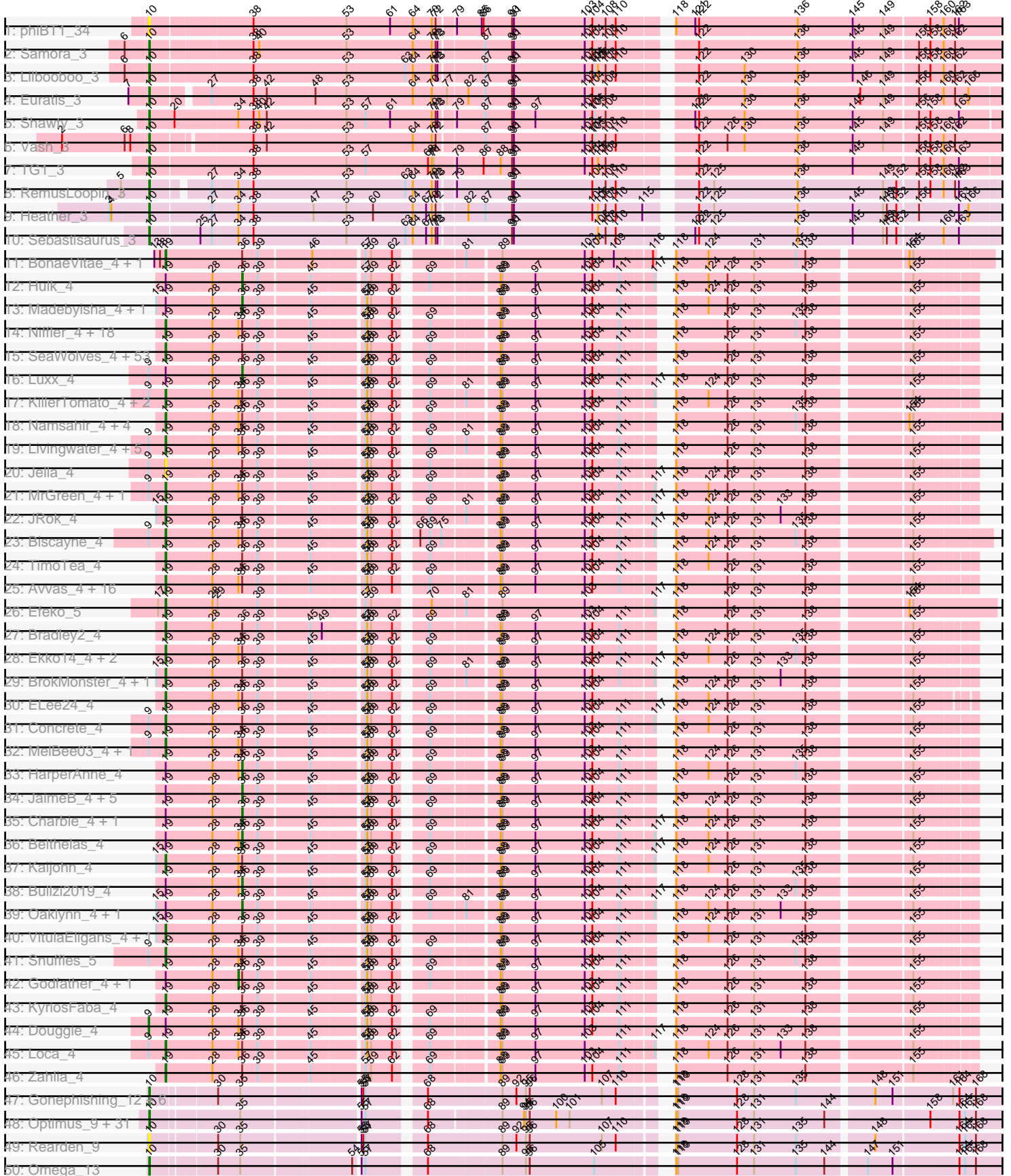


Pham 296243





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 296243 Report

This analysis was run 04/25/26 on database version 644.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 296243 has 220 members, 26 are drafts.

Phages represented in each track:

- Track 1 : phiBT1\_34
- Track 2 : Samora\_3
- Track 3 : Lilbooboo\_3
- Track 4 : Euratis\_3
- Track 5 : Shawty\_3
- Track 6 : Vash\_3
- Track 7 : TG1\_3
- Track 8 : RemusLoopin\_3
- Track 9 : Heather\_3
- Track 10 : Sebastisaurus\_3
- Track 11 : BonaeVitae\_4, Naby\_4
- Track 12 : Hulk\_4
- Track 13 : Madebyisha\_4, OdetoJoy\_4
- Track 14 : Niffler\_4, Nobel\_4, Slizam\_4, Miaurora\_4, JooneeDee\_4, IzzyPants24\_4, Lunatic\_4, Rira\_4, Trireme\_4, TomBrady12\_4, Cazares\_4, PuffyCat\_4, Stem\_4, TinyTruffula\_4, Clownery\_4, Mauilvory\_4, Trackstar\_4, Bintii\_4, Yami\_4
- Track 15 : SeaWolves\_4, Majesty\_4, Alucard\_4, Goobery\_4, Erin\_4, Baine\_4, Sachet\_4, Minima\_4, Lola20\_4, ManAs\_4, LemonPepper\_4, Jahseh\_4, Yasuo\_4, Eightball\_4, Goulash\_4, DirtPie\_4, Gabbspett\_4, Gillker\_4, Owens\_4, Gardevoir\_4, Aztec\_4, Cayde6\_4, Dooby\_4, Jannah\_4, Dongwon\_4, TeddyBoy\_4, JoBros\_4, LionelHutz\_4, GoldenBlanche\_4, Witch\_4, Myram\_4, Picnic\_4, Sara\_4, NeumannU\_4, Slentz\_4, Puddles3\_4, PaoPu\_4, Horacetta\_4, BinkBonk\_4, Anseraureola\_4, Yubaba\_4, BurtonThePup\_4, BarBear\_4, Pondwater\_4, YertPhresh\_4, Octopus\_4, Picconator\_4, Chatham\_4, Danimal\_4, HeadMave\_4, Scrunchy\_4, Duggle\_4, EdElric\_4, Ciel\_4
- Track 16 : Luxx\_4
- Track 17 : KillerTomato\_4, Bri160\_4, BoomRoasted\_4
- Track 18 : Namsahir\_4, Upsilon\_4, PoRanda\_4, MirimarMandM\_4, Publix\_4
- Track 19 : Livingwater\_4, Quaker\_4, Bodhi17\_4, Sippinontea\_4, Wolfpack\_4, KayPaulus\_4
- Track 20 : Jella\_4
- Track 21 : MrGreen\_4, Leafy\_4
- Track 22 : JRok\_4

- Track 23 : Biscayne\_4
- Track 24 : TimoTea\_4
- Track 25 : Avvas\_4, SantasSleigh\_4, RoscoWindex\_4, Otwor\_4, DaftyDuck\_4, LaviMo\_4, Burgy\_4, MasterPitts\_4, Scamander\_4, Grayscar\_4, Josuke\_4, Danno\_4, Sage7\_4, Rhysand\_4, Aries55\_4, Cheesecake\_4, Vanisius\_4
- Track 26 : Efeke\_5
- Track 27 : Bradley2\_4
- Track 28 : Ekko14\_4, Elspeth\_4, Noelani\_4
- Track 29 : BrokMonster\_4, McShie\_4
- Track 30 : ELee24\_4
- Track 31 : Concrete\_4
- Track 32 : MelBee03\_4, Kevanna\_4
- Track 33 : HarperAnne\_4
- Track 34 : JaimeB\_4, Tyrellus\_4, Marichuy\_4, Astro16\_4, Rhogar\_4, Hernandez44\_4
- Track 35 : Charbie\_4, Maneater\_4
- Track 36 : Belthelas\_4
- Track 37 : Kaijohn\_4
- Track 38 : Bullzi2019\_4
- Track 39 : Oaklynn\_4, Azizam\_4
- Track 40 : VitulaEligans\_4, Jerky\_4
- Track 41 : Snuffles\_5
- Track 42 : Godfather\_4, Kojax4\_4
- Track 43 : KyriosFaba\_4
- Track 44 : Duggie\_4
- Track 45 : Loca\_4
- Track 46 : Zahlia\_4
- Track 47 : Gonephishing\_12, Ariel\_11, BronnyJames\_8, LittleE\_11, Squint\_12, Shaboozey\_8, Lucky2013\_12
- Track 48 : Optimus\_9, HokkenD\_7, BAKA\_8, Duke13\_8, Bombitas\_9, Phoebus\_12, Dove\_9, Ejimix\_13, Minerva\_11, Schatzie\_10, Pound\_11, EricMillard\_12, Beem\_12, Odette\_11, NihilNomen\_11, Hughesyang\_11, DmpstrDiver\_11, Klein\_12, JuicyJay\_13, Bobby\_13, Xiaokay\_7, Bagrid\_10, Zelink\_12, Yeet\_10, Kalah2\_12, Wanda\_12, Dallas\_11, Halley\_12, Thibault\_8, Constella\_7, ThreeRngTarjay\_11, Redno2\_11
- Track 49 : Rearden\_9
- Track 50 : Omega\_13
- Track 51 : Nekros\_10, Hannaconda\_9, Porcelain\_12, Courthouse\_12, KashFlow\_6, Superphikiman\_12, MiaZeal\_12
- Track 52 : Hidrated\_12, Marleymoo\_13
- Track 53 : Nibley\_8
- Track 54 : Faiyaz\_11, AuntGwenStacy\_11, Hilltopfarm\_11, Typha\_11
- Track 55 : Bipper\_11, Cracklewink\_11
- Track 56 : Barebow\_3
- Track 57 : Bobburn\_4
- Track 58 : Ball\_4

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

The start number called the most often in the published annotations is 19, it was called in 121 of the 194 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alucard\_4, Anseraureola\_4, Aries55\_4, Avvas\_4, Aztec\_4, Baine\_4, BarBear\_4, BinkBonk\_4, Bintii\_4, Biscayne\_4, Bodhi17\_4, BonaeVitae\_4, BoomRoasted\_4, Bradley2\_4, Bri160\_4, BrokMonster\_4, Burgy\_4, BurtonThePup\_4, Cayde6\_4, Cazares\_4, Chatham\_4, Cheesecake\_4, Ciel\_4, Clownery\_4, Concrete\_4, DaftyDuck\_4, Danimal\_4, Danno\_4, DirtPie\_4, Dongwon\_4, Dooby\_4, Duggle\_4, ELee24\_4, EdElric\_4, Efeko\_5, Eightball\_4, Ekko14\_4, Elspeth\_4, Erin\_4, Gabbspett\_4, Gardevoir\_4, Gillker\_4, GoldenBlanche\_4, Goobery\_4, Goulash\_4, Grayscar\_4, HeadMave\_4, Horacetta\_4, IzzyPants24\_4, JRok\_4, Jahseh\_4, Jannah\_4, Jella\_4, Jerky\_4, JoBros\_4, JooneeDee\_4, Josuke\_4, Kaijohn\_4, KayPaulus\_4, Kevanna\_4, KillerTomato\_4, KyriosFaba\_4, LaviMo\_4, Leafy\_4, LemonPepper\_4, LionelHutz\_4, Livingwater\_4, Loca\_4, Lola20\_4, Lunatic\_4, Majesty\_4, ManAs\_4, MasterPitts\_4, Mauilvory\_4, McShie\_4, MelBee03\_4, Miaurora\_4, Minima\_4, MirimarMandM\_4, MrGreen\_4, Myram\_4, Naby\_4, Namsahir\_4, NeumannU\_4, Niffler\_4, Nobel\_4, Noelani\_4, Octopus\_4, Otwor\_4, Owens\_4, PaoPu\_4, Picconator\_4, Picnic\_4, PoRanda\_4, Pondwater\_4, Publix\_4, Puddles3\_4, PuffyCat\_4, Quaker\_4, Rhysand\_4, Rira\_4, RoscoWindex\_4, Sachet\_4, Sage7\_4, SantasSleigh\_4, Sara\_4, Scamander\_4, Scrunchy\_4, SeaWolves\_4, Sippinontea\_4, Slentz\_4, Slizam\_4, Snuffles\_5, Stem\_4, TeddyBoy\_4, TimoTea\_4, TinyTruffula\_4, TomBrady12\_4, Trackstar\_4, Trireme\_4, Upsilon\_4, Vanisius\_4, VitulaEligans\_4, Witch\_4, Wolfpack\_4, Yami\_4, Yasuo\_4, YertPhresh\_4, Yubaba\_4, Zahlia\_4,

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

- Astro16\_4, Azizam\_4, Belthelas\_4, Bullzi2019\_4, Charbie\_4, Douggie\_4, Godfather\_4, HarperAnne\_4, Hernandez44\_4, Hulk\_4, JaimeB\_4, Kojax4\_4, Luxx\_4, Madebyisha\_4, Maneater\_4, Marichuy\_4, Oaklynn\_4, OdetoJoy\_4, Rhogar\_4, Tyrellus\_4,

