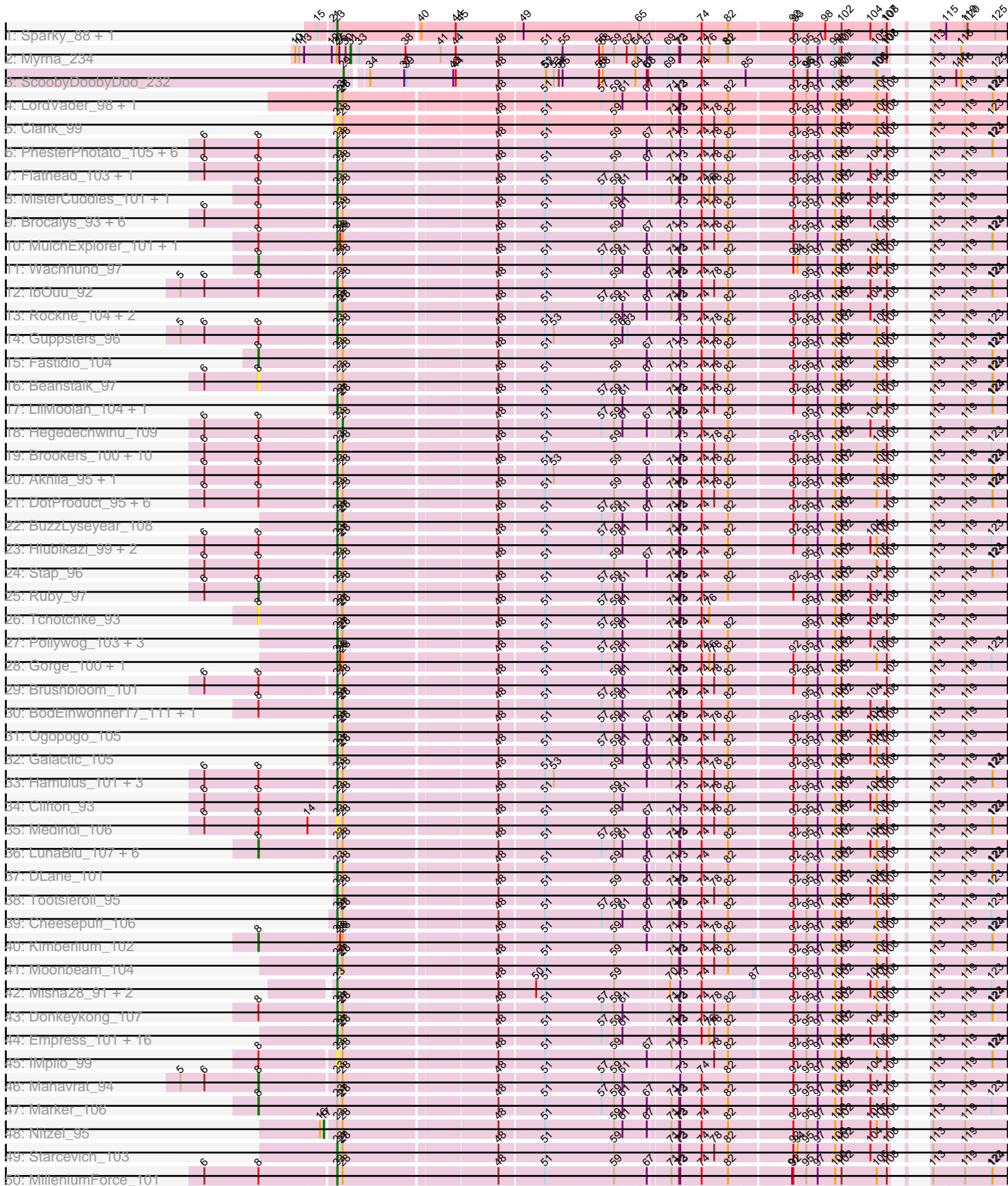


Pham 301030







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 301030 Report

This analysis was run 06/08/26 on database version 649.

Pham number 301030 has 252 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Sparky\_88, Farewell\_89
- Track 2 : Myrna\_234
- Track 3 : ScoobyDoobyDoo\_232
- Track 4 : LordVader\_98, Squirty\_100
- Track 5 : Clank\_99
- Track 6 : PhesterPhotato\_105, CaptainTrips\_103, Seagreen\_102, Mova\_103, DosHalletts\_98, Melissauren88\_91, Fruitloop\_99
- Track 7 : Flathead\_103, Mozy\_105
- Track 8 : MisterCuddles\_101, Girr\_100
- Track 9 : Brocalys\_93, LastJedi\_92, Lizziana\_102, Priscilla\_102, SwagPiggett\_103, NormanBulbieJr\_99, Koella\_94
- Track 10 : MulchExplorer\_101, Juice456\_100
- Track 11 : Wachhund\_97
- Track 12 : lbOuu\_92
- Track 13 : Rockne\_104, PMC\_100, Plumbus\_100
- Track 14 : Guppsters\_96
- Track 15 : Fastidio\_104
- Track 16 : Beanstalk\_97
- Track 17 : LilMoolah\_104, Nivrat\_101
- Track 18 : Hegedechwinu\_109
- Track 19 : Brookers\_100, Kingsley\_110, Cerasum\_100, Sarma624\_103, Coco12\_102, Rita\_101, Bipolar\_103, Kenuha5\_93, Velveteen\_98, Emma\_106, BigPhil\_98
- Track 20 : Akhila\_95, MilanaBonita\_94
- Track 21 : DotProduct\_95, SG4\_102, Chuckly\_98, Corium\_100, Royals2015\_105, Whatsapiecost\_95, KingJulian\_109
- Track 22 : BuzzLyseyear\_108
- Track 23 : Hlubikazi\_99, Mandlovu\_99, Strokeseat\_99
- Track 24 : Stap\_96
- Track 25 : Ruby\_97
- Track 26 : Tchotchke\_93
- Track 27 : Pollywog\_103, Fancypants\_108, DaddyRickover\_103, Eradicator\_92
- Track 28 : Gorge\_100, Saal\_99
- Track 29 : Brushbloom\_101
- Track 30 : BodEinwohner17\_111, BlueCrab\_104
- Track 31 : Ogopogo\_105
- Track 32 : Galactic\_105

- Track 33 : Hamulus\_101, Ms6\_103, Okabe\_93, LittleShirley\_109
- Track 34 : Clifton\_93
- Track 35 : Medindi\_106
- Track 36 : LunaBlu\_107, Enzomatic\_113, Polo2Bam\_112, Ibhubesi\_97, NewHope4\_108, Harley\_102, SeaLumen\_109
- Track 37 : DLane\_101
- Track 38 : Tootsieroll\_95
- Track 39 : Cheesepuff\_106
- Track 40 : Kimberlium\_102
- Track 41 : Moonbeam\_104
- Track 42 : Misha28\_91, Piper2020\_96, TootsiePop\_91
- Track 43 : Donkeykong\_107
- Track 44 : Empress\_101, Daenerys\_99, Dorothy\_102, Sassafras\_103, Inventum\_99, KingMidas\_101, JoeyJr\_104, Leperchaun\_103, PHappiness\_101, Polka14\_105, Nimbo\_93, Deb65\_94, OldBen\_98, RitaG\_100, RedBird\_102, Geralt\_94, Scottish\_101
- Track 45 : IMpilo\_99
- Track 46 : Mahavrat\_94
- Track 47 : Marker\_106
- Track 48 : Nitzel\_95
- Track 49 : Starcevich\_103
- Track 50 : MilleniumForce\_101
- Track 51 : Bubbles123\_95
- Track 52 : Phalconet\_102
- Track 53 : MadMen\_106
- Track 54 : Gandalph\_101, EleanorGeorge\_105
- Track 55 : Estave1\_109
- Track 56 : RockyHorror\_104, DaWorst\_100, Lucia\_100, Mantra\_98, UncleRicky\_100, Lorde\_103, Enby\_104
- Track 57 : Latretium\_104
- Track 58 : Aloeri\_93, ChickenDinner\_92, DocMcStuffins\_89
- Track 59 : Filuzino\_101
- Track 60 : Peridot\_104
- Track 61 : Doug\_97
- Track 62 : GigiOuiOui\_95
- Track 63 : Sabbb\_104
- Track 64 : GUmbie\_100
- Track 65 : Quico\_110, Girafales\_110
- Track 66 : ByChance\_92
- Track 67 : ShowerHandel\_103, James\_105
- Track 68 : Ramsey\_106
- Track 69 : BobaPhett\_104
- Track 70 : SuperGrey\_100
- Track 71 : Alexphander\_102
- Track 72 : DirtMcgirt\_101
- Track 73 : ArcusAngelus\_101, Chevrolet\_105
- Track 74 : Ardmore\_85
- Track 75 : Spikelee\_101
- Track 76 : Violac\_102
- Track 77 : Aubs\_101, Philus\_105
- Track 78 : Awesomesauce\_93
- Track 79 : Crumble\_96
- Track 80 : Frankie\_100

- Track 81 : DillTech15\_107
- Track 82 : VRedHorse\_102
- Track 83 : Pippy\_100, Jennelsea\_98, Zizzle\_105
- Track 84 : ShiLan\_104, Jarcob\_104, Mattes\_102
- Track 85 : Yorick\_97
- Track 86 : Madiba\_100
- Track 87 : Florinda\_113
- Track 88 : PatoPoderoso\_102
- Track 89 : Llij\_96
- Track 90 : Phatniss\_98
- Track 91 : MinionDave\_99, Boomer\_102, Hades\_98
- Track 92 : StAnnes\_106
- Track 93 : SiSi\_96, Veteran\_91
- Track 94 : Bobi\_102
- Track 95 : FreddyB\_110
- Track 96 : Drago\_100
- Track 97 : Burwell21\_96
- Track 98 : Radiance\_99
- Track 99 : SassyB\_91, PopTart\_91
- Track 100 : Cabrinians\_99
- Track 101 : Mutaforma13\_102, Firehouse51\_95
- Track 102 : Pacc40\_98
- Track 103 : Phasih\_97
- Track 104 : Maravista\_99
- Track 105 : Spartacus\_108
- Track 106 : Sandalphon\_100
- Track 107 : DRBy19\_101, TDanisky\_109, Sparkdehlily\_108
- Track 108 : Mwanjiwa\_104
- Track 109 : Kersh\_103
- Track 110 : Whouxphf\_105
- Track 111 : Leozinho\_97
- Track 112 : JalFarm20\_110
- Track 113 : Slim\_105, Emmaloid\_105
- Track 114 : XFactor\_92
- Track 115 : Karhdo\_97, Zerg\_100
- Track 116 : Taj\_107, Wee\_104
- Track 117 : Poenanya\_105, Doomphist\_106
- Track 118 : Totinger\_104, Rialto\_106
- Track 119 : KristaRAM\_110
- Track 120 : Minnie\_96
- Track 121 : Krakatau\_94
- Track 122 : SimranZ1\_97
- Track 123 : Beakin\_94
- Track 124 : Eish\_106
- Track 125 : OlympiaSaint\_105
- Track 126 : EmiMonkey\_89, PhilipPhlop\_90
- Track 127 : ShroomBoi\_99
- Track 128 : Vivum\_101
- Track 129 : QuickMath\_102
- Track 130 : Spoonbill\_101
- Track 131 : Topiatin\_102
- Track 132 : Juniper1\_92
- Track 133 : Ovechkin\_103

- Track 134 : Phanphagia\_106, Shauna1\_103
- Track 135 : Byougenkin\_97
- Track 136 : Cornucopia\_101
- Track 137 : OwlsT2W\_98
- Track 138 : Job42\_103
- Track 139 : Batiatus\_101
- Track 140 : Martik\_100
- Track 141 : LunaStella\_98, TChen\_98
- Track 142 : Renaud18\_110
- Track 143 : MulchSalad\_103
- Track 144 : QueenHazel\_70, Xula\_71
- Track 145 : Che9c\_82
- Track 146 : Sbash\_87
- Track 147 : Stuck\_85
- Track 148 : MooMoo\_94

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

The start number called the most often in the published annotations is 23, it was called in 182 of the 231 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila\_95, Alexphander\_102, Aloeri\_93, ArcusAngelus\_101, Ardmore\_85, Aubs\_101, Awesomesauce\_93, Batiatus\_101, Beakin\_94, BigPhil\_98, Bipolar\_103, BlueCrab\_104, BobaPhett\_104, BodEinwohner17\_111, Boomer\_102, Brocalys\_93, Brookers\_100, Brushbloom\_101, Bubbles123\_95, Burwell21\_96, BuzzLyseyear\_108, ByChance\_92, CaptainTrips\_103, Cerasum\_100, Che9c\_82, Cheesepuff\_106, Chevrolet\_105, ChickenDinner\_92, Chuckly\_98, Clank\_99, Clifton\_93, Coco12\_102, Corium\_100, Cornucopia\_101, Crumble\_96, DLane\_101, DRBy19\_101, DaddyRickover\_103, Daenerys\_99, Deb65\_94, DillTech15\_107, DocMcStuffins\_89, Donkeykong\_107, Doomphist\_106, Dorothy\_102, DosHalletts\_98, DotProduct\_95, Drago\_100, Eish\_106, EleanorGeorge\_105, Emma\_106, Emmaloid\_105, Empress\_101, Eradicator\_92, Estave1\_109, Fancypants\_108, Farewell\_89, Firehouse51\_95, Flathead\_103, Florinda\_113, Fruitloop\_99, GUmbie\_100, Galactic\_105, Gandolph\_101, Geralt\_94, Girafales\_110, Girr\_100, Gorge\_100, Guppsters\_96, Hades\_98, Hamulus\_101, Hlubikazi\_99, IMpilo\_99, IbOuu\_92, Inventum\_99, JalFarm20\_110, James\_105, Jarcob\_104, Jennelsea\_98, Job42\_103, JoeyJr\_104, Juice456\_100, Karhdo\_97, Kenuha5\_93, KingJulian\_109, KingMidas\_101, Kingsley\_110, Koella\_94, Krakatau\_94, KristaRAM\_110, LastJedi\_92, Latretium\_104, Leperchaun\_103, LilMoolah\_104, LittleShirley\_109, Lizziana\_102, Llij\_96, LordVader\_98, LunaStella\_98, MadMen\_106, Madiba\_100, Mandlovu\_99, Maravista\_99, Mattes\_102, Medindi\_106, Melissauren88\_91, MilanaBonita\_94, MilleniumForce\_101, MinionDave\_99, Minnie\_96, Misha28\_91, MisterCuddles\_101, MooMoo\_94, Moonbeam\_104, Mova\_103, Mozy\_105, Ms6\_103, MulchExplorer\_101, MulchSalad\_103, Mutaforma13\_102, Mwanjiwa\_104, Nimbo\_93, Nivrat\_101, NormanBulbieJr\_99, Ogopogo\_105, Okabe\_93, OldBen\_98, OlympiaSaint\_105, PHappiness\_101, PMC\_100, PatoPoderoso\_102, Phalconet\_102, Phanphagia\_106, PhesterPhotato\_105, Philus\_105, Piper2020\_96, Pippy\_100, Plumbus\_100, Poenanya\_105, Polka14\_105, Pollywog\_103, Priscilla\_102, QueenHazel\_70, QuickMath\_102, Quico\_110, Radiance\_99, Ramsey\_106,

RedBird\_102, Rialto\_106, RitaG\_100, Rita\_101, Rockne\_104, Royals2015\_105, SG4\_102, Saal\_99, Sabbb\_104, Sarma624\_103, Sassafras\_103, Sbash\_87, Scottish\_101, Seagreen\_102, Shauna1\_103, ShiLan\_104, ShowerHandel\_103, ShroomBoi\_99, Slim\_105, Sparkdehlily\_108, Sparky\_88, Spartacus\_108, Spikelee\_101, Spoonbill\_101, Squirty\_100, StAnnes\_106, Stap\_96, Starcevich\_103, Strokeseat\_99, Stuck\_85, SwagPiggett\_103, TChen\_98, TDanisky\_109, Taj\_107, TootsiePop\_91, Tootsieroll\_95, Topiatin\_102, Totinger\_104, VRedHorse\_102, Velveteen\_98, Violac\_102, Vivum\_101, Wee\_104, Whatsapiecost\_95, XFactor\_92, Xula\_71, Yorick\_97, Zerg\_100, Zizzle\_105,

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

- Beanstalk\_97, Bobi\_102, Byougenkin\_97, DaWorst\_100, DirtMcgirt\_101, Doug\_97, EmiMonkey\_89, Enby\_104, Enzomatic\_113, Fastidio\_104, Filuzino\_101, Frankie\_100, FreddyB\_110, GigiOuiOui\_95, Harley\_102, Hegedechwinu\_109, Ibhubesi\_97, Juniper1\_92, Kersh\_103, Kimberlium\_102, Leozinho\_97, Lorde\_103, Lucia\_100, LunaBlu\_107, Mahavrat\_94, Mantra\_98, Marker\_106, Martik\_100, NewHope4\_108, Nitzel\_95, Ovechkin\_103, OwlsT2W\_98, Pacc40\_98, Peridot\_104, Phasih\_97, Phatniss\_98, PhlipPhlop\_90, Polo2Bam\_112, PopTart\_91, RockyHorror\_104, Ruby\_97, Sandalphon\_100, SassyB\_91, SeaLumen\_109, SiSi\_96, SimranZ1\_97, SuperGrey\_100, Tchotchke\_93, UncleRicky\_100, Veteran\_91, Wachhund\_97, Whouxphf\_105,

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

- Cabrinians\_99, Myrna\_234, Renaud18\_110, ScoobyDoobyDoo\_232,

### Summary by start number:

Start 8:

- Found in 134 of 252 ( 53.2% ) of genes in pham
- Manual Annotations of this start: 41 of 231
- Called 35.1% of time when present
- Phage (with cluster) where this start called: Beanstalk\_97 (F1), Bobi\_102 (F1), Byougenkin\_97 (F1), DaWorst\_100 (F1), DirtMcgirt\_101 (F1), Doug\_97 (F1), EmiMonkey\_89 (F1), Enby\_104 (F1), Enzomatic\_113 (F1), Fastidio\_104 (F1), Frankie\_100 (F1), FreddyB\_110 (F1), GigiOuiOui\_95 (F1), Harley\_102 (F1), Ibhubesi\_97 (F1), Juniper1\_92 (F1), Kersh\_103 (F1), Kimberlium\_102 (F1), Leozinho\_97 (F1), Lorde\_103 (F1), Lucia\_100 (F1), LunaBlu\_107 (F1), Mahavrat\_94 (F1), Mantra\_98 (F1), Marker\_106 (F1), NewHope4\_108 (F1), Ovechkin\_103 (F1), OwlsT2W\_98 (F1), Pacc40\_98 (F1), Phasih\_97 (F1), Phatniss\_98 (F1), PhlipPhlop\_90 (F1), Polo2Bam\_112 (F1), PopTart\_91 (F1), RockyHorror\_104 (F1), Ruby\_97 (F1), Sandalphon\_100 (F1), SassyB\_91 (F1), SeaLumen\_109 (F1), SiSi\_96 (F1), SimranZ1\_97 (F1), SuperGrey\_100 (F1), Tchotchke\_93 (F1), UncleRicky\_100 (F1), Veteran\_91 (F1), Wachhund\_97 (F1), Whouxphf\_105 (F1),

Start 14:

- Found in 2 of 252 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 231
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Filuzino\_101 (F1),

Start 17:

- Found in 2 of 252 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 2 of 231

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Martik\_100 (F1), Nitzel\_95 (F1),

Start 23:

- Found in 248 of 252 ( 98.4% ) of genes in pham
- Manual Annotations of this start: 182 of 231
- Called 79.0% of time when present
- Phage (with cluster) where this start called: Akhila\_95 (F1), Alexphander\_102 (F1), Aloeri\_93 (F1), ArcusAngelus\_101 (F1), Ardmore\_85 (F1), Aubs\_101 (F1), Awesomesauce\_93 (F1), Batiatus\_101 (F1), Beakin\_94 (F1), BigPhil\_98 (F1), Bipolar\_103 (F1), BlueCrab\_104 (F1), BobaPhett\_104 (F1), BodEinwohner17\_111 (F1), Boomer\_102 (F1), Brocalys\_93 (F1), Brookers\_100 (F1), Brushbloom\_101 (F1), Bubbles123\_95 (F1), Burwell21\_96 (F1), BuzzLyseyear\_108 (F1), ByChance\_92 (F1), CaptainTrips\_103 (F1), Cerasum\_100 (F1), Che9c\_82 (I2), CheesePuff\_106 (F1), Chevrolet\_105 (F1), ChickenDinner\_92 (F1), Chuckly\_98 (F1), Clank\_99 (F), Clifton\_93 (F1), Coco12\_102 (F1), Corium\_100 (F1), Cornucopia\_101 (F1), Crumble\_96 (F1), DLane\_101 (F1), DRBy19\_101 (F1), DaddyRickover\_103 (F1), Daenerys\_99 (F1), Deb65\_94 (F1), DillTech15\_107 (F1), DocMcStuffins\_89 (F1), Donkeykong\_107 (F1), Doomphist\_106 (F1), Dorothy\_102 (F1), DosHalletts\_98 (F1), DotProduct\_95 (F1), Drago\_100 (F1), Eish\_106 (F1), EleanorGeorge\_105 (F1), Emma\_106 (F1), Emmaloid\_105 (F1), Empress\_101 (F1), Eradicator\_92 (F1), Estave1\_109 (F1), Fancypants\_108 (F1), Farewell\_89 (AF), Firehouse51\_95 (F1), Flathead\_103 (F1), Florinda\_113 (F1), Fruitloop\_99 (F1), GUmBie\_100 (F1), Galactic\_105 (F1), Gandolph\_101 (F1), Geralt\_94 (F1), Girafales\_110 (F1), GIRR\_100 (F1), Gorge\_100 (F1), Guppsters\_96 (F1), Hades\_98 (F1), Hamulus\_101 (F1), Hlubikazi\_99 (F1), IMPilo\_99 (F1), IbOuu\_92 (F1), Inventum\_99 (F1), JalFarm20\_110 (F1), James\_105 (F1), Jacob\_104 (F1), Jennelsea\_98 (F1), Job42\_103 (F1), JoeyJr\_104 (F1), Juice456\_100 (F1), Karhdo\_97 (F1), Kenuha5\_93 (F1), KingJulian\_109 (F1), KingMidas\_101 (F1), Kingsley\_110 (F1), Koella\_94 (F1), Krakatau\_94 (F1), KristaRAM\_110 (F1), LastJedi\_92 (F1), Latretium\_104 (F1), Leperchaun\_103 (F1), LilMoolah\_104 (F1), LittleShirley\_109 (F1), Lizziana\_102 (F1), Llij\_96 (F1), LordVader\_98 (F), LunaStella\_98 (F4), MadMen\_106 (F1), Madiba\_100 (F1), Mandlovu\_99 (F1), Maravista\_99 (F1), Mattes\_102 (F1), Medindi\_106 (F1), Melissauren88\_91 (F1), MilanaBonita\_94 (F1), MilleniumForce\_101 (F1), MinionDave\_99 (F1), Minnie\_96 (F1), Misha28\_91 (F1), MisterCuddles\_101 (F1), MooMoo\_94 (singleton), Moonbeam\_104 (F1), Mova\_103 (F1), Mozy\_105 (F1), Ms6\_103 (F1), MulchExplorer\_101 (F1), MulchSalad\_103 (F7), Mutaforma13\_102 (F1), Mwanjiwa\_104 (F1), Nimbo\_93 (F1), Nivrat\_101 (F1), NormanBulbieJr\_99 (F1), OgoPogo\_105 (F1), Okabe\_93 (F8), OldBen\_98 (F1), OlympiaSaint\_105 (F1), PHappiness\_101 (F1), PMC\_100 (F1), PatoPoderoso\_102 (F1), Phalconet\_102 (F1), Phanphagia\_106 (F1), PhesterPotato\_105 (F1), Philus\_105 (F1), Piper2020\_96 (F1), Pippy\_100 (F1), Plumbus\_100 (F1), Poenanya\_105 (F1), Polka14\_105 (F1), Pollywog\_103 (F1), Priscilla\_102 (F1), QueenHazel\_70 (I1), QuickMath\_102 (F1), Quico\_110 (F1), Radiance\_99 (F1), Ramsey\_106 (F1), RedBird\_102 (F1), Rialto\_106 (F1), RitaG\_100 (F1), Rita\_101 (F1), Rockne\_104 (F1), Royals2015\_105 (F1), SG4\_102 (F1), Saal\_99 (F1), Sabbh\_104 (F1), Sarma624\_103 (F1), Sassafras\_103 (F1), Sbash\_87 (I2), Scottish\_101 (F1), Seagreen\_102 (F1), Shauna1\_103 (F1), ShiLan\_104 (F1), ShowerHandel\_103 (F1), ShroomBoi\_99 (F1), Slim\_105 (F1), Sparkdehlily\_108 (F1), Sparky\_88 (AF), Spartacus\_108 (F1), Spikelee\_101 (F1), Spoonbill\_101 (F1), Squirty\_100 (F3), StAnnes\_106 (F1), Stap\_96 (F1), Starcevich\_103 (F1), Strokeseat\_99 (F1), Stuck\_85 (I2), SwagPigglett\_103 (F1), TChen\_98 (F4), TDanisky\_109 (F1), Taj\_107 (F1), TootsiePop\_91 (F1), Tootsieroll\_95 (F1), Topiatin\_102 (F1), Totinger\_104 (F1), VRedHorse\_102 (F1),

