

Pham 202569







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 202569 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202569 has 462 members, 38 are drafts.

Phages represented in each track:

- Track 1 : SPB78\_23
- Track 2 : LilMartin\_67, MulchMansion\_67, Angela\_67
- Track 3 : Riptide\_68, Anedea\_68
- Track 4 : Marsus\_69
- Track 5 : Mildred21\_68
- Track 6 : Bmoc\_68
- Track 7 : Warpy\_74, Jay2Jay\_75, Evy\_71, Targaryen\_71
- Track 8 : Wipeout\_70, Quaran19\_72, Spelly\_72, Spilled\_73, Gibbi\_76, MindFlayer\_70, JimJam\_72, Jollison\_71, Bordeaux\_70, Battuta\_70, Birchlyn\_69, Karimac\_71, Amabiko\_72, SaltySpitoon\_72, KentuckyRacer\_72, PumpkinSpice\_71, CeilingFan\_74, TomSawyer\_70, IchabodCrane\_69, Rikishi\_75, Starbow\_70
- Track 9 : Stanimal\_72, Sollertia\_72, Genie2\_72, BoomerJR\_72, Yaboi\_72
- Track 10 : Mugiwara\_73
- Track 11 : Tomas\_74
- Track 12 : Elmer\_74, Wofford\_71
- Track 13 : LukeCage\_71
- Track 14 : StarPlatinum\_72
- Track 15 : Enygma\_72
- Track 16 : RosePharie\_49
- Track 17 : Manuel\_46
- Track 18 : JPandJE\_50, Romero\_49, ToriToki\_49, HaugeAnator\_49, Percastrophe\_49, Immanuel3\_49, Olicious\_49, ZooBear\_49, Treat\_49
- Track 19 : Gremlin23\_49, Geostin\_44, Fabian\_46, RetrieverFever\_49, Vorvolakos\_49, FlowerPower\_49
- Track 20 : Zeigle\_47, WRightOn\_50, Kumquat\_47
- Track 21 : Stella\_51
- Track 22 : Rideau\_51, Dennebes\_50
- Track 23 : Destructrice\_48
- Track 24 : Muntaha\_47, Wakanda\_47
- Track 25 : Circinus\_48, BillNye\_46
- Track 26 : G4\_25
- Track 27 : Morrissey\_23
- Track 28 : Mahdia\_22
- Track 29 : Gustav\_22
- Track 30 : Shagrat\_28
- Track 31 : Huffy\_26, Goib\_25, DinoDaryn\_26, TZGordon\_26, Vendetta\_24, Splinter\_24

- Track 32 : Banquo\_28
- Track 33 : TinaLin\_27
- Track 34 : Dardanus\_26
- Track 35 : Catfish\_24
- Track 36 : BeeGee\_23
- Track 37 : Cashline\_23
- Track 38 : Lilas\_23, EMsquaredA\_23, Pollux\_23, BritBrat\_23, Bradissa\_23, EnalisNailo\_23, Marteena\_23, Floral\_23
- Track 39 : Confidence\_23
- Track 40 : Lton\_19
- Track 41 : Pepperoni\_20
- Track 42 : Lamberg\_19, Nettuno\_19, EdnaMode\_19
- Track 43 : Matteo\_19, Pickett\_19
- Track 44 : Denise\_19
- Track 45 : Moosehead\_19, Morkie\_21, PhorbesPhlower\_21
- Track 46 : Faith5x5\_19
- Track 47 : Archimedes\_20
- Track 48 : Coriander\_23
- Track 49 : RayTheFireFly\_23, Doggs\_22
- Track 50 : Lucky10\_21
- Track 51 : Ecliptus\_28, ODay\_29
- Track 52 : Ronaldo\_64, Ziko\_64, Fryberger\_61, Volt\_64
- Track 53 : Keelan\_59
- Track 54 : Guey18\_67
- Track 55 : Pioneer3\_56, Hortus1\_56, OlinDD\_56, Alleb\_57, Tandem\_56, Platte\_56
- Track 56 : Cen1621\_21
- Track 57 : Zeta1847\_21
- Track 58 : Honk\_21
- Track 59 : GardenState\_23, IAmGroot\_23
- Track 60 : Gretchen\_23
- Track 61 : UtzChips\_22, Barnstormer\_22
- Track 62 : Floof\_23
- Track 63 : SuMoo\_22, Mabodamaca\_23
- Track 64 : Caron\_22
- Track 65 : Percival\_23
- Track 66 : Cicada\_32, SBlackberry\_30
- Track 67 : PermaG\_31
- Track 68 : Rasovi\_30, Htur\_30
- Track 69 : Olympi\_31, Johann\_31, Goodman\_31
- Track 70 : Milani\_31
- Track 71 : Linayshia\_30
- Track 72 : Zanella\_30
- Track 73 : Jera\_31
- Track 74 : Benry\_30
- Track 75 : IndiRoo\_31, Sucha\_27
- Track 76 : FireCastle\_30
- Track 77 : TurboVicky\_30, Typher\_32
- Track 78 : KristaRAM\_33, Shauna1\_29, Hegedechwinu\_33, MinionDave\_35, MilleniumForce\_33, Hlubikazi\_33, Whatsapiecost\_33, Brushbloom\_35, Eradicator\_32, Melissauren88\_32, DeadP\_32, Fruitloop\_31, Akhila\_26, Batiatus\_32, WillSterrel\_34, Piper2020\_34, Juice456\_34, Tweety\_32, Mandlovu\_33, Latretium\_33, DLane\_32, JalFarm20\_35, IrishSherpFalk\_34, Flathead\_32, Pippy\_26, Ardmore\_31, Blarby\_41, Brocalys\_27, Strokeseat\_33, OwlsT2W\_33, Ms6\_26, PhesterPhotato\_32,

MilanaBonita\_26, Coco12\_32, Taj\_32, Phanphagia\_29, Mutaforma13\_32, Wee\_33, MulchSalad\_31, Wachhund\_32, Phalconet\_32, Vivum\_33, Leozinho\_34

- Track 79 : Spartacus\_34
- Track 80 : Inventum\_32, GigiOuiOui\_32, Blexus\_32, Empress\_33, Royals2015\_32, JoeyJr\_32, OldBen\_32, Phasih\_33, Plumbus\_34, Beakin\_33, SiSi\_32, RockyHorror\_33, Pollywog\_32, RitaG\_33, Veteran\_32, DaddyRickover\_32, Scottish\_33, Sassafras\_33, Frankie\_36, Zerg\_32, Polka14\_33, Dorothy\_32, GUmbie\_32, Mozy\_34, KingMidas\_34, Nitzel\_33, Karhdo\_32, Dante\_32, Daenerys\_32, RedBird\_32, Che8\_34, Alexphander\_35, DaWorst\_34
- Track 81 : SwagPigglett\_32, NormanBulbieJr\_32, Zizzle\_32, Yorick\_32, Jarcob\_32, LastJedi\_26, Martik\_32, Koella\_26, Maravista\_32, LilMoolah\_32, ShiLan\_32, Lizziana\_32, Hades\_33, Clifton\_26, Nivrat\_32, ShowerHandel\_32, Burwell21\_32
- Track 82 : Eish\_32, Moonbeam\_33, Sabbb\_33, Job42\_36, Fancypants\_32, DosHalletts\_34, ArcusAngelus\_32
- Track 83 : Krakatau\_33, Cornucopia\_33, DillTech15\_32, Fastidio\_34, Mantra\_32, Totinger\_33, LittleShirley\_35, Rockne\_32, Phatniss\_33, UncleRicky\_35, Llij\_32, DotProduct\_32, Drago\_33, PMC\_32, Chuckly\_32, Rialto\_36, XFactor\_32
- Track 84 : DoRead\_35, Gorge\_32, QuickMath\_33, Kimberlium\_34, Quico\_33, Girafales\_33, Saal\_32, MulchExplorer\_36, Spoonbill\_32, Sparkdehlily\_32, DRBy19\_32, James\_32, Florinda\_32, Mattes\_32, Crumble\_26, Kersh\_31, Radiance\_32, BobaPhett\_32, OlympiaSaint\_32, Philus\_32, TDanisky\_32
- Track 85 : BigPhil\_28, Sarma624\_28, Cerasum\_28, Velveteen\_28
- Track 86 : LunaBlu\_35, Cornie\_32, Emma\_34, Galactic\_34, Renaud18\_32, Filuzino\_32, ShroomBoi\_29, Firehouse51\_33, Mova\_33, Kenuha5\_29, Bobi\_34, SuperGrey\_33, Byougenkin\_32, Bubbles123\_34, Guppsters\_34
- Track 87 : Awesomesauce\_33, Misha28\_33, Aloeri\_34, TootsiePop\_33, ChickenDinner\_34, DocMcStuffins\_34
- Track 88 : Sandalphon\_33
- Track 89 : Grimmer\_34
- Track 90 : SassyB\_32, PopTart\_32, Boomer\_34
- Track 91 : Ogopogo\_32, lbOuu\_34, Ramsey\_35
- Track 92 : Seagreen\_33
- Track 93 : Seabastian\_32, Ochi17\_30, Estave1\_30, Pacc40\_32, OfUltron\_32, Llama\_32, Jinglebell\_31, Modragons\_32, SimranZ1\_35, AlpineSix\_33, Oksu\_33
- Track 94 : Mahavrat\_32
- Track 95 : Ovechkin\_33, StAnnes\_31
- Track 96 : Hamulus\_33, Girr\_34, Ruby\_34, Kingsley\_31, MisterCuddles\_34
- Track 97 : Juniper1\_32
- Track 98 : Rita\_33, Bipolar\_29
- Track 99 : Harley\_32, Ibhubesi\_32, Minnie\_34
- Track 100 : Poenanya\_32, Doomphist\_32
- Track 101 : BuzzLyseyear\_35, Spikelee\_34
- Track 102 : MadMen\_30
- Track 103 : Leperchaun\_32
- Track 104 : Enby\_34, SG4\_33, Lorde\_34, EleanorGeorge\_33
- Track 105 : Chevrolet\_33
- Track 106 : Cabrinians\_32, Priscilla\_32
- Track 107 : FreddyB\_32
- Track 108 : BodEinwohner17\_32, Marker\_33
- Track 109 : Aubs\_33, Donkeykong\_32
- Track 110 : Tootsieroll\_33
- Track 111 : VRedHorse\_32
- Track 112 : Doug\_33

- Track 113 : CaptainTrips\_33
- Track 114 : Madiba\_30
- Track 115 : Gandalph\_33
- Track 116 : DirtMcgirt\_33
- Track 117 : BlueCrab\_32, Deb65\_32, Geralt\_32, Nimbo\_32, PHappiness\_32
- Track 118 : Whouxphf\_33
- Track 119 : Starcevich\_36
- Track 120 : Stap\_33
- Track 121 : Che9d\_37
- Track 122 : Jabbawokkie\_40, Zapner\_39, Demsculpinboyz\_38, Avani\_37
- Track 123 : Yoshi\_39
- Track 124 : Soul22\_37
- Track 125 : LunaStella\_34, TChen\_32
- Track 126 : ThetaBob\_32
- Track 127 : Toron\_33
- Track 128 : Hum25\_24
- Track 129 : Pitbull\_23
- Track 130 : Babsiella\_28, HC\_29
- Track 131 : Xula\_26
- Track 132 : QueenHazel\_27
- Track 133 : Phrann\_27
- Track 134 : Sonah\_28, Jung\_27, Gavriela\_28, Ksquared\_28, Phegasus\_28, Fishburne\_28, Techage\_28, Brusacoram\_28, Shipwreck\_30, Pygmy\_30, Jebeks\_28, Zilizebeth\_28, Kari\_28, Juniormint\_28, Atcoo\_28, StressBall\_28, Glaske\_28, Bartholomew\_27, Venti\_28, Dynamo\_28, Polkaroo\_28, Necropolis\_28, Mangethe\_28, Majeke\_28, HUHilltop\_28, FirstPlacePfu\_28, Vidya\_28, Camster\_28, CactusJack\_28, KilKor\_28, Phalm\_28, Phineas\_28, Langerak\_28, GreaseLightnin\_28, StevieRay\_28, Bunnies\_28, Megiddo\_28, Donovan\_28, Malithi\_28, Thespis\_28, Arib1\_28
- Track 135 : Xavia\_28
- Track 136 : LilSpotty\_33
- Track 137 : MooMoo\_30
- Track 138 : Gudmit\_20
- Track 139 : OnionKnight\_23
- Track 140 : GMA1\_21
- Track 141 : RomansRevenge\_35
- Track 142 : Finkle\_21
- Track 143 : GAL1\_23
- Track 144 : StAugustine\_22

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

The start number called the most often in the published annotations is 82, it was called in 326 of the 424 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila\_26, Alexphander\_35, Aloeri\_34, AlpineSix\_33, Amabiko\_72, Anedea\_68, Angela\_67, Archimedes\_20, ArcusAngelus\_32, Ardmore\_31, Arib1\_28, Atcoo\_28, Aubs\_33, Awesomesauce\_33, Babsiella\_28, Bartholomew\_27, Batiatus\_32, Battuta\_70, Beakin\_33, BeeGee\_23, BigPhil\_28, BillNye\_46, Bipolar\_29, Birchlyn\_69, Blarby\_41, Blexus\_32, BlueCrab\_32, Bmoc\_68, BobaPhett\_32,

Bobi\_34, BoomerJR\_72, Boomer\_34, Bordeaux\_70, Bradissa\_23, BritBrat\_23, Brocalys\_27, Brusacoram\_28, Brushbloom\_35, Bubbles123\_34, Bunnies\_28, Burwell21\_32, Byougenkin\_32, Cabrinians\_32, CactusJack\_28, Camster\_28, CaptainTrips\_33, Cashline\_23, CeilingFan\_74, Cerasum\_28, Che8\_34, Che9d\_37, ChickenDinner\_34, Chuckly\_32, Circinus\_48, Clifton\_26, Coco12\_32, Confidence\_23, Coriander\_23, Cornie\_32, Cornucopia\_33, Crumble\_26, DLane\_32, DRBy19\_32, DaWorst\_34, DaddyRickover\_32, Daenerys\_32, Dante\_32, DeadP\_32, Deb65\_32, DillTech15\_32, DirtMcgirt\_33, DoRead\_35, DocMcStuffins\_34, Donkeykong\_32, Donovan\_28, Doomphist\_32, Dorothy\_32, DosHalletts\_34, DotProduct\_32, Drago\_33, Dynamo\_28, EMsquaredA\_23, EdnaMode\_19, Eish\_32, EleanorGeorge\_33, Elmer\_74, Emma\_34, Empress\_33, EnalisNailo\_23, Enby\_34, Enygma\_72, Eradicator\_32, Estave1\_30, Evy\_71, Faith5x5\_19, Fancypants\_32, Fastidio\_34, Filuzino\_32, Finkle\_21, Firehouse51\_33, FirstPlacePfu\_28, Fishburne\_28, Flathead\_32, Floral\_23, Florinda\_32, Frankie\_36, Fruitloop\_31, Fryberger\_61, GAL1\_23, GUmbie\_32, Galactic\_34, Gandalph\_33, Gavriela\_28, Genie2\_72, Geralt\_32, Gibbi\_76, GigiOuiOui\_32, Girafales\_33, Glaske\_28, Gorge\_32, GreaseLightnin\_28, Grimmer\_34, Gudmit\_20, Guey18\_67, Guppsters\_34, Gustav\_22, HC\_29, HUHilltop\_28, Hades\_33, Harley\_32, Hegedechwinu\_33, Hlubikazi\_33, Hum25\_24, Ibhubesi\_32, IchabodCrane\_69, Inventum\_32, IrishSherpFalk\_34, JalFarm20\_35, James\_32, Jarcob\_32, Jay2Jay\_75, Jebeks\_28, JimJam\_72, Jinglebell\_31, Job42\_36, JoeyJr\_32, Jollison\_71, Juice456\_34, Jung\_27, Juniomint\_28, Juniper1\_32, Karhdo\_32, Kari\_28, Karimac\_71, Keelan\_59, KentuckyRacer\_72, Kenuha5\_29, Kersh\_31, KilKor\_28, Kimberlium\_34, KingMidas\_34, Koella\_26, Krakatau\_33, KristaRAM\_33, Ksquared\_28, Lamberg\_19, Langerak\_28, LastJedi\_26, Latretium\_33, Leozinho\_34, LilMartin\_67, LilMoolah\_32, LilSpotty\_33, Lilas\_23, LittleShirley\_35, Lizziana\_32, Llama\_32, Llij\_32, Lorde\_34, Lton\_19, Lucky10\_21, LukeCage\_71, LunaBlu\_35, MadMen\_30, Mahavrat\_32, Mahdia\_22, Majeke\_28, Malithi\_28, Mandlovu\_33, Mangethe\_28, Mantra\_32, Maravista\_32, Marsus\_69, Marteena\_23, Martik\_32, Mattes\_32, Megiddo\_28, Melissauren88\_32, MilanaBonita\_26, Mildred21\_68, MilleniumForce\_33, MindFlayer\_70, MinionDave\_35, Minnie\_34, Misha28\_33, Modragons\_32, Moonbeam\_33, Moosehead\_19, Morkie\_21, Morrissey\_23, Mova\_33, Mozy\_34, Ms6\_26, Mugiwara\_73, MulchExplorer\_36, MulchMansion\_67, MulchSalad\_31, Muntaha\_47, Mutaforma13\_32, Necropolis\_28, Nettuno\_19, Nimbo\_32, Nitzel\_33, Nivrat\_32, NormanBulbieJr\_32, Ochi17\_30, OfUltron\_32, Oksu\_33, OldBen\_32, OlympiaSaint\_32, Ovechkin\_33, OwlsT2W\_33, PHappiness\_32, PMC\_32, Pacc40\_32, Pepperoni\_20, Phalconet\_32, Phalm\_28, Phanphagia\_29, Phasih\_33, Phatniss\_33, Phegasus\_28, PhesterPotato\_32, Philus\_32, Phineas\_28, PhorbesPhlower\_21, Phrann\_27, Piper2020\_34, Pippy\_26, Pitbull\_23, Plumbus\_34, Poenanya\_32, Polka14\_33, Polkaroo\_28, Pollux\_23, Pollywog\_32, PopTart\_32, Priscilla\_32, PumpkinSpice\_71, Pygmy\_30, Quarant19\_72, QueenHazel\_27, QuickMath\_33, Quico\_33, Radiance\_32, RedBird\_32, Renaud18\_32, Rialto\_36, Rikishi\_75, Riptide\_68, RitaG\_33, Rita\_33, Rockne\_32, RockyHorror\_33, Ronaldo\_64, Royals2015\_32, SG4\_33, SPB78\_23, Saal\_32, Sabbb\_33, SaltySpittoon\_72, Sandalphon\_33, Sarma624\_28, Sassafras\_33, SassyB\_32, Scottish\_33, Seabastian\_32, Seagreen\_33, Shagrat\_28, Shauna1\_29, ShiLan\_32, Shipwreck\_30, ShowerHandel\_32, ShroomBoi\_29, SiSi\_32, SimranZ1\_35, Sollertia\_72, Sonah\_28, Sparkdehlily\_32, Spartacus\_34, Spelly\_72, Spilled\_73, Spoonbill\_32, StAnnes\_31, Stanimal\_72, Stap\_33, StarPlatinum\_72, Starbow\_70, Starcevich\_36, StevieRay\_28, StressBall\_28, Strokeseat\_33, SuperGrey\_33, SwagPiggett\_32, TDanisky\_32, Taj\_32, Targaryen\_71, Techage\_28, Thespis\_28, ThetaBob\_32, TomSawyer\_70, Tomas\_74, TootsiePop\_33, Tootsieroll\_33, Totinger\_33, Tweety\_32, UncleRicky\_35, VRedHorse\_32, Velveteen\_28, Venti\_28,



Veteran\_32, Vidya\_28, Vivum\_33, Volt\_64, Wachhund\_32, Wakanda\_47, Warpy\_74, Wee\_33, Whatsapiecost\_33, Whouxphf\_33, WillSterrel\_34, Wipeout\_70, Wofford\_71, XFactor\_32, Xavia\_28, Xula\_26, Yaboi\_72, Yorick\_32, Yoshi\_39, Zerg\_32, Ziko\_64, Zilizabeth\_28, Zizzle\_32,

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

- BodEinwohner17\_32, Chevrolet\_33, Denise\_19, Doggs\_22, Ecliptus\_28, FreddyB\_32, Girr\_34, Hamulus\_33, Kingsley\_31, Leperchaun\_32, Madiba\_30, Manuel\_46, Marker\_33, Matteo\_19, MisterCuddles\_34, ODay\_29, Pickett\_19, RayTheFireFly\_23, Ruby\_34, Soul22\_37,

