670), (292, 4862), (296, 4883), (306, 4943), (309, 4955), (320, 5009), (340, 5084), (341, 5087), (343, 5099), (347, 5120), (351, 5135), (353, 5141), (365, 5195), (384, 5249),

Gene: Katniss\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Katniss\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: KayaCho\_4 Start: 2387, Stop: 4147, Start Num: 48

Candidate Starts for KayaCho\_4:

(Start: 48 @2387 has 22 MA's), (99, 2546), (102, 2552), (122, 2648), (129, 2693), (138, 2732), (143, 2768), (162, 2861), (168, 2894), (175, 2921), (182, 3002), (183, 3005), (189, 3053), (194, 3080), (195, 3083), (198, 3116), (200, 3137), (204, 3170), (229, 3335), (239, 3380), (259, 3494), (263, 3509), (266, 3518), (272, 3578), (274, 3584), (285, 3653), (293, 3689), (296, 3698), (301, 3734), (310, 3773), (317, 3809), (328, 3851), (336, 3884), (348, 3938), (370, 4022), (378, 4049), (384, 4064), (401, 4118),

Gene: Keitherie\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Keitherie\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Kewpiedoll\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Kewpiedoll\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (114, 622), (122, 652), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (162, 865), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (284, 1639), (286, 1657), (297, 1723), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (370, 1996),

Gene: Khan1\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Khan1\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Kheth\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Kheth\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (113, 4368), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: Kikipoo\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Kikipoo\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Kimbrough\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Kimbrough\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: KimmyK\_5 Start: 1791, Stop: 3395, Start Num: 82

Candidate Starts for KimmyK\_5:

(Start: 82 @1791 has 27 MA's), (94, 1839), (122, 1962), (136, 2034), (145, 2085), (150, 2106), (152, 2124), (167, 2193), (182, 2274), (184, 2289), (187, 2316), (193, 2343), (197, 2376), (200, 2409), (205,

2445), (208, 2454), (249, 2757), (277, 2883), (283, 2925), (289, 2961), (296, 2994), (297, 3018), (318, 3087), (320, 3096), (324, 3108), (354, 3225), (363, 3261), (364, 3273), (381, 3321),

Gene: KingTut\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for KingTut\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: KingVeVeVe\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for KingVeVeVe\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: KingstonB\_2 Start: 1099, Stop: 2844, Start Num: 79

Candidate Starts for KingstonB\_2:

(69, 1063), (Start: 79 @1099 has 3 MA's), (Start: 83 @1108 has 1 MA's), (86, 1111), (92, 1138), (101, 1171), (135, 1336), (136, 1339), (138, 1348), (142, 1378), (169, 1516), (173, 1534), (191, 1678), (194, 1699), (198, 1735), (204, 1789), (221, 1894), (229, 1960), (230, 1963), (244, 2026), (247, 2050), (267, 2140), (279, 2218), (280, 2221), (283, 2248), (287, 2278), (292, 2296), (301, 2353), (315, 2419), (350, 2566), (377, 2665), (385, 2689), (387, 2701), (391, 2722), (396, 2746), (402, 2773), (405, 2809), (407, 2821),

Gene: KlimbOn\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for KlimbOn\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Kloppinator\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Kloppinator\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (76, 633), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Knocker\_10 Start: 6134, Stop: 7915, Start Num: 37

Candidate Starts for Knocker\_10:

(Start: 37 @6134 has 1 MA's), (74, 6221), (76, 6230), (102, 6320), (103, 6323), (109, 6347), (122, 6416), (123, 6419), (129, 6461), (138, 6500), (143, 6536), (159, 6617), (164, 6641), (168, 6665), (178, 6737), (186, 6809), (189, 6824), (195, 6854), (198, 6887), (202, 6914), (229, 7106), (230, 7109), (239, 7151), (242, 7166), (268, 7298), (287, 7439), (290, 7451), (301, 7514), (320, 7604), (336, 7664), (341, 7682), (351, 7730), (353, 7736), (365, 7790), (376, 7823), (378, 7829), (384, 7844), (385, 7850), (401, 7895),

Gene: Kolhan\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Kolhan\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: Kroos\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Kroos\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (207, 1139), (208, 1142), (220, 1226), (223, 1247), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: Kwadwo\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Kwadwo\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Kwekel\_2 Start: 558, Stop: 2156, Start Num: 84

Candidate Starts for Kwekel\_2:

(Start: 84 @558 has 7 MA's), (108, 642), (116, 690), (122, 714), (125, 735), (129, 759), (136, 786), (142, 825), (150, 858), (152, 876), (154, 882), (164, 936), (165, 939), (182, 1026), (187, 1068), (196, 1122), (198, 1140), (200, 1161), (208, 1206), (217, 1278), (220, 1290), (223, 1311), (231, 1386), (241, 1443), (243, 1452), (245, 1470), (247, 1482), (266, 1569), (282, 1683), (289, 1722), (297, 1779), (320, 1857), (364, 2034), (370, 2052), (382, 2085),

Gene: Kwksand96\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Kwksand96\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Kwobi\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Kwobi\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (208, 1142), (220, 1226), (223, 1247), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: Labeouficaum\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Labeouficaum\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266,

1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Lambano\_4 Start: 2364, Stop: 4109, Start Num: 43

Candidate Starts for Lambano\_4:

(Start: 43 @2364 has 2 MA's), (76, 2424), (102, 2514), (105, 2526), (113, 2553), (114, 2583), (119, 2595), (125, 2631), (129, 2655), (137, 2688), (138, 2694), (143, 2730), (159, 2811), (175, 2886), (180, 2946), (186, 3003), (194, 3045), (195, 3048), (200, 3102), (209, 3171), (211, 3183), (213, 3201), (229, 3300), (230, 3303), (242, 3360), (255, 3450), (263, 3474), (266, 3483), (272, 3543), (282, 3597), (287, 3630), (293, 3660), (296, 3669), (299, 3699), (301, 3705), (302, 3708), (317, 3780), (336, 3855), (348, 3909), (353, 3927), (362, 3957), (376, 4014), (378, 4020), (384, 4035), (401, 4086),

Gene: Lars\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for Lars\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: LasagnaCat\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for LasagnaCat\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Lasso\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Lasso\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Laurie\_7 Start: 4224, Stop: 5924, Start Num: 71

Candidate Starts for Laurie\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: LeeLot\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for LeeLot\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Lego3393\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Lego3393\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Legolas\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Legolas\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: LeiMonet\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for LeiMonet\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: LemonSlice\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for LemonSlice\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Lennon\_2 Start: 515, Stop: 2107, Start Num: 91

Candidate Starts for Lennon\_2:

(Start: 91 @515 has 34 MA's), (93, 521), (114, 623), (122, 653), (125, 674), (130, 701), (136, 725), (142, 764), (143, 770), (148, 791), (157, 842), (162, 866), (165, 878), (187, 1007), (198, 1079), (200, 1100), (205, 1136), (208, 1145), (220, 1229), (223, 1250), (241, 1382), (245, 1409), (247, 1421), (284, 1640), (286, 1658), (297, 1724), (300, 1733), (321, 1805), (327, 1826), (329, 1835), (338, 1865), (342, 1880), (364, 1979), (370, 1997), (381, 2027), (397, 2087),

Gene: Leonard\_2 Start: 534, Stop: 2189, Start Num: 88

Candidate Starts for Leonard\_2:

(Start: 88 @534 has 7 MA's), (114, 657), (116, 663), (122, 687), (125, 708), (129, 732), (132, 741), (136, 759), (137, 762), (142, 798), (150, 831), (154, 855), (162, 900), (170, 939), (182, 999), (187, 1041), (188, 1047), (197, 1101), (198, 1113), (200, 1134), (205, 1170), (208, 1179), (217, 1251), (220, 1263), (223, 1284), (225, 1308), (241, 1446), (245, 1473), (282, 1692), (289, 1731), (295, 1761), (297, 1788), (301, 1800), (303, 1806), (320, 1887), (329, 1920), (331, 1923), (364, 2064), (370, 2082), (373, 2094), (381, 2112), (394, 2163),

Gene: Lephleur\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Lephleur\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442),



(292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: LestyG\_6 Start: 2717, Stop: 4477, Start Num: 45

Candidate Starts for LestyG\_6:

(3, 2243), (6, 2276), (8, 2342), (15, 2438), (Start: 38 @2699 has 4 MA's), (Start: 45 @2717 has 27 MA's), (53, 2735), (81, 2816), (129, 3029), (137, 3059), (138, 3065), (141, 3092), (151, 3128), (166, 3212), (182, 3338), (194, 3416), (200, 3473), (204, 3506), (223, 3620), (229, 3674), (250, 3794), (254, 3815), (272, 3911), (283, 3962), (287, 3992), (288, 3995), (301, 4067), (317, 4142), (324, 4169), (326, 4178), (341, 4229), (347, 4262), (351, 4277), (356, 4289), (370, 4349), (383, 4388), (384, 4391), (401, 4442),

Gene: Ligma\_4 Start: 2439, Stop: 4172, Start Num: 49

Candidate Starts for Ligma\_4:

(Start: 49 @2439 has 9 MA's), (90, 2550), (105, 2607), (118, 2676), (120, 2679), (136, 2763), (138, 2772), (143, 2808), (147, 2820), (199, 3171), (202, 3186), (229, 3378), (238, 3420), (248, 3498), (263, 3552), (266, 3561), (272, 3621), (279, 3642), (280, 3645), (287, 3702), (301, 3777), (348, 3972), (351, 3984), (353, 3990), (356, 3996), (358, 4008), (361, 4017), (368, 4053), (393, 4131), (401, 4149),

Gene: LilHam\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for LilHam\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (142, 761), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (207, 1139), (208, 1142), (220, 1226), (223, 1247), (224, 1262), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (370, 1994),

Gene: LilMcDreamy\_6 Start: 4326, Stop: 6113, Start Num: 57

Candidate Starts for LilMcDreamy\_6:

(Start: 57 @4326 has 10 MA's), (65, 4350), (68, 4356), (102, 4479), (135, 4644), (138, 4656), (146, 4701), (166, 4803), (169, 4824), (171, 4833), (182, 4929), (190, 4983), (194, 5007), (195, 5010), (201, 5067), (211, 5145), (214, 5166), (222, 5202), (229, 5262), (233, 5283), (236, 5301), (237, 5304), (280, 5544), (287, 5601), (292, 5619), (296, 5640), (306, 5700), (310, 5715), (314, 5739), (336, 5826), (353, 5898), (365, 5952), (384, 6006), (395, 6066), (401, 6090),

Gene: LilSmirk\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for LilSmirk\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: Lilbeanie\_2 Start: 584, Stop: 2185, Start Num: 82

Candidate Starts for Lilbeanie\_2:

(Start: 82 @584 has 27 MA's), (104, 665), (109, 686), (122, 755), (125, 776), (129, 800), (139, 848), (140, 860), (150, 899), (158, 950), (162, 968), (165, 980), (182, 1067), (187, 1109), (198, 1181), (200, 1202), (208, 1247), (209, 1271), (218, 1325), (219, 1328), (220, 1331), (223, 1352), (225, 1376), (227, 1391), (235, 1448), (252, 1565), (281, 1694), (283, 1718), (289, 1754), (295, 1784), (303, 1829), (327, 1907), (364, 2060), (366, 2069), (367, 2072),

Gene: LittleMunchkin\_6 Start: 3931, Stop: 5658, Start Num: 58

Candidate Starts for LittleMunchkin\_6:

(Start: 58 @3931 has 1 MA's), (105, 4093), (118, 4162), (136, 4249), (137, 4252), (138, 4258), (143, 4294), (144, 4297), (185, 4558), (199, 4657), (202, 4672), (229, 4864), (248, 4984), (256, 5020), (267, 5050), (269, 5077), (271, 5098), (272, 5107), (279, 5128), (282, 5155), (296, 5227), (299, 5257), (301, 5263), (326, 5371), (347, 5455), (348, 5458), (351, 5470), (358, 5494), (361, 5503), (365, 5530), (368, 5539), (401, 5635),

Gene: LizLemon\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for LizLemon\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: Lolalove\_5 Start: 3455, Stop: 5203, Start Num: 48

