





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 294428 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294428 has 213 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Makoto\_14
- Track 2 : OMalley\_14, Eunoia\_14, Aledel\_14, Chridison\_14, Riovina\_14
- Track 3 : Carpal\_18, Dino\_18, Kalizoi\_18, Zorro\_18
- Track 4 : CristinaYang\_14, Lasagna\_14, Nancia\_14, Bodacious\_14
- Track 5 : Scuttle\_18
- Track 6 : Sergei\_14, KingBob\_14, Herb\_14, Temper16\_14, Maria1952\_14, Daiboju\_14
- Track 7 : AustinPowers\_14
- Track 8 : Korra\_19
- Track 9 : HunterDalle\_14, Vulture\_14
- Track 10 : RAP15\_18, Vallejo\_18, Jumboset\_18, MeganNoll\_18
- Track 11 : LilStuart\_14, Lennox\_14
- Track 12 : Potatoes\_18, Cholula\_18, Immaculata\_18
- Track 13 : PinkFriday\_14
- Track 14 : Fluke\_18, Glenn\_18, TattModd\_18, Savage2526\_18
- Track 15 : Lucy\_14
- Track 16 : Wawa\_18
- Track 17 : DrRobert\_14
- Track 18 : OurGirlNessie\_14
- Track 19 : Pumancara\_14
- Track 20 : PitaDog\_14
- Track 21 : Rozby\_18
- Track 22 : MrGloopy\_18
- Track 23 : Riverdale\_18
- Track 24 : ChewChew\_14
- Track 25 : Pterodactyl\_14
- Track 26 : Christian\_14
- Track 27 : Supakev\_14
- Track 28 : Beethoven\_18
- Track 29 : WonderBoy\_14
- Track 30 : BrotherBLo\_18
- Track 31 : Megan\_30
- Track 32 : Goobery\_12, JaimeB\_12, Grayscar\_12, BurtonThePup\_12, Otwor\_12, LionelHutz\_12, Burgy\_12, Rhogar\_12, Owens\_12, Slentz\_12, HeadMave\_12, Rhysand\_12, Danno\_12, Tyrellus\_12, Ciel\_12, NeumannU\_12, BinkBonk\_12, Josuke\_12, SantasSleigh\_12, Cheesecake\_12, Godfather\_12, Luxx\_12, Scrunchy\_12, Jella\_12, Eightball\_12, Vanisius\_12, Charbie\_12, Scamander\_12,

Maneater\_12, Aries55\_12, Majesty\_12, Sage7\_12, Picconator\_12, BarBear\_12, Kojax4\_12, Astro16\_12, TeddyBoy\_12, Avvas\_12, Yasuo\_12, LaviMo\_12, TimoTea\_12

- Track 33 : Baine\_12, Lola20\_12, Cayde6\_12
- Track 34 : McShie\_12, BrokMonster\_12
- Track 35 : Miaurora\_12, Stem\_12
- Track 36 : MasterPitts\_12, DaftyDuck\_12
- Track 37 : Lunatic\_12, Nobel\_12, PuffyCat\_12, TinyTruffula\_12, Clownery\_12, Niffler\_12
- Track 38 : Madebyisha\_12, Jerky\_12, OdetoJoy\_14, VitulaEligans\_12
- Track 39 : Octopus\_12, Sara\_12, Alucard\_12, YertPhresh\_12, EdElric\_12, Puddles3\_12, Horacetta\_12, SeaWolves\_12, Erin\_12, PaoPu\_12, Aztec\_12, Danimal\_12, Gardevoir\_12, Dooby\_12, Chatham\_12, Picnic\_12, GoldenBlanche\_12, Minima\_12, LemonPepper\_12, ManAs\_12, KyriosFaba\_12, Pondwater\_12, Sachet\_12, JoBros\_12, Dongwon\_12, Witch\_12, Myram\_12, Yubaba\_12
- Track 40 : Leafy\_12
- Track 41 : BonaeVitae\_12
- Track 42 : Gabbspett\_12, Hernandez44\_12
- Track 43 : Namsahir\_12, Rira\_12, Bullzi2019\_12, IzzyPants24\_11, TomBrady12\_12, Snuffles\_13, Publix\_12, Slizam\_12
- Track 44 : Jannah\_12
- Track 45 : MirimarMandM\_12, Upsilon\_12, PoRanda\_12
- Track 46 : Bradley2\_12, Gillker\_12
- Track 47 : Oaklynn\_12
- Track 48 : KayPaulus\_12, MelBee03\_12, Bodhi17\_12, Sippinontea\_12, Wolfpack\_12, Douggie\_12, Kevanna\_12
- Track 49 : Belthelas\_12, Concrete\_12, BoomRoasted\_12
- Track 50 : Jahseh\_12
- Track 51 : Mauilvory\_11, Ekko14\_12, HarperAnne\_12, Elspeth\_12
- Track 52 : Hulk\_12
- Track 53 : KillerTomato\_12, Bri160\_12
- Track 54 : Goulash\_12
- Track 55 : ELee24\_12
- Track 56 : Bintii\_12
- Track 57 : DirtPie\_12, Zahlia\_12, Marichuy\_12
- Track 58 : Quaker\_12, Livingwater\_12
- Track 59 : Kaijohn\_12
- Track 60 : Anseraureola\_12
- Track 61 : Trackstar\_12
- Track 62 : JRok\_12, Azizam\_12
- Track 63 : MrGreen\_12
- Track 64 : Noelani\_12
- Track 65 : Yami\_12, Cazares\_12
- Track 66 : Naby\_12
- Track 67 : JooneeDee\_12
- Track 68 : Trireme\_12
- Track 69 : RoscoWindex\_12
- Track 70 : Loca\_12
- Track 71 : Efeko\_13
- Track 72 : Biscayne\_12
- Track 73 : Zeta1847\_14
- Track 74 : Honk\_14
- Track 75 : Caron\_14

- Track 76 : GardenState\_15
- Track 77 : Barnstormer\_14, UtzChips\_14
- Track 78 : IAmGroot\_15
- Track 79 : Cen1621\_14

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

The start number called the most often in the published annotations is 10, it was called in 135 of the 202 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alucard\_12, Anseraureola\_12, Aries55\_12, Astro16\_12, Avvas\_12, Azizam\_12, Aztec\_12, Baine\_12, BarBear\_12, Belthelas\_12, BinkBonk\_12, Bintii\_12, Biscayne\_12, Bodhi17\_12, BonaeVitae\_12, BoomRoasted\_12, Bradley2\_12, Bri160\_12, BrokMonster\_12, Bullzi2019\_12, Burgy\_12, BurtonThePup\_12, Cayde6\_12, Charbie\_12, Chatham\_12, Cheesecake\_12, Ciel\_12, Clownery\_12, Concrete\_12, DaftyDuck\_12, Danimal\_12, Danno\_12, DirtPie\_12, Dongwon\_12, Dooby\_12, Duggie\_12, ELee24\_12, EdElric\_12, Efeke\_13, Eightball\_12, Ekko14\_12, Elspeth\_12, Erin\_12, Gabbspett\_12, Gardevoir\_12, Gillker\_12, Godfather\_12, GoldenBlanche\_12, Goobery\_12, Goulash\_12, Grayscar\_12, HarperAnne\_12, HeadMave\_12, Hernandez44\_12, Horacetta\_12, Hulk\_12, IzzyPants24\_11, JRok\_12, Jahseh\_12, JaimeB\_12, Jannah\_12, Jella\_12, Jerky\_12, JoBros\_12, JooneeDee\_12, Josuke\_12, Kaijohn\_12, KayPaulus\_12, Kevanna\_12, KillerTomato\_12, Kojax4\_12, KyriosFaba\_12, LaviMo\_12, Leafy\_12, LemonPepper\_12, LionelHutz\_12, Livingwater\_12, Loca\_12, Lola20\_12, Lunatic\_12, Luxx\_12, Madebyisha\_12, Majesty\_12, ManAs\_12, Maneater\_12, Marichuy\_12, MasterPitts\_12, Mauilvory\_11, McShie\_12, MelBee03\_12, Miaurora\_12, Minima\_12, MirimarMandM\_12, MrGreen\_12, Myram\_12, Naby\_12, Namsahir\_12, NeumannU\_12, Niffler\_12, Nobel\_12, Noelani\_12, Octopus\_12, OdetoJoy\_14, Otwor\_12, Owens\_12, PaoPu\_12, Picconator\_12, Picnic\_12, PoRanda\_12, Pondwater\_12, Publix\_12, Puddles3\_12, PuffyCat\_12, Quaker\_12, Rhogar\_12, Rhysand\_12, Rira\_12, RoscoWindex\_12, Sachet\_12, Sage7\_12, SantasSleigh\_12, Sara\_12, Scamander\_12, Scrunchy\_12, SeaWolves\_12, Sippinontea\_12, Slentz\_12, Slizam\_12, Snuffles\_13, Stem\_12, TeddyBoy\_12, TimoTea\_12, TinyTruffula\_12, TomBrady12\_12, Trackstar\_12, Trireme\_12, Tyrellus\_12, Upsilon\_12, Vanisius\_12, VitulaEligans\_12, Witch\_12, Wolfpack\_12, Yasuo\_12, YertPhresh\_12, Yubaba\_12, Zahlia\_12,

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

- Cazares\_12, Oaklynn\_12, Yami\_12,

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

- Aledel\_14, AustinPowers\_14, Barnstormer\_14, Beethoven\_18, Bodacious\_14, BrotherBLo\_18, Caron\_14, Carpal\_18, Cen1621\_14, ChewChew\_14, Cholula\_18, Chridison\_14, Christian\_14, CristinaYang\_14, Daiboju\_14, Dino\_18, DrRobert\_14, Eunoia\_14, Fluke\_18, GardenState\_15, Glenn\_18, Herb\_14, Honk\_14, HunterDalle\_14, IAmGroot\_15, Immaculata\_18, Jumboset\_18, Kalizoi\_18, KingBob\_14, Korra\_19, Lasagna\_14, Lennox\_14, LilStuart\_14, Lucy\_14, Makoto\_14, Maria1952\_14, MeganNoll\_18, Megan\_30, MrGloopy\_18, Nancia\_14, OMalley\_14, OurGirlNessie\_14, PinkFriday\_14, PitaDog\_14, Potatoes\_18, Pterodactyl\_14,

Pumancara\_14, RAP15\_18, Riovina\_14, Riverdale\_18, Rozby\_18, Savage2526\_18, Scuttle\_18, Sergei\_14, Supakev\_14, TattModd\_18, Temper16\_14, UtzChips\_14, Vallejo\_18, Vulture\_14, Wawa\_18, WonderBoy\_14, Zeta1847\_14, Zorro\_18,

### Summary by start number:

#### Start 4:

- Found in 1 of 213 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zeta1847\_14 (EH),

#### Start 5:

- Found in 55 of 213 ( 25.8% ) of genes in pham
- Manual Annotations of this start: 55 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aledel\_14 (AK), AustinPowers\_14 (AK), Beethoven\_18 (AK), Bodacious\_14 (AK), BrotherBLo\_18 (AK), Carpal\_18 (AK), ChewChew\_14 (AK), Cholula\_18 (AK), Chridison\_14 (AK), Christian\_14 (AK), CristinaYang\_14 (AK), Daiboju\_14 (AK), Dino\_18 (AK), DrRobert\_14 (AK), Eunoia\_14 (AK), Fluke\_18 (AK), Glenn\_18 (AK), Herb\_14 (AK), HunterDalle\_14 (AK), Immaculata\_18 (AK), Jumboset\_18 (AK), Kalizoi\_18 (AK), KingBob\_14 (AK), Korra\_19 (AK), Lasagna\_14 (AK), Lennox\_14 (AK), LilStuart\_14 (AK), Lucy\_14 (AK), Makoto\_14 (AK), Maria1952\_14 (AK), MeganNoll\_18 (AK), MrGloopy\_18 (AK), Nancia\_14 (AK), OMalley\_14 (AK), OurGirlNessie\_14 (AK), PinkFriday\_14 (AK), PitaDog\_14 (AK), Potatoes\_18 (AK), Pterodactyl\_14 (AK), Pumancara\_14 (AK), RAP15\_18 (AK), Riovina\_14 (AK), Riverdale\_18 (AK), Rozby\_18 (AK), Savage2526\_18 (AK), Scuttle\_18 (AK), Sergei\_14 (AK), Supakev\_14 (AK), TattModd\_18 (AK), Temper16\_14 (AK), Vallejo\_18 (AK), Vulture\_14 (AK), Wawa\_18 (AK), WonderBoy\_14 (AK), Zorro\_18 (AK),