Velveteen\_98 (F1), Violac\_102 (F1), Vivum\_101 (F1), Wee\_104 (F1),  
Whatsapiecost\_95 (F1), XFactor\_92 (F1), Xula\_71 (I1), Yorick\_97 (F1), Zerg\_100  
(F1), Zizzle\_105 (F1),

Start 24:

- Found in 1 of 252 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 231
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Renaud18\_110 (F4),

Start 28:

- Found in 235 of 252 ( 93.3% ) of genes in pham
- Manual Annotations of this start: 1 of 231
- Called 0.9% of time when present
- Phage (with cluster) where this start called: Hegedechwinu\_109 (F1), Peridot\_104 (F1),

Start 29:

- Found in 1 of 252 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 231
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ScoobyDoobyDoo\_232 (C2),

Start 31:

- Found in 1 of 252 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 231
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Myrna\_234 (C2),

Start 48:

- Found in 249 of 252 ( 98.8% ) of genes in pham
- Manual Annotations of this start: 1 of 231
- Called 0.4% of time when present
- Phage (with cluster) where this start called: Cabrinians\_99 (F1),

### **Summary by clusters:**

There are 11 clusters represented in this pham: F1, singleton, F3, F4, F7, F, I1, AF, F8, C2, I2,

Info for manual annotations of cluster AF:

- Start number 23 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster C2:

- Start number 29 was manually annotated 1 time for cluster C2.
- Start number 31 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster F1:

- Start number 8 was manually annotated 41 times for cluster F1.
- Start number 14 was manually annotated 1 time for cluster F1.
- Start number 17 was manually annotated 2 times for cluster F1.
- Start number 23 was manually annotated 172 times for cluster F1.

- Start number 28 was manually annotated 1 time for cluster F1.
- Start number 48 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F3:

- Start number 23 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 23 was manually annotated 2 times for cluster F4.
- Start number 24 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster I1:

- Start number 23 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster I2:

- Start number 23 was manually annotated 2 times for cluster I2.

### **Gene Information:**

Gene: Akhila\_95 Start: 53042, Stop: 54478, Start Num: 23

Candidate Starts for Akhila\_95:

(6, 52739), (Start: 8 @52868 has 41 MA's), (Start: 23 @53042 has 182 MA's), (Start: 28 @53054 has 1 MA's), (Start: 48 @53393 has 1 MA's), (51, 53495), (53, 53516), (59, 53660), (67, 53735), (71, 53780), (72, 53798), (73, 53801), (74, 53852), (78, 53882), (82, 53915), (92, 54047), (95, 54077), (97, 54101), (100, 54143), (102, 54158), (106, 54239), (108, 54263), (113, 54281), (119, 54356), (123, 54419), (124, 54422),

Gene: Alexphander\_102 Start: 55386, Stop: 56825, Start Num: 23

Candidate Starts for Alexphander\_102:

(Start: 23 @55386 has 182 MA's), (27, 55395), (Start: 28 @55398 has 1 MA's), (Start: 48 @55740 has 1 MA's), (51, 55842), (57, 55977), (59, 56007), (61, 56025), (71, 56127), (72, 56145), (73, 56148), (74, 56199), (78, 56229), (82, 56262), (92, 56394), (95, 56424), (97, 56448), (100, 56490), (102, 56505), (104, 56571), (106, 56586), (108, 56610), (113, 56628), (119, 56703), (123, 56766),

Gene: Aloeri\_93 Start: 54180, Stop: 55616, Start Num: 23

Candidate Starts for Aloeri\_93:

(1, 53421), (2, 53583), (3, 53727), (4, 53730), (5, 53820), (6, 53877), (7, 53982), (Start: 8 @54006 has 41 MA's), (Start: 23 @54180 has 182 MA's), (Start: 28 @54192 has 1 MA's), (Start: 48 @54531 has 1 MA's), (51, 54633), (57, 54768), (59, 54798), (61, 54816), (67, 54873), (71, 54918), (72, 54936), (73, 54939), (74, 54990), (82, 55053), (92, 55185), (95, 55215), (97, 55239), (100, 55281), (102, 55296), (106, 55377), (108, 55401), (113, 55419), (119, 55494), (123, 55557),

Gene: ArcusAngelus\_101 Start: 55357, Stop: 56796, Start Num: 23

Candidate Starts for ArcusAngelus\_101:

(Start: 23 @55357 has 182 MA's), (27, 55366), (Start: 28 @55369 has 1 MA's), (Start: 48 @55711 has 1 MA's), (51, 55813), (57, 55948), (59, 55978), (67, 56053), (71, 56098), (72, 56116), (73, 56119), (74, 56170), (78, 56200), (82, 56233), (92, 56365), (95, 56395), (97, 56419), (100, 56461), (102, 56476), (106, 56557), (108, 56581), (113, 56599), (119, 56674), (123, 56737), (124, 56740),

Gene: Ardmore\_85 Start: 48931, Stop: 50367, Start Num: 23

Candidate Starts for Ardmore\_85:

(6, 48628), (Start: 8 @48757 has 41 MA's), (Start: 23 @48931 has 182 MA's), (Start: 28 @48943 has 1 MA's), (Start: 48 @49282 has 1 MA's), (51, 49384), (59, 49549), (71, 49669), (72, 49687), (73, 49690), (74, 49741), (82, 49804), (92, 49936), (95, 49966), (97, 49990), (100, 50032), (102, 50047), (106, 50128), (108, 50152), (113, 50170), (119, 50245), (123, 50308), (124, 50311),

Gene: Aubs\_101 Start: 55933, Stop: 57369, Start Num: 23

Candidate Starts for Aubs\_101:

(6, 55630), (Start: 8 @55759 has 41 MA's), (Start: 23 @55933 has 182 MA's), (Start: 28 @55945 has 1 MA's), (Start: 48 @56284 has 1 MA's), (51, 56386), (59, 56551), (67, 56626), (71, 56671), (72, 56689), (73, 56692), (74, 56743), (82, 56806), (92, 56938), (95, 56968), (97, 56992), (100, 57034), (102, 57049), (106, 57130), (108, 57154), (113, 57172), (119, 57247), (123, 57310), (124, 57313),

Gene: Awesomesauce\_93 Start: 54705, Stop: 56141, Start Num: 23

Candidate Starts for Awesomesauce\_93:

(Start: 23 @54705 has 182 MA's), (Start: 28 @54717 has 1 MA's), (Start: 48 @55056 has 1 MA's), (51, 55158), (59, 55323), (60, 55335), (67, 55398), (71, 55443), (72, 55461), (73, 55464), (74, 55515), (78, 55545), (82, 55578), (92, 55710), (95, 55740), (97, 55764), (100, 55806), (102, 55821), (106, 55902), (108, 55926), (113, 55944), (119, 56019), (123, 56082),

Gene: Batiatus\_101 Start: 54481, Stop: 55917, Start Num: 23

Candidate Starts for Batiatus\_101:

(6, 54178), (Start: 8 @54307 has 41 MA's), (Start: 23 @54481 has 182 MA's), (Start: 28 @54493 has 1 MA's), (Start: 48 @54832 has 1 MA's), (51, 54934), (59, 55099), (61, 55117), (71, 55219), (72, 55237), (73, 55240), (74, 55291), (78, 55321), (82, 55354), (92, 55486), (95, 55516), (97, 55540), (100, 55582), (102, 55597), (106, 55678), (108, 55702), (113, 55720), (119, 55795), (123, 55858), (124, 55861),

Gene: Beakin\_94 Start: 51744, Stop: 53180, Start Num: 23

Candidate Starts for Beakin\_94:

(9, 51642), (Start: 23 @51744 has 182 MA's), (Start: 28 @51756 has 1 MA's), (Start: 48 @52095 has 1 MA's), (51, 52197), (53, 52218), (59, 52362), (67, 52437), (71, 52482), (73, 52503), (74, 52554), (78, 52584), (82, 52617), (92, 52749), (95, 52779), (97, 52803), (100, 52845), (102, 52860), (106, 52941), (108, 52965), (113, 52983), (119, 53058), (123, 53121), (124, 53124),

Gene: Beanstalk\_97 Start: 53457, Stop: 55067, Start Num: 8

Candidate Starts for Beanstalk\_97:

(6, 53328), (Start: 8 @53457 has 41 MA's), (Start: 23 @53631 has 182 MA's), (Start: 28 @53643 has 1 MA's), (Start: 48 @53982 has 1 MA's), (51, 54084), (59, 54249), (67, 54324), (71, 54369), (73, 54390), (74, 54441), (78, 54471), (82, 54504), (92, 54636), (95, 54666), (97, 54690), (100, 54732), (102, 54747), (106, 54828), (108, 54852), (113, 54870), (119, 54945), (123, 55008), (124, 55011),

Gene: BigPhil\_98 Start: 51273, Stop: 52709, Start Num: 23

Candidate Starts for BigPhil\_98:

(6, 50970), (Start: 8 @51099 has 41 MA's), (Start: 23 @51273 has 182 MA's), (Start: 28 @51285 has 1 MA's), (Start: 48 @51624 has 1 MA's), (51, 51726), (59, 51891), (73, 52032), (74, 52083), (78, 52113), (82, 52146), (92, 52278), (95, 52308), (97, 52332), (100, 52374), (102, 52389), (106, 52470), (108, 52494), (113, 52512), (119, 52587), (123, 52650),

Gene: Bipolar\_103 Start: 56250, Stop: 57686, Start Num: 23

Candidate Starts for Bipolar\_103:

(6, 55947), (Start: 8 @56076 has 41 MA's), (Start: 23 @56250 has 182 MA's), (Start: 28 @56262 has 1 MA's), (Start: 48 @56601 has 1 MA's), (51, 56703), (59, 56868), (73, 57009), (74, 57060), (78, 57090), (82, 57123), (92, 57255), (95, 57285), (97, 57309), (100, 57351), (102, 57366), (106, 57447), (108,

57471), (113, 57489), (119, 57564), (123, 57627),

Gene: BlueCrab\_104 Start: 55862, Stop: 57301, Start Num: 23

Candidate Starts for BlueCrab\_104:

(Start: 8 @55679 has 41 MA's), (Start: 23 @55862 has 182 MA's), (27, 55871), (Start: 28 @55874 has 1 MA's), (Start: 48 @56216 has 1 MA's), (51, 56318), (57, 56453), (59, 56483), (61, 56501), (71, 56603), (72, 56621), (73, 56624), (74, 56675), (82, 56738), (95, 56900), (97, 56924), (100, 56966), (102, 56981), (104, 57047), (108, 57086), (113, 57104), (119, 57179),

Gene: BobaPhett\_104 Start: 56828, Stop: 58264, Start Num: 23

Candidate Starts for BobaPhett\_104:

(Start: 23 @56828 has 182 MA's), (Start: 28 @56840 has 1 MA's), (Start: 48 @57179 has 1 MA's), (51, 57281), (53, 57302), (57, 57416), (59, 57446), (67, 57521), (71, 57566), (72, 57584), (73, 57587), (74, 57638), (78, 57668), (82, 57701), (92, 57833), (95, 57863), (97, 57887), (100, 57929), (102, 57944), (108, 58049), (113, 58067), (119, 58142),

Gene: Bobi\_102 Start: 55781, Stop: 57391, Start Num: 8

Candidate Starts for Bobi\_102:

(6, 55652), (Start: 8 @55781 has 41 MA's), (Start: 23 @55955 has 182 MA's), (Start: 28 @55967 has 1 MA's), (Start: 48 @56306 has 1 MA's), (51, 56408), (57, 56543), (59, 56573), (67, 56648), (71, 56693), (73, 56714), (74, 56765), (78, 56795), (82, 56828), (95, 56990), (97, 57014), (100, 57056), (102, 57071), (104, 57137), (108, 57176), (113, 57194), (119, 57269),

Gene: BodEinwohner17\_111 Start: 56918, Stop: 58357, Start Num: 23

Candidate Starts for BodEinwohner17\_111:

(Start: 8 @56735 has 41 MA's), (Start: 23 @56918 has 182 MA's), (27, 56927), (Start: 28 @56930 has 1 MA's), (Start: 48 @57272 has 1 MA's), (51, 57374), (57, 57509), (59, 57539), (61, 57557), (71, 57659), (72, 57677), (73, 57680), (74, 57731), (82, 57794), (95, 57956), (97, 57980), (100, 58022), (102, 58037), (104, 58103), (108, 58142), (113, 58160), (119, 58235),

Gene: Boomer\_102 Start: 55216, Stop: 56655, Start Num: 23

Candidate Starts for Boomer\_102:

(Start: 23 @55216 has 182 MA's), (27, 55225), (Start: 28 @55228 has 1 MA's), (Start: 48 @55570 has 1 MA's), (51, 55672), (59, 55837), (67, 55912), (71, 55957), (72, 55975), (73, 55978), (74, 56029), (82, 56092), (92, 56224), (95, 56254), (97, 56278), (100, 56320), (102, 56335), (106, 56416), (108, 56440), (113, 56458), (119, 56533), (123, 56596), (124, 56599),

Gene: Brocalys\_93 Start: 52018, Stop: 53454, Start Num: 23

Candidate Starts for Brocalys\_93:

(6, 51715), (Start: 8 @51844 has 41 MA's), (Start: 23 @52018 has 182 MA's), (Start: 28 @52030 has 1 MA's), (Start: 48 @52369 has 1 MA's), (51, 52471), (59, 52636), (61, 52654), (73, 52777), (74, 52828), (78, 52858), (82, 52891), (92, 53023), (95, 53053), (97, 53077), (100, 53119), (102, 53134), (104, 53200), (108, 53239), (113, 53257), (119, 53332),

Gene: Brookers\_100 Start: 54224, Stop: 55660, Start Num: 23

Candidate Starts for Brookers\_100:

(6, 53921), (Start: 8 @54050 has 41 MA's), (Start: 23 @54224 has 182 MA's), (Start: 28 @54236 has 1 MA's), (Start: 48 @54575 has 1 MA's), (51, 54677), (59, 54842), (73, 54983), (74, 55034), (78, 55064), (82, 55097), (92, 55229), (95, 55259), (97, 55283), (100, 55325), (102, 55340), (106, 55421), (108, 55445), (113, 55463), (119, 55538), (123, 55601),

Gene: Brushbloom\_101 Start: 55525, Stop: 56961, Start Num: 23

Candidate Starts for Brushbloom\_101:

(6, 55222), (Start: 8 @55351 has 41 MA's), (Start: 23 @55525 has 182 MA's), (Start: 28 @55537 has 1 MA's), (Start: 48 @55876 has 1 MA's), (51, 55978), (59, 56143), (61, 56161), (71, 56263), (72, 56281), (73, 56284), (74, 56335), (78, 56365), (82, 56398), (92, 56530), (95, 56560), (97, 56584), (100, 56626), (102, 56641), (108, 56746), (113, 56764), (119, 56839),

Gene: Bubbles123\_95 Start: 54293, Stop: 55729, Start Num: 23

Candidate Starts for Bubbles123\_95:

(6, 53990), (Start: 8 @54119 has 41 MA's), (Start: 23 @54293 has 182 MA's), (Start: 28 @54305 has 1 MA's), (Start: 48 @54644 has 1 MA's), (51, 54746), (59, 54911), (67, 54986), (71, 55031), (72, 55049), (73, 55052), (74, 55103), (82, 55166), (95, 55328), (97, 55352), (100, 55394), (102, 55409), (106, 55490), (108, 55514), (113, 55532), (119, 55607), (123, 55670),

Gene: Burwell21\_96 Start: 54593, Stop: 56029, Start Num: 23

Candidate Starts for Burwell21\_96:

(Start: 23 @54593 has 182 MA's), (Start: 28 @54605 has 1 MA's), (Start: 48 @54944 has 1 MA's), (51, 55046), (53, 55067), (57, 55181), (59, 55211), (67, 55286), (71, 55331), (72, 55349), (73, 55352), (74, 55403), (78, 55433), (82, 55466), (92, 55598), (95, 55628), (97, 55652), (100, 55694), (102, 55709), (106, 55790), (108, 55814), (113, 55832), (119, 55907), (123, 55970), (124, 55973),

Gene: BuzzLyseyear\_108 Start: 57074, Stop: 58510, Start Num: 23

Candidate Starts for BuzzLyseyear\_108:

(Start: 23 @57074 has 182 MA's), (27, 57080), (Start: 28 @57083 has 1 MA's), (Start: 48 @57425 has 1 MA's), (51, 57527), (57, 57662), (59, 57692), (61, 57710), (67, 57767), (71, 57812), (72, 57830), (73, 57833), (74, 57884), (82, 57947), (92, 58079), (95, 58109), (97, 58133), (100, 58175), (102, 58190), (108, 58295), (113, 58313), (119, 58388),

Gene: ByChance\_92 Start: 50387, Stop: 51826, Start Num: 23

Candidate Starts for ByChance\_92:

(Start: 23 @50387 has 182 MA's), (27, 50396), (Start: 28 @50399 has 1 MA's), (Start: 48 @50741 has 1 MA's), (51, 50843), (57, 50978), (59, 51008), (61, 51026), (71, 51128), (72, 51146), (73, 51149), (74, 51200), (82, 51263), (95, 51425), (97, 51449), (100, 51491), (102, 51506), (108, 51611), (113, 51629), (119, 51704),

Gene: Byougenkin\_97 Start: 51166, Stop: 52869, Start Num: 8

Candidate Starts for Byougenkin\_97:

(5, 50980), (6, 51037), (Start: 8 @51166 has 41 MA's), (Start: 23 @51340 has 182 MA's), (Start: 28 @51352 has 1 MA's), (Start: 48 @51691 has 1 MA's), (51, 51793), (57, 51928), (59, 51958), (61, 51976), (67, 52033), (71, 52078), (72, 52096), (73, 52099), (74, 52150), (82, 52213), (95, 52375), (97, 52399), (100, 52441), (102, 52456), (104, 52522), (108, 52561), (109, 52579), (111, 52615), (112, 52654), (113, 52672), (119, 52747),

Gene: Cabrinians\_99 Start: 54289, Stop: 55374, Start Num: 48

Candidate Starts for Cabrinians\_99:

(Start: 48 @54289 has 1 MA's), (51, 54391), (59, 54556), (61, 54574), (73, 54697), (74, 54748), (78, 54778), (82, 54811), (92, 54943), (95, 54973), (97, 54997), (100, 55039), (102, 55054), (104, 55120), (108, 55159), (113, 55177), (119, 55252),

Gene: CaptainTrips\_103 Start: 54119, Stop: 55555, Start Num: 23

Candidate Starts for CaptainTrips\_103:

(6, 53816), (Start: 8 @53945 has 41 MA's), (Start: 23 @54119 has 182 MA's), (Start: 28 @54131 has 1 MA's), (Start: 48 @54470 has 1 MA's), (51, 54572), (59, 54737), (67, 54812), (71, 54857), (73, 54878), (74, 54929), (78, 54959), (82, 54992), (92, 55124), (95, 55154), (97, 55178), (100, 55220), (102, 55235), (106, 55316), (108, 55340), (113, 55358), (119, 55433), (123, 55496), (124, 55499),

Gene: Cerasum\_100 Start: 51291, Stop: 52727, Start Num: 23

Candidate Starts for Cerasum\_100:

(6, 50988), (Start: 8 @51117 has 41 MA's), (Start: 23 @51291 has 182 MA's), (Start: 28 @51303 has 1 MA's), (Start: 48 @51642 has 1 MA's), (51, 51744), (59, 51909), (73, 52050), (74, 52101), (78, 52131), (82, 52164), (92, 52296), (95, 52326), (97, 52350), (100, 52392), (102, 52407), (106, 52488), (108, 52512), (113, 52530), (119, 52605), (123, 52668),

Gene: Che9c\_82 Start: 54573, Stop: 56009, Start Num: 23

Candidate Starts for Che9c\_82:

(12, 54507), (Start: 23 @54573 has 182 MA's), (27, 54582), (Start: 48 @54924 has 1 MA's), (51, 55026), (59, 55191), (67, 55266), (71, 55311), (72, 55329), (73, 55332), (74, 55383), (82, 55446), (87, 55494), (90, 55569), (92, 55578), (95, 55608), (97, 55632), (102, 55689), (108, 55794), (113, 55812), (117, 55875), (119, 55887),

Gene: Cheesepuff\_106 Start: 54311, Stop: 55750, Start Num: 23

Candidate Starts for Cheesepuff\_106:

(Start: 23 @54311 has 182 MA's), (27, 54320), (Start: 28 @54323 has 1 MA's), (Start: 48 @54665 has 1 MA's), (51, 54767), (57, 54902), (59, 54932), (61, 54950), (67, 55007), (71, 55052), (72, 55070), (73, 55073), (74, 55124), (82, 55187), (92, 55319), (95, 55349), (97, 55373), (100, 55415), (102, 55430), (106, 55511), (108, 55535), (113, 55553), (119, 55628), (123, 55691),

Gene: Chevrolet\_105 Start: 55358, Stop: 56797, Start Num: 23

Candidate Starts for Chevrolet\_105:

(Start: 23 @55358 has 182 MA's), (27, 55367), (Start: 28 @55370 has 1 MA's), (Start: 48 @55712 has 1 MA's), (51, 55814), (57, 55949), (59, 55979), (67, 56054), (71, 56099), (72, 56117), (73, 56120), (74, 56171), (78, 56201), (82, 56234), (92, 56366), (95, 56396), (97, 56420), (100, 56462), (102, 56477), (106, 56558), (108, 56582), (113, 56600), (119, 56675), (123, 56738), (124, 56741),

Gene: ChickenDinner\_92 Start: 54180, Stop: 55616, Start Num: 23

Candidate Starts for ChickenDinner\_92:

(1, 53421), (2, 53583), (3, 53727), (4, 53730), (5, 53820), (6, 53877), (7, 53982), (Start: 8 @54006 has 41 MA's), (Start: 23 @54180 has 182 MA's), (Start: 28 @54192 has 1 MA's), (Start: 48 @54531 has 1 MA's), (51, 54633), (57, 54768), (59, 54798), (61, 54816), (67, 54873), (71, 54918), (72, 54936), (73, 54939), (74, 54990), (82, 55053), (92, 55185), (95, 55215), (97, 55239), (100, 55281), (102, 55296), (106, 55377), (108, 55401), (113, 55419), (119, 55494), (123, 55557),

Gene: Chuckly\_98 Start: 51161, Stop: 52597, Start Num: 23

Candidate Starts for Chuckly\_98:

(6, 50858), (Start: 8 @50987 has 41 MA's), (Start: 23 @51161 has 182 MA's), (Start: 28 @51173 has 1 MA's), (Start: 48 @51512 has 1 MA's), (51, 51614), (59, 51779), (67, 51854), (71, 51899), (72, 51917), (73, 51920), (74, 51971), (78, 52001), (82, 52034), (92, 52166), (95, 52196), (97, 52220), (100, 52262), (102, 52277), (106, 52358), (108, 52382), (113, 52400), (119, 52475), (123, 52538), (124, 52541),

Gene: Clank\_99 Start: 52488, Stop: 53924, Start Num: 23

Candidate Starts for Clank\_99:

(Start: 23 @52488 has 182 MA's), (Start: 28 @52500 has 1 MA's), (Start: 48 @52839 has 1 MA's), (51, 52941), (59, 53106), (71, 53226), (72, 53244), (73, 53247), (74, 53298), (78, 53328), (82, 53361), (92, 53493), (95, 53523), (97, 53547), (100, 53589), (102, 53604), (106, 53685), (108, 53709), (113, 53727), (119, 53802), (123, 53865),

Gene: Clifton\_93 Start: 52993, Stop: 54429, Start Num: 23

Candidate Starts for Clifton\_93:

(6, 52690), (Start: 8 @52819 has 41 MA's), (Start: 23 @52993 has 182 MA's), (Start: 28 @53005 has 1 MA's), (Start: 48 @53344 has 1 MA's), (51, 53446), (59, 53611), (61, 53629), (73, 53752), (74, 53803), (78, 53833), (82, 53866), (92, 53998), (95, 54028), (97, 54052), (100, 54094), (102, 54109), (104, 54175), (106, 54190), (108, 54214), (113, 54232), (119, 54307),

Gene: Coco12\_102 Start: 55348, Stop: 56784, Start Num: 23

Candidate Starts for Coco12\_102:

(6, 55045), (Start: 8 @55174 has 41 MA's), (Start: 23 @55348 has 182 MA's), (Start: 28 @55360 has 1 MA's), (Start: 48 @55699 has 1 MA's), (51, 55801), (59, 55966), (73, 56107), (74, 56158), (78, 56188), (82, 56221), (92, 56353), (95, 56383), (97, 56407), (100, 56449), (102, 56464), (106, 56545), (108, 56569), (113, 56587), (119, 56662), (123, 56725),

Gene: Corium\_100 Start: 56148, Stop: 57584, Start Num: 23

Candidate Starts for Corium\_100:

(6, 55845), (Start: 8 @55974 has 41 MA's), (Start: 23 @56148 has 182 MA's), (Start: 28 @56160 has 1 MA's), (Start: 48 @56499 has 1 MA's), (51, 56601), (59, 56766), (67, 56841), (71, 56886), (72, 56904), (73, 56907), (74, 56958), (78, 56988), (82, 57021), (92, 57153), (95, 57183), (97, 57207), (100, 57249), (102, 57264), (106, 57345), (108, 57369), (113, 57387), (119, 57462), (123, 57525), (124, 57528),

Gene: Cornucopia\_101 Start: 52419, Stop: 53855, Start Num: 23

Candidate Starts for Cornucopia\_101:

(6, 52116), (Start: 8 @52245 has 41 MA's), (Start: 23 @52419 has 182 MA's), (Start: 28 @52431 has 1 MA's), (46, 52695), (Start: 48 @52770 has 1 MA's), (51, 52872), (59, 53037), (67, 53112), (71, 53157), (72, 53175), (73, 53178), (74, 53229), (82, 53292), (92, 53424), (95, 53454), (97, 53478), (100, 53520), (102, 53535), (104, 53601), (108, 53640), (113, 53658), (119, 53733), (123, 53796),

Gene: Crumble\_96 Start: 50687, Stop: 52123, Start Num: 23

Candidate Starts for Crumble\_96:

(5, 50327), (6, 50384), (Start: 8 @50513 has 41 MA's), (Start: 23 @50687 has 182 MA's), (Start: 28 @50699 has 1 MA's), (Start: 48 @51038 has 1 MA's), (51, 51140), (53, 51161), (57, 51275), (59, 51305), (67, 51380), (71, 51425), (72, 51443), (73, 51446), (74, 51497), (78, 51527), (82, 51560), (92, 51692), (95, 51722), (97, 51746), (100, 51788), (102, 51803), (106, 51884), (108, 51908), (113, 51926), (119, 52001), (123, 52064),

Gene: DLane\_101 Start: 55690, Stop: 57126, Start Num: 23

Candidate Starts for DLane\_101:

(Start: 23 @55690 has 182 MA's), (Start: 28 @55702 has 1 MA's), (Start: 48 @56041 has 1 MA's), (51, 56143), (59, 56308), (67, 56383), (71, 56428), (73, 56449), (74, 56500), (82, 56563), (92, 56695), (95, 56725), (97, 56749), (100, 56791), (102, 56806), (106, 56887), (108, 56911), (113, 56929), (119, 57004), (123, 57067), (124, 57070),

Gene: DRBy19\_101 Start: 55630, Stop: 57069, Start Num: 23

Candidate Starts for DRBy19\_101:

(Start: 23 @55630 has 182 MA's), (27, 55639), (Start: 28 @55642 has 1 MA's), (Start: 48 @55984 has 1 MA's), (51, 56086), (57, 56221), (59, 56251), (61, 56269), (71, 56371), (72, 56389), (73, 56392), (74, 56443), (78, 56473), (82, 56506), (92, 56638), (95, 56668), (97, 56692), (100, 56734), (102, 56749), (108, 56854), (113, 56872), (119, 56947),

Gene: DaWorst\_100 Start: 54061, Stop: 55683, Start Num: 8

Candidate Starts for DaWorst\_100:

(Start: 8 @54061 has 41 MA's), (Start: 23 @54244 has 182 MA's), (27, 54253), (Start: 28 @54256 has 1 MA's), (Start: 48 @54598 has 1 MA's), (51, 54700), (57, 54835), (59, 54865), (61, 54883), (71, 54985), (72, 55003), (73, 55006), (74, 55057), (76, 55075), (82, 55120), (95, 55282), (97, 55306), (100,

55348), (102, 55363), (104, 55429), (108, 55468), (113, 55486), (119, 55561),

Gene: DaddyRickover\_103 Start: 55113, Stop: 56549, Start Num: 23

Candidate Starts for DaddyRickover\_103:

(Start: 23 @55113 has 182 MA's), (27, 55119), (Start: 28 @55122 has 1 MA's), (Start: 48 @55464 has 1 MA's), (51, 55566), (57, 55701), (59, 55731), (61, 55749), (71, 55851), (72, 55869), (73, 55872), (74, 55923), (82, 55986), (95, 56148), (97, 56172), (100, 56214), (102, 56229), (104, 56295), (108, 56334), (113, 56352), (119, 56427),

Gene: Daenerys\_99 Start: 55280, Stop: 56716, Start Num: 23

Candidate Starts for Daenerys\_99:

(Start: 23 @55280 has 182 MA's), (27, 55286), (Start: 28 @55289 has 1 MA's), (Start: 48 @55631 has 1 MA's), (51, 55733), (57, 55868), (59, 55898), (61, 55916), (71, 56018), (72, 56036), (73, 56039), (74, 56090), (76, 56108), (78, 56120), (82, 56153), (92, 56285), (95, 56315), (97, 56339), (100, 56381), (102, 56396), (104, 56462), (108, 56501), (113, 56519), (119, 56594),

Gene: Deb65\_94 Start: 53004, Stop: 54440, Start Num: 23

Candidate Starts for Deb65\_94:

(Start: 23 @53004 has 182 MA's), (27, 53010), (Start: 28 @53013 has 1 MA's), (Start: 48 @53355 has 1 MA's), (51, 53457), (57, 53592), (59, 53622), (61, 53640), (71, 53742), (72, 53760), (73, 53763), (74, 53814), (76, 53832), (78, 53844), (82, 53877), (92, 54009), (95, 54039), (97, 54063), (100, 54105), (102, 54120), (104, 54186), (108, 54225), (113, 54243), (119, 54318),

Gene: DillTech15\_107 Start: 54586, Stop: 56025, Start Num: 23

Candidate Starts for DillTech15\_107:

(Start: 23 @54586 has 182 MA's), (27, 54595), (Start: 28 @54598 has 1 MA's), (Start: 48 @54940 has 1 MA's), (51, 55042), (59, 55207), (71, 55327), (72, 55345), (73, 55348), (74, 55399), (78, 55429), (82, 55462), (92, 55594), (95, 55624), (97, 55648), (100, 55690), (102, 55705), (106, 55786), (108, 55810), (113, 55828), (119, 55903), (123, 55966), (124, 55969),

Gene: DirtMcgirt\_101 Start: 51642, Stop: 53252, Start Num: 8

Candidate Starts for DirtMcgirt\_101:

(Start: 8 @51642 has 41 MA's), (Start: 23 @51816 has 182 MA's), (Start: 28 @51828 has 1 MA's), (Start: 48 @52167 has 1 MA's), (51, 52269), (53, 52290), (59, 52434), (67, 52509), (71, 52554), (73, 52575), (74, 52626), (82, 52689), (95, 52851), (97, 52875), (100, 52917), (102, 52932), (104, 52998), (108, 53037), (113, 53055), (119, 53130),

Gene: DocMcStuffins\_89 Start: 55810, Stop: 57246, Start Num: 23

Candidate Starts for DocMcStuffins\_89:

(1, 55051), (2, 55213), (3, 55357), (4, 55360), (5, 55450), (6, 55507), (7, 55612), (Start: 8 @55636 has 41 MA's), (Start: 23 @55810 has 182 MA's), (Start: 28 @55822 has 1 MA's), (Start: 48 @56161 has 1 MA's), (51, 56263), (57, 56398), (59, 56428), (61, 56446), (67, 56503), (71, 56548), (72, 56566), (73, 56569), (74, 56620), (82, 56683), (92, 56815), (95, 56845), (97, 56869), (100, 56911), (102, 56926), (106, 57007), (108, 57031), (113, 57049), (119, 57124), (123, 57187),

Gene: Donkeykong\_107 Start: 56745, Stop: 58181, Start Num: 23

Candidate Starts for Donkeykong\_107:

(Start: 8 @56562 has 41 MA's), (Start: 23 @56745 has 182 MA's), (27, 56754), (Start: 28 @56757 has 1 MA's), (Start: 48 @57096 has 1 MA's), (51, 57198), (57, 57333), (59, 57363), (61, 57381), (71, 57483), (72, 57501), (73, 57504), (74, 57555), (78, 57585), (82, 57618), (92, 57750), (95, 57780), (97, 57804), (100, 57846), (102, 57861), (106, 57942), (108, 57966), (113, 57984), (119, 58059), (123, 58122), (124, 58125),

Gene: Doomphist\_106 Start: 55933, Stop: 57354, Start Num: 23

Candidate Starts for Doomphist\_106:

(Start: 23 @55933 has 182 MA's), (26, 55939), (Start: 28 @55942 has 1 MA's), (Start: 48 @56284 has 1 MA's), (51, 56386), (57, 56521), (59, 56551), (61, 56569), (67, 56626), (71, 56671), (72, 56689), (73, 56692), (74, 56743), (82, 56806), (92, 56938), (95, 56968), (97, 56992), (100, 57034), (102, 57049), (104, 57115), (106, 57130), (108, 57154), (113, 57172), (119, 57247), (123, 57310),

Gene: Dorothy\_102 Start: 56102, Stop: 57538, Start Num: 23

Candidate Starts for Dorothy\_102:

(Start: 23 @56102 has 182 MA's), (27, 56108), (Start: 28 @56111 has 1 MA's), (Start: 48 @56453 has 1 MA's), (51, 56555), (57, 56690), (59, 56720), (61, 56738), (71, 56840), (72, 56858), (73, 56861), (74, 56912), (76, 56930), (78, 56942), (82, 56975), (92, 57107), (95, 57137), (97, 57161), (100, 57203), (102, 57218), (104, 57284), (108, 57323), (113, 57341), (119, 57416),

Gene: DosHalletts\_98 Start: 54741, Stop: 56177, Start Num: 23

Candidate Starts for DosHalletts\_98:

(6, 54438), (Start: 8 @54567 has 41 MA's), (Start: 23 @54741 has 182 MA's), (Start: 28 @54753 has 1 MA's), (Start: 48 @55092 has 1 MA's), (51, 55194), (59, 55359), (67, 55434), (71, 55479), (73, 55500), (74, 55551), (78, 55581), (82, 55614), (92, 55746), (95, 55776), (97, 55800), (100, 55842), (102, 55857), (106, 55938), (108, 55962), (113, 55980), (119, 56055), (123, 56118), (124, 56121),

Gene: DotProduct\_95 Start: 52108, Stop: 53544, Start Num: 23

Candidate Starts for DotProduct\_95:

(6, 51805), (Start: 8 @51934 has 41 MA's), (Start: 23 @52108 has 182 MA's), (Start: 28 @52120 has 1 MA's), (Start: 48 @52459 has 1 MA's), (51, 52561), (59, 52726), (67, 52801), (71, 52846), (72, 52864), (73, 52867), (74, 52918), (78, 52948), (82, 52981), (92, 53113), (95, 53143), (97, 53167), (100, 53209), (102, 53224), (106, 53305), (108, 53329), (113, 53347), (119, 53422), (123, 53485), (124, 53488),

Gene: Doug\_97 Start: 55481, Stop: 57100, Start Num: 8

Candidate Starts for Doug\_97:

(Start: 8 @55481 has 41 MA's), (Start: 23 @55664 has 182 MA's), (27, 55673), (Start: 28 @55676 has 1 MA's), (Start: 48 @56015 has 1 MA's), (51, 56117), (57, 56252), (59, 56282), (61, 56300), (71, 56402), (72, 56420), (73, 56423), (74, 56474), (82, 56537), (92, 56669), (95, 56699), (97, 56723), (100, 56765), (102, 56780), (104, 56846), (108, 56885), (113, 56903), (119, 56978),

Gene: Drago\_100 Start: 51828, Stop: 53267, Start Num: 23

Candidate Starts for Drago\_100:

(Start: 8 @51645 has 41 MA's), (Start: 23 @51828 has 182 MA's), (27, 51837), (Start: 28 @51840 has 1 MA's), (Start: 48 @52182 has 1 MA's), (51, 52284), (57, 52419), (59, 52449), (61, 52467), (71, 52569), (72, 52587), (73, 52590), (74, 52641), (76, 52659), (82, 52704), (95, 52866), (97, 52890), (100, 52932), (102, 52947), (104, 53013), (108, 53052), (113, 53070), (119, 53145),

Gene: Eish\_106 Start: 55417, Stop: 56853, Start Num: 23

Candidate Starts for Eish\_106:

(6, 55114), (Start: 8 @55243 has 41 MA's), (Start: 23 @55417 has 182 MA's), (Start: 28 @55429 has 1 MA's), (Start: 48 @55768 has 1 MA's), (51, 55870), (57, 56005), (59, 56035), (61, 56053), (67, 56110), (71, 56155), (72, 56173), (73, 56176), (74, 56227), (82, 56290), (92, 56422), (95, 56452), (97, 56476), (100, 56518), (102, 56533), (104, 56599), (108, 56638), (113, 56656), (119, 56731),

Gene: EleanorGeorge\_105 Start: 56747, Stop: 58186, Start Num: 23

Candidate Starts for EleanorGeorge\_105:

(Start: 23 @56747 has 182 MA's), (27, 56756), (Start: 28 @56759 has 1 MA's), (Start: 48 @57101 has 1 MA's), (51, 57203), (59, 57368), (71, 57488), (72, 57506), (73, 57509), (74, 57560), (78, 57590), (82,

57623), (92, 57755), (95, 57785), (97, 57809), (100, 57851), (102, 57866), (106, 57947), (108, 57971), (113, 57989), (119, 58064), (123, 58127), (124, 58130),

Gene: EmiMonkey\_89 Start: 55677, Stop: 57287, Start Num: 8

Candidate Starts for EmiMonkey\_89:

(Start: 8 @55677 has 41 MA's), (Start: 23 @55851 has 182 MA's), (Start: 28 @55863 has 1 MA's), (Start: 48 @56202 has 1 MA's), (51, 56304), (57, 56439), (59, 56469), (67, 56544), (71, 56589), (73, 56610), (74, 56661), (78, 56691), (82, 56724), (92, 56856), (95, 56886), (97, 56910), (100, 56952), (102, 56967), (104, 57033), (108, 57072), (113, 57090), (119, 57165),

Gene: Emma\_106 Start: 53685, Stop: 55121, Start Num: 23

Candidate Starts for Emma\_106:

(6, 53382), (Start: 8 @53511 has 41 MA's), (Start: 23 @53685 has 182 MA's), (Start: 28 @53697 has 1 MA's), (Start: 48 @54036 has 1 MA's), (51, 54138), (59, 54303), (73, 54444), (74, 54495), (78, 54525), (82, 54558), (92, 54690), (95, 54720), (97, 54744), (100, 54786), (102, 54801), (106, 54882), (108, 54906), (113, 54924), (119, 54999), (123, 55062),

Gene: Emmaloid\_105 Start: 54894, Stop: 56330, Start Num: 23

Candidate Starts for Emmaloid\_105:

(Start: 23 @54894 has 182 MA's), (Start: 28 @54906 has 1 MA's), (Start: 48 @55245 has 1 MA's), (51, 55347), (59, 55512), (67, 55587), (71, 55632), (73, 55653), (74, 55704), (78, 55734), (82, 55767), (92, 55899), (95, 55929), (97, 55953), (100, 55995), (102, 56010), (106, 56091), (108, 56115), (113, 56133), (119, 56208), (123, 56271), (124, 56274),

Gene: Empress\_101 Start: 54196, Stop: 55632, Start Num: 23

Candidate Starts for Empress\_101:

(Start: 23 @54196 has 182 MA's), (27, 54202), (Start: 28 @54205 has 1 MA's), (Start: 48 @54547 has 1 MA's), (51, 54649), (57, 54784), (59, 54814), (61, 54832), (71, 54934), (72, 54952), (73, 54955), (74, 55006), (76, 55024), (78, 55036), (82, 55069), (92, 55201), (95, 55231), (97, 55255), (100, 55297), (102, 55312), (104, 55378), (108, 55417), (113, 55435), (119, 55510),

Gene: Enby\_104 Start: 51921, Stop: 53543, Start Num: 8

Candidate Starts for Enby\_104:

(Start: 8 @51921 has 41 MA's), (Start: 23 @52104 has 182 MA's), (27, 52113), (Start: 28 @52116 has 1 MA's), (Start: 48 @52458 has 1 MA's), (51, 52560), (57, 52695), (59, 52725), (61, 52743), (71, 52845), (72, 52863), (73, 52866), (74, 52917), (76, 52935), (82, 52980), (95, 53142), (97, 53166), (100, 53208), (102, 53223), (104, 53289), (108, 53328), (113, 53346), (119, 53421),

Gene: Enzomatic\_113 Start: 53837, Stop: 55447, Start Num: 8

Candidate Starts for Enzomatic\_113:

(Start: 8 @53837 has 41 MA's), (Start: 23 @54011 has 182 MA's), (Start: 28 @54023 has 1 MA's), (Start: 48 @54362 has 1 MA's), (51, 54464), (57, 54599), (59, 54629), (61, 54647), (67, 54704), (71, 54749), (72, 54767), (73, 54770), (74, 54821), (82, 54884), (92, 55016), (95, 55046), (97, 55070), (100, 55112), (102, 55127), (104, 55193), (106, 55208), (108, 55232), (113, 55250), (119, 55325),

Gene: Eradicator\_92 Start: 52966, Stop: 54402, Start Num: 23

Candidate Starts for Eradicator\_92:

(Start: 23 @52966 has 182 MA's), (27, 52972), (Start: 28 @52975 has 1 MA's), (Start: 48 @53317 has 1 MA's), (51, 53419), (57, 53554), (59, 53584), (61, 53602), (71, 53704), (72, 53722), (73, 53725), (74, 53776), (82, 53839), (95, 54001), (97, 54025), (100, 54067), (102, 54082), (104, 54148), (108, 54187), (113, 54205), (119, 54280),

Gene: Estave1\_109 Start: 57990, Stop: 59429, Start Num: 23

Candidate Starts for Estave1\_109:

(Start: 23 @57990 has 182 MA's), (27, 57999), (Start: 28 @58002 has 1 MA's), (Start: 48 @58344 has 1 MA's), (51, 58446), (57, 58581), (59, 58611), (61, 58629), (67, 58686), (71, 58731), (72, 58749), (73, 58752), (74, 58803), (82, 58866), (95, 59028), (97, 59052), (100, 59094), (102, 59109), (104, 59175), (108, 59214), (113, 59232), (119, 59307),

Gene: Fancypants\_108 Start: 57495, Stop: 58931, Start Num: 23

Candidate Starts for Fancypants\_108:

(Start: 23 @57495 has 182 MA's), (27, 57501), (Start: 28 @57504 has 1 MA's), (Start: 48 @57846 has 1 MA's), (51, 57948), (57, 58083), (59, 58113), (61, 58131), (71, 58233), (72, 58251), (73, 58254), (74, 58305), (82, 58368), (95, 58530), (97, 58554), (100, 58596), (102, 58611), (104, 58677), (108, 58716), (113, 58734), (119, 58809),

Gene: Farewell\_89 Start: 57991, Stop: 59445, Start Num: 23

Candidate Starts for Farewell\_89:

(15, 57958), (21, 57982), (Start: 23 @57991 has 182 MA's), (40, 58180), (44, 58255), (45, 58267), (49, 58408), (65, 58678), (74, 58813), (82, 58876), (92, 59011), (93, 59017), (98, 59086), (102, 59125), (104, 59194), (107, 59230), (108, 59233), (115, 59278), (119, 59323), (120, 59329), (125, 59395),

Gene: Fastidio\_104 Start: 52456, Stop: 54066, Start Num: 8

Candidate Starts for Fastidio\_104:

(Start: 8 @52456 has 41 MA's), (Start: 23 @52630 has 182 MA's), (Start: 28 @52642 has 1 MA's), (Start: 48 @52981 has 1 MA's), (51, 53083), (59, 53248), (67, 53323), (71, 53368), (73, 53389), (74, 53440), (78, 53470), (82, 53503), (92, 53635), (95, 53665), (97, 53689), (100, 53731), (102, 53746), (106, 53827), (108, 53851), (113, 53869), (119, 53944), (123, 54007), (124, 54010),

Gene: Filuzino\_101 Start: 56039, Stop: 57532, Start Num: 14

Candidate Starts for Filuzino\_101:

(6, 55793), (Start: 8 @55922 has 41 MA's), (Start: 14 @56039 has 1 MA's), (Start: 23 @56096 has 182 MA's), (Start: 28 @56108 has 1 MA's), (Start: 48 @56447 has 1 MA's), (51, 56549), (59, 56714), (67, 56789), (70, 56831), (71, 56834), (73, 56855), (74, 56906), (78, 56936), (82, 56969), (92, 57101), (95, 57131), (97, 57155), (100, 57197), (102, 57212), (106, 57293), (108, 57317), (113, 57335), (119, 57410), (123, 57473), (124, 57476),

Gene: Firehouse51\_95 Start: 54914, Stop: 56350, Start Num: 23

Candidate Starts for Firehouse51\_95:

(Start: 23 @54914 has 182 MA's), (Start: 28 @54926 has 1 MA's), (Start: 48 @55265 has 1 MA's), (51, 55367), (57, 55502), (59, 55532), (61, 55550), (67, 55607), (71, 55652), (72, 55670), (73, 55673), (74, 55724), (82, 55787), (92, 55919), (95, 55949), (97, 55973), (100, 56015), (102, 56030), (104, 56096), (106, 56111), (108, 56135), (113, 56153), (119, 56228),

Gene: Flathead\_103 Start: 54417, Stop: 55853, Start Num: 23

Candidate Starts for Flathead\_103:

(6, 54114), (Start: 8 @54243 has 41 MA's), (Start: 23 @54417 has 182 MA's), (Start: 28 @54429 has 1 MA's), (Start: 48 @54768 has 1 MA's), (51, 54870), (59, 55035), (67, 55110), (71, 55155), (73, 55176), (74, 55227), (78, 55257), (82, 55290), (92, 55422), (95, 55452), (97, 55476), (100, 55518), (102, 55533), (104, 55599), (108, 55638), (113, 55656), (119, 55731),

Gene: Florinda\_113 Start: 56502, Stop: 57938, Start Num: 23

Candidate Starts for Florinda\_113:

(5, 56142), (6, 56199), (Start: 8 @56328 has 41 MA's), (Start: 23 @56502 has 182 MA's), (Start: 28 @56514 has 1 MA's), (Start: 48 @56853 has 1 MA's), (51, 56955), (57, 57090), (59, 57120), (61, 57138), (71, 57240), (72, 57258), (73, 57261), (74, 57312), (78, 57342), (82, 57375), (92, 57507), (95,

57537), (97, 57561), (100, 57603), (102, 57618), (108, 57723), (113, 57741), (119, 57816),

Gene: Frankie\_100 Start: 54151, Stop: 55761, Start Num: 8

Candidate Starts for Frankie\_100:

(6, 54022), (Start: 8 @54151 has 41 MA's), (Start: 23 @54325 has 182 MA's), (Start: 28 @54337 has 1 MA's), (Start: 48 @54676 has 1 MA's), (51, 54778), (59, 54943), (67, 55018), (71, 55063), (72, 55081), (73, 55084), (74, 55135), (82, 55198), (92, 55330), (95, 55360), (97, 55384), (100, 55426), (102, 55441), (106, 55522), (108, 55546), (113, 55564), (119, 55639), (123, 55702),

Gene: FreddyB\_110 Start: 55411, Stop: 57021, Start Num: 8

Candidate Starts for FreddyB\_110:

(6, 55282), (Start: 8 @55411 has 41 MA's), (Start: 23 @55585 has 182 MA's), (Start: 28 @55597 has 1 MA's), (Start: 48 @55936 has 1 MA's), (51, 56038), (59, 56203), (61, 56221), (73, 56344), (74, 56395), (78, 56425), (82, 56458), (92, 56590), (95, 56620), (97, 56644), (100, 56686), (102, 56701), (104, 56767), (108, 56806), (113, 56824), (119, 56899),

Gene: Fruitloop\_99 Start: 55261, Stop: 56697, Start Num: 23

Candidate Starts for Fruitloop\_99:

(6, 54958), (Start: 8 @55087 has 41 MA's), (Start: 23 @55261 has 182 MA's), (Start: 28 @55273 has 1 MA's), (Start: 48 @55612 has 1 MA's), (51, 55714), (59, 55879), (67, 55954), (71, 55999), (73, 56020), (74, 56071), (78, 56101), (82, 56134), (92, 56266), (95, 56296), (97, 56320), (100, 56362), (102, 56377), (106, 56458), (108, 56482), (113, 56500), (119, 56575), (123, 56638), (124, 56641),

Gene: GUmbie\_100 Start: 54132, Stop: 55568, Start Num: 23

Candidate Starts for GUmbie\_100:

(Start: 23 @54132 has 182 MA's), (27, 54141), (Start: 28 @54144 has 1 MA's), (Start: 48 @54483 has 1 MA's), (51, 54585), (57, 54720), (59, 54750), (61, 54768), (67, 54825), (71, 54870), (72, 54888), (73, 54891), (74, 54942), (82, 55005), (92, 55137), (95, 55167), (97, 55191), (100, 55233), (102, 55248), (106, 55329), (108, 55353), (113, 55371), (119, 55446), (123, 55509), (124, 55512),

Gene: Galactic\_105 Start: 54609, Stop: 56045, Start Num: 23

Candidate Starts for Galactic\_105:

(Start: 23 @54609 has 182 MA's), (27, 54618), (Start: 28 @54621 has 1 MA's), (Start: 48 @54960 has 1 MA's), (51, 55062), (57, 55197), (59, 55227), (61, 55245), (67, 55302), (71, 55347), (72, 55365), (73, 55368), (74, 55419), (82, 55482), (92, 55614), (95, 55644), (97, 55668), (100, 55710), (102, 55725), (104, 55791), (106, 55806), (108, 55830), (113, 55848), (119, 55923),

Gene: Gandalph\_101 Start: 52238, Stop: 53677, Start Num: 23

Candidate Starts for Gandalph\_101:

(Start: 23 @52238 has 182 MA's), (27, 52247), (Start: 28 @52250 has 1 MA's), (Start: 48 @52592 has 1 MA's), (51, 52694), (59, 52859), (71, 52979), (72, 52997), (73, 53000), (74, 53051), (78, 53081), (82, 53114), (92, 53246), (95, 53276), (97, 53300), (100, 53342), (102, 53357), (106, 53438), (108, 53462), (113, 53480), (119, 53555), (123, 53618), (124, 53621),

Gene: Geralt\_94 Start: 53002, Stop: 54438, Start Num: 23

Candidate Starts for Geralt\_94:

(Start: 23 @53002 has 182 MA's), (27, 53008), (Start: 28 @53011 has 1 MA's), (Start: 48 @53353 has 1 MA's), (51, 53455), (57, 53590), (59, 53620), (61, 53638), (71, 53740), (72, 53758), (73, 53761), (74, 53812), (76, 53830), (78, 53842), (82, 53875), (92, 54007), (95, 54037), (97, 54061), (100, 54103), (102, 54118), (104, 54184), (108, 54223), (113, 54241), (119, 54316),

Gene: GigiOuiOui\_95 Start: 52951, Stop: 54573, Start Num: 8

Candidate Starts for GigiOuiOui\_95:

(Start: 8 @52951 has 41 MA's), (Start: 23 @53134 has 182 MA's), (27, 53143), (Start: 28 @53146 has 1 MA's), (Start: 48 @53488 has 1 MA's), (51, 53590), (57, 53725), (59, 53755), (61, 53773), (67, 53830), (71, 53875), (72, 53893), (73, 53896), (74, 53947), (82, 54010), (92, 54142), (95, 54172), (97, 54196), (100, 54238), (102, 54253), (104, 54319), (106, 54334), (108, 54358), (113, 54376), (119, 54451),

Gene: Girafales\_110 Start: 56107, Stop: 57543, Start Num: 23

Candidate Starts for Girafales\_110:

(5, 55747), (6, 55804), (Start: 8 @55933 has 41 MA's), (Start: 23 @56107 has 182 MA's), (Start: 28 @56119 has 1 MA's), (Start: 48 @56458 has 1 MA's), (51, 56560), (57, 56695), (59, 56725), (61, 56743), (71, 56845), (72, 56863), (73, 56866), (74, 56917), (78, 56947), (82, 56980), (92, 57112), (95, 57142), (97, 57166), (100, 57208), (102, 57223), (106, 57304), (108, 57328), (113, 57346), (119, 57421), (123, 57484),

Gene: Girr\_100 Start: 54991, Stop: 56427, Start Num: 23

Candidate Starts for Girr\_100:

(Start: 8 @54817 has 41 MA's), (Start: 23 @54991 has 182 MA's), (Start: 28 @55003 has 1 MA's), (Start: 48 @55342 has 1 MA's), (51, 55444), (57, 55579), (59, 55609), (61, 55627), (71, 55729), (72, 55747), (73, 55750), (74, 55801), (76, 55819), (78, 55831), (82, 55864), (92, 55996), (95, 56026), (97, 56050), (100, 56092), (102, 56107), (104, 56173), (108, 56212), (113, 56230), (119, 56305),

Gene: Gorge\_100 Start: 55222, Stop: 56658, Start Num: 23

Candidate Starts for Gorge\_100:

(Start: 23 @55222 has 182 MA's), (26, 55228), (Start: 28 @55231 has 1 MA's), (Start: 48 @55573 has 1 MA's), (51, 55675), (57, 55810), (59, 55840), (61, 55858), (71, 55960), (72, 55978), (73, 55981), (74, 56032), (76, 56050), (78, 56062), (82, 56095), (92, 56227), (95, 56257), (97, 56281), (100, 56323), (102, 56338), (106, 56419), (108, 56443), (113, 56461), (119, 56536), (123, 56599),

Gene: Guppsters\_96 Start: 52102, Stop: 53538, Start Num: 23

Candidate Starts for Guppsters\_96:

(5, 51742), (6, 51799), (Start: 8 @51928 has 41 MA's), (Start: 23 @52102 has 182 MA's), (Start: 28 @52114 has 1 MA's), (Start: 48 @52453 has 1 MA's), (51, 52555), (53, 52576), (59, 52720), (61, 52738), (63, 52750), (73, 52861), (74, 52912), (78, 52942), (82, 52975), (92, 53107), (95, 53137), (97, 53161), (100, 53203), (102, 53218), (106, 53299), (108, 53323), (113, 53341), (119, 53416), (123, 53479),

Gene: Hades\_98 Start: 51775, Stop: 53214, Start Num: 23

Candidate Starts for Hades\_98:

(Start: 23 @51775 has 182 MA's), (27, 51784), (Start: 28 @51787 has 1 MA's), (Start: 48 @52129 has 1 MA's), (51, 52231), (59, 52396), (67, 52471), (71, 52516), (72, 52534), (73, 52537), (74, 52588), (82, 52651), (92, 52783), (95, 52813), (97, 52837), (100, 52879), (102, 52894), (106, 52975), (108, 52999), (113, 53017), (119, 53092), (123, 53155), (124, 53158),

Gene: Hamulus\_101 Start: 53946, Stop: 55382, Start Num: 23

Candidate Starts for Hamulus\_101:

(6, 53643), (Start: 8 @53772 has 41 MA's), (Start: 23 @53946 has 182 MA's), (Start: 28 @53958 has 1 MA's), (Start: 48 @54297 has 1 MA's), (51, 54399), (53, 54420), (59, 54564), (67, 54639), (71, 54684), (73, 54705), (74, 54756), (78, 54786), (82, 54819), (92, 54951), (95, 54981), (97, 55005), (100, 55047), (102, 55062), (106, 55143), (108, 55167), (113, 55185), (119, 55260), (123, 55323), (124, 55326),

Gene: Harley\_102 Start: 54944, Stop: 56554, Start Num: 8

Candidate Starts for Harley\_102:

(Start: 8 @54944 has 41 MA's), (Start: 23 @55118 has 182 MA's), (Start: 28 @55130 has 1 MA's), (Start: 48 @55469 has 1 MA's), (51, 55571), (57, 55706), (59, 55736), (61, 55754), (67, 55811), (71, 55856), (72, 55874), (73, 55877), (74, 55928), (82, 55991), (92, 56123), (95, 56153), (97, 56177), (100, 56219), (102, 56234), (104, 56300), (106, 56315), (108, 56339), (113, 56357), (119, 56432),

Gene: Hegedechwinu\_109 Start: 54494, Stop: 55918, Start Num: 28

Candidate Starts for Hegedechwinu\_109:

(6, 54179), (Start: 8 @54308 has 41 MA's), (Start: 23 @54482 has 182 MA's), (Start: 28 @54494 has 1 MA's), (Start: 48 @54833 has 1 MA's), (51, 54935), (57, 55070), (59, 55100), (61, 55118), (67, 55175), (71, 55220), (72, 55238), (73, 55241), (74, 55292), (82, 55355), (95, 55517), (97, 55541), (100, 55583), (102, 55598), (104, 55664), (108, 55703), (113, 55721), (119, 55796),

Gene: Hlubikazi\_99 Start: 52734, Stop: 54173, Start Num: 23

Candidate Starts for Hlubikazi\_99:

(6, 52422), (Start: 8 @52551 has 41 MA's), (Start: 23 @52734 has 182 MA's), (27, 52743), (Start: 28 @52746 has 1 MA's), (Start: 48 @53088 has 1 MA's), (51, 53190), (57, 53325), (59, 53355), (61, 53373), (71, 53475), (72, 53493), (73, 53496), (74, 53547), (82, 53610), (92, 53742), (95, 53772), (97, 53796), (100, 53838), (102, 53853), (104, 53919), (106, 53934), (108, 53958), (113, 53976), (119, 54051), (123, 54114),

Gene: IMpilo\_99 Start: 52724, Stop: 54160, Start Num: 23

Candidate Starts for IMpilo\_99:

(Start: 8 @52550 has 41 MA's), (Start: 23 @52724 has 182 MA's), (Start: 28 @52736 has 1 MA's), (Start: 48 @53075 has 1 MA's), (51, 53177), (59, 53342), (67, 53417), (71, 53462), (73, 53483), (78, 53564), (82, 53597), (92, 53729), (95, 53759), (97, 53783), (100, 53825), (102, 53840), (106, 53921), (108, 53945), (113, 53963), (119, 54038), (123, 54101), (124, 54104),

Gene: IbOuu\_92 Start: 52088, Stop: 53524, Start Num: 23

Candidate Starts for IbOuu\_92:

(5, 51728), (6, 51785), (Start: 8 @51914 has 41 MA's), (Start: 23 @52088 has 182 MA's), (Start: 28 @52100 has 1 MA's), (Start: 48 @52439 has 1 MA's), (51, 52541), (59, 52706), (67, 52781), (71, 52826), (72, 52844), (73, 52847), (74, 52898), (78, 52928), (82, 52961), (95, 53123), (97, 53147), (100, 53189), (102, 53204), (104, 53270), (108, 53309), (113, 53327), (119, 53402), (123, 53465), (124, 53468),

Gene: lbhubesi\_97 Start: 51813, Stop: 53423, Start Num: 8

Candidate Starts for lbhubesi\_97:

(Start: 8 @51813 has 41 MA's), (Start: 23 @51987 has 182 MA's), (Start: 28 @51999 has 1 MA's), (Start: 48 @52338 has 1 MA's), (51, 52440), (57, 52575), (59, 52605), (61, 52623), (67, 52680), (71, 52725), (72, 52743), (73, 52746), (74, 52797), (82, 52860), (92, 52992), (95, 53022), (97, 53046), (100, 53088), (102, 53103), (104, 53169), (106, 53184), (108, 53208), (113, 53226), (119, 53301),

Gene: Inventum\_99 Start: 54290, Stop: 55726, Start Num: 23

Candidate Starts for Inventum\_99:

(Start: 23 @54290 has 182 MA's), (27, 54296), (Start: 28 @54299 has 1 MA's), (Start: 48 @54641 has 1 MA's), (51, 54743), (57, 54878), (59, 54908), (61, 54926), (71, 55028), (72, 55046), (73, 55049), (74, 55100), (76, 55118), (78, 55130), (82, 55163), (92, 55295), (95, 55325), (97, 55349), (100, 55391), (102, 55406), (104, 55472), (108, 55511), (113, 55529), (119, 55604),

Gene: JalFarm20\_110 Start: 56423, Stop: 57859, Start Num: 23

Candidate Starts for JalFarm20\_110:

(6, 56120), (Start: 8 @56249 has 41 MA's), (Start: 23 @56423 has 182 MA's), (Start: 28 @56435 has 1 MA's), (Start: 48 @56774 has 1 MA's), (51, 56876), (59, 57041), (67, 57116), (70, 57158), (71, 57161),

(73, 57182), (74, 57233), (78, 57263), (82, 57296), (90, 57419), (92, 57428), (95, 57458), (97, 57482), (100, 57524), (102, 57539), (106, 57620), (108, 57644), (113, 57662), (119, 57737), (123, 57800), (124, 57803),

Gene: James\_105 Start: 56883, Stop: 58319, Start Num: 23

Candidate Starts for James\_105:

(Start: 23 @56883 has 182 MA's), (Start: 28 @56895 has 1 MA's), (Start: 48 @57234 has 1 MA's), (51, 57336), (53, 57357), (57, 57471), (59, 57501), (61, 57519), (71, 57621), (72, 57639), (73, 57642), (74, 57693), (82, 57756), (92, 57888), (95, 57918), (97, 57942), (100, 57984), (102, 57999), (104, 58065), (108, 58104), (113, 58122), (119, 58197),

Gene: Jarcob\_104 Start: 56203, Stop: 57639, Start Num: 23

Candidate Starts for Jarcob\_104:

(Start: 23 @56203 has 182 MA's), (27, 56209), (Start: 28 @56212 has 1 MA's), (Start: 48 @56554 has 1 MA's), (51, 56656), (57, 56791), (59, 56821), (61, 56839), (71, 56941), (72, 56959), (73, 56962), (74, 57013), (76, 57031), (78, 57043), (82, 57076), (92, 57208), (95, 57238), (97, 57262), (100, 57304), (102, 57319), (108, 57424), (113, 57442), (119, 57517),

Gene: Jennelsea\_98 Start: 53783, Stop: 55219, Start Num: 23

Candidate Starts for Jennelsea\_98:

(Start: 23 @53783 has 182 MA's), (Start: 28 @53795 has 1 MA's), (Start: 48 @54134 has 1 MA's), (51, 54236), (53, 54257), (57, 54371), (59, 54401), (67, 54476), (71, 54521), (72, 54539), (73, 54542), (74, 54593), (78, 54623), (82, 54656), (92, 54788), (95, 54818), (97, 54842), (100, 54884), (102, 54899), (104, 54965), (108, 55004), (113, 55022), (119, 55097),

Gene: Job42\_103 Start: 57057, Stop: 58493, Start Num: 23

Candidate Starts for Job42\_103:

(Start: 23 @57057 has 182 MA's), (Start: 28 @57069 has 1 MA's), (Start: 48 @57408 has 1 MA's), (51, 57510), (57, 57645), (59, 57675), (61, 57693), (67, 57750), (71, 57795), (72, 57813), (73, 57816), (74, 57867), (78, 57897), (82, 57930), (92, 58062), (95, 58092), (97, 58116), (100, 58158), (102, 58173), (113, 58296), (119, 58371),

Gene: JoeyJr\_104 Start: 56198, Stop: 57634, Start Num: 23

Candidate Starts for JoeyJr\_104:

(Start: 23 @56198 has 182 MA's), (27, 56204), (Start: 28 @56207 has 1 MA's), (Start: 48 @56549 has 1 MA's), (51, 56651), (57, 56786), (59, 56816), (61, 56834), (71, 56936), (72, 56954), (73, 56957), (74, 57008), (76, 57026), (78, 57038), (82, 57071), (92, 57203), (95, 57233), (97, 57257), (100, 57299), (102, 57314), (104, 57380), (108, 57419), (113, 57437), (119, 57512),

Gene: Juice456\_100 Start: 53907, Stop: 55343, Start Num: 23

Candidate Starts for Juice456\_100:

(Start: 8 @53724 has 41 MA's), (Start: 23 @53907 has 182 MA's), (26, 53913), (Start: 28 @53916 has 1 MA's), (Start: 48 @54258 has 1 MA's), (51, 54360), (59, 54525), (67, 54600), (71, 54645), (73, 54666), (74, 54717), (78, 54747), (82, 54780), (92, 54912), (95, 54942), (97, 54966), (100, 55008), (102, 55023), (106, 55104), (108, 55128), (113, 55146), (119, 55221), (123, 55284), (124, 55287),

Gene: Juniper1\_92 Start: 52711, Stop: 54321, Start Num: 8

Candidate Starts for Juniper1\_92:

(5, 52525), (6, 52582), (Start: 8 @52711 has 41 MA's), (Start: 23 @52885 has 182 MA's), (Start: 28 @52897 has 1 MA's), (Start: 48 @53236 has 1 MA's), (51, 53338), (57, 53473), (59, 53503), (61, 53521), (71, 53623), (72, 53641), (73, 53644), (74, 53695), (82, 53758), (92, 53890), (95, 53920), (97, 53944), (100, 53986), (102, 54001), (106, 54082), (108, 54106), (113, 54124), (119, 54199), (123, 54262),

Gene: Karhdo\_97 Start: 52646, Stop: 54082, Start Num: 23

Candidate Starts for Karhdo\_97:

(Start: 23 @52646 has 182 MA's), (Start: 28 @52658 has 1 MA's), (Start: 48 @52997 has 1 MA's), (51, 53099), (57, 53234), (59, 53264), (61, 53282), (71, 53384), (72, 53402), (73, 53405), (74, 53456), (82, 53519), (92, 53651), (95, 53681), (97, 53705), (100, 53747), (102, 53762), (104, 53828), (108, 53867), (113, 53885), (119, 53960),

Gene: Kenuha5\_93 Start: 53770, Stop: 55206, Start Num: 23

Candidate Starts for Kenuha5\_93:

(6, 53467), (Start: 8 @53596 has 41 MA's), (Start: 23 @53770 has 182 MA's), (Start: 28 @53782 has 1 MA's), (Start: 48 @54121 has 1 MA's), (51, 54223), (59, 54388), (73, 54529), (74, 54580), (78, 54610), (82, 54643), (92, 54775), (95, 54805), (97, 54829), (100, 54871), (102, 54886), (106, 54967), (108, 54991), (113, 55009), (119, 55084), (123, 55147),

Gene: Kersh\_103 Start: 56765, Stop: 58375, Start Num: 8

Candidate Starts for Kersh\_103:

(Start: 8 @56765 has 41 MA's), (Start: 23 @56939 has 182 MA's), (Start: 28 @56951 has 1 MA's), (Start: 48 @57290 has 1 MA's), (51, 57392), (57, 57527), (59, 57557), (61, 57575), (71, 57677), (72, 57695), (73, 57698), (74, 57749), (82, 57812), (92, 57944), (95, 57974), (97, 57998), (100, 58040), (102, 58055), (104, 58121), (106, 58136), (108, 58160), (113, 58178), (119, 58253),