Candidate Starts for Lolalove\_5:

(Start: 48 @3455 has 22 MA's), (76, 3515), (102, 3605), (113, 3644), (114, 3674), (119, 3686), (125, 3722), (129, 3746), (137, 3779), (138, 3785), (147, 3833), (159, 3902), (175, 3977), (180, 4037), (186, 4094), (194, 4136), (195, 4139), (200, 4193), (209, 4262), (229, 4391), (242, 4451), (255, 4541), (263, 4565), (266, 4574), (272, 4634), (279, 4661), (282, 4688), (287, 4721), (293, 4751), (296, 4760), (299, 4790), (301, 4796), (302, 4799), (310, 4835), (317, 4871), (336, 4946), (348, 5000), (353, 5018), (362, 5048), (365, 5072), (376, 5105), (378, 5111), (384, 5126), (401, 5177),

Gene: Longacauda\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Longacauda\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Lopsy\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Lopsy\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (76, 633), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: LostAndPhound\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for LostAndPhound\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Love\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Love\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (114, 622), (122, 652), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (162, 865), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (260, 1489), (266, 1513), (284, 1639), (286, 1657), (297, 1723), (321, 1804), (327, 1825), (329, 1834), (338,

1864), (342, 1879), (364, 1978), (381, 2026),

Gene: LuckyMarjie\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for LuckyMarjie\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Lulumae\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Lulumae\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Lulwa\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Lulwa\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Lumine\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Lumine\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: MRabcd\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for MRabcd\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Mag7\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Mag7\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Magic8\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Magic8\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Magpie\_5 Start: 3455, Stop: 5203, Start Num: 48

Candidate Starts for Magpie\_5:

(Start: 48 @3455 has 22 MA's), (102, 3605), (113, 3644), (114, 3674), (119, 3686), (125, 3722), (129, 3746), (137, 3779), (138, 3785), (143, 3821), (159, 3902), (175, 3977), (180, 4037), (186, 4094), (194, 4136), (195, 4139), (200, 4193), (209, 4262), (211, 4274), (229, 4391), (242, 4451), (263, 4565), (266, 4574), (272, 4634), (279, 4661), (282, 4688), (287, 4721), (293, 4751), (296, 4760), (299, 4790), (301, 4796), (302, 4799), (310, 4835), (317, 4871), (336, 4946), (348, 5000), (353, 5018), (362, 5048), (365, 5072), (376, 5105), (378, 5111), (384, 5126), (401, 5177),

Gene: MakoManhole\_6 Start: 3931, Stop: 5652, Start Num: 55

Candidate Starts for MakoManhole\_6:

(31, 3829), (Start: 55 @3931 has 6 MA's), (63, 3949), (Start: 83 @4012 has 1 MA's), (105, 4090), (121, 4168), (124, 4189), (136, 4246), (138, 4255), (141, 4282), (143, 4291), (147, 4303), (160, 4381), (180, 4507), (185, 4555), (198, 4642), (199, 4654), (200, 4663), (202, 4669), (205, 4699), (215, 4771), (222, 4801), (229, 4861), (296, 5224), (301, 5260), (311, 5311), (322, 5353), (336, 5401), (358, 5491), (365, 5527), (393, 5614), (401, 5632),

Gene: Mana\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Mana\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Manad\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Manad\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Mao1\_2 Start: 207, Stop: 1727, Start Num: 95

Candidate Starts for Mao1\_2:

(Start: 95 @207 has 4 MA's), (103, 222), (106, 234), (123, 318), (129, 363), (136, 390), (148, 453), (149, 456), (155, 486), (162, 528), (166, 540), (181, 630), (189, 681), (192, 696), (201, 768), (206, 804), (207, 807), (208, 810), (211, 846), (212, 849), (223, 894), (227, 921), (228, 939), (229, 945), (230, 948), (231, 957), (240, 987), (245, 1023), (246, 1029), (247, 1035), (253, 1077), (255, 1092), (263, 1116), (266, 1125), (267, 1128), (271, 1176), (277, 1203), (281, 1212), (283, 1236), (287, 1266), (292, 1284), (296, 1305), (301, 1341), (302, 1344), (304, 1356), (307, 1368), (312, 1401), (321, 1434), (325, 1446), (330, 1464), (333, 1476), (335, 1482), (339, 1497), (357, 1569), (360, 1578), (361, 1581), (364, 1602), (390, 1677), (393, 1689), (396, 1698),

Gene: Mariokart\_4 Start: 2433, Stop: 4175, Start Num: 49

Candidate Starts for Mariokart\_4:

(33, 2358), (Start: 49 @2433 has 9 MA's), (87, 2544), (90, 2553), (105, 2610), (118, 2679), (120, 2682), (136, 2766), (138, 2775), (143, 2811), (147, 2823), (185, 3075), (199, 3174), (200, 3183), (202, 3189), (229, 3381), (248, 3501), (266, 3564), (279, 3645), (280, 3648), (299, 3774), (301, 3780), (326, 3888), (348, 3975), (351, 3987), (353, 3993), (356, 3999), (358, 4011), (361, 4020), (365, 4047), (368, 4056), (401, 4152),

Gene: Marlia\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Marlia\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (207, 3512), (209, 3539), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Maru\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Maru\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Mask\_2 Start: 207, Stop: 1727, Start Num: 95

Candidate Starts for Mask\_2:

(Start: 95 @207 has 4 MA's), (103, 222), (106, 234), (123, 318), (129, 363), (136, 390), (148, 453), (149, 456), (155, 486), (162, 528), (166, 540), (181, 630), (189, 681), (192, 696), (201, 768), (206, 804), (207, 807), (208, 810), (211, 846), (212, 849), (223, 894), (227, 921), (228, 939), (229, 945), (230, 948), (231, 957), (240, 987), (245, 1023), (246, 1029), (247, 1035), (249, 1062), (253, 1077), (255, 1092), (263, 1116), (266, 1125), (267, 1128), (271, 1176), (277, 1203), (281, 1212), (283, 1236), (287, 1266), (292, 1284), (296, 1305), (301, 1341), (302, 1344), (304, 1356), (307, 1368), (312, 1401), (321, 1434), (325, 1446), (330, 1464), (333, 1476), (335, 1482), (339, 1497), (357, 1569), (360, 1578), (361, 1581), (364, 1602), (390, 1677), (393, 1689), (396, 1698),

Gene: Maskar\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Maskar\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: MasterPo\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for MasterPo\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: Matalotodo\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Matalotodo\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: McKinley\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for McKinley\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (162, 865), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (260, 1489), (262, 1501), (266, 1513), (284, 1639), (286, 1657), (297, 1723), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (370, 1996), (381, 2026), (397, 2086),

Gene: Mcshane\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Mcshane\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Mecca\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Mecca\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (214, 1413), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Megabear\_2 Start: 348, Stop: 1952, Start Num: 78

Candidate Starts for Megabear\_2:

(Start: 78 @348 has 8 MA's), (101, 426), (105, 438), (136, 594), (138, 603), (146, 648), (153, 687), (154, 690), (169, 771), (182, 876), (194, 954), (197, 978), (198, 990), (223, 1158), (226, 1176), (242, 1263), (244, 1275), (256, 1359), (263, 1380), (266, 1389), (267, 1392), (268, 1398), (273, 1452), (279, 1470), (281, 1476), (283, 1500), (287, 1530), (301, 1605), (313, 1656), (330, 1719), (333, 1731), (357, 1824), (360, 1833), (362, 1839), (364, 1857), (379, 1902), (385, 1923), (386, 1932), (388, 1944), (389, 1947),

Gene: Megamind20\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Megamind20\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Megatron\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Megatron\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

2238), (384, 2250), (401, 2328),

Gene: MelBins\_2 Start: 534, Stop: 2189, Start Num: 88

Candidate Starts for MelBins\_2:

(Start: 88 @534 has 7 MA's), (114, 657), (116, 663), (122, 687), (125, 708), (129, 732), (132, 741), (136, 759), (137, 762), (142, 798), (150, 831), (154, 855), (162, 900), (182, 999), (187, 1041), (188, 1047), (197, 1101), (198, 1113), (200, 1134), (205, 1170), (206, 1173), (208, 1179), (217, 1251), (220, 1263), (223, 1284), (225, 1308), (241, 1446), (245, 1473), (282, 1692), (289, 1731), (295, 1761), (297, 1788), (301, 1800), (303, 1806), (320, 1887), (329, 1920), (331, 1923), (364, 2064), (370, 2082), (373, 2094), (381, 2112), (394, 2163),

Gene: Melc17\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Melc17\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: MelsMeow\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for MelsMeow\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Mesh1\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Mesh1\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Mesmerelda\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Mesmerelda\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: MichaelPhcott\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for MichaelPhcott\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Mikota\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Mikota\_2:

(22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (299, 1914), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: MiniBoss\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for MiniBoss\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: MitKao\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for MitKao\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Mithril\_5 Start: 3458, Stop: 5206, Start Num: 48

Candidate Starts for Mithril\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (143, 3824), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (209, 4265), (211, 4277), (229, 4394), (230, 4397), (242, 4454), (263, 4568), (266, 4577), (279, 4664), (282, 4691), (287, 4724), (293, 4754), (296, 4763), (299, 4793), (301, 4799), (302, 4802), (310, 4838), (317, 4874), (336, 4949), (348, 5003), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: MmasiCarm\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for MmasiCarm\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: MoontowerMania\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for MoontowerMania\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (114, 622), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (165, 877), (187, 1006), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (260, 1489), (266, 1513), (281, 1606), (284, 1639), (286, 1657), (297, 1723), (300, 1732), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (366, 1987), (381, 2026), (397, 2086),

Gene: Morgushi\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Morgushi\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266,



1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Morty\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Morty\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Mosaic\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Mosaic\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: MossRose\_6 Start: 3931, Stop: 5652, Start Num: 55

Candidate Starts for MossRose\_6:

(31, 3829), (Start: 55 @3931 has 6 MA's), (63, 3949), (Start: 83 @4012 has 1 MA's), (105, 4090), (121, 4168), (124, 4189), (136, 4246), (138, 4255), (141, 4282), (143, 4291), (147, 4303), (160, 4381), (180, 4507), (185, 4555), (198, 4642), (199, 4654), (200, 4663), (202, 4669), (205, 4699), (206, 4702), (215, 4771), (222, 4801), (229, 4861), (296, 5224), (301, 5260), (311, 5311), (322, 5353), (336, 5401), (358, 5491), (365, 5527), (393, 5614), (401, 5632),

Gene: MrPhizzler\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for MrPhizzler\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Mudslide\_5 Start: 3455, Stop: 5203, Start Num: 48

Candidate Starts for Mudslide\_5:

(Start: 48 @3455 has 22 MA's), (76, 3515), (102, 3605), (113, 3644), (114, 3674), (119, 3686), (125, 3722), (129, 3746), (137, 3779), (138, 3785), (143, 3821), (159, 3902), (175, 3977), (180, 4037), (186, 4094), (194, 4136), (195, 4139), (200, 4193), (209, 4262), (211, 4274), (229, 4391), (230, 4394), (242, 4451), (263, 4565), (266, 4574), (279, 4661), (282, 4688), (287, 4721), (293, 4751), (296, 4760), (299, 4790), (301, 4796), (302, 4799), (310, 4835), (317, 4871), (336, 4946), (348, 5000), (353, 5018), (362, 5048), (365, 5072), (376, 5105), (378, 5111), (384, 5126), (401, 5177),

Gene: Mulan\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Mulan\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Murdoc\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Murdoc\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Mutante\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Mutante\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Mutzi\_5 Start: 1791, Stop: 3395, Start Num: 82

Candidate Starts for Mutzi\_5:

(Start: 82 @1791 has 27 MA's), (94, 1839), (122, 1962), (136, 2034), (145, 2085), (150, 2106), (152, 2124), (167, 2193), (182, 2274), (184, 2289), (187, 2316), (193, 2343), (197, 2376), (200, 2409), (205, 2445), (208, 2454), (249, 2757), (276, 2877), (277, 2883), (283, 2925), (289, 2961), (296, 2994), (297, 3018), (318, 3087), (320, 3096), (324, 3108), (349, 3207), (354, 3225), (364, 3273), (373, 3303), (381, 3321),

