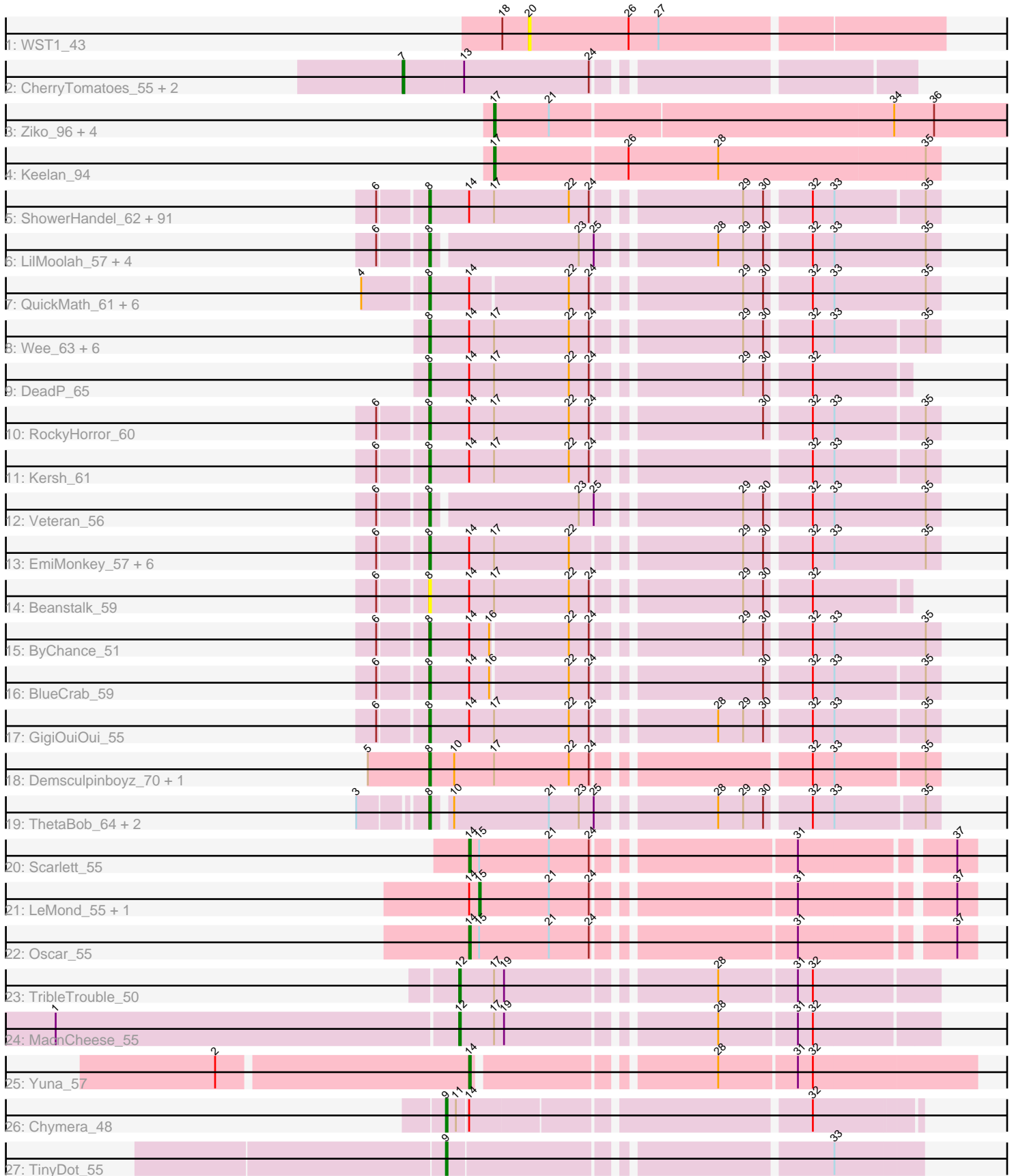


Pham 304776



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 304776 Report

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

Pham number 304776 has 150 members, 8 are drafts.

Phages represented in each track:

- Track 1 : WST1\_43
- Track 2 : CherryTomatoes\_55, SCentae\_53, Pupper\_53
- Track 3 : Ziko\_96, Ronaldo\_96, Volt\_97, Guey18\_98, Fryberger\_93
- Track 4 : Keelan\_94
- Track 5 : ShowerHandel\_62, Burwell21\_57, Zizzle\_63, SiSi\_57, Phatniss\_57, WillSterrel\_60, Jarcob\_59, Llij\_55, Marker\_61, Rita\_60, Violac\_61, Drago\_57, Blexus\_57, Strokeseat\_55, Karhdo\_56, Vivum\_60, Sabbb\_63, Latretium\_61, DirtMcgirt\_58, LastJedi\_53, Brocalys\_54, Jabbawokkie\_73, Eradicator\_52, SwagPiggett\_64, Martik\_59, OldBen\_56, Mova\_60, BuzzLyseyear\_65, Soul22\_65, Lizziana\_65, EleanorGeorge\_60, Whouxphf\_56, KristaRAM\_62, Spartacus\_61, Gandalph\_62, Cabrinians\_60, Dante\_60, Emmaloid\_60, Mozy\_68, Tootsieroll\_60, Pollywog\_60, Koella\_53, Chuckly\_62, IrishSherpFalk\_60, Priscilla\_59, Peridot\_60, Zapner\_72, BobaPhett\_63, Saal\_61, Alexphander\_63, Maravista\_60, ShiLan\_58, Yorick\_58, Clifton\_54, Radiance\_58, PMC\_56, Hlubikazi\_55, Totinger\_58, MadMen\_57, James\_63, Rialto\_65, Zerg\_59, Madiba\_57, Blarby\_71, Rockne\_60, DaddyRickover\_58, Mahavrat\_57, Doug\_61, Gorge\_63, OlympiaSaint\_61, NormanBulbieJr\_59, Boomer\_64, Mattes\_63, ShroomBoi\_61, Pippy\_57, UncleRicky\_58, Firehouse51\_60, VRedHorse\_59, Byougenkin\_57, Mandlovu\_55, Slim\_60, Lucia\_58, FreddyB\_60, Mutaforma13\_63, LittleShirley\_58, Spikelee\_66, Lorde\_59, Scottish\_57, GUmbe\_57, Hades\_60, Crumble\_54, Fancypants\_61
- Track 6 : LilMoolah\_57, DRBy19\_62, Job42\_61, Nivrat\_55, Philus\_62
- Track 7 : QuickMath\_61, Kimberlium\_62, Cornie\_55, Topiatin\_67, Starcevich\_59, Cheesepuff\_66, MulchExplorer\_62
- Track 8 : Wee\_63, MinionDave\_58, CaptainTrips\_56, Enby\_60, Hegedechwinu\_59, SG4\_56, lbOuu\_58
- Track 9 : DeadP\_65
- Track 10 : RockyHorror\_60
- Track 11 : Kersh\_61
- Track 12 : Veteran\_56
- Track 13 : EmiMonkey\_57, Eish\_63, PatoPoderoso\_56, KingJulian\_59, DaWorst\_60, PhilipPhlop\_59, Corium\_56
- Track 14 : Beanstalk\_59
- Track 15 : ByChance\_51
- Track 16 : BlueCrab\_59
- Track 17 : GigiOuiOui\_55
- Track 18 : Demsculpinboyz\_70, Renaud18\_65
- Track 19 : ThetaBob\_64, LunaStella\_58, Yoshi\_72

- Track 20 : Scarlett\_55
- Track 21 : LeMond\_55, KiSi\_55
- Track 22 : Oscar\_55
- Track 23 : TribbleTrouble\_50
- Track 24 : MacnCheese\_55
- Track 25 : Yuna\_57
- Track 26 : Chymera\_48
- Track 27 : TinyDot\_55

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

The start number called the most often in the published annotations is 8, it was called in 124 of the 142 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alexphander\_63, Beanstalk\_59, Blarby\_71, Blexus\_57, BlueCrab\_59, BobaPhett\_63, Boomer\_64, Brocalys\_54, Burwell21\_57, BuzzLyseyear\_65, ByChance\_51, Byougenkin\_57, Cabrinians\_60, CaptainTrips\_56, CheesePuff\_66, Chuckly\_62, Clifton\_54, Corium\_56, Cornie\_55, Crumble\_54, DRBy19\_62, DaWorst\_60, DaddyRickover\_58, Dante\_60, DeadP\_65, Demsculpinboyz\_70, DirtMcGirt\_58, Doug\_61, Drago\_57, Eish\_63, EleanorGeorge\_60, EmiMonkey\_57, Emmaloid\_60, Enby\_60, Eradicator\_52, Fancypants\_61, Firehouse51\_60, FreddyB\_60, GUmbie\_57, Gandolph\_62, GigiOuiOui\_55, Gorge\_63, Hades\_60, Hegedechwinu\_59, Hlubikazi\_55, IbOuu\_58, IrishSherpFalk\_60, Jabbawokkie\_73, James\_63, Jarcob\_59, Job42\_61, Karhdo\_56, Kersh\_61, Kimberlium\_62, KingJulian\_59, Koella\_53, KristaRAM\_62, LastJedi\_53, Latretium\_61, LilMoolah\_57, LittleShirley\_58, Lizziana\_65, Llij\_55, Lorde\_59, Lucia\_58, LunaStella\_58, MadMen\_57, Madiba\_57, Mahavrat\_57, Mandlovu\_55, Maravista\_60, Marker\_61, Martik\_59, Mattes\_63, MinionDave\_58, Mova\_60, Mozy\_68, MulchExplorer\_62, Mutaforma13\_63, Nivrat\_55, NormanBulbieJr\_59, OldBen\_56, OlympiaSaint\_61, PMC\_56, PatoPoderoso\_56, Peridot\_60, Phatniss\_57, Philus\_62, PhilipPhlop\_59, Pippy\_57, Pollywog\_60, Priscilla\_59, QuickMath\_61, Radiance\_58, Renaud18\_65, Rialto\_65, Rita\_60, Rockne\_60, RockyHorror\_60, SG4\_56, Saal\_61, Sabbb\_63, Scottish\_57, ShiLan\_58, ShowerHandel\_62, ShroomBoi\_61, SiSi\_57, Slim\_60, Soul22\_65, Spartacus\_61, Spikelee\_66, Starcevich\_59, Strokeseat\_55, SwagPigglett\_64, ThetaBob\_64, Tootsieroll\_60, Topiatin\_67, Totinger\_58, UncleRicky\_58, VRedHorse\_59, Veteran\_56, Violac\_61, Vivum\_60, Wee\_63, Whouxphf\_56, WillSterrel\_60, Yorick\_58, Yoshi\_72, Zapner\_72, Zerg\_59, Zizzle\_63,