Gene: Kimberlium\_102 Start: 53824, Stop: 55443, Start Num: 8

Candidate Starts for Kimberlium\_102:

(Start: 8 @53824 has 41 MA's), (Start: 23 @54007 has 182 MA's), (26, 54013), (Start: 28 @54016 has 1 MA's), (Start: 48 @54358 has 1 MA's), (51, 54460), (59, 54625), (67, 54700), (71, 54745), (73, 54766), (74, 54817), (78, 54847), (82, 54880), (92, 55012), (95, 55042), (97, 55066), (100, 55108), (102, 55123), (106, 55204), (108, 55228), (113, 55246), (119, 55321), (123, 55384), (124, 55387),

Gene: KingJulian\_109 Start: 57012, Stop: 58448, Start Num: 23

Candidate Starts for KingJulian\_109:

(6, 56709), (Start: 8 @56838 has 41 MA's), (Start: 23 @57012 has 182 MA's), (Start: 28 @57024 has 1 MA's), (Start: 48 @57363 has 1 MA's), (51, 57465), (59, 57630), (67, 57705), (71, 57750), (72, 57768), (73, 57771), (74, 57822), (78, 57852), (82, 57885), (92, 58017), (95, 58047), (97, 58071), (100, 58113), (102, 58128), (106, 58209), (108, 58233), (113, 58251), (119, 58326), (123, 58389), (124, 58392),

Gene: KingMidas\_101 Start: 54427, Stop: 55863, Start Num: 23

Candidate Starts for KingMidas\_101:

(Start: 23 @54427 has 182 MA's), (27, 54433), (Start: 28 @54436 has 1 MA's), (Start: 48 @54778 has 1 MA's), (51, 54880), (57, 55015), (59, 55045), (61, 55063), (71, 55165), (72, 55183), (73, 55186), (74, 55237), (76, 55255), (78, 55267), (82, 55300), (92, 55432), (95, 55462), (97, 55486), (100, 55528), (102, 55543), (104, 55609), (108, 55648), (113, 55666), (119, 55741),

Gene: Kingsley\_110 Start: 57955, Stop: 59391, Start Num: 23

Candidate Starts for Kingsley\_110:

(6, 57652), (Start: 8 @57781 has 41 MA's), (Start: 23 @57955 has 182 MA's), (Start: 28 @57967 has 1 MA's), (Start: 48 @58306 has 1 MA's), (51, 58408), (59, 58573), (73, 58714), (74, 58765), (78, 58795), (82, 58828), (92, 58960), (95, 58990), (97, 59014), (100, 59056), (102, 59071), (106, 59152), (108, 59176), (113, 59194), (119, 59269), (123, 59332),

Gene: Koella\_94 Start: 51356, Stop: 52792, Start Num: 23

Candidate Starts for Koella\_94:

(6, 51053), (Start: 8 @51182 has 41 MA's), (Start: 23 @51356 has 182 MA's), (Start: 28 @51368 has 1 MA's), (Start: 48 @51707 has 1 MA's), (51, 51809), (59, 51974), (61, 51992), (73, 52115), (74, 52166), (78, 52196), (82, 52229), (92, 52361), (95, 52391), (97, 52415), (100, 52457), (102, 52472), (104, 52538), (108, 52577), (113, 52595), (119, 52670),

Gene: Krakatau\_94 Start: 50325, Stop: 51761, Start Num: 23

Candidate Starts for Krakatau\_94:

(Start: 23 @50325 has 182 MA's), (27, 50334), (Start: 28 @50337 has 1 MA's), (Start: 48 @50676 has 1 MA's), (51, 50778), (59, 50943), (67, 51018), (71, 51063), (73, 51084), (74, 51135), (78, 51165), (82, 51198), (92, 51330), (95, 51360), (97, 51384), (100, 51426), (102, 51441), (106, 51522), (108, 51546), (113, 51564), (119, 51639), (123, 51702), (124, 51705),

Gene: KristaRAM\_110 Start: 55967, Stop: 57403, Start Num: 23

Candidate Starts for KristaRAM\_110:

(Start: 23 @55967 has 182 MA's), (Start: 28 @55979 has 1 MA's), (Start: 48 @56318 has 1 MA's), (51, 56420), (57, 56555), (59, 56585), (61, 56603), (67, 56660), (71, 56705), (72, 56723), (73, 56726), (74, 56777), (82, 56840), (92, 56972), (95, 57002), (97, 57026), (100, 57068), (102, 57083), (104, 57149), (108, 57188), (113, 57206), (119, 57281),

Gene: LastJedi\_92 Start: 52413, Stop: 53849, Start Num: 23

Candidate Starts for LastJedi\_92:

(6, 52110), (Start: 8 @52239 has 41 MA's), (Start: 23 @52413 has 182 MA's), (Start: 28 @52425 has 1 MA's), (Start: 48 @52764 has 1 MA's), (51, 52866), (59, 53031), (61, 53049), (73, 53172), (74, 53223), (78, 53253), (82, 53286), (92, 53418), (95, 53448), (97, 53472), (100, 53514), (102, 53529), (104, 53595), (108, 53634), (113, 53652), (119, 53727),

Gene: Latretium\_104 Start: 55469, Stop: 56908, Start Num: 23

Candidate Starts for Latretium\_104:

(Start: 23 @55469 has 182 MA's), (27, 55478), (Start: 28 @55481 has 1 MA's), (Start: 48 @55823 has 1 MA's), (51, 55925), (57, 56060), (59, 56090), (61, 56108), (71, 56210), (72, 56228), (73, 56231), (74, 56282), (82, 56345), (95, 56507), (97, 56531), (100, 56573), (102, 56588), (104, 56654), (106, 56669), (108, 56693), (113, 56711), (119, 56786),

Gene: Leozinho\_97 Start: 51762, Stop: 53372, Start Num: 8

Candidate Starts for Leozinho\_97:

(Start: 8 @51762 has 41 MA's), (Start: 23 @51936 has 182 MA's), (Start: 28 @51948 has 1 MA's), (Start: 48 @52287 has 1 MA's), (51, 52389), (57, 52524), (59, 52554), (61, 52572), (71, 52674), (72, 52692), (73, 52695), (74, 52746), (82, 52809), (95, 52971), (97, 52995), (100, 53037), (102, 53052), (108, 53157), (113, 53175), (119, 53250),

Gene: Leperchaun\_103 Start: 55432, Stop: 56868, Start Num: 23

Candidate Starts for Leperchaun\_103:

(Start: 23 @55432 has 182 MA's), (27, 55438), (Start: 28 @55441 has 1 MA's), (Start: 48 @55783 has 1 MA's), (51, 55885), (57, 56020), (59, 56050), (61, 56068), (71, 56170), (72, 56188), (73, 56191), (74, 56242), (76, 56260), (78, 56272), (82, 56305), (92, 56437), (95, 56467), (97, 56491), (100, 56533), (102, 56548), (104, 56614), (108, 56653), (113, 56671), (119, 56746),

Gene: LilMoolah\_104 Start: 55403, Stop: 56839, Start Num: 23

Candidate Starts for LilMoolah\_104:

(Start: 23 @55403 has 182 MA's), (27, 55412), (Start: 28 @55415 has 1 MA's), (Start: 48 @55754 has 1 MA's), (51, 55856), (57, 55991), (59, 56021), (61, 56039), (71, 56141), (72, 56159), (73, 56162), (74, 56213), (78, 56243), (82, 56276), (92, 56408), (95, 56438), (97, 56462), (100, 56504), (102, 56519), (106, 56600), (108, 56624), (113, 56642), (119, 56717), (123, 56780), (124, 56783),

Gene: LittleShirley\_109 Start: 55790, Stop: 57226, Start Num: 23

Candidate Starts for LittleShirley\_109:

(6, 55487), (Start: 8 @55616 has 41 MA's), (Start: 23 @55790 has 182 MA's), (Start: 28 @55802 has 1 MA's), (Start: 48 @56141 has 1 MA's), (51, 56243), (53, 56264), (59, 56408), (67, 56483), (71, 56528), (73, 56549), (74, 56600), (78, 56630), (82, 56663), (92, 56795), (95, 56825), (97, 56849), (100, 56891), (102, 56906), (106, 56987), (108, 57011), (113, 57029), (119, 57104), (123, 57167), (124, 57170),

Gene: Lizziana\_102 Start: 55661, Stop: 57097, Start Num: 23

Candidate Starts for Lizziana\_102:

(6, 55358), (Start: 8 @55487 has 41 MA's), (Start: 23 @55661 has 182 MA's), (Start: 28 @55673 has 1 MA's), (Start: 48 @56012 has 1 MA's), (51, 56114), (59, 56279), (61, 56297), (73, 56420), (74, 56471), (78, 56501), (82, 56534), (92, 56666), (95, 56696), (97, 56720), (100, 56762), (102, 56777), (104, 56843), (108, 56882), (113, 56900), (119, 56975),

Gene: Llij\_96 Start: 53354, Stop: 54793, Start Num: 23

Candidate Starts for Llij\_96:

(Start: 23 @53354 has 182 MA's), (27, 53363), (Start: 28 @53366 has 1 MA's), (Start: 48 @53708 has 1 MA's), (51, 53810), (57, 53945), (59, 53975), (61, 53993), (71, 54095), (72, 54113), (73, 54116), (74, 54167), (82, 54230), (92, 54362), (95, 54392), (97, 54416), (100, 54458), (102, 54473), (104, 54539), (108, 54578), (113, 54596), (119, 54671),

Gene: LordVader\_98 Start: 51269, Stop: 52705, Start Num: 23

Candidate Starts for LordVader\_98:

(Start: 23 @51269 has 182 MA's), (27, 51278), (Start: 28 @51281 has 1 MA's), (Start: 48 @51620 has 1 MA's), (51, 51722), (57, 51857), (59, 51887), (61, 51905), (67, 51962), (71, 52007), (72, 52025), (73, 52028), (74, 52079), (82, 52142), (92, 52274), (95, 52304), (97, 52328), (100, 52370), (102, 52385), (106, 52466), (108, 52490), (113, 52508), (119, 52583), (123, 52646), (124, 52649),

Gene: Lorde\_103 Start: 51086, Stop: 52708, Start Num: 8

Candidate Starts for Lorde\_103:

(Start: 8 @51086 has 41 MA's), (Start: 23 @51269 has 182 MA's), (27, 51278), (Start: 28 @51281 has 1 MA's), (Start: 48 @51623 has 1 MA's), (51, 51725), (57, 51860), (59, 51890), (61, 51908), (71, 52010), (72, 52028), (73, 52031), (74, 52082), (76, 52100), (82, 52145), (95, 52307), (97, 52331), (100, 52373), (102, 52388), (104, 52454), (108, 52493), (113, 52511), (119, 52586),

Gene: Lucia\_100 Start: 51934, Stop: 53556, Start Num: 8

Candidate Starts for Lucia\_100:

(Start: 8 @51934 has 41 MA's), (Start: 23 @52117 has 182 MA's), (27, 52126), (Start: 28 @52129 has 1 MA's), (Start: 48 @52471 has 1 MA's), (51, 52573), (57, 52708), (59, 52738), (61, 52756), (71, 52858), (72, 52876), (73, 52879), (74, 52930), (76, 52948), (82, 52993), (95, 53155), (97, 53179), (100, 53221), (102, 53236), (104, 53302), (108, 53341), (113, 53359), (119, 53434),

Gene: LunaBlu\_107 Start: 55857, Stop: 57467, Start Num: 8

Candidate Starts for LunaBlu\_107:

(Start: 8 @55857 has 41 MA's), (Start: 23 @56031 has 182 MA's), (Start: 28 @56043 has 1 MA's), (Start: 48 @56382 has 1 MA's), (51, 56484), (57, 56619), (59, 56649), (61, 56667), (67, 56724), (71, 56769), (72, 56787), (73, 56790), (74, 56841), (82, 56904), (92, 57036), (95, 57066), (97, 57090), (100, 57132), (102, 57147), (104, 57213), (106, 57228), (108, 57252), (113, 57270), (119, 57345),

Gene: LunaStella\_98 Start: 52755, Stop: 54188, Start Num: 23

Candidate Starts for LunaStella\_98:

(Start: 23 @52755 has 182 MA's), (27, 52764), (32, 52788), (42, 52992), (Start: 48 @53100 has 1 MA's), (50, 53184), (51, 53205), (57, 53340), (59, 53370), (61, 53388), (74, 53562), (75, 53574), (82, 53625), (88, 53685), (90, 53748), (92, 53757), (95, 53787), (97, 53811), (102, 53868), (108, 53973), (113, 53991), (119, 54066), (122, 54111),

Gene: MadMen\_106 Start: 55023, Stop: 56462, Start Num: 23

Candidate Starts for MadMen\_106:

(Start: 23 @55023 has 182 MA's), (27, 55032), (Start: 28 @55035 has 1 MA's), (Start: 48 @55377 has 1 MA's), (51, 55479), (57, 55614), (59, 55644), (61, 55662), (71, 55764), (72, 55782), (73, 55785), (74, 55836), (76, 55854), (78, 55866), (82, 55899), (92, 56031), (95, 56061), (97, 56085), (100, 56127), (102, 56142), (108, 56247), (113, 56265), (119, 56340),

Gene: Madiba\_100 Start: 53711, Stop: 55147, Start Num: 23

Candidate Starts for Madiba\_100:

(Start: 23 @53711 has 182 MA's), (27, 53720), (Start: 28 @53723 has 1 MA's), (Start: 48 @54062 has 1 MA's), (51, 54164), (57, 54299), (59, 54329), (61, 54347), (71, 54449), (72, 54467), (73, 54470), (74, 54521), (82, 54584), (92, 54716), (95, 54746), (97, 54770), (100, 54812), (102, 54827), (104, 54893), (106, 54908), (108, 54932), (113, 54950), (119, 55025), (123, 55088),

Gene: Mahavrat\_94 Start: 51740, Stop: 53350, Start Num: 8

Candidate Starts for Mahavrat\_94:

(5, 51554), (6, 51611), (Start: 8 @51740 has 41 MA's), (Start: 23 @51914 has 182 MA's), (Start: 28 @51926 has 1 MA's), (Start: 48 @52265 has 1 MA's), (51, 52367), (57, 52502), (59, 52532), (61, 52550), (73, 52673), (74, 52724), (82, 52787), (92, 52919), (95, 52949), (97, 52973), (100, 53015), (102, 53030), (104, 53096), (108, 53135), (113, 53153), (119, 53228),

Gene: Mandlovu\_99 Start: 52676, Stop: 54115, Start Num: 23

Candidate Starts for Mandlovu\_99:

(6, 52364), (Start: 8 @52493 has 41 MA's), (Start: 23 @52676 has 182 MA's), (27, 52685), (Start: 28 @52688 has 1 MA's), (Start: 48 @53030 has 1 MA's), (51, 53132), (57, 53267), (59, 53297), (61, 53315), (71, 53417), (72, 53435), (73, 53438), (74, 53489), (82, 53552), (92, 53684), (95, 53714), (97, 53738), (100, 53780), (102, 53795), (104, 53861), (106, 53876), (108, 53900), (113, 53918), (119, 53993), (123, 54056),

Gene: Mantra\_98 Start: 53847, Stop: 55469, Start Num: 8

Candidate Starts for Mantra\_98:

(Start: 8 @53847 has 41 MA's), (Start: 23 @54030 has 182 MA's), (27, 54039), (Start: 28 @54042 has 1 MA's), (Start: 48 @54384 has 1 MA's), (51, 54486), (57, 54621), (59, 54651), (61, 54669), (71, 54771), (72, 54789), (73, 54792), (74, 54843), (76, 54861), (82, 54906), (95, 55068), (97, 55092), (100, 55134), (102, 55149), (104, 55215), (108, 55254), (113, 55272), (119, 55347),

Gene: Maravista\_99 Start: 56610, Stop: 58046, Start Num: 23

Candidate Starts for Maravista\_99:

(Start: 23 @56610 has 182 MA's), (Start: 28 @56622 has 1 MA's), (Start: 48 @56961 has 1 MA's), (51, 57063), (59, 57228), (60, 57240), (66, 57300), (67, 57303), (71, 57348), (72, 57366), (73, 57369), (74, 57420), (78, 57450), (82, 57483), (95, 57645), (97, 57669), (100, 57711), (102, 57726), (104, 57792), (108, 57831), (113, 57849), (119, 57924),

Gene: Marker\_106 Start: 55630, Stop: 57252, Start Num: 8

Candidate Starts for Marker\_106:

(Start: 8 @55630 has 41 MA's), (Start: 23 @55813 has 182 MA's), (27, 55822), (Start: 28 @55825 has 1 MA's), (Start: 48 @56167 has 1 MA's), (51, 56269), (57, 56404), (59, 56434), (61, 56452), (67, 56509), (71, 56554), (72, 56572), (73, 56575), (74, 56626), (82, 56689), (92, 56821), (95, 56851), (97,

56875), (100, 56917), (102, 56932), (104, 56998), (108, 57037), (113, 57055), (119, 57130), (123, 57193),

Gene: Martik\_100 Start: 56104, Stop: 57558, Start Num: 17

Candidate Starts for Martik\_100:

(16, 56095), (Start: 17 @56104 has 2 MA's), (Start: 23 @56122 has 182 MA's), (Start: 28 @56134 has 1 MA's), (Start: 48 @56473 has 1 MA's), (51, 56575), (57, 56710), (59, 56740), (61, 56758), (71, 56860), (72, 56878), (73, 56881), (74, 56932), (76, 56950), (78, 56962), (82, 56995), (92, 57127), (95, 57157), (97, 57181), (100, 57223), (102, 57238), (108, 57343), (113, 57361), (119, 57436),

Gene: Mattes\_102 Start: 55340, Stop: 56776, Start Num: 23

Candidate Starts for Mattes\_102:

(Start: 23 @55340 has 182 MA's), (27, 55346), (Start: 28 @55349 has 1 MA's), (Start: 48 @55691 has 1 MA's), (51, 55793), (57, 55928), (59, 55958), (61, 55976), (71, 56078), (72, 56096), (73, 56099), (74, 56150), (76, 56168), (78, 56180), (82, 56213), (92, 56345), (95, 56375), (97, 56399), (100, 56441), (102, 56456), (108, 56561), (113, 56579), (119, 56654),

Gene: Medindi\_106 Start: 55472, Stop: 56908, Start Num: 23

Candidate Starts for Medindi\_106:

(6, 55169), (Start: 8 @55298 has 41 MA's), (Start: 14 @55415 has 1 MA's), (Start: 23 @55472 has 182 MA's), (Start: 28 @55484 has 1 MA's), (Start: 48 @55823 has 1 MA's), (51, 55925), (59, 56090), (67, 56165), (71, 56210), (73, 56231), (74, 56282), (78, 56312), (82, 56345), (92, 56477), (95, 56507), (97, 56531), (100, 56573), (102, 56588), (106, 56669), (108, 56693), (113, 56711), (119, 56786), (123, 56849), (124, 56852),

Gene: Melissauren88\_91 Start: 51146, Stop: 52582, Start Num: 23

Candidate Starts for Melissauren88\_91:

(6, 50843), (Start: 8 @50972 has 41 MA's), (Start: 23 @51146 has 182 MA's), (Start: 28 @51158 has 1 MA's), (Start: 48 @51497 has 1 MA's), (51, 51599), (59, 51764), (67, 51839), (71, 51884), (73, 51905), (74, 51956), (78, 51986), (82, 52019), (92, 52151), (95, 52181), (97, 52205), (100, 52247), (102, 52262), (106, 52343), (108, 52367), (113, 52385), (119, 52460), (123, 52523), (124, 52526),

Gene: MilanaBonita\_94 Start: 53042, Stop: 54478, Start Num: 23

Candidate Starts for MilanaBonita\_94:

(6, 52739), (Start: 8 @52868 has 41 MA's), (Start: 23 @53042 has 182 MA's), (Start: 28 @53054 has 1 MA's), (Start: 48 @53393 has 1 MA's), (51, 53495), (53, 53516), (59, 53660), (67, 53735), (71, 53780), (72, 53798), (73, 53801), (74, 53852), (78, 53882), (82, 53915), (92, 54047), (95, 54077), (97, 54101), (100, 54143), (102, 54158), (106, 54239), (108, 54263), (113, 54281), (119, 54356), (123, 54419), (124, 54422),

Gene: MilleniumForce\_101 Start: 54849, Stop: 56285, Start Num: 23

Candidate Starts for MilleniumForce\_101:

(6, 54546), (Start: 8 @54675 has 41 MA's), (Start: 23 @54849 has 182 MA's), (Start: 28 @54861 has 1 MA's), (Start: 48 @55200 has 1 MA's), (51, 55302), (59, 55467), (67, 55542), (71, 55587), (72, 55605), (73, 55608), (74, 55659), (82, 55722), (91, 55851), (92, 55854), (95, 55884), (97, 55908), (100, 55950), (102, 55965), (106, 56046), (108, 56070), (113, 56088), (119, 56163), (123, 56226), (124, 56229),

Gene: MinionDave\_99 Start: 54815, Stop: 56254, Start Num: 23

Candidate Starts for MinionDave\_99:

(Start: 23 @54815 has 182 MA's), (27, 54824), (Start: 28 @54827 has 1 MA's), (Start: 48 @55169 has 1 MA's), (51, 55271), (59, 55436), (67, 55511), (71, 55556), (72, 55574), (73, 55577), (74, 55628), (82, 55691), (92, 55823), (95, 55853), (97, 55877), (100, 55919), (102, 55934), (106, 56015), (108, 56039), (113, 56057), (119, 56132), (123, 56195), (124, 56198),

Gene: Minnie\_96 Start: 55752, Stop: 57188, Start Num: 23

Candidate Starts for Minnie\_96:

(Start: 23 @55752 has 182 MA's), (27, 55761), (Start: 28 @55764 has 1 MA's), (Start: 48 @56103 has 1 MA's), (51, 56205), (57, 56340), (59, 56370), (61, 56388), (71, 56490), (72, 56508), (73, 56511), (74, 56562), (82, 56625), (95, 56787), (97, 56811), (100, 56853), (102, 56868), (104, 56934), (108, 56973), (113, 56991), (119, 57066),

Gene: Misha28\_91 Start: 55106, Stop: 56542, Start Num: 23

Candidate Starts for Misha28\_91:

(Start: 23 @55106 has 182 MA's), (Start: 48 @55457 has 1 MA's), (50, 55538), (51, 55559), (59, 55724), (70, 55841), (73, 55865), (74, 55916), (87, 56027), (92, 56111), (95, 56141), (97, 56165), (100, 56207), (102, 56222), (104, 56288), (106, 56303), (108, 56327), (113, 56345), (119, 56420), (123, 56483),

Gene: MisterCuddles\_101 Start: 54991, Stop: 56427, Start Num: 23

Candidate Starts for MisterCuddles\_101:

(Start: 8 @54817 has 41 MA's), (Start: 23 @54991 has 182 MA's), (Start: 28 @55003 has 1 MA's), (Start: 48 @55342 has 1 MA's), (51, 55444), (57, 55579), (59, 55609), (61, 55627), (71, 55729), (72, 55747), (73, 55750), (74, 55801), (76, 55819), (78, 55831), (82, 55864), (92, 55996), (95, 56026), (97, 56050), (100, 56092), (102, 56107), (104, 56173), (108, 56212), (113, 56230), (119, 56305),