Gene: Mysterious\_6 Start: 3862, Stop: 5622, Start Num: 57

Candidate Starts for Mysterious\_6:

(Start: 57 @3862 has 10 MA's), (68, 3892), (92, 3982), (102, 4015), (131, 4159), (138, 4192), (143, 4228), (146, 4237), (166, 4339), (168, 4357), (175, 4384), (194, 4543), (195, 4546), (201, 4603), (209, 4669), (211, 4681), (221, 4732), (229, 4798), (233, 4819), (236, 4837), (250, 4939), (280, 5080), (287, 5137), (292, 5155), (296, 5176), (306, 5236), (309, 5248), (314, 5275), (317, 5287), (336, 5362), (343, 5392), (351, 5428), (353, 5434), (365, 5488), (384, 5542),

Gene: NHagos\_4 Start: 2460, Stop: 4139, Start Num: 72

Candidate Starts for NHagos\_4:

(Start: 72 @2460 has 1 MA's), (Start: 91 @2529 has 34 MA's), (123, 2664), (124, 2676), (128, 2697), (136, 2733), (137, 2736), (138, 2742), (141, 2769), (143, 2778), (173, 2928), (183, 3018), (198, 3129), (199, 3141), (200, 3150), (202, 3156), (222, 3288), (228, 3342), (229, 3348), (246, 3438), (279, 3612), (280, 3615), (296, 3711), (301, 3747), (308, 3777), (336, 3888), (347, 3939), (353, 3960), (359, 3981), (376, 4047), (384, 4068), (385, 4074),

Gene: Nacho\_002 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Nacho\_002:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Nanao\_4 Start: 2364, Stop: 4109, Start Num: 43

Candidate Starts for Nanao\_4:

(Start: 43 @2364 has 2 MA's), (76, 2424), (102, 2514), (113, 2553), (114, 2583), (119, 2595), (125, 2631), (129, 2655), (137, 2688), (138, 2694), (143, 2730), (159, 2811), (175, 2886), (180, 2946), (186, 3003), (194, 3045), (195, 3048), (200, 3102), (209, 3171), (211, 3183), (213, 3201), (229, 3300), (230, 3303), (242, 3360), (255, 3450), (263, 3474), (266, 3483), (272, 3543), (282, 3597), (287, 3630), (293,

3660), (296, 3669), (299, 3699), (301, 3705), (302, 3708), (317, 3780), (336, 3855), (348, 3909), (353, 3927), (362, 3957), (376, 4014), (378, 4020), (384, 4035), (401, 4086),

Gene: Nangang\_6 Start: 3572, Stop: 5338, Start Num: 57

Candidate Starts for Nangang\_6:

(16, 3338), (17, 3347), (19, 3359), (28, 3431), (42, 3536), (Start: 57 @3572 has 10 MA's), (68, 3599), (97, 3713), (102, 3722), (138, 3899), (163, 4037), (164, 4040), (168, 4064), (171, 4076), (175, 4091), (188, 4220), (194, 4250), (195, 4253), (201, 4310), (202, 4313), (203, 4322), (209, 4376), (211, 4388), (229, 4505), (233, 4526), (255, 4670), (292, 4862), (296, 4883), (306, 4943), (309, 4955), (320, 5009), (336, 5069), (343, 5099), (347, 5120), (351, 5135), (353, 5141), (365, 5195), (384, 5249),

Gene: Nathan\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Nathan\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Nehemiah\_5 Start: 3862, Stop: 5622, Start Num: 57

Candidate Starts for Nehemiah\_5:

(Start: 57 @3862 has 10 MA's), (68, 3892), (92, 3982), (102, 4015), (131, 4159), (138, 4192), (143, 4228), (146, 4237), (166, 4339), (168, 4357), (175, 4384), (194, 4543), (195, 4546), (201, 4603), (209, 4669), (211, 4681), (221, 4732), (229, 4798), (233, 4819), (236, 4837), (250, 4939), (280, 5080), (287, 5137), (292, 5155), (296, 5176), (306, 5236), (309, 5248), (314, 5275), (317, 5287), (336, 5362), (343, 5392), (351, 5428), (353, 5434), (365, 5488), (384, 5542),

Gene: Newman\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Newman\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Nicole21\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Nicole21\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Nigel\_4 Start: 2375, Stop: 4129, Start Num: 48

Candidate Starts for Nigel\_4:

(26, 2258), (30, 2276), (Start: 48 @2375 has 22 MA's), (76, 2444), (102, 2534), (113, 2573), (114, 2603), (119, 2615), (125, 2651), (129, 2675), (137, 2708), (138, 2714), (143, 2750), (154, 2801), (159, 2831), (175, 2906), (180, 2966), (186, 3023), (194, 3065), (195, 3068), (200, 3122), (211, 3203), (229, 3320), (230, 3323), (242, 3380), (263, 3494), (278, 3581), (282, 3617), (287, 3650), (293, 3680), (296, 3689), (299, 3719), (301, 3725), (302, 3728), (317, 3800), (336, 3875), (348, 3929), (362, 3977), (376, 4034), (378, 4040), (384, 4055), (401, 4106),

Gene: Nubi\_5 Start: 1791, Stop: 3395, Start Num: 82

Candidate Starts for Nubi\_5:

(Start: 82 @1791 has 27 MA's), (94, 1839), (122, 1962), (136, 2034), (145, 2085), (150, 2106), (152, 2124), (167, 2193), (182, 2274), (184, 2289), (187, 2316), (193, 2343), (197, 2376), (200, 2409), (205, 2445), (208, 2454), (249, 2757), (276, 2877), (277, 2883), (283, 2925), (289, 2961), (296, 2994), (297, 3018), (318, 3087), (320, 3096), (324, 3108), (349, 3207), (354, 3225), (364, 3273), (373, 3303), (381, 3321),

Gene: Numberten\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Numberten\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Nyala\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Nyala\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: OSmaximus\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for OSmaximus\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Obutu\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Obutu\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (207, 3512), (209, 3539), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Olak\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Olak\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Oline\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Oline\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266,

1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Olive\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Olive\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: OliverWalter\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for OliverWalter\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Olivio\_5 Start: 2562, Stop: 4322, Start Num: 45

Candidate Starts for Olivio\_5:

(3, 2088), (6, 2121), (8, 2187), (15, 2283), (Start: 38 @2544 has 4 MA's), (Start: 45 @2562 has 27 MA's), (53, 2580), (81, 2661), (129, 2874), (137, 2904), (138, 2910), (141, 2937), (151, 2973), (166, 3057), (182, 3183), (194, 3261), (200, 3318), (204, 3351), (223, 3465), (229, 3519), (250, 3639), (254, 3660), (272, 3756), (283, 3807), (287, 3837), (288, 3840), (301, 3912), (317, 3987), (324, 4014), (326, 4023), (341, 4074), (347, 4107), (351, 4122), (356, 4134), (370, 4194), (383, 4233), (384, 4236), (401, 4287),

Gene: Omniscient\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Omniscient\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Oosterbaan\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Oosterbaan\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Opia\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Opia\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: OrangeOswald\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for OrangeOswald\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (296, 4028), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (365, 4334), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Orfeu\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Orfeu\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Orion\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Orion\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Orwigg\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Orwigg\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: PG1\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for PG1\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: PR\_02 Start: 348, Stop: 1952, Start Num: 78

Candidate Starts for PR\_02:

(Start: 78 @348 has 8 MA's), (101, 426), (105, 438), (136, 594), (138, 603), (146, 648), (153, 687), (154, 690), (169, 771), (182, 876), (194, 954), (197, 978), (198, 990), (223, 1158), (226, 1176), (242, 1263), (244, 1275), (256, 1359), (263, 1380), (266, 1389), (267, 1392), (268, 1398), (273, 1452), (279, 1470), (281, 1476), (283, 1500), (287, 1530), (301, 1605), (313, 1656), (330, 1719), (333, 1731), (357, 1824), (360, 1833), (362, 1839), (364, 1857), (379, 1902), (385, 1923), (386, 1932), (388, 1944), (389, 1947),

Gene: Pacifista\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Pacifista\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194,

1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Paries\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Paries\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (136, 724), (142, 763), (143, 769), (148, 790), (162, 865), (165, 877), (187, 1006), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (260, 1489), (262, 1501), (266, 1513), (284, 1639), (286, 1657), (297, 1723), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (381, 2026),

Gene: PenguinLover67\_8 Start: 4582, Stop: 6324, Start Num: 59

Candidate Starts for PenguinLover67\_8:

(Start: 59 @4582 has 1 MA's), (67, 4606), (74, 4627), (76, 4636), (81, 4654), (102, 4726), (109, 4753), (129, 4867), (136, 4897), (138, 4906), (162, 5038), (168, 5071), (180, 5158), (194, 5257), (195, 5260), (200, 5314), (204, 5347), (209, 5383), (211, 5395), (229, 5512), (267, 5698), (268, 5704), (272, 5755), (279, 5785), (287, 5845), (301, 5920), (310, 5959), (314, 5983), (336, 6070), (348, 6124), (353, 6142), (365, 6196), (370, 6208), (376, 6229), (401, 6304),

Gene: Phaedrus\_5 Start: 2603, Stop: 4363, Start Num: 45

Candidate Starts for Phaedrus\_5:

(3, 2129), (6, 2162), (8, 2228), (15, 2324), (Start: 38 @2585 has 4 MA's), (Start: 45 @2603 has 27 MA's), (53, 2621), (81, 2702), (129, 2915), (137, 2945), (138, 2951), (141, 2978), (151, 3014), (166, 3098), (182, 3224), (194, 3302), (200, 3359), (204, 3392), (223, 3506), (229, 3560), (250, 3680), (254, 3701), (272, 3797), (283, 3848), (287, 3878), (288, 3881), (301, 3953), (317, 4028), (324, 4055), (326, 4064), (341, 4115), (347, 4148), (351, 4163), (356, 4175), (370, 4235), (383, 4274), (384, 4277), (401, 4328),

Gene: Phamished\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Phamished\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Phantasmagoria\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Phantasmagoria\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: Phareon\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Phareon\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: PhatCats2014\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for PhatCats2014\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: PhatLouie\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for PhatLouie\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Phauci\_2 Start: 534, Stop: 2189, Start Num: 88

Candidate Starts for Phauci\_2:

(Start: 88 @534 has 7 MA's), (114, 657), (116, 663), (122, 687), (125, 708), (129, 732), (132, 741), (136, 759), (137, 762), (150, 831), (154, 855), (162, 900), (170, 939), (182, 999), (187, 1041), (188, 1047), (197, 1101), (198, 1113), (200, 1134), (205, 1170), (208, 1179), (217, 1251), (220, 1263), (223, 1284), (225, 1308), (241, 1446), (245, 1473), (282, 1692), (284, 1704), (289, 1731), (295, 1761), (297, 1788), (303, 1806), (320, 1887), (329, 1920), (331, 1923), (338, 1950), (364, 2064), (370, 2082), (373, 2094), (381, 2112), (394, 2163),

Gene: Phayeta\_5 Start: 2562, Stop: 4322, Start Num: 45

Candidate Starts for Phayeta\_5:

(3, 2088), (6, 2121), (8, 2187), (15, 2283), (Start: 38 @2544 has 4 MA's), (Start: 45 @2562 has 27 MA's), (53, 2580), (81, 2661), (129, 2874), (137, 2904), (138, 2910), (141, 2937), (151, 2973), (166, 3057), (182, 3183), (194, 3261), (200, 3318), (204, 3351), (223, 3465), (229, 3519), (250, 3639), (254, 3660), (272, 3756), (283, 3807), (287, 3837), (288, 3840), (301, 3912), (317, 3987), (324, 4014), (326, 4023), (341, 4074), (347, 4107), (351, 4122), (356, 4134), (370, 4194), (383, 4233), (384, 4236), (401, 4287),

Gene: Phelemich\_6 Start: 3862, Stop: 5625, Start Num: 57

Candidate Starts for Phelemich\_6:

(Start: 57 @3862 has 10 MA's), (68, 3892), (92, 3982), (102, 4015), (131, 4159), (138, 4192), (143, 4228), (146, 4237), (166, 4339), (168, 4357), (175, 4384), (194, 4543), (195, 4546), (201, 4603), (209, 4669), (211, 4681), (221, 4732), (229, 4798), (233, 4819), (236, 4837), (250, 4939), (280, 5080), (287, 5137), (292, 5155), (296, 5176), (306, 5236), (309, 5248), (314, 5275), (317, 5287), (336, 5362), (343, 5392), (351, 5428), (353, 5434), (365, 5488), (384, 5542),

Gene: PhenghisKhan\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for PhenghisKhan\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Pherdinand\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Pherdinand\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189,



1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Phergie\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Phergie\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Philly\_5 Start: 2603, Stop: 4363, Start Num: 45

Candidate Starts for Philly\_5:

(3, 2129), (6, 2162), (8, 2228), (15, 2324), (Start: 38 @2585 has 4 MA's), (Start: 45 @2603 has 27 MA's), (53, 2621), (81, 2702), (129, 2915), (137, 2945), (138, 2951), (141, 2978), (151, 3014), (166, 3098), (182, 3224), (194, 3302), (200, 3359), (204, 3392), (223, 3506), (229, 3560), (250, 3680), (254, 3701), (272, 3797), (283, 3848), (287, 3878), (288, 3881), (301, 3953), (314, 4016), (317, 4028), (324, 4055), (326, 4064), (341, 4115), (347, 4148), (351, 4163), (356, 4175), (370, 4235), (383, 4274), (384, 4277), (401, 4328),

Gene: Phinally\_2 Start: 534, Stop: 2189, Start Num: 88

Candidate Starts for Phinally\_2:

(Start: 88 @534 has 7 MA's), (114, 657), (116, 663), (122, 687), (125, 708), (129, 732), (132, 741), (136, 759), (137, 762), (142, 798), (150, 831), (154, 855), (162, 900), (170, 939), (182, 999), (187, 1041), (188, 1047), (197, 1101), (198, 1113), (200, 1134), (205, 1170), (208, 1179), (217, 1251), (220, 1263), (223, 1284), (225, 1308), (241, 1446), (245, 1473), (282, 1692), (289, 1731), (295, 1761), (297, 1788), (301, 1800), (303, 1806), (320, 1887), (329, 1920), (331, 1923), (364, 2064), (370, 2082), (373, 2094), (381, 2112), (394, 2163),

Gene: Phipps\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Phipps\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Phleuron\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Phleuron\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Phlop\_5 Start: 1770, Stop: 3377, Start Num: 82

Candidate Starts for Phlop\_5:

(39, 1671), (Start: 82 @1770 has 27 MA's), (94, 1818), (136, 2016), (142, 2055), (150, 2088), (156, 2127), (157, 2133), (167, 2175), (182, 2256), (187, 2298), (190, 2310), (200, 2391), (205, 2427), (208, 2436), (223, 2541), (245, 2700), (266, 2799), (277, 2865), (283, 2907), (296, 2976), (297, 3000), (318, 3069), (320, 3078), (324, 3090), (346, 3180), (354, 3207), (364, 3255), (381, 3303),

Gene: PhrankReynolds\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for PhrankReynolds\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: PhrodoBaggins\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for PhrodoBaggins\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Phunky\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Phunky\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Piglet\_002 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Piglet\_002:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Pine5\_01 Start: 15, Stop: 1676, Start Num: 62

Candidate Starts for Pine5\_01:

(62, 15), (Start: 79 @75 has 3 MA's), (115, 222), (128, 282), (138, 327), (162, 459), (169, 495), (173, 513), (178, 564), (194, 678), (200, 735), (202, 741), (229, 933), (270, 1161), (279, 1194), (293, 1284), (306, 1353), (336, 1410), (348, 1464), (356, 1488), (358, 1500), (365, 1536), (400, 1647), (404, 1671),

Gene: PinheadLarry\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for PinheadLarry\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: PinkCoffee\_5 Start: 1800, Stop: 3404, Start Num: 82

Candidate Starts for PinkCoffee\_5:

(Start: 82 @1800 has 27 MA's), (94, 1848), (122, 1971), (136, 2043), (145, 2094), (150, 2115), (152, 2133), (167, 2202), (182, 2283), (184, 2298), (187, 2325), (193, 2352), (197, 2385), (200, 2418), (205, 2454), (208, 2463), (277, 2892), (283, 2934), (289, 2970), (296, 3003), (297, 3027), (318, 3096), (320, 3105), (324, 3117), (354, 3234), (363, 3270), (364, 3282), (381, 3330),

Gene: Pinkman\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Pinkman\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Pipsqueak\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Pipsqueak\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Placalicious\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Placalicious\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Plata\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Plata\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Plmatters\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Plmatters\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Podrick\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Podrick\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Pops\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Pops\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266,

1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Portcullis\_5 Start: 1815, Stop: 3422, Start Num: 82

Candidate Starts for Portcullis\_5:

(1, 1137), (5, 1260), (9, 1365), (10, 1368), (14, 1437), (Start: 80 @1809 has 1 MA's), (Start: 82 @1815 has 27 MA's), (94, 1863), (136, 2061), (142, 2100), (150, 2133), (156, 2172), (157, 2178), (167, 2220), (182, 2301), (187, 2343), (190, 2355), (200, 2436), (208, 2481), (223, 2586), (245, 2745), (266, 2844), (277, 2910), (283, 2952), (295, 3018), (296, 3021), (297, 3045), (318, 3114), (320, 3123), (324, 3135), (346, 3225), (354, 3252), (363, 3288), (364, 3300), (373, 3330), (381, 3348),

Gene: Poster\_4 Start: 2364, Stop: 4109, Start Num: 43

Candidate Starts for Poster\_4:

(Start: 43 @2364 has 2 MA's), (76, 2424), (102, 2514), (113, 2553), (114, 2583), (119, 2595), (125, 2631), (129, 2655), (137, 2688), (138, 2694), (143, 2730), (159, 2811), (175, 2886), (180, 2946), (186, 3003), (194, 3045), (195, 3048), (200, 3102), (209, 3171), (211, 3183), (213, 3201), (229, 3300), (230, 3303), (242, 3360), (255, 3450), (263, 3474), (266, 3483), (272, 3543), (282, 3597), (287, 3630), (293, 3660), (296, 3669), (299, 3699), (301, 3705), (302, 3708), (317, 3780), (336, 3855), (348, 3909), (353, 3927), (362, 3957), (376, 4014), (378, 4020), (384, 4035), (401, 4086),

Gene: Potter\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Potter\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Prickles\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Prickles\_2:

(22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (299, 1914), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Prince\_5 Start: 3458, Stop: 5206, Start Num: 48

Candidate Starts for Prince\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (147, 3836), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (209, 4265), (229, 4394), (242, 4454), (255, 4544), (263, 4568), (266, 4577), (272, 4637), (279, 4664), (282, 4691), (287, 4724), (293, 4754), (296, 4763), (299, 4793), (301, 4799), (302, 4802), (310, 4838), (317, 4874), (336, 4949), (348, 5003), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: PrinceCharming\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for PrinceCharming\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: ProfessorX\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for ProfessorX\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Puhltonio\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Puhltonio\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: PullumCavea\_5 Start: 1770, Stop: 3377, Start Num: 82

Candidate Starts for PullumCavea\_5:

(39, 1671), (Start: 82 @1770 has 27 MA's), (94, 1818), (136, 2016), (142, 2055), (150, 2088), (156, 2127), (157, 2133), (167, 2175), (182, 2256), (187, 2298), (190, 2310), (200, 2391), (205, 2427), (208, 2436), (223, 2541), (245, 2700), (266, 2799), (277, 2865), (283, 2907), (296, 2976), (297, 3000), (318, 3069), (320, 3078), (324, 3090), (346, 3180), (354, 3207), (364, 3255), (381, 3303),

Gene: QueenBeane\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for QueenBeane\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Quesadilla\_8 Start: 4606, Stop: 6360, Start Num: 50

Candidate Starts for Quesadilla\_8:

(Start: 50 @4606 has 2 MA's), (67, 4642), (76, 4672), (81, 4690), (102, 4762), (109, 4789), (129, 4903), (136, 4933), (138, 4942), (162, 5074), (174, 5131), (180, 5194), (194, 5293), (195, 5296), (204, 5383), (211, 5431), (229, 5548), (263, 5722), (272, 5791), (301, 5956), (310, 5995), (336, 6106), (343, 6136), (348, 6160), (351, 6172), (353, 6178), (365, 6232), (376, 6265), (401, 6340),

Gene: Quisquilliae\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Quisquilliae\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Qyrzula\_7 Start: 4314, Stop: 6014, Start Num: 71

Candidate Starts for Qyrzula\_7:

(Start: 71 @4314 has 6 MA's), (Start: 73 @4320 has 28 MA's), (118, 4500), (133, 4581), (141, 4632), (143, 4641), (148, 4662), (168, 4770), (171, 4782), (194, 4956), (198, 4992), (199, 5004), (200, 5013), (211, 5094), (229, 5211), (230, 5214), (245, 5289), (248, 5325), (263, 5382), (283, 5502), (287, 5532), (292, 5550), (296, 5571), (299, 5601), (301, 5607), (310, 5646), (317, 5682), (324, 5709), (336, 5751), (348, 5805), (353, 5823), (365, 5877), (387, 5949),

Gene: RagingRooster\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for RagingRooster\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (296, 4028), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: RawrgerThat\_5 Start: 3455, Stop: 5203, Start Num: 48

Candidate Starts for RawrgerThat\_5:

(Start: 48 @3455 has 22 MA's), (102, 3605), (113, 3644), (114, 3674), (119, 3686), (125, 3722), (137, 3779), (138, 3785), (147, 3833), (159, 3902), (175, 3977), (180, 4037), (186, 4094), (194, 4136), (195, 4139), (200, 4193), (211, 4274), (214, 4295), (229, 4391), (242, 4451), (263, 4565), (266, 4574), (272, 4634), (279, 4661), (282, 4688), (287, 4721), (293, 4751), (296, 4760), (299, 4790), (301, 4796), (302, 4799), (310, 4835), (317, 4871), (336, 4946), (348, 5000), (353, 5018), (362, 5048), (365, 5072), (376, 5105), (378, 5111), (384, 5126), (401, 5177),

Gene: RedMaple\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for RedMaple\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Reprobate\_6 Start: 3859, Stop: 5622, Start Num: 57

Candidate Starts for Reprobate\_6:

(Start: 57 @3859 has 10 MA's), (68, 3889), (92, 3979), (102, 4012), (131, 4156), (138, 4189), (143, 4225), (146, 4234), (166, 4336), (168, 4354), (175, 4381), (194, 4540), (195, 4543), (201, 4600), (209, 4666), (211, 4678), (221, 4729), (229, 4795), (233, 4816), (236, 4834), (250, 4936), (280, 5077), (287, 5134), (292, 5152), (296, 5173), (306, 5233), (309, 5245), (314, 5272), (317, 5284), (336, 5359), (343, 5389), (351, 5425), (353, 5431), (365, 5485), (384, 5539),

Gene: Rhinoforte\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for Rhinoforte\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (113, 4485), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: Ribeye\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Ribeye\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (207, 1139), (208, 1142), (220, 1226), (223, 1247), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: Rich\_6 Start: 3584, Stop: 5350, Start Num: 57

Candidate Starts for Rich\_6:

(16, 3350), (17, 3359), (19, 3371), (28, 3443), (42, 3548), (Start: 57 @3584 has 10 MA's), (68, 3611), (97, 3725), (102, 3734), (138, 3911), (164, 4052), (171, 4088), (173, 4097), (194, 4262), (195, 4265), (201, 4322), (202, 4325), (203, 4334), (209, 4388), (211, 4400), (229, 4517), (233, 4538), (255, 4682), (292, 4874), (296, 4895), (306, 4955), (309, 4967), (314, 4994), (320, 5021), (336, 5081), (343, 5111), (347, 5132), (351, 5147), (353, 5153), (365, 5207), (384, 5261),

Gene: Ricotta\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Ricotta\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Riggan\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Riggan\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Rimu\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Rimu\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Rinke\_9 Start: 5506, Stop: 7278, Start Num: 44

Candidate Starts for Rinke\_9:

(25, 5377), (Start: 44 @5506 has 2 MA's), (76, 5593), (81, 5611), (102, 5683), (105, 5695), (117, 5761), (129, 5824), (138, 5863), (143, 5899), (154, 5950), (159, 5980), (164, 6004), (168, 6028), (178, 6100), (180, 6115), (186, 6172), (189, 6187), (194, 6214), (198, 6250), (229, 6469), (230, 6472), (239, 6514), (242, 6529), (266, 6652), (268, 6661), (279, 6742), (296, 6841), (301, 6877), (302, 6880), (310, 6916), (316, 6943), (318, 6958), (336, 7027), (343, 7057), (351, 7093), (353, 7099), (358, 7117), (365, 7153), (375, 7183), (376, 7186), (384, 7207), (385, 7213), (401, 7258),

Gene: Rita130\_6 Start: 3581, Stop: 5347, Start Num: 57

Candidate Starts for Rita130\_6:

(16, 3347), (17, 3356), (19, 3368), (28, 3440), (42, 3545), (Start: 57 @3581 has 10 MA's), (65, 3602), (68, 3608), (97, 3722), (102, 3731), (138, 3908), (163, 4046), (164, 4049), (168, 4073), (171, 4085), (175, 4100), (194, 4259), (195, 4262), (201, 4319), (202, 4322), (203, 4331), (209, 4385), (211, 4397), (229, 4514), (233, 4535), (255, 4679), (292, 4871), (296, 4892), (306, 4952), (309, 4964), (314, 4991), (320, 5018), (336, 5078), (343, 5108), (347, 5129), (351, 5144), (353, 5150), (365, 5204), (384, 5258),

Gene: Rita1961\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Rita1961\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326,

4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: RiverRaider\_2 Start: 511, Stop: 2103, Start Num: 91

Candidate Starts for RiverRaider\_2:

(Start: 91 @511 has 34 MA's), (93, 517), (122, 649), (125, 670), (135, 718), (136, 721), (139, 742), (142, 760), (143, 766), (162, 862), (170, 901), (187, 1003), (196, 1057), (200, 1096), (205, 1132), (207, 1138), (208, 1141), (223, 1246), (241, 1378), (245, 1405), (247, 1417), (248, 1441), (265, 1507), (281, 1603), (282, 1624), (286, 1654), (289, 1663), (295, 1693), (297, 1720), (298, 1723), (300, 1729), (324, 1810), (327, 1822), (329, 1831), (338, 1861), (342, 1876), (364, 1975), (370, 1993),

Gene: Riverton\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Riverton\_2:

(22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: RoadKill\_2 Start: 558, Stop: 2156, Start Num: 84

Candidate Starts for RoadKill\_2:

(Start: 84 @558 has 7 MA's), (108, 642), (116, 690), (122, 714), (125, 735), (129, 759), (136, 786), (142, 825), (150, 858), (152, 876), (154, 882), (164, 936), (165, 939), (182, 1026), (187, 1068), (196, 1122), (198, 1140), (200, 1161), (208, 1206), (217, 1278), (220, 1290), (223, 1311), (231, 1386), (241, 1443), (243, 1452), (245, 1470), (247, 1482), (266, 1569), (282, 1683), (289, 1722), (297, 1779), (320, 1857), (364, 2034), (370, 2052), (382, 2085),

Gene: Robyn\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Robyn\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: RogerDodger\_5 Start: 1815, Stop: 3422, Start Num: 82

Candidate Starts for RogerDodger\_5:

(1, 1137), (5, 1260), (9, 1365), (10, 1368), (14, 1437), (Start: 80 @1809 has 1 MA's), (Start: 82 @1815 has 27 MA's), (94, 1863), (136, 2061), (142, 2100), (150, 2133), (156, 2172), (157, 2178), (167, 2220), (182, 2301), (187, 2343), (190, 2355), (200, 2436), (208, 2481), (223, 2586), (245, 2745), (247, 2757), (266, 2844), (277, 2910), (283, 2952), (296, 3021), (297, 3045), (318, 3114), (320, 3123), (324, 3135), (346, 3225), (354, 3252), (363, 3288), (364, 3300), (373, 3330), (381, 3348),

Gene: Roliet\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Roliet\_2:

(22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (299, 1914), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Roscoe\_3 Start: 797, Stop: 2584, Start Num: 56

Candidate Starts for Roscoe\_3:



(Start: 56 @797 has 267 MA's), (102, 956), (113, 995), (129, 1097), (138, 1136), (143, 1172), (162, 1268), (168, 1301), (180, 1388), (183, 1412), (186, 1445), (189, 1460), (194, 1487), (195, 1490), (200, 1544), (206, 1583), (211, 1625), (229, 1742), (230, 1745), (266, 1928), (272, 1988), (280, 2021), (293, 2108), (302, 2156), (336, 2303), (341, 2321), (365, 2429), (371, 2447), (380, 2471), (384, 2483), (401, 2561),

Gene: Rosebush\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for Rosebush\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: Roy17\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Roy17\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: SDcharge11\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for SDcharge11\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Sabella\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Sabella\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: Saguaro\_8 Start: 4765, Stop: 6495, Start Num: 61

Candidate Starts for Saguaro\_8:

(Start: 61 @4765 has 2 MA's), (64, 4774), (67, 4780), (74, 4801), (76, 4810), (102, 4900), (109, 4927), (122, 4996), (129, 5041), (138, 5080), (143, 5116), (162, 5212), (168, 5245), (180, 5332), (194, 5431), (195, 5434), (200, 5488), (209, 5557), (211, 5569), (229, 5686), (238, 5728), (258, 5842), (263, 5860), (268, 5878), (272, 5929), (281, 5965), (287, 6019), (296, 6058), (302, 6097), (320, 6184), (336, 6244), (348, 6298), (353, 6316), (365, 6370), (376, 6403), (401, 6475),

Gene: Salvador\_5 Start: 1653, Stop: 3257, Start Num: 82

Candidate Starts for Salvador\_5:

(4, 1077), (13, 1248), (18, 1350), (21, 1365), (24, 1392), (77, 1635), (Start: 82 @1653 has 27 MA's), (94, 1701), (122, 1824), (136, 1896), (145, 1947), (150, 1968), (152, 1986), (167, 2055), (182, 2136), (184, 2151), (187, 2178), (193, 2205), (197, 2238), (200, 2271), (205, 2307), (208, 2316), (248, 2616), (276, 2739), (277, 2745), (283, 2787), (289, 2823), (296, 2856), (297, 2880), (318, 2949), (320, 2958), (324, 2970), (354, 3087), (364, 3135), (381, 3183),

Gene: Samaymay\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Samaymay\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Sanjuju\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Sanjuju\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (122, 652), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (162, 865), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (284, 1639), (286, 1657), (297, 1723), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (370, 1996), (381, 2026), (397, 2086),

Gene: Saronaya\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Saronaya\_2:

(Start: 91 @512 has 34 MA's), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (208, 1142), (220, 1226), (223, 1247), (224, 1262), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: SassyCat97\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for SassyCat97\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Savbucketdawg\_5 Start: 1785, Stop: 3392, Start Num: 82

Candidate Starts for Savbucketdawg\_5:

(Start: 82 @1785 has 27 MA's), (94, 1833), (136, 2031), (142, 2070), (150, 2103), (156, 2142), (157, 2148), (167, 2190), (182, 2271), (187, 2313), (190, 2325), (200, 2406), (205, 2442), (208, 2451), (223, 2556), (245, 2715), (266, 2814), (277, 2880), (283, 2922), (295, 2988), (296, 2991), (297, 3015), (318, 3084), (320, 3093), (324, 3105), (354, 3222), (364, 3270), (381, 3318),

Gene: Schadenfreude\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Schadenfreude\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: SchottB\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for SchottB\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (142, 761), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (207, 1139), (208, 1142), (220, 1226), (223, 1247), (241, 1379), (245, 1406),

(247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (370, 1994),

Gene: Schueller\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Schueller\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Scoot17C\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Scoot17C\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Scrick\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Scrick\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Sejanus\_2 Start: 207, Stop: 1727, Start Num: 95

Candidate Starts for Sejanus\_2:

(Start: 95 @207 has 4 MA's), (103, 222), (106, 234), (123, 318), (129, 363), (136, 390), (148, 453), (149, 456), (155, 486), (162, 528), (166, 540), (181, 630), (189, 681), (192, 696), (201, 768), (206, 804), (207, 807), (208, 810), (211, 846), (212, 849), (223, 894), (227, 921), (228, 939), (229, 945), (230, 948), (231, 957), (240, 987), (245, 1023), (246, 1029), (247, 1035), (249, 1062), (253, 1077), (255, 1092), (263, 1116), (266, 1125), (267, 1128), (271, 1176), (277, 1203), (281, 1212), (283, 1236), (287, 1266), (292, 1284), (296, 1305), (301, 1341), (302, 1344), (304, 1356), (307, 1368), (312, 1401), (321, 1434), (325, 1446), (330, 1464), (333, 1476), (335, 1482), (339, 1497), (357, 1569), (360, 1578), (361, 1581), (364, 1602), (390, 1677), (393, 1689), (396, 1698),

Gene: Selr12\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Selr12\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Serendipitous\_6 Start: 3647, Stop: 5404, Start Num: 57

Candidate Starts for Serendipitous\_6:

(16, 3413), (17, 3422), (19, 3434), (28, 3506), (Start: 57 @3647 has 10 MA's), (65, 3668), (68, 3674), (97, 3788), (102, 3797), (138, 3974), (164, 4115), (168, 4139), (171, 4151), (173, 4160), (175, 4166), (194, 4325), (195, 4328), (201, 4385), (202, 4388), (209, 4451), (211, 4463), (214, 4484), (229, 4580), (233, 4601), (234, 4607), (255, 4745), (292, 4937), (296, 4958), (306, 5018), (309, 5030), (314, 5057), (320, 5084), (336, 5144), (343, 5174), (347, 5195), (351, 5210), (353, 5216), (365, 5270), (384, 5324),

Gene: Serendipity\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Serendipity\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Serpentine\_002 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Serpentine\_002:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Shatter\_4 Start: 2439, Stop: 4172, Start Num: 49

Candidate Starts for Shatter\_4:

(Start: 49 @2439 has 9 MA's), (90, 2550), (105, 2607), (118, 2676), (120, 2679), (136, 2763), (138, 2772), (143, 2808), (147, 2820), (199, 3171), (202, 3186), (229, 3378), (238, 3420), (248, 3498), (263, 3552), (266, 3561), (272, 3621), (279, 3642), (280, 3645), (287, 3702), (301, 3777), (348, 3972), (351, 3984), (353, 3990), (356, 3996), (358, 4008), (361, 4017), (368, 4053), (393, 4131), (401, 4149),

Gene: Sheila\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Sheila\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Shenandoah\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Shenandoah\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (207, 3512), (209, 3539), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (365, 4334), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Shenyu\_6 Start: 3572, Stop: 5338, Start Num: 57

Candidate Starts for Shenyu\_6:

(16, 3338), (17, 3347), (19, 3359), (28, 3431), (42, 3536), (Start: 57 @3572 has 10 MA's), (68, 3599), (97, 3713), (102, 3722), (138, 3899), (163, 4037), (164, 4040), (168, 4064), (171, 4076), (175, 4091), (188, 4220), (194, 4250), (195, 4253), (201, 4310), (202, 4313), (203, 4322), (209, 4376), (211, 4388), (229, 4505), (233, 4526), (255, 4670), (292, 4862), (296, 4883), (306, 4943), (309, 4955), (320, 5009), (336, 5069), (343, 5099), (347, 5120), (351, 5135), (353, 5141), (365, 5195), (384, 5249),

Gene: ShiVal\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for ShiVal\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194,

1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Shinji\_5 Start: 1791, Stop: 3395, Start Num: 82

Candidate Starts for Shinji\_5:

(Start: 82 @1791 has 27 MA's), (94, 1839), (122, 1962), (136, 2034), (145, 2085), (150, 2106), (152, 2124), (167, 2193), (182, 2274), (184, 2289), (187, 2316), (193, 2343), (197, 2376), (200, 2409), (205, 2445), (208, 2454), (249, 2757), (276, 2877), (277, 2883), (283, 2925), (289, 2961), (296, 2994), (297, 3018), (318, 3087), (320, 3096), (324, 3108), (349, 3207), (354, 3225), (364, 3273), (373, 3303), (381, 3321),