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

- Ariel\_11, AuntGwenStacy\_11, BAKA\_8, Bagrid\_10, Ball\_4, Barebow\_3, Beem\_12, Bipper\_11, Bobburn\_4, Bobby\_13, Bombitas\_9, BronnyJames\_8, Constella\_7, Courthouse\_12, Cracklewink\_11, Dallas\_11, DmpstrDiver\_11, Dove\_9, Duke13\_8, Ejimix\_13, EricMillard\_12, Euratis\_3, Faiyaz\_11, Gonephishing\_12, Halley\_12, Hannaconda\_9, Heather\_3, Hidrated\_12, Hilltopfarm\_11, HokkenD\_7, Hughesyang\_11, JuicyJay\_13, Kalah2\_12, KashFlow\_6, Klein\_12, Lilbooboo\_3, LittleE\_11, Lucky2013\_12, Marleymoo\_13, MiaZeal\_12, Minerva\_11, Nekros\_10, Nibley\_8, NihilNomen\_11, Odette\_11, Omega\_13, Optimus\_9, Phoebus\_12, Porcelain\_12, Pound\_11, Rearden\_9, Redno2\_11, RemusLoopin\_3, Samora\_3, Schatzie\_10, Sebastisaurus\_3, Shaboozey\_8, Shawty\_3, Squint\_12, Superphikiman\_12, TG1\_3, Thibault\_8, ThreeRngTarjay\_11, Typha\_11, Vash\_3, Wanda\_12, Xiaokay\_7, Yeet\_10, Zelink\_12, phiBT1\_34,

### Summary by start number:

Start 9:

- Found in 20 of 220 ( 9.1% ) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Douggie\_4 (EE),

Start 10:

- Found in 67 of 220 ( 30.5% ) of genes in pham
- Manual Annotations of this start: 54 of 194
- Called 98.5% of time when present
- Phage (with cluster) where this start called: Ariel\_11 (J), AuntGwenStacy\_11 (Y), BAKA\_8 (J), Bagrid\_10 (J), Beem\_12 (J), Bipper\_11 (Y), Bobby\_13 (J), Bombitas\_9 (J), BronnyJames\_8 (J), Constella\_7 (J), Courthouse\_12 (J), Cracklewink\_11 (Y), Dallas\_11 (J), DmpstrDiver\_11 (J), Dove\_9 (J), Duke13\_8 (J), Ejimix\_13 (J), EricMillard\_12 (J), Euratis\_3 (BB1), Faiyaz\_11 (Y), Gonephishing\_12 (J), Halley\_12 (J), Hannaconda\_9 (J), Heather\_3 (BB2), Hidrated\_12 (J), Hilltopfarm\_11 (Y), HokkenD\_7 (J), Hughesyang\_11 (J), JuicyJay\_13 (J), Kalah2\_12 (J), KashFlow\_6 (J), Klein\_12 (J), Lilbooboo\_3 (BB1), LittleE\_11 (J), Lucky2013\_12 (J), Marleymoo\_13 (J), MiaZeal\_12 (J), Minerva\_11 (J), Nekros\_10 (J), NihilNomen\_11 (J), Odette\_11 (J), Omega\_13 (J), Optimus\_9 (J), Phoebus\_12 (J), Porcelain\_12 (J), Pound\_11 (J), Rearden\_9 (J), Redno2\_11 (J), RemusLoopin\_3 (BB2), Samora\_3 (BB1), Schatzie\_10 (J), Sebastisaurus\_3 (BB2), Shaboozey\_8 (J), Shawty\_3 (BB1), Squint\_12 (J), Superphikiman\_12 (J), TG1\_3 (BB1), Thibault\_8 (J), ThreeRngTarjay\_11 (J), Typha\_11 (Y), Vash\_3 (BB1), Wanda\_12 (J), Xiaokay\_7 (J), Yeet\_10 (J), Zelink\_12 (J), phiBT1\_34 (BB1),

Start 15:

- Found in 12 of 220 ( 5.5% ) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Barebow\_3 (singleton),

Start 19:

- Found in 150 of 220 ( 68.2% ) of genes in pham
- Manual Annotations of this start: 121 of 194
- Called 86.7% of time when present
- Phage (with cluster) where this start called: Alucard\_4 (EE), Anseraureola\_4 (EE), Aries55\_4 (EE), Avvas\_4 (EE), Aztec\_4 (EE), Baine\_4 (EE), BarBear\_4 (EE), BinkBonk\_4 (EE), Bintii\_4 (EE), Biscayne\_4 (EE), Bodhi17\_4 (EE), BonaeVitae\_4 (EE), BoomRoasted\_4 (EE), Bradley2\_4 (EE), Bri160\_4 (EE), BrokMonster\_4 (EE), Burgy\_4 (EE), BurtonThePup\_4 (EE), Cayde6\_4 (EE), Cazares\_4 (EE), Chatham\_4 (EE), Cheesecake\_4 (EE), Ciel\_4 (EE), Clownery\_4 (EE), Concrete\_4 (EE), DaftyDuck\_4 (EE), Danimal\_4 (EE), Danno\_4 (EE), DirtPie\_4 (EE), Dongwon\_4 (EE), Dooby\_4 (EE), Duggle\_4 (EE), ELee24\_4 (EE), EdEric\_4 (EE), Efeko\_5 (EE), Eightball\_4 (EE), Ekko14\_4 (EE), Elspeth\_4 (EE), Erin\_4 (EE), Gabbspett\_4 (EE), Gardevoir\_4 (EE), Gillker\_4 (EE), GoldenBlanche\_4 (EE), Goobery\_4 (EE), Goulash\_4 (EE), Grayscar\_4 (EE), HeadMave\_4 (EE), Horacetta\_4 (EE), IzzyPants24\_4 (EE), JRok\_4 (EE), Jahseh\_4 (EE), Jannah\_4 (EE), Jella\_4 (EE), Jerky\_4 (EE), JoBros\_4 (EE), JooneeDee\_4 (EE), Josuke\_4 (EE), Kaijohn\_4 (EE), KayPaulus\_4 (EE), Kevanna\_4 (EE), KillerTomato\_4 (EE), KyriosFaba\_4 (EE), LaviMo\_4 (EE), Leafy\_4 (EE), LemonPepper\_4 (EE), LionelHutz\_4 (EE), Livingwater\_4 (EE), Loca\_4 (EE), Lola20\_4 (EE), Lunatic\_4 (EE), Majesty\_4 (EE), ManAs\_4 (EE), MasterPitts\_4 (EE), MauiIvory\_4 (EE), McShie\_4 (EE), MelBee03\_4 (EE), Miaurora\_4 (EE), Minima\_4 (EE), MirimarMandM\_4 (EE), MrGreen\_4 (EE), Myram\_4 (EE), Naby\_4 (EE), Namsahir\_4 (EE), NeumannU\_4 (EE), Niffler\_4 (EE), Nobel\_4 (EE), Noelani\_4 (EE), Octopus\_4 (EE), Otwor\_4 (EE), Owens\_4 (EE), PaoPu\_4 (EE), Picconator\_4 (EE), Picnic\_4 (EE), PoRanda\_4 (EE), Pondwater\_4 (EE), Publix\_4 (EE), Puddles3\_4 (EE), PuffyCat\_4 (EE), Quaker\_4 (EE), Rhysand\_4

(EE), Rira\_4 (EE), RoscoWindex\_4 (EE), Sachet\_4 (EE), Sage7\_4 (EE), SantasSleigh\_4 (EE), Sara\_4 (EE), Scamander\_4 (EE), Scrunchy\_4 (EE), SeaWolves\_4 (EE), Sippinontea\_4 (EE), Slentz\_4 (EE), Slizam\_4 (EE), Snuffles\_5 (EE), Stem\_4 (EE), TeddyBoy\_4 (EE), TimoTea\_4 (EE), TinyTruffula\_4 (EE), TomBrady12\_4 (EE), Trackstar\_4 (EE), Trireme\_4 (EE), Upsilon\_4 (EE), Vanisius\_4 (EE), VitulaEligans\_4 (EE), Witch\_4 (EE), Wolfpack\_4 (EE), Yami\_4 (EE), Yasuo\_4 (EE), YertPhresh\_4 (EE), Yubaba\_4 (EE), Zahlia\_4 (EE),

#### Start 21:

- Found in 1 of 220 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ball\_4 (singleton),

#### Start 34:

- Found in 73 of 220 ( 33.2% ) of genes in pham
- Manual Annotations of this start: 2 of 194
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Godfather\_4 (EE), Kojax4\_4 (EE),

#### Start 35:

- Found in 50 of 220 ( 22.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.0% of time when present
- Phage (with cluster) where this start called: Nibley\_8 (J),

#### Start 36:

- Found in 150 of 220 ( 68.2% ) of genes in pham
- Manual Annotations of this start: 15 of 194
- Called 11.3% of time when present
- Phage (with cluster) where this start called: Astro16\_4 (EE), Azizam\_4 (EE), Belthelas\_4 (EE), Bullzi2019\_4 (EE), Charbie\_4 (EE), HarperAnne\_4 (EE), Hernandez44\_4 (EE), Hulk\_4 (EE), JaimeB\_4 (EE), Luxx\_4 (EE), Madebyisha\_4 (EE), Maneater\_4 (EE), Marichuy\_4 (EE), Oaklynn\_4 (EE), OdetoJoy\_4 (EE), Rhogar\_4 (EE), Tyrellus\_4 (EE),

#### Start 37:

- Found in 1 of 220 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bobburn\_4 (singleton),

### Summary by clusters:

There are 6 clusters represented in this pham: singleton, EE, J, Y, BB2, BB1,

Info for manual annotations of cluster BB1:

- Start number 10 was manually annotated 6 times for cluster BB1.

Info for manual annotations of cluster BB2:

- Start number 10 was manually annotated 3 times for cluster BB2.

Info for manual annotations of cluster EE:

- Start number 9 was manually annotated 1 time for cluster EE.
- Start number 19 was manually annotated 121 times for cluster EE.
- Start number 34 was manually annotated 2 times for cluster EE.
- Start number 36 was manually annotated 15 times for cluster EE.

Info for manual annotations of cluster J:

- Start number 10 was manually annotated 40 times for cluster J.

Info for manual annotations of cluster Y:

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

### **Gene Information:**

Gene: Alucard\_4 Start: 2660, Stop: 3787, Start Num: 19

Candidate Starts for Alucard\_4:

(Start: 19 @2660 has 121 MA's), (28, 2729), (Start: 36 @2771 has 15 MA's), (39, 2795), (45, 2870), (57, 2942), (58, 2945), (59, 2951), (62, 2984), (69, 3020), (88, 3113), (89, 3116), (97, 3167), (103, 3245), (104, 3257), (111, 3299), (118, 3350), (126, 3431), (131, 3473), (138, 3554), (155, 3704),

Gene: Anseraureola\_4 Start: 2683, Stop: 3810, Start Num: 19

Candidate Starts for Anseraureola\_4:

(Start: 19 @2683 has 121 MA's), (28, 2752), (Start: 36 @2794 has 15 MA's), (39, 2818), (45, 2893), (57, 2965), (58, 2968), (59, 2974), (62, 3007), (69, 3043), (88, 3136), (89, 3139), (97, 3190), (103, 3268), (104, 3280), (111, 3322), (118, 3373), (126, 3454), (131, 3496), (138, 3577), (155, 3727),

Gene: Ariel\_11 Start: 4635, Stop: 5864, Start Num: 10

Candidate Starts for Ariel\_11:

(Start: 10 @4635 has 54 MA's), (30, 4728), (35, 4761), (55, 4932), (56, 4935), (57, 4938), (68, 5016), (89, 5127), (92, 5148), (95, 5163), (96, 5169), (107, 5283), (110, 5304), (118, 5361), (119, 5364), (128, 5457), (131, 5481), (135, 5547), (148, 5658), (151, 5685), (161, 5769), (164, 5778), (168, 5802),

Gene: Aries55\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Aries55\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Astro16\_4 Start: 2782, Stop: 3798, Start Num: 36

Candidate Starts for Astro16\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: AuntGwenStacy\_11 Start: 6484, Stop: 7815, Start Num: 10

Candidate Starts for AuntGwenStacy\_11:

(Start: 10 @6484 has 54 MA's), (12, 6490), (14, 6493), (22, 6541), (32, 6598), (35, 6619), (39, 6646), (49, 6739), (55, 6790), (56, 6793), (57, 6796), (68, 6895), (74, 6913), (76, 6922), (78, 6928), (80, 6949), (89, 7009), (96, 7051), (104, 7150), (110, 7186), (112, 7195), (113, 7198), (118, 7243), (119, 7246), (128, 7339), (131, 7363), (139, 7453), (143, 7471), (144, 7474), (153, 7585), (158, 7621), (161, 7654), (164, 7663), (169, 7699),

Gene: Avvas\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Avvas\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Azizam\_4 Start: 2770, Stop: 3786, Start Num: 36

Candidate Starts for Azizam\_4:

(Start: 15 @2644 has 1 MA's), (Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (81, 3067), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (117, 3346), (118, 3349), (124, 3400), (126, 3430), (131, 3472), (133, 3514), (138, 3553), (155, 3703),

Gene: Aztec\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Aztec\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: BAKA\_8 Start: 5468, Stop: 6691, Start Num: 10

Candidate Starts for BAKA\_8:

(Start: 10 @5468 has 54 MA's), (35, 5594), (55, 5765), (57, 5771), (68, 5849), (89, 5954), (94, 5987), (95, 5990), (96, 5996), (100, 6038), (101, 6059), (118, 6188), (119, 6191), (128, 6284), (131, 6308), (144, 6419), (158, 6566), (164, 6605), (165, 6614), (168, 6629),

Gene: Bagrid\_10 Start: 5265, Stop: 6488, Start Num: 10

Candidate Starts for Bagrid\_10:

(Start: 10 @5265 has 54 MA's), (35, 5391), (55, 5562), (57, 5568), (68, 5646), (89, 5751), (94, 5784), (95, 5787), (96, 5793), (100, 5835), (101, 5856), (118, 5985), (119, 5988), (128, 6081), (131, 6105), (144, 6216), (158, 6363), (164, 6402), (165, 6411), (168, 6426),

Gene: Baine\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for Baine\_4:

(Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: Ball\_4 Start: 2192, Stop: 3328, Start Num: 21

Candidate Starts for Ball\_4:

(16, 2159), (21, 2192), (24, 2213), (31, 2261), (33, 2279), (Start: 36 @2288 has 15 MA's), (46, 2384), (53, 2435), (76, 2558), (88, 2621), (89, 2624), (98, 2690), (99, 2702), (109, 2798), (112, 2810), (113, 2813), (114, 2837), (117, 2852), (123, 2900), (145, 3119), (149, 3167), (159, 3242), (167, 3290),

Gene: BarBear\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for BarBear\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Barebow\_3 Start: 1899, Stop: 3107, Start Num: 15

Candidate Starts for Barebow\_3:

(Start: 15 @1899 has 1 MA's), (26, 1971), (40, 2049), (44, 2103), (52, 2166), (57, 2196), (74, 2289), (88, 2373), (92, 2397), (109, 2550), (120, 2616), (129, 2700), (135, 2790), (157, 2970),

Gene: Beem\_12 Start: 5831, Stop: 7054, Start Num: 10

Candidate Starts for Beem\_12:

(Start: 10 @5831 has 54 MA's), (35, 5957), (55, 6128), (57, 6134), (68, 6212), (89, 6317), (94, 6350), (95, 6353), (96, 6359), (100, 6401), (101, 6422), (118, 6551), (119, 6554), (128, 6647), (131, 6671), (144, 6782), (158, 6929), (164, 6968), (165, 6977), (168, 6992),

Gene: Belthelas\_4 Start: 2821, Stop: 3837, Start Num: 36

Candidate Starts for Belthelas\_4:

(Start: 19 @2710 has 121 MA's), (28, 2779), (Start: 34 @2815 has 2 MA's), (Start: 36 @2821 has 15 MA's), (39, 2845), (45, 2920), (57, 2992), (58, 2995), (59, 3001), (62, 3034), (69, 3070), (88, 3163), (89, 3166), (97, 3217), (103, 3295), (104, 3307), (111, 3349), (117, 3397), (118, 3400), (124, 3451), (126, 3481), (131, 3523), (138, 3604), (155, 3754),

Gene: BinkBonk\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for BinkBonk\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Bintii\_4 Start: 2689, Stop: 3816, Start Num: 19

Candidate Starts for Bintii\_4:

(Start: 19 @2689 has 121 MA's), (28, 2758), (Start: 34 @2794 has 2 MA's), (Start: 36 @2800 has 15 MA's), (39, 2824), (45, 2899), (57, 2971), (58, 2974), (59, 2980), (62, 3013), (69, 3049), (88, 3142), (89, 3145), (97, 3196), (103, 3274), (104, 3286), (111, 3328), (118, 3379), (126, 3460), (131, 3502), (135, 3568), (138, 3583), (155, 3733),

Gene: Bipper\_11 Start: 6524, Stop: 7870, Start Num: 10

Candidate Starts for Bipper\_11:

(Start: 10 @6524 has 54 MA's), (30, 6623), (35, 6656), (39, 6683), (41, 6689), (46, 6761), (55, 6830), (57, 6836), (65, 6920), (68, 6935), (80, 6989), (84, 7007), (89, 7049), (96, 7091), (99, 7127), (104, 7190), (113, 7238), (127, 7373), (128, 7379), (131, 7403), (137, 7481), (140, 7496), (143, 7511), (161, 7694), (164, 7703), (165, 7712),

Gene: Biscayne\_4 Start: 2687, Stop: 3844, Start Num: 19

Candidate Starts for Biscayne\_4:

(Start: 9 @2660 has 1 MA's), (Start: 19 @2687 has 121 MA's), (28, 2756), (Start: 34 @2792 has 2 MA's), (Start: 36 @2798 has 15 MA's), (39, 2822), (45, 2897), (57, 2969), (58, 2972), (59, 2978), (62, 3011), (66, 3032), (69, 3047), (75, 3065), (88, 3140), (89, 3143), (97, 3194), (103, 3272), (104, 3284), (111, 3326), (117, 3374), (118, 3377), (124, 3428), (126, 3458), (131, 3500), (135, 3566), (138, 3581), (155, 3731),

Gene: Bobburn\_4 Start: 2059, Stop: 3156, Start Num: 37

Candidate Starts for Bobburn\_4:

(1, 1711), (5, 1864), (11, 1912), (Start: 15 @1918 has 1 MA's), (23, 1972), (Start: 34 @2041 has 2 MA's), (37, 2059), (51, 2185), (68, 2296), (83, 2359), (93, 2434), (102, 2512), (103, 2533), (104, 2545), (108, 2566), (111, 2587), (124, 2728), (127, 2767), (131, 2800), (132, 2806), (138, 2881), (141, 2899), (142, 2905),

Gene: Bobby\_13 Start: 5558, Stop: 6781, Start Num: 10

Candidate Starts for Bobby\_13:

(Start: 10 @5558 has 54 MA's), (35, 5684), (55, 5855), (57, 5861), (68, 5939), (89, 6044), (94, 6077), (95, 6080), (96, 6086), (100, 6128), (101, 6149), (118, 6278), (119, 6281), (128, 6374), (131, 6398), (144, 6509), (158, 6656), (164, 6695), (165, 6704), (168, 6719),

Gene: Bodhi17\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for Bodhi17\_4:

(Start: 9 @2629 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 34 @2761 has 2 MA's), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (81, 3064), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: Bombitas\_9 Start: 5140, Stop: 6363, Start Num: 10

Candidate Starts for Bombitas\_9:

(Start: 10 @5140 has 54 MA's), (35, 5266), (55, 5437), (57, 5443), (68, 5521), (89, 5626), (94, 5659), (95, 5662), (96, 5668), (100, 5710), (101, 5731), (118, 5860), (119, 5863), (128, 5956), (131, 5980), (144, 6091), (158, 6238), (164, 6277), (165, 6286), (168, 6301),

Gene: BonaeVitae\_4 Start: 2373, Stop: 3533, Start Num: 19

Candidate Starts for BonaeVitae\_4:

(13, 2355), (18, 2364), (Start: 19 @2373 has 121 MA's), (Start: 36 @2484 has 15 MA's), (39, 2508), (46, 2586), (57, 2655), (59, 2664), (62, 2697), (81, 2781), (89, 2829), (103, 2958), (104, 2970), (109, 3003), (116, 3057), (118, 3063), (124, 3114), (131, 3186), (135, 3252), (138, 3267), (154, 3411), (155, 3417),

Gene: BoomRoasted\_4 Start: 2710, Stop: 3837, Start Num: 19

Candidate Starts for BoomRoasted\_4:

(Start: 9 @2683 has 1 MA's), (Start: 19 @2710 has 121 MA's), (28, 2779), (Start: 34 @2815 has 2 MA's), (Start: 36 @2821 has 15 MA's), (39, 2845), (45, 2920), (57, 2992), (58, 2995), (59, 3001), (62, 3034), (69, 3070), (81, 3118), (88, 3163), (89, 3166), (97, 3217), (103, 3295), (104, 3307), (111, 3349), (117, 3397), (118, 3400), (124, 3451), (126, 3481), (131, 3523), (138, 3604), (155, 3754),

Gene: Bradley2\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Bradley2\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (49, 2887), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Bri160\_4 Start: 2710, Stop: 3837, Start Num: 19

Candidate Starts for Bri160\_4:

(Start: 9 @2683 has 1 MA's), (Start: 19 @2710 has 121 MA's), (28, 2779), (Start: 34 @2815 has 2 MA's), (Start: 36 @2821 has 15 MA's), (39, 2845), (45, 2920), (57, 2992), (58, 2995), (59, 3001), (62, 3034), (69, 3070), (81, 3118), (88, 3163), (89, 3166), (97, 3217), (103, 3295), (104, 3307), (111, 3349), (117, 3397), (118, 3400), (124, 3451), (126, 3481), (131, 3523), (138, 3604), (155, 3754),

Gene: BrokMonster\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for BrokMonster\_4:

(Start: 15 @2641 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (81, 3064), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (117, 3343), (118, 3346), (126, 3427), (131, 3469), (133, 3511), (138, 3550), (155, 3700),

Gene: BronnyJames\_8 Start: 3985, Stop: 5214, Start Num: 10

Candidate Starts for BronnyJames\_8:

(Start: 10 @3985 has 54 MA's), (30, 4078), (35, 4111), (55, 4282), (56, 4285), (57, 4288), (68, 4366), (89, 4477), (92, 4498), (95, 4513), (96, 4519), (107, 4633), (110, 4654), (118, 4711), (119, 4714), (128, 4807), (131, 4831), (135, 4897), (148, 5008), (151, 5035), (161, 5119), (164, 5128), (168, 5152),

Gene: Bullzi2019\_4 Start: 2791, Stop: 3807, Start Num: 36

Candidate Starts for Bullzi2019\_4:

(Start: 19 @2680 has 121 MA's), (28, 2749), (Start: 34 @2785 has 2 MA's), (Start: 36 @2791 has 15 MA's), (39, 2815), (45, 2890), (57, 2962), (58, 2965), (59, 2971), (62, 3004), (69, 3040), (88, 3133), (89, 3136), (97, 3187), (103, 3265), (104, 3277), (111, 3319), (118, 3370), (126, 3451), (131, 3493), (135, 3559), (138, 3574), (155, 3724),

Gene: Burgy\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Burgy\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: BurtonThePup\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for BurtonThePup\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Cayde6\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for Cayde6\_4:

(Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: Cazares\_4 Start: 2647, Stop: 3774, Start Num: 19

Candidate Starts for Cazares\_4:

(Start: 19 @2647 has 121 MA's), (28, 2716), (Start: 34 @2752 has 2 MA's), (Start: 36 @2758 has 15 MA's), (39, 2782), (45, 2857), (57, 2929), (58, 2932), (59, 2938), (62, 2971), (69, 3007), (88, 3100), (89, 3103), (97, 3154), (103, 3232), (104, 3244), (111, 3286), (118, 3337), (126, 3418), (131, 3460), (135, 3526), (138, 3541), (155, 3691),

Gene: Charbie\_4 Start: 2758, Stop: 3774, Start Num: 36

Candidate Starts for Charbie\_4:

(Start: 19 @2647 has 121 MA's), (28, 2716), (Start: 36 @2758 has 15 MA's), (39, 2782), (45, 2857), (57, 2929), (58, 2932), (59, 2938), (62, 2971), (69, 3007), (88, 3100), (89, 3103), (97, 3154), (103, 3232), (104, 3244), (111, 3286), (118, 3337), (124, 3388), (126, 3418), (131, 3460), (138, 3541), (155, 3691),

Gene: Chatham\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Chatham\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Cheesecake\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Cheesecake\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Ciel\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Ciel\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Clownery\_4 Start: 2764, Stop: 3891, Start Num: 19

Candidate Starts for Clownery\_4:

(Start: 19 @2764 has 121 MA's), (28, 2833), (Start: 34 @2869 has 2 MA's), (Start: 36 @2875 has 15 MA's), (39, 2899), (45, 2974), (57, 3046), (58, 3049), (59, 3055), (62, 3088), (69, 3124), (88, 3217), (89, 3220), (97, 3271), (103, 3349), (104, 3361), (111, 3403), (118, 3454), (126, 3535), (131, 3577), (135, 3643), (138, 3658), (155, 3808),

Gene: Concrete\_4 Start: 2710, Stop: 3837, Start Num: 19

Candidate Starts for Concrete\_4:

(Start: 9 @2683 has 1 MA's), (Start: 19 @2710 has 121 MA's), (28, 2779), (Start: 36 @2821 has 15 MA's), (39, 2845), (45, 2920), (57, 2992), (58, 2995), (59, 3001), (62, 3034), (69, 3070), (88, 3163), (89, 3166), (97, 3217), (103, 3295), (104, 3307), (111, 3349), (117, 3397), (118, 3400), (124, 3451), (126, 3481), (131, 3523), (138, 3604), (155, 3754),

Gene: Constella\_7 Start: 4649, Stop: 5872, Start Num: 10

Candidate Starts for Constella\_7:

(Start: 10 @4649 has 54 MA's), (35, 4775), (55, 4946), (57, 4952), (68, 5030), (89, 5135), (94, 5168), (95, 5171), (96, 5177), (100, 5219), (101, 5240), (118, 5369), (119, 5372), (128, 5465), (131, 5489), (144, 5600), (158, 5747), (164, 5786), (165, 5795), (168, 5810),

Gene: Courthouse\_12 Start: 5434, Stop: 6669, Start Num: 10

Candidate Starts for Courthouse\_12:

(Start: 10 @5434 has 54 MA's), (43, 5620), (50, 5689), (55, 5737), (57, 5743), (68, 5821), (89, 5929), (94, 5962), (95, 5965), (96, 5971), (107, 6085), (110, 6106), (118, 6163), (119, 6166), (128, 6259), (131, 6283), (134, 6334), (135, 6349), (138, 6364), (154, 6508), (164, 6580), (165, 6589),

Gene: Cracklewink\_11 Start: 6524, Stop: 7870, Start Num: 10

Candidate Starts for Cracklewink\_11:

(Start: 10 @6524 has 54 MA's), (30, 6623), (35, 6656), (39, 6683), (41, 6689), (46, 6761), (55, 6830), (57, 6836), (65, 6920), (68, 6935), (80, 6989), (84, 7007), (89, 7049), (96, 7091), (99, 7127), (104, 7190), (113, 7238), (127, 7373), (128, 7379), (131, 7403), (137, 7481), (140, 7496), (143, 7511), (161, 7694), (164, 7703), (165, 7712),