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

- Alleb\_57, Avani\_37, Banquo\_28, Barnstormer\_22, Benry\_30, BuzzLyseyear\_35, Caron\_22, Catfish\_24, Cen1621\_21, Cicada\_32, Dardanus\_26, Demsculpinboyz\_38, Dennebes\_50, Destructrice\_48, DinoDaryn\_26, Doug\_33, Fabian\_46, FireCastle\_30, Floof\_23, FlowerPower\_49, G4\_25, GMA1\_21, GardenState\_23, Geostin\_44, Goib\_25, Goodman\_31, Gremlin23\_49, Gretchen\_23, HaugeAnator\_49, Honk\_21, Hortus1\_56, Htur\_30, Huffy\_26, IAmGroot\_23, IbOuu\_34, Immanuel3\_49, IndiRoo\_31, JPandJE\_50, Jabbawokkie\_40, Jera\_31, Johann\_31, Kumquat\_47, Linayshia\_30, LunaStella\_34, Mabodamaca\_23, Milani\_31, MooMoo\_30, Ogotogo\_32, Olicious\_49, OlinDD\_56, Olympi\_31, OnionKnight\_23, Percastrophe\_49, Percival\_23, PermaG\_31, Pioneer3\_56, Platte\_56, Ramsey\_35, Rasovi\_30, RetrieverFever\_49, Rideau\_51, RomansRevenge\_35, Romero\_49, RosePharie\_49, SBlackberry\_30, Spikelee\_34, Splinter\_24, StAugustine\_22, Stella\_51, SuMoo\_22, Sucha\_27, TChen\_32, TZGordon\_26, Tandem\_56, TinaLin\_27, ToriToki\_49, Toron\_33, Treat\_49, TurboVicky\_30, Typher\_32, UtzChips\_22, Vendetta\_24, Vorvolakos\_49, WRightOn\_50, Zanella\_30, Zapner\_39, Zeigle\_47, Zeta1847\_21, ZooBear\_49,

### Summary by start number:

Start 59:

- Found in 13 of 462 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 13 of 424
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnstormer\_22 (EH), Caron\_22 (EH), Cen1621\_21 (EH), Floof\_23 (EH), GardenState\_23 (EH), Gretchen\_23 (EH), Honk\_21 (EH), IAmGroot\_23 (EH), Mabodamaca\_23 (EH), Percival\_23 (EH), SuMoo\_22 (EH), UtzChips\_22 (EH), Zeta1847\_21 (EH),

Start 62:

- Found in 1 of 462 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 424
- Called 100.0% of time when present
- Phage (with cluster) where this start called: OnionKnight\_23 (singleton),

Start 65:

- Found in 1 of 462 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Toron\_33 (F6),

Start 67:

- Found in 6 of 462 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 6 of 424
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alleb\_57 (ED1), Hortus1\_56 (ED1), OlinDD\_56 (ED1), Pioneer3\_56 (ED1), Platte\_56 (ED1), Tandem\_56 (ED1),

#### Start 71:

- Found in 1 of 462 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RomansRevenge\_35 (singleton),

#### Start 73:

- Found in 1 of 462 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: StAugustine\_22 (singleton),

#### Start 76:

- Found in 12 of 462 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 6 of 424
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Girr\_34 (F1), Hamulus\_33 (F1), Kingsley\_31 (F1), MisterCuddles\_34 (F1), Ruby\_34 (F1), Soul22\_37 (F2),

#### Start 77:

- Found in 4 of 462 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 3 of 424
- Called 75.0% of time when present
- Phage (with cluster) where this start called: LunaStella\_34 (F4), MooMoo\_30 (singleton), TChen\_32 (F4),

#### Start 78:

- Found in 10 of 462 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 7 of 424
- Called 70.0% of time when present
- Phage (with cluster) where this start called: Denise\_19 (CZ5), Doggs\_22 (DB), Ecliptus\_28 (DN), Matteo\_19 (CZ2), ODay\_29 (DN), Pickett\_19 (CZ2), RayTheFireFly\_23 (DB),

#### Start 79:

- Found in 31 of 462 ( 6.7% ) of genes in pham
- Manual Annotations of this start: 26 of 424
- Called 96.8% of time when present
- Phage (with cluster) where this start called: Banquo\_28 (CU1), Benry\_30 (EJ), Catfish\_24 (CU5), Cicada\_32 (EJ), Dardanus\_26 (CU3), DinoDaryn\_26 (CU1), FireCastle\_30 (EJ), G4\_25 (BW), GMA1\_21 (singleton), Goib\_25 (CU1), Goodman\_31 (EJ), Htur\_30 (EJ), Huff\_26 (CU1), IndiRoo\_31 (EJ), Jera\_31 (EJ), Johann\_31 (EJ), Linayshia\_30 (EJ), Milani\_31 (EJ), Olympi\_31 (EJ), PermaG\_31 (EJ), Rasovi\_30 (EJ), SBlackberry\_30 (EJ), Splinter\_24 (CU1), Sucha\_27 (EJ), TZGordon\_26 (CU1), TinaLin\_27 (CU1), TurboVicky\_30 (EJ), Typher\_32 (EJ), Vendetta\_24 (CU1), Zanella\_30 (EJ),

Start 80:

- Found in 6 of 462 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 5 of 424
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BuzzLyseyear\_35 (F1), Doug\_33 (F1), IbOuu\_34 (F1), Ogopogo\_32 (F1), Ramsey\_35 (F1), Spikelee\_34 (F1),

Start 81:

- Found in 4 of 462 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 4 of 424
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Avani\_37 (F2), Demsculpinboyz\_38 (F2), Jabbawokkie\_40 (F2), Zapner\_39 (F2),

Start 82:

- Found in 373 of 462 ( 80.7% ) of genes in pham
- Manual Annotations of this start: 326 of 424
- Called 94.6% of time when present
- Phage (with cluster) where this start called: Akhila\_26 (F1), Alexphander\_35 (F1), Aloeri\_34 (F1), AlpineSix\_33 (F1), Amabiko\_72 (BE2), Anedea\_68 (BE1), Angela\_67 (BE1), Archimedes\_20 (DA), ArcusAngelus\_32 (F1), Ardmore\_31 (F1), Arib1\_28 (P1), Atcoo\_28 (P1), Aubs\_33 (F1), Awesomesauce\_33 (F1), Babsiella\_28 (I1), Bartholomew\_27 (P1), Batiatus\_32 (F1), Battuta\_70 (BE2), Beakin\_33 (F1), BeeGee\_23 (CY), BigPhil\_28 (F1), BillNye\_46 (BK2), Bipolar\_29 (F1), Birchlyn\_69 (BE2), Blarby\_41 (F), Blexus\_32 (F1), BlueCrab\_32 (F1), Bmoc\_68 (BE1), BobaPhett\_32 (F1), Bobi\_34 (F1), BoomerJR\_72 (BE2), Boomer\_34 (F1), Bordeaux\_70 (BE2), Bradissa\_23 (CY1), BritBrat\_23 (CY2), Brocalys\_27 (F1), Brusacoram\_28 (P1), Brushbloom\_35 (F1), Bubbles123\_34 (F1), Bunnies\_28 (P1), Burwell21\_32 (F1), Byougenkin\_32 (F1), Cabrinians\_32 (F1), CactusJack\_28 (P1), Camster\_28 (P1), CaptainTrips\_33 (F1), Cashline\_23 (CY), CeilingFan\_74 (BE2), Cerasum\_28 (F1), Che8\_34 (F1), Che9d\_37 (F2), ChickenDinner\_34 (F1), Chuckly\_32 (F1), Circinus\_48 (BK2), Clifton\_26 (F1), Coco12\_32 (F1), Confidence\_23 (CY1), Coriander\_23 (DB), Cornie\_32 (F5), Cornucopia\_33 (F1), Crumble\_26 (F1), DLane\_32 (F1), DRBy19\_32 (F1), DaWorst\_34 (F1), DaddyRickover\_32 (F1), Daenerys\_32 (F1), Dante\_32 (F1), DeadP\_32 (F1), Deb65\_32 (F1), DillTech15\_32 (F1), DirtMcgirt\_33 (F1), DoRead\_35 (F1), DocMcStuffins\_34 (F1), Donkeykong\_32 (F1), Donovan\_28 (P1), Doomphist\_32 (F1), Dorothy\_32 (F1), DosHalletts\_34 (F1), DotProduct\_32 (F1), Drago\_33 (F1), Dynamo\_28 (P1), EMSquaredA\_23 (CY1), EdnaMode\_19 (CZ2), Eish\_32 (F1), EleanorGeorge\_33 (F1), Elmer\_74 (BE2), Emma\_34 (F1), Empress\_33 (F1), EnalisNailo\_23 (CY1), Enby\_34 (F1), Enygma\_72 (BE2), Eradicator\_32 (F1), Estave1\_30 (F1), Evy\_71 (BE1), Faith5x5\_19 (CZ6), Fancypants\_32 (F1), Fastidio\_34 (F1), Filuzino\_32 (F1), Finkle\_21 (singleton), Firehouse51\_33 (F1), FirstPlacePfu\_28 (P1), Fishburne\_28 (P1), Flathead\_32 (F1), Floral\_23 (CY1), Florinda\_32 (F1), Frankie\_36 (F1), Fruitloop\_31 (F1), Fryberger\_61 (DP), GAL1\_23 (singleton), GUmbie\_32 (F1), Galactic\_34 (F1), Gandolph\_33 (F1), Gavriela\_28 (P1), Genie2\_72 (BE2), Geralt\_32 (F1), Gibbi\_76 (BE2), GigiOuiOui\_32 (F1), Girafales\_33 (F1), Glaske\_28 (P1), Gorge\_32 (F1), GreaseLightnin\_28 (P1), Grimmer\_34 (F1), Gudmit\_20 (singleton), Guey18\_67 (DP), Guppsters\_34 (F1), Gustav\_22 (CD), HC\_29 (I1), HUHilltop\_28 (P1), Hades\_33 (F1), Harley\_32 (F1), Hegedechwinu\_33 (F1), Hlubikazi\_33 (F1), Hum25\_24 (FQ), Ibhubesi\_32 (F1), IchabodCrane\_69 (BE2), Inventum\_32 (F1), IrishSherpFalk\_34 (F1), JalFarm20\_35 (F1), James\_32 (F1), Jarcob\_32 (F1), Jay2Jay\_75 (BE1), Jebeks\_28 (P1), JimJam\_72 (BE2), Jinglebell\_31

(F1), Job42\_36 (F1), JoeyJr\_32 (F1), Jollison\_71 (BE2), Juice456\_34 (F1), Jung\_27 (P1), Juniormint\_28 (P1), Juniper1\_32 (F1), Karhdo\_32 (F1), Kari\_28 (P1), Karimac\_71 (BE2), Keelan\_59 (DP), KentuckyRacer\_72 (BE2), Kenuha5\_29 (F1), Kersh\_31 (F1), KilKor\_28 (P1), Kimberlium\_34 (F1), KingMidas\_34 (F1), Koella\_26 (F1), Krakatau\_33 (F1), KristaRAM\_33 (F1), Ksquared\_28 (P1), Lamberg\_19 (CZ2), Langerak\_28 (P1), LastJedi\_26 (F1), Latretium\_33 (F1), Leozinho\_34 (F1), LilMartin\_67 (BE1), LilMoolah\_32 (F1), LilSpotty\_33 (singleton), Lilas\_23 (CY1), LittleShirley\_35 (F1), Lizziana\_32 (F1), Llama\_32 (F1), Llij\_32 (F1), Lorde\_34 (F1), Lton\_19 (CZ), Lucky10\_21 (DH), LukeCage\_71 (BE2), LunaBlu\_35 (F1), MadMen\_30 (F1), Mahavrat\_32 (F1), Mahdia\_22 (CD), Majeke\_28 (P1), Malithi\_28 (P1), Mandlovu\_33 (F1), Mangethe\_28 (P1), Mantra\_32 (F1), Maravista\_32 (F1), Marsus\_69 (BE1), Marteena\_23 (CY1), Martik\_32 (F1), Mattes\_32 (F1), Megiddo\_28 (P1), Melissauren88\_32 (F1), MilanaBonita\_26 (F1), Mildred21\_68 (BE1), MilleniumForce\_33 (F1), MindFlayer\_70 (BE2), MinionDave\_35 (F1), Minnie\_34 (F1), Misha28\_33 (F1), Modragons\_32 (F1), Moonbeam\_33 (F1), Moosehead\_19 (CZ6), Morkie\_21 (DH), Morrissey\_23 (CD), Mova\_33 (F1), Mozy\_34 (F1), Ms6\_26 (F1), Mugiwara\_73 (BE2), MulchExplorer\_36 (F1), MulchMansion\_67 (BE1), MulchSalad\_31 (F), Muntaha\_47 (BK2), Mutaforma13\_32 (F1), Necropolis\_28 (P1), Nettuno\_19 (CZ2), Nimbo\_32 (F1), Nitzel\_33 (F1), Nivrat\_32 (F1), NormanBulbieJr\_32 (F1), Ochi17\_30 (F1), OfUltron\_32 (F1), Oksu\_33 (F1), OldBen\_32 (F1), OlympiaSaint\_32 (F1), Ovechkin\_33 (F1), OwlsT2W\_33 (F1), PHappiness\_32 (F1), PMC\_32 (F1), Pacc40\_32 (F1), Pepperoni\_20 (CZ), Phalconet\_32 (F1), Phalm\_28 (P1), Phanphagia\_29 (F1), Phasih\_33 (F1), Phatniss\_33 (F1), Phegasus\_28 (P1), PhesterPhotato\_32 (F1), Philus\_32 (F1), Phineas\_28 (P1), PhorbesPhlower\_21 (DH), Phrann\_27 (N), Piper2020\_34 (F1), Pippy\_26 (F1), Pitbull\_23 (FQ), Plumbus\_34 (F1), Poenanya\_32 (F1), Polka14\_33 (F1), Polkaro\_28 (P1), Pollux\_23 (CY1), Pollywog\_32 (F1), PopTart\_32 (F1), Priscilla\_32 (F1), PumpkinSpice\_71 (BE2), Pygmy\_30 (P1), Quarant19\_72 (BE2), QueenHazel\_27 (I1), QuickMath\_33 (F1), Quico\_33 (F1), Radiance\_32 (F1), RedBird\_32 (F1), Renaud18\_32 (F4), Rialto\_36 (F1), Rikishi\_75 (BE2), Riptide\_68 (BE1), RitaG\_33 (F1), Rita\_33 (F1), Rockne\_32 (F1), RockyHorror\_33 (F1), Ronaldo\_64 (DP), Royals2015\_32 (F1), SG4\_33 (F1), SPB78\_23 (BA), Saal\_32 (F1), Sabbb\_33 (F1), SaltySpittoon\_72 (BE2), Sandalphon\_33 (F1), Sarma624\_28 (F1), Sassafras\_33 (F1), SassyB\_32 (F1), Scottish\_33 (F1), Seabastian\_32 (F1), Seagreen\_33 (F1), Shagrat\_28 (CF), Shauna1\_29 (F1), ShiLan\_32 (F1), Shipwreck\_30 (P1), ShowerHandel\_32 (F1), ShroomBoi\_29 (F1), SiSi\_32 (F1), SimranZ1\_35 (F1), Sollertia\_72 (BE2), Sonah\_28 (P1), Sparkdehlily\_32 (F1), Spartacus\_34 (F1), Spelly\_72 (BE2), Spilled\_73 (BE2), Spoonbill\_32 (F1), StAnnes\_31 (F1), Stanimal\_72 (BE2), Stap\_33 (F1), StarPlatinum\_72 (BE2), Starbow\_70 (BE2), Starceвич\_36 (F1), StevieRay\_28 (P1), StressBall\_28 (P1), Strokeseat\_33 (F1), SuperGrey\_33 (F1), SwagPigglett\_32 (F1), TDanisky\_32 (F1), Taj\_32 (F1), Targaryen\_71 (BE1), Techage\_28 (P1), Thespis\_28 (P1), ThetaBob\_32 (F4), TomSawyer\_70 (BE2), Tomas\_74 (BE2), TootsiePop\_33 (F1), Tootsieroll\_33 (F1), Totinger\_33 (F1), Tweety\_32 (F1), UncleRicky\_35 (F1), VRedHorse\_32 (F1), Velveteen\_28 (F1), Venti\_28 (P1), Veteran\_32 (F1), Vidya\_28 (P1), Vivum\_33 (F1), Volt\_64 (DP), Wachhund\_32 (F1), Wakanda\_47 (BK2), Warpy\_74 (BE1), Wee\_33 (F1), Whatsapiecost\_33 (F1), Whouxphf\_33 (F1), WillSterrel\_34 (F1), Wipeout\_70 (BE2), Wofford\_71 (BE2), XFactor\_32 (F1), Xavia\_28 (P3), Xula\_26 (I1), Yaboi\_72 (BE2), Yorick\_32 (F1), Yoshi\_39 (F2), Zerg\_32 (F1), Ziko\_64 (DP), Zilizabeth\_28 (P1), Zizzle\_32 (F1),

Start 83:

- Found in 134 of 462 ( 29.0% ) of genes in pham

- Manual Annotations of this start: 6 of 424
- Called 4.5% of time when present
- Phage (with cluster) where this start called: BodEinwohner17\_32 (F1), Chevrolet\_33 (F1), FreddyB\_32 (F1), Leperchaun\_32 (F1), Madiba\_30 (F1), Marker\_33 (F1),

Start 84:

- Found in 24 of 462 ( 5.2% ) of genes in pham
- Manual Annotations of this start: 21 of 424
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dennebes\_50 (BF), Destructrice\_48 (BF), Fabian\_46 (BF), FlowerPower\_49 (BF), Geostin\_44 (BF), Gremlin23\_49 (BF), HaugeAnator\_49 (BF), Immanuel3\_49 (BF), JPandJE\_50 (BF), Kumquat\_47 (BF), Manuel\_46 (BF), Olicious\_49 (BF), Percastrophe\_49 (BF), RetrieverFever\_49 (BF), Rideau\_51 (BF), Romero\_49 (BF), RosePharie\_49 (BF), Stella\_51 (BF), ToriToki\_49 (BF), Treat\_49 (BF), Vorvolakos\_49 (BF), WRightOn\_50 (BF), Zeigle\_47 (BF), ZooBear\_49 (BF),

### Summary by clusters:

There are 38 clusters represented in this pham: DN, FQ, BF, BA, DH, P3, CZ2, DB, singleton, DA, ED1, CZ5, DP, CU5, CU3, CU1, I1, F, CY2, CY1, P1, EH, EJ, CZ6, CF, N, CZ, CY, BK2, CD, F1, F2, F4, F5, F6, BW, BE2, BE1,

Info for manual annotations of cluster BE1:

- Start number 82 was manually annotated 10 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 82 was manually annotated 29 times for cluster BE2.

Info for manual annotations of cluster BF:

- Start number 84 was manually annotated 21 times for cluster BF.

Info for manual annotations of cluster BK2:

- Start number 82 was manually annotated 4 times for cluster BK2.

Info for manual annotations of cluster BW:

- Start number 79 was manually annotated 1 time for cluster BW.

Info for manual annotations of cluster CD:

- Start number 82 was manually annotated 3 times for cluster CD.

Info for manual annotations of cluster CF:

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

Info for manual annotations of cluster CU1:

- Start number 79 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 79 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU5:

- Start number 79 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CY:

- Start number 82 was manually annotated 2 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 82 was manually annotated 8 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 82 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CZ:

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

Info for manual annotations of cluster CZ2:

- Start number 78 was manually annotated 2 times for cluster CZ2.
- Start number 82 was manually annotated 3 times for cluster CZ2.

Info for manual annotations of cluster CZ5:

- Start number 78 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 82 was manually annotated 2 times for cluster CZ6.

Info for manual annotations of cluster DA:

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

Info for manual annotations of cluster DB:

- Start number 78 was manually annotated 2 times for cluster DB.

Info for manual annotations of cluster DH:

- Start number 82 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 78 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DP:

- Start number 82 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster ED1:

- Start number 67 was manually annotated 6 times for cluster ED1.

Info for manual annotations of cluster EH:

- Start number 59 was manually annotated 13 times for cluster EH.

Info for manual annotations of cluster EJ:

- Start number 79 was manually annotated 15 times for cluster EJ.

Info for manual annotations of cluster F1:

- Start number 76 was manually annotated 5 times for cluster F1.
- Start number 80 was manually annotated 5 times for cluster F1.
- Start number 82 was manually annotated 199 times for cluster F1.
- Start number 83 was manually annotated 6 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 76 was manually annotated 1 time for cluster F2.
- Start number 81 was manually annotated 4 times for cluster F2.
- Start number 82 was manually annotated 2 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 77 was manually annotated 2 times for cluster F4.
- Start number 82 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 82 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster FQ:

- Start number 82 was manually annotated 2 times for cluster FQ.

Info for manual annotations of cluster I1:

- Start number 82 was manually annotated 4 times for cluster I1.

Info for manual annotations of cluster N:

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

Info for manual annotations of cluster P1:

- Start number 82 was manually annotated 37 times for cluster P1.

Info for manual annotations of cluster P3:

- Start number 82 was manually annotated 1 time for cluster P3.