#### Start 6:

- Found in 8 of 213 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 8 of 202
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnstormer\_14 (EH), Caron\_14 (EH), Cen1621\_14 (EH), GardenState\_15 (EH), Honk\_14 (EH), IAmGroot\_15 (EH), Megan\_30 (EC), UtzChips\_14 (EH),

#### Start 10:

- Found in 149 of 213 ( 70.0% ) of genes in pham
- Manual Annotations of this start: 135 of 202
- Called 98.0% of time when present
- Phage (with cluster) where this start called: Alucard\_12 (EE), Anseraureola\_12 (EE), Aries55\_12 (EE), Astro16\_12 (EE), Avvas\_12 (EE), Azizam\_12 (EE), Aztec\_12 (EE), Baine\_12 (EE), BarBear\_12 (EE), Belthelas\_12 (EE), BinkBonk\_12 (EE), Binti\_12 (EE), Biscayne\_12 (EE), Bodhi17\_12 (EE), BonaeVitae\_12 (EE), BoomRoasted\_12 (EE), Bradley2\_12 (EE), Bri160\_12 (EE), BrokMonster\_12 (EE), Bullzi2019\_12 (EE), Burgy\_12 (EE), BurtonThePup\_12 (EE), Cayde6\_12 (EE), Charbie\_12 (EE), Chatham\_12 (EE), Cheesecake\_12 (EE), Ciel\_12 (EE), Clownery\_12 (EE), Concrete\_12 (EE), DaftyDuck\_12 (EE), Danimal\_12 (EE), Danno\_12 (EE), DirtPie\_12 (EE), Dongwon\_12 (EE), Dooby\_12 (EE), Douggie\_12 (EE), ELee24\_12 (EE), EdElric\_12 (EE), Efeko\_13 (EE), Eightball\_12 (EE), Ekko14\_12 (EE), Elspeth\_12

(EE), Erin\_12 (EE), Gabbspett\_12 (EE), Gardevoir\_12 (EE), Gillker\_12 (EE), Godfather\_12 (EE), GoldenBlanche\_12 (EE), Goobery\_12 (EE), Goulash\_12 (EE), Grayscar\_12 (EE), HarperAnne\_12 (EE), HeadMave\_12 (EE), Hernandez44\_12 (EE), Horacetta\_12 (EE), Hulk\_12 (EE), IzzyPants24\_11 (EE), JRok\_12 (EE), Jahseh\_12 (EE), JaimeB\_12 (EE), Jannah\_12 (EE), Jella\_12 (EE), Jerky\_12 (EE), JoBros\_12 (EE), JooneeDee\_12 (EE), Josuke\_12 (EE), Kaijohn\_12 (EE), KayPaulus\_12 (EE), Kevanna\_12 (EE), KillerTomato\_12 (EE), Kojax4\_12 (EE), KyriosFaba\_12 (EE), LaviMo\_12 (EE), Leafy\_12 (EE), LemonPepper\_12 (EE), LionelHutz\_12 (EE), Livingwater\_12 (EE), Loca\_12 (EE), Lola20\_12 (EE), Lunatic\_12 (EE), Luxx\_12 (EE), Madebyisha\_12 (EE), Majesty\_12 (EE), ManAs\_12 (EE), Maneater\_12 (EE), Marichuy\_12 (EE), MasterPitts\_12 (EE), Mauilvory\_11 (EE), McShie\_12 (EE), MelBee03\_12 (EE), Miaurora\_12 (EE), Minima\_12 (EE), MirimarMandM\_12 (EE), MrGreen\_12 (EE), Myram\_12 (EE), Naby\_12 (EE), Namsahir\_12 (EE), NeumannU\_12 (EE), Niffler\_12 (EE), Nobel\_12 (EE), Noelani\_12 (EE), Octopus\_12 (EE), OdetoJoy\_14 (EE), Otwor\_12 (EE), Owens\_12 (EE), PaoPu\_12 (EE), Picconator\_12 (EE), Picnic\_12 (EE), PoRanda\_12 (EE), Pondwater\_12 (EE), Publix\_12 (EE), Puddles3\_12 (EE), PuffyCat\_12 (EE), Quaker\_12 (EE), Rhogar\_12 (EE), Rhysand\_12 (EE), Rira\_12 (EE), RoscoWindex\_12 (EE), Sachet\_12 (EE), Sage7\_12 (EE), SantasSleigh\_12 (EE), Sara\_12 (EE), Scamander\_12 (EE), Scrunchy\_12 (EE), SeaWolves\_12 (EE), Sippinontea\_12 (EE), Slentz\_12 (EE), Slizam\_12 (EE), Snuffles\_13 (EE), Stem\_12 (EE), TeddyBoy\_12 (EE), TimoTea\_12 (EE), TinyTruffula\_12 (EE), TomBrady12\_12 (EE), Trackstar\_12 (EE), Trireme\_12 (EE), Tyrellus\_12 (EE), Upsilon\_12 (EE), Vanisius\_12 (EE), VitulaEligans\_12 (EE), Witch\_12 (EE), Wolfpack\_12 (EE), Yasuo\_12 (EE), YertPhresh\_12 (EE), Yubaba\_12 (EE), Zahlia\_12 (EE),

Start 12:

- Found in 148 of 213 ( 69.5% ) of genes in pham
- Manual Annotations of this start: 3 of 202
- Called 2.0% of time when present
- Phage (with cluster) where this start called: Cazares\_12 (EE), Oaklynn\_12 (EE), Yami\_12 (EE),

### Summary by clusters:

There are 4 clusters represented in this pham: EE, AK, EH, EC,

Info for manual annotations of cluster AK:

- Start number 5 was manually annotated 55 times for cluster AK.

Info for manual annotations of cluster EC:

- Start number 6 was manually annotated 1 time for cluster EC.

Info for manual annotations of cluster EE:

- Start number 10 was manually annotated 135 times for cluster EE.
- Start number 12 was manually annotated 3 times for cluster EE.

Info for manual annotations of cluster EH:

- Start number 4 was manually annotated 1 time for cluster EH.
- Start number 6 was manually annotated 7 times for cluster EH.

### **Gene Information:**

Gene: Aledel\_14 Start: 9738, Stop: 12296, Start Num: 5

Candidate Starts for Aledel\_14:

(Start: 5 @9738 has 55 MA's), (7, 9747), (8, 9777), (15, 9867), (26, 9963), (29, 10008), (31, 10026), (40, 10194), (44, 10290), (45, 10293), (46, 10308), (54, 10395), (70, 10599), (71, 10602), (79, 10686), (117, 10992), (127, 11052), (131, 11070), (133, 11076), (138, 11109), (140, 11121), (146, 11157), (150, 11184), (155, 11208), (156, 11214), (164, 11271), (169, 11295), (171, 11304), (175, 11319), (181, 11343), (184, 11355), (188, 11376), (189, 11382), (193, 11403), (196, 11427), (197, 11436), (200, 11454), (205, 11475), (207, 11481), (209, 11493), (214, 11526), (215, 11529), (217, 11541), (219, 11556), (220, 11559), (228, 11646), (238, 11736), (239, 11739), (243, 11790), (251, 11847), (253, 11856), (254, 11868), (259, 11922), (260, 11925), (267, 11979), (270, 12018), (274, 12066), (275, 12075), (276, 12099), (278, 12111), (285, 12207), (286, 12237),

Gene: Alucard\_12 Start: 7541, Stop: 9646, Start Num: 10

Candidate Starts for Alucard\_12:

(Start: 10 @7541 has 135 MA's), (Start: 12 @7562 has 3 MA's), (28, 7739), (30, 7748), (33, 7772), (34, 7844), (36, 7868), (37, 7874), (43, 8024), (46, 8045), (47, 8057), (49, 8066), (60, 8273), (62, 8291), (81, 8378), (92, 8447), (98, 8459), (105, 8507), (111, 8537), (112, 8552), (116, 8588), (121, 8615), (124, 8636), (130, 8660), (134, 8684), (135, 8690), (141, 8717), (146, 8750), (153, 8789), (158, 8816), (162, 8837), (163, 8852), (175, 8879), (176, 8882), (181, 8903), (184, 8915), (185, 8921), (195, 8969), (199, 9005), (211, 9053), (215, 9080), (218, 9101), (225, 9164), (229, 9188), (235, 9245), (246, 9350), (250, 9371), (252, 9383), (256, 9425), (258, 9446), (261, 9467), (274, 9596),

Gene: Anseraureola\_12 Start: 7563, Stop: 9671, Start Num: 10

Candidate Starts for Anseraureola\_12:

(Start: 10 @7563 has 135 MA's), (Start: 12 @7584 has 3 MA's), (28, 7761), (30, 7770), (33, 7794), (34, 7866), (36, 7890), (37, 7896), (42, 7989), (43, 8046), (46, 8067), (47, 8079), (49, 8088), (60, 8295), (62, 8313), (81, 8400), (92, 8469), (98, 8481), (105, 8529), (111, 8559), (112, 8574), (116, 8610), (121, 8637), (125, 8661), (130, 8682), (134, 8706), (135, 8712), (141, 8739), (146, 8772), (153, 8811), (158, 8838), (162, 8859), (163, 8874), (175, 8901), (176, 8904), (184, 8937), (185, 8943), (195, 8991), (199, 9027), (211, 9075), (215, 9102), (218, 9123), (225, 9186), (229, 9210), (235, 9267), (246, 9372), (250, 9393), (252, 9405), (256, 9447), (261, 9489), (274, 9621),

Gene: Aries55\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Aries55\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: Astro16\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for Astro16\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: AustinPowers\_14 Start: 9739, Stop: 12297, Start Num: 5

Candidate Starts for AustinPowers\_14:

(Start: 5 @9739 has 55 MA's), (7, 9748), (8, 9778), (15, 9868), (26, 9964), (29, 10009), (31, 10027), (40, 10195), (44, 10291), (45, 10294), (46, 10309), (54, 10396), (56, 10462), (70, 10600), (71, 10603), (79, 10687), (117, 10993), (127, 11053), (131, 11071), (133, 11077), (138, 11110), (140, 11122), (146, 11158), (150, 11185), (155, 11209), (156, 11215), (164, 11272), (169, 11296), (171, 11305), (175, 11320), (181, 11344), (184, 11356), (188, 11377), (189, 11383), (193, 11404), (197, 11437), (200, 11455), (205, 11476), (207, 11482), (209, 11494), (214, 11527), (215, 11530), (217, 11542), (219, 11557), (220, 11560), (228, 11647), (238, 11737), (239, 11740), (243, 11791), (247, 11824), (251, 11848), (253, 11857), (259, 11923), (260, 11926), (267, 11980), (270, 12019), (274, 12067), (275, 12076), (276, 12100), (278, 12112), (285, 12208), (286, 12238),

Gene: Avvas\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Avvas\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: Azizam\_12 Start: 7534, Stop: 9639, Start Num: 10

Candidate Starts for Azizam\_12:

(Start: 10 @7534 has 135 MA's), (Start: 12 @7555 has 3 MA's), (28, 7732), (30, 7741), (33, 7765), (34, 7837), (36, 7861), (37, 7867), (43, 8017), (46, 8038), (47, 8050), (49, 8059), (60, 8266), (62, 8284), (81, 8371), (92, 8440), (98, 8452), (105, 8500), (111, 8530), (112, 8545), (121, 8608), (124, 8629), (125, 8632), (135, 8683), (141, 8710), (146, 8743), (153, 8782), (158, 8809), (162, 8830), (163, 8845), (175, 8872), (181, 8896), (184, 8908), (185, 8914), (195, 8962), (211, 9046), (215, 9073), (218, 9094), (225, 9157), (229, 9181), (231, 9205), (233, 9226), (246, 9343), (250, 9364), (252, 9376), (256, 9418), (258, 9439), (261, 9460), (274, 9589),

Gene: Aztec\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Aztec\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Baine\_12 Start: 7538, Stop: 9646, Start Num: 10