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

- 

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

- CherryTomatoes\_55, Chymera\_48, Fryberger\_93, Guey18\_98, Keelan\_94, KiSi\_55, LeMond\_55, MacnCheese\_55, Oscar\_55, Pupper\_53, Ronaldo\_96, SCentae\_53, Scarlett\_55, TinyDot\_55, TribbleTrouble\_50, Volt\_97, WST1\_43, Yuna\_57, Ziko\_96,

**Summary by start number:**

Start 7:

- Found in 3 of 150 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 3 of 142
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CherryTomatoes\_55 (DO), Pupper\_53 (DO), SCentae\_53 (DO),

#### Start 8:

- Found in 131 of 150 ( 87.3% ) of genes in pham
- Manual Annotations of this start: 124 of 142
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alexphander\_63 (F1), Beanstalk\_59 (F1), Blarby\_71 (F), Blexus\_57 (F1), BlueCrab\_59 (F1), BobaPhett\_63 (F1), Boomer\_64 (F1), Brocalys\_54 (F1), Burwell21\_57 (F1), BuzzLyseyear\_65 (F1), ByChance\_51 (F1), Byougenkin\_57 (F1), Cabrinians\_60 (F1), CaptainTrips\_56 (F1), CheesePuff\_66 (F1), Chuckly\_62 (F1), Clifton\_54 (F1), Corium\_56 (F1), Cornie\_55 (F5), Crumble\_54 (F1), DRBy19\_62 (F1), DaWorst\_60 (F1), DaddyRickover\_58 (F1), Dante\_60 (F1), DeadP\_65 (F1), Demsculpinboyz\_70 (F2), DirtMcGirt\_58 (F1), Doug\_61 (F1), Drago\_57 (F1), Eish\_63 (F1), EleanorGeorge\_60 (F1), EmiMonkey\_57 (F1), Emmaloid\_60 (F1), Enby\_60 (F1), Eradicator\_52 (F1), Fancypants\_61 (F1), Firehouse51\_60 (F1), FreddyB\_60 (F1), GUmbie\_57 (F1), Gandolph\_62 (F1), GigiOuiOui\_55 (F1), Gorge\_63 (F1), Hades\_60 (F1), Hegedechwinu\_59 (F1), Hlubikazi\_55 (F1), IbOuu\_58 (F1), IrishSherpFalk\_60 (F1), Jabbawokkie\_73 (F2), James\_63 (F1), Jarcob\_59 (F1), Job42\_61 (F1), Karhdo\_56 (F1), Kersh\_61 (F1), Kimberlium\_62 (F1), KingJulian\_59 (F1), Koella\_53 (F1), KristaRAM\_62 (F1), LastJedi\_53 (F1), Latretium\_61 (F1), LilMoolah\_57 (F1), LittleShirley\_58 (F1), Lizziana\_65 (F1), Llij\_55 (F1), Lorde\_59 (F1), Lucia\_58 (F1), LunaStella\_58 (F4), MadMen\_57 (F1), Madiba\_57 (F1), Mahavrat\_57 (F1), Mandlovu\_55 (F1), Maravista\_60 (F1), Marker\_61 (F1), Martik\_59 (F1), Mattes\_63 (F1), MinionDave\_58 (F1), Mova\_60 (F1), Mozy\_68 (F1), MulchExplorer\_62 (F1), Mutaforma13\_63 (F1), Nivrat\_55 (F1), NormanBulbieJr\_59 (F1), OldBen\_56 (F1), OlympiaSaint\_61 (F1), PMC\_56 (F1), PatoPoderoso\_56 (F1), Peridot\_60 (F1), Phatniss\_57 (F1), Philus\_62 (F1), PhilipPhlop\_59 (F1), Pippy\_57 (F1), Pollywog\_60 (F1), Priscilla\_59 (F1), QuickMath\_61 (F1), Radiance\_58 (F1), Renaud18\_65 (F4), Rialto\_65 (F1), Rita\_60 (F1), Rockne\_60 (F1), RockyHorror\_60 (F1), SG4\_56 (F1), Saal\_61 (F1), Sabbb\_63 (F1), Scottish\_57 (F1), ShiLan\_58 (F1), ShowerHandel\_62 (F1), ShroomBoi\_61 (F1), SiSi\_57 (F1), Slim\_60 (F1), Soul22\_65 (F2), Spartacus\_61 (F1), Spikelee\_66 (F1), Starceвич\_59 (F1), Strokeseat\_55 (F1), SwagPigglett\_64 (F1), ThetaBob\_64 (F4), Tootsieroll\_60 (F1), Topiatin\_67 (F1), Totinger\_58 (F1), UncleRicky\_58 (F1), VRedHorse\_59 (F1), Veteran\_56 (F1), Violac\_61 (F1), Vivum\_60 (F1), Wee\_63 (F1), Whouxphf\_56 (F1), WillSterrel\_60 (F1), Yorick\_58 (F1), Yoshi\_72 (F2), Zapner\_72 (F2), Zerg\_59 (F1), Zizzle\_63 (F1),

#### Start 9:

- Found in 2 of 150 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 2 of 142
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chymera\_48 (singleton), TinyDot\_55 (singleton),

#### Start 12:

- Found in 2 of 150 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 2 of 142
- Called 100.0% of time when present

- Phage (with cluster) where this start called: MacnCheese\_55 (K3), TribbleTrouble\_50 (K3),

Start 14:

- Found in 126 of 150 ( 84.0% ) of genes in pham
- Manual Annotations of this start: 3 of 142
- Called 2.4% of time when present
- Phage (with cluster) where this start called: Oscar\_55 (K1), Scarlett\_55 (K1), Yuna\_57 (K6),

Start 15:

- Found in 4 of 150 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 2 of 142
- Called 50.0% of time when present
- Phage (with cluster) where this start called: KiSi\_55 (K1), LeMond\_55 (K1),

Start 17:

- Found in 121 of 150 ( 80.7% ) of genes in pham
- Manual Annotations of this start: 6 of 142
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Fryberger\_93 (DP), Guey18\_98 (DP), Keelan\_94 (DP), Ronaldo\_96 (DP), Volt\_97 (DP), Ziko\_96 (DP),

Start 20:

- Found in 1 of 150 ( 0.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: WST1\_43 (AJ),

### **Summary by clusters:**

There are 12 clusters represented in this pham: F1, F2, F4, F5, DO, F, AJ, singleton, K3, K1, K6, DP,

Info for manual annotations of cluster DO:

- Start number 7 was manually annotated 3 times for cluster DO.

Info for manual annotations of cluster DP:

- Start number 17 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster F1:

- Start number 8 was manually annotated 115 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 8 was manually annotated 5 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 8 was manually annotated 3 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 8 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster K1:

- Start number 14 was manually annotated 2 times for cluster K1.
- Start number 15 was manually annotated 2 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 12 was manually annotated 2 times for cluster K3.

Info for manual annotations of cluster K6:

- Start number 14 was manually annotated 1 time for cluster K6.