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

Gene: Akhila\_26 Start: 24607, Stop: 24840, Start Num: 82

Candidate Starts for Akhila\_26:

(Start: 82 @24607 has 326 MA's), (108, 24706), (117, 24727), (121, 24736), (135, 24769),

Gene: Alexphander\_35 Start: 29298, Stop: 29531, Start Num: 82

Candidate Starts for Alexphander\_35:

(Start: 82 @29298 has 326 MA's), (Start: 83 @29301 has 6 MA's), (114, 29412), (117, 29418), (121, 29427), (127, 29445), (128, 29448), (135, 29460),

Gene: Alleb\_57 Start: 35882, Stop: 36097, Start Num: 67

Candidate Starts for Alleb\_57:

(48, 35792), (Start: 67 @35882 has 6 MA's), (69, 35888),

Gene: Aloeri\_34 Start: 29151, Stop: 29384, Start Num: 82

Candidate Starts for Aloeri\_34:

(Start: 82 @29151 has 326 MA's), (Start: 83 @29154 has 6 MA's), (114, 29265), (117, 29271), (121, 29280), (127, 29298), (128, 29301), (135, 29313),

Gene: AlpineSix\_33 Start: 28745, Stop: 28978, Start Num: 82

Candidate Starts for AlpineSix\_33:

(32, 28529), (Start: 82 @28745 has 326 MA's), (Start: 83 @28748 has 6 MA's), (114, 28859), (117, 28865), (121, 28874), (127, 28892), (128, 28895), (135, 28907),

Gene: Amabiko\_72 Start: 53129, Stop: 53380, Start Num: 82  
Candidate Starts for Amabiko\_72:  
(Start: 82 @53129 has 326 MA's), (99, 53204),

Gene: Anedea\_68 Start: 52701, Stop: 52952, Start Num: 82  
Candidate Starts for Anedea\_68:  
(Start: 82 @52701 has 326 MA's), (101, 52782), (154, 52929),

Gene: Angela\_67 Start: 52161, Stop: 52412, Start Num: 82  
Candidate Starts for Angela\_67:  
(Start: 82 @52161 has 326 MA's), (92, 52203),

Gene: Archimedes\_20 Start: 18843, Stop: 19064, Start Num: 82  
Candidate Starts for Archimedes\_20:  
(Start: 82 @18843 has 326 MA's), (96, 18906), (120, 18978), (122, 18984), (129, 19002), (131, 19005),

Gene: ArcusAngelus\_32 Start: 29080, Stop: 29313, Start Num: 82  
Candidate Starts for ArcusAngelus\_32:  
(30, 28837), (43, 28933), (Start: 82 @29080 has 326 MA's), (Start: 83 @29083 has 6 MA's), (114, 29194), (117, 29200), (121, 29209), (127, 29227), (128, 29230), (135, 29242),

Gene: Ardmore\_31 Start: 28524, Stop: 28757, Start Num: 82  
Candidate Starts for Ardmore\_31:  
(Start: 82 @28524 has 326 MA's), (108, 28623), (117, 28644), (121, 28653), (135, 28686),

Gene: Arib1\_28 Start: 25246, Stop: 25494, Start Num: 82  
Candidate Starts for Arib1\_28:  
(Start: 82 @25246 has 326 MA's),

Gene: Atcoo\_28 Start: 25729, Stop: 25977, Start Num: 82  
Candidate Starts for Atcoo\_28:  
(Start: 82 @25729 has 326 MA's),

Gene: Aubs\_33 Start: 28859, Stop: 29092, Start Num: 82  
Candidate Starts for Aubs\_33:  
(Start: 82 @28859 has 326 MA's), (108, 28958), (117, 28979), (121, 28988), (135, 29021),

Gene: Avani\_37 Start: 28000, Stop: 28257, Start Num: 81  
Candidate Starts for Avani\_37:  
(Start: 81 @28000 has 4 MA's), (86, 28018), (97, 28063), (98, 28066), (111, 28105), (118, 28123), (128, 28150), (132, 28156), (133, 28159),

Gene: Awesomesauce\_33 Start: 28413, Stop: 28646, Start Num: 82  
Candidate Starts for Awesomesauce\_33:  
(Start: 82 @28413 has 326 MA's), (Start: 83 @28416 has 6 MA's), (114, 28527), (117, 28533), (121, 28542), (127, 28560), (128, 28563), (135, 28575),

Gene: Babsiella\_28 Start: 25313, Stop: 25558, Start Num: 82  
Candidate Starts for Babsiella\_28:



(1, 23846), (2, 23891), (3, 23966), (4, 24071), (5, 24230), (7, 24476), (11, 24692), (15, 24797), (17, 24815), (58, 25208), (63, 25256), (Start: 82 @25313 has 326 MA's), (111, 25418), (117, 25433),

Gene: Banquo\_28 Start: 20189, Stop: 20431, Start Num: 79

Candidate Starts for Banquo\_28:

(Start: 79 @20189 has 26 MA's), (87, 20213), (98, 20264), (104, 20282), (121, 20324), (124, 20333), (133, 20354), (144, 20393), (146, 20405),

Gene: Barnstormer\_22 Start: 18840, Stop: 19127, Start Num: 59

Candidate Starts for Barnstormer\_22:

(Start: 59 @18840 has 13 MA's), (69, 18876), (119, 19038), (148, 19122),

Gene: Bartholomew\_27 Start: 25240, Stop: 25488, Start Num: 82

Candidate Starts for Bartholomew\_27:

(Start: 82 @25240 has 326 MA's),

Gene: Batiatus\_32 Start: 28517, Stop: 28750, Start Num: 82

Candidate Starts for Batiatus\_32:

(Start: 82 @28517 has 326 MA's), (108, 28616), (117, 28637), (121, 28646), (135, 28679),

Gene: Battuta\_70 Start: 53103, Stop: 53354, Start Num: 82

Candidate Starts for Battuta\_70:

(Start: 82 @53103 has 326 MA's), (99, 53178),

Gene: Beakin\_33 Start: 28431, Stop: 28664, Start Num: 82

Candidate Starts for Beakin\_33:

(Start: 82 @28431 has 326 MA's), (Start: 83 @28434 has 6 MA's), (114, 28545), (117, 28551), (121, 28560), (127, 28578), (128, 28581), (135, 28593),

Gene: BeeGee\_23 Start: 20766, Stop: 21002, Start Num: 82

Candidate Starts for BeeGee\_23:

(23, 20376), (33, 20517), (50, 20625), (Start: 82 @20766 has 326 MA's), (97, 20838), (104, 20859), (105, 20862), (132, 20919),

Gene: Benry\_30 Start: 20899, Stop: 21171, Start Num: 79

Candidate Starts for Benry\_30:

(74, 20890), (Start: 79 @20899 has 26 MA's), (101, 20986), (109, 21013), (128, 21061),

Gene: BigPhil\_28 Start: 24741, Stop: 24974, Start Num: 82

Candidate Starts for BigPhil\_28:

(Start: 82 @24741 has 326 MA's), (108, 24840), (114, 24855), (117, 24861), (121, 24870), (135, 24903),

Gene: BillNye\_46 Start: 46091, Stop: 46348, Start Num: 82

Candidate Starts for BillNye\_46:

(64, 46037), (Start: 82 @46091 has 326 MA's), (92, 46133), (150, 46319),

Gene: Bipolar\_29 Start: 27603, Stop: 27836, Start Num: 82

Candidate Starts for Bipolar\_29:

(26, 27315), (Start: 82 @27603 has 326 MA's), (108, 27702), (114, 27717), (117, 27723), (121, 27732), (135, 27765),

Gene: Birchlyn\_69 Start: 50986, Stop: 51237, Start Num: 82

Candidate Starts for Birchlyn\_69:  
(Start: 82 @50986 has 326 MA's), (99, 51061),

Gene: Blarby\_41 Start: 28996, Stop: 29229, Start Num: 82  
Candidate Starts for Blarby\_41:  
(Start: 82 @28996 has 326 MA's), (108, 29095), (117, 29116), (121, 29125), (135, 29158),

Gene: Blexus\_32 Start: 28853, Stop: 29086, Start Num: 82  
Candidate Starts for Blexus\_32:  
(Start: 82 @28853 has 326 MA's), (Start: 83 @28856 has 6 MA's), (114, 28967), (117, 28973), (121, 28982), (127, 29000), (128, 29003), (135, 29015),

Gene: BlueCrab\_32 Start: 28703, Stop: 28936, Start Num: 82  
Candidate Starts for BlueCrab\_32:  
(Start: 82 @28703 has 326 MA's), (Start: 83 @28706 has 6 MA's), (114, 28817), (117, 28823), (121, 28832), (127, 28850), (128, 28853), (135, 28865),

Gene: Bmoc\_68 Start: 52505, Stop: 52756, Start Num: 82  
Candidate Starts for Bmoc\_68:  
(Start: 82 @52505 has 326 MA's), (101, 52586), (107, 52598), (154, 52733),

Gene: BobaPhett\_32 Start: 28723, Stop: 28956, Start Num: 82  
Candidate Starts for BobaPhett\_32:  
(43, 28576), (Start: 82 @28723 has 326 MA's), (Start: 83 @28726 has 6 MA's), (114, 28837), (117, 28843), (121, 28852), (127, 28870), (128, 28873), (135, 28885),

Gene: Bobi\_34 Start: 29230, Stop: 29463, Start Num: 82  
Candidate Starts for Bobi\_34:  
(26, 28942), (Start: 82 @29230 has 326 MA's), (108, 29329), (117, 29350), (121, 29359), (135, 29392),

Gene: BodEinwohner17\_32 Start: 28926, Stop: 29156, Start Num: 83  
Candidate Starts for BodEinwohner17\_32:  
(Start: 82 @28923 has 326 MA's), (Start: 83 @28926 has 6 MA's), (114, 29037), (117, 29043), (121, 29052), (127, 29070), (128, 29073), (135, 29085),

Gene: Boomer\_34 Start: 28593, Stop: 28826, Start Num: 82  
Candidate Starts for Boomer\_34:  
(Start: 82 @28593 has 326 MA's), (Start: 83 @28596 has 6 MA's), (108, 28692), (117, 28713), (121, 28722), (135, 28755),

Gene: BoomerJR\_72 Start: 52981, Stop: 53232, Start Num: 82  
Candidate Starts for BoomerJR\_72:  
(Start: 82 @52981 has 326 MA's), (92, 53023), (118, 53101), (154, 53209),

Gene: Bordeaux\_70 Start: 53258, Stop: 53509, Start Num: 82  
Candidate Starts for Bordeaux\_70:  
(Start: 82 @53258 has 326 MA's), (99, 53333),

Gene: Bradissa\_23 Start: 20951, Stop: 21190, Start Num: 82  
Candidate Starts for Bradissa\_23:  
(56, 20843), (Start: 82 @20951 has 326 MA's), (92, 20993), (104, 21044), (105, 21047), (128, 21098), (132, 21104),

Gene: BritBrat\_23 Start: 20804, Stop: 21043, Start Num: 82  
Candidate Starts for BritBrat\_23:  
(56, 20696), (Start: 82 @20804 has 326 MA's), (92, 20846), (104, 20897), (105, 20900), (128, 20951),  
(132, 20957),

Gene: Brocalys\_27 Start: 24320, Stop: 24553, Start Num: 82  
Candidate Starts for Brocalys\_27:  
(Start: 82 @24320 has 326 MA's), (108, 24419), (117, 24440), (121, 24449), (135, 24482),

Gene: Brusacoram\_28 Start: 25235, Stop: 25483, Start Num: 82  
Candidate Starts for Brusacoram\_28:  
(Start: 82 @25235 has 326 MA's),

Gene: Brushbloom\_35 Start: 28541, Stop: 28774, Start Num: 82  
Candidate Starts for Brushbloom\_35:  
(Start: 82 @28541 has 326 MA's), (108, 28640), (117, 28661), (121, 28670), (135, 28703),

Gene: Bubbles123\_34 Start: 29508, Stop: 29741, Start Num: 82  
Candidate Starts for Bubbles123\_34:  
(26, 29220), (Start: 82 @29508 has 326 MA's), (108, 29607), (117, 29628), (121, 29637), (135, 29670),

Gene: Bunnies\_28 Start: 25256, Stop: 25504, Start Num: 82  
Candidate Starts for Bunnies\_28:  
(Start: 82 @25256 has 326 MA's),

Gene: Burwell21\_32 Start: 28707, Stop: 28940, Start Num: 82  
Candidate Starts for Burwell21\_32:  
(25, 28416), (26, 28419), (29, 28455), (Start: 82 @28707 has 326 MA's), (108, 28806), (117, 28827),  
(121, 28836), (135, 28869),

Gene: BuzzLyseyear\_35 Start: 29322, Stop: 29555, Start Num: 80  
Candidate Starts for BuzzLyseyear\_35:  
(Start: 80 @29322 has 5 MA's), (114, 29436), (117, 29442), (121, 29451), (127, 29469), (128, 29472),  
(135, 29484),

Gene: Byougenkin\_32 Start: 28605, Stop: 28838, Start Num: 82  
Candidate Starts for Byougenkin\_32:  
(26, 28317), (Start: 82 @28605 has 326 MA's), (108, 28704), (117, 28725), (121, 28734), (135, 28767),

Gene: Cabrinians\_32 Start: 28785, Stop: 29018, Start Num: 82  
Candidate Starts for Cabrinians\_32:  
(8, 28071), (9, 28092), (10, 28143), (12, 28233), (14, 28308), (18, 28347), (20, 28380), (22, 28413),  
(25, 28494), (26, 28497), (Start: 82 @28785 has 326 MA's), (108, 28884), (117, 28905), (121, 28914),  
(135, 28947),

Gene: CactusJack\_28 Start: 25499, Stop: 25747, Start Num: 82  
Candidate Starts for CactusJack\_28:  
(Start: 82 @25499 has 326 MA's),

Gene: Camster\_28 Start: 25272, Stop: 25520, Start Num: 82  
Candidate Starts for Camster\_28:  
(Start: 82 @25272 has 326 MA's),

Gene: CaptainTrips\_33 Start: 28930, Stop: 29163, Start Num: 82  
Candidate Starts for CaptainTrips\_33:  
(24, 28621), (28, 28669), (43, 28783), (Start: 82 @28930 has 326 MA's), (Start: 83 @28933 has 6 MA's), (114, 29044), (117, 29050), (121, 29059), (127, 29077), (128, 29080), (135, 29092),

Gene: Caron\_22 Start: 18225, Stop: 18512, Start Num: 59  
Candidate Starts for Caron\_22:  
(36, 18102), (Start: 59 @18225 has 13 MA's), (69, 18261), (116, 18417), (128, 18447),

Gene: Cashline\_23 Start: 20633, Stop: 20869, Start Num: 82  
Candidate Starts for Cashline\_23:  
(Start: 82 @20633 has 326 MA's), (92, 20675), (97, 20705), (105, 20729), (128, 20780),

Gene: Catfish\_24 Start: 20833, Stop: 21081, Start Num: 79  
Candidate Starts for Catfish\_24:  
(13, 20257), (19, 20365), (27, 20524), (Start: 79 @20833 has 26 MA's), (92, 20878), (99, 20914), (100, 20917), (133, 21001),

Gene: CeilingFan\_74 Start: 53018, Stop: 53269, Start Num: 82  
Candidate Starts for CeilingFan\_74:  
(Start: 82 @53018 has 326 MA's), (99, 53093),

Gene: Cen1621\_21 Start: 17291, Stop: 17560, Start Num: 59  
Candidate Starts for Cen1621\_21:  
(37, 17165), (40, 17171), (45, 17198), (Start: 59 @17291 has 13 MA's), (93, 17387), (124, 17477), (148, 17555),

Gene: Cerasum\_28 Start: 24741, Stop: 24974, Start Num: 82  
Candidate Starts for Cerasum\_28:  
(Start: 82 @24741 has 326 MA's), (108, 24840), (114, 24855), (117, 24861), (121, 24870), (135, 24903),

Gene: Che8\_34 Start: 28974, Stop: 29207, Start Num: 82  
Candidate Starts for Che8\_34:  
(Start: 82 @28974 has 326 MA's), (Start: 83 @28977 has 6 MA's), (114, 29088), (117, 29094), (121, 29103), (127, 29121), (128, 29124), (135, 29136),

Gene: Che9d\_37 Start: 28009, Stop: 28266, Start Num: 82  
Candidate Starts for Che9d\_37:  
(Start: 82 @28009 has 326 MA's), (86, 28027), (97, 28072), (98, 28075), (111, 28114), (118, 28132), (128, 28159), (132, 28165), (133, 28168),

Gene: Chevrolet\_33 Start: 29084, Stop: 29314, Start Num: 83  
Candidate Starts for Chevrolet\_33:  
(30, 28838), (43, 28934), (Start: 82 @29081 has 326 MA's), (Start: 83 @29084 has 6 MA's), (114, 29195), (117, 29201), (121, 29210), (127, 29228), (128, 29231), (135, 29243),

Gene: ChickenDinner\_34 Start: 29151, Stop: 29384, Start Num: 82  
Candidate Starts for ChickenDinner\_34:  
(Start: 82 @29151 has 326 MA's), (Start: 83 @29154 has 6 MA's), (114, 29265), (117, 29271), (121, 29280), (127, 29298), (128, 29301), (135, 29313),

Gene: Chuckly\_32 Start: 28706, Stop: 28939, Start Num: 82

Candidate Starts for Chuckly\_32:

(43, 28559), (Start: 82 @28706 has 326 MA's), (Start: 83 @28709 has 6 MA's), (114, 28820), (117, 28826), (121, 28835), (127, 28853), (128, 28856), (135, 28868),

Gene: Cicada\_32 Start: 22721, Stop: 23002, Start Num: 79

Candidate Starts for Cicada\_32:

(35, 22508), (52, 22583), (74, 22712), (Start: 79 @22721 has 26 MA's), (97, 22796), (101, 22808), (109, 22835), (115, 22850), (128, 22883), (153, 22961),

Gene: Circinus\_48 Start: 46230, Stop: 46487, Start Num: 82

Candidate Starts for Circinus\_48:

(64, 46176), (Start: 82 @46230 has 326 MA's), (92, 46272), (150, 46458),

Gene: Clifton\_26 Start: 24671, Stop: 24904, Start Num: 82

Candidate Starts for Clifton\_26:

(25, 24380), (26, 24383), (29, 24419), (Start: 82 @24671 has 326 MA's), (108, 24770), (117, 24791), (121, 24800), (135, 24833),

Gene: Coco12\_32 Start: 28590, Stop: 28823, Start Num: 82

Candidate Starts for Coco12\_32:

(Start: 82 @28590 has 326 MA's), (108, 28689), (117, 28710), (121, 28719), (135, 28752),

Gene: Confidence\_23 Start: 20796, Stop: 21032, Start Num: 82

Candidate Starts for Confidence\_23:

(23, 20406), (50, 20655), (Start: 82 @20796 has 326 MA's), (97, 20868), (104, 20889), (105, 20892), (132, 20949),

Gene: Coriander\_23 Start: 21345, Stop: 21584, Start Num: 82

Candidate Starts for Coriander\_23:

(Start: 78 @21339 has 7 MA's), (Start: 82 @21345 has 326 MA's), (92, 21387), (97, 21417), (104, 21438), (128, 21492), (148, 21552),

Gene: Cornie\_32 Start: 29028, Stop: 29261, Start Num: 82

Candidate Starts for Cornie\_32:

(26, 28740), (Start: 82 @29028 has 326 MA's), (108, 29127), (117, 29148), (121, 29157), (135, 29190),

Gene: Cornucopia\_33 Start: 28549, Stop: 28782, Start Num: 82

Candidate Starts for Cornucopia\_33:

(43, 28402), (Start: 82 @28549 has 326 MA's), (Start: 83 @28552 has 6 MA's), (114, 28663), (117, 28669), (121, 28678), (127, 28696), (128, 28699), (135, 28711),

Gene: Crumble\_26 Start: 24720, Stop: 24953, Start Num: 82

Candidate Starts for Crumble\_26:

(43, 24573), (Start: 82 @24720 has 326 MA's), (Start: 83 @24723 has 6 MA's), (114, 24834), (117, 24840), (121, 24849), (127, 24867), (128, 24870), (135, 24882),

Gene: DLane\_32 Start: 28494, Stop: 28727, Start Num: 82

Candidate Starts for DLane\_32:

(Start: 82 @28494 has 326 MA's), (108, 28593), (117, 28614), (121, 28623), (135, 28656),

Gene: DRBy19\_32 Start: 28632, Stop: 28865, Start Num: 82

Candidate Starts for DRBy19\_32:

(43, 28485), (Start: 82 @28632 has 326 MA's), (Start: 83 @28635 has 6 MA's), (114, 28746), (117, 28752), (121, 28761), (127, 28779), (128, 28782), (135, 28794),

Gene: DaWorst\_34 Start: 29072, Stop: 29305, Start Num: 82

Candidate Starts for DaWorst\_34:

(Start: 82 @29072 has 326 MA's), (Start: 83 @29075 has 6 MA's), (114, 29186), (117, 29192), (121, 29201), (127, 29219), (128, 29222), (135, 29234),

Gene: DaddyRickover\_32 Start: 28715, Stop: 28948, Start Num: 82

Candidate Starts for DaddyRickover\_32:

(Start: 82 @28715 has 326 MA's), (Start: 83 @28718 has 6 MA's), (114, 28829), (117, 28835), (121, 28844), (127, 28862), (128, 28865), (135, 28877),

Gene: Daenerys\_32 Start: 28536, Stop: 28769, Start Num: 82

Candidate Starts for Daenerys\_32:

(Start: 82 @28536 has 326 MA's), (Start: 83 @28539 has 6 MA's), (114, 28650), (117, 28656), (121, 28665), (127, 28683), (128, 28686), (135, 28698),

Gene: Dante\_32 Start: 28654, Stop: 28887, Start Num: 82

Candidate Starts for Dante\_32:

(Start: 82 @28654 has 326 MA's), (Start: 83 @28657 has 6 MA's), (114, 28768), (117, 28774), (121, 28783), (127, 28801), (128, 28804), (135, 28816),