Candidate Starts for Baine\_12:

(Start: 10 @7538 has 135 MA's), (Start: 12 @7559 has 3 MA's), (28, 7736), (30, 7745), (33, 7769), (34, 7841), (36, 7865), (37, 7871), (42, 7964), (43, 8021), (46, 8042), (47, 8054), (49, 8063), (60, 8270), (62, 8288), (81, 8375), (92, 8444), (98, 8456), (105, 8504), (111, 8534), (112, 8549), (116, 8585), (121, 8612), (130, 8657), (134, 8681), (135, 8687), (141, 8714), (146, 8747), (153, 8786), (158, 8813), (162, 8834), (163, 8849), (175, 8876), (176, 8879), (184, 8912), (185, 8918), (195, 8966), (199, 9002), (211, 9050), (215, 9077), (218, 9098), (225, 9161), (229, 9185), (235, 9242), (246, 9347), (250, 9368), (252, 9380), (256, 9422), (261, 9464), (274, 9596),

Gene: BarBear\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for BarBear\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Barnstormer\_14 Start: 9927, Stop: 12275, Start Num: 6

Candidate Starts for Barnstormer\_14:

(Start: 6 @9927 has 8 MA's), (21, 10110), (33, 10206), (38, 10314), (41, 10374), (55, 10569), (57, 10632), (61, 10716), (62, 10728), (63, 10731), (74, 10782), (75, 10833), (85, 10920), (91, 10980), (94, 11004), (103, 11085), (110, 11145), (113, 11166), (121, 11226), (124, 11247), (127, 11256), (137, 11307), (151, 11394), (153, 11403), (177, 11499), (178, 11505), (185, 11538), (202, 11634), (211, 11673), (229, 11811), (236, 11874), (249, 11985), (261, 12090), (266, 12126),

Gene: Beethoven\_18 Start: 12567, Stop: 15128, Start Num: 5

Candidate Starts for Beethoven\_18:

(3, 12546), (Start: 5 @12567 has 55 MA's), (9, 12615), (13, 12648), (15, 12696), (17, 12720), (18, 12732), (26, 12792), (30, 12840), (31, 12855), (32, 12861), (39, 12981), (40, 13023), (44, 13119), (45, 13122), (48, 13152), (52, 13206), (59, 13347), (60, 13368), (63, 13392), (67, 13413), (68, 13422), (76, 13473), (77, 13491), (98, 13677), (117, 13821), (123, 13854), (127, 13881), (131, 13899), (133, 13905), (136, 13929), (138, 13938), (146, 13986), (150, 14013), (156, 14043), (157, 14049), (164, 14100), (168, 14115), (170, 14127), (171, 14133), (172, 14136), (174, 14145), (181, 14172), (184, 14184), (186, 14193), (188, 14205), (189, 14211), (193, 14232), (196, 14256), (197, 14265), (204, 14301), (205, 14304), (209, 14322), (214, 14355), (215, 14358), (216, 14367), (217, 14370), (219, 14385), (228, 14475), (243, 14619), (248, 14655), (259, 14751), (260, 14754), (267, 14808), (270, 14847), (274, 14895), (275, 14904), (276, 14928), (279, 14946), (282, 14997), (284, 15021), (285, 15039), (286, 15069),

Gene: Belthelas\_12 Start: 7590, Stop: 9695, Start Num: 10

Candidate Starts for Belthelas\_12:

(Start: 10 @7590 has 135 MA's), (Start: 12 @7611 has 3 MA's), (28, 7788), (30, 7797), (33, 7821), (34, 7893), (36, 7917), (37, 7923), (42, 8016), (43, 8073), (46, 8094), (47, 8106), (49, 8115), (60, 8322), (62, 8340), (81, 8427), (92, 8496), (98, 8508), (105, 8556), (111, 8586), (112, 8601), (116, 8637), (121, 8664), (125, 8688), (130, 8709), (134, 8733), (135, 8739), (141, 8766), (146, 8799), (153, 8838), (158, 8865), (162, 8886), (163, 8901), (175, 8928), (176, 8931), (181, 8952), (184, 8964), (185, 8970), (195, 9018), (199, 9054), (211, 9102), (215, 9129), (218, 9150), (225, 9213), (229, 9237), (235, 9294), (246, 9399), (250, 9420), (252, 9432), (256, 9474), (258, 9495), (261, 9516), (274, 9645),

Gene: BinkBonk\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for BinkBonk\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Bintii\_12 Start: 7572, Stop: 9677, Start Num: 10

Candidate Starts for Bintii\_12:

(1, 7476), (Start: 10 @7572 has 135 MA's), (Start: 12 @7593 has 3 MA's), (28, 7770), (30, 7779), (33, 7803), (34, 7875), (36, 7899), (42, 7998), (46, 8076), (47, 8088), (49, 8097), (60, 8304), (62, 8322), (81, 8409), (92, 8478), (98, 8490), (105, 8538), (111, 8568), (112, 8583), (119, 8637), (124, 8667), (125, 8670), (130, 8691), (135, 8721), (141, 8748), (146, 8781), (153, 8820), (158, 8847), (159, 8853), (162, 8868), (163, 8883), (175, 8910), (176, 8913), (181, 8934), (184, 8946), (185, 8952), (195, 9000), (199, 9036), (211, 9084), (215, 9111), (218, 9132), (225, 9195), (229, 9219), (235, 9276), (246, 9381), (250, 9402), (252, 9414), (256, 9456), (258, 9477), (261, 9498),

Gene: Biscayne\_12 Start: 7608, Stop: 9713, Start Num: 10

Candidate Starts for Biscayne\_12:

(Start: 10 @7608 has 135 MA's), (Start: 12 @7629 has 3 MA's), (28, 7806), (30, 7815), (33, 7839), (34, 7911), (36, 7935), (37, 7941), (43, 8091), (46, 8112), (47, 8124), (49, 8133), (60, 8340), (62, 8358), (81, 8445), (92, 8514), (98, 8526), (105, 8574), (111, 8604), (112, 8619), (116, 8655), (121, 8682), (124, 8703), (130, 8727), (134, 8751), (135, 8757), (141, 8784), (146, 8817), (153, 8856), (158, 8883), (162, 8904), (163, 8919), (175, 8946), (176, 8949), (181, 8970), (184, 8982), (185, 8988), (195, 9036), (211, 9120), (215, 9147), (218, 9168), (225, 9231), (229, 9255), (235, 9312), (246, 9417), (250, 9438), (252, 9450), (256, 9492), (258, 9513), (261, 9534), (274, 9663),

Gene: Bodacious\_14 Start: 9717, Stop: 12278, Start Num: 5

Candidate Starts for Bodacious\_14:

(3, 9696), (Start: 5 @9717 has 55 MA's), (9, 9765), (15, 9846), (17, 9870), (26, 9942), (30, 9990), (31, 10005), (32, 10011), (39, 10131), (40, 10173), (44, 10269), (45, 10272), (48, 10302), (56, 10440), (60, 10518), (67, 10563), (68, 10572), (76, 10623), (77, 10641), (78, 10653), (83, 10677), (107, 10893), (118, 10983), (123, 11004), (127, 11031), (131, 11049), (133, 11055), (136, 11079), (138, 11088), (146, 11136), (150, 11163), (156, 11193), (164, 11250), (168, 11265), (170, 11277), (171, 11283), (172, 11286), (174, 11295), (181, 11322), (184, 11334), (186, 11343), (188, 11355), (189, 11361), (194, 11385), (196, 11406), (197, 11415), (199, 11430), (205, 11454), (214, 11505), (215, 11508), (217, 11520), (224, 11595), (228, 11625), (232, 11661), (243, 11769), (244, 11781), (248, 11805), (259, 11901), (260, 11904), (265, 11937), (267, 11958), (270, 11997), (273, 12015), (274, 12045), (275, 12054), (276, 12078), (283, 12153), (286, 12219),

Gene: Bodhi17\_12 Start: 7533, Stop: 9638, Start Num: 10

Candidate Starts for Bodhi17\_12:

(Start: 10 @7533 has 135 MA's), (Start: 12 @7554 has 3 MA's), (28, 7731), (30, 7740), (33, 7764), (34, 7836), (36, 7860), (37, 7866), (42, 7959), (43, 8016), (46, 8037), (47, 8049), (49, 8058), (60, 8265), (62, 8283), (81, 8370), (92, 8439), (98, 8451), (105, 8499), (111, 8529), (112, 8544), (116, 8580), (121, 8607), (125, 8631), (130, 8652), (134, 8676), (135, 8682), (141, 8709), (146, 8742), (153, 8781), (158, 8808), (162, 8829), (163, 8844), (175, 8871), (176, 8874), (184, 8907), (185, 8913), (195, 8961), (199, 8997), (211, 9045), (215, 9072), (218, 9093), (225, 9156), (229, 9180), (235, 9237), (246, 9342), (250, 9363), (252, 9375), (256, 9417), (258, 9438), (261, 9459), (274, 9588),

Gene: BonaeVitae\_12 Start: 7240, Stop: 9339, Start Num: 10

Candidate Starts for BonaeVitae\_12:

(Start: 10 @7240 has 135 MA's), (11, 7255), (Start: 12 @7261 has 3 MA's), (16, 7321), (22, 7375), (28, 7438), (30, 7447), (33, 7471), (34, 7543), (36, 7567), (42, 7666), (43, 7723), (47, 7756), (49, 7765), (71, 8032), (81, 8077), (97, 8149), (100, 8179), (111, 8236), (112, 8251), (122, 8320), (132, 8365), (134, 8383), (135, 8389), (146, 8449), (147, 8455), (149, 8470), (153, 8488), (158, 8515), (170, 8557), (181, 8602), (185, 8620), (191, 8647), (208, 8734), (211, 8752), (215, 8779), (222, 8821), (225, 8863), (226, 8866), (229, 8887), (242, 8998), (250, 9070), (252, 9082), (255, 9112), (256, 9124), (258, 9145), (272, 9253), (274, 9289),

Gene: BoomRoasted\_12 Start: 7587, Stop: 9692, Start Num: 10

Candidate Starts for BoomRoasted\_12:

(Start: 10 @7587 has 135 MA's), (Start: 12 @7608 has 3 MA's), (28, 7785), (30, 7794), (33, 7818), (34, 7890), (36, 7914), (37, 7920), (42, 8013), (43, 8070), (46, 8091), (47, 8103), (49, 8112), (60, 8319), (62, 8337), (81, 8424), (92, 8493), (98, 8505), (105, 8553), (111, 8583), (112, 8598), (116, 8634), (121, 8661), (125, 8685), (130, 8706), (134, 8730), (135, 8736), (141, 8763), (146, 8796), (153, 8835), (158, 8862), (162, 8883), (163, 8898), (175, 8925), (176, 8928), (181, 8949), (184, 8961), (185, 8967), (195, 9015), (199, 9051), (211, 9099), (215, 9126), (218, 9147), (225, 9210), (229, 9234), (235, 9291), (246, 9396), (250, 9417), (252, 9429), (256, 9471), (258, 9492), (261, 9513), (274, 9642),

Gene: Bradley2\_12 Start: 7539, Stop: 9644, Start Num: 10

Candidate Starts for Bradley2\_12:

(Start: 10 @7539 has 135 MA's), (Start: 12 @7560 has 3 MA's), (28, 7737), (30, 7746), (33, 7770), (34, 7842), (36, 7866), (37, 7872), (43, 8022), (46, 8043), (47, 8055), (49, 8064), (60, 8271), (62, 8289), (81, 8376), (92, 8445), (98, 8457), (105, 8505), (111, 8535), (112, 8550), (116, 8586), (121, 8613), (124, 8634), (130, 8658), (134, 8682), (135, 8688), (141, 8715), (146, 8748), (153, 8787), (158, 8814), (162, 8835), (163, 8850), (175, 8877), (176, 8880), (181, 8901), (184, 8913), (185, 8919), (195, 8967), (199, 9003), (211, 9051), (215, 9078), (218, 9099), (225, 9162), (229, 9186), (235, 9243), (246, 9348), (250, 9369), (252, 9381), (256, 9423), (258, 9444), (261, 9465), (274, 9594),

Gene: Bri160\_12 Start: 7586, Stop: 9691, Start Num: 10

Candidate Starts for Bri160\_12:

(Start: 10 @7586 has 135 MA's), (Start: 12 @7607 has 3 MA's), (28, 7784), (30, 7793), (33, 7817), (34, 7889), (36, 7913), (37, 7919), (42, 8012), (43, 8069), (46, 8090), (47, 8102), (49, 8111), (60, 8318), (62, 8336), (81, 8423), (92, 8492), (98, 8504), (105, 8552), (111, 8582), (112, 8597), (116, 8633), (121, 8660), (125, 8684), (130, 8705), (134, 8729), (135, 8735), (141, 8762), (146, 8795), (153, 8834), (158, 8861), (162, 8882), (163, 8897), (175, 8924), (176, 8927), (181, 8948), (184, 8960), (185, 8966), (195, 9014), (199, 9050), (211, 9098), (215, 9125), (218, 9146), (225, 9209), (229, 9233), (235, 9290), (246, 9395), (250, 9416), (252, 9428), (256, 9470), (258, 9491), (261, 9512), (274, 9641),

Gene: BrokMonster\_12 Start: 7529, Stop: 9634, Start Num: 10

Candidate Starts for BrokMonster\_12:

(Start: 10 @7529 has 135 MA's), (Start: 12 @7550 has 3 MA's), (28, 7727), (30, 7736), (33, 7760), (34, 7832), (36, 7856), (37, 7862), (42, 7955), (43, 8012), (46, 8033), (47, 8045), (49, 8054), (60, 8261), (62, 8279), (81, 8366), (92, 8435), (98, 8447), (105, 8495), (111, 8525), (112, 8540), (121, 8603), (124, 8624), (125, 8627), (135, 8678), (141, 8705), (146, 8738), (153, 8777), (158, 8804), (162, 8825), (163, 8840), (175, 8867), (181, 8891), (184, 8903), (185, 8909), (195, 8957), (211, 9041), (215, 9068), (218, 9089), (225, 9152), (229, 9176), (235, 9233), (246, 9338), (250, 9359), (252, 9371), (256, 9413), (258, 9434), (261, 9455), (274, 9584),

Gene: BrotherBLo\_18 Start: 12573, Stop: 15134, Start Num: 5

Candidate Starts for BrotherBLo\_18:

(3, 12552), (Start: 5 @12573 has 55 MA's), (9, 12621), (13, 12654), (15, 12702), (17, 12726), (18, 12738), (26, 12798), (30, 12846), (31, 12861), (32, 12867), (39, 12987), (40, 13029), (44, 13125), (45, 13128), (48, 13158), (52, 13212), (59, 13353), (60, 13374), (63, 13398), (67, 13419), (68, 13428), (76, 13479), (77, 13497), (98, 13683), (117, 13827), (123, 13860), (127, 13887), (131, 13905), (133, 13911), (136, 13935), (138, 13944), (146, 13992), (150, 14019), (151, 14022), (155, 14043), (156, 14049), (157, 14055), (164, 14106), (168, 14121), (170, 14133), (171, 14139), (172, 14142), (174, 14151), (181, 14178), (184, 14190), (186, 14199), (188, 14211), (189, 14217), (193, 14238), (196, 14262), (197, 14271), (205, 14310), (209, 14328), (214, 14361), (215, 14364), (216, 14373), (217, 14376), (219, 14391), (228, 14481), (232, 14517), (243, 14625), (248, 14661), (251, 14682), (259, 14757), (260, 14760), (267, 14814), (270, 14853), (274, 14901), (275, 14910), (276, 14934), (279, 14952), (282, 15003), (284, 15027), (285, 15045), (286, 15075),

Gene: Bullzi2019\_12 Start: 7561, Stop: 9666, Start Num: 10

Candidate Starts for Bullzi2019\_12:

(Start: 10 @7561 has 135 MA's), (Start: 12 @7582 has 3 MA's), (28, 7759), (30, 7768), (33, 7792), (34, 7864), (36, 7888), (42, 7987), (46, 8065), (47, 8077), (49, 8086), (60, 8293), (62, 8311), (81, 8398), (92, 8467), (98, 8479), (105, 8527), (111, 8557), (112, 8572), (119, 8626), (124, 8656), (125, 8659), (130, 8680), (135, 8710), (141, 8737), (146, 8770), (153, 8809), (158, 8836), (159, 8842), (162, 8857), (163, 8872), (175, 8899), (176, 8902), (181, 8923), (184, 8935), (185, 8941), (195, 8989), (199, 9025), (211, 9073), (215, 9100), (218, 9121), (225, 9184), (229, 9208), (235, 9265), (246, 9370), (250, 9391), (256, 9445), (258, 9466), (261, 9487),

Gene: Burgy\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Burgy\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: BurtonThePup\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for BurtonThePup\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Caron\_14 Start: 9969, Stop: 12317, Start Num: 6

Candidate Starts for Caron\_14:

(Start: 6 @9969 has 8 MA's), (21, 10152), (33, 10248), (38, 10356), (41, 10416), (55, 10611), (57, 10674), (61, 10758), (62, 10770), (63, 10773), (74, 10824), (75, 10875), (84, 10956), (91, 11022), (94, 11046), (103, 11127), (110, 11187), (113, 11208), (127, 11298), (137, 11349), (153, 11445), (177, 11541), (178, 11547), (180, 11559), (185, 11580), (203, 11682), (211, 11715), (218, 11763), (229, 11853), (236, 11916), (237, 11928), (249, 12027), (261, 12132), (266, 12168),

Gene: Carpal\_18 Start: 12574, Stop: 15135, Start Num: 5

Candidate Starts for Carpal\_18:

(3, 12553), (Start: 5 @12574 has 55 MA's), (9, 12622), (13, 12655), (15, 12703), (17, 12727), (18, 12739), (26, 12799), (30, 12847), (31, 12862), (32, 12868), (39, 12988), (40, 13030), (44, 13126), (45, 13129), (48, 13159), (52, 13213), (59, 13354), (60, 13375), (63, 13399), (67, 13420), (68, 13429), (76, 13480), (77, 13498), (98, 13684), (117, 13828), (123, 13861), (127, 13888), (131, 13906), (133, 13912), (136, 13936), (138, 13945), (146, 13993), (150, 14020), (151, 14023), (155, 14044), (157, 14056), (164, 14107), (168, 14122), (170, 14134), (172, 14143), (174, 14152), (181, 14179), (184, 14191), (186, 14200), (188, 14212), (189, 14218), (193, 14239), (196, 14263), (197, 14272), (205, 14311), (214, 14362), (215, 14365), (216, 14374), (217, 14377), (219, 14392), (228, 14482), (232, 14518), (243, 14626), (248, 14662), (259, 14758), (260, 14761), (267, 14815), (270, 14854), (274, 14902), (275, 14911), (276, 14935), (279, 14953), (282, 15004), (284, 15028), (285, 15046), (286, 15076),

Gene: Cayde6\_12 Start: 7538, Stop: 9646, Start Num: 10

Candidate Starts for Cayde6\_12:

(Start: 10 @7538 has 135 MA's), (Start: 12 @7559 has 3 MA's), (28, 7736), (30, 7745), (33, 7769), (34, 7841), (36, 7865), (37, 7871), (42, 7964), (43, 8021), (46, 8042), (47, 8054), (49, 8063), (60, 8270), (62, 8288), (81, 8375), (92, 8444), (98, 8456), (105, 8504), (111, 8534), (112, 8549), (116, 8585), (121, 8612), (130, 8657), (134, 8681), (135, 8687), (141, 8714), (146, 8747), (153, 8786), (158, 8813), (162, 8834), (163, 8849), (175, 8876), (176, 8879), (184, 8912), (185, 8918), (195, 8966), (199, 9002), (211, 9050), (215, 9077), (218, 9098), (225, 9161), (229, 9185), (235, 9242), (246, 9347), (250, 9368), (252, 9380), (256, 9422), (261, 9464), (274, 9596),

Gene: Cazares\_12 Start: 7552, Stop: 9636, Start Num: 12

Candidate Starts for Cazares\_12:

(Start: 10 @7531 has 135 MA's), (Start: 12 @7552 has 3 MA's), (28, 7729), (30, 7738), (33, 7762), (34, 7834), (36, 7858), (42, 7957), (43, 8014), (46, 8035), (47, 8047), (49, 8056), (60, 8263), (62, 8281), (81, 8368), (92, 8437), (98, 8449), (105, 8497), (111, 8527), (112, 8542), (124, 8626), (125, 8629), (130, 8650), (135, 8680), (141, 8707), (146, 8740), (153, 8779), (158, 8806), (159, 8812), (162, 8827), (163, 8842), (176, 8872), (181, 8893), (184, 8905), (185, 8911), (195, 8959), (199, 8995), (211, 9043), (215, 9070), (218, 9091), (225, 9154), (229, 9178), (235, 9235), (246, 9340), (250, 9361), (256, 9415), (258, 9436), (261, 9457),

Gene: Cen1621\_14 Start: 9057, Stop: 11342, Start Num: 6

Candidate Starts for Cen1621\_14:

(Start: 6 @9057 has 8 MA's), (18, 9216), (27, 9294), (33, 9336), (38, 9444), (40, 9495), (41, 9504), (43, 9588), (47, 9621), (51, 9645), (55, 9699), (57, 9762), (62, 9858), (63, 9861), (106, 10152), (108, 10173), (119, 10254), (130, 10308), (132, 10314), (139, 10353), (145, 10386), (159, 10470), (166, 10518), (179, 10578), (184, 10596), (191, 10629), (195, 10650), (198, 10677), (206, 10710), (211, 10734), (213, 10743), (225, 10845), (236, 10932), (245, 11028), (254, 11082), (255, 11094), (267, 11187),

Gene: Charbie\_12 Start: 7528, Stop: 9633, Start Num: 10

Candidate Starts for Charbie\_12:

(Start: 10 @7528 has 135 MA's), (Start: 12 @7549 has 3 MA's), (28, 7726), (30, 7735), (33, 7759), (34, 7831), (36, 7855), (37, 7861), (43, 8011), (46, 8032), (47, 8044), (49, 8053), (60, 8260), (62, 8278), (81, 8365), (92, 8434), (98, 8446), (105, 8494), (111, 8524), (112, 8539), (116, 8575), (121, 8602), (124, 8623), (130, 8647), (134, 8671), (135, 8677), (141, 8704), (146, 8737), (153, 8776), (158, 8803), (162, 8824), (163, 8839), (175, 8866), (176, 8869), (181, 8890), (184, 8902), (185, 8908), (195, 8956), (209, 9031), (211, 9040), (215, 9067), (218, 9088), (225, 9151), (229, 9175), (235, 9232), (246, 9337), (250, 9358), (252, 9370), (256, 9412), (258, 9433), (261, 9454),

Gene: Chatham\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Chatham\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Cheesecake\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Cheesecake\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124,

8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: ChewChew\_14 Start: 9716, Stop: 12277, Start Num: 5

Candidate Starts for ChewChew\_14:

(3, 9695), (Start: 5 @9716 has 55 MA's), (9, 9764), (15, 9845), (17, 9869), (26, 9941), (30, 9989), (31, 10004), (32, 10010), (40, 10172), (44, 10268), (45, 10271), (48, 10301), (56, 10439), (60, 10517), (67, 10562), (68, 10571), (76, 10622), (77, 10640), (78, 10652), (83, 10676), (107, 10892), (118, 10982), (123, 11003), (127, 11030), (131, 11048), (133, 11054), (136, 11078), (138, 11087), (146, 11135), (150, 11162), (156, 11192), (164, 11249), (168, 11264), (170, 11276), (171, 11282), (172, 11285), (174, 11294), (181, 11321), (184, 11333), (186, 11342), (188, 11354), (189, 11360), (194, 11384), (196, 11405), (197, 11414), (199, 11429), (204, 11450), (205, 11453), (214, 11504), (215, 11507), (217, 11519), (224, 11594), (228, 11624), (232, 11660), (243, 11768), (244, 11780), (248, 11804), (259, 11900), (260, 11903), (265, 11936), (267, 11957), (270, 11996), (273, 12014), (274, 12044), (275, 12053), (276, 12077), (283, 12152), (286, 12218),

Gene: Cholula\_18 Start: 12619, Stop: 15180, Start Num: 5

Candidate Starts for Cholula\_18:

(3, 12598), (Start: 5 @12619 has 55 MA's), (9, 12667), (13, 12700), (15, 12748), (17, 12772), (18, 12784), (26, 12844), (30, 12892), (31, 12907), (32, 12913), (39, 13033), (40, 13075), (43, 13168), (44, 13171), (45, 13174), (48, 13204), (52, 13258), (59, 13399), (60, 13420), (63, 13444), (67, 13465), (68, 13474), (76, 13525), (77, 13543), (80, 13567), (98, 13729), (117, 13873), (123, 13906), (127, 13933), (131, 13951), (133, 13957), (136, 13981), (138, 13990), (146, 14038), (150, 14065), (155, 14089), (156, 14095), (157, 14101), (164, 14152), (168, 14167), (170, 14179), (171, 14185), (172, 14188), (174, 14197), (181, 14224), (184, 14236), (186, 14245), (188, 14257), (189, 14263), (193, 14284), (197, 14317), (205, 14356), (214, 14407), (215, 14410), (216, 14419), (217, 14422), (219, 14437), (227, 14521), (228, 14527), (232, 14563), (243, 14671), (244, 14683), (248, 14707), (259, 14803), (260, 14806), (267, 14860), (270, 14899), (274, 14947), (275, 14956), (276, 14980), (279, 14998), (282, 15049), (284, 15073), (285, 15091), (286, 15121),

Gene: Chridison\_14 Start: 9739, Stop: 12297, Start Num: 5

Candidate Starts for Chridison\_14:

(Start: 5 @9739 has 55 MA's), (7, 9748), (8, 9778), (15, 9868), (26, 9964), (29, 10009), (31, 10027), (40, 10195), (44, 10291), (45, 10294), (46, 10309), (54, 10396), (70, 10600), (71, 10603), (79, 10687), (117, 10993), (127, 11053), (131, 11071), (133, 11077), (138, 11110), (140, 11122), (146, 11158), (150, 11185), (155, 11209), (156, 11215), (164, 11272), (169, 11296), (171, 11305), (175, 11320), (181, 11344), (184, 11356), (188, 11377), (189, 11383), (193, 11404), (196, 11428), (197, 11437), (200, 11455), (205, 11476), (207, 11482), (209, 11494), (214, 11527), (215, 11530), (217, 11542), (219, 11557), (220, 11560), (228, 11647), (238, 11737), (239, 11740), (243, 11791), (251, 11848), (253, 11857), (254, 11869), (259, 11923), (260, 11926), (267, 11980), (270, 12019), (274, 12067), (275, 12076), (276, 12100), (278, 12112), (285, 12208), (286, 12238),

Gene: Christian\_14 Start: 9717, Stop: 12278, Start Num: 5

Candidate Starts for Christian\_14:

(3, 9696), (Start: 5 @9717 has 55 MA's), (9, 9765), (15, 9846), (17, 9870), (26, 9942), (30, 9990), (31, 10005), (32, 10011), (40, 10173), (44, 10269), (45, 10272), (48, 10302), (56, 10440), (60, 10518), (67, 10563), (68, 10572), (76, 10623), (77, 10641), (78, 10653), (83, 10677), (107, 10893), (118, 10983), (123, 11004), (127, 11031), (131, 11049), (133, 11055), (136, 11079), (138, 11088), (146, 11136), (150, 11163), (156, 11193), (164, 11250), (171, 11283), (174, 11295), (181, 11322), (182, 11328), (184, 11334), (186, 11343), (188, 11355), (189, 11361), (194, 11385), (196, 11406), (197, 11415), (199, 11430), (205, 11454), (214, 11505), (215, 11508), (217, 11520), (224, 11595), (228, 11625),

(232, 11661), (243, 11769), (244, 11781), (248, 11805), (259, 11901), (260, 11904), (265, 11937), (267, 11958), (270, 11997), (273, 12015), (274, 12045), (275, 12054), (276, 12078), (283, 12153), (286, 12219),

Gene: Ciel\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for Ciel\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Clownery\_12 Start: 7648, Stop: 9753, Start Num: 10

Candidate Starts for Clownery\_12:

(Start: 10 @7648 has 135 MA's), (Start: 12 @7669 has 3 MA's), (28, 7846), (30, 7855), (33, 7879), (34, 7951), (36, 7975), (42, 8074), (43, 8131), (46, 8152), (47, 8164), (49, 8173), (60, 8380), (62, 8398), (81, 8485), (92, 8554), (98, 8566), (105, 8614), (111, 8644), (112, 8659), (124, 8743), (125, 8746), (130, 8767), (135, 8797), (141, 8824), (146, 8857), (153, 8896), (158, 8923), (159, 8929), (162, 8944), (163, 8959), (176, 8989), (181, 9010), (184, 9022), (185, 9028), (195, 9076), (199, 9112), (211, 9160), (215, 9187), (218, 9208), (225, 9271), (229, 9295), (235, 9352), (246, 9457), (250, 9478), (256, 9532), (258, 9553), (261, 9574),

Gene: Concrete\_12 Start: 7587, Stop: 9692, Start Num: 10

Candidate Starts for Concrete\_12:

(Start: 10 @7587 has 135 MA's), (Start: 12 @7608 has 3 MA's), (28, 7785), (30, 7794), (33, 7818), (34, 7890), (36, 7914), (37, 7920), (42, 8013), (43, 8070), (46, 8091), (47, 8103), (49, 8112), (60, 8319), (62, 8337), (81, 8424), (92, 8493), (98, 8505), (105, 8553), (111, 8583), (112, 8598), (116, 8634), (121, 8661), (125, 8685), (130, 8706), (134, 8730), (135, 8736), (141, 8763), (146, 8796), (153, 8835), (158, 8862), (162, 8883), (163, 8898), (175, 8925), (176, 8928), (181, 8949), (184, 8961), (185, 8967), (195, 9015), (199, 9051), (211, 9099), (215, 9126), (218, 9147), (225, 9210), (229, 9234), (235, 9291), (246, 9396), (250, 9417), (252, 9429), (256, 9471), (258, 9492), (261, 9513), (274, 9642),

Gene: CristinaYang\_14 Start: 9717, Stop: 12278, Start Num: 5

Candidate Starts for CristinaYang\_14:

(3, 9696), (Start: 5 @9717 has 55 MA's), (9, 9765), (15, 9846), (17, 9870), (26, 9942), (30, 9990), (31, 10005), (32, 10011), (39, 10131), (40, 10173), (44, 10269), (45, 10272), (48, 10302), (56, 10440), (60, 10518), (67, 10563), (68, 10572), (76, 10623), (77, 10641), (78, 10653), (83, 10677), (107, 10893), (118, 10983), (123, 11004), (127, 11031), (131, 11049), (133, 11055), (136, 11079), (138, 11088), (146, 11136), (150, 11163), (156, 11193), (164, 11250), (168, 11265), (170, 11277), (171, 11283), (172, 11286), (174, 11295), (181, 11322), (184, 11334), (186, 11343), (188, 11355), (189, 11361), (194, 11385), (196, 11406), (197, 11415), (199, 11430), (205, 11454), (214, 11505), (215, 11508), (217, 11520), (224, 11595), (228, 11625), (232, 11661), (243, 11769), (244, 11781), (248, 11805), (259, 11901), (260, 11904), (265, 11937), (267, 11958), (270, 11997), (273, 12015), (274, 12045), (275, 12054), (276, 12078), (283, 12153), (286, 12219),

Gene: DaftyDuck\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for DaftyDuck\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162,

8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472), (274, 9601),

Gene: Daiboju\_14 Start: 9744, Stop: 12302, Start Num: 5

Candidate Starts for Daiboju\_14:

(Start: 5 @9744 has 55 MA's), (7, 9753), (8, 9783), (15, 9873), (18, 9909), (30, 10017), (31, 10032), (40, 10200), (44, 10296), (63, 10569), (67, 10590), (74, 10620), (76, 10650), (86, 10737), (99, 10860), (109, 10935), (117, 10998), (123, 11031), (126, 11052), (127, 11058), (131, 11076), (133, 11082), (136, 11106), (144, 11148), (146, 11163), (147, 11169), (152, 11196), (161, 11247), (165, 11280), (167, 11289), (171, 11310), (174, 11322), (181, 11349), (184, 11361), (186, 11370), (188, 11382), (189, 11388), (190, 11391), (194, 11412), (197, 11442), (200, 11460), (205, 11481), (208, 11490), (209, 11499), (214, 11532), (215, 11535), (217, 11547), (219, 11562), (227, 11646), (228, 11652), (232, 11688), (239, 11745), (241, 11754), (243, 11796), (251, 11853), (259, 11928), (260, 11931), (264, 11961), (267, 11985), (273, 12042), (274, 12072), (275, 12081), (276, 12105), (278, 12117), (286, 12243),

Gene: Danimal\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Danimal\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Danno\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Danno\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: Dino\_18 Start: 12572, Stop: 15133, Start Num: 5

Candidate Starts for Dino\_18:

(3, 12551), (Start: 5 @12572 has 55 MA's), (9, 12620), (13, 12653), (15, 12701), (17, 12725), (18, 12737), (26, 12797), (30, 12845), (31, 12860), (32, 12866), (39, 12986), (40, 13028), (44, 13124), (45, 13127), (48, 13157), (52, 13211), (59, 13352), (60, 13373), (63, 13397), (67, 13418), (68, 13427), (76, 13478), (77, 13496), (98, 13682), (117, 13826), (123, 13859), (127, 13886), (131, 13904), (133, 13910), (136, 13934), (138, 13943), (146, 13991), (150, 14018), (151, 14021), (155, 14042), (157, 14054), (164, 14105), (168, 14120), (170, 14132), (172, 14141), (174, 14150), (181, 14177), (184, 14189), (186, 14198), (188, 14210), (189, 14216), (193, 14237), (196, 14261), (197, 14270), (205, 14309), (214, 14360), (215, 14363), (216, 14372), (217, 14375), (219, 14390), (228, 14480), (232, 14516), (243, 14624), (248, 14660), (259, 14756), (260, 14759), (267, 14813), (270, 14852), (274, 14900), (275, 14909), (276, 14933), (279, 14951), (282, 15002), (284, 15026), (285, 15044), (286, 15074),

Gene: DirtPie\_12 Start: 7639, Stop: 9744, Start Num: 10

Candidate Starts for DirtPie\_12:

(Start: 10 @7639 has 135 MA's), (Start: 12 @7660 has 3 MA's), (28, 7837), (30, 7846), (33, 7870), (34, 7942), (36, 7966), (37, 7972), (43, 8122), (46, 8143), (47, 8155), (49, 8164), (60, 8371), (62, 8389), (81, 8476), (92, 8545), (98, 8557), (105, 8605), (111, 8635), (112, 8650), (116, 8686), (121, 8713), (124, 8734), (130, 8758), (134, 8782), (135, 8788), (141, 8815), (146, 8848), (153, 8887), (158, 8914), (162, 8935), (163, 8950), (175, 8977), (176, 8980), (181, 9001), (184, 9013), (185, 9019), (195, 9067), (209, 9142), (211, 9151), (215, 9178), (218, 9199), (225, 9262), (229, 9286), (235, 9343), (246, 9448), (250, 9469), (252, 9481), (256, 9523), (258, 9544), (261, 9565), (274, 9694),

Gene: Dongwon\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Dongwon\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Dooby\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Dooby\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Douggie\_12 Start: 7533, Stop: 9638, Start Num: 10

Candidate Starts for Douggie\_12:

(Start: 10 @7533 has 135 MA's), (Start: 12 @7554 has 3 MA's), (28, 7731), (30, 7740), (33, 7764), (34, 7836), (36, 7860), (37, 7866), (42, 7959), (43, 8016), (46, 8037), (47, 8049), (49, 8058), (60, 8265), (62, 8283), (81, 8370), (92, 8439), (98, 8451), (105, 8499), (111, 8529), (112, 8544), (116, 8580), (121, 8607), (125, 8631), (130, 8652), (134, 8676), (135, 8682), (141, 8709), (146, 8742), (153, 8781), (158, 8808), (162, 8829), (163, 8844), (175, 8871), (176, 8874), (184, 8907), (185, 8913), (195, 8961), (199, 8997), (211, 9045), (215, 9072), (218, 9093), (225, 9156), (229, 9180), (235, 9237), (246, 9342), (250, 9363), (252, 9375), (256, 9417), (258, 9438), (261, 9459), (274, 9588),