Gene: Shivanishola\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Shivanishola\_2:

(Start: 91 @514 has 34 MA's), (122, 652), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (284, 1639), (286, 1657), (297, 1723), (300, 1732), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (370, 1996),

Gene: Sigman\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Sigman\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: SilverBell\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for SilverBell\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Simielle\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Simielle\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: SirBeauregard\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for SirBeauregard\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: SirJeffery\_6 Start: 3581, Stop: 5347, Start Num: 57

Candidate Starts for SirJeffery\_6:

(16, 3347), (17, 3356), (19, 3368), (28, 3440), (42, 3545), (Start: 57 @3581 has 10 MA's), (65, 3602), (68, 3608), (97, 3722), (102, 3731), (138, 3908), (163, 4046), (164, 4049), (168, 4073), (171, 4085), (175, 4100), (194, 4259), (195, 4262), (201, 4319), (202, 4322), (203, 4331), (209, 4385), (211, 4397), (229, 4514), (233, 4535), (255, 4679), (292, 4871), (296, 4892), (306, 4952), (309, 4964), (314, 4991), (320, 5018), (336, 5078), (343, 5108), (347, 5129), (351, 5144), (353, 5150), (365, 5204), (384, 5258),

Gene: Sisko\_4 Start: 2448, Stop: 4187, Start Num: 49

Candidate Starts for Sisko\_4:

(Start: 49 @2448 has 9 MA's), (105, 2625), (118, 2694), (136, 2781), (138, 2790), (143, 2826), (147, 2838), (180, 3042), (199, 3189), (202, 3204), (222, 3336), (229, 3396), (238, 3438), (248, 3516), (258, 3555), (263, 3567), (267, 3579), (280, 3660), (282, 3684), (287, 3717), (301, 3792), (305, 3810), (343, 3963), (351, 3999), (361, 4032), (365, 4059), (368, 4068), (385, 4119),

Gene: Sitar\_2 Start: 515, Stop: 2107, Start Num: 91

Candidate Starts for Sitar\_2:

(Start: 91 @515 has 34 MA's), (93, 521), (114, 623), (122, 653), (125, 674), (130, 701), (136, 725), (142, 764), (143, 770), (148, 791), (157, 842), (162, 866), (165, 878), (187, 1007), (198, 1079), (200, 1100), (205, 1136), (208, 1145), (220, 1229), (223, 1250), (241, 1382), (245, 1409), (247, 1421), (284, 1640), (286, 1658), (297, 1724), (300, 1733), (321, 1805), (327, 1826), (329, 1835), (338, 1865), (342, 1880), (364, 1979), (370, 1997), (381, 2027), (397, 2087),

Gene: Skippy\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Skippy\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Slatt\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Slatt\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: SmokingBunny\_5 Start: 1653, Stop: 3257, Start Num: 82

Candidate Starts for SmokingBunny\_5:

(4, 1077), (13, 1248), (18, 1350), (21, 1365), (24, 1392), (77, 1635), (Start: 82 @1653 has 27 MA's), (94, 1701), (122, 1824), (136, 1896), (145, 1947), (150, 1968), (152, 1986), (167, 2055), (182, 2136), (184, 2151), (187, 2178), (193, 2205), (197, 2238), (200, 2271), (205, 2307), (208, 2316), (248, 2616), (276, 2739), (277, 2745), (283, 2787), (289, 2823), (296, 2856), (297, 2880), (318, 2949), (320, 2958), (324, 2970), (354, 3087), (364, 3135), (381, 3183),

Gene: Soile\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Soile\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Solosis\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Solosis\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Soos\_2 Start: 1099, Stop: 2844, Start Num: 79

Candidate Starts for Soos\_2:

(69, 1063), (Start: 79 @1099 has 3 MA's), (Start: 83 @1108 has 1 MA's), (86, 1111), (92, 1138), (101, 1171), (135, 1336), (136, 1339), (138, 1348), (142, 1378), (169, 1516), (173, 1534), (191, 1678), (194, 1699), (198, 1735), (204, 1789), (221, 1894), (229, 1960), (230, 1963), (244, 2026), (247, 2050), (267, 2140), (279, 2218), (280, 2221), (283, 2248), (287, 2278), (292, 2296), (301, 2353), (315, 2419), (350, 2566), (385, 2689), (387, 2701), (391, 2722), (396, 2746), (402, 2773), (405, 2809), (407, 2821),

Gene: Sophia\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Sophia\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Soto\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Soto\_2:

(22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (299, 1914), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Sour\_8 Start: 4287, Stop: 6029, Start Num: 46

Candidate Starts for Sour\_8:

(Start: 46 @4287 has 2 MA's), (Start: 83 @4386 has 1 MA's), (105, 4464), (118, 4533), (136, 4620), (138, 4629), (143, 4665), (147, 4677), (180, 4881), (185, 4929), (196, 4998), (199, 5028), (202, 5043), (229, 5235), (238, 5277), (248, 5355), (272, 5478), (279, 5499), (301, 5634), (326, 5742), (347, 5826), (353, 5847), (358, 5865), (365, 5901), (370, 5913), (387, 5973), (401, 6006),

Gene: Spartan300\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Spartan300\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Squid\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Squid\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

2238), (384, 2250), (401, 2328),

Gene: Squiggle\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Squiggle\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: StAugustine\_10 Start: 6095, Stop: 7816, Start Num: 70

Candidate Starts for StAugustine\_10:

(Start: 70 @6095 has 1 MA's), (102, 6206), (136, 6374), (138, 6383), (162, 6515), (171, 6560), (180, 6635), (189, 6707), (194, 6734), (199, 6782), (223, 6938), (229, 6989), (256, 7127), (292, 7316), (296, 7337), (301, 7373), (310, 7412), (324, 7475), (376, 7682),

Gene: Sting\_2 Start: 1096, Stop: 2841, Start Num: 79

Candidate Starts for Sting\_2:

(Start: 79 @1096 has 3 MA's), (Start: 83 @1105 has 1 MA's), (86, 1108), (92, 1135), (101, 1168), (135, 1333), (136, 1336), (138, 1345), (142, 1375), (169, 1513), (173, 1531), (191, 1675), (194, 1696), (204, 1786), (221, 1891), (229, 1957), (244, 2023), (247, 2047), (267, 2137), (279, 2215), (280, 2218), (283, 2245), (287, 2275), (292, 2293), (301, 2350), (315, 2416), (385, 2686), (387, 2698), (391, 2719), (396, 2743), (402, 2770), (405, 2806), (407, 2818), (408, 2821),

Gene: Stinger\_4 Start: 2363, Stop: 4120, Start Num: 46

Candidate Starts for Stinger\_4:

(35, 2324), (Start: 46 @2363 has 2 MA's), (Start: 48 @2369 has 22 MA's), (102, 2525), (103, 2528), (113, 2564), (114, 2594), (119, 2606), (125, 2642), (129, 2666), (137, 2699), (138, 2705), (143, 2741), (154, 2792), (159, 2822), (180, 2957), (186, 3014), (194, 3056), (195, 3059), (198, 3092), (200, 3113), (211, 3194), (214, 3215), (229, 3311), (230, 3314), (242, 3371), (255, 3461), (263, 3485), (266, 3494), (278, 3572), (279, 3581), (282, 3608), (287, 3641), (288, 3644), (293, 3671), (296, 3680), (299, 3710), (301, 3716), (302, 3719), (317, 3791), (336, 3866), (348, 3920), (362, 3968), (376, 4025), (378, 4031), (384, 4046), (401, 4097),

Gene: StinkyVeggy\_6 Start: 3572, Stop: 5335, Start Num: 57

Candidate Starts for StinkyVeggy\_6:

(17, 3347), (19, 3359), (28, 3431), (42, 3536), (Start: 57 @3572 has 10 MA's), (68, 3599), (97, 3713), (102, 3722), (138, 3899), (163, 4037), (164, 4040), (168, 4064), (171, 4076), (175, 4091), (194, 4250), (195, 4253), (201, 4310), (202, 4313), (203, 4322), (209, 4376), (211, 4388), (229, 4505), (233, 4526), (255, 4670), (292, 4862), (296, 4883), (306, 4943), (309, 4955), (320, 5009), (340, 5084), (341, 5087), (343, 5099), (347, 5120), (351, 5135), (353, 5141), (365, 5195), (384, 5249),

Gene: StorminNorm\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for StorminNorm\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (208, 1142), (220, 1226), (223, 1247), (224, 1262), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: Struggle\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Struggle\_2:



(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Stultus\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Stultus\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (162, 865), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (284, 1639), (286, 1657), (297, 1723), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (381, 2026), (397, 2086),

Gene: Suffolk\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Suffolk\_2:

(22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Suigeneris\_6 Start: 3581, Stop: 5347, Start Num: 57

Candidate Starts for Suigeneris\_6:

(16, 3347), (17, 3356), (19, 3368), (28, 3440), (42, 3545), (Start: 57 @3581 has 10 MA's), (65, 3602), (68, 3608), (97, 3722), (102, 3731), (138, 3908), (163, 4046), (164, 4049), (168, 4073), (171, 4085), (175, 4100), (194, 4259), (195, 4262), (201, 4319), (202, 4322), (203, 4331), (209, 4385), (211, 4397), (229, 4514), (233, 4535), (255, 4679), (292, 4871), (296, 4892), (306, 4952), (309, 4964), (314, 4991), (320, 5018), (336, 5078), (343, 5108), (347, 5129), (351, 5144), (353, 5150), (365, 5204), (384, 5258),

Gene: Surely\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Surely\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: SwainyDoc\_6 Start: 2714, Stop: 4471, Start Num: 45

Candidate Starts for SwainyDoc\_6:

(Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2810), (129, 3023), (137, 3053), (138, 3059), (141, 3086), (151, 3122), (166, 3206), (182, 3332), (194, 3410), (200, 3467), (204, 3500), (223, 3614), (229, 3668), (250, 3788), (254, 3809), (272, 3905), (283, 3956), (287, 3986), (288, 3989), (301, 4061), (317, 4136), (324, 4163), (326, 4172), (341, 4223), (347, 4256), (351, 4271), (356, 4283), (370, 4343), (383, 4382), (384, 4385), (401, 4436),

Gene: Swiphy\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Swiphy\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Swish\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Swish\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: SynergyX\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for SynergyX\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (296, 4028), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: TA17A\_7 Start: 4224, Stop: 5924, Start Num: 71

Candidate Starts for TA17A\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (103, 4332), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923), (211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: TPA2\_09 Start: 3353, Stop: 5014, Start Num: 89

Candidate Starts for TPA2\_09:

(89, 3353), (92, 3368), (96, 3392), (102, 3404), (138, 3584), (147, 3632), (151, 3647), (154, 3671), (160, 3710), (178, 3821), (183, 3860), (189, 3908), (201, 3995), (205, 4028), (206, 4031), (210, 4070), (212, 4076), (229, 4190), (245, 4274), (255, 4343), (264, 4376), (266, 4382), (279, 4463), (283, 4493), (296, 4562), (337, 4751), (343, 4778), (345, 4793), (355, 4823), (365, 4874), (370, 4886), (399, 4982),

Gene: TallGrassMM\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for TallGrassMM\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Tangerine\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Tangerine\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (157, 839), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (208, 1142), (220, 1226), (223, 1247), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: Taptic\_2 Start: 348, Stop: 1952, Start Num: 78

Candidate Starts for Taptic\_2:

(Start: 78 @348 has 8 MA's), (101, 426), (103, 429), (105, 438), (136, 594), (138, 603), (146, 648), (153, 687), (154, 690), (169, 771), (182, 876), (194, 954), (197, 978), (198, 990), (223, 1158), (226, 1176), (242, 1263), (244, 1275), (256, 1359), (263, 1380), (266, 1389), (267, 1392), (268, 1398), (273,