Gene: Dardanus\_26 Start: 19033, Stop: 19278, Start Num: 79

Candidate Starts for Dardanus\_26:

(27, 18721), (Start: 79 @19033 has 26 MA's), (87, 19057), (89, 19069), (90, 19072), (100, 19117), (101, 19120), (106, 19138), (133, 19201), (144, 19240),

Gene: DeadP\_32 Start: 28691, Stop: 28924, Start Num: 82

Candidate Starts for DeadP\_32:

(Start: 82 @28691 has 326 MA's), (108, 28790), (117, 28811), (121, 28820), (135, 28853),

Gene: Deb65\_32 Start: 28537, Stop: 28770, Start Num: 82

Candidate Starts for Deb65\_32:

(Start: 82 @28537 has 326 MA's), (Start: 83 @28540 has 6 MA's), (114, 28651), (117, 28657), (121, 28666), (127, 28684), (128, 28687), (135, 28699),

Gene: Demsculpinboyz\_38 Start: 27942, Stop: 28199, Start Num: 81

Candidate Starts for Demsculpinboyz\_38:

(Start: 81 @27942 has 4 MA's), (86, 27960), (97, 28005), (98, 28008), (111, 28047), (118, 28065), (128, 28092), (132, 28098), (133, 28101),

Gene: Denise\_19 Start: 17855, Stop: 18097, Start Num: 78

Candidate Starts for Denise\_19:

(Start: 78 @17855 has 7 MA's), (Start: 82 @17861 has 326 MA's), (92, 17903), (97, 17933), (104, 17954), (105, 17957), (132, 18014),

Gene: Dennebes\_50 Start: 27480, Stop: 27677, Start Num: 84

Candidate Starts for Dennebes\_50:

(55, 27357), (Start: 84 @27480 has 21 MA's), (91, 27513), (98, 27546), (132, 27615), (143, 27642),

Gene: Destructrice\_48 Start: 27852, Stop: 28049, Start Num: 84

Candidate Starts for Destructrice\_48:

(Start: 83 @27849 has 6 MA's), (Start: 84 @27852 has 21 MA's), (91, 27885), (98, 27918),

Gene: DillTech15\_32 Start: 28622, Stop: 28855, Start Num: 82

Candidate Starts for DillTech15\_32:

(43, 28475), (Start: 82 @28622 has 326 MA's), (Start: 83 @28625 has 6 MA's), (114, 28736), (117, 28742), (121, 28751), (127, 28769), (128, 28772), (135, 28784),

Gene: DinoDaryn\_26 Start: 19059, Stop: 19298, Start Num: 79

Candidate Starts for DinoDaryn\_26:

(Start: 79 @19059 has 26 MA's), (87, 19083), (89, 19095), (98, 19134), (133, 19224), (144, 19260),

Gene: DirtMcgirt\_33 Start: 28357, Stop: 28590, Start Num: 82

Candidate Starts for DirtMcgirt\_33:

(24, 28048), (28, 28096), (30, 28114), (43, 28210), (Start: 82 @28357 has 326 MA's), (Start: 83 @28360 has 6 MA's), (114, 28471), (117, 28477), (121, 28486), (127, 28504), (128, 28507), (135, 28519),

Gene: DoRead\_35 Start: 28766, Stop: 28999, Start Num: 82

Candidate Starts for DoRead\_35:

(43, 28619), (Start: 82 @28766 has 326 MA's), (Start: 83 @28769 has 6 MA's), (114, 28880), (117, 28886), (121, 28895), (127, 28913), (128, 28916), (135, 28928),

Gene: DocMcStuffins\_34 Start: 29151, Stop: 29384, Start Num: 82

Candidate Starts for DocMcStuffins\_34:

(Start: 82 @29151 has 326 MA's), (Start: 83 @29154 has 6 MA's), (114, 29265), (117, 29271), (121, 29280), (127, 29298), (128, 29301), (135, 29313),

Gene: Doggs\_22 Start: 21038, Stop: 21283, Start Num: 78

Candidate Starts for Doggs\_22:

(Start: 78 @21038 has 7 MA's), (Start: 82 @21044 has 326 MA's), (92, 21086), (97, 21116), (104, 21137), (128, 21191), (148, 21251),

Gene: Donkeykong\_32 Start: 28717, Stop: 28950, Start Num: 82

Candidate Starts for Donkeykong\_32:

(Start: 82 @28717 has 326 MA's), (108, 28816), (117, 28837), (121, 28846), (135, 28879),

Gene: Donovan\_28 Start: 25229, Stop: 25477, Start Num: 82

Candidate Starts for Donovan\_28:

(Start: 82 @25229 has 326 MA's),

Gene: Doomphist\_32 Start: 28654, Stop: 28887, Start Num: 82

Candidate Starts for Doomphist\_32:

(Start: 82 @28654 has 326 MA's), (108, 28753), (117, 28774), (121, 28783), (135, 28816),

Gene: Dorothy\_32 Start: 28500, Stop: 28733, Start Num: 82

Candidate Starts for Dorothy\_32:

(Start: 82 @28500 has 326 MA's), (Start: 83 @28503 has 6 MA's), (114, 28614), (117, 28620), (121, 28629), (127, 28647), (128, 28650), (135, 28662),

Gene: DosHalletts\_34 Start: 28918, Stop: 29151, Start Num: 82

Candidate Starts for DosHalletts\_34:

(30, 28675), (43, 28771), (Start: 82 @28918 has 326 MA's), (Start: 83 @28921 has 6 MA's), (114, 29032), (117, 29038), (121, 29047), (127, 29065), (128, 29068), (135, 29080),

Gene: DotProduct\_32 Start: 28523, Stop: 28756, Start Num: 82

Candidate Starts for DotProduct\_32:

(43, 28376), (Start: 82 @28523 has 326 MA's), (Start: 83 @28526 has 6 MA's), (114, 28637), (117, 28643), (121, 28652), (127, 28670), (128, 28673), (135, 28685),

Gene: Doug\_33 Start: 29095, Stop: 29328, Start Num: 80

Candidate Starts for Doug\_33:

(Start: 80 @29095 has 5 MA's), (114, 29209), (117, 29215), (121, 29224), (127, 29242), (128, 29245), (135, 29257),

Gene: Drago\_33 Start: 28350, Stop: 28583, Start Num: 82

Candidate Starts for Drago\_33:

(43, 28203), (Start: 82 @28350 has 326 MA's), (Start: 83 @28353 has 6 MA's), (114, 28464), (117, 28470), (121, 28479), (127, 28497), (128, 28500), (135, 28512),

Gene: Dynamo\_28 Start: 25651, Stop: 25899, Start Num: 82

Candidate Starts for Dynamo\_28:

(Start: 82 @25651 has 326 MA's),

Gene: EMSquaredA\_23 Start: 20804, Stop: 21043, Start Num: 82

Candidate Starts for EMSquaredA\_23:

(56, 20696), (Start: 82 @20804 has 326 MA's), (92, 20846), (104, 20897), (105, 20900), (128, 20951), (132, 20957),

Gene: Ecliptus\_28 Start: 22063, Stop: 22305, Start Num: 78

Candidate Starts for Ecliptus\_28:

(Start: 78 @22063 has 7 MA's), (Start: 82 @22069 has 326 MA's), (92, 22111), (97, 22141), (104, 22162), (105, 22165), (128, 22216), (132, 22222),

Gene: EdnaMode\_19 Start: 17610, Stop: 17849, Start Num: 82

Candidate Starts for EdnaMode\_19:

(50, 17475), (Start: 82 @17610 has 326 MA's), (97, 17682), (132, 17763), (147, 17814), (148, 17817),

Gene: Eish\_32 Start: 29242, Stop: 29475, Start Num: 82

Candidate Starts for Eish\_32:

(30, 28999), (43, 29095), (Start: 82 @29242 has 326 MA's), (Start: 83 @29245 has 6 MA's), (114, 29356), (117, 29362), (121, 29371), (127, 29389), (128, 29392), (135, 29404),

Gene: EleanorGeorge\_33 Start: 29267, Stop: 29500, Start Num: 82

Candidate Starts for EleanorGeorge\_33:

(21, 28832), (46, 29093), (Start: 76 @29258 has 6 MA's), (Start: 82 @29267 has 326 MA's), (Start: 83 @29270 has 6 MA's), (108, 29366), (114, 29381), (117, 29387), (121, 29396), (127, 29414), (128, 29417), (135, 29429),

Gene: Elmer\_74 Start: 54196, Stop: 54447, Start Num: 82

Candidate Starts for Elmer\_74:

(Start: 82 @54196 has 326 MA's), (99, 54271), (114, 54307), (132, 54349), (143, 54376),

Gene: Emma\_34 Start: 29135, Stop: 29368, Start Num: 82

Candidate Starts for Emma\_34:

(26, 28847), (Start: 82 @29135 has 326 MA's), (108, 29234), (117, 29255), (121, 29264), (135, 29297),



Gene: Empress\_33 Start: 29950, Stop: 30183, Start Num: 82

Candidate Starts for Empress\_33:

(Start: 82 @29950 has 326 MA's), (Start: 83 @29953 has 6 MA's), (114, 30064), (117, 30070), (121, 30079), (127, 30097), (128, 30100), (135, 30112),

Gene: EnalisNailo\_23 Start: 20953, Stop: 21192, Start Num: 82

Candidate Starts for EnalisNailo\_23:

(56, 20845), (Start: 82 @20953 has 326 MA's), (92, 20995), (104, 21046), (105, 21049), (128, 21100), (132, 21106),

Gene: Enby\_34 Start: 28796, Stop: 29029, Start Num: 82

Candidate Starts for Enby\_34:

(21, 28361), (46, 28622), (Start: 76 @28787 has 6 MA's), (Start: 82 @28796 has 326 MA's), (Start: 83 @28799 has 6 MA's), (108, 28895), (114, 28910), (117, 28916), (121, 28925), (127, 28943), (128, 28946), (135, 28958),

Gene: Enygma\_72 Start: 54921, Stop: 55172, Start Num: 82

Candidate Starts for Enygma\_72:

(Start: 82 @54921 has 326 MA's), (99, 54996), (111, 55023),

Gene: Eradicator\_32 Start: 28637, Stop: 28870, Start Num: 82

Candidate Starts for Eradicator\_32:

(Start: 82 @28637 has 326 MA's), (108, 28736), (117, 28757), (121, 28766), (135, 28799),

Gene: Estave1\_30 Start: 28054, Stop: 28287, Start Num: 82

Candidate Starts for Estave1\_30:

(32, 27838), (Start: 82 @28054 has 326 MA's), (Start: 83 @28057 has 6 MA's), (114, 28168), (117, 28174), (121, 28183), (127, 28201), (128, 28204), (135, 28216),

Gene: Evy\_71 Start: 53796, Stop: 54047, Start Num: 82

Candidate Starts for Evy\_71:

(Start: 82 @53796 has 326 MA's), (121, 53922),

Gene: Fabian\_46 Start: 27549, Stop: 27746, Start Num: 84

Candidate Starts for Fabian\_46:

(Start: 84 @27549 has 21 MA's), (95, 27600),

Gene: Faith5x5\_19 Start: 17558, Stop: 17797, Start Num: 82

Candidate Starts for Faith5x5\_19:

(23, 17168), (33, 17309), (38, 17345), (50, 17417), (Start: 82 @17558 has 326 MA's), (92, 17600), (97, 17630), (132, 17711),

Gene: Fancypants\_32 Start: 28543, Stop: 28776, Start Num: 82

Candidate Starts for Fancypants\_32:

(30, 28300), (43, 28396), (Start: 82 @28543 has 326 MA's), (Start: 83 @28546 has 6 MA's), (114, 28657), (117, 28663), (121, 28672), (127, 28690), (128, 28693), (135, 28705),

Gene: Fastidio\_34 Start: 28851, Stop: 29084, Start Num: 82

Candidate Starts for Fastidio\_34:

(43, 28704), (Start: 82 @28851 has 326 MA's), (Start: 83 @28854 has 6 MA's), (114, 28965), (117, 28971), (121, 28980), (127, 28998), (128, 29001), (135, 29013),

Gene: Filuzino\_32 Start: 28485, Stop: 28718, Start Num: 82

Candidate Starts for Filuzino\_32:

(26, 28197), (Start: 82 @28485 has 326 MA's), (108, 28584), (117, 28605), (121, 28614), (135, 28647),

Gene: Finkle\_21 Start: 18973, Stop: 19227, Start Num: 82

Candidate Starts for Finkle\_21:

(66, 18934), (Start: 82 @18973 has 326 MA's), (92, 19015), (94, 19027), (98, 19048), (137, 19144), (138, 19147),

Gene: FireCastle\_30 Start: 22475, Stop: 22750, Start Num: 79

Candidate Starts for FireCastle\_30:

(74, 22466), (Start: 79 @22475 has 26 MA's), (100, 22559), (101, 22562), (109, 22589), (128, 22637), (152, 22712),

Gene: Firehouse51\_33 Start: 29324, Stop: 29557, Start Num: 82

Candidate Starts for Firehouse51\_33:

(26, 29036), (Start: 82 @29324 has 326 MA's), (108, 29423), (117, 29444), (121, 29453), (135, 29486),

Gene: FirstPlacePfu\_28 Start: 25240, Stop: 25488, Start Num: 82

Candidate Starts for FirstPlacePfu\_28:

(Start: 82 @25240 has 326 MA's),

Gene: Fishburne\_28 Start: 25240, Stop: 25488, Start Num: 82

Candidate Starts for Fishburne\_28:

(Start: 82 @25240 has 326 MA's),

Gene: Flathead\_32 Start: 29131, Stop: 29364, Start Num: 82

Candidate Starts for Flathead\_32:

(Start: 82 @29131 has 326 MA's), (108, 29230), (117, 29251), (121, 29260), (135, 29293),

Gene: Floof\_23 Start: 18951, Stop: 19205, Start Num: 59

Candidate Starts for Floof\_23:

(Start: 59 @18951 has 13 MA's), (99, 19056), (113, 19098), (145, 19191),

Gene: Floral\_23 Start: 20804, Stop: 21043, Start Num: 82

Candidate Starts for Floral\_23:

(56, 20696), (Start: 82 @20804 has 326 MA's), (92, 20846), (104, 20897), (105, 20900), (128, 20951), (132, 20957),

Gene: Florinda\_32 Start: 28535, Stop: 28768, Start Num: 82

Candidate Starts for Florinda\_32:

(43, 28388), (Start: 82 @28535 has 326 MA's), (Start: 83 @28538 has 6 MA's), (114, 28649), (117, 28655), (121, 28664), (127, 28682), (128, 28685), (135, 28697),

Gene: FlowerPower\_49 Start: 27549, Stop: 27746, Start Num: 84

Candidate Starts for FlowerPower\_49:

(Start: 84 @27549 has 21 MA's), (95, 27600),

Gene: Frankie\_36 Start: 29679, Stop: 29912, Start Num: 82

Candidate Starts for Frankie\_36:

(Start: 82 @29679 has 326 MA's), (Start: 83 @29682 has 6 MA's), (114, 29793), (117, 29799), (121, 29808), (127, 29826), (128, 29829), (135, 29841),

Gene: FreddyB\_32 Start: 28802, Stop: 29032, Start Num: 83

Candidate Starts for FreddyB\_32:

(43, 28652), (Start: 82 @28799 has 326 MA's), (Start: 83 @28802 has 6 MA's), (114, 28913), (117, 28919), (121, 28928), (127, 28946), (128, 28949), (135, 28961),

Gene: Fruitloop\_31 Start: 28680, Stop: 28913, Start Num: 82

Candidate Starts for Fruitloop\_31:

(Start: 82 @28680 has 326 MA's), (108, 28779), (117, 28800), (121, 28809), (135, 28842),

Gene: Fryberger\_61 Start: 34752, Stop: 34964, Start Num: 82

Candidate Starts for Fryberger\_61:

(Start: 82 @34752 has 326 MA's), (91, 34791), (128, 34896), (143, 34929),

Gene: G4\_25 Start: 19311, Stop: 19532, Start Num: 79

Candidate Starts for G4\_25:

(Start: 79 @19311 has 26 MA's), (102, 19389), (115, 19416), (128, 19449), (132, 19455), (133, 19458),

Gene: GAL1\_23 Start: 20309, Stop: 20548, Start Num: 82

Candidate Starts for GAL1\_23:

(33, 20060), (50, 20168), (Start: 82 @20309 has 326 MA's), (92, 20351), (97, 20381), (104, 20402), (105, 20405), (132, 20462),

Gene: GMA1\_21 Start: 18613, Stop: 18861, Start Num: 79

Candidate Starts for GMA1\_21:

(Start: 79 @18613 has 26 MA's), (92, 18658), (101, 18694), (108, 18718), (114, 18727), (132, 18769), (138, 18784),

Gene: GUmbie\_32 Start: 28554, Stop: 28787, Start Num: 82

Candidate Starts for GUmbie\_32:

(Start: 82 @28554 has 326 MA's), (Start: 83 @28557 has 6 MA's), (114, 28668), (117, 28674), (121, 28683), (127, 28701), (128, 28704), (135, 28716),

Gene: Galactic\_34 Start: 29372, Stop: 29605, Start Num: 82

Candidate Starts for Galactic\_34:

(26, 29084), (Start: 82 @29372 has 326 MA's), (108, 29471), (117, 29492), (121, 29501), (135, 29534),

Gene: Gandalph\_33 Start: 28870, Stop: 29103, Start Num: 82

Candidate Starts for Gandalph\_33:

(Start: 82 @28870 has 326 MA's), (108, 28969), (117, 28990), (121, 28999), (135, 29032),

Gene: GardenState\_23 Start: 19313, Stop: 19597, Start Num: 59

Candidate Starts for GardenState\_23:

(Start: 59 @19313 has 13 MA's), (148, 19592),

Gene: Gavriela\_28 Start: 25499, Stop: 25747, Start Num: 82

Candidate Starts for Gavriela\_28:

(Start: 82 @25499 has 326 MA's),

Gene: Genie2\_72 Start: 53095, Stop: 53346, Start Num: 82

Candidate Starts for Genie2\_72:

(Start: 82 @53095 has 326 MA's), (92, 53137), (118, 53215), (154, 53323),

Gene: Geostin\_44 Start: 27549, Stop: 27746, Start Num: 84

Candidate Starts for Geostin\_44:

(Start: 84 @27549 has 21 MA's), (95, 27600),

Gene: Geralt\_32 Start: 28536, Stop: 28769, Start Num: 82

Candidate Starts for Geralt\_32:

(Start: 82 @28536 has 326 MA's), (Start: 83 @28539 has 6 MA's), (114, 28650), (117, 28656), (121, 28665), (127, 28683), (128, 28686), (135, 28698),

Gene: Gibbi\_76 Start: 53241, Stop: 53492, Start Num: 82

Candidate Starts for Gibbi\_76:

(Start: 82 @53241 has 326 MA's), (99, 53316),

Gene: GigiOuiOui\_32 Start: 28666, Stop: 28899, Start Num: 82

Candidate Starts for GigiOuiOui\_32:

(Start: 82 @28666 has 326 MA's), (Start: 83 @28669 has 6 MA's), (114, 28780), (117, 28786), (121, 28795), (127, 28813), (128, 28816), (135, 28828),

Gene: Girafales\_33 Start: 28343, Stop: 28576, Start Num: 82

Candidate Starts for Girafales\_33:

(43, 28196), (Start: 82 @28343 has 326 MA's), (Start: 83 @28346 has 6 MA's), (114, 28457), (117, 28463), (121, 28472), (127, 28490), (128, 28493), (135, 28505),

Gene: Girr\_34 Start: 29563, Stop: 29805, Start Num: 76

Candidate Starts for Girr\_34:

(21, 29137), (46, 29398), (Start: 76 @29563 has 6 MA's), (Start: 82 @29572 has 326 MA's), (Start: 83 @29575 has 6 MA's), (114, 29686), (117, 29692), (121, 29701), (127, 29719), (128, 29722), (135, 29734),

Gene: Glaske\_28 Start: 25499, Stop: 25747, Start Num: 82

Candidate Starts for Glaske\_28:

(Start: 82 @25499 has 326 MA's),

Gene: Goib\_25 Start: 18843, Stop: 19082, Start Num: 79

Candidate Starts for Goib\_25:

(Start: 79 @18843 has 26 MA's), (87, 18867), (89, 18879), (98, 18918), (133, 19008), (144, 19044),

Gene: Goodman\_31 Start: 22634, Stop: 22915, Start Num: 79

Candidate Starts for Goodman\_31:

(35, 22421), (52, 22496), (54, 22508), (74, 22625), (Start: 79 @22634 has 26 MA's), (97, 22709), (101, 22721), (109, 22748), (115, 22763), (128, 22796), (148, 22859), (153, 22874),

Gene: Gorge\_32 Start: 28766, Stop: 28999, Start Num: 82

Candidate Starts for Gorge\_32:

(43, 28619), (Start: 82 @28766 has 326 MA's), (Start: 83 @28769 has 6 MA's), (114, 28880), (117, 28886), (121, 28895), (127, 28913), (128, 28916), (135, 28928),

Gene: GreaseLightnin\_28 Start: 25491, Stop: 25739, Start Num: 82

Candidate Starts for GreaseLightnin\_28:

(Start: 82 @25491 has 326 MA's),

Gene: Gremlin23\_49 Start: 27549, Stop: 27746, Start Num: 84

Candidate Starts for Gremlin23\_49:

(Start: 84 @27549 has 21 MA's), (95, 27600),

Gene: Gretchen\_23 Start: 19981, Stop: 20262, Start Num: 59  
Candidate Starts for Gretchen\_23:  
(40, 19858), (Start: 59 @19981 has 13 MA's), (99, 20113), (128, 20191),

Gene: Grimmer\_34 Start: 29257, Stop: 29490, Start Num: 82  
Candidate Starts for Grimmer\_34:  
(43, 29110), (Start: 82 @29257 has 326 MA's), (Start: 83 @29260 has 6 MA's), (114, 29371), (121, 29386), (127, 29404), (128, 29407), (135, 29419),

Gene: Gudmit\_20 Start: 18449, Stop: 18694, Start Num: 82  
Candidate Starts for Gudmit\_20:  
(47, 18287), (61, 18386), (Start: 82 @18449 has 326 MA's), (92, 18491), (97, 18521), (128, 18596), (148, 18656), (149, 18659),

Gene: Guey18\_67 Start: 36272, Stop: 36484, Start Num: 82  
Candidate Starts for Guey18\_67:  
(Start: 82 @36272 has 326 MA's), (91, 36311), (128, 36416),

Gene: Guppsters\_34 Start: 29052, Stop: 29285, Start Num: 82  
Candidate Starts for Guppsters\_34:  
(26, 28764), (Start: 82 @29052 has 326 MA's), (108, 29151), (117, 29172), (121, 29181), (135, 29214),

Gene: Gustav\_22 Start: 19031, Stop: 19273, Start Num: 82  
Candidate Starts for Gustav\_22:  
(29, 18722), (Start: 79 @19028 has 26 MA's), (Start: 82 @19031 has 326 MA's), (132, 19181), (143, 19208),

Gene: HC\_29 Start: 25369, Stop: 25614, Start Num: 82  
Candidate Starts for HC\_29:  
(1, 23902), (2, 23947), (3, 24022), (4, 24127), (5, 24286), (7, 24532), (11, 24748), (15, 24853), (17, 24871), (58, 25264), (63, 25312), (Start: 82 @25369 has 326 MA's), (111, 25474), (117, 25489),

Gene: HUHilltop\_28 Start: 25240, Stop: 25488, Start Num: 82  
Candidate Starts for HUHilltop\_28:  
(Start: 82 @25240 has 326 MA's),

Gene: Hades\_33 Start: 28863, Stop: 29096, Start Num: 82  
Candidate Starts for Hades\_33:  
(25, 28572), (26, 28575), (29, 28611), (Start: 82 @28863 has 326 MA's), (108, 28962), (117, 28983), (121, 28992), (135, 29025),

Gene: Hamulus\_33 Start: 29517, Stop: 29759, Start Num: 76  
Candidate Starts for Hamulus\_33:  
(21, 29091), (46, 29352), (Start: 76 @29517 has 6 MA's), (Start: 82 @29526 has 326 MA's), (Start: 83 @29529 has 6 MA's), (114, 29640), (117, 29646), (121, 29655), (127, 29673), (128, 29676), (135, 29688),

Gene: Harley\_32 Start: 28472, Stop: 28705, Start Num: 82  
Candidate Starts for Harley\_32:  
(24, 28163), (30, 28229), (43, 28325), (Start: 82 @28472 has 326 MA's), (Start: 83 @28475 has 6 MA's), (114, 28586), (117, 28592), (121, 28601), (127, 28619), (128, 28622), (135, 28634),

Gene: HaugeAnator\_49 Start: 27959, Stop: 28156, Start Num: 84

Candidate Starts for HaugeAnator\_49:  
(Start: 84 @27959 has 21 MA's), (91, 27992), (98, 28025),

Gene: Hegedechwinu\_33 Start: 28561, Stop: 28794, Start Num: 82  
Candidate Starts for Hegedechwinu\_33:  
(Start: 82 @28561 has 326 MA's), (108, 28660), (117, 28681), (121, 28690), (135, 28723),

Gene: Hlubikazi\_33 Start: 29358, Stop: 29591, Start Num: 82  
Candidate Starts for Hlubikazi\_33:  
(Start: 82 @29358 has 326 MA's), (108, 29457), (117, 29478), (121, 29487), (135, 29520),

Gene: Honk\_21 Start: 17157, Stop: 17432, Start Num: 59  
Candidate Starts for Honk\_21:  
(Start: 59 @17157 has 13 MA's), (148, 17427),

Gene: Hortus1\_56 Start: 35872, Stop: 36087, Start Num: 67  
Candidate Starts for Hortus1\_56:  
(48, 35782), (Start: 67 @35872 has 6 MA's), (69, 35878),

Gene: Htur\_30 Start: 22726, Stop: 23004, Start Num: 79  
Candidate Starts for Htur\_30:  
(35, 22486), (52, 22588), (74, 22717), (Start: 79 @22726 has 26 MA's), (97, 22801), (101, 22813),  
(109, 22840), (128, 22888), (153, 22966),

Gene: Huffy\_26 Start: 19059, Stop: 19298, Start Num: 79  
Candidate Starts for Huffy\_26:  
(Start: 79 @19059 has 26 MA's), (87, 19083), (89, 19095), (98, 19134), (133, 19224), (144, 19260),

Gene: Hum25\_24 Start: 17738, Stop: 17992, Start Num: 82  
Candidate Starts for Hum25\_24:  
(Start: 82 @17738 has 326 MA's), (117, 17864), (127, 17891),

Gene: IAmGroot\_23 Start: 19974, Stop: 20258, Start Num: 59  
Candidate Starts for IAmGroot\_23:  
(Start: 59 @19974 has 13 MA's), (148, 20253),

Gene: lbOuu\_34 Start: 29111, Stop: 29344, Start Num: 80  
Candidate Starts for lbOuu\_34:  
(Start: 80 @29111 has 5 MA's), (108, 29210), (117, 29231), (121, 29240), (127, 29258), (128, 29261),  
(135, 29273),

Gene: lbhubesi\_32 Start: 28479, Stop: 28712, Start Num: 82  
Candidate Starts for lbhubesi\_32:  
(24, 28170), (30, 28236), (43, 28332), (Start: 82 @28479 has 326 MA's), (Start: 83 @28482 has 6  
MA's), (114, 28593), (117, 28599), (121, 28608), (127, 28626), (128, 28629), (135, 28641),

Gene: IchabodCrane\_69 Start: 52830, Stop: 53081, Start Num: 82  
Candidate Starts for IchabodCrane\_69:  
(Start: 82 @52830 has 326 MA's), (99, 52905),

Gene: Immanuel3\_49 Start: 27963, Stop: 28160, Start Num: 84  
Candidate Starts for Immanuel3\_49:  
(Start: 84 @27963 has 21 MA's), (91, 27996), (98, 28029),

Gene: IndiRoo\_31 Start: 20932, Stop: 21204, Start Num: 79  
Candidate Starts for IndiRoo\_31:  
(74, 20923), (Start: 79 @20932 has 26 MA's), (101, 21019), (128, 21094),

Gene: Inventum\_32 Start: 29216, Stop: 29449, Start Num: 82  
Candidate Starts for Inventum\_32:  
(Start: 82 @29216 has 326 MA's), (Start: 83 @29219 has 6 MA's), (114, 29330), (117, 29336), (121, 29345), (127, 29363), (128, 29366), (135, 29378),

Gene: IrishSherpFalk\_34 Start: 30123, Stop: 30356, Start Num: 82  
Candidate Starts for IrishSherpFalk\_34:  
(Start: 82 @30123 has 326 MA's), (108, 30222), (117, 30243), (121, 30252), (135, 30285),

Gene: JPandJE\_50 Start: 28427, Stop: 28624, Start Num: 84  
Candidate Starts for JPandJE\_50:  
(Start: 84 @28427 has 21 MA's), (91, 28460), (98, 28493),

Gene: Jabbawokkie\_40 Start: 29390, Stop: 29647, Start Num: 81  
Candidate Starts for Jabbawokkie\_40:  
(Start: 81 @29390 has 4 MA's), (86, 29408), (97, 29453), (98, 29456), (111, 29495), (118, 29513), (128, 29540), (132, 29546), (133, 29549),

Gene: JalFarm20\_35 Start: 29611, Stop: 29844, Start Num: 82  
Candidate Starts for JalFarm20\_35:  
(Start: 82 @29611 has 326 MA's), (108, 29710), (117, 29731), (121, 29740), (135, 29773),

Gene: James\_32 Start: 28723, Stop: 28956, Start Num: 82  
Candidate Starts for James\_32:  
(43, 28576), (Start: 82 @28723 has 326 MA's), (Start: 83 @28726 has 6 MA's), (114, 28837), (117, 28843), (121, 28852), (127, 28870), (128, 28873), (135, 28885),

Gene: Jarcob\_32 Start: 28759, Stop: 28992, Start Num: 82  
Candidate Starts for Jarcob\_32:  
(25, 28468), (26, 28471), (29, 28507), (Start: 82 @28759 has 326 MA's), (108, 28858), (117, 28879), (121, 28888), (135, 28921),

Gene: Jay2Jay\_75 Start: 54649, Stop: 54900, Start Num: 82  
Candidate Starts for Jay2Jay\_75:  
(Start: 82 @54649 has 326 MA's), (121, 54775),

Gene: Jebeks\_28 Start: 25225, Stop: 25473, Start Num: 82  
Candidate Starts for Jebeks\_28:  
(Start: 82 @25225 has 326 MA's),

Gene: Jera\_31 Start: 21768, Stop: 22046, Start Num: 79  
Candidate Starts for Jera\_31:  
(35, 21537), (52, 21630), (74, 21759), (Start: 79 @21768 has 26 MA's), (101, 21855), (115, 21897), (128, 21930), (153, 22008),

Gene: JimJam\_72 Start: 53204, Stop: 53455, Start Num: 82  
Candidate Starts for JimJam\_72:  
(Start: 82 @53204 has 326 MA's), (99, 53279),

Gene: Jinglebell\_31 Start: 28744, Stop: 28977, Start Num: 82

Candidate Starts for Jinglebell\_31:

(32, 28528), (Start: 82 @28744 has 326 MA's), (Start: 83 @28747 has 6 MA's), (114, 28858), (117, 28864), (121, 28873), (127, 28891), (128, 28894), (135, 28906),

Gene: Job42\_36 Start: 30532, Stop: 30765, Start Num: 82

Candidate Starts for Job42\_36:

(30, 30289), (43, 30385), (Start: 82 @30532 has 326 MA's), (Start: 83 @30535 has 6 MA's), (114, 30646), (117, 30652), (121, 30661), (127, 30679), (128, 30682), (135, 30694),

Gene: JoeyJr\_32 Start: 28704, Stop: 28937, Start Num: 82

Candidate Starts for JoeyJr\_32:

(Start: 82 @28704 has 326 MA's), (Start: 83 @28707 has 6 MA's), (114, 28818), (117, 28824), (121, 28833), (127, 28851), (128, 28854), (135, 28866),

Gene: Johann\_31 Start: 22634, Stop: 22915, Start Num: 79

Candidate Starts for Johann\_31:

(35, 22421), (52, 22496), (54, 22508), (74, 22625), (Start: 79 @22634 has 26 MA's), (97, 22709), (101, 22721), (109, 22748), (115, 22763), (128, 22796), (148, 22859), (153, 22874),

Gene: Jollison\_71 Start: 53086, Stop: 53337, Start Num: 82

Candidate Starts for Jollison\_71:

(Start: 82 @53086 has 326 MA's), (99, 53161),

Gene: Juice456\_34 Start: 29832, Stop: 30065, Start Num: 82

Candidate Starts for Juice456\_34:

(Start: 82 @29832 has 326 MA's), (108, 29931), (117, 29952), (121, 29961), (135, 29994),

Gene: Jung\_27 Start: 25202, Stop: 25450, Start Num: 82

Candidate Starts for Jung\_27:

(Start: 82 @25202 has 326 MA's),

Gene: Juniormint\_28 Start: 25278, Stop: 25526, Start Num: 82

Candidate Starts for Juniormint\_28:

(Start: 82 @25278 has 326 MA's),

Gene: Juniper1\_32 Start: 28502, Stop: 28735, Start Num: 82

Candidate Starts for Juniper1\_32:

(12, 27944), (14, 28019), (18, 28058), (20, 28091), (22, 28124), (25, 28205), (26, 28208), (32, 28286), (Start: 82 @28502 has 326 MA's), (Start: 83 @28505 has 6 MA's), (114, 28616), (121, 28631), (127, 28649), (128, 28652), (135, 28664),

Gene: Karhdo\_32 Start: 28668, Stop: 28901, Start Num: 82

Candidate Starts for Karhdo\_32:

(Start: 82 @28668 has 326 MA's), (Start: 83 @28671 has 6 MA's), (114, 28782), (117, 28788), (121, 28797), (127, 28815), (128, 28818), (135, 28830),

Gene: Kari\_28 Start: 25237, Stop: 25485, Start Num: 82

Candidate Starts for Kari\_28:

(Start: 82 @25237 has 326 MA's),

Gene: Karimac\_71 Start: 53235, Stop: 53486, Start Num: 82



Candidate Starts for Karimac\_71:  
(Start: 82 @53235 has 326 MA's), (99, 53310),

Gene: Keelan\_59 Start: 34992, Stop: 35204, Start Num: 82  
Candidate Starts for Keelan\_59:  
(Start: 82 @34992 has 326 MA's), (91, 35031), (92, 35034), (128, 35136),

Gene: KentuckyRacer\_72 Start: 53019, Stop: 53270, Start Num: 82  
Candidate Starts for KentuckyRacer\_72:  
(Start: 82 @53019 has 326 MA's), (99, 53094),

Gene: Kenuha5\_29 Start: 27646, Stop: 27879, Start Num: 82  
Candidate Starts for Kenuha5\_29:  
(26, 27358), (Start: 82 @27646 has 326 MA's), (108, 27745), (117, 27766), (121, 27775), (135, 27808),

Gene: Kersh\_31 Start: 29742, Stop: 29975, Start Num: 82  
Candidate Starts for Kersh\_31:  
(43, 29595), (Start: 82 @29742 has 326 MA's), (Start: 83 @29745 has 6 MA's), (114, 29856), (117, 29862), (121, 29871), (127, 29889), (128, 29892), (135, 29904),

Gene: KilKor\_28 Start: 25499, Stop: 25747, Start Num: 82  
Candidate Starts for KilKor\_28:  
(Start: 82 @25499 has 326 MA's),

Gene: Kimberlium\_34 Start: 29660, Stop: 29893, Start Num: 82  
Candidate Starts for Kimberlium\_34:  
(43, 29513), (Start: 82 @29660 has 326 MA's), (Start: 83 @29663 has 6 MA's), (114, 29774), (117, 29780), (121, 29789), (127, 29807), (128, 29810), (135, 29822),

Gene: KingMidas\_34 Start: 30399, Stop: 30632, Start Num: 82  
Candidate Starts for KingMidas\_34:  
(Start: 82 @30399 has 326 MA's), (Start: 83 @30402 has 6 MA's), (114, 30513), (117, 30519), (121, 30528), (127, 30546), (128, 30549), (135, 30561),

Gene: Kingsley\_31 Start: 28346, Stop: 28588, Start Num: 76  
Candidate Starts for Kingsley\_31:  
(21, 27920), (46, 28181), (Start: 76 @28346 has 6 MA's), (Start: 82 @28355 has 326 MA's), (Start: 83 @28358 has 6 MA's), (114, 28469), (117, 28475), (121, 28484), (127, 28502), (128, 28505), (135, 28517),

Gene: Koella\_26 Start: 24683, Stop: 24916, Start Num: 82  
Candidate Starts for Koella\_26:  
(25, 24392), (26, 24395), (29, 24431), (Start: 82 @24683 has 326 MA's), (108, 24782), (117, 24803), (121, 24812), (135, 24845),

Gene: Krakatau\_33 Start: 29229, Stop: 29462, Start Num: 82  
Candidate Starts for Krakatau\_33:  
(43, 29082), (Start: 82 @29229 has 326 MA's), (Start: 83 @29232 has 6 MA's), (114, 29343), (117, 29349), (121, 29358), (127, 29376), (128, 29379), (135, 29391),

Gene: KristaRAM\_33 Start: 29355, Stop: 29588, Start Num: 82  
Candidate Starts for KristaRAM\_33:  
(Start: 82 @29355 has 326 MA's), (108, 29454), (117, 29475), (121, 29484), (135, 29517),

Gene: Ksquared\_28 Start: 25256, Stop: 25504, Start Num: 82

Candidate Starts for Ksquared\_28:

(Start: 82 @25256 has 326 MA's),

Gene: Kumquat\_47 Start: 27506, Stop: 27703, Start Num: 84

Candidate Starts for Kumquat\_47:

(Start: 84 @27506 has 21 MA's), (92, 27542), (107, 27590), (141, 27665),

Gene: Lamberg\_19 Start: 17610, Stop: 17849, Start Num: 82

Candidate Starts for Lamberg\_19:

(50, 17475), (Start: 82 @17610 has 326 MA's), (97, 17682), (132, 17763), (147, 17814), (148, 17817),

Gene: Langerak\_28 Start: 25224, Stop: 25472, Start Num: 82

Candidate Starts for Langerak\_28:

(Start: 82 @25224 has 326 MA's),

Gene: LastJedi\_26 Start: 24714, Stop: 24947, Start Num: 82

Candidate Starts for LastJedi\_26:

(25, 24423), (26, 24426), (29, 24462), (Start: 82 @24714 has 326 MA's), (108, 24813), (117, 24834), (121, 24843), (135, 24876),

Gene: Latretium\_33 Start: 29314, Stop: 29547, Start Num: 82

Candidate Starts for Latretium\_33:

(Start: 82 @29314 has 326 MA's), (108, 29413), (117, 29434), (121, 29443), (135, 29476),

Gene: Leozinho\_34 Start: 28957, Stop: 29190, Start Num: 82

Candidate Starts for Leozinho\_34:

(Start: 82 @28957 has 326 MA's), (108, 29056), (117, 29077), (121, 29086), (135, 29119),

Gene: Leperchaun\_32 Start: 28612, Stop: 28842, Start Num: 83

Candidate Starts for Leperchaun\_32:

(32, 28393), (Start: 82 @28609 has 326 MA's), (Start: 83 @28612 has 6 MA's), (114, 28723), (117, 28729), (121, 28738), (127, 28756), (128, 28759), (135, 28771),

Gene: LilMartin\_67 Start: 52109, Stop: 52360, Start Num: 82

Candidate Starts for LilMartin\_67:

(Start: 82 @52109 has 326 MA's), (92, 52151),

Gene: LilMoolah\_32 Start: 28807, Stop: 29040, Start Num: 82

Candidate Starts for LilMoolah\_32:

(25, 28516), (26, 28519), (29, 28555), (Start: 82 @28807 has 326 MA's), (108, 28906), (117, 28927), (121, 28936), (135, 28969),

Gene: LilSpotty\_33 Start: 26076, Stop: 26330, Start Num: 82

Candidate Starts for LilSpotty\_33:

(46, 25902), (75, 26067), (Start: 82 @26076 has 326 MA's), (97, 26139), (117, 26196),

Gene: Lilas\_23 Start: 20953, Stop: 21192, Start Num: 82

Candidate Starts for Lilas\_23:

(56, 20845), (Start: 82 @20953 has 326 MA's), (92, 20995), (104, 21046), (105, 21049), (128, 21100), (132, 21106),

Gene: Linayshia\_30 Start: 22691, Stop: 22969, Start Num: 79  
Candidate Starts for Linayshia\_30:  
(35, 22478), (52, 22553), (54, 22565), (57, 22580), (74, 22682), (Start: 79 @22691 has 26 MA's), (97, 22766), (101, 22778), (109, 22805), (128, 22853), (153, 22931),

Gene: LittleShirley\_35 Start: 30174, Stop: 30407, Start Num: 82  
Candidate Starts for LittleShirley\_35:  
(43, 30027), (Start: 82 @30174 has 326 MA's), (Start: 83 @30177 has 6 MA's), (114, 30288), (117, 30294), (121, 30303), (127, 30321), (128, 30324), (135, 30336),

Gene: Lizziana\_32 Start: 28682, Stop: 28915, Start Num: 82  
Candidate Starts for Lizziana\_32:  
(25, 28391), (26, 28394), (29, 28430), (Start: 82 @28682 has 326 MA's), (108, 28781), (117, 28802), (121, 28811), (135, 28844),

Gene: Llama\_32 Start: 28743, Stop: 28976, Start Num: 82  
Candidate Starts for Llama\_32:  
(32, 28527), (Start: 82 @28743 has 326 MA's), (Start: 83 @28746 has 6 MA's), (114, 28857), (117, 28863), (121, 28872), (127, 28890), (128, 28893), (135, 28905),

Gene: Llij\_32 Start: 28514, Stop: 28747, Start Num: 82  
Candidate Starts for Llij\_32:  
(43, 28367), (Start: 82 @28514 has 326 MA's), (Start: 83 @28517 has 6 MA's), (114, 28628), (117, 28634), (121, 28643), (127, 28661), (128, 28664), (135, 28676),