Gene: MooMoo\_94 Start: 52213, Stop: 53643, Start Num: 23

Candidate Starts for MooMoo\_94:

(Start: 23 @52213 has 182 MA's), (27, 52222), (35, 52303), (39, 52363), (Start: 48 @52558 has 1 MA's), (51, 52660), (57, 52795), (59, 52825), (63, 52855), (70, 52942), (71, 52945), (72, 52963), (73, 52966), (74, 53017), (84, 53098), (92, 53212), (95, 53242), (97, 53266), (102, 53323), (108, 53428), (113, 53446), (119, 53521),

Gene: Moonbeam\_104 Start: 55247, Stop: 56686, Start Num: 23

Candidate Starts for Moonbeam\_104:

(Start: 23 @55247 has 182 MA's), (27, 55256), (Start: 28 @55259 has 1 MA's), (Start: 48 @55601 has 1 MA's), (51, 55703), (59, 55868), (71, 55988), (72, 56006), (73, 56009), (74, 56060), (78, 56090), (82, 56123), (92, 56255), (95, 56285), (97, 56309), (100, 56351), (102, 56366), (106, 56447), (108, 56471), (113, 56489), (119, 56564),

Gene: Mova\_103 Start: 54779, Stop: 56215, Start Num: 23

Candidate Starts for Mova\_103:

(6, 54476), (Start: 8 @54605 has 41 MA's), (Start: 23 @54779 has 182 MA's), (Start: 28 @54791 has 1 MA's), (Start: 48 @55130 has 1 MA's), (51, 55232), (59, 55397), (67, 55472), (71, 55517), (73, 55538), (74, 55589), (78, 55619), (82, 55652), (92, 55784), (95, 55814), (97, 55838), (100, 55880), (102, 55895), (106, 55976), (108, 56000), (113, 56018), (119, 56093), (123, 56156), (124, 56159),

Gene: Mozy\_105 Start: 54414, Stop: 55850, Start Num: 23

Candidate Starts for Mozy\_105:

(6, 54111), (Start: 8 @54240 has 41 MA's), (Start: 23 @54414 has 182 MA's), (Start: 28 @54426 has 1 MA's), (Start: 48 @54765 has 1 MA's), (51, 54867), (59, 55032), (67, 55107), (71, 55152), (73, 55173), (74, 55224), (78, 55254), (82, 55287), (92, 55419), (95, 55449), (97, 55473), (100, 55515), (102, 55530), (104, 55596), (108, 55635), (113, 55653), (119, 55728),

Gene: Ms6\_103 Start: 51037, Stop: 52473, Start Num: 23

Candidate Starts for Ms6\_103:

(6, 50734), (Start: 8 @50863 has 41 MA's), (Start: 23 @51037 has 182 MA's), (Start: 28 @51049 has 1 MA's), (Start: 48 @51388 has 1 MA's), (51, 51490), (53, 51511), (59, 51655), (67, 51730), (71, 51775), (73, 51796), (74, 51847), (78, 51877), (82, 51910), (92, 52042), (95, 52072), (97, 52096), (100, 52138), (102, 52153), (106, 52234), (108, 52258), (113, 52276), (119, 52351), (123, 52414), (124, 52417),

Gene: MulchExplorer\_101 Start: 53678, Stop: 55114, Start Num: 23

Candidate Starts for MulchExplorer\_101:

(Start: 8 @53495 has 41 MA's), (Start: 23 @53678 has 182 MA's), (26, 53684), (Start: 28 @53687 has 1 MA's), (Start: 48 @54029 has 1 MA's), (51, 54131), (59, 54296), (67, 54371), (71, 54416), (73, 54437), (74, 54488), (78, 54518), (82, 54551), (92, 54683), (95, 54713), (97, 54737), (100, 54779), (102, 54794), (106, 54875), (108, 54899), (113, 54917), (119, 54992), (123, 55055), (124, 55058),

Gene: MulchSalad\_103 Start: 55680, Stop: 57119, Start Num: 23

Candidate Starts for MulchSalad\_103:

(Start: 23 @55680 has 182 MA's), (27, 55689), (Start: 28 @55692 has 1 MA's), (Start: 48 @56034 has 1 MA's), (51, 56136), (57, 56271), (59, 56301), (61, 56319), (67, 56376), (71, 56421), (72, 56439), (73, 56442), (74, 56493), (82, 56556), (92, 56688), (95, 56718), (97, 56742), (100, 56784), (102, 56799), (106, 56880), (108, 56904), (113, 56922), (119, 56997), (123, 57060), (124, 57063),

Gene: Mutaforma13\_102 Start: 54449, Stop: 55885, Start Num: 23

Candidate Starts for Mutaforma13\_102:

(Start: 23 @54449 has 182 MA's), (Start: 28 @54461 has 1 MA's), (Start: 48 @54800 has 1 MA's), (51, 54902), (57, 55037), (59, 55067), (61, 55085), (67, 55142), (71, 55187), (72, 55205), (73, 55208), (74, 55259), (82, 55322), (92, 55454), (95, 55484), (97, 55508), (100, 55550), (102, 55565), (104, 55631), (106, 55646), (108, 55670), (113, 55688), (119, 55763),

Gene: Mwanjiwa\_104 Start: 55851, Stop: 57287, Start Num: 23

Candidate Starts for Mwanjiwa\_104:

(5, 55491), (6, 55548), (Start: 8 @55677 has 41 MA's), (Start: 23 @55851 has 182 MA's), (Start: 28 @55863 has 1 MA's), (Start: 48 @56202 has 1 MA's), (50, 56283), (51, 56304), (59, 56469), (61, 56487), (73, 56610), (74, 56661), (82, 56724), (90, 56847), (92, 56856), (95, 56886), (97, 56910), (100, 56952), (102, 56967), (104, 57033), (108, 57072), (113, 57090), (119, 57165), (123, 57228),

Gene: Myrna\_234 Start: 135813, Stop: 137252, Start Num: 31

Candidate Starts for Myrna\_234:

(10, 135681), (11, 135690), (13, 135702), (19, 135768), (22, 135780), (25, 135786), (30, 135801), (Start: 31 @135813 has 1 MA's), (33, 135828), (38, 135936), (41, 136020), (44, 136056), (Start: 48 @136158 has 1 MA's), (51, 136269), (55, 136311), (56, 136398), (58, 136407), (59, 136434), (62, 136464), (64, 136482), (67, 136509), (69, 136560), (72, 136584), (73, 136587), (74, 136638), (76, 136656), (81, 136698), (82, 136701), (92, 136845), (95, 136875), (97, 136899), (99, 136938), (101, 136950), (102, 136956), (105, 137028), (107, 137052), (108, 137055), (113, 137073), (118, 137127),

Gene: NewHope4\_108 Start: 53983, Stop: 55593, Start Num: 8

Candidate Starts for NewHope4\_108:

(Start: 8 @53983 has 41 MA's), (Start: 23 @54157 has 182 MA's), (Start: 28 @54169 has 1 MA's), (Start: 48 @54508 has 1 MA's), (51, 54610), (57, 54745), (59, 54775), (61, 54793), (67, 54850), (71, 54895), (72, 54913), (73, 54916), (74, 54967), (82, 55030), (92, 55162), (95, 55192), (97, 55216), (100, 55258), (102, 55273), (104, 55339), (106, 55354), (108, 55378), (113, 55396), (119, 55471),

Gene: Nimbo\_93 Start: 53004, Stop: 54440, Start Num: 23

Candidate Starts for Nimbo\_93:

(Start: 23 @53004 has 182 MA's), (27, 53010), (Start: 28 @53013 has 1 MA's), (Start: 48 @53355 has 1 MA's), (51, 53457), (57, 53592), (59, 53622), (61, 53640), (71, 53742), (72, 53760), (73, 53763), (74,

53814), (76, 53832), (78, 53844), (82, 53877), (92, 54009), (95, 54039), (97, 54063), (100, 54105), (102, 54120), (104, 54186), (108, 54225), (113, 54243), (119, 54318),

Gene: Nitzel\_95 Start: 51587, Stop: 53041, Start Num: 17

Candidate Starts for Nitzel\_95:

(16, 51578), (Start: 17 @51587 has 2 MA's), (Start: 23 @51605 has 182 MA's), (Start: 28 @51617 has 1 MA's), (Start: 48 @51956 has 1 MA's), (51, 52058), (59, 52223), (61, 52241), (67, 52298), (71, 52343), (72, 52361), (73, 52364), (74, 52415), (82, 52478), (92, 52610), (95, 52640), (97, 52664), (100, 52706), (102, 52721), (104, 52787), (106, 52802), (108, 52826), (113, 52844), (119, 52919),

Gene: Nivrat\_101 Start: 55276, Stop: 56712, Start Num: 23

Candidate Starts for Nivrat\_101:

(Start: 23 @55276 has 182 MA's), (27, 55285), (Start: 28 @55288 has 1 MA's), (Start: 48 @55627 has 1 MA's), (51, 55729), (57, 55864), (59, 55894), (61, 55912), (71, 56014), (72, 56032), (73, 56035), (74, 56086), (78, 56116), (82, 56149), (92, 56281), (95, 56311), (97, 56335), (100, 56377), (102, 56392), (106, 56473), (108, 56497), (113, 56515), (119, 56590), (123, 56653), (124, 56656),

Gene: NormanBulbieJr\_99 Start: 55370, Stop: 56806, Start Num: 23

Candidate Starts for NormanBulbieJr\_99:

(6, 55067), (Start: 8 @55196 has 41 MA's), (Start: 23 @55370 has 182 MA's), (Start: 28 @55382 has 1 MA's), (Start: 48 @55721 has 1 MA's), (51, 55823), (59, 55988), (61, 56006), (73, 56129), (74, 56180), (78, 56210), (82, 56243), (92, 56375), (95, 56405), (97, 56429), (100, 56471), (102, 56486), (104, 56552), (108, 56591), (113, 56609), (119, 56684),

Gene: Ogotogo\_105 Start: 53609, Stop: 55048, Start Num: 23

Candidate Starts for Ogotogo\_105:

(Start: 23 @53609 has 182 MA's), (27, 53618), (Start: 28 @53621 has 1 MA's), (Start: 48 @53963 has 1 MA's), (51, 54065), (57, 54200), (59, 54230), (61, 54248), (67, 54305), (71, 54350), (72, 54368), (73, 54371), (74, 54422), (78, 54452), (82, 54485), (92, 54617), (95, 54647), (97, 54671), (100, 54713), (102, 54728), (104, 54794), (106, 54809), (108, 54833), (113, 54851), (119, 54926),

Gene: Okabe\_93 Start: 50824, Stop: 52260, Start Num: 23

Candidate Starts for Okabe\_93:

(6, 50521), (Start: 8 @50650 has 41 MA's), (Start: 23 @50824 has 182 MA's), (Start: 28 @50836 has 1 MA's), (Start: 48 @51175 has 1 MA's), (51, 51277), (53, 51298), (59, 51442), (67, 51517), (71, 51562), (73, 51583), (74, 51634), (78, 51664), (82, 51697), (92, 51829), (95, 51859), (97, 51883), (100, 51925), (102, 51940), (106, 52021), (108, 52045), (113, 52063), (119, 52138), (123, 52201), (124, 52204),

Gene: OldBen\_98 Start: 54396, Stop: 55832, Start Num: 23

Candidate Starts for OldBen\_98:

(Start: 23 @54396 has 182 MA's), (27, 54402), (Start: 28 @54405 has 1 MA's), (Start: 48 @54747 has 1 MA's), (51, 54849), (57, 54984), (59, 55014), (61, 55032), (71, 55134), (72, 55152), (73, 55155), (74, 55206), (76, 55224), (78, 55236), (82, 55269), (92, 55401), (95, 55431), (97, 55455), (100, 55497), (102, 55512), (104, 55578), (108, 55617), (113, 55635), (119, 55710),

Gene: OlympiaSaint\_105 Start: 55560, Stop: 56996, Start Num: 23

Candidate Starts for OlympiaSaint\_105:

(5, 55200), (6, 55257), (Start: 8 @55386 has 41 MA's), (Start: 23 @55560 has 182 MA's), (Start: 28 @55572 has 1 MA's), (Start: 48 @55911 has 1 MA's), (51, 56013), (59, 56178), (73, 56319), (74, 56370), (78, 56400), (82, 56433), (92, 56565), (95, 56595), (97, 56619), (100, 56661), (102, 56676), (106, 56757), (108, 56781), (113, 56799), (119, 56874), (123, 56937),

Gene: Ovechkin\_103 Start: 54912, Stop: 56522, Start Num: 8

Candidate Starts for Ovechkin\_103:

(5, 54726), (6, 54783), (Start: 8 @54912 has 41 MA's), (Start: 23 @55086 has 182 MA's), (Start: 28 @55098 has 1 MA's), (Start: 48 @55437 has 1 MA's), (51, 55539), (57, 55674), (59, 55704), (61, 55722), (67, 55779), (71, 55824), (72, 55842), (73, 55845), (74, 55896), (82, 55959), (92, 56091), (95, 56121), (97, 56145), (100, 56187), (102, 56202), (104, 56268), (106, 56283), (108, 56307), (113, 56325), (119, 56400),

Gene: OwlsT2W\_98 Start: 53116, Stop: 54726, Start Num: 8

Candidate Starts for OwlsT2W\_98:

(6, 52987), (Start: 8 @53116 has 41 MA's), (Start: 23 @53290 has 182 MA's), (Start: 28 @53302 has 1 MA's), (Start: 48 @53641 has 1 MA's), (51, 53743), (59, 53908), (67, 53983), (71, 54028), (72, 54046), (73, 54049), (74, 54100), (82, 54163), (92, 54295), (95, 54325), (97, 54349), (100, 54391), (102, 54406), (104, 54472), (108, 54511), (113, 54529), (119, 54604),

Gene: PHappiness\_101 Start: 55225, Stop: 56661, Start Num: 23

Candidate Starts for PHappiness\_101:

(Start: 23 @55225 has 182 MA's), (27, 55231), (Start: 28 @55234 has 1 MA's), (Start: 48 @55576 has 1 MA's), (51, 55678), (57, 55813), (59, 55843), (61, 55861), (71, 55963), (72, 55981), (73, 55984), (74, 56035), (76, 56053), (78, 56065), (82, 56098), (92, 56230), (95, 56260), (97, 56284), (100, 56326), (102, 56341), (104, 56407), (108, 56446), (113, 56464), (119, 56539),

Gene: PMC\_100 Start: 53440, Stop: 54876, Start Num: 23

Candidate Starts for PMC\_100:

(Start: 23 @53440 has 182 MA's), (27, 53449), (Start: 28 @53452 has 1 MA's), (Start: 48 @53791 has 1 MA's), (51, 53893), (57, 54028), (59, 54058), (61, 54076), (67, 54133), (71, 54178), (72, 54196), (73, 54199), (74, 54250), (82, 54313), (92, 54445), (95, 54475), (97, 54499), (100, 54541), (102, 54556), (104, 54622), (108, 54661), (113, 54679), (119, 54754),

Gene: Pacc40\_98 Start: 55635, Stop: 57257, Start Num: 8

Candidate Starts for Pacc40\_98:

(Start: 8 @55635 has 41 MA's), (Start: 23 @55818 has 182 MA's), (27, 55827), (Start: 28 @55830 has 1 MA's), (Start: 48 @56172 has 1 MA's), (51, 56274), (59, 56439), (61, 56457), (71, 56559), (72, 56577), (73, 56580), (74, 56631), (82, 56694), (92, 56826), (95, 56856), (97, 56880), (100, 56922), (102, 56937), (104, 57003), (108, 57042), (113, 57060), (119, 57135),

Gene: PatoPoderoso\_102 Start: 57012, Stop: 58448, Start Num: 23

Candidate Starts for PatoPoderoso\_102:

(6, 56709), (Start: 8 @56838 has 41 MA's), (Start: 23 @57012 has 182 MA's), (Start: 28 @57024 has 1 MA's), (Start: 48 @57363 has 1 MA's), (51, 57465), (59, 57630), (71, 57750), (72, 57768), (73, 57771), (74, 57822), (78, 57852), (82, 57885), (92, 58017), (95, 58047), (97, 58071), (100, 58113), (102, 58128), (106, 58209), (108, 58233), (113, 58251), (119, 58326), (123, 58389), (124, 58392),

Gene: Peridot\_104 Start: 54821, Stop: 56248, Start Num: 28

Candidate Starts for Peridot\_104:

(Start: 23 @54809 has 182 MA's), (27, 54818), (Start: 28 @54821 has 1 MA's), (Start: 48 @55163 has 1 MA's), (51, 55265), (59, 55430), (71, 55550), (72, 55568), (73, 55571), (74, 55622), (78, 55652), (82, 55685), (92, 55817), (95, 55847), (97, 55871), (100, 55913), (102, 55928), (108, 56033), (113, 56051), (119, 56126),

Gene: Phalconet\_102 Start: 54439, Stop: 55875, Start Num: 23

Candidate Starts for Phalconet\_102:

(6, 54136), (Start: 8 @54265 has 41 MA's), (Start: 23 @54439 has 182 MA's), (Start: 28 @54451 has 1 MA's), (Start: 48 @54790 has 1 MA's), (51, 54892), (53, 54913), (59, 55057), (67, 55132), (71, 55177),

(73, 55198), (74, 55249), (82, 55312), (92, 55444), (95, 55474), (97, 55498), (100, 55540), (102, 55555), (106, 55636), (108, 55660), (113, 55678), (119, 55753), (123, 55816), (124, 55819),

Gene: Phanphagia\_106 Start: 56194, Stop: 57630, Start Num: 23

Candidate Starts for Phanphagia\_106:

(6, 55891), (Start: 8 @56020 has 41 MA's), (Start: 23 @56194 has 182 MA's), (Start: 28 @56206 has 1 MA's), (Start: 48 @56545 has 1 MA's), (51, 56647), (59, 56812), (73, 56953), (74, 57004), (78, 57034), (82, 57067), (92, 57199), (95, 57229), (97, 57253), (100, 57295), (102, 57310), (106, 57391), (108, 57415), (113, 57433), (119, 57508), (123, 57571), (124, 57574),

Gene: Phasih\_97 Start: 53206, Stop: 54828, Start Num: 8

Candidate Starts for Phasih\_97:

(Start: 8 @53206 has 41 MA's), (Start: 23 @53389 has 182 MA's), (27, 53398), (Start: 28 @53401 has 1 MA's), (Start: 48 @53743 has 1 MA's), (51, 53845), (57, 53980), (59, 54010), (61, 54028), (71, 54130), (72, 54148), (73, 54151), (74, 54202), (82, 54265), (92, 54397), (95, 54427), (97, 54451), (100, 54493), (102, 54508), (106, 54589), (108, 54613), (113, 54631), (119, 54706), (123, 54769), (124, 54772),

Gene: Phatniss\_98 Start: 53597, Stop: 55207, Start Num: 8

Candidate Starts for Phatniss\_98:

(6, 53468), (Start: 8 @53597 has 41 MA's), (Start: 23 @53771 has 182 MA's), (Start: 28 @53783 has 1 MA's), (Start: 48 @54122 has 1 MA's), (51, 54224), (59, 54389), (67, 54464), (71, 54509), (73, 54530), (74, 54581), (78, 54611), (82, 54644), (92, 54776), (95, 54806), (97, 54830), (100, 54872), (102, 54887), (104, 54953), (108, 54992), (113, 55010), (119, 55085),

Gene: PhesterPhotato\_105 Start: 54413, Stop: 55849, Start Num: 23

Candidate Starts for PhesterPhotato\_105:

(6, 54110), (Start: 8 @54239 has 41 MA's), (Start: 23 @54413 has 182 MA's), (Start: 28 @54425 has 1 MA's), (Start: 48 @54764 has 1 MA's), (51, 54866), (59, 55031), (67, 55106), (71, 55151), (73, 55172), (74, 55223), (78, 55253), (82, 55286), (92, 55418), (95, 55448), (97, 55472), (100, 55514), (102, 55529), (106, 55610), (108, 55634), (113, 55652), (119, 55727), (123, 55790), (124, 55793),

Gene: Philus\_105 Start: 56501, Stop: 57937, Start Num: 23

Candidate Starts for Philus\_105:

(6, 56198), (Start: 8 @56327 has 41 MA's), (Start: 23 @56501 has 182 MA's), (Start: 28 @56513 has 1 MA's), (Start: 48 @56852 has 1 MA's), (51, 56954), (59, 57119), (67, 57194), (71, 57239), (72, 57257), (73, 57260), (74, 57311), (82, 57374), (92, 57506), (95, 57536), (97, 57560), (100, 57602), (102, 57617), (106, 57698), (108, 57722), (113, 57740), (119, 57815), (123, 57878), (124, 57881),

Gene: PhlipPhlop\_90 Start: 55677, Stop: 57287, Start Num: 8

Candidate Starts for PhlipPhlop\_90:

(Start: 8 @55677 has 41 MA's), (Start: 23 @55851 has 182 MA's), (Start: 28 @55863 has 1 MA's), (Start: 48 @56202 has 1 MA's), (51, 56304), (57, 56439), (59, 56469), (67, 56544), (71, 56589), (73, 56610), (74, 56661), (78, 56691), (82, 56724), (92, 56856), (95, 56886), (97, 56910), (100, 56952), (102, 56967), (104, 57033), (108, 57072), (113, 57090), (119, 57165),

Gene: Piper2020\_96 Start: 55354, Stop: 56790, Start Num: 23

Candidate Starts for Piper2020\_96:

(Start: 23 @55354 has 182 MA's), (Start: 48 @55705 has 1 MA's), (50, 55786), (51, 55807), (59, 55972), (70, 56089), (73, 56113), (74, 56164), (87, 56275), (92, 56359), (95, 56389), (97, 56413), (100, 56455), (102, 56470), (104, 56536), (106, 56551), (108, 56575), (113, 56593), (119, 56668), (123, 56731),

Gene: Pippy\_100 Start: 53930, Stop: 55366, Start Num: 23

Candidate Starts for Pippy\_100:

(Start: 23 @53930 has 182 MA's), (Start: 28 @53942 has 1 MA's), (Start: 48 @54281 has 1 MA's), (51, 54383), (53, 54404), (57, 54518), (59, 54548), (67, 54623), (71, 54668), (72, 54686), (73, 54689), (74, 54740), (78, 54770), (82, 54803), (92, 54935), (95, 54965), (97, 54989), (100, 55031), (102, 55046), (104, 55112), (108, 55151), (113, 55169), (119, 55244),

Gene: Plumbus\_100 Start: 52121, Stop: 53560, Start Num: 23

Candidate Starts for Plumbus\_100:

(Start: 23 @52121 has 182 MA's), (27, 52130), (Start: 28 @52133 has 1 MA's), (Start: 48 @52475 has 1 MA's), (51, 52577), (57, 52712), (59, 52742), (61, 52760), (67, 52817), (71, 52862), (72, 52880), (73, 52883), (74, 52934), (82, 52997), (92, 53129), (95, 53159), (97, 53183), (100, 53225), (102, 53240), (104, 53306), (108, 53345), (113, 53363), (119, 53438),

