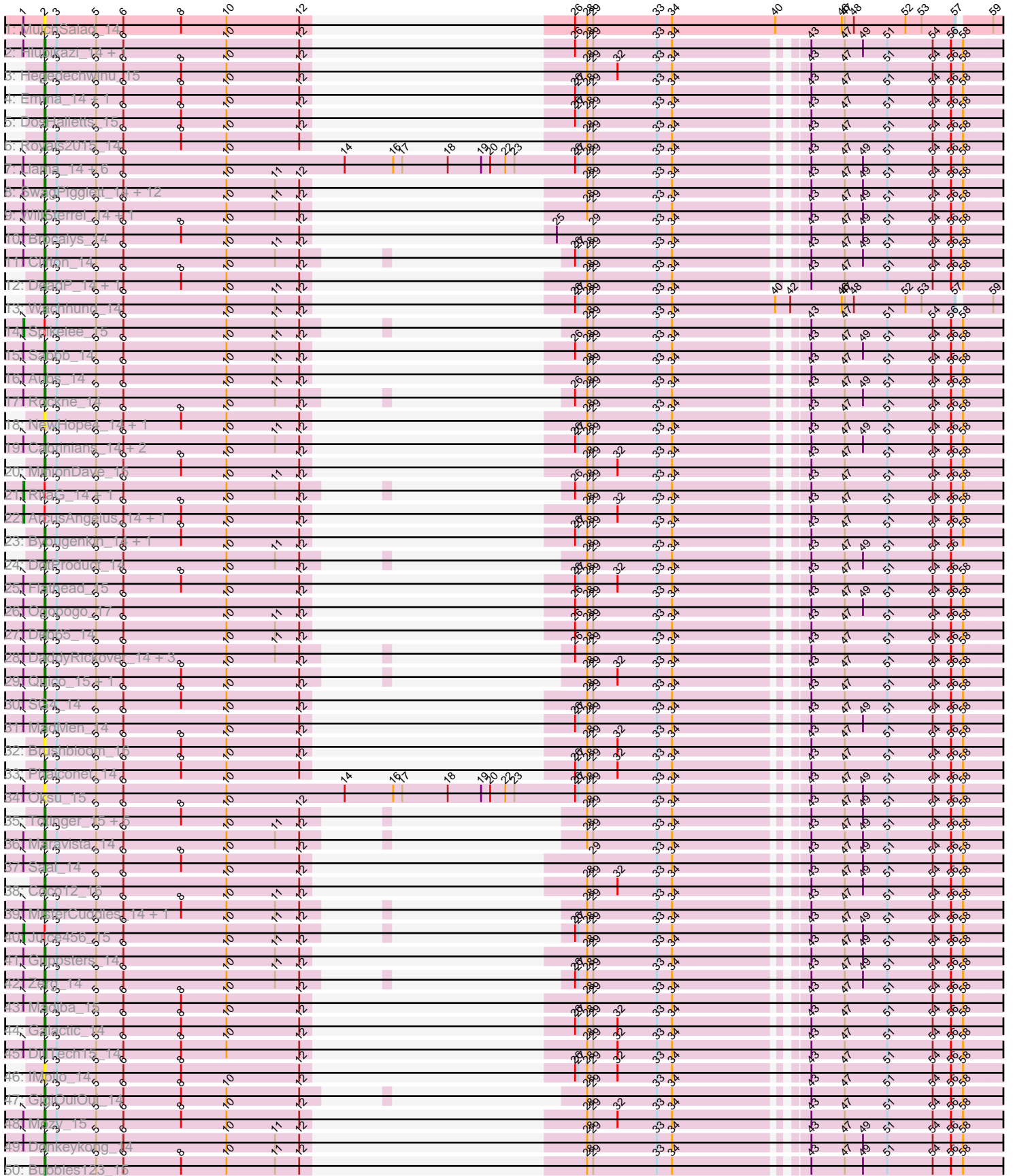
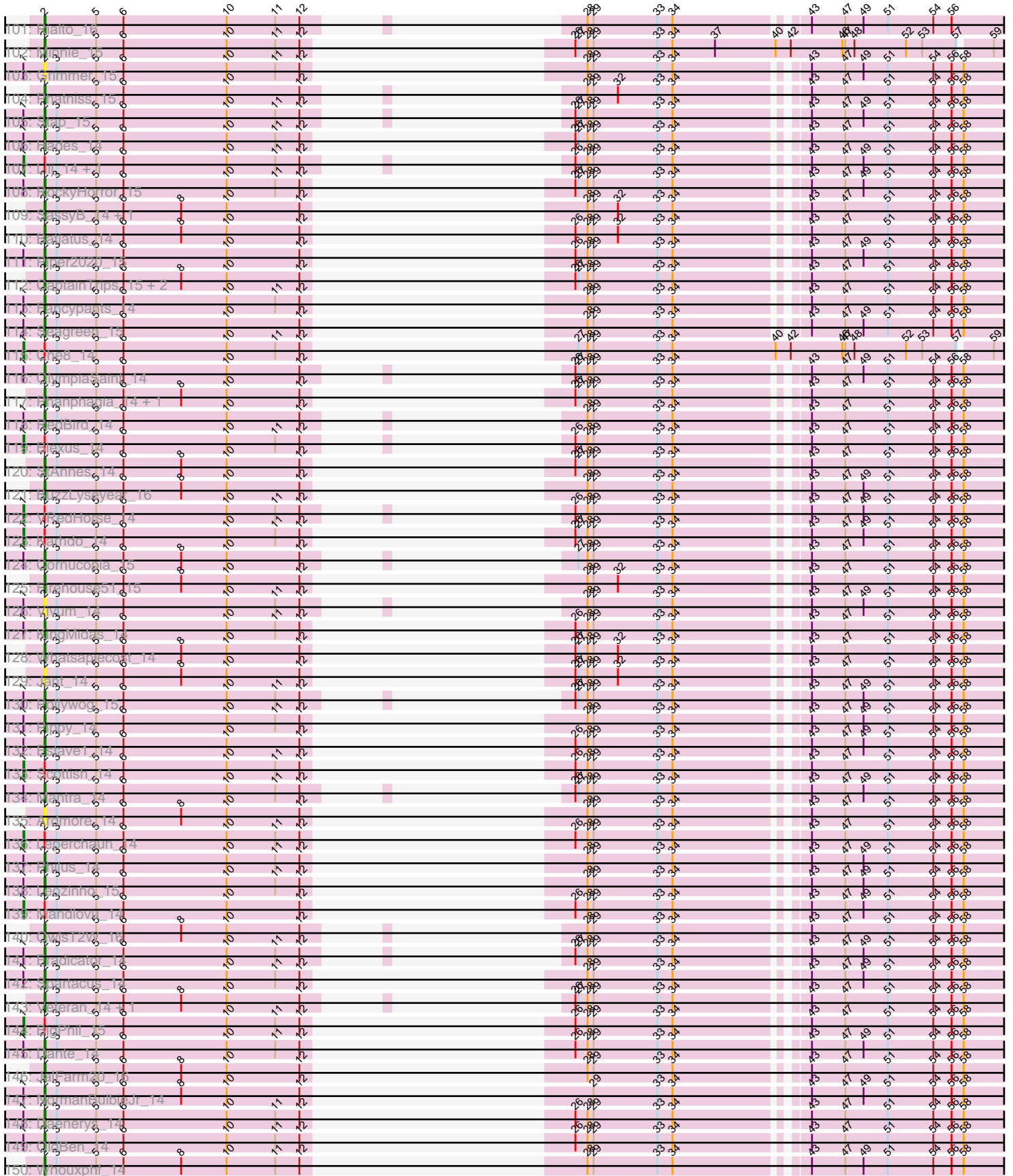


Zoomed Pham 224260

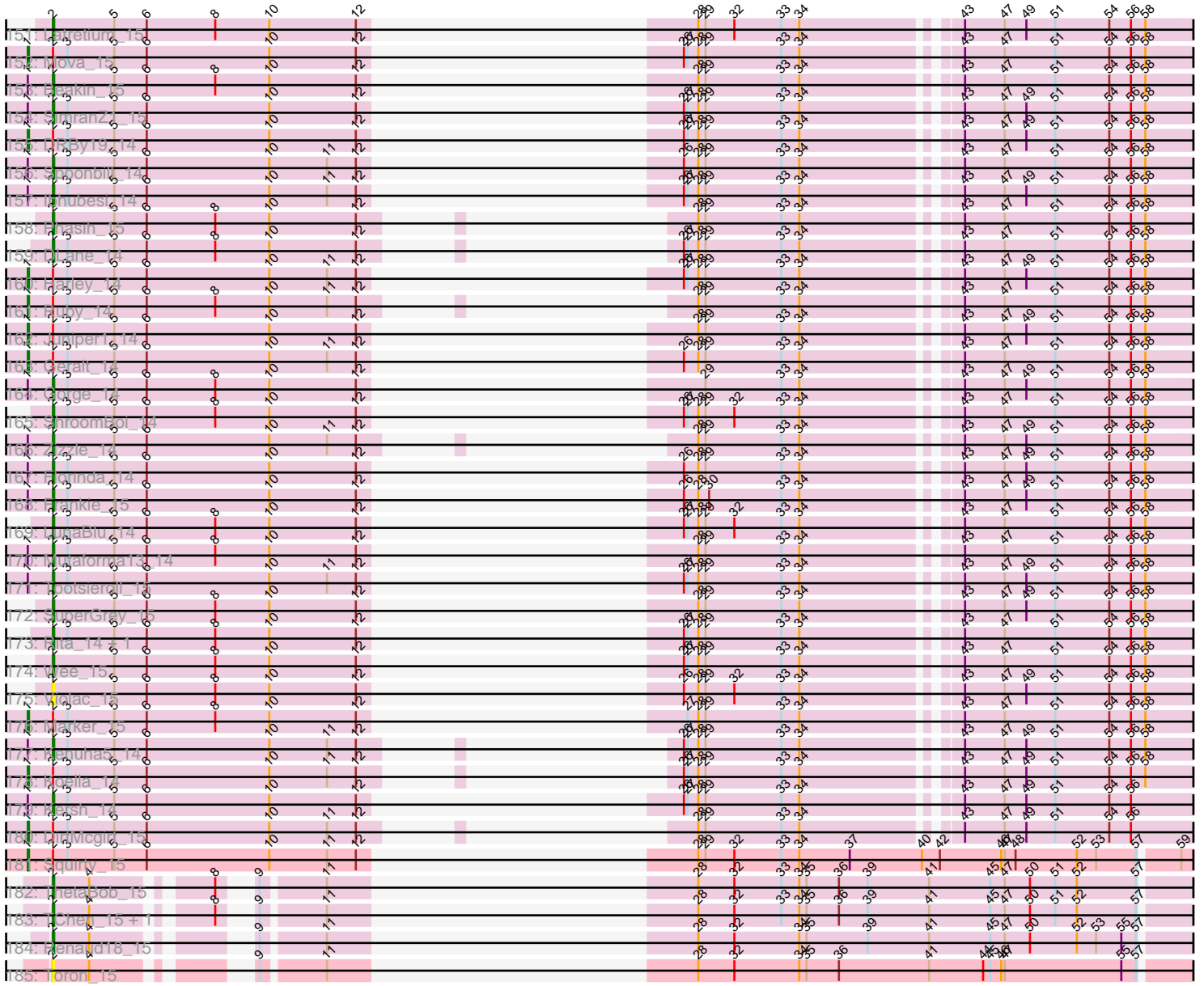




# Zoomed Pham 224260



# Zoomed Pham 224260



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 224260 Report

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

Pham number 224260 has 249 members, 28 are drafts.

Phages represented in each track:

- Track 1 : MulchSalad\_14
- Track 2 : Hlubikazi\_14, Strokeseat\_14
- Track 3 : Hegedechwinu\_15
- Track 4 : Emma\_14, Tweety\_14
- Track 5 : DosHalletts\_15
- Track 6 : Royals2015\_14
- Track 7 : Llama\_14, Modragons\_14, Sebastian\_14, AlpineSix\_14, Jinglebell\_13, OfUltron\_14, Ochi17\_14
- Track 8 : SwagPiggett\_14, James\_14, ShiLan\_14, BobaPhett\_14, LastJedi\_14, Yorick\_14, ShowerHandel\_14, Burwell21\_14, Nivrat\_14, Jarcob\_14, Mattes\_14, Lizziana\_14, Martik\_14
- Track 9 : WillSterrel\_14, IrishSherpFalk\_14
- Track 10 : Brocalys\_14
- Track 11 : Clifton\_14
- Track 12 : DeadP\_14, Taj\_14
- Track 13 : Wachhund\_14
- Track 14 : Spikelee\_15
- Track 15 : Sabbb\_14
- Track 16 : Aubs\_14
- Track 17 : Rockne\_14
- Track 18 : NewHope4\_14, Polo2Bam\_15
- Track 19 : Cabrinians\_14, ByChance\_14, Priscilla\_14
- Track 20 : MinionDave\_15
- Track 21 : RitaG\_14, BodEinwohner17\_14
- Track 22 : ArcusAngelus\_14, Chevrolet\_14
- Track 23 : Byougenkin\_14, Ovechkin\_14
- Track 24 : DotProduct\_14
- Track 25 : Flathead\_15
- Track 26 : Ogopogo\_17
- Track 27 : Deb65\_14
- Track 28 : DaddyRickover\_14, BlueCrab\_14, Pacc40\_14, JoeyJr\_14
- Track 29 : Quico\_15, Girafales\_15
- Track 30 : SG4\_14
- Track 31 : MadMen\_14
- Track 32 : Brushbloom\_16
- Track 33 : Phalconet\_14
- Track 34 : Oksu\_15

- Track 35 : Totinger\_15, Slim\_16, EmiMonkey\_14, Emmaloid\_16, Starcevich\_15, PhilipPhlop\_14
- Track 36 : Maravista\_14
- Track 37 : Saal\_14
- Track 38 : Coco12\_16
- Track 39 : MisterCuddles\_14, Girr\_14
- Track 40 : Juice456\_15
- Track 41 : Guppsters\_14
- Track 42 : Zerg\_14
- Track 43 : Madiba\_15
- Track 44 : Galactic\_14
- Track 45 : DillTech15\_14
- Track 46 : IMpilo\_14
- Track 47 : GigiOuiOui\_14
- Track 48 : Mozy\_15
- Track 49 : Donkeykong\_14
- Track 50 : Bubbles123\_15
- Track 51 : Cerasum\_15, Sarma624\_15, Velveteen\_15, Kingsley\_15, Brookers\_15
- Track 52 : Gandalph\_14
- Track 53 : KristaRAM\_15
- Track 54 : FreddyB\_14
- Track 55 : Corium\_14, KingJulian\_14
- Track 56 : Bobi\_16
- Track 57 : DaWorst\_16, Alexphander\_16
- Track 58 : UncleRicky\_15, Drago\_15
- Track 59 : MilanaBonita\_15, Akhila\_15
- Track 60 : Ms6\_14
- Track 61 : Inventum\_14, Sassafras\_14
- Track 62 : Eish\_14
- Track 63 : Aloeri\_15, ChickenDinner\_15, DocMcStuffins\_15
- Track 64 : QuickMath\_14
- Track 65 : DoRead\_14
- Track 66 : Doug\_15
- Track 67 : Cheesepuff\_16
- Track 68 : Krakatau\_15
- Track 69 : PhesterPhotato\_14
- Track 70 : IbOuu\_14
- Track 71 : MulchExplorer\_16, Kimberlium\_15
- Track 72 : Hamulus\_14
- Track 73 : Misha28\_15, TootsiePop\_15
- Track 74 : Boomer\_15
- Track 75 : Chuckly\_14
- Track 76 : Awesomesauce\_15
- Track 77 : Radiance\_14
- Track 78 : Sparkdehlily\_14, TDanisky\_14
- Track 79 : Enby\_15, Lorde\_15
- Track 80 : Job42\_16
- Track 81 : Ramsey\_15
- Track 82 : Mahavrat\_14
- Track 83 : LittleShirley\_15
- Track 84 : Polka14\_15
- Track 85 : Fastidio\_14
- Track 86 : Nimbo\_14, PHappiness\_14

- Track 87 : Dorothy\_14
- Track 88 : Doomphist\_14, Poenanya\_14
- Track 89 : EleanorGeorge\_14
- Track 90 : Nitzel\_15
- Track 91 : Crumble\_14
- Track 92 : Tchotchke\_15
- Track 93 : Empress\_14
- Track 94 : MilleniumForce\_15
- Track 95 : LilMoolah\_14
- Track 96 : Plumbus\_15
- Track 97 : Moonbeam\_15
- Track 98 : XFactor\_14
- Track 99 : SiSi\_14, Filuzino\_14
- Track 100 : Sandalphon\_15
- Track 101 : Rialto\_16
- Track 102 : Minnie\_15
- Track 103 : Grimmer\_15
- Track 104 : Phatniss\_15
- Track 105 : Stap\_15
- Track 106 : Hades\_14
- Track 107 : Llij\_14, PMC\_14
- Track 108 : RockyHorror\_15
- Track 109 : SassyB\_14, PopTart\_14
- Track 110 : Batiatus\_14
- Track 111 : Piper2020\_15
- Track 112 : CaptainTrips\_15, Fruitloop\_14, Melissauren88\_14
- Track 113 : Fancypants\_14
- Track 114 : Seagreen\_15
- Track 115 : Che8\_14
- Track 116 : OlympiaSaint\_14
- Track 117 : Phanphagia\_14, Shauna1\_14
- Track 118 : RedBird\_14
- Track 119 : Blexus\_14
- Track 120 : StAnnes\_14
- Track 121 : BuzzLyseyear\_16
- Track 122 : VRedHorse\_14
- Track 123 : Karhdo\_14
- Track 124 : Cornucopia\_15
- Track 125 : Firehouse51\_15
- Track 126 : Vivum\_14
- Track 127 : KingMidas\_14
- Track 128 : Whatsapiecost\_14
- Track 129 : Jant\_14
- Track 130 : Pollywog\_15
- Track 131 : Pippy\_14
- Track 132 : Estave1\_14
- Track 133 : Scottish\_14
- Track 134 : Mantra\_14
- Track 135 : Ardmore\_14
- Track 136 : Leperchaun\_14
- Track 137 : Philus\_14
- Track 138 : Leozinho\_15
- Track 139 : Mandlovu\_14

- Track 140 : OwlsT2W\_16
- Track 141 : Eradicator\_14
- Track 142 : Spartacus\_14
- Track 143 : Veteran\_14, GUmbie\_14
- Track 144 : BigPhil\_15
- Track 145 : Dante\_14
- Track 146 : JalFarm20\_16
- Track 147 : NormanBulbieJr\_14
- Track 148 : Daenerys\_14
- Track 149 : OldBen\_14
- Track 150 : Whouxphf\_14
- Track 151 : Latretium\_15
- Track 152 : Mova\_15
- Track 153 : Beakin\_15
- Track 154 : SimranZ1\_15
- Track 155 : DRBy19\_14
- Track 156 : Spoonbill\_14
- Track 157 : Ibhubesi\_14
- Track 158 : Phasih\_15
- Track 159 : DLane\_14
- Track 160 : Harley\_14
- Track 161 : Ruby\_14
- Track 162 : Juniper1\_14
- Track 163 : Geralt\_14
- Track 164 : Gorge\_14
- Track 165 : ShroomBoi\_14
- Track 166 : Zizzle\_14
- Track 167 : Florinda\_14
- Track 168 : Frankie\_15
- Track 169 : LunaBlu\_14
- Track 170 : Mutaforma13\_14
- Track 171 : Tootsieroll\_15
- Track 172 : SuperGrey\_15
- Track 173 : Rita\_14, Bipolar\_14
- Track 174 : Wee\_15
- Track 175 : Violac\_15
- Track 176 : Marker\_15
- Track 177 : Kenuha5\_14
- Track 178 : Koella\_14
- Track 179 : Kersh\_14
- Track 180 : DirtMcgirt\_15
- Track 181 : Squirty\_15
- Track 182 : ThetaBob\_15
- Track 183 : TChen\_15, LunaStella\_15
- Track 184 : Renaud18\_15
- Track 185 : Toron\_15

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



The start number called the most often in the published annotations is 2, it was called in 184 of the 221 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila\_15, Alexphander\_16, Aloeri\_15, AlpineSix\_14, Ardmore\_14, Aubs\_14, Awesomesauce\_15, Batiatus\_14, Beakin\_15, Bipolar\_14, BlueCrab\_14, BobaPhett\_14, Bobi\_16, Brocalys\_14, Brookers\_15, Brushbloom\_16, Bubbles123\_15, Burwell21\_14, BuzzLyseyear\_16, ByChance\_14, Byougenkin\_14, Cabrinians\_14, CaptainTrips\_15, Cerasum\_15, CheesePuff\_16, ChickenDinner\_15, Chuckly\_14, Clifton\_14, Coco12\_16, Corium\_14, Cornucopia\_15, Crumble\_14, DLane\_14, DaWorst\_16, DaddyRickover\_14, Daenerys\_14, Dante\_14, DeadP\_14, Deb65\_14, DillTech15\_14, DoRead\_14, DocMcStuffins\_15, Donkeykong\_14, DosHalletts\_15, DotProduct\_14, Doug\_15, Eish\_14, EleanorGeorge\_14, EmiMonkey\_14, Emma\_14, Emmaloid\_16, Empress\_14, Enby\_15, Eradicator\_14, Estave1\_14, Fancypants\_14, Fastidio\_14, Filuzino\_14, Firehouse51\_15, Flathead\_15, Florinda\_14, Frankie\_15, Fruitloop\_14, GUmbe\_14, Galactic\_14, Gandolph\_14, GigiOuiOui\_14, Girafales\_15, Girr\_14, Gorge\_14, Grimmer\_15, Guppsters\_14, Hades\_14, Hamulus\_14, Hegedechwinu\_15, Hlubikazi\_14, IMpilo\_14, IbOuu\_14, Ibhubesi\_14, Inventum\_14, IrishSherpFalk\_14, JalFarm20\_16, James\_14, Jant\_14, Jarcob\_14, Jinglebell\_13, Job42\_16, JoeyJr\_14, Kenuha5\_14, Kersh\_14, Kimberlium\_15, KingJulian\_14, KingMidas\_14, Kingsley\_15, Krakatau\_15, KristaRAM\_15, LastJedi\_14, Latretium\_15, Leozinho\_15, LittleShirley\_15, Lizziana\_14, Llama\_14, Lorde\_15, LunaBlu\_14, LunaStella\_15, MadMen\_14, Madiba\_15, Mahavrat\_14, Mantra\_14, Maravista\_14, Martik\_14, Mattes\_14, Melissauren88\_14, MilanaBonita\_15, MilleniumForce\_15, MinionDave\_15, Minnie\_15, Misha28\_15, MisterCuddles\_14, Modragons\_14, Moonbeam\_15, Mozy\_15, Ms6\_14, MulchExplorer\_16, MulchSalad\_14, Mutaforma13\_14, NewHope4\_14, Nitzel\_15, Nivrat\_14, NormanBulbieJr\_14, Ochi17\_14, OfUltron\_14, OgoPogo\_17, Oksu\_15, OldBen\_14, OlympiaSaint\_14, Ovechkin\_14, OwlsT2W\_16, Pacc40\_14, Phalconet\_14, Phanphagia\_14, Phasih\_15, Phatniss\_15, PhesterPhotato\_14, Philus\_14, PhilipPhlop\_14, Piper2020\_15, Pippy\_14, Polka14\_15, Pollywog\_15, Polo2Bam\_15, PopTart\_14, Priscilla\_14, QuickMath\_14, Quico\_15, Radiance\_14, Ramsey\_15, RedBird\_14, Renaud18\_15, Rialto\_16, Rita\_14, Rockne\_14, RockyHorror\_15, Royals2015\_14, SG4\_14, Saal\_14, Sabb\_14, Sandalphon\_15, Sarma624\_15, Sassafras\_14, SassyB\_14, Seabastian\_14, Seagreen\_15, Shauna1\_14, ShiLan\_14, ShowerHandel\_14, ShroomBoi\_14, SiSi\_14, SimranZ1\_15, Slim\_16, Sparkdehlily\_14, Spartacus\_14, Spoonbill\_14, StAnnes\_14, Stap\_15, StarceVich\_15, Strokeseat\_14, SuperGrey\_15, SwagPiggett\_14, TChen\_15, TDanisky\_14, Taj\_14, Tchotchke\_15, ThetaBob\_15, TootsiePop\_15, Tootsieroll\_15, Toron\_15, Totinger\_15, Tweety\_14, Velveteen\_15, Veteran\_14, Violac\_15, Vivum\_14, Wachhund\_14, Wee\_15, Whatsapiecost\_14, Whouxphf\_14, WillSterrel\_14, XFactor\_14, Yorick\_14, Zerg\_14, Zizzle\_14,

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

- ArcusAngelus\_14, BigPhil\_15, Blexus\_14, BodEinwohner17\_14, Boomer\_15, Che8\_14, Chevrolet\_14, DRBy19\_14, DirtMcGirt\_15, Doomphist\_14, Dorothy\_14, Drago\_15, FreddyB\_14, Geralt\_14, Harley\_14, Juice456\_15, Juniper1\_14, Karhdo\_14, Koella\_14, Leperchaun\_14, LilMoolah\_14, Lij\_14, Mandlovu\_14, Marker\_15, Mova\_15, Nimbo\_14, PHappiness\_14, PMC\_14, Plumbus\_15, Poenanya\_14, RitaG\_14, Ruby\_14, Scottish\_14, Spikelee\_15, Squirty\_15, UncleRicky\_15, VRedHorse\_14,

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

•

## Summary by start number:

### Start 1:

- Found in 160 of 249 ( 64.3% ) of genes in pham
- Manual Annotations of this start: 37 of 221
- Called 23.1% of time when present
- Phage (with cluster) where this start called: ArcusAngelus\_14 (F1), BigPhil\_15 (F1), Blexus\_14 (F1), BodEinwohner17\_14 (F1), Boomer\_15 (F1), Che8\_14 (F1), Chevrolet\_14 (F1), DRBy19\_14 (F1), DirtMcgirt\_15 (F1), Doomphist\_14 (F1), Dorothy\_14 (F1), Drago\_15 (F1), FreddyB\_14 (F1), Geralt\_14 (F1), Harley\_14 (F1), Juice456\_15 (F1), Juniper1\_14 (F1), Karhdo\_14 (F1), Koella\_14 (F1), Leperchaun\_14 (F1), LilMoolah\_14 (F1), Llij\_14 (F1), Mandlovu\_14 (F1), Marker\_15 (F1), Mova\_15 (F1), Nimbo\_14 (F1), PHappiness\_14 (F1), PMC\_14 (F1), Plumbus\_15 (F1), Poenanya\_14 (F1), RitaG\_14 (F1), Ruby\_14 (F1), Scottish\_14 (F1), Spikelee\_15 (F1), Squirty\_15 (F3), UncleRicky\_15 (F1), VRedHorse\_14 (F1),

### Start 2:

- Found in 249 of 249 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 184 of 221
- Called 85.1% of time when present
- Phage (with cluster) where this start called: Akhila\_15 (F1), Alexphander\_16 (F1), Aloeri\_15 (F1), AlpineSix\_14 (F1), Ardmore\_14 (F1), Aubs\_14 (F1), Awesomesauce\_15 (F1), Batiatus\_14 (F1), Beakin\_15 (F1), Bipolar\_14 (F1), BlueCrab\_14 (F1), BobaPhett\_14 (F1), Bobi\_16 (F1), Brocalys\_14 (F1), Brookers\_15 (F1), Brushbloom\_16 (F1), Bubbles123\_15 (F1), Burwell21\_14 (F1), BuzzLyseyear\_16 (F1), ByChance\_14 (F1), Byougenkin\_14 (F1), Cabrinians\_14 (F1), CaptainTrips\_15 (F1), Cerasum\_15 (F1), Cheesepuff\_16 (F1), ChickenDinner\_15 (F1), Chuckly\_14 (F1), Clifton\_14 (F1), Coco12\_16 (F1), Corium\_14 (F1), Cornucopia\_15 (F1), Crumble\_14 (F1), DLane\_14 (F1), DaWorst\_16 (F1), DaddyRickover\_14 (F1), Daenerys\_14 (F1), Dante\_14 (F1), DeadP\_14 (F1), Deb65\_14 (F1), DillTech15\_14 (F1), DoRead\_14 (F1), DocMcStuffins\_15 (F1), Donkeykong\_14 (F1), DosHalletts\_15 (F1), DotProduct\_14 (F1), Doug\_15 (F1), Eish\_14 (F1), EleanorGeorge\_14 (F1), EmiMonkey\_14 (F1), Emma\_14 (F1), Emmaloid\_16 (F1), Empress\_14 (F1), Enby\_15 (F1), Eradicator\_14 (F1), Estave1\_14 (F1), Fancypants\_14 (F1), Fastidio\_14 (F1), Filuzino\_14 (F1), Firehouse51\_15 (F1), Flathead\_15 (F1), Florinda\_14 (F1), Frankie\_15 (F1), Fruitloop\_14 (F1), GÜmbie\_14 (F1), Galactic\_14 (F1), Gandolph\_14 (F1), GigiOuiOui\_14 (F1), Girafales\_15 (F1), Girr\_14 (F1), Gorge\_14 (F1), Grimmer\_15 (F1), Guppsters\_14 (F1), Hades\_14 (F1), Hamulus\_14 (F1), Hegedechwinu\_15 (F1), Hlubikazi\_14 (F1), IMpilo\_14 (F1), IbOuu\_14 (F1), Ibhubesi\_14 (F1), Inventum\_14 (F1), IrishSherpFalk\_14 (F1), JalFarm20\_16 (F1), James\_14 (F1), Jant\_14 (F1), Jarcob\_14 (F1), Jinglebell\_13 (F1), Job42\_16 (F1), JoeyJr\_14 (F1), Kenuha5\_14 (F1), Kersh\_14 (F1), Kimberlium\_15 (F1), KingJulian\_14 (F1), KingMidas\_14 (F1), Kingsley\_15 (F1), Krakatau\_15 (F1), KristaRAM\_15 (F1), LastJedi\_14 (F1), Latretium\_15 (F1), Leozinho\_15 (F1), LittleShirley\_15 (F1), Lizziana\_14 (F1), Llama\_14 (F1), Lorde\_15 (F1), LunaBlu\_14 (F1), LunaStella\_15 (F4), MadMen\_14 (F1), Madiba\_15 (F1), Mahavrat\_14 (F1), Mantra\_14 (F1), Maravista\_14 (F1), Martik\_14 (F1), Mattes\_14 (F1), Melissauren88\_14 (F1), MilanaBonita\_15 (F1), MilleniumForce\_15 (F1), MinionDave\_15 (F1), Minnie\_15 (F1), Misha28\_15 (F1), MisterCuddles\_14 (F1), Modragons\_14 (F1), Moonbeam\_15 (F1), Mozy\_15 (F1), Ms6\_14 (F1), MulchExplorer\_16 (F1), MulchSalad\_14 (F), Mutaforma13\_14 (F1), NewHope4\_14

(F1), Nitzel\_15 (F1), Nivrat\_14 (F1), NormanBulbieJr\_14 (F1), Ochi17\_14 (F1), OfUltron\_14 (F1), Ogotogo\_17 (F1), Oksu\_15 (F1), OldBen\_14 (F1), OlympiaSaint\_14 (F1), Ovechkin\_14 (F1), OwlsT2W\_16 (F1), Pacc40\_14 (F1), Phalconet\_14 (F1), Phanphagia\_14 (F1), Phasih\_15 (F1), Phatniss\_15 (F1), PhesterPhotato\_14 (F1), Philus\_14 (F1), PhilipPhlop\_14 (F1), Piper2020\_15 (F1), Pippy\_14 (F1), Polka14\_15 (F1), Pollywog\_15 (F1), Polo2Bam\_15 (F1), PopTart\_14 (F1), Priscilla\_14 (F1), QuickMath\_14 (F1), Quico\_15 (F1), Radiance\_14 (F1), Ramsey\_15 (F1), RedBird\_14 (F1), Renaud18\_15 (F4), Rialto\_16 (F1), Rita\_14 (F1), Rockne\_14 (F1), RockyHorror\_15 (F1), Royals2015\_14 (F1), SG4\_14 (F1), Saal\_14 (F1), Sabb\_14 (F1), Sandalphon\_15 (F1), Sarma624\_15 (F1), Sassafras\_14 (F1), SassyB\_14 (F1), Seabastian\_14 (F1), Seagreen\_15 (F1), Shauna1\_14 (F1), ShiLan\_14 (F1), ShowerHandel\_14 (F1), ShroomBoi\_14 (F1), SiSi\_14 (F1), SimranZ1\_15 (F1), Slim\_16 (F1), Sparkdehlily\_14 (F1), Spartacus\_14 (F1), Spoonbill\_14 (F1), StAnnes\_14 (F1), Stap\_15 (F1), Starceвич\_15 (F1), Strokeseat\_14 (F1), SuperGrey\_15 (F1), SwagPigglett\_14 (F1), TChen\_15 (F4), TDanisky\_14 (F1), Taj\_14 (F1), Tchotchke\_15 (F1), ThetaBob\_15 (F4), TootsiePop\_15 (F1), Tootsieroll\_15 (F1), Toron\_15 (F6), Totinger\_15 (F1), Tweety\_14 (F1), Velveteen\_15 (F1), Veteran\_14 (F1), Violac\_15 (F1), Vivum\_14 (F1), Wachhund\_14 (F1), Wee\_15 (F1), Whatsapiecost\_14 (F1), Whouxphf\_14 (F1), WillSterrel\_14 (F1), XFactor\_14 (F1), Yorick\_14 (F1), Zerg\_14 (F1), Zizzle\_14 (F1),

### **Summary by clusters:**

There are 5 clusters represented in this pham: F1, F3, F4, F6, F,

Info for manual annotations of cluster F1:

- Start number 1 was manually annotated 36 times for cluster F1.
- Start number 2 was manually annotated 180 times for cluster F1.

Info for manual annotations of cluster F3:

- Start number 1 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 2 was manually annotated 4 times for cluster F4.

### **Gene Information:**

Gene: Akhila\_15 Start: 10181, Stop: 13708, Start Num: 2

Candidate Starts for Akhila\_15:

(Start: 1 @10160 has 37 MA's), (Start: 2 @10181 has 184 MA's), (3, 10193), (5, 10232), (6, 10259), (8, 10316), (10, 10361), (12, 10433), (28, 10487), (29, 10493), (33, 10556), (34, 10571), (43, 10688), (47, 10721), (51, 10763), (54, 10808), (56, 10826), (58, 10838), (62, 10910), (65, 10943), (66, 10946), (70, 10985), (73, 11027), (75, 11057), (77, 11063), (79, 11093), (81, 11129), (82, 11138), (83, 11150), (85, 11183), (90, 11246), (96, 11342), (98, 11372), (101, 11405), (102, 11408), (103, 11420), (109, 11474), (112, 11486), (119, 11540), (121, 11549), (135, 11669), (148, 11813), (151, 11873), (153, 11885), (157, 11954), (159, 11978), (160, 12017), (161, 12032), (162, 12035), (164, 12074), (165, 12092), (169, 12164), (171, 12218), (172, 12254), (173, 12260), (176, 12326), (180, 12377), (182, 12410), (183, 12434), (184, 12437), (185, 12446), (187, 12491), (188, 12494), (189, 12500), (191, 12518), (194, 12587), (195, 12593), (210, 12692), (215, 12731), (216, 12734), (222, 12764), (226, 12791),

(230, 12818), (233, 12863), (251, 12986), (259, 13034), (278, 13064), (281, 13085), (286, 13151), (291, 13259), (293, 13283), (294, 13289), (296, 13304), (299, 13319), (300, 13355), (302, 13418), (303, 13421), (304, 13433), (305, 13454), (307, 13514), (311, 13694),

Gene: Alexphander\_16 Start: 9879, Stop: 13538, Start Num: 2

Candidate Starts for Alexphander\_16:

(Start: 2 @9879 has 184 MA's), (5, 9930), (6, 9957), (8, 10014), (10, 10059), (12, 10131), (28, 10185), (29, 10191), (33, 10254), (34, 10269), (43, 10386), (47, 10419), (51, 10461), (54, 10506), (56, 10524), (58, 10536), (61, 10593), (62, 10608), (63, 10626), (65, 10641), (66, 10644), (70, 10683), (72, 10701), (73, 10725), (75, 10755), (77, 10761), (79, 10791), (81, 10827), (82, 10836), (83, 10848), (85, 10881), (86, 10896), (87, 10923), (90, 10944), (91, 10956), (92, 10965), (94, 11007), (96, 11040), (99, 11082), (100, 11094), (104, 11139), (106, 11151), (116, 11202), (117, 11211), (124, 11244), (125, 11247), (126, 11253), (130, 11265), (134, 11328), (137, 11376), (143, 11439), (144, 11442), (145, 11451), (157, 11616), (158, 11625), (160, 11676), (161, 11691), (162, 11694), (163, 11712), (164, 11733), (165, 11751), (169, 11823), (171, 11877), (172, 11913), (173, 11919), (174, 11952), (176, 11985), (180, 12036), (182, 12069), (183, 12093), (184, 12096), (185, 12105), (187, 12150), (188, 12153), (191, 12177), (196, 12267), (213, 12414), (217, 12435), (233, 12576), (238, 12600), (240, 12627), (267, 12807), (271, 12837), (279, 12909), (287, 12996), (291, 13089), (293, 13113), (294, 13119), (296, 13134), (299, 13149), (300, 13185), (302, 13248), (303, 13251), (305, 13284), (307, 13344), (311, 13524),

Gene: Aloeri\_15 Start: 9353, Stop: 12883, Start Num: 2

Candidate Starts for Aloeri\_15:

(Start: 1 @9332 has 37 MA's), (Start: 2 @9353 has 184 MA's), (3, 9365), (5, 9404), (6, 9431), (10, 9533), (12, 9605), (26, 9647), (28, 9659), (29, 9665), (33, 9728), (34, 9743), (43, 9860), (47, 9893), (49, 9911), (51, 9935), (54, 9980), (56, 9998), (58, 10010), (61, 10067), (62, 10082), (63, 10100), (65, 10115), (66, 10118), (70, 10157), (73, 10199), (75, 10229), (77, 10235), (79, 10265), (81, 10301), (82, 10310), (83, 10322), (85, 10355), (86, 10370), (87, 10397), (90, 10418), (92, 10439), (97, 10535), (98, 10544), (102, 10580), (103, 10592), (106, 10625), (109, 10646), (121, 10721), (122, 10727), (125, 10739), (135, 10841), (140, 10916), (151, 11045), (153, 11057), (157, 11126), (158, 11135), (160, 11186), (161, 11201), (162, 11204), (163, 11222), (164, 11243), (165, 11261), (169, 11333), (171, 11387), (172, 11423), (173, 11429), (174, 11462), (176, 11495), (180, 11546), (182, 11579), (183, 11603), (184, 11606), (185, 11615), (187, 11660), (188, 11663), (191, 11687), (194, 11759), (195, 11765), (226, 11963), (229, 11981), (232, 12014), (233, 12035), (244, 12137), (251, 12161), (259, 12209), (281, 12260), (286, 12326), (291, 12434), (293, 12458), (294, 12464), (296, 12479), (297, 12485), (299, 12494), (300, 12530), (302, 12593), (303, 12596), (305, 12629), (306, 12668), (307, 12689), (311, 12869),

Gene: AlpineSix\_14 Start: 9489, Stop: 13247, Start Num: 2

Candidate Starts for AlpineSix\_14:

(Start: 1 @9468 has 37 MA's), (Start: 2 @9489 has 184 MA's), (3, 9501), (5, 9540), (6, 9567), (10, 9669), (14, 9786), (16, 9834), (17, 9843), (18, 9888), (19, 9921), (20, 9930), (22, 9945), (23, 9954), (26, 10014), (27, 10017), (28, 10026), (29, 10032), (33, 10095), (34, 10110), (43, 10227), (47, 10260), (49, 10278), (51, 10302), (54, 10347), (56, 10365), (58, 10377), (61, 10434), (62, 10449), (65, 10482), (66, 10485), (70, 10524), (73, 10566), (75, 10596), (77, 10602), (79, 10632), (81, 10668), (82, 10677), (83, 10689), (85, 10722), (86, 10737), (90, 10785), (92, 10806), (97, 10902), (98, 10911), (102, 10947), (103, 10959), (106, 10992), (109, 11013), (112, 11025), (121, 11088), (122, 11094), (125, 11106), (135, 11208), (140, 11283), (151, 11412), (153, 11424), (157, 11493), (158, 11502), (160, 11553), (161, 11568), (162, 11571), (163, 11589), (164, 11610), (165, 11628), (169, 11700), (171, 11754), (172, 11790), (173, 11796), (174, 11829), (176, 11862), (180, 11913), (182, 11946), (183, 11970), (184, 11973), (185, 11982), (187, 12027), (188, 12030), (191, 12054), (194, 12126), (195, 12132), (201, 12180), (210, 12231), (215, 12270), (216, 12273), (222, 12303), (226, 12330), (230, 12357), (233, 12402), (236, 12414), (244, 12501), (251, 12525), (259, 12573), (281, 12624), (286, 12690),

(291, 12798), (293, 12822), (294, 12828), (296, 12843), (297, 12849), (299, 12858), (300, 12894), (302, 12957), (303, 12960), (305, 12993), (306, 13032), (307, 13053), (311, 13233),

Gene: ArcusAngelus\_14 Start: 9500, Stop: 13048, Start Num: 1

Candidate Starts for ArcusAngelus\_14:

(Start: 1 @9500 has 37 MA's), (Start: 2 @9521 has 184 MA's), (3, 9533), (5, 9572), (6, 9599), (8, 9656), (10, 9701), (12, 9773), (28, 9827), (29, 9833), (32, 9857), (33, 9896), (34, 9911), (43, 10028), (47, 10061), (51, 10103), (54, 10148), (56, 10166), (58, 10178), (62, 10250), (65, 10283), (66, 10286), (70, 10325), (73, 10367), (75, 10397), (77, 10403), (79, 10433), (81, 10469), (82, 10478), (83, 10490), (87, 10565), (90, 10586), (96, 10682), (97, 10703), (98, 10712), (101, 10745), (102, 10748), (103, 10760), (109, 10814), (112, 10826), (119, 10880), (121, 10889), (128, 10919), (135, 11009), (148, 11153), (151, 11213), (153, 11225), (157, 11294), (159, 11318), (160, 11357), (161, 11372), (162, 11375), (163, 11393), (164, 11414), (165, 11432), (169, 11504), (171, 11558), (172, 11594), (173, 11600), (176, 11666), (180, 11717), (182, 11750), (183, 11774), (184, 11777), (185, 11786), (187, 11831), (188, 11834), (189, 11840), (191, 11858), (194, 11927), (195, 11933), (210, 12032), (215, 12071), (216, 12074), (222, 12104), (230, 12158), (233, 12203), (251, 12326), (259, 12374), (278, 12404), (281, 12425), (286, 12491), (291, 12599), (293, 12623), (294, 12629), (296, 12644), (299, 12659), (300, 12695), (302, 12758), (303, 12761), (304, 12773), (305, 12794), (307, 12854), (311, 13034),

Gene: Ardmore\_14 Start: 9532, Stop: 13059, Start Num: 2

Candidate Starts for Ardmore\_14:

(Start: 2 @9532 has 184 MA's), (3, 9544), (5, 9583), (6, 9610), (8, 9667), (10, 9712), (12, 9784), (28, 9838), (29, 9844), (33, 9907), (34, 9922), (43, 10039), (47, 10072), (51, 10114), (54, 10159), (56, 10177), (58, 10189), (62, 10261), (65, 10294), (66, 10297), (70, 10336), (73, 10378), (75, 10408), (77, 10414), (79, 10444), (81, 10480), (82, 10489), (83, 10501), (90, 10597), (96, 10693), (98, 10723), (101, 10756), (102, 10759), (103, 10771), (109, 10825), (112, 10837), (119, 10891), (121, 10900), (135, 11020), (148, 11164), (153, 11236), (157, 11305), (159, 11329), (161, 11383), (162, 11386), (164, 11425), (165, 11443), (169, 11515), (171, 11569), (172, 11605), (173, 11611), (176, 11677), (180, 11728), (182, 11761), (183, 11785), (185, 11797), (187, 11842), (188, 11845), (189, 11851), (191, 11869), (194, 11938), (195, 11944), (210, 12043), (215, 12082), (216, 12085), (222, 12115), (226, 12142), (233, 12214), (236, 12226), (244, 12313), (251, 12337), (259, 12385), (278, 12415), (281, 12436), (286, 12502), (291, 12610), (293, 12634), (294, 12640), (296, 12655), (299, 12670), (300, 12706), (302, 12769), (303, 12772), (304, 12784), (305, 12805), (307, 12865), (311, 13045),

Gene: Aubs\_14 Start: 9530, Stop: 13198, Start Num: 2

Candidate Starts for Aubs\_14:

(Start: 1 @9509 has 37 MA's), (Start: 2 @9530 has 184 MA's), (3, 9542), (5, 9581), (6, 9608), (10, 9710), (11, 9758), (12, 9782), (28, 9836), (29, 9842), (33, 9905), (34, 9920), (43, 10037), (47, 10070), (51, 10112), (54, 10157), (56, 10175), (58, 10187), (62, 10259), (65, 10292), (66, 10295), (70, 10334), (73, 10376), (75, 10406), (77, 10412), (79, 10442), (81, 10478), (82, 10487), (83, 10499), (90, 10595), (96, 10691), (98, 10721), (101, 10754), (102, 10757), (103, 10769), (109, 10823), (112, 10835), (119, 10889), (121, 10898), (135, 11018), (148, 11162), (151, 11222), (153, 11234), (157, 11303), (159, 11327), (160, 11366), (161, 11381), (162, 11384), (164, 11423), (165, 11441), (169, 11513), (171, 11567), (172, 11603), (173, 11609), (176, 11675), (180, 11726), (182, 11759), (183, 11783), (184, 11786), (185, 11795), (187, 11840), (188, 11843), (191, 11867), (194, 11933), (195, 11939), (222, 12110), (230, 12164), (233, 12209), (254, 12368), (259, 12407), (266, 12431), (268, 12437), (269, 12443), (273, 12479), (286, 12641), (291, 12749), (293, 12773), (296, 12794), (297, 12800), (300, 12845), (302, 12908), (303, 12911), (305, 12944), (306, 12983), (307, 13004), (311, 13184),

Gene: Awesomesauce\_15 Start: 9354, Stop: 12878, Start Num: 2

Candidate Starts for Awesomesauce\_15:

(Start: 1 @9333 has 37 MA's), (Start: 2 @9354 has 184 MA's), (3, 9366), (5, 9405), (6, 9432), (10, 9534), (12, 9606), (26, 9648), (28, 9660), (29, 9666), (33, 9729), (34, 9744), (43, 9861), (47, 9894), (49, 9912), (51, 9936), (54, 9981), (56, 9999), (58, 10011), (61, 10068), (62, 10083), (63, 10101), (65, 10116), (66, 10119), (70, 10158), (73, 10200), (75, 10230), (77, 10236), (79, 10266), (81, 10302), (82, 10311), (83, 10323), (85, 10356), (86, 10371), (87, 10398), (90, 10419), (92, 10440), (97, 10536), (98, 10545), (102, 10581), (103, 10593), (106, 10626), (109, 10647), (121, 10722), (122, 10728), (125, 10740), (135, 10842), (140, 10917), (151, 11046), (153, 11058), (157, 11127), (158, 11136), (160, 11187), (161, 11202), (162, 11205), (163, 11223), (164, 11244), (165, 11262), (169, 11334), (171, 11388), (172, 11424), (173, 11430), (176, 11496), (180, 11547), (182, 11580), (183, 11604), (184, 11607), (185, 11616), (187, 11661), (188, 11664), (191, 11688), (194, 11754), (195, 11760), (226, 11958), (229, 11976), (232, 12009), (233, 12030), (244, 12132), (251, 12156), (259, 12204), (281, 12255), (286, 12321), (291, 12429), (293, 12453), (294, 12459), (296, 12474), (297, 12480), (299, 12489), (300, 12525), (302, 12588), (303, 12591), (305, 12624), (306, 12663), (307, 12684), (311, 12864),

Gene: Batiatus\_14 Start: 9531, Stop: 13061, Start Num: 2

Candidate Starts for Batiatus\_14:

(Start: 2 @9531 has 184 MA's), (3, 9543), (5, 9582), (6, 9609), (8, 9666), (10, 9711), (12, 9783), (26, 9825), (28, 9837), (29, 9843), (32, 9867), (33, 9906), (34, 9921), (43, 10038), (47, 10071), (51, 10113), (54, 10158), (56, 10176), (58, 10188), (62, 10260), (65, 10293), (66, 10296), (70, 10335), (73, 10377), (75, 10407), (77, 10413), (79, 10443), (81, 10479), (82, 10488), (83, 10500), (85, 10533), (90, 10596), (96, 10692), (98, 10722), (101, 10755), (102, 10758), (103, 10770), (109, 10824), (112, 10836), (119, 10890), (121, 10899), (135, 11019), (148, 11163), (151, 11223), (153, 11235), (157, 11304), (159, 11328), (160, 11367), (161, 11382), (162, 11385), (164, 11424), (165, 11442), (169, 11514), (171, 11568), (172, 11604), (173, 11610), (176, 11676), (180, 11727), (182, 11760), (183, 11784), (184, 11787), (185, 11796), (187, 11841), (188, 11844), (189, 11850), (191, 11868), (194, 11937), (195, 11943), (210, 12042), (226, 12141), (233, 12213), (244, 12315), (251, 12339), (259, 12387), (278, 12417), (281, 12438), (286, 12504), (291, 12612), (293, 12636), (294, 12642), (296, 12657), (299, 12672), (300, 12708), (302, 12771), (303, 12774), (304, 12786), (305, 12807), (307, 12867), (311, 13047),

Gene: Beakin\_15 Start: 9346, Stop: 12870, Start Num: 2

Candidate Starts for Beakin\_15:

(Start: 1 @9325 has 37 MA's), (Start: 2 @9346 has 184 MA's), (5, 9397), (6, 9424), (8, 9481), (10, 9526), (12, 9598), (28, 9652), (29, 9658), (33, 9721), (34, 9736), (43, 9853), (47, 9886), (51, 9928), (54, 9973), (56, 9991), (58, 10003), (62, 10075), (65, 10108), (66, 10111), (70, 10150), (73, 10192), (75, 10222), (77, 10228), (79, 10258), (81, 10294), (82, 10303), (83, 10315), (85, 10348), (90, 10411), (96, 10507), (98, 10537), (101, 10570), (102, 10573), (103, 10585), (109, 10639), (112, 10651), (119, 10705), (121, 10714), (135, 10834), (140, 10909), (151, 11038), (153, 11050), (157, 11119), (158, 11128), (160, 11179), (161, 11194), (162, 11197), (163, 11215), (164, 11236), (165, 11254), (169, 11326), (171, 11380), (172, 11416), (173, 11422), (176, 11488), (180, 11539), (182, 11572), (183, 11596), (184, 11599), (185, 11608), (187, 11653), (188, 11656), (189, 11662), (191, 11680), (194, 11749), (195, 11755), (210, 11854), (215, 11893), (216, 11896), (222, 11926), (230, 11980), (233, 12025), (251, 12148), (259, 12196), (278, 12226), (281, 12247), (286, 12313), (291, 12421), (293, 12445), (294, 12451), (296, 12466), (299, 12481), (300, 12517), (302, 12580), (303, 12583), (304, 12595), (305, 12616), (307, 12676), (311, 12856),

Gene: BigPhil\_15 Start: 9316, Stop: 12867, Start Num: 1

Candidate Starts for BigPhil\_15:

(Start: 1 @9316 has 37 MA's), (Start: 2 @9337 has 184 MA's), (3, 9349), (5, 9388), (6, 9415), (10, 9517), (11, 9565), (12, 9589), (26, 9631), (28, 9643), (29, 9649), (33, 9712), (34, 9727), (43, 9844), (47, 9877), (51, 9919), (54, 9964), (56, 9982), (58, 9994), (62, 10066), (65, 10099), (66, 10102), (70, 10141), (73, 10183), (75, 10213), (77, 10219), (79, 10249), (81, 10285), (82, 10294), (83, 10306), (90,

10402), (96, 10498), (98, 10528), (101, 10561), (102, 10564), (103, 10576), (109, 10630), (112, 10642), (119, 10696), (121, 10705), (135, 10825), (148, 10969), (151, 11029), (153, 11041), (157, 11110), (158, 11119), (160, 11173), (161, 11188), (162, 11191), (164, 11230), (165, 11248), (169, 11320), (171, 11374), (172, 11410), (173, 11416), (174, 11449), (176, 11482), (180, 11533), (182, 11566), (183, 11590), (184, 11593), (185, 11602), (187, 11647), (188, 11650), (189, 11656), (191, 11674), (194, 11743), (195, 11749), (210, 11848), (226, 11947), (229, 11965), (233, 12019), (244, 12121), (251, 12145), (259, 12193), (278, 12223), (281, 12244), (286, 12310), (291, 12418), (293, 12442), (294, 12448), (296, 12463), (299, 12478), (300, 12514), (302, 12577), (303, 12580), (304, 12592), (305, 12613), (307, 12673), (311, 12853),

Gene: Bipolar\_14 Start: 9500, Stop: 13027, Start Num: 2

Candidate Starts for Bipolar\_14:

(Start: 2 @9500 has 184 MA's), (3, 9512), (5, 9551), (6, 9578), (8, 9635), (10, 9680), (12, 9752), (26, 9794), (27, 9797), (28, 9806), (29, 9812), (33, 9875), (34, 9890), (43, 10007), (47, 10040), (51, 10082), (54, 10127), (56, 10145), (58, 10157), (62, 10229), (65, 10262), (66, 10265), (70, 10304), (73, 10346), (75, 10376), (77, 10382), (79, 10412), (81, 10448), (82, 10457), (83, 10469), (90, 10565), (96, 10661), (98, 10691), (101, 10724), (102, 10727), (103, 10739), (109, 10793), (112, 10805), (119, 10859), (121, 10868), (135, 10988), (148, 11132), (151, 11192), (153, 11204), (157, 11273), (159, 11297), (161, 11351), (162, 11354), (164, 11393), (165, 11411), (169, 11483), (171, 11537), (172, 11573), (173, 11579), (176, 11645), (180, 11696), (182, 11729), (183, 11753), (184, 11756), (185, 11765), (187, 11810), (188, 11813), (189, 11819), (191, 11837), (194, 11906), (195, 11912), (210, 12011), (212, 12032), (226, 12110), (229, 12128), (233, 12182), (236, 12194), (244, 12281), (251, 12305), (259, 12353), (278, 12383), (281, 12404), (286, 12470), (291, 12578), (293, 12602), (294, 12608), (296, 12623), (299, 12638), (300, 12674), (302, 12737), (303, 12740), (304, 12752), (305, 12773), (307, 12833), (311, 13013),

Gene: Blexus\_14 Start: 9481, Stop: 13197, Start Num: 1

Candidate Starts for Blexus\_14:

(Start: 1 @9481 has 37 MA's), (Start: 2 @9502 has 184 MA's), (3, 9514), (5, 9553), (6, 9580), (10, 9682), (11, 9730), (12, 9754), (26, 9796), (28, 9808), (29, 9814), (33, 9877), (34, 9892), (43, 10009), (47, 10042), (51, 10084), (54, 10129), (56, 10147), (58, 10159), (62, 10231), (65, 10264), (66, 10267), (70, 10306), (73, 10348), (75, 10378), (77, 10384), (79, 10414), (81, 10450), (82, 10459), (83, 10471), (85, 10504), (90, 10567), (92, 10588), (97, 10684), (98, 10693), (102, 10729), (103, 10741), (106, 10774), (109, 10795), (119, 10861), (121, 10870), (125, 10888), (135, 10990), (140, 11065), (148, 11134), (151, 11194), (153, 11206), (157, 11275), (158, 11284), (160, 11338), (161, 11353), (162, 11356), (163, 11374), (164, 11395), (165, 11413), (168, 11458), (169, 11485), (171, 11539), (172, 11575), (173, 11581), (174, 11614), (176, 11647), (180, 11698), (182, 11731), (183, 11755), (184, 11758), (185, 11767), (187, 11812), (188, 11815), (191, 11839), (196, 11929), (213, 12076), (217, 12097), (233, 12238), (238, 12262), (240, 12289), (267, 12469), (271, 12499), (279, 12571), (287, 12658), (291, 12751), (293, 12775), (294, 12781), (296, 12796), (297, 12802), (299, 12811), (300, 12847), (302, 12910), (303, 12913), (305, 12946), (306, 12985), (307, 13006), (311, 13183),

Gene: BlueCrab\_14 Start: 9486, Stop: 13181, Start Num: 2

Candidate Starts for BlueCrab\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751),

(187, 11796), (188, 11799), (191, 11823), (196, 11913), (213, 12060), (217, 12081), (233, 12222), (238, 12246), (240, 12273), (267, 12453), (271, 12483), (279, 12555), (287, 12642), (291, 12735), (293, 12759), (294, 12765), (296, 12780), (297, 12786), (299, 12795), (300, 12831), (302, 12894), (303, 12897), (305, 12930), (306, 12969), (307, 12990), (311, 13167),

Gene: BobaPhett\_14 Start: 9483, Stop: 13010, Start Num: 2

Candidate Starts for BobaPhett\_14:

(Start: 1 @9462 has 37 MA's), (Start: 2 @9483 has 184 MA's), (3, 9495), (5, 9534), (6, 9561), (10, 9663), (11, 9711), (12, 9735), (28, 9789), (29, 9795), (33, 9858), (34, 9873), (43, 9990), (47, 10023), (49, 10041), (51, 10065), (54, 10110), (56, 10128), (58, 10140), (62, 10212), (65, 10245), (66, 10248), (70, 10287), (73, 10329), (75, 10359), (77, 10365), (79, 10395), (81, 10431), (82, 10440), (83, 10452), (85, 10485), (86, 10500), (87, 10527), (90, 10548), (91, 10560), (92, 10569), (97, 10665), (98, 10674), (102, 10710), (103, 10722), (106, 10755), (109, 10776), (121, 10851), (125, 10869), (135, 10971), (140, 11046), (151, 11175), (153, 11187), (157, 11256), (160, 11319), (161, 11334), (162, 11337), (163, 11355), (164, 11376), (165, 11394), (169, 11466), (171, 11520), (172, 11556), (173, 11562), (176, 11628), (180, 11679), (182, 11712), (183, 11736), (184, 11739), (185, 11748), (187, 11793), (188, 11796), (189, 11802), (191, 11820), (194, 11889), (195, 11895), (210, 11994), (215, 12033), (216, 12036), (222, 12066), (230, 12120), (233, 12165), (251, 12288), (259, 12336), (278, 12366), (281, 12387), (286, 12453), (288, 12477), (291, 12561), (293, 12585), (294, 12591), (296, 12606), (299, 12621), (300, 12657), (302, 12720), (303, 12723), (304, 12735), (305, 12756), (307, 12816), (311, 12996),

Gene: Bobi\_16 Start: 9900, Stop: 13598, Start Num: 2

Candidate Starts for Bobi\_16:

(Start: 2 @9900 has 184 MA's), (5, 9951), (6, 9978), (8, 10035), (10, 10080), (12, 10152), (26, 10194), (27, 10197), (28, 10206), (29, 10212), (33, 10275), (34, 10290), (43, 10407), (47, 10440), (51, 10482), (54, 10527), (56, 10545), (58, 10557), (62, 10629), (65, 10662), (66, 10665), (70, 10704), (73, 10746), (75, 10776), (77, 10782), (79, 10812), (81, 10848), (82, 10857), (83, 10869), (90, 10965), (96, 11061), (98, 11091), (101, 11124), (102, 11127), (103, 11139), (109, 11193), (112, 11205), (119, 11259), (121, 11268), (135, 11388), (148, 11532), (151, 11592), (153, 11604), (157, 11673), (159, 11697), (160, 11736), (161, 11751), (162, 11754), (163, 11772), (164, 11793), (165, 11811), (169, 11883), (171, 11937), (172, 11973), (173, 11979), (174, 12012), (176, 12045), (178, 12066), (180, 12096), (182, 12129), (183, 12153), (184, 12156), (185, 12165), (187, 12210), (188, 12213), (191, 12237), (196, 12327), (213, 12474), (217, 12495), (233, 12636), (238, 12660), (240, 12687), (267, 12867), (271, 12897), (279, 12969), (287, 13056), (291, 13149), (293, 13173), (294, 13179), (296, 13194), (299, 13209), (300, 13245), (302, 13308), (303, 13311), (304, 13323), (305, 13344), (307, 13404), (311, 13584),

Gene: BodEinwohner17\_14 Start: 9465, Stop: 13181, Start Num: 1

Candidate Starts for BodEinwohner17\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751), (187, 11796), (188, 11799), (191, 11823), (196, 11913), (213, 12060), (217, 12081), (233, 12222), (238, 12246), (240, 12273), (267, 12453), (271, 12483), (279, 12555), (287, 12642), (291, 12735), (293, 12759), (294, 12765), (296, 12780), (297, 12786), (299, 12795), (300, 12831), (302, 12894), (303, 12897), (305, 12930), (306, 12969), (307, 12990), (311, 13167),



Gene: Boomer\_15 Start: 9322, Stop: 12828, Start Num: 1

Candidate Starts for Boomer\_15:

(Start: 1 @9322 has 37 MA's), (Start: 2 @9343 has 184 MA's), (3, 9355), (5, 9394), (6, 9421), (8, 9478), (10, 9523), (12, 9595), (26, 9637), (27, 9640), (28, 9649), (29, 9655), (33, 9718), (34, 9733), (43, 9850), (47, 9883), (51, 9925), (54, 9970), (56, 9988), (58, 10000), (62, 10072), (65, 10105), (66, 10108), (70, 10147), (73, 10189), (75, 10219), (77, 10225), (79, 10255), (81, 10291), (82, 10300), (83, 10312), (90, 10408), (94, 10471), (99, 10546), (104, 10603), (106, 10615), (112, 10636), (116, 10666), (124, 10708), (125, 10711), (126, 10717), (130, 10729), (145, 10915), (155, 11062), (157, 11077), (159, 11101), (161, 11152), (162, 11155), (163, 11173), (164, 11194), (165, 11212), (169, 11284), (171, 11338), (172, 11374), (173, 11380), (176, 11446), (180, 11497), (182, 11530), (183, 11554), (184, 11557), (185, 11566), (187, 11611), (188, 11614), (189, 11620), (191, 11638), (194, 11707), (195, 11713), (210, 11812), (215, 11851), (216, 11854), (222, 11884), (226, 11911), (230, 11938), (233, 11983), (251, 12106), (271, 12154), (276, 12184), (281, 12205), (286, 12271), (291, 12379), (293, 12403), (294, 12409), (296, 12424), (299, 12439), (300, 12475), (302, 12538), (303, 12541), (304, 12553), (305, 12574), (307, 12634), (311, 12814),

Gene: Brocalys\_14 Start: 9475, Stop: 12996, Start Num: 2

Candidate Starts for Brocalys\_14:

(Start: 1 @9454 has 37 MA's), (Start: 2 @9475 has 184 MA's), (3, 9487), (5, 9526), (6, 9553), (8, 9610), (10, 9655), (12, 9727), (25, 9751), (29, 9787), (33, 9850), (34, 9865), (43, 9982), (47, 10015), (49, 10033), (51, 10057), (54, 10102), (56, 10120), (58, 10132), (62, 10204), (65, 10237), (66, 10240), (70, 10279), (73, 10321), (75, 10351), (77, 10357), (79, 10387), (81, 10423), (82, 10432), (83, 10444), (85, 10477), (86, 10492), (87, 10519), (90, 10540), (91, 10552), (92, 10561), (97, 10657), (98, 10666), (101, 10699), (102, 10702), (103, 10714), (106, 10747), (109, 10768), (121, 10843), (122, 10849), (125, 10861), (135, 10963), (140, 11038), (151, 11167), (153, 11179), (157, 11245), (160, 11305), (161, 11320), (162, 11323), (163, 11341), (164, 11362), (165, 11380), (169, 11452), (171, 11506), (172, 11542), (173, 11548), (174, 11581), (176, 11614), (180, 11665), (182, 11698), (183, 11722), (184, 11725), (185, 11734), (187, 11779), (188, 11782), (189, 11788), (191, 11806), (194, 11875), (195, 11881), (210, 11980), (215, 12019), (216, 12022), (222, 12052), (226, 12079), (230, 12106), (233, 12151), (251, 12274), (259, 12322), (278, 12352), (281, 12373), (286, 12439), (291, 12547), (293, 12571), (294, 12577), (296, 12592), (299, 12607), (300, 12643), (302, 12706), (303, 12709), (304, 12721), (305, 12742), (307, 12802), (311, 12982),

Gene: Brookers\_15 Start: 9337, Stop: 12867, Start Num: 2

Candidate Starts for Brookers\_15:

(Start: 1 @9316 has 37 MA's), (Start: 2 @9337 has 184 MA's), (3, 9349), (5, 9388), (6, 9415), (10, 9517), (11, 9565), (12, 9589), (26, 9631), (28, 9643), (29, 9649), (33, 9712), (34, 9727), (43, 9844), (47, 9877), (51, 9919), (54, 9964), (56, 9982), (58, 9994), (62, 10066), (65, 10099), (66, 10102), (70, 10141), (73, 10183), (75, 10213), (77, 10219), (79, 10249), (81, 10285), (82, 10294), (83, 10306), (90, 10402), (96, 10498), (98, 10528), (101, 10561), (102, 10564), (103, 10576), (109, 10630), (112, 10642), (119, 10696), (121, 10705), (135, 10825), (148, 10969), (151, 11029), (153, 11041), (157, 11110), (158, 11119), (160, 11173), (161, 11188), (162, 11191), (164, 11230), (165, 11248), (169, 11320), (171, 11374), (172, 11410), (173, 11416), (174, 11449), (176, 11482), (180, 11533), (182, 11566), (183, 11590), (184, 11593), (185, 11602), (187, 11647), (188, 11650), (189, 11656), (191, 11674), (194, 11743), (195, 11749), (210, 11848), (226, 11947), (229, 11965), (233, 12019), (244, 12121), (251, 12145), (259, 12193), (278, 12223), (281, 12244), (286, 12310), (291, 12418), (293, 12442), (294, 12448), (296, 12463), (299, 12478), (300, 12514), (302, 12577), (303, 12580), (304, 12592), (305, 12613), (307, 12673), (311, 12853),

Gene: Brushbloom\_16 Start: 9364, Stop: 12891, Start Num: 2

Candidate Starts for Brushbloom\_16:

(Start: 2 @9364 has 184 MA's), (3, 9376), (5, 9415), (6, 9442), (8, 9499), (10, 9544), (12, 9616), (28, 9670), (29, 9676), (32, 9700), (33, 9739), (34, 9754), (43, 9871), (47, 9904), (51, 9946), (54, 9991), (56, 10009), (58, 10021), (62, 10093), (65, 10126), (66, 10129), (70, 10168), (73, 10210), (75, 10240), (77, 10246), (79, 10276), (81, 10312), (82, 10321), (83, 10333), (90, 10429), (96, 10525), (98, 10555), (101, 10588), (102, 10591), (103, 10603), (109, 10657), (112, 10669), (119, 10723), (121, 10732), (135, 10852), (148, 10996), (151, 11056), (153, 11068), (157, 11137), (159, 11161), (161, 11215), (162, 11218), (163, 11236), (164, 11257), (165, 11275), (169, 11347), (171, 11401), (172, 11437), (173, 11443), (176, 11509), (180, 11560), (182, 11593), (183, 11617), (184, 11620), (185, 11629), (187, 11674), (188, 11677), (189, 11683), (191, 11701), (194, 11770), (195, 11776), (210, 11875), (215, 11914), (216, 11917), (222, 11947), (230, 12001), (233, 12046), (251, 12169), (259, 12217), (278, 12247), (281, 12268), (286, 12334), (291, 12442), (293, 12466), (294, 12472), (296, 12487), (299, 12502), (300, 12538), (302, 12601), (303, 12604), (304, 12616), (305, 12637), (307, 12697), (311, 12877),

Gene: Bubbles123\_15 Start: 10056, Stop: 13727, Start Num: 2

Candidate Starts for Bubbles123\_15:

(Start: 2 @10056 has 184 MA's), (5, 10107), (6, 10134), (8, 10191), (10, 10236), (11, 10284), (12, 10308), (28, 10362), (29, 10368), (33, 10431), (34, 10446), (43, 10563), (47, 10596), (49, 10614), (51, 10638), (54, 10683), (56, 10701), (58, 10713), (61, 10770), (62, 10785), (63, 10803), (65, 10818), (66, 10821), (70, 10860), (73, 10902), (75, 10932), (77, 10938), (79, 10968), (81, 11004), (82, 11013), (83, 11025), (85, 11058), (90, 11121), (91, 11133), (97, 11238), (98, 11247), (101, 11280), (102, 11283), (103, 11295), (106, 11328), (109, 11349), (112, 11361), (121, 11424), (122, 11430), (125, 11442), (135, 11544), (140, 11619), (151, 11748), (153, 11760), (157, 11826), (160, 11886), (161, 11901), (162, 11904), (163, 11922), (164, 11943), (165, 11961), (171, 12087), (172, 12123), (173, 12129), (174, 12162), (176, 12195), (180, 12246), (182, 12279), (183, 12303), (184, 12306), (185, 12315), (187, 12360), (188, 12363), (191, 12387), (194, 12456), (195, 12462), (222, 12633), (230, 12687), (233, 12732), (254, 12891), (259, 12930), (266, 12954), (268, 12960), (269, 12966), (273, 13002), (286, 13170), (291, 13278), (293, 13302), (294, 13308), (296, 13323), (299, 13338), (300, 13374), (302, 13437), (303, 13440), (304, 13452), (305, 13473), (307, 13533), (311, 13713),

Gene: Burwell21\_14 Start: 9490, Stop: 13017, Start Num: 2

Candidate Starts for Burwell21\_14:

(Start: 1 @9469 has 37 MA's), (Start: 2 @9490 has 184 MA's), (3, 9502), (5, 9541), (6, 9568), (10, 9670), (11, 9718), (12, 9742), (28, 9796), (29, 9802), (33, 9865), (34, 9880), (43, 9997), (47, 10030), (49, 10048), (51, 10072), (54, 10117), (56, 10135), (58, 10147), (62, 10219), (65, 10252), (66, 10255), (70, 10294), (73, 10336), (75, 10366), (77, 10372), (79, 10402), (81, 10438), (82, 10447), (83, 10459), (85, 10492), (86, 10507), (87, 10534), (90, 10555), (91, 10567), (92, 10576), (97, 10672), (98, 10681), (102, 10717), (103, 10729), (106, 10762), (109, 10783), (121, 10858), (125, 10876), (135, 10978), (140, 11053), (151, 11182), (153, 11194), (157, 11263), (160, 11326), (161, 11341), (162, 11344), (163, 11362), (164, 11383), (165, 11401), (169, 11473), (171, 11527), (172, 11563), (173, 11569), (176, 11635), (180, 11686), (182, 11719), (183, 11743), (184, 11746), (185, 11755), (187, 11800), (188, 11803), (189, 11809), (191, 11827), (194, 11896), (195, 11902), (210, 12001), (215, 12040), (216, 12043), (222, 12073), (230, 12127), (233, 12172), (251, 12295), (259, 12343), (278, 12373), (281, 12394), (286, 12460), (288, 12484), (291, 12568), (293, 12592), (294, 12598), (296, 12613), (299, 12628), (300, 12664), (302, 12727), (303, 12730), (304, 12742), (305, 12763), (307, 12823), (311, 13003),

Gene: BuzzLyseyear\_16 Start: 9879, Stop: 13403, Start Num: 2

Candidate Starts for BuzzLyseyear\_16:

(Start: 2 @9879 has 184 MA's), (5, 9930), (6, 9957), (8, 10014), (10, 10059), (12, 10131), (28, 10185), (29, 10191), (33, 10254), (34, 10269), (43, 10386), (47, 10419), (49, 10437), (51, 10461), (54, 10506), (56, 10524), (58, 10536), (62, 10608), (65, 10641), (66, 10644), (70, 10683), (73, 10725), (75, 10755), (77, 10761), (79, 10791), (81, 10827), (82, 10836), (83, 10848), (90, 10944), (97, 11061), (98, 11070),

(101, 11103), (102, 11106), (103, 11118), (109, 11172), (112, 11184), (119, 11238), (121, 11247), (135, 11367), (148, 11511), (151, 11571), (153, 11583), (157, 11652), (159, 11676), (161, 11730), (162, 11733), (164, 11772), (165, 11790), (169, 11862), (171, 11916), (172, 11952), (173, 11958), (176, 12024), (180, 12075), (182, 12108), (183, 12132), (184, 12135), (185, 12144), (187, 12189), (188, 12192), (189, 12198), (191, 12216), (194, 12285), (195, 12291), (210, 12390), (226, 12489), (229, 12507), (233, 12561), (244, 12660), (251, 12684), (259, 12732), (278, 12762), (281, 12783), (286, 12849), (291, 12957), (293, 12981), (294, 12987), (296, 13002), (299, 13017), (300, 13053), (302, 13116), (303, 13119), (305, 13152), (306, 13191), (307, 13212), (311, 13389),

Gene: ByChance\_14 Start: 9493, Stop: 13020, Start Num: 2

Candidate Starts for ByChance\_14:

(Start: 1 @9472 has 37 MA's), (Start: 2 @9493 has 184 MA's), (3, 9505), (5, 9544), (6, 9571), (10, 9673), (11, 9721), (12, 9745), (26, 9787), (27, 9790), (28, 9799), (29, 9805), (33, 9868), (34, 9883), (43, 10000), (47, 10033), (49, 10051), (51, 10075), (54, 10120), (56, 10138), (58, 10150), (62, 10222), (65, 10255), (66, 10258), (70, 10297), (73, 10339), (75, 10369), (77, 10375), (79, 10405), (81, 10441), (82, 10450), (83, 10462), (85, 10495), (86, 10510), (90, 10558), (91, 10570), (97, 10675), (98, 10684), (102, 10720), (103, 10732), (106, 10765), (109, 10786), (121, 10861), (125, 10879), (135, 10981), (140, 11056), (151, 11185), (153, 11197), (157, 11266), (160, 11329), (161, 11344), (162, 11347), (163, 11365), (164, 11386), (165, 11404), (169, 11476), (171, 11530), (172, 11566), (173, 11572), (174, 11605), (176, 11638), (180, 11689), (182, 11722), (183, 11746), (184, 11749), (185, 11758), (187, 11803), (188, 11806), (189, 11812), (191, 11830), (194, 11899), (195, 11905), (210, 12004), (215, 12043), (216, 12046), (222, 12076), (230, 12130), (233, 12175), (251, 12298), (259, 12346), (278, 12376), (281, 12397), (286, 12463), (291, 12571), (293, 12595), (294, 12601), (296, 12616), (299, 12631), (300, 12667), (302, 12730), (303, 12733), (304, 12745), (305, 12766), (306, 12805), (307, 12826), (311, 13006),

Gene: Byougenkin\_14 Start: 9503, Stop: 13030, Start Num: 2

Candidate Starts for Byougenkin\_14:

(Start: 2 @9503 has 184 MA's), (3, 9515), (5, 9554), (6, 9581), (8, 9638), (10, 9683), (12, 9755), (26, 9797), (27, 9800), (28, 9809), (29, 9815), (33, 9878), (34, 9893), (43, 10010), (47, 10043), (51, 10085), (54, 10130), (56, 10148), (58, 10160), (62, 10232), (65, 10265), (66, 10268), (70, 10307), (73, 10349), (75, 10379), (77, 10385), (79, 10415), (81, 10451), (82, 10460), (83, 10472), (90, 10568), (96, 10664), (98, 10694), (101, 10727), (102, 10730), (103, 10742), (109, 10796), (112, 10808), (119, 10862), (121, 10871), (135, 10991), (148, 11135), (151, 11195), (153, 11207), (157, 11276), (159, 11300), (161, 11354), (162, 11357), (164, 11396), (165, 11414), (171, 11540), (172, 11576), (173, 11582), (176, 11648), (180, 11699), (182, 11732), (183, 11756), (184, 11759), (185, 11768), (187, 11813), (188, 11816), (189, 11822), (191, 11840), (194, 11909), (195, 11915), (210, 12014), (215, 12053), (216, 12056), (222, 12086), (226, 12113), (233, 12185), (236, 12197), (244, 12284), (251, 12308), (259, 12356), (278, 12386), (281, 12407), (286, 12473), (291, 12581), (293, 12605), (294, 12611), (296, 12626), (299, 12641), (300, 12677), (302, 12740), (303, 12743), (304, 12755), (305, 12776), (307, 12836), (311, 13016),

Gene: Cabrinians\_14 Start: 9483, Stop: 13010, Start Num: 2

Candidate Starts for Cabrinians\_14:

(Start: 1 @9462 has 37 MA's), (Start: 2 @9483 has 184 MA's), (3, 9495), (5, 9534), (6, 9561), (10, 9663), (11, 9711), (12, 9735), (26, 9777), (27, 9780), (28, 9789), (29, 9795), (33, 9858), (34, 9873), (43, 9990), (47, 10023), (49, 10041), (51, 10065), (54, 10110), (56, 10128), (58, 10140), (62, 10212), (65, 10245), (66, 10248), (70, 10287), (73, 10329), (75, 10359), (77, 10365), (79, 10395), (81, 10431), (82, 10440), (83, 10452), (85, 10485), (86, 10500), (90, 10548), (91, 10560), (97, 10665), (98, 10674), (102, 10710), (103, 10722), (106, 10755), (109, 10776), (121, 10851), (125, 10869), (135, 10971), (140, 11046), (151, 11175), (153, 11187), (157, 11256), (160, 11319), (161, 11334), (162, 11337), (163, 11355), (164, 11376), (165, 11394), (169, 11466), (171, 11520), (172, 11556), (173, 11562), (174, 11595), (176, 11628), (180, 11679), (182, 11712), (183, 11736), (184, 11739), (185, 11748), (187,

11793), (188, 11796), (189, 11802), (191, 11820), (194, 11889), (195, 11895), (210, 11994), (215, 12033), (216, 12036), (222, 12066), (230, 12120), (233, 12165), (251, 12288), (259, 12336), (278, 12366), (281, 12387), (286, 12453), (291, 12561), (293, 12585), (294, 12591), (296, 12606), (299, 12621), (300, 12657), (302, 12720), (303, 12723), (304, 12735), (305, 12756), (306, 12795), (307, 12816), (311, 12996),

Gene: CaptainTrips\_15 Start: 10180, Stop: 13704, Start Num: 2

Candidate Starts for CaptainTrips\_15:

(Start: 2 @10180 has 184 MA's), (3, 10192), (5, 10231), (6, 10258), (8, 10315), (10, 10360), (12, 10432), (26, 10474), (27, 10477), (28, 10486), (29, 10492), (33, 10555), (34, 10570), (43, 10687), (47, 10720), (51, 10762), (54, 10807), (56, 10825), (58, 10837), (62, 10909), (65, 10942), (66, 10945), (70, 10984), (73, 11026), (75, 11056), (77, 11062), (79, 11092), (81, 11128), (82, 11137), (83, 11149), (90, 11245), (96, 11341), (98, 11371), (101, 11404), (102, 11407), (103, 11419), (109, 11473), (112, 11485), (119, 11539), (121, 11548), (135, 11668), (148, 11812), (151, 11872), (153, 11884), (157, 11953), (159, 11977), (161, 12028), (162, 12031), (164, 12070), (165, 12088), (171, 12214), (172, 12250), (173, 12256), (176, 12322), (180, 12373), (182, 12406), (183, 12430), (184, 12433), (185, 12442), (187, 12487), (188, 12490), (189, 12496), (191, 12514), (194, 12583), (195, 12589), (210, 12688), (215, 12727), (216, 12730), (222, 12760), (226, 12787), (230, 12814), (233, 12859), (251, 12982), (259, 13030), (278, 13060), (281, 13081), (286, 13147), (291, 13255), (293, 13279), (294, 13285), (296, 13300), (299, 13315), (300, 13351), (302, 13414), (303, 13417), (304, 13429), (305, 13450), (307, 13510), (311, 13690),

Gene: Cerasum\_15 Start: 9337, Stop: 12867, Start Num: 2

Candidate Starts for Cerasum\_15:

(Start: 1 @9316 has 37 MA's), (Start: 2 @9337 has 184 MA's), (3, 9349), (5, 9388), (6, 9415), (10, 9517), (11, 9565), (12, 9589), (26, 9631), (28, 9643), (29, 9649), (33, 9712), (34, 9727), (43, 9844), (47, 9877), (51, 9919), (54, 9964), (56, 9982), (58, 9994), (62, 10066), (65, 10099), (66, 10102), (70, 10141), (73, 10183), (75, 10213), (77, 10219), (79, 10249), (81, 10285), (82, 10294), (83, 10306), (90, 10402), (96, 10498), (98, 10528), (101, 10561), (102, 10564), (103, 10576), (109, 10630), (112, 10642), (119, 10696), (121, 10705), (135, 10825), (148, 10969), (151, 11029), (153, 11041), (157, 11110), (158, 11119), (160, 11173), (161, 11188), (162, 11191), (164, 11230), (165, 11248), (169, 11320), (171, 11374), (172, 11410), (173, 11416), (174, 11449), (176, 11482), (180, 11533), (182, 11566), (183, 11590), (184, 11593), (185, 11602), (187, 11647), (188, 11650), (189, 11656), (191, 11674), (194, 11743), (195, 11749), (210, 11848), (226, 11947), (229, 11965), (233, 12019), (244, 12121), (251, 12145), (259, 12193), (278, 12223), (281, 12244), (286, 12310), (291, 12418), (293, 12442), (294, 12448), (296, 12463), (299, 12478), (300, 12514), (302, 12577), (303, 12580), (304, 12592), (305, 12613), (307, 12673), (311, 12853),

Gene: Che8\_14 Start: 9469, Stop: 13035, Start Num: 1

Candidate Starts for Che8\_14:

(Start: 1 @9469 has 37 MA's), (Start: 2 @9490 has 184 MA's), (3, 9502), (5, 9541), (6, 9568), (10, 9670), (11, 9718), (12, 9742), (27, 9787), (28, 9796), (29, 9802), (33, 9865), (34, 9880), (40, 9982), (42, 9997), (46, 10048), (47, 10051), (48, 10060), (52, 10111), (53, 10126), (57, 10159), (59, 10189), (64, 10255), (65, 10264), (67, 10276), (68, 10291), (73, 10342), (74, 10345), (82, 10453), (85, 10498), (91, 10564), (92, 10573), (98, 10678), (99, 10690), (102, 10714), (111, 10789), (122, 10864), (127, 10885), (149, 11062), (160, 11227), (161, 11242), (162, 11245), (163, 11263), (164, 11284), (165, 11302), (169, 11374), (171, 11428), (172, 11464), (173, 11470), (174, 11503), (176, 11536), (178, 11557), (180, 11587), (182, 11620), (183, 11644), (184, 11647), (185, 11656), (187, 11701), (188, 11704), (191, 11728), (194, 11797), (195, 11803), (206, 11869), (207, 11872), (208, 11875), (210, 11893), (221, 11962), (227, 11995), (231, 12022), (237, 12085), (252, 12205), (260, 12259), (264, 12268), (267, 12274), (272, 12310), (281, 12415), (286, 12481), (291, 12589), (293, 12613), (294, 12619), (296, 12634), (299, 12649), (300, 12685), (302, 12748), (303, 12751), (306, 12823), (307, 12844), (311, 13021),

Gene: Cheesepuff\_16 Start: 10047, Stop: 13805, Start Num: 2

Candidate Starts for Cheesepuff\_16:

(Start: 2 @10047 has 184 MA's), (5, 10098), (6, 10125), (7, 10158), (8, 10182), (10, 10227), (11, 10275), (12, 10299), (13, 10341), (14, 10344), (15, 10353), (16, 10392), (20, 10488), (21, 10500), (23, 10512), (24, 10545), (26, 10572), (27, 10575), (28, 10584), (29, 10590), (31, 10602), (33, 10653), (38, 10719), (43, 10785), (47, 10818), (49, 10836), (51, 10860), (54, 10905), (56, 10923), (58, 10935), (62, 11007), (65, 11040), (66, 11043), (70, 11082), (73, 11124), (75, 11154), (77, 11160), (79, 11190), (81, 11226), (82, 11235), (83, 11247), (85, 11280), (87, 11322), (90, 11343), (92, 11364), (97, 11460), (98, 11469), (101, 11502), (102, 11505), (106, 11550), (109, 11571), (121, 11646), (125, 11664), (135, 11766), (151, 11970), (153, 11982), (157, 12051), (158, 12060), (160, 12111), (161, 12126), (162, 12129), (163, 12147), (164, 12168), (165, 12186), (169, 12258), (171, 12312), (172, 12348), (173, 12354), (176, 12420), (180, 12471), (182, 12504), (183, 12528), (184, 12531), (185, 12540), (187, 12585), (188, 12588), (191, 12612), (194, 12684), (195, 12690), (201, 12738), (210, 12789), (215, 12828), (216, 12831), (222, 12861), (226, 12888), (230, 12915), (233, 12960), (236, 12972), (244, 13059), (251, 13083), (259, 13131), (278, 13161), (281, 13182), (286, 13248), (291, 13356), (293, 13380), (294, 13386), (296, 13401), (299, 13416), (300, 13452), (302, 13515), (303, 13518), (304, 13530), (305, 13551), (307, 13611), (311, 13791),

Gene: Chevrolet\_14 Start: 9500, Stop: 13048, Start Num: 1

Candidate Starts for Chevrolet\_14:

(Start: 1 @9500 has 37 MA's), (Start: 2 @9521 has 184 MA's), (3, 9533), (5, 9572), (6, 9599), (8, 9656), (10, 9701), (12, 9773), (28, 9827), (29, 9833), (32, 9857), (33, 9896), (34, 9911), (43, 10028), (47, 10061), (51, 10103), (54, 10148), (56, 10166), (58, 10178), (62, 10250), (65, 10283), (66, 10286), (70, 10325), (73, 10367), (75, 10397), (77, 10403), (79, 10433), (81, 10469), (82, 10478), (83, 10490), (87, 10565), (90, 10586), (96, 10682), (97, 10703), (98, 10712), (101, 10745), (102, 10748), (103, 10760), (109, 10814), (112, 10826), (119, 10880), (121, 10889), (128, 10919), (135, 11009), (148, 11153), (151, 11213), (153, 11225), (157, 11294), (159, 11318), (160, 11357), (161, 11372), (162, 11375), (163, 11393), (164, 11414), (165, 11432), (169, 11504), (171, 11558), (172, 11594), (173, 11600), (176, 11666), (180, 11717), (182, 11750), (183, 11774), (184, 11777), (185, 11786), (187, 11831), (188, 11834), (189, 11840), (191, 11858), (194, 11927), (195, 11933), (210, 12032), (215, 12071), (216, 12074), (222, 12104), (230, 12158), (233, 12203), (251, 12326), (259, 12374), (278, 12404), (281, 12425), (286, 12491), (291, 12599), (293, 12623), (294, 12629), (296, 12644), (299, 12659), (300, 12695), (302, 12758), (303, 12761), (304, 12773), (305, 12794), (307, 12854), (311, 13034),

Gene: ChickenDinner\_15 Start: 9353, Stop: 12883, Start Num: 2

Candidate Starts for ChickenDinner\_15:

(Start: 1 @9332 has 37 MA's), (Start: 2 @9353 has 184 MA's), (3, 9365), (5, 9404), (6, 9431), (10, 9533), (12, 9605), (26, 9647), (28, 9659), (29, 9665), (33, 9728), (34, 9743), (43, 9860), (47, 9893), (49, 9911), (51, 9935), (54, 9980), (56, 9998), (58, 10010), (61, 10067), (62, 10082), (63, 10100), (65, 10115), (66, 10118), (70, 10157), (73, 10199), (75, 10229), (77, 10235), (79, 10265), (81, 10301), (82, 10310), (83, 10322), (85, 10355), (86, 10370), (87, 10397), (90, 10418), (92, 10439), (97, 10535), (98, 10544), (102, 10580), (103, 10592), (106, 10625), (109, 10646), (121, 10721), (122, 10727), (125, 10739), (135, 10841), (140, 10916), (151, 11045), (153, 11057), (157, 11126), (158, 11135), (160, 11186), (161, 11201), (162, 11204), (163, 11222), (164, 11243), (165, 11261), (169, 11333), (171, 11387), (172, 11423), (173, 11429), (174, 11462), (176, 11495), (180, 11546), (182, 11579), (183, 11603), (184, 11606), (185, 11615), (187, 11660), (188, 11663), (191, 11687), (194, 11759), (195, 11765), (226, 11963), (229, 11981), (232, 12014), (233, 12035), (244, 12137), (251, 12161), (259, 12209), (281, 12260), (286, 12326), (291, 12434), (293, 12458), (294, 12464), (296, 12479), (297, 12485), (299, 12494), (300, 12530), (302, 12593), (303, 12596), (305, 12629), (306, 12668), (307, 12689), (311, 12869),

Gene: Chuckly\_14 Start: 9533, Stop: 13183, Start Num: 2

Candidate Starts for Chuckly\_14:

(Start: 2 @9533 has 184 MA's), (3, 9545), (5, 9584), (6, 9611), (10, 9713), (11, 9761), (12, 9785), (26, 9827), (27, 9830), (28, 9839), (29, 9845), (33, 9908), (34, 9923), (43, 10040), (47, 10073), (51, 10115), (54, 10160), (56, 10178), (58, 10190), (62, 10262), (65, 10295), (66, 10298), (70, 10337), (73, 10379), (75, 10409), (77, 10415), (79, 10445), (81, 10481), (82, 10490), (83, 10502), (90, 10598), (96, 10694), (98, 10724), (101, 10757), (102, 10760), (103, 10772), (109, 10826), (112, 10838), (119, 10892), (121, 10901), (135, 11021), (148, 11165), (151, 11225), (153, 11237), (157, 11306), (159, 11330), (161, 11384), (162, 11387), (163, 11405), (164, 11426), (165, 11444), (171, 11570), (172, 11606), (173, 11612), (174, 11645), (176, 11678), (180, 11729), (182, 11762), (183, 11786), (184, 11789), (185, 11798), (187, 11843), (188, 11846), (189, 11852), (191, 11870), (195, 11945), (203, 12011), (204, 12014), (207, 12035), (209, 12047), (216, 12095), (218, 12104), (228, 12164), (235, 12227), (247, 12332), (252, 12347), (256, 12401), (257, 12404), (258, 12410), (261, 12416), (270, 12452), (281, 12560), (286, 12626), (291, 12734), (293, 12758), (294, 12764), (296, 12779), (299, 12794), (300, 12830), (302, 12893), (303, 12896), (304, 12908), (305, 12929), (307, 12989), (311, 13169),

Gene: Clifton\_14 Start: 9474, Stop: 12965, Start Num: 2

Candidate Starts for Clifton\_14:

(Start: 1 @9453 has 37 MA's), (Start: 2 @9474 has 184 MA's), (3, 9486), (5, 9525), (6, 9552), (10, 9654), (11, 9702), (12, 9726), (26, 9768), (27, 9771), (28, 9780), (29, 9786), (33, 9849), (34, 9864), (43, 9981), (47, 10014), (49, 10032), (51, 10056), (54, 10101), (56, 10119), (58, 10131), (61, 10188), (62, 10203), (63, 10221), (65, 10236), (66, 10239), (70, 10278), (73, 10320), (75, 10350), (77, 10356), (79, 10386), (81, 10422), (82, 10431), (83, 10443), (85, 10476), (86, 10491), (87, 10518), (90, 10539), (92, 10560), (94, 10602), (96, 10635), (99, 10677), (100, 10689), (104, 10734), (106, 10746), (116, 10797), (117, 10806), (125, 10842), (126, 10848), (130, 10860), (134, 10923), (137, 10971), (143, 11034), (144, 11037), (145, 11046), (157, 11211), (160, 11274), (161, 11289), (162, 11292), (163, 11310), (164, 11331), (165, 11349), (169, 11421), (171, 11475), (172, 11511), (173, 11517), (174, 11550), (176, 11583), (180, 11634), (182, 11667), (183, 11691), (184, 11694), (185, 11703), (187, 11748), (188, 11751), (191, 11775), (194, 11844), (195, 11850), (210, 11949), (215, 11988), (216, 11991), (222, 12021), (226, 12048), (230, 12075), (233, 12120), (251, 12243), (271, 12291), (276, 12321), (281, 12342), (286, 12408), (291, 12516), (293, 12540), (294, 12546), (296, 12561), (299, 12576), (300, 12612), (302, 12675), (303, 12678), (304, 12690), (305, 12711), (306, 12750), (307, 12771), (311, 12951),

Gene: Coco12\_16 Start: 9878, Stop: 13408, Start Num: 2

Candidate Starts for Coco12\_16:

(Start: 2 @9878 has 184 MA's), (5, 9929), (6, 9956), (10, 10058), (12, 10130), (28, 10184), (29, 10190), (32, 10214), (33, 10253), (34, 10268), (43, 10385), (47, 10418), (49, 10436), (51, 10460), (54, 10505), (56, 10523), (58, 10535), (62, 10607), (65, 10640), (66, 10643), (70, 10682), (73, 10724), (75, 10754), (77, 10760), (79, 10790), (81, 10826), (82, 10835), (83, 10847), (90, 10943), (96, 11039), (98, 11069), (101, 11102), (102, 11105), (103, 11117), (109, 11171), (112, 11183), (119, 11237), (121, 11246), (135, 11366), (148, 11510), (151, 11570), (153, 11582), (157, 11651), (159, 11675), (161, 11729), (162, 11732), (163, 11750), (164, 11771), (165, 11789), (169, 11861), (171, 11915), (172, 11951), (173, 11957), (176, 12023), (180, 12074), (182, 12107), (183, 12131), (184, 12134), (185, 12143), (187, 12188), (188, 12191), (189, 12197), (191, 12215), (194, 12284), (195, 12290), (210, 12389), (226, 12488), (229, 12506), (233, 12560), (244, 12662), (251, 12686), (259, 12734), (278, 12764), (281, 12785), (286, 12851), (291, 12959), (293, 12983), (294, 12989), (296, 13004), (299, 13019), (300, 13055), (302, 13118), (303, 13121), (304, 13133), (305, 13154), (307, 13214), (311, 13394),

Gene: Corium\_14 Start: 9533, Stop: 13063, Start Num: 2

Candidate Starts for Corium\_14:

(Start: 2 @9533 has 184 MA's), (3, 9545), (5, 9584), (6, 9611), (8, 9668), (10, 9713), (12, 9785), (26, 9827), (27, 9830), (28, 9839), (29, 9845), (32, 9869), (33, 9908), (34, 9923), (43, 10040), (47, 10073),

(51, 10115), (54, 10160), (56, 10178), (58, 10190), (62, 10262), (65, 10295), (66, 10298), (70, 10337), (73, 10379), (75, 10409), (77, 10415), (79, 10445), (81, 10481), (82, 10490), (83, 10502), (90, 10598), (96, 10694), (98, 10724), (101, 10757), (102, 10760), (103, 10772), (109, 10826), (112, 10838), (119, 10892), (121, 10901), (135, 11021), (148, 11165), (151, 11225), (153, 11237), (157, 11306), (159, 11330), (161, 11384), (162, 11387), (164, 11426), (165, 11444), (169, 11516), (171, 11570), (172, 11606), (173, 11612), (176, 11678), (180, 11729), (182, 11762), (183, 11786), (184, 11789), (185, 11798), (187, 11843), (188, 11846), (189, 11852), (191, 11870), (194, 11939), (195, 11945), (210, 12044), (226, 12143), (229, 12161), (233, 12215), (244, 12317), (251, 12341), (259, 12389), (278, 12419), (281, 12440), (286, 12506), (291, 12614), (293, 12638), (294, 12644), (296, 12659), (299, 12674), (300, 12710), (302, 12773), (303, 12776), (304, 12788), (305, 12809), (307, 12869), (311, 13049),

Gene: Cornucopia\_15 Start: 9372, Stop: 13064, Start Num: 2

Candidate Starts for Cornucopia\_15:

(Start: 1 @9351 has 37 MA's), (Start: 2 @9372 has 184 MA's), (3, 9384), (5, 9423), (6, 9450), (8, 9507), (10, 9552), (12, 9624), (27, 9669), (28, 9678), (29, 9684), (33, 9747), (34, 9762), (43, 9879), (47, 9912), (51, 9954), (54, 9999), (56, 10017), (58, 10029), (62, 10101), (65, 10134), (66, 10137), (70, 10176), (73, 10218), (75, 10248), (77, 10254), (79, 10284), (81, 10320), (82, 10329), (83, 10341), (87, 10416), (90, 10437), (91, 10449), (92, 10458), (96, 10533), (97, 10554), (98, 10563), (102, 10599), (103, 10611), (106, 10644), (109, 10665), (121, 10740), (125, 10758), (128, 10770), (135, 10860), (148, 11004), (151, 11064), (153, 11076), (157, 11145), (159, 11169), (160, 11205), (161, 11220), (162, 11223), (164, 11262), (165, 11280), (169, 11352), (171, 11406), (172, 11442), (173, 11448), (176, 11514), (180, 11565), (182, 11598), (183, 11622), (184, 11625), (185, 11634), (187, 11679), (188, 11682), (189, 11688), (191, 11706), (196, 11796), (213, 11943), (217, 11964), (233, 12105), (238, 12129), (240, 12156), (267, 12336), (271, 12366), (287, 12525), (291, 12618), (293, 12642), (294, 12648), (296, 12663), (297, 12669), (299, 12678), (300, 12714), (302, 12777), (303, 12780), (305, 12813), (306, 12852), (307, 12873), (311, 13050),

Gene: Crumble\_14 Start: 9491, Stop: 13012, Start Num: 2

Candidate Starts for Crumble\_14:

(Start: 1 @9470 has 37 MA's), (Start: 2 @9491 has 184 MA's), (3, 9503), (5, 9542), (6, 9569), (8, 9626), (10, 9671), (12, 9743), (29, 9803), (33, 9866), (34, 9881), (43, 9998), (47, 10031), (49, 10049), (51, 10073), (54, 10118), (56, 10136), (58, 10148), (62, 10220), (65, 10253), (66, 10256), (70, 10295), (73, 10337), (75, 10367), (77, 10373), (79, 10403), (81, 10439), (82, 10448), (83, 10460), (85, 10493), (86, 10508), (87, 10535), (90, 10556), (91, 10568), (92, 10577), (97, 10673), (98, 10682), (101, 10715), (102, 10718), (103, 10730), (106, 10763), (109, 10784), (121, 10859), (122, 10865), (125, 10877), (135, 10979), (140, 11054), (151, 11183), (153, 11195), (157, 11261), (160, 11321), (161, 11336), (162, 11339), (163, 11357), (164, 11378), (165, 11396), (169, 11468), (171, 11522), (172, 11558), (173, 11564), (174, 11597), (176, 11630), (180, 11681), (182, 11714), (183, 11738), (184, 11741), (185, 11750), (187, 11795), (188, 11798), (189, 11804), (191, 11822), (194, 11891), (195, 11897), (210, 11996), (215, 12035), (216, 12038), (222, 12068), (226, 12095), (230, 12122), (233, 12167), (251, 12290), (259, 12338), (278, 12368), (281, 12389), (286, 12455), (291, 12563), (293, 12587), (294, 12593), (296, 12608), (299, 12623), (300, 12659), (302, 12722), (303, 12725), (304, 12737), (305, 12758), (306, 12797), (307, 12818), (311, 12998),

Gene: DLane\_14 Start: 9531, Stop: 13013, Start Num: 2

Candidate Starts for DLane\_14:

(Start: 2 @9531 has 184 MA's), (3, 9543), (5, 9582), (6, 9609), (8, 9666), (10, 9711), (12, 9783), (26, 9825), (27, 9828), (28, 9837), (29, 9843), (33, 9906), (34, 9921), (43, 10038), (47, 10071), (51, 10113), (54, 10158), (56, 10176), (58, 10188), (62, 10260), (65, 10293), (66, 10296), (70, 10335), (73, 10377), (75, 10407), (77, 10413), (79, 10443), (81, 10479), (82, 10488), (83, 10500), (90, 10596), (94, 10659), (99, 10734), (104, 10791), (106, 10803), (112, 10824), (116, 10854), (124, 10896), (125, 10899), (126, 10905), (130, 10917), (144, 11094), (145, 11103), (155, 11250), (157, 11265), (159, 11289), (161,

11340), (162, 11343), (163, 11361), (164, 11382), (165, 11400), (169, 11472), (171, 11526), (172, 11562), (173, 11568), (176, 11634), (180, 11685), (182, 11718), (183, 11742), (184, 11745), (185, 11754), (187, 11799), (188, 11802), (189, 11808), (191, 11826), (194, 11895), (195, 11901), (210, 12000), (215, 12039), (222, 12072), (226, 12099), (233, 12171), (251, 12294), (271, 12339), (276, 12369), (281, 12390), (286, 12456), (291, 12564), (293, 12588), (294, 12594), (296, 12609), (299, 12624), (300, 12660), (302, 12723), (303, 12726), (304, 12738), (305, 12759), (307, 12819), (311, 12999),

Gene: DRBy19\_14 Start: 9494, Stop: 13042, Start Num: 1

Candidate Starts for DRBy19\_14:

(Start: 1 @9494 has 37 MA's), (Start: 2 @9515 has 184 MA's), (3, 9527), (5, 9566), (6, 9593), (10, 9695), (12, 9767), (26, 9809), (27, 9812), (28, 9821), (29, 9827), (33, 9890), (34, 9905), (43, 10022), (47, 10055), (49, 10073), (51, 10097), (54, 10142), (56, 10160), (58, 10172), (61, 10229), (62, 10244), (63, 10262), (65, 10277), (66, 10280), (70, 10319), (73, 10361), (75, 10391), (77, 10397), (79, 10427), (81, 10463), (82, 10472), (83, 10484), (85, 10517), (86, 10532), (87, 10559), (90, 10580), (91, 10592), (92, 10601), (97, 10697), (98, 10706), (101, 10739), (102, 10742), (103, 10754), (106, 10787), (109, 10808), (112, 10820), (121, 10883), (122, 10889), (125, 10901), (135, 11003), (151, 11207), (153, 11219), (157, 11288), (158, 11297), (160, 11351), (161, 11366), (162, 11369), (163, 11387), (164, 11408), (165, 11426), (169, 11498), (171, 11552), (172, 11588), (173, 11594), (176, 11660), (180, 11711), (182, 11744), (183, 11768), (184, 11771), (185, 11780), (187, 11825), (188, 11828), (189, 11834), (191, 11852), (194, 11921), (195, 11927), (210, 12026), (215, 12065), (216, 12068), (222, 12098), (230, 12152), (233, 12197), (251, 12320), (259, 12368), (278, 12398), (281, 12419), (286, 12485), (288, 12509), (291, 12593), (293, 12617), (294, 12623), (296, 12638), (299, 12653), (300, 12689), (302, 12752), (303, 12755), (304, 12767), (305, 12788), (307, 12848), (311, 13028),

Gene: DaWorst\_16 Start: 9884, Stop: 13543, Start Num: 2

Candidate Starts for DaWorst\_16:

(Start: 2 @9884 has 184 MA's), (5, 9935), (6, 9962), (8, 10019), (10, 10064), (12, 10136), (28, 10190), (29, 10196), (33, 10259), (34, 10274), (43, 10391), (47, 10424), (51, 10466), (54, 10511), (56, 10529), (58, 10541), (61, 10598), (62, 10613), (63, 10631), (65, 10646), (66, 10649), (70, 10688), (72, 10706), (73, 10730), (75, 10760), (77, 10766), (79, 10796), (81, 10832), (82, 10841), (83, 10853), (85, 10886), (86, 10901), (87, 10928), (90, 10949), (91, 10961), (92, 10970), (94, 11012), (96, 11045), (99, 11087), (100, 11099), (104, 11144), (106, 11156), (116, 11207), (117, 11216), (124, 11249), (125, 11252), (126, 11258), (130, 11270), (134, 11333), (137, 11381), (143, 11444), (144, 11447), (145, 11456), (157, 11621), (158, 11630), (160, 11681), (161, 11696), (162, 11699), (163, 11717), (164, 11738), (165, 11756), (169, 11828), (171, 11882), (172, 11918), (173, 11924), (174, 11957), (176, 11990), (180, 12041), (182, 12074), (183, 12098), (184, 12101), (185, 12110), (187, 12155), (188, 12158), (191, 12182), (196, 12272), (213, 12419), (217, 12440), (233, 12581), (238, 12605), (240, 12632), (267, 12812), (271, 12842), (279, 12914), (287, 13001), (291, 13094), (293, 13118), (294, 13124), (296, 13139), (299, 13154), (300, 13190), (302, 13253), (303, 13256), (305, 13289), (307, 13349), (311, 13529),

Gene: DaddyRickover\_14 Start: 9486, Stop: 13181, Start Num: 2

Candidate Starts for DaddyRickover\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751),



(187, 11796), (188, 11799), (191, 11823), (196, 11913), (213, 12060), (217, 12081), (233, 12222), (238, 12246), (240, 12273), (267, 12453), (271, 12483), (279, 12555), (287, 12642), (291, 12735), (293, 12759), (294, 12765), (296, 12780), (297, 12786), (299, 12795), (300, 12831), (302, 12894), (303, 12897), (305, 12930), (306, 12969), (307, 12990), (311, 13167),

Gene: Daenerys\_14 Start: 9486, Stop: 13013, Start Num: 2

Candidate Starts for Daenerys\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751), (187, 11796), (188, 11799), (189, 11805), (191, 11823), (194, 11892), (195, 11898), (210, 11997), (215, 12036), (216, 12039), (222, 12069), (230, 12123), (233, 12168), (251, 12291), (259, 12339), (278, 12369), (281, 12390), (286, 12456), (291, 12564), (293, 12588), (294, 12594), (296, 12609), (299, 12624), (300, 12660), (302, 12723), (303, 12726), (304, 12738), (305, 12759), (306, 12798), (307, 12819), (311, 12999),

Gene: Dante\_14 Start: 9517, Stop: 13044, Start Num: 2

Candidate Starts for Dante\_14:

(Start: 1 @9496 has 37 MA's), (Start: 2 @9517 has 184 MA's), (3, 9529), (5, 9568), (6, 9595), (10, 9697), (11, 9745), (12, 9769), (26, 9811), (28, 9823), (29, 9829), (33, 9892), (34, 9907), (43, 10024), (47, 10057), (49, 10075), (51, 10099), (54, 10144), (56, 10162), (58, 10174), (61, 10231), (62, 10246), (63, 10264), (65, 10279), (66, 10282), (70, 10321), (73, 10363), (75, 10393), (77, 10399), (79, 10429), (81, 10465), (82, 10474), (83, 10486), (85, 10519), (86, 10534), (87, 10561), (90, 10582), (92, 10603), (97, 10699), (98, 10708), (102, 10744), (103, 10756), (106, 10789), (109, 10810), (121, 10885), (125, 10903), (135, 11005), (140, 11080), (151, 11209), (153, 11221), (157, 11290), (160, 11353), (161, 11368), (162, 11371), (163, 11389), (164, 11410), (165, 11428), (169, 11500), (171, 11554), (172, 11590), (173, 11596), (176, 11662), (180, 11713), (182, 11746), (183, 11770), (184, 11773), (185, 11782), (187, 11827), (188, 11830), (191, 11854), (194, 11926), (195, 11932), (210, 12031), (215, 12070), (216, 12073), (222, 12103), (230, 12157), (233, 12202), (251, 12325), (259, 12373), (278, 12403), (281, 12424), (286, 12490), (291, 12598), (293, 12622), (294, 12628), (296, 12643), (299, 12658), (300, 12694), (302, 12757), (303, 12760), (305, 12793), (306, 12832), (307, 12853), (311, 13030),

Gene: DeadP\_14 Start: 9532, Stop: 13059, Start Num: 2

Candidate Starts for DeadP\_14:

(Start: 2 @9532 has 184 MA's), (3, 9544), (5, 9583), (6, 9610), (8, 9667), (10, 9712), (12, 9784), (28, 9838), (29, 9844), (33, 9907), (34, 9922), (43, 10039), (47, 10072), (51, 10114), (54, 10159), (56, 10177), (58, 10189), (62, 10261), (65, 10294), (66, 10297), (70, 10336), (73, 10378), (75, 10408), (77, 10414), (79, 10444), (81, 10480), (82, 10489), (83, 10501), (90, 10597), (96, 10693), (98, 10723), (101, 10756), (102, 10759), (103, 10771), (109, 10825), (112, 10837), (119, 10891), (121, 10900), (135, 11020), (148, 11164), (151, 11224), (153, 11236), (157, 11305), (159, 11329), (161, 11383), (162, 11386), (163, 11404), (164, 11425), (165, 11443), (171, 11569), (172, 11605), (173, 11611), (176, 11677), (180, 11728), (182, 11761), (183, 11785), (184, 11788), (185, 11797), (187, 11842), (188, 11845), (189, 11851), (191, 11869), (194, 11938), (195, 11944), (210, 12043), (215, 12082), (216, 12085), (222, 12115), (226, 12142), (230, 12169), (233, 12214), (251, 12337), (259, 12385), (278, 12415), (281, 12436), (286, 12502), (291, 12610), (293, 12634), (294, 12640), (296, 12655), (299, 12670), (300, 12706), (302, 12769), (303, 12772), (304, 12784), (305, 12805), (307, 12865), (311,

13045),

Gene: Deb65\_14 Start: 9486, Stop: 13010, Start Num: 2

Candidate Starts for Deb65\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751), (187, 11796), (188, 11799), (189, 11805), (191, 11823), (194, 11892), (195, 11898), (210, 11997), (215, 12036), (216, 12039), (222, 12069), (230, 12123), (233, 12168), (251, 12291), (259, 12339), (278, 12369), (281, 12390), (286, 12456), (291, 12564), (293, 12588), (294, 12594), (296, 12609), (297, 12615), (299, 12624), (300, 12660), (302, 12723), (303, 12726), (305, 12759), (306, 12798), (307, 12819), (311, 12996),

Gene: DillTech15\_14 Start: 9530, Stop: 13060, Start Num: 2

Candidate Starts for DillTech15\_14:

(Start: 1 @9509 has 37 MA's), (Start: 2 @9530 has 184 MA's), (3, 9542), (5, 9581), (6, 9608), (8, 9665), (10, 9710), (12, 9782), (28, 9836), (29, 9842), (32, 9866), (33, 9905), (34, 9920), (43, 10037), (47, 10070), (51, 10112), (54, 10157), (56, 10175), (58, 10187), (62, 10259), (65, 10292), (66, 10295), (70, 10334), (73, 10376), (75, 10406), (77, 10412), (79, 10442), (81, 10478), (82, 10487), (83, 10499), (90, 10595), (96, 10691), (98, 10721), (101, 10754), (102, 10757), (103, 10769), (109, 10823), (112, 10835), (119, 10889), (121, 10898), (135, 11018), (148, 11162), (151, 11222), (153, 11234), (157, 11303), (159, 11327), (161, 11381), (162, 11384), (163, 11402), (164, 11423), (165, 11441), (169, 11513), (171, 11567), (172, 11603), (173, 11609), (176, 11675), (180, 11726), (182, 11759), (183, 11783), (184, 11786), (185, 11795), (187, 11840), (188, 11843), (189, 11849), (191, 11867), (194, 11936), (195, 11942), (210, 12041), (226, 12140), (229, 12158), (233, 12212), (244, 12314), (251, 12338), (259, 12386), (278, 12416), (281, 12437), (286, 12503), (291, 12611), (293, 12635), (294, 12641), (296, 12656), (299, 12671), (300, 12707), (302, 12770), (303, 12773), (304, 12785), (305, 12806), (307, 12866), (311, 13046),

Gene: DirtMcgirt\_15 Start: 9325, Stop: 12837, Start Num: 1

Candidate Starts for DirtMcgirt\_15:

(Start: 1 @9325 has 37 MA's), (Start: 2 @9346 has 184 MA's), (3, 9358), (5, 9397), (6, 9424), (10, 9526), (11, 9574), (12, 9598), (28, 9652), (29, 9658), (33, 9721), (34, 9736), (43, 9853), (47, 9886), (49, 9904), (51, 9928), (54, 9973), (56, 9991), (62, 10075), (65, 10108), (66, 10111), (70, 10150), (73, 10192), (75, 10222), (77, 10228), (79, 10258), (81, 10294), (82, 10303), (83, 10315), (85, 10348), (86, 10363), (87, 10390), (90, 10411), (92, 10432), (94, 10474), (96, 10507), (99, 10549), (100, 10561), (104, 10606), (106, 10618), (116, 10669), (117, 10678), (125, 10714), (126, 10720), (130, 10732), (134, 10795), (137, 10843), (143, 10906), (144, 10909), (145, 10918), (157, 11083), (160, 11146), (161, 11161), (162, 11164), (163, 11182), (164, 11203), (165, 11221), (169, 11293), (171, 11347), (172, 11383), (173, 11389), (174, 11422), (176, 11455), (180, 11506), (182, 11539), (183, 11563), (185, 11575), (187, 11620), (188, 11623), (189, 11629), (191, 11647), (194, 11716), (195, 11722), (210, 11821), (212, 11842), (226, 11920), (229, 11938), (233, 11992), (244, 12091), (251, 12115), (271, 12163), (276, 12193), (281, 12214), (286, 12280), (291, 12388), (293, 12412), (294, 12418), (296, 12433), (299, 12448), (300, 12484), (302, 12547), (303, 12550), (304, 12562), (305, 12583), (306, 12622), (307, 12643), (311, 12823),

Gene: DoRead\_14 Start: 9488, Stop: 12979, Start Num: 2

Candidate Starts for DoRead\_14:

(Start: 1 @9467 has 37 MA's), (Start: 2 @9488 has 184 MA's), (3, 9500), (5, 9539), (6, 9566), (10, 9668), (11, 9716), (12, 9740), (26, 9782), (27, 9785), (28, 9794), (29, 9800), (33, 9863), (34, 9878), (43, 9995), (47, 10028), (49, 10046), (51, 10070), (54, 10115), (56, 10133), (58, 10145), (61, 10202), (62, 10217), (63, 10235), (65, 10250), (66, 10253), (70, 10292), (73, 10334), (75, 10364), (77, 10370), (79, 10400), (81, 10436), (82, 10445), (83, 10457), (85, 10490), (86, 10505), (87, 10532), (90, 10553), (91, 10565), (92, 10574), (94, 10616), (96, 10649), (99, 10691), (100, 10703), (104, 10748), (106, 10760), (116, 10811), (117, 10820), (124, 10853), (125, 10856), (126, 10862), (130, 10874), (134, 10937), (137, 10985), (143, 11048), (144, 11051), (157, 11225), (158, 11234), (160, 11288), (161, 11303), (162, 11306), (163, 11324), (164, 11345), (165, 11363), (169, 11435), (171, 11489), (172, 11525), (173, 11531), (174, 11564), (176, 11597), (180, 11648), (182, 11681), (183, 11705), (184, 11708), (185, 11717), (187, 11762), (188, 11765), (189, 11771), (191, 11789), (194, 11858), (195, 11864), (210, 11963), (214, 11996), (226, 12062), (229, 12080), (233, 12134), (236, 12146), (244, 12233), (251, 12257), (271, 12305), (276, 12335), (281, 12356), (286, 12422), (291, 12530), (293, 12554), (296, 12575), (297, 12581), (300, 12626), (302, 12689), (303, 12692), (304, 12704), (305, 12725), (307, 12785), (311, 12965),

Gene: DocMcStuffins\_15 Start: 9353, Stop: 12883, Start Num: 2

Candidate Starts for DocMcStuffins\_15:

(Start: 1 @9332 has 37 MA's), (Start: 2 @9353 has 184 MA's), (3, 9365), (5, 9404), (6, 9431), (10, 9533), (12, 9605), (26, 9647), (28, 9659), (29, 9665), (33, 9728), (34, 9743), (43, 9860), (47, 9893), (49, 9911), (51, 9935), (54, 9980), (56, 9998), (58, 10010), (61, 10067), (62, 10082), (63, 10100), (65, 10115), (66, 10118), (70, 10157), (73, 10199), (75, 10229), (77, 10235), (79, 10265), (81, 10301), (82, 10310), (83, 10322), (85, 10355), (86, 10370), (87, 10397), (90, 10418), (92, 10439), (97, 10535), (98, 10544), (102, 10580), (103, 10592), (106, 10625), (109, 10646), (121, 10721), (122, 10727), (125, 10739), (135, 10841), (140, 10916), (151, 11045), (153, 11057), (157, 11126), (158, 11135), (160, 11186), (161, 11201), (162, 11204), (163, 11222), (164, 11243), (165, 11261), (169, 11333), (171, 11387), (172, 11423), (173, 11429), (174, 11462), (176, 11495), (180, 11546), (182, 11579), (183, 11603), (184, 11606), (185, 11615), (187, 11660), (188, 11663), (191, 11687), (194, 11759), (195, 11765), (226, 11963), (229, 11981), (232, 12014), (233, 12035), (244, 12137), (251, 12161), (259, 12209), (281, 12260), (286, 12326), (291, 12434), (293, 12458), (294, 12464), (296, 12479), (297, 12485), (299, 12494), (300, 12530), (302, 12593), (303, 12596), (305, 12629), (306, 12668), (307, 12689), (311, 12869),

Gene: Donkeykong\_14 Start: 9509, Stop: 13189, Start Num: 2

Candidate Starts for Donkeykong\_14:

(Start: 1 @9488 has 37 MA's), (Start: 2 @9509 has 184 MA's), (3, 9521), (5, 9560), (6, 9587), (10, 9689), (11, 9737), (12, 9761), (28, 9815), (29, 9821), (33, 9884), (34, 9899), (43, 10016), (47, 10049), (49, 10067), (51, 10091), (54, 10136), (56, 10154), (58, 10166), (62, 10238), (65, 10271), (66, 10274), (70, 10313), (73, 10355), (75, 10385), (77, 10391), (79, 10421), (81, 10457), (82, 10466), (83, 10478), (85, 10511), (86, 10526), (87, 10553), (90, 10574), (91, 10586), (92, 10595), (97, 10691), (98, 10700), (102, 10736), (103, 10748), (106, 10781), (109, 10802), (121, 10877), (125, 10895), (135, 10997), (140, 11072), (151, 11201), (153, 11213), (157, 11282), (160, 11345), (161, 11360), (162, 11363), (163, 11381), (164, 11402), (165, 11420), (169, 11492), (171, 11546), (172, 11582), (173, 11588), (176, 11654), (180, 11705), (182, 11738), (183, 11762), (184, 11765), (185, 11774), (187, 11819), (188, 11822), (191, 11846), (194, 11918), (195, 11924), (222, 12095), (230, 12149), (233, 12194), (254, 12353), (259, 12392), (266, 12416), (268, 12422), (269, 12428), (273, 12464), (286, 12632), (291, 12740), (293, 12764), (294, 12770), (296, 12785), (299, 12800), (300, 12836), (302, 12899), (303, 12902), (304, 12914), (305, 12935), (307, 12995), (311, 13175),

Gene: Doomphist\_14 Start: 9465, Stop: 13145, Start Num: 1

Candidate Starts for Doomphist\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (49, 10044), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (94, 10614), (96, 10647), (99, 10689), (100, 10701), (104, 10746), (106, 10758), (116, 10809), (117, 10818), (125, 10854), (126, 10860), (130, 10872), (134, 10935), (137, 10983), (143, 11046), (144, 11049), (145, 11058), (157, 11223), (160, 11286), (161, 11301), (162, 11304), (163, 11322), (164, 11343), (165, 11361), (169, 11433), (171, 11487), (172, 11523), (173, 11529), (174, 11562), (176, 11595), (180, 11646), (182, 11679), (183, 11703), (184, 11706), (185, 11715), (187, 11760), (188, 11763), (191, 11787), (196, 11877), (213, 12024), (217, 12045), (233, 12186), (238, 12210), (240, 12237), (267, 12417), (271, 12447), (279, 12519), (287, 12606), (291, 12699), (293, 12723), (294, 12729), (296, 12744), (297, 12750), (299, 12759), (300, 12795), (302, 12858), (303, 12861), (305, 12894), (306, 12933), (307, 12954), (311, 13131),

Gene: Dorothy\_14 Start: 9465, Stop: 12971, Start Num: 1

Candidate Starts for Dorothy\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (12, 9738), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (86, 10503), (87, 10530), (90, 10551), (92, 10572), (94, 10614), (96, 10647), (99, 10689), (100, 10701), (104, 10746), (106, 10758), (116, 10809), (117, 10818), (125, 10854), (126, 10860), (130, 10872), (134, 10935), (137, 10983), (143, 11046), (144, 11049), (145, 11058), (157, 11223), (160, 11286), (161, 11301), (162, 11304), (163, 11322), (164, 11343), (165, 11361), (169, 11433), (171, 11487), (172, 11523), (173, 11529), (176, 11595), (180, 11646), (182, 11679), (183, 11703), (184, 11706), (185, 11715), (187, 11760), (188, 11763), (189, 11769), (191, 11787), (194, 11856), (195, 11862), (210, 11961), (215, 12000), (216, 12003), (222, 12033), (226, 12060), (230, 12087), (233, 12132), (251, 12255), (271, 12300), (276, 12330), (281, 12351), (286, 12417), (291, 12525), (293, 12549), (294, 12555), (296, 12570), (299, 12585), (300, 12621), (302, 12684), (303, 12687), (305, 12720), (306, 12759), (307, 12780), (311, 12957),

Gene: DosHalletts\_15 Start: 9340, Stop: 12945, Start Num: 2

Candidate Starts for DosHalletts\_15:

(Start: 2 @9340 has 184 MA's), (5, 9391), (6, 9418), (8, 9475), (10, 9520), (12, 9592), (26, 9634), (27, 9637), (28, 9646), (29, 9652), (33, 9715), (34, 9730), (43, 9847), (47, 9880), (51, 9922), (54, 9967), (56, 9985), (58, 9997), (62, 10069), (65, 10102), (66, 10105), (70, 10144), (73, 10186), (75, 10216), (77, 10222), (79, 10252), (81, 10288), (82, 10297), (83, 10309), (90, 10405), (94, 10468), (99, 10543), (105, 10600), (107, 10612), (110, 10633), (116, 10663), (124, 10705), (125, 10708), (126, 10714), (130, 10726), (144, 10903), (146, 10912), (156, 11059), (157, 11074), (159, 11098), (161, 11149), (162, 11152), (164, 11191), (165, 11209), (171, 11335), (172, 11371), (173, 11377), (176, 11443), (180, 11494), (182, 11527), (183, 11551), (184, 11554), (185, 11563), (187, 11608), (188, 11611), (189, 11617), (191, 11635), (194, 11704), (195, 11710), (203, 11776), (204, 11779), (205, 11782), (207, 11800), (209, 11812), (216, 11860), (218, 11869), (223, 11902), (228, 11929), (235, 11992), (241, 12043), (247, 12097), (252, 12112), (256, 12166), (258, 12175), (261, 12181), (270, 12217), (274, 12244), (281, 12322), (286, 12388), (291, 12496), (293, 12520), (294, 12526), (296, 12541), (299, 12556), (300, 12592), (302, 12655), (303, 12658), (304, 12670), (305, 12691), (307, 12751), (311, 12931),

Gene: DotProduct\_14 Start: 9533, Stop: 13021, Start Num: 2

Candidate Starts for DotProduct\_14:

(Start: 2 @9533 has 184 MA's), (3, 9545), (5, 9584), (6, 9611), (10, 9713), (11, 9761), (12, 9785), (28, 9839), (29, 9845), (33, 9908), (34, 9923), (43, 10040), (47, 10073), (49, 10091), (51, 10115), (54, 10160), (56, 10178), (62, 10262), (65, 10295), (66, 10298), (70, 10337), (73, 10379), (75, 10409), (77,

10415), (79, 10445), (81, 10481), (82, 10490), (83, 10502), (85, 10535), (86, 10550), (87, 10577), (90, 10598), (91, 10610), (92, 10619), (94, 10661), (96, 10694), (99, 10736), (100, 10748), (104, 10793), (106, 10805), (116, 10856), (117, 10865), (124, 10898), (125, 10901), (126, 10907), (130, 10919), (134, 10982), (143, 11093), (144, 11096), (145, 11105), (157, 11270), (160, 11330), (161, 11345), (162, 11348), (163, 11366), (164, 11387), (165, 11405), (169, 11477), (171, 11531), (172, 11567), (173, 11573), (174, 11606), (176, 11639), (180, 11690), (182, 11723), (183, 11747), (184, 11750), (185, 11759), (187, 11804), (188, 11807), (189, 11813), (191, 11831), (194, 11900), (195, 11906), (210, 12005), (215, 12044), (216, 12047), (222, 12077), (230, 12131), (233, 12176), (236, 12188), (251, 12299), (271, 12347), (276, 12377), (281, 12398), (286, 12464), (291, 12572), (293, 12596), (294, 12602), (296, 12617), (299, 12632), (300, 12668), (302, 12731), (303, 12734), (304, 12746), (305, 12767), (307, 12827), (311, 13007),

Gene: Doug\_15 Start: 10032, Stop: 13559, Start Num: 2

Candidate Starts for Doug\_15:

(Start: 2 @10032 has 184 MA's), (5, 10083), (6, 10110), (10, 10212), (12, 10284), (28, 10338), (29, 10344), (33, 10407), (34, 10422), (43, 10539), (47, 10572), (51, 10614), (54, 10659), (56, 10677), (58, 10689), (62, 10761), (65, 10794), (66, 10797), (70, 10836), (73, 10878), (75, 10908), (77, 10914), (79, 10944), (81, 10980), (82, 10989), (83, 11001), (90, 11097), (96, 11193), (97, 11214), (98, 11223), (102, 11259), (103, 11271), (106, 11304), (109, 11325), (119, 11391), (121, 11400), (125, 11418), (135, 11520), (148, 11664), (151, 11724), (153, 11736), (157, 11805), (158, 11814), (160, 11868), (161, 11883), (162, 11886), (163, 11904), (164, 11925), (165, 11943), (169, 12015), (171, 12069), (172, 12105), (173, 12111), (174, 12144), (176, 12177), (180, 12228), (182, 12261), (183, 12285), (184, 12288), (185, 12297), (187, 12342), (188, 12345), (189, 12351), (191, 12369), (194, 12438), (195, 12444), (210, 12543), (215, 12582), (216, 12585), (222, 12615), (230, 12669), (233, 12714), (251, 12837), (259, 12885), (278, 12915), (281, 12936), (286, 13002), (291, 13110), (293, 13134), (294, 13140), (296, 13155), (299, 13170), (300, 13206), (302, 13269), (303, 13272), (304, 13284), (305, 13305), (307, 13365), (311, 13545),

Gene: Drago\_15 Start: 9323, Stop: 12835, Start Num: 1

Candidate Starts for Drago\_15:

(Start: 1 @9323 has 37 MA's), (Start: 2 @9344 has 184 MA's), (3, 9356), (5, 9395), (6, 9422), (10, 9524), (11, 9572), (12, 9596), (26, 9638), (27, 9641), (28, 9650), (29, 9656), (33, 9719), (34, 9734), (43, 9851), (47, 9884), (49, 9902), (51, 9926), (54, 9971), (56, 9989), (58, 10001), (61, 10058), (62, 10073), (63, 10091), (65, 10106), (66, 10109), (70, 10148), (73, 10190), (75, 10220), (77, 10226), (79, 10256), (81, 10292), (82, 10301), (83, 10313), (85, 10346), (87, 10388), (90, 10409), (91, 10421), (92, 10430), (94, 10472), (96, 10505), (99, 10547), (100, 10559), (104, 10604), (106, 10616), (116, 10667), (117, 10676), (125, 10712), (126, 10718), (130, 10730), (134, 10793), (137, 10841), (143, 10904), (144, 10907), (145, 10916), (157, 11081), (160, 11144), (161, 11159), (162, 11162), (163, 11180), (164, 11201), (165, 11219), (169, 11291), (171, 11345), (172, 11381), (173, 11387), (174, 11420), (176, 11453), (180, 11504), (182, 11537), (183, 11561), (184, 11564), (185, 11573), (187, 11618), (188, 11621), (191, 11645), (194, 11714), (195, 11720), (210, 11819), (215, 11858), (216, 11861), (222, 11891), (226, 11918), (230, 11945), (233, 11990), (251, 12113), (271, 12161), (276, 12191), (281, 12212), (286, 12278), (291, 12386), (293, 12410), (294, 12416), (296, 12431), (299, 12446), (300, 12482), (302, 12545), (303, 12548), (304, 12560), (305, 12581), (307, 12641), (311, 12821),

Gene: Eish\_14 Start: 9482, Stop: 13153, Start Num: 2

Candidate Starts for Eish\_14:

(Start: 1 @9461 has 37 MA's), (Start: 2 @9482 has 184 MA's), (3, 9494), (5, 9533), (6, 9560), (10, 9662), (12, 9734), (26, 9776), (28, 9788), (29, 9794), (33, 9857), (34, 9872), (43, 9989), (47, 10022), (49, 10040), (51, 10064), (54, 10109), (56, 10127), (58, 10139), (62, 10211), (65, 10244), (66, 10247), (70, 10286), (73, 10328), (75, 10358), (77, 10364), (79, 10394), (81, 10430), (82, 10439), (83, 10451), (85, 10484), (86, 10499), (87, 10526), (90, 10547), (92, 10568), (97, 10664), (98, 10673), (102, 10709), (103, 10721), (106, 10754), (109, 10775), (121, 10850), (122, 10856), (125, 10868), (135, 10970),

(151, 11174), (153, 11186), (157, 11255), (160, 11315), (161, 11330), (162, 11333), (163, 11351), (164, 11372), (165, 11390), (169, 11462), (171, 11516), (172, 11552), (173, 11558), (176, 11624), (180, 11675), (182, 11708), (183, 11732), (184, 11735), (185, 11744), (187, 11789), (188, 11792), (191, 11816), (194, 11885), (195, 11891), (222, 12062), (230, 12116), (233, 12161), (254, 12320), (259, 12359), (266, 12383), (268, 12389), (269, 12395), (273, 12431), (286, 12599), (291, 12707), (293, 12731), (294, 12737), (296, 12752), (297, 12758), (299, 12767), (300, 12803), (302, 12866), (303, 12869), (305, 12902), (306, 12941), (307, 12962), (311, 13139),

Gene: EleanorGeorge\_14 Start: 9534, Stop: 13178, Start Num: 2

Candidate Starts for EleanorGeorge\_14:

(Start: 2 @9534 has 184 MA's), (3, 9546), (5, 9585), (6, 9612), (8, 9669), (10, 9714), (12, 9786), (28, 9840), (29, 9846), (32, 9870), (33, 9909), (34, 9924), (43, 10041), (47, 10074), (51, 10116), (54, 10161), (56, 10179), (58, 10191), (62, 10263), (65, 10296), (66, 10299), (70, 10338), (73, 10380), (75, 10410), (77, 10416), (79, 10446), (81, 10482), (82, 10491), (83, 10503), (90, 10599), (96, 10695), (98, 10725), (101, 10758), (102, 10761), (103, 10773), (109, 10827), (112, 10839), (119, 10893), (121, 10902), (135, 11022), (148, 11166), (151, 11226), (153, 11238), (157, 11307), (159, 11331), (161, 11382), (162, 11385), (164, 11424), (165, 11442), (169, 11514), (171, 11568), (172, 11604), (173, 11610), (176, 11676), (180, 11727), (182, 11760), (183, 11784), (184, 11787), (185, 11796), (187, 11841), (188, 11844), (189, 11850), (191, 11868), (195, 11943), (203, 12009), (204, 12012), (207, 12033), (209, 12045), (216, 12093), (218, 12102), (223, 12135), (228, 12162), (235, 12225), (247, 12330), (252, 12345), (256, 12399), (258, 12408), (261, 12414), (281, 12555), (286, 12621), (291, 12729), (293, 12753), (294, 12759), (296, 12774), (299, 12789), (300, 12825), (302, 12888), (303, 12891), (304, 12903), (305, 12924), (307, 12984), (311, 13164),

Gene: EmiMonkey\_14 Start: 9504, Stop: 12992, Start Num: 2

Candidate Starts for EmiMonkey\_14:

(Start: 2 @9504 has 184 MA's), (5, 9555), (6, 9582), (8, 9639), (10, 9684), (12, 9756), (28, 9810), (29, 9816), (33, 9879), (34, 9894), (43, 10011), (47, 10044), (49, 10062), (51, 10086), (54, 10131), (56, 10149), (58, 10161), (61, 10218), (62, 10233), (63, 10251), (65, 10266), (66, 10269), (70, 10308), (73, 10350), (75, 10380), (77, 10386), (79, 10416), (81, 10452), (82, 10461), (83, 10473), (85, 10506), (86, 10521), (87, 10548), (90, 10569), (91, 10581), (92, 10590), (94, 10632), (96, 10665), (99, 10707), (100, 10719), (104, 10764), (106, 10776), (116, 10827), (117, 10836), (124, 10869), (125, 10872), (126, 10878), (130, 10890), (134, 10953), (137, 11001), (143, 11064), (144, 11067), (145, 11076), (157, 11241), (158, 11250), (160, 11301), (161, 11316), (162, 11319), (163, 11337), (164, 11358), (165, 11376), (169, 11448), (171, 11502), (172, 11538), (173, 11544), (174, 11577), (176, 11610), (180, 11661), (182, 11694), (183, 11718), (184, 11721), (185, 11730), (187, 11775), (188, 11778), (189, 11784), (191, 11802), (194, 11871), (195, 11877), (210, 11976), (215, 12015), (216, 12018), (222, 12048), (226, 12075), (230, 12102), (233, 12147), (251, 12270), (271, 12318), (276, 12348), (281, 12369), (286, 12435), (291, 12543), (293, 12567), (294, 12573), (296, 12588), (299, 12603), (300, 12639), (302, 12702), (303, 12705), (304, 12717), (305, 12738), (307, 12798), (311, 12978),

Gene: Emma\_14 Start: 9531, Stop: 13061, Start Num: 2

Candidate Starts for Emma\_14:

(Start: 2 @9531 has 184 MA's), (3, 9543), (5, 9582), (6, 9609), (8, 9666), (10, 9711), (12, 9783), (26, 9825), (27, 9828), (28, 9837), (29, 9843), (33, 9906), (34, 9921), (43, 10038), (47, 10071), (51, 10113), (54, 10158), (56, 10176), (58, 10188), (62, 10260), (65, 10293), (66, 10296), (70, 10335), (73, 10377), (75, 10407), (77, 10413), (79, 10443), (81, 10479), (82, 10488), (83, 10500), (90, 10596), (92, 10617), (96, 10692), (97, 10713), (98, 10722), (101, 10755), (102, 10758), (103, 10770), (109, 10824), (112, 10836), (119, 10890), (121, 10899), (128, 10929), (135, 11019), (148, 11163), (151, 11223), (153, 11235), (157, 11304), (159, 11328), (160, 11364), (161, 11379), (162, 11382), (163, 11400), (164, 11421), (165, 11439), (169, 11511), (171, 11565), (172, 11601), (173, 11607), (174, 11640), (176, 11673), (178, 11694), (180, 11724), (182, 11757), (183, 11781), (184, 11784), (185, 11793), (187, 11838), (188, 11841), (191, 11865), (194, 11937), (195, 11943), (210, 12042), (212, 12063), (226,

12141), (229, 12159), (232, 12192), (233, 12213), (244, 12315), (251, 12339), (259, 12387), (278, 12417), (281, 12438), (286, 12504), (291, 12612), (293, 12636), (294, 12642), (296, 12657), (299, 12672), (300, 12708), (302, 12771), (303, 12774), (305, 12807), (306, 12846), (307, 12867), (311, 13047),

Gene: Emmaloid\_16 Start: 9341, Stop: 12829, Start Num: 2

Candidate Starts for Emmaloid\_16:

(Start: 2 @9341 has 184 MA's), (5, 9392), (6, 9419), (8, 9476), (10, 9521), (12, 9593), (28, 9647), (29, 9653), (33, 9716), (34, 9731), (43, 9848), (47, 9881), (49, 9899), (51, 9923), (54, 9968), (56, 9986), (58, 9998), (61, 10055), (62, 10070), (63, 10088), (65, 10103), (66, 10106), (70, 10145), (73, 10187), (75, 10217), (77, 10223), (79, 10253), (81, 10289), (82, 10298), (83, 10310), (85, 10343), (86, 10358), (87, 10385), (90, 10406), (91, 10418), (92, 10427), (94, 10469), (96, 10502), (99, 10544), (100, 10556), (104, 10601), (106, 10613), (116, 10664), (117, 10673), (124, 10706), (125, 10709), (126, 10715), (130, 10727), (134, 10790), (137, 10838), (143, 10901), (144, 10904), (145, 10913), (157, 11078), (158, 11087), (160, 11138), (161, 11153), (162, 11156), (163, 11174), (164, 11195), (165, 11213), (169, 11285), (171, 11339), (172, 11375), (173, 11381), (174, 11414), (176, 11447), (180, 11498), (182, 11531), (183, 11555), (184, 11558), (185, 11567), (187, 11612), (188, 11615), (189, 11621), (191, 11639), (194, 11708), (195, 11714), (210, 11813), (215, 11852), (216, 11855), (222, 11885), (226, 11912), (230, 11939), (233, 11984), (251, 12107), (271, 12155), (276, 12185), (281, 12206), (286, 12272), (291, 12380), (293, 12404), (294, 12410), (296, 12425), (299, 12440), (300, 12476), (302, 12539), (303, 12542), (304, 12554), (305, 12575), (307, 12635), (311, 12815),

Gene: Empress\_14 Start: 9508, Stop: 13032, Start Num: 2

Candidate Starts for Empress\_14:

(Start: 2 @9508 has 184 MA's), (3, 9520), (5, 9559), (6, 9586), (10, 9688), (11, 9736), (12, 9760), (28, 9814), (29, 9820), (33, 9883), (34, 9898), (43, 10015), (47, 10048), (49, 10066), (51, 10090), (54, 10135), (56, 10153), (62, 10237), (65, 10270), (66, 10273), (70, 10312), (73, 10354), (75, 10384), (77, 10390), (79, 10420), (81, 10456), (82, 10465), (83, 10477), (85, 10510), (87, 10552), (90, 10573), (91, 10585), (92, 10594), (97, 10690), (98, 10699), (101, 10732), (102, 10735), (103, 10747), (106, 10780), (109, 10801), (121, 10876), (122, 10882), (125, 10894), (135, 10996), (140, 11071), (151, 11200), (153, 11212), (157, 11284), (159, 11308), (160, 11344), (161, 11359), (162, 11362), (163, 11380), (164, 11401), (165, 11419), (169, 11491), (171, 11545), (172, 11581), (173, 11587), (174, 11620), (176, 11653), (180, 11704), (182, 11737), (183, 11761), (184, 11764), (185, 11773), (187, 11818), (188, 11821), (191, 11845), (194, 11914), (195, 11920), (212, 12040), (226, 12118), (229, 12136), (232, 12169), (233, 12190), (244, 12292), (251, 12316), (259, 12364), (278, 12394), (281, 12415), (286, 12478), (291, 12586), (293, 12610), (294, 12616), (296, 12631), (297, 12637), (299, 12646), (300, 12682), (302, 12745), (303, 12748), (305, 12781), (306, 12820), (307, 12841), (311, 13018),

Gene: Enby\_15 Start: 9344, Stop: 12835, Start Num: 2

Candidate Starts for Enby\_15:

(Start: 1 @9323 has 37 MA's), (Start: 2 @9344 has 184 MA's), (3, 9356), (5, 9395), (6, 9422), (10, 9524), (11, 9572), (12, 9596), (26, 9638), (27, 9641), (28, 9650), (29, 9656), (33, 9719), (34, 9734), (43, 9851), (47, 9884), (49, 9902), (51, 9926), (54, 9971), (56, 9989), (58, 10001), (61, 10058), (62, 10073), (63, 10091), (65, 10106), (66, 10109), (70, 10148), (73, 10190), (75, 10220), (77, 10226), (79, 10256), (81, 10292), (82, 10301), (83, 10313), (85, 10346), (87, 10388), (90, 10409), (91, 10421), (92, 10430), (94, 10472), (96, 10505), (99, 10547), (100, 10559), (104, 10604), (106, 10616), (116, 10667), (117, 10676), (125, 10712), (126, 10718), (130, 10730), (134, 10793), (137, 10841), (143, 10904), (144, 10907), (145, 10916), (157, 11081), (160, 11144), (161, 11159), (162, 11162), (163, 11180), (164, 11201), (165, 11219), (169, 11291), (171, 11345), (172, 11381), (173, 11387), (174, 11420), (176, 11453), (180, 11504), (182, 11537), (183, 11561), (184, 11564), (185, 11573), (187, 11618), (188, 11621), (191, 11645), (194, 11714), (195, 11720), (210, 11819), (215, 11858), (216, 11861), (222, 11891), (226, 11918), (230, 11945), (233, 11990), (251, 12113), (271, 12161), (276, 12191), (281, 12212), (286, 12278), (291, 12386), (293, 12410), (294, 12416), (296, 12431), (299, 12446), (300,

12482), (302, 12545), (303, 12548), (304, 12560), (305, 12581), (307, 12641), (311, 12821),

Gene: Eradicator\_14 Start: 9487, Stop: 12975, Start Num: 2

Candidate Starts for Eradicator\_14:

(Start: 1 @9466 has 37 MA's), (Start: 2 @9487 has 184 MA's), (3, 9499), (5, 9538), (6, 9565), (10, 9667), (11, 9715), (12, 9739), (26, 9781), (27, 9784), (28, 9793), (29, 9799), (33, 9862), (34, 9877), (43, 9994), (47, 10027), (49, 10045), (51, 10069), (54, 10114), (56, 10132), (58, 10144), (61, 10201), (62, 10216), (63, 10234), (65, 10249), (66, 10252), (70, 10291), (73, 10333), (75, 10363), (77, 10369), (79, 10399), (81, 10435), (82, 10444), (83, 10456), (85, 10489), (86, 10504), (87, 10531), (90, 10552), (92, 10573), (94, 10615), (96, 10648), (99, 10690), (100, 10702), (104, 10747), (106, 10759), (116, 10810), (117, 10819), (125, 10855), (126, 10861), (130, 10873), (134, 10936), (137, 10984), (143, 11047), (144, 11050), (145, 11059), (157, 11224), (160, 11287), (161, 11302), (162, 11305), (163, 11323), (164, 11344), (165, 11362), (169, 11434), (171, 11488), (172, 11524), (173, 11530), (174, 11563), (176, 11596), (180, 11647), (182, 11680), (183, 11704), (184, 11707), (185, 11716), (187, 11761), (188, 11764), (189, 11770), (191, 11788), (194, 11857), (195, 11863), (210, 11962), (215, 12001), (216, 12004), (222, 12034), (230, 12088), (233, 12133), (251, 12256), (271, 12304), (276, 12334), (281, 12355), (286, 12421), (291, 12529), (293, 12553), (294, 12559), (296, 12574), (299, 12589), (300, 12625), (302, 12688), (303, 12691), (304, 12703), (305, 12724), (306, 12763), (307, 12784), (311, 12961),

Gene: Estave1\_14 Start: 9502, Stop: 13137, Start Num: 2

Candidate Starts for Estave1\_14:

(Start: 1 @9481 has 37 MA's), (Start: 2 @9502 has 184 MA's), (3, 9514), (5, 9553), (6, 9580), (10, 9682), (12, 9754), (26, 9796), (28, 9808), (29, 9814), (33, 9877), (34, 9892), (43, 10009), (47, 10042), (49, 10060), (51, 10084), (54, 10129), (56, 10147), (58, 10159), (61, 10216), (62, 10231), (63, 10249), (65, 10264), (66, 10267), (70, 10306), (73, 10348), (75, 10378), (77, 10384), (79, 10414), (81, 10450), (82, 10459), (83, 10471), (85, 10504), (86, 10519), (87, 10546), (90, 10567), (91, 10579), (92, 10588), (97, 10684), (98, 10693), (101, 10726), (102, 10729), (103, 10741), (106, 10774), (109, 10795), (112, 10807), (121, 10870), (122, 10876), (125, 10888), (135, 10990), (151, 11194), (153, 11206), (157, 11272), (158, 11281), (160, 11335), (161, 11350), (162, 11353), (163, 11371), (164, 11392), (165, 11410), (169, 11482), (171, 11536), (172, 11572), (173, 11578), (174, 11611), (176, 11644), (178, 11665), (180, 11695), (182, 11728), (183, 11752), (184, 11755), (185, 11764), (187, 11809), (188, 11812), (191, 11836), (194, 11905), (195, 11911), (203, 11977), (204, 11980), (207, 12001), (218, 12070), (223, 12103), (228, 12130), (234, 12190), (235, 12193), (239, 12235), (247, 12298), (249, 12304), (252, 12313), (257, 12367), (258, 12373), (261, 12379), (270, 12415), (277, 12475), (281, 12517), (286, 12583), (291, 12691), (293, 12715), (294, 12721), (296, 12736), (297, 12742), (299, 12751), (300, 12787), (302, 12850), (303, 12853), (305, 12886), (306, 12925), (307, 12946), (311, 13123),

Gene: Fancypants\_14 Start: 9493, Stop: 13020, Start Num: 2

Candidate Starts for Fancypants\_14:

(Start: 1 @9472 has 37 MA's), (Start: 2 @9493 has 184 MA's), (3, 9505), (5, 9544), (6, 9571), (10, 9673), (11, 9721), (12, 9745), (28, 9799), (29, 9805), (33, 9868), (34, 9883), (43, 10000), (47, 10033), (51, 10075), (54, 10120), (56, 10138), (58, 10150), (62, 10222), (65, 10255), (66, 10258), (70, 10297), (73, 10339), (75, 10369), (77, 10375), (79, 10405), (81, 10441), (82, 10450), (83, 10462), (87, 10537), (90, 10558), (91, 10570), (92, 10579), (97, 10675), (98, 10684), (102, 10720), (103, 10732), (109, 10786), (112, 10798), (119, 10852), (121, 10861), (135, 10981), (140, 11056), (151, 11185), (153, 11197), (157, 11269), (159, 11293), (160, 11329), (161, 11344), (162, 11347), (163, 11365), (164, 11386), (165, 11404), (169, 11476), (171, 11530), (172, 11566), (173, 11572), (174, 11605), (176, 11638), (178, 11659), (180, 11689), (182, 11722), (183, 11746), (184, 11749), (185, 11758), (187, 11803), (188, 11806), (189, 11812), (191, 11830), (194, 11899), (195, 11905), (210, 12004), (215, 12043), (216, 12046), (222, 12076), (226, 12103), (230, 12130), (233, 12175), (251, 12298), (259, 12346), (278, 12376), (281, 12397), (286, 12463), (291, 12571), (293, 12595), (294, 12601), (296,



12616), (299, 12631), (300, 12667), (302, 12730), (303, 12733), (304, 12745), (305, 12766), (307, 12826), (311, 13006),

Gene: Fastidio\_14 Start: 9500, Stop: 12991, Start Num: 2

Candidate Starts for Fastidio\_14:

(Start: 1 @9479 has 37 MA's), (Start: 2 @9500 has 184 MA's), (3, 9512), (5, 9551), (6, 9578), (8, 9635), (10, 9680), (12, 9752), (28, 9806), (29, 9812), (32, 9836), (33, 9875), (34, 9890), (43, 10007), (47, 10040), (51, 10082), (54, 10127), (56, 10145), (58, 10157), (62, 10229), (65, 10262), (66, 10265), (70, 10304), (73, 10346), (75, 10376), (77, 10382), (79, 10412), (81, 10448), (82, 10457), (83, 10469), (90, 10565), (94, 10628), (96, 10661), (99, 10703), (100, 10715), (104, 10760), (106, 10772), (116, 10823), (117, 10832), (124, 10865), (125, 10868), (126, 10874), (130, 10886), (134, 10949), (137, 10997), (143, 11060), (144, 11063), (145, 11072), (157, 11237), (158, 11246), (160, 11297), (161, 11312), (162, 11315), (163, 11333), (164, 11354), (165, 11372), (169, 11444), (171, 11498), (172, 11534), (173, 11540), (174, 11573), (176, 11606), (180, 11657), (182, 11690), (183, 11714), (184, 11717), (185, 11726), (187, 11771), (188, 11774), (189, 11780), (191, 11798), (194, 11867), (195, 11873), (210, 11972), (226, 12071), (229, 12089), (233, 12143), (244, 12245), (251, 12269), (271, 12317), (276, 12347), (281, 12368), (286, 12434), (291, 12542), (293, 12566), (294, 12572), (296, 12587), (299, 12602), (300, 12638), (302, 12701), (303, 12704), (304, 12716), (305, 12737), (307, 12797), (311, 12977),

Gene: Filuzino\_14 Start: 9533, Stop: 13018, Start Num: 2

Candidate Starts for Filuzino\_14:

(Start: 2 @9533 has 184 MA's), (3, 9545), (5, 9584), (6, 9611), (8, 9668), (10, 9713), (12, 9785), (26, 9827), (27, 9830), (28, 9839), (29, 9845), (33, 9908), (34, 9923), (43, 10040), (47, 10073), (51, 10115), (54, 10160), (56, 10178), (58, 10190), (62, 10262), (65, 10295), (66, 10298), (70, 10337), (73, 10379), (75, 10409), (77, 10415), (79, 10445), (81, 10481), (82, 10490), (83, 10502), (90, 10598), (94, 10661), (99, 10736), (104, 10793), (106, 10805), (112, 10826), (116, 10856), (124, 10898), (125, 10901), (126, 10907), (130, 10919), (144, 11096), (145, 11105), (155, 11252), (157, 11267), (159, 11291), (161, 11342), (162, 11345), (163, 11363), (164, 11384), (165, 11402), (169, 11474), (171, 11528), (172, 11564), (173, 11570), (176, 11636), (180, 11687), (182, 11720), (183, 11744), (184, 11747), (185, 11756), (187, 11801), (188, 11804), (189, 11810), (191, 11828), (194, 11897), (195, 11903), (210, 12002), (215, 12041), (216, 12044), (222, 12074), (226, 12101), (230, 12128), (233, 12173), (251, 12296), (271, 12344), (276, 12374), (281, 12395), (286, 12461), (291, 12569), (293, 12593), (294, 12599), (296, 12614), (299, 12629), (300, 12665), (302, 12728), (303, 12731), (304, 12743), (305, 12764), (307, 12824), (311, 13004),

Gene: Firehouse51\_15 Start: 10071, Stop: 13598, Start Num: 2

Candidate Starts for Firehouse51\_15:

(Start: 2 @10071 has 184 MA's), (5, 10122), (6, 10149), (8, 10206), (10, 10251), (12, 10323), (28, 10377), (29, 10383), (32, 10407), (33, 10446), (34, 10461), (43, 10578), (47, 10611), (51, 10653), (54, 10698), (56, 10716), (58, 10728), (62, 10800), (65, 10833), (66, 10836), (70, 10875), (73, 10917), (75, 10947), (77, 10953), (79, 10983), (81, 11019), (82, 11028), (83, 11040), (90, 11136), (96, 11232), (98, 11262), (101, 11295), (102, 11298), (103, 11310), (109, 11364), (112, 11376), (119, 11430), (121, 11439), (135, 11559), (148, 11703), (151, 11763), (153, 11775), (157, 11844), (159, 11868), (160, 11904), (161, 11919), (162, 11922), (163, 11940), (164, 11961), (165, 11979), (169, 12051), (171, 12105), (172, 12141), (173, 12147), (176, 12213), (180, 12264), (182, 12297), (183, 12321), (184, 12324), (185, 12333), (187, 12378), (188, 12381), (189, 12387), (191, 12405), (194, 12474), (195, 12480), (210, 12579), (226, 12678), (229, 12696), (233, 12750), (244, 12852), (251, 12876), (259, 12924), (278, 12954), (281, 12975), (286, 13041), (291, 13149), (293, 13173), (294, 13179), (296, 13194), (299, 13209), (300, 13245), (302, 13308), (303, 13311), (304, 13323), (305, 13344), (307, 13404), (311, 13584),

Gene: Flathead\_15 Start: 9363, Stop: 12893, Start Num: 2

Candidate Starts for Flathead\_15:

(Start: 1 @9342 has 37 MA's), (Start: 2 @9363 has 184 MA's), (3, 9375), (5, 9414), (6, 9441), (8, 9498), (10, 9543), (12, 9615), (26, 9657), (27, 9660), (28, 9669), (29, 9675), (32, 9699), (33, 9738), (34, 9753), (43, 9870), (47, 9903), (51, 9945), (54, 9990), (56, 10008), (58, 10020), (62, 10092), (65, 10125), (66, 10128), (70, 10167), (73, 10209), (75, 10239), (77, 10245), (79, 10275), (81, 10311), (82, 10320), (83, 10332), (90, 10428), (96, 10524), (98, 10554), (101, 10587), (102, 10590), (103, 10602), (109, 10656), (112, 10668), (119, 10722), (121, 10731), (135, 10851), (148, 10995), (151, 11055), (153, 11067), (157, 11136), (159, 11160), (161, 11214), (162, 11217), (163, 11235), (164, 11256), (165, 11274), (169, 11346), (171, 11400), (172, 11436), (173, 11442), (176, 11508), (180, 11559), (182, 11592), (183, 11616), (184, 11619), (185, 11628), (187, 11673), (188, 11676), (189, 11682), (191, 11700), (194, 11769), (195, 11775), (210, 11874), (226, 11973), (229, 11991), (233, 12045), (244, 12147), (251, 12171), (259, 12219), (278, 12249), (281, 12270), (286, 12336), (291, 12444), (293, 12468), (294, 12474), (296, 12489), (299, 12504), (300, 12540), (302, 12603), (303, 12606), (304, 12618), (305, 12639), (307, 12699), (311, 12879),

Gene: Florinda\_14 Start: 9513, Stop: 13037, Start Num: 2

Candidate Starts for Florinda\_14:

(Start: 1 @9492 has 37 MA's), (Start: 2 @9513 has 184 MA's), (3, 9525), (5, 9564), (6, 9591), (10, 9693), (12, 9765), (26, 9807), (28, 9819), (29, 9825), (33, 9888), (34, 9903), (43, 10020), (47, 10053), (49, 10071), (51, 10095), (54, 10140), (56, 10158), (58, 10170), (62, 10242), (65, 10275), (66, 10278), (70, 10317), (73, 10359), (75, 10389), (77, 10395), (79, 10425), (81, 10461), (82, 10470), (83, 10482), (90, 10578), (96, 10674), (98, 10704), (101, 10737), (102, 10740), (103, 10752), (106, 10785), (109, 10806), (121, 10881), (128, 10911), (135, 11001), (148, 11145), (151, 11205), (153, 11217), (157, 11286), (158, 11295), (160, 11346), (161, 11361), (162, 11364), (163, 11382), (164, 11403), (165, 11421), (169, 11493), (171, 11547), (172, 11583), (173, 11589), (176, 11655), (180, 11706), (182, 11739), (183, 11763), (184, 11766), (185, 11775), (187, 11820), (188, 11823), (191, 11847), (194, 11916), (195, 11922), (210, 12021), (215, 12060), (216, 12063), (222, 12093), (230, 12147), (233, 12192), (251, 12315), (259, 12363), (278, 12393), (281, 12414), (282, 12429), (286, 12480), (291, 12588), (293, 12612), (294, 12618), (296, 12633), (299, 12648), (300, 12684), (302, 12747), (303, 12750), (305, 12783), (307, 12843), (311, 13023),

Gene: Frankie\_15 Start: 9542, Stop: 13117, Start Num: 2

Candidate Starts for Frankie\_15:

(Start: 1 @9521 has 37 MA's), (Start: 2 @9542 has 184 MA's), (3, 9554), (5, 9593), (6, 9620), (10, 9722), (12, 9794), (26, 9836), (28, 9848), (30, 9857), (33, 9917), (34, 9932), (43, 10049), (47, 10082), (49, 10100), (51, 10124), (54, 10169), (56, 10187), (58, 10199), (62, 10271), (63, 10289), (65, 10304), (66, 10307), (70, 10346), (73, 10388), (75, 10418), (77, 10424), (79, 10454), (81, 10490), (82, 10499), (83, 10511), (85, 10544), (86, 10559), (87, 10586), (90, 10607), (92, 10628), (99, 10745), (101, 10766), (105, 10805), (113, 10847), (120, 10892), (127, 10922), (132, 10976), (136, 11030), (138, 11054), (141, 11081), (150, 11147), (157, 11258), (158, 11267), (160, 11315), (164, 11372), (165, 11390), (171, 11516), (172, 11552), (173, 11558), (176, 11624), (180, 11675), (182, 11708), (183, 11732), (184, 11735), (185, 11744), (187, 11789), (188, 11792), (191, 11816), (194, 11885), (195, 11891), (203, 11957), (204, 11960), (205, 11963), (207, 11981), (218, 12050), (223, 12083), (225, 12092), (235, 12173), (241, 12224), (247, 12278), (252, 12293), (257, 12347), (258, 12353), (261, 12359), (270, 12395), (280, 12479), (281, 12497), (286, 12563), (291, 12671), (293, 12695), (294, 12701), (296, 12716), (299, 12731), (300, 12767), (302, 12830), (303, 12833), (307, 12926), (311, 13103),

Gene: FreddyB\_14 Start: 9471, Stop: 13019, Start Num: 1

Candidate Starts for FreddyB\_14:

(Start: 1 @9471 has 37 MA's), (Start: 2 @9492 has 184 MA's), (3, 9504), (5, 9543), (6, 9570), (10, 9672), (11, 9720), (12, 9744), (26, 9786), (27, 9789), (28, 9798), (29, 9804), (33, 9867), (34, 9882), (43, 9999), (47, 10032), (49, 10050), (51, 10074), (54, 10119), (56, 10137), (58, 10149), (62, 10221), (65, 10254), (66, 10257), (70, 10296), (73, 10338), (75, 10368), (77, 10374), (79, 10404), (81, 10440), (82,

10449), (83, 10461), (85, 10494), (86, 10509), (90, 10557), (91, 10569), (97, 10674), (98, 10683), (102, 10719), (103, 10731), (106, 10764), (109, 10785), (121, 10860), (125, 10878), (135, 10980), (140, 11055), (151, 11184), (153, 11196), (157, 11265), (160, 11328), (161, 11343), (162, 11346), (163, 11364), (164, 11385), (165, 11403), (169, 11475), (171, 11529), (172, 11565), (173, 11571), (174, 11604), (176, 11637), (180, 11688), (182, 11721), (183, 11745), (184, 11748), (185, 11757), (187, 11802), (188, 11805), (189, 11811), (191, 11829), (194, 11898), (195, 11904), (210, 12003), (215, 12042), (216, 12045), (222, 12075), (230, 12129), (233, 12174), (251, 12297), (259, 12345), (278, 12375), (281, 12396), (286, 12462), (291, 12570), (293, 12594), (294, 12600), (296, 12615), (299, 12630), (300, 12666), (302, 12729), (303, 12732), (304, 12744), (305, 12765), (306, 12804), (307, 12825), (311, 13005),

Gene: Fruitloop\_14 Start: 9533, Stop: 13057, Start Num: 2

Candidate Starts for Fruitloop\_14:

(Start: 2 @9533 has 184 MA's), (3, 9545), (5, 9584), (6, 9611), (8, 9668), (10, 9713), (12, 9785), (26, 9827), (27, 9830), (28, 9839), (29, 9845), (33, 9908), (34, 9923), (43, 10040), (47, 10073), (51, 10115), (54, 10160), (56, 10178), (58, 10190), (62, 10262), (65, 10295), (66, 10298), (70, 10337), (73, 10379), (75, 10409), (77, 10415), (79, 10445), (81, 10481), (82, 10490), (83, 10502), (90, 10598), (96, 10694), (98, 10724), (101, 10757), (102, 10760), (103, 10772), (109, 10826), (112, 10838), (119, 10892), (121, 10901), (135, 11021), (148, 11165), (151, 11225), (153, 11237), (157, 11306), (159, 11330), (161, 11381), (162, 11384), (164, 11423), (165, 11441), (171, 11567), (172, 11603), (173, 11609), (176, 11675), (180, 11726), (182, 11759), (183, 11783), (184, 11786), (185, 11795), (187, 11840), (188, 11843), (189, 11849), (191, 11867), (194, 11936), (195, 11942), (210, 12041), (215, 12080), (216, 12083), (222, 12113), (226, 12140), (230, 12167), (233, 12212), (251, 12335), (259, 12383), (278, 12413), (281, 12434), (286, 12500), (291, 12608), (293, 12632), (294, 12638), (296, 12653), (299, 12668), (300, 12704), (302, 12767), (303, 12770), (304, 12782), (305, 12803), (307, 12863), (311, 13043),

Gene: GUmbie\_14 Start: 9527, Stop: 13012, Start Num: 2

Candidate Starts for GUmbie\_14:

(Start: 2 @9527 has 184 MA's), (3, 9539), (5, 9578), (6, 9605), (8, 9662), (10, 9707), (12, 9779), (26, 9821), (27, 9824), (28, 9833), (29, 9839), (33, 9902), (34, 9917), (43, 10034), (47, 10067), (51, 10109), (54, 10154), (56, 10172), (58, 10184), (62, 10256), (65, 10289), (66, 10292), (70, 10331), (73, 10373), (75, 10403), (77, 10409), (79, 10439), (81, 10475), (82, 10484), (83, 10496), (90, 10592), (94, 10655), (99, 10730), (104, 10787), (106, 10799), (112, 10820), (116, 10850), (124, 10892), (125, 10895), (126, 10901), (130, 10913), (145, 11099), (155, 11246), (157, 11261), (159, 11285), (161, 11339), (162, 11342), (164, 11381), (165, 11399), (169, 11471), (171, 11525), (172, 11561), (173, 11567), (176, 11633), (180, 11684), (182, 11717), (183, 11741), (184, 11744), (185, 11753), (187, 11798), (188, 11801), (189, 11807), (191, 11825), (194, 11894), (195, 11900), (210, 11999), (215, 12038), (216, 12041), (222, 12071), (226, 12098), (230, 12125), (233, 12170), (251, 12293), (271, 12341), (276, 12371), (281, 12392), (286, 12458), (291, 12566), (293, 12590), (294, 12596), (296, 12611), (299, 12626), (300, 12662), (302, 12725), (303, 12728), (305, 12761), (306, 12800), (307, 12821), (311, 12998),

Gene: Galactic\_14 Start: 9507, Stop: 13034, Start Num: 2

Candidate Starts for Galactic\_14:

(Start: 2 @9507 has 184 MA's), (3, 9519), (5, 9558), (6, 9585), (8, 9642), (10, 9687), (12, 9759), (26, 9801), (27, 9804), (28, 9813), (29, 9819), (32, 9843), (33, 9882), (34, 9897), (43, 10014), (47, 10047), (51, 10089), (54, 10134), (56, 10152), (58, 10164), (62, 10236), (65, 10269), (66, 10272), (70, 10311), (73, 10353), (75, 10383), (77, 10389), (79, 10419), (81, 10455), (82, 10464), (83, 10476), (90, 10572), (96, 10668), (98, 10698), (101, 10731), (102, 10734), (103, 10746), (109, 10800), (112, 10812), (119, 10866), (121, 10875), (135, 10995), (148, 11139), (151, 11199), (153, 11211), (157, 11280), (159, 11304), (160, 11343), (161, 11358), (162, 11361), (164, 11400), (165, 11418), (169, 11490), (171, 11544), (172, 11580), (173, 11586), (176, 11652), (180, 11703), (182, 11736), (183, 11760), (184,

11763), (185, 11772), (187, 11817), (188, 11820), (189, 11826), (191, 11844), (194, 11913), (195, 11919), (210, 12018), (215, 12057), (216, 12060), (222, 12090), (230, 12144), (233, 12189), (251, 12312), (259, 12360), (278, 12390), (281, 12411), (286, 12477), (291, 12585), (293, 12609), (294, 12615), (296, 12630), (299, 12645), (300, 12681), (302, 12744), (303, 12747), (304, 12759), (305, 12780), (307, 12840), (311, 13020),

Gene: Gandalph\_14 Start: 9504, Stop: 13028, Start Num: 2

Candidate Starts for Gandalph\_14:

(Start: 1 @9483 has 37 MA's), (Start: 2 @9504 has 184 MA's), (3, 9516), (5, 9555), (6, 9582), (10, 9684), (11, 9732), (12, 9756), (28, 9810), (29, 9816), (33, 9879), (34, 9894), (43, 10011), (47, 10044), (51, 10086), (54, 10131), (56, 10149), (58, 10161), (62, 10233), (65, 10266), (66, 10269), (70, 10308), (73, 10350), (75, 10380), (77, 10386), (79, 10416), (81, 10452), (82, 10461), (83, 10473), (90, 10569), (96, 10665), (98, 10695), (101, 10728), (102, 10731), (103, 10743), (109, 10797), (112, 10809), (119, 10863), (121, 10872), (135, 10992), (148, 11136), (151, 11196), (153, 11208), (157, 11277), (159, 11301), (161, 11355), (162, 11358), (163, 11376), (164, 11397), (165, 11415), (169, 11487), (171, 11541), (172, 11577), (173, 11583), (176, 11649), (180, 11700), (182, 11733), (183, 11757), (184, 11760), (185, 11769), (187, 11814), (188, 11817), (191, 11841), (194, 11910), (195, 11916), (210, 12015), (215, 12054), (216, 12057), (222, 12087), (226, 12114), (230, 12141), (233, 12186), (251, 12309), (259, 12354), (278, 12384), (281, 12405), (286, 12471), (291, 12579), (293, 12603), (294, 12609), (296, 12624), (299, 12639), (300, 12675), (302, 12738), (303, 12741), (304, 12753), (305, 12774), (307, 12834), (311, 13014),

Gene: Geralt\_14 Start: 9465, Stop: 13010, Start Num: 1

Candidate Starts for Geralt\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751), (187, 11796), (188, 11799), (189, 11805), (191, 11823), (194, 11892), (195, 11898), (210, 11997), (215, 12036), (216, 12039), (222, 12069), (230, 12123), (233, 12168), (251, 12291), (259, 12339), (278, 12369), (281, 12390), (286, 12456), (291, 12564), (293, 12588), (294, 12594), (296, 12609), (297, 12615), (299, 12624), (300, 12660), (302, 12723), (303, 12726), (305, 12759), (306, 12798), (307, 12819), (311, 12996),

Gene: GigiOuiOui\_14 Start: 9504, Stop: 13136, Start Num: 2

Candidate Starts for GigiOuiOui\_14:

(Start: 2 @9504 has 184 MA's), (3, 9516), (5, 9555), (6, 9582), (8, 9639), (10, 9684), (12, 9756), (28, 9810), (29, 9816), (33, 9879), (34, 9894), (43, 10011), (47, 10044), (51, 10086), (54, 10131), (56, 10149), (58, 10161), (62, 10233), (65, 10266), (66, 10269), (70, 10308), (73, 10350), (75, 10380), (77, 10386), (79, 10416), (81, 10452), (83, 10473), (90, 10569), (94, 10632), (96, 10665), (99, 10707), (100, 10719), (104, 10764), (106, 10776), (116, 10827), (117, 10836), (124, 10869), (125, 10872), (126, 10878), (130, 10890), (134, 10953), (137, 11001), (143, 11064), (144, 11067), (145, 11076), (157, 11241), (158, 11250), (160, 11301), (161, 11316), (162, 11319), (163, 11337), (164, 11358), (165, 11376), (169, 11448), (171, 11502), (172, 11538), (173, 11544), (174, 11577), (176, 11610), (180, 11661), (182, 11694), (183, 11718), (184, 11721), (185, 11730), (187, 11775), (188, 11778), (191, 11802), (194, 11871), (195, 11877), (222, 12048), (230, 12102), (233, 12147), (254, 12306), (258, 12345), (263, 12369), (264, 12375), (267, 12381), (272, 12417), (286, 12582), (291, 12690), (293, 12714), (294, 12720), (296, 12735), (297, 12741), (299, 12750), (300, 12786), (302, 12849), (303,

12852), (305, 12885), (306, 12924), (307, 12945), (311, 13122),

Gene: Girafales\_15 Start: 9357, Stop: 12845, Start Num: 2

Candidate Starts for Girafales\_15:

(Start: 1 @9336 has 37 MA's), (Start: 2 @9357 has 184 MA's), (3, 9369), (5, 9408), (6, 9435), (8, 9492), (10, 9537), (12, 9609), (28, 9663), (29, 9669), (32, 9693), (33, 9732), (34, 9747), (43, 9864), (47, 9897), (51, 9939), (54, 9984), (56, 10002), (58, 10014), (62, 10086), (65, 10119), (66, 10122), (70, 10161), (73, 10203), (75, 10233), (77, 10239), (79, 10269), (81, 10305), (82, 10314), (83, 10326), (85, 10359), (86, 10374), (90, 10422), (92, 10443), (94, 10485), (96, 10518), (99, 10560), (100, 10572), (104, 10617), (106, 10629), (116, 10680), (117, 10689), (124, 10722), (125, 10725), (126, 10731), (130, 10743), (134, 10806), (143, 10917), (144, 10920), (145, 10929), (158, 11103), (160, 11154), (161, 11169), (162, 11172), (163, 11190), (164, 11211), (165, 11229), (169, 11301), (171, 11355), (172, 11391), (173, 11397), (176, 11463), (180, 11514), (182, 11547), (183, 11571), (184, 11574), (185, 11583), (187, 11628), (188, 11631), (191, 11655), (194, 11724), (195, 11730), (210, 11829), (215, 11868), (216, 11871), (222, 11901), (230, 11955), (233, 12000), (251, 12123), (271, 12171), (276, 12201), (281, 12222), (282, 12237), (286, 12288), (291, 12396), (293, 12420), (294, 12426), (296, 12441), (299, 12456), (300, 12492), (302, 12555), (303, 12558), (305, 12591), (307, 12651), (311, 12831),

Gene: Girr\_14 Start: 9496, Stop: 12981, Start Num: 2

Candidate Starts for Girr\_14:

(Start: 1 @9475 has 37 MA's), (Start: 2 @9496 has 184 MA's), (3, 9508), (5, 9547), (6, 9574), (8, 9631), (10, 9676), (11, 9724), (12, 9748), (28, 9802), (29, 9808), (33, 9871), (34, 9886), (43, 10003), (47, 10036), (51, 10078), (54, 10123), (56, 10141), (58, 10153), (62, 10225), (65, 10258), (66, 10261), (70, 10300), (73, 10342), (75, 10372), (77, 10378), (79, 10408), (81, 10444), (82, 10453), (83, 10465), (90, 10561), (94, 10624), (99, 10699), (104, 10756), (106, 10768), (112, 10789), (116, 10819), (124, 10861), (125, 10864), (126, 10870), (130, 10882), (145, 11068), (155, 11215), (157, 11230), (159, 11254), (161, 11308), (162, 11311), (164, 11350), (165, 11368), (169, 11440), (171, 11494), (172, 11530), (173, 11536), (176, 11602), (180, 11653), (182, 11686), (183, 11710), (184, 11713), (185, 11722), (187, 11767), (188, 11770), (189, 11776), (191, 11794), (194, 11863), (195, 11869), (210, 11968), (215, 12007), (216, 12010), (222, 12040), (226, 12067), (230, 12094), (233, 12139), (251, 12262), (271, 12310), (276, 12340), (281, 12361), (286, 12427), (291, 12535), (293, 12559), (294, 12565), (296, 12580), (299, 12595), (300, 12631), (302, 12694), (303, 12697), (305, 12730), (306, 12769), (307, 12790), (311, 12967),