### **Gene Information:**

Gene: Alexphander\_63 Start: 40422, Stop: 40706, Start Num: 8

Candidate Starts for Alexphander\_63:

(6, 40395), (Start: 8 @40422 has 124 MA's), (Start: 14 @40446 has 3 MA's), (Start: 17 @40461 has 6 MA's), (22, 40506), (24, 40518), (29, 40596), (30, 40608), (32, 40632), (33, 40644), (35, 40698),

Gene: Beanstalk\_59 Start: 38741, Stop: 39007, Start Num: 8

Candidate Starts for Beanstalk\_59:

(6, 38714), (Start: 8 @38741 has 124 MA's), (Start: 14 @38765 has 3 MA's), (Start: 17 @38780 has 6 MA's), (22, 38825), (24, 38837), (29, 38915), (30, 38927), (32, 38951),

Gene: Blarby\_71 Start: 41835, Stop: 42119, Start Num: 8

Candidate Starts for Blarby\_71:

(6, 41808), (Start: 8 @41835 has 124 MA's), (Start: 14 @41859 has 3 MA's), (Start: 17 @41874 has 6 MA's), (22, 41919), (24, 41931), (29, 42009), (30, 42021), (32, 42045), (33, 42057), (35, 42111),

Gene: Blexus\_57 Start: 40392, Stop: 40673, Start Num: 8

Candidate Starts for Blexus\_57:

(6, 40365), (Start: 8 @40392 has 124 MA's), (Start: 14 @40416 has 3 MA's), (Start: 17 @40431 has 6 MA's), (22, 40476), (24, 40488), (29, 40566), (30, 40578), (32, 40602), (33, 40614), (35, 40665),

Gene: BlueCrab\_59 Start: 40700, Stop: 40978, Start Num: 8

Candidate Starts for BlueCrab\_59:

(6, 40673), (Start: 8 @40700 has 124 MA's), (Start: 14 @40724 has 3 MA's), (16, 40736), (22, 40781), (24, 40793), (30, 40883), (32, 40907), (33, 40919), (35, 40970),

Gene: BobaPhett\_63 Start: 42651, Stop: 42935, Start Num: 8

Candidate Starts for BobaPhett\_63:

(6, 42624), (Start: 8 @42651 has 124 MA's), (Start: 14 @42675 has 3 MA's), (Start: 17 @42690 has 6 MA's), (22, 42735), (24, 42747), (29, 42825), (30, 42837), (32, 42861), (33, 42873), (35, 42927),

Gene: Boomer\_64 Start: 42326, Stop: 42610, Start Num: 8

Candidate Starts for Boomer\_64:

(6, 42299), (Start: 8 @42326 has 124 MA's), (Start: 14 @42350 has 3 MA's), (Start: 17 @42365 has 6 MA's), (22, 42410), (24, 42422), (29, 42500), (30, 42512), (32, 42536), (33, 42548), (35, 42602),

Gene: Brocalys\_54 Start: 36836, Stop: 37117, Start Num: 8

Candidate Starts for Brocalys\_54:

(6, 36809), (Start: 8 @36836 has 124 MA's), (Start: 14 @36860 has 3 MA's), (Start: 17 @36875 has 6 MA's), (22, 36920), (24, 36932), (29, 37010), (30, 37022), (32, 37046), (33, 37058), (35, 37109),

Gene: Burwell21\_57 Start: 39934, Stop: 40218, Start Num: 8

Candidate Starts for Burwell21\_57:

(6, 39907), (Start: 8 @39934 has 124 MA's), (Start: 14 @39958 has 3 MA's), (Start: 17 @39973 has 6 MA's), (22, 40018), (24, 40030), (29, 40108), (30, 40120), (32, 40144), (33, 40156), (35, 40210),

Gene: BuzzLyseyear\_65 Start: 41358, Stop: 41639, Start Num: 8

Candidate Starts for BuzzLyseyear\_65:

(6, 41331), (Start: 8 @41358 has 124 MA's), (Start: 14 @41382 has 3 MA's), (Start: 17 @41397 has 6 MA's), (22, 41442), (24, 41454), (29, 41532), (30, 41544), (32, 41568), (33, 41580), (35, 41631),

Gene: ByChance\_51 Start: 35625, Stop: 35906, Start Num: 8

Candidate Starts for ByChance\_51:

(6, 35598), (Start: 8 @35625 has 124 MA's), (Start: 14 @35649 has 3 MA's), (16, 35661), (22, 35706), (24, 35718), (29, 35796), (30, 35808), (32, 35832), (33, 35844), (35, 35898),

Gene: Byougenkin\_57 Start: 39701, Stop: 39982, Start Num: 8

Candidate Starts for Byougenkin\_57:

(6, 39674), (Start: 8 @39701 has 124 MA's), (Start: 14 @39725 has 3 MA's), (Start: 17 @39740 has 6 MA's), (22, 39785), (24, 39797), (29, 39875), (30, 39887), (32, 39911), (33, 39923), (35, 39974),

Gene: Cabrinians\_60 Start: 40012, Stop: 40296, Start Num: 8

Candidate Starts for Cabrinians\_60:

(6, 39985), (Start: 8 @40012 has 124 MA's), (Start: 14 @40036 has 3 MA's), (Start: 17 @40051 has 6 MA's), (22, 40096), (24, 40108), (29, 40186), (30, 40198), (32, 40222), (33, 40234), (35, 40288),

Gene: CaptainTrips\_56 Start: 39508, Stop: 39792, Start Num: 8

Candidate Starts for CaptainTrips\_56:

(Start: 8 @39508 has 124 MA's), (Start: 14 @39532 has 3 MA's), (Start: 17 @39547 has 6 MA's), (22, 39592), (24, 39604), (29, 39682), (30, 39694), (32, 39718), (33, 39730), (35, 39784),

Gene: Cheesepuff\_66 Start: 41977, Stop: 42255, Start Num: 8

Candidate Starts for Cheesepuff\_66:

(4, 41941), (Start: 8 @41977 has 124 MA's), (Start: 14 @42001 has 3 MA's), (22, 42058), (24, 42070), (29, 42148), (30, 42160), (32, 42184), (33, 42196), (35, 42247),

Gene: CherryTomatoes\_55 Start: 18497, Stop: 18778, Start Num: 7

Candidate Starts for CherryTomatoes\_55:

(Start: 7 @18497 has 3 MA's), (13, 18533), (24, 18608),

Gene: Chuckly\_62 Start: 40654, Stop: 40938, Start Num: 8

Candidate Starts for Chuckly\_62:

(6, 40627), (Start: 8 @40654 has 124 MA's), (Start: 14 @40678 has 3 MA's), (Start: 17 @40693 has 6 MA's), (22, 40738), (24, 40750), (29, 40828), (30, 40840), (32, 40864), (33, 40876), (35, 40930),

Gene: Chymera\_48 Start: 30948, Stop: 31208, Start Num: 9

Candidate Starts for Chymera\_48:

(Start: 9 @30948 has 2 MA's), (11, 30954), (Start: 14 @30960 has 3 MA's), (32, 31149),

Gene: Clifton\_54 Start: 37187, Stop: 37468, Start Num: 8

Candidate Starts for Clifton\_54:

(6, 37160), (Start: 8 @37187 has 124 MA's), (Start: 14 @37211 has 3 MA's), (Start: 17 @37226 has 6 MA's), (22, 37271), (24, 37283), (29, 37361), (30, 37373), (32, 37397), (33, 37409), (35, 37460),

Gene: Corium\_56 Start: 39051, Stop: 39335, Start Num: 8

Candidate Starts for Corium\_56:

(6, 39024), (Start: 8 @39051 has 124 MA's), (Start: 14 @39075 has 3 MA's), (Start: 17 @39090 has 6 MA's), (22, 39135), (29, 39225), (30, 39237), (32, 39261), (33, 39273), (35, 39327),

Gene: Cornie\_55 Start: 38439, Stop: 38717, Start Num: 8

Candidate Starts for Cornie\_55:

(4, 38403), (Start: 8 @38439 has 124 MA's), (Start: 14 @38463 has 3 MA's), (22, 38520), (24, 38532), (29, 38610), (30, 38622), (32, 38646), (33, 38658), (35, 38709),

Gene: Crumble\_54 Start: 35948, Stop: 36232, Start Num: 8

Candidate Starts for Crumble\_54:

(6, 35921), (Start: 8 @35948 has 124 MA's), (Start: 14 @35972 has 3 MA's), (Start: 17 @35987 has 6 MA's), (22, 36032), (24, 36044), (29, 36122), (30, 36134), (32, 36158), (33, 36170), (35, 36224),

Gene: DRBy19\_62 Start: 41112, Stop: 41393, Start Num: 8

Candidate Starts for DRBy19\_62:

(6, 41085), (Start: 8 @41112 has 124 MA's), (23, 41196), (25, 41205), (28, 41268), (29, 41283), (30, 41295), (32, 41319), (33, 41331), (35, 41385),

Gene: DaWorst\_60 Start: 40413, Stop: 40697, Start Num: 8

Candidate Starts for DaWorst\_60:

(6, 40386), (Start: 8 @40413 has 124 MA's), (Start: 14 @40437 has 3 MA's), (Start: 17 @40452 has 6 MA's), (22, 40497), (29, 40587), (30, 40599), (32, 40623), (33, 40635), (35, 40689),

Gene: DaddyRickover\_58 Start: 40151, Stop: 40435, Start Num: 8

Candidate Starts for DaddyRickover\_58:

(6, 40124), (Start: 8 @40151 has 124 MA's), (Start: 14 @40175 has 3 MA's), (Start: 17 @40190 has 6 MA's), (22, 40235), (24, 40247), (29, 40325), (30, 40337), (32, 40361), (33, 40373), (35, 40427),

Gene: Dante\_60 Start: 39936, Stop: 40220, Start Num: 8

Candidate Starts for Dante\_60:

(6, 39909), (Start: 8 @39936 has 124 MA's), (Start: 14 @39960 has 3 MA's), (Start: 17 @39975 has 6 MA's), (22, 40020), (24, 40032), (29, 40110), (30, 40122), (32, 40146), (33, 40158), (35, 40212),

Gene: DeadP\_65 Start: 42582, Stop: 42848, Start Num: 8

Candidate Starts for DeadP\_65:

(Start: 8 @42582 has 124 MA's), (Start: 14 @42606 has 3 MA's), (Start: 17 @42621 has 6 MA's), (22, 42666), (24, 42678), (29, 42756), (30, 42768), (32, 42792),