1452), (279, 1470), (281, 1476), (283, 1500), (287, 1530), (301, 1605), (313, 1656), (330, 1719), (333, 1731), (357, 1824), (360, 1833), (362, 1839), (364, 1857), (379, 1902), (385, 1923), (386, 1932), (388, 1944), (389, 1947),

Gene: Tardus\_2 Start: 491, Stop: 2155, Start Num: 85

Candidate Starts for Tardus\_2:

(Start: 85 @491 has 2 MA's), (94, 530), (107, 581), (125, 677), (129, 701), (136, 728), (142, 767), (154, 824), (162, 869), (170, 908), (182, 968), (187, 1010), (197, 1070), (198, 1082), (200, 1103), (205, 1139), (208, 1148), (217, 1220), (220, 1232), (223, 1253), (232, 1334), (241, 1415), (245, 1442), (266, 1541), (282, 1655), (286, 1685), (293, 1718), (295, 1724), (297, 1751), (306, 1787), (314, 1826), (321, 1856), (324, 1865), (329, 1886), (331, 1889), (354, 1982), (364, 2030), (370, 2048),

Gene: Telesworld\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Telesworld\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Thing3\_2 Start: 514, Stop: 2106, Start Num: 91

Candidate Starts for Thing3\_2:

(Start: 91 @514 has 34 MA's), (93, 520), (125, 673), (136, 724), (142, 763), (143, 769), (148, 790), (157, 841), (162, 865), (165, 877), (187, 1006), (196, 1060), (198, 1078), (200, 1099), (205, 1135), (208, 1144), (220, 1228), (223, 1249), (241, 1381), (245, 1408), (247, 1420), (260, 1489), (266, 1513), (284, 1639), (286, 1657), (297, 1723), (300, 1732), (321, 1804), (327, 1825), (329, 1834), (338, 1864), (342, 1879), (364, 1978), (381, 2026),

Gene: Thonko\_1 Start: 1, Stop: 1770, Start Num: 43

Candidate Starts for Thonko\_1:

(Start: 43 @1 has 2 MA's), (67, 61), (69, 67), (102, 187), (129, 328), (136, 358), (138, 367), (182, 640), (194, 718), (201, 778), (203, 790), (211, 856), (216, 889), (229, 973), (259, 1132), (283, 1267), (291, 1312), (292, 1315), (301, 1372), (306, 1396), (323, 1471), (336, 1516), (353, 1588), (365, 1642), (392, 1732), (401, 1750),

Gene: Thora\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Thora\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: ThreeOh3D2\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for ThreeOh3D2\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Thunderbird\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Thunderbird\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Tiamoceli\_2 Start: 558, Stop: 2156, Start Num: 84

Candidate Starts for Tiamoceli\_2:

(Start: 84 @558 has 7 MA's), (108, 642), (116, 690), (122, 714), (125, 735), (129, 759), (136, 786), (142, 825), (150, 858), (152, 876), (154, 882), (164, 936), (165, 939), (182, 1026), (187, 1068), (196, 1122), (198, 1140), (200, 1161), (208, 1206), (217, 1278), (220, 1290), (223, 1311), (231, 1386), (241, 1443), (243, 1452), (245, 1470), (247, 1482), (266, 1569), (282, 1683), (289, 1722), (297, 1779), (320, 1857), (364, 2034), (370, 2052), (382, 2085),

Gene: TillyBobJoe\_5 Start: 1788, Stop: 3395, Start Num: 82

Candidate Starts for TillyBobJoe\_5:

(Start: 82 @1788 has 27 MA's), (94, 1836), (136, 2034), (142, 2073), (150, 2106), (156, 2145), (157, 2151), (167, 2193), (182, 2274), (187, 2316), (190, 2328), (200, 2409), (205, 2445), (208, 2454), (223, 2559), (245, 2718), (266, 2817), (277, 2883), (283, 2925), (295, 2991), (296, 2994), (297, 3018), (318, 3087), (320, 3096), (324, 3108), (354, 3225), (364, 3273), (381, 3321),

Gene: Timmi\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Timmi\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Tinciduntolum\_8 Start: 4340, Stop: 6040, Start Num: 71

Candidate Starts for Tinciduntolum\_8:

(Start: 71 @4340 has 6 MA's), (Start: 73 @4346 has 28 MA's), (118, 4526), (133, 4607), (141, 4658), (143, 4667), (148, 4688), (168, 4796), (171, 4808), (194, 4982), (198, 5018), (199, 5030), (200, 5039), (211, 5120), (229, 5237), (230, 5240), (245, 5315), (248, 5351), (263, 5408), (283, 5528), (287, 5558), (292, 5576), (296, 5597), (299, 5627), (301, 5633), (310, 5672), (317, 5708), (324, 5735), (336, 5777), (348, 5831), (353, 5849), (365, 5903), (387, 5975),

Gene: TinyTerror\_6 Start: 2717, Stop: 4477, Start Num: 45

Candidate Starts for TinyTerror\_6:

(3, 2243), (6, 2276), (8, 2342), (15, 2438), (Start: 38 @2699 has 4 MA's), (Start: 45 @2717 has 27 MA's), (53, 2735), (81, 2816), (129, 3029), (137, 3059), (138, 3065), (141, 3092), (151, 3128), (166, 3212), (182, 3338), (194, 3416), (200, 3473), (204, 3506), (223, 3620), (229, 3674), (250, 3794), (254, 3815), (272, 3911), (283, 3962), (287, 3992), (288, 3995), (301, 4067), (317, 4142), (324, 4169), (326, 4178), (341, 4229), (347, 4262), (351, 4277), (356, 4289), (370, 4349), (383, 4388), (384, 4391), (401, 4442),

Gene: Togo\_5 Start: 1653, Stop: 3257, Start Num: 82

Candidate Starts for Togo\_5:

(4, 1077), (13, 1248), (18, 1350), (21, 1365), (24, 1392), (77, 1635), (Start: 82 @1653 has 27 MA's), (94, 1701), (122, 1824), (136, 1896), (145, 1947), (150, 1968), (152, 1986), (167, 2055), (182, 2136), (184, 2151), (187, 2178), (193, 2205), (197, 2238), (200, 2271), (205, 2307), (208, 2316), (248, 2616), (276, 2739), (277, 2745), (283, 2787), (289, 2823), (296, 2856), (297, 2880), (318, 2949), (320, 2958), (324, 2970), (354, 3087), (364, 3135), (381, 3183),

Gene: TomBombadil\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for TomBombadil\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Tomlarah\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Tomlarah\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Toni\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Toni\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Tonitrus\_13 Start: 6376, Stop: 8133, Start Num: 83

Candidate Starts for Tonitrus\_13:

(Start: 83 @6376 has 1 MA's), (112, 6484), (122, 6541), (128, 6577), (138, 6622), (142, 6652), (147, 6670), (152, 6703), (155, 6712), (177, 6832), (182, 6895), (193, 6964), (194, 6973), (197, 6997), (198, 7009), (204, 7063), (209, 7099), (221, 7159), (230, 7231), (263, 7399), (267, 7408), (271, 7456), (277, 7483), (283, 7516), (301, 7621), (315, 7687), (319, 7705), (330, 7747), (332, 7750), (350, 7840), (367, 7909), (385, 7963), (387, 7975), (396, 8020), (403, 8053),

Gene: TooFast2Furius\_3 Start: 797, Stop: 2584, Start Num: 56

Candidate Starts for TooFast2Furius\_3:

(Start: 56 @797 has 267 MA's), (102, 956), (113, 995), (129, 1097), (138, 1136), (143, 1172), (162, 1268), (168, 1301), (180, 1388), (183, 1412), (186, 1445), (189, 1460), (194, 1487), (195, 1490), (200, 1544), (206, 1583), (211, 1625), (229, 1742), (230, 1745), (266, 1928), (272, 1988), (280, 2021), (293, 2108), (302, 2156), (336, 2303), (341, 2321), (365, 2429), (371, 2447), (380, 2471), (384, 2483), (401, 2561),

Gene: Tooj\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Tooj\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Tres\_7 Start: 4230, Stop: 5924, Start Num: 73

Candidate Starts for Tres\_7:

(Start: 71 @4224 has 6 MA's), (Start: 73 @4230 has 28 MA's), (118, 4410), (133, 4491), (141, 4542), (143, 4551), (148, 4572), (168, 4680), (171, 4692), (194, 4866), (198, 4902), (199, 4914), (200, 4923),

(211, 5004), (229, 5121), (230, 5124), (245, 5199), (248, 5235), (263, 5292), (283, 5412), (287, 5442), (292, 5460), (296, 5481), (299, 5511), (301, 5517), (310, 5556), (317, 5592), (324, 5619), (336, 5661), (348, 5715), (353, 5733), (365, 5787), (387, 5859),

Gene: True\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for True\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Trypo\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Trypo\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Twister6\_5 Start: 1703, Stop: 3307, Start Num: 82

Candidate Starts for Twister6\_5:

(27, 1493), (Start: 82 @1703 has 27 MA's), (94, 1751), (100, 1775), (136, 1946), (145, 1997), (150, 2018), (152, 2036), (167, 2105), (182, 2186), (184, 2201), (187, 2228), (193, 2255), (197, 2288), (200, 2321), (205, 2357), (208, 2366), (277, 2795), (283, 2837), (289, 2873), (296, 2906), (297, 2930), (318, 2999), (320, 3008), (324, 3020), (354, 3137), (364, 3185), (381, 3233),

Gene: Twonlo\_2 Start: 558, Stop: 2156, Start Num: 84

Candidate Starts for Twonlo\_2:

(Start: 84 @558 has 7 MA's), (108, 642), (116, 690), (122, 714), (125, 735), (129, 759), (136, 786), (142, 825), (150, 858), (152, 876), (154, 882), (164, 936), (165, 939), (182, 1026), (187, 1068), (197, 1128), (198, 1140), (200, 1161), (208, 1206), (217, 1278), (220, 1290), (223, 1311), (231, 1386), (241, 1443), (243, 1452), (245, 1470), (247, 1482), (266, 1569), (282, 1683), (289, 1722), (297, 1779), (320, 1857), (364, 2034), (370, 2052), (382, 2085),

Gene: Tycho\_2 Start: 512, Stop: 2104, Start Num: 91

Candidate Starts for Tycho\_2:

(Start: 91 @512 has 34 MA's), (93, 518), (98, 545), (114, 620), (122, 650), (125, 671), (129, 695), (136, 722), (143, 767), (148, 788), (162, 863), (165, 875), (187, 1004), (198, 1076), (200, 1097), (205, 1133), (208, 1142), (220, 1226), (223, 1247), (241, 1379), (245, 1406), (247, 1418), (266, 1511), (281, 1604), (286, 1655), (295, 1694), (297, 1721), (300, 1730), (321, 1802), (324, 1811), (327, 1823), (329, 1832), (338, 1862), (342, 1877), (364, 1976), (397, 2084),

Gene: TyrionL\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for TyrionL\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: UAch1\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for UAch1\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: UncleHowie\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for UncleHowie\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Usavi\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Usavi\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Vaishali24\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Vaishali24\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Valary\_5 Start: 1809, Stop: 3422, Start Num: 80

Candidate Starts for Valary\_5:

(1, 1137), (5, 1260), (9, 1365), (10, 1368), (14, 1437), (Start: 80 @1809 has 1 MA's), (Start: 82 @1815 has 27 MA's), (94, 1863), (136, 2061), (142, 2100), (150, 2133), (156, 2172), (157, 2178), (167, 2220), (182, 2301), (187, 2343), (190, 2355), (200, 2436), (208, 2481), (223, 2586), (245, 2745), (247, 2757), (266, 2844), (277, 2910), (283, 2952), (296, 3021), (297, 3045), (318, 3114), (320, 3123), (324, 3135), (346, 3225), (354, 3252), (363, 3288), (364, 3300), (373, 3330), (381, 3348),

Gene: Valjean\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Valjean\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: VanDeWege\_5 Start: 1740, Stop: 3344, Start Num: 82

Candidate Starts for VanDeWege\_5:

(27, 1530), (Start: 82 @1740 has 27 MA's), (94, 1788), (100, 1812), (136, 1983), (145, 2034), (150, 2055), (152, 2073), (167, 2142), (182, 2223), (184, 2238), (187, 2265), (193, 2292), (197, 2325), (200, 2358), (205, 2394), (208, 2403), (277, 2832), (283, 2874), (289, 2910), (296, 2943), (297, 2967), (318, 3036), (320, 3045), (324, 3057), (354, 3174), (364, 3222), (381, 3270),