Gene: Gorge\_14 Start: 9475, Stop: 12996, Start Num: 2

Candidate Starts for Gorge\_14:

(Start: 1 @9454 has 37 MA's), (Start: 2 @9475 has 184 MA's), (3, 9487), (5, 9526), (6, 9553), (8, 9610), (10, 9655), (12, 9727), (29, 9787), (33, 9850), (34, 9865), (43, 9982), (47, 10015), (49, 10033), (51, 10057), (54, 10102), (56, 10120), (58, 10132), (62, 10204), (65, 10237), (66, 10240), (70, 10279), (73, 10321), (75, 10351), (77, 10357), (79, 10387), (81, 10423), (82, 10432), (83, 10444), (85, 10477), (86, 10492), (87, 10519), (90, 10540), (91, 10552), (92, 10561), (97, 10657), (98, 10666), (101, 10699), (102, 10702), (103, 10714), (106, 10747), (109, 10768), (121, 10843), (122, 10849), (125, 10861), (135, 10963), (140, 11038), (151, 11167), (153, 11179), (157, 11245), (160, 11305), (161, 11320), (162, 11323), (163, 11341), (164, 11362), (165, 11380), (169, 11452), (171, 11506), (172, 11542), (173, 11548), (174, 11581), (176, 11614), (180, 11665), (182, 11698), (183, 11722), (184, 11725), (185, 11734), (187, 11779), (188, 11782), (189, 11788), (191, 11806), (194, 11875), (195, 11881), (210, 11980), (215, 12019), (216, 12022), (222, 12052), (226, 12079), (230, 12106), (233, 12151), (251, 12274), (259, 12322), (278, 12352), (281, 12373), (286, 12439), (291, 12547), (293, 12571), (294, 12577), (296, 12592), (299, 12607), (300, 12643), (302, 12706), (303, 12709), (304, 12721), (305, 12742), (307, 12802), (311, 12982),

Gene: Grimmer\_15 Start: 10145, Stop: 13672, Start Num: 2

Candidate Starts for Grimmer\_15:

(Start: 1 @10124 has 37 MA's), (Start: 2 @10145 has 184 MA's), (3, 10157), (5, 10196), (6, 10223), (10, 10325), (11, 10373), (12, 10397), (28, 10451), (29, 10457), (33, 10520), (34, 10535), (43, 10652), (47, 10685), (49, 10703), (51, 10727), (54, 10772), (56, 10790), (58, 10802), (62, 10874), (65, 10907), (66, 10910), (70, 10949), (73, 10991), (75, 11021), (77, 11027), (79, 11057), (81, 11093), (82, 11102), (83, 11114), (85, 11147), (86, 11162), (90, 11210), (97, 11327), (98, 11336), (102, 11372), (106, 11417), (109, 11438), (121, 11513), (122, 11519), (125, 11531), (135, 11633), (151, 11837), (153, 11849), (157, 11918), (159, 11942), (160, 11978), (161, 11993), (162, 11996), (163, 12014), (164, 12035), (165, 12053), (169, 12125), (171, 12179), (172, 12215), (173, 12221), (174, 12254), (176, 12287), (178, 12308), (180, 12338), (182, 12371), (183, 12395), (184, 12398), (185, 12407), (187, 12452), (188, 12455), (191, 12479), (194, 12551), (195, 12557), (201, 12605), (210, 12656), (215, 12695), (216, 12698), (222, 12728), (226, 12755), (230, 12782), (233, 12827), (236, 12839), (244, 12926), (251, 12950), (259, 12998), (278, 13028), (281, 13049), (286, 13115), (291, 13223), (293, 13247), (294, 13253), (296, 13268), (297, 13274), (299, 13283), (300, 13319), (302, 13382), (303, 13385), (305, 13418), (306, 13457), (307, 13478), (311, 13658),

Gene: Guppsters\_14 Start: 9531, Stop: 13169, Start Num: 2

Candidate Starts for Guppsters\_14:

(Start: 1 @9510 has 37 MA's), (Start: 2 @9531 has 184 MA's), (3, 9543), (5, 9582), (6, 9609), (10, 9711), (11, 9759), (12, 9783), (28, 9837), (29, 9843), (33, 9906), (34, 9921), (43, 10038), (47, 10071), (49, 10089), (51, 10113), (54, 10158), (56, 10176), (58, 10188), (62, 10260), (65, 10293), (66, 10296), (70, 10335), (72, 10353), (73, 10377), (75, 10407), (77, 10413), (79, 10443), (81, 10479), (82, 10488), (83, 10500), (85, 10533), (87, 10575), (90, 10596), (91, 10608), (92, 10617), (97, 10713), (98, 10722), (101, 10755), (102, 10758), (103, 10770), (106, 10803), (109, 10824), (121, 10899), (122, 10905), (125, 10917), (135, 11019), (140, 11094), (151, 11223), (153, 11235), (157, 11304), (158, 11313), (160, 11364), (161, 11379), (162, 11382), (163, 11400), (164, 11421), (165, 11439), (169, 11511), (171, 11565), (172, 11601), (173, 11607), (176, 11673), (180, 11724), (182, 11757), (183, 11781), (184, 11784), (185, 11793), (187, 11838), (188, 11841), (191, 11865), (192, 11883), (197, 11958), (200, 11982), (220, 12111), (224, 12132), (242, 12273), (243, 12297), (245, 12315), (248, 12324), (283, 12564), (286, 12615), (291, 12723), (293, 12747), (294, 12753), (296, 12768), (299, 12783), (300, 12819), (302, 12882), (303, 12885), (304, 12897), (305, 12918), (306, 12957), (307, 12978), (311, 13155),

Gene: Hades\_14 Start: 9493, Stop: 13020, Start Num: 2

Candidate Starts for Hades\_14:

(Start: 1 @9472 has 37 MA's), (Start: 2 @9493 has 184 MA's), (3, 9505), (5, 9544), (6, 9571), (10, 9673), (11, 9721), (12, 9745), (26, 9787), (27, 9790), (28, 9799), (29, 9805), (33, 9868), (34, 9883), (43, 10000), (47, 10033), (51, 10075), (54, 10120), (56, 10138), (58, 10150), (62, 10222), (65, 10255), (66, 10258), (70, 10297), (73, 10339), (75, 10369), (77, 10375), (79, 10405), (81, 10441), (82, 10450), (83, 10462), (85, 10495), (90, 10558), (96, 10654), (98, 10684), (101, 10717), (102, 10720), (103, 10732), (109, 10786), (112, 10798), (119, 10852), (121, 10861), (135, 10981), (148, 11125), (151, 11185), (153, 11197), (157, 11266), (159, 11290), (161, 11344), (162, 11347), (164, 11386), (165, 11404), (169, 11476), (171, 11530), (172, 11566), (173, 11572), (176, 11638), (180, 11689), (182, 11722), (183, 11746), (184, 11749), (185, 11758), (187, 11803), (188, 11806), (189, 11812), (191, 11830), (194, 11899), (195, 11905), (210, 12004), (215, 12043), (216, 12046), (222, 12076), (230, 12130), (233, 12175), (251, 12298), (259, 12346), (278, 12376), (281, 12397), (286, 12463), (291, 12571), (293, 12595), (294, 12601), (296, 12616), (299, 12631), (300, 12667), (302, 12730), (303, 12733), (304, 12745), (305, 12766), (307, 12826), (311, 13006),

Gene: Hamulus\_14 Start: 9538, Stop: 13017, Start Num: 2

Candidate Starts for Hamulus\_14:

(Start: 2 @9538 has 184 MA's), (3, 9550), (5, 9589), (6, 9616), (8, 9673), (10, 9718), (12, 9790), (28, 9844), (29, 9850), (33, 9913), (34, 9928), (43, 10045), (47, 10078), (51, 10120), (54, 10165), (56,

10183), (58, 10195), (62, 10267), (65, 10300), (66, 10303), (70, 10342), (73, 10384), (75, 10414), (77, 10420), (79, 10450), (81, 10486), (82, 10495), (83, 10507), (90, 10603), (94, 10666), (99, 10741), (104, 10798), (106, 10810), (112, 10831), (116, 10861), (124, 10903), (125, 10906), (126, 10912), (130, 10924), (144, 11101), (145, 11110), (155, 11257), (157, 11272), (159, 11296), (160, 11332), (161, 11347), (162, 11350), (163, 11368), (164, 11389), (165, 11407), (169, 11479), (171, 11533), (172, 11569), (173, 11575), (176, 11641), (180, 11692), (182, 11725), (183, 11749), (184, 11752), (185, 11761), (187, 11806), (188, 11809), (189, 11815), (191, 11833), (194, 11902), (195, 11908), (210, 12007), (226, 12106), (229, 12124), (233, 12178), (236, 12190), (244, 12277), (251, 12301), (271, 12343), (276, 12373), (281, 12394), (286, 12460), (291, 12568), (293, 12592), (294, 12598), (296, 12613), (299, 12628), (300, 12664), (302, 12727), (303, 12730), (304, 12742), (305, 12763), (307, 12823), (311, 13003),

Gene: Harley\_14 Start: 9461, Stop: 13003, Start Num: 1

Candidate Starts for Harley\_14:

(Start: 1 @9461 has 37 MA's), (Start: 2 @9482 has 184 MA's), (3, 9494), (5, 9533), (6, 9560), (10, 9662), (11, 9710), (12, 9734), (26, 9776), (27, 9779), (28, 9788), (29, 9794), (33, 9857), (34, 9872), (43, 9989), (47, 10022), (49, 10040), (51, 10064), (54, 10109), (56, 10127), (58, 10139), (62, 10211), (65, 10244), (66, 10247), (70, 10286), (73, 10328), (75, 10358), (77, 10364), (79, 10394), (81, 10430), (82, 10439), (83, 10451), (90, 10547), (91, 10559), (97, 10664), (98, 10673), (101, 10706), (102, 10709), (103, 10721), (106, 10754), (109, 10775), (112, 10787), (121, 10850), (125, 10868), (135, 10970), (151, 11174), (153, 11186), (157, 11255), (160, 11315), (161, 11330), (162, 11333), (163, 11351), (164, 11372), (165, 11390), (169, 11462), (171, 11516), (172, 11552), (173, 11558), (176, 11624), (180, 11675), (182, 11708), (183, 11732), (184, 11735), (185, 11744), (187, 11789), (188, 11792), (189, 11798), (191, 11816), (194, 11885), (195, 11891), (210, 11990), (215, 12029), (216, 12032), (222, 12062), (230, 12116), (233, 12161), (251, 12284), (259, 12332), (278, 12362), (281, 12383), (286, 12449), (291, 12557), (293, 12581), (294, 12587), (296, 12602), (299, 12617), (300, 12653), (302, 12716), (303, 12719), (304, 12731), (305, 12752), (307, 12812), (311, 12989),

Gene: Hegedechwinu\_15 Start: 9364, Stop: 12891, Start Num: 2

Candidate Starts for Hegedechwinu\_15:

(Start: 2 @9364 has 184 MA's), (3, 9376), (5, 9415), (6, 9442), (8, 9499), (10, 9544), (12, 9616), (28, 9670), (29, 9676), (32, 9700), (33, 9739), (34, 9754), (43, 9871), (47, 9904), (51, 9946), (54, 9991), (56, 10009), (58, 10021), (62, 10093), (65, 10126), (66, 10129), (70, 10168), (73, 10210), (75, 10240), (77, 10246), (79, 10276), (81, 10312), (82, 10321), (83, 10333), (90, 10429), (96, 10525), (97, 10546), (98, 10555), (101, 10588), (102, 10591), (103, 10603), (109, 10657), (112, 10669), (119, 10723), (121, 10732), (135, 10852), (148, 10996), (151, 11056), (153, 11068), (157, 11137), (159, 11161), (161, 11215), (162, 11218), (164, 11257), (165, 11275), (169, 11347), (171, 11401), (172, 11437), (173, 11443), (176, 11509), (180, 11560), (182, 11593), (183, 11617), (184, 11620), (185, 11629), (187, 11674), (188, 11677), (189, 11683), (191, 11701), (194, 11770), (195, 11776), (210, 11875), (215, 11914), (216, 11917), (222, 11947), (226, 11974), (230, 12001), (233, 12046), (236, 12058), (244, 12145), (251, 12169), (259, 12217), (278, 12247), (281, 12268), (286, 12334), (291, 12442), (293, 12466), (294, 12472), (296, 12487), (299, 12502), (300, 12538), (302, 12601), (303, 12604), (305, 12637), (307, 12697), (311, 12877),

Gene: Hlubikazi\_14 Start: 9488, Stop: 13123, Start Num: 2

Candidate Starts for Hlubikazi\_14:

(Start: 1 @9467 has 37 MA's), (Start: 2 @9488 has 184 MA's), (3, 9500), (5, 9539), (6, 9566), (10, 9668), (12, 9740), (26, 9782), (28, 9794), (29, 9800), (33, 9863), (34, 9878), (43, 9995), (47, 10028), (49, 10046), (51, 10070), (54, 10115), (56, 10133), (58, 10145), (61, 10202), (62, 10217), (63, 10235), (65, 10250), (66, 10253), (70, 10292), (73, 10334), (75, 10364), (77, 10370), (79, 10400), (80, 10424), (81, 10436), (82, 10445), (83, 10457), (85, 10490), (86, 10505), (87, 10532), (90, 10553), (91, 10565), (92, 10574), (97, 10670), (98, 10679), (101, 10712), (102, 10715), (103, 10727), (106, 10760), (109, 10781), (112, 10793), (121, 10856), (122, 10862), (125, 10874), (135, 10976), (151, 11180), (153,

11192), (157, 11258), (158, 11267), (160, 11321), (161, 11336), (162, 11339), (163, 11357), (164, 11378), (165, 11396), (169, 11468), (171, 11522), (172, 11558), (173, 11564), (174, 11597), (176, 11630), (180, 11681), (182, 11714), (183, 11738), (184, 11741), (185, 11750), (187, 11795), (188, 11798), (191, 11822), (194, 11894), (195, 11900), (203, 11966), (204, 11969), (205, 11972), (207, 11990), (209, 12002), (218, 12059), (223, 12092), (228, 12119), (234, 12179), (235, 12182), (239, 12224), (241, 12233), (247, 12287), (249, 12293), (252, 12302), (257, 12356), (258, 12362), (261, 12368), (270, 12404), (281, 12500), (286, 12566), (291, 12674), (293, 12698), (294, 12704), (296, 12719), (299, 12734), (300, 12770), (302, 12833), (303, 12836), (305, 12869), (307, 12929), (311, 13109),

Gene: IMpilo\_14 Start: 9517, Stop: 13041, Start Num: 2

Candidate Starts for IMpilo\_14:

(Start: 2 @9517 has 184 MA's), (3, 9529), (5, 9568), (6, 9595), (8, 9652), (12, 9769), (26, 9811), (27, 9814), (28, 9823), (29, 9829), (32, 9853), (33, 9892), (34, 9907), (43, 10024), (47, 10057), (51, 10099), (54, 10144), (56, 10162), (58, 10174), (61, 10231), (62, 10246), (65, 10279), (66, 10282), (70, 10321), (73, 10363), (75, 10393), (77, 10399), (79, 10429), (81, 10465), (82, 10474), (83, 10486), (85, 10519), (86, 10534), (87, 10561), (90, 10582), (92, 10603), (97, 10699), (98, 10708), (101, 10741), (102, 10744), (103, 10756), (106, 10789), (109, 10810), (112, 10822), (121, 10885), (135, 11005), (148, 11149), (151, 11209), (153, 11221), (157, 11290), (159, 11314), (161, 11368), (162, 11371), (164, 11410), (165, 11428), (169, 11500), (171, 11554), (172, 11590), (173, 11596), (176, 11662), (180, 11713), (182, 11746), (183, 11770), (184, 11773), (187, 11827), (188, 11830), (189, 11836), (191, 11854), (194, 11923), (195, 11929), (210, 12028), (212, 12049), (226, 12127), (229, 12145), (233, 12199), (236, 12211), (244, 12298), (251, 12322), (259, 12367), (278, 12397), (281, 12418), (286, 12484), (291, 12592), (293, 12616), (294, 12622), (296, 12637), (299, 12652), (300, 12688), (302, 12751), (303, 12754), (304, 12766), (305, 12787), (307, 12847), (311, 13027),

Gene: IbOuu\_14 Start: 9486, Stop: 13010, Start Num: 2

Candidate Starts for IbOuu\_14:

(Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (96, 10647), (97, 10668), (98, 10677), (101, 10710), (102, 10713), (103, 10725), (109, 10779), (112, 10791), (119, 10845), (121, 10854), (135, 10974), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (159, 11283), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751), (187, 11796), (188, 11799), (189, 11805), (191, 11823), (194, 11892), (195, 11898), (210, 11997), (226, 12096), (229, 12114), (233, 12168), (236, 12180), (244, 12267), (251, 12291), (259, 12339), (278, 12369), (281, 12390), (286, 12456), (291, 12564), (293, 12588), (294, 12594), (296, 12609), (299, 12624), (300, 12660), (302, 12723), (303, 12726), (304, 12738), (305, 12759), (306, 12798), (307, 12819), (311, 12996),

Gene: Ibhubesi\_14 Start: 9482, Stop: 13003, Start Num: 2

Candidate Starts for Ibhubesi\_14:

(Start: 1 @9461 has 37 MA's), (Start: 2 @9482 has 184 MA's), (3, 9494), (5, 9533), (6, 9560), (10, 9662), (11, 9710), (12, 9734), (26, 9776), (27, 9779), (28, 9788), (29, 9794), (33, 9857), (34, 9872), (43, 9989), (47, 10022), (49, 10040), (51, 10064), (54, 10109), (56, 10127), (58, 10139), (62, 10211), (65, 10244), (66, 10247), (70, 10286), (73, 10328), (75, 10358), (77, 10364), (79, 10394), (81, 10430), (82, 10439), (83, 10451), (90, 10547), (91, 10559), (97, 10664), (98, 10673), (101, 10706), (102, 10709), (103, 10721), (106, 10754), (109, 10775), (112, 10787), (121, 10850), (125, 10868), (135, 10970), (151, 11174), (153, 11186), (157, 11255), (160, 11315), (161, 11330), (162, 11333), (163, 11351), (164, 11372), (165, 11390), (169, 11462), (171, 11516), (172, 11552), (173, 11558), (176, 11624), (180, 11675), (182, 11708), (183, 11732), (184, 11735), (185, 11744), (187, 11789), (188, 11792),



(189, 11798), (191, 11816), (194, 11885), (195, 11891), (210, 11990), (215, 12029), (216, 12032), (222, 12062), (230, 12116), (233, 12161), (251, 12284), (259, 12332), (278, 12362), (281, 12383), (286, 12449), (291, 12557), (293, 12581), (294, 12587), (296, 12602), (299, 12617), (300, 12653), (302, 12716), (303, 12719), (304, 12731), (305, 12752), (307, 12812), (311, 12989),

Gene: Inventum\_14 Start: 9486, Stop: 13145, Start Num: 2

Candidate Starts for Inventum\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (27, 9783), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (49, 10044), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (61, 10200), (62, 10215), (63, 10233), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (86, 10503), (87, 10530), (90, 10551), (92, 10572), (94, 10614), (96, 10647), (99, 10689), (100, 10701), (104, 10746), (106, 10758), (116, 10809), (117, 10818), (125, 10854), (126, 10860), (130, 10872), (134, 10935), (137, 10983), (143, 11046), (144, 11049), (145, 11058), (157, 11223), (160, 11286), (161, 11301), (162, 11304), (163, 11322), (164, 11343), (165, 11361), (169, 11433), (171, 11487), (172, 11523), (173, 11529), (174, 11562), (176, 11595), (180, 11646), (182, 11679), (183, 11703), (184, 11706), (185, 11715), (187, 11760), (188, 11763), (191, 11787), (196, 11877), (213, 12024), (217, 12045), (233, 12186), (238, 12210), (240, 12237), (267, 12417), (271, 12447), (287, 12606), (291, 12699), (293, 12723), (294, 12729), (296, 12744), (297, 12750), (299, 12759), (300, 12795), (302, 12858), (303, 12861), (305, 12894), (306, 12933), (307, 12954), (311, 13131),

Gene: IrishSherpFalk\_14 Start: 9517, Stop: 13038, Start Num: 2

Candidate Starts for IrishSherpFalk\_14:

(Start: 1 @9496 has 37 MA's), (Start: 2 @9517 has 184 MA's), (3, 9529), (5, 9568), (6, 9595), (10, 9697), (11, 9745), (12, 9769), (28, 9823), (29, 9829), (33, 9892), (34, 9907), (43, 10024), (47, 10057), (49, 10075), (51, 10099), (54, 10144), (56, 10162), (58, 10174), (62, 10246), (65, 10279), (66, 10282), (70, 10321), (72, 10339), (73, 10363), (75, 10393), (77, 10399), (79, 10429), (81, 10465), (82, 10474), (83, 10486), (85, 10519), (86, 10534), (90, 10582), (92, 10603), (97, 10699), (98, 10708), (101, 10741), (102, 10744), (103, 10756), (106, 10789), (109, 10810), (112, 10822), (121, 10885), (122, 10891), (125, 10903), (135, 11005), (140, 11080), (151, 11209), (153, 11221), (157, 11290), (158, 11299), (160, 11350), (161, 11365), (162, 11368), (163, 11386), (164, 11407), (165, 11425), (169, 11497), (171, 11551), (172, 11587), (173, 11593), (174, 11626), (176, 11659), (178, 11680), (180, 11710), (182, 11743), (183, 11767), (184, 11770), (185, 11779), (187, 11824), (188, 11827), (191, 11851), (194, 11920), (195, 11926), (210, 12025), (215, 12064), (216, 12067), (222, 12097), (226, 12124), (230, 12151), (233, 12196), (251, 12319), (259, 12367), (278, 12397), (281, 12418), (286, 12484), (291, 12592), (293, 12616), (294, 12622), (296, 12637), (299, 12652), (300, 12688), (302, 12751), (303, 12754), (305, 12787), (306, 12826), (307, 12847), (311, 13024),

Gene: JalFarm20\_16 Start: 9878, Stop: 13408, Start Num: 2

Candidate Starts for JalFarm20\_16:

(Start: 2 @9878 has 184 MA's), (5, 9929), (6, 9956), (8, 10013), (10, 10058), (12, 10130), (28, 10184), (29, 10190), (33, 10253), (34, 10268), (43, 10385), (47, 10418), (51, 10460), (54, 10505), (56, 10523), (58, 10535), (62, 10607), (65, 10640), (66, 10643), (70, 10682), (73, 10724), (75, 10754), (77, 10760), (79, 10790), (81, 10826), (82, 10835), (83, 10847), (85, 10880), (90, 10943), (96, 11039), (98, 11069), (101, 11102), (102, 11105), (103, 11117), (109, 11171), (112, 11183), (119, 11237), (121, 11246), (135, 11366), (148, 11510), (151, 11570), (153, 11582), (157, 11651), (159, 11675), (160, 11714), (161, 11729), (162, 11732), (163, 11750), (164, 11771), (165, 11789), (169, 11861), (171, 11915), (172, 11951), (173, 11957), (176, 12023), (180, 12074), (182, 12107), (183, 12131), (184, 12134), (185, 12143), (187, 12188), (188, 12191), (189, 12197), (191, 12215), (194, 12284), (195, 12290), (210, 12389), (226, 12488), (229, 12506), (233, 12560), (244, 12662), (251, 12686), (259, 12734), (278, 12764), (281, 12785), (286, 12851), (291, 12959), (293, 12983), (294, 12989), (296, 13004), (299, 13019), (300, 13055), (302, 13118), (303, 13121), (304, 13133), (305, 13154), (307, 13214),

(311, 13394),

Gene: James\_14 Start: 9483, Stop: 13010, Start Num: 2

Candidate Starts for James\_14:

(Start: 1 @9462 has 37 MA's), (Start: 2 @9483 has 184 MA's), (3, 9495), (5, 9534), (6, 9561), (10, 9663), (11, 9711), (12, 9735), (28, 9789), (29, 9795), (33, 9858), (34, 9873), (43, 9990), (47, 10023), (49, 10041), (51, 10065), (54, 10110), (56, 10128), (58, 10140), (62, 10212), (65, 10245), (66, 10248), (70, 10287), (73, 10329), (75, 10359), (77, 10365), (79, 10395), (81, 10431), (82, 10440), (83, 10452), (85, 10485), (86, 10500), (87, 10527), (90, 10548), (91, 10560), (92, 10569), (97, 10665), (98, 10674), (102, 10710), (103, 10722), (106, 10755), (109, 10776), (121, 10851), (125, 10869), (135, 10971), (140, 11046), (151, 11175), (153, 11187), (157, 11256), (160, 11319), (161, 11334), (162, 11337), (163, 11355), (164, 11376), (165, 11394), (169, 11466), (171, 11520), (172, 11556), (173, 11562), (176, 11628), (180, 11679), (182, 11712), (183, 11736), (184, 11739), (185, 11748), (187, 11793), (188, 11796), (189, 11802), (191, 11820), (194, 11889), (195, 11895), (210, 11994), (215, 12033), (216, 12036), (222, 12066), (230, 12120), (233, 12165), (251, 12288), (259, 12336), (278, 12366), (281, 12387), (286, 12453), (288, 12477), (291, 12561), (293, 12585), (294, 12591), (296, 12606), (299, 12621), (300, 12657), (302, 12720), (303, 12723), (304, 12735), (305, 12756), (307, 12816), (311, 12996),

Gene: Jant\_14 Start: 9534, Stop: 13181, Start Num: 2

Candidate Starts for Jant\_14:

(Start: 2 @9534 has 184 MA's), (3, 9546), (5, 9585), (6, 9612), (8, 9669), (10, 9714), (12, 9786), (26, 9828), (27, 9831), (28, 9840), (29, 9846), (32, 9870), (33, 9909), (34, 9924), (43, 10041), (47, 10074), (51, 10116), (54, 10161), (56, 10179), (58, 10191), (62, 10263), (65, 10296), (66, 10299), (70, 10338), (73, 10380), (75, 10410), (77, 10416), (79, 10446), (81, 10482), (82, 10491), (83, 10503), (90, 10599), (96, 10695), (98, 10725), (101, 10758), (102, 10761), (103, 10773), (109, 10827), (112, 10839), (119, 10893), (121, 10902), (135, 11022), (148, 11166), (151, 11226), (153, 11238), (157, 11307), (159, 11331), (160, 11370), (161, 11385), (162, 11388), (163, 11406), (164, 11427), (165, 11445), (169, 11517), (171, 11571), (172, 11607), (173, 11613), (176, 11679), (180, 11730), (182, 11763), (183, 11787), (184, 11790), (185, 11799), (187, 11844), (188, 11847), (189, 11853), (191, 11871), (194, 11940), (195, 11946), (203, 12012), (204, 12015), (205, 12018), (207, 12036), (209, 12048), (216, 12096), (218, 12105), (223, 12138), (228, 12165), (235, 12228), (241, 12279), (247, 12333), (252, 12348), (256, 12402), (258, 12411), (261, 12417), (270, 12453), (274, 12480), (281, 12558), (286, 12624), (291, 12732), (293, 12756), (294, 12762), (296, 12777), (299, 12792), (300, 12828), (302, 12891), (303, 12894), (304, 12906), (305, 12927), (307, 12987), (311, 13167),

Gene: Jacob\_14 Start: 9491, Stop: 13018, Start Num: 2

Candidate Starts for Jacob\_14:

(Start: 1 @9470 has 37 MA's), (Start: 2 @9491 has 184 MA's), (3, 9503), (5, 9542), (6, 9569), (10, 9671), (11, 9719), (12, 9743), (28, 9797), (29, 9803), (33, 9866), (34, 9881), (43, 9998), (47, 10031), (49, 10049), (51, 10073), (54, 10118), (56, 10136), (58, 10148), (62, 10220), (65, 10253), (66, 10256), (70, 10295), (73, 10337), (75, 10367), (77, 10373), (79, 10403), (81, 10439), (82, 10448), (83, 10460), (85, 10493), (86, 10508), (87, 10535), (90, 10556), (91, 10568), (92, 10577), (97, 10673), (98, 10682), (102, 10718), (103, 10730), (106, 10763), (109, 10784), (121, 10859), (125, 10877), (135, 10979), (140, 11054), (151, 11183), (153, 11195), (157, 11264), (160, 11327), (161, 11342), (162, 11345), (163, 11363), (164, 11384), (165, 11402), (169, 11474), (171, 11528), (172, 11564), (173, 11570), (176, 11636), (180, 11687), (182, 11720), (183, 11744), (184, 11747), (185, 11756), (187, 11801), (188, 11804), (189, 11810), (191, 11828), (194, 11897), (195, 11903), (210, 12002), (215, 12041), (216, 12044), (222, 12074), (230, 12128), (233, 12173), (251, 12296), (259, 12344), (278, 12374), (281, 12395), (286, 12461), (288, 12485), (291, 12569), (293, 12593), (294, 12599), (296, 12614), (299, 12629), (300, 12665), (302, 12728), (303, 12731), (304, 12743), (305, 12764), (307, 12824), (311, 13004),

Gene: Jinglebell\_13 Start: 9489, Stop: 13247, Start Num: 2

Candidate Starts for Jinglebell\_13:

(Start: 1 @9468 has 37 MA's), (Start: 2 @9489 has 184 MA's), (3, 9501), (5, 9540), (6, 9567), (10, 9669), (14, 9786), (16, 9834), (17, 9843), (18, 9888), (19, 9921), (20, 9930), (22, 9945), (23, 9954), (26, 10014), (27, 10017), (28, 10026), (29, 10032), (33, 10095), (34, 10110), (43, 10227), (47, 10260), (49, 10278), (51, 10302), (54, 10347), (56, 10365), (58, 10377), (61, 10434), (62, 10449), (65, 10482), (66, 10485), (70, 10524), (73, 10566), (75, 10596), (77, 10602), (79, 10632), (81, 10668), (82, 10677), (83, 10689), (85, 10722), (86, 10737), (90, 10785), (92, 10806), (97, 10902), (98, 10911), (102, 10947), (103, 10959), (106, 10992), (109, 11013), (112, 11025), (121, 11088), (122, 11094), (125, 11106), (135, 11208), (140, 11283), (151, 11412), (153, 11424), (157, 11493), (158, 11502), (160, 11553), (161, 11568), (162, 11571), (163, 11589), (164, 11610), (165, 11628), (169, 11700), (171, 11754), (172, 11790), (173, 11796), (174, 11829), (176, 11862), (180, 11913), (182, 11946), (183, 11970), (184, 11973), (185, 11982), (187, 12027), (188, 12030), (191, 12054), (194, 12126), (195, 12132), (201, 12180), (210, 12231), (215, 12270), (216, 12273), (222, 12303), (226, 12330), (230, 12357), (233, 12402), (236, 12414), (244, 12501), (251, 12525), (259, 12573), (281, 12624), (286, 12690), (291, 12798), (293, 12822), (294, 12828), (296, 12843), (297, 12849), (299, 12858), (300, 12894), (302, 12957), (303, 12960), (305, 12993), (306, 13032), (307, 13053), (311, 13233),

Gene: Job42\_16 Start: 9901, Stop: 13389, Start Num: 2

Candidate Starts for Job42\_16:

(Start: 2 @9901 has 184 MA's), (5, 9952), (6, 9979), (10, 10081), (11, 10129), (12, 10153), (28, 10207), (29, 10213), (33, 10276), (34, 10291), (43, 10408), (47, 10441), (49, 10459), (51, 10483), (54, 10528), (56, 10546), (58, 10558), (61, 10615), (62, 10630), (63, 10648), (65, 10663), (66, 10666), (70, 10705), (72, 10723), (73, 10747), (75, 10777), (77, 10783), (79, 10813), (81, 10849), (82, 10858), (83, 10870), (85, 10903), (86, 10918), (87, 10945), (90, 10966), (92, 10987), (94, 11029), (96, 11062), (99, 11104), (100, 11116), (104, 11161), (106, 11173), (116, 11224), (117, 11233), (125, 11269), (126, 11275), (130, 11287), (134, 11350), (137, 11398), (143, 11461), (144, 11464), (145, 11473), (157, 11638), (160, 11701), (161, 11716), (162, 11719), (163, 11737), (164, 11758), (165, 11776), (169, 11848), (171, 11902), (172, 11938), (173, 11944), (174, 11977), (176, 12010), (180, 12061), (182, 12094), (183, 12118), (184, 12121), (185, 12130), (187, 12175), (188, 12178), (191, 12202), (194, 12271), (195, 12277), (210, 12376), (215, 12415), (216, 12418), (222, 12448), (226, 12475), (230, 12502), (233, 12547), (251, 12670), (271, 12718), (276, 12748), (281, 12769), (286, 12835), (291, 12943), (293, 12967), (294, 12973), (296, 12988), (299, 13003), (300, 13039), (302, 13102), (303, 13105), (305, 13138), (307, 13198), (311, 13375),

Gene: JoeyJr\_14 Start: 9486, Stop: 13181, Start Num: 2

Candidate Starts for JoeyJr\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751), (187, 11796), (188, 11799), (191, 11823), (196, 11913), (213, 12060), (217, 12081), (233, 12222), (238, 12246), (240, 12273), (267, 12453), (271, 12483), (279, 12555), (287, 12642), (291, 12735), (293, 12759), (294, 12765), (296, 12780), (297, 12786), (299, 12795), (300, 12831), (302, 12894), (303, 12897), (305, 12930), (306, 12969), (307, 12990), (311, 13167),

Gene: Juice456\_15 Start: 9324, Stop: 12830, Start Num: 1

Candidate Starts for Juice456\_15:

(Start: 1 @9324 has 37 MA's), (Start: 2 @9345 has 184 MA's), (3, 9357), (5, 9396), (6, 9423), (10, 9525), (11, 9573), (12, 9597), (26, 9639), (27, 9642), (28, 9651), (29, 9657), (33, 9720), (34, 9735), (43, 9852), (47, 9885), (49, 9903), (51, 9927), (54, 9972), (56, 9990), (58, 10002), (61, 10059), (62, 10074), (63, 10092), (65, 10107), (66, 10110), (70, 10149), (72, 10167), (73, 10191), (75, 10221), (77, 10227), (79, 10257), (81, 10293), (82, 10302), (83, 10314), (85, 10347), (86, 10362), (87, 10389), (90, 10410), (91, 10422), (92, 10431), (94, 10473), (96, 10506), (99, 10548), (100, 10560), (104, 10605), (106, 10617), (116, 10668), (117, 10677), (124, 10710), (125, 10713), (126, 10719), (130, 10731), (134, 10794), (137, 10842), (143, 10905), (144, 10908), (145, 10917), (157, 11082), (158, 11091), (160, 11142), (161, 11157), (162, 11160), (163, 11178), (164, 11199), (165, 11217), (169, 11289), (171, 11343), (172, 11379), (173, 11385), (174, 11418), (176, 11451), (180, 11502), (182, 11535), (183, 11559), (184, 11562), (185, 11571), (187, 11616), (188, 11619), (191, 11643), (194, 11712), (195, 11718), (222, 11889), (230, 11943), (233, 11988), (251, 12111), (271, 12159), (276, 12189), (281, 12210), (286, 12276), (288, 12300), (291, 12384), (293, 12408), (294, 12414), (296, 12429), (297, 12435), (299, 12444), (300, 12480), (302, 12543), (303, 12546), (305, 12579), (306, 12618), (307, 12639), (311, 12816),

Gene: Juniper1\_14 Start: 9462, Stop: 13007, Start Num: 1

Candidate Starts for Juniper1\_14:

(Start: 1 @9462 has 37 MA's), (Start: 2 @9483 has 184 MA's), (3, 9495), (5, 9534), (6, 9561), (10, 9663), (12, 9735), (28, 9789), (29, 9795), (33, 9858), (34, 9873), (43, 9990), (47, 10023), (49, 10041), (51, 10065), (54, 10110), (56, 10128), (58, 10140), (62, 10212), (65, 10245), (66, 10248), (70, 10287), (73, 10329), (75, 10359), (77, 10365), (79, 10395), (81, 10431), (82, 10440), (83, 10452), (85, 10485), (90, 10548), (91, 10560), (92, 10569), (97, 10665), (98, 10674), (102, 10710), (103, 10722), (106, 10755), (109, 10776), (121, 10851), (122, 10857), (125, 10869), (135, 10971), (140, 11046), (151, 11175), (153, 11187), (157, 11253), (158, 11262), (160, 11316), (161, 11331), (162, 11334), (163, 11352), (164, 11373), (165, 11391), (169, 11463), (171, 11517), (172, 11553), (173, 11559), (174, 11592), (176, 11625), (180, 11676), (182, 11709), (183, 11733), (184, 11736), (185, 11745), (187, 11790), (188, 11793), (191, 11817), (194, 11886), (195, 11892), (212, 12012), (226, 12090), (229, 12108), (232, 12141), (233, 12162), (244, 12264), (251, 12288), (259, 12336), (278, 12366), (281, 12387), (286, 12453), (291, 12561), (293, 12585), (294, 12591), (296, 12606), (297, 12612), (299, 12621), (300, 12657), (302, 12720), (303, 12723), (305, 12756), (306, 12795), (307, 12816), (311, 12993),

Gene: Karhdo\_14 Start: 9473, Stop: 13141, Start Num: 1

Candidate Starts for Karhdo\_14:

(Start: 1 @9473 has 37 MA's), (Start: 2 @9494 has 184 MA's), (3, 9506), (5, 9545), (6, 9572), (10, 9674), (11, 9722), (12, 9746), (26, 9788), (27, 9791), (28, 9800), (29, 9806), (33, 9869), (34, 9884), (43, 10001), (47, 10034), (49, 10052), (51, 10076), (54, 10121), (56, 10139), (58, 10151), (62, 10223), (65, 10256), (66, 10259), (70, 10298), (73, 10340), (75, 10370), (77, 10376), (79, 10406), (81, 10442), (82, 10451), (83, 10463), (85, 10496), (87, 10538), (90, 10559), (91, 10571), (92, 10580), (97, 10676), (98, 10685), (102, 10721), (103, 10733), (106, 10766), (109, 10787), (121, 10862), (122, 10868), (125, 10880), (135, 10982), (148, 11126), (151, 11186), (153, 11198), (157, 11267), (159, 11291), (160, 11330), (161, 11345), (162, 11348), (163, 11366), (164, 11387), (165, 11405), (169, 11477), (171, 11531), (172, 11567), (173, 11573), (176, 11639), (180, 11690), (182, 11723), (183, 11747), (184, 11750), (185, 11759), (187, 11804), (188, 11807), (189, 11813), (191, 11831), (194, 11900), (195, 11906), (203, 11972), (204, 11975), (205, 11978), (207, 11996), (209, 12008), (216, 12056), (218, 12065), (223, 12098), (228, 12125), (235, 12188), (241, 12239), (247, 12293), (252, 12308), (258, 12371), (261, 12377), (270, 12413), (274, 12440), (281, 12518), (286, 12584), (291, 12692), (293, 12716), (294, 12722), (296, 12737), (299, 12752), (300, 12788), (302, 12851), (303, 12854), (304, 12866), (305, 12887), (307, 12947), (311, 13127),

Gene: Kenuha5\_14 Start: 9499, Stop: 13134, Start Num: 2

Candidate Starts for Kenuha5\_14:

(Start: 1 @9478 has 37 MA's), (Start: 2 @9499 has 184 MA's), (3, 9511), (5, 9550), (6, 9577), (10, 9679), (11, 9727), (12, 9751), (26, 9793), (27, 9796), (28, 9805), (29, 9811), (33, 9874), (34, 9889), (43, 10006), (47, 10039), (49, 10057), (51, 10081), (54, 10126), (56, 10144), (58, 10156), (61, 10213), (62, 10228), (63, 10246), (65, 10261), (66, 10264), (70, 10303), (73, 10345), (75, 10375), (77, 10381), (79, 10411), (81, 10447), (82, 10456), (83, 10468), (85, 10501), (86, 10516), (87, 10543), (90, 10564), (91, 10576), (92, 10585), (94, 10627), (96, 10660), (99, 10702), (100, 10714), (104, 10759), (106, 10771), (116, 10822), (117, 10831), (124, 10864), (125, 10867), (126, 10873), (130, 10885), (134, 10948), (137, 10996), (143, 11059), (144, 11062), (157, 11236), (158, 11245), (160, 11299), (161, 11314), (162, 11317), (163, 11335), (164, 11356), (165, 11374), (169, 11446), (171, 11500), (172, 11536), (173, 11542), (174, 11575), (176, 11608), (180, 11659), (182, 11692), (183, 11716), (184, 11719), (185, 11728), (187, 11773), (188, 11776), (191, 11800), (194, 11869), (195, 11875), (222, 12046), (230, 12100), (233, 12145), (254, 12304), (258, 12343), (263, 12367), (264, 12373), (267, 12379), (272, 12415), (286, 12580), (291, 12688), (293, 12712), (294, 12718), (296, 12733), (297, 12739), (299, 12748), (300, 12784), (302, 12847), (303, 12850), (305, 12883), (307, 12943), (311, 13120),

Gene: Kersh\_14 Start: 9486, Stop: 13124, Start Num: 2

Candidate Starts for Kersh\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (12, 9738), (26, 9780), (27, 9783), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (49, 10044), (51, 10068), (54, 10113), (56, 10131), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (87, 10530), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (101, 10710), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (121, 10854), (122, 10860), (125, 10872), (135, 10974), (151, 11178), (153, 11190), (157, 11256), (160, 11316), (161, 11331), (162, 11334), (163, 11352), (164, 11373), (165, 11391), (169, 11463), (171, 11517), (172, 11553), (173, 11559), (176, 11625), (178, 11646), (180, 11676), (182, 11709), (183, 11733), (184, 11736), (185, 11745), (187, 11790), (188, 11793), (189, 11799), (191, 11817), (195, 11892), (203, 11958), (204, 11961), (207, 11982), (209, 11994), (216, 12042), (218, 12051), (223, 12084), (228, 12111), (235, 12174), (247, 12279), (252, 12294), (256, 12348), (258, 12357), (261, 12363), (270, 12399), (281, 12504), (286, 12570), (291, 12678), (293, 12702), (294, 12708), (296, 12723), (297, 12729), (299, 12738), (300, 12774), (302, 12837), (303, 12840), (306, 12912), (307, 12933), (311, 13110),

Gene: Kimberlium\_15 Start: 9345, Stop: 12830, Start Num: 2

Candidate Starts for Kimberlium\_15:

(Start: 1 @9324 has 37 MA's), (Start: 2 @9345 has 184 MA's), (3, 9357), (5, 9396), (6, 9423), (10, 9525), (11, 9573), (12, 9597), (26, 9639), (27, 9642), (28, 9651), (29, 9657), (33, 9720), (34, 9735), (43, 9852), (47, 9885), (49, 9903), (51, 9927), (54, 9972), (56, 9990), (58, 10002), (61, 10059), (62, 10074), (63, 10092), (65, 10107), (66, 10110), (70, 10149), (72, 10167), (73, 10191), (75, 10221), (77, 10227), (79, 10257), (81, 10293), (82, 10302), (83, 10314), (85, 10347), (86, 10362), (87, 10389), (90, 10410), (91, 10422), (92, 10431), (94, 10473), (96, 10506), (99, 10548), (100, 10560), (104, 10605), (106, 10617), (116, 10668), (117, 10677), (124, 10710), (125, 10713), (126, 10719), (130, 10731), (134, 10794), (137, 10842), (143, 10905), (144, 10908), (145, 10917), (157, 11082), (158, 11091), (160, 11142), (161, 11157), (162, 11160), (163, 11178), (164, 11199), (165, 11217), (169, 11289), (171, 11343), (172, 11379), (173, 11385), (174, 11418), (176, 11451), (180, 11502), (182, 11535), (183, 11559), (184, 11562), (185, 11571), (187, 11616), (188, 11619), (191, 11643), (194, 11712), (195, 11718), (222, 11889), (230, 11943), (233, 11988), (251, 12111), (271, 12159), (276, 12189), (281, 12210), (286, 12276), (288, 12300), (291, 12384), (293, 12408), (294, 12414), (296, 12429), (297, 12435), (299, 12444), (300, 12480), (302, 12543), (303, 12546), (305, 12579), (306, 12618), (307, 12639), (311, 12816),

Gene: KingJulian\_14 Start: 9533, Stop: 13063, Start Num: 2

Candidate Starts for KingJulian\_14:

(Start: 2 @9533 has 184 MA's), (3, 9545), (5, 9584), (6, 9611), (8, 9668), (10, 9713), (12, 9785), (26, 9827), (27, 9830), (28, 9839), (29, 9845), (32, 9869), (33, 9908), (34, 9923), (43, 10040), (47, 10073), (51, 10115), (54, 10160), (56, 10178), (58, 10190), (62, 10262), (65, 10295), (66, 10298), (70, 10337), (73, 10379), (75, 10409), (77, 10415), (79, 10445), (81, 10481), (82, 10490), (83, 10502), (90, 10598), (96, 10694), (98, 10724), (101, 10757), (102, 10760), (103, 10772), (109, 10826), (112, 10838), (119, 10892), (121, 10901), (135, 11021), (148, 11165), (151, 11225), (153, 11237), (157, 11306), (159, 11330), (161, 11384), (162, 11387), (164, 11426), (165, 11444), (169, 11516), (171, 11570), (172, 11606), (173, 11612), (176, 11678), (180, 11729), (182, 11762), (183, 11786), (184, 11789), (185, 11798), (187, 11843), (188, 11846), (189, 11852), (191, 11870), (194, 11939), (195, 11945), (210, 12044), (226, 12143), (229, 12161), (233, 12215), (244, 12317), (251, 12341), (259, 12389), (278, 12419), (281, 12440), (286, 12506), (291, 12614), (293, 12638), (294, 12644), (296, 12659), (299, 12674), (300, 12710), (302, 12773), (303, 12776), (304, 12788), (305, 12809), (307, 12869), (311, 13049),

Gene: KingMidas\_14 Start: 9486, Stop: 13010, Start Num: 2

Candidate Starts for KingMidas\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751), (187, 11796), (188, 11799), (191, 11823), (194, 11892), (195, 11898), (212, 12018), (226, 12096), (229, 12114), (232, 12147), (233, 12168), (244, 12270), (251, 12294), (259, 12342), (278, 12372), (281, 12393), (286, 12456), (291, 12564), (293, 12588), (294, 12594), (296, 12609), (297, 12615), (299, 12624), (300, 12660), (302, 12723), (303, 12726), (305, 12759), (306, 12798), (307, 12819), (311, 12996),

Gene: Kingsley\_15 Start: 9337, Stop: 12867, Start Num: 2

Candidate Starts for Kingsley\_15:

(Start: 1 @9316 has 37 MA's), (Start: 2 @9337 has 184 MA's), (3, 9349), (5, 9388), (6, 9415), (10, 9517), (11, 9565), (12, 9589), (26, 9631), (28, 9643), (29, 9649), (33, 9712), (34, 9727), (43, 9844), (47, 9877), (51, 9919), (54, 9964), (56, 9982), (58, 9994), (62, 10066), (65, 10099), (66, 10102), (70, 10141), (73, 10183), (75, 10213), (77, 10219), (79, 10249), (81, 10285), (82, 10294), (83, 10306), (90, 10402), (96, 10498), (98, 10528), (101, 10561), (102, 10564), (103, 10576), (109, 10630), (112, 10642), (119, 10696), (121, 10705), (135, 10825), (148, 10969), (151, 11029), (153, 11041), (157, 11110), (158, 11119), (160, 11173), (161, 11188), (162, 11191), (164, 11230), (165, 11248), (169, 11320), (171, 11374), (172, 11410), (173, 11416), (174, 11449), (176, 11482), (180, 11533), (182, 11566), (183, 11590), (184, 11593), (185, 11602), (187, 11647), (188, 11650), (189, 11656), (191, 11674), (194, 11743), (195, 11749), (210, 11848), (226, 11947), (229, 11965), (233, 12019), (244, 12121), (251, 12145), (259, 12193), (278, 12223), (281, 12244), (286, 12310), (291, 12418), (293, 12442), (294, 12448), (296, 12463), (299, 12478), (300, 12514), (302, 12577), (303, 12580), (304, 12592), (305, 12613), (307, 12673), (311, 12853),

Gene: Koella\_14 Start: 9465, Stop: 12977, Start Num: 1

Candidate Starts for Koella\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (27, 9783), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (49, 10044), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (61, 10200), (62, 10215), (63, 10233), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79,

10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (86, 10503), (87, 10530), (90, 10551), (92, 10572), (94, 10614), (96, 10647), (99, 10689), (100, 10701), (104, 10746), (106, 10758), (116, 10809), (117, 10818), (125, 10854), (126, 10860), (130, 10872), (134, 10935), (137, 10983), (143, 11046), (144, 11049), (145, 11058), (157, 11223), (160, 11286), (161, 11301), (162, 11304), (163, 11322), (164, 11343), (165, 11361), (169, 11433), (171, 11487), (172, 11523), (173, 11529), (174, 11562), (176, 11595), (180, 11646), (182, 11679), (183, 11703), (184, 11706), (185, 11715), (187, 11760), (188, 11763), (191, 11787), (194, 11856), (195, 11862), (210, 11961), (215, 12000), (216, 12003), (222, 12033), (226, 12060), (230, 12087), (233, 12132), (251, 12255), (271, 12303), (276, 12333), (281, 12354), (286, 12420), (291, 12528), (293, 12552), (294, 12558), (296, 12573), (299, 12588), (300, 12624), (302, 12687), (303, 12690), (304, 12702), (305, 12723), (306, 12762), (307, 12783), (311, 12963),

Gene: Krakatau\_15 Start: 10184, Stop: 13708, Start Num: 2

Candidate Starts for Krakatau\_15:

(Start: 2 @10184 has 184 MA's), (3, 10196), (5, 10235), (6, 10262), (8, 10319), (10, 10364), (12, 10436), (26, 10478), (27, 10481), (28, 10490), (29, 10496), (32, 10520), (33, 10559), (34, 10574), (43, 10691), (47, 10724), (51, 10766), (54, 10811), (56, 10829), (58, 10841), (62, 10913), (65, 10946), (66, 10949), (70, 10988), (73, 11030), (75, 11060), (77, 11066), (79, 11096), (81, 11132), (82, 11141), (83, 11153), (90, 11249), (96, 11345), (98, 11375), (101, 11408), (102, 11411), (103, 11423), (109, 11477), (112, 11489), (119, 11543), (121, 11552), (135, 11672), (148, 11816), (151, 11876), (153, 11888), (157, 11957), (159, 11981), (160, 12020), (161, 12035), (162, 12038), (163, 12056), (164, 12077), (165, 12095), (169, 12167), (171, 12221), (172, 12257), (173, 12263), (176, 12329), (180, 12380), (182, 12413), (183, 12437), (184, 12440), (185, 12449), (187, 12494), (188, 12497), (189, 12503), (191, 12521), (194, 12590), (195, 12596), (210, 12695), (215, 12734), (216, 12737), (222, 12767), (230, 12821), (233, 12866), (251, 12989), (259, 13037), (278, 13067), (281, 13088), (286, 13154), (291, 13262), (293, 13286), (294, 13292), (296, 13307), (299, 13322), (300, 13358), (302, 13421), (303, 13424), (304, 13436), (305, 13457), (306, 13496), (307, 13517), (311, 13694),

Gene: KristaRAM\_15 Start: 10181, Stop: 13711, Start Num: 2

Candidate Starts for KristaRAM\_15:

(Start: 2 @10181 has 184 MA's), (3, 10193), (5, 10232), (6, 10259), (8, 10316), (10, 10361), (12, 10433), (28, 10487), (29, 10493), (33, 10556), (34, 10571), (43, 10688), (47, 10721), (51, 10763), (54, 10808), (56, 10826), (58, 10838), (62, 10910), (65, 10943), (66, 10946), (70, 10985), (73, 11027), (75, 11057), (77, 11063), (79, 11093), (81, 11129), (82, 11138), (83, 11150), (90, 11246), (96, 11342), (98, 11372), (101, 11405), (102, 11408), (103, 11420), (109, 11474), (112, 11486), (119, 11540), (121, 11549), (135, 11669), (151, 11873), (153, 11885), (157, 11954), (159, 11978), (161, 12032), (162, 12035), (163, 12053), (164, 12074), (165, 12092), (169, 12164), (171, 12218), (172, 12254), (173, 12260), (176, 12326), (180, 12377), (182, 12410), (183, 12434), (184, 12437), (185, 12446), (187, 12491), (188, 12494), (189, 12500), (191, 12518), (194, 12587), (195, 12593), (210, 12692), (226, 12791), (233, 12863), (244, 12965), (251, 12989), (259, 13037), (278, 13067), (281, 13088), (286, 13154), (291, 13262), (293, 13286), (294, 13292), (296, 13307), (299, 13322), (300, 13358), (302, 13421), (303, 13424), (304, 13436), (305, 13457), (307, 13517), (311, 13697),

Gene: LastJedi\_14 Start: 9482, Stop: 13009, Start Num: 2

Candidate Starts for LastJedi\_14:

(Start: 1 @9461 has 37 MA's), (Start: 2 @9482 has 184 MA's), (3, 9494), (5, 9533), (6, 9560), (10, 9662), (11, 9710), (12, 9734), (28, 9788), (29, 9794), (33, 9857), (34, 9872), (43, 9989), (47, 10022), (49, 10040), (51, 10064), (54, 10109), (56, 10127), (58, 10139), (62, 10211), (65, 10244), (66, 10247), (70, 10286), (73, 10328), (75, 10358), (77, 10364), (79, 10394), (81, 10430), (82, 10439), (83, 10451), (85, 10484), (86, 10499), (87, 10526), (90, 10547), (91, 10559), (92, 10568), (97, 10664), (98, 10673), (102, 10709), (103, 10721), (106, 10754), (109, 10775), (121, 10850), (125, 10868), (135, 10970), (140, 11045), (151, 11174), (153, 11186), (157, 11255), (160, 11318), (161, 11333), (162, 11336), (163, 11354), (164, 11375), (165, 11393), (169, 11465), (171, 11519), (172, 11555), (173, 11561),

(176, 11627), (180, 11678), (182, 11711), (183, 11735), (184, 11738), (185, 11747), (187, 11792), (188, 11795), (189, 11801), (191, 11819), (194, 11888), (195, 11894), (210, 11993), (215, 12032), (216, 12035), (222, 12065), (230, 12119), (233, 12164), (251, 12287), (259, 12335), (278, 12365), (281, 12386), (286, 12452), (288, 12476), (291, 12560), (293, 12584), (294, 12590), (296, 12605), (299, 12620), (300, 12656), (302, 12719), (303, 12722), (304, 12734), (305, 12755), (307, 12815), (311, 12995),

Gene: Latretium\_15 Start: 10020, Stop: 13691, Start Num: 2

Candidate Starts for Latretium\_15:

(Start: 2 @10020 has 184 MA's), (5, 10071), (6, 10098), (8, 10155), (10, 10200), (12, 10272), (28, 10326), (29, 10332), (32, 10356), (33, 10395), (34, 10410), (43, 10527), (47, 10560), (49, 10578), (51, 10602), (54, 10647), (56, 10665), (58, 10677), (61, 10734), (62, 10749), (63, 10767), (65, 10782), (66, 10785), (70, 10824), (73, 10866), (75, 10896), (77, 10902), (79, 10932), (81, 10968), (82, 10977), (83, 10989), (85, 11022), (90, 11085), (96, 11181), (98, 11211), (101, 11244), (102, 11247), (103, 11259), (106, 11292), (109, 11313), (121, 11388), (125, 11406), (135, 11508), (151, 11712), (153, 11724), (157, 11793), (160, 11853), (161, 11868), (162, 11871), (163, 11889), (164, 11910), (165, 11928), (169, 12000), (171, 12054), (172, 12090), (173, 12096), (174, 12129), (176, 12162), (180, 12213), (182, 12246), (183, 12270), (184, 12273), (185, 12282), (187, 12327), (188, 12330), (191, 12354), (194, 12423), (195, 12429), (222, 12600), (230, 12654), (233, 12699), (254, 12858), (259, 12897), (266, 12921), (268, 12927), (269, 12933), (273, 12969), (286, 13137), (291, 13245), (293, 13269), (294, 13275), (296, 13290), (297, 13296), (299, 13305), (300, 13341), (303, 13407), (305, 13440), (306, 13479), (307, 13500), (311, 13677),

Gene: Leozinho\_15 Start: 9344, Stop: 12871, Start Num: 2

Candidate Starts for Leozinho\_15:

(Start: 1 @9323 has 37 MA's), (Start: 2 @9344 has 184 MA's), (3, 9356), (5, 9395), (6, 9422), (10, 9524), (11, 9572), (12, 9596), (28, 9650), (29, 9656), (33, 9719), (34, 9734), (43, 9851), (47, 9884), (49, 9902), (51, 9926), (54, 9971), (56, 9989), (58, 10001), (62, 10073), (65, 10106), (66, 10109), (70, 10148), (73, 10190), (75, 10220), (77, 10226), (79, 10256), (81, 10292), (82, 10301), (83, 10313), (85, 10346), (90, 10409), (92, 10430), (97, 10526), (98, 10535), (102, 10571), (103, 10583), (106, 10616), (109, 10637), (119, 10703), (121, 10712), (125, 10730), (135, 10832), (148, 10976), (151, 11036), (153, 11048), (157, 11117), (158, 11126), (160, 11180), (161, 11195), (162, 11198), (163, 11216), (164, 11237), (165, 11255), (169, 11327), (171, 11381), (172, 11417), (173, 11423), (174, 11456), (176, 11489), (180, 11540), (182, 11573), (183, 11597), (184, 11600), (185, 11609), (187, 11654), (188, 11657), (191, 11681), (194, 11750), (195, 11756), (210, 11855), (215, 11894), (216, 11897), (222, 11927), (226, 11954), (230, 11981), (233, 12026), (251, 12149), (259, 12197), (278, 12227), (281, 12248), (286, 12314), (291, 12422), (293, 12446), (294, 12452), (296, 12467), (299, 12482), (300, 12518), (302, 12581), (303, 12584), (304, 12596), (305, 12617), (307, 12677), (311, 12857),