Gene: Demsculpinboyz\_70 Start: 39936, Stop: 40217, Start Num: 8

Candidate Starts for Demsculpinboyz\_70:

(5, 39900), (Start: 8 @39936 has 124 MA's), (10, 39951), (Start: 17 @39975 has 6 MA's), (22, 40020), (24, 40032), (32, 40146), (33, 40158), (35, 40209),

Gene: DirtMcgirt\_58 Start: 38676, Stop: 38960, Start Num: 8

Candidate Starts for DirtMcgirt\_58:

(6, 38649), (Start: 8 @38676 has 124 MA's), (Start: 14 @38700 has 3 MA's), (Start: 17 @38715 has 6 MA's), (22, 38760), (24, 38772), (29, 38850), (30, 38862), (32, 38886), (33, 38898), (35, 38952),

Gene: Doug\_61 Start: 40679, Stop: 40963, Start Num: 8

Candidate Starts for Doug\_61:

(6, 40652), (Start: 8 @40679 has 124 MA's), (Start: 14 @40703 has 3 MA's), (Start: 17 @40718 has 6 MA's), (22, 40763), (24, 40775), (29, 40853), (30, 40865), (32, 40889), (33, 40901), (35, 40955),

Gene: Drago\_57 Start: 38679, Stop: 38963, Start Num: 8

Candidate Starts for Drago\_57:

(6, 38652), (Start: 8 @38679 has 124 MA's), (Start: 14 @38703 has 3 MA's), (Start: 17 @38718 has 6 MA's), (22, 38763), (24, 38775), (29, 38853), (30, 38865), (32, 38889), (33, 38901), (35, 38955),

Gene: Eish\_63 Start: 40928, Stop: 41212, Start Num: 8

Candidate Starts for Eish\_63:

(6, 40901), (Start: 8 @40928 has 124 MA's), (Start: 14 @40952 has 3 MA's), (Start: 17 @40967 has 6 MA's), (22, 41012), (29, 41102), (30, 41114), (32, 41138), (33, 41150), (35, 41204),

Gene: EleanorGeorge\_60 Start: 40795, Stop: 41076, Start Num: 8

Candidate Starts for EleanorGeorge\_60:

(6, 40768), (Start: 8 @40795 has 124 MA's), (Start: 14 @40819 has 3 MA's), (Start: 17 @40834 has 6 MA's), (22, 40879), (24, 40891), (29, 40969), (30, 40981), (32, 41005), (33, 41017), (35, 41068),

Gene: EmiMonkey\_57 Start: 41642, Stop: 41926, Start Num: 8

Candidate Starts for EmiMonkey\_57:

(6, 41615), (Start: 8 @41642 has 124 MA's), (Start: 14 @41666 has 3 MA's), (Start: 17 @41681 has 6 MA's), (22, 41726), (29, 41816), (30, 41828), (32, 41852), (33, 41864), (35, 41918),

Gene: Emmaloid\_60 Start: 40738, Stop: 41022, Start Num: 8

Candidate Starts for Emmaloid\_60:

(6, 40711), (Start: 8 @40738 has 124 MA's), (Start: 14 @40762 has 3 MA's), (Start: 17 @40777 has 6 MA's), (22, 40822), (24, 40834), (29, 40912), (30, 40924), (32, 40948), (33, 40960), (35, 41014),

Gene: Enby\_60 Start: 38955, Stop: 39239, Start Num: 8

Candidate Starts for Enby\_60:

(Start: 8 @38955 has 124 MA's), (Start: 14 @38979 has 3 MA's), (Start: 17 @38994 has 6 MA's), (22, 39039), (24, 39051), (29, 39129), (30, 39141), (32, 39165), (33, 39177), (35, 39231),

Gene: Eradicator\_52 Start: 38208, Stop: 38489, Start Num: 8

Candidate Starts for Eradicator\_52:

(6, 38181), (Start: 8 @38208 has 124 MA's), (Start: 14 @38232 has 3 MA's), (Start: 17 @38247 has 6 MA's), (22, 38292), (24, 38304), (29, 38382), (30, 38394), (32, 38418), (33, 38430), (35, 38481),

Gene: Fancypants\_61 Start: 40646, Stop: 40930, Start Num: 8

Candidate Starts for Fancypants\_61:

(6, 40619), (Start: 8 @40646 has 124 MA's), (Start: 14 @40670 has 3 MA's), (Start: 17 @40685 has 6 MA's), (22, 40730), (24, 40742), (29, 40820), (30, 40832), (32, 40856), (33, 40868), (35, 40922),

Gene: Firehouse51\_60 Start: 43530, Stop: 43814, Start Num: 8

Candidate Starts for Firehouse51\_60:

(6, 43503), (Start: 8 @43530 has 124 MA's), (Start: 14 @43554 has 3 MA's), (Start: 17 @43569 has 6 MA's), (22, 43614), (24, 43626), (29, 43704), (30, 43716), (32, 43740), (33, 43752), (35, 43806),

Gene: FreddyB\_60 Start: 38860, Stop: 39141, Start Num: 8

Candidate Starts for FreddyB\_60:

(6, 38833), (Start: 8 @38860 has 124 MA's), (Start: 14 @38884 has 3 MA's), (Start: 17 @38899 has 6 MA's), (22, 38944), (24, 38956), (29, 39034), (30, 39046), (32, 39070), (33, 39082), (35, 39133),

Gene: Fryberger\_93 Start: 47445, Stop: 47750, Start Num: 17

Candidate Starts for Fryberger\_93:

(Start: 17 @47445 has 6 MA's), (21, 47478), (34, 47679), (36, 47703),

Gene: GUmbie\_57 Start: 39435, Stop: 39716, Start Num: 8

Candidate Starts for GUmbie\_57:

(6, 39408), (Start: 8 @39435 has 124 MA's), (Start: 14 @39459 has 3 MA's), (Start: 17 @39474 has 6 MA's), (22, 39519), (24, 39531), (29, 39609), (30, 39621), (32, 39645), (33, 39657), (35, 39708),

Gene: Gandalph\_62 Start: 40257, Stop: 40538, Start Num: 8

Candidate Starts for Gandalph\_62:

(6, 40230), (Start: 8 @40257 has 124 MA's), (Start: 14 @40281 has 3 MA's), (Start: 17 @40296 has 6 MA's), (22, 40341), (24, 40353), (29, 40431), (30, 40443), (32, 40467), (33, 40479), (35, 40530),

Gene: GigiOuiOui\_55 Start: 38875, Stop: 39156, Start Num: 8

Candidate Starts for GigiOuiOui\_55:

(6, 38848), (Start: 8 @38875 has 124 MA's), (Start: 14 @38899 has 3 MA's), (Start: 17 @38914 has 6 MA's), (22, 38959), (24, 38971), (28, 39034), (29, 39049), (30, 39061), (32, 39085), (33, 39097), (35, 39148),

Gene: Gorge\_63 Start: 41377, Stop: 41658, Start Num: 8

Candidate Starts for Gorge\_63:

(6, 41350), (Start: 8 @41377 has 124 MA's), (Start: 14 @41401 has 3 MA's), (Start: 17 @41416 has 6 MA's), (22, 41461), (24, 41473), (29, 41551), (30, 41563), (32, 41587), (33, 41599), (35, 41650),

Gene: Guey18\_98 Start: 48765, Stop: 49070, Start Num: 17

Candidate Starts for Guey18\_98:

(Start: 17 @48765 has 6 MA's), (21, 48798), (34, 48999), (36, 49023),

Gene: Hades\_60 Start: 40833, Stop: 41114, Start Num: 8

Candidate Starts for Hades\_60:

(6, 40806), (Start: 8 @40833 has 124 MA's), (Start: 14 @40857 has 3 MA's), (Start: 17 @40872 has 6 MA's), (22, 40917), (24, 40929), (29, 41007), (30, 41019), (32, 41043), (33, 41055), (35, 41106),

Gene: Hegedechwinu\_59 Start: 39047, Stop: 39328, Start Num: 8

Candidate Starts for Hegedechwinu\_59:

(Start: 8 @39047 has 124 MA's), (Start: 14 @39071 has 3 MA's), (Start: 17 @39086 has 6 MA's), (22, 39131), (24, 39143), (29, 39221), (30, 39233), (32, 39257), (33, 39269), (35, 39320),

Gene: Hlubikazi\_55 Start: 38053, Stop: 38334, Start Num: 8

Candidate Starts for Hlubikazi\_55:

(6, 38026), (Start: 8 @38053 has 124 MA's), (Start: 14 @38077 has 3 MA's), (Start: 17 @38092 has 6 MA's), (22, 38137), (24, 38149), (29, 38227), (30, 38239), (32, 38263), (33, 38275), (35, 38326),

Gene: lbOuu\_58 Start: 40412, Stop: 40696, Start Num: 8

Candidate Starts for lbOuu\_58:

(Start: 8 @40412 has 124 MA's), (Start: 14 @40436 has 3 MA's), (Start: 17 @40451 has 6 MA's), (22, 40496), (24, 40508), (29, 40586), (30, 40598), (32, 40622), (33, 40634), (35, 40688),

Gene: IrishSherpFalk\_60 Start: 41690, Stop: 41971, Start Num: 8

Candidate Starts for IrishSherpFalk\_60:

(6, 41663), (Start: 8 @41690 has 124 MA's), (Start: 14 @41714 has 3 MA's), (Start: 17 @41729 has 6 MA's), (22, 41774), (24, 41786), (29, 41864), (30, 41876), (32, 41900), (33, 41912), (35, 41963),

