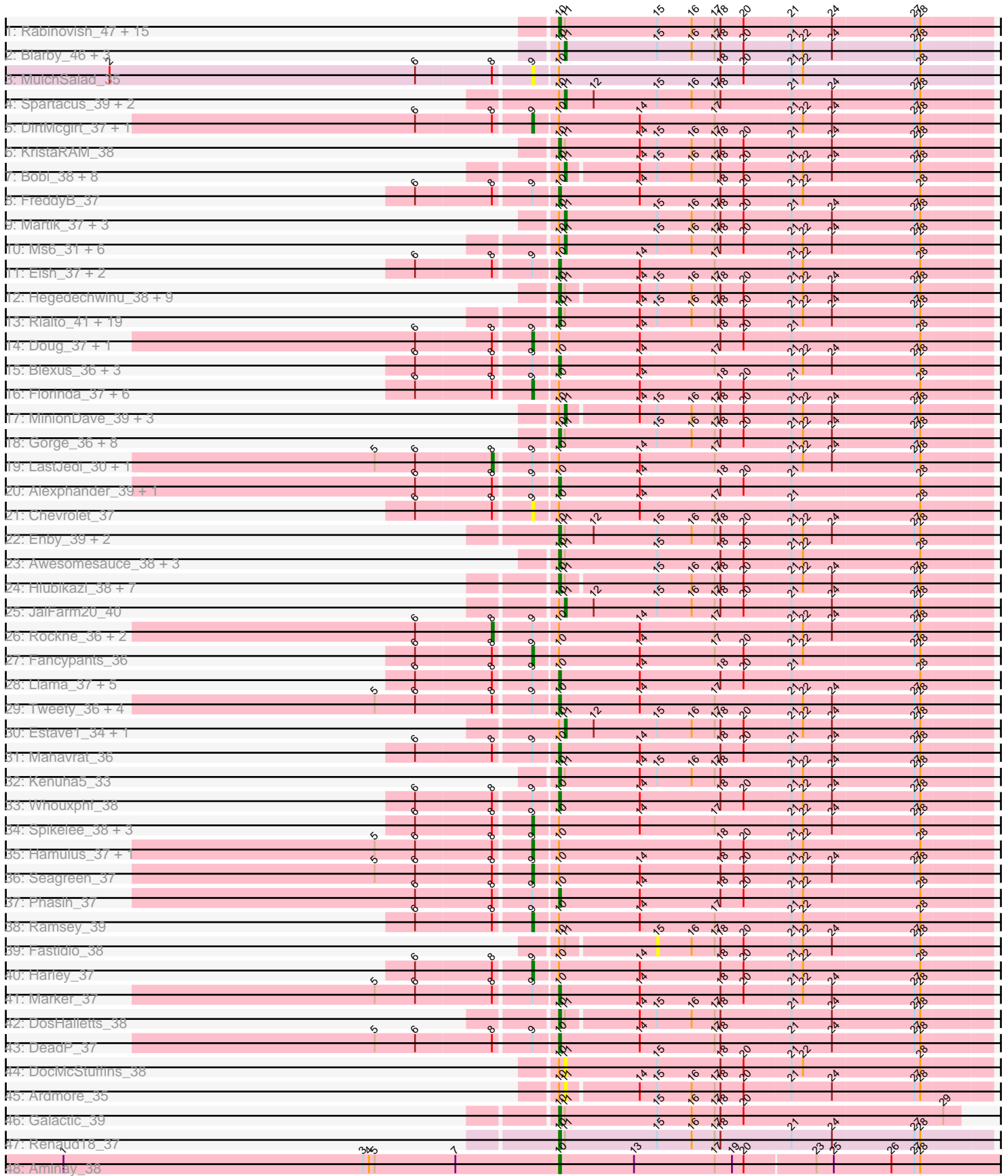


Pham 171242



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 171242 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171242 has 167 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Rabinovish\_47, Pippy\_30, SwagPiggett\_37, NormanBulbieJr\_37, Koella\_30, Nivrat\_36, BobaPhett\_36, ShowerHandel\_37, Zizzle\_36, Priscilla\_36, Crumble\_30, LilMoolah\_36, Burwell21\_36, Jarcob\_36, ShiLan\_36, Cabrinians\_36
- Track 2 : Blarby\_46, Philus\_36, Wachhund\_36, Phalconet\_37
- Track 3 : MulchSalad\_35
- Track 4 : Spartacus\_39, WillSterrel\_39, IrishSherpFalk\_39
- Track 5 : DirtMcgirt\_37, Drago\_38
- Track 6 : KristaRAM\_38
- Track 7 : Bobi\_38, IbOuu\_39, Yassified\_47, Stubby\_44, Astraea\_50, Shaqnato\_44, Morizzled23\_51, Shauna1\_34, Tootsieroll\_38
- Track 8 : FreddyB\_37
- Track 9 : Martik\_37, Doomphist\_37, Poenanya\_37, Lizziana\_36
- Track 10 : Ms6\_31, PhesterPhotato\_37, Fruitloop\_35, StAnnes\_36, LunaBlu\_40, Strokeseat\_38, Melissauren88\_36
- Track 11 : Eish\_37, Sassafras\_37, Radiance\_37
- Track 12 : Hegedechwinu\_38, SuperGrey\_38, MilleniumForce\_38, Sandalphon\_37, CaptainTrips\_37, Donkeykong\_37, Moonbeam\_37, Chuckly\_37, PopTart\_36, SassyB\_36
- Track 13 : Rialto\_41, Akhila\_30, Alice\_43, Lukilu\_43, Koguma\_45, Emma\_39, EasyJones\_50, MilanaBonita\_30, Grungle\_41, Phanphagia\_33, Juice456\_39, Phox\_47, Coco12\_36, JulietS\_44, LRRHood\_46, Halldule\_44, Ronan\_43, Bipolar\_34, Blackdragon\_45, Pinkcreek\_40
- Track 14 : Doug\_37, Hades\_38
- Track 15 : Blexus\_36, Filuzino\_36, Madiba\_35, Latretium\_37
- Track 16 : Florinda\_37, Sparkdehlily\_36, Juniper1\_36, Beakin\_37, Jinglebell\_36, Oksu\_37, TDanisky\_36
- Track 17 : MinionDave\_39, Batiatus\_36, Whatsapiecost\_38, Flathead\_36
- Track 18 : Gorge\_36, Piper2020\_39, Ogopogo\_36, DRBy19\_36, Mattes\_36, James\_36, Mova\_37, Saal\_36, DillTech15\_36
- Track 19 : LastJedi\_30, Maravista\_36
- Track 20 : Alexphander\_39, DaWorst\_38
- Track 21 : Chevrolet\_37
- Track 22 : Enby\_39, Lorde\_39, EleanorGeorge\_38
- Track 23 : Awesomesauce\_38, TootsiePop\_38, ChickenDinner\_39, Misha28\_38
- Track 24 : Hlubikazi\_38, Byougenkin\_36, Mandlovu\_37, Kingsley\_36, DLane\_36, Gandolph\_38, XFactor\_36, Soul22\_42
- Track 25 : JalFarm20\_40

- Track 26 : Rockne\_36, Phatniss\_37, UncleRicky\_39
- Track 27 : Fancypants\_36
- Track 28 : Llama\_37, Seabastian\_37, Ochi17\_35, OfUltron\_37, Rita\_38, AlpineSix\_37
- Track 29 : Tweety\_36, Bubbles123\_38, RedBird\_36, Aubs\_37, MadMen\_34
- Track 30 : Estave1\_34, SG4\_38
- Track 31 : Mahavrat\_36
- Track 32 : Kenuha5\_33
- Track 33 : Whouxphf\_38
- Track 34 : Spikelee\_38, BodEinwohner17\_36, Yorick\_36, Pollywog\_36
- Track 35 : Hamulus\_37, Mantra\_36
- Track 36 : Seagreen\_37
- Track 37 : Phasih\_37
- Track 38 : Ramsey\_39
- Track 39 : Fastidio\_38
- Track 40 : Harley\_37
- Track 41 : Marker\_37
- Track 42 : DosHalletts\_38
- Track 43 : DeadP\_37
- Track 44 : DocMcStuffins\_38
- Track 45 : Ardmore\_35
- Track 46 : Galactic\_39
- Track 47 : Renaud18\_37
- Track 48 : Aminay\_38

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

The start number called the most often in the published annotations is 10, it was called in 98 of the 151 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila\_30, Alexphander\_39, Alice\_43, AlpineSix\_37, Aminay\_38, Aubs\_37, Awesomesauce\_38, Bipolar\_34, Blackdragon\_45, Blexus\_36, BobaPhett\_36, Bubbles123\_38, Burwell21\_36, Byougenkin\_36, Cabrinians\_36, CaptainTrips\_37, ChickenDinner\_39, Chuckly\_37, Coco12\_36, Crumble\_30, DLane\_36, DRBy19\_36, DaWorst\_38, DeadP\_37, DillTech15\_36, Donkeykong\_37, DosHalletts\_38, EasyJones\_50, Eish\_37, EleanorGeorge\_38, Emma\_39, Enby\_39, Filuzino\_36, FreddyB\_37, Galactic\_39, Gandalph\_38, Gorge\_36, Grungle\_41, Halldule\_44, Hegedechwinu\_38, Hlubikazi\_38, James\_36, Jarcob\_36, Juice456\_39, JulietS\_44, Kenuha5\_33, Kingsley\_36, Koella\_30, Koguma\_45, KristaRAM\_38, LRRHood\_46, Latretium\_37, LilMoolah\_36, Llama\_37, Lorde\_39, Lukilu\_43, MadMen\_34, Madiba\_35, Mahavrat\_36, Mandlovu\_37, Marker\_37, Mattes\_36, MilanaBonita\_30, MilleniumForce\_38, Misha28\_38, Moonbeam\_37, Mova\_37, Nivrat\_36, NormanBulbieJr\_37, Ochi17\_35, OfUltron\_37, Ogotogo\_36, Phanphagia\_33, Phasih\_37, Phox\_47, Pinkcreek\_40, Piper2020\_39, Pippy\_30, PopTart\_36, Priscilla\_36, Rabinovish\_47, Radiance\_37, RedBird\_36, Renaud18\_37, Rialto\_41, Rita\_38, Ronan\_43, Saal\_36, Sandalphon\_37, Sassafras\_37, SassyB\_36, Seabastian\_37, ShiLan\_36, ShowerHandel\_37, Soul22\_42, SuperGrey\_38, SwagPiggett\_37, TootsiePop\_38, Tweety\_36, Whouxphf\_38, XFactor\_36, Zizzle\_36,