Gene: Leperchaun\_14 Start: 9454, Stop: 13002, Start Num: 1

Candidate Starts for Leperchaun\_14:

(Start: 1 @9454 has 37 MA's), (Start: 2 @9475 has 184 MA's), (3, 9487), (5, 9526), (6, 9553), (10, 9655), (11, 9703), (12, 9727), (26, 9769), (28, 9781), (29, 9787), (33, 9850), (34, 9865), (43, 9982), (47, 10015), (51, 10057), (54, 10102), (56, 10120), (58, 10132), (62, 10204), (65, 10237), (66, 10240), (70, 10279), (73, 10321), (75, 10351), (77, 10357), (79, 10387), (81, 10423), (82, 10432), (83, 10444), (85, 10477), (90, 10540), (92, 10561), (97, 10657), (98, 10666), (102, 10702), (103, 10714), (106, 10747), (109, 10768), (119, 10834), (121, 10843), (125, 10861), (135, 10963), (140, 11038), (148, 11107), (151, 11167), (153, 11179), (157, 11248), (158, 11257), (160, 11311), (161, 11326), (162, 11329), (163, 11347), (164, 11368), (165, 11386), (169, 11458), (171, 11512), (172, 11548), (173, 11554), (174, 11587), (176, 11620), (180, 11671), (182, 11704), (183, 11728), (184, 11731), (185, 11740), (187, 11785), (188, 11788), (191, 11812), (194, 11884), (195, 11890), (210, 11989), (215, 12028), (216, 12031), (222, 12061), (226, 12088), (230, 12115), (233, 12160), (251, 12283), (259, 12331), (278, 12361), (281, 12382), (286, 12448), (291, 12556), (293, 12580), (294, 12586), (296, 12601),



(297, 12607), (299, 12616), (300, 12652), (303, 12718), (305, 12751), (306, 12790), (307, 12811), (311, 12988),

Gene: LilMoolah\_14 Start: 9434, Stop: 13144, Start Num: 1

Candidate Starts for LilMoolah\_14:

(Start: 1 @9434 has 37 MA's), (Start: 2 @9455 has 184 MA's), (3, 9467), (5, 9506), (6, 9533), (10, 9635), (11, 9683), (12, 9707), (28, 9761), (29, 9767), (33, 9830), (34, 9845), (43, 9962), (47, 9995), (49, 10013), (51, 10037), (54, 10082), (56, 10100), (58, 10112), (62, 10184), (65, 10217), (66, 10220), (70, 10259), (73, 10301), (75, 10331), (77, 10337), (79, 10367), (81, 10403), (82, 10412), (83, 10424), (85, 10457), (86, 10472), (90, 10520), (97, 10637), (98, 10646), (102, 10682), (103, 10694), (106, 10727), (109, 10748), (121, 10823), (125, 10841), (135, 10943), (140, 11018), (151, 11147), (153, 11159), (157, 11225), (160, 11285), (161, 11300), (162, 11303), (163, 11321), (164, 11342), (165, 11360), (169, 11432), (171, 11486), (172, 11522), (173, 11528), (176, 11594), (180, 11645), (182, 11678), (183, 11702), (184, 11705), (185, 11714), (187, 11759), (188, 11762), (191, 11786), (196, 11876), (213, 12023), (217, 12044), (233, 12185), (238, 12209), (240, 12236), (267, 12416), (271, 12446), (279, 12518), (287, 12605), (291, 12698), (293, 12722), (294, 12728), (296, 12743), (299, 12758), (300, 12794), (302, 12857), (303, 12860), (305, 12893), (306, 12932), (307, 12953), (311, 13130),

Gene: LittleShirley\_15 Start: 9341, Stop: 12826, Start Num: 2

Candidate Starts for LittleShirley\_15:

(Start: 2 @9341 has 184 MA's), (5, 9392), (6, 9419), (8, 9476), (10, 9521), (12, 9593), (28, 9647), (29, 9653), (33, 9716), (34, 9731), (43, 9848), (47, 9881), (49, 9899), (51, 9923), (54, 9968), (56, 9986), (58, 9998), (61, 10055), (62, 10070), (63, 10088), (65, 10103), (66, 10106), (70, 10145), (73, 10187), (75, 10217), (77, 10223), (79, 10253), (81, 10289), (82, 10298), (83, 10310), (85, 10343), (86, 10358), (87, 10385), (90, 10406), (91, 10418), (92, 10427), (94, 10469), (96, 10502), (99, 10544), (100, 10556), (104, 10601), (106, 10613), (116, 10664), (117, 10673), (124, 10706), (125, 10709), (126, 10715), (130, 10727), (134, 10790), (137, 10838), (143, 10901), (144, 10904), (145, 10913), (157, 11078), (158, 11087), (160, 11138), (161, 11153), (162, 11156), (163, 11174), (164, 11195), (165, 11213), (169, 11285), (171, 11339), (172, 11375), (173, 11381), (174, 11414), (176, 11447), (180, 11498), (182, 11531), (183, 11555), (184, 11558), (185, 11567), (187, 11612), (188, 11615), (189, 11621), (191, 11639), (194, 11708), (195, 11714), (210, 11813), (215, 11852), (216, 11855), (222, 11885), (226, 11912), (230, 11939), (233, 11984), (251, 12107), (271, 12155), (276, 12185), (281, 12206), (286, 12272), (291, 12380), (293, 12404), (294, 12410), (296, 12425), (297, 12431), (299, 12440), (300, 12476), (302, 12539), (303, 12542), (305, 12575), (307, 12635), (311, 12812),

Gene: Lizziana\_14 Start: 9492, Stop: 13019, Start Num: 2

Candidate Starts for Lizziana\_14:

(Start: 1 @9471 has 37 MA's), (Start: 2 @9492 has 184 MA's), (3, 9504), (5, 9543), (6, 9570), (10, 9672), (11, 9720), (12, 9744), (28, 9798), (29, 9804), (33, 9867), (34, 9882), (43, 9999), (47, 10032), (49, 10050), (51, 10074), (54, 10119), (56, 10137), (58, 10149), (62, 10221), (65, 10254), (66, 10257), (70, 10296), (73, 10338), (75, 10368), (77, 10374), (79, 10404), (81, 10440), (82, 10449), (83, 10461), (85, 10494), (86, 10509), (87, 10536), (90, 10557), (91, 10569), (92, 10578), (97, 10674), (98, 10683), (102, 10719), (103, 10731), (106, 10764), (109, 10785), (121, 10860), (125, 10878), (135, 10980), (140, 11055), (151, 11184), (153, 11196), (157, 11265), (160, 11328), (161, 11343), (162, 11346), (163, 11364), (164, 11385), (165, 11403), (169, 11475), (171, 11529), (172, 11565), (173, 11571), (176, 11637), (180, 11688), (182, 11721), (183, 11745), (184, 11748), (185, 11757), (187, 11802), (188, 11805), (189, 11811), (191, 11829), (194, 11898), (195, 11904), (210, 12003), (215, 12042), (216, 12045), (222, 12075), (230, 12129), (233, 12174), (251, 12297), (259, 12345), (278, 12375), (281, 12396), (286, 12462), (288, 12486), (291, 12570), (293, 12594), (294, 12600), (296, 12615), (299, 12630), (300, 12666), (302, 12729), (303, 12732), (304, 12744), (305, 12765), (307, 12825), (311, 13005),

Gene: Llama\_14 Start: 9489, Stop: 13247, Start Num: 2

Candidate Starts for Llama\_14:

(Start: 1 @9468 has 37 MA's), (Start: 2 @9489 has 184 MA's), (3, 9501), (5, 9540), (6, 9567), (10, 9669), (14, 9786), (16, 9834), (17, 9843), (18, 9888), (19, 9921), (20, 9930), (22, 9945), (23, 9954), (26, 10014), (27, 10017), (28, 10026), (29, 10032), (33, 10095), (34, 10110), (43, 10227), (47, 10260), (49, 10278), (51, 10302), (54, 10347), (56, 10365), (58, 10377), (61, 10434), (62, 10449), (65, 10482), (66, 10485), (70, 10524), (73, 10566), (75, 10596), (77, 10602), (79, 10632), (81, 10668), (82, 10677), (83, 10689), (85, 10722), (86, 10737), (90, 10785), (92, 10806), (97, 10902), (98, 10911), (102, 10947), (103, 10959), (106, 10992), (109, 11013), (112, 11025), (121, 11088), (122, 11094), (125, 11106), (135, 11208), (140, 11283), (151, 11412), (153, 11424), (157, 11493), (158, 11502), (160, 11553), (161, 11568), (162, 11571), (163, 11589), (164, 11610), (165, 11628), (169, 11700), (171, 11754), (172, 11790), (173, 11796), (174, 11829), (176, 11862), (180, 11913), (182, 11946), (183, 11970), (184, 11973), (185, 11982), (187, 12027), (188, 12030), (191, 12054), (194, 12126), (195, 12132), (201, 12180), (210, 12231), (215, 12270), (216, 12273), (222, 12303), (226, 12330), (230, 12357), (233, 12402), (236, 12414), (244, 12501), (251, 12525), (259, 12573), (281, 12624), (286, 12690), (291, 12798), (293, 12822), (294, 12828), (296, 12843), (297, 12849), (299, 12858), (300, 12894), (302, 12957), (303, 12960), (305, 12993), (306, 13032), (307, 13053), (311, 13233),

Gene: Llij\_14 Start: 9482, Stop: 12994, Start Num: 1

Candidate Starts for Llij\_14:

(Start: 1 @9482 has 37 MA's), (Start: 2 @9503 has 184 MA's), (3, 9515), (5, 9554), (6, 9581), (10, 9683), (11, 9731), (12, 9755), (26, 9797), (28, 9809), (29, 9815), (33, 9878), (34, 9893), (43, 10010), (47, 10043), (49, 10061), (51, 10085), (54, 10130), (56, 10148), (58, 10160), (61, 10217), (62, 10232), (63, 10250), (65, 10265), (66, 10268), (70, 10307), (73, 10349), (75, 10379), (77, 10385), (79, 10415), (81, 10451), (82, 10460), (83, 10472), (85, 10505), (87, 10547), (90, 10568), (91, 10580), (92, 10589), (94, 10631), (96, 10664), (99, 10706), (100, 10718), (104, 10763), (106, 10775), (116, 10826), (117, 10835), (125, 10871), (126, 10877), (130, 10889), (134, 10952), (137, 11000), (143, 11063), (144, 11066), (145, 11075), (157, 11240), (160, 11303), (161, 11318), (162, 11321), (163, 11339), (164, 11360), (165, 11378), (169, 11450), (171, 11504), (172, 11540), (173, 11546), (174, 11579), (176, 11612), (180, 11663), (182, 11696), (183, 11720), (184, 11723), (185, 11732), (187, 11777), (188, 11780), (191, 11804), (194, 11873), (195, 11879), (210, 11978), (215, 12017), (216, 12020), (222, 12050), (226, 12077), (230, 12104), (233, 12149), (251, 12272), (271, 12320), (276, 12350), (281, 12371), (286, 12437), (291, 12545), (293, 12569), (294, 12575), (296, 12590), (299, 12605), (300, 12641), (302, 12704), (303, 12707), (304, 12719), (305, 12740), (307, 12800), (311, 12980),

Gene: Lorde\_15 Start: 9344, Stop: 12835, Start Num: 2

Candidate Starts for Lorde\_15:

(Start: 1 @9323 has 37 MA's), (Start: 2 @9344 has 184 MA's), (3, 9356), (5, 9395), (6, 9422), (10, 9524), (11, 9572), (12, 9596), (26, 9638), (27, 9641), (28, 9650), (29, 9656), (33, 9719), (34, 9734), (43, 9851), (47, 9884), (49, 9902), (51, 9926), (54, 9971), (56, 9989), (58, 10001), (61, 10058), (62, 10073), (63, 10091), (65, 10106), (66, 10109), (70, 10148), (73, 10190), (75, 10220), (77, 10226), (79, 10256), (81, 10292), (82, 10301), (83, 10313), (85, 10346), (87, 10388), (90, 10409), (91, 10421), (92, 10430), (94, 10472), (96, 10505), (99, 10547), (100, 10559), (104, 10604), (106, 10616), (116, 10667), (117, 10676), (125, 10712), (126, 10718), (130, 10730), (134, 10793), (137, 10841), (143, 10904), (144, 10907), (145, 10916), (157, 11081), (160, 11144), (161, 11159), (162, 11162), (163, 11180), (164, 11201), (165, 11219), (169, 11291), (171, 11345), (172, 11381), (173, 11387), (174, 11420), (176, 11453), (180, 11504), (182, 11537), (183, 11561), (184, 11564), (185, 11573), (187, 11618), (188, 11621), (191, 11645), (194, 11714), (195, 11720), (210, 11819), (215, 11858), (216, 11861), (222, 11891), (226, 11918), (230, 11945), (233, 11990), (251, 12113), (271, 12161), (276, 12191), (281, 12212), (286, 12278), (291, 12386), (293, 12410), (294, 12416), (296, 12431), (299, 12446), (300, 12482), (302, 12545), (303, 12548), (304, 12560), (305, 12581), (307, 12641), (311, 12821),

Gene: LunaBlu\_14 Start: 9507, Stop: 13037, Start Num: 2

Candidate Starts for LunaBlu\_14:

(Start: 2 @9507 has 184 MA's), (3, 9519), (5, 9558), (6, 9585), (8, 9642), (10, 9687), (12, 9759), (26, 9801), (27, 9804), (28, 9813), (29, 9819), (32, 9843), (33, 9882), (34, 9897), (43, 10014), (47, 10047), (51, 10089), (54, 10134), (56, 10152), (58, 10164), (62, 10236), (65, 10269), (66, 10272), (70, 10311), (73, 10353), (75, 10383), (77, 10389), (79, 10419), (81, 10455), (82, 10464), (83, 10476), (85, 10509), (90, 10572), (96, 10668), (98, 10698), (101, 10731), (102, 10734), (103, 10746), (109, 10800), (112, 10812), (119, 10866), (121, 10875), (135, 10995), (148, 11139), (151, 11199), (153, 11211), (157, 11280), (159, 11304), (161, 11358), (162, 11361), (163, 11379), (164, 11400), (165, 11418), (171, 11544), (172, 11580), (173, 11586), (176, 11652), (180, 11703), (182, 11736), (183, 11760), (184, 11763), (185, 11772), (187, 11817), (188, 11820), (189, 11826), (191, 11844), (194, 11913), (195, 11919), (210, 12018), (226, 12117), (229, 12135), (233, 12189), (244, 12291), (251, 12315), (259, 12363), (278, 12393), (281, 12414), (286, 12480), (291, 12588), (293, 12612), (294, 12618), (296, 12633), (299, 12648), (300, 12684), (302, 12747), (303, 12750), (304, 12762), (305, 12783), (307, 12843), (311, 13023),

Gene: LunaStella\_15 Start: 9943, Stop: 13467, Start Num: 2

Candidate Starts for LunaStella\_15:

(Start: 2 @9943 has 184 MA's), (4, 9973), (8, 10054), (9, 10066), (11, 10114), (28, 10192), (32, 10222), (33, 10261), (34, 10276), (35, 10282), (36, 10309), (39, 10333), (41, 10384), (45, 10435), (47, 10447), (50, 10468), (51, 10489), (52, 10507), (57, 10555), (63, 10645), (64, 10651), (72, 10717), (73, 10741), (77, 10777), (78, 10786), (81, 10843), (88, 10939), (89, 10942), (90, 10951), (92, 10972), (97, 11068), (103, 11125), (105, 11149), (112, 11188), (115, 11209), (118, 11242), (122, 11260), (123, 11266), (129, 11287), (135, 11371), (139, 11425), (142, 11455), (147, 11509), (148, 11512), (152, 11584), (154, 11620), (161, 11713), (162, 11716), (163, 11734), (164, 11755), (166, 11776), (167, 11815), (169, 11845), (170, 11860), (173, 11941), (174, 11974), (175, 11977), (177, 12016), (179, 12061), (180, 12079), (181, 12100), (183, 12136), (184, 12139), (185, 12148), (187, 12193), (188, 12196), (190, 12205), (193, 12283), (196, 12310), (197, 12316), (198, 12340), (210, 12403), (216, 12445), (222, 12475), (230, 12529), (232, 12553), (233, 12574), (250, 12697), (284, 12874), (285, 12886), (287, 12910), (292, 13018), (299, 13063), (302, 13162), (303, 13165), (306, 13237), (308, 13267), (309, 13312), (312, 13462),

Gene: MadMen\_14 Start: 9515, Stop: 13195, Start Num: 2

Candidate Starts for MadMen\_14:

(Start: 1 @9494 has 37 MA's), (Start: 2 @9515 has 184 MA's), (3, 9527), (5, 9566), (6, 9593), (10, 9695), (12, 9767), (26, 9809), (27, 9812), (28, 9821), (29, 9827), (33, 9890), (34, 9905), (43, 10022), (47, 10055), (49, 10073), (51, 10097), (54, 10142), (56, 10160), (58, 10172), (61, 10229), (62, 10244), (63, 10262), (65, 10277), (66, 10280), (70, 10319), (73, 10361), (75, 10391), (77, 10397), (79, 10427), (81, 10463), (82, 10472), (83, 10484), (85, 10517), (86, 10532), (87, 10559), (90, 10580), (91, 10592), (92, 10601), (97, 10697), (98, 10706), (101, 10739), (102, 10742), (103, 10754), (106, 10787), (109, 10808), (112, 10820), (121, 10883), (122, 10889), (125, 10901), (135, 11003), (151, 11207), (153, 11219), (157, 11288), (160, 11348), (161, 11363), (162, 11366), (163, 11384), (164, 11405), (165, 11423), (169, 11495), (171, 11549), (172, 11585), (173, 11591), (174, 11624), (176, 11657), (180, 11708), (182, 11741), (183, 11765), (184, 11768), (185, 11777), (187, 11822), (188, 11825), (191, 11849), (194, 11921), (195, 11927), (222, 12098), (230, 12152), (233, 12197), (254, 12356), (259, 12395), (265, 12422), (268, 12431), (269, 12437), (273, 12473), (286, 12641), (291, 12749), (293, 12773), (294, 12779), (296, 12794), (297, 12800), (299, 12809), (300, 12845), (303, 12911), (305, 12944), (306, 12983), (307, 13004), (311, 13181),

Gene: Madiba\_15 Start: 9358, Stop: 12885, Start Num: 2

Candidate Starts for Madiba\_15:

(Start: 1 @9337 has 37 MA's), (Start: 2 @9358 has 184 MA's), (3, 9370), (5, 9409), (6, 9436), (8, 9493), (10, 9538), (12, 9610), (28, 9664), (29, 9670), (33, 9733), (34, 9748), (43, 9865), (47, 9898), (51, 9940), (54, 9985), (56, 10003), (58, 10015), (62, 10087), (65, 10120), (66, 10123), (70, 10162), (73, 10204), (75, 10234), (77, 10240), (79, 10270), (81, 10306), (82, 10315), (83, 10327), (85, 10360), (90,

10423), (96, 10519), (98, 10549), (101, 10582), (102, 10585), (103, 10597), (109, 10651), (112, 10663), (119, 10717), (121, 10726), (135, 10846), (140, 10921), (151, 11050), (153, 11062), (157, 11131), (160, 11194), (161, 11209), (162, 11212), (163, 11230), (164, 11251), (165, 11269), (169, 11341), (171, 11395), (172, 11431), (173, 11437), (176, 11503), (180, 11554), (182, 11587), (183, 11611), (184, 11614), (185, 11623), (187, 11668), (188, 11671), (189, 11677), (191, 11695), (194, 11764), (195, 11770), (210, 11869), (215, 11908), (216, 11911), (222, 11941), (226, 11968), (230, 11995), (233, 12040), (251, 12163), (259, 12211), (278, 12241), (281, 12262), (286, 12328), (291, 12436), (293, 12460), (294, 12466), (296, 12481), (299, 12496), (300, 12532), (302, 12595), (303, 12598), (304, 12610), (305, 12631), (307, 12691), (311, 12871),

Gene: Mahavrat\_14 Start: 9480, Stop: 13004, Start Num: 2

Candidate Starts for Mahavrat\_14:

(Start: 1 @9459 has 37 MA's), (Start: 2 @9480 has 184 MA's), (3, 9492), (5, 9531), (6, 9558), (10, 9660), (12, 9732), (28, 9786), (29, 9792), (33, 9855), (34, 9870), (43, 9987), (47, 10020), (49, 10038), (51, 10062), (54, 10107), (56, 10125), (58, 10137), (62, 10209), (65, 10242), (66, 10245), (70, 10284), (73, 10326), (75, 10356), (77, 10362), (79, 10392), (81, 10428), (82, 10437), (83, 10449), (85, 10482), (90, 10545), (91, 10557), (92, 10566), (97, 10662), (98, 10671), (102, 10707), (103, 10719), (106, 10752), (109, 10773), (121, 10848), (122, 10854), (125, 10866), (135, 10968), (140, 11043), (151, 11172), (153, 11184), (157, 11250), (158, 11259), (160, 11313), (161, 11328), (162, 11331), (163, 11349), (164, 11370), (165, 11388), (169, 11460), (171, 11514), (172, 11550), (173, 11556), (174, 11589), (176, 11622), (180, 11673), (182, 11706), (183, 11730), (184, 11733), (185, 11742), (187, 11787), (188, 11790), (191, 11814), (194, 11883), (195, 11889), (212, 12009), (226, 12087), (229, 12105), (232, 12138), (233, 12159), (244, 12261), (251, 12285), (259, 12333), (278, 12363), (281, 12384), (286, 12450), (291, 12558), (293, 12582), (294, 12588), (296, 12603), (297, 12609), (299, 12618), (300, 12654), (302, 12717), (303, 12720), (305, 12753), (306, 12792), (307, 12813), (311, 12990),

Gene: Mandlovu\_14 Start: 9467, Stop: 13123, Start Num: 1

Candidate Starts for Mandlovu\_14:

(Start: 1 @9467 has 37 MA's), (Start: 2 @9488 has 184 MA's), (3, 9500), (5, 9539), (6, 9566), (10, 9668), (12, 9740), (26, 9782), (28, 9794), (29, 9800), (33, 9863), (34, 9878), (43, 9995), (47, 10028), (49, 10046), (51, 10070), (54, 10115), (56, 10133), (58, 10145), (61, 10202), (62, 10217), (63, 10235), (65, 10250), (66, 10253), (70, 10292), (73, 10334), (75, 10364), (77, 10370), (79, 10400), (80, 10424), (81, 10436), (82, 10445), (83, 10457), (85, 10490), (86, 10505), (87, 10532), (90, 10553), (91, 10565), (92, 10574), (97, 10670), (98, 10679), (101, 10712), (102, 10715), (103, 10727), (106, 10760), (109, 10781), (112, 10793), (121, 10856), (122, 10862), (125, 10874), (135, 10976), (151, 11180), (153, 11192), (157, 11258), (158, 11267), (160, 11321), (161, 11336), (162, 11339), (163, 11357), (164, 11378), (165, 11396), (169, 11468), (171, 11522), (172, 11558), (173, 11564), (174, 11597), (176, 11630), (180, 11681), (182, 11714), (183, 11738), (184, 11741), (185, 11750), (187, 11795), (188, 11798), (191, 11822), (194, 11894), (195, 11900), (203, 11966), (204, 11969), (205, 11972), (207, 11990), (209, 12002), (218, 12059), (223, 12092), (228, 12119), (234, 12179), (235, 12182), (239, 12224), (241, 12233), (247, 12287), (249, 12293), (252, 12302), (257, 12356), (258, 12362), (261, 12368), (270, 12404), (281, 12500), (286, 12566), (291, 12674), (293, 12698), (294, 12704), (296, 12719), (299, 12734), (300, 12770), (302, 12833), (303, 12836), (305, 12869), (307, 12929), (311, 13109),

Gene: Mantra\_14 Start: 9503, Stop: 13135, Start Num: 2

Candidate Starts for Mantra\_14:

(Start: 1 @9482 has 37 MA's), (Start: 2 @9503 has 184 MA's), (3, 9515), (5, 9554), (6, 9581), (10, 9683), (11, 9731), (12, 9755), (26, 9797), (27, 9800), (28, 9809), (29, 9815), (33, 9878), (34, 9893), (43, 10010), (47, 10043), (49, 10061), (51, 10085), (54, 10130), (56, 10148), (58, 10160), (62, 10232), (65, 10265), (66, 10268), (70, 10307), (73, 10349), (75, 10379), (77, 10385), (79, 10415), (81, 10451), (82, 10460), (83, 10472), (85, 10505), (87, 10547), (90, 10568), (91, 10580), (92, 10589), (94, 10631), (96,

10664), (99, 10706), (100, 10718), (104, 10763), (106, 10775), (116, 10826), (117, 10835), (124, 10868), (125, 10871), (126, 10877), (130, 10889), (134, 10952), (143, 11063), (144, 11066), (145, 11075), (157, 11240), (160, 11300), (161, 11315), (162, 11318), (163, 11336), (164, 11357), (165, 11375), (169, 11447), (171, 11501), (172, 11537), (173, 11543), (174, 11576), (176, 11609), (180, 11660), (182, 11693), (183, 11717), (184, 11720), (185, 11729), (187, 11774), (188, 11777), (191, 11801), (194, 11870), (195, 11876), (222, 12047), (230, 12101), (233, 12146), (254, 12305), (258, 12344), (263, 12368), (264, 12374), (267, 12380), (272, 12416), (286, 12581), (291, 12689), (293, 12713), (294, 12719), (296, 12734), (297, 12740), (299, 12749), (300, 12785), (302, 12848), (303, 12851), (305, 12884), (306, 12923), (307, 12944), (311, 13121),

Gene: Maravista\_14 Start: 9480, Stop: 12971, Start Num: 2

Candidate Starts for Maravista\_14:

(Start: 1 @9459 has 37 MA's), (Start: 2 @9480 has 184 MA's), (3, 9492), (5, 9531), (6, 9558), (10, 9660), (11, 9708), (12, 9732), (28, 9786), (29, 9792), (33, 9855), (34, 9870), (43, 9987), (47, 10020), (49, 10038), (51, 10062), (54, 10107), (56, 10125), (58, 10137), (62, 10209), (65, 10242), (66, 10245), (70, 10284), (73, 10326), (75, 10356), (77, 10362), (79, 10392), (81, 10428), (82, 10437), (83, 10449), (85, 10482), (86, 10497), (87, 10524), (90, 10545), (91, 10557), (92, 10566), (94, 10608), (96, 10641), (99, 10683), (100, 10695), (104, 10740), (106, 10752), (116, 10803), (117, 10812), (125, 10848), (126, 10854), (130, 10866), (134, 10929), (137, 10977), (143, 11040), (144, 11043), (145, 11052), (157, 11217), (160, 11280), (161, 11295), (162, 11298), (163, 11316), (164, 11337), (165, 11355), (169, 11427), (171, 11481), (172, 11517), (173, 11523), (174, 11556), (176, 11589), (180, 11640), (182, 11673), (183, 11697), (184, 11700), (185, 11709), (187, 11754), (188, 11757), (189, 11763), (191, 11781), (194, 11850), (195, 11856), (210, 11955), (215, 11994), (216, 11997), (222, 12027), (230, 12081), (233, 12126), (251, 12249), (271, 12297), (276, 12327), (281, 12348), (286, 12414), (291, 12522), (293, 12546), (294, 12552), (296, 12567), (299, 12582), (300, 12618), (302, 12681), (303, 12684), (304, 12696), (305, 12717), (307, 12777), (311, 12957),

Gene: Marker\_15 Start: 9330, Stop: 12875, Start Num: 1

Candidate Starts for Marker\_15:

(Start: 1 @9330 has 37 MA's), (Start: 2 @9351 has 184 MA's), (3, 9363), (5, 9402), (6, 9429), (8, 9486), (10, 9531), (12, 9603), (27, 9648), (28, 9657), (29, 9663), (33, 9726), (34, 9741), (43, 9858), (47, 9891), (51, 9933), (54, 9978), (56, 9996), (58, 10008), (62, 10080), (65, 10113), (66, 10116), (70, 10155), (73, 10197), (75, 10227), (77, 10233), (79, 10263), (81, 10299), (82, 10308), (83, 10320), (87, 10395), (90, 10416), (91, 10428), (92, 10437), (96, 10512), (97, 10533), (98, 10542), (102, 10578), (103, 10590), (106, 10623), (109, 10644), (121, 10719), (125, 10737), (128, 10749), (135, 10839), (148, 10983), (151, 11043), (153, 11055), (157, 11124), (159, 11148), (160, 11184), (161, 11199), (162, 11202), (164, 11241), (165, 11259), (169, 11331), (171, 11385), (172, 11421), (173, 11427), (176, 11493), (180, 11544), (182, 11577), (183, 11601), (184, 11604), (185, 11613), (187, 11658), (188, 11661), (189, 11667), (191, 11685), (194, 11754), (195, 11760), (210, 11859), (215, 11898), (216, 11901), (222, 11931), (226, 11958), (230, 11985), (233, 12030), (251, 12153), (259, 12201), (278, 12231), (281, 12252), (286, 12318), (291, 12426), (293, 12450), (294, 12456), (296, 12471), (299, 12486), (300, 12522), (302, 12585), (303, 12588), (304, 12600), (305, 12621), (307, 12681), (311, 12861),

Gene: Martik\_14 Start: 9492, Stop: 13019, Start Num: 2

Candidate Starts for Martik\_14:

(Start: 1 @9471 has 37 MA's), (Start: 2 @9492 has 184 MA's), (3, 9504), (5, 9543), (6, 9570), (10, 9672), (11, 9720), (12, 9744), (28, 9798), (29, 9804), (33, 9867), (34, 9882), (43, 9999), (47, 10032), (49, 10050), (51, 10074), (54, 10119), (56, 10137), (58, 10149), (62, 10221), (65, 10254), (66, 10257), (70, 10296), (73, 10338), (75, 10368), (77, 10374), (79, 10404), (81, 10440), (82, 10449), (83, 10461), (85, 10494), (86, 10509), (87, 10536), (90, 10557), (91, 10569), (92, 10578), (97, 10674), (98, 10683), (102, 10719), (103, 10731), (106, 10764), (109, 10785), (121, 10860), (125, 10878), (135, 10980), (140, 11055), (151, 11184), (153, 11196), (157, 11265), (160, 11328), (161, 11343), (162, 11346),

(163, 11364), (164, 11385), (165, 11403), (169, 11475), (171, 11529), (172, 11565), (173, 11571), (176, 11637), (180, 11688), (182, 11721), (183, 11745), (184, 11748), (185, 11757), (187, 11802), (188, 11805), (189, 11811), (191, 11829), (194, 11898), (195, 11904), (210, 12003), (215, 12042), (216, 12045), (222, 12075), (230, 12129), (233, 12174), (251, 12297), (259, 12345), (278, 12375), (281, 12396), (286, 12462), (288, 12486), (291, 12570), (293, 12594), (294, 12600), (296, 12615), (299, 12630), (300, 12666), (302, 12729), (303, 12732), (304, 12744), (305, 12765), (307, 12825), (311, 13005),

Gene: Mattes\_14 Start: 9483, Stop: 13010, Start Num: 2

Candidate Starts for Mattes\_14:

(Start: 1 @9462 has 37 MA's), (Start: 2 @9483 has 184 MA's), (3, 9495), (5, 9534), (6, 9561), (10, 9663), (11, 9711), (12, 9735), (28, 9789), (29, 9795), (33, 9858), (34, 9873), (43, 9990), (47, 10023), (49, 10041), (51, 10065), (54, 10110), (56, 10128), (58, 10140), (62, 10212), (65, 10245), (66, 10248), (70, 10287), (73, 10329), (75, 10359), (77, 10365), (79, 10395), (81, 10431), (82, 10440), (83, 10452), (85, 10485), (86, 10500), (87, 10527), (90, 10548), (91, 10560), (92, 10569), (97, 10665), (98, 10674), (102, 10710), (103, 10722), (106, 10755), (109, 10776), (121, 10851), (125, 10869), (135, 10971), (140, 11046), (151, 11175), (153, 11187), (157, 11256), (160, 11319), (161, 11334), (162, 11337), (163, 11355), (164, 11376), (165, 11394), (169, 11466), (171, 11520), (172, 11556), (173, 11562), (176, 11628), (180, 11679), (182, 11712), (183, 11736), (184, 11739), (185, 11748), (187, 11793), (188, 11796), (189, 11802), (191, 11820), (194, 11889), (195, 11895), (210, 11994), (215, 12033), (216, 12036), (222, 12066), (230, 12120), (233, 12165), (251, 12288), (259, 12336), (278, 12366), (281, 12387), (286, 12453), (288, 12477), (291, 12561), (293, 12585), (294, 12591), (296, 12606), (299, 12621), (300, 12657), (302, 12720), (303, 12723), (304, 12735), (305, 12756), (307, 12816), (311, 12996),

Gene: Melissauren88\_14 Start: 9532, Stop: 13056, Start Num: 2

Candidate Starts for Melissauren88\_14:

(Start: 2 @9532 has 184 MA's), (3, 9544), (5, 9583), (6, 9610), (8, 9667), (10, 9712), (12, 9784), (26, 9826), (27, 9829), (28, 9838), (29, 9844), (33, 9907), (34, 9922), (43, 10039), (47, 10072), (51, 10114), (54, 10159), (56, 10177), (58, 10189), (62, 10261), (65, 10294), (66, 10297), (70, 10336), (73, 10378), (75, 10408), (77, 10414), (79, 10444), (81, 10480), (82, 10489), (83, 10501), (90, 10597), (96, 10693), (98, 10723), (101, 10756), (102, 10759), (103, 10771), (109, 10825), (112, 10837), (119, 10891), (121, 10900), (135, 11020), (148, 11164), (151, 11224), (153, 11236), (157, 11305), (159, 11329), (161, 11380), (162, 11383), (164, 11422), (165, 11440), (171, 11566), (172, 11602), (173, 11608), (176, 11674), (180, 11725), (182, 11758), (183, 11782), (184, 11785), (185, 11794), (187, 11839), (188, 11842), (189, 11848), (191, 11866), (194, 11935), (195, 11941), (210, 12040), (215, 12079), (216, 12082), (222, 12112), (226, 12139), (230, 12166), (233, 12211), (251, 12334), (259, 12382), (278, 12412), (281, 12433), (286, 12499), (291, 12607), (293, 12631), (294, 12637), (296, 12652), (299, 12667), (300, 12703), (302, 12766), (303, 12769), (304, 12781), (305, 12802), (307, 12862), (311, 13042),

Gene: MilanaBonita\_15 Start: 10181, Stop: 13708, Start Num: 2

Candidate Starts for MilanaBonita\_15:

(Start: 1 @10160 has 37 MA's), (Start: 2 @10181 has 184 MA's), (3, 10193), (5, 10232), (6, 10259), (8, 10316), (10, 10361), (12, 10433), (28, 10487), (29, 10493), (33, 10556), (34, 10571), (43, 10688), (47, 10721), (51, 10763), (54, 10808), (56, 10826), (58, 10838), (62, 10910), (65, 10943), (66, 10946), (70, 10985), (73, 11027), (75, 11057), (77, 11063), (79, 11093), (81, 11129), (82, 11138), (83, 11150), (85, 11183), (90, 11246), (96, 11342), (98, 11372), (101, 11405), (102, 11408), (103, 11420), (109, 11474), (112, 11486), (119, 11540), (121, 11549), (135, 11669), (148, 11813), (151, 11873), (153, 11885), (157, 11954), (159, 11978), (160, 12017), (161, 12032), (162, 12035), (164, 12074), (165, 12092), (169, 12164), (171, 12218), (172, 12254), (173, 12260), (176, 12326), (180, 12377), (182, 12410), (183, 12434), (184, 12437), (185, 12446), (187, 12491), (188, 12494), (189, 12500), (191, 12518), (194, 12587), (195, 12593), (210, 12692), (215, 12731), (216, 12734), (222, 12764), (226, 12791),

(230, 12818), (233, 12863), (251, 12986), (259, 13034), (278, 13064), (281, 13085), (286, 13151),  
(291, 13259), (293, 13283), (294, 13289), (296, 13304), (299, 13319), (300, 13355), (302, 13418),  
(303, 13421), (304, 13433), (305, 13454), (307, 13514), (311, 13694),

Gene: MilleniumForce\_15 Start: 10178, Stop: 13825, Start Num: 2

Candidate Starts for MilleniumForce\_15:

(Start: 2 @10178 has 184 MA's), (3, 10190), (5, 10229), (6, 10256), (8, 10313), (10, 10358), (12,  
10430), (26, 10472), (27, 10475), (28, 10484), (29, 10490), (33, 10553), (34, 10568), (43, 10685), (47,  
10718), (51, 10760), (54, 10805), (56, 10823), (58, 10835), (62, 10907), (65, 10940), (66, 10943), (70,  
10982), (73, 11024), (75, 11054), (77, 11060), (79, 11090), (81, 11126), (82, 11135), (83, 11147), (85,  
11180), (90, 11243), (96, 11339), (98, 11369), (101, 11402), (102, 11405), (103, 11417), (109, 11471),  
(112, 11483), (119, 11537), (121, 11546), (135, 11666), (148, 11810), (151, 11870), (153, 11882),  
(157, 11951), (159, 11975), (161, 12029), (162, 12032), (163, 12050), (164, 12071), (165, 12089),  
(169, 12161), (171, 12215), (172, 12251), (173, 12257), (176, 12323), (180, 12374), (182, 12407),  
(183, 12431), (184, 12434), (185, 12443), (187, 12488), (188, 12491), (189, 12497), (191, 12515),  
(194, 12584), (195, 12590), (203, 12656), (204, 12659), (205, 12662), (207, 12680), (209, 12692),  
(216, 12740), (218, 12749), (223, 12782), (228, 12809), (235, 12872), (241, 12923), (247, 12977),  
(252, 12992), (256, 13046), (258, 13055), (261, 13061), (270, 13097), (274, 13124), (281, 13202),  
(286, 13268), (291, 13376), (293, 13400), (294, 13406), (296, 13421), (299, 13436), (300, 13472),  
(302, 13535), (303, 13538), (304, 13550), (305, 13571), (307, 13631), (311, 13811),

Gene: MinionDave\_15 Start: 10182, Stop: 13709, Start Num: 2

Candidate Starts for MinionDave\_15:

(Start: 2 @10182 has 184 MA's), (3, 10194), (5, 10233), (6, 10260), (8, 10317), (10, 10362), (12,  
10434), (28, 10488), (29, 10494), (32, 10518), (33, 10557), (34, 10572), (43, 10689), (47, 10722), (51,  
10764), (54, 10809), (56, 10827), (58, 10839), (62, 10911), (65, 10944), (66, 10947), (70, 10986), (73,  
11028), (75, 11058), (77, 11064), (79, 11094), (81, 11130), (82, 11139), (83, 11151), (85, 11184), (90,  
11247), (96, 11343), (98, 11373), (101, 11406), (102, 11409), (103, 11421), (109, 11475), (112,  
11487), (119, 11541), (121, 11550), (135, 11670), (148, 11814), (151, 11874), (153, 11886), (157,  
11955), (159, 11979), (161, 12033), (162, 12036), (163, 12054), (164, 12075), (165, 12093), (169,  
12165), (171, 12219), (172, 12255), (173, 12261), (176, 12327), (180, 12378), (182, 12411), (183,  
12435), (184, 12438), (185, 12447), (187, 12492), (188, 12495), (189, 12501), (191, 12519), (194,  
12588), (195, 12594), (210, 12693), (215, 12732), (216, 12735), (222, 12765), (226, 12792), (233,  
12864), (236, 12876), (244, 12963), (251, 12987), (259, 13035), (278, 13065), (281, 13086), (286,  
13152), (291, 13260), (293, 13284), (294, 13290), (296, 13305), (299, 13320), (300, 13356), (302,  
13419), (303, 13422), (304, 13434), (305, 13455), (307, 13515), (311, 13695),

Gene: Minnie\_15 Start: 10042, Stop: 13554, Start Num: 2

Candidate Starts for Minnie\_15:

(Start: 2 @10042 has 184 MA's), (5, 10093), (6, 10120), (10, 10222), (11, 10270), (12, 10294), (26,  
10336), (27, 10339), (28, 10348), (29, 10354), (33, 10417), (34, 10432), (37, 10474), (40, 10534), (42,  
10549), (46, 10600), (47, 10603), (48, 10612), (52, 10663), (53, 10678), (57, 10711), (59, 10741), (64,  
10807), (73, 10894), (74, 10897), (82, 11005), (85, 11050), (91, 11116), (92, 11125), (96, 11200), (97,  
11221), (98, 11230), (101, 11263), (102, 11266), (103, 11278), (109, 11332), (112, 11344), (119,  
11398), (121, 11407), (128, 11437), (135, 11527), (148, 11671), (151, 11731), (153, 11743), (160,  
11863), (161, 11878), (162, 11881), (163, 11899), (164, 11920), (165, 11938), (169, 12010), (171,  
12064), (172, 12100), (173, 12106), (176, 12172), (180, 12223), (182, 12256), (183, 12280), (184,  
12283), (185, 12292), (187, 12337), (188, 12340), (189, 12346), (191, 12364), (194, 12433), (195,  
12439), (210, 12538), (215, 12577), (216, 12580), (222, 12610), (226, 12637), (230, 12664), (233,  
12709), (251, 12832), (271, 12880), (276, 12910), (281, 12931), (286, 12997), (291, 13105), (293,  
13129), (294, 13135), (296, 13150), (299, 13165), (300, 13201), (302, 13264), (303, 13267), (304,  
13279), (305, 13300), (307, 13360), (311, 13540),

Gene: Misha28\_15 Start: 9353, Stop: 12883, Start Num: 2

Candidate Starts for Misha28\_15:

(Start: 1 @9332 has 37 MA's), (Start: 2 @9353 has 184 MA's), (3, 9365), (5, 9404), (6, 9431), (10, 9533), (12, 9605), (26, 9647), (28, 9659), (29, 9665), (33, 9728), (34, 9743), (43, 9860), (47, 9893), (49, 9911), (51, 9935), (54, 9980), (56, 9998), (58, 10010), (61, 10067), (62, 10082), (63, 10100), (65, 10115), (66, 10118), (70, 10157), (73, 10199), (75, 10229), (77, 10235), (79, 10265), (81, 10301), (82, 10310), (83, 10322), (85, 10355), (86, 10370), (87, 10397), (90, 10418), (92, 10439), (97, 10535), (98, 10544), (102, 10580), (103, 10592), (106, 10625), (109, 10646), (121, 10721), (122, 10727), (125, 10739), (135, 10841), (140, 10916), (151, 11045), (153, 11057), (157, 11126), (158, 11135), (160, 11186), (161, 11201), (162, 11204), (163, 11222), (164, 11243), (165, 11261), (169, 11333), (171, 11387), (172, 11423), (173, 11429), (176, 11495), (180, 11546), (182, 11579), (183, 11603), (184, 11606), (185, 11615), (187, 11660), (188, 11663), (191, 11687), (194, 11759), (195, 11765), (226, 11963), (229, 11981), (232, 12014), (233, 12035), (244, 12137), (251, 12161), (259, 12209), (281, 12260), (286, 12326), (291, 12434), (293, 12458), (294, 12464), (296, 12479), (297, 12485), (299, 12494), (300, 12530), (302, 12593), (303, 12596), (304, 12608), (305, 12629), (306, 12668), (307, 12689), (311, 12869),

Gene: MisterCuddles\_14 Start: 9496, Stop: 12981, Start Num: 2

Candidate Starts for MisterCuddles\_14:

(Start: 1 @9475 has 37 MA's), (Start: 2 @9496 has 184 MA's), (3, 9508), (5, 9547), (6, 9574), (8, 9631), (10, 9676), (11, 9724), (12, 9748), (28, 9802), (29, 9808), (33, 9871), (34, 9886), (43, 10003), (47, 10036), (51, 10078), (54, 10123), (56, 10141), (58, 10153), (62, 10225), (65, 10258), (66, 10261), (70, 10300), (73, 10342), (75, 10372), (77, 10378), (79, 10408), (81, 10444), (82, 10453), (83, 10465), (90, 10561), (94, 10624), (99, 10699), (104, 10756), (106, 10768), (112, 10789), (116, 10819), (124, 10861), (125, 10864), (126, 10870), (130, 10882), (145, 11068), (155, 11215), (157, 11230), (159, 11254), (161, 11308), (162, 11311), (164, 11350), (165, 11368), (169, 11440), (171, 11494), (172, 11530), (173, 11536), (176, 11602), (180, 11653), (182, 11686), (183, 11710), (184, 11713), (185, 11722), (187, 11767), (188, 11770), (189, 11776), (191, 11794), (194, 11863), (195, 11869), (210, 11968), (215, 12007), (216, 12010), (222, 12040), (226, 12067), (230, 12094), (233, 12139), (251, 12262), (271, 12310), (276, 12340), (281, 12361), (286, 12427), (291, 12535), (293, 12559), (294, 12565), (296, 12580), (299, 12595), (300, 12631), (302, 12694), (303, 12697), (305, 12730), (306, 12769), (307, 12790), (311, 12967),

Gene: Modragons\_14 Start: 9489, Stop: 13247, Start Num: 2

Candidate Starts for Modragons\_14:

(Start: 1 @9468 has 37 MA's), (Start: 2 @9489 has 184 MA's), (3, 9501), (5, 9540), (6, 9567), (10, 9669), (14, 9786), (16, 9834), (17, 9843), (18, 9888), (19, 9921), (20, 9930), (22, 9945), (23, 9954), (26, 10014), (27, 10017), (28, 10026), (29, 10032), (33, 10095), (34, 10110), (43, 10227), (47, 10260), (49, 10278), (51, 10302), (54, 10347), (56, 10365), (58, 10377), (61, 10434), (62, 10449), (65, 10482), (66, 10485), (70, 10524), (73, 10566), (75, 10596), (77, 10602), (79, 10632), (81, 10668), (82, 10677), (83, 10689), (85, 10722), (86, 10737), (90, 10785), (92, 10806), (97, 10902), (98, 10911), (102, 10947), (103, 10959), (106, 10992), (109, 11013), (112, 11025), (121, 11088), (122, 11094), (125, 11106), (135, 11208), (140, 11283), (151, 11412), (153, 11424), (157, 11493), (158, 11502), (160, 11553), (161, 11568), (162, 11571), (163, 11589), (164, 11610), (165, 11628), (169, 11700), (171, 11754), (172, 11790), (173, 11796), (174, 11829), (176, 11862), (180, 11913), (182, 11946), (183, 11970), (184, 11973), (185, 11982), (187, 12027), (188, 12030), (191, 12054), (194, 12126), (195, 12132), (201, 12180), (210, 12231), (215, 12270), (216, 12273), (222, 12303), (226, 12330), (230, 12357), (233, 12402), (236, 12414), (244, 12501), (251, 12525), (259, 12573), (281, 12624), (286, 12690), (291, 12798), (293, 12822), (294, 12828), (296, 12843), (297, 12849), (299, 12858), (300, 12894), (302, 12957), (303, 12960), (305, 12993), (306, 13032), (307, 13053), (311, 13233),

Gene: Moonbeam\_15 Start: 10033, Stop: 13518, Start Num: 2

Candidate Starts for Moonbeam\_15:



(Start: 2 @10033 has 184 MA's), (5, 10084), (6, 10111), (10, 10213), (11, 10261), (12, 10285), (28, 10339), (29, 10345), (33, 10408), (34, 10423), (43, 10540), (47, 10573), (49, 10591), (51, 10615), (54, 10660), (56, 10678), (62, 10762), (65, 10795), (66, 10798), (70, 10837), (73, 10879), (75, 10909), (77, 10915), (79, 10945), (81, 10981), (82, 10990), (83, 11002), (85, 11035), (87, 11077), (90, 11098), (92, 11119), (94, 11161), (96, 11194), (99, 11236), (100, 11248), (104, 11293), (106, 11305), (116, 11356), (117, 11365), (124, 11398), (125, 11401), (126, 11407), (130, 11419), (134, 11482), (143, 11593), (144, 11596), (145, 11605), (157, 11770), (160, 11830), (161, 11845), (162, 11848), (163, 11866), (164, 11887), (165, 11905), (169, 11977), (171, 12031), (172, 12067), (173, 12073), (176, 12139), (180, 12190), (182, 12223), (183, 12247), (184, 12250), (185, 12259), (187, 12304), (188, 12307), (189, 12313), (191, 12331), (194, 12400), (195, 12406), (210, 12505), (226, 12604), (229, 12622), (233, 12676), (236, 12688), (244, 12775), (251, 12799), (271, 12844), (276, 12874), (281, 12895), (286, 12961), (291, 13069), (293, 13093), (294, 13099), (296, 13114), (299, 13129), (300, 13165), (302, 13228), (303, 13231), (304, 13243), (305, 13264), (307, 13324), (311, 13504),

Gene: Mova\_15 Start: 9325, Stop: 12876, Start Num: 1

Candidate Starts for Mova\_15:

(Start: 1 @9325 has 37 MA's), (Start: 2 @9346 has 184 MA's), (3, 9358), (5, 9397), (6, 9424), (10, 9526), (12, 9598), (26, 9640), (27, 9643), (28, 9652), (29, 9658), (33, 9721), (34, 9736), (43, 9853), (47, 9886), (51, 9928), (54, 9973), (56, 9991), (58, 10003), (62, 10075), (65, 10108), (66, 10111), (70, 10150), (73, 10192), (75, 10222), (77, 10228), (79, 10258), (81, 10294), (82, 10303), (83, 10315), (85, 10348), (86, 10363), (90, 10411), (91, 10423), (97, 10528), (98, 10537), (102, 10573), (103, 10585), (106, 10618), (109, 10639), (121, 10714), (125, 10732), (135, 10834), (151, 11038), (153, 11050), (157, 11119), (159, 11143), (161, 11200), (162, 11203), (163, 11221), (164, 11242), (165, 11260), (169, 11332), (171, 11386), (172, 11422), (173, 11428), (176, 11494), (180, 11545), (182, 11578), (183, 11602), (184, 11605), (185, 11614), (187, 11659), (188, 11662), (189, 11668), (191, 11686), (194, 11755), (195, 11761), (210, 11860), (212, 11881), (226, 11959), (229, 11977), (233, 12031), (236, 12043), (244, 12130), (251, 12154), (259, 12202), (278, 12232), (281, 12253), (286, 12319), (291, 12427), (293, 12451), (294, 12457), (296, 12472), (299, 12487), (300, 12523), (302, 12586), (303, 12589), (304, 12601), (305, 12622), (307, 12682), (311, 12862),

Gene: Mozy\_15 Start: 9379, Stop: 12909, Start Num: 2

Candidate Starts for Mozy\_15:

(Start: 1 @9358 has 37 MA's), (Start: 2 @9379 has 184 MA's), (3, 9391), (5, 9430), (6, 9457), (8, 9514), (10, 9559), (12, 9631), (28, 9685), (29, 9691), (32, 9715), (33, 9754), (34, 9769), (43, 9886), (47, 9919), (51, 9961), (54, 10006), (56, 10024), (58, 10036), (62, 10108), (65, 10141), (66, 10144), (70, 10183), (73, 10225), (75, 10255), (77, 10261), (79, 10291), (81, 10327), (82, 10336), (83, 10348), (87, 10423), (90, 10444), (96, 10540), (97, 10561), (98, 10570), (101, 10603), (102, 10606), (103, 10618), (109, 10672), (112, 10684), (119, 10738), (121, 10747), (128, 10777), (135, 10867), (148, 11011), (151, 11071), (153, 11083), (157, 11152), (159, 11176), (160, 11218), (161, 11233), (162, 11236), (163, 11254), (164, 11275), (165, 11293), (171, 11419), (172, 11455), (173, 11461), (176, 11527), (180, 11578), (182, 11611), (183, 11635), (184, 11638), (185, 11647), (187, 11692), (188, 11695), (189, 11701), (191, 11719), (195, 11794), (210, 11893), (216, 11935), (222, 11965), (230, 12019), (232, 12043), (233, 12064), (251, 12187), (259, 12235), (278, 12265), (281, 12286), (286, 12352), (291, 12460), (293, 12484), (294, 12490), (296, 12505), (299, 12520), (300, 12556), (302, 12619), (303, 12622), (304, 12634), (305, 12655), (307, 12715), (311, 12895),

Gene: Ms6\_14 Start: 9532, Stop: 13020, Start Num: 2

Candidate Starts for Ms6\_14:

(Start: 2 @9532 has 184 MA's), (3, 9544), (5, 9583), (6, 9610), (8, 9667), (10, 9712), (12, 9784), (26, 9826), (27, 9829), (28, 9838), (29, 9844), (33, 9907), (34, 9922), (43, 10039), (47, 10072), (51, 10114), (54, 10159), (56, 10177), (58, 10189), (62, 10261), (65, 10294), (66, 10297), (70, 10336), (73, 10378), (75, 10408), (77, 10414), (79, 10444), (81, 10480), (82, 10489), (83, 10501), (85, 10534), (90, 10597), (94, 10660), (99, 10735), (104, 10792), (106, 10804), (112, 10825), (116, 10855), (124, 10897), (125,

10900), (126, 10906), (130, 10918), (144, 11095), (145, 11104), (155, 11251), (157, 11266), (159, 11290), (161, 11341), (162, 11344), (164, 11383), (165, 11401), (171, 11527), (172, 11563), (173, 11569), (176, 11635), (180, 11686), (182, 11719), (183, 11743), (184, 11746), (185, 11755), (187, 11800), (188, 11803), (189, 11809), (191, 11827), (194, 11896), (195, 11902), (210, 12001), (226, 12100), (229, 12118), (233, 12172), (244, 12274), (251, 12298), (271, 12346), (276, 12376), (281, 12397), (286, 12463), (291, 12571), (293, 12595), (294, 12601), (296, 12616), (299, 12631), (300, 12667), (302, 12730), (303, 12733), (304, 12745), (305, 12766), (307, 12826), (311, 13006),

Gene: MulchExplorer\_16 Start: 9345, Stop: 12830, Start Num: 2

Candidate Starts for MulchExplorer\_16:

(Start: 1 @9324 has 37 MA's), (Start: 2 @9345 has 184 MA's), (3, 9357), (5, 9396), (6, 9423), (10, 9525), (11, 9573), (12, 9597), (26, 9639), (27, 9642), (28, 9651), (29, 9657), (33, 9720), (34, 9735), (43, 9852), (47, 9885), (49, 9903), (51, 9927), (54, 9972), (56, 9990), (58, 10002), (61, 10059), (62, 10074), (63, 10092), (65, 10107), (66, 10110), (70, 10149), (72, 10167), (73, 10191), (75, 10221), (77, 10227), (79, 10257), (81, 10293), (82, 10302), (83, 10314), (85, 10347), (86, 10362), (87, 10389), (90, 10410), (91, 10422), (92, 10431), (94, 10473), (96, 10506), (99, 10548), (100, 10560), (104, 10605), (106, 10617), (116, 10668), (117, 10677), (124, 10710), (125, 10713), (126, 10719), (130, 10731), (134, 10794), (137, 10842), (143, 10905), (144, 10908), (145, 10917), (157, 11082), (158, 11091), (160, 11142), (161, 11157), (162, 11160), (163, 11178), (164, 11199), (165, 11217), (169, 11289), (171, 11343), (172, 11379), (173, 11385), (174, 11418), (176, 11451), (180, 11502), (182, 11535), (183, 11559), (184, 11562), (185, 11571), (187, 11616), (188, 11619), (191, 11643), (194, 11712), (195, 11718), (222, 11889), (230, 11943), (233, 11988), (251, 12111), (271, 12159), (276, 12189), (281, 12210), (286, 12276), (288, 12300), (291, 12384), (293, 12408), (294, 12414), (296, 12429), (297, 12435), (299, 12444), (300, 12480), (302, 12543), (303, 12546), (305, 12579), (306, 12618), (307, 12639), (311, 12816),

Gene: MulchSalad\_14 Start: 9503, Stop: 12931, Start Num: 2

Candidate Starts for MulchSalad\_14:

(Start: 1 @9482 has 37 MA's), (Start: 2 @9503 has 184 MA's), (3, 9515), (5, 9554), (6, 9581), (8, 9638), (10, 9683), (12, 9755), (26, 9797), (28, 9809), (29, 9815), (33, 9878), (34, 9893), (40, 9995), (46, 10061), (47, 10064), (48, 10073), (52, 10124), (53, 10139), (57, 10172), (59, 10202), (60, 10214), (64, 10268), (67, 10289), (68, 10304), (71, 10325), (73, 10355), (74, 10358), (82, 10466), (85, 10511), (91, 10577), (92, 10586), (98, 10691), (99, 10703), (102, 10727), (108, 10784), (111, 10802), (122, 10877), (127, 10898), (149, 11075), (160, 11240), (161, 11255), (162, 11258), (163, 11276), (164, 11297), (165, 11315), (171, 11441), (172, 11477), (173, 11483), (176, 11549), (180, 11600), (182, 11633), (183, 11657), (184, 11660), (185, 11669), (187, 11714), (188, 11717), (191, 11741), (194, 11807), (195, 11813), (210, 11912), (212, 11933), (226, 12011), (229, 12029), (232, 12062), (233, 12083), (244, 12185), (251, 12209), (271, 12257), (276, 12287), (281, 12308), (286, 12374), (291, 12482), (293, 12506), (294, 12512), (296, 12527), (299, 12542), (300, 12578), (302, 12641), (303, 12644), (305, 12677), (307, 12737), (311, 12917),