Gene: Jabbawokkie\_73 Start: 41755, Stop: 42039, Start Num: 8

Candidate Starts for Jabbawokkie\_73:

(6, 41728), (Start: 8 @41755 has 124 MA's), (Start: 14 @41779 has 3 MA's), (Start: 17 @41794 has 6 MA's), (22, 41839), (24, 41851), (29, 41929), (30, 41941), (32, 41965), (33, 41977), (35, 42031),

Gene: James\_63 Start: 41502, Stop: 41783, Start Num: 8

Candidate Starts for James\_63:

(6, 41475), (Start: 8 @41502 has 124 MA's), (Start: 14 @41526 has 3 MA's), (Start: 17 @41541 has 6 MA's), (22, 41586), (24, 41598), (29, 41676), (30, 41688), (32, 41712), (33, 41724), (35, 41775),

Gene: Jarcob\_59 Start: 39980, Stop: 40264, Start Num: 8

Candidate Starts for Jarcob\_59:

(6, 39953), (Start: 8 @39980 has 124 MA's), (Start: 14 @40004 has 3 MA's), (Start: 17 @40019 has 6 MA's), (22, 40064), (24, 40076), (29, 40154), (30, 40166), (32, 40190), (33, 40202), (35, 40256),

Gene: Job42\_61 Start: 41920, Stop: 42201, Start Num: 8

Candidate Starts for Job42\_61:

(6, 41893), (Start: 8 @41920 has 124 MA's), (23, 42004), (25, 42013), (28, 42076), (29, 42091), (30, 42103), (32, 42127), (33, 42139), (35, 42193),

Gene: Karhdo\_56 Start: 39525, Stop: 39809, Start Num: 8

Candidate Starts for Karhdo\_56:

(6, 39498), (Start: 8 @39525 has 124 MA's), (Start: 14 @39549 has 3 MA's), (Start: 17 @39564 has 6 MA's), (22, 39609), (24, 39621), (29, 39699), (30, 39711), (32, 39735), (33, 39747), (35, 39801),

Gene: Keelan\_94 Start: 48287, Stop: 48550, Start Num: 17

Candidate Starts for Keelan\_94:

(Start: 17 @48287 has 6 MA's), (26, 48365), (28, 48419), (35, 48542),

Gene: Kersh\_61 Start: 42278, Stop: 42559, Start Num: 8

Candidate Starts for Kersh\_61:

(6, 42251), (Start: 8 @42278 has 124 MA's), (Start: 14 @42302 has 3 MA's), (Start: 17 @42317 has 6 MA's), (22, 42362), (24, 42374), (32, 42488), (33, 42500), (35, 42551),

Gene: KiSi\_55 Start: 38687, Stop: 38956, Start Num: 15

Candidate Starts for KiSi\_55:

(Start: 14 @38681 has 3 MA's), (Start: 15 @38687 has 2 MA's), (21, 38729), (24, 38753), (31, 38861), (37, 38945),

Gene: Kimberlium\_62 Start: 41811, Stop: 42092, Start Num: 8

Candidate Starts for Kimberlium\_62:

(4, 41775), (Start: 8 @41811 has 124 MA's), (Start: 14 @41835 has 3 MA's), (22, 41892), (24, 41904), (29, 41982), (30, 41994), (32, 42018), (33, 42030), (35, 42084),

Gene: KingJulian\_59 Start: 39051, Stop: 39335, Start Num: 8

Candidate Starts for KingJulian\_59:

(6, 39024), (Start: 8 @39051 has 124 MA's), (Start: 14 @39075 has 3 MA's), (Start: 17 @39090 has 6 MA's), (22, 39135), (29, 39225), (30, 39237), (32, 39261), (33, 39273), (35, 39327),

Gene: Koella\_53 Start: 35910, Stop: 36194, Start Num: 8

Candidate Starts for Koella\_53:

(6, 35883), (Start: 8 @35910 has 124 MA's), (Start: 14 @35934 has 3 MA's), (Start: 17 @35949 has 6 MA's), (22, 35994), (24, 36006), (29, 36084), (30, 36096), (32, 36120), (33, 36132), (35, 36186),

Gene: KristaRAM\_62 Start: 42482, Stop: 42763, Start Num: 8

Candidate Starts for KristaRAM\_62:

(6, 42455), (Start: 8 @42482 has 124 MA's), (Start: 14 @42506 has 3 MA's), (Start: 17 @42521 has 6 MA's), (22, 42566), (24, 42578), (29, 42656), (30, 42668), (32, 42692), (33, 42704), (35, 42755),

Gene: LastJedi\_53 Start: 37230, Stop: 37511, Start Num: 8

Candidate Starts for LastJedi\_53:

(6, 37203), (Start: 8 @37230 has 124 MA's), (Start: 14 @37254 has 3 MA's), (Start: 17 @37269 has 6 MA's), (22, 37314), (24, 37326), (29, 37404), (30, 37416), (32, 37440), (33, 37452), (35, 37503),

Gene: Latretium\_61 Start: 40556, Stop: 40837, Start Num: 8

Candidate Starts for Latretium\_61:

(6, 40529), (Start: 8 @40556 has 124 MA's), (Start: 14 @40580 has 3 MA's), (Start: 17 @40595 has 6 MA's), (22, 40640), (24, 40652), (29, 40730), (30, 40742), (32, 40766), (33, 40778), (35, 40829),

Gene: LeMond\_55 Start: 38671, Stop: 38940, Start Num: 15

Candidate Starts for LeMond\_55:

(Start: 14 @38665 has 3 MA's), (Start: 15 @38671 has 2 MA's), (21, 38713), (24, 38737), (31, 38845), (37, 38929),

Gene: LilMoolah\_57 Start: 39425, Stop: 39706, Start Num: 8

Candidate Starts for LilMoolah\_57:

(6, 39398), (Start: 8 @39425 has 124 MA's), (23, 39509), (25, 39518), (28, 39581), (29, 39596), (30, 39608), (32, 39632), (33, 39644), (35, 39698),

Gene: LittleShirley\_58 Start: 40469, Stop: 40753, Start Num: 8

Candidate Starts for LittleShirley\_58:

(6, 40442), (Start: 8 @40469 has 124 MA's), (Start: 14 @40493 has 3 MA's), (Start: 17 @40508 has 6 MA's), (22, 40553), (24, 40565), (29, 40643), (30, 40655), (32, 40679), (33, 40691), (35, 40745),

Gene: Lizziana\_65 Start: 40983, Stop: 41264, Start Num: 8

Candidate Starts for Lizziana\_65:

(6, 40956), (Start: 8 @40983 has 124 MA's), (Start: 14 @41007 has 3 MA's), (Start: 17 @41022 has 6 MA's), (22, 41067), (24, 41079), (29, 41157), (30, 41169), (32, 41193), (33, 41205), (35, 41256),

Gene: Llij\_55 Start: 38833, Stop: 39117, Start Num: 8

Candidate Starts for Llij\_55:

(6, 38806), (Start: 8 @38833 has 124 MA's), (Start: 14 @38857 has 3 MA's), (Start: 17 @38872 has 6 MA's), (22, 38917), (24, 38929), (29, 39007), (30, 39019), (32, 39043), (33, 39055), (35, 39109),

Gene: Lorde\_59 Start: 38120, Stop: 38404, Start Num: 8

Candidate Starts for Lorde\_59:

(6, 38093), (Start: 8 @38120 has 124 MA's), (Start: 14 @38144 has 3 MA's), (Start: 17 @38159 has 6 MA's), (22, 38204), (24, 38216), (29, 38294), (30, 38306), (32, 38330), (33, 38342), (35, 38396),

Gene: Lucia\_58 Start: 38977, Stop: 39258, Start Num: 8

Candidate Starts for Lucia\_58:

(6, 38950), (Start: 8 @38977 has 124 MA's), (Start: 14 @39001 has 3 MA's), (Start: 17 @39016 has 6 MA's), (22, 39061), (24, 39073), (29, 39151), (30, 39163), (32, 39187), (33, 39199), (35, 39250),

Gene: LunaStella\_58 Start: 39407, Stop: 39685, Start Num: 8

Candidate Starts for LunaStella\_58:

(3, 39371), (Start: 8 @39407 has 124 MA's), (10, 39416), (21, 39473), (23, 39491), (25, 39500), (28, 39563), (29, 39578), (30, 39590), (32, 39614), (33, 39626), (35, 39677),

Gene: MacnCheese\_55 Start: 38928, Stop: 39194, Start Num: 12

Candidate Starts for MacnCheese\_55:

(1, 38688), (Start: 12 @38928 has 2 MA's), (Start: 17 @38949 has 6 MA's), (19, 38955), (28, 39069), (31, 39114), (32, 39123),

Gene: MadMen\_57 Start: 39757, Stop: 40041, Start Num: 8

Candidate Starts for MadMen\_57:

(6, 39730), (Start: 8 @39757 has 124 MA's), (Start: 14 @39781 has 3 MA's), (Start: 17 @39796 has 6 MA's), (22, 39841), (24, 39853), (29, 39931), (30, 39943), (32, 39967), (33, 39979), (35, 40033),

Gene: Madiba\_57 Start: 39006, Stop: 39290, Start Num: 8

Candidate Starts for Madiba\_57:

(6, 38979), (Start: 8 @39006 has 124 MA's), (Start: 14 @39030 has 3 MA's), (Start: 17 @39045 has 6 MA's), (22, 39090), (24, 39102), (29, 39180), (30, 39192), (32, 39216), (33, 39228), (35, 39282),

Gene: Mahavrat\_57 Start: 39385, Stop: 39666, Start Num: 8

Candidate Starts for Mahavrat\_57:

(6, 39358), (Start: 8 @39385 has 124 MA's), (Start: 14 @39409 has 3 MA's), (Start: 17 @39424 has 6 MA's), (22, 39469), (24, 39481), (29, 39559), (30, 39571), (32, 39595), (33, 39607), (35, 39658),

Gene: Mandlovu\_55 Start: 37995, Stop: 38276, Start Num: 8

Candidate Starts for Mandlovu\_55:

(6, 37968), (Start: 8 @37995 has 124 MA's), (Start: 14 @38019 has 3 MA's), (Start: 17 @38034 has 6 MA's), (22, 38079), (24, 38091), (29, 38169), (30, 38181), (32, 38205), (33, 38217), (35, 38268),

Gene: Maravista\_60 Start: 41432, Stop: 41713, Start Num: 8

Candidate Starts for Maravista\_60:

(6, 41405), (Start: 8 @41432 has 124 MA's), (Start: 14 @41456 has 3 MA's), (Start: 17 @41471 has 6 MA's), (22, 41516), (24, 41528), (29, 41606), (30, 41618), (32, 41642), (33, 41654), (35, 41705),

Gene: Marker\_61 Start: 40100, Stop: 40384, Start Num: 8

Candidate Starts for Marker\_61:

(6, 40073), (Start: 8 @40100 has 124 MA's), (Start: 14 @40124 has 3 MA's), (Start: 17 @40139 has 6 MA's), (22, 40184), (24, 40196), (29, 40274), (30, 40286), (32, 40310), (33, 40322), (35, 40376),

Gene: Martik\_59 Start: 39936, Stop: 40217, Start Num: 8

Candidate Starts for Martik\_59:

(6, 39909), (Start: 8 @39936 has 124 MA's), (Start: 14 @39960 has 3 MA's), (Start: 17 @39975 has 6 MA's), (22, 40020), (24, 40032), (29, 40110), (30, 40122), (32, 40146), (33, 40158), (35, 40209),

Gene: Mattes\_63 Start: 41502, Stop: 41783, Start Num: 8

Candidate Starts for Mattes\_63:

(6, 41475), (Start: 8 @41502 has 124 MA's), (Start: 14 @41526 has 3 MA's), (Start: 17 @41541 has 6 MA's), (22, 41586), (24, 41598), (29, 41676), (30, 41688), (32, 41712), (33, 41724), (35, 41775),

Gene: MinionDave\_58 Start: 40283, Stop: 40564, Start Num: 8

Candidate Starts for MinionDave\_58:

(Start: 8 @40283 has 124 MA's), (Start: 14 @40307 has 3 MA's), (Start: 17 @40322 has 6 MA's), (22, 40367), (24, 40379), (29, 40457), (30, 40469), (32, 40493), (33, 40505), (35, 40556),

Gene: Mova\_60 Start: 39510, Stop: 39794, Start Num: 8

Candidate Starts for Mova\_60:

(6, 39483), (Start: 8 @39510 has 124 MA's), (Start: 14 @39534 has 3 MA's), (Start: 17 @39549 has 6 MA's), (22, 39594), (24, 39606), (29, 39684), (30, 39696), (32, 39720), (33, 39732), (35, 39786),

Gene: Mozy\_68 Start: 42517, Stop: 42798, Start Num: 8

Candidate Starts for Mozy\_68:

(6, 42490), (Start: 8 @42517 has 124 MA's), (Start: 14 @42541 has 3 MA's), (Start: 17 @42556 has 6 MA's), (22, 42601), (24, 42613), (29, 42691), (30, 42703), (32, 42727), (33, 42739), (35, 42790),

Gene: MulchExplorer\_62 Start: 41810, Stop: 42091, Start Num: 8

Candidate Starts for MulchExplorer\_62:

(4, 41774), (Start: 8 @41810 has 124 MA's), (Start: 14 @41834 has 3 MA's), (22, 41891), (24, 41903), (29, 41981), (30, 41993), (32, 42017), (33, 42029), (35, 42083),

Gene: Mutaforma13\_63 Start: 42840, Stop: 43124, Start Num: 8

Candidate Starts for Mutaforma13\_63:

(6, 42813), (Start: 8 @42840 has 124 MA's), (Start: 14 @42864 has 3 MA's), (Start: 17 @42879 has 6 MA's), (22, 42924), (24, 42936), (29, 43014), (30, 43026), (32, 43050), (33, 43062), (35, 43116),

Gene: Nivrat\_55 Start: 39298, Stop: 39579, Start Num: 8

Candidate Starts for Nivrat\_55:

(6, 39271), (Start: 8 @39298 has 124 MA's), (23, 39382), (25, 39391), (28, 39454), (29, 39469), (30, 39481), (32, 39505), (33, 39517), (35, 39571),

Gene: NormanBulbieJr\_59 Start: 39923, Stop: 40207, Start Num: 8

Candidate Starts for NormanBulbieJr\_59:

(6, 39896), (Start: 8 @39923 has 124 MA's), (Start: 14 @39947 has 3 MA's), (Start: 17 @39962 has 6 MA's), (22, 40007), (24, 40019), (29, 40097), (30, 40109), (32, 40133), (33, 40145), (35, 40199),

Gene: OldBen\_56 Start: 39848, Stop: 40132, Start Num: 8

Candidate Starts for OldBen\_56:

(6, 39821), (Start: 8 @39848 has 124 MA's), (Start: 14 @39872 has 3 MA's), (Start: 17 @39887 has 6 MA's), (22, 39932), (24, 39944), (29, 40022), (30, 40034), (32, 40058), (33, 40070), (35, 40124),

Gene: OlympiaSaint\_61 Start: 40444, Stop: 40725, Start Num: 8

Candidate Starts for OlympiaSaint\_61:

(6, 40417), (Start: 8 @40444 has 124 MA's), (Start: 14 @40468 has 3 MA's), (Start: 17 @40483 has 6 MA's), (22, 40528), (24, 40540), (29, 40618), (30, 40630), (32, 40654), (33, 40666), (35, 40717),

Gene: Oscar\_55 Start: 38567, Stop: 38842, Start Num: 14

Candidate Starts for Oscar\_55:

(Start: 14 @38567 has 3 MA's), (Start: 15 @38573 has 2 MA's), (21, 38615), (24, 38639), (31, 38747), (37, 38831),

Gene: PMC\_56 Start: 40550, Stop: 40834, Start Num: 8

Candidate Starts for PMC\_56:

(6, 40523), (Start: 8 @40550 has 124 MA's), (Start: 14 @40574 has 3 MA's), (Start: 17 @40589 has 6 MA's), (22, 40634), (24, 40646), (29, 40724), (30, 40736), (32, 40760), (33, 40772), (35, 40826),

Gene: PatoPoderoso\_56 Start: 39051, Stop: 39335, Start Num: 8

Candidate Starts for PatoPoderoso\_56:

(6, 39024), (Start: 8 @39051 has 124 MA's), (Start: 14 @39075 has 3 MA's), (Start: 17 @39090 has 6 MA's), (22, 39135), (29, 39225), (30, 39237), (32, 39261), (33, 39273), (35, 39327),

Gene: Peridot\_60 Start: 39388, Stop: 39672, Start Num: 8

Candidate Starts for Peridot\_60:

(6, 39361), (Start: 8 @39388 has 124 MA's), (Start: 14 @39412 has 3 MA's), (Start: 17 @39427 has 6 MA's), (22, 39472), (24, 39484), (29, 39562), (30, 39574), (32, 39598), (33, 39610), (35, 39664),

Gene: Phatniss\_57 Start: 39928, Stop: 40212, Start Num: 8

Candidate Starts for Phatniss\_57:

(6, 39901), (Start: 8 @39928 has 124 MA's), (Start: 14 @39952 has 3 MA's), (Start: 17 @39967 has 6 MA's), (22, 40012), (24, 40024), (29, 40102), (30, 40114), (32, 40138), (33, 40150), (35, 40204),

Gene: Philus\_62 Start: 41088, Stop: 41369, Start Num: 8

Candidate Starts for Philus\_62:

(6, 41061), (Start: 8 @41088 has 124 MA's), (23, 41172), (25, 41181), (28, 41244), (29, 41259), (30, 41271), (32, 41295), (33, 41307), (35, 41361),

Gene: PhlipPhlop\_59 Start: 41642, Stop: 41926, Start Num: 8

Candidate Starts for PhlipPhlop\_59:

(6, 41615), (Start: 8 @41642 has 124 MA's), (Start: 14 @41666 has 3 MA's), (Start: 17 @41681 has 6 MA's), (22, 41726), (29, 41816), (30, 41828), (32, 41852), (33, 41864), (35, 41918),

Gene: Pippy\_57 Start: 38794, Stop: 39075, Start Num: 8

Candidate Starts for Pippy\_57:

(6, 38767), (Start: 8 @38794 has 124 MA's), (Start: 14 @38818 has 3 MA's), (Start: 17 @38833 has 6 MA's), (22, 38878), (24, 38890), (29, 38968), (30, 38980), (32, 39004), (33, 39016), (35, 39067),

Gene: Pollywog\_60 Start: 40759, Stop: 41043, Start Num: 8

Candidate Starts for Pollywog\_60:

(6, 40732), (Start: 8 @40759 has 124 MA's), (Start: 14 @40783 has 3 MA's), (Start: 17 @40798 has 6 MA's), (22, 40843), (24, 40855), (29, 40933), (30, 40945), (32, 40969), (33, 40981), (35, 41035),

Gene: Priscilla\_59 Start: 40022, Stop: 40306, Start Num: 8

Candidate Starts for Priscilla\_59:

(6, 39995), (Start: 8 @40022 has 124 MA's), (Start: 14 @40046 has 3 MA's), (Start: 17 @40061 has 6 MA's), (22, 40106), (24, 40118), (29, 40196), (30, 40208), (32, 40232), (33, 40244), (35, 40298),

Gene: Pupper\_53 Start: 18336, Stop: 18617, Start Num: 7

Candidate Starts for Pupper\_53:

(Start: 7 @18336 has 3 MA's), (13, 18372), (24, 18447),

Gene: QuickMath\_61 Start: 42034, Stop: 42315, Start Num: 8

Candidate Starts for QuickMath\_61:

(4, 41998), (Start: 8 @42034 has 124 MA's), (Start: 14 @42058 has 3 MA's), (22, 42115), (24, 42127), (29, 42205), (30, 42217), (32, 42241), (33, 42253), (35, 42307),

Gene: Radiance\_58 Start: 40047, Stop: 40328, Start Num: 8

Candidate Starts for Radiance\_58:

(6, 40020), (Start: 8 @40047 has 124 MA's), (Start: 14 @40071 has 3 MA's), (Start: 17 @40086 has 6 MA's), (22, 40131), (24, 40143), (29, 40221), (30, 40233), (32, 40257), (33, 40269), (35, 40320),

Gene: Renaud18\_65 Start: 40812, Stop: 41093, Start Num: 8

Candidate Starts for Renaud18\_65:

(5, 40776), (Start: 8 @40812 has 124 MA's), (10, 40827), (Start: 17 @40851 has 6 MA's), (22, 40896), (24, 40908), (32, 41022), (33, 41034), (35, 41085),

Gene: Rialto\_65 Start: 42826, Stop: 43110, Start Num: 8

Candidate Starts for Rialto\_65:

(6, 42799), (Start: 8 @42826 has 124 MA's), (Start: 14 @42850 has 3 MA's), (Start: 17 @42865 has 6 MA's), (22, 42910), (24, 42922), (29, 43000), (30, 43012), (32, 43036), (33, 43048), (35, 43102),

Gene: Rita\_60 Start: 38653, Stop: 38937, Start Num: 8

Candidate Starts for Rita\_60:

(6, 38626), (Start: 8 @38653 has 124 MA's), (Start: 14 @38677 has 3 MA's), (Start: 17 @38692 has 6 MA's), (22, 38737), (24, 38749), (29, 38827), (30, 38839), (32, 38863), (33, 38875), (35, 38929),

Gene: Rockne\_60 Start: 40562, Stop: 40846, Start Num: 8

Candidate Starts for Rockne\_60:

(6, 40535), (Start: 8 @40562 has 124 MA's), (Start: 14 @40586 has 3 MA's), (Start: 17 @40601 has 6 MA's), (22, 40646), (24, 40658), (29, 40736), (30, 40748), (32, 40772), (33, 40784), (35, 40838),

Gene: RockyHorror\_60 Start: 39611, Stop: 39892, Start Num: 8

Candidate Starts for RockyHorror\_60:

(6, 39584), (Start: 8 @39611 has 124 MA's), (Start: 14 @39635 has 3 MA's), (Start: 17 @39650 has 6 MA's), (22, 39695), (24, 39707), (30, 39797), (32, 39821), (33, 39833), (35, 39884),

Gene: Ronaldo\_96 Start: 48347, Stop: 48652, Start Num: 17

Candidate Starts for Ronaldo\_96:

(Start: 17 @48347 has 6 MA's), (21, 48380), (34, 48581), (36, 48605),

Gene: SCentae\_53 Start: 18353, Stop: 18634, Start Num: 7

Candidate Starts for SCentae\_53:

(Start: 7 @18353 has 3 MA's), (13, 18389), (24, 18464),

Gene: SG4\_56 Start: 39440, Stop: 39724, Start Num: 8

Candidate Starts for SG4\_56:

(Start: 8 @39440 has 124 MA's), (Start: 14 @39464 has 3 MA's), (Start: 17 @39479 has 6 MA's), (22, 39524), (24, 39536), (29, 39614), (30, 39626), (32, 39650), (33, 39662), (35, 39716),

Gene: Saal\_61 Start: 41196, Stop: 41477, Start Num: 8

Candidate Starts for Saal\_61:

(6, 41169), (Start: 8 @41196 has 124 MA's), (Start: 14 @41220 has 3 MA's), (Start: 17 @41235 has 6 MA's), (22, 41280), (24, 41292), (29, 41370), (30, 41382), (32, 41406), (33, 41418), (35, 41469),

Gene: Sabbb\_63 Start: 40884, Stop: 41165, Start Num: 8

Candidate Starts for Sabbb\_63:

(6, 40857), (Start: 8 @40884 has 124 MA's), (Start: 14 @40908 has 3 MA's), (Start: 17 @40923 has 6 MA's), (22, 40968), (24, 40980), (29, 41058), (30, 41070), (32, 41094), (33, 41106), (35, 41157),

Gene: Scarlett\_55 Start: 38559, Stop: 38834, Start Num: 14

Candidate Starts for Scarlett\_55:

(Start: 14 @38559 has 3 MA's), (Start: 15 @38565 has 2 MA's), (21, 38607), (24, 38631), (31, 38739), (37, 38823),

Gene: Scottish\_57 Start: 39568, Stop: 39852, Start Num: 8

Candidate Starts for Scottish\_57:

(6, 39541), (Start: 8 @39568 has 124 MA's), (Start: 14 @39592 has 3 MA's), (Start: 17 @39607 has 6 MA's), (22, 39652), (24, 39664), (29, 39742), (30, 39754), (32, 39778), (33, 39790), (35, 39844),

Gene: ShiLan\_58 Start: 39969, Stop: 40253, Start Num: 8

Candidate Starts for ShiLan\_58:

(6, 39942), (Start: 8 @39969 has 124 MA's), (Start: 14 @39993 has 3 MA's), (Start: 17 @40008 has 6 MA's), (22, 40053), (24, 40065), (29, 40143), (30, 40155), (32, 40179), (33, 40191), (35, 40245),

Gene: ShowerHandel\_62 Start: 39936, Stop: 40217, Start Num: 8

Candidate Starts for ShowerHandel\_62:

(6, 39909), (Start: 8 @39936 has 124 MA's), (Start: 14 @39960 has 3 MA's), (Start: 17 @39975 has 6 MA's), (22, 40020), (24, 40032), (29, 40110), (30, 40122), (32, 40146), (33, 40158), (35, 40209),

Gene: ShroomBoi\_61 Start: 40896, Stop: 41177, Start Num: 8

Candidate Starts for ShroomBoi\_61:

(6, 40869), (Start: 8 @40896 has 124 MA's), (Start: 14 @40920 has 3 MA's), (Start: 17 @40935 has 6 MA's), (22, 40980), (24, 40992), (29, 41070), (30, 41082), (32, 41106), (33, 41118), (35, 41169),

Gene: SiSi\_57 Start: 39342, Stop: 39626, Start Num: 8

Candidate Starts for SiSi\_57:

(6, 39315), (Start: 8 @39342 has 124 MA's), (Start: 14 @39366 has 3 MA's), (Start: 17 @39381 has 6 MA's), (22, 39426), (24, 39438), (29, 39516), (30, 39528), (32, 39552), (33, 39564), (35, 39618),

Gene: Slim\_60 Start: 40729, Stop: 41013, Start Num: 8

Candidate Starts for Slim\_60:

(6, 40702), (Start: 8 @40729 has 124 MA's), (Start: 14 @40753 has 3 MA's), (Start: 17 @40768 has 6 MA's), (22, 40813), (24, 40825), (29, 40903), (30, 40915), (32, 40939), (33, 40951), (35, 41005),

Gene: Soul22\_65 Start: 41527, Stop: 41811, Start Num: 8

Candidate Starts for Soul22\_65:

(6, 41500), (Start: 8 @41527 has 124 MA's), (Start: 14 @41551 has 3 MA's), (Start: 17 @41566 has 6 MA's), (22, 41611), (24, 41623), (29, 41701), (30, 41713), (32, 41737), (33, 41749), (35, 41803),

Gene: Spartacus\_61 Start: 40606, Stop: 40887, Start Num: 8

Candidate Starts for Spartacus\_61:

(6, 40579), (Start: 8 @40606 has 124 MA's), (Start: 14 @40630 has 3 MA's), (Start: 17 @40645 has 6 MA's), (22, 40690), (24, 40702), (29, 40780), (30, 40792), (32, 40816), (33, 40828), (35, 40879),

Gene: Spikelee\_66 Start: 42226, Stop: 42507, Start Num: 8

Candidate Starts for Spikelee\_66:

(6, 42199), (Start: 8 @42226 has 124 MA's), (Start: 14 @42250 has 3 MA's), (Start: 17 @42265 has 6 MA's), (22, 42310), (24, 42322), (29, 42400), (30, 42412), (32, 42436), (33, 42448), (35, 42499),