Gene: DaftyDuck\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for DaftyDuck\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Dallas\_11 Start: 5370, Stop: 6593, Start Num: 10

Candidate Starts for Dallas\_11:

(Start: 10 @5370 has 54 MA's), (35, 5496), (55, 5667), (57, 5673), (68, 5751), (89, 5856), (94, 5889), (95, 5892), (96, 5898), (100, 5940), (101, 5961), (118, 6090), (119, 6093), (128, 6186), (131, 6210), (144, 6321), (158, 6468), (164, 6507), (165, 6516), (168, 6531),

Gene: Danimal\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Danimal\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Danno\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Danno\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: DirtPie\_4 Start: 2764, Stop: 3891, Start Num: 19

Candidate Starts for DirtPie\_4:

(Start: 19 @2764 has 121 MA's), (28, 2833), (Start: 36 @2875 has 15 MA's), (39, 2899), (45, 2974), (57, 3046), (58, 3049), (59, 3055), (62, 3088), (69, 3124), (88, 3217), (89, 3220), (97, 3271), (103, 3349), (104, 3361), (111, 3403), (118, 3454), (126, 3535), (131, 3577), (138, 3658), (155, 3808),

Gene: DmpstrDiver\_11 Start: 6011, Stop: 7234, Start Num: 10

Candidate Starts for DmpstrDiver\_11:

(Start: 10 @6011 has 54 MA's), (35, 6137), (55, 6308), (57, 6314), (68, 6392), (89, 6497), (94, 6530), (95, 6533), (96, 6539), (100, 6581), (101, 6602), (118, 6731), (119, 6734), (128, 6827), (131, 6851), (144, 6962), (158, 7109), (164, 7148), (165, 7157), (168, 7172),

Gene: Dongwon\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Dongwon\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Dooby\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Dooby\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Douggie\_4 Start: 2629, Stop: 3783, Start Num: 9

Candidate Starts for Douggie\_4:

(Start: 9 @2629 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 34 @2761 has 2 MA's), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: Dove\_9 Start: 5139, Stop: 6362, Start Num: 10

Candidate Starts for Dove\_9:

(Start: 10 @5139 has 54 MA's), (35, 5265), (55, 5436), (57, 5442), (68, 5520), (89, 5625), (94, 5658), (95, 5661), (96, 5667), (100, 5709), (101, 5730), (118, 5859), (119, 5862), (128, 5955), (131, 5979), (144, 6090), (158, 6237), (164, 6276), (165, 6285), (168, 6300),

Gene: Duggle\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Duggle\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Duke13\_8 Start: 5396, Stop: 6619, Start Num: 10

Candidate Starts for Duke13\_8:

(Start: 10 @5396 has 54 MA's), (35, 5522), (55, 5693), (57, 5699), (68, 5777), (89, 5882), (94, 5915), (95, 5918), (96, 5924), (100, 5966), (101, 5987), (118, 6116), (119, 6119), (128, 6212), (131, 6236), (144, 6347), (158, 6494), (164, 6533), (165, 6542), (168, 6557),

Gene: ELee24\_4 Start: 2719, Stop: 3840, Start Num: 19

Candidate Starts for ELee24\_4:

(Start: 19 @2719 has 121 MA's), (28, 2788), (Start: 34 @2824 has 2 MA's), (Start: 36 @2830 has 15 MA's), (39, 2854), (45, 2929), (57, 3001), (58, 3004), (59, 3010), (62, 3043), (69, 3079), (88, 3172), (89, 3175), (97, 3226), (103, 3304), (104, 3316), (118, 3409), (124, 3460), (126, 3490), (131, 3532), (138, 3613), (155, 3763),

Gene: EdElric\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for EdElric\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Efeko\_5 Start: 2520, Stop: 3692, Start Num: 19

Candidate Starts for Efeko\_5:

(17, 2508), (Start: 19 @2520 has 121 MA's), (28, 2592), (29, 2598), (39, 2658), (57, 2805), (59, 2814), (70, 2886), (81, 2931), (89, 2979), (103, 3108), (117, 3210), (118, 3213), (126, 3294), (131, 3336), (138, 3417), (154, 3561), (155, 3567),

Gene: Eightball\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Eightball\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Ejimix\_13 Start: 6581, Stop: 7804, Start Num: 10

Candidate Starts for Ejimix\_13:

(Start: 10 @6581 has 54 MA's), (35, 6707), (55, 6878), (57, 6884), (68, 6962), (89, 7067), (94, 7100), (95, 7103), (96, 7109), (100, 7151), (101, 7172), (118, 7301), (119, 7304), (128, 7397), (131, 7421), (144, 7532), (158, 7679), (164, 7718), (165, 7727), (168, 7742),

Gene: Ekko14\_4 Start: 2647, Stop: 3774, Start Num: 19

Candidate Starts for Ekko14\_4:

(Start: 19 @2647 has 121 MA's), (28, 2716), (Start: 34 @2752 has 2 MA's), (Start: 36 @2758 has 15 MA's), (39, 2782), (45, 2857), (57, 2929), (58, 2932), (59, 2938), (62, 2971), (69, 3007), (88, 3100), (89, 3103), (97, 3154), (103, 3232), (104, 3244), (111, 3286), (118, 3337), (124, 3388), (126, 3418), (131, 3460), (135, 3526), (138, 3541), (155, 3691),

Gene: Elspeth\_4 Start: 2647, Stop: 3774, Start Num: 19

Candidate Starts for Elspeth\_4:

(Start: 19 @2647 has 121 MA's), (28, 2716), (Start: 34 @2752 has 2 MA's), (Start: 36 @2758 has 15 MA's), (39, 2782), (45, 2857), (57, 2929), (58, 2932), (59, 2938), (62, 2971), (69, 3007), (88, 3100), (89, 3103), (97, 3154), (103, 3232), (104, 3244), (111, 3286), (118, 3337), (124, 3388), (126, 3418), (131, 3460), (135, 3526), (138, 3541), (155, 3691),

Gene: EricMillard\_12 Start: 6116, Stop: 7339, Start Num: 10

Candidate Starts for EricMillard\_12:

(Start: 10 @6116 has 54 MA's), (35, 6242), (55, 6413), (57, 6419), (68, 6497), (89, 6602), (94, 6635), (95, 6638), (96, 6644), (100, 6686), (101, 6707), (118, 6836), (119, 6839), (128, 6932), (131, 6956), (144, 7067), (158, 7214), (164, 7253), (165, 7262), (168, 7277),

Gene: Erin\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Erin\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Euratis\_3 Start: 2222, Stop: 3574, Start Num: 10

Candidate Starts for Euratis\_3:

(7, 2192), (Start: 10 @2222 has 54 MA's), (27, 2300), (38, 2366), (42, 2387), (48, 2462), (53, 2510), (64, 2615), (70, 2645), (77, 2669), (82, 2699), (87, 2726), (90, 2768), (91, 2771), (103, 2882), (104, 2894), (108, 2915), (122, 3032), (130, 3104), (136, 3185), (146, 3284), (149, 3320), (156, 3371), (160, 3410), (162, 3428), (166, 3449),

Gene: Faiyaz\_11 Start: 6484, Stop: 7815, Start Num: 10

Candidate Starts for Faiyaz\_11:

(Start: 10 @6484 has 54 MA's), (12, 6490), (14, 6493), (22, 6541), (32, 6598), (35, 6619), (39, 6646), (49, 6739), (55, 6790), (56, 6793), (57, 6796), (68, 6895), (74, 6913), (76, 6922), (78, 6928), (80, 6949), (89, 7009), (96, 7051), (104, 7150), (110, 7186), (112, 7195), (113, 7198), (118, 7243), (119, 7246), (128, 7339), (131, 7363), (139, 7453), (143, 7471), (144, 7474), (153, 7585), (158, 7621), (161, 7654), (164, 7663), (169, 7699),

Gene: Gabbspett\_4 Start: 2761, Stop: 3888, Start Num: 19

Candidate Starts for Gabbspett\_4:

(Start: 19 @2761 has 121 MA's), (28, 2830), (Start: 36 @2872 has 15 MA's), (39, 2896), (45, 2971), (57, 3043), (58, 3046), (59, 3052), (62, 3085), (69, 3121), (88, 3214), (89, 3217), (97, 3268), (103, 3346), (104, 3358), (111, 3400), (118, 3451), (126, 3532), (131, 3574), (138, 3655), (155, 3805),

Gene: Gardevoir\_4 Start: 2660, Stop: 3787, Start Num: 19

Candidate Starts for Gardevoir\_4:

(Start: 19 @2660 has 121 MA's), (28, 2729), (Start: 36 @2771 has 15 MA's), (39, 2795), (45, 2870), (57, 2942), (58, 2945), (59, 2951), (62, 2984), (69, 3020), (88, 3113), (89, 3116), (97, 3167), (103, 3245), (104, 3257), (111, 3299), (118, 3350), (126, 3431), (131, 3473), (138, 3554), (155, 3704),

Gene: Gillker\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Gillker\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Godfather\_4 Start: 2776, Stop: 3798, Start Num: 34

Candidate Starts for Godfather\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: GoldenBlanche\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for GoldenBlanche\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Gonephishing\_12 Start: 5962, Stop: 7191, Start Num: 10

Candidate Starts for Gonephishing\_12:

(Start: 10 @5962 has 54 MA's), (30, 6055), (35, 6088), (55, 6259), (56, 6262), (57, 6265), (68, 6343), (89, 6454), (92, 6475), (95, 6490), (96, 6496), (107, 6610), (110, 6631), (118, 6688), (119, 6691), (128, 6784), (131, 6808), (135, 6874), (148, 6985), (151, 7012), (161, 7096), (164, 7105), (168, 7129),

Gene: Goobery\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Goobery\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Goulash\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Goulash\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Grayscar\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Grayscar\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Halley\_12 Start: 5831, Stop: 7054, Start Num: 10

Candidate Starts for Halley\_12:

(Start: 10 @5831 has 54 MA's), (35, 5957), (55, 6128), (57, 6134), (68, 6212), (89, 6317), (94, 6350), (95, 6353), (96, 6359), (100, 6401), (101, 6422), (118, 6551), (119, 6554), (128, 6647), (131, 6671), (144, 6782), (158, 6929), (164, 6968), (165, 6977), (168, 6992),

Gene: Hannaconda\_9 Start: 4114, Stop: 5349, Start Num: 10

Candidate Starts for Hannaconda\_9:

(Start: 10 @4114 has 54 MA's), (43, 4300), (50, 4369), (55, 4417), (57, 4423), (68, 4501), (89, 4609), (94, 4642), (95, 4645), (96, 4651), (107, 4765), (110, 4786), (118, 4843), (119, 4846), (128, 4939), (131, 4963), (134, 5014), (135, 5029), (138, 5044), (154, 5188), (164, 5260), (165, 5269),

Gene: HarperAnne\_4 Start: 2758, Stop: 3774, Start Num: 36

Candidate Starts for HarperAnne\_4:

(Start: 19 @2647 has 121 MA's), (28, 2716), (Start: 34 @2752 has 2 MA's), (Start: 36 @2758 has 15 MA's), (39, 2782), (45, 2857), (57, 2929), (58, 2932), (59, 2938), (62, 2971), (69, 3007), (88, 3100), (89, 3103), (97, 3154), (103, 3232), (104, 3244), (111, 3286), (118, 3337), (124, 3388), (126, 3418), (131,

3460), (135, 3526), (138, 3541), (155, 3691),

Gene: HeadMave\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for HeadMave\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Heather\_3 Start: 2179, Stop: 3543, Start Num: 10

Candidate Starts for Heather\_3:

(3, 2119), (4, 2122), (Start: 10 @2179 has 54 MA's), (27, 2272), (Start: 34 @2311 has 2 MA's), (38, 2335), (47, 2428), (53, 2479), (60, 2521), (64, 2584), (67, 2605), (70, 2614), (72, 2620), (82, 2662), (87, 2689), (90, 2731), (91, 2734), (104, 2857), (106, 2866), (108, 2878), (110, 2893), (115, 2935), (122, 2995), (125, 3019), (136, 3148), (145, 3235), (149, 3283), (150, 3289), (152, 3304), (156, 3334), (163, 3397), (166, 3412),

Gene: Hernandez44\_4 Start: 2872, Stop: 3888, Start Num: 36

Candidate Starts for Hernandez44\_4:

(Start: 19 @2761 has 121 MA's), (28, 2830), (Start: 36 @2872 has 15 MA's), (39, 2896), (45, 2971), (57, 3043), (58, 3046), (59, 3052), (62, 3085), (69, 3121), (88, 3214), (89, 3217), (97, 3268), (103, 3346), (104, 3358), (111, 3400), (118, 3451), (126, 3532), (131, 3574), (138, 3655), (155, 3805),

Gene: Hidrated\_12 Start: 5917, Stop: 7140, Start Num: 10

Candidate Starts for Hidrated\_12:

(Start: 10 @5917 has 54 MA's), (35, 6043), (55, 6214), (57, 6220), (68, 6298), (89, 6403), (94, 6436), (95, 6439), (96, 6445), (99, 6481), (100, 6487), (101, 6508), (118, 6637), (119, 6640), (128, 6733), (131, 6757), (144, 6868), (158, 7015), (164, 7054), (165, 7063), (168, 7078),

Gene: Hilltopfarm\_11 Start: 6514, Stop: 7845, Start Num: 10

Candidate Starts for Hilltopfarm\_11:

(Start: 10 @6514 has 54 MA's), (12, 6520), (14, 6523), (22, 6571), (32, 6628), (35, 6649), (39, 6676), (49, 6769), (55, 6820), (56, 6823), (57, 6826), (68, 6925), (74, 6943), (76, 6952), (78, 6958), (80, 6979), (89, 7039), (96, 7081), (104, 7180), (110, 7216), (112, 7225), (113, 7228), (118, 7273), (119, 7276), (128, 7369), (131, 7393), (139, 7483), (143, 7501), (144, 7504), (153, 7615), (158, 7651), (161, 7684), (164, 7693), (169, 7729),

Gene: HokkenD\_7 Start: 5399, Stop: 6622, Start Num: 10

Candidate Starts for HokkenD\_7:

(Start: 10 @5399 has 54 MA's), (35, 5525), (55, 5696), (57, 5702), (68, 5780), (89, 5885), (94, 5918), (95, 5921), (96, 5927), (100, 5969), (101, 5990), (118, 6119), (119, 6122), (128, 6215), (131, 6239), (144, 6350), (158, 6497), (164, 6536), (165, 6545), (168, 6560),

Gene: Horacetta\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Horacetta\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Hughesyang\_11 Start: 6011, Stop: 7234, Start Num: 10

Candidate Starts for Hughesyang\_11:

(Start: 10 @6011 has 54 MA's), (35, 6137), (55, 6308), (57, 6314), (68, 6392), (89, 6497), (94, 6530), (95, 6533), (96, 6539), (100, 6581), (101, 6602), (118, 6731), (119, 6734), (128, 6827), (131, 6851), (144, 6962), (158, 7109), (164, 7148), (165, 7157), (168, 7172),

Gene: Hulk\_4 Start: 2782, Stop: 3798, Start Num: 36

Candidate Starts for Hulk\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (117, 3358), (118, 3361), (124, 3412), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: IzzyPants24\_4 Start: 2698, Stop: 3825, Start Num: 19

Candidate Starts for IzzyPants24\_4:

(Start: 19 @2698 has 121 MA's), (28, 2767), (Start: 34 @2803 has 2 MA's), (Start: 36 @2809 has 15 MA's), (39, 2833), (45, 2908), (57, 2980), (58, 2983), (59, 2989), (62, 3022), (69, 3058), (88, 3151), (89, 3154), (97, 3205), (103, 3283), (104, 3295), (111, 3337), (118, 3388), (126, 3469), (131, 3511), (135, 3577), (138, 3592), (155, 3742),

Gene: JRok\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for JRok\_4:

(Start: 15 @2641 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (81, 3064), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (117, 3343), (118, 3346), (124, 3397), (126, 3427), (131, 3469), (133, 3511), (138, 3550), (155, 3700),

Gene: Jahseh\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Jahseh\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: JaimeB\_4 Start: 2782, Stop: 3798, Start Num: 36

Candidate Starts for JaimeB\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Jannah\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Jannah\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Jella\_4 Start: 2683, Stop: 3810, Start Num: 19

Candidate Starts for Jella\_4:

(Start: 9 @2656 has 1 MA's), (Start: 19 @2683 has 121 MA's), (28, 2752), (Start: 36 @2794 has 15 MA's), (39, 2818), (45, 2893), (57, 2965), (58, 2968), (59, 2974), (62, 3007), (69, 3043), (88, 3136), (89, 3139), (97, 3190), (103, 3268), (104, 3280), (111, 3322), (118, 3373), (126, 3454), (131, 3496), (138, 3577), (155, 3727),

Gene: Jerky\_4 Start: 2740, Stop: 3867, Start Num: 19

Candidate Starts for Jerky\_4:

(Start: 15 @2725 has 1 MA's), (Start: 19 @2740 has 121 MA's), (28, 2809), (Start: 36 @2851 has 15 MA's), (39, 2875), (45, 2950), (57, 3022), (58, 3025), (59, 3031), (62, 3064), (88, 3193), (89, 3196), (97, 3247), (103, 3325), (104, 3337), (111, 3379), (118, 3430), (124, 3481), (126, 3511), (131, 3553), (138, 3634), (155, 3784),

Gene: JoBros\_4 Start: 2660, Stop: 3787, Start Num: 19

Candidate Starts for JoBros\_4:

(Start: 19 @2660 has 121 MA's), (28, 2729), (Start: 36 @2771 has 15 MA's), (39, 2795), (45, 2870), (57, 2942), (58, 2945), (59, 2951), (62, 2984), (69, 3020), (88, 3113), (89, 3116), (97, 3167), (103, 3245), (104, 3257), (111, 3299), (118, 3350), (126, 3431), (131, 3473), (138, 3554), (155, 3704),

Gene: JooneeDee\_4 Start: 2689, Stop: 3816, Start Num: 19

Candidate Starts for JooneeDee\_4:

(Start: 19 @2689 has 121 MA's), (28, 2758), (Start: 34 @2794 has 2 MA's), (Start: 36 @2800 has 15 MA's), (39, 2824), (45, 2899), (57, 2971), (58, 2974), (59, 2980), (62, 3013), (69, 3049), (88, 3142), (89, 3145), (97, 3196), (103, 3274), (104, 3286), (111, 3328), (118, 3379), (126, 3460), (131, 3502), (135, 3568), (138, 3583), (155, 3733),

Gene: Josuke\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Josuke\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: JuicyJay\_13 Start: 6661, Stop: 7884, Start Num: 10

Candidate Starts for JuicyJay\_13:

(Start: 10 @6661 has 54 MA's), (35, 6787), (55, 6958), (57, 6964), (68, 7042), (89, 7147), (94, 7180), (95, 7183), (96, 7189), (100, 7231), (101, 7252), (118, 7381), (119, 7384), (128, 7477), (131, 7501), (144, 7612), (158, 7759), (164, 7798), (165, 7807), (168, 7822),

Gene: Kaijohn\_4 Start: 2665, Stop: 3792, Start Num: 19

Candidate Starts for Kaijohn\_4:

(Start: 15 @2650 has 1 MA's), (Start: 19 @2665 has 121 MA's), (28, 2734), (Start: 34 @2770 has 2 MA's), (Start: 36 @2776 has 15 MA's), (39, 2800), (45, 2875), (57, 2947), (58, 2950), (59, 2956), (62, 2989), (69, 3025), (88, 3118), (89, 3121), (97, 3172), (103, 3250), (104, 3262), (111, 3304), (117, 3352), (118, 3355), (124, 3406), (126, 3436), (131, 3478), (138, 3559), (155, 3709),

Gene: Kalah2\_12 Start: 6430, Stop: 7653, Start Num: 10

Candidate Starts for Kalah2\_12:

(Start: 10 @6430 has 54 MA's), (35, 6556), (55, 6727), (57, 6733), (68, 6811), (89, 6916), (94, 6949), (95, 6952), (96, 6958), (100, 7000), (101, 7021), (118, 7150), (119, 7153), (128, 7246), (131, 7270), (144, 7381), (158, 7528), (164, 7567), (165, 7576), (168, 7591),

Gene: KashFlow\_6 Start: 3680, Stop: 4915, Start Num: 10

Candidate Starts for KashFlow\_6:

(Start: 10 @3680 has 54 MA's), (43, 3866), (50, 3935), (55, 3983), (57, 3989), (68, 4067), (89, 4175), (94, 4208), (95, 4211), (96, 4217), (107, 4331), (110, 4352), (118, 4409), (119, 4412), (128, 4505), (131, 4529), (134, 4580), (135, 4595), (138, 4610), (154, 4754), (164, 4826), (165, 4835),

Gene: KayPaulus\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for KayPaulus\_4:

(Start: 9 @2629 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 34 @2761 has 2 MA's), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (81, 3064), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: Kevanna\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for Kevanna\_4:

(Start: 9 @2629 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 34 @2761 has 2 MA's), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: KillerTomato\_4 Start: 2710, Stop: 3837, Start Num: 19

Candidate Starts for KillerTomato\_4:

(Start: 9 @2683 has 1 MA's), (Start: 19 @2710 has 121 MA's), (28, 2779), (Start: 34 @2815 has 2 MA's), (Start: 36 @2821 has 15 MA's), (39, 2845), (45, 2920), (57, 2992), (58, 2995), (59, 3001), (62, 3034), (69, 3070), (81, 3118), (88, 3163), (89, 3166), (97, 3217), (103, 3295), (104, 3307), (111, 3349), (117, 3397), (118, 3400), (124, 3451), (126, 3481), (131, 3523), (138, 3604), (155, 3754),

Gene: Klein\_12 Start: 5407, Stop: 6630, Start Num: 10

Candidate Starts for Klein\_12:

(Start: 10 @5407 has 54 MA's), (35, 5533), (55, 5704), (57, 5710), (68, 5788), (89, 5893), (94, 5926), (95, 5929), (96, 5935), (100, 5977), (101, 5998), (118, 6127), (119, 6130), (128, 6223), (131, 6247), (144, 6358), (158, 6505), (164, 6544), (165, 6553), (168, 6568),

Gene: Kojax4\_4 Start: 2776, Stop: 3798, Start Num: 34

Candidate Starts for Kojax4\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: KyriosFaba\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for KyriosFaba\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: LaviMo\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for LaviMo\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Leafy\_4 Start: 2677, Stop: 3804, Start Num: 19

Candidate Starts for Leafy\_4:

(Start: 9 @2650 has 1 MA's), (Start: 19 @2677 has 121 MA's), (28, 2746), (Start: 34 @2782 has 2 MA's), (Start: 36 @2788 has 15 MA's), (39, 2812), (45, 2887), (57, 2959), (58, 2962), (59, 2968), (62, 3001), (69, 3037), (88, 3130), (89, 3133), (97, 3184), (103, 3262), (104, 3274), (111, 3316), (117, 3364), (118, 3367), (124, 3418), (126, 3448), (131, 3490), (138, 3571), (155, 3721),

Gene: LemonPepper\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for LemonPepper\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Lilbooboo\_3 Start: 2201, Stop: 3571, Start Num: 10

Candidate Starts for Lilbooboo\_3:

(6, 2165), (Start: 10 @2201 has 54 MA's), (38, 2354), (53, 2498), (63, 2591), (64, 2603), (70, 2633), (72, 2639), (73, 2642), (87, 2708), (90, 2750), (91, 2753), (103, 2864), (104, 2876), (105, 2879), (106, 2885), (108, 2897), (110, 2912), (122, 3014), (130, 3086), (136, 3167), (145, 3254), (149, 3302), (156, 3353), (158, 3371), (160, 3392), (162, 3410),

Gene: LionelHutz\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for LionelHutz\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: LittleE\_11 Start: 5813, Stop: 7042, Start Num: 10

Candidate Starts for LittleE\_11:

(Start: 10 @5813 has 54 MA's), (30, 5906), (35, 5939), (55, 6110), (56, 6113), (57, 6116), (68, 6194), (89, 6305), (92, 6326), (95, 6341), (96, 6347), (107, 6461), (110, 6482), (118, 6539), (119, 6542), (128, 6635), (131, 6659), (135, 6725), (148, 6836), (151, 6863), (161, 6947), (164, 6956), (168, 6980),

Gene: Livingwater\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for Livingwater\_4:

(Start: 9 @2629 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 34 @2761 has 2 MA's), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (81, 3064), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: Loca\_4 Start: 2677, Stop: 3804, Start Num: 19

Candidate Starts for Loca\_4:

(Start: 9 @2650 has 1 MA's), (Start: 19 @2677 has 121 MA's), (28, 2746), (Start: 34 @2782 has 2 MA's), (Start: 36 @2788 has 15 MA's), (39, 2812), (45, 2887), (57, 2959), (58, 2962), (59, 2968), (62, 3001), (69, 3037), (88, 3130), (89, 3133), (97, 3184), (103, 3262), (111, 3316), (117, 3364), (118, 3367), (124, 3418), (126, 3448), (131, 3490), (133, 3532), (138, 3571), (155, 3721),

Gene: Lola20\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for Lola20\_4:

(Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: Lucky2013\_12 Start: 5184, Stop: 6413, Start Num: 10

Candidate Starts for Lucky2013\_12:

(Start: 10 @5184 has 54 MA's), (30, 5277), (35, 5310), (55, 5481), (56, 5484), (57, 5487), (68, 5565), (89, 5676), (92, 5697), (95, 5712), (96, 5718), (107, 5832), (110, 5853), (118, 5910), (119, 5913), (128, 6006), (131, 6030), (135, 6096), (148, 6207), (151, 6234), (161, 6318), (164, 6327), (168, 6351),

Gene: Lunatic\_4 Start: 2647, Stop: 3774, Start Num: 19

Candidate Starts for Lunatic\_4:

(Start: 19 @2647 has 121 MA's), (28, 2716), (Start: 34 @2752 has 2 MA's), (Start: 36 @2758 has 15 MA's), (39, 2782), (45, 2857), (57, 2929), (58, 2932), (59, 2938), (62, 2971), (69, 3007), (88, 3100), (89, 3103), (97, 3154), (103, 3232), (104, 3244), (111, 3286), (118, 3337), (126, 3418), (131, 3460), (135, 3526), (138, 3541), (155, 3691),

Gene: Luxx\_4 Start: 2794, Stop: 3810, Start Num: 36

Candidate Starts for Luxx\_4:

(Start: 9 @2656 has 1 MA's), (Start: 19 @2683 has 121 MA's), (28, 2752), (Start: 36 @2794 has 15 MA's), (39, 2818), (45, 2893), (57, 2965), (58, 2968), (59, 2974), (62, 3007), (69, 3043), (88, 3136), (89, 3139), (97, 3190), (103, 3268), (104, 3280), (111, 3322), (118, 3373), (126, 3454), (131, 3496), (138, 3577), (155, 3727),

Gene: Madebyisha\_4 Start: 2851, Stop: 3867, Start Num: 36

Candidate Starts for Madebyisha\_4:

(Start: 15 @2725 has 1 MA's), (Start: 19 @2740 has 121 MA's), (28, 2809), (Start: 36 @2851 has 15 MA's), (39, 2875), (45, 2950), (57, 3022), (58, 3025), (59, 3031), (62, 3064), (88, 3193), (89, 3196), (97, 3247), (103, 3325), (104, 3337), (111, 3379), (118, 3430), (124, 3481), (126, 3511), (131, 3553), (138, 3634), (155, 3784),

Gene: Majesty\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Majesty\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: ManAs\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for ManAs\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Maneater\_4 Start: 2758, Stop: 3774, Start Num: 36

Candidate Starts for Maneater\_4:

(Start: 19 @2647 has 121 MA's), (28, 2716), (Start: 36 @2758 has 15 MA's), (39, 2782), (45, 2857), (57, 2929), (58, 2932), (59, 2938), (62, 2971), (69, 3007), (88, 3100), (89, 3103), (97, 3154), (103, 3232), (104, 3244), (111, 3286), (118, 3337), (124, 3388), (126, 3418), (131, 3460), (138, 3541), (155, 3691),

Gene: Marichuy\_4 Start: 2875, Stop: 3891, Start Num: 36

Candidate Starts for Marichuy\_4:

(Start: 19 @2764 has 121 MA's), (28, 2833), (Start: 36 @2875 has 15 MA's), (39, 2899), (45, 2974), (57, 3046), (58, 3049), (59, 3055), (62, 3088), (69, 3124), (88, 3217), (89, 3220), (97, 3271), (103, 3349), (104, 3361), (111, 3403), (118, 3454), (126, 3535), (131, 3577), (138, 3658), (155, 3808),

Gene: Marleymoo\_13 Start: 6462, Stop: 7685, Start Num: 10

Candidate Starts for Marleymoo\_13:

(Start: 10 @6462 has 54 MA's), (35, 6588), (55, 6759), (57, 6765), (68, 6843), (89, 6948), (94, 6981), (95, 6984), (96, 6990), (99, 7026), (100, 7032), (101, 7053), (118, 7182), (119, 7185), (128, 7278), (131, 7302), (144, 7413), (158, 7560), (164, 7599), (165, 7608), (168, 7623),

Gene: MasterPitts\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for MasterPitts\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Mauilvory\_4 Start: 2764, Stop: 3891, Start Num: 19

Candidate Starts for Mauilvory\_4:

(Start: 19 @2764 has 121 MA's), (28, 2833), (Start: 34 @2869 has 2 MA's), (Start: 36 @2875 has 15 MA's), (39, 2899), (45, 2974), (57, 3046), (58, 3049), (59, 3055), (62, 3088), (69, 3124), (88, 3217), (89, 3220), (97, 3271), (103, 3349), (104, 3361), (111, 3403), (118, 3454), (126, 3535), (131, 3577), (135, 3643), (138, 3658), (155, 3808),

Gene: McShie\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for McShie\_4:

(Start: 15 @2641 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (81, 3064), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (117, 3343), (118, 3346), (126, 3427), (131, 3469), (133, 3511), (138, 3550), (155, 3700),

Gene: MelBee03\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for MelBee03\_4:

(Start: 9 @2629 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 34 @2761 has 2 MA's), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: MiaZeal\_12 Start: 5253, Stop: 6488, Start Num: 10

Candidate Starts for MiaZeal\_12:

(Start: 10 @5253 has 54 MA's), (43, 5439), (50, 5508), (55, 5556), (57, 5562), (68, 5640), (89, 5748), (94, 5781), (95, 5784), (96, 5790), (107, 5904), (110, 5925), (118, 5982), (119, 5985), (128, 6078), (131, 6102), (134, 6153), (135, 6168), (138, 6183), (154, 6327), (164, 6399), (165, 6408),

Gene: Miaurora\_4 Start: 2764, Stop: 3891, Start Num: 19

Candidate Starts for Miaurora\_4:

(Start: 19 @2764 has 121 MA's), (28, 2833), (Start: 34 @2869 has 2 MA's), (Start: 36 @2875 has 15 MA's), (39, 2899), (45, 2974), (57, 3046), (58, 3049), (59, 3055), (62, 3088), (69, 3124), (88, 3217), (89, 3220), (97, 3271), (103, 3349), (104, 3361), (111, 3403), (118, 3454), (126, 3535), (131, 3577), (135, 3643), (138, 3658), (155, 3808),

Gene: Minerva\_11 Start: 5890, Stop: 7113, Start Num: 10

Candidate Starts for Minerva\_11:

(Start: 10 @5890 has 54 MA's), (35, 6016), (55, 6187), (57, 6193), (68, 6271), (89, 6376), (94, 6409), (95, 6412), (96, 6418), (100, 6460), (101, 6481), (118, 6610), (119, 6613), (128, 6706), (131, 6730), (144, 6841), (158, 6988), (164, 7027), (165, 7036), (168, 7051),

Gene: Minima\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Minima\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: MirimarMandM\_4 Start: 2689, Stop: 3858, Start Num: 19

Candidate Starts for MirimarMandM\_4:

(Start: 19 @2689 has 121 MA's), (28, 2758), (Start: 34 @2794 has 2 MA's), (Start: 36 @2800 has 15 MA's), (39, 2824), (45, 2899), (57, 2971), (58, 2974), (59, 2980), (62, 3013), (69, 3049), (88, 3142), (89, 3145), (97, 3196), (103, 3274), (104, 3286), (111, 3328), (118, 3379), (126, 3460), (131, 3502), (135, 3568), (138, 3583), (154, 3727), (155, 3733),

Gene: MrGreen\_4 Start: 2677, Stop: 3804, Start Num: 19

Candidate Starts for MrGreen\_4:

(Start: 9 @2650 has 1 MA's), (Start: 19 @2677 has 121 MA's), (28, 2746), (Start: 34 @2782 has 2 MA's), (Start: 36 @2788 has 15 MA's), (39, 2812), (45, 2887), (57, 2959), (58, 2962), (59, 2968), (62, 3001), (69, 3037), (88, 3130), (89, 3133), (97, 3184), (103, 3262), (104, 3274), (111, 3316), (117, 3364), (118, 3367), (124, 3418), (126, 3448), (131, 3490), (138, 3571), (155, 3721),

Gene: Myram\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Myram\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Naby\_4 Start: 2373, Stop: 3533, Start Num: 19

Candidate Starts for Naby\_4:

(13, 2355), (18, 2364), (Start: 19 @2373 has 121 MA's), (Start: 36 @2484 has 15 MA's), (39, 2508), (46, 2586), (57, 2655), (59, 2664), (62, 2697), (81, 2781), (89, 2829), (103, 2958), (104, 2970), (109, 3003), (116, 3057), (118, 3063), (124, 3114), (131, 3186), (135, 3252), (138, 3267), (154, 3411), (155, 3417),

Gene: Namsahir\_4 Start: 2680, Stop: 3846, Start Num: 19

Candidate Starts for Namsahir\_4:

(Start: 19 @2680 has 121 MA's), (28, 2749), (Start: 34 @2785 has 2 MA's), (Start: 36 @2791 has 15 MA's), (39, 2815), (45, 2890), (57, 2962), (58, 2965), (59, 2971), (62, 3004), (69, 3040), (88, 3133), (89, 3136), (97, 3187), (103, 3265), (104, 3277), (111, 3319), (118, 3370), (126, 3451), (131, 3493), (135, 3559), (138, 3574), (154, 3718), (155, 3724),

Gene: Nekros\_10 Start: 5301, Stop: 6536, Start Num: 10

Candidate Starts for Nekros\_10:

(Start: 10 @5301 has 54 MA's), (43, 5487), (50, 5556), (55, 5604), (57, 5610), (68, 5688), (89, 5796), (94, 5829), (95, 5832), (96, 5838), (107, 5952), (110, 5973), (118, 6030), (119, 6033), (128, 6126), (131, 6150), (134, 6201), (135, 6216), (138, 6231), (154, 6375), (164, 6447), (165, 6456),

Gene: NeumannU\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for NeumannU\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Nibley\_8 Start: 4111, Stop: 5214, Start Num: 35

Candidate Starts for Nibley\_8:

(Start: 10 @3985 has 54 MA's), (30, 4078), (35, 4111), (55, 4282), (56, 4285), (57, 4288), (68, 4366), (89, 4477), (92, 4498), (95, 4513), (96, 4519), (100, 4561), (107, 4633), (110, 4654), (118, 4711), (119, 4714), (128, 4807), (131, 4831), (135, 4897), (148, 5008), (151, 5035), (161, 5119), (164, 5128), (168, 5152),

Gene: Niffler\_4 Start: 2737, Stop: 3864, Start Num: 19

Candidate Starts for Niffler\_4:

(Start: 19 @2737 has 121 MA's), (28, 2806), (Start: 34 @2842 has 2 MA's), (Start: 36 @2848 has 15 MA's), (39, 2872), (45, 2947), (57, 3019), (58, 3022), (59, 3028), (62, 3061), (69, 3097), (88, 3190), (89, 3193), (97, 3244), (103, 3322), (104, 3334), (111, 3376), (118, 3427), (126, 3508), (131, 3550), (135, 3616), (138, 3631), (155, 3781),

Gene: NihilNomen\_11 Start: 5890, Stop: 7113, Start Num: 10

Candidate Starts for NihilNomen\_11:

(Start: 10 @5890 has 54 MA's), (35, 6016), (55, 6187), (57, 6193), (68, 6271), (89, 6376), (94, 6409), (95, 6412), (96, 6418), (100, 6460), (101, 6481), (118, 6610), (119, 6613), (128, 6706), (131, 6730), (144, 6841), (158, 6988), (164, 7027), (165, 7036), (168, 7051),

Gene: Nobel\_4 Start: 2764, Stop: 3891, Start Num: 19

Candidate Starts for Nobel\_4:

(Start: 19 @2764 has 121 MA's), (28, 2833), (Start: 34 @2869 has 2 MA's), (Start: 36 @2875 has 15 MA's), (39, 2899), (45, 2974), (57, 3046), (58, 3049), (59, 3055), (62, 3088), (69, 3124), (88, 3217), (89, 3220), (97, 3271), (103, 3349), (104, 3361), (111, 3403), (118, 3454), (126, 3535), (131, 3577), (135, 3643), (138, 3658), (155, 3808),

Gene: Noelani\_4 Start: 2647, Stop: 3774, Start Num: 19

Candidate Starts for Noelani\_4:

(Start: 19 @2647 has 121 MA's), (28, 2716), (Start: 34 @2752 has 2 MA's), (Start: 36 @2758 has 15 MA's), (39, 2782), (45, 2857), (57, 2929), (58, 2932), (59, 2938), (62, 2971), (69, 3007), (88, 3100), (89, 3103), (97, 3154), (103, 3232), (104, 3244), (111, 3286), (118, 3337), (124, 3388), (126, 3418), (131, 3460), (135, 3526), (138, 3541), (155, 3691),

Gene: Oaklynn\_4 Start: 2770, Stop: 3786, Start Num: 36

Candidate Starts for Oaklynn\_4:

(Start: 15 @2644 has 1 MA's), (Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (81, 3067), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (117, 3346), (118, 3349), (124, 3400), (126, 3430), (131, 3472), (133, 3514), (138, 3553), (155, 3703),

Gene: Octopus\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Octopus\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: OdetoJoy\_4 Start: 2851, Stop: 3867, Start Num: 36

Candidate Starts for OdetoJoy\_4:

(Start: 15 @2725 has 1 MA's), (Start: 19 @2740 has 121 MA's), (28, 2809), (Start: 36 @2851 has 15 MA's), (39, 2875), (45, 2950), (57, 3022), (58, 3025), (59, 3031), (62, 3064), (88, 3193), (89, 3196), (97, 3247), (103, 3325), (104, 3337), (111, 3379), (118, 3430), (124, 3481), (126, 3511), (131, 3553), (138, 3634), (155, 3784),

Gene: Odette\_11 Start: 5369, Stop: 6592, Start Num: 10

Candidate Starts for Odette\_11:

(Start: 10 @5369 has 54 MA's), (35, 5495), (55, 5666), (57, 5672), (68, 5750), (89, 5855), (94, 5888), (95, 5891), (96, 5897), (100, 5939), (101, 5960), (118, 6089), (119, 6092), (128, 6185), (131, 6209), (144, 6320), (158, 6467), (164, 6506), (165, 6515), (168, 6530),

Gene: Omega\_13 Start: 7158, Stop: 8387, Start Num: 10

Candidate Starts for Omega\_13:

(Start: 10 @7158 has 54 MA's), (30, 7251), (35, 7284), (54, 7449), (55, 7455), (57, 7461), (68, 7539), (89, 7650), (95, 7686), (96, 7692), (105, 7794), (118, 7884), (119, 7887), (128, 7980), (131, 8004), (135, 8070), (144, 8115), (147, 8169), (151, 8208), (164, 8301), (165, 8310), (168, 8325),

Gene: Optimus\_9 Start: 5396, Stop: 6619, Start Num: 10

Candidate Starts for Optimus\_9:

(Start: 10 @5396 has 54 MA's), (35, 5522), (55, 5693), (57, 5699), (68, 5777), (89, 5882), (94, 5915), (95, 5918), (96, 5924), (100, 5966), (101, 5987), (118, 6116), (119, 6119), (128, 6212), (131, 6236), (144, 6347), (158, 6494), (164, 6533), (165, 6542), (168, 6557),

Gene: Otwor\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Otwor\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Owens\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Owens\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: PaoPu\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for PaoPu\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Phoebus\_12 Start: 6116, Stop: 7339, Start Num: 10