Gene: DrRobert\_14 Start: 9717, Stop: 12278, Start Num: 5

Candidate Starts for DrRobert\_14:

(3, 9696), (Start: 5 @9717 has 55 MA's), (9, 9765), (15, 9846), (17, 9870), (26, 9942), (30, 9990), (31, 10005), (32, 10011), (40, 10173), (44, 10269), (45, 10272), (48, 10302), (56, 10440), (60, 10518), (67, 10563), (68, 10572), (76, 10623), (77, 10641), (78, 10653), (83, 10677), (107, 10893), (118, 10983), (123, 11004), (127, 11031), (131, 11049), (136, 11079), (138, 11088), (146, 11136), (150, 11163), (156, 11193), (164, 11250), (168, 11265), (170, 11277), (171, 11283), (172, 11286), (174, 11295), (181, 11322), (184, 11334), (186, 11343), (188, 11355), (189, 11361), (194, 11385), (196, 11406), (197, 11415), (199, 11430), (205, 11454), (214, 11505), (215, 11508), (217, 11520), (224, 11595), (228, 11625), (232, 11661), (243, 11769), (244, 11781), (247, 11802), (248, 11805), (259, 11901), (260, 11904), (265, 11937), (267, 11958), (273, 12015), (274, 12045), (275, 12054), (276, 12078), (283, 12153), (286, 12219),

Gene: ELee24\_12 Start: 7568, Stop: 9673, Start Num: 10

Candidate Starts for ELee24\_12:

(Start: 10 @7568 has 135 MA's), (11, 7583), (Start: 12 @7589 has 3 MA's), (16, 7649), (28, 7766), (30, 7775), (33, 7799), (34, 7871), (36, 7895), (42, 7994), (43, 8051), (46, 8072), (49, 8093), (60, 8300), (62, 8318), (81, 8405), (92, 8474), (98, 8486), (100, 8507), (103, 8525), (105, 8534), (112, 8579), (116, 8615), (124, 8663), (125, 8666), (135, 8717), (142, 8750), (146, 8777), (153, 8816), (158, 8843), (162, 8864), (163, 8879), (181, 8930), (184, 8942), (185, 8948), (187, 8960), (208, 9062), (209, 9071), (211, 9080), (215, 9107), (225, 9191), (229, 9215), (250, 9398), (252, 9410), (256, 9452), (258, 9473), (261, 9494), (274, 9623),

Gene: EdElric\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for EdElric\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Efeko\_13 Start: 7413, Stop: 9512, Start Num: 10

Candidate Starts for Efeko\_13:

(Start: 10 @7413 has 135 MA's), (24, 7557), (26, 7572), (27, 7602), (30, 7620), (33, 7644), (34, 7716), (36, 7740), (37, 7746), (42, 7839), (46, 7917), (47, 7929), (49, 7938), (60, 8145), (64, 8169), (66, 8178), (71, 8205), (81, 8250), (89, 8295), (114, 8430), (120, 8478), (122, 8490), (128, 8523), (134, 8556), (135, 8562), (139, 8577), (143, 8598), (153, 8661), (154, 8670), (159, 8694), (160, 8700), (162, 8709), (170, 8730), (175, 8751), (176, 8754), (181, 8775), (184, 8787), (185, 8793), (191, 8820), (195, 8841), (198, 8868), (208, 8907), (211, 8925), (215, 8952), (218, 8973), (225, 9036), (226, 9039), (229, 9060), (233, 9105), (242, 9171), (246, 9222), (250, 9243), (252, 9255), (256, 9297), (271, 9420), (272, 9426),

Gene: Eightball\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for Eightball\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Ekko14\_12 Start: 7529, Stop: 9634, Start Num: 10

Candidate Starts for Ekko14\_12:

(Start: 10 @7529 has 135 MA's), (Start: 12 @7550 has 3 MA's), (28, 7727), (30, 7736), (33, 7760), (34, 7832), (36, 7856), (42, 7955), (46, 8033), (47, 8045), (49, 8054), (60, 8261), (62, 8279), (81, 8366), (92, 8435), (98, 8447), (105, 8495), (111, 8525), (112, 8540), (124, 8624), (125, 8627), (130, 8648), (135, 8678), (141, 8705), (146, 8738), (153, 8777), (158, 8804), (159, 8810), (162, 8825), (163, 8840), (176, 8870), (181, 8891), (184, 8903), (185, 8909), (195, 8957), (199, 8993), (211, 9041), (215, 9068), (218, 9089), (225, 9152), (229, 9176), (235, 9233), (246, 9338), (250, 9359), (256, 9413), (258, 9434), (261, 9455),

Gene: Elspeth\_12 Start: 7529, Stop: 9634, Start Num: 10

Candidate Starts for Elspeth\_12:

(Start: 10 @7529 has 135 MA's), (Start: 12 @7550 has 3 MA's), (28, 7727), (30, 7736), (33, 7760), (34, 7832), (36, 7856), (42, 7955), (46, 8033), (47, 8045), (49, 8054), (60, 8261), (62, 8279), (81, 8366), (92, 8435), (98, 8447), (105, 8495), (111, 8525), (112, 8540), (124, 8624), (125, 8627), (130, 8648), (135,

8678), (141, 8705), (146, 8738), (153, 8777), (158, 8804), (159, 8810), (162, 8825), (163, 8840), (176, 8870), (181, 8891), (184, 8903), (185, 8909), (195, 8957), (199, 8993), (211, 9041), (215, 9068), (218, 9089), (225, 9152), (229, 9176), (235, 9233), (246, 9338), (250, 9359), (256, 9413), (258, 9434), (261, 9455),

Gene: Erin\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Erin\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Eunoia\_14 Start: 9738, Stop: 12296, Start Num: 5

Candidate Starts for Eunoia\_14:

(Start: 5 @9738 has 55 MA's), (7, 9747), (8, 9777), (15, 9867), (26, 9963), (29, 10008), (31, 10026), (40, 10194), (44, 10290), (45, 10293), (46, 10308), (54, 10395), (70, 10599), (71, 10602), (79, 10686), (117, 10992), (127, 11052), (131, 11070), (133, 11076), (138, 11109), (140, 11121), (146, 11157), (150, 11184), (155, 11208), (156, 11214), (164, 11271), (169, 11295), (171, 11304), (175, 11319), (181, 11343), (184, 11355), (188, 11376), (189, 11382), (193, 11403), (196, 11427), (197, 11436), (200, 11454), (205, 11475), (207, 11481), (209, 11493), (214, 11526), (215, 11529), (217, 11541), (219, 11556), (220, 11559), (228, 11646), (238, 11736), (239, 11739), (243, 11790), (251, 11847), (253, 11856), (254, 11868), (259, 11922), (260, 11925), (267, 11979), (270, 12018), (274, 12066), (275, 12075), (276, 12099), (278, 12111), (285, 12207), (286, 12237),

Gene: Fluke\_18 Start: 12615, Stop: 15176, Start Num: 5

Candidate Starts for Fluke\_18:

(3, 12594), (Start: 5 @12615 has 55 MA's), (9, 12663), (13, 12696), (15, 12744), (17, 12768), (18, 12780), (26, 12840), (30, 12888), (31, 12903), (32, 12909), (39, 13029), (40, 13071), (44, 13167), (45, 13170), (48, 13200), (52, 13254), (59, 13395), (60, 13416), (63, 13440), (67, 13461), (68, 13470), (76, 13521), (77, 13539), (98, 13725), (117, 13869), (123, 13902), (127, 13929), (131, 13947), (133, 13953), (136, 13977), (138, 13986), (146, 14034), (150, 14061), (156, 14091), (157, 14097), (164, 14148), (168, 14163), (170, 14175), (171, 14181), (172, 14184), (174, 14193), (181, 14220), (184, 14232), (186, 14241), (188, 14253), (189, 14259), (193, 14280), (196, 14304), (197, 14313), (205, 14352), (209, 14370), (214, 14403), (215, 14406), (216, 14415), (217, 14418), (219, 14433), (228, 14523), (232, 14559), (243, 14667), (248, 14703), (259, 14799), (260, 14802), (267, 14856), (270, 14895), (274, 14943), (275, 14952), (276, 14976), (279, 14994), (282, 15045), (284, 15069), (285, 15087), (286, 15117),

Gene: Gabbspett\_12 Start: 7641, Stop: 9746, Start Num: 10

Candidate Starts for Gabbspett\_12:

(Start: 10 @7641 has 135 MA's), (Start: 12 @7662 has 3 MA's), (28, 7839), (30, 7848), (33, 7872), (34, 7944), (36, 7968), (37, 7974), (43, 8124), (46, 8145), (47, 8157), (49, 8166), (60, 8373), (62, 8391), (81, 8478), (92, 8547), (98, 8559), (105, 8607), (111, 8637), (112, 8652), (116, 8688), (121, 8715), (124, 8736), (130, 8760), (134, 8784), (135, 8790), (141, 8817), (146, 8850), (153, 8889), (158, 8916), (162, 8937), (163, 8952), (175, 8979), (176, 8982), (181, 9003), (184, 9015), (185, 9021), (195, 9069), (209, 9144), (211, 9153), (215, 9180), (218, 9201), (225, 9264), (229, 9288), (235, 9345), (246, 9450), (250, 9471), (252, 9483), (256, 9525), (258, 9546), (261, 9567),

Gene: GardenState\_15 Start: 10196, Stop: 12547, Start Num: 6

Candidate Starts for GardenState\_15:

(Start: 6 @10196 has 8 MA's), (21, 10379), (38, 10595), (41, 10655), (43, 10739), (49, 10781), (55, 10850), (57, 10913), (62, 11009), (63, 11012), (74, 11063), (75, 11114), (87, 11228), (88, 11237), (93, 11276), (115, 11465), (129, 11549), (137, 11588), (141, 11609), (153, 11684), (178, 11786), (185, 11819), (207, 11933), (210, 11948), (211, 11954), (230, 12104), (235, 12149), (236, 12155), (249, 12266), (254, 12305), (261, 12371),

Gene: Gardevoir\_12 Start: 7574, Stop: 9679, Start Num: 10

Candidate Starts for Gardevoir\_12:

(Start: 10 @7574 has 135 MA's), (Start: 12 @7595 has 3 MA's), (28, 7772), (30, 7781), (33, 7805), (34, 7877), (36, 7901), (37, 7907), (43, 8057), (46, 8078), (47, 8090), (49, 8099), (60, 8306), (62, 8324), (81, 8411), (92, 8480), (98, 8492), (105, 8540), (111, 8570), (112, 8585), (116, 8621), (121, 8648), (124, 8669), (130, 8693), (134, 8717), (135, 8723), (141, 8750), (146, 8783), (153, 8822), (158, 8849), (162, 8870), (163, 8885), (175, 8912), (176, 8915), (181, 8936), (184, 8948), (185, 8954), (195, 9002), (199, 9038), (211, 9086), (215, 9113), (218, 9134), (225, 9197), (229, 9221), (235, 9278), (246, 9383), (250, 9404), (252, 9416), (256, 9458), (258, 9479), (261, 9500), (274, 9629),

Gene: Gillker\_12 Start: 7539, Stop: 9644, Start Num: 10

Candidate Starts for Gillker\_12:

(Start: 10 @7539 has 135 MA's), (Start: 12 @7560 has 3 MA's), (28, 7737), (30, 7746), (33, 7770), (34, 7842), (36, 7866), (37, 7872), (43, 8022), (46, 8043), (47, 8055), (49, 8064), (60, 8271), (62, 8289), (81, 8376), (92, 8445), (98, 8457), (105, 8505), (111, 8535), (112, 8550), (116, 8586), (121, 8613), (124, 8634), (130, 8658), (134, 8682), (135, 8688), (141, 8715), (146, 8748), (153, 8787), (158, 8814), (162, 8835), (163, 8850), (175, 8877), (176, 8880), (181, 8901), (184, 8913), (185, 8919), (195, 8967), (199, 9003), (211, 9051), (215, 9078), (218, 9099), (225, 9162), (229, 9186), (235, 9243), (246, 9348), (250, 9369), (252, 9381), (256, 9423), (258, 9444), (261, 9465), (274, 9594),