Gene: Mutaforma13\_14 Start: 9530, Stop: 13057, Start Num: 2

Candidate Starts for Mutaforma13\_14:

(Start: 1 @9509 has 37 MA's), (Start: 2 @9530 has 184 MA's), (3, 9542), (5, 9581), (6, 9608), (8, 9665), (10, 9710), (12, 9782), (28, 9836), (29, 9842), (33, 9905), (34, 9920), (43, 10037), (47, 10070), (51, 10112), (54, 10157), (56, 10175), (58, 10187), (62, 10259), (65, 10292), (66, 10295), (70, 10334), (73, 10376), (75, 10406), (77, 10412), (79, 10442), (81, 10478), (82, 10487), (83, 10499), (90, 10595), (96, 10691), (98, 10721), (101, 10754), (102, 10757), (103, 10769), (109, 10823), (112, 10835), (119, 10889), (121, 10898), (135, 11018), (148, 11162), (151, 11222), (153, 11234), (157, 11303), (159, 11327), (161, 11381), (162, 11384), (163, 11402), (164, 11423), (165, 11441), (171, 11567), (172, 11603), (173, 11609), (176, 11675), (180, 11726), (182, 11759), (183, 11783), (184, 11786), (185, 11795), (187, 11840), (188, 11843), (189, 11849), (191, 11867), (194, 11936), (195, 11942), (210, 12041), (215, 12080), (216, 12083), (222, 12113), (226, 12140), (233, 12212), (236, 12224), (244,

12311), (251, 12335), (259, 12383), (278, 12413), (281, 12434), (286, 12500), (291, 12608), (293, 12632), (294, 12638), (296, 12653), (299, 12668), (300, 12704), (302, 12767), (303, 12770), (304, 12782), (305, 12803), (307, 12863), (311, 13043),

Gene: NewHope4\_14 Start: 9507, Stop: 13034, Start Num: 2

Candidate Starts for NewHope4\_14:

(Start: 2 @9507 has 184 MA's), (3, 9519), (5, 9558), (6, 9585), (8, 9642), (10, 9687), (12, 9759), (28, 9813), (29, 9819), (33, 9882), (34, 9897), (43, 10014), (47, 10047), (51, 10089), (54, 10134), (56, 10152), (58, 10164), (62, 10236), (65, 10269), (66, 10272), (70, 10311), (73, 10353), (75, 10383), (77, 10389), (79, 10419), (81, 10455), (82, 10464), (83, 10476), (90, 10572), (96, 10668), (97, 10689), (98, 10698), (101, 10731), (102, 10734), (103, 10746), (109, 10800), (112, 10812), (119, 10866), (121, 10875), (135, 10995), (148, 11139), (151, 11199), (153, 11211), (157, 11280), (159, 11304), (161, 11358), (162, 11361), (164, 11400), (165, 11418), (169, 11490), (171, 11544), (172, 11580), (173, 11586), (176, 11652), (180, 11703), (182, 11736), (183, 11760), (184, 11763), (185, 11772), (187, 11817), (188, 11820), (189, 11826), (191, 11844), (194, 11913), (195, 11919), (210, 12018), (215, 12057), (216, 12060), (222, 12090), (226, 12117), (230, 12144), (233, 12189), (236, 12201), (244, 12288), (251, 12312), (259, 12360), (278, 12390), (281, 12411), (286, 12477), (291, 12585), (293, 12609), (294, 12615), (296, 12630), (299, 12645), (300, 12681), (302, 12744), (303, 12747), (305, 12780), (307, 12840), (311, 13020),

Gene: Nimbo\_14 Start: 9465, Stop: 13013, Start Num: 1

Candidate Starts for Nimbo\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751), (187, 11796), (188, 11799), (189, 11805), (191, 11823), (194, 11892), (195, 11898), (210, 11997), (215, 12036), (216, 12039), (222, 12069), (230, 12123), (233, 12168), (251, 12291), (259, 12339), (278, 12369), (281, 12390), (286, 12456), (291, 12564), (293, 12588), (294, 12594), (296, 12609), (299, 12624), (300, 12660), (302, 12723), (303, 12726), (304, 12738), (305, 12759), (306, 12798), (307, 12819), (311, 12999),

Gene: Nitzel\_15 Start: 10152, Stop: 13793, Start Num: 2

Candidate Starts for Nitzel\_15:

(Start: 1 @10131 has 37 MA's), (Start: 2 @10152 has 184 MA's), (3, 10164), (5, 10203), (6, 10230), (8, 10287), (10, 10332), (12, 10404), (26, 10446), (28, 10458), (29, 10464), (32, 10488), (33, 10527), (34, 10542), (43, 10659), (47, 10692), (49, 10710), (51, 10734), (54, 10779), (56, 10797), (58, 10809), (62, 10881), (65, 10914), (66, 10917), (70, 10956), (73, 10998), (75, 11028), (77, 11034), (79, 11064), (81, 11100), (82, 11109), (83, 11121), (85, 11154), (86, 11169), (90, 11217), (97, 11334), (98, 11343), (101, 11376), (102, 11379), (106, 11424), (109, 11445), (112, 11457), (121, 11520), (122, 11526), (125, 11538), (135, 11640), (151, 11844), (153, 11856), (157, 11925), (158, 11934), (160, 11985), (161, 12000), (162, 12003), (163, 12021), (164, 12042), (165, 12060), (169, 12132), (171, 12186), (172, 12222), (173, 12228), (176, 12294), (180, 12345), (182, 12378), (183, 12402), (184, 12405), (185, 12414), (187, 12459), (188, 12462), (189, 12468), (191, 12486), (194, 12555), (195, 12561), (203, 12627), (204, 12630), (205, 12633), (207, 12651), (209, 12663), (216, 12711), (218, 12720), (223, 12753), (228, 12780), (235, 12843), (241, 12894), (247, 12948), (252, 12963), (256, 13017), (258, 13026), (261, 13032), (270, 13068), (274, 13095), (281, 13173), (286, 13239), (291, 13347), (293, 13371), (294, 13377), (296, 13392), (299, 13407), (300, 13443), (302, 13506), (303, 13509), (305,

13542), (306, 13581), (307, 13602), (310, 13707), (311, 13779),

Gene: Nivrat\_14 Start: 9491, Stop: 13018, Start Num: 2

Candidate Starts for Nivrat\_14:

(Start: 1 @9470 has 37 MA's), (Start: 2 @9491 has 184 MA's), (3, 9503), (5, 9542), (6, 9569), (10, 9671), (11, 9719), (12, 9743), (28, 9797), (29, 9803), (33, 9866), (34, 9881), (43, 9998), (47, 10031), (49, 10049), (51, 10073), (54, 10118), (56, 10136), (58, 10148), (62, 10220), (65, 10253), (66, 10256), (70, 10295), (73, 10337), (75, 10367), (77, 10373), (79, 10403), (81, 10439), (82, 10448), (83, 10460), (85, 10493), (86, 10508), (87, 10535), (90, 10556), (91, 10568), (92, 10577), (97, 10673), (98, 10682), (102, 10718), (103, 10730), (106, 10763), (109, 10784), (121, 10859), (125, 10877), (135, 10979), (140, 11054), (151, 11183), (153, 11195), (157, 11264), (160, 11327), (161, 11342), (162, 11345), (163, 11363), (164, 11384), (165, 11402), (169, 11474), (171, 11528), (172, 11564), (173, 11570), (176, 11636), (180, 11687), (182, 11720), (183, 11744), (184, 11747), (185, 11756), (187, 11801), (188, 11804), (189, 11810), (191, 11828), (194, 11897), (195, 11903), (210, 12002), (215, 12041), (216, 12044), (222, 12074), (230, 12128), (233, 12173), (251, 12296), (259, 12344), (278, 12374), (281, 12395), (286, 12461), (288, 12485), (291, 12569), (293, 12593), (294, 12599), (296, 12614), (299, 12629), (300, 12665), (302, 12728), (303, 12731), (304, 12743), (305, 12764), (307, 12824), (311, 13004),

Gene: NormanBulbieJr\_14 Start: 9477, Stop: 13004, Start Num: 2

Candidate Starts for NormanBulbieJr\_14:

(Start: 1 @9456 has 37 MA's), (Start: 2 @9477 has 184 MA's), (3, 9489), (5, 9528), (6, 9555), (8, 9612), (10, 9657), (12, 9729), (29, 9789), (33, 9852), (34, 9867), (43, 9984), (47, 10017), (49, 10035), (51, 10059), (54, 10104), (56, 10122), (58, 10134), (62, 10206), (65, 10239), (66, 10242), (70, 10281), (73, 10323), (75, 10353), (77, 10359), (79, 10389), (81, 10425), (82, 10434), (83, 10446), (85, 10479), (86, 10494), (87, 10521), (90, 10542), (91, 10554), (92, 10563), (97, 10659), (98, 10668), (102, 10704), (103, 10716), (106, 10749), (109, 10770), (121, 10845), (125, 10863), (135, 10965), (140, 11040), (151, 11169), (153, 11181), (157, 11250), (160, 11313), (161, 11328), (162, 11331), (163, 11349), (164, 11370), (165, 11388), (169, 11460), (171, 11514), (172, 11550), (173, 11556), (176, 11622), (180, 11673), (182, 11706), (183, 11730), (184, 11733), (185, 11742), (187, 11787), (188, 11790), (189, 11796), (191, 11814), (194, 11883), (195, 11889), (210, 11988), (215, 12027), (216, 12030), (222, 12060), (230, 12114), (233, 12159), (251, 12282), (259, 12330), (278, 12360), (281, 12381), (286, 12447), (288, 12471), (291, 12555), (293, 12579), (294, 12585), (296, 12600), (299, 12615), (300, 12651), (302, 12714), (303, 12717), (304, 12729), (305, 12750), (307, 12810), (311, 12990),

Gene: Ochi17\_14 Start: 9489, Stop: 13247, Start Num: 2

Candidate Starts for Ochi17\_14:

(Start: 1 @9468 has 37 MA's), (Start: 2 @9489 has 184 MA's), (3, 9501), (5, 9540), (6, 9567), (10, 9669), (14, 9786), (16, 9834), (17, 9843), (18, 9888), (19, 9921), (20, 9930), (22, 9945), (23, 9954), (26, 10014), (27, 10017), (28, 10026), (29, 10032), (33, 10095), (34, 10110), (43, 10227), (47, 10260), (49, 10278), (51, 10302), (54, 10347), (56, 10365), (58, 10377), (61, 10434), (62, 10449), (65, 10482), (66, 10485), (70, 10524), (73, 10566), (75, 10596), (77, 10602), (79, 10632), (81, 10668), (82, 10677), (83, 10689), (85, 10722), (86, 10737), (90, 10785), (92, 10806), (97, 10902), (98, 10911), (102, 10947), (103, 10959), (106, 10992), (109, 11013), (112, 11025), (121, 11088), (122, 11094), (125, 11106), (135, 11208), (140, 11283), (151, 11412), (153, 11424), (157, 11493), (158, 11502), (160, 11553), (161, 11568), (162, 11571), (163, 11589), (164, 11610), (165, 11628), (169, 11700), (171, 11754), (172, 11790), (173, 11796), (174, 11829), (176, 11862), (180, 11913), (182, 11946), (183, 11970), (184, 11973), (185, 11982), (187, 12027), (188, 12030), (191, 12054), (194, 12126), (195, 12132), (201, 12180), (210, 12231), (215, 12270), (216, 12273), (222, 12303), (226, 12330), (230, 12357), (233, 12402), (236, 12414), (244, 12501), (251, 12525), (259, 12573), (281, 12624), (286, 12690), (291, 12798), (293, 12822), (294, 12828), (296, 12843), (297, 12849), (299, 12858), (300, 12894), (302, 12957), (303, 12960), (305, 12993), (306, 13032), (307, 13053), (311, 13233),

Gene: OfUltron\_14 Start: 9489, Stop: 13247, Start Num: 2

Candidate Starts for OfUltron\_14:

(Start: 1 @9468 has 37 MA's), (Start: 2 @9489 has 184 MA's), (3, 9501), (5, 9540), (6, 9567), (10, 9669), (14, 9786), (16, 9834), (17, 9843), (18, 9888), (19, 9921), (20, 9930), (22, 9945), (23, 9954), (26, 10014), (27, 10017), (28, 10026), (29, 10032), (33, 10095), (34, 10110), (43, 10227), (47, 10260), (49, 10278), (51, 10302), (54, 10347), (56, 10365), (58, 10377), (61, 10434), (62, 10449), (65, 10482), (66, 10485), (70, 10524), (73, 10566), (75, 10596), (77, 10602), (79, 10632), (81, 10668), (82, 10677), (83, 10689), (85, 10722), (86, 10737), (90, 10785), (92, 10806), (97, 10902), (98, 10911), (102, 10947), (103, 10959), (106, 10992), (109, 11013), (112, 11025), (121, 11088), (122, 11094), (125, 11106), (135, 11208), (140, 11283), (151, 11412), (153, 11424), (157, 11493), (158, 11502), (160, 11553), (161, 11568), (162, 11571), (163, 11589), (164, 11610), (165, 11628), (169, 11700), (171, 11754), (172, 11790), (173, 11796), (174, 11829), (176, 11862), (180, 11913), (182, 11946), (183, 11970), (184, 11973), (185, 11982), (187, 12027), (188, 12030), (191, 12054), (194, 12126), (195, 12132), (201, 12180), (210, 12231), (215, 12270), (216, 12273), (222, 12303), (226, 12330), (230, 12357), (233, 12402), (236, 12414), (244, 12501), (251, 12525), (259, 12573), (281, 12624), (286, 12690), (291, 12798), (293, 12822), (294, 12828), (296, 12843), (297, 12849), (299, 12858), (300, 12894), (302, 12957), (303, 12960), (305, 12993), (306, 13032), (307, 13053), (311, 13233),

Gene: Ogopogo\_17 Start: 9745, Stop: 13269, Start Num: 2

Candidate Starts for Ogopogo\_17:

(Start: 1 @9724 has 37 MA's), (Start: 2 @9745 has 184 MA's), (3, 9757), (5, 9796), (6, 9823), (10, 9925), (12, 9997), (26, 10039), (28, 10051), (29, 10057), (33, 10120), (34, 10135), (43, 10252), (47, 10285), (49, 10303), (51, 10327), (54, 10372), (56, 10390), (58, 10402), (61, 10459), (62, 10474), (63, 10492), (65, 10507), (66, 10510), (70, 10549), (73, 10591), (75, 10621), (77, 10627), (79, 10657), (81, 10693), (82, 10702), (83, 10714), (85, 10747), (86, 10762), (87, 10789), (90, 10810), (91, 10822), (92, 10831), (97, 10927), (98, 10936), (101, 10969), (102, 10972), (103, 10984), (106, 11017), (109, 11038), (112, 11050), (121, 11113), (122, 11119), (125, 11131), (135, 11233), (151, 11437), (153, 11449), (157, 11515), (158, 11524), (160, 11578), (161, 11593), (162, 11596), (163, 11614), (164, 11635), (165, 11653), (169, 11725), (171, 11779), (172, 11815), (173, 11821), (174, 11854), (176, 11887), (178, 11908), (180, 11938), (182, 11971), (183, 11995), (184, 11998), (185, 12007), (187, 12052), (188, 12055), (191, 12079), (194, 12148), (195, 12154), (212, 12274), (222, 12325), (226, 12352), (229, 12370), (233, 12424), (244, 12526), (251, 12550), (259, 12598), (281, 12649), (286, 12715), (291, 12823), (293, 12847), (294, 12853), (296, 12868), (297, 12874), (299, 12883), (300, 12919), (303, 12985), (306, 13057), (307, 13078), (311, 13255),

Gene: Oksu\_15 Start: 9352, Stop: 13077, Start Num: 2

Candidate Starts for Oksu\_15:

(Start: 1 @9331 has 37 MA's), (Start: 2 @9352 has 184 MA's), (3, 9364), (5, 9403), (6, 9430), (10, 9532), (14, 9649), (16, 9697), (17, 9706), (18, 9751), (19, 9784), (20, 9793), (22, 9808), (23, 9817), (26, 9877), (27, 9880), (28, 9889), (29, 9895), (33, 9958), (34, 9973), (43, 10090), (47, 10123), (49, 10141), (51, 10165), (54, 10210), (56, 10228), (58, 10240), (61, 10297), (62, 10312), (63, 10330), (65, 10345), (66, 10348), (70, 10387), (73, 10429), (75, 10459), (77, 10465), (79, 10495), (81, 10531), (82, 10540), (83, 10552), (85, 10585), (86, 10600), (87, 10627), (90, 10648), (92, 10669), (94, 10711), (96, 10744), (99, 10786), (100, 10798), (104, 10843), (106, 10855), (116, 10906), (117, 10915), (125, 10951), (126, 10957), (130, 10969), (134, 11032), (137, 11080), (143, 11143), (144, 11146), (145, 11155), (157, 11320), (160, 11383), (161, 11398), (162, 11401), (163, 11419), (164, 11440), (165, 11458), (169, 11530), (171, 11584), (172, 11620), (173, 11626), (174, 11659), (176, 11692), (180, 11743), (182, 11776), (183, 11800), (184, 11803), (185, 11812), (187, 11857), (188, 11860), (191, 11884), (194, 11956), (195, 11962), (202, 12010), (210, 12061), (215, 12100), (216, 12103), (222, 12133), (226, 12160), (230, 12187), (233, 12232), (236, 12244), (244, 12331), (251, 12355), (271, 12403), (281, 12454), (286, 12520), (291, 12628), (293, 12652), (294, 12658), (296, 12673), (297, 12679), (299, 12688), (300, 12724), (302, 12787), (303, 12790), (305, 12823), (306, 12862), (307, 12883), (311, 13063),

Gene: OldBen\_14 Start: 9486, Stop: 13010, Start Num: 2

Candidate Starts for OldBen\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751), (187, 11796), (188, 11799), (189, 11805), (191, 11823), (194, 11892), (195, 11898), (210, 11997), (215, 12036), (216, 12039), (222, 12069), (226, 12096), (230, 12123), (233, 12168), (251, 12291), (259, 12336), (278, 12366), (281, 12387), (286, 12453), (291, 12561), (293, 12585), (294, 12591), (296, 12606), (299, 12621), (300, 12657), (302, 12720), (303, 12723), (304, 12735), (305, 12756), (307, 12816), (311, 12996),

Gene: OlympiaSaint\_14 Start: 9510, Stop: 13205, Start Num: 2

Candidate Starts for OlympiaSaint\_14:

(Start: 1 @9489 has 37 MA's), (Start: 2 @9510 has 184 MA's), (3, 9522), (5, 9561), (6, 9588), (10, 9690), (12, 9762), (26, 9804), (27, 9807), (28, 9816), (29, 9822), (33, 9885), (34, 9900), (43, 10017), (47, 10050), (49, 10068), (51, 10092), (54, 10137), (56, 10155), (58, 10167), (61, 10224), (62, 10239), (63, 10257), (65, 10272), (66, 10275), (70, 10314), (73, 10356), (75, 10386), (77, 10392), (79, 10422), (81, 10458), (82, 10467), (83, 10479), (85, 10512), (86, 10527), (87, 10554), (90, 10575), (91, 10587), (92, 10596), (97, 10692), (98, 10701), (101, 10734), (102, 10737), (103, 10749), (106, 10782), (109, 10803), (112, 10815), (121, 10878), (122, 10884), (125, 10896), (135, 10998), (151, 11202), (153, 11214), (157, 11280), (158, 11289), (160, 11340), (161, 11355), (162, 11358), (163, 11376), (164, 11397), (165, 11415), (169, 11487), (171, 11541), (172, 11577), (173, 11583), (174, 11616), (176, 11649), (178, 11670), (180, 11700), (182, 11733), (183, 11757), (184, 11760), (185, 11769), (187, 11814), (188, 11817), (191, 11841), (196, 11934), (213, 12081), (217, 12102), (233, 12243), (238, 12267), (240, 12294), (267, 12474), (271, 12504), (279, 12576), (287, 12663), (291, 12756), (293, 12780), (294, 12786), (296, 12801), (299, 12816), (300, 12852), (302, 12915), (303, 12918), (305, 12951), (306, 12990), (307, 13011), (311, 13191),

Gene: Ovechkin\_14 Start: 9532, Stop: 13056, Start Num: 2

Candidate Starts for Ovechkin\_14:

(Start: 2 @9532 has 184 MA's), (3, 9544), (5, 9583), (6, 9610), (8, 9667), (10, 9712), (12, 9784), (26, 9826), (27, 9829), (28, 9838), (29, 9844), (33, 9907), (34, 9922), (43, 10039), (47, 10072), (51, 10114), (54, 10159), (56, 10177), (58, 10189), (62, 10261), (65, 10294), (66, 10297), (70, 10336), (73, 10378), (75, 10408), (77, 10414), (79, 10444), (81, 10480), (82, 10489), (83, 10501), (90, 10597), (96, 10693), (98, 10723), (101, 10756), (102, 10759), (103, 10771), (109, 10825), (112, 10837), (119, 10891), (121, 10900), (135, 11020), (148, 11164), (151, 11224), (153, 11236), (157, 11305), (159, 11329), (161, 11383), (162, 11386), (164, 11425), (165, 11443), (171, 11569), (172, 11605), (173, 11611), (176, 11677), (180, 11728), (182, 11761), (183, 11785), (184, 11788), (185, 11797), (187, 11842), (188, 11845), (189, 11851), (191, 11869), (194, 11938), (195, 11944), (210, 12043), (215, 12082), (216, 12085), (222, 12115), (226, 12142), (233, 12214), (236, 12226), (244, 12313), (251, 12337), (259, 12382), (278, 12412), (281, 12433), (286, 12499), (291, 12607), (293, 12631), (294, 12637), (296, 12652), (299, 12667), (300, 12703), (302, 12766), (303, 12769), (304, 12781), (305, 12802), (307, 12862), (311, 13042),

Gene: OwlsT2W\_16 Start: 9891, Stop: 13379, Start Num: 2

Candidate Starts for OwlsT2W\_16:

(Start: 2 @9891 has 184 MA's), (5, 9942), (6, 9969), (8, 10026), (10, 10071), (12, 10143), (28, 10197), (29, 10203), (33, 10266), (34, 10281), (43, 10398), (47, 10431), (51, 10473), (54, 10518), (56, 10536), (58, 10548), (62, 10620), (65, 10653), (66, 10656), (70, 10695), (73, 10737), (75, 10767), (77, 10773), (79, 10803), (81, 10839), (82, 10848), (83, 10860), (85, 10893), (86, 10908), (90, 10956), (94, 11019), (99, 11094), (104, 11151), (106, 11163), (112, 11184), (116, 11214), (124, 11256), (125, 11259), (126, 11265), (130, 11277), (144, 11454), (145, 11463), (155, 11610), (157, 11625), (159, 11649), (161, 11700), (162, 11703), (163, 11721), (164, 11742), (165, 11760), (169, 11832), (171, 11886), (172, 11922), (173, 11928), (176, 11994), (180, 12045), (182, 12078), (183, 12102), (184, 12105), (185, 12114), (187, 12159), (188, 12162), (189, 12168), (191, 12186), (194, 12255), (195, 12261), (210, 12360), (226, 12459), (229, 12477), (233, 12531), (244, 12633), (251, 12657), (271, 12705), (276, 12735), (281, 12756), (286, 12822), (291, 12930), (293, 12954), (294, 12960), (296, 12975), (299, 12990), (300, 13026), (302, 13089), (303, 13092), (304, 13104), (305, 13125), (307, 13185), (311, 13365),

Gene: PHappiness\_14 Start: 9443, Stop: 12991, Start Num: 1

Candidate Starts for PHappiness\_14:

(Start: 1 @9443 has 37 MA's), (Start: 2 @9464 has 184 MA's), (3, 9476), (5, 9515), (6, 9542), (10, 9644), (11, 9692), (12, 9716), (26, 9758), (28, 9770), (29, 9776), (33, 9839), (34, 9854), (43, 9971), (47, 10004), (51, 10046), (54, 10091), (56, 10109), (58, 10121), (62, 10193), (65, 10226), (66, 10229), (70, 10268), (73, 10310), (75, 10340), (77, 10346), (79, 10376), (81, 10412), (82, 10421), (83, 10433), (85, 10466), (90, 10529), (92, 10550), (97, 10646), (98, 10655), (102, 10691), (103, 10703), (106, 10736), (109, 10757), (119, 10823), (121, 10832), (125, 10850), (135, 10952), (140, 11027), (148, 11096), (151, 11156), (153, 11168), (157, 11237), (158, 11246), (160, 11300), (161, 11315), (162, 11318), (163, 11336), (164, 11357), (165, 11375), (169, 11447), (171, 11501), (172, 11537), (173, 11543), (174, 11576), (176, 11609), (180, 11660), (182, 11693), (183, 11717), (184, 11720), (185, 11729), (187, 11774), (188, 11777), (189, 11783), (191, 11801), (194, 11870), (195, 11876), (210, 11975), (215, 12014), (216, 12017), (222, 12047), (230, 12101), (233, 12146), (251, 12269), (259, 12317), (278, 12347), (281, 12368), (286, 12434), (291, 12542), (293, 12566), (294, 12572), (296, 12587), (299, 12602), (300, 12638), (302, 12701), (303, 12704), (304, 12716), (305, 12737), (306, 12776), (307, 12797), (311, 12977),

Gene: PMC\_14 Start: 9482, Stop: 12994, Start Num: 1

Candidate Starts for PMC\_14:

(Start: 1 @9482 has 37 MA's), (Start: 2 @9503 has 184 MA's), (3, 9515), (5, 9554), (6, 9581), (10, 9683), (11, 9731), (12, 9755), (26, 9797), (28, 9809), (29, 9815), (33, 9878), (34, 9893), (43, 10010), (47, 10043), (49, 10061), (51, 10085), (54, 10130), (56, 10148), (58, 10160), (61, 10217), (62, 10232), (63, 10250), (65, 10265), (66, 10268), (70, 10307), (73, 10349), (75, 10379), (77, 10385), (79, 10415), (81, 10451), (82, 10460), (83, 10472), (85, 10505), (87, 10547), (90, 10568), (91, 10580), (92, 10589), (94, 10631), (96, 10664), (99, 10706), (100, 10718), (104, 10763), (106, 10775), (116, 10826), (117, 10835), (125, 10871), (126, 10877), (130, 10889), (134, 10952), (137, 11000), (143, 11063), (144, 11066), (145, 11075), (157, 11240), (160, 11303), (161, 11318), (162, 11321), (163, 11339), (164, 11360), (165, 11378), (169, 11450), (171, 11504), (172, 11540), (173, 11546), (174, 11579), (176, 11612), (180, 11663), (182, 11696), (183, 11720), (184, 11723), (185, 11732), (187, 11777), (188, 11780), (191, 11804), (194, 11873), (195, 11879), (210, 11978), (215, 12017), (216, 12020), (222, 12050), (226, 12077), (230, 12104), (233, 12149), (251, 12272), (271, 12320), (276, 12350), (281, 12371), (286, 12437), (291, 12545), (293, 12569), (294, 12575), (296, 12590), (299, 12605), (300, 12641), (302, 12704), (303, 12707), (304, 12719), (305, 12740), (307, 12800), (311, 12980),

Gene: Pacc40\_14 Start: 9486, Stop: 13181, Start Num: 2

Candidate Starts for Pacc40\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70,

10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751), (187, 11796), (188, 11799), (191, 11823), (196, 11913), (213, 12060), (217, 12081), (233, 12222), (238, 12246), (240, 12273), (267, 12453), (271, 12483), (279, 12555), (287, 12642), (291, 12735), (293, 12759), (294, 12765), (296, 12780), (297, 12786), (299, 12795), (300, 12831), (302, 12894), (303, 12897), (305, 12930), (306, 12969), (307, 12990), (311, 13167),

Gene: Phalconet\_14 Start: 9534, Stop: 13061, Start Num: 2

Candidate Starts for Phalconet\_14:

(Start: 2 @9534 has 184 MA's), (3, 9546), (5, 9585), (6, 9612), (8, 9669), (10, 9714), (12, 9786), (26, 9828), (27, 9831), (28, 9840), (29, 9846), (32, 9870), (33, 9909), (34, 9924), (43, 10041), (47, 10074), (51, 10116), (54, 10161), (56, 10179), (58, 10191), (62, 10263), (65, 10296), (66, 10299), (70, 10338), (73, 10380), (75, 10410), (77, 10416), (79, 10446), (81, 10482), (82, 10491), (83, 10503), (90, 10599), (96, 10695), (98, 10725), (101, 10758), (102, 10761), (103, 10773), (109, 10827), (112, 10839), (119, 10893), (121, 10902), (135, 11022), (148, 11166), (151, 11226), (153, 11238), (157, 11307), (159, 11331), (161, 11385), (162, 11388), (164, 11427), (165, 11445), (169, 11517), (171, 11571), (172, 11607), (173, 11613), (176, 11679), (180, 11730), (182, 11763), (183, 11787), (184, 11790), (185, 11799), (187, 11844), (188, 11847), (189, 11853), (191, 11871), (194, 11940), (195, 11946), (210, 12045), (215, 12084), (216, 12087), (222, 12117), (230, 12171), (233, 12216), (251, 12339), (259, 12387), (278, 12417), (281, 12438), (286, 12504), (291, 12612), (293, 12636), (294, 12642), (296, 12657), (299, 12672), (300, 12708), (302, 12771), (303, 12774), (304, 12786), (305, 12807), (307, 12867), (311, 13047),

Gene: Phanphagia\_14 Start: 9533, Stop: 13063, Start Num: 2

Candidate Starts for Phanphagia\_14:

(Start: 2 @9533 has 184 MA's), (3, 9545), (5, 9584), (6, 9611), (8, 9668), (10, 9713), (12, 9785), (26, 9827), (27, 9830), (28, 9839), (29, 9845), (33, 9908), (34, 9923), (43, 10040), (47, 10073), (51, 10115), (54, 10160), (56, 10178), (58, 10190), (62, 10262), (65, 10295), (66, 10298), (70, 10337), (73, 10379), (75, 10409), (77, 10415), (79, 10445), (81, 10481), (82, 10490), (83, 10502), (85, 10535), (90, 10598), (96, 10694), (98, 10724), (101, 10757), (102, 10760), (103, 10772), (109, 10826), (112, 10838), (119, 10892), (121, 10901), (135, 11021), (148, 11165), (151, 11225), (153, 11237), (157, 11306), (159, 11330), (161, 11384), (162, 11387), (163, 11405), (164, 11426), (165, 11444), (171, 11570), (172, 11606), (173, 11612), (176, 11678), (180, 11729), (182, 11762), (183, 11786), (184, 11789), (185, 11798), (187, 11843), (188, 11846), (189, 11852), (191, 11870), (194, 11939), (195, 11945), (210, 12044), (226, 12143), (229, 12161), (233, 12215), (244, 12317), (251, 12341), (259, 12389), (278, 12419), (281, 12440), (286, 12506), (291, 12614), (293, 12638), (294, 12644), (296, 12659), (299, 12674), (300, 12710), (302, 12773), (303, 12776), (304, 12788), (305, 12809), (307, 12869), (311, 13049),

Gene: Phasih\_15 Start: 10064, Stop: 13549, Start Num: 2

Candidate Starts for Phasih\_15:

(Start: 2 @10064 has 184 MA's), (5, 10115), (6, 10142), (8, 10199), (10, 10244), (12, 10316), (28, 10370), (29, 10376), (33, 10439), (34, 10454), (43, 10571), (47, 10604), (51, 10646), (54, 10691), (56, 10709), (58, 10721), (62, 10793), (65, 10826), (66, 10829), (70, 10868), (73, 10910), (75, 10940), (77, 10946), (79, 10976), (81, 11012), (82, 11021), (83, 11033), (90, 11129), (94, 11192), (99, 11267), (104, 11324), (106, 11336), (112, 11357), (116, 11387), (124, 11429), (125, 11432), (126, 11438), (130, 11450), (144, 11627), (145, 11636), (155, 11783), (157, 11798), (159, 11822), (161, 11876), (162, 11879), (164, 11918), (165, 11936), (169, 12008), (171, 12062), (172, 12098), (173, 12104), (176, 12170), (180, 12221), (182, 12254), (183, 12278), (184, 12281), (185, 12290), (187, 12335), (188,



12338), (189, 12344), (191, 12362), (194, 12431), (195, 12437), (210, 12536), (215, 12575), (216, 12578), (222, 12608), (226, 12635), (230, 12662), (233, 12707), (251, 12830), (271, 12878), (276, 12908), (281, 12929), (286, 12995), (291, 13103), (293, 13127), (294, 13133), (296, 13148), (299, 13163), (300, 13199), (302, 13262), (303, 13265), (305, 13298), (306, 13337), (307, 13358), (311, 13535),

Gene: Phatniss\_15 Start: 10026, Stop: 13517, Start Num: 2

Candidate Starts for Phatniss\_15:

(Start: 2 @10026 has 184 MA's), (5, 10077), (6, 10104), (10, 10206), (12, 10278), (28, 10332), (29, 10338), (32, 10362), (33, 10401), (34, 10416), (43, 10533), (47, 10566), (51, 10608), (54, 10653), (56, 10671), (58, 10683), (62, 10755), (65, 10788), (66, 10791), (70, 10830), (73, 10872), (75, 10902), (77, 10908), (79, 10938), (81, 10974), (82, 10983), (83, 10995), (85, 11028), (87, 11070), (90, 11091), (91, 11103), (92, 11112), (94, 11154), (96, 11187), (99, 11229), (100, 11241), (104, 11286), (106, 11298), (116, 11349), (117, 11358), (125, 11394), (126, 11400), (130, 11412), (134, 11475), (137, 11523), (143, 11586), (144, 11589), (145, 11598), (157, 11763), (160, 11826), (161, 11841), (162, 11844), (163, 11862), (164, 11883), (165, 11901), (169, 11973), (171, 12027), (172, 12063), (173, 12069), (176, 12135), (180, 12186), (182, 12219), (183, 12243), (184, 12246), (185, 12255), (187, 12300), (188, 12303), (189, 12309), (191, 12327), (194, 12396), (195, 12402), (210, 12501), (212, 12522), (226, 12600), (229, 12618), (233, 12672), (244, 12771), (251, 12795), (271, 12843), (276, 12873), (281, 12894), (286, 12960), (291, 13068), (293, 13092), (294, 13098), (296, 13113), (299, 13128), (300, 13164), (302, 13227), (303, 13230), (304, 13242), (305, 13263), (306, 13302), (307, 13323), (311, 13503),

Gene: PhesterPhotato\_14 Start: 9533, Stop: 13060, Start Num: 2

Candidate Starts for PhesterPhotato\_14:

(Start: 2 @9533 has 184 MA's), (3, 9545), (5, 9584), (6, 9611), (8, 9668), (10, 9713), (12, 9785), (26, 9827), (27, 9830), (28, 9839), (29, 9845), (33, 9908), (34, 9923), (43, 10040), (47, 10073), (51, 10115), (54, 10160), (56, 10178), (58, 10190), (62, 10262), (65, 10295), (66, 10298), (70, 10337), (73, 10379), (75, 10409), (77, 10415), (79, 10445), (81, 10481), (82, 10490), (83, 10502), (90, 10598), (96, 10694), (98, 10724), (101, 10757), (102, 10760), (103, 10772), (109, 10826), (112, 10838), (119, 10892), (121, 10901), (135, 11021), (148, 11165), (151, 11225), (153, 11237), (157, 11306), (159, 11330), (160, 11369), (161, 11384), (162, 11387), (163, 11405), (164, 11426), (165, 11444), (169, 11516), (171, 11570), (172, 11606), (173, 11612), (176, 11678), (180, 11729), (182, 11762), (183, 11786), (184, 11789), (185, 11798), (187, 11843), (188, 11846), (189, 11852), (191, 11870), (194, 11939), (195, 11945), (210, 12044), (215, 12083), (216, 12086), (222, 12116), (226, 12143), (230, 12170), (233, 12215), (251, 12338), (259, 12386), (278, 12416), (281, 12437), (286, 12503), (291, 12611), (293, 12635), (294, 12641), (296, 12656), (299, 12671), (300, 12707), (302, 12770), (303, 12773), (304, 12785), (305, 12806), (307, 12866), (311, 13046),

Gene: Philus\_14 Start: 9491, Stop: 13018, Start Num: 2

Candidate Starts for Philus\_14:

(Start: 1 @9470 has 37 MA's), (Start: 2 @9491 has 184 MA's), (3, 9503), (5, 9542), (6, 9569), (10, 9671), (11, 9719), (12, 9743), (28, 9797), (29, 9803), (33, 9866), (34, 9881), (43, 9998), (47, 10031), (49, 10049), (51, 10073), (54, 10118), (56, 10136), (58, 10148), (62, 10220), (65, 10253), (66, 10256), (70, 10295), (73, 10337), (75, 10367), (77, 10373), (79, 10403), (81, 10439), (82, 10448), (83, 10460), (85, 10493), (86, 10508), (87, 10535), (90, 10556), (91, 10568), (92, 10577), (97, 10673), (98, 10682), (102, 10718), (103, 10730), (106, 10763), (109, 10784), (112, 10796), (121, 10859), (125, 10877), (135, 10979), (140, 11054), (151, 11183), (153, 11195), (157, 11264), (160, 11327), (161, 11342), (162, 11345), (163, 11363), (164, 11384), (165, 11402), (169, 11474), (171, 11528), (172, 11564), (173, 11570), (176, 11636), (180, 11687), (182, 11720), (183, 11744), (184, 11747), (185, 11756), (187, 11801), (188, 11804), (189, 11810), (191, 11828), (194, 11897), (195, 11903), (210, 12002), (215, 12041), (216, 12044), (222, 12074), (230, 12128), (233, 12173), (251, 12296), (259, 12344), (278, 12374), (281, 12395), (286, 12461), (288, 12485), (291, 12569), (293, 12593), (294, 12599),

(296, 12614), (299, 12629), (300, 12665), (302, 12728), (303, 12731), (304, 12743), (305, 12764), (307, 12824), (311, 13004),

Gene: PhlipPhlop\_14 Start: 9504, Stop: 12992, Start Num: 2

Candidate Starts for PhlipPhlop\_14:

(Start: 2 @9504 has 184 MA's), (5, 9555), (6, 9582), (8, 9639), (10, 9684), (12, 9756), (28, 9810), (29, 9816), (33, 9879), (34, 9894), (43, 10011), (47, 10044), (49, 10062), (51, 10086), (54, 10131), (56, 10149), (58, 10161), (61, 10218), (62, 10233), (63, 10251), (65, 10266), (66, 10269), (70, 10308), (73, 10350), (75, 10380), (77, 10386), (79, 10416), (81, 10452), (82, 10461), (83, 10473), (85, 10506), (86, 10521), (87, 10548), (90, 10569), (91, 10581), (92, 10590), (94, 10632), (96, 10665), (99, 10707), (100, 10719), (104, 10764), (106, 10776), (116, 10827), (117, 10836), (124, 10869), (125, 10872), (126, 10878), (130, 10890), (134, 10953), (137, 11001), (143, 11064), (144, 11067), (145, 11076), (157, 11241), (158, 11250), (160, 11301), (161, 11316), (162, 11319), (163, 11337), (164, 11358), (165, 11376), (169, 11448), (171, 11502), (172, 11538), (173, 11544), (174, 11577), (176, 11610), (180, 11661), (182, 11694), (183, 11718), (184, 11721), (185, 11730), (187, 11775), (188, 11778), (189, 11784), (191, 11802), (194, 11871), (195, 11877), (210, 11976), (215, 12015), (216, 12018), (222, 12048), (226, 12075), (230, 12102), (233, 12147), (251, 12270), (271, 12318), (276, 12348), (281, 12369), (286, 12435), (291, 12543), (293, 12567), (294, 12573), (296, 12588), (299, 12603), (300, 12639), (302, 12702), (303, 12705), (304, 12717), (305, 12738), (307, 12798), (311, 12978),

Gene: Piper2020\_15 Start: 9353, Stop: 12883, Start Num: 2

Candidate Starts for Piper2020\_15:

(Start: 1 @9332 has 37 MA's), (Start: 2 @9353 has 184 MA's), (3, 9365), (5, 9404), (6, 9431), (10, 9533), (12, 9605), (26, 9647), (28, 9659), (29, 9665), (33, 9728), (34, 9743), (43, 9860), (47, 9893), (49, 9911), (51, 9935), (54, 9980), (56, 9998), (58, 10010), (61, 10067), (62, 10082), (63, 10100), (65, 10115), (66, 10118), (70, 10157), (73, 10199), (75, 10229), (77, 10235), (79, 10265), (81, 10301), (82, 10310), (83, 10322), (85, 10355), (86, 10370), (87, 10397), (90, 10418), (91, 10430), (92, 10439), (97, 10535), (98, 10544), (102, 10580), (103, 10592), (106, 10625), (109, 10646), (121, 10721), (122, 10727), (125, 10739), (135, 10841), (140, 10916), (151, 11045), (153, 11057), (157, 11126), (158, 11135), (160, 11186), (161, 11201), (162, 11204), (163, 11222), (164, 11243), (165, 11261), (169, 11333), (171, 11387), (172, 11423), (173, 11429), (174, 11462), (176, 11495), (180, 11546), (182, 11579), (183, 11603), (184, 11606), (185, 11615), (187, 11660), (188, 11663), (191, 11687), (194, 11759), (195, 11765), (226, 11963), (229, 11981), (232, 12014), (233, 12035), (244, 12137), (251, 12161), (259, 12209), (281, 12260), (286, 12326), (291, 12434), (293, 12458), (294, 12464), (296, 12479), (297, 12485), (299, 12494), (300, 12530), (302, 12593), (303, 12596), (305, 12629), (306, 12668), (307, 12689), (311, 12869),

Gene: Pippy\_14 Start: 9474, Stop: 13001, Start Num: 2

Candidate Starts for Pippy\_14:

(Start: 1 @9453 has 37 MA's), (Start: 2 @9474 has 184 MA's), (3, 9486), (5, 9525), (6, 9552), (10, 9654), (11, 9702), (12, 9726), (28, 9780), (29, 9786), (33, 9849), (34, 9864), (43, 9981), (47, 10014), (49, 10032), (51, 10056), (54, 10101), (56, 10119), (58, 10131), (62, 10203), (65, 10236), (66, 10239), (70, 10278), (73, 10320), (75, 10350), (77, 10356), (79, 10386), (81, 10422), (82, 10431), (83, 10443), (85, 10476), (86, 10491), (87, 10518), (90, 10539), (91, 10551), (92, 10560), (97, 10656), (98, 10665), (102, 10701), (103, 10713), (106, 10746), (109, 10767), (121, 10842), (125, 10860), (135, 10962), (140, 11037), (151, 11166), (153, 11178), (157, 11247), (160, 11310), (161, 11325), (162, 11328), (163, 11346), (164, 11367), (165, 11385), (169, 11457), (171, 11511), (172, 11547), (173, 11553), (174, 11586), (176, 11619), (180, 11670), (182, 11703), (183, 11727), (184, 11730), (185, 11739), (187, 11784), (188, 11787), (189, 11793), (191, 11811), (194, 11880), (195, 11886), (210, 11985), (215, 12024), (216, 12027), (222, 12057), (226, 12084), (230, 12111), (233, 12156), (251, 12279), (259, 12327), (278, 12357), (281, 12378), (286, 12444), (291, 12552), (293, 12576), (294, 12582), (296, 12597), (299, 12612), (300, 12648), (302, 12711), (303, 12714), (304, 12726), (305, 12747), (306, 12786), (307, 12807), (311, 12987),

Gene: Plumbus\_15 Start: 9324, Stop: 12866, Start Num: 1

Candidate Starts for Plumbus\_15:

(Start: 1 @9324 has 37 MA's), (Start: 2 @9345 has 184 MA's), (3, 9357), (5, 9396), (6, 9423), (10, 9525), (11, 9573), (12, 9597), (26, 9639), (27, 9642), (28, 9651), (29, 9657), (33, 9720), (34, 9735), (43, 9852), (47, 9885), (49, 9903), (51, 9927), (54, 9972), (56, 9990), (58, 10002), (62, 10074), (65, 10107), (66, 10110), (70, 10149), (72, 10167), (73, 10191), (75, 10221), (77, 10227), (79, 10257), (81, 10293), (82, 10302), (83, 10314), (85, 10347), (90, 10410), (91, 10422), (92, 10431), (97, 10527), (98, 10536), (102, 10572), (103, 10584), (106, 10617), (109, 10638), (121, 10713), (122, 10719), (125, 10731), (135, 10833), (140, 10908), (151, 11037), (153, 11049), (157, 11118), (159, 11142), (160, 11178), (161, 11193), (162, 11196), (163, 11214), (164, 11235), (165, 11253), (169, 11325), (171, 11379), (172, 11415), (173, 11421), (174, 11454), (176, 11487), (180, 11538), (182, 11571), (183, 11595), (184, 11598), (185, 11607), (187, 11652), (188, 11655), (189, 11661), (191, 11679), (194, 11748), (195, 11754), (210, 11853), (215, 11892), (216, 11895), (222, 11925), (230, 11979), (233, 12024), (251, 12147), (259, 12195), (278, 12225), (281, 12246), (286, 12312), (291, 12420), (293, 12444), (294, 12450), (296, 12465), (299, 12480), (300, 12516), (302, 12579), (303, 12582), (304, 12594), (305, 12615), (306, 12654), (307, 12675), (311, 12852),

Gene: Poenanya\_14 Start: 9465, Stop: 13145, Start Num: 1

Candidate Starts for Poenanya\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (49, 10044), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (94, 10614), (96, 10647), (99, 10689), (100, 10701), (104, 10746), (106, 10758), (116, 10809), (117, 10818), (125, 10854), (126, 10860), (130, 10872), (134, 10935), (137, 10983), (143, 11046), (144, 11049), (145, 11058), (157, 11223), (160, 11286), (161, 11301), (162, 11304), (163, 11322), (164, 11343), (165, 11361), (169, 11433), (171, 11487), (172, 11523), (173, 11529), (174, 11562), (176, 11595), (180, 11646), (182, 11679), (183, 11703), (184, 11706), (185, 11715), (187, 11760), (188, 11763), (191, 11787), (196, 11877), (213, 12024), (217, 12045), (233, 12186), (238, 12210), (240, 12237), (267, 12417), (271, 12447), (279, 12519), (287, 12606), (291, 12699), (293, 12723), (294, 12729), (296, 12744), (297, 12750), (299, 12759), (300, 12795), (302, 12858), (303, 12861), (305, 12894), (306, 12933), (307, 12954), (311, 13131),

Gene: Polka14\_15 Start: 10026, Stop: 13553, Start Num: 2

Candidate Starts for Polka14\_15:

(Start: 2 @10026 has 184 MA's), (5, 10077), (6, 10104), (10, 10206), (12, 10278), (28, 10332), (29, 10338), (33, 10401), (34, 10416), (43, 10533), (47, 10566), (49, 10584), (51, 10608), (54, 10653), (56, 10671), (58, 10683), (62, 10755), (63, 10773), (65, 10788), (66, 10791), (70, 10830), (73, 10872), (75, 10902), (77, 10908), (79, 10938), (81, 10974), (82, 10983), (83, 10995), (85, 11028), (86, 11043), (87, 11070), (90, 11091), (91, 11103), (92, 11112), (97, 11208), (98, 11217), (102, 11253), (103, 11265), (106, 11298), (109, 11319), (119, 11385), (121, 11394), (125, 11412), (135, 11514), (140, 11589), (148, 11658), (151, 11718), (153, 11730), (157, 11799), (158, 11808), (160, 11862), (161, 11877), (162, 11880), (163, 11898), (164, 11919), (165, 11937), (169, 12009), (171, 12063), (172, 12099), (173, 12105), (174, 12138), (176, 12171), (180, 12222), (182, 12255), (183, 12279), (184, 12282), (185, 12291), (187, 12336), (188, 12339), (189, 12345), (191, 12363), (194, 12432), (195, 12438), (210, 12537), (215, 12576), (216, 12579), (222, 12609), (230, 12663), (233, 12708), (251, 12831), (259, 12879), (278, 12909), (281, 12930), (286, 12996), (291, 13104), (293, 13128), (294, 13134), (296, 13149), (299, 13164), (300, 13200), (302, 13263), (303, 13266), (304, 13278), (305, 13299), (307, 13359), (311, 13539),

Gene: Pollywog\_15 Start: 9339, Stop: 12830, Start Num: 2

Candidate Starts for Pollywog\_15:

(Start: 1 @9318 has 37 MA's), (Start: 2 @9339 has 184 MA's), (3, 9351), (5, 9390), (6, 9417), (10, 9519), (11, 9567), (12, 9591), (26, 9633), (27, 9636), (28, 9645), (29, 9651), (33, 9714), (34, 9729), (43, 9846), (47, 9879), (49, 9897), (51, 9921), (54, 9966), (56, 9984), (58, 9996), (61, 10053), (62, 10068), (63, 10086), (65, 10101), (66, 10104), (70, 10143), (73, 10185), (75, 10215), (77, 10221), (79, 10251), (81, 10287), (82, 10296), (83, 10308), (85, 10341), (86, 10356), (87, 10383), (90, 10404), (92, 10425), (94, 10467), (96, 10500), (99, 10542), (100, 10554), (104, 10599), (106, 10611), (116, 10662), (117, 10671), (125, 10707), (126, 10713), (130, 10725), (134, 10788), (137, 10836), (143, 10899), (144, 10902), (145, 10911), (157, 11076), (160, 11139), (161, 11154), (162, 11157), (163, 11175), (164, 11196), (165, 11214), (169, 11286), (171, 11340), (172, 11376), (173, 11382), (174, 11415), (176, 11448), (180, 11499), (182, 11532), (183, 11556), (184, 11559), (185, 11568), (187, 11613), (188, 11616), (189, 11622), (191, 11640), (194, 11709), (195, 11715), (210, 11814), (215, 11853), (216, 11856), (222, 11886), (226, 11913), (230, 11940), (233, 11985), (251, 12108), (271, 12156), (276, 12186), (281, 12207), (286, 12273), (291, 12381), (293, 12405), (294, 12411), (296, 12426), (299, 12441), (300, 12477), (302, 12540), (303, 12543), (304, 12555), (305, 12576), (307, 12636), (311, 12816),

Gene: Polo2Bam\_15 Start: 9507, Stop: 13034, Start Num: 2

Candidate Starts for Polo2Bam\_15:

(Start: 2 @9507 has 184 MA's), (3, 9519), (5, 9558), (6, 9585), (8, 9642), (10, 9687), (12, 9759), (28, 9813), (29, 9819), (33, 9882), (34, 9897), (43, 10014), (47, 10047), (51, 10089), (54, 10134), (56, 10152), (58, 10164), (62, 10236), (65, 10269), (66, 10272), (70, 10311), (73, 10353), (75, 10383), (77, 10389), (79, 10419), (81, 10455), (82, 10464), (83, 10476), (90, 10572), (96, 10668), (97, 10689), (98, 10698), (101, 10731), (102, 10734), (103, 10746), (109, 10800), (112, 10812), (119, 10866), (121, 10875), (135, 10995), (148, 11139), (151, 11199), (153, 11211), (157, 11280), (159, 11304), (161, 11358), (162, 11361), (164, 11400), (165, 11418), (169, 11490), (171, 11544), (172, 11580), (173, 11586), (176, 11652), (180, 11703), (182, 11736), (183, 11760), (184, 11763), (185, 11772), (187, 11817), (188, 11820), (189, 11826), (191, 11844), (194, 11913), (195, 11919), (210, 12018), (215, 12057), (216, 12060), (222, 12090), (226, 12117), (230, 12144), (233, 12189), (236, 12201), (244, 12288), (251, 12312), (259, 12360), (278, 12390), (281, 12411), (286, 12477), (291, 12585), (293, 12609), (294, 12615), (296, 12630), (299, 12645), (300, 12681), (302, 12744), (303, 12747), (305, 12780), (307, 12840), (311, 13020),

Gene: PopTart\_14 Start: 9532, Stop: 13062, Start Num: 2

Candidate Starts for PopTart\_14:

(Start: 2 @9532 has 184 MA's), (3, 9544), (5, 9583), (6, 9610), (8, 9667), (10, 9712), (12, 9784), (28, 9838), (29, 9844), (32, 9868), (33, 9907), (34, 9922), (43, 10039), (47, 10072), (51, 10114), (54, 10159), (56, 10177), (58, 10189), (62, 10261), (65, 10294), (66, 10297), (70, 10336), (73, 10378), (75, 10408), (77, 10414), (79, 10444), (81, 10480), (82, 10489), (83, 10501), (90, 10597), (96, 10693), (98, 10723), (101, 10756), (102, 10759), (103, 10771), (109, 10825), (112, 10837), (119, 10891), (121, 10900), (135, 11020), (148, 11164), (151, 11224), (153, 11236), (157, 11305), (159, 11329), (161, 11386), (162, 11389), (164, 11428), (165, 11446), (169, 11518), (171, 11572), (172, 11608), (173, 11614), (176, 11680), (180, 11731), (182, 11764), (183, 11788), (184, 11791), (185, 11800), (187, 11845), (188, 11848), (189, 11854), (191, 11872), (194, 11941), (195, 11947), (210, 12046), (226, 12145), (229, 12163), (233, 12217), (236, 12229), (244, 12316), (251, 12340), (259, 12388), (278, 12418), (281, 12439), (286, 12505), (291, 12613), (293, 12637), (294, 12643), (296, 12658), (299, 12673), (300, 12709), (302, 12772), (303, 12775), (304, 12787), (305, 12808), (307, 12868), (311, 13048),

Gene: Priscilla\_14 Start: 9492, Stop: 13019, Start Num: 2

Candidate Starts for Priscilla\_14:

(Start: 1 @9471 has 37 MA's), (Start: 2 @9492 has 184 MA's), (3, 9504), (5, 9543), (6, 9570), (10, 9672), (11, 9720), (12, 9744), (26, 9786), (27, 9789), (28, 9798), (29, 9804), (33, 9867), (34, 9882), (43, 9999), (47, 10032), (49, 10050), (51, 10074), (54, 10119), (56, 10137), (58, 10149), (62, 10221), (65,

10254), (66, 10257), (70, 10296), (73, 10338), (75, 10368), (77, 10374), (79, 10404), (81, 10440), (82, 10449), (83, 10461), (85, 10494), (86, 10509), (90, 10557), (91, 10569), (97, 10674), (98, 10683), (102, 10719), (103, 10731), (106, 10764), (109, 10785), (121, 10860), (125, 10878), (135, 10980), (140, 11055), (151, 11184), (153, 11196), (157, 11265), (160, 11328), (161, 11343), (162, 11346), (163, 11364), (164, 11385), (165, 11403), (169, 11475), (171, 11529), (172, 11565), (173, 11571), (174, 11604), (176, 11637), (180, 11688), (182, 11721), (183, 11745), (184, 11748), (185, 11757), (187, 11802), (188, 11805), (189, 11811), (191, 11829), (194, 11898), (195, 11904), (210, 12003), (215, 12042), (216, 12045), (222, 12075), (230, 12129), (233, 12174), (251, 12297), (259, 12345), (278, 12375), (281, 12396), (286, 12462), (291, 12570), (293, 12594), (294, 12600), (296, 12615), (299, 12630), (300, 12666), (302, 12729), (303, 12732), (304, 12744), (305, 12765), (306, 12804), (307, 12825), (311, 13005),

Gene: QuickMath\_14 Start: 9533, Stop: 13054, Start Num: 2

Candidate Starts for QuickMath\_14:

(Start: 2 @9533 has 184 MA's), (3, 9545), (5, 9584), (6, 9611), (8, 9668), (10, 9713), (12, 9785), (26, 9827), (27, 9830), (28, 9839), (29, 9845), (33, 9908), (34, 9923), (43, 10040), (47, 10073), (51, 10115), (54, 10160), (56, 10178), (58, 10190), (62, 10262), (65, 10295), (66, 10298), (70, 10337), (73, 10379), (75, 10409), (77, 10415), (79, 10445), (81, 10481), (82, 10490), (83, 10502), (90, 10598), (96, 10694), (98, 10724), (101, 10757), (102, 10760), (103, 10772), (109, 10826), (112, 10838), (119, 10892), (121, 10901), (135, 11021), (148, 11165), (151, 11225), (153, 11237), (157, 11306), (159, 11330), (161, 11381), (162, 11384), (164, 11423), (165, 11441), (171, 11567), (172, 11603), (173, 11609), (176, 11675), (180, 11726), (182, 11759), (183, 11783), (184, 11786), (185, 11795), (187, 11840), (188, 11843), (189, 11849), (191, 11867), (194, 11936), (195, 11942), (210, 12041), (215, 12080), (216, 12083), (222, 12113), (226, 12140), (230, 12167), (233, 12212), (251, 12335), (259, 12383), (278, 12413), (281, 12434), (286, 12500), (288, 12524), (291, 12608), (293, 12632), (294, 12638), (296, 12653), (297, 12659), (299, 12668), (300, 12704), (302, 12767), (303, 12770), (305, 12803), (306, 12842), (307, 12863), (311, 13040),