Candidate Starts for Phoebus\_12:

(Start: 10 @6116 has 54 MA's), (35, 6242), (55, 6413), (57, 6419), (68, 6497), (89, 6602), (94, 6635), (95, 6638), (96, 6644), (100, 6686), (101, 6707), (118, 6836), (119, 6839), (128, 6932), (131, 6956), (144, 7067), (158, 7214), (164, 7253), (165, 7262), (168, 7277),

Gene: Picconator\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Picconator\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Picnic\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Picnic\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: PoRanda\_4 Start: 2689, Stop: 3858, Start Num: 19

Candidate Starts for PoRanda\_4:

(Start: 19 @2689 has 121 MA's), (28, 2758), (Start: 34 @2794 has 2 MA's), (Start: 36 @2800 has 15 MA's), (39, 2824), (45, 2899), (57, 2971), (58, 2974), (59, 2980), (62, 3013), (69, 3049), (88, 3142), (89, 3145), (97, 3196), (103, 3274), (104, 3286), (111, 3328), (118, 3379), (126, 3460), (131, 3502), (135, 3568), (138, 3583), (154, 3727), (155, 3733),

Gene: Pondwater\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Pondwater\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Porcelain\_12 Start: 5253, Stop: 6488, Start Num: 10

Candidate Starts for Porcelain\_12:

(Start: 10 @5253 has 54 MA's), (43, 5439), (50, 5508), (55, 5556), (57, 5562), (68, 5640), (89, 5748), (94, 5781), (95, 5784), (96, 5790), (107, 5904), (110, 5925), (118, 5982), (119, 5985), (128, 6078), (131, 6102), (134, 6153), (135, 6168), (138, 6183), (154, 6327), (164, 6399), (165, 6408),

Gene: Pound\_11 Start: 5886, Stop: 7109, Start Num: 10

Candidate Starts for Pound\_11:

(Start: 10 @5886 has 54 MA's), (35, 6012), (55, 6183), (57, 6189), (68, 6267), (89, 6372), (94, 6405), (95, 6408), (96, 6414), (100, 6456), (101, 6477), (118, 6606), (119, 6609), (128, 6702), (131, 6726), (144, 6837), (158, 6984), (164, 7023), (165, 7032), (168, 7047),

Gene: Publix\_4 Start: 2680, Stop: 3846, Start Num: 19

Candidate Starts for Publix\_4:

(Start: 19 @2680 has 121 MA's), (28, 2749), (Start: 34 @2785 has 2 MA's), (Start: 36 @2791 has 15 MA's), (39, 2815), (45, 2890), (57, 2962), (58, 2965), (59, 2971), (62, 3004), (69, 3040), (88, 3133), (89, 3136), (97, 3187), (103, 3265), (104, 3277), (111, 3319), (118, 3370), (126, 3451), (131, 3493), (135, 3559), (138, 3574), (154, 3718), (155, 3724),

Gene: Puddles3\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Puddles3\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: PuffyCat\_4 Start: 2689, Stop: 3816, Start Num: 19

Candidate Starts for PuffyCat\_4:

(Start: 19 @2689 has 121 MA's), (28, 2758), (Start: 34 @2794 has 2 MA's), (Start: 36 @2800 has 15 MA's), (39, 2824), (45, 2899), (57, 2971), (58, 2974), (59, 2980), (62, 3013), (69, 3049), (88, 3142), (89, 3145), (97, 3196), (103, 3274), (104, 3286), (111, 3328), (118, 3379), (126, 3460), (131, 3502), (135, 3568), (138, 3583), (155, 3733),

Gene: Quaker\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for Quaker\_4:

(Start: 9 @2629 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 34 @2761 has 2 MA's), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (81, 3064), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: Rearden\_9 Start: 4063, Stop: 5292, Start Num: 10

Candidate Starts for Rearden\_9:

(Start: 10 @4063 has 54 MA's), (30, 4156), (35, 4189), (55, 4360), (56, 4363), (57, 4366), (68, 4444), (89, 4555), (92, 4576), (95, 4591), (96, 4597), (107, 4711), (110, 4732), (118, 4789), (119, 4792), (128, 4885), (131, 4909), (135, 4975), (148, 5086), (164, 5206), (165, 5215), (168, 5230),

Gene: Redno2\_11 Start: 5601, Stop: 6824, Start Num: 10

Candidate Starts for Redno2\_11:

(Start: 10 @5601 has 54 MA's), (35, 5727), (55, 5898), (57, 5904), (68, 5982), (89, 6087), (94, 6120), (95, 6123), (96, 6129), (100, 6171), (101, 6192), (118, 6321), (119, 6324), (128, 6417), (131, 6441), (144, 6552), (158, 6699), (164, 6738), (165, 6747), (168, 6762),

Gene: RemusLoopin\_3 Start: 2182, Stop: 3525, Start Num: 10

Candidate Starts for RemusLoopin\_3:

(5, 2137), (Start: 10 @2182 has 54 MA's), (27, 2260), (Start: 34 @2296 has 2 MA's), (38, 2320), (53, 2464), (63, 2557), (64, 2569), (70, 2599), (72, 2605), (73, 2608), (79, 2629), (90, 2716), (91, 2719), (104, 2842), (108, 2863), (110, 2878), (122, 2980), (125, 3004), (136, 3133), (149, 3268), (152, 3289), (156, 3319), (158, 3337), (160, 3358), (162, 3376), (163, 3382),

Gene: Rhogar\_4 Start: 2782, Stop: 3798, Start Num: 36

Candidate Starts for Rhogar\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Rhysand\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Rhysand\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Rira\_4 Start: 2698, Stop: 3825, Start Num: 19

Candidate Starts for Rira\_4:

(Start: 19 @2698 has 121 MA's), (28, 2767), (Start: 34 @2803 has 2 MA's), (Start: 36 @2809 has 15 MA's), (39, 2833), (45, 2908), (57, 2980), (58, 2983), (59, 2989), (62, 3022), (69, 3058), (88, 3151), (89, 3154), (97, 3205), (103, 3283), (104, 3295), (111, 3337), (118, 3388), (126, 3469), (131, 3511), (135, 3577), (138, 3592), (155, 3742),

Gene: RoscoWindex\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for RoscoWindex\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Sachet\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Sachet\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Sage7\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Sage7\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Samora\_3 Start: 2204, Stop: 3595, Start Num: 10

Candidate Starts for Samora\_3:

(6, 2168), (Start: 10 @2204 has 54 MA's), (38, 2357), (40, 2366), (53, 2501), (64, 2606), (70, 2636), (72, 2642), (73, 2645), (87, 2711), (90, 2753), (91, 2756), (103, 2867), (104, 2879), (108, 2900), (110, 2915), (122, 3017), (136, 3170), (145, 3257), (149, 3305), (156, 3356), (158, 3374), (160, 3395), (162, 3413),

Gene: SantasSleigh\_4 Start: 2695, Stop: 3822, Start Num: 19

Candidate Starts for SantasSleigh\_4:

(Start: 19 @2695 has 121 MA's), (28, 2764), (Start: 34 @2800 has 2 MA's), (Start: 36 @2806 has 15 MA's), (39, 2830), (45, 2905), (57, 2977), (58, 2980), (59, 2986), (62, 3019), (69, 3055), (88, 3148), (89, 3151), (97, 3202), (103, 3280), (104, 3292), (111, 3334), (118, 3385), (126, 3466), (131, 3508), (138, 3589), (155, 3739),

Gene: Sara\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for Sara\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Scamander\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Scamander\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Schatzie\_10 Start: 5140, Stop: 6363, Start Num: 10

Candidate Starts for Schatzie\_10:

(Start: 10 @5140 has 54 MA's), (35, 5266), (55, 5437), (57, 5443), (68, 5521), (89, 5626), (94, 5659), (95, 5662), (96, 5668), (100, 5710), (101, 5731), (118, 5860), (119, 5863), (128, 5956), (131, 5980), (144, 6091), (158, 6238), (164, 6277), (165, 6286), (168, 6301),

Gene: Scrunchy\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Scrunchy\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: SeaWolves\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for SeaWolves\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Sebastisaurus\_3 Start: 2190, Stop: 3551, Start Num: 10

Candidate Starts for Sebastisaurus\_3:

(Start: 10 @2190 has 54 MA's), (25, 2265), (27, 2283), (Start: 34 @2319 has 2 MA's), (38, 2343), (53, 2487), (63, 2580), (64, 2592), (67, 2613), (70, 2622), (72, 2628), (73, 2631), (90, 2739), (91, 2742), (106, 2874), (108, 2886), (110, 2901), (121, 2997), (122, 3003), (125, 3027), (136, 3156), (145, 3243), (149, 3291), (150, 3297), (152, 3312), (160, 3381), (163, 3405),

Gene: Shaboozey\_8 Start: 3985, Stop: 5214, Start Num: 10

Candidate Starts for Shaboozey\_8:

(Start: 10 @3985 has 54 MA's), (30, 4078), (35, 4111), (55, 4282), (56, 4285), (57, 4288), (68, 4366), (89, 4477), (92, 4498), (95, 4513), (96, 4519), (107, 4633), (110, 4654), (118, 4711), (119, 4714), (128, 4807), (131, 4831), (135, 4897), (148, 5008), (151, 5035), (161, 5119), (164, 5128), (168, 5152),

Gene: Shawty\_3 Start: 2202, Stop: 3572, Start Num: 10

Candidate Starts for Shawty\_3:

(Start: 10 @2202 has 54 MA's), (20, 2241), (Start: 34 @2337 has 2 MA's), (38, 2361), (40, 2370), (42, 2382), (53, 2505), (57, 2535), (61, 2574), (70, 2640), (72, 2646), (73, 2649), (79, 2670), (87, 2715), (90, 2757), (91, 2760), (97, 2793), (103, 2871), (104, 2883), (105, 2886), (108, 2904), (121, 3015), (122, 3021), (130, 3093), (136, 3174), (145, 3261), (149, 3309), (156, 3360), (158, 3378), (163, 3423),

Gene: Sippinontea\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for Sippinontea\_4:

(Start: 9 @2629 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 34 @2761 has 2 MA's), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (81, 3064), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: Slentz\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Slentz\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Slizam\_4 Start: 2698, Stop: 3825, Start Num: 19

Candidate Starts for Slizam\_4:

(Start: 19 @2698 has 121 MA's), (28, 2767), (Start: 34 @2803 has 2 MA's), (Start: 36 @2809 has 15 MA's), (39, 2833), (45, 2908), (57, 2980), (58, 2983), (59, 2989), (62, 3022), (69, 3058), (88, 3151), (89, 3154), (97, 3205), (103, 3283), (104, 3295), (111, 3337), (118, 3388), (126, 3469), (131, 3511), (135, 3577), (138, 3592), (155, 3742),

Gene: Snuffles\_5 Start: 2868, Stop: 3995, Start Num: 19

Candidate Starts for Snuffles\_5:

(Start: 9 @2841 has 1 MA's), (Start: 19 @2868 has 121 MA's), (28, 2937), (Start: 34 @2973 has 2 MA's), (Start: 36 @2979 has 15 MA's), (39, 3003), (45, 3078), (57, 3150), (58, 3153), (59, 3159), (62, 3192), (69, 3228), (88, 3321), (89, 3324), (97, 3375), (103, 3453), (104, 3465), (111, 3507), (118, 3558), (126, 3639), (131, 3681), (135, 3747), (138, 3762), (155, 3912),

Gene: Squint\_12 Start: 5184, Stop: 6413, Start Num: 10

Candidate Starts for Squint\_12:

(Start: 10 @5184 has 54 MA's), (30, 5277), (35, 5310), (55, 5481), (56, 5484), (57, 5487), (68, 5565), (89, 5676), (92, 5697), (95, 5712), (96, 5718), (107, 5832), (110, 5853), (118, 5910), (119, 5913), (128, 6006), (131, 6030), (135, 6096), (148, 6207), (151, 6234), (161, 6318), (164, 6327), (168, 6351),

Gene: Stem\_4 Start: 2698, Stop: 3825, Start Num: 19

Candidate Starts for Stem\_4:

(Start: 19 @2698 has 121 MA's), (28, 2767), (Start: 34 @2803 has 2 MA's), (Start: 36 @2809 has 15 MA's), (39, 2833), (45, 2908), (57, 2980), (58, 2983), (59, 2989), (62, 3022), (69, 3058), (88, 3151), (89, 3154), (97, 3205), (103, 3283), (104, 3295), (111, 3337), (118, 3388), (126, 3469), (131, 3511), (135, 3577), (138, 3592), (155, 3742),

Gene: Superphikiman\_12 Start: 5434, Stop: 6669, Start Num: 10

Candidate Starts for Superphikiman\_12:

(Start: 10 @5434 has 54 MA's), (43, 5620), (50, 5689), (55, 5737), (57, 5743), (68, 5821), (89, 5929), (94, 5962), (95, 5965), (96, 5971), (107, 6085), (110, 6106), (118, 6163), (119, 6166), (128, 6259), (131, 6283), (134, 6334), (135, 6349), (138, 6364), (154, 6508), (164, 6580), (165, 6589),

Gene: TG1\_3 Start: 2208, Stop: 3587, Start Num: 10

Candidate Starts for TG1\_3:

(Start: 10 @2208 has 54 MA's), (38, 2364), (53, 2508), (57, 2538), (68, 2637), (70, 2643), (71, 2646), (79, 2679), (86, 2721), (88, 2748), (90, 2766), (91, 2769), (103, 2880), (104, 2892), (106, 2901), (108, 2913), (122, 3030), (136, 3183), (145, 3270), (156, 3369), (158, 3387), (160, 3408), (163, 3432),