Gene: Lorde\_34 Start: 28771, Stop: 29004, Start Num: 82  
Candidate Starts for Lorde\_34:  
(21, 28336), (46, 28597), (Start: 76 @28762 has 6 MA's), (Start: 82 @28771 has 326 MA's), (Start: 83 @28774 has 6 MA's), (108, 28870), (114, 28885), (117, 28891), (121, 28900), (127, 28918), (128, 28921), (135, 28933),

Gene: Lton\_19 Start: 17639, Stop: 17878, Start Num: 82  
Candidate Starts for Lton\_19:  
(Start: 82 @17639 has 326 MA's), (97, 17711), (132, 17792), (147, 17843), (148, 17846),

Gene: Lucky10\_21 Start: 18592, Stop: 18828, Start Num: 82  
Candidate Starts for Lucky10\_21:  
(Start: 78 @18586 has 7 MA's), (Start: 82 @18592 has 326 MA's), (92, 18634), (97, 18664), (104, 18685), (105, 18688), (128, 18739), (132, 18745),

Gene: LukeCage\_71 Start: 52989, Stop: 53240, Start Num: 82  
Candidate Starts for LukeCage\_71:  
(Start: 82 @52989 has 326 MA's), (99, 53064), (101, 53070), (148, 53196),

Gene: LunaBlu\_35 Start: 29546, Stop: 29779, Start Num: 82  
Candidate Starts for LunaBlu\_35:  
(26, 29258), (Start: 82 @29546 has 326 MA's), (108, 29645), (117, 29666), (121, 29675), (135, 29708),

Gene: LunaStella\_34 Start: 29277, Stop: 29540, Start Num: 77  
Candidate Starts for LunaStella\_34:  
(41, 29070), (42, 29085), (60, 29220), (Start: 77 @29277 has 3 MA's), (130, 29442), (134, 29448), (136, 29451), (142, 29469), (155, 29526),

Gene: Mabodamaca\_23 Start: 19124, Stop: 19408, Start Num: 59

Candidate Starts for Mabodamaca\_23:

(Start: 59 @19124 has 13 MA's), (138, 19364), (148, 19403),

Gene: MadMen\_30 Start: 27967, Stop: 28200, Start Num: 82

Candidate Starts for MadMen\_30:

(26, 27679), (Start: 82 @27967 has 326 MA's), (108, 28066), (117, 28087), (121, 28096), (135, 28129),

Gene: Madiba\_30 Start: 27447, Stop: 27677, Start Num: 83

Candidate Starts for Madiba\_30:

(24, 27135), (30, 27201), (43, 27297), (Start: 82 @27444 has 326 MA's), (Start: 83 @27447 has 6 MA's), (114, 27558), (117, 27564), (121, 27573), (127, 27591), (128, 27594), (135, 27606),

Gene: Mahavrat\_32 Start: 28574, Stop: 28807, Start Num: 82

Candidate Starts for Mahavrat\_32:

(12, 28016), (14, 28091), (18, 28130), (20, 28163), (22, 28196), (25, 28277), (26, 28280), (32, 28358), (Start: 82 @28574 has 326 MA's), (Start: 83 @28577 has 6 MA's), (114, 28688), (117, 28694), (121, 28703), (127, 28721), (128, 28724), (135, 28736),

Gene: Mahdia\_22 Start: 18708, Stop: 18950, Start Num: 82

Candidate Starts for Mahdia\_22:

(Start: 82 @18708 has 326 MA's), (121, 18840), (148, 18912),

Gene: Majeke\_28 Start: 25246, Stop: 25494, Start Num: 82

Candidate Starts for Majeke\_28:

(Start: 82 @25246 has 326 MA's),

Gene: Malithi\_28 Start: 25165, Stop: 25413, Start Num: 82

Candidate Starts for Malithi\_28:

(Start: 82 @25165 has 326 MA's),

Gene: Mandlovu\_33 Start: 29300, Stop: 29533, Start Num: 82

Candidate Starts for Mandlovu\_33:

(Start: 82 @29300 has 326 MA's), (108, 29399), (117, 29420), (121, 29429), (135, 29462),

Gene: Mangethe\_28 Start: 25246, Stop: 25494, Start Num: 82

Candidate Starts for Mangethe\_28:

(Start: 82 @25246 has 326 MA's),

Gene: Mantra\_32 Start: 28633, Stop: 28866, Start Num: 82

Candidate Starts for Mantra\_32:

(43, 28486), (Start: 82 @28633 has 326 MA's), (Start: 83 @28636 has 6 MA's), (114, 28747), (117, 28753), (121, 28762), (127, 28780), (128, 28783), (135, 28795),

Gene: Manuel\_46 Start: 27594, Stop: 27791, Start Num: 84

Candidate Starts for Manuel\_46:

(Start: 82 @27588 has 326 MA's), (Start: 84 @27594 has 21 MA's), (107, 27678), (141, 27753),

Gene: Maravista\_32 Start: 28464, Stop: 28697, Start Num: 82

Candidate Starts for Maravista\_32:

(25, 28173), (26, 28176), (29, 28212), (Start: 82 @28464 has 326 MA's), (108, 28563), (117, 28584), (121, 28593), (135, 28626),

Gene: Marker\_33 Start: 28403, Stop: 28633, Start Num: 83

Candidate Starts for Marker\_33:

(Start: 82 @28400 has 326 MA's), (Start: 83 @28403 has 6 MA's), (114, 28514), (117, 28520), (121, 28529), (127, 28547), (128, 28550), (135, 28562),

Gene: Marsus\_69 Start: 52381, Stop: 52632, Start Num: 82

Candidate Starts for Marsus\_69:

(Start: 82 @52381 has 326 MA's),

Gene: Marteena\_23 Start: 20804, Stop: 21043, Start Num: 82

Candidate Starts for Marteena\_23:

(56, 20696), (Start: 82 @20804 has 326 MA's), (92, 20846), (104, 20897), (105, 20900), (128, 20951), (132, 20957),

Gene: Martik\_32 Start: 28709, Stop: 28942, Start Num: 82

Candidate Starts for Martik\_32:

(25, 28418), (26, 28421), (29, 28457), (Start: 82 @28709 has 326 MA's), (108, 28808), (117, 28829), (121, 28838), (135, 28871),

Gene: Matteo\_19 Start: 17541, Stop: 17786, Start Num: 78

Candidate Starts for Matteo\_19:

(Start: 78 @17541 has 7 MA's), (Start: 82 @17547 has 326 MA's), (97, 17619), (132, 17700), (147, 17751), (148, 17754),

Gene: Mattes\_32 Start: 28723, Stop: 28956, Start Num: 82

Candidate Starts for Mattes\_32:

(43, 28576), (Start: 82 @28723 has 326 MA's), (Start: 83 @28726 has 6 MA's), (114, 28837), (117, 28843), (121, 28852), (127, 28870), (128, 28873), (135, 28885),

Gene: Megiddo\_28 Start: 25499, Stop: 25747, Start Num: 82

Candidate Starts for Megiddo\_28:

(Start: 82 @25499 has 326 MA's),

Gene: Melissauren88\_32 Start: 28676, Stop: 28909, Start Num: 82

Candidate Starts for Melissauren88\_32:

(Start: 82 @28676 has 326 MA's), (108, 28775), (117, 28796), (121, 28805), (135, 28838),

Gene: MilanaBonita\_26 Start: 24607, Stop: 24840, Start Num: 82

Candidate Starts for MilanaBonita\_26:

(Start: 82 @24607 has 326 MA's), (108, 24706), (117, 24727), (121, 24736), (135, 24769),

Gene: Milani\_31 Start: 21543, Stop: 21809, Start Num: 79

Candidate Starts for Milani\_31:

(Start: 79 @21543 has 26 MA's), (101, 21630), (109, 21657), (115, 21672), (128, 21705),

Gene: Mildred21\_68 Start: 52306, Stop: 52557, Start Num: 82

Candidate Starts for Mildred21\_68:

(Start: 82 @52306 has 326 MA's), (143, 52486),

Gene: MilleniumForce\_33 Start: 29468, Stop: 29701, Start Num: 82

Candidate Starts for MilleniumForce\_33:

(Start: 82 @29468 has 326 MA's), (108, 29567), (117, 29588), (121, 29597), (135, 29630),

Gene: MindFlayer\_70 Start: 52737, Stop: 52988, Start Num: 82  
Candidate Starts for MindFlayer\_70:  
(Start: 82 @52737 has 326 MA's), (99, 52812),

Gene: MinionDave\_35 Start: 29705, Stop: 29938, Start Num: 82  
Candidate Starts for MinionDave\_35:  
(Start: 82 @29705 has 326 MA's), (108, 29804), (117, 29825), (121, 29834), (135, 29867),

Gene: Minnie\_34 Start: 29518, Stop: 29751, Start Num: 82  
Candidate Starts for Minnie\_34:  
(24, 29209), (30, 29275), (43, 29371), (Start: 82 @29518 has 326 MA's), (Start: 83 @29521 has 6 MA's), (114, 29632), (117, 29638), (121, 29647), (127, 29665), (128, 29668), (135, 29680),

Gene: Misha28\_33 Start: 28418, Stop: 28651, Start Num: 82  
Candidate Starts for Misha28\_33:  
(Start: 82 @28418 has 326 MA's), (Start: 83 @28421 has 6 MA's), (114, 28532), (117, 28538), (121, 28547), (127, 28565), (128, 28568), (135, 28580),

Gene: MisterCuddles\_34 Start: 29563, Stop: 29805, Start Num: 76  
Candidate Starts for MisterCuddles\_34:  
(21, 29137), (46, 29398), (Start: 76 @29563 has 6 MA's), (Start: 82 @29572 has 326 MA's), (Start: 83 @29575 has 6 MA's), (114, 29686), (117, 29692), (121, 29701), (127, 29719), (128, 29722), (135, 29734),

Gene: Modragons\_32 Start: 28588, Stop: 28821, Start Num: 82  
Candidate Starts for Modragons\_32:  
(32, 28372), (Start: 82 @28588 has 326 MA's), (Start: 83 @28591 has 6 MA's), (114, 28702), (117, 28708), (121, 28717), (127, 28735), (128, 28738), (135, 28750),

Gene: MooMoo\_30 Start: 27824, Stop: 28087, Start Num: 77  
Candidate Starts for MooMoo\_30:  
(60, 27767), (Start: 77 @27824 has 3 MA's), (130, 27989), (134, 27995), (136, 27998), (142, 28016), (155, 28073),

Gene: Moonbeam\_33 Start: 29222, Stop: 29455, Start Num: 82  
Candidate Starts for Moonbeam\_33:  
(30, 28979), (43, 29075), (Start: 82 @29222 has 326 MA's), (Start: 83 @29225 has 6 MA's), (114, 29336), (117, 29342), (121, 29351), (127, 29369), (128, 29372), (135, 29384),

Gene: Moosehead\_19 Start: 17566, Stop: 17805, Start Num: 82  
Candidate Starts for Moosehead\_19:  
(Start: 82 @17566 has 326 MA's), (92, 17608), (97, 17638), (104, 17659), (105, 17662), (128, 17713), (132, 17719),

Gene: Morkie\_21 Start: 18439, Stop: 18675, Start Num: 82  
Candidate Starts for Morkie\_21:  
(Start: 82 @18439 has 326 MA's), (92, 18481), (97, 18511), (104, 18532), (105, 18535), (128, 18586), (132, 18592),

Gene: Morrissey\_23 Start: 19911, Stop: 20153, Start Num: 82  
Candidate Starts for Morrissey\_23:  
(Start: 82 @19911 has 326 MA's), (121, 20043), (126, 20052),

Gene: Mova\_33 Start: 28357, Stop: 28590, Start Num: 82  
Candidate Starts for Mova\_33:  
(26, 28069), (Start: 82 @28357 has 326 MA's), (108, 28456), (117, 28477), (121, 28486), (135, 28519),

Gene: Mozy\_34 Start: 29413, Stop: 29646, Start Num: 82  
Candidate Starts for Mozy\_34:  
(Start: 82 @29413 has 326 MA's), (Start: 83 @29416 has 6 MA's), (114, 29527), (117, 29533), (121, 29542), (127, 29560), (128, 29563), (135, 29575),

Gene: Ms6\_26 Start: 24139, Stop: 24372, Start Num: 82  
Candidate Starts for Ms6\_26:  
(Start: 82 @24139 has 326 MA's), (108, 24238), (117, 24259), (121, 24268), (135, 24301),

Gene: Mugiwara\_73 Start: 53488, Stop: 53739, Start Num: 82  
Candidate Starts for Mugiwara\_73:  
(Start: 82 @53488 has 326 MA's), (92, 53530), (99, 53563), (148, 53695),

Gene: MulchExplorer\_36 Start: 29659, Stop: 29892, Start Num: 82  
Candidate Starts for MulchExplorer\_36:  
(43, 29512), (Start: 82 @29659 has 326 MA's), (Start: 83 @29662 has 6 MA's), (114, 29773), (117, 29779), (121, 29788), (127, 29806), (128, 29809), (135, 29821),

Gene: MulchMansion\_67 Start: 52109, Stop: 52360, Start Num: 82  
Candidate Starts for MulchMansion\_67:  
(Start: 82 @52109 has 326 MA's), (92, 52151),

Gene: MulchSalad\_31 Start: 25420, Stop: 25653, Start Num: 82  
Candidate Starts for MulchSalad\_31:  
(Start: 82 @25420 has 326 MA's), (108, 25519), (117, 25540), (121, 25549), (135, 25582),

Gene: Muntaha\_47 Start: 44490, Stop: 44744, Start Num: 82  
Candidate Starts for Muntaha\_47:  
(Start: 82 @44490 has 326 MA's), (148, 44703),

Gene: Mutaforma13\_32 Start: 28792, Stop: 29025, Start Num: 82  
Candidate Starts for Mutaforma13\_32:  
(Start: 82 @28792 has 326 MA's), (108, 28891), (117, 28912), (121, 28921), (135, 28954),

Gene: Necropolis\_28 Start: 25237, Stop: 25485, Start Num: 82  
Candidate Starts for Necropolis\_28:  
(Start: 82 @25237 has 326 MA's),

Gene: Nettuno\_19 Start: 17613, Stop: 17852, Start Num: 82  
Candidate Starts for Nettuno\_19:  
(50, 17478), (Start: 82 @17613 has 326 MA's), (97, 17685), (132, 17766), (147, 17817), (148, 17820),

Gene: Nimbo\_32 Start: 28540, Stop: 28773, Start Num: 82  
Candidate Starts for Nimbo\_32:  
(Start: 82 @28540 has 326 MA's), (Start: 83 @28543 has 6 MA's), (114, 28654), (117, 28660), (121, 28669), (127, 28687), (128, 28690), (135, 28702),

Gene: Nitzel\_33 Start: 29256, Stop: 29489, Start Num: 82  
Candidate Starts for Nitzel\_33:

(Start: 82 @29256 has 326 MA's), (Start: 83 @29259 has 6 MA's), (114, 29370), (117, 29376), (121, 29385), (127, 29403), (128, 29406), (135, 29418),

Gene: Nivrat\_32 Start: 28681, Stop: 28914, Start Num: 82

Candidate Starts for Nivrat\_32:

(25, 28390), (26, 28393), (29, 28429), (Start: 82 @28681 has 326 MA's), (108, 28780), (117, 28801), (121, 28810), (135, 28843),

Gene: NormanBulbieJr\_32 Start: 28696, Stop: 28929, Start Num: 82

Candidate Starts for NormanBulbieJr\_32:

(25, 28405), (26, 28408), (29, 28444), (Start: 82 @28696 has 326 MA's), (108, 28795), (117, 28816), (121, 28825), (135, 28858),

Gene: ODay\_29 Start: 22346, Stop: 22588, Start Num: 78

Candidate Starts for ODay\_29:

(Start: 78 @22346 has 7 MA's), (Start: 82 @22352 has 326 MA's), (92, 22394), (97, 22424), (104, 22445), (105, 22448), (128, 22499), (132, 22505),

Gene: Ochi17\_30 Start: 28195, Stop: 28428, Start Num: 82

Candidate Starts for Ochi17\_30:

(32, 27979), (Start: 82 @28195 has 326 MA's), (Start: 83 @28198 has 6 MA's), (114, 28309), (117, 28315), (121, 28324), (127, 28342), (128, 28345), (135, 28357),

Gene: OfUltron\_32 Start: 28744, Stop: 28977, Start Num: 82

Candidate Starts for OfUltron\_32:

(32, 28528), (Start: 82 @28744 has 326 MA's), (Start: 83 @28747 has 6 MA's), (114, 28858), (117, 28864), (121, 28873), (127, 28891), (128, 28894), (135, 28906),

Gene: Ogopogo\_32 Start: 27888, Stop: 28121, Start Num: 80

Candidate Starts for Ogopogo\_32:

(Start: 80 @27888 has 5 MA's), (108, 27987), (117, 28008), (121, 28017), (127, 28035), (128, 28038), (135, 28050),

Gene: Oksu\_33 Start: 28588, Stop: 28821, Start Num: 82

Candidate Starts for Oksu\_33:

(32, 28372), (Start: 82 @28588 has 326 MA's), (Start: 83 @28591 has 6 MA's), (114, 28702), (117, 28708), (121, 28717), (127, 28735), (128, 28738), (135, 28750),

Gene: OldBen\_32 Start: 28571, Stop: 28804, Start Num: 82

Candidate Starts for OldBen\_32:

(Start: 82 @28571 has 326 MA's), (Start: 83 @28574 has 6 MA's), (114, 28685), (117, 28691), (121, 28700), (127, 28718), (128, 28721), (135, 28733),

Gene: Olicious\_49 Start: 27959, Stop: 28156, Start Num: 84

Candidate Starts for Olicious\_49:

(Start: 84 @27959 has 21 MA's), (91, 27992), (98, 28025),

Gene: OlinDD\_56 Start: 35871, Stop: 36086, Start Num: 67

Candidate Starts for OlinDD\_56:

(48, 35781), (Start: 67 @35871 has 6 MA's), (69, 35877),

Gene: Olympi\_31 Start: 22621, Stop: 22902, Start Num: 79

Candidate Starts for Olympi\_31:



(35, 22408), (52, 22483), (54, 22495), (74, 22612), (Start: 79 @22621 has 26 MA's), (97, 22696), (101, 22708), (109, 22735), (115, 22750), (128, 22783), (148, 22846), (153, 22861),

Gene: OlympiaSaint\_32 Start: 28985, Stop: 29218, Start Num: 82

Candidate Starts for OlympiaSaint\_32:

(43, 28838), (Start: 82 @28985 has 326 MA's), (Start: 83 @28988 has 6 MA's), (114, 29099), (117, 29105), (121, 29114), (127, 29132), (128, 29135), (135, 29147),

Gene: OnionKnight\_23 Start: 18605, Stop: 18871, Start Num: 62

Candidate Starts for OnionKnight\_23:

(Start: 62 @18605 has 1 MA's), (72, 18641), (91, 18683), (106, 18743), (110, 18752), (125, 18785), (130, 18797), (135, 18806),

Gene: Ovechkin\_33 Start: 29544, Stop: 29777, Start Num: 82

Candidate Starts for Ovechkin\_33:

(21, 29109), (46, 29370), (Start: 76 @29535 has 6 MA's), (Start: 82 @29544 has 326 MA's), (Start: 83 @29547 has 6 MA's), (114, 29658), (117, 29664), (121, 29673), (127, 29691), (128, 29694), (135, 29706),

Gene: OwlsT2W\_33 Start: 28960, Stop: 29193, Start Num: 82

Candidate Starts for OwlsT2W\_33:

(Start: 82 @28960 has 326 MA's), (108, 29059), (117, 29080), (121, 29089), (135, 29122),

Gene: PHappiness\_32 Start: 28513, Stop: 28746, Start Num: 82

Candidate Starts for PHappiness\_32:

(Start: 82 @28513 has 326 MA's), (Start: 83 @28516 has 6 MA's), (114, 28627), (117, 28633), (121, 28642), (127, 28660), (128, 28663), (135, 28675),

Gene: PMC\_32 Start: 28514, Stop: 28747, Start Num: 82

Candidate Starts for PMC\_32:

(43, 28367), (Start: 82 @28514 has 326 MA's), (Start: 83 @28517 has 6 MA's), (114, 28628), (117, 28634), (121, 28643), (127, 28661), (128, 28664), (135, 28676),

Gene: Pacc40\_32 Start: 28705, Stop: 28938, Start Num: 82

Candidate Starts for Pacc40\_32:

(32, 28489), (Start: 82 @28705 has 326 MA's), (Start: 83 @28708 has 6 MA's), (114, 28819), (117, 28825), (121, 28834), (127, 28852), (128, 28855), (135, 28867),

Gene: Pepperoni\_20 Start: 18419, Stop: 18658, Start Num: 82

Candidate Starts for Pepperoni\_20:

(Start: 78 @18413 has 7 MA's), (Start: 82 @18419 has 326 MA's), (97, 18491), (132, 18572), (147, 18623), (148, 18626),

Gene: Percastrophe\_49 Start: 27893, Stop: 28090, Start Num: 84

Candidate Starts for Percastrophe\_49:

(Start: 84 @27893 has 21 MA's), (91, 27926), (98, 27959),

Gene: Percival\_23 Start: 19815, Stop: 20096, Start Num: 59

Candidate Starts for Percival\_23:

(Start: 59 @19815 has 13 MA's), (99, 19947), (128, 20025),

Gene: PermaG\_31 Start: 22670, Stop: 22951, Start Num: 79

Candidate Starts for PermaG\_31:

(Start: 79 @22670 has 26 MA's), (97, 22745), (101, 22757), (109, 22784), (115, 22799), (128, 22832), (148, 22895), (153, 22910),

Gene: Phalconet\_32 Start: 28642, Stop: 28875, Start Num: 82

Candidate Starts for Phalconet\_32:

(Start: 82 @28642 has 326 MA's), (108, 28741), (117, 28762), (121, 28771), (135, 28804),

Gene: Phalm\_28 Start: 25499, Stop: 25747, Start Num: 82

Candidate Starts for Phalm\_28:

(Start: 82 @25499 has 326 MA's),

Gene: Phanphagia\_29 Start: 27665, Stop: 27898, Start Num: 82

Candidate Starts for Phanphagia\_29:

(Start: 82 @27665 has 326 MA's), (108, 27764), (117, 27785), (121, 27794), (135, 27827),

Gene: Phasih\_33 Start: 29091, Stop: 29324, Start Num: 82

Candidate Starts for Phasih\_33:

(Start: 82 @29091 has 326 MA's), (Start: 83 @29094 has 6 MA's), (114, 29205), (117, 29211), (121, 29220), (127, 29238), (128, 29241), (135, 29253),

Gene: Phatniss\_33 Start: 29031, Stop: 29264, Start Num: 82

Candidate Starts for Phatniss\_33:

(43, 28884), (Start: 82 @29031 has 326 MA's), (Start: 83 @29034 has 6 MA's), (114, 29145), (117, 29151), (121, 29160), (127, 29178), (128, 29181), (135, 29193),

Gene: Phegasus\_28 Start: 25246, Stop: 25494, Start Num: 82

Candidate Starts for Phegasus\_28:

(Start: 82 @25246 has 326 MA's),

Gene: PhesterPhotato\_32 Start: 28562, Stop: 28795, Start Num: 82

Candidate Starts for PhesterPhotato\_32:

(Start: 82 @28562 has 326 MA's), (108, 28661), (117, 28682), (121, 28691), (135, 28724),

Gene: Philus\_32 Start: 28608, Stop: 28841, Start Num: 82

Candidate Starts for Philus\_32:

(43, 28461), (Start: 82 @28608 has 326 MA's), (Start: 83 @28611 has 6 MA's), (114, 28722), (117, 28728), (121, 28737), (127, 28755), (128, 28758), (135, 28770),

Gene: Phineas\_28 Start: 25611, Stop: 25859, Start Num: 82

Candidate Starts for Phineas\_28:

(Start: 82 @25611 has 326 MA's),

Gene: PhorbesPhlower\_21 Start: 18439, Stop: 18675, Start Num: 82

Candidate Starts for PhorbesPhlower\_21:

(Start: 82 @18439 has 326 MA's), (92, 18481), (97, 18511), (104, 18532), (105, 18535), (128, 18586), (132, 18592),

Gene: Phrann\_27 Start: 24392, Stop: 24637, Start Num: 82

Candidate Starts for Phrann\_27:

(6, 23375), (7, 23555), (11, 23771), (15, 23876), (17, 23894), (58, 24287), (63, 24335), (Start: 82 @24392 has 326 MA's), (111, 24497), (117, 24512), (142, 24575), (147, 24605),

Gene: Pickett\_19 Start: 17534, Stop: 17779, Start Num: 78

Candidate Starts for Pickett\_19:

(Start: 78 @17534 has 7 MA's), (Start: 82 @17540 has 326 MA's), (97, 17612), (132, 17693), (147, 17744), (148, 17747),

Gene: Pioneer3\_56 Start: 35879, Stop: 36094, Start Num: 67

Candidate Starts for Pioneer3\_56:

(48, 35789), (Start: 67 @35879 has 6 MA's), (69, 35885),

Gene: Piper2020\_34 Start: 29134, Stop: 29367, Start Num: 82

Candidate Starts for Piper2020\_34:

(Start: 82 @29134 has 326 MA's), (108, 29233), (117, 29254), (121, 29263), (135, 29296),

Gene: Pippy\_26 Start: 24672, Stop: 24905, Start Num: 82

Candidate Starts for Pippy\_26:

(Start: 82 @24672 has 326 MA's), (108, 24771), (117, 24792), (121, 24801), (135, 24834),

Gene: Pitbull\_23 Start: 17606, Stop: 17854, Start Num: 82

Candidate Starts for Pitbull\_23:

(Start: 82 @17606 has 326 MA's), (100, 17687), (103, 17696), (117, 17732), (123, 17747), (141, 17792),

Gene: Platte\_56 Start: 35664, Stop: 35879, Start Num: 67

Candidate Starts for Platte\_56:

(48, 35574), (Start: 67 @35664 has 6 MA's), (69, 35670),

Gene: Plumbus\_34 Start: 28611, Stop: 28844, Start Num: 82

Candidate Starts for Plumbus\_34:

(Start: 82 @28611 has 326 MA's), (Start: 83 @28614 has 6 MA's), (114, 28725), (117, 28731), (121, 28740), (127, 28758), (128, 28761), (135, 28773),

Gene: Poenanya\_32 Start: 28654, Stop: 28887, Start Num: 82

Candidate Starts for Poenanya\_32:

(Start: 82 @28654 has 326 MA's), (108, 28753), (117, 28774), (121, 28783), (135, 28816),

Gene: Polka14\_33 Start: 29157, Stop: 29390, Start Num: 82

Candidate Starts for Polka14\_33:

(Start: 82 @29157 has 326 MA's), (Start: 83 @29160 has 6 MA's), (114, 29271), (117, 29277), (121, 29286), (127, 29304), (128, 29307), (135, 29319),

Gene: Polkaroo\_28 Start: 25256, Stop: 25504, Start Num: 82

Candidate Starts for Polkaroo\_28:

(Start: 82 @25256 has 326 MA's),

Gene: Pollux\_23 Start: 20804, Stop: 21043, Start Num: 82

Candidate Starts for Pollux\_23:

(56, 20696), (Start: 82 @20804 has 326 MA's), (92, 20846), (104, 20897), (105, 20900), (128, 20951), (132, 20957),

Gene: Pollywog\_32 Start: 28866, Stop: 29099, Start Num: 82

Candidate Starts for Pollywog\_32:

(Start: 82 @28866 has 326 MA's), (Start: 83 @28869 has 6 MA's), (114, 28980), (117, 28986), (121, 28995), (127, 29013), (128, 29016), (135, 29028),

Gene: PopTart\_32 Start: 28847, Stop: 29080, Start Num: 82  
Candidate Starts for PopTart\_32:  
(Start: 82 @28847 has 326 MA's), (Start: 83 @28850 has 6 MA's), (108, 28946), (117, 28967), (121, 28976), (135, 29009),

Gene: Priscilla\_32 Start: 28794, Stop: 29027, Start Num: 82  
Candidate Starts for Priscilla\_32:  
(8, 28080), (9, 28101), (10, 28152), (12, 28242), (14, 28317), (18, 28356), (20, 28389), (22, 28422), (25, 28503), (26, 28506), (Start: 82 @28794 has 326 MA's), (108, 28893), (117, 28914), (121, 28923), (135, 28956),

Gene: PumpkinSpice\_71 Start: 53129, Stop: 53380, Start Num: 82  
Candidate Starts for PumpkinSpice\_71:  
(Start: 82 @53129 has 326 MA's), (99, 53204),

Gene: Pygmy\_30 Start: 27079, Stop: 27327, Start Num: 82  
Candidate Starts for Pygmy\_30:  
(Start: 82 @27079 has 326 MA's),

Gene: Quaran19\_72 Start: 53120, Stop: 53371, Start Num: 82  
Candidate Starts for Quaran19\_72:  
(Start: 82 @53120 has 326 MA's), (99, 53195),

Gene: QueenHazel\_27 Start: 25412, Stop: 25657, Start Num: 82  
Candidate Starts for QueenHazel\_27:  
(7, 24575), (11, 24791), (15, 24896), (17, 24914), (58, 25307), (63, 25355), (Start: 82 @25412 has 326 MA's), (111, 25517), (117, 25532), (147, 25625),

Gene: QuickMath\_33 Start: 29883, Stop: 30116, Start Num: 82  
Candidate Starts for QuickMath\_33:  
(43, 29736), (Start: 82 @29883 has 326 MA's), (Start: 83 @29886 has 6 MA's), (114, 29997), (117, 30003), (121, 30012), (127, 30030), (128, 30033), (135, 30045),

Gene: Quico\_33 Start: 28343, Stop: 28576, Start Num: 82  
Candidate Starts for Quico\_33:  
(43, 28196), (Start: 82 @28343 has 326 MA's), (Start: 83 @28346 has 6 MA's), (114, 28457), (117, 28463), (121, 28472), (127, 28490), (128, 28493), (135, 28505),

Gene: Radiance\_32 Start: 28707, Stop: 28940, Start Num: 82  
Candidate Starts for Radiance\_32:  
(43, 28560), (Start: 82 @28707 has 326 MA's), (Start: 83 @28710 has 6 MA's), (114, 28821), (117, 28827), (121, 28836), (127, 28854), (128, 28857), (135, 28869),

Gene: Ramsey\_35 Start: 29367, Stop: 29600, Start Num: 80  
Candidate Starts for Ramsey\_35:  
(Start: 80 @29367 has 5 MA's), (108, 29466), (117, 29487), (121, 29496), (127, 29514), (128, 29517), (135, 29529),

Gene: Rasovi\_30 Start: 22726, Stop: 23004, Start Num: 79  
Candidate Starts for Rasovi\_30:  
(35, 22486), (52, 22588), (74, 22717), (Start: 79 @22726 has 26 MA's), (97, 22801), (101, 22813), (109, 22840), (128, 22888), (153, 22966),

Gene: RayTheFireFly\_23 Start: 21371, Stop: 21616, Start Num: 78

Candidate Starts for RayTheFireFly\_23:

(Start: 78 @21371 has 7 MA's), (Start: 82 @21377 has 326 MA's), (92, 21419), (97, 21449), (104, 21470), (128, 21524), (148, 21584),

Gene: RedBird\_32 Start: 28512, Stop: 28745, Start Num: 82

Candidate Starts for RedBird\_32:

(Start: 82 @28512 has 326 MA's), (Start: 83 @28515 has 6 MA's), (114, 28626), (117, 28632), (121, 28641), (127, 28659), (128, 28662), (135, 28674),

Gene: Renaud18\_32 Start: 28732, Stop: 28965, Start Num: 82

Candidate Starts for Renaud18\_32:

(26, 28444), (Start: 82 @28732 has 326 MA's), (108, 28831), (117, 28852), (121, 28861), (135, 28894),

Gene: RetrieverFever\_49 Start: 27549, Stop: 27746, Start Num: 84

Candidate Starts for RetrieverFever\_49:

(Start: 84 @27549 has 21 MA's), (95, 27600),

Gene: Rialto\_36 Start: 30865, Stop: 31098, Start Num: 82

Candidate Starts for Rialto\_36:

(43, 30718), (Start: 82 @30865 has 326 MA's), (Start: 83 @30868 has 6 MA's), (114, 30979), (117, 30985), (121, 30994), (127, 31012), (128, 31015), (135, 31027),

Gene: Rideau\_51 Start: 27480, Stop: 27677, Start Num: 84

Candidate Starts for Rideau\_51:

(55, 27357), (Start: 84 @27480 has 21 MA's), (91, 27513), (98, 27546), (132, 27615), (143, 27642),

Gene: Rikishi\_75 Start: 53035, Stop: 53286, Start Num: 82

Candidate Starts for Rikishi\_75:

(Start: 82 @53035 has 326 MA's), (99, 53110),

Gene: Riptide\_68 Start: 51923, Stop: 52174, Start Num: 82

Candidate Starts for Riptide\_68:

(Start: 82 @51923 has 326 MA's), (101, 52004), (154, 52151),

Gene: Rita\_33 Start: 28781, Stop: 29014, Start Num: 82

Candidate Starts for Rita\_33:

(26, 28493), (Start: 82 @28781 has 326 MA's), (108, 28880), (114, 28895), (117, 28901), (121, 28910), (135, 28943),

Gene: RitaG\_33 Start: 28977, Stop: 29210, Start Num: 82

Candidate Starts for RitaG\_33:

(Start: 82 @28977 has 326 MA's), (Start: 83 @28980 has 6 MA's), (114, 29091), (117, 29097), (121, 29106), (127, 29124), (128, 29127), (135, 29139),

Gene: Rockne\_32 Start: 28514, Stop: 28747, Start Num: 82

Candidate Starts for Rockne\_32:

(43, 28367), (Start: 82 @28514 has 326 MA's), (Start: 83 @28517 has 6 MA's), (114, 28628), (117, 28634), (121, 28643), (127, 28661), (128, 28664), (135, 28676),

Gene: RockyHorror\_33 Start: 28458, Stop: 28691, Start Num: 82

Candidate Starts for RockyHorror\_33:

(Start: 82 @28458 has 326 MA's), (Start: 83 @28461 has 6 MA's), (114, 28572), (117, 28578), (121, 28587), (127, 28605), (128, 28608), (135, 28620),

Gene: RomansRevenge\_35 Start: 33483, Stop: 33725, Start Num: 71

Candidate Starts for RomansRevenge\_35:

(71, 33483), (100, 33570), (118, 33621), (138, 33669),

Gene: Romero\_49 Start: 27952, Stop: 28149, Start Num: 84

Candidate Starts for Romero\_49:

(Start: 84 @27952 has 21 MA's), (91, 27985), (98, 28018),

Gene: Ronaldo\_64 Start: 35651, Stop: 35863, Start Num: 82

Candidate Starts for Ronaldo\_64:

(Start: 82 @35651 has 326 MA's), (91, 35690), (128, 35795), (143, 35828),

Gene: RosePharie\_49 Start: 28196, Stop: 28393, Start Num: 84

Candidate Starts for RosePharie\_49:

(31, 27917), (34, 27941), (39, 27974), (44, 27998), (49, 28043), (51, 28046), (Start: 84 @28196 has 21 MA's), (107, 28280), (141, 28355),

Gene: Royals2015\_32 Start: 28631, Stop: 28864, Start Num: 82

Candidate Starts for Royals2015\_32:

(Start: 82 @28631 has 326 MA's), (Start: 83 @28634 has 6 MA's), (114, 28745), (117, 28751), (121, 28760), (127, 28778), (128, 28781), (135, 28793),

Gene: Ruby\_34 Start: 29563, Stop: 29805, Start Num: 76

Candidate Starts for Ruby\_34:

(21, 29137), (46, 29398), (Start: 76 @29563 has 6 MA's), (Start: 82 @29572 has 326 MA's), (Start: 83 @29575 has 6 MA's), (114, 29686), (117, 29692), (121, 29701), (127, 29719), (128, 29722), (135, 29734),

Gene: SBlackberry\_30 Start: 22499, Stop: 22780, Start Num: 79

Candidate Starts for SBlackberry\_30:

(35, 22286), (52, 22361), (74, 22490), (Start: 79 @22499 has 26 MA's), (97, 22574), (101, 22586), (109, 22613), (115, 22628), (128, 22661), (153, 22739),

Gene: SG4\_33 Start: 29281, Stop: 29514, Start Num: 82

Candidate Starts for SG4\_33:

(21, 28846), (46, 29107), (Start: 76 @29272 has 6 MA's), (Start: 82 @29281 has 326 MA's), (Start: 83 @29284 has 6 MA's), (108, 29380), (114, 29395), (117, 29401), (121, 29410), (127, 29428), (128, 29431), (135, 29443),

Gene: SPB78\_23 Start: 20233, Stop: 20484, Start Num: 82

Candidate Starts for SPB78\_23:

(53, 20095), (Start: 82 @20233 has 326 MA's), (91, 20272), (97, 20296), (100, 20305), (127, 20380), (138, 20404),

Gene: Saal\_32 Start: 28586, Stop: 28819, Start Num: 82

Candidate Starts for Saal\_32:

(43, 28439), (Start: 82 @28586 has 326 MA's), (Start: 83 @28589 has 6 MA's), (114, 28700), (117, 28706), (121, 28715), (127, 28733), (128, 28736), (135, 28748),

Gene: Sabbb\_33 Start: 28931, Stop: 29164, Start Num: 82

Candidate Starts for Sabbb\_33:

(30, 28688), (43, 28784), (Start: 82 @28931 has 326 MA's), (Start: 83 @28934 has 6 MA's), (114, 29045), (117, 29051), (121, 29060), (127, 29078), (128, 29081), (135, 29093),

Gene: SaltySpitoon\_72 Start: 53129, Stop: 53380, Start Num: 82

Candidate Starts for SaltySpitoon\_72:

(Start: 82 @53129 has 326 MA's), (99, 53204),

Gene: Sandalphon\_33 Start: 29315, Stop: 29548, Start Num: 82

Candidate Starts for Sandalphon\_33:

(Start: 82 @29315 has 326 MA's), (108, 29414), (117, 29435), (121, 29444), (135, 29477),

Gene: Sarma624\_28 Start: 24741, Stop: 24974, Start Num: 82

Candidate Starts for Sarma624\_28:

(Start: 82 @24741 has 326 MA's), (108, 24840), (114, 24855), (117, 24861), (121, 24870), (135, 24903),

Gene: Sassafras\_33 Start: 29216, Stop: 29449, Start Num: 82

Candidate Starts for Sassafras\_33:

(Start: 82 @29216 has 326 MA's), (Start: 83 @29219 has 6 MA's), (114, 29330), (117, 29336), (121, 29345), (127, 29363), (128, 29366), (135, 29378),

Gene: SassyB\_32 Start: 28847, Stop: 29080, Start Num: 82

Candidate Starts for SassyB\_32:

(Start: 82 @28847 has 326 MA's), (Start: 83 @28850 has 6 MA's), (108, 28946), (117, 28967), (121, 28976), (135, 29009),

Gene: Scottish\_33 Start: 29837, Stop: 30070, Start Num: 82

Candidate Starts for Scottish\_33:

(Start: 82 @29837 has 326 MA's), (Start: 83 @29840 has 6 MA's), (114, 29951), (117, 29957), (121, 29966), (127, 29984), (128, 29987), (135, 29999),

Gene: Seabastian\_32 Start: 28744, Stop: 28977, Start Num: 82

Candidate Starts for Seabastian\_32:

(32, 28528), (Start: 82 @28744 has 326 MA's), (Start: 83 @28747 has 6 MA's), (114, 28858), (117, 28864), (121, 28873), (127, 28891), (128, 28894), (135, 28906),

Gene: Seagreen\_33 Start: 28654, Stop: 28887, Start Num: 82

Candidate Starts for Seagreen\_33:

(Start: 82 @28654 has 326 MA's), (Start: 83 @28657 has 6 MA's), (114, 28768), (121, 28783), (127, 28801), (128, 28804), (135, 28816),

Gene: Shagrat\_28 Start: 27081, Stop: 27296, Start Num: 82

Candidate Starts for Shagrat\_28:

(Start: 82 @27081 has 326 MA's), (100, 27159), (138, 27249),

Gene: Shauna1\_29 Start: 27668, Stop: 27901, Start Num: 82

Candidate Starts for Shauna1\_29:

(Start: 82 @27668 has 326 MA's), (108, 27767), (117, 27788), (121, 27797), (135, 27830),

Gene: ShiLan\_32 Start: 28750, Stop: 28983, Start Num: 82

Candidate Starts for ShiLan\_32:

(25, 28459), (26, 28462), (29, 28498), (Start: 82 @28750 has 326 MA's), (108, 28849), (117, 28870), (121, 28879), (135, 28912),

Gene: Shipwreck\_30 Start: 27054, Stop: 27302, Start Num: 82  
Candidate Starts for Shipwreck\_30:  
(Start: 82 @27054 has 326 MA's),

Gene: ShowerHandel\_32 Start: 28709, Stop: 28942, Start Num: 82  
Candidate Starts for ShowerHandel\_32:  
(25, 28418), (26, 28421), (29, 28457), (Start: 82 @28709 has 326 MA's), (108, 28808), (117, 28829), (121, 28838), (135, 28871),

Gene: ShroomBoi\_29 Start: 27607, Stop: 27840, Start Num: 82  
Candidate Starts for ShroomBoi\_29:  
(26, 27319), (Start: 82 @27607 has 326 MA's), (108, 27706), (117, 27727), (121, 27736), (135, 27769),

Gene: SiSi\_32 Start: 28515, Stop: 28748, Start Num: 82  
Candidate Starts for SiSi\_32:  
(Start: 82 @28515 has 326 MA's), (Start: 83 @28518 has 6 MA's), (114, 28629), (117, 28635), (121, 28644), (127, 28662), (128, 28665), (135, 28677),

Gene: SimranZ1\_35 Start: 28834, Stop: 29067, Start Num: 82  
Candidate Starts for SimranZ1\_35:  
(32, 28618), (Start: 82 @28834 has 326 MA's), (Start: 83 @28837 has 6 MA's), (114, 28948), (117, 28954), (121, 28963), (127, 28981), (128, 28984), (135, 28996),