Gene: Quico\_15 Start: 9357, Stop: 12845, Start Num: 2

Candidate Starts for Quico\_15:

(Start: 1 @9336 has 37 MA's), (Start: 2 @9357 has 184 MA's), (3, 9369), (5, 9408), (6, 9435), (8, 9492), (10, 9537), (12, 9609), (28, 9663), (29, 9669), (32, 9693), (33, 9732), (34, 9747), (43, 9864), (47, 9897), (51, 9939), (54, 9984), (56, 10002), (58, 10014), (62, 10086), (65, 10119), (66, 10122), (70, 10161), (73, 10203), (75, 10233), (77, 10239), (79, 10269), (81, 10305), (82, 10314), (83, 10326), (85, 10359), (86, 10374), (90, 10422), (92, 10443), (94, 10485), (96, 10518), (99, 10560), (100, 10572), (104, 10617), (106, 10629), (116, 10680), (117, 10689), (124, 10722), (125, 10725), (126, 10731), (130, 10743), (134, 10806), (143, 10917), (144, 10920), (145, 10929), (158, 11103), (160, 11154), (161, 11169), (162, 11172), (163, 11190), (164, 11211), (165, 11229), (169, 11301), (171, 11355), (172, 11391), (173, 11397), (176, 11463), (180, 11514), (182, 11547), (183, 11571), (184, 11574), (185, 11583), (187, 11628), (188, 11631), (191, 11655), (194, 11724), (195, 11730), (210, 11829), (215, 11868), (216, 11871), (222, 11901), (230, 11955), (233, 12000), (251, 12123), (271, 12171), (276, 12201), (281, 12222), (282, 12237), (286, 12288), (291, 12396), (293, 12420), (294, 12426), (296, 12441), (299, 12456), (300, 12492), (302, 12555), (303, 12558), (305, 12591), (307, 12651), (311, 12831),

Gene: Radiance\_14 Start: 9485, Stop: 13009, Start Num: 2

Candidate Starts for Radiance\_14:

(Start: 1 @9464 has 37 MA's), (Start: 2 @9485 has 184 MA's), (3, 9497), (5, 9536), (6, 9563), (10, 9665), (11, 9713), (12, 9737), (26, 9779), (28, 9791), (29, 9797), (33, 9860), (34, 9875), (43, 9992), (47, 10025), (51, 10067), (54, 10112), (56, 10130), (58, 10142), (62, 10214), (65, 10247), (66, 10250), (70, 10289), (73, 10331), (75, 10361), (77, 10367), (79, 10397), (81, 10433), (82, 10442), (83, 10454), (85, 10487), (90, 10550), (92, 10571), (97, 10667), (98, 10676), (102, 10712), (103, 10724), (106, 10757), (109, 10778), (119, 10844), (121, 10853), (125, 10871), (135, 10973), (140, 11048), (148, 11117),

(151, 11177), (153, 11189), (157, 11258), (160, 11318), (161, 11333), (162, 11336), (163, 11354), (164, 11375), (165, 11393), (169, 11465), (171, 11519), (172, 11555), (173, 11561), (174, 11594), (176, 11627), (180, 11678), (182, 11711), (183, 11735), (184, 11738), (185, 11747), (187, 11792), (188, 11795), (189, 11801), (191, 11819), (194, 11888), (195, 11894), (210, 11993), (215, 12032), (216, 12035), (222, 12065), (230, 12119), (233, 12164), (251, 12287), (259, 12335), (278, 12365), (281, 12386), (286, 12452), (291, 12560), (293, 12584), (294, 12590), (296, 12605), (299, 12620), (300, 12656), (302, 12719), (303, 12722), (304, 12734), (305, 12755), (306, 12794), (307, 12815), (311, 12995),

Gene: Ramsey\_15 Start: 9342, Stop: 13040, Start Num: 2

Candidate Starts for Ramsey\_15:

(Start: 1 @9321 has 37 MA's), (Start: 2 @9342 has 184 MA's), (5, 9393), (6, 9420), (10, 9522), (11, 9570), (12, 9594), (26, 9636), (27, 9639), (28, 9648), (29, 9654), (33, 9717), (34, 9732), (43, 9849), (47, 9882), (51, 9924), (54, 9969), (56, 9987), (58, 9999), (62, 10071), (65, 10104), (66, 10107), (70, 10146), (73, 10188), (75, 10218), (77, 10224), (79, 10254), (81, 10290), (82, 10299), (83, 10311), (85, 10344), (87, 10386), (90, 10407), (91, 10419), (92, 10428), (97, 10524), (98, 10533), (101, 10566), (102, 10569), (103, 10581), (106, 10614), (109, 10635), (121, 10710), (122, 10716), (125, 10728), (135, 10830), (140, 10905), (151, 11034), (153, 11046), (157, 11115), (160, 11175), (161, 11190), (162, 11193), (163, 11211), (164, 11232), (165, 11250), (169, 11322), (171, 11376), (172, 11412), (173, 11418), (174, 11451), (176, 11484), (180, 11535), (182, 11568), (183, 11592), (184, 11595), (185, 11604), (187, 11649), (188, 11652), (191, 11676), (196, 11769), (213, 11916), (217, 11937), (233, 12078), (238, 12102), (240, 12129), (267, 12309), (271, 12339), (287, 12498), (291, 12591), (293, 12615), (294, 12621), (296, 12636), (297, 12642), (299, 12651), (300, 12687), (302, 12750), (303, 12753), (305, 12786), (306, 12825), (307, 12846), (311, 13026),

Gene: RedBird\_14 Start: 9486, Stop: 12971, Start Num: 2

Candidate Starts for RedBird\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (12, 9738), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (86, 10503), (87, 10530), (90, 10551), (92, 10572), (94, 10614), (96, 10647), (99, 10689), (100, 10701), (104, 10746), (106, 10758), (116, 10809), (117, 10818), (125, 10854), (126, 10860), (130, 10872), (134, 10935), (137, 10983), (143, 11046), (144, 11049), (145, 11058), (157, 11223), (160, 11286), (161, 11301), (162, 11304), (163, 11322), (164, 11343), (165, 11361), (169, 11433), (171, 11487), (172, 11523), (173, 11529), (176, 11595), (180, 11646), (182, 11679), (183, 11703), (184, 11706), (185, 11715), (187, 11760), (188, 11763), (189, 11769), (191, 11787), (194, 11856), (195, 11862), (210, 11961), (215, 12000), (216, 12003), (222, 12033), (226, 12060), (230, 12087), (233, 12132), (251, 12255), (271, 12300), (276, 12330), (281, 12351), (286, 12417), (291, 12525), (293, 12549), (294, 12555), (296, 12570), (299, 12585), (300, 12621), (302, 12684), (303, 12687), (305, 12720), (306, 12759), (307, 12780), (311, 12957),

Gene: Renaud18\_15 Start: 9814, Stop: 13338, Start Num: 2

Candidate Starts for Renaud18\_15:

(Start: 2 @9814 has 184 MA's), (4, 9844), (9, 9937), (11, 9985), (28, 10063), (32, 10093), (34, 10147), (35, 10153), (39, 10204), (41, 10255), (45, 10306), (47, 10318), (50, 10339), (52, 10378), (53, 10393), (55, 10414), (57, 10426), (63, 10516), (64, 10522), (71, 10582), (72, 10588), (73, 10612), (76, 10645), (77, 10648), (78, 10657), (81, 10714), (84, 10759), (85, 10768), (88, 10810), (89, 10813), (92, 10843), (93, 10855), (97, 10939), (103, 10996), (104, 11017), (105, 11020), (112, 11059), (115, 11080), (118, 11113), (122, 11131), (123, 11137), (129, 11158), (131, 11185), (133, 11215), (135, 11242), (139, 11296), (140, 11317), (142, 11326), (146, 11359), (147, 11383), (148, 11386), (152, 11455), (153, 11461), (161, 11584), (164, 11626), (166, 11647), (167, 11686), (169, 11716), (170, 11731), (174, 11845), (175, 11848), (176, 11878), (177, 11887), (178, 11920), (181, 11971), (183, 12007), (184,

12010), (185, 12019), (187, 12064), (188, 12067), (190, 12076), (193, 12154), (196, 12181), (210, 12274), (216, 12316), (222, 12346), (230, 12400), (233, 12445), (253, 12595), (262, 12646), (278, 12694), (285, 12757), (286, 12772), (287, 12781), (290, 12853), (292, 12889), (295, 12910), (298, 12931), (299, 12934), (302, 13033), (303, 13036), (305, 13069), (309, 13183), (312, 13333),

Gene: Rialto\_16 Start: 9885, Stop: 13517, Start Num: 2

Candidate Starts for Rialto\_16:

(Start: 2 @9885 has 184 MA's), (5, 9936), (6, 9963), (10, 10065), (11, 10113), (12, 10137), (28, 10191), (29, 10197), (33, 10260), (34, 10275), (43, 10392), (47, 10425), (49, 10443), (51, 10467), (54, 10512), (56, 10530), (62, 10614), (65, 10647), (66, 10650), (70, 10689), (73, 10731), (75, 10761), (77, 10767), (79, 10797), (81, 10833), (82, 10842), (83, 10854), (85, 10887), (87, 10929), (90, 10950), (92, 10971), (94, 11013), (96, 11046), (99, 11088), (100, 11100), (104, 11145), (106, 11157), (116, 11208), (117, 11217), (124, 11250), (125, 11253), (126, 11259), (130, 11271), (134, 11334), (143, 11445), (144, 11448), (145, 11457), (157, 11622), (160, 11682), (161, 11697), (162, 11700), (163, 11718), (164, 11739), (165, 11757), (169, 11829), (171, 11883), (172, 11919), (173, 11925), (174, 11958), (176, 11991), (180, 12042), (182, 12075), (183, 12099), (184, 12102), (185, 12111), (187, 12156), (188, 12159), (191, 12183), (194, 12252), (195, 12258), (222, 12429), (230, 12483), (233, 12528), (254, 12687), (258, 12726), (263, 12750), (264, 12756), (267, 12762), (272, 12798), (286, 12963), (291, 13071), (293, 13095), (294, 13101), (296, 13116), (297, 13122), (299, 13131), (300, 13167), (302, 13230), (303, 13233), (305, 13266), (306, 13305), (307, 13326), (311, 13503),

Gene: Rita\_14 Start: 9501, Stop: 13028, Start Num: 2

Candidate Starts for Rita\_14:

(Start: 2 @9501 has 184 MA's), (3, 9513), (5, 9552), (6, 9579), (8, 9636), (10, 9681), (12, 9753), (26, 9795), (27, 9798), (28, 9807), (29, 9813), (33, 9876), (34, 9891), (43, 10008), (47, 10041), (51, 10083), (54, 10128), (56, 10146), (58, 10158), (62, 10230), (65, 10263), (66, 10266), (70, 10305), (73, 10347), (75, 10377), (77, 10383), (79, 10413), (81, 10449), (82, 10458), (83, 10470), (90, 10566), (96, 10662), (98, 10692), (101, 10725), (102, 10728), (103, 10740), (109, 10794), (112, 10806), (119, 10860), (121, 10869), (135, 10989), (148, 11133), (151, 11193), (153, 11205), (157, 11274), (159, 11298), (161, 11352), (162, 11355), (164, 11394), (165, 11412), (169, 11484), (171, 11538), (172, 11574), (173, 11580), (176, 11646), (180, 11697), (182, 11730), (183, 11754), (184, 11757), (185, 11766), (187, 11811), (188, 11814), (189, 11820), (191, 11838), (194, 11907), (195, 11913), (210, 12012), (212, 12033), (226, 12111), (229, 12129), (233, 12183), (236, 12195), (244, 12282), (251, 12306), (259, 12354), (278, 12384), (281, 12405), (286, 12471), (291, 12579), (293, 12603), (294, 12609), (296, 12624), (299, 12639), (300, 12675), (302, 12738), (303, 12741), (304, 12753), (305, 12774), (307, 12834), (311, 13014),

Gene: RitaG\_14 Start: 9438, Stop: 13154, Start Num: 1

Candidate Starts for RitaG\_14:

(Start: 1 @9438 has 37 MA's), (Start: 2 @9459 has 184 MA's), (3, 9471), (5, 9510), (6, 9537), (10, 9639), (11, 9687), (12, 9711), (26, 9753), (28, 9765), (29, 9771), (33, 9834), (34, 9849), (43, 9966), (47, 9999), (51, 10041), (54, 10086), (56, 10104), (58, 10116), (62, 10188), (65, 10221), (66, 10224), (70, 10263), (73, 10305), (75, 10335), (77, 10341), (79, 10371), (81, 10407), (82, 10416), (83, 10428), (85, 10461), (90, 10524), (92, 10545), (97, 10641), (98, 10650), (102, 10686), (103, 10698), (106, 10731), (109, 10752), (119, 10818), (121, 10827), (125, 10845), (135, 10947), (140, 11022), (148, 11091), (151, 11151), (153, 11163), (157, 11232), (158, 11241), (160, 11295), (161, 11310), (162, 11313), (163, 11331), (164, 11352), (165, 11370), (169, 11442), (171, 11496), (172, 11532), (173, 11538), (174, 11571), (176, 11604), (180, 11655), (182, 11688), (183, 11712), (184, 11715), (185, 11724), (187, 11769), (188, 11772), (191, 11796), (196, 11886), (213, 12033), (217, 12054), (233, 12195), (238, 12219), (240, 12246), (267, 12426), (271, 12456), (279, 12528), (287, 12615), (291, 12708), (293, 12732), (294, 12738), (296, 12753), (297, 12759), (299, 12768), (300, 12804), (302, 12867), (303, 12870), (305, 12903), (306, 12942), (307, 12963), (311, 13140),

Gene: Rockne\_14 Start: 9503, Stop: 12994, Start Num: 2

Candidate Starts for Rockne\_14:

(Start: 1 @9482 has 37 MA's), (Start: 2 @9503 has 184 MA's), (3, 9515), (5, 9554), (6, 9581), (10, 9683), (11, 9731), (12, 9755), (26, 9797), (28, 9809), (29, 9815), (33, 9878), (34, 9893), (43, 10010), (47, 10043), (49, 10061), (51, 10085), (54, 10130), (56, 10148), (58, 10160), (61, 10217), (62, 10232), (63, 10250), (65, 10265), (66, 10268), (70, 10307), (73, 10349), (75, 10379), (77, 10385), (79, 10415), (81, 10451), (82, 10460), (83, 10472), (85, 10505), (87, 10547), (90, 10568), (91, 10580), (92, 10589), (94, 10631), (96, 10664), (99, 10706), (100, 10718), (104, 10763), (106, 10775), (116, 10826), (117, 10835), (125, 10871), (126, 10877), (130, 10889), (134, 10952), (137, 11000), (143, 11063), (144, 11066), (145, 11075), (157, 11240), (160, 11303), (161, 11318), (162, 11321), (163, 11339), (164, 11360), (165, 11378), (169, 11450), (171, 11504), (172, 11540), (173, 11546), (174, 11579), (176, 11612), (180, 11663), (182, 11696), (183, 11720), (184, 11723), (185, 11732), (187, 11777), (188, 11780), (191, 11804), (194, 11873), (195, 11879), (210, 11978), (215, 12017), (216, 12020), (222, 12050), (226, 12077), (230, 12104), (233, 12149), (251, 12272), (271, 12320), (276, 12350), (281, 12371), (286, 12437), (291, 12545), (293, 12569), (294, 12575), (296, 12590), (299, 12605), (300, 12641), (302, 12704), (303, 12707), (304, 12719), (305, 12740), (307, 12800), (311, 12980),

Gene: RockyHorror\_15 Start: 9343, Stop: 12870, Start Num: 2

Candidate Starts for RockyHorror\_15:

(Start: 1 @9322 has 37 MA's), (Start: 2 @9343 has 184 MA's), (3, 9355), (5, 9394), (6, 9421), (10, 9523), (11, 9571), (12, 9595), (26, 9637), (27, 9640), (28, 9649), (29, 9655), (33, 9718), (34, 9733), (43, 9850), (47, 9883), (49, 9901), (51, 9925), (54, 9970), (56, 9988), (58, 10000), (62, 10072), (65, 10105), (66, 10108), (70, 10147), (73, 10189), (75, 10219), (77, 10225), (79, 10255), (81, 10291), (82, 10300), (83, 10312), (85, 10345), (87, 10387), (90, 10408), (91, 10420), (92, 10429), (97, 10525), (98, 10534), (102, 10570), (103, 10582), (106, 10615), (109, 10636), (121, 10711), (122, 10717), (125, 10729), (135, 10831), (148, 10975), (151, 11035), (153, 11047), (157, 11116), (159, 11140), (160, 11179), (161, 11194), (162, 11197), (163, 11215), (164, 11236), (165, 11254), (169, 11326), (171, 11380), (172, 11416), (173, 11422), (176, 11488), (180, 11539), (182, 11572), (183, 11596), (184, 11599), (185, 11608), (187, 11653), (188, 11656), (189, 11662), (191, 11680), (194, 11749), (195, 11755), (210, 11854), (212, 11875), (226, 11953), (229, 11971), (233, 12025), (244, 12124), (251, 12148), (259, 12196), (278, 12226), (281, 12247), (286, 12313), (291, 12421), (293, 12445), (294, 12451), (296, 12466), (299, 12481), (300, 12517), (302, 12580), (303, 12583), (304, 12595), (305, 12616), (306, 12655), (307, 12676), (311, 12856),

Gene: Royals2015\_14 Start: 9531, Stop: 13058, Start Num: 2

Candidate Starts for Royals2015\_14:

(Start: 2 @9531 has 184 MA's), (3, 9543), (5, 9582), (6, 9609), (8, 9666), (10, 9711), (12, 9783), (28, 9837), (29, 9843), (33, 9906), (34, 9921), (43, 10038), (47, 10071), (51, 10113), (54, 10158), (56, 10176), (58, 10188), (62, 10260), (65, 10293), (66, 10296), (70, 10335), (73, 10377), (75, 10407), (77, 10413), (79, 10443), (81, 10479), (82, 10488), (83, 10500), (90, 10596), (96, 10692), (98, 10722), (101, 10755), (102, 10758), (103, 10770), (109, 10824), (112, 10836), (119, 10890), (121, 10899), (135, 11019), (148, 11163), (151, 11223), (153, 11235), (157, 11304), (159, 11328), (161, 11382), (162, 11385), (164, 11424), (165, 11442), (169, 11514), (171, 11568), (172, 11604), (173, 11610), (176, 11676), (180, 11727), (182, 11760), (183, 11784), (184, 11787), (185, 11796), (187, 11841), (188, 11844), (189, 11850), (191, 11868), (194, 11937), (195, 11943), (210, 12042), (215, 12081), (216, 12084), (222, 12114), (233, 12213), (251, 12336), (259, 12384), (278, 12414), (281, 12435), (286, 12501), (291, 12609), (293, 12633), (294, 12639), (296, 12654), (299, 12669), (300, 12705), (302, 12768), (303, 12771), (305, 12804), (307, 12864), (311, 13044),

Gene: Ruby\_14 Start: 9475, Stop: 12981, Start Num: 1

Candidate Starts for Ruby\_14:

(Start: 1 @9475 has 37 MA's), (Start: 2 @9496 has 184 MA's), (3, 9508), (5, 9547), (6, 9574), (8, 9631), (10, 9676), (11, 9724), (12, 9748), (28, 9802), (29, 9808), (33, 9871), (34, 9886), (43, 10003),



(47, 10036), (51, 10078), (54, 10123), (56, 10141), (58, 10153), (62, 10225), (65, 10258), (66, 10261), (70, 10300), (73, 10342), (75, 10372), (77, 10378), (79, 10408), (81, 10444), (82, 10453), (83, 10465), (90, 10561), (94, 10624), (99, 10699), (104, 10756), (106, 10768), (112, 10789), (116, 10819), (124, 10861), (125, 10864), (126, 10870), (130, 10882), (145, 11068), (155, 11215), (157, 11230), (159, 11254), (161, 11308), (162, 11311), (164, 11350), (165, 11368), (169, 11440), (171, 11494), (172, 11530), (173, 11536), (176, 11602), (180, 11653), (182, 11686), (183, 11710), (184, 11713), (185, 11722), (187, 11767), (188, 11770), (189, 11776), (191, 11794), (194, 11863), (195, 11869), (210, 11968), (215, 12007), (216, 12010), (222, 12040), (226, 12067), (230, 12094), (233, 12139), (251, 12262), (271, 12310), (276, 12340), (281, 12361), (286, 12427), (291, 12535), (293, 12559), (294, 12565), (296, 12580), (299, 12595), (300, 12631), (302, 12694), (303, 12697), (305, 12730), (306, 12769), (307, 12790), (311, 12967),

Gene: SG4\_14 Start: 9530, Stop: 13177, Start Num: 2

Candidate Starts for SG4\_14:

(Start: 1 @9509 has 37 MA's), (Start: 2 @9530 has 184 MA's), (3, 9542), (5, 9581), (6, 9608), (8, 9665), (10, 9710), (12, 9782), (28, 9836), (29, 9842), (33, 9905), (34, 9920), (43, 10037), (47, 10070), (51, 10112), (54, 10157), (56, 10175), (58, 10187), (62, 10259), (65, 10292), (66, 10295), (70, 10334), (73, 10376), (75, 10406), (77, 10412), (79, 10442), (81, 10478), (82, 10487), (83, 10499), (90, 10595), (96, 10691), (98, 10721), (101, 10754), (102, 10757), (103, 10769), (109, 10823), (112, 10835), (119, 10889), (121, 10898), (135, 11018), (148, 11162), (151, 11222), (153, 11234), (157, 11303), (159, 11327), (160, 11366), (161, 11381), (162, 11384), (163, 11402), (164, 11423), (165, 11441), (169, 11513), (171, 11567), (172, 11603), (173, 11609), (176, 11675), (180, 11726), (182, 11759), (183, 11783), (184, 11786), (185, 11795), (187, 11840), (188, 11843), (189, 11849), (191, 11867), (194, 11936), (195, 11942), (203, 12008), (204, 12011), (205, 12014), (207, 12032), (209, 12044), (216, 12092), (218, 12101), (223, 12134), (228, 12161), (235, 12224), (241, 12275), (247, 12329), (252, 12344), (256, 12398), (258, 12407), (261, 12413), (270, 12449), (274, 12476), (281, 12554), (286, 12620), (291, 12728), (293, 12752), (294, 12758), (296, 12773), (299, 12788), (300, 12824), (302, 12887), (303, 12890), (304, 12902), (305, 12923), (307, 12983), (311, 13163),

Gene: Saal\_14 Start: 9475, Stop: 12996, Start Num: 2

Candidate Starts for Saal\_14:

(Start: 1 @9454 has 37 MA's), (Start: 2 @9475 has 184 MA's), (3, 9487), (5, 9526), (6, 9553), (8, 9610), (10, 9655), (12, 9727), (29, 9787), (33, 9850), (34, 9865), (43, 9982), (47, 10015), (49, 10033), (51, 10057), (54, 10102), (56, 10120), (58, 10132), (62, 10204), (65, 10237), (66, 10240), (70, 10279), (73, 10321), (75, 10351), (77, 10357), (79, 10387), (81, 10423), (82, 10432), (83, 10444), (85, 10477), (86, 10492), (87, 10519), (90, 10540), (91, 10552), (92, 10561), (97, 10657), (98, 10666), (101, 10699), (102, 10702), (103, 10714), (106, 10747), (109, 10768), (121, 10843), (122, 10849), (125, 10861), (135, 10963), (140, 11038), (151, 11167), (153, 11179), (157, 11245), (160, 11305), (161, 11320), (162, 11323), (163, 11341), (164, 11362), (165, 11380), (169, 11452), (171, 11506), (172, 11542), (173, 11548), (174, 11581), (176, 11614), (180, 11665), (182, 11698), (183, 11722), (184, 11725), (185, 11734), (187, 11779), (188, 11782), (189, 11788), (191, 11806), (194, 11875), (195, 11881), (210, 11980), (215, 12019), (216, 12022), (222, 12052), (226, 12079), (230, 12106), (233, 12151), (251, 12274), (255, 12301), (259, 12322), (278, 12352), (281, 12373), (286, 12439), (291, 12547), (293, 12571), (294, 12577), (296, 12592), (299, 12607), (300, 12643), (302, 12706), (303, 12709), (304, 12721), (305, 12742), (307, 12802), (311, 12982),

Gene: Sabbb\_14 Start: 9504, Stop: 13181, Start Num: 2

Candidate Starts for Sabbb\_14:

(Start: 1 @9483 has 37 MA's), (Start: 2 @9504 has 184 MA's), (3, 9516), (5, 9555), (6, 9582), (10, 9684), (11, 9732), (12, 9756), (26, 9798), (28, 9810), (29, 9816), (33, 9879), (34, 9894), (43, 10011), (47, 10044), (49, 10062), (51, 10086), (54, 10131), (56, 10149), (58, 10161), (61, 10218), (62, 10233), (63, 10251), (65, 10266), (66, 10269), (70, 10308), (73, 10350), (75, 10380), (77, 10386), (79, 10416), (81, 10452), (82, 10461), (83, 10473), (85, 10506), (86, 10521), (87, 10548), (90, 10569), (91, 10581),

(92, 10590), (97, 10686), (98, 10695), (101, 10728), (102, 10731), (103, 10743), (106, 10776), (109, 10797), (112, 10809), (121, 10872), (122, 10878), (125, 10890), (135, 10992), (151, 11196), (153, 11208), (157, 11274), (158, 11283), (160, 11337), (161, 11352), (162, 11355), (163, 11373), (164, 11394), (165, 11412), (169, 11484), (171, 11538), (172, 11574), (173, 11580), (174, 11613), (176, 11646), (178, 11667), (180, 11697), (182, 11730), (183, 11754), (184, 11757), (185, 11766), (187, 11811), (188, 11814), (191, 11838), (194, 11907), (195, 11913), (210, 12012), (215, 12051), (216, 12054), (222, 12084), (230, 12138), (233, 12183), (254, 12342), (259, 12381), (265, 12408), (268, 12417), (269, 12423), (273, 12459), (286, 12627), (291, 12735), (293, 12759), (294, 12765), (296, 12780), (297, 12786), (299, 12795), (300, 12831), (303, 12897), (304, 12909), (305, 12930), (306, 12969), (307, 12990), (311, 13167),

Gene: Sandalphon\_15 Start: 10043, Stop: 13567, Start Num: 2

Candidate Starts for Sandalphon\_15:

(Start: 2 @10043 has 184 MA's), (5, 10094), (6, 10121), (8, 10178), (10, 10223), (12, 10295), (28, 10349), (29, 10355), (32, 10379), (33, 10418), (34, 10433), (43, 10550), (47, 10583), (49, 10601), (51, 10625), (54, 10670), (56, 10688), (58, 10700), (62, 10772), (65, 10805), (66, 10808), (70, 10847), (73, 10889), (75, 10919), (77, 10925), (79, 10955), (81, 10991), (82, 11000), (83, 11012), (85, 11045), (86, 11060), (90, 11108), (97, 11225), (98, 11234), (102, 11270), (103, 11282), (106, 11315), (109, 11336), (121, 11411), (125, 11429), (135, 11531), (140, 11606), (151, 11735), (153, 11747), (157, 11813), (160, 11876), (161, 11891), (162, 11894), (163, 11912), (164, 11933), (165, 11951), (169, 12023), (171, 12077), (172, 12113), (173, 12119), (176, 12185), (180, 12236), (182, 12269), (183, 12293), (184, 12296), (185, 12305), (187, 12350), (188, 12353), (189, 12359), (191, 12377), (194, 12446), (195, 12452), (210, 12551), (215, 12590), (216, 12593), (222, 12623), (226, 12650), (230, 12677), (233, 12722), (251, 12845), (259, 12893), (278, 12923), (281, 12944), (286, 13010), (291, 13118), (293, 13142), (294, 13148), (296, 13163), (299, 13178), (300, 13214), (302, 13277), (303, 13280), (304, 13292), (305, 13313), (307, 13373), (311, 13553),

Gene: Sarma624\_15 Start: 9337, Stop: 12867, Start Num: 2

Candidate Starts for Sarma624\_15:

(Start: 1 @9316 has 37 MA's), (Start: 2 @9337 has 184 MA's), (3, 9349), (5, 9388), (6, 9415), (10, 9517), (11, 9565), (12, 9589), (26, 9631), (28, 9643), (29, 9649), (33, 9712), (34, 9727), (43, 9844), (47, 9877), (51, 9919), (54, 9964), (56, 9982), (58, 9994), (62, 10066), (65, 10099), (66, 10102), (70, 10141), (73, 10183), (75, 10213), (77, 10219), (79, 10249), (81, 10285), (82, 10294), (83, 10306), (90, 10402), (96, 10498), (98, 10528), (101, 10561), (102, 10564), (103, 10576), (109, 10630), (112, 10642), (119, 10696), (121, 10705), (135, 10825), (148, 10969), (151, 11029), (153, 11041), (157, 11110), (158, 11119), (160, 11173), (161, 11188), (162, 11191), (164, 11230), (165, 11248), (169, 11320), (171, 11374), (172, 11410), (173, 11416), (174, 11449), (176, 11482), (180, 11533), (182, 11566), (183, 11590), (184, 11593), (185, 11602), (187, 11647), (188, 11650), (189, 11656), (191, 11674), (194, 11743), (195, 11749), (210, 11848), (226, 11947), (229, 11965), (233, 12019), (244, 12121), (251, 12145), (259, 12193), (278, 12223), (281, 12244), (286, 12310), (291, 12418), (293, 12442), (294, 12448), (296, 12463), (299, 12478), (300, 12514), (302, 12577), (303, 12580), (304, 12592), (305, 12613), (307, 12673), (311, 12853),

Gene: Sassafras\_14 Start: 9486, Stop: 13145, Start Num: 2

Candidate Starts for Sassafras\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (27, 9783), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (49, 10044), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (61, 10200), (62, 10215), (63, 10233), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (86, 10503), (87, 10530), (90, 10551), (92, 10572), (94, 10614), (96, 10647), (99, 10689), (100, 10701), (104, 10746), (106, 10758), (116, 10809), (117, 10818), (125, 10854), (126, 10860), (130, 10872), (134, 10935), (137, 10983), (143, 11046), (144, 11049), (145, 11058), (157, 11223), (160, 11286), (161, 11301), (162, 11304), (163, 11322),

(164, 11343), (165, 11361), (169, 11433), (171, 11487), (172, 11523), (173, 11529), (174, 11562), (176, 11595), (180, 11646), (182, 11679), (183, 11703), (184, 11706), (185, 11715), (187, 11760), (188, 11763), (191, 11787), (196, 11877), (213, 12024), (217, 12045), (233, 12186), (238, 12210), (240, 12237), (267, 12417), (271, 12447), (287, 12606), (291, 12699), (293, 12723), (294, 12729), (296, 12744), (297, 12750), (299, 12759), (300, 12795), (302, 12858), (303, 12861), (305, 12894), (306, 12933), (307, 12954), (311, 13131),

Gene: SassyB\_14 Start: 9532, Stop: 13062, Start Num: 2

Candidate Starts for SassyB\_14:

(Start: 2 @9532 has 184 MA's), (3, 9544), (5, 9583), (6, 9610), (8, 9667), (10, 9712), (12, 9784), (28, 9838), (29, 9844), (32, 9868), (33, 9907), (34, 9922), (43, 10039), (47, 10072), (51, 10114), (54, 10159), (56, 10177), (58, 10189), (62, 10261), (65, 10294), (66, 10297), (70, 10336), (73, 10378), (75, 10408), (77, 10414), (79, 10444), (81, 10480), (82, 10489), (83, 10501), (90, 10597), (96, 10693), (98, 10723), (101, 10756), (102, 10759), (103, 10771), (109, 10825), (112, 10837), (119, 10891), (121, 10900), (135, 11020), (148, 11164), (151, 11224), (153, 11236), (157, 11305), (159, 11329), (161, 11386), (162, 11389), (164, 11428), (165, 11446), (169, 11518), (171, 11572), (172, 11608), (173, 11614), (176, 11680), (180, 11731), (182, 11764), (183, 11788), (184, 11791), (185, 11800), (187, 11845), (188, 11848), (189, 11854), (191, 11872), (194, 11941), (195, 11947), (210, 12046), (226, 12145), (229, 12163), (233, 12217), (236, 12229), (244, 12316), (251, 12340), (259, 12388), (278, 12418), (281, 12439), (286, 12505), (291, 12613), (293, 12637), (294, 12643), (296, 12658), (299, 12673), (300, 12709), (302, 12772), (303, 12775), (304, 12787), (305, 12808), (307, 12868), (311, 13048),

Gene: Scottish\_14 Start: 9465, Stop: 13010, Start Num: 1

Candidate Starts for Scottish\_14:

(Start: 1 @9465 has 37 MA's), (Start: 2 @9486 has 184 MA's), (3, 9498), (5, 9537), (6, 9564), (10, 9666), (11, 9714), (12, 9738), (26, 9780), (28, 9792), (29, 9798), (33, 9861), (34, 9876), (43, 9993), (47, 10026), (51, 10068), (54, 10113), (56, 10131), (58, 10143), (62, 10215), (65, 10248), (66, 10251), (70, 10290), (73, 10332), (75, 10362), (77, 10368), (79, 10398), (81, 10434), (82, 10443), (83, 10455), (85, 10488), (90, 10551), (92, 10572), (97, 10668), (98, 10677), (102, 10713), (103, 10725), (106, 10758), (109, 10779), (119, 10845), (121, 10854), (125, 10872), (135, 10974), (140, 11049), (148, 11118), (151, 11178), (153, 11190), (157, 11259), (158, 11268), (160, 11322), (161, 11337), (162, 11340), (163, 11358), (164, 11379), (165, 11397), (169, 11469), (171, 11523), (172, 11559), (173, 11565), (174, 11598), (176, 11631), (180, 11682), (182, 11715), (183, 11739), (184, 11742), (185, 11751), (187, 11796), (188, 11799), (191, 11823), (194, 11892), (195, 11898), (212, 12018), (226, 12096), (229, 12114), (232, 12147), (233, 12168), (244, 12270), (251, 12294), (259, 12342), (278, 12372), (281, 12393), (286, 12456), (291, 12564), (293, 12588), (294, 12594), (296, 12609), (297, 12615), (299, 12624), (300, 12660), (302, 12723), (303, 12726), (305, 12759), (306, 12798), (307, 12819), (311, 12996),

Gene: Seabastian\_14 Start: 9489, Stop: 13247, Start Num: 2

Candidate Starts for Seabastian\_14:

(Start: 1 @9468 has 37 MA's), (Start: 2 @9489 has 184 MA's), (3, 9501), (5, 9540), (6, 9567), (10, 9669), (14, 9786), (16, 9834), (17, 9843), (18, 9888), (19, 9921), (20, 9930), (22, 9945), (23, 9954), (26, 10014), (27, 10017), (28, 10026), (29, 10032), (33, 10095), (34, 10110), (43, 10227), (47, 10260), (49, 10278), (51, 10302), (54, 10347), (56, 10365), (58, 10377), (61, 10434), (62, 10449), (65, 10482), (66, 10485), (70, 10524), (73, 10566), (75, 10596), (77, 10602), (79, 10632), (81, 10668), (82, 10677), (83, 10689), (85, 10722), (86, 10737), (90, 10785), (92, 10806), (97, 10902), (98, 10911), (102, 10947), (103, 10959), (106, 10992), (109, 11013), (112, 11025), (121, 11088), (122, 11094), (125, 11106), (135, 11208), (140, 11283), (151, 11412), (153, 11424), (157, 11493), (158, 11502), (160, 11553), (161, 11568), (162, 11571), (163, 11589), (164, 11610), (165, 11628), (169, 11700), (171, 11754), (172, 11790), (173, 11796), (174, 11829), (176, 11862), (180, 11913), (182, 11946), (183, 11970), (184, 11973), (185, 11982), (187, 12027), (188, 12030), (191, 12054), (194, 12126), (195, 12132),

(201, 12180), (210, 12231), (215, 12270), (216, 12273), (222, 12303), (226, 12330), (230, 12357), (233, 12402), (236, 12414), (244, 12501), (251, 12525), (259, 12573), (281, 12624), (286, 12690), (291, 12798), (293, 12822), (294, 12828), (296, 12843), (297, 12849), (299, 12858), (300, 12894), (302, 12957), (303, 12960), (305, 12993), (306, 13032), (307, 13053), (311, 13233),

Gene: Seagreen\_15 Start: 9346, Stop: 12870, Start Num: 2

Candidate Starts for Seagreen\_15:

(Start: 1 @9325 has 37 MA's), (Start: 2 @9346 has 184 MA's), (3, 9358), (5, 9397), (6, 9424), (10, 9526), (12, 9598), (28, 9652), (29, 9658), (33, 9721), (34, 9736), (43, 9853), (47, 9886), (49, 9904), (51, 9928), (54, 9973), (56, 9991), (58, 10003), (62, 10075), (65, 10108), (66, 10111), (70, 10150), (73, 10192), (75, 10222), (77, 10228), (79, 10258), (81, 10294), (82, 10303), (83, 10315), (85, 10348), (90, 10411), (91, 10423), (92, 10432), (97, 10528), (98, 10537), (101, 10570), (102, 10573), (106, 10618), (109, 10639), (112, 10651), (121, 10714), (122, 10720), (125, 10732), (135, 10834), (151, 11038), (153, 11050), (157, 11119), (160, 11179), (161, 11194), (162, 11197), (163, 11215), (164, 11236), (165, 11254), (171, 11380), (172, 11416), (173, 11422), (176, 11488), (180, 11539), (182, 11572), (183, 11596), (184, 11599), (185, 11608), (187, 11653), (188, 11656), (189, 11662), (191, 11680), (194, 11749), (195, 11755), (210, 11854), (215, 11893), (216, 11896), (222, 11926), (226, 11953), (230, 11980), (233, 12025), (251, 12148), (259, 12196), (278, 12226), (281, 12247), (286, 12313), (291, 12421), (293, 12445), (294, 12451), (296, 12466), (299, 12481), (300, 12517), (302, 12580), (303, 12583), (304, 12595), (305, 12616), (307, 12676), (311, 12856),

Gene: Shauna1\_14 Start: 9533, Stop: 13063, Start Num: 2

Candidate Starts for Shauna1\_14:

(Start: 2 @9533 has 184 MA's), (3, 9545), (5, 9584), (6, 9611), (8, 9668), (10, 9713), (12, 9785), (26, 9827), (27, 9830), (28, 9839), (29, 9845), (33, 9908), (34, 9923), (43, 10040), (47, 10073), (51, 10115), (54, 10160), (56, 10178), (58, 10190), (62, 10262), (65, 10295), (66, 10298), (70, 10337), (73, 10379), (75, 10409), (77, 10415), (79, 10445), (81, 10481), (82, 10490), (83, 10502), (85, 10535), (90, 10598), (96, 10694), (98, 10724), (101, 10757), (102, 10760), (103, 10772), (109, 10826), (112, 10838), (119, 10892), (121, 10901), (135, 11021), (148, 11165), (151, 11225), (153, 11237), (157, 11306), (159, 11330), (161, 11384), (162, 11387), (163, 11405), (164, 11426), (165, 11444), (171, 11570), (172, 11606), (173, 11612), (176, 11678), (180, 11729), (182, 11762), (183, 11786), (184, 11789), (185, 11798), (187, 11843), (188, 11846), (189, 11852), (191, 11870), (194, 11939), (195, 11945), (210, 12044), (226, 12143), (229, 12161), (233, 12215), (244, 12317), (251, 12341), (259, 12389), (278, 12419), (281, 12440), (286, 12506), (291, 12614), (293, 12638), (294, 12644), (296, 12659), (299, 12674), (300, 12710), (302, 12773), (303, 12776), (304, 12788), (305, 12809), (307, 12869), (311, 13049),

Gene: ShiLan\_14 Start: 9491, Stop: 13018, Start Num: 2

Candidate Starts for ShiLan\_14:

(Start: 1 @9470 has 37 MA's), (Start: 2 @9491 has 184 MA's), (3, 9503), (5, 9542), (6, 9569), (10, 9671), (11, 9719), (12, 9743), (28, 9797), (29, 9803), (33, 9866), (34, 9881), (43, 9998), (47, 10031), (49, 10049), (51, 10073), (54, 10118), (56, 10136), (58, 10148), (62, 10220), (65, 10253), (66, 10256), (70, 10295), (73, 10337), (75, 10367), (77, 10373), (79, 10403), (81, 10439), (82, 10448), (83, 10460), (85, 10493), (86, 10508), (87, 10535), (90, 10556), (91, 10568), (92, 10577), (97, 10673), (98, 10682), (102, 10718), (103, 10730), (106, 10763), (109, 10784), (121, 10859), (125, 10877), (135, 10979), (140, 11054), (151, 11183), (153, 11195), (157, 11264), (160, 11327), (161, 11342), (162, 11345), (163, 11363), (164, 11384), (165, 11402), (169, 11474), (171, 11528), (172, 11564), (173, 11570), (176, 11636), (180, 11687), (182, 11720), (183, 11744), (184, 11747), (185, 11756), (187, 11801), (188, 11804), (189, 11810), (191, 11828), (194, 11897), (195, 11903), (210, 12002), (215, 12041), (216, 12044), (222, 12074), (230, 12128), (233, 12173), (251, 12296), (259, 12344), (278, 12374), (281, 12395), (286, 12461), (288, 12485), (291, 12569), (293, 12593), (294, 12599), (296, 12614), (299, 12629), (300, 12665), (302, 12728), (303, 12731), (304, 12743), (305, 12764), (307, 12824), (311, 13004),

Gene: ShowerHandel\_14 Start: 9492, Stop: 13019, Start Num: 2

Candidate Starts for ShowerHandel\_14:

(Start: 1 @9471 has 37 MA's), (Start: 2 @9492 has 184 MA's), (3, 9504), (5, 9543), (6, 9570), (10, 9672), (11, 9720), (12, 9744), (28, 9798), (29, 9804), (33, 9867), (34, 9882), (43, 9999), (47, 10032), (49, 10050), (51, 10074), (54, 10119), (56, 10137), (58, 10149), (62, 10221), (65, 10254), (66, 10257), (70, 10296), (73, 10338), (75, 10368), (77, 10374), (79, 10404), (81, 10440), (82, 10449), (83, 10461), (85, 10494), (86, 10509), (87, 10536), (90, 10557), (91, 10569), (92, 10578), (97, 10674), (98, 10683), (102, 10719), (103, 10731), (106, 10764), (109, 10785), (121, 10860), (125, 10878), (135, 10980), (140, 11055), (151, 11184), (153, 11196), (157, 11265), (160, 11328), (161, 11343), (162, 11346), (163, 11364), (164, 11385), (165, 11403), (169, 11475), (171, 11529), (172, 11565), (173, 11571), (176, 11637), (180, 11688), (182, 11721), (183, 11745), (184, 11748), (185, 11757), (187, 11802), (188, 11805), (189, 11811), (191, 11829), (194, 11898), (195, 11904), (210, 12003), (215, 12042), (216, 12045), (222, 12075), (230, 12129), (233, 12174), (251, 12297), (259, 12345), (278, 12375), (281, 12396), (286, 12462), (288, 12486), (291, 12570), (293, 12594), (294, 12600), (296, 12615), (299, 12630), (300, 12666), (302, 12729), (303, 12732), (304, 12744), (305, 12765), (307, 12825), (311, 13005),

Gene: ShroomBoi\_14 Start: 9534, Stop: 13061, Start Num: 2

Candidate Starts for ShroomBoi\_14:

(Start: 2 @9534 has 184 MA's), (3, 9546), (5, 9585), (6, 9612), (8, 9669), (10, 9714), (12, 9786), (26, 9828), (27, 9831), (28, 9840), (29, 9846), (32, 9870), (33, 9909), (34, 9924), (43, 10041), (47, 10074), (51, 10116), (54, 10161), (56, 10179), (58, 10191), (62, 10263), (65, 10296), (66, 10299), (70, 10338), (73, 10380), (75, 10410), (77, 10416), (79, 10446), (81, 10482), (82, 10491), (83, 10503), (85, 10536), (90, 10599), (96, 10695), (98, 10725), (101, 10758), (102, 10761), (103, 10773), (109, 10827), (112, 10839), (119, 10893), (121, 10902), (135, 11022), (148, 11166), (151, 11226), (153, 11238), (157, 11307), (159, 11331), (161, 11385), (162, 11388), (163, 11406), (164, 11427), (165, 11445), (169, 11517), (171, 11571), (172, 11607), (173, 11613), (176, 11679), (180, 11730), (182, 11763), (183, 11787), (184, 11790), (185, 11799), (187, 11844), (188, 11847), (189, 11853), (191, 11871), (194, 11940), (195, 11946), (210, 12045), (215, 12084), (216, 12087), (222, 12117), (226, 12144), (233, 12216), (236, 12228), (244, 12315), (251, 12339), (259, 12387), (278, 12417), (281, 12438), (286, 12504), (291, 12612), (293, 12636), (294, 12642), (296, 12657), (299, 12672), (300, 12708), (302, 12771), (303, 12774), (304, 12786), (305, 12807), (307, 12867), (311, 13047),

Gene: SiSi\_14 Start: 9520, Stop: 13002, Start Num: 2

Candidate Starts for SiSi\_14:

(Start: 2 @9520 has 184 MA's), (3, 9532), (5, 9571), (6, 9598), (8, 9655), (10, 9700), (12, 9772), (26, 9814), (27, 9817), (28, 9826), (29, 9832), (33, 9895), (34, 9910), (43, 10027), (47, 10060), (51, 10102), (54, 10147), (56, 10165), (58, 10177), (62, 10249), (65, 10282), (66, 10285), (70, 10324), (73, 10366), (75, 10396), (77, 10402), (79, 10432), (81, 10468), (82, 10477), (83, 10489), (90, 10585), (94, 10648), (99, 10723), (104, 10780), (106, 10792), (112, 10813), (116, 10843), (124, 10885), (125, 10888), (126, 10894), (130, 10906), (144, 11083), (145, 11092), (155, 11239), (157, 11254), (159, 11278), (161, 11329), (162, 11332), (163, 11350), (164, 11371), (165, 11389), (169, 11461), (171, 11515), (172, 11551), (173, 11557), (176, 11623), (180, 11674), (182, 11707), (183, 11731), (184, 11734), (185, 11743), (187, 11788), (188, 11791), (189, 11797), (191, 11815), (194, 11884), (195, 11890), (210, 11989), (215, 12028), (216, 12031), (222, 12061), (226, 12088), (230, 12115), (233, 12160), (251, 12283), (271, 12328), (276, 12358), (281, 12379), (286, 12445), (291, 12553), (293, 12577), (294, 12583), (296, 12598), (299, 12613), (300, 12649), (302, 12712), (303, 12715), (304, 12727), (305, 12748), (307, 12808), (311, 12988),

Gene: SimranZ1\_15 Start: 9342, Stop: 12869, Start Num: 2

Candidate Starts for SimranZ1\_15:

(Start: 1 @9321 has 37 MA's), (Start: 2 @9342 has 184 MA's), (3, 9354), (5, 9393), (6, 9420), (10, 9522), (12, 9594), (26, 9636), (27, 9639), (28, 9648), (29, 9654), (33, 9717), (34, 9732), (43, 9849), (47, 9882), (49, 9900), (51, 9924), (54, 9969), (56, 9987), (58, 9999), (62, 10071), (65, 10104), (66, 10107), (70, 10146), (73, 10188), (75, 10218), (77, 10224), (79, 10254), (81, 10290), (82, 10299), (83, 10311), (87, 10386), (90, 10407), (91, 10419), (92, 10428), (97, 10524), (98, 10533), (101, 10566), (102, 10569), (103, 10581), (106, 10614), (109, 10635), (112, 10647), (121, 10710), (122, 10716), (125, 10728), (135, 10830), (151, 11034), (153, 11046), (157, 11115), (160, 11175), (161, 11190), (162, 11193), (163, 11211), (164, 11232), (165, 11250), (169, 11322), (171, 11376), (172, 11412), (173, 11418), (174, 11451), (176, 11484), (180, 11535), (182, 11568), (183, 11592), (184, 11595), (185, 11604), (187, 11649), (188, 11652), (191, 11676), (194, 11745), (195, 11751), (201, 11799), (210, 11850), (215, 11889), (216, 11892), (222, 11922), (226, 11949), (230, 11976), (233, 12021), (236, 12033), (244, 12120), (251, 12144), (259, 12195), (278, 12225), (281, 12246), (286, 12312), (291, 12420), (293, 12444), (294, 12450), (296, 12465), (297, 12471), (299, 12480), (300, 12516), (302, 12579), (303, 12582), (305, 12615), (306, 12654), (307, 12675), (311, 12855),

Gene: Slim\_16 Start: 9341, Stop: 12829, Start Num: 2

Candidate Starts for Slim\_16:

(Start: 2 @9341 has 184 MA's), (5, 9392), (6, 9419), (8, 9476), (10, 9521), (12, 9593), (28, 9647), (29, 9653), (33, 9716), (34, 9731), (43, 9848), (47, 9881), (49, 9899), (51, 9923), (54, 9968), (56, 9986), (58, 9998), (61, 10055), (62, 10070), (63, 10088), (65, 10103), (66, 10106), (70, 10145), (73, 10187), (75, 10217), (77, 10223), (79, 10253), (81, 10289), (82, 10298), (83, 10310), (85, 10343), (86, 10358), (87, 10385), (90, 10406), (91, 10418), (92, 10427), (94, 10469), (96, 10502), (99, 10544), (100, 10556), (104, 10601), (106, 10613), (116, 10664), (117, 10673), (124, 10706), (125, 10709), (126, 10715), (130, 10727), (134, 10790), (137, 10838), (143, 10901), (144, 10904), (145, 10913), (157, 11078), (158, 11087), (160, 11138), (161, 11153), (162, 11156), (163, 11174), (164, 11195), (165, 11213), (169, 11285), (171, 11339), (172, 11375), (173, 11381), (174, 11414), (176, 11447), (180, 11498), (182, 11531), (183, 11555), (184, 11558), (185, 11567), (187, 11612), (188, 11615), (189, 11621), (191, 11639), (194, 11708), (195, 11714), (210, 11813), (215, 11852), (216, 11855), (222, 11885), (226, 11912), (230, 11939), (233, 11984), (251, 12107), (271, 12155), (276, 12185), (281, 12206), (286, 12272), (291, 12380), (293, 12404), (294, 12410), (296, 12425), (299, 12440), (300, 12476), (302, 12539), (303, 12542), (304, 12554), (305, 12575), (307, 12635), (311, 12815),

Gene: Sparkdehlily\_14 Start: 9515, Stop: 13042, Start Num: 2

Candidate Starts for Sparkdehlily\_14:

(Start: 1 @9494 has 37 MA's), (Start: 2 @9515 has 184 MA's), (3, 9527), (5, 9566), (6, 9593), (10, 9695), (12, 9767), (26, 9809), (27, 9812), (28, 9821), (29, 9827), (33, 9890), (34, 9905), (43, 10022), (47, 10055), (49, 10073), (51, 10097), (54, 10142), (56, 10160), (58, 10172), (61, 10229), (62, 10244), (63, 10262), (65, 10277), (66, 10280), (70, 10319), (73, 10361), (75, 10391), (77, 10397), (79, 10427), (81, 10463), (82, 10472), (83, 10484), (85, 10517), (86, 10532), (87, 10559), (90, 10580), (91, 10592), (92, 10601), (97, 10697), (98, 10706), (101, 10739), (102, 10742), (103, 10754), (106, 10787), (109, 10808), (112, 10820), (121, 10883), (122, 10889), (125, 10901), (135, 11003), (151, 11207), (153, 11219), (157, 11288), (158, 11297), (160, 11351), (161, 11366), (162, 11369), (163, 11387), (164, 11408), (165, 11426), (169, 11498), (171, 11552), (172, 11588), (173, 11594), (176, 11660), (180, 11711), (182, 11744), (183, 11768), (184, 11771), (185, 11780), (187, 11825), (188, 11828), (189, 11834), (191, 11852), (194, 11921), (195, 11927), (210, 12026), (215, 12065), (216, 12068), (222, 12098), (230, 12152), (233, 12197), (251, 12320), (259, 12368), (278, 12398), (281, 12419), (286, 12485), (288, 12509), (291, 12593), (293, 12617), (294, 12623), (296, 12638), (299, 12653), (300, 12689), (302, 12752), (303, 12755), (304, 12767), (305, 12788), (307, 12848), (311, 13028),

Gene: Spartacus\_14 Start: 9517, Stop: 13041, Start Num: 2

Candidate Starts for Spartacus\_14:

(Start: 1 @9496 has 37 MA's), (Start: 2 @9517 has 184 MA's), (3, 9529), (5, 9568), (6, 9595), (10, 9697), (11, 9745), (12, 9769), (28, 9823), (29, 9829), (33, 9892), (34, 9907), (43, 10024), (47, 10057),

(49, 10075), (51, 10099), (54, 10144), (56, 10162), (58, 10174), (62, 10246), (65, 10279), (66, 10282), (70, 10321), (72, 10339), (73, 10363), (75, 10393), (77, 10399), (79, 10429), (81, 10465), (82, 10474), (83, 10486), (85, 10519), (86, 10534), (90, 10582), (92, 10603), (97, 10699), (98, 10708), (101, 10741), (102, 10744), (103, 10756), (106, 10789), (109, 10810), (112, 10822), (121, 10885), (122, 10891), (125, 10903), (135, 11005), (140, 11080), (151, 11209), (153, 11221), (157, 11290), (158, 11299), (160, 11350), (161, 11365), (162, 11368), (163, 11386), (164, 11407), (165, 11425), (169, 11497), (171, 11551), (172, 11587), (173, 11593), (174, 11626), (176, 11659), (178, 11680), (180, 11710), (182, 11743), (183, 11767), (184, 11770), (185, 11779), (187, 11824), (188, 11827), (191, 11851), (194, 11920), (195, 11926), (210, 12025), (215, 12064), (216, 12067), (222, 12097), (226, 12124), (230, 12151), (233, 12196), (251, 12319), (259, 12367), (278, 12397), (281, 12418), (286, 12484), (291, 12592), (293, 12616), (294, 12622), (296, 12637), (299, 12652), (300, 12688), (302, 12751), (303, 12754), (304, 12766), (305, 12787), (307, 12847), (311, 13027),

Gene: Spikelee\_15 Start: 9323, Stop: 12835, Start Num: 1

Candidate Starts for Spikelee\_15:

(Start: 1 @9323 has 37 MA's), (Start: 2 @9344 has 184 MA's), (3, 9356), (5, 9395), (6, 9422), (10, 9524), (11, 9572), (12, 9596), (28, 9650), (29, 9656), (33, 9719), (34, 9734), (43, 9851), (47, 9884), (51, 9926), (54, 9971), (56, 9989), (58, 10001), (61, 10058), (62, 10073), (63, 10091), (65, 10106), (66, 10109), (70, 10148), (73, 10190), (75, 10220), (77, 10226), (79, 10256), (81, 10292), (82, 10301), (83, 10313), (85, 10346), (86, 10361), (87, 10388), (90, 10409), (91, 10421), (92, 10430), (94, 10472), (96, 10505), (99, 10547), (100, 10559), (104, 10604), (106, 10616), (116, 10667), (117, 10676), (125, 10712), (126, 10718), (130, 10730), (134, 10793), (137, 10841), (143, 10904), (144, 10907), (145, 10916), (157, 11081), (160, 11144), (161, 11159), (162, 11162), (163, 11180), (164, 11201), (165, 11219), (169, 11291), (171, 11345), (172, 11381), (173, 11387), (176, 11453), (180, 11504), (182, 11537), (183, 11561), (184, 11564), (185, 11573), (187, 11618), (188, 11621), (191, 11645), (194, 11714), (195, 11720), (210, 11819), (215, 11858), (216, 11861), (222, 11891), (226, 11918), (230, 11945), (233, 11990), (251, 12113), (271, 12161), (276, 12191), (281, 12212), (286, 12278), (291, 12386), (293, 12410), (294, 12416), (296, 12431), (299, 12446), (300, 12482), (302, 12545), (303, 12548), (304, 12560), (305, 12581), (307, 12641), (311, 12821),

Gene: Spoonbill\_14 Start: 9492, Stop: 13016, Start Num: 2

Candidate Starts for Spoonbill\_14:

(Start: 1 @9471 has 37 MA's), (Start: 2 @9492 has 184 MA's), (3, 9504), (5, 9543), (6, 9570), (10, 9672), (11, 9720), (12, 9744), (26, 9786), (28, 9798), (29, 9804), (33, 9867), (34, 9882), (43, 9999), (47, 10032), (51, 10074), (54, 10119), (56, 10137), (58, 10149), (62, 10221), (65, 10254), (66, 10257), (70, 10296), (73, 10338), (75, 10368), (77, 10374), (79, 10404), (81, 10440), (82, 10449), (83, 10461), (85, 10494), (90, 10557), (92, 10578), (97, 10674), (98, 10683), (102, 10719), (103, 10731), (106, 10764), (109, 10785), (121, 10860), (125, 10878), (135, 10980), (148, 11124), (151, 11184), (153, 11196), (157, 11265), (158, 11274), (160, 11328), (161, 11343), (162, 11346), (163, 11364), (164, 11385), (165, 11403), (169, 11475), (171, 11529), (172, 11565), (173, 11571), (176, 11637), (180, 11688), (182, 11721), (183, 11745), (184, 11748), (185, 11757), (187, 11802), (188, 11805), (189, 11811), (191, 11829), (194, 11898), (195, 11904), (210, 12003), (215, 12042), (216, 12045), (222, 12075), (226, 12102), (230, 12129), (233, 12174), (251, 12297), (259, 12342), (278, 12372), (281, 12393), (286, 12459), (291, 12567), (293, 12591), (294, 12597), (296, 12612), (299, 12627), (300, 12663), (302, 12726), (303, 12729), (304, 12741), (305, 12762), (307, 12822), (311, 13002),