Gene: TeddyBoy\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for TeddyBoy\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Thibault\_8 Start: 5396, Stop: 6619, Start Num: 10

Candidate Starts for Thibault\_8:

(Start: 10 @5396 has 54 MA's), (35, 5522), (55, 5693), (57, 5699), (68, 5777), (89, 5882), (94, 5915), (95, 5918), (96, 5924), (100, 5966), (101, 5987), (118, 6116), (119, 6119), (128, 6212), (131, 6236), (144, 6347), (158, 6494), (164, 6533), (165, 6542), (168, 6557),

Gene: ThreeRngTarjay\_11 Start: 5886, Stop: 7109, Start Num: 10

Candidate Starts for ThreeRngTarjay\_11:

(Start: 10 @5886 has 54 MA's), (35, 6012), (55, 6183), (57, 6189), (68, 6267), (89, 6372), (94, 6405), (95, 6408), (96, 6414), (100, 6456), (101, 6477), (118, 6606), (119, 6609), (128, 6702), (131, 6726), (144, 6837), (158, 6984), (164, 7023), (165, 7032), (168, 7047),

Gene: TimoTea\_4 Start: 2647, Stop: 3774, Start Num: 19

Candidate Starts for TimoTea\_4:

(Start: 19 @2647 has 121 MA's), (28, 2716), (Start: 36 @2758 has 15 MA's), (39, 2782), (45, 2857), (57, 2929), (58, 2932), (59, 2938), (62, 2971), (69, 3007), (88, 3100), (89, 3103), (97, 3154), (103, 3232), (104, 3244), (111, 3286), (118, 3337), (124, 3388), (126, 3418), (131, 3460), (138, 3541), (155, 3691),

Gene: TinyTruffula\_4 Start: 2764, Stop: 3891, Start Num: 19

Candidate Starts for TinyTruffula\_4:

(Start: 19 @2764 has 121 MA's), (28, 2833), (Start: 34 @2869 has 2 MA's), (Start: 36 @2875 has 15 MA's), (39, 2899), (45, 2974), (57, 3046), (58, 3049), (59, 3055), (62, 3088), (69, 3124), (88, 3217), (89, 3220), (97, 3271), (103, 3349), (104, 3361), (111, 3403), (118, 3454), (126, 3535), (131, 3577), (135, 3643), (138, 3658), (155, 3808),

Gene: TomBrady12\_4 Start: 2698, Stop: 3825, Start Num: 19

Candidate Starts for TomBrady12\_4:

(Start: 19 @2698 has 121 MA's), (28, 2767), (Start: 34 @2803 has 2 MA's), (Start: 36 @2809 has 15 MA's), (39, 2833), (45, 2908), (57, 2980), (58, 2983), (59, 2989), (62, 3022), (69, 3058), (88, 3151), (89, 3154), (97, 3205), (103, 3283), (104, 3295), (111, 3337), (118, 3388), (126, 3469), (131, 3511), (135, 3577), (138, 3592), (155, 3742),

Gene: Trackstar\_4 Start: 2764, Stop: 3891, Start Num: 19

Candidate Starts for Trackstar\_4:

(Start: 19 @2764 has 121 MA's), (28, 2833), (Start: 34 @2869 has 2 MA's), (Start: 36 @2875 has 15 MA's), (39, 2899), (45, 2974), (57, 3046), (58, 3049), (59, 3055), (62, 3088), (69, 3124), (88, 3217), (89, 3220), (97, 3271), (103, 3349), (104, 3361), (111, 3403), (118, 3454), (126, 3535), (131, 3577), (135, 3643), (138, 3658), (155, 3808),

Gene: Trireme\_4 Start: 2764, Stop: 3891, Start Num: 19

Candidate Starts for Trireme\_4:

(Start: 19 @2764 has 121 MA's), (28, 2833), (Start: 34 @2869 has 2 MA's), (Start: 36 @2875 has 15 MA's), (39, 2899), (45, 2974), (57, 3046), (58, 3049), (59, 3055), (62, 3088), (69, 3124), (88, 3217), (89, 3220), (97, 3271), (103, 3349), (104, 3361), (111, 3403), (118, 3454), (126, 3535), (131, 3577), (135, 3643), (138, 3658), (155, 3808),

Gene: Typha\_11 Start: 6484, Stop: 7815, Start Num: 10

Candidate Starts for Typha\_11:

(Start: 10 @6484 has 54 MA's), (12, 6490), (14, 6493), (22, 6541), (32, 6598), (35, 6619), (39, 6646), (49, 6739), (55, 6790), (56, 6793), (57, 6796), (68, 6895), (74, 6913), (76, 6922), (78, 6928), (80, 6949), (89, 7009), (96, 7051), (104, 7150), (110, 7186), (112, 7195), (113, 7198), (118, 7243), (119, 7246), (128, 7339), (131, 7363), (139, 7453), (143, 7471), (144, 7474), (153, 7585), (158, 7621), (161, 7654), (164, 7663), (169, 7699),

Gene: Tyrellus\_4 Start: 2782, Stop: 3798, Start Num: 36

Candidate Starts for Tyrellus\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Upsilon\_4 Start: 2689, Stop: 3858, Start Num: 19

Candidate Starts for Upsilon\_4:

(Start: 19 @2689 has 121 MA's), (28, 2758), (Start: 34 @2794 has 2 MA's), (Start: 36 @2800 has 15 MA's), (39, 2824), (45, 2899), (57, 2971), (58, 2974), (59, 2980), (62, 3013), (69, 3049), (88, 3142), (89, 3145), (97, 3196), (103, 3274), (104, 3286), (111, 3328), (118, 3379), (126, 3460), (131, 3502), (135, 3568), (138, 3583), (154, 3727), (155, 3733),

Gene: Vanisius\_4 Start: 2671, Stop: 3798, Start Num: 19

Candidate Starts for Vanisius\_4:

(Start: 19 @2671 has 121 MA's), (28, 2740), (Start: 34 @2776 has 2 MA's), (Start: 36 @2782 has 15 MA's), (39, 2806), (45, 2881), (57, 2953), (58, 2956), (59, 2962), (62, 2995), (69, 3031), (88, 3124), (89, 3127), (97, 3178), (103, 3256), (104, 3268), (111, 3310), (118, 3361), (126, 3442), (131, 3484), (138, 3565), (155, 3715),

Gene: Vash\_3 Start: 2206, Stop: 3567, Start Num: 10

Candidate Starts for Vash\_3:

(2, 2071), (6, 2170), (8, 2179), (Start: 10 @2206 has 54 MA's), (38, 2350), (42, 2371), (53, 2494), (64, 2599), (70, 2629), (72, 2635), (87, 2704), (90, 2746), (91, 2749), (103, 2860), (104, 2872), (105, 2875), (108, 2893), (110, 2908), (122, 3010), (126, 3055), (130, 3082), (136, 3163), (145, 3250), (149, 3298), (156, 3349), (158, 3367), (160, 3388), (162, 3406),

Gene: VitulaEligans\_4 Start: 2740, Stop: 3867, Start Num: 19

Candidate Starts for VitulaEligans\_4:

(Start: 15 @2725 has 1 MA's), (Start: 19 @2740 has 121 MA's), (28, 2809), (Start: 36 @2851 has 15 MA's), (39, 2875), (45, 2950), (57, 3022), (58, 3025), (59, 3031), (62, 3064), (88, 3193), (89, 3196), (97, 3247), (103, 3325), (104, 3337), (111, 3379), (118, 3430), (124, 3481), (126, 3511), (131, 3553), (138, 3634), (155, 3784),

Gene: Wanda\_12 Start: 5407, Stop: 6630, Start Num: 10

Candidate Starts for Wanda\_12:

(Start: 10 @5407 has 54 MA's), (35, 5533), (55, 5704), (57, 5710), (68, 5788), (89, 5893), (94, 5926), (95, 5929), (96, 5935), (100, 5977), (101, 5998), (118, 6127), (119, 6130), (128, 6223), (131, 6247), (144, 6358), (158, 6505), (164, 6544), (165, 6553), (168, 6568),

Gene: Witch\_4 Start: 2660, Stop: 3787, Start Num: 19

Candidate Starts for Witch\_4:

(Start: 19 @2660 has 121 MA's), (28, 2729), (Start: 36 @2771 has 15 MA's), (39, 2795), (45, 2870), (57, 2942), (58, 2945), (59, 2951), (62, 2984), (69, 3020), (88, 3113), (89, 3116), (97, 3167), (103, 3245), (104, 3257), (111, 3299), (118, 3350), (126, 3431), (131, 3473), (138, 3554), (155, 3704),

Gene: Wolfpack\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for Wolfpack\_4:

(Start: 9 @2629 has 1 MA's), (Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 34 @2761 has 2 MA's), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (81, 3064), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: Xiaokay\_7 Start: 4649, Stop: 5872, Start Num: 10

Candidate Starts for Xiaokay\_7:

(Start: 10 @4649 has 54 MA's), (35, 4775), (55, 4946), (57, 4952), (68, 5030), (89, 5135), (94, 5168), (95, 5171), (96, 5177), (100, 5219), (101, 5240), (118, 5369), (119, 5372), (128, 5465), (131, 5489), (144, 5600), (158, 5747), (164, 5786), (165, 5795), (168, 5810),

Gene: Yami\_4 Start: 2647, Stop: 3774, Start Num: 19

Candidate Starts for Yami\_4:

(Start: 19 @2647 has 121 MA's), (28, 2716), (Start: 34 @2752 has 2 MA's), (Start: 36 @2758 has 15 MA's), (39, 2782), (45, 2857), (57, 2929), (58, 2932), (59, 2938), (62, 2971), (69, 3007), (88, 3100), (89, 3103), (97, 3154), (103, 3232), (104, 3244), (111, 3286), (118, 3337), (126, 3418), (131, 3460), (135, 3526), (138, 3541), (155, 3691),

Gene: Yasuo\_4 Start: 2656, Stop: 3783, Start Num: 19

Candidate Starts for Yasuo\_4:

(Start: 19 @2656 has 121 MA's), (28, 2725), (Start: 36 @2767 has 15 MA's), (39, 2791), (45, 2866), (57, 2938), (58, 2941), (59, 2947), (62, 2980), (69, 3016), (88, 3109), (89, 3112), (97, 3163), (103, 3241), (104, 3253), (111, 3295), (118, 3346), (126, 3427), (131, 3469), (138, 3550), (155, 3700),

Gene: Yeet\_10 Start: 5140, Stop: 6363, Start Num: 10

Candidate Starts for Yeet\_10:

(Start: 10 @5140 has 54 MA's), (35, 5266), (55, 5437), (57, 5443), (68, 5521), (89, 5626), (94, 5659), (95, 5662), (96, 5668), (100, 5710), (101, 5731), (118, 5860), (119, 5863), (128, 5956), (131, 5980), (144, 6091), (158, 6238), (164, 6277), (165, 6286), (168, 6301),

Gene: YertPhresh\_4 Start: 2659, Stop: 3786, Start Num: 19

Candidate Starts for YertPhresh\_4:

(Start: 19 @2659 has 121 MA's), (28, 2728), (Start: 36 @2770 has 15 MA's), (39, 2794), (45, 2869), (57, 2941), (58, 2944), (59, 2950), (62, 2983), (69, 3019), (88, 3112), (89, 3115), (97, 3166), (103, 3244), (104, 3256), (111, 3298), (118, 3349), (126, 3430), (131, 3472), (138, 3553), (155, 3703),

Gene: Yubaba\_4 Start: 2660, Stop: 3787, Start Num: 19

Candidate Starts for Yubaba\_4:

(Start: 19 @2660 has 121 MA's), (28, 2729), (Start: 36 @2771 has 15 MA's), (39, 2795), (45, 2870), (57, 2942), (58, 2945), (59, 2951), (62, 2984), (69, 3020), (88, 3113), (89, 3116), (97, 3167), (103, 3245), (104, 3257), (111, 3299), (118, 3350), (126, 3431), (131, 3473), (138, 3554), (155, 3704),

Gene: Zahlia\_4 Start: 2761, Stop: 3888, Start Num: 19

Candidate Starts for Zahlia\_4:

(Start: 19 @2761 has 121 MA's), (28, 2830), (Start: 36 @2872 has 15 MA's), (39, 2896), (45, 2971), (57, 3043), (59, 3052), (62, 3085), (69, 3121), (88, 3214), (89, 3217), (97, 3268), (103, 3346), (104, 3358), (111, 3400), (118, 3451), (126, 3532), (131, 3574), (138, 3655), (155, 3805),

Gene: Zelink\_12 Start: 5914, Stop: 7137, Start Num: 10

Candidate Starts for Zelink\_12:

(Start: 10 @5914 has 54 MA's), (35, 6040), (55, 6211), (57, 6217), (68, 6295), (89, 6400), (94, 6433), (95, 6436), (96, 6442), (100, 6484), (101, 6505), (118, 6634), (119, 6637), (128, 6730), (131, 6754), (144, 6865), (158, 7012), (164, 7051), (165, 7060), (168, 7075),

Gene: phiBT1\_34 Start: 2227, Stop: 3600, Start Num: 10

Candidate Starts for phiBT1\_34:

(Start: 10 @2227 has 54 MA's), (38, 2380), (53, 2524), (61, 2593), (64, 2629), (70, 2659), (72, 2665), (79, 2689), (85, 2728), (86, 2731), (90, 2776), (91, 2779), (103, 2890), (104, 2902), (108, 2923), (110, 2938), (118, 3004), (121, 3034), (122, 3040), (136, 3193), (145, 3280), (149, 3328), (158, 3397), (160, 3418), (162, 3436), (163, 3442),