Gene: Starcevich\_59 Start: 40105, Stop: 40383, Start Num: 8

Candidate Starts for Starcevich\_59:

(4, 40069), (Start: 8 @40105 has 124 MA's), (Start: 14 @40129 has 3 MA's), (22, 40186), (24, 40198), (29, 40276), (30, 40288), (32, 40312), (33, 40324), (35, 40375),

Gene: Strokeseat\_55 Start: 38052, Stop: 38333, Start Num: 8

Candidate Starts for Strokeseat\_55:

(6, 38025), (Start: 8 @38052 has 124 MA's), (Start: 14 @38076 has 3 MA's), (Start: 17 @38091 has 6 MA's), (22, 38136), (24, 38148), (29, 38226), (30, 38238), (32, 38262), (33, 38274), (35, 38325),

Gene: SwagPiggett\_64 Start: 42244, Stop: 42525, Start Num: 8

Candidate Starts for SwagPiggett\_64:

(6, 42217), (Start: 8 @42244 has 124 MA's), (Start: 14 @42268 has 3 MA's), (Start: 17 @42283 has 6 MA's), (22, 42328), (24, 42340), (29, 42418), (30, 42430), (32, 42454), (33, 42466), (35, 42517),

Gene: ThetaBob\_64 Start: 41432, Stop: 41710, Start Num: 8

Candidate Starts for ThetaBob\_64:

(3, 41396), (Start: 8 @41432 has 124 MA's), (10, 41441), (21, 41498), (23, 41516), (25, 41525), (28, 41588), (29, 41603), (30, 41615), (32, 41639), (33, 41651), (35, 41702),

Gene: TinyDot\_55 Start: 34530, Stop: 34790, Start Num: 9

Candidate Starts for TinyDot\_55:

(Start: 9 @34530 has 2 MA's), (33, 34740),

Gene: Tootsieroll\_60 Start: 39265, Stop: 39549, Start Num: 8

Candidate Starts for Tootsieroll\_60:

(6, 39238), (Start: 8 @39265 has 124 MA's), (Start: 14 @39289 has 3 MA's), (Start: 17 @39304 has 6 MA's), (22, 39349), (24, 39361), (29, 39439), (30, 39451), (32, 39475), (33, 39487), (35, 39541),

Gene: Topiatin\_67 Start: 42597, Stop: 42878, Start Num: 8

Candidate Starts for Topiatin\_67:

(4, 42561), (Start: 8 @42597 has 124 MA's), (Start: 14 @42621 has 3 MA's), (22, 42678), (24, 42690), (29, 42768), (30, 42780), (32, 42804), (33, 42816), (35, 42870),

Gene: Totinger\_58 Start: 39195, Stop: 39479, Start Num: 8

Candidate Starts for Totinger\_58:

(6, 39168), (Start: 8 @39195 has 124 MA's), (Start: 14 @39219 has 3 MA's), (Start: 17 @39234 has 6 MA's), (22, 39279), (24, 39291), (29, 39369), (30, 39381), (32, 39405), (33, 39417), (35, 39471),

Gene: TribbleTrouble\_50 Start: 37335, Stop: 37601, Start Num: 12

Candidate Starts for TribbleTrouble\_50:

(Start: 12 @37335 has 2 MA's), (Start: 17 @37356 has 6 MA's), (19, 37362), (28, 37476), (31, 37521), (32, 37530),

Gene: UncleRicky\_58 Start: 40176, Stop: 40460, Start Num: 8

Candidate Starts for UncleRicky\_58:

(6, 40149), (Start: 8 @40176 has 124 MA's), (Start: 14 @40200 has 3 MA's), (Start: 17 @40215 has 6 MA's), (22, 40260), (24, 40272), (29, 40350), (30, 40362), (32, 40386), (33, 40398), (35, 40452),

Gene: VRedHorse\_59 Start: 39252, Stop: 39533, Start Num: 8

Candidate Starts for VRedHorse\_59:

(6, 39225), (Start: 8 @39252 has 124 MA's), (Start: 14 @39276 has 3 MA's), (Start: 17 @39291 has 6 MA's), (22, 39336), (24, 39348), (29, 39426), (30, 39438), (32, 39462), (33, 39474), (35, 39525),

Gene: Veteran\_56 Start: 38956, Stop: 39237, Start Num: 8

Candidate Starts for Veteran\_56:

(6, 38929), (Start: 8 @38956 has 124 MA's), (23, 39040), (25, 39049), (29, 39127), (30, 39139), (32, 39163), (33, 39175), (35, 39229),

Gene: Violac\_61 Start: 41322, Stop: 41603, Start Num: 8

Candidate Starts for Violac\_61:

(6, 41295), (Start: 8 @41322 has 124 MA's), (Start: 14 @41346 has 3 MA's), (Start: 17 @41361 has 6 MA's), (22, 41406), (24, 41418), (29, 41496), (30, 41508), (32, 41532), (33, 41544), (35, 41595),

Gene: Vivum\_60 Start: 40254, Stop: 40535, Start Num: 8

Candidate Starts for Vivum\_60:

(6, 40227), (Start: 8 @40254 has 124 MA's), (Start: 14 @40278 has 3 MA's), (Start: 17 @40293 has 6 MA's), (22, 40338), (24, 40350), (29, 40428), (30, 40440), (32, 40464), (33, 40476), (35, 40527),

Gene: Volt\_97 Start: 48511, Stop: 48816, Start Num: 17

Candidate Starts for Volt\_97:

(Start: 17 @48511 has 6 MA's), (21, 48544), (34, 48745), (36, 48769),

Gene: WST1\_43 Start: 28947, Stop: 29189, Start Num: 20

Candidate Starts for WST1\_43:

(18, 28932), (20, 28947), (26, 29007), (27, 29025),

Gene: Wee\_63 Start: 41773, Stop: 42054, Start Num: 8

Candidate Starts for Wee\_63:

(Start: 8 @41773 has 124 MA's), (Start: 14 @41797 has 3 MA's), (Start: 17 @41812 has 6 MA's), (22, 41857), (24, 41869), (29, 41947), (30, 41959), (32, 41983), (33, 41995), (35, 42046),

Gene: Whouxphf\_56 Start: 39848, Stop: 40129, Start Num: 8

Candidate Starts for Whouxphf\_56:

(6, 39821), (Start: 8 @39848 has 124 MA's), (Start: 14 @39872 has 3 MA's), (Start: 17 @39887 has 6 MA's), (22, 39932), (24, 39944), (29, 40022), (30, 40034), (32, 40058), (33, 40070), (35, 40121),

Gene: WillSterrel\_60 Start: 41723, Stop: 42004, Start Num: 8

Candidate Starts for WillSterrel\_60:

(6, 41696), (Start: 8 @41723 has 124 MA's), (Start: 14 @41747 has 3 MA's), (Start: 17 @41762 has 6 MA's), (22, 41807), (24, 41819), (29, 41897), (30, 41909), (32, 41933), (33, 41945), (35, 41996),

Gene: Yorick\_58 Start: 40310, Stop: 40591, Start Num: 8

Candidate Starts for Yorick\_58:

(6, 40283), (Start: 8 @40310 has 124 MA's), (Start: 14 @40334 has 3 MA's), (Start: 17 @40349 has 6 MA's), (22, 40394), (24, 40406), (29, 40484), (30, 40496), (32, 40520), (33, 40532), (35, 40583),

Gene: Yoshi\_72 Start: 41696, Stop: 41974, Start Num: 8

Candidate Starts for Yoshi\_72:

(3, 41660), (Start: 8 @41696 has 124 MA's), (10, 41705), (21, 41762), (23, 41780), (25, 41789), (28, 41852), (29, 41867), (30, 41879), (32, 41903), (33, 41915), (35, 41966),

Gene: Yuna\_57 Start: 39151, Stop: 39429, Start Num: 14

Candidate Starts for Yuna\_57:

(2, 39004), (Start: 14 @39151 has 3 MA's), (28, 39280), (31, 39325), (32, 39334),

Gene: Zapner\_72 Start: 41849, Stop: 42133, Start Num: 8

Candidate Starts for Zapner\_72:

(6, 41822), (Start: 8 @41849 has 124 MA's), (Start: 14 @41873 has 3 MA's), (Start: 17 @41888 has 6 MA's), (22, 41933), (24, 41945), (29, 42023), (30, 42035), (32, 42059), (33, 42071), (35, 42125),

Gene: Zerg\_59 Start: 39720, Stop: 40004, Start Num: 8

Candidate Starts for Zerg\_59:

(6, 39693), (Start: 8 @39720 has 124 MA's), (Start: 14 @39744 has 3 MA's), (Start: 17 @39759 has 6 MA's), (22, 39804), (24, 39816), (29, 39894), (30, 39906), (32, 39930), (33, 39942), (35, 39996),

Gene: Ziko\_96 Start: 48332, Stop: 48637, Start Num: 17

Candidate Starts for Ziko\_96:

(Start: 17 @48332 has 6 MA's), (21, 48365), (34, 48566), (36, 48590),

Gene: Zizzle\_63 Start: 41563, Stop: 41847, Start Num: 8

Candidate Starts for Zizzle\_63:

(6, 41536), (Start: 8 @41563 has 124 MA's), (Start: 14 @41587 has 3 MA's), (Start: 17 @41602 has 6 MA's), (22, 41647), (24, 41659), (29, 41737), (30, 41749), (32, 41773), (33, 41785), (35, 41839),