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

- Ardmore\_35, Astraea\_50, Batiatus\_36, Beakin\_37, Blarby\_46, Bobi\_38, BodEinwohner17\_36, Chevrolet\_37, DirtMcgirt\_37, DocMcStuffins\_38, Doomphist\_37, Doug\_37, Drago\_38, Estave1\_34, Fancypants\_36, Fastidio\_38, Flathead\_36, Florinda\_37, Fruitloop\_35, Hades\_38, Hamulus\_37, Harley\_37, IbOuu\_39, IrishSherpFalk\_39, JalFarm20\_40, Jinglebell\_36, Juniper1\_36, LastJedi\_30, Lizziana\_36, LunaBlu\_40, Mantra\_36, Maravista\_36, Martik\_37, Melissauren88\_36, MinionDave\_39, Morizzled23\_51, Ms6\_31, MulchSalad\_35, Oksu\_37, Phalconet\_37, Phatniss\_37, PhesterPhotato\_37, Philus\_36, Poenanya\_37, Pollywog\_36, Ramsey\_39, Rockne\_36, SG4\_38, Seagreen\_37, Shaqnato\_44, Shauna1\_34, Sparkdehlily\_36, Spartacus\_39, Spikelee\_38, StAnnes\_36, Strokeseat\_38, Stubby\_44, TDanisky\_36, Tootsieroll\_38, UncleRicky\_39, Wachhund\_36, Whatsapiecost\_38, WillSterrel\_39, Yassified\_47, Yorick\_36,

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

- 

### Summary by start number:

Start 8:

- Found in 54 of 167 ( 32.3% ) of genes in pham
- Manual Annotations of this start: 5 of 151
- Called 9.3% of time when present
- Phage (with cluster) where this start called: LastJedi\_30 (F1), Maravista\_36 (F1), Phatniss\_37 (F1), Rockne\_36 (F1), UncleRicky\_39 (F1),

Start 9:

- Found in 54 of 167 ( 32.3% ) of genes in pham
- Manual Annotations of this start: 18 of 151
- Called 42.6% of time when present
- Phage (with cluster) where this start called: Beakin\_37 (F1), BodEinwohner17\_36 (F1), Chevrolet\_37 (F1), DirtMcgirt\_37 (F1), Doug\_37 (F1), Drago\_38 (F1), Fancypants\_36 (F1), Florinda\_37 (F1), Hades\_38 (F1), Hamulus\_37 (F1), Harley\_37 (F1), Jinglebell\_36 (F1), Juniper1\_36 (F1), Mantra\_36 (F1), MulchSalad\_35 (F), Oksu\_37 (F1), Pollywog\_36 (F1), Ramsey\_39 (F1), Seagreen\_37 (F1), Sparkdehlily\_36 (F1), Spikelee\_38 (F1), TDanisky\_36 (F1), Yorick\_36 (F1),

Start 10:

- Found in 167 of 167 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 98 of 151
- Called 61.1% of time when present
- Phage (with cluster) where this start called: Akhila\_30 (F1), Alexphander\_39 (F1), Alice\_43 (C1), AlpineSix\_37 (F1), Aminay\_38 (K7), Aubs\_37 (F1), Awesomesauce\_38 (F1), Bipolar\_34 (F1), Blackdragon\_45 (C1), Blexus\_36 (F1), BobaPhett\_36 (F1), Bubbles123\_38 (F1), Burwell21\_36 (F1), Byougenkin\_36 (F1), Cabrinians\_36 (F1), CaptainTrips\_37 (F1), ChickenDinner\_39 (F1), Chuckly\_37 (F1), Coco12\_36 (F1), Crumble\_30 (F1), DLane\_36 (F1), DRBy19\_36 (F1), DaWorst\_38 (F1), DeadP\_37 (F1), DillTech15\_36 (F1), Donkeykong\_37 (F1), DosHalletts\_38 (F1), EasyJones\_50 (C1), Eish\_37 (F1), EleanorGeorge\_38 (F1), Emma\_39 (F1), Enby\_39 (F1), Filuzino\_36 (F1), FreddyB\_37 (F1), Galactic\_39 (F1), Gandolph\_38 (F1), Gorge\_36 (F1), Grungle\_41 (C1), Halldule\_44 (C1), Hegedechwinu\_38 (F1), Hlubikazi\_38 (F1), James\_36 (F1), Jarcob\_36 (F1), Juice456\_39 (F1), JulietS\_44 (C1), Kenuha5\_33 (F1), Kingsley\_36 (F1), Koella\_30 (F1), Koguma\_45 (C1),

KristaRAM\_38 (F1), LRRHood\_46 (C1), Latretium\_37 (F1), LilMoolah\_36 (F1), Llama\_37 (F1), Lorde\_39 (F1), Lukilu\_43 (C1), MadMen\_34 (F1), Madiba\_35 (F1), Mahavrat\_36 (F1), Mandlovu\_37 (F1), Marker\_37 (F1), Mattes\_36 (F1), MilanaBonita\_30 (F1), MilleniumForce\_38 (F1), Misha28\_38 (F1), Moonbeam\_37 (F1), Mova\_37 (F1), Nivrat\_36 (F1), NormanBulbieJr\_37 (F1), Ochi17\_35 (F1), OfUltron\_37 (F1), Ogopogo\_36 (F1), Phanphagia\_33 (F1), Phasih\_37 (F1), Phox\_47 (C1), Pinkcreek\_40 (C1), Piper2020\_39 (F1), Pippy\_30 (F1), PopTart\_36 (F1), Priscilla\_36 (F1), Rabinovish\_47 (C1), Radiance\_37 (F1), RedBird\_36 (F1), Renaud18\_37 (F4), Rialto\_41 (F1), Rita\_38 (F1), Ronan\_43 (C1), Saal\_36 (F1), Sandalphon\_37 (F1), Sassafras\_37 (F1), SassyB\_36 (F1), Seabastian\_37 (F1), ShiLan\_36 (F1), ShowerHandel\_37 (F1), Soul22\_42 (F2), SuperGrey\_38 (F1), SwagPiggett\_37 (F1), TootsiePop\_38 (F1), Tweety\_36 (F1), Whouxphf\_38 (F1), XFactor\_36 (F1), Zizzle\_36 (F1),

Start 11:

- Found in 112 of 167 ( 67.1% ) of genes in pham
- Manual Annotations of this start: 30 of 151
- Called 32.1% of time when present
- Phage (with cluster) where this start called: Ardmere\_35 (F1), Astraea\_50 (C1), Batiatus\_36 (F1), Blarby\_46 (F), Bobi\_38 (F1), DocMcStuffins\_38 (F1), Doomphist\_37 (F1), Estave1\_34 (F1), Flathead\_36 (F1), Fruitloop\_35 (F1), IbOuu\_39 (F1), IrishSherpFalk\_39 (F1), JalFarm20\_40 (F1), Lizziana\_36 (F1), LunaBlu\_40 (F1), Martik\_37 (F1), Melissauren88\_36 (F1), MinionDave\_39 (F1), Morizzled23\_51 (C1), Ms6\_31 (F1), Phalconet\_37 (F1), PhesterPhotato\_37 (F1), Philus\_36 (F1), Poenanya\_37 (F1), SG4\_38 (F1), Shaq nato\_44 (C1), Shauna1\_34 (F1), Spartacus\_39 (F1), StAnnes\_36 (F1), Strokeseat\_38 (F1), Stubby\_44 (C1), Tootsieroll\_38 (F1), Wachhund\_36 (F1), Whatsapiecost\_38 (F1), WillSterrel\_39 (F1), Yassified\_47 (C1),

Start 15:

- Found in 112 of 167 ( 67.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.9% of time when present
- Phage (with cluster) where this start called: Fastidio\_38 (F1),

### Summary by clusters:

There are 6 clusters represented in this pham: F1, F2, F4, F, K7, C1,

Info for manual annotations of cluster C1:

- Start number 10 was manually annotated 10 times for cluster C1.
- Start number 11 was manually annotated 5 times for cluster C1.

Info for manual annotations of cluster F1:

- Start number 8 was manually annotated 5 times for cluster F1.
- Start number 9 was manually annotated 18 times for cluster F1.
- Start number 10 was manually annotated 85 times for cluster F1.
- Start number 11 was manually annotated 25 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 10 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F4:

- Start number 10 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster K7:

- Start number 10 was manually annotated 1 time for cluster K7.

### **Gene Information:**

Gene: Akhila\_30 Start: 26361, Stop: 26582, Start Num: 10

Candidate Starts for Akhila\_30:

(Start: 10 @26361 has 98 MA's), (Start: 11 @26364 has 30 MA's), (14, 26403), (15, 26412), (16, 26430), (17, 26442), (18, 26445), (20, 26457), (21, 26481), (22, 26487), (24, 26502), (27, 26544), (28, 26547),

Gene: Alexphander\_39 Start: 31054, Stop: 31275, Start Num: 10

Candidate Starts for Alexphander\_39:

(6, 30985), (Start: 8 @31024 has 5 MA's), (Start: 9 @31042 has 18 MA's), (Start: 10 @31054 has 98 MA's), (14, 31096), (18, 31138), (20, 31150), (21, 31174), (28, 31240),

Gene: Alice\_43 Start: 14907, Stop: 14686, Start Num: 10

Candidate Starts for Alice\_43:

(Start: 10 @14907 has 98 MA's), (Start: 11 @14904 has 30 MA's), (14, 14865), (15, 14856), (16, 14838), (17, 14826), (18, 14823), (20, 14811), (21, 14787), (22, 14781), (24, 14766), (27, 14724), (28, 14721),

Gene: AlpineSix\_37 Start: 30499, Stop: 30720, Start Num: 10

Candidate Starts for AlpineSix\_37:

(6, 30430), (Start: 8 @30469 has 5 MA's), (Start: 9 @30487 has 18 MA's), (Start: 10 @30499 has 98 MA's), (14, 30541), (18, 30583), (20, 30595), (21, 30619), (28, 30685),

Gene: Aminay\_38 Start: 31323, Stop: 31559, Start Num: 10

Candidate Starts for Aminay\_38:

(1, 31065), (3, 31221), (4, 31224), (5, 31227), (7, 31269), (Start: 10 @31323 has 98 MA's), (13, 31362), (17, 31404), (19, 31413), (20, 31419), (23, 31455), (25, 31464), (26, 31494), (27, 31506), (28, 31509),

Gene: Ardmore\_35 Start: 30281, Stop: 30496, Start Num: 11

Candidate Starts for Ardmore\_35:

(Start: 10 @30278 has 98 MA's), (Start: 11 @30281 has 30 MA's), (14, 30317), (15, 30326), (16, 30344), (17, 30356), (18, 30359), (20, 30371), (21, 30395), (24, 30416), (27, 30458), (28, 30461),

Gene: Astraea\_50 Start: 16300, Stop: 16082, Start Num: 11

Candidate Starts for Astraea\_50:

(Start: 10 @16303 has 98 MA's), (Start: 11 @16300 has 30 MA's), (14, 16261), (15, 16252), (16, 16234), (17, 16222), (18, 16219), (20, 16207), (21, 16183), (22, 16177), (24, 16162), (27, 16120), (28, 16117),

Gene: Aubs\_37 Start: 30615, Stop: 30836, Start Num: 10

Candidate Starts for Aubs\_37:

(5, 30525), (6, 30546), (Start: 8 @30585 has 5 MA's), (Start: 9 @30603 has 18 MA's), (Start: 10 @30615 has 98 MA's), (14, 30657), (17, 30696), (21, 30735), (22, 30741), (24, 30756), (27, 30798),

(28, 30801),

Gene: Awesomesauce\_38 Start: 30167, Stop: 30388, Start Num: 10

Candidate Starts for Awesomesauce\_38:

(Start: 10 @30167 has 98 MA's), (Start: 11 @30170 has 30 MA's), (15, 30218), (18, 30251), (20, 30263), (21, 30287), (22, 30293), (28, 30353),

Gene: Batiatus\_36 Start: 30274, Stop: 30489, Start Num: 11

Candidate Starts for Batiatus\_36:

(Start: 10 @30271 has 98 MA's), (Start: 11 @30274 has 30 MA's), (14, 30310), (15, 30319), (16, 30337), (17, 30349), (18, 30352), (20, 30364), (21, 30388), (22, 30394), (24, 30409), (27, 30451), (28, 30454),

Gene: Beakin\_37 Start: 30174, Stop: 30407, Start Num: 9

Candidate Starts for Beakin\_37:

(6, 30117), (Start: 8 @30156 has 5 MA's), (Start: 9 @30174 has 18 MA's), (Start: 10 @30186 has 98 MA's), (14, 30228), (18, 30270), (20, 30282), (21, 30306), (28, 30372),

Gene: Bipolar\_34 Start: 29357, Stop: 29578, Start Num: 10

Candidate Starts for Bipolar\_34:

(Start: 10 @29357 has 98 MA's), (Start: 11 @29360 has 30 MA's), (14, 29399), (15, 29408), (16, 29426), (17, 29438), (18, 29441), (20, 29453), (21, 29477), (22, 29483), (24, 29498), (27, 29540), (28, 29543),

Gene: Blackdragon\_45 Start: 15234, Stop: 15013, Start Num: 10

Candidate Starts for Blackdragon\_45:

(Start: 10 @15234 has 98 MA's), (Start: 11 @15231 has 30 MA's), (14, 15192), (15, 15183), (16, 15165), (17, 15153), (18, 15150), (20, 15138), (21, 15114), (22, 15108), (24, 15093), (27, 15051), (28, 15048),

Gene: Blarby\_46 Start: 30753, Stop: 30971, Start Num: 11

Candidate Starts for Blarby\_46:

(Start: 10 @30750 has 98 MA's), (Start: 11 @30753 has 30 MA's), (15, 30801), (16, 30819), (17, 30831), (18, 30834), (20, 30846), (21, 30870), (22, 30876), (24, 30891), (27, 30933), (28, 30936),

Gene: Blexus\_36 Start: 30607, Stop: 30828, Start Num: 10

Candidate Starts for Blexus\_36:

(6, 30538), (Start: 8 @30577 has 5 MA's), (Start: 9 @30595 has 18 MA's), (Start: 10 @30607 has 98 MA's), (14, 30649), (17, 30688), (21, 30727), (22, 30733), (24, 30748), (27, 30790), (28, 30793),

Gene: BobaPhett\_36 Start: 30477, Stop: 30698, Start Num: 10

Candidate Starts for BobaPhett\_36:

(Start: 10 @30477 has 98 MA's), (Start: 11 @30480 has 30 MA's), (15, 30528), (16, 30546), (17, 30558), (18, 30561), (20, 30573), (21, 30597), (24, 30618), (27, 30660), (28, 30663),

Gene: Bobi\_38 Start: 30987, Stop: 31202, Start Num: 11

Candidate Starts for Bobi\_38:

(Start: 10 @30984 has 98 MA's), (Start: 11 @30987 has 30 MA's), (14, 31023), (15, 31032), (16, 31050), (17, 31062), (18, 31065), (20, 31077), (21, 31101), (22, 31107), (24, 31122), (27, 31164), (28, 31167),

Gene: BodEinwohner17\_36 Start: 30665, Stop: 30898, Start Num: 9

Candidate Starts for BodEinwohner17\_36:

(6, 30608), (Start: 8 @30647 has 5 MA's), (Start: 9 @30665 has 18 MA's), (Start: 10 @30677 has 98 MA's), (14, 30719), (17, 30758), (21, 30797), (22, 30803), (24, 30818), (27, 30860), (28, 30863),

Gene: Bubbles123\_38 Start: 31264, Stop: 31485, Start Num: 10

Candidate Starts for Bubbles123\_38:

(5, 31174), (6, 31195), (Start: 8 @31234 has 5 MA's), (Start: 9 @31252 has 18 MA's), (Start: 10 @31264 has 98 MA's), (14, 31306), (17, 31345), (21, 31384), (22, 31390), (24, 31405), (27, 31447), (28, 31450),

Gene: Burwell21\_36 Start: 30460, Stop: 30681, Start Num: 10

Candidate Starts for Burwell21\_36:

(Start: 10 @30460 has 98 MA's), (Start: 11 @30463 has 30 MA's), (15, 30511), (16, 30529), (17, 30541), (18, 30544), (20, 30556), (21, 30580), (24, 30601), (27, 30643), (28, 30646),

Gene: Byougenkin\_36 Start: 30359, Stop: 30580, Start Num: 10

Candidate Starts for Byougenkin\_36:

(Start: 10 @30359 has 98 MA's), (Start: 11 @30362 has 30 MA's), (15, 30410), (16, 30428), (17, 30440), (18, 30443), (20, 30455), (21, 30479), (22, 30485), (24, 30500), (27, 30542), (28, 30545),

Gene: Cabrinians\_36 Start: 30538, Stop: 30759, Start Num: 10

Candidate Starts for Cabrinians\_36:

(Start: 10 @30538 has 98 MA's), (Start: 11 @30541 has 30 MA's), (15, 30589), (16, 30607), (17, 30619), (18, 30622), (20, 30634), (21, 30658), (24, 30679), (27, 30721), (28, 30724),

Gene: CaptainTrips\_37 Start: 30684, Stop: 30902, Start Num: 10

Candidate Starts for CaptainTrips\_37:

(Start: 10 @30684 has 98 MA's), (Start: 11 @30687 has 30 MA's), (14, 30723), (15, 30732), (16, 30750), (17, 30762), (18, 30765), (20, 30777), (21, 30801), (22, 30807), (24, 30822), (27, 30864), (28, 30867),

Gene: Chevrolet\_37 Start: 30823, Stop: 31056, Start Num: 9

Candidate Starts for Chevrolet\_37:

(6, 30766), (Start: 8 @30805 has 5 MA's), (Start: 9 @30823 has 18 MA's), (Start: 10 @30835 has 98 MA's), (14, 30877), (17, 30916), (21, 30955), (28, 31021),

Gene: ChickenDinner\_39 Start: 30905, Stop: 31126, Start Num: 10

Candidate Starts for ChickenDinner\_39:

(Start: 10 @30905 has 98 MA's), (Start: 11 @30908 has 30 MA's), (15, 30956), (18, 30989), (20, 31001), (21, 31025), (22, 31031), (28, 31091),

Gene: Chuckly\_37 Start: 30459, Stop: 30680, Start Num: 10

Candidate Starts for Chuckly\_37:

(Start: 10 @30459 has 98 MA's), (Start: 11 @30462 has 30 MA's), (14, 30501), (15, 30510), (16, 30528), (17, 30540), (18, 30543), (20, 30555), (21, 30579), (22, 30585), (24, 30600), (27, 30642), (28, 30645),

Gene: Coco12\_36 Start: 30344, Stop: 30565, Start Num: 10

Candidate Starts for Coco12\_36:

(Start: 10 @30344 has 98 MA's), (Start: 11 @30347 has 30 MA's), (14, 30386), (15, 30395), (16, 30413), (17, 30425), (18, 30428), (20, 30440), (21, 30464), (22, 30470), (24, 30485), (27, 30527), (28, 30530),

Gene: Crumble\_30 Start: 26474, Stop: 26695, Start Num: 10



Candidate Starts for Crumble\_30:

(Start: 10 @26474 has 98 MA's), (Start: 11 @26477 has 30 MA's), (15, 26525), (16, 26543), (17, 26555), (18, 26558), (20, 26570), (21, 26594), (24, 26615), (27, 26657), (28, 26660),

Gene: DLane\_36 Start: 30248, Stop: 30469, Start Num: 10

Candidate Starts for DLane\_36:

(Start: 10 @30248 has 98 MA's), (Start: 11 @30251 has 30 MA's), (15, 30299), (16, 30317), (17, 30329), (18, 30332), (20, 30344), (21, 30368), (22, 30374), (24, 30389), (27, 30431), (28, 30434),

Gene: DRBy19\_36 Start: 30386, Stop: 30607, Start Num: 10

Candidate Starts for DRBy19\_36:

(Start: 10 @30386 has 98 MA's), (Start: 11 @30389 has 30 MA's), (15, 30437), (16, 30455), (17, 30467), (18, 30470), (20, 30482), (21, 30506), (22, 30512), (24, 30527), (27, 30569), (28, 30572),

Gene: DaWorst\_38 Start: 30828, Stop: 31049, Start Num: 10

Candidate Starts for DaWorst\_38:

(6, 30759), (Start: 8 @30798 has 5 MA's), (Start: 9 @30816 has 18 MA's), (Start: 10 @30828 has 98 MA's), (14, 30870), (18, 30912), (20, 30924), (21, 30948), (28, 31014),

Gene: DeadP\_37 Start: 30447, Stop: 30668, Start Num: 10

Candidate Starts for DeadP\_37:

(5, 30357), (6, 30378), (Start: 8 @30417 has 5 MA's), (Start: 9 @30435 has 18 MA's), (Start: 10 @30447 has 98 MA's), (14, 30489), (17, 30528), (18, 30531), (21, 30567), (24, 30588), (27, 30630), (28, 30633),

Gene: DillTech15\_36 Start: 30376, Stop: 30594, Start Num: 10

Candidate Starts for DillTech15\_36:

(Start: 10 @30376 has 98 MA's), (Start: 11 @30379 has 30 MA's), (15, 30424), (16, 30442), (17, 30454), (18, 30457), (20, 30469), (21, 30493), (22, 30499), (24, 30514), (27, 30556), (28, 30559),

Gene: DirtMcgirt\_37 Start: 30102, Stop: 30335, Start Num: 9

Candidate Starts for DirtMcgirt\_37:

(6, 30045), (Start: 8 @30084 has 5 MA's), (Start: 9 @30102 has 18 MA's), (Start: 10 @30114 has 98 MA's), (14, 30156), (17, 30195), (21, 30234), (22, 30240), (24, 30255), (27, 30297), (28, 30300),

Gene: DocMcStuffins\_38 Start: 30908, Stop: 31126, Start Num: 11

Candidate Starts for DocMcStuffins\_38:

(Start: 10 @30905 has 98 MA's), (Start: 11 @30908 has 30 MA's), (15, 30956), (18, 30989), (20, 31001), (21, 31025), (22, 31031), (28, 31091),

Gene: Donkeykong\_37 Start: 30472, Stop: 30693, Start Num: 10

Candidate Starts for Donkeykong\_37:

(Start: 10 @30472 has 98 MA's), (Start: 11 @30475 has 30 MA's), (14, 30514), (15, 30523), (16, 30541), (17, 30553), (18, 30556), (20, 30568), (21, 30592), (22, 30598), (24, 30613), (27, 30655), (28, 30658),

Gene: Doomphist\_37 Start: 30411, Stop: 30629, Start Num: 11

Candidate Starts for Doomphist\_37:

(Start: 10 @30408 has 98 MA's), (Start: 11 @30411 has 30 MA's), (15, 30459), (16, 30477), (17, 30489), (18, 30492), (20, 30504), (21, 30528), (24, 30549), (27, 30591), (28, 30594),

Gene: DosHalletts\_38 Start: 30672, Stop: 30890, Start Num: 10

Candidate Starts for DosHalletts\_38:

(Start: 10 @30672 has 98 MA's), (Start: 11 @30675 has 30 MA's), (14, 30711), (15, 30720), (16, 30738), (17, 30750), (18, 30753), (21, 30789), (24, 30810), (27, 30852), (28, 30855),

Gene: Doug\_37 Start: 30840, Stop: 31073, Start Num: 9

Candidate Starts for Doug\_37:

(6, 30783), (Start: 8 @30822 has 5 MA's), (Start: 9 @30840 has 18 MA's), (Start: 10 @30852 has 98 MA's), (14, 30894), (18, 30936), (20, 30948), (21, 30972), (28, 31038),

Gene: Drago\_38 Start: 30095, Stop: 30328, Start Num: 9

Candidate Starts for Drago\_38:

(6, 30038), (Start: 8 @30077 has 5 MA's), (Start: 9 @30095 has 18 MA's), (Start: 10 @30107 has 98 MA's), (14, 30149), (17, 30188), (21, 30227), (22, 30233), (24, 30248), (27, 30290), (28, 30293),

Gene: EasyJones\_50 Start: 15986, Stop: 15765, Start Num: 10

Candidate Starts for EasyJones\_50:

(Start: 10 @15986 has 98 MA's), (Start: 11 @15983 has 30 MA's), (14, 15944), (15, 15935), (16, 15917), (17, 15905), (18, 15902), (20, 15890), (21, 15866), (22, 15860), (24, 15845), (27, 15803), (28, 15800),

Gene: Eish\_37 Start: 30996, Stop: 31217, Start Num: 10

Candidate Starts for Eish\_37:

(6, 30927), (Start: 8 @30966 has 5 MA's), (Start: 9 @30984 has 18 MA's), (Start: 10 @30996 has 98 MA's), (14, 31038), (17, 31077), (21, 31116), (22, 31122), (28, 31182),

Gene: EleanorGeorge\_38 Start: 31025, Stop: 31246, Start Num: 10

Candidate Starts for EleanorGeorge\_38:

(Start: 10 @31025 has 98 MA's), (Start: 11 @31028 has 30 MA's), (12, 31043), (15, 31076), (16, 31094), (17, 31106), (18, 31109), (20, 31121), (21, 31145), (22, 31151), (24, 31166), (27, 31208), (28, 31211),

Gene: Emma\_39 Start: 30889, Stop: 31110, Start Num: 10

Candidate Starts for Emma\_39:

(Start: 10 @30889 has 98 MA's), (Start: 11 @30892 has 30 MA's), (14, 30931), (15, 30940), (16, 30958), (17, 30970), (18, 30973), (20, 30985), (21, 31009), (22, 31015), (24, 31030), (27, 31072), (28, 31075),

Gene: Enby\_39 Start: 30554, Stop: 30775, Start Num: 10

Candidate Starts for Enby\_39:

(Start: 10 @30554 has 98 MA's), (Start: 11 @30557 has 30 MA's), (12, 30572), (15, 30605), (16, 30623), (17, 30635), (18, 30638), (20, 30650), (21, 30674), (22, 30680), (24, 30695), (27, 30737), (28, 30740),

Gene: Estave1\_34 Start: 29814, Stop: 30032, Start Num: 11

Candidate Starts for Estave1\_34:

(Start: 10 @29811 has 98 MA's), (Start: 11 @29814 has 30 MA's), (12, 29829), (15, 29862), (16, 29880), (17, 29892), (18, 29895), (20, 29907), (21, 29931), (22, 29937), (24, 29952), (27, 29994), (28, 29997),

Gene: Fancypants\_36 Start: 30285, Stop: 30518, Start Num: 9

Candidate Starts for Fancypants\_36:

(6, 30228), (Start: 8 @30267 has 5 MA's), (Start: 9 @30285 has 18 MA's), (Start: 10 @30297 has 98 MA's), (14, 30339), (17, 30378), (20, 30393), (21, 30417), (22, 30423), (27, 30480), (28, 30483),

Gene: Fastidio\_38 Start: 30653, Stop: 30823, Start Num: 15

Candidate Starts for Fastidio\_38:

(Start: 10 @30605 has 98 MA's), (Start: 11 @30608 has 30 MA's), (15, 30653), (16, 30671), (17, 30683), (18, 30686), (20, 30698), (21, 30722), (22, 30728), (24, 30743), (27, 30785), (28, 30788),

Gene: Filuzino\_36 Start: 30240, Stop: 30461, Start Num: 10

Candidate Starts for Filuzino\_36:

(6, 30171), (Start: 8 @30210 has 5 MA's), (Start: 9 @30228 has 18 MA's), (Start: 10 @30240 has 98 MA's), (14, 30282), (17, 30321), (21, 30360), (22, 30366), (24, 30381), (27, 30423), (28, 30426),

Gene: Flathead\_36 Start: 30889, Stop: 31104, Start Num: 11

Candidate Starts for Flathead\_36:

(Start: 10 @30886 has 98 MA's), (Start: 11 @30889 has 30 MA's), (14, 30925), (15, 30934), (16, 30952), (17, 30964), (18, 30967), (20, 30979), (21, 31003), (22, 31009), (24, 31024), (27, 31066), (28, 31069),

Gene: Florinda\_37 Start: 30277, Stop: 30510, Start Num: 9

Candidate Starts for Florinda\_37:

(6, 30220), (Start: 8 @30259 has 5 MA's), (Start: 9 @30277 has 18 MA's), (Start: 10 @30289 has 98 MA's), (14, 30331), (18, 30373), (20, 30385), (21, 30409), (28, 30475),

Gene: FreddyB\_37 Start: 30554, Stop: 30775, Start Num: 10

Candidate Starts for FreddyB\_37:

(6, 30485), (Start: 8 @30524 has 5 MA's), (Start: 9 @30542 has 18 MA's), (Start: 10 @30554 has 98 MA's), (14, 30596), (18, 30638), (20, 30650), (21, 30674), (22, 30680), (28, 30740),

Gene: Fruitloop\_35 Start: 30437, Stop: 30652, Start Num: 11

Candidate Starts for Fruitloop\_35:

(Start: 10 @30434 has 98 MA's), (Start: 11 @30437 has 30 MA's), (15, 30482), (16, 30500), (17, 30512), (18, 30515), (20, 30527), (21, 30551), (22, 30557), (24, 30572), (27, 30614), (28, 30617),

Gene: Galactic\_39 Start: 31126, Stop: 31332, Start Num: 10

Candidate Starts for Galactic\_39:

(Start: 10 @31126 has 98 MA's), (Start: 11 @31129 has 30 MA's), (15, 31177), (16, 31195), (17, 31207), (18, 31210), (20, 31222), (29, 31324),

Gene: Gandalph\_38 Start: 30624, Stop: 30845, Start Num: 10

Candidate Starts for Gandalph\_38:

(Start: 10 @30624 has 98 MA's), (Start: 11 @30627 has 30 MA's), (15, 30675), (16, 30693), (17, 30705), (18, 30708), (20, 30720), (21, 30744), (22, 30750), (24, 30765), (27, 30807), (28, 30810),

Gene: Gorge\_36 Start: 30520, Stop: 30741, Start Num: 10

Candidate Starts for Gorge\_36:

(Start: 10 @30520 has 98 MA's), (Start: 11 @30523 has 30 MA's), (15, 30571), (16, 30589), (17, 30601), (18, 30604), (20, 30616), (21, 30640), (22, 30646), (24, 30661), (27, 30703), (28, 30706),

Gene: Grungle\_41 Start: 13722, Stop: 13501, Start Num: 10

Candidate Starts for Grungle\_41:

(Start: 10 @13722 has 98 MA's), (Start: 11 @13719 has 30 MA's), (14, 13680), (15, 13671), (16, 13653), (17, 13641), (18, 13638), (20, 13626), (21, 13602), (22, 13596), (24, 13581), (27, 13539), (28, 13536),

Gene: Hades\_38 Start: 30608, Stop: 30841, Start Num: 9

Candidate Starts for Hades\_38:

(6, 30551), (Start: 8 @30590 has 5 MA's), (Start: 9 @30608 has 18 MA's), (Start: 10 @30620 has 98 MA's), (14, 30662), (18, 30704), (20, 30716), (21, 30740), (28, 30806),

Gene: Halldule\_44 Start: 14174, Stop: 13953, Start Num: 10

Candidate Starts for Halldule\_44:

(Start: 10 @14174 has 98 MA's), (Start: 11 @14171 has 30 MA's), (14, 14132), (15, 14123), (16, 14105), (17, 14093), (18, 14090), (20, 14078), (21, 14054), (22, 14048), (24, 14033), (27, 13991), (28, 13988),

Gene: Hamulus\_37 Start: 31270, Stop: 31503, Start Num: 9

Candidate Starts for Hamulus\_37:

(5, 31192), (6, 31213), (Start: 8 @31252 has 5 MA's), (Start: 9 @31270 has 18 MA's), (Start: 10 @31282 has 98 MA's), (18, 31366), (20, 31378), (21, 31402), (22, 31408), (28, 31468),

Gene: Harley\_37 Start: 30214, Stop: 30447, Start Num: 9

Candidate Starts for Harley\_37:

(6, 30157), (Start: 8 @30196 has 5 MA's), (Start: 9 @30214 has 18 MA's), (Start: 10 @30226 has 98 MA's), (14, 30268), (18, 30310), (20, 30322), (21, 30346), (22, 30352), (28, 30412),

Gene: Hegedechwinu\_38 Start: 30315, Stop: 30533, Start Num: 10

Candidate Starts for Hegedechwinu\_38:

(Start: 10 @30315 has 98 MA's), (Start: 11 @30318 has 30 MA's), (14, 30354), (15, 30363), (16, 30381), (17, 30393), (18, 30396), (20, 30408), (21, 30432), (22, 30438), (24, 30453), (27, 30495), (28, 30498),

Gene: Hlubikazi\_38 Start: 31112, Stop: 31330, Start Num: 10

Candidate Starts for Hlubikazi\_38:

(Start: 10 @31112 has 98 MA's), (Start: 11 @31115 has 30 MA's), (15, 31160), (16, 31178), (17, 31190), (18, 31193), (20, 31205), (21, 31229), (22, 31235), (24, 31250), (27, 31292), (28, 31295),

Gene: IbOuu\_39 Start: 30868, Stop: 31086, Start Num: 11

Candidate Starts for IbOuu\_39:

(Start: 10 @30865 has 98 MA's), (Start: 11 @30868 has 30 MA's), (14, 30907), (15, 30916), (16, 30934), (17, 30946), (18, 30949), (20, 30961), (21, 30985), (22, 30991), (24, 31006), (27, 31048), (28, 31051),

Gene: IrishSherpFalk\_39 Start: 31884, Stop: 32102, Start Num: 11

Candidate Starts for IrishSherpFalk\_39:

(Start: 10 @31881 has 98 MA's), (Start: 11 @31884 has 30 MA's), (12, 31899), (15, 31932), (16, 31950), (17, 31962), (18, 31965), (21, 32001), (24, 32022), (27, 32064), (28, 32067),

Gene: JalFarm20\_40 Start: 31369, Stop: 31587, Start Num: 11

Candidate Starts for JalFarm20\_40:

(Start: 10 @31366 has 98 MA's), (Start: 11 @31369 has 30 MA's), (12, 31384), (15, 31417), (16, 31435), (17, 31447), (18, 31450), (20, 31462), (21, 31486), (24, 31507), (27, 31549), (28, 31552),

Gene: James\_36 Start: 30477, Stop: 30698, Start Num: 10

Candidate Starts for James\_36:

(Start: 10 @30477 has 98 MA's), (Start: 11 @30480 has 30 MA's), (15, 30528), (16, 30546), (17, 30558), (18, 30561), (20, 30573), (21, 30597), (22, 30603), (24, 30618), (27, 30660), (28, 30663),

Gene: Jarcob\_36 Start: 30512, Stop: 30733, Start Num: 10

Candidate Starts for Jarcob\_36:

(Start: 10 @30512 has 98 MA's), (Start: 11 @30515 has 30 MA's), (15, 30563), (16, 30581), (17, 30593), (18, 30596), (20, 30608), (21, 30632), (24, 30653), (27, 30695), (28, 30698),

Gene: Jinglebell\_36 Start: 30486, Stop: 30719, Start Num: 9

Candidate Starts for Jinglebell\_36:

(6, 30429), (Start: 8 @30468 has 5 MA's), (Start: 9 @30486 has 18 MA's), (Start: 10 @30498 has 98 MA's), (14, 30540), (18, 30582), (20, 30594), (21, 30618), (28, 30684),

Gene: Juice456\_39 Start: 31586, Stop: 31807, Start Num: 10

Candidate Starts for Juice456\_39:

(Start: 10 @31586 has 98 MA's), (Start: 11 @31589 has 30 MA's), (14, 31628), (15, 31637), (16, 31655), (17, 31667), (18, 31670), (20, 31682), (21, 31706), (22, 31712), (24, 31727), (27, 31769), (28, 31772),

Gene: JulietS\_44 Start: 14025, Stop: 13804, Start Num: 10

Candidate Starts for JulietS\_44:

(Start: 10 @14025 has 98 MA's), (Start: 11 @14022 has 30 MA's), (14, 13983), (15, 13974), (16, 13956), (17, 13944), (18, 13941), (20, 13929), (21, 13905), (22, 13899), (24, 13884), (27, 13842), (28, 13839),

Gene: Juniper1\_36 Start: 30244, Stop: 30477, Start Num: 9

Candidate Starts for Juniper1\_36:

(6, 30187), (Start: 8 @30226 has 5 MA's), (Start: 9 @30244 has 18 MA's), (Start: 10 @30256 has 98 MA's), (14, 30298), (18, 30340), (20, 30352), (21, 30376), (28, 30442),

Gene: Kenuha5\_33 Start: 29400, Stop: 29621, Start Num: 10

Candidate Starts for Kenuha5\_33:

(Start: 10 @29400 has 98 MA's), (Start: 11 @29403 has 30 MA's), (14, 29442), (15, 29451), (16, 29469), (17, 29481), (18, 29484), (21, 29520), (22, 29526), (24, 29541), (27, 29583), (28, 29586),

Gene: Kingsley\_36 Start: 30109, Stop: 30327, Start Num: 10

Candidate Starts for Kingsley\_36:

(Start: 10 @30109 has 98 MA's), (Start: 11 @30112 has 30 MA's), (15, 30157), (16, 30175), (17, 30187), (18, 30190), (20, 30202), (21, 30226), (22, 30232), (24, 30247), (27, 30289), (28, 30292),

Gene: Koella\_30 Start: 26436, Stop: 26657, Start Num: 10

Candidate Starts for Koella\_30:

(Start: 10 @26436 has 98 MA's), (Start: 11 @26439 has 30 MA's), (15, 26487), (16, 26505), (17, 26517), (18, 26520), (20, 26532), (21, 26556), (24, 26577), (27, 26619), (28, 26622),

Gene: Koguma\_45 Start: 14368, Stop: 14147, Start Num: 10

Candidate Starts for Koguma\_45:

(Start: 10 @14368 has 98 MA's), (Start: 11 @14365 has 30 MA's), (14, 14326), (15, 14317), (16, 14299), (17, 14287), (18, 14284), (20, 14272), (21, 14248), (22, 14242), (24, 14227), (27, 14185), (28, 14182),

Gene: KristaRAM\_38 Start: 31109, Stop: 31330, Start Num: 10

Candidate Starts for KristaRAM\_38:

(Start: 10 @31109 has 98 MA's), (Start: 11 @31112 has 30 MA's), (14, 31151), (15, 31160), (16, 31178), (17, 31190), (18, 31193), (20, 31205), (21, 31229), (24, 31250), (27, 31292), (28, 31295),

Gene: LRRHood\_46 Start: 16291, Stop: 16070, Start Num: 10

Candidate Starts for LRRHood\_46:

(Start: 10 @16291 has 98 MA's), (Start: 11 @16288 has 30 MA's), (14, 16249), (15, 16240), (16, 16222), (17, 16210), (18, 16207), (20, 16195), (21, 16171), (22, 16165), (24, 16150), (27, 16108), (28, 16105),

Gene: LastJedi\_30 Start: 26440, Stop: 26691, Start Num: 8

Candidate Starts for LastJedi\_30:

(5, 26380), (6, 26401), (Start: 8 @26440 has 5 MA's), (Start: 9 @26458 has 18 MA's), (Start: 10 @26470 has 98 MA's), (14, 26512), (17, 26551), (21, 26590), (22, 26596), (24, 26611), (27, 26653), (28, 26656),

Gene: Latretium\_37 Start: 31069, Stop: 31290, Start Num: 10

Candidate Starts for Latretium\_37:

(6, 31000), (Start: 8 @31039 has 5 MA's), (Start: 9 @31057 has 18 MA's), (Start: 10 @31069 has 98 MA's), (14, 31111), (17, 31150), (21, 31189), (22, 31195), (24, 31210), (27, 31252), (28, 31255),

Gene: LilMoolah\_36 Start: 30560, Stop: 30781, Start Num: 10

Candidate Starts for LilMoolah\_36:

(Start: 10 @30560 has 98 MA's), (Start: 11 @30563 has 30 MA's), (15, 30611), (16, 30629), (17, 30641), (18, 30644), (20, 30656), (21, 30680), (24, 30701), (27, 30743), (28, 30746),

Gene: Lizziana\_36 Start: 30438, Stop: 30656, Start Num: 11

Candidate Starts for Lizziana\_36:

(Start: 10 @30435 has 98 MA's), (Start: 11 @30438 has 30 MA's), (15, 30486), (16, 30504), (17, 30516), (18, 30519), (20, 30531), (21, 30555), (24, 30576), (27, 30618), (28, 30621),

Gene: Llama\_37 Start: 30497, Stop: 30718, Start Num: 10

Candidate Starts for Llama\_37:

(6, 30428), (Start: 8 @30467 has 5 MA's), (Start: 9 @30485 has 18 MA's), (Start: 10 @30497 has 98 MA's), (14, 30539), (18, 30581), (20, 30593), (21, 30617), (28, 30683),

Gene: Lorde\_39 Start: 30529, Stop: 30750, Start Num: 10

Candidate Starts for Lorde\_39:

(Start: 10 @30529 has 98 MA's), (Start: 11 @30532 has 30 MA's), (12, 30547), (15, 30580), (16, 30598), (17, 30610), (18, 30613), (20, 30625), (21, 30649), (22, 30655), (24, 30670), (27, 30712), (28, 30715),

Gene: Lukilu\_43 Start: 15493, Stop: 15272, Start Num: 10

Candidate Starts for Lukilu\_43:

(Start: 10 @15493 has 98 MA's), (Start: 11 @15490 has 30 MA's), (14, 15451), (15, 15442), (16, 15424), (17, 15412), (18, 15409), (20, 15397), (21, 15373), (22, 15367), (24, 15352), (27, 15310), (28, 15307),

Gene: LunaBlu\_40 Start: 31303, Stop: 31521, Start Num: 11

Candidate Starts for LunaBlu\_40:

(Start: 10 @31300 has 98 MA's), (Start: 11 @31303 has 30 MA's), (15, 31351), (16, 31369), (17, 31381), (18, 31384), (20, 31396), (21, 31420), (22, 31426), (24, 31441), (27, 31483), (28, 31486),

Gene: MadMen\_34 Start: 29725, Stop: 29946, Start Num: 10

Candidate Starts for MadMen\_34:

(5, 29635), (6, 29656), (Start: 8 @29695 has 5 MA's), (Start: 9 @29713 has 18 MA's), (Start: 10 @29725 has 98 MA's), (14, 29767), (17, 29806), (21, 29845), (22, 29851), (24, 29866), (27, 29908), (28, 29911),