Gene: Vaticameos\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Vaticameos\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Veritas\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Veritas\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Vic9\_00007 Start: 4673, Stop: 6367, Start Num: 73

Candidate Starts for Vic9\_00007:

(Start: 71 @4667 has 6 MA's), (Start: 73 @4673 has 28 MA's), (118, 4853), (133, 4934), (141, 4985), (143, 4994), (148, 5015), (168, 5123), (171, 5135), (194, 5309), (198, 5345), (199, 5357), (200, 5366), (211, 5447), (229, 5564), (230, 5567), (245, 5642), (248, 5678), (263, 5735), (283, 5855), (287, 5885), (292, 5903), (296, 5924), (299, 5954), (301, 5960), (310, 5999), (317, 6035), (324, 6062), (336, 6104), (348, 6158), (353, 6176), (365, 6230), (387, 6302),

Gene: VioletZ\_5 Start: 3458, Stop: 5206, Start Num: 48

Candidate Starts for VioletZ\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (147, 3836), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (209, 4265), (211, 4277), (229, 4394), (230, 4397), (242, 4454), (263, 4568), (266, 4577), (279, 4664), (282, 4691), (287, 4724), (293, 4754), (296, 4763), (299, 4793), (301, 4799), (302, 4802), (310, 4838), (317, 4874), (336, 4949), (348, 5003), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: Virapocalypse\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Virapocalypse\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Virgeve\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Virgeve\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Vista\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Vista\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194,



1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Vivaldi\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Vivaldi\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Vortex\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Vortex\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Waleliano\_5 Start: 3458, Stop: 5206, Start Num: 48

Candidate Starts for Waleliano\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (209, 4265), (211, 4277), (229, 4394), (230, 4397), (242, 4454), (263, 4568), (266, 4577), (279, 4664), (282, 4691), (287, 4724), (293, 4754), (296, 4763), (299, 4793), (301, 4799), (302, 4802), (310, 4838), (317, 4874), (336, 4949), (348, 5003), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: Wallhey\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Wallhey\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Waterdiva\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Waterdiva\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Weher20\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Weher20\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: West99\_7 Start: 4347, Stop: 6041, Start Num: 73

Candidate Starts for West99\_7:

(Start: 71 @4341 has 6 MA's), (Start: 73 @4347 has 28 MA's), (118, 4527), (133, 4608), (141, 4659), (143, 4668), (148, 4689), (168, 4797), (171, 4809), (194, 4983), (198, 5019), (199, 5031), (200, 5040), (211, 5121), (229, 5238), (230, 5241), (245, 5316), (248, 5352), (263, 5409), (283, 5529), (287, 5559), (292, 5577), (296, 5598), (299, 5628), (301, 5634), (310, 5673), (317, 5709), (324, 5736), (336, 5778), (348, 5832), (353, 5850), (365, 5904), (387, 5976),

Gene: Windsor\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Windsor\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: Wizard\_5 Start: 1770, Stop: 3377, Start Num: 82

Candidate Starts for Wizard\_5:

(39, 1671), (Start: 82 @1770 has 27 MA's), (94, 1818), (136, 2016), (142, 2055), (150, 2088), (156, 2127), (157, 2133), (167, 2175), (182, 2256), (187, 2298), (190, 2310), (200, 2391), (205, 2427), (208, 2436), (223, 2541), (245, 2700), (266, 2799), (277, 2865), (283, 2907), (296, 2976), (297, 3000), (318, 3069), (320, 3078), (324, 3090), (346, 3180), (354, 3207), (364, 3255), (381, 3303),

Gene: Wooper\_6 Start: 3931, Stop: 5652, Start Num: 55

Candidate Starts for Wooper\_6:

(31, 3829), (Start: 55 @3931 has 6 MA's), (63, 3949), (Start: 83 @4012 has 1 MA's), (105, 4090), (121, 4168), (124, 4189), (136, 4246), (138, 4255), (141, 4282), (143, 4291), (147, 4303), (160, 4381), (180, 4507), (185, 4555), (198, 4642), (199, 4654), (200, 4663), (202, 4669), (205, 4699), (215, 4771), (222, 4801), (229, 4861), (296, 5224), (301, 5260), (311, 5311), (322, 5353), (336, 5401), (358, 5491), (365, 5527), (393, 5614), (401, 5632),

Gene: Xavier\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Xavier\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Xincheng\_5 Start: 3458, Stop: 5203, Start Num: 48

Candidate Starts for Xincheng\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (143, 3824), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (211, 4277), (229, 4394), (242, 4454), (263, 4568), (266, 4577), (272, 4637), (279, 4664), (282, 4691), (287, 4724), (293, 4754), (296, 4763), (299, 4793), (302, 4802), (317, 4874), (336, 4949), (348, 5003), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: Yago84\_4 Start: 2457, Stop: 4196, Start Num: 49

Candidate Starts for Yago84\_4:

(Start: 49 @2457 has 9 MA's), (105, 2634), (118, 2703), (136, 2790), (138, 2799), (143, 2835), (147, 2847), (199, 3198), (202, 3213), (222, 3345), (229, 3405), (238, 3447), (248, 3525), (258, 3564), (263, 3576), (267, 3588), (280, 3669), (282, 3693), (287, 3726), (301, 3801), (305, 3819), (343, 3972), (351,

4008), (361, 4041), (365, 4068), (368, 4077), (385, 4128),

Gene: Yahalom\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Yahalom\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: Yeshua\_6 Start: 3929, Stop: 5656, Start Num: 54

Candidate Starts for Yeshua\_6:

(34, 3860), (36, 3878), (41, 3899), (52, 3926), (54, 3929), (63, 3953), (Start: 83 @4016 has 1 MA's), (105, 4094), (121, 4172), (124, 4193), (136, 4250), (138, 4259), (141, 4286), (143, 4295), (160, 4385), (180, 4511), (185, 4559), (198, 4646), (199, 4658), (200, 4667), (202, 4673), (205, 4703), (215, 4775), (222, 4805), (229, 4865), (296, 5228), (301, 5264), (311, 5315), (316, 5330), (322, 5357), (336, 5405), (358, 5495), (365, 5531), (393, 5618), (401, 5636),

Gene: Yinz\_6 Start: 2714, Stop: 4474, Start Num: 45

Candidate Starts for Yinz\_6:

(3, 2240), (6, 2273), (8, 2339), (15, 2435), (Start: 38 @2696 has 4 MA's), (Start: 45 @2714 has 27 MA's), (53, 2732), (81, 2813), (129, 3026), (137, 3056), (138, 3062), (141, 3089), (151, 3125), (166, 3209), (182, 3335), (194, 3413), (200, 3470), (204, 3503), (223, 3617), (229, 3671), (250, 3791), (254, 3812), (272, 3908), (283, 3959), (287, 3989), (288, 3992), (301, 4064), (317, 4139), (324, 4166), (326, 4175), (341, 4226), (347, 4259), (351, 4274), (356, 4286), (370, 4346), (383, 4385), (384, 4388), (401, 4439),

Gene: YorkOnyx\_2 Start: 513, Stop: 2105, Start Num: 91

Candidate Starts for YorkOnyx\_2:

(12, 69), (Start: 91 @513 has 34 MA's), (93, 519), (98, 546), (114, 621), (122, 651), (125, 672), (129, 696), (136, 723), (143, 768), (148, 789), (162, 864), (165, 876), (187, 1005), (198, 1077), (200, 1098), (205, 1134), (208, 1143), (220, 1227), (223, 1248), (224, 1263), (241, 1380), (245, 1407), (247, 1419), (266, 1512), (281, 1605), (286, 1656), (295, 1695), (297, 1722), (300, 1731), (321, 1803), (324, 1812), (327, 1824), (329, 1833), (338, 1863), (342, 1878), (364, 1977), (397, 2085),

Gene: Yoshand\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Yoshand\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: YouGoGlencoco\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for YouGoGlencoco\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Zaider\_3 Start: 797, Stop: 2584, Start Num: 56

Candidate Starts for Zaider\_3:

(Start: 56 @797 has 267 MA's), (102, 956), (113, 995), (129, 1097), (138, 1136), (143, 1172), (162, 1268), (168, 1301), (180, 1388), (183, 1412), (186, 1445), (189, 1460), (194, 1487), (195, 1490), (200, 1544), (206, 1583), (211, 1625), (229, 1742), (230, 1745), (266, 1928), (272, 1988), (280, 2021), (293, 2108), (302, 2156), (336, 2303), (341, 2321), (365, 2429), (371, 2447), (380, 2471), (384, 2483), (401, 2561),

Gene: Zelda\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Zelda\_2:

(20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (371, 2214), (380, 2238), (384, 2250), (401, 2328),

Gene: Zemanar\_5 Start: 3458, Stop: 5206, Start Num: 48

Candidate Starts for Zemanar\_5:

(Start: 48 @3458 has 22 MA's), (76, 3518), (102, 3608), (113, 3647), (114, 3677), (119, 3689), (125, 3725), (129, 3749), (137, 3782), (138, 3788), (147, 3836), (159, 3905), (175, 3980), (180, 4040), (186, 4097), (194, 4139), (195, 4142), (200, 4196), (209, 4265), (211, 4277), (229, 4394), (242, 4454), (263, 4568), (266, 4577), (279, 4664), (282, 4691), (287, 4724), (293, 4754), (296, 4763), (299, 4793), (301, 4799), (302, 4802), (310, 4838), (317, 4874), (336, 4949), (348, 5003), (353, 5021), (362, 5051), (365, 5075), (376, 5108), (378, 5114), (384, 5129), (401, 5180),

Gene: Zenteno07\_8 Start: 2057, Stop: 3829, Start Num: 47

Candidate Starts for Zenteno07\_8:

(Start: 47 @2057 has 3 MA's), (97, 2213), (102, 2222), (103, 2225), (113, 2261), (138, 2402), (176, 2603), (179, 2645), (186, 2711), (206, 2849), (209, 2879), (229, 3008), (266, 3191), (272, 3251), (275, 3260), (276, 3263), (293, 3371), (310, 3455), (336, 3566), (348, 3620), (365, 3692), (376, 3725), (380, 3734), (384, 3746), (401, 3809),

Gene: Zitch\_1 Start: 491, Stop: 2155, Start Num: 85

Candidate Starts for Zitch\_1:

(Start: 85 @491 has 2 MA's), (94, 530), (107, 581), (125, 677), (129, 701), (136, 728), (142, 767), (154, 824), (162, 869), (170, 908), (182, 968), (187, 1010), (198, 1082), (200, 1103), (205, 1139), (208, 1148), (217, 1220), (220, 1232), (223, 1253), (232, 1334), (241, 1415), (245, 1442), (266, 1541), (282, 1655), (286, 1685), (293, 1718), (297, 1751), (306, 1787), (314, 1826), (321, 1856), (324, 1865), (329, 1886), (354, 1982), (370, 2048),

Gene: Zonia\_2 Start: 564, Stop: 2351, Start Num: 56

Candidate Starts for Zonia\_2:

(12, 252), (20, 360), (22, 387), (29, 435), (Start: 56 @564 has 267 MA's), (102, 723), (113, 762), (129, 864), (138, 903), (143, 939), (162, 1035), (168, 1068), (180, 1155), (183, 1179), (186, 1212), (189, 1227), (194, 1254), (195, 1257), (200, 1311), (206, 1350), (211, 1392), (229, 1509), (230, 1512), (266, 1695), (272, 1755), (280, 1788), (293, 1875), (302, 1923), (336, 2070), (341, 2088), (365, 2196), (380, 2238), (384, 2250), (401, 2328),

Gene: pZL12\_67c Start: 56094, Stop: 54634, Start Num: 102

Candidate Starts for pZL12\_67c:

(75, 56199), (102, 56094), (110, 56061), (113, 56055), (125, 55983), (127, 55971), (134, 55941), (136, 55932), (153, 55839), (182, 55674), (297, 54966), (319, 54897), (322, 54885), (352, 54774), (358, 54753), (364, 54723),