Gene: Poenanya\_105 Start: 55933, Stop: 57369, Start Num: 23

Candidate Starts for Poenanya\_105:

(Start: 23 @55933 has 182 MA's), (26, 55939), (Start: 28 @55942 has 1 MA's), (Start: 48 @56284 has 1 MA's), (51, 56386), (57, 56521), (59, 56551), (61, 56569), (67, 56626), (71, 56671), (72, 56689), (73, 56692), (74, 56743), (82, 56806), (92, 56938), (95, 56968), (97, 56992), (100, 57034), (102, 57049), (104, 57115), (106, 57130), (108, 57154), (113, 57172), (119, 57247), (123, 57310),

Gene: Polka14\_105 Start: 55994, Stop: 57430, Start Num: 23

Candidate Starts for Polka14\_105:

(Start: 23 @55994 has 182 MA's), (27, 56000), (Start: 28 @56003 has 1 MA's), (Start: 48 @56345 has 1 MA's), (51, 56447), (57, 56582), (59, 56612), (61, 56630), (71, 56732), (72, 56750), (73, 56753), (74, 56804), (76, 56822), (78, 56834), (82, 56867), (92, 56999), (95, 57029), (97, 57053), (100, 57095), (102, 57110), (104, 57176), (108, 57215), (113, 57233), (119, 57308),

Gene: Pollywog\_103 Start: 56052, Stop: 57488, Start Num: 23

Candidate Starts for Pollywog\_103:

(Start: 23 @56052 has 182 MA's), (27, 56058), (Start: 28 @56061 has 1 MA's), (Start: 48 @56403 has 1 MA's), (51, 56505), (57, 56640), (59, 56670), (61, 56688), (71, 56790), (72, 56808), (73, 56811), (74, 56862), (82, 56925), (95, 57087), (97, 57111), (100, 57153), (102, 57168), (104, 57234), (108, 57273), (113, 57291), (119, 57366),

Gene: Polo2Bam\_112 Start: 53837, Stop: 55447, Start Num: 8

Candidate Starts for Polo2Bam\_112:

(Start: 8 @53837 has 41 MA's), (Start: 23 @54011 has 182 MA's), (Start: 28 @54023 has 1 MA's), (Start: 48 @54362 has 1 MA's), (51, 54464), (57, 54599), (59, 54629), (61, 54647), (67, 54704), (71, 54749), (72, 54767), (73, 54770), (74, 54821), (82, 54884), (92, 55016), (95, 55046), (97, 55070), (100, 55112), (102, 55127), (104, 55193), (106, 55208), (108, 55232), (113, 55250), (119, 55325),

Gene: PopTart\_91 Start: 51669, Stop: 53279, Start Num: 8

Candidate Starts for PopTart\_91:

(6, 51540), (Start: 8 @51669 has 41 MA's), (Start: 23 @51843 has 182 MA's), (Start: 28 @51855 has 1 MA's), (Start: 48 @52194 has 1 MA's), (51, 52296), (57, 52431), (59, 52461), (61, 52479), (71, 52581), (72, 52599), (73, 52602), (74, 52653), (82, 52716), (87, 52764), (92, 52848), (95, 52878), (97, 52902), (100, 52944), (102, 52959), (104, 53025), (106, 53040), (108, 53064), (113, 53082), (119, 53157),

Gene: Priscilla\_102 Start: 55468, Stop: 56904, Start Num: 23

Candidate Starts for Priscilla\_102:

(6, 55165), (Start: 8 @55294 has 41 MA's), (Start: 23 @55468 has 182 MA's), (Start: 28 @55480 has 1 MA's), (Start: 48 @55819 has 1 MA's), (51, 55921), (59, 56086), (61, 56104), (73, 56227), (74, 56278),

(78, 56308), (82, 56341), (92, 56473), (95, 56503), (97, 56527), (100, 56569), (102, 56584), (104, 56650), (108, 56689), (113, 56707), (119, 56782),

Gene: QueenHazel\_70 Start: 45079, Stop: 46515, Start Num: 23

Candidate Starts for QueenHazel\_70:

(Start: 23 @45079 has 182 MA's), (27, 45088), (32, 45112), (Start: 48 @45430 has 1 MA's), (51, 45532), (53, 45553), (59, 45697), (63, 45727), (67, 45772), (71, 45817), (73, 45838), (74, 45889), (84, 45970), (90, 46075), (92, 46084), (95, 46114), (97, 46138), (102, 46195), (108, 46300), (113, 46318), (119, 46393),

Gene: QuickMath\_102 Start: 54314, Stop: 55753, Start Num: 23

Candidate Starts for QuickMath\_102:

(Start: 23 @54314 has 182 MA's), (27, 54323), (Start: 28 @54326 has 1 MA's), (Start: 48 @54668 has 1 MA's), (51, 54770), (59, 54935), (67, 55010), (71, 55055), (72, 55073), (73, 55076), (74, 55127), (78, 55157), (82, 55190), (92, 55322), (95, 55352), (97, 55376), (100, 55418), (102, 55433), (106, 55514), (108, 55538), (113, 55556), (119, 55631), (123, 55694), (124, 55697),

Gene: Quico\_110 Start: 56322, Stop: 57758, Start Num: 23

Candidate Starts for Quico\_110:

(5, 55962), (6, 56019), (Start: 8 @56148 has 41 MA's), (Start: 23 @56322 has 182 MA's), (Start: 28 @56334 has 1 MA's), (Start: 48 @56673 has 1 MA's), (51, 56775), (57, 56910), (59, 56940), (61, 56958), (71, 57060), (72, 57078), (73, 57081), (74, 57132), (78, 57162), (82, 57195), (92, 57327), (95, 57357), (97, 57381), (100, 57423), (102, 57438), (106, 57519), (108, 57543), (113, 57561), (119, 57636), (123, 57699),

Gene: Radiance\_99 Start: 54337, Stop: 55773, Start Num: 23

Candidate Starts for Radiance\_99:

(Start: 23 @54337 has 182 MA's), (27, 54343), (Start: 28 @54346 has 1 MA's), (Start: 48 @54688 has 1 MA's), (51, 54790), (57, 54925), (59, 54955), (67, 55030), (71, 55075), (73, 55096), (74, 55147), (76, 55165), (78, 55177), (82, 55210), (92, 55342), (95, 55372), (97, 55396), (100, 55438), (102, 55453), (104, 55519), (108, 55558), (113, 55576), (119, 55651),

Gene: Ramsey\_106 Start: 56233, Stop: 57669, Start Num: 23

Candidate Starts for Ramsey\_106:

(Start: 23 @56233 has 182 MA's), (27, 56242), (Start: 28 @56245 has 1 MA's), (Start: 48 @56584 has 1 MA's), (51, 56686), (57, 56821), (59, 56851), (61, 56869), (67, 56926), (71, 56971), (72, 56989), (73, 56992), (74, 57043), (82, 57106), (92, 57238), (95, 57268), (97, 57292), (100, 57334), (102, 57349), (104, 57415), (106, 57430), (108, 57454), (113, 57472), (119, 57547), (123, 57610),

Gene: RedBird\_102 Start: 55972, Stop: 57408, Start Num: 23

Candidate Starts for RedBird\_102:

(Start: 23 @55972 has 182 MA's), (27, 55978), (Start: 28 @55981 has 1 MA's), (Start: 48 @56323 has 1 MA's), (51, 56425), (57, 56560), (59, 56590), (61, 56608), (71, 56710), (72, 56728), (73, 56731), (74, 56782), (76, 56800), (78, 56812), (82, 56845), (92, 56977), (95, 57007), (97, 57031), (100, 57073), (102, 57088), (104, 57154), (108, 57193), (113, 57211), (119, 57286),

Gene: Renaud18\_110 Start: 55509, Stop: 56948, Start Num: 24

Candidate Starts for Renaud18\_110:

(18, 55485), (20, 55494), (Start: 24 @55509 has 1 MA's), (34, 55578), (36, 55650), (44, 55764), (47, 55842), (53, 55989), (59, 56133), (61, 56151), (77, 56343), (78, 56352), (79, 56358), (80, 56379), (81, 56382), (83, 56400), (86, 56433), (88, 56451), (89, 56457), (92, 56517), (99, 56613), (100, 56616), (102, 56631), (107, 56733), (108, 56736), (110, 56745), (114, 56775), (118, 56817), (119, 56826), (121, 56841), (125, 56898),

Gene: Rialto\_106 Start: 55588, Stop: 57027, Start Num: 23

Candidate Starts for Rialto\_106:

(Start: 23 @55588 has 182 MA's), (27, 55597), (Start: 28 @55600 has 1 MA's), (Start: 48 @55942 has 1 MA's), (51, 56044), (59, 56209), (71, 56329), (72, 56347), (73, 56350), (74, 56401), (78, 56431), (82, 56464), (92, 56596), (95, 56626), (97, 56650), (100, 56692), (102, 56707), (108, 56812), (113, 56830), (119, 56905),

Gene: Rita\_101 Start: 56038, Stop: 57474, Start Num: 23

Candidate Starts for Rita\_101:

(6, 55735), (Start: 8 @55864 has 41 MA's), (Start: 23 @56038 has 182 MA's), (Start: 28 @56050 has 1 MA's), (Start: 48 @56389 has 1 MA's), (51, 56491), (59, 56656), (73, 56797), (74, 56848), (78, 56878), (82, 56911), (92, 57043), (95, 57073), (97, 57097), (100, 57139), (102, 57154), (106, 57235), (108, 57259), (113, 57277), (119, 57352), (123, 57415),

Gene: RitaG\_100 Start: 55027, Stop: 56463, Start Num: 23

Candidate Starts for RitaG\_100:

(Start: 23 @55027 has 182 MA's), (27, 55033), (Start: 28 @55036 has 1 MA's), (Start: 48 @55378 has 1 MA's), (51, 55480), (57, 55615), (59, 55645), (61, 55663), (71, 55765), (72, 55783), (73, 55786), (74, 55837), (76, 55855), (78, 55867), (82, 55900), (92, 56032), (95, 56062), (97, 56086), (100, 56128), (102, 56143), (104, 56209), (108, 56248), (113, 56266), (119, 56341),

Gene: Rockne\_104 Start: 53452, Stop: 54888, Start Num: 23

Candidate Starts for Rockne\_104:

(Start: 23 @53452 has 182 MA's), (27, 53461), (Start: 28 @53464 has 1 MA's), (Start: 48 @53803 has 1 MA's), (51, 53905), (57, 54040), (59, 54070), (61, 54088), (67, 54145), (71, 54190), (72, 54208), (73, 54211), (74, 54262), (82, 54325), (92, 54457), (95, 54487), (97, 54511), (100, 54553), (102, 54568), (104, 54634), (108, 54673), (113, 54691), (119, 54766),

Gene: RockyHorror\_104 Start: 53953, Stop: 55575, Start Num: 8

Candidate Starts for RockyHorror\_104:

(Start: 8 @53953 has 41 MA's), (Start: 23 @54136 has 182 MA's), (27, 54145), (Start: 28 @54148 has 1 MA's), (Start: 48 @54490 has 1 MA's), (51, 54592), (57, 54727), (59, 54757), (61, 54775), (71, 54877), (72, 54895), (73, 54898), (74, 54949), (76, 54967), (82, 55012), (95, 55174), (97, 55198), (100, 55240), (102, 55255), (104, 55321), (108, 55360), (113, 55378), (119, 55453),

Gene: Royals2015\_105 Start: 53573, Stop: 55009, Start Num: 23

Candidate Starts for Royals2015\_105:

(6, 53270), (Start: 8 @53399 has 41 MA's), (Start: 23 @53573 has 182 MA's), (Start: 28 @53585 has 1 MA's), (Start: 48 @53924 has 1 MA's), (51, 54026), (59, 54191), (67, 54266), (71, 54311), (72, 54329), (73, 54332), (74, 54383), (78, 54413), (82, 54446), (92, 54578), (95, 54608), (97, 54632), (100, 54674), (102, 54689), (106, 54770), (108, 54794), (113, 54812), (119, 54887), (123, 54950), (124, 54953),

Gene: Ruby\_97 Start: 54819, Stop: 56429, Start Num: 8

Candidate Starts for Ruby\_97:

(6, 54690), (Start: 8 @54819 has 41 MA's), (Start: 23 @54993 has 182 MA's), (Start: 28 @55005 has 1 MA's), (Start: 48 @55344 has 1 MA's), (51, 55446), (57, 55581), (59, 55611), (61, 55629), (71, 55731), (72, 55749), (73, 55752), (74, 55803), (82, 55866), (92, 55998), (95, 56028), (97, 56052), (100, 56094), (102, 56109), (104, 56175), (108, 56214), (113, 56232), (119, 56307),

Gene: SG4\_102 Start: 55807, Stop: 57243, Start Num: 23

Candidate Starts for SG4\_102:

(6, 55504), (Start: 8 @55633 has 41 MA's), (Start: 23 @55807 has 182 MA's), (Start: 28 @55819 has 1 MA's), (Start: 48 @56158 has 1 MA's), (51, 56260), (59, 56425), (67, 56500), (71, 56545), (72, 56563), (73, 56566), (74, 56617), (78, 56647), (82, 56680), (92, 56812), (95, 56842), (97, 56866), (100, 56908), (102, 56923), (106, 57004), (108, 57028), (113, 57046), (119, 57121), (123, 57184), (124, 57187),

Gene: Saal\_99 Start: 55042, Stop: 56478, Start Num: 23

Candidate Starts for Saal\_99:

(Start: 23 @55042 has 182 MA's), (26, 55048), (Start: 28 @55051 has 1 MA's), (Start: 48 @55393 has 1 MA's), (51, 55495), (57, 55630), (59, 55660), (61, 55678), (71, 55780), (72, 55798), (73, 55801), (74, 55852), (76, 55870), (78, 55882), (82, 55915), (92, 56047), (95, 56077), (97, 56101), (100, 56143), (102, 56158), (106, 56239), (108, 56263), (113, 56281), (119, 56356), (123, 56419),

Gene: Sabbb\_104 Start: 52998, Stop: 54434, Start Num: 23

Candidate Starts for Sabbb\_104:

(6, 52695), (Start: 8 @52824 has 41 MA's), (Start: 23 @52998 has 182 MA's), (Start: 28 @53010 has 1 MA's), (Start: 48 @53349 has 1 MA's), (51, 53451), (53, 53472), (59, 53616), (61, 53634), (67, 53691), (71, 53736), (72, 53754), (73, 53757), (74, 53808), (78, 53838), (82, 53871), (92, 54003), (95, 54033), (97, 54057), (100, 54099), (102, 54114), (104, 54180), (108, 54219), (113, 54237), (119, 54312),

Gene: Sandalphon\_100 Start: 55851, Stop: 57461, Start Num: 8

Candidate Starts for Sandalphon\_100:

(5, 55665), (6, 55722), (Start: 8 @55851 has 41 MA's), (Start: 23 @56025 has 182 MA's), (Start: 28 @56037 has 1 MA's), (Start: 48 @56376 has 1 MA's), (51, 56478), (59, 56643), (71, 56763), (72, 56781), (73, 56784), (74, 56835), (82, 56898), (95, 57060), (97, 57084), (100, 57126), (102, 57141), (104, 57207), (108, 57246), (113, 57264), (119, 57339),

Gene: Sarma624\_103 Start: 51967, Stop: 53403, Start Num: 23

Candidate Starts for Sarma624\_103:

(6, 51664), (Start: 8 @51793 has 41 MA's), (Start: 23 @51967 has 182 MA's), (Start: 28 @51979 has 1 MA's), (Start: 48 @52318 has 1 MA's), (51, 52420), (59, 52585), (73, 52726), (74, 52777), (78, 52807), (82, 52840), (92, 52972), (95, 53002), (97, 53026), (100, 53068), (102, 53083), (106, 53164), (108, 53188), (113, 53206), (119, 53281), (123, 53344),

Gene: Sassafra\_103 Start: 54289, Stop: 55725, Start Num: 23

Candidate Starts for Sassafra\_103:

(Start: 23 @54289 has 182 MA's), (27, 54295), (Start: 28 @54298 has 1 MA's), (Start: 48 @54640 has 1 MA's), (51, 54742), (57, 54877), (59, 54907), (61, 54925), (71, 55027), (72, 55045), (73, 55048), (74, 55099), (76, 55117), (78, 55129), (82, 55162), (92, 55294), (95, 55324), (97, 55348), (100, 55390), (102, 55405), (104, 55471), (108, 55510), (113, 55528), (119, 55603),

Gene: SassyB\_91 Start: 51669, Stop: 53279, Start Num: 8

Candidate Starts for SassyB\_91:

(6, 51540), (Start: 8 @51669 has 41 MA's), (Start: 23 @51843 has 182 MA's), (Start: 28 @51855 has 1 MA's), (Start: 48 @52194 has 1 MA's), (51, 52296), (57, 52431), (59, 52461), (61, 52479), (71, 52581), (72, 52599), (73, 52602), (74, 52653), (82, 52716), (87, 52764), (92, 52848), (95, 52878), (97, 52902), (100, 52944), (102, 52959), (104, 53025), (106, 53040), (108, 53064), (113, 53082), (119, 53157),

Gene: Sbash\_87 Start: 53343, Stop: 54779, Start Num: 23

Candidate Starts for Sbash\_87:

(12, 53277), (Start: 23 @53343 has 182 MA's), (27, 53352), (Start: 48 @53694 has 1 MA's), (51, 53796), (59, 53961), (67, 54036), (71, 54081), (72, 54099), (73, 54102), (74, 54153), (82, 54216), (87, 54264), (90, 54339), (92, 54348), (95, 54378), (97, 54402), (102, 54459), (103, 54480), (108, 54564), (113, 54582), (117, 54645), (119, 54657), (125, 54729),

Gene: ScoobyDoobyDoo\_232 Start: 132607, Stop: 134067, Start Num: 29

Candidate Starts for ScoobyDoobyDoo\_232:

(Start: 29 @132607 has 1 MA's), (34, 132649), (37, 132730), (39, 132736), (43, 132847), (44, 132853), (Start: 48 @132955 has 1 MA's), (51, 133066), (52, 133069), (53, 133087), (54, 133099), (55, 133108), (56, 133195), (58, 133204), (64, 133282), (67, 133309), (68, 133312), (69, 133360), (74, 133438), (85, 133543), (92, 133654), (95, 133684), (96, 133687), (97, 133708), (99, 133747), (101, 133759), (102, 133765), (105, 133837), (106, 133840), (113, 133882), (116, 133930), (118, 133939), (125, 134017),

Gene: Scottish\_101 Start: 53866, Stop: 55302, Start Num: 23

Candidate Starts for Scottish\_101:

(Start: 23 @53866 has 182 MA's), (27, 53872), (Start: 28 @53875 has 1 MA's), (Start: 48 @54217 has 1 MA's), (51, 54319), (57, 54454), (59, 54484), (61, 54502), (71, 54604), (72, 54622), (73, 54625), (74, 54676), (76, 54694), (78, 54706), (82, 54739), (92, 54871), (95, 54901), (97, 54925), (100, 54967), (102, 54982), (104, 55048), (108, 55087), (113, 55105), (119, 55180),

Gene: SeaLumen\_109 Start: 53837, Stop: 55447, Start Num: 8

Candidate Starts for SeaLumen\_109:

(Start: 8 @53837 has 41 MA's), (Start: 23 @54011 has 182 MA's), (Start: 28 @54023 has 1 MA's), (Start: 48 @54362 has 1 MA's), (51, 54464), (57, 54599), (59, 54629), (61, 54647), (67, 54704), (71, 54749), (72, 54767), (73, 54770), (74, 54821), (82, 54884), (92, 55016), (95, 55046), (97, 55070), (100, 55112), (102, 55127), (104, 55193), (106, 55208), (108, 55232), (113, 55250), (119, 55325),

Gene: Seagreen\_102 Start: 54945, Stop: 56381, Start Num: 23

Candidate Starts for Seagreen\_102:

(6, 54642), (Start: 8 @54771 has 41 MA's), (Start: 23 @54945 has 182 MA's), (Start: 28 @54957 has 1 MA's), (Start: 48 @55296 has 1 MA's), (51, 55398), (59, 55563), (67, 55638), (71, 55683), (73, 55704), (74, 55755), (78, 55785), (82, 55818), (92, 55950), (95, 55980), (97, 56004), (100, 56046), (102, 56061), (106, 56142), (108, 56166), (113, 56184), (119, 56259), (123, 56322), (124, 56325),

Gene: Shauna1\_103 Start: 55810, Stop: 57246, Start Num: 23

Candidate Starts for Shauna1\_103:

(6, 55507), (Start: 8 @55636 has 41 MA's), (Start: 23 @55810 has 182 MA's), (Start: 28 @55822 has 1 MA's), (Start: 48 @56161 has 1 MA's), (51, 56263), (59, 56428), (73, 56569), (74, 56620), (78, 56650), (82, 56683), (92, 56815), (95, 56845), (97, 56869), (100, 56911), (102, 56926), (106, 57007), (108, 57031), (113, 57049), (119, 57124), (123, 57187), (124, 57190),

Gene: ShiLan\_104 Start: 57059, Stop: 58495, Start Num: 23

Candidate Starts for ShiLan\_104:

(Start: 23 @57059 has 182 MA's), (27, 57065), (Start: 28 @57068 has 1 MA's), (Start: 48 @57410 has 1 MA's), (51, 57512), (57, 57647), (59, 57677), (61, 57695), (71, 57797), (72, 57815), (73, 57818), (74, 57869), (76, 57887), (78, 57899), (82, 57932), (92, 58064), (95, 58094), (97, 58118), (100, 58160), (102, 58175), (108, 58280), (113, 58298), (119, 58373),

Gene: ShowerHandel\_103 Start: 54603, Stop: 56039, Start Num: 23

Candidate Starts for ShowerHandel\_103:

(Start: 23 @54603 has 182 MA's), (Start: 28 @54615 has 1 MA's), (Start: 48 @54954 has 1 MA's), (51, 55056), (53, 55077), (57, 55191), (59, 55221), (61, 55239), (71, 55341), (72, 55359), (73, 55362), (74, 55413), (82, 55476), (92, 55608), (95, 55638), (97, 55662), (100, 55704), (102, 55719), (104, 55785), (108, 55824), (113, 55842), (119, 55917),

Gene: ShroomBoi\_99 Start: 54651, Stop: 56087, Start Num: 23

Candidate Starts for ShroomBoi\_99:

(Start: 23 @54651 has 182 MA's), (Start: 28 @54663 has 1 MA's), (Start: 48 @55002 has 1 MA's), (51, 55104), (57, 55239), (59, 55269), (61, 55287), (67, 55344), (71, 55389), (72, 55407), (73, 55410), (74, 55461), (82, 55524), (92, 55656), (95, 55686), (97, 55710), (100, 55752), (102, 55767), (106, 55848), (108, 55872), (113, 55890), (119, 55965), (123, 56028), (124, 56031),

Gene: SiSi\_96 Start: 53372, Stop: 54982, Start Num: 8

Candidate Starts for SiSi\_96:

(Start: 8 @53372 has 41 MA's), (Start: 23 @53546 has 182 MA's), (Start: 28 @53558 has 1 MA's), (Start: 48 @53897 has 1 MA's), (51, 53999), (57, 54134), (59, 54164), (61, 54182), (71, 54284), (72, 54302), (73, 54305), (74, 54356), (82, 54419), (92, 54551), (95, 54581), (97, 54605), (100, 54647), (102, 54662), (106, 54743), (108, 54767), (113, 54785), (119, 54860),