Gene: Squirty\_15 Start: 9323, Stop: 12916, Start Num: 1

Candidate Starts for Squirty\_15:

(Start: 1 @9323 has 37 MA's), (Start: 2 @9344 has 184 MA's), (3, 9356), (5, 9395), (6, 9422), (10, 9524), (11, 9572), (12, 9596), (28, 9650), (29, 9656), (32, 9680), (33, 9719), (34, 9734), (37, 9776), (40, 9836), (42, 9851), (46, 9902), (47, 9905), (48, 9914), (52, 9965), (53, 9980), (57, 10013), (59, 10043), (64, 10109), (67, 10130), (68, 10145), (73, 10196), (74, 10199), (82, 10307), (85, 10352), (91, 10418), (92, 10427), (98, 10532), (99, 10544), (102, 10568), (108, 10625), (111, 10643), (122, 10718), (127,

10739), (149, 10916), (160, 11081), (161, 11096), (162, 11099), (163, 11117), (164, 11138), (165, 11156), (169, 11228), (171, 11282), (172, 11318), (173, 11324), (174, 11357), (176, 11390), (180, 11441), (182, 11474), (183, 11498), (184, 11501), (185, 11510), (187, 11555), (188, 11558), (191, 11582), (194, 11651), (195, 11657), (222, 11828), (230, 11882), (233, 11927), (254, 12086), (258, 12125), (263, 12149), (264, 12155), (267, 12161), (272, 12197), (286, 12359), (291, 12467), (293, 12491), (294, 12497), (296, 12512), (297, 12518), (300, 12563), (302, 12626), (303, 12629), (304, 12641), (305, 12662), (307, 12722), (311, 12902),

Gene: StAnnes\_14 Start: 9534, Stop: 13058, Start Num: 2

Candidate Starts for StAnnes\_14:

(Start: 2 @9534 has 184 MA's), (3, 9546), (5, 9585), (6, 9612), (8, 9669), (10, 9714), (12, 9786), (26, 9828), (27, 9831), (28, 9840), (29, 9846), (33, 9909), (34, 9924), (43, 10041), (47, 10074), (51, 10116), (54, 10161), (56, 10179), (58, 10191), (62, 10263), (65, 10296), (66, 10299), (70, 10338), (73, 10380), (75, 10410), (77, 10416), (79, 10446), (81, 10482), (82, 10491), (83, 10503), (85, 10536), (90, 10599), (96, 10695), (98, 10725), (101, 10758), (102, 10761), (103, 10773), (109, 10827), (112, 10839), (119, 10893), (121, 10902), (135, 11022), (148, 11166), (151, 11226), (153, 11238), (157, 11307), (159, 11331), (161, 11385), (162, 11388), (164, 11427), (165, 11445), (171, 11571), (172, 11607), (173, 11613), (176, 11679), (180, 11730), (182, 11763), (183, 11787), (184, 11790), (185, 11799), (187, 11844), (188, 11847), (189, 11853), (191, 11871), (194, 11940), (195, 11946), (210, 12045), (226, 12144), (229, 12162), (233, 12216), (236, 12228), (244, 12315), (251, 12339), (259, 12384), (278, 12414), (281, 12435), (286, 12501), (291, 12609), (293, 12633), (294, 12639), (296, 12654), (299, 12669), (300, 12705), (302, 12768), (303, 12771), (304, 12783), (305, 12804), (307, 12864), (311, 13044),

Gene: Stap\_15 Start: 9343, Stop: 13041, Start Num: 2

Candidate Starts for Stap\_15:

(Start: 1 @9322 has 37 MA's), (Start: 2 @9343 has 184 MA's), (3, 9355), (5, 9394), (6, 9421), (10, 9523), (11, 9571), (12, 9595), (26, 9637), (27, 9640), (28, 9649), (29, 9655), (33, 9718), (34, 9733), (43, 9850), (47, 9883), (49, 9901), (51, 9925), (54, 9970), (56, 9988), (58, 10000), (62, 10072), (65, 10105), (66, 10108), (70, 10147), (73, 10189), (75, 10219), (77, 10225), (79, 10255), (81, 10291), (82, 10300), (83, 10312), (85, 10345), (90, 10408), (92, 10429), (97, 10525), (98, 10534), (101, 10567), (102, 10570), (103, 10582), (106, 10615), (109, 10636), (121, 10711), (122, 10717), (125, 10729), (135, 10831), (140, 10906), (151, 11035), (153, 11047), (157, 11116), (160, 11176), (161, 11191), (162, 11194), (163, 11212), (164, 11233), (165, 11251), (169, 11323), (171, 11377), (172, 11413), (173, 11419), (174, 11452), (176, 11485), (180, 11536), (182, 11569), (183, 11593), (184, 11596), (185, 11605), (187, 11650), (188, 11653), (191, 11677), (196, 11770), (213, 11917), (217, 11938), (233, 12079), (238, 12103), (240, 12130), (267, 12310), (271, 12340), (279, 12412), (287, 12499), (291, 12592), (293, 12616), (294, 12622), (296, 12637), (297, 12643), (300, 12688), (302, 12751), (303, 12754), (305, 12787), (306, 12826), (307, 12847), (311, 13027),

Gene: Starcevich\_15 Start: 9343, Stop: 12831, Start Num: 2

Candidate Starts for Starcevich\_15:

(Start: 2 @9343 has 184 MA's), (5, 9394), (6, 9421), (8, 9478), (10, 9523), (12, 9595), (28, 9649), (29, 9655), (33, 9718), (34, 9733), (43, 9850), (47, 9883), (49, 9901), (51, 9925), (54, 9970), (56, 9988), (58, 10000), (61, 10057), (62, 10072), (63, 10090), (65, 10105), (66, 10108), (70, 10147), (73, 10189), (75, 10219), (77, 10225), (79, 10255), (81, 10291), (82, 10300), (83, 10312), (85, 10345), (86, 10360), (87, 10387), (90, 10408), (91, 10420), (92, 10429), (94, 10471), (96, 10504), (99, 10546), (100, 10558), (104, 10603), (106, 10615), (116, 10666), (117, 10675), (124, 10708), (125, 10711), (126, 10717), (130, 10729), (134, 10792), (137, 10840), (143, 10903), (144, 10906), (145, 10915), (157, 11080), (158, 11089), (160, 11140), (161, 11155), (162, 11158), (163, 11176), (164, 11197), (165, 11215), (169, 11287), (171, 11341), (172, 11377), (173, 11383), (174, 11416), (176, 11449), (180, 11500), (182, 11533), (183, 11557), (184, 11560), (185, 11569), (187, 11614), (188, 11617), (189, 11623), (191, 11641), (194, 11710), (195, 11716), (210, 11815), (215, 11854), (216, 11857), (222, 11887),



(226, 11914), (230, 11941), (233, 11986), (251, 12109), (271, 12157), (276, 12187), (281, 12208), (286, 12274), (291, 12382), (293, 12406), (294, 12412), (296, 12427), (299, 12442), (300, 12478), (302, 12541), (303, 12544), (304, 12556), (305, 12577), (307, 12637), (311, 12817),

Gene: Strokeseat\_14 Start: 9488, Stop: 13123, Start Num: 2

Candidate Starts for Strokeseat\_14:

(Start: 1 @9467 has 37 MA's), (Start: 2 @9488 has 184 MA's), (3, 9500), (5, 9539), (6, 9566), (10, 9668), (12, 9740), (26, 9782), (28, 9794), (29, 9800), (33, 9863), (34, 9878), (43, 9995), (47, 10028), (49, 10046), (51, 10070), (54, 10115), (56, 10133), (58, 10145), (61, 10202), (62, 10217), (63, 10235), (65, 10250), (66, 10253), (70, 10292), (73, 10334), (75, 10364), (77, 10370), (79, 10400), (80, 10424), (81, 10436), (82, 10445), (83, 10457), (85, 10490), (86, 10505), (87, 10532), (90, 10553), (91, 10565), (92, 10574), (97, 10670), (98, 10679), (101, 10712), (102, 10715), (103, 10727), (106, 10760), (109, 10781), (112, 10793), (121, 10856), (122, 10862), (125, 10874), (135, 10976), (151, 11180), (153, 11192), (157, 11258), (158, 11267), (160, 11321), (161, 11336), (162, 11339), (163, 11357), (164, 11378), (165, 11396), (169, 11468), (171, 11522), (172, 11558), (173, 11564), (174, 11597), (176, 11630), (180, 11681), (182, 11714), (183, 11738), (184, 11741), (185, 11750), (187, 11795), (188, 11798), (191, 11822), (194, 11894), (195, 11900), (203, 11966), (204, 11969), (205, 11972), (207, 11990), (209, 12002), (218, 12059), (223, 12092), (228, 12119), (234, 12179), (235, 12182), (239, 12224), (241, 12233), (247, 12287), (249, 12293), (252, 12302), (257, 12356), (258, 12362), (261, 12368), (270, 12404), (281, 12500), (286, 12566), (291, 12674), (293, 12698), (294, 12704), (296, 12719), (299, 12734), (300, 12770), (302, 12833), (303, 12836), (305, 12869), (307, 12929), (311, 13109),

Gene: SuperGrey\_15 Start: 10038, Stop: 13685, Start Num: 2

Candidate Starts for SuperGrey\_15:

(Start: 2 @10038 has 184 MA's), (5, 10089), (6, 10116), (8, 10173), (10, 10218), (12, 10290), (28, 10344), (29, 10350), (33, 10413), (34, 10428), (43, 10545), (47, 10578), (49, 10596), (51, 10620), (54, 10665), (56, 10683), (58, 10695), (62, 10767), (65, 10800), (66, 10803), (70, 10842), (73, 10884), (75, 10914), (77, 10920), (79, 10950), (81, 10986), (82, 10995), (83, 11007), (85, 11040), (90, 11103), (96, 11199), (98, 11229), (101, 11262), (102, 11265), (103, 11277), (109, 11331), (112, 11343), (119, 11397), (121, 11406), (135, 11526), (148, 11670), (151, 11730), (153, 11742), (157, 11811), (159, 11835), (161, 11889), (162, 11892), (164, 11931), (165, 11949), (169, 12021), (171, 12075), (172, 12111), (173, 12117), (176, 12183), (180, 12234), (182, 12267), (183, 12291), (184, 12294), (185, 12303), (187, 12348), (188, 12351), (189, 12357), (191, 12375), (194, 12444), (195, 12450), (203, 12516), (204, 12519), (205, 12522), (207, 12540), (216, 12600), (218, 12609), (223, 12642), (228, 12669), (235, 12732), (241, 12783), (247, 12837), (252, 12852), (256, 12906), (258, 12915), (261, 12921), (270, 12957), (274, 12984), (281, 13062), (286, 13128), (291, 13236), (293, 13260), (294, 13266), (296, 13281), (299, 13296), (300, 13332), (302, 13395), (303, 13398), (305, 13431), (306, 13470), (307, 13491), (311, 13671),

Gene: SwagPiggett\_14 Start: 9492, Stop: 13019, Start Num: 2

Candidate Starts for SwagPiggett\_14:

(Start: 1 @9471 has 37 MA's), (Start: 2 @9492 has 184 MA's), (3, 9504), (5, 9543), (6, 9570), (10, 9672), (11, 9720), (12, 9744), (28, 9798), (29, 9804), (33, 9867), (34, 9882), (43, 9999), (47, 10032), (49, 10050), (51, 10074), (54, 10119), (56, 10137), (58, 10149), (62, 10221), (65, 10254), (66, 10257), (70, 10296), (73, 10338), (75, 10368), (77, 10374), (79, 10404), (81, 10440), (82, 10449), (83, 10461), (85, 10494), (86, 10509), (87, 10536), (90, 10557), (91, 10569), (92, 10578), (97, 10674), (98, 10683), (102, 10719), (103, 10731), (106, 10764), (109, 10785), (121, 10860), (125, 10878), (135, 10980), (140, 11055), (151, 11184), (153, 11196), (157, 11265), (160, 11328), (161, 11343), (162, 11346), (163, 11364), (164, 11385), (165, 11403), (169, 11475), (171, 11529), (172, 11565), (173, 11571), (176, 11637), (180, 11688), (182, 11721), (183, 11745), (184, 11748), (185, 11757), (187, 11802), (188, 11805), (189, 11811), (191, 11829), (194, 11898), (195, 11904), (210, 12003), (215, 12042), (216, 12045), (222, 12075), (230, 12129), (233, 12174), (251, 12297), (259, 12345), (278, 12375),

(281, 12396), (286, 12462), (288, 12486), (291, 12570), (293, 12594), (294, 12600), (296, 12615), (299, 12630), (300, 12666), (302, 12729), (303, 12732), (304, 12744), (305, 12765), (307, 12825), (311, 13005),

Gene: TChen\_15 Start: 9943, Stop: 13467, Start Num: 2

Candidate Starts for TChen\_15:

(Start: 2 @9943 has 184 MA's), (4, 9973), (8, 10054), (9, 10066), (11, 10114), (28, 10192), (32, 10222), (33, 10261), (34, 10276), (35, 10282), (36, 10309), (39, 10333), (41, 10384), (45, 10435), (47, 10447), (50, 10468), (51, 10489), (52, 10507), (57, 10555), (63, 10645), (64, 10651), (72, 10717), (73, 10741), (77, 10777), (78, 10786), (81, 10843), (88, 10939), (89, 10942), (90, 10951), (92, 10972), (97, 11068), (103, 11125), (105, 11149), (112, 11188), (115, 11209), (118, 11242), (122, 11260), (123, 11266), (129, 11287), (135, 11371), (139, 11425), (142, 11455), (147, 11509), (148, 11512), (152, 11584), (154, 11620), (161, 11713), (162, 11716), (163, 11734), (164, 11755), (166, 11776), (167, 11815), (169, 11845), (170, 11860), (173, 11941), (174, 11974), (175, 11977), (177, 12016), (179, 12061), (180, 12079), (181, 12100), (183, 12136), (184, 12139), (185, 12148), (187, 12193), (188, 12196), (190, 12205), (193, 12283), (196, 12310), (197, 12316), (198, 12340), (210, 12403), (216, 12445), (222, 12475), (230, 12529), (232, 12553), (233, 12574), (250, 12697), (284, 12874), (285, 12886), (287, 12910), (292, 13018), (299, 13063), (302, 13162), (303, 13165), (306, 13237), (308, 13267), (309, 13312), (312, 13462),

Gene: TDanisky\_14 Start: 9515, Stop: 13042, Start Num: 2

Candidate Starts for TDanisky\_14:

(Start: 1 @9494 has 37 MA's), (Start: 2 @9515 has 184 MA's), (3, 9527), (5, 9566), (6, 9593), (10, 9695), (12, 9767), (26, 9809), (27, 9812), (28, 9821), (29, 9827), (33, 9890), (34, 9905), (43, 10022), (47, 10055), (49, 10073), (51, 10097), (54, 10142), (56, 10160), (58, 10172), (61, 10229), (62, 10244), (63, 10262), (65, 10277), (66, 10280), (70, 10319), (73, 10361), (75, 10391), (77, 10397), (79, 10427), (81, 10463), (82, 10472), (83, 10484), (85, 10517), (86, 10532), (87, 10559), (90, 10580), (91, 10592), (92, 10601), (97, 10697), (98, 10706), (101, 10739), (102, 10742), (103, 10754), (106, 10787), (109, 10808), (112, 10820), (121, 10883), (122, 10889), (125, 10901), (135, 11003), (151, 11207), (153, 11219), (157, 11288), (158, 11297), (160, 11351), (161, 11366), (162, 11369), (163, 11387), (164, 11408), (165, 11426), (169, 11498), (171, 11552), (172, 11588), (173, 11594), (176, 11660), (180, 11711), (182, 11744), (183, 11768), (184, 11771), (185, 11780), (187, 11825), (188, 11828), (189, 11834), (191, 11852), (194, 11921), (195, 11927), (210, 12026), (215, 12065), (216, 12068), (222, 12098), (230, 12152), (233, 12197), (251, 12320), (259, 12368), (278, 12398), (281, 12419), (286, 12485), (288, 12509), (291, 12593), (293, 12617), (294, 12623), (296, 12638), (299, 12653), (300, 12689), (302, 12752), (303, 12755), (304, 12767), (305, 12788), (307, 12848), (311, 13028),

Gene: Taj\_14 Start: 9532, Stop: 13059, Start Num: 2

Candidate Starts for Taj\_14:

(Start: 2 @9532 has 184 MA's), (3, 9544), (5, 9583), (6, 9610), (8, 9667), (10, 9712), (12, 9784), (28, 9838), (29, 9844), (33, 9907), (34, 9922), (43, 10039), (47, 10072), (51, 10114), (54, 10159), (56, 10177), (58, 10189), (62, 10261), (65, 10294), (66, 10297), (70, 10336), (73, 10378), (75, 10408), (77, 10414), (79, 10444), (81, 10480), (82, 10489), (83, 10501), (90, 10597), (96, 10693), (98, 10723), (101, 10756), (102, 10759), (103, 10771), (109, 10825), (112, 10837), (119, 10891), (121, 10900), (135, 11020), (148, 11164), (151, 11224), (153, 11236), (157, 11305), (159, 11329), (161, 11383), (162, 11386), (163, 11404), (164, 11425), (165, 11443), (171, 11569), (172, 11605), (173, 11611), (176, 11677), (180, 11728), (182, 11761), (183, 11785), (184, 11788), (185, 11797), (187, 11842), (188, 11845), (189, 11851), (191, 11869), (194, 11938), (195, 11944), (210, 12043), (215, 12082), (216, 12085), (222, 12115), (226, 12142), (230, 12169), (233, 12214), (251, 12337), (259, 12385), (278, 12415), (281, 12436), (286, 12502), (291, 12610), (293, 12634), (294, 12640), (296, 12655), (299, 12670), (300, 12706), (302, 12769), (303, 12772), (304, 12784), (305, 12805), (307, 12865), (311, 13045),

Gene: Tchotchke\_15 Start: 9338, Stop: 12970, Start Num: 2

Candidate Starts for Tchotchke\_15:

(Start: 1 @9317 has 37 MA's), (Start: 2 @9338 has 184 MA's), (3, 9350), (5, 9389), (6, 9416), (10, 9518), (11, 9566), (12, 9590), (26, 9632), (27, 9635), (28, 9644), (29, 9650), (33, 9713), (34, 9728), (43, 9845), (47, 9878), (49, 9896), (51, 9920), (54, 9965), (56, 9983), (58, 9995), (62, 10067), (65, 10100), (66, 10103), (70, 10142), (73, 10184), (75, 10214), (77, 10220), (79, 10250), (81, 10286), (82, 10295), (83, 10307), (90, 10403), (94, 10466), (96, 10499), (99, 10541), (100, 10553), (104, 10598), (106, 10610), (116, 10661), (117, 10670), (124, 10703), (125, 10706), (126, 10712), (130, 10724), (134, 10787), (137, 10835), (143, 10898), (144, 10901), (145, 10910), (157, 11075), (158, 11084), (160, 11135), (161, 11150), (162, 11153), (163, 11171), (164, 11192), (165, 11210), (169, 11282), (171, 11336), (172, 11372), (173, 11378), (174, 11411), (176, 11444), (180, 11495), (182, 11528), (183, 11552), (184, 11555), (185, 11564), (187, 11609), (188, 11612), (191, 11636), (194, 11705), (195, 11711), (222, 11882), (230, 11936), (233, 11981), (254, 12140), (258, 12179), (263, 12203), (264, 12209), (267, 12215), (272, 12251), (286, 12416), (291, 12524), (293, 12548), (294, 12554), (296, 12569), (297, 12575), (299, 12584), (300, 12620), (302, 12683), (303, 12686), (305, 12719), (306, 12758), (307, 12779), (311, 12956),

Gene: ThetaBob\_15 Start: 9826, Stop: 13350, Start Num: 2

Candidate Starts for ThetaBob\_15:

(Start: 2 @9826 has 184 MA's), (4, 9856), (8, 9937), (9, 9949), (11, 9997), (28, 10075), (32, 10105), (33, 10144), (34, 10159), (35, 10165), (36, 10192), (39, 10216), (41, 10267), (45, 10318), (47, 10330), (50, 10351), (51, 10372), (52, 10390), (57, 10438), (63, 10528), (64, 10534), (72, 10600), (73, 10624), (77, 10660), (78, 10669), (81, 10726), (88, 10822), (89, 10825), (90, 10834), (92, 10855), (97, 10951), (103, 11008), (105, 11032), (112, 11071), (115, 11092), (118, 11125), (122, 11143), (123, 11149), (129, 11170), (135, 11254), (139, 11308), (142, 11338), (147, 11392), (148, 11395), (152, 11467), (154, 11503), (161, 11596), (162, 11599), (163, 11617), (164, 11638), (166, 11659), (167, 11698), (169, 11728), (170, 11743), (173, 11824), (174, 11857), (175, 11860), (177, 11899), (179, 11944), (180, 11962), (181, 11983), (183, 12019), (184, 12022), (185, 12031), (187, 12076), (188, 12079), (190, 12088), (193, 12166), (196, 12193), (210, 12286), (216, 12328), (222, 12358), (230, 12412), (233, 12457), (253, 12607), (262, 12658), (278, 12706), (285, 12769), (286, 12784), (287, 12793), (290, 12865), (292, 12901), (295, 12922), (298, 12943), (299, 12946), (302, 13045), (303, 13048), (305, 13081), (309, 13195), (312, 13345),

Gene: TootsiePop\_15 Start: 9353, Stop: 12883, Start Num: 2

Candidate Starts for TootsiePop\_15:

(Start: 1 @9332 has 37 MA's), (Start: 2 @9353 has 184 MA's), (3, 9365), (5, 9404), (6, 9431), (10, 9533), (12, 9605), (26, 9647), (28, 9659), (29, 9665), (33, 9728), (34, 9743), (43, 9860), (47, 9893), (49, 9911), (51, 9935), (54, 9980), (56, 9998), (58, 10010), (61, 10067), (62, 10082), (63, 10100), (65, 10115), (66, 10118), (70, 10157), (73, 10199), (75, 10229), (77, 10235), (79, 10265), (81, 10301), (82, 10310), (83, 10322), (85, 10355), (86, 10370), (87, 10397), (90, 10418), (92, 10439), (97, 10535), (98, 10544), (102, 10580), (103, 10592), (106, 10625), (109, 10646), (121, 10721), (122, 10727), (125, 10739), (135, 10841), (140, 10916), (151, 11045), (153, 11057), (157, 11126), (158, 11135), (160, 11186), (161, 11201), (162, 11204), (163, 11222), (164, 11243), (165, 11261), (169, 11333), (171, 11387), (172, 11423), (173, 11429), (176, 11495), (180, 11546), (182, 11579), (183, 11603), (184, 11606), (185, 11615), (187, 11660), (188, 11663), (191, 11687), (194, 11759), (195, 11765), (226, 11963), (229, 11981), (232, 12014), (233, 12035), (244, 12137), (251, 12161), (259, 12209), (281, 12260), (286, 12326), (291, 12434), (293, 12458), (294, 12464), (296, 12479), (297, 12485), (299, 12494), (300, 12530), (302, 12593), (303, 12596), (304, 12608), (305, 12629), (306, 12668), (307, 12689), (311, 12869),

Gene: Tootsieroll\_15 Start: 9343, Stop: 12867, Start Num: 2

Candidate Starts for Tootsieroll\_15:

(Start: 1 @9322 has 37 MA's), (Start: 2 @9343 has 184 MA's), (3, 9355), (5, 9394), (6, 9421), (10, 9523), (11, 9571), (12, 9595), (26, 9637), (27, 9640), (28, 9649), (29, 9655), (33, 9718), (34, 9733), (43, 9850), (47, 9883), (49, 9901), (51, 9925), (54, 9970), (56, 9988), (58, 10000), (62, 10072), (63, 10090), (65, 10105), (66, 10108), (70, 10147), (73, 10189), (75, 10219), (77, 10225), (79, 10255), (81, 10291), (82, 10300), (83, 10312), (85, 10345), (90, 10408), (92, 10429), (97, 10525), (98, 10534), (101, 10567), (102, 10570), (103, 10582), (106, 10615), (109, 10636), (121, 10711), (122, 10717), (125, 10729), (135, 10831), (140, 10906), (151, 11035), (153, 11047), (157, 11116), (160, 11176), (161, 11191), (162, 11194), (163, 11212), (164, 11233), (165, 11251), (169, 11323), (171, 11377), (172, 11413), (173, 11419), (174, 11452), (176, 11485), (180, 11536), (182, 11569), (183, 11593), (184, 11596), (185, 11605), (187, 11650), (188, 11653), (189, 11659), (191, 11677), (194, 11746), (195, 11752), (210, 11851), (215, 11890), (216, 11893), (222, 11923), (230, 11977), (233, 12022), (251, 12145), (259, 12193), (278, 12223), (281, 12244), (286, 12310), (291, 12418), (293, 12442), (294, 12448), (296, 12463), (299, 12478), (300, 12514), (302, 12577), (303, 12580), (304, 12592), (305, 12613), (306, 12652), (307, 12673), (311, 12853),

Gene: Toron\_15 Start: 9936, Stop: 13451, Start Num: 2

Candidate Starts for Toron\_15:

(Start: 2 @9936 has 184 MA's), (4, 9966), (9, 10059), (11, 10107), (28, 10185), (32, 10215), (34, 10269), (35, 10275), (36, 10302), (41, 10377), (44, 10422), (45, 10428), (46, 10437), (47, 10440), (55, 10536), (57, 10548), (60, 10590), (63, 10638), (64, 10644), (69, 10683), (71, 10704), (72, 10710), (77, 10770), (81, 10836), (85, 10890), (88, 10932), (89, 10935), (92, 10965), (93, 10977), (95, 11028), (97, 11061), (103, 11118), (104, 11139), (105, 11142), (112, 11181), (114, 11193), (115, 11202), (122, 11253), (123, 11259), (129, 11280), (135, 11364), (142, 11448), (146, 11481), (147, 11505), (152, 11577), (153, 11583), (158, 11649), (163, 11727), (164, 11748), (166, 11769), (167, 11808), (169, 11838), (170, 11853), (172, 11928), (174, 11967), (175, 11970), (176, 12000), (177, 12009), (179, 12054), (180, 12072), (183, 12129), (186, 12153), (188, 12189), (193, 12276), (196, 12303), (199, 12336), (216, 12438), (222, 12468), (226, 12495), (230, 12522), (233, 12567), (286, 12888), (287, 12897), (289, 12951), (290, 12969), (292, 13005), (295, 13026), (299, 13050), (301, 13140), (302, 13149), (303, 13152), (306, 13224), (310, 13365), (312, 13446),

Gene: Totinger\_15 Start: 9341, Stop: 12829, Start Num: 2

Candidate Starts for Totinger\_15:

(Start: 2 @9341 has 184 MA's), (5, 9392), (6, 9419), (8, 9476), (10, 9521), (12, 9593), (28, 9647), (29, 9653), (33, 9716), (34, 9731), (43, 9848), (47, 9881), (49, 9899), (51, 9923), (54, 9968), (56, 9986), (58, 9998), (61, 10055), (62, 10070), (63, 10088), (65, 10103), (66, 10106), (70, 10145), (73, 10187), (75, 10217), (77, 10223), (79, 10253), (81, 10289), (82, 10298), (83, 10310), (85, 10343), (86, 10358), (87, 10385), (90, 10406), (91, 10418), (92, 10427), (94, 10469), (96, 10502), (99, 10544), (100, 10556), (104, 10601), (106, 10613), (116, 10664), (117, 10673), (124, 10706), (125, 10709), (126, 10715), (130, 10727), (134, 10790), (137, 10838), (143, 10901), (144, 10904), (145, 10913), (157, 11078), (158, 11087), (160, 11138), (161, 11153), (162, 11156), (163, 11174), (164, 11195), (165, 11213), (169, 11285), (171, 11339), (172, 11375), (173, 11381), (174, 11414), (176, 11447), (180, 11498), (182, 11531), (183, 11555), (184, 11558), (185, 11567), (187, 11612), (188, 11615), (189, 11621), (191, 11639), (194, 11708), (195, 11714), (210, 11813), (215, 11852), (216, 11855), (222, 11885), (226, 11912), (230, 11939), (233, 11984), (251, 12107), (271, 12155), (276, 12185), (281, 12206), (286, 12272), (291, 12380), (293, 12404), (294, 12410), (296, 12425), (299, 12440), (300, 12476), (302, 12539), (303, 12542), (304, 12554), (305, 12575), (307, 12635), (311, 12815),

Gene: Tweety\_14 Start: 9534, Stop: 13064, Start Num: 2

Candidate Starts for Tweety\_14:

(Start: 2 @9534 has 184 MA's), (3, 9546), (5, 9585), (6, 9612), (8, 9669), (10, 9714), (12, 9786), (26, 9828), (27, 9831), (28, 9840), (29, 9846), (33, 9909), (34, 9924), (43, 10041), (47, 10074), (51, 10116), (54, 10161), (56, 10179), (58, 10191), (62, 10263), (65, 10296), (66, 10299), (70, 10338), (73, 10380), (75, 10410), (77, 10416), (79, 10446), (81, 10482), (82, 10491), (83, 10503), (90, 10599), (92, 10620),

(96, 10695), (97, 10716), (98, 10725), (101, 10758), (102, 10761), (103, 10773), (109, 10827), (112, 10839), (119, 10893), (121, 10902), (128, 10932), (135, 11022), (148, 11166), (151, 11226), (153, 11238), (157, 11307), (159, 11331), (160, 11367), (161, 11382), (162, 11385), (163, 11403), (164, 11424), (165, 11442), (169, 11514), (171, 11568), (172, 11604), (173, 11610), (174, 11643), (176, 11676), (178, 11697), (180, 11727), (182, 11760), (183, 11784), (184, 11787), (185, 11796), (187, 11841), (188, 11844), (191, 11868), (194, 11940), (195, 11946), (210, 12045), (212, 12066), (226, 12144), (229, 12162), (232, 12195), (233, 12216), (244, 12318), (251, 12342), (259, 12390), (278, 12420), (281, 12441), (286, 12507), (291, 12615), (293, 12639), (294, 12645), (296, 12660), (299, 12675), (300, 12711), (302, 12774), (303, 12777), (305, 12810), (306, 12849), (307, 12870), (311, 13050),

Gene: UncleRicky\_15 Start: 9323, Stop: 12835, Start Num: 1

Candidate Starts for UncleRicky\_15:

(Start: 1 @9323 has 37 MA's), (Start: 2 @9344 has 184 MA's), (3, 9356), (5, 9395), (6, 9422), (10, 9524), (11, 9572), (12, 9596), (26, 9638), (27, 9641), (28, 9650), (29, 9656), (33, 9719), (34, 9734), (43, 9851), (47, 9884), (49, 9902), (51, 9926), (54, 9971), (56, 9989), (58, 10001), (61, 10058), (62, 10073), (63, 10091), (65, 10106), (66, 10109), (70, 10148), (73, 10190), (75, 10220), (77, 10226), (79, 10256), (81, 10292), (82, 10301), (83, 10313), (85, 10346), (87, 10388), (90, 10409), (91, 10421), (92, 10430), (94, 10472), (96, 10505), (99, 10547), (100, 10559), (104, 10604), (106, 10616), (116, 10667), (117, 10676), (125, 10712), (126, 10718), (130, 10730), (134, 10793), (137, 10841), (143, 10904), (144, 10907), (145, 10916), (157, 11081), (160, 11144), (161, 11159), (162, 11162), (163, 11180), (164, 11201), (165, 11219), (169, 11291), (171, 11345), (172, 11381), (173, 11387), (174, 11420), (176, 11453), (180, 11504), (182, 11537), (183, 11561), (184, 11564), (185, 11573), (187, 11618), (188, 11621), (191, 11645), (194, 11714), (195, 11720), (210, 11819), (215, 11858), (216, 11861), (222, 11891), (226, 11918), (230, 11945), (233, 11990), (251, 12113), (271, 12161), (276, 12191), (281, 12212), (286, 12278), (291, 12386), (293, 12410), (294, 12416), (296, 12431), (299, 12446), (300, 12482), (302, 12545), (303, 12548), (304, 12560), (305, 12581), (307, 12641), (311, 12821),

Gene: VRedHorse\_14 Start: 9467, Stop: 13177, Start Num: 1

Candidate Starts for VRedHorse\_14:

(Start: 1 @9467 has 37 MA's), (Start: 2 @9488 has 184 MA's), (3, 9500), (5, 9539), (6, 9566), (10, 9668), (11, 9716), (12, 9740), (26, 9782), (28, 9794), (29, 9800), (33, 9863), (34, 9878), (43, 9995), (47, 10028), (49, 10046), (51, 10070), (54, 10115), (56, 10133), (58, 10145), (62, 10217), (65, 10250), (66, 10253), (70, 10292), (73, 10334), (75, 10364), (77, 10370), (79, 10400), (81, 10436), (82, 10445), (83, 10457), (85, 10490), (90, 10553), (92, 10574), (97, 10670), (98, 10679), (102, 10715), (103, 10727), (106, 10760), (109, 10781), (121, 10856), (125, 10874), (135, 10976), (140, 11051), (151, 11180), (153, 11192), (157, 11261), (158, 11270), (160, 11321), (161, 11336), (162, 11339), (163, 11357), (164, 11378), (165, 11396), (169, 11468), (171, 11522), (172, 11558), (173, 11564), (174, 11597), (176, 11630), (180, 11681), (182, 11714), (183, 11738), (184, 11741), (185, 11750), (187, 11795), (188, 11798), (191, 11822), (196, 11912), (213, 12059), (217, 12080), (233, 12221), (238, 12245), (240, 12272), (267, 12452), (271, 12482), (279, 12554), (287, 12638), (291, 12731), (293, 12755), (294, 12761), (296, 12776), (297, 12782), (299, 12791), (300, 12827), (302, 12890), (303, 12893), (305, 12926), (306, 12965), (307, 12986), (311, 13163),

Gene: Velveteen\_15 Start: 9337, Stop: 12867, Start Num: 2

Candidate Starts for Velveteen\_15:

(Start: 1 @9316 has 37 MA's), (Start: 2 @9337 has 184 MA's), (3, 9349), (5, 9388), (6, 9415), (10, 9517), (11, 9565), (12, 9589), (26, 9631), (28, 9643), (29, 9649), (33, 9712), (34, 9727), (43, 9844), (47, 9877), (51, 9919), (54, 9964), (56, 9982), (58, 9994), (62, 10066), (65, 10099), (66, 10102), (70, 10141), (73, 10183), (75, 10213), (77, 10219), (79, 10249), (81, 10285), (82, 10294), (83, 10306), (90, 10402), (96, 10498), (98, 10528), (101, 10561), (102, 10564), (103, 10576), (109, 10630), (112, 10642), (119, 10696), (121, 10705), (135, 10825), (148, 10969), (151, 11029), (153, 11041), (157, 11110), (158, 11119), (160, 11173), (161, 11188), (162, 11191), (164, 11230), (165, 11248), (169,

11320), (171, 11374), (172, 11410), (173, 11416), (174, 11449), (176, 11482), (180, 11533), (182, 11566), (183, 11590), (184, 11593), (185, 11602), (187, 11647), (188, 11650), (189, 11656), (191, 11674), (194, 11743), (195, 11749), (210, 11848), (226, 11947), (229, 11965), (233, 12019), (244, 12121), (251, 12145), (259, 12193), (278, 12223), (281, 12244), (286, 12310), (291, 12418), (293, 12442), (294, 12448), (296, 12463), (299, 12478), (300, 12514), (302, 12577), (303, 12580), (304, 12592), (305, 12613), (307, 12673), (311, 12853),

Gene: Veteran\_14 Start: 9527, Stop: 13012, Start Num: 2

Candidate Starts for Veteran\_14:

(Start: 2 @9527 has 184 MA's), (3, 9539), (5, 9578), (6, 9605), (8, 9662), (10, 9707), (12, 9779), (26, 9821), (27, 9824), (28, 9833), (29, 9839), (33, 9902), (34, 9917), (43, 10034), (47, 10067), (51, 10109), (54, 10154), (56, 10172), (58, 10184), (62, 10256), (65, 10289), (66, 10292), (70, 10331), (73, 10373), (75, 10403), (77, 10409), (79, 10439), (81, 10475), (82, 10484), (83, 10496), (90, 10592), (94, 10655), (99, 10730), (104, 10787), (106, 10799), (112, 10820), (116, 10850), (124, 10892), (125, 10895), (126, 10901), (130, 10913), (145, 11099), (155, 11246), (157, 11261), (159, 11285), (161, 11339), (162, 11342), (164, 11381), (165, 11399), (169, 11471), (171, 11525), (172, 11561), (173, 11567), (176, 11633), (180, 11684), (182, 11717), (183, 11741), (184, 11744), (185, 11753), (187, 11798), (188, 11801), (189, 11807), (191, 11825), (194, 11894), (195, 11900), (210, 11999), (215, 12038), (216, 12041), (222, 12071), (226, 12098), (230, 12125), (233, 12170), (251, 12293), (271, 12341), (276, 12371), (281, 12392), (286, 12458), (291, 12566), (293, 12590), (294, 12596), (296, 12611), (299, 12626), (300, 12662), (302, 12725), (303, 12728), (305, 12761), (306, 12800), (307, 12821), (311, 12998),

Gene: Violac\_15 Start: 10032, Stop: 13556, Start Num: 2

Candidate Starts for Violac\_15:

(Start: 2 @10032 has 184 MA's), (5, 10083), (6, 10110), (8, 10167), (10, 10212), (12, 10284), (26, 10326), (28, 10338), (29, 10344), (32, 10368), (33, 10407), (34, 10422), (43, 10539), (47, 10572), (49, 10590), (51, 10614), (54, 10659), (56, 10677), (58, 10689), (62, 10761), (65, 10794), (66, 10797), (70, 10836), (73, 10878), (75, 10908), (77, 10914), (79, 10944), (81, 10980), (82, 10989), (83, 11001), (85, 11034), (86, 11049), (90, 11097), (91, 11109), (97, 11214), (98, 11223), (102, 11259), (103, 11271), (106, 11304), (109, 11325), (121, 11400), (125, 11418), (135, 11520), (140, 11595), (151, 11724), (153, 11736), (157, 11805), (160, 11868), (161, 11883), (162, 11886), (163, 11904), (164, 11925), (165, 11943), (171, 12069), (172, 12105), (173, 12111), (174, 12144), (176, 12177), (180, 12228), (182, 12261), (183, 12285), (185, 12297), (187, 12342), (188, 12345), (189, 12351), (191, 12369), (194, 12438), (195, 12444), (210, 12543), (215, 12582), (216, 12585), (222, 12615), (226, 12642), (230, 12669), (233, 12714), (251, 12837), (259, 12885), (278, 12915), (281, 12936), (286, 13002), (291, 13110), (293, 13134), (294, 13140), (296, 13155), (299, 13170), (300, 13206), (302, 13269), (303, 13272), (305, 13305), (306, 13344), (307, 13365), (311, 13542),

Gene: Vivum\_14 Start: 9493, Stop: 12984, Start Num: 2

Candidate Starts for Vivum\_14:

(Start: 1 @9472 has 37 MA's), (Start: 2 @9493 has 184 MA's), (3, 9505), (5, 9544), (6, 9571), (10, 9673), (11, 9721), (12, 9745), (28, 9799), (29, 9805), (33, 9868), (34, 9883), (43, 10000), (47, 10033), (49, 10051), (51, 10075), (54, 10120), (56, 10138), (58, 10150), (61, 10207), (62, 10222), (63, 10240), (65, 10255), (66, 10258), (70, 10297), (73, 10339), (75, 10369), (77, 10375), (79, 10405), (81, 10441), (82, 10450), (83, 10462), (85, 10495), (86, 10510), (87, 10537), (90, 10558), (92, 10579), (94, 10621), (96, 10654), (99, 10696), (100, 10708), (104, 10753), (106, 10765), (116, 10816), (117, 10825), (125, 10861), (126, 10867), (130, 10879), (134, 10942), (137, 10990), (143, 11053), (144, 11056), (145, 11065), (157, 11230), (160, 11293), (161, 11308), (162, 11311), (163, 11329), (164, 11350), (165, 11368), (169, 11440), (171, 11494), (172, 11530), (173, 11536), (174, 11569), (176, 11602), (180, 11653), (182, 11686), (183, 11710), (184, 11713), (185, 11722), (187, 11767), (188, 11770), (189, 11776), (191, 11794), (194, 11863), (195, 11869), (210, 11968), (215, 12007), (216, 12010), (222, 12040), (226, 12067), (230, 12094), (233, 12139), (251, 12262), (271, 12310), (276, 12340), (281,

12361), (286, 12427), (291, 12535), (293, 12559), (294, 12565), (296, 12580), (299, 12595), (300, 12631), (302, 12694), (303, 12697), (304, 12709), (305, 12730), (307, 12790), (311, 12970),

Gene: Wachhund\_14 Start: 9487, Stop: 13035, Start Num: 2

Candidate Starts for Wachhund\_14:

(Start: 2 @9487 has 184 MA's), (3, 9499), (5, 9538), (6, 9565), (10, 9667), (11, 9715), (12, 9739), (26, 9781), (27, 9784), (28, 9793), (29, 9799), (33, 9862), (34, 9877), (40, 9979), (42, 9994), (46, 10045), (47, 10048), (48, 10057), (52, 10108), (53, 10123), (57, 10156), (59, 10186), (64, 10252), (65, 10261), (67, 10273), (68, 10288), (73, 10339), (74, 10342), (82, 10450), (85, 10495), (91, 10561), (92, 10570), (98, 10675), (99, 10687), (102, 10711), (108, 10768), (111, 10786), (122, 10861), (127, 10882), (149, 11059), (160, 11224), (161, 11239), (162, 11242), (164, 11281), (165, 11299), (169, 11371), (171, 11425), (172, 11461), (173, 11467), (176, 11533), (180, 11584), (182, 11617), (183, 11641), (184, 11644), (185, 11653), (187, 11698), (188, 11701), (189, 11707), (191, 11725), (194, 11794), (195, 11800), (206, 11866), (207, 11869), (208, 11872), (210, 11890), (211, 11902), (219, 11950), (221, 11959), (227, 11992), (231, 12019), (237, 12082), (241, 12133), (246, 12187), (252, 12202), (260, 12256), (264, 12265), (267, 12271), (272, 12307), (275, 12334), (281, 12412), (286, 12478), (291, 12586), (293, 12610), (294, 12616), (296, 12631), (297, 12637), (299, 12646), (300, 12682), (302, 12745), (303, 12748), (304, 12760), (305, 12781), (307, 12841), (311, 13021),

Gene: Wee\_15 Start: 10070, Stop: 13600, Start Num: 2

Candidate Starts for Wee\_15:

(Start: 2 @10070 has 184 MA's), (5, 10121), (6, 10148), (8, 10205), (10, 10250), (12, 10322), (26, 10364), (27, 10367), (28, 10376), (29, 10382), (33, 10445), (34, 10460), (43, 10577), (47, 10610), (51, 10652), (54, 10697), (56, 10715), (58, 10727), (62, 10799), (65, 10832), (66, 10835), (70, 10874), (73, 10916), (75, 10946), (77, 10952), (79, 10982), (81, 11018), (82, 11027), (83, 11039), (90, 11135), (96, 11231), (98, 11261), (101, 11294), (102, 11297), (103, 11309), (109, 11363), (112, 11375), (119, 11429), (121, 11438), (135, 11558), (148, 11702), (151, 11762), (153, 11774), (157, 11843), (159, 11867), (160, 11903), (161, 11918), (162, 11921), (163, 11939), (164, 11960), (165, 11978), (169, 12050), (171, 12104), (172, 12140), (173, 12146), (174, 12179), (176, 12212), (178, 12233), (180, 12263), (182, 12296), (183, 12320), (184, 12323), (185, 12332), (187, 12377), (188, 12380), (191, 12404), (194, 12476), (195, 12482), (210, 12581), (212, 12602), (226, 12680), (229, 12698), (232, 12731), (233, 12752), (244, 12854), (251, 12878), (259, 12926), (278, 12956), (281, 12977), (286, 13043), (291, 13151), (293, 13175), (294, 13181), (296, 13196), (299, 13211), (300, 13247), (302, 13310), (303, 13313), (304, 13325), (305, 13346), (307, 13406), (311, 13586),

Gene: Whatsapiecost\_14 Start: 9532, Stop: 13059, Start Num: 2

Candidate Starts for Whatsapiecost\_14:

(Start: 2 @9532 has 184 MA's), (3, 9544), (5, 9583), (6, 9610), (8, 9667), (10, 9712), (12, 9784), (26, 9826), (27, 9829), (28, 9838), (29, 9844), (32, 9868), (33, 9907), (34, 9922), (43, 10039), (47, 10072), (51, 10114), (54, 10159), (56, 10177), (58, 10189), (62, 10261), (65, 10294), (66, 10297), (70, 10336), (73, 10378), (75, 10408), (77, 10414), (79, 10444), (81, 10480), (82, 10489), (83, 10501), (90, 10597), (96, 10693), (98, 10723), (101, 10756), (102, 10759), (103, 10771), (109, 10825), (112, 10837), (119, 10891), (121, 10900), (135, 11020), (148, 11164), (151, 11224), (153, 11236), (157, 11305), (159, 11329), (161, 11383), (162, 11386), (164, 11425), (165, 11443), (169, 11515), (171, 11569), (172, 11605), (173, 11611), (176, 11677), (180, 11728), (182, 11761), (183, 11785), (184, 11788), (185, 11797), (187, 11842), (188, 11845), (189, 11851), (191, 11869), (194, 11938), (195, 11944), (210, 12043), (226, 12142), (229, 12160), (233, 12214), (236, 12226), (244, 12313), (251, 12337), (259, 12385), (278, 12415), (281, 12436), (286, 12502), (291, 12610), (293, 12634), (294, 12640), (296, 12655), (299, 12670), (300, 12706), (302, 12769), (303, 12772), (304, 12784), (305, 12805), (307, 12865), (311, 13045),

Gene: Whouxphf\_14 Start: 9481, Stop: 13113, Start Num: 2

Candidate Starts for Whouxphf\_14:

(Start: 2 @9481 has 184 MA's), (3, 9493), (5, 9532), (6, 9559), (8, 9616), (10, 9661), (11, 9709), (12, 9733), (28, 9787), (29, 9793), (33, 9856), (34, 9871), (43, 9988), (47, 10021), (49, 10039), (51, 10063), (54, 10108), (56, 10126), (58, 10138), (62, 10210), (65, 10243), (66, 10246), (70, 10285), (73, 10327), (75, 10357), (77, 10363), (79, 10393), (81, 10429), (82, 10438), (83, 10450), (85, 10483), (87, 10525), (90, 10546), (92, 10567), (97, 10663), (98, 10672), (102, 10708), (103, 10720), (106, 10753), (109, 10774), (121, 10849), (125, 10867), (135, 10969), (140, 11044), (151, 11173), (153, 11185), (157, 11254), (160, 11317), (161, 11332), (162, 11335), (163, 11353), (164, 11374), (165, 11392), (169, 11464), (171, 11518), (172, 11554), (173, 11560), (174, 11593), (176, 11626), (180, 11677), (182, 11710), (183, 11734), (185, 11746), (187, 11791), (188, 11794), (191, 11818), (194, 11887), (195, 11893), (203, 11959), (204, 11962), (207, 11983), (209, 11995), (218, 12052), (223, 12085), (228, 12112), (235, 12175), (247, 12280), (249, 12286), (252, 12295), (257, 12349), (258, 12355), (261, 12361), (270, 12397), (281, 12493), (286, 12559), (291, 12667), (293, 12691), (294, 12697), (296, 12712), (299, 12727), (300, 12763), (302, 12826), (303, 12829), (305, 12862), (306, 12901), (307, 12922), (311, 13099),

Gene: WillSterrel\_14 Start: 9517, Stop: 13038, Start Num: 2

Candidate Starts for WillSterrel\_14:

(Start: 1 @9496 has 37 MA's), (Start: 2 @9517 has 184 MA's), (3, 9529), (5, 9568), (6, 9595), (10, 9697), (11, 9745), (12, 9769), (28, 9823), (29, 9829), (33, 9892), (34, 9907), (43, 10024), (47, 10057), (49, 10075), (51, 10099), (54, 10144), (56, 10162), (58, 10174), (62, 10246), (65, 10279), (66, 10282), (70, 10321), (72, 10339), (73, 10363), (75, 10393), (77, 10399), (79, 10429), (81, 10465), (82, 10474), (83, 10486), (85, 10519), (86, 10534), (90, 10582), (92, 10603), (97, 10699), (98, 10708), (101, 10741), (102, 10744), (103, 10756), (106, 10789), (109, 10810), (112, 10822), (121, 10885), (122, 10891), (125, 10903), (135, 11005), (140, 11080), (151, 11209), (153, 11221), (157, 11290), (158, 11299), (160, 11350), (161, 11365), (162, 11368), (163, 11386), (164, 11407), (165, 11425), (169, 11497), (171, 11551), (172, 11587), (173, 11593), (174, 11626), (176, 11659), (178, 11680), (180, 11710), (182, 11743), (183, 11767), (184, 11770), (185, 11779), (187, 11824), (188, 11827), (191, 11851), (194, 11920), (195, 11926), (210, 12025), (215, 12064), (216, 12067), (222, 12097), (226, 12124), (230, 12151), (233, 12196), (251, 12319), (259, 12367), (278, 12397), (281, 12418), (286, 12484), (291, 12592), (293, 12616), (294, 12622), (296, 12637), (299, 12652), (300, 12688), (302, 12751), (303, 12754), (305, 12787), (306, 12826), (307, 12847), (311, 13024),

Gene: XFactor\_14 Start: 9531, Stop: 13016, Start Num: 2

Candidate Starts for XFactor\_14:

(Start: 1 @9510 has 37 MA's), (Start: 2 @9531 has 184 MA's), (3, 9543), (5, 9582), (6, 9609), (8, 9666), (10, 9711), (12, 9783), (28, 9837), (29, 9843), (32, 9867), (33, 9906), (34, 9921), (43, 10038), (47, 10071), (51, 10113), (54, 10158), (56, 10176), (58, 10188), (62, 10260), (65, 10293), (66, 10296), (70, 10335), (73, 10377), (75, 10407), (77, 10413), (79, 10443), (81, 10479), (82, 10488), (83, 10500), (85, 10533), (90, 10596), (94, 10659), (99, 10734), (104, 10791), (106, 10803), (112, 10824), (116, 10854), (124, 10896), (125, 10899), (126, 10905), (130, 10917), (144, 11094), (145, 11103), (155, 11250), (157, 11265), (159, 11289), (161, 11340), (162, 11343), (164, 11382), (165, 11400), (169, 11472), (171, 11526), (172, 11562), (173, 11568), (176, 11634), (180, 11685), (182, 11718), (183, 11742), (184, 11745), (185, 11754), (187, 11799), (188, 11802), (189, 11808), (191, 11826), (194, 11895), (195, 11901), (210, 12000), (215, 12039), (216, 12042), (222, 12072), (226, 12099), (230, 12126), (233, 12171), (251, 12294), (271, 12342), (276, 12372), (281, 12393), (286, 12459), (291, 12567), (293, 12591), (294, 12597), (296, 12612), (299, 12627), (300, 12663), (302, 12726), (303, 12729), (304, 12741), (305, 12762), (307, 12822), (311, 13002),

Gene: Yorick\_14 Start: 9490, Stop: 13017, Start Num: 2

Candidate Starts for Yorick\_14:

(Start: 1 @9469 has 37 MA's), (Start: 2 @9490 has 184 MA's), (3, 9502), (5, 9541), (6, 9568), (10, 9670), (11, 9718), (12, 9742), (28, 9796), (29, 9802), (33, 9865), (34, 9880), (43, 9997), (47, 10030), (49, 10048), (51, 10072), (54, 10117), (56, 10135), (58, 10147), (62, 10219), (65, 10252), (66, 10255),



(70, 10294), (73, 10336), (75, 10366), (77, 10372), (79, 10402), (81, 10438), (82, 10447), (83, 10459), (85, 10492), (86, 10507), (87, 10534), (90, 10555), (91, 10567), (92, 10576), (97, 10672), (98, 10681), (102, 10717), (103, 10729), (106, 10762), (109, 10783), (121, 10858), (125, 10876), (135, 10978), (140, 11053), (151, 11182), (153, 11194), (157, 11263), (160, 11326), (161, 11341), (162, 11344), (163, 11362), (164, 11383), (165, 11401), (169, 11473), (171, 11527), (172, 11563), (173, 11569), (176, 11635), (180, 11686), (182, 11719), (183, 11743), (184, 11746), (185, 11755), (187, 11800), (188, 11803), (189, 11809), (191, 11827), (194, 11896), (195, 11902), (210, 12001), (215, 12040), (216, 12043), (222, 12073), (230, 12127), (233, 12172), (251, 12295), (259, 12343), (278, 12373), (281, 12394), (286, 12460), (288, 12484), (291, 12568), (293, 12592), (294, 12598), (296, 12613), (299, 12628), (300, 12664), (302, 12727), (303, 12730), (304, 12742), (305, 12763), (307, 12823), (311, 13003),

Gene: Zerg\_14 Start: 9492, Stop: 12977, Start Num: 2

Candidate Starts for Zerg\_14:

(Start: 1 @9471 has 37 MA's), (Start: 2 @9492 has 184 MA's), (3, 9504), (5, 9543), (6, 9570), (10, 9672), (11, 9720), (12, 9744), (26, 9786), (27, 9789), (28, 9798), (29, 9804), (33, 9867), (34, 9882), (43, 9999), (47, 10032), (49, 10050), (51, 10074), (54, 10119), (56, 10137), (58, 10149), (61, 10206), (62, 10221), (63, 10239), (65, 10254), (66, 10257), (70, 10296), (72, 10314), (73, 10338), (75, 10368), (77, 10374), (79, 10404), (81, 10440), (82, 10449), (83, 10461), (85, 10494), (86, 10509), (87, 10536), (90, 10557), (91, 10569), (92, 10578), (94, 10620), (96, 10653), (99, 10695), (100, 10707), (104, 10752), (106, 10764), (116, 10815), (117, 10824), (124, 10857), (125, 10860), (126, 10866), (130, 10878), (134, 10941), (137, 10989), (143, 11052), (144, 11055), (145, 11064), (157, 11229), (158, 11238), (160, 11289), (161, 11304), (162, 11307), (163, 11325), (164, 11346), (165, 11364), (169, 11436), (171, 11490), (172, 11526), (173, 11532), (174, 11565), (176, 11598), (180, 11649), (182, 11682), (183, 11706), (184, 11709), (185, 11718), (187, 11763), (188, 11766), (191, 11790), (194, 11859), (195, 11865), (222, 12036), (230, 12090), (233, 12135), (251, 12258), (271, 12306), (276, 12336), (281, 12357), (286, 12423), (291, 12531), (293, 12555), (294, 12561), (296, 12576), (299, 12591), (300, 12627), (302, 12690), (303, 12693), (304, 12705), (305, 12726), (306, 12765), (307, 12786), (311, 12963),

Gene: Zizzle\_14 Start: 9494, Stop: 12985, Start Num: 2

Candidate Starts for Zizzle\_14:

(Start: 1 @9473 has 37 MA's), (Start: 2 @9494 has 184 MA's), (5, 9545), (6, 9572), (10, 9674), (11, 9722), (12, 9746), (28, 9800), (29, 9806), (33, 9869), (34, 9884), (43, 10001), (47, 10034), (49, 10052), (51, 10076), (54, 10121), (56, 10139), (58, 10151), (62, 10223), (65, 10256), (66, 10259), (70, 10298), (73, 10340), (75, 10370), (77, 10376), (79, 10406), (81, 10442), (82, 10451), (83, 10463), (85, 10496), (86, 10511), (87, 10538), (90, 10559), (92, 10580), (94, 10622), (96, 10655), (99, 10697), (100, 10709), (104, 10754), (106, 10766), (116, 10817), (117, 10826), (125, 10862), (126, 10868), (130, 10880), (134, 10943), (137, 10991), (143, 11054), (144, 11057), (145, 11066), (157, 11231), (160, 11294), (161, 11309), (162, 11312), (163, 11330), (164, 11351), (165, 11369), (169, 11441), (171, 11495), (172, 11531), (173, 11537), (174, 11570), (176, 11603), (180, 11654), (182, 11687), (183, 11711), (184, 11714), (185, 11723), (187, 11768), (188, 11771), (191, 11795), (194, 11864), (195, 11870), (210, 11969), (215, 12008), (216, 12011), (222, 12041), (226, 12068), (230, 12095), (233, 12140), (251, 12263), (271, 12311), (276, 12341), (281, 12362), (286, 12428), (291, 12536), (293, 12560), (294, 12566), (296, 12581), (299, 12596), (300, 12632), (302, 12695), (303, 12698), (304, 12710), (305, 12731), (306, 12770), (307, 12791), (311, 12971),