Gene: Glenn\_18 Start: 12624, Stop: 15185, Start Num: 5

Candidate Starts for Glenn\_18:

(3, 12603), (Start: 5 @12624 has 55 MA's), (9, 12672), (13, 12705), (15, 12753), (17, 12777), (18, 12789), (26, 12849), (30, 12897), (31, 12912), (32, 12918), (39, 13038), (40, 13080), (44, 13176), (45, 13179), (48, 13209), (52, 13263), (59, 13404), (60, 13425), (63, 13449), (67, 13470), (68, 13479), (76, 13530), (77, 13548), (98, 13734), (117, 13878), (123, 13911), (127, 13938), (131, 13956), (133, 13962), (136, 13986), (138, 13995), (146, 14043), (150, 14070), (156, 14100), (157, 14106), (164, 14157), (168, 14172), (170, 14184), (171, 14190), (172, 14193), (174, 14202), (181, 14229), (184, 14241), (186, 14250), (188, 14262), (189, 14268), (193, 14289), (196, 14313), (197, 14322), (205, 14361), (209, 14379), (214, 14412), (215, 14415), (216, 14424), (217, 14427), (219, 14442), (228, 14532), (232, 14568), (243, 14676), (248, 14712), (259, 14808), (260, 14811), (267, 14865), (270, 14904), (274, 14952), (275, 14961), (276, 14985), (279, 15003), (282, 15054), (284, 15078), (285, 15096), (286, 15126),

Gene: Godfather\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Godfather\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: GoldenBlanche\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for GoldenBlanche\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Goobery\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for Goobery\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Goulash\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Goulash\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (242, 9298), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Grayscar\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Grayscar\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: HarperAnne\_12 Start: 7528, Stop: 9633, Start Num: 10

Candidate Starts for HarperAnne\_12:

(Start: 10 @7528 has 135 MA's), (Start: 12 @7549 has 3 MA's), (28, 7726), (30, 7735), (33, 7759), (34, 7831), (36, 7855), (42, 7954), (46, 8032), (47, 8044), (49, 8053), (60, 8260), (62, 8278), (81, 8365), (92, 8434), (98, 8446), (105, 8494), (111, 8524), (112, 8539), (124, 8623), (125, 8626), (130, 8647), (135, 8677), (141, 8704), (146, 8737), (153, 8776), (158, 8803), (159, 8809), (162, 8824), (163, 8839), (176, 8869), (181, 8890), (184, 8902), (185, 8908), (195, 8956), (199, 8992), (211, 9040), (215, 9067), (218, 9088), (225, 9151), (229, 9175), (235, 9232), (246, 9337), (250, 9358), (256, 9412), (258, 9433), (261, 9454),

Gene: HeadMave\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for HeadMave\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124,

8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Herb\_14 Start: 9744, Stop: 12302, Start Num: 5

Candidate Starts for Herb\_14:

(Start: 5 @9744 has 55 MA's), (7, 9753), (8, 9783), (15, 9873), (18, 9909), (30, 10017), (31, 10032), (40, 10200), (44, 10296), (63, 10569), (67, 10590), (74, 10620), (76, 10650), (86, 10737), (99, 10860), (109, 10935), (117, 10998), (123, 11031), (126, 11052), (127, 11058), (131, 11076), (133, 11082), (136, 11106), (144, 11148), (146, 11163), (147, 11169), (152, 11196), (161, 11247), (165, 11280), (167, 11289), (171, 11310), (174, 11322), (181, 11349), (184, 11361), (186, 11370), (188, 11382), (189, 11388), (190, 11391), (194, 11412), (197, 11442), (200, 11460), (205, 11481), (208, 11490), (209, 11499), (214, 11532), (215, 11535), (217, 11547), (219, 11562), (227, 11646), (228, 11652), (232, 11688), (239, 11745), (241, 11754), (243, 11796), (251, 11853), (259, 11928), (260, 11931), (264, 11961), (267, 11985), (273, 12042), (274, 12072), (275, 12081), (276, 12105), (278, 12117), (286, 12243),

Gene: Hernandez44\_12 Start: 7641, Stop: 9746, Start Num: 10

Candidate Starts for Hernandez44\_12:

(Start: 10 @7641 has 135 MA's), (Start: 12 @7662 has 3 MA's), (28, 7839), (30, 7848), (33, 7872), (34, 7944), (36, 7968), (37, 7974), (43, 8124), (46, 8145), (47, 8157), (49, 8166), (60, 8373), (62, 8391), (81, 8478), (92, 8547), (98, 8559), (105, 8607), (111, 8637), (112, 8652), (116, 8688), (121, 8715), (124, 8736), (130, 8760), (134, 8784), (135, 8790), (141, 8817), (146, 8850), (153, 8889), (158, 8916), (162, 8937), (163, 8952), (175, 8979), (176, 8982), (181, 9003), (184, 9015), (185, 9021), (195, 9069), (209, 9144), (211, 9153), (215, 9180), (218, 9201), (225, 9264), (229, 9288), (235, 9345), (246, 9450), (250, 9471), (252, 9483), (256, 9525), (258, 9546), (261, 9567),

Gene: Honk\_14 Start: 9008, Stop: 11266, Start Num: 6

Candidate Starts for Honk\_14:

(Start: 6 @9008 has 8 MA's), (18, 9167), (21, 9191), (25, 9203), (27, 9245), (33, 9287), (38, 9395), (40, 9446), (41, 9455), (47, 9572), (50, 9587), (51, 9596), (55, 9650), (57, 9713), (61, 9797), (62, 9809), (63, 9812), (65, 9821), (75, 9872), (90, 9986), (105, 10082), (108, 10124), (123, 10223), (129, 10256), (132, 10265), (146, 10349), (176, 10481), (183, 10511), (185, 10520), (199, 10604), (201, 10610), (203, 10619), (210, 10646), (211, 10652), (223, 10751), (233, 10832), (249, 10964), (254, 11003), (255, 11015), (261, 11069), (263, 11084), (267, 11111),

Gene: Horacetta\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Horacetta\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Hulk\_12 Start: 7553, Stop: 9658, Start Num: 10

Candidate Starts for Hulk\_12:

(Start: 10 @7553 has 135 MA's), (Start: 12 @7574 has 3 MA's), (28, 7751), (30, 7760), (33, 7784), (34, 7856), (36, 7880), (37, 7886), (43, 8036), (46, 8057), (47, 8069), (49, 8078), (60, 8285), (62, 8303), (81, 8390), (92, 8459), (98, 8471), (105, 8519), (111, 8549), (112, 8564), (116, 8600), (121, 8627), (124, 8648), (130, 8672), (134, 8696), (135, 8702), (141, 8729), (146, 8762), (153, 8801), (158, 8828), (162,

8849), (163, 8864), (175, 8891), (176, 8894), (181, 8915), (184, 8927), (185, 8933), (195, 8981), (209, 9056), (211, 9065), (215, 9092), (218, 9113), (225, 9176), (235, 9257), (246, 9362), (250, 9383), (252, 9395), (256, 9437), (258, 9458), (261, 9479), (274, 9608),

Gene: HunterDalle\_14 Start: 9738, Stop: 12296, Start Num: 5

Candidate Starts for HunterDalle\_14:

(Start: 5 @9738 has 55 MA's), (7, 9747), (8, 9777), (15, 9867), (26, 9963), (31, 10026), (40, 10194), (44, 10290), (45, 10293), (46, 10308), (54, 10395), (56, 10461), (70, 10599), (71, 10602), (79, 10686), (117, 10992), (127, 11052), (131, 11070), (133, 11076), (138, 11109), (140, 11121), (146, 11157), (150, 11184), (155, 11208), (156, 11214), (164, 11271), (169, 11295), (171, 11304), (175, 11319), (181, 11343), (184, 11355), (188, 11376), (189, 11382), (193, 11403), (196, 11427), (197, 11436), (200, 11454), (205, 11475), (207, 11481), (209, 11493), (214, 11526), (215, 11529), (217, 11541), (219, 11556), (220, 11559), (228, 11646), (238, 11736), (239, 11739), (243, 11790), (251, 11847), (253, 11856), (254, 11868), (259, 11922), (260, 11925), (267, 11979), (270, 12018), (274, 12066), (275, 12075), (276, 12099), (278, 12111), (285, 12207), (286, 12237),

Gene: IAmGroot\_15 Start: 10840, Stop: 13191, Start Num: 6

Candidate Starts for IAmGroot\_15:

(Start: 6 @10840 has 8 MA's), (21, 11023), (38, 11239), (41, 11299), (43, 11383), (49, 11425), (55, 11494), (57, 11557), (62, 11653), (63, 11656), (74, 11707), (75, 11758), (87, 11872), (88, 11881), (93, 11920), (115, 12109), (129, 12193), (137, 12232), (141, 12253), (153, 12328), (178, 12430), (180, 12442), (185, 12463), (207, 12577), (210, 12592), (211, 12598), (236, 12799), (254, 12949), (261, 13015),

Gene: Immaculata\_18 Start: 12618, Stop: 15179, Start Num: 5

Candidate Starts for Immaculata\_18:

(3, 12597), (Start: 5 @12618 has 55 MA's), (9, 12666), (13, 12699), (15, 12747), (17, 12771), (18, 12783), (26, 12843), (30, 12891), (31, 12906), (32, 12912), (39, 13032), (40, 13074), (43, 13167), (44, 13170), (45, 13173), (48, 13203), (52, 13257), (59, 13398), (60, 13419), (63, 13443), (67, 13464), (68, 13473), (76, 13524), (77, 13542), (80, 13566), (98, 13728), (117, 13872), (123, 13905), (127, 13932), (131, 13950), (133, 13956), (136, 13980), (138, 13989), (146, 14037), (150, 14064), (155, 14088), (156, 14094), (157, 14100), (164, 14151), (168, 14166), (170, 14178), (171, 14184), (172, 14187), (174, 14196), (181, 14223), (184, 14235), (186, 14244), (188, 14256), (189, 14262), (193, 14283), (197, 14316), (205, 14355), (214, 14406), (215, 14409), (216, 14418), (217, 14421), (219, 14436), (227, 14520), (228, 14526), (232, 14562), (243, 14670), (244, 14682), (248, 14706), (259, 14802), (260, 14805), (267, 14859), (270, 14898), (274, 14946), (275, 14955), (276, 14979), (279, 14997), (282, 15048), (284, 15072), (285, 15090), (286, 15120),

Gene: IzzyPants24\_11 Start: 7579, Stop: 9684, Start Num: 10

Candidate Starts for IzzyPants24\_11:

(Start: 10 @7579 has 135 MA's), (Start: 12 @7600 has 3 MA's), (28, 7777), (30, 7786), (33, 7810), (34, 7882), (36, 7906), (42, 8005), (46, 8083), (47, 8095), (49, 8104), (60, 8311), (62, 8329), (81, 8416), (92, 8485), (98, 8497), (105, 8545), (111, 8575), (112, 8590), (119, 8644), (124, 8674), (125, 8677), (130, 8698), (135, 8728), (141, 8755), (146, 8788), (153, 8827), (158, 8854), (159, 8860), (162, 8875), (163, 8890), (175, 8917), (176, 8920), (181, 8941), (184, 8953), (185, 8959), (195, 9007), (199, 9043), (211, 9091), (215, 9118), (218, 9139), (225, 9202), (229, 9226), (235, 9283), (246, 9388), (250, 9409), (256, 9463), (258, 9484), (261, 9505),

Gene: JRok\_12 Start: 7531, Stop: 9636, Start Num: 10

Candidate Starts for JRok\_12:

(Start: 10 @7531 has 135 MA's), (Start: 12 @7552 has 3 MA's), (28, 7729), (30, 7738), (33, 7762), (34, 7834), (36, 7858), (37, 7864), (43, 8014), (46, 8035), (47, 8047), (49, 8056), (60, 8263), (62, 8281), (81, 8368), (92, 8437), (98, 8449), (105, 8497), (111, 8527), (112, 8542), (121, 8605), (124, 8626), (125,