Gene: Sollertia\_72 Start: 53095, Stop: 53346, Start Num: 82  
Candidate Starts for Sollertia\_72:  
(Start: 82 @53095 has 326 MA's), (92, 53137), (118, 53215), (154, 53323),

Gene: Sonah\_28 Start: 25227, Stop: 25475, Start Num: 82  
Candidate Starts for Sonah\_28:  
(Start: 82 @25227 has 326 MA's),

Gene: Soul22\_37 Start: 28902, Stop: 29144, Start Num: 76  
Candidate Starts for Soul22\_37:  
(Start: 76 @28902 has 6 MA's), (Start: 82 @28911 has 326 MA's), (Start: 83 @28914 has 6 MA's), (114, 29025), (117, 29031), (121, 29040), (127, 29058), (128, 29061), (135, 29073),

Gene: Sparkdehlily\_32 Start: 28632, Stop: 28865, Start Num: 82  
Candidate Starts for Sparkdehlily\_32:  
(43, 28485), (Start: 82 @28632 has 326 MA's), (Start: 83 @28635 has 6 MA's), (114, 28746), (117, 28752), (121, 28761), (127, 28779), (128, 28782), (135, 28794),

Gene: Spartacus\_34 Start: 29042, Stop: 29275, Start Num: 82  
Candidate Starts for Spartacus\_34:  
(Start: 82 @29042 has 326 MA's), (Start: 83 @29045 has 6 MA's), (114, 29156), (117, 29162), (121, 29171), (127, 29189), (128, 29192), (135, 29204),

Gene: Spelly\_72 Start: 53084, Stop: 53335, Start Num: 82  
Candidate Starts for Spelly\_72:  
(Start: 82 @53084 has 326 MA's), (99, 53159),



Gene: Spikelee\_34 Start: 28780, Stop: 29013, Start Num: 80  
Candidate Starts for Spikelee\_34:  
(Start: 80 @28780 has 5 MA's), (114, 28894), (117, 28900), (121, 28909), (127, 28927), (128, 28930),  
(135, 28942),

Gene: Spilled\_73 Start: 53201, Stop: 53452, Start Num: 82  
Candidate Starts for Spilled\_73:  
(Start: 82 @53201 has 326 MA's), (99, 53276),

Gene: Splinter\_24 Start: 18843, Stop: 19082, Start Num: 79  
Candidate Starts for Splinter\_24:  
(Start: 79 @18843 has 26 MA's), (87, 18867), (89, 18879), (98, 18918), (133, 19008), (144, 19044),

Gene: Spoonbill\_32 Start: 28796, Stop: 29029, Start Num: 82  
Candidate Starts for Spoonbill\_32:  
(43, 28649), (Start: 82 @28796 has 326 MA's), (Start: 83 @28799 has 6 MA's), (114, 28910), (117,  
28916), (121, 28925), (127, 28943), (128, 28946), (135, 28958),

Gene: StAnnes\_31 Start: 29111, Stop: 29344, Start Num: 82  
Candidate Starts for StAnnes\_31:  
(21, 28676), (46, 28937), (Start: 76 @29102 has 6 MA's), (Start: 82 @29111 has 326 MA's), (Start: 83  
@29114 has 6 MA's), (114, 29225), (117, 29231), (121, 29240), (127, 29258), (128, 29261), (135,  
29273),

Gene: StAugustine\_22 Start: 16877, Stop: 17173, Start Num: 73  
Candidate Starts for StAugustine\_22:  
(73, 16877), (112, 17015), (151, 17123),

Gene: Stanimal\_72 Start: 52984, Stop: 53235, Start Num: 82  
Candidate Starts for Stanimal\_72:  
(Start: 82 @52984 has 326 MA's), (92, 53026), (118, 53104), (154, 53212),

Gene: Stap\_33 Start: 28688, Stop: 28921, Start Num: 82  
Candidate Starts for Stap\_33:  
(26, 28397), (Start: 82 @28688 has 326 MA's), (114, 28802), (117, 28808), (121, 28817), (127, 28835),  
(128, 28838), (135, 28850),

Gene: StarPlatinum\_72 Start: 53629, Stop: 53880, Start Num: 82  
Candidate Starts for StarPlatinum\_72:  
(Start: 82 @53629 has 326 MA's), (99, 53704), (148, 53836),

Gene: Starbow\_70 Start: 53105, Stop: 53356, Start Num: 82  
Candidate Starts for Starbow\_70:  
(Start: 82 @53105 has 326 MA's), (99, 53180),

Gene: Starcevich\_36 Start: 29410, Stop: 29643, Start Num: 82  
Candidate Starts for Starcevich\_36:  
(32, 29200), (Start: 82 @29410 has 326 MA's), (108, 29509), (117, 29530), (121, 29539), (135, 29572),

Gene: Stella\_51 Start: 28187, Stop: 28384, Start Num: 84  
Candidate Starts for Stella\_51:  
(Start: 84 @28187 has 21 MA's), (91, 28220), (143, 28349),

Gene: StevieRay\_28 Start: 25219, Stop: 25464, Start Num: 82  
Candidate Starts for StevieRay\_28:  
(Start: 82 @25219 has 326 MA's),

Gene: StressBall\_28 Start: 25499, Stop: 25747, Start Num: 82  
Candidate Starts for StressBall\_28:  
(Start: 82 @25499 has 326 MA's),

Gene: Strokeseat\_33 Start: 29357, Stop: 29590, Start Num: 82  
Candidate Starts for Strokeseat\_33:  
(Start: 82 @29357 has 326 MA's), (108, 29456), (117, 29477), (121, 29486), (135, 29519),

Gene: SuMoo\_22 Start: 18079, Stop: 18363, Start Num: 59  
Candidate Starts for SuMoo\_22:  
(Start: 59 @18079 has 13 MA's), (138, 18319), (148, 18358),

Gene: Sucha\_27 Start: 19896, Stop: 20168, Start Num: 79  
Candidate Starts for Sucha\_27:  
(74, 19887), (Start: 79 @19896 has 26 MA's), (101, 19983), (128, 20058),

Gene: SuperGrey\_33 Start: 29503, Stop: 29736, Start Num: 82  
Candidate Starts for SuperGrey\_33:  
(26, 29215), (Start: 82 @29503 has 326 MA's), (108, 29602), (117, 29623), (121, 29632), (135, 29665),

Gene: SwagPiggett\_32 Start: 28520, Stop: 28753, Start Num: 82  
Candidate Starts for SwagPiggett\_32:  
(25, 28229), (26, 28232), (29, 28268), (Start: 82 @28520 has 326 MA's), (108, 28619), (117, 28640),  
(121, 28649), (135, 28682),

Gene: TChen\_32 Start: 29278, Stop: 29541, Start Num: 77  
Candidate Starts for TChen\_32:  
(41, 29071), (42, 29086), (60, 29221), (Start: 77 @29278 has 3 MA's), (130, 29443), (134, 29449),  
(136, 29452), (142, 29470), (155, 29527),

Gene: TDanisky\_32 Start: 28632, Stop: 28865, Start Num: 82  
Candidate Starts for TDanisky\_32:  
(43, 28485), (Start: 82 @28632 has 326 MA's), (Start: 83 @28635 has 6 MA's), (114, 28746), (117,  
28752), (121, 28761), (127, 28779), (128, 28782), (135, 28794),

Gene: TZGordon\_26 Start: 18982, Stop: 19221, Start Num: 79  
Candidate Starts for TZGordon\_26:  
(Start: 79 @18982 has 26 MA's), (87, 19006), (89, 19018), (98, 19057), (133, 19147), (144, 19183),

Gene: Taj\_32 Start: 28693, Stop: 28926, Start Num: 82  
Candidate Starts for Taj\_32:  
(Start: 82 @28693 has 326 MA's), (108, 28792), (117, 28813), (121, 28822), (135, 28855),

Gene: Tandem\_56 Start: 35818, Stop: 36033, Start Num: 67  
Candidate Starts for Tandem\_56:  
(48, 35728), (Start: 67 @35818 has 6 MA's), (69, 35824),

Gene: Targaryen\_71 Start: 54698, Stop: 54949, Start Num: 82  
Candidate Starts for Targaryen\_71:

(Start: 82 @54698 has 326 MA's), (121, 54824),

Gene: Techage\_28 Start: 25231, Stop: 25479, Start Num: 82

Candidate Starts for Techage\_28:

(Start: 82 @25231 has 326 MA's),

Gene: Thespis\_28 Start: 25235, Stop: 25483, Start Num: 82

Candidate Starts for Thespis\_28:

(Start: 82 @25235 has 326 MA's),

Gene: ThetaBob\_32 Start: 28234, Stop: 28491, Start Num: 82

Candidate Starts for ThetaBob\_32:

(Start: 82 @28234 has 326 MA's), (91, 28273), (100, 28306), (101, 28309), (121, 28363), (139, 28408), (140, 28411),

Gene: TinaLin\_27 Start: 19813, Stop: 20055, Start Num: 79

Candidate Starts for TinaLin\_27:

(Start: 79 @19813 has 26 MA's), (87, 19837), (98, 19888), (104, 19906), (121, 19948), (133, 19978), (144, 20017), (146, 20029),

Gene: TomSawyer\_70 Start: 52723, Stop: 52974, Start Num: 82

Candidate Starts for TomSawyer\_70:

(Start: 82 @52723 has 326 MA's), (99, 52798),

Gene: Tomas\_74 Start: 55444, Stop: 55695, Start Num: 82

Candidate Starts for Tomas\_74:

(70, 55414), (Start: 82 @55444 has 326 MA's), (99, 55519), (101, 55525), (154, 55672),

Gene: TootsiePop\_33 Start: 28418, Stop: 28651, Start Num: 82

Candidate Starts for TootsiePop\_33:

(Start: 82 @28418 has 326 MA's), (Start: 83 @28421 has 6 MA's), (114, 28532), (117, 28538), (121, 28547), (127, 28565), (128, 28568), (135, 28580),

Gene: Tootsieroll\_33 Start: 28584, Stop: 28817, Start Num: 82

Candidate Starts for Tootsieroll\_33:

(26, 28293), (Start: 82 @28584 has 326 MA's), (108, 28683), (117, 28704), (121, 28713), (135, 28746),

Gene: ToriToki\_49 Start: 27955, Stop: 28152, Start Num: 84

Candidate Starts for ToriToki\_49:

(Start: 84 @27955 has 21 MA's), (91, 27988), (98, 28021),

Gene: Toron\_33 Start: 29073, Stop: 29384, Start Num: 65

Candidate Starts for Toron\_33:

(60, 29058), (65, 29073), (68, 29088), (Start: 77 @29115 has 3 MA's), (88, 29151), (130, 29286), (134, 29292), (136, 29295), (142, 29313), (155, 29370),

Gene: Totinger\_33 Start: 28516, Stop: 28749, Start Num: 82

Candidate Starts for Totinger\_33:

(43, 28369), (Start: 82 @28516 has 326 MA's), (Start: 83 @28519 has 6 MA's), (114, 28630), (117, 28636), (121, 28645), (127, 28663), (128, 28666), (135, 28678),

Gene: Treat\_49 Start: 27896, Stop: 28093, Start Num: 84

Candidate Starts for Treat\_49:

(Start: 84 @27896 has 21 MA's), (91, 27929), (98, 27962),

Gene: TurboVicky\_30 Start: 22515, Stop: 22793, Start Num: 79

Candidate Starts for TurboVicky\_30:

(35, 22284), (52, 22377), (57, 22404), (74, 22506), (Start: 79 @22515 has 26 MA's), (101, 22602), (115, 22644), (128, 22677), (153, 22755),

Gene: Tweety\_32 Start: 28751, Stop: 28984, Start Num: 82

Candidate Starts for Tweety\_32:

(Start: 82 @28751 has 326 MA's), (108, 28850), (117, 28871), (121, 28880), (135, 28913),

Gene: Typher\_32 Start: 22644, Stop: 22922, Start Num: 79

Candidate Starts for Typher\_32:

(35, 22413), (52, 22506), (57, 22533), (74, 22635), (Start: 79 @22644 has 26 MA's), (101, 22731), (115, 22773), (128, 22806), (153, 22884),

Gene: UncleRicky\_35 Start: 29847, Stop: 30080, Start Num: 82

Candidate Starts for UncleRicky\_35:

(43, 29700), (Start: 82 @29847 has 326 MA's), (Start: 83 @29850 has 6 MA's), (114, 29961), (117, 29967), (121, 29976), (127, 29994), (128, 29997), (135, 30009),

Gene: UtzChips\_22 Start: 18828, Stop: 19115, Start Num: 59

Candidate Starts for UtzChips\_22:

(Start: 59 @18828 has 13 MA's), (69, 18864), (119, 19026), (148, 19110),

Gene: VRedHorse\_32 Start: 28705, Stop: 28938, Start Num: 82

Candidate Starts for VRedHorse\_32:

(43, 28558), (Start: 82 @28705 has 326 MA's), (Start: 83 @28708 has 6 MA's), (114, 28819), (117, 28825), (121, 28834), (135, 28867),

Gene: Velveteen\_28 Start: 24741, Stop: 24974, Start Num: 82

Candidate Starts for Velveteen\_28:

(Start: 82 @24741 has 326 MA's), (108, 24840), (114, 24855), (117, 24861), (121, 24870), (135, 24903),

Gene: Vendetta\_24 Start: 18843, Stop: 19082, Start Num: 79

Candidate Starts for Vendetta\_24:

(Start: 79 @18843 has 26 MA's), (87, 18867), (89, 18879), (98, 18918), (133, 19008), (144, 19044),

Gene: Venti\_28 Start: 25240, Stop: 25488, Start Num: 82

Candidate Starts for Venti\_28:

(Start: 82 @25240 has 326 MA's),

Gene: Veteran\_32 Start: 28554, Stop: 28787, Start Num: 82

Candidate Starts for Veteran\_32:

(Start: 82 @28554 has 326 MA's), (Start: 83 @28557 has 6 MA's), (114, 28668), (117, 28674), (121, 28683), (127, 28701), (128, 28704), (135, 28716),

Gene: Vidya\_28 Start: 25240, Stop: 25488, Start Num: 82

Candidate Starts for Vidya\_28:

(Start: 82 @25240 has 326 MA's),

Gene: Vivum\_33 Start: 28532, Stop: 28765, Start Num: 82

Candidate Starts for Vivum\_33:

(Start: 82 @28532 has 326 MA's), (108, 28631), (117, 28652), (121, 28661), (135, 28694),

Gene: Volt\_64 Start: 35815, Stop: 36027, Start Num: 82

Candidate Starts for Volt\_64:

(Start: 82 @35815 has 326 MA's), (91, 35854), (128, 35959), (143, 35992),

Gene: Vorvolakos\_49 Start: 27548, Stop: 27745, Start Num: 84

Candidate Starts for Vorvolakos\_49:

(Start: 84 @27548 has 21 MA's), (95, 27599),

Gene: WRightOn\_50 Start: 27662, Stop: 27859, Start Num: 84

Candidate Starts for WRightOn\_50:

(Start: 84 @27662 has 21 MA's), (92, 27698), (107, 27746), (141, 27821),

Gene: Wachhund\_32 Start: 28708, Stop: 28941, Start Num: 82

Candidate Starts for Wachhund\_32:

(Start: 82 @28708 has 326 MA's), (108, 28807), (117, 28828), (121, 28837), (135, 28870),

Gene: Wakanda\_47 Start: 44427, Stop: 44681, Start Num: 82

Candidate Starts for Wakanda\_47:

(Start: 82 @44427 has 326 MA's), (148, 44640),

Gene: Warpy\_74 Start: 54162, Stop: 54413, Start Num: 82

Candidate Starts for Warpy\_74:

(Start: 82 @54162 has 326 MA's), (121, 54288),

Gene: Wee\_33 Start: 29231, Stop: 29464, Start Num: 82

Candidate Starts for Wee\_33:

(Start: 82 @29231 has 326 MA's), (108, 29330), (117, 29351), (121, 29360), (135, 29393),

Gene: Whatsapiecost\_33 Start: 28967, Stop: 29200, Start Num: 82

Candidate Starts for Whatsapiecost\_33:

(Start: 82 @28967 has 326 MA's), (108, 29066), (117, 29087), (121, 29096), (135, 29129),

Gene: Whouxphf\_33 Start: 29025, Stop: 29258, Start Num: 82

Candidate Starts for Whouxphf\_33:

(24, 28716), (30, 28782), (43, 28878), (Start: 82 @29025 has 326 MA's), (Start: 83 @29028 has 6 MA's), (114, 29139), (117, 29145), (121, 29154), (135, 29187),

Gene: WillSterrel\_34 Start: 30156, Stop: 30389, Start Num: 82

Candidate Starts for WillSterrel\_34:

(Start: 82 @30156 has 326 MA's), (108, 30255), (117, 30276), (121, 30285), (135, 30318),

Gene: Wipeout\_70 Start: 53474, Stop: 53725, Start Num: 82

Candidate Starts for Wipeout\_70:

(Start: 82 @53474 has 326 MA's), (99, 53549),

Gene: Wofford\_71 Start: 54159, Stop: 54410, Start Num: 82

Candidate Starts for Wofford\_71:

(Start: 82 @54159 has 326 MA's), (99, 54234), (114, 54270), (132, 54312), (143, 54339),

Gene: XFactor\_32 Start: 28712, Stop: 28945, Start Num: 82

Candidate Starts for XFactor\_32:

(43, 28565), (Start: 82 @28712 has 326 MA's), (Start: 83 @28715 has 6 MA's), (114, 28826), (117, 28832), (121, 28841), (127, 28859), (128, 28862), (135, 28874),

Gene: Xavia\_28 Start: 25869, Stop: 26114, Start Num: 82

Candidate Starts for Xavia\_28:

(6, 24852), (7, 25032), (11, 25248), (15, 25353), (17, 25371), (58, 25764), (63, 25812), (Start: 82 @25869 has 326 MA's), (111, 25974), (117, 25989), (142, 26052),

Gene: Xula\_26 Start: 24936, Stop: 25181, Start Num: 82

Candidate Starts for Xula\_26:

(7, 24099), (11, 24315), (15, 24420), (17, 24438), (58, 24831), (63, 24879), (Start: 82 @24936 has 326 MA's), (111, 25041), (117, 25056),

Gene: Yaboi\_72 Start: 53072, Stop: 53323, Start Num: 82

Candidate Starts for Yaboi\_72:

(Start: 82 @53072 has 326 MA's), (92, 53114), (118, 53192), (154, 53300),

Gene: Yorick\_32 Start: 28707, Stop: 28940, Start Num: 82

Candidate Starts for Yorick\_32:

(25, 28416), (26, 28419), (29, 28455), (Start: 82 @28707 has 326 MA's), (108, 28806), (117, 28827), (121, 28836), (135, 28869),

Gene: Yoshi\_39 Start: 28311, Stop: 28568, Start Num: 82

Candidate Starts for Yoshi\_39:

(Start: 82 @28311 has 326 MA's), (85, 28320), (100, 28383), (121, 28440), (127, 28458), (139, 28485), (140, 28488), (156, 28557),

Gene: Zanella\_30 Start: 22523, Stop: 22801, Start Num: 79

Candidate Starts for Zanella\_30:

(35, 22292), (52, 22385), (54, 22397), (74, 22514), (Start: 79 @22523 has 26 MA's), (101, 22610), (115, 22652), (128, 22685), (153, 22763),

Gene: Zapner\_39 Start: 29391, Stop: 29648, Start Num: 81

Candidate Starts for Zapner\_39:

(Start: 81 @29391 has 4 MA's), (86, 29409), (97, 29454), (98, 29457), (111, 29496), (118, 29514), (128, 29541), (132, 29547), (133, 29550),

Gene: Zeigle\_47 Start: 27506, Stop: 27703, Start Num: 84

Candidate Starts for Zeigle\_47:

(Start: 84 @27506 has 21 MA's), (92, 27542), (107, 27590), (141, 27665),

Gene: Zerg\_32 Start: 28567, Stop: 28800, Start Num: 82

Candidate Starts for Zerg\_32:

(Start: 82 @28567 has 326 MA's), (Start: 83 @28570 has 6 MA's), (114, 28681), (117, 28687), (121, 28696), (127, 28714), (128, 28717), (135, 28729),

Gene: Zeta1847\_21 Start: 18934, Stop: 19224, Start Num: 59

Candidate Starts for Zeta1847\_21:

(16, 18499), (48, 18847), (Start: 59 @18934 has 13 MA's), (128, 19159), (148, 19219),

Gene: Ziko\_64 Start: 35637, Stop: 35849, Start Num: 82

Candidate Starts for Ziko\_64:

(Start: 82 @35637 has 326 MA's), (91, 35676), (128, 35781), (143, 35814),

Gene: Zilizebeth\_28 Start: 25240, Stop: 25488, Start Num: 82

Candidate Starts for Zilizebeth\_28:

(Start: 82 @25240 has 326 MA's),

Gene: Zizzle\_32 Start: 28651, Stop: 28884, Start Num: 82

Candidate Starts for Zizzle\_32:

(25, 28360), (26, 28363), (29, 28399), (Start: 82 @28651 has 326 MA's), (108, 28750), (117, 28771),  
(121, 28780), (135, 28813),

Gene: ZooBear\_49 Start: 27959, Stop: 28156, Start Num: 84

Candidate Starts for ZooBear\_49:

(Start: 84 @27959 has 21 MA's), (91, 27992), (98, 28025),