Gene: SimranZ1\_97 Start: 52735, Stop: 54345, Start Num: 8

Candidate Starts for SimranZ1\_97:

(Start: 8 @52735 has 41 MA's), (Start: 23 @52909 has 182 MA's), (Start: 28 @52921 has 1 MA's), (Start: 48 @53260 has 1 MA's), (51, 53362), (57, 53497), (59, 53527), (61, 53545), (73, 53668), (74, 53719), (82, 53782), (92, 53914), (95, 53944), (97, 53968), (100, 54010), (102, 54025), (104, 54091), (108, 54130), (113, 54148), (119, 54223),

Gene: Slim\_105 Start: 54885, Stop: 56321, Start Num: 23

Candidate Starts for Slim\_105:

(Start: 23 @54885 has 182 MA's), (Start: 28 @54897 has 1 MA's), (Start: 48 @55236 has 1 MA's), (51, 55338), (59, 55503), (67, 55578), (71, 55623), (73, 55644), (74, 55695), (78, 55725), (82, 55758), (92, 55890), (95, 55920), (97, 55944), (100, 55986), (102, 56001), (106, 56082), (108, 56106), (113, 56124), (119, 56199), (123, 56262), (124, 56265),

Gene: Sparkdehlily\_108 Start: 53537, Stop: 54976, Start Num: 23

Candidate Starts for Sparkdehlily\_108:

(Start: 23 @53537 has 182 MA's), (27, 53546), (Start: 28 @53549 has 1 MA's), (Start: 48 @53891 has 1 MA's), (51, 53993), (57, 54128), (59, 54158), (61, 54176), (71, 54278), (72, 54296), (73, 54299), (74, 54350), (78, 54380), (82, 54413), (92, 54545), (95, 54575), (97, 54599), (100, 54641), (102, 54656), (108, 54761), (113, 54779), (119, 54854),

Gene: Sparky\_88 Start: 59585, Stop: 61039, Start Num: 23

Candidate Starts for Sparky\_88:

(15, 59552), (21, 59576), (Start: 23 @59585 has 182 MA's), (40, 59774), (44, 59849), (45, 59861), (49, 60002), (65, 60272), (74, 60407), (82, 60470), (92, 60605), (93, 60611), (98, 60680), (102, 60719), (104, 60788), (107, 60824), (108, 60827), (115, 60872), (119, 60917), (120, 60923), (125, 60989),

Gene: Spartacus\_108 Start: 57651, Stop: 59090, Start Num: 23

Candidate Starts for Spartacus\_108:

(Start: 23 @57651 has 182 MA's), (27, 57660), (Start: 28 @57663 has 1 MA's), (Start: 48 @58005 has 1 MA's), (51, 58107), (57, 58242), (59, 58272), (61, 58290), (71, 58392), (72, 58410), (73, 58413), (74, 58464), (78, 58494), (82, 58527), (92, 58659), (95, 58689), (97, 58713), (100, 58755), (102, 58770), (104, 58836), (108, 58875), (113, 58893), (119, 58968),

Gene: Spikelee\_101 Start: 56031, Stop: 57470, Start Num: 23

Candidate Starts for Spikelee\_101:

(Start: 23 @56031 has 182 MA's), (27, 56040), (Start: 28 @56043 has 1 MA's), (Start: 48 @56385 has 1 MA's), (51, 56487), (59, 56652), (67, 56727), (71, 56772), (72, 56790), (73, 56793), (74, 56844), (78, 56874), (82, 56907), (95, 57069), (97, 57093), (100, 57135), (102, 57150), (104, 57216), (108, 57255), (113, 57273), (119, 57348),

Gene: Spoonbill\_101 Start: 52972, Stop: 54408, Start Num: 23

Candidate Starts for Spoonbill\_101:

(Start: 23 @52972 has 182 MA's), (27, 52981), (Start: 28 @52984 has 1 MA's), (Start: 48 @53323 has 1 MA's), (51, 53425), (57, 53560), (59, 53590), (61, 53608), (71, 53710), (72, 53728), (73, 53731), (74, 53782), (76, 53800), (78, 53812), (82, 53845), (92, 53977), (95, 54007), (97, 54031), (100, 54073), (102, 54088), (104, 54154), (108, 54193), (113, 54211), (119, 54286),

Gene: Squirty\_100 Start: 57940, Stop: 59376, Start Num: 23

Candidate Starts for Squirty\_100:

(Start: 23 @57940 has 182 MA's), (27, 57949), (Start: 28 @57952 has 1 MA's), (Start: 48 @58291 has 1 MA's), (51, 58393), (57, 58528), (59, 58558), (61, 58576), (67, 58633), (71, 58678), (72, 58696), (73, 58699), (74, 58750), (82, 58813), (92, 58945), (95, 58975), (97, 58999), (100, 59041), (102, 59056), (106, 59137), (108, 59161), (113, 59179), (119, 59254), (123, 59317), (124, 59320),

Gene: StAnnes\_106 Start: 56148, Stop: 57584, Start Num: 23

Candidate Starts for StAnnes\_106:

(Start: 23 @56148 has 182 MA's), (Start: 28 @56160 has 1 MA's), (Start: 48 @56499 has 1 MA's), (50, 56580), (51, 56601), (53, 56622), (59, 56766), (67, 56841), (71, 56886), (73, 56907), (74, 56958), (78, 56988), (82, 57021), (92, 57153), (95, 57183), (97, 57207), (100, 57249), (102, 57264), (106, 57345), (108, 57369), (113, 57387), (119, 57462), (123, 57525), (124, 57528),

Gene: Stap\_96 Start: 51574, Stop: 53010, Start Num: 23

Candidate Starts for Stap\_96:

(6, 51271), (Start: 8 @51400 has 41 MA's), (Start: 23 @51574 has 182 MA's), (Start: 28 @51586 has 1 MA's), (Start: 48 @51925 has 1 MA's), (51, 52027), (59, 52192), (67, 52267), (71, 52312), (72, 52330), (73, 52333), (74, 52384), (82, 52447), (95, 52609), (97, 52633), (100, 52675), (102, 52690), (106, 52771), (108, 52795), (113, 52813), (119, 52888), (123, 52951), (124, 52954),

Gene: Starcevich\_103 Start: 55701, Stop: 57140, Start Num: 23

Candidate Starts for Starcevich\_103:

(Start: 23 @55701 has 182 MA's), (27, 55710), (Start: 28 @55713 has 1 MA's), (Start: 48 @56055 has 1 MA's), (51, 56157), (59, 56322), (71, 56442), (72, 56460), (73, 56463), (74, 56514), (78, 56544), (82, 56577), (92, 56709), (94, 56718), (95, 56739), (97, 56763), (100, 56805), (102, 56820), (104, 56886), (108, 56925), (113, 56943), (119, 57018),

Gene: Strokeseat\_99 Start: 52733, Stop: 54172, Start Num: 23

Candidate Starts for Strokeseat\_99:

(6, 52421), (Start: 8 @52550 has 41 MA's), (Start: 23 @52733 has 182 MA's), (27, 52742), (Start: 28 @52745 has 1 MA's), (Start: 48 @53087 has 1 MA's), (51, 53189), (57, 53324), (59, 53354), (61, 53372), (71, 53474), (72, 53492), (73, 53495), (74, 53546), (82, 53609), (92, 53741), (95, 53771), (97, 53795), (100, 53837), (102, 53852), (104, 53918), (106, 53933), (108, 53957), (113, 53975), (119, 54050), (123, 54113),

Gene: Stuck\_85 Start: 52653, Stop: 54089, Start Num: 23

Candidate Starts for Stuck\_85:

(12, 52587), (Start: 23 @52653 has 182 MA's), (27, 52662), (Start: 48 @53004 has 1 MA's), (51, 53106), (59, 53271), (61, 53289), (63, 53301), (67, 53346), (71, 53391), (72, 53409), (73, 53412), (74, 53463), (82, 53526), (87, 53574), (90, 53649), (95, 53688), (97, 53712), (102, 53769), (106, 53850), (108, 53874), (113, 53892), (117, 53955), (119, 53967), (125, 54039),

Gene: SuperGrey\_100 Start: 56436, Stop: 58046, Start Num: 8

Candidate Starts for SuperGrey\_100:

(6, 56307), (Start: 8 @56436 has 41 MA's), (Start: 23 @56610 has 182 MA's), (Start: 28 @56622 has 1 MA's), (Start: 48 @56961 has 1 MA's), (51, 57063), (59, 57228), (73, 57369), (74, 57420), (78, 57450), (82, 57483), (92, 57615), (95, 57645), (97, 57669), (100, 57711), (102, 57726), (106, 57807), (108, 57831), (113, 57849), (119, 57924), (123, 57987), (124, 57990),

Gene: SwagPiggett\_103 Start: 56168, Stop: 57604, Start Num: 23

Candidate Starts for SwagPiggett\_103:

(6, 55865), (Start: 8 @55994 has 41 MA's), (Start: 23 @56168 has 182 MA's), (Start: 28 @56180 has 1 MA's), (Start: 48 @56519 has 1 MA's), (51, 56621), (59, 56786), (61, 56804), (73, 56927), (74, 56978), (78, 57008), (82, 57041), (92, 57173), (95, 57203), (97, 57227), (100, 57269), (102, 57284), (104, 57350), (108, 57389), (113, 57407), (119, 57482),

Gene: TChen\_98 Start: 54706, Stop: 56139, Start Num: 23

Candidate Starts for TChen\_98:

(Start: 23 @54706 has 182 MA's), (27, 54715), (32, 54739), (42, 54943), (Start: 48 @55051 has 1 MA's), (50, 55135), (51, 55156), (57, 55291), (59, 55321), (61, 55339), (74, 55513), (75, 55525), (82, 55576), (88, 55636), (90, 55699), (92, 55708), (95, 55738), (97, 55762), (102, 55819), (108, 55924), (113, 55942), (119, 56017), (122, 56062),

Gene: TDanisky\_109 Start: 53537, Stop: 54976, Start Num: 23

Candidate Starts for TDanisky\_109:

(Start: 23 @53537 has 182 MA's), (27, 53546), (Start: 28 @53549 has 1 MA's), (Start: 48 @53891 has 1 MA's), (51, 53993), (57, 54128), (59, 54158), (61, 54176), (71, 54278), (72, 54296), (73, 54299), (74, 54350), (78, 54380), (82, 54413), (92, 54545), (95, 54575), (97, 54599), (100, 54641), (102, 54656), (108, 54761), (113, 54779), (119, 54854),

Gene: Taj\_107 Start: 55815, Stop: 57251, Start Num: 23

Candidate Starts for Taj\_107:

(Start: 23 @55815 has 182 MA's), (Start: 28 @55827 has 1 MA's), (Start: 48 @56166 has 1 MA's), (51, 56268), (59, 56433), (67, 56508), (71, 56553), (73, 56574), (74, 56625), (84, 56706), (90, 56811), (92, 56820), (95, 56850), (97, 56874), (102, 56931), (108, 57036), (113, 57054), (119, 57129),

Gene: Tchotchke\_93 Start: 52916, Stop: 54538, Start Num: 8

Candidate Starts for Tchotchke\_93:

(Start: 8 @52916 has 41 MA's), (Start: 23 @53099 has 182 MA's), (27, 53108), (Start: 28 @53111 has 1 MA's), (Start: 48 @53453 has 1 MA's), (51, 53555), (57, 53690), (59, 53720), (61, 53738), (71, 53840), (72, 53858), (73, 53861), (74, 53912), (76, 53930), (95, 54137), (97, 54161), (100, 54203), (102, 54218), (104, 54284), (108, 54323), (113, 54341), (119, 54416),

Gene: TootsiePop\_91 Start: 55106, Stop: 56542, Start Num: 23

Candidate Starts for TootsiePop\_91:

(Start: 23 @55106 has 182 MA's), (Start: 48 @55457 has 1 MA's), (50, 55538), (51, 55559), (59, 55724), (70, 55841), (73, 55865), (74, 55916), (87, 56027), (92, 56111), (95, 56141), (97, 56165), (100, 56207), (102, 56222), (104, 56288), (106, 56303), (108, 56327), (113, 56345), (119, 56420), (123, 56483),

Gene: Tootsieroll\_95 Start: 55249, Stop: 56685, Start Num: 23

Candidate Starts for Tootsieroll\_95:

(Start: 23 @55249 has 182 MA's), (Start: 28 @55261 has 1 MA's), (Start: 48 @55600 has 1 MA's), (51, 55702), (59, 55867), (67, 55942), (71, 55987), (72, 56005), (73, 56008), (74, 56059), (78, 56089), (82, 56122), (92, 56254), (95, 56284), (97, 56308), (100, 56350), (102, 56365), (104, 56431), (106, 56446), (108, 56470), (113, 56488), (119, 56563), (123, 56626),

Gene: Topiatin\_102 Start: 55567, Stop: 57006, Start Num: 23

Candidate Starts for Topiatin\_102:

(Start: 23 @55567 has 182 MA's), (27, 55576), (Start: 28 @55579 has 1 MA's), (Start: 48 @55921 has 1 MA's), (51, 56023), (57, 56158), (59, 56188), (61, 56206), (74, 56380), (75, 56392), (82, 56443), (87, 56491), (90, 56566), (92, 56575), (94, 56584), (95, 56605), (97, 56629), (100, 56671), (102, 56686), (106, 56767), (108, 56791), (113, 56809), (119, 56884), (123, 56947), (124, 56950),

Gene: Totinger\_104 Start: 55101, Stop: 56540, Start Num: 23

Candidate Starts for Totinger\_104:

(Start: 23 @55101 has 182 MA's), (27, 55110), (Start: 28 @55113 has 1 MA's), (Start: 48 @55455 has 1 MA's), (51, 55557), (59, 55722), (71, 55842), (72, 55860), (73, 55863), (74, 55914), (78, 55944), (82, 55977), (92, 56109), (95, 56139), (97, 56163), (100, 56205), (102, 56220), (108, 56325), (113, 56343), (119, 56418),

Gene: UncleRicky\_100 Start: 53142, Stop: 54764, Start Num: 8

Candidate Starts for UncleRicky\_100:

(Start: 8 @53142 has 41 MA's), (Start: 23 @53325 has 182 MA's), (27, 53334), (Start: 28 @53337 has 1 MA's), (Start: 48 @53679 has 1 MA's), (51, 53781), (57, 53916), (59, 53946), (61, 53964), (71, 54066), (72, 54084), (73, 54087), (74, 54138), (76, 54156), (82, 54201), (95, 54363), (97, 54387), (100, 54429), (102, 54444), (104, 54510), (108, 54549), (113, 54567), (119, 54642),

Gene: VRedHorse\_102 Start: 52066, Stop: 53502, Start Num: 23

Candidate Starts for VRedHorse\_102:

(6, 51763), (Start: 8 @51892 has 41 MA's), (Start: 23 @52066 has 182 MA's), (Start: 28 @52078 has 1 MA's), (Start: 48 @52417 has 1 MA's), (51, 52519), (57, 52654), (59, 52684), (61, 52702), (67, 52759), (71, 52804), (72, 52822), (73, 52825), (74, 52876), (82, 52939), (92, 53071), (95, 53101), (97, 53125), (100, 53167), (102, 53182), (104, 53248), (106, 53263), (108, 53287), (113, 53305), (119, 53380), (123, 53443),

Gene: Velveteen\_98 Start: 51967, Stop: 53403, Start Num: 23

Candidate Starts for Velveteen\_98:

(6, 51664), (Start: 8 @51793 has 41 MA's), (Start: 23 @51967 has 182 MA's), (Start: 28 @51979 has 1 MA's), (Start: 48 @52318 has 1 MA's), (51, 52420), (59, 52585), (73, 52726), (74, 52777), (78, 52807), (82, 52840), (92, 52972), (95, 53002), (97, 53026), (100, 53068), (102, 53083), (106, 53164), (108, 53188), (113, 53206), (119, 53281), (123, 53344),

Gene: Veteran\_91 Start: 53240, Stop: 54850, Start Num: 8

Candidate Starts for Veteran\_91:

(Start: 8 @53240 has 41 MA's), (Start: 23 @53414 has 182 MA's), (Start: 28 @53426 has 1 MA's), (Start: 48 @53765 has 1 MA's), (51, 53867), (57, 54002), (59, 54032), (61, 54050), (71, 54152), (72, 54170), (73, 54173), (74, 54224), (82, 54287), (92, 54419), (95, 54449), (97, 54473), (100, 54515), (102, 54530), (106, 54611), (108, 54635), (113, 54653), (119, 54728),

Gene: Violac\_102 Start: 55462, Stop: 56898, Start Num: 23

Candidate Starts for Violac\_102:

(5, 55102), (6, 55159), (Start: 8 @55288 has 41 MA's), (Start: 23 @55462 has 182 MA's), (Start: 28 @55474 has 1 MA's), (Start: 48 @55813 has 1 MA's), (51, 55915), (57, 56050), (59, 56080), (61, 56098), (71, 56200), (72, 56218), (73, 56221), (74, 56272), (82, 56335), (95, 56497), (97, 56521), (100, 56563), (102, 56578), (104, 56644), (108, 56683), (113, 56701), (119, 56776),

Gene: Vivum\_101 Start: 56403, Stop: 57839, Start Num: 23

Candidate Starts for Vivum\_101:

(Start: 8 @56229 has 41 MA's), (Start: 23 @56403 has 182 MA's), (Start: 28 @56415 has 1 MA's), (Start: 48 @56754 has 1 MA's), (51, 56856), (57, 56991), (59, 57021), (61, 57039), (71, 57141), (72, 57159), (73, 57162), (74, 57213), (82, 57276), (92, 57408), (95, 57438), (97, 57462), (100, 57504), (102, 57519), (106, 57600), (108, 57624), (113, 57642), (119, 57717),

Gene: Wachhund\_97 Start: 51088, Stop: 52698, Start Num: 8

Candidate Starts for Wachhund\_97:

(Start: 8 @51088 has 41 MA's), (Start: 23 @51262 has 182 MA's), (Start: 28 @51274 has 1 MA's), (Start: 48 @51613 has 1 MA's), (51, 51715), (57, 51850), (59, 51880), (61, 51898), (67, 51955), (71, 52000), (72, 52018), (73, 52021), (74, 52072), (82, 52135), (92, 52267), (94, 52276), (95, 52297), (97, 52321), (100, 52363), (102, 52378), (104, 52444), (106, 52459), (108, 52483), (113, 52501), (119, 52576),

Gene: Wee\_104 Start: 55891, Stop: 57327, Start Num: 23

Candidate Starts for Wee\_104:

(Start: 23 @55891 has 182 MA's), (Start: 28 @55903 has 1 MA's), (Start: 48 @56242 has 1 MA's), (51, 56344), (59, 56509), (67, 56584), (71, 56629), (73, 56650), (74, 56701), (84, 56782), (90, 56887), (92, 56896), (95, 56926), (97, 56950), (102, 57007), (108, 57112), (113, 57130), (119, 57205),

Gene: Whatsapiecost\_95 Start: 49617, Stop: 51053, Start Num: 23

Candidate Starts for Whatsapiecost\_95:

(6, 49314), (Start: 8 @49443 has 41 MA's), (Start: 23 @49617 has 182 MA's), (Start: 28 @49629 has 1 MA's), (Start: 48 @49968 has 1 MA's), (51, 50070), (59, 50235), (67, 50310), (71, 50355), (72, 50373), (73, 50376), (74, 50427), (78, 50457), (82, 50490), (92, 50622), (95, 50652), (97, 50676), (100, 50718), (102, 50733), (106, 50814), (108, 50838), (113, 50856), (119, 50931), (123, 50994), (124, 50997),

Gene: Whouxphf\_105 Start: 56186, Stop: 57796, Start Num: 8

Candidate Starts for Whouxphf\_105:

(5, 56000), (6, 56057), (Start: 8 @56186 has 41 MA's), (Start: 23 @56360 has 182 MA's), (Start: 28 @56372 has 1 MA's), (Start: 48 @56711 has 1 MA's), (51, 56813), (53, 56834), (59, 56978), (67, 57053), (71, 57098), (72, 57116), (73, 57119), (74, 57170), (78, 57200), (82, 57233), (92, 57365), (95, 57395), (97, 57419), (100, 57461), (102, 57476), (106, 57557), (108, 57581), (113, 57599), (119, 57674),

Gene: XFactor\_92 Start: 52408, Stop: 53844, Start Num: 23

Candidate Starts for XFactor\_92:

(6, 52105), (Start: 8 @52234 has 41 MA's), (Start: 23 @52408 has 182 MA's), (Start: 28 @52420 has 1 MA's), (Start: 48 @52759 has 1 MA's), (51, 52861), (59, 53026), (67, 53101), (71, 53146), (73, 53167), (74, 53218), (82, 53281), (92, 53413), (95, 53443), (97, 53467), (100, 53509), (102, 53524), (106, 53605), (108, 53629), (113, 53647), (119, 53722), (123, 53785), (124, 53788),

Gene: Xula\_71 Start: 45566, Stop: 47002, Start Num: 23

Candidate Starts for Xula\_71:

(Start: 23 @45566 has 182 MA's), (27, 45575), (32, 45599), (Start: 48 @45917 has 1 MA's), (51, 46019), (53, 46040), (59, 46184), (63, 46214), (67, 46259), (71, 46304), (73, 46325), (74, 46376), (84, 46457), (90, 46562), (92, 46571), (95, 46601), (97, 46625), (102, 46682), (108, 46787), (113, 46805), (119, 46880),

Gene: Yorick\_97 Start: 55719, Stop: 57158, Start Num: 23

Candidate Starts for Yorick\_97:

(Start: 23 @55719 has 182 MA's), (27, 55728), (Start: 28 @55731 has 1 MA's), (Start: 48 @56073 has 1 MA's), (51, 56175), (59, 56340), (61, 56358), (71, 56460), (72, 56478), (73, 56481), (74, 56532), (76, 56550), (78, 56562), (82, 56595), (92, 56727), (95, 56757), (97, 56781), (100, 56823), (102, 56838),

(108, 56943), (113, 56961), (119, 57036),

Gene: Zerg\_100 Start: 54572, Stop: 56008, Start Num: 23

Candidate Starts for Zerg\_100:

(Start: 23 @54572 has 182 MA's), (Start: 28 @54584 has 1 MA's), (Start: 48 @54923 has 1 MA's), (51, 55025), (57, 55160), (59, 55190), (61, 55208), (71, 55310), (72, 55328), (73, 55331), (74, 55382), (82, 55445), (92, 55577), (95, 55607), (97, 55631), (100, 55673), (102, 55688), (104, 55754), (108, 55793), (113, 55811), (119, 55886),

Gene: Zizzle\_105 Start: 56648, Stop: 58084, Start Num: 23

Candidate Starts for Zizzle\_105:

(Start: 23 @56648 has 182 MA's), (Start: 28 @56660 has 1 MA's), (Start: 48 @56999 has 1 MA's), (51, 57101), (53, 57122), (57, 57236), (59, 57266), (67, 57341), (71, 57386), (72, 57404), (73, 57407), (74, 57458), (78, 57488), (82, 57521), (92, 57653), (95, 57683), (97, 57707), (100, 57749), (102, 57764), (104, 57830), (108, 57869), (113, 57887), (119, 57962),