Gene: Madiba\_35 Start: 29198, Stop: 29419, Start Num: 10

Candidate Starts for Madiba\_35:

(6, 29129), (Start: 8 @29168 has 5 MA's), (Start: 9 @29186 has 18 MA's), (Start: 10 @29198 has 98 MA's), (14, 29240), (17, 29279), (21, 29318), (22, 29324), (24, 29339), (27, 29381), (28, 29384),

Gene: Mahavrat\_36 Start: 30329, Stop: 30550, Start Num: 10

Candidate Starts for Mahavrat\_36:

(6, 30260), (Start: 8 @30299 has 5 MA's), (Start: 9 @30317 has 18 MA's), (Start: 10 @30329 has 98 MA's), (14, 30371), (18, 30413), (20, 30425), (21, 30449), (24, 30470), (27, 30512), (28, 30515),

Gene: Mandlovu\_37 Start: 31054, Stop: 31272, Start Num: 10

Candidate Starts for Mandlovu\_37:

(Start: 10 @31054 has 98 MA's), (Start: 11 @31057 has 30 MA's), (15, 31102), (16, 31120), (17, 31132), (18, 31135), (20, 31147), (21, 31171), (22, 31177), (24, 31192), (27, 31234), (28, 31237),

Gene: Mantra\_36 Start: 30377, Stop: 30610, Start Num: 9

Candidate Starts for Mantra\_36:

(5, 30299), (6, 30320), (Start: 8 @30359 has 5 MA's), (Start: 9 @30377 has 18 MA's), (Start: 10 @30389 has 98 MA's), (18, 30473), (20, 30485), (21, 30509), (22, 30515), (28, 30575),

Gene: Maravista\_36 Start: 30190, Stop: 30441, Start Num: 8

Candidate Starts for Maravista\_36:

(5, 30130), (6, 30151), (Start: 8 @30190 has 5 MA's), (Start: 9 @30208 has 18 MA's), (Start: 10 @30220 has 98 MA's), (14, 30262), (17, 30301), (21, 30340), (22, 30346), (24, 30361), (27, 30403), (28, 30406),

Gene: Marker\_37 Start: 30156, Stop: 30377, Start Num: 10

Candidate Starts for Marker\_37:

(5, 30066), (6, 30087), (Start: 8 @30126 has 5 MA's), (Start: 9 @30144 has 18 MA's), (Start: 10 @30156 has 98 MA's), (14, 30198), (18, 30240), (20, 30252), (21, 30276), (22, 30282), (24, 30297), (27, 30339), (28, 30342),

Gene: Martik\_37 Start: 30465, Stop: 30683, Start Num: 11

Candidate Starts for Martik\_37:

(Start: 10 @30462 has 98 MA's), (Start: 11 @30465 has 30 MA's), (15, 30513), (16, 30531), (17, 30543), (18, 30546), (20, 30558), (21, 30582), (24, 30603), (27, 30645), (28, 30648),

Gene: Mattes\_36 Start: 30477, Stop: 30698, Start Num: 10

Candidate Starts for Mattes\_36:

(Start: 10 @30477 has 98 MA's), (Start: 11 @30480 has 30 MA's), (15, 30528), (16, 30546), (17, 30558), (18, 30561), (20, 30573), (21, 30597), (22, 30603), (24, 30618), (27, 30660), (28, 30663),

Gene: Melissauren88\_36 Start: 30433, Stop: 30648, Start Num: 11

Candidate Starts for Melissauren88\_36:

(Start: 10 @30430 has 98 MA's), (Start: 11 @30433 has 30 MA's), (15, 30478), (16, 30496), (17, 30508), (18, 30511), (20, 30523), (21, 30547), (22, 30553), (24, 30568), (27, 30610), (28, 30613),

Gene: MilanaBonita\_30 Start: 26361, Stop: 26582, Start Num: 10

Candidate Starts for MilanaBonita\_30:

(Start: 10 @26361 has 98 MA's), (Start: 11 @26364 has 30 MA's), (14, 26403), (15, 26412), (16, 26430), (17, 26442), (18, 26445), (20, 26457), (21, 26481), (22, 26487), (24, 26502), (27, 26544), (28, 26547),

Gene: MilleniumForce\_38 Start: 31222, Stop: 31440, Start Num: 10

Candidate Starts for MilleniumForce\_38:

(Start: 10 @31222 has 98 MA's), (Start: 11 @31225 has 30 MA's), (14, 31261), (15, 31270), (16, 31288), (17, 31300), (18, 31303), (20, 31315), (21, 31339), (22, 31345), (24, 31360), (27, 31402), (28, 31405),

Gene: MinionDave\_39 Start: 31462, Stop: 31677, Start Num: 11

Candidate Starts for MinionDave\_39:

(Start: 10 @31459 has 98 MA's), (Start: 11 @31462 has 30 MA's), (14, 31498), (15, 31507), (16, 31525), (17, 31537), (18, 31540), (20, 31552), (21, 31576), (22, 31582), (24, 31597), (27, 31639), (28, 31642),

Gene: Misha28\_38 Start: 30172, Stop: 30393, Start Num: 10

Candidate Starts for Misha28\_38:

(Start: 10 @30172 has 98 MA's), (Start: 11 @30175 has 30 MA's), (15, 30223), (18, 30256), (20, 30268), (21, 30292), (22, 30298), (28, 30358),

Gene: Moonbeam\_37 Start: 30976, Stop: 31194, Start Num: 10

Candidate Starts for Moonbeam\_37:

(Start: 10 @30976 has 98 MA's), (Start: 11 @30979 has 30 MA's), (14, 31015), (15, 31024), (16, 31042), (17, 31054), (18, 31057), (20, 31069), (21, 31093), (22, 31099), (24, 31114), (27, 31156), (28, 31159),

Gene: Morizzled23\_51 Start: 15991, Stop: 15773, Start Num: 11

Candidate Starts for Morizzled23\_51:

(Start: 10 @15994 has 98 MA's), (Start: 11 @15991 has 30 MA's), (14, 15952), (15, 15943), (16, 15925), (17, 15913), (18, 15910), (20, 15898), (21, 15874), (22, 15868), (24, 15853), (27, 15811), (28, 15808),

Gene: Mova\_37 Start: 30111, Stop: 30332, Start Num: 10

Candidate Starts for Mova\_37:

(Start: 10 @30111 has 98 MA's), (Start: 11 @30114 has 30 MA's), (15, 30162), (16, 30180), (17, 30192), (18, 30195), (20, 30207), (21, 30231), (22, 30237), (24, 30252), (27, 30294), (28, 30297),

Gene: Ms6\_31 Start: 25896, Stop: 26114, Start Num: 11

Candidate Starts for Ms6\_31:

(Start: 10 @25893 has 98 MA's), (Start: 11 @25896 has 30 MA's), (15, 25944), (16, 25962), (17, 25974), (18, 25977), (20, 25989), (21, 26013), (22, 26019), (24, 26034), (27, 26076), (28, 26079),

Gene: MulchSalad\_35 Start: 27165, Stop: 27398, Start Num: 9

Candidate Starts for MulchSalad\_35:

(2, 26949), (6, 27108), (Start: 8 @27147 has 5 MA's), (Start: 9 @27165 has 18 MA's), (Start: 10 @27177 has 98 MA's), (18, 27261), (20, 27273), (21, 27297), (22, 27303), (28, 27363),

Gene: Nivrat\_36 Start: 30434, Stop: 30655, Start Num: 10

Candidate Starts for Nivrat\_36:

(Start: 10 @30434 has 98 MA's), (Start: 11 @30437 has 30 MA's), (15, 30485), (16, 30503), (17, 30515), (18, 30518), (20, 30530), (21, 30554), (24, 30575), (27, 30617), (28, 30620),

Gene: NormanBulbieJr\_37 Start: 30449, Stop: 30670, Start Num: 10

Candidate Starts for NormanBulbieJr\_37:



(Start: 10 @30449 has 98 MA's), (Start: 11 @30452 has 30 MA's), (15, 30500), (16, 30518), (17, 30530), (18, 30533), (20, 30545), (21, 30569), (24, 30590), (27, 30632), (28, 30635),

Gene: Ochi17\_35 Start: 29949, Stop: 30170, Start Num: 10

Candidate Starts for Ochi17\_35:

(6, 29880), (Start: 8 @29919 has 5 MA's), (Start: 9 @29937 has 18 MA's), (Start: 10 @29949 has 98 MA's), (14, 29991), (18, 30033), (20, 30045), (21, 30069), (28, 30135),

Gene: OfUltron\_37 Start: 30498, Stop: 30719, Start Num: 10

Candidate Starts for OfUltron\_37:

(6, 30429), (Start: 8 @30468 has 5 MA's), (Start: 9 @30486 has 18 MA's), (Start: 10 @30498 has 98 MA's), (14, 30540), (18, 30582), (20, 30594), (21, 30618), (28, 30684),

Gene: Ogotopogo\_36 Start: 29642, Stop: 29863, Start Num: 10

Candidate Starts for Ogotopogo\_36:

(Start: 10 @29642 has 98 MA's), (Start: 11 @29645 has 30 MA's), (15, 29693), (16, 29711), (17, 29723), (18, 29726), (20, 29738), (21, 29762), (22, 29768), (24, 29783), (27, 29825), (28, 29828),

Gene: Oksu\_37 Start: 30330, Stop: 30563, Start Num: 9

Candidate Starts for Oksu\_37:

(6, 30273), (Start: 8 @30312 has 5 MA's), (Start: 9 @30330 has 18 MA's), (Start: 10 @30342 has 98 MA's), (14, 30384), (18, 30426), (20, 30438), (21, 30462), (28, 30528),

Gene: Phalconet\_37 Start: 30400, Stop: 30615, Start Num: 11

Candidate Starts for Phalconet\_37:

(Start: 10 @30397 has 98 MA's), (Start: 11 @30400 has 30 MA's), (15, 30445), (16, 30463), (17, 30475), (18, 30478), (20, 30490), (21, 30514), (22, 30520), (24, 30535), (27, 30577), (28, 30580),

Gene: Phanphagia\_33 Start: 29419, Stop: 29640, Start Num: 10

Candidate Starts for Phanphagia\_33:

(Start: 10 @29419 has 98 MA's), (Start: 11 @29422 has 30 MA's), (14, 29461), (15, 29470), (16, 29488), (17, 29500), (18, 29503), (20, 29515), (21, 29539), (22, 29545), (24, 29560), (27, 29602), (28, 29605),

Gene: Phasih\_37 Start: 30847, Stop: 31068, Start Num: 10

Candidate Starts for Phasih\_37:

(6, 30778), (Start: 8 @30817 has 5 MA's), (Start: 9 @30835 has 18 MA's), (Start: 10 @30847 has 98 MA's), (14, 30889), (18, 30931), (20, 30943), (21, 30967), (22, 30973), (28, 31033),

Gene: Phatniss\_37 Start: 30758, Stop: 31009, Start Num: 8

Candidate Starts for Phatniss\_37:

(6, 30719), (Start: 8 @30758 has 5 MA's), (Start: 9 @30776 has 18 MA's), (Start: 10 @30788 has 98 MA's), (14, 30830), (17, 30869), (21, 30908), (22, 30914), (24, 30929), (27, 30971), (28, 30974),

Gene: PhesterPhotato\_37 Start: 30320, Stop: 30538, Start Num: 11

Candidate Starts for PhesterPhotato\_37:

(Start: 10 @30317 has 98 MA's), (Start: 11 @30320 has 30 MA's), (15, 30368), (16, 30386), (17, 30398), (18, 30401), (20, 30413), (21, 30437), (22, 30443), (24, 30458), (27, 30500), (28, 30503),

Gene: Philus\_36 Start: 30365, Stop: 30583, Start Num: 11

Candidate Starts for Philus\_36:

(Start: 10 @30362 has 98 MA's), (Start: 11 @30365 has 30 MA's), (15, 30413), (16, 30431), (17, 30443), (18, 30446), (20, 30458), (21, 30482), (22, 30488), (24, 30503), (27, 30545), (28, 30548),

Gene: Phox\_47 Start: 16755, Stop: 16534, Start Num: 10

Candidate Starts for Phox\_47:

(Start: 10 @16755 has 98 MA's), (Start: 11 @16752 has 30 MA's), (14, 16713), (15, 16704), (16, 16686), (17, 16674), (18, 16671), (20, 16659), (21, 16635), (22, 16629), (24, 16614), (27, 16572), (28, 16569),

Gene: Pinkcreek\_40 Start: 14224, Stop: 14003, Start Num: 10

Candidate Starts for Pinkcreek\_40:

(Start: 10 @14224 has 98 MA's), (Start: 11 @14221 has 30 MA's), (14, 14182), (15, 14173), (16, 14155), (17, 14143), (18, 14140), (20, 14128), (21, 14104), (22, 14098), (24, 14083), (27, 14041), (28, 14038),

Gene: Piper2020\_39 Start: 30888, Stop: 31109, Start Num: 10

Candidate Starts for Piper2020\_39:

(Start: 10 @30888 has 98 MA's), (Start: 11 @30891 has 30 MA's), (15, 30939), (16, 30957), (17, 30969), (18, 30972), (20, 30984), (21, 31008), (22, 31014), (24, 31029), (27, 31071), (28, 31074),

Gene: Pippy\_30 Start: 26425, Stop: 26646, Start Num: 10

Candidate Starts for Pippy\_30:

(Start: 10 @26425 has 98 MA's), (Start: 11 @26428 has 30 MA's), (15, 26476), (16, 26494), (17, 26506), (18, 26509), (20, 26521), (21, 26545), (24, 26566), (27, 26608), (28, 26611),

Gene: Poenanya\_37 Start: 30411, Stop: 30629, Start Num: 11

Candidate Starts for Poenanya\_37:

(Start: 10 @30408 has 98 MA's), (Start: 11 @30411 has 30 MA's), (15, 30459), (16, 30477), (17, 30489), (18, 30492), (20, 30504), (21, 30528), (24, 30549), (27, 30591), (28, 30594),

Gene: Pollywog\_36 Start: 30608, Stop: 30841, Start Num: 9

Candidate Starts for Pollywog\_36:

(6, 30551), (Start: 8 @30590 has 5 MA's), (Start: 9 @30608 has 18 MA's), (Start: 10 @30620 has 98 MA's), (14, 30662), (17, 30701), (21, 30740), (22, 30746), (24, 30761), (27, 30803), (28, 30806),

Gene: PopTart\_36 Start: 30601, Stop: 30819, Start Num: 10

Candidate Starts for PopTart\_36:

(Start: 10 @30601 has 98 MA's), (Start: 11 @30604 has 30 MA's), (14, 30640), (15, 30649), (16, 30667), (17, 30679), (18, 30682), (20, 30694), (21, 30718), (22, 30724), (24, 30739), (27, 30781), (28, 30784),

Gene: Priscilla\_36 Start: 30547, Stop: 30768, Start Num: 10

Candidate Starts for Priscilla\_36:

(Start: 10 @30547 has 98 MA's), (Start: 11 @30550 has 30 MA's), (15, 30598), (16, 30616), (17, 30628), (18, 30631), (20, 30643), (21, 30667), (24, 30688), (27, 30730), (28, 30733),

Gene: Rabinovish\_47 Start: 16933, Stop: 16712, Start Num: 10

Candidate Starts for Rabinovish\_47:

(Start: 10 @16933 has 98 MA's), (Start: 11 @16930 has 30 MA's), (15, 16882), (16, 16864), (17, 16852), (18, 16849), (20, 16837), (21, 16813), (24, 16792), (27, 16750), (28, 16747),

Gene: Radiance\_37 Start: 30462, Stop: 30683, Start Num: 10

Candidate Starts for Radiance\_37:

(6, 30393), (Start: 8 @30432 has 5 MA's), (Start: 9 @30450 has 18 MA's), (Start: 10 @30462 has 98 MA's), (14, 30504), (17, 30543), (21, 30582), (22, 30588), (28, 30648),

Gene: Ramsey\_39 Start: 31110, Stop: 31343, Start Num: 9

Candidate Starts for Ramsey\_39:

(6, 31053), (Start: 8 @31092 has 5 MA's), (Start: 9 @31110 has 18 MA's), (Start: 10 @31122 has 98 MA's), (14, 31164), (17, 31203), (21, 31242), (22, 31248), (28, 31308),

Gene: RedBird\_36 Start: 30268, Stop: 30489, Start Num: 10

Candidate Starts for RedBird\_36:

(5, 30178), (6, 30199), (Start: 8 @30238 has 5 MA's), (Start: 9 @30256 has 18 MA's), (Start: 10 @30268 has 98 MA's), (14, 30310), (17, 30349), (21, 30388), (22, 30394), (24, 30409), (27, 30451), (28, 30454),

Gene: Renaud18\_37 Start: 30490, Stop: 30711, Start Num: 10

Candidate Starts for Renaud18\_37:

(Start: 10 @30490 has 98 MA's), (Start: 11 @30493 has 30 MA's), (15, 30541), (16, 30559), (17, 30571), (18, 30574), (21, 30610), (24, 30631), (27, 30673), (28, 30676),

Gene: Rialto\_41 Start: 32618, Stop: 32839, Start Num: 10

Candidate Starts for Rialto\_41:

(Start: 10 @32618 has 98 MA's), (Start: 11 @32621 has 30 MA's), (14, 32660), (15, 32669), (16, 32687), (17, 32699), (18, 32702), (20, 32714), (21, 32738), (22, 32744), (24, 32759), (27, 32801), (28, 32804),

Gene: Rita\_38 Start: 30536, Stop: 30757, Start Num: 10

Candidate Starts for Rita\_38:

(6, 30467), (Start: 8 @30506 has 5 MA's), (Start: 9 @30524 has 18 MA's), (Start: 10 @30536 has 98 MA's), (14, 30578), (18, 30620), (20, 30632), (21, 30656), (28, 30722),

Gene: Rockne\_36 Start: 30241, Stop: 30492, Start Num: 8

Candidate Starts for Rockne\_36:

(6, 30202), (Start: 8 @30241 has 5 MA's), (Start: 9 @30259 has 18 MA's), (Start: 10 @30271 has 98 MA's), (14, 30313), (17, 30352), (21, 30391), (22, 30397), (24, 30412), (27, 30454), (28, 30457),

Gene: Ronan\_43 Start: 13565, Stop: 13344, Start Num: 10

Candidate Starts for Ronan\_43:

(Start: 10 @13565 has 98 MA's), (Start: 11 @13562 has 30 MA's), (14, 13523), (15, 13514), (16, 13496), (17, 13484), (18, 13481), (20, 13469), (21, 13445), (22, 13439), (24, 13424), (27, 13382), (28, 13379),

Gene: SG4\_38 Start: 31042, Stop: 31260, Start Num: 11

Candidate Starts for SG4\_38:

(Start: 10 @31039 has 98 MA's), (Start: 11 @31042 has 30 MA's), (12, 31057), (15, 31090), (16, 31108), (17, 31120), (18, 31123), (20, 31135), (21, 31159), (22, 31165), (24, 31180), (27, 31222), (28, 31225),

Gene: Saal\_36 Start: 30340, Stop: 30561, Start Num: 10

Candidate Starts for Saal\_36:

(Start: 10 @30340 has 98 MA's), (Start: 11 @30343 has 30 MA's), (15, 30391), (16, 30409), (17, 30421), (18, 30424), (20, 30436), (21, 30460), (22, 30466), (24, 30481), (27, 30523), (28, 30526),

Gene: Sandalphon\_37 Start: 31069, Stop: 31290, Start Num: 10

Candidate Starts for Sandalphon\_37:

(Start: 10 @31069 has 98 MA's), (Start: 11 @31072 has 30 MA's), (14, 31111), (15, 31120), (16, 31138), (17, 31150), (18, 31153), (20, 31165), (21, 31189), (22, 31195), (24, 31210), (27, 31252), (28, 31255),

Gene: Sassafras\_37 Start: 30971, Stop: 31192, Start Num: 10

Candidate Starts for Sassafras\_37:

(6, 30902), (Start: 8 @30941 has 5 MA's), (Start: 9 @30959 has 18 MA's), (Start: 10 @30971 has 98 MA's), (14, 31013), (17, 31052), (21, 31091), (22, 31097), (28, 31157),

Gene: SassyB\_36 Start: 30601, Stop: 30819, Start Num: 10

Candidate Starts for SassyB\_36:

(Start: 10 @30601 has 98 MA's), (Start: 11 @30604 has 30 MA's), (14, 30640), (15, 30649), (16, 30667), (17, 30679), (18, 30682), (20, 30694), (21, 30718), (22, 30724), (24, 30739), (27, 30781), (28, 30784),

Gene: Seabastian\_37 Start: 30498, Stop: 30719, Start Num: 10

Candidate Starts for Seabastian\_37:

(6, 30429), (Start: 8 @30468 has 5 MA's), (Start: 9 @30486 has 18 MA's), (Start: 10 @30498 has 98 MA's), (14, 30540), (18, 30582), (20, 30594), (21, 30618), (28, 30684),

Gene: Seagreen\_37 Start: 30398, Stop: 30631, Start Num: 9

Candidate Starts for Seagreen\_37:

(5, 30320), (6, 30341), (Start: 8 @30380 has 5 MA's), (Start: 9 @30398 has 18 MA's), (Start: 10 @30410 has 98 MA's), (14, 30452), (18, 30494), (20, 30506), (21, 30530), (22, 30536), (24, 30551), (27, 30593), (28, 30596),

Gene: Shaqnato\_44 Start: 14710, Stop: 14492, Start Num: 11

Candidate Starts for Shaqnato\_44:

(Start: 10 @14713 has 98 MA's), (Start: 11 @14710 has 30 MA's), (14, 14671), (15, 14662), (16, 14644), (17, 14632), (18, 14629), (20, 14617), (21, 14593), (22, 14587), (24, 14572), (27, 14530), (28, 14527),

Gene: Shauna1\_34 Start: 29425, Stop: 29643, Start Num: 11

Candidate Starts for Shauna1\_34:

(Start: 10 @29422 has 98 MA's), (Start: 11 @29425 has 30 MA's), (14, 29464), (15, 29473), (16, 29491), (17, 29503), (18, 29506), (20, 29518), (21, 29542), (22, 29548), (24, 29563), (27, 29605), (28, 29608),

Gene: ShiLan\_36 Start: 30503, Stop: 30724, Start Num: 10

Candidate Starts for ShiLan\_36:

(Start: 10 @30503 has 98 MA's), (Start: 11 @30506 has 30 MA's), (15, 30554), (16, 30572), (17, 30584), (18, 30587), (20, 30599), (21, 30623), (24, 30644), (27, 30686), (28, 30689),

Gene: ShowerHandel\_37 Start: 30462, Stop: 30683, Start Num: 10

Candidate Starts for ShowerHandel\_37:

(Start: 10 @30462 has 98 MA's), (Start: 11 @30465 has 30 MA's), (15, 30513), (16, 30531), (17, 30543), (18, 30546), (20, 30558), (21, 30582), (24, 30603), (27, 30645), (28, 30648),

Gene: Soul22\_42 Start: 30665, Stop: 30883, Start Num: 10

Candidate Starts for Soul22\_42:

(Start: 10 @30665 has 98 MA's), (Start: 11 @30668 has 30 MA's), (15, 30713), (16, 30731), (17, 30743), (18, 30746), (20, 30758), (21, 30782), (22, 30788), (24, 30803), (27, 30845), (28, 30848),

Gene: Sparkdehlily\_36 Start: 30375, Stop: 30608, Start Num: 9  
Candidate Starts for Sparkdehlily\_36:  
(6, 30318), (Start: 8 @30357 has 5 MA's), (Start: 9 @30375 has 18 MA's), (Start: 10 @30387 has 98 MA's), (14, 30429), (18, 30471), (20, 30483), (21, 30507), (28, 30573),

Gene: Spartacus\_39 Start: 30803, Stop: 31021, Start Num: 11  
Candidate Starts for Spartacus\_39:  
(Start: 10 @30800 has 98 MA's), (Start: 11 @30803 has 30 MA's), (12, 30818), (15, 30851), (16, 30869), (17, 30881), (18, 30884), (21, 30920), (24, 30941), (27, 30983), (28, 30986),

Gene: Spikelee\_38 Start: 30523, Stop: 30756, Start Num: 9  
Candidate Starts for Spikelee\_38:  
(6, 30466), (Start: 8 @30505 has 5 MA's), (Start: 9 @30523 has 18 MA's), (Start: 10 @30535 has 98 MA's), (14, 30577), (17, 30616), (21, 30655), (22, 30661), (24, 30676), (27, 30718), (28, 30721),

Gene: StAnnes\_36 Start: 30868, Stop: 31086, Start Num: 11  
Candidate Starts for StAnnes\_36:  
(Start: 10 @30865 has 98 MA's), (Start: 11 @30868 has 30 MA's), (15, 30916), (16, 30934), (17, 30946), (18, 30949), (20, 30961), (21, 30985), (22, 30991), (24, 31006), (27, 31048), (28, 31051),

Gene: Strokeseat\_38 Start: 31114, Stop: 31329, Start Num: 11  
Candidate Starts for Strokeseat\_38:  
(Start: 10 @31111 has 98 MA's), (Start: 11 @31114 has 30 MA's), (15, 31159), (16, 31177), (17, 31189), (18, 31192), (20, 31204), (21, 31228), (22, 31234), (24, 31249), (27, 31291), (28, 31294),

Gene: Stubby\_44 Start: 15552, Stop: 15334, Start Num: 11  
Candidate Starts for Stubby\_44:  
(Start: 10 @15555 has 98 MA's), (Start: 11 @15552 has 30 MA's), (14, 15513), (15, 15504), (16, 15486), (17, 15474), (18, 15471), (20, 15459), (21, 15435), (22, 15429), (24, 15414), (27, 15372), (28, 15369),

Gene: SuperGrey\_38 Start: 31257, Stop: 31478, Start Num: 10  
Candidate Starts for SuperGrey\_38:  
(Start: 10 @31257 has 98 MA's), (Start: 11 @31260 has 30 MA's), (14, 31299), (15, 31308), (16, 31326), (17, 31338), (18, 31341), (20, 31353), (21, 31377), (22, 31383), (24, 31398), (27, 31440), (28, 31443),

Gene: SwagPigglett\_37 Start: 30273, Stop: 30494, Start Num: 10  
Candidate Starts for SwagPigglett\_37:  
(Start: 10 @30273 has 98 MA's), (Start: 11 @30276 has 30 MA's), (15, 30324), (16, 30342), (17, 30354), (18, 30357), (20, 30369), (21, 30393), (24, 30414), (27, 30456), (28, 30459),

Gene: TDanisky\_36 Start: 30375, Stop: 30608, Start Num: 9  
Candidate Starts for TDanisky\_36:  
(6, 30318), (Start: 8 @30357 has 5 MA's), (Start: 9 @30375 has 18 MA's), (Start: 10 @30387 has 98 MA's), (14, 30429), (18, 30471), (20, 30483), (21, 30507), (28, 30573),

Gene: TootsiePop\_38 Start: 30172, Stop: 30393, Start Num: 10  
Candidate Starts for TootsiePop\_38:  
(Start: 10 @30172 has 98 MA's), (Start: 11 @30175 has 30 MA's), (15, 30223), (18, 30256), (20, 30268), (21, 30292), (22, 30298), (28, 30358),

Gene: Tootsieroll\_38 Start: 30341, Stop: 30559, Start Num: 11

Candidate Starts for Tootsieroll\_38:

(Start: 10 @30338 has 98 MA's), (Start: 11 @30341 has 30 MA's), (14, 30380), (15, 30389), (16, 30407), (17, 30419), (18, 30422), (20, 30434), (21, 30458), (22, 30464), (24, 30479), (27, 30521), (28, 30524),

Gene: Tweety\_36 Start: 30508, Stop: 30729, Start Num: 10

Candidate Starts for Tweety\_36:

(5, 30418), (6, 30439), (Start: 8 @30478 has 5 MA's), (Start: 9 @30496 has 18 MA's), (Start: 10 @30508 has 98 MA's), (14, 30550), (17, 30589), (21, 30628), (22, 30634), (24, 30649), (27, 30691), (28, 30694),

Gene: UncleRicky\_39 Start: 31574, Stop: 31825, Start Num: 8

Candidate Starts for UncleRicky\_39:

(6, 31535), (Start: 8 @31574 has 5 MA's), (Start: 9 @31592 has 18 MA's), (Start: 10 @31604 has 98 MA's), (14, 31646), (17, 31685), (21, 31724), (22, 31730), (24, 31745), (27, 31787), (28, 31790),

Gene: Wachhund\_36 Start: 30465, Stop: 30683, Start Num: 11

Candidate Starts for Wachhund\_36:

(Start: 10 @30462 has 98 MA's), (Start: 11 @30465 has 30 MA's), (15, 30513), (16, 30531), (17, 30543), (18, 30546), (20, 30558), (21, 30582), (22, 30588), (24, 30603), (27, 30645), (28, 30648),

Gene: Whatsapiecost\_38 Start: 30724, Stop: 30939, Start Num: 11

Candidate Starts for Whatsapiecost\_38:

(Start: 10 @30721 has 98 MA's), (Start: 11 @30724 has 30 MA's), (14, 30760), (15, 30769), (16, 30787), (17, 30799), (18, 30802), (20, 30814), (21, 30838), (22, 30844), (24, 30859), (27, 30901), (28, 30904),

Gene: Whouxphf\_38 Start: 30779, Stop: 31000, Start Num: 10

Candidate Starts for Whouxphf\_38:

(6, 30710), (Start: 8 @30749 has 5 MA's), (Start: 9 @30767 has 18 MA's), (Start: 10 @30779 has 98 MA's), (14, 30821), (18, 30863), (20, 30875), (21, 30899), (22, 30905), (24, 30920), (27, 30962), (28, 30965),

Gene: WillSterrel\_39 Start: 31917, Stop: 32135, Start Num: 11

Candidate Starts for WillSterrel\_39:

(Start: 10 @31914 has 98 MA's), (Start: 11 @31917 has 30 MA's), (12, 31932), (15, 31965), (16, 31983), (17, 31995), (18, 31998), (21, 32034), (24, 32055), (27, 32097), (28, 32100),

Gene: XFactor\_36 Start: 30466, Stop: 30687, Start Num: 10

Candidate Starts for XFactor\_36:

(Start: 10 @30466 has 98 MA's), (Start: 11 @30469 has 30 MA's), (15, 30517), (16, 30535), (17, 30547), (18, 30550), (20, 30562), (21, 30586), (22, 30592), (24, 30607), (27, 30649), (28, 30652),

Gene: Yassified\_47 Start: 15547, Stop: 15329, Start Num: 11

Candidate Starts for Yassified\_47:

(Start: 10 @15550 has 98 MA's), (Start: 11 @15547 has 30 MA's), (14, 15508), (15, 15499), (16, 15481), (17, 15469), (18, 15466), (20, 15454), (21, 15430), (22, 15424), (24, 15409), (27, 15367), (28, 15364),

Gene: Yorick\_36 Start: 30450, Stop: 30683, Start Num: 9

Candidate Starts for Yorick\_36:

(6, 30393), (Start: 8 @30432 has 5 MA's), (Start: 9 @30450 has 18 MA's), (Start: 10 @30462 has 98 MA's), (14, 30504), (17, 30543), (21, 30582), (22, 30588), (24, 30603), (27, 30645), (28, 30648),

Gene: Zizzle\_36 Start: 30404, Stop: 30625, Start Num: 10

Candidate Starts for Zizzle\_36:

(Start: 10 @30404 has 98 MA's), (Start: 11 @30407 has 30 MA's), (15, 30455), (16, 30473), (17, 30485), (18, 30488), (20, 30500), (21, 30524), (24, 30545), (27, 30587), (28, 30590),