8629), (135, 8680), (141, 8707), (146, 8740), (153, 8779), (158, 8806), (162, 8827), (163, 8842), (175, 8869), (181, 8893), (184, 8905), (185, 8911), (195, 8959), (211, 9043), (215, 9070), (218, 9091), (225, 9154), (229, 9178), (231, 9202), (233, 9223), (246, 9340), (250, 9361), (252, 9373), (256, 9415), (258, 9436), (261, 9457), (274, 9586),

Gene: Jahseh\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Jahseh\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: JaimeB\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for JaimeB\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Jannah\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Jannah\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466),

Gene: Jella\_12 Start: 7564, Stop: 9669, Start Num: 10

Candidate Starts for Jella\_12:

(Start: 10 @7564 has 135 MA's), (Start: 12 @7585 has 3 MA's), (28, 7762), (30, 7771), (33, 7795), (34, 7867), (36, 7891), (37, 7897), (43, 8047), (46, 8068), (47, 8080), (49, 8089), (60, 8296), (62, 8314), (81, 8401), (92, 8470), (98, 8482), (105, 8530), (111, 8560), (112, 8575), (116, 8611), (121, 8638), (124, 8659), (130, 8683), (134, 8707), (135, 8713), (141, 8740), (146, 8773), (153, 8812), (158, 8839), (162, 8860), (163, 8875), (175, 8902), (176, 8905), (181, 8926), (184, 8938), (185, 8944), (195, 8992), (209, 9067), (211, 9076), (215, 9103), (218, 9124), (225, 9187), (229, 9211), (235, 9268), (246, 9373), (250, 9394), (252, 9406), (256, 9448), (258, 9469), (261, 9490),

Gene: Jerky\_12 Start: 7627, Stop: 9732, Start Num: 10

Candidate Starts for Jerky\_12:

(Start: 10 @7627 has 135 MA's), (Start: 12 @7648 has 3 MA's), (28, 7825), (30, 7834), (33, 7858), (34, 7930), (36, 7954), (37, 7960), (43, 8110), (46, 8131), (47, 8143), (49, 8152), (60, 8359), (62, 8377), (81, 8464), (92, 8533), (98, 8545), (105, 8593), (111, 8623), (112, 8638), (121, 8701), (124, 8722), (130, 8746), (134, 8770), (135, 8776), (141, 8803), (146, 8836), (153, 8875), (158, 8902), (162, 8923), (163, 8938), (175, 8965), (176, 8968), (181, 8989), (184, 9001), (185, 9007), (195, 9055), (199, 9091), (209, 9130), (211, 9139), (215, 9166), (218, 9187), (225, 9250), (229, 9274), (235, 9331), (246, 9436), (250,

9457), (252, 9469), (256, 9511), (258, 9532), (261, 9553), (274, 9682),

Gene: JoBros\_12 Start: 7541, Stop: 9646, Start Num: 10

Candidate Starts for JoBros\_12:

(Start: 10 @7541 has 135 MA's), (Start: 12 @7562 has 3 MA's), (28, 7739), (30, 7748), (33, 7772), (34, 7844), (36, 7868), (37, 7874), (43, 8024), (46, 8045), (47, 8057), (49, 8066), (60, 8273), (62, 8291), (81, 8378), (92, 8447), (98, 8459), (105, 8507), (111, 8537), (112, 8552), (116, 8588), (121, 8615), (124, 8636), (130, 8660), (134, 8684), (135, 8690), (141, 8717), (146, 8750), (153, 8789), (158, 8816), (162, 8837), (163, 8852), (175, 8879), (176, 8882), (181, 8903), (184, 8915), (185, 8921), (195, 8969), (199, 9005), (211, 9053), (215, 9080), (218, 9101), (225, 9164), (229, 9188), (235, 9245), (246, 9350), (250, 9371), (252, 9383), (256, 9425), (258, 9446), (261, 9467), (274, 9596),

Gene: JooneeDee\_12 Start: 7572, Stop: 9677, Start Num: 10

Candidate Starts for JooneeDee\_12:

(1, 7476), (Start: 10 @7572 has 135 MA's), (Start: 12 @7593 has 3 MA's), (25, 7719), (28, 7770), (30, 7779), (33, 7803), (34, 7875), (36, 7899), (42, 7998), (46, 8076), (47, 8088), (49, 8097), (60, 8304), (62, 8322), (81, 8409), (92, 8478), (98, 8490), (105, 8538), (111, 8568), (112, 8583), (119, 8637), (124, 8667), (125, 8670), (130, 8691), (135, 8721), (141, 8748), (146, 8781), (153, 8820), (158, 8847), (159, 8853), (162, 8868), (163, 8883), (175, 8910), (176, 8913), (181, 8934), (184, 8946), (185, 8952), (195, 9000), (199, 9036), (211, 9084), (215, 9111), (218, 9132), (225, 9195), (229, 9219), (235, 9276), (246, 9381), (250, 9402), (252, 9414), (256, 9456), (258, 9477), (261, 9498),

Gene: Josuke\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Josuke\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: Jumboset\_18 Start: 12567, Stop: 15128, Start Num: 5

Candidate Starts for Jumboset\_18:

(3, 12546), (Start: 5 @12567 has 55 MA's), (9, 12615), (13, 12648), (15, 12696), (17, 12720), (18, 12732), (26, 12792), (30, 12840), (31, 12855), (32, 12861), (39, 12981), (40, 13023), (44, 13119), (45, 13122), (48, 13152), (52, 13206), (53, 13209), (59, 13347), (60, 13368), (63, 13392), (67, 13413), (68, 13422), (76, 13473), (77, 13491), (98, 13677), (117, 13821), (123, 13854), (127, 13881), (131, 13899), (133, 13905), (136, 13929), (138, 13938), (146, 13986), (150, 14013), (151, 14016), (155, 14037), (156, 14043), (157, 14049), (164, 14100), (168, 14115), (170, 14127), (171, 14133), (172, 14136), (174, 14145), (181, 14172), (184, 14184), (186, 14193), (188, 14205), (189, 14211), (193, 14232), (197, 14265), (205, 14304), (214, 14355), (215, 14358), (216, 14367), (217, 14370), (219, 14385), (228, 14475), (232, 14511), (243, 14619), (248, 14655), (259, 14751), (260, 14754), (267, 14808), (270, 14847), (274, 14895), (275, 14904), (276, 14928), (279, 14946), (282, 14997), (284, 15021), (285, 15039), (286, 15069),

Gene: Kaijohn\_12 Start: 7545, Stop: 9650, Start Num: 10

Candidate Starts for Kaijohn\_12:

(Start: 10 @7545 has 135 MA's), (Start: 12 @7566 has 3 MA's), (28, 7743), (30, 7752), (33, 7776), (34, 7848), (36, 7872), (37, 7878), (42, 7971), (43, 8028), (46, 8049), (47, 8061), (49, 8070), (60, 8277), (62, 8295), (81, 8382), (92, 8451), (98, 8463), (105, 8511), (111, 8541), (112, 8556), (116, 8592), (121, 8619), (124, 8640), (130, 8664), (134, 8688), (135, 8694), (141, 8721), (146, 8754), (153, 8793), (158, 8820), (162, 8841), (163, 8856), (175, 8883), (176, 8886), (181, 8907), (184, 8919), (185, 8925), (195,

8973), (211, 9057), (215, 9084), (218, 9105), (225, 9168), (235, 9249), (246, 9354), (252, 9387), (256, 9429), (258, 9450), (261, 9471), (274, 9600),

Gene: Kalizoi\_18 Start: 12566, Stop: 15127, Start Num: 5

Candidate Starts for Kalizoi\_18:

(3, 12545), (Start: 5 @12566 has 55 MA's), (9, 12614), (13, 12647), (15, 12695), (17, 12719), (18, 12731), (26, 12791), (30, 12839), (31, 12854), (32, 12860), (39, 12980), (40, 13022), (44, 13118), (45, 13121), (48, 13151), (52, 13205), (59, 13346), (60, 13367), (63, 13391), (67, 13412), (68, 13421), (76, 13472), (77, 13490), (98, 13676), (117, 13820), (123, 13853), (127, 13880), (131, 13898), (133, 13904), (136, 13928), (138, 13937), (146, 13985), (150, 14012), (151, 14015), (155, 14036), (157, 14048), (164, 14099), (168, 14114), (170, 14126), (172, 14135), (174, 14144), (181, 14171), (184, 14183), (186, 14192), (188, 14204), (189, 14210), (193, 14231), (196, 14255), (197, 14264), (205, 14303), (214, 14354), (215, 14357), (216, 14366), (217, 14369), (219, 14384), (228, 14474), (232, 14510), (243, 14618), (248, 14654), (259, 14750), (260, 14753), (267, 14807), (270, 14846), (274, 14894), (275, 14903), (276, 14927), (279, 14945), (282, 14996), (284, 15020), (285, 15038), (286, 15068),

Gene: KayPaulus\_12 Start: 7533, Stop: 9638, Start Num: 10

Candidate Starts for KayPaulus\_12:

(Start: 10 @7533 has 135 MA's), (Start: 12 @7554 has 3 MA's), (28, 7731), (30, 7740), (33, 7764), (34, 7836), (36, 7860), (37, 7866), (42, 7959), (43, 8016), (46, 8037), (47, 8049), (49, 8058), (60, 8265), (62, 8283), (81, 8370), (92, 8439), (98, 8451), (105, 8499), (111, 8529), (112, 8544), (116, 8580), (121, 8607), (125, 8631), (130, 8652), (134, 8676), (135, 8682), (141, 8709), (146, 8742), (153, 8781), (158, 8808), (162, 8829), (163, 8844), (175, 8871), (176, 8874), (184, 8907), (185, 8913), (195, 8961), (199, 8997), (211, 9045), (215, 9072), (218, 9093), (225, 9156), (229, 9180), (235, 9237), (246, 9342), (250, 9363), (252, 9375), (256, 9417), (258, 9438), (261, 9459), (274, 9588),

Gene: Kevanna\_12 Start: 7533, Stop: 9638, Start Num: 10

Candidate Starts for Kevanna\_12:

(Start: 10 @7533 has 135 MA's), (Start: 12 @7554 has 3 MA's), (28, 7731), (30, 7740), (33, 7764), (34, 7836), (36, 7860), (37, 7866), (42, 7959), (43, 8016), (46, 8037), (47, 8049), (49, 8058), (60, 8265), (62, 8283), (81, 8370), (92, 8439), (98, 8451), (105, 8499), (111, 8529), (112, 8544), (116, 8580), (121, 8607), (125, 8631), (130, 8652), (134, 8676), (135, 8682), (141, 8709), (146, 8742), (153, 8781), (158, 8808), (162, 8829), (163, 8844), (175, 8871), (176, 8874), (184, 8907), (185, 8913), (195, 8961), (199, 8997), (211, 9045), (215, 9072), (218, 9093), (225, 9156), (229, 9180), (235, 9237), (246, 9342), (250, 9363), (252, 9375), (256, 9417), (258, 9438), (261, 9459), (274, 9588),

Gene: KillerTomato\_12 Start: 7586, Stop: 9691, Start Num: 10

Candidate Starts for KillerTomato\_12:

(Start: 10 @7586 has 135 MA's), (Start: 12 @7607 has 3 MA's), (28, 7784), (30, 7793), (33, 7817), (34, 7889), (36, 7913), (37, 7919), (42, 8012), (43, 8069), (46, 8090), (47, 8102), (49, 8111), (60, 8318), (62, 8336), (81, 8423), (92, 8492), (98, 8504), (105, 8552), (111, 8582), (112, 8597), (116, 8633), (121, 8660), (125, 8684), (130, 8705), (134, 8729), (135, 8735), (141, 8762), (146, 8795), (153, 8834), (158, 8861), (162, 8882), (163, 8897), (175, 8924), (176, 8927), (181, 8948), (184, 8960), (185, 8966), (195, 9014), (199, 9050), (211, 9098), (215, 9125), (218, 9146), (225, 9209), (229, 9233), (235, 9290), (246, 9395), (250, 9416), (252, 9428), (256, 9470), (258, 9491), (261, 9512), (274, 9641),

Gene: KingBob\_14 Start: 9744, Stop: 12302, Start Num: 5

Candidate Starts for KingBob\_14:

(Start: 5 @9744 has 55 MA's), (7, 9753), (8, 9783), (15, 9873), (18, 9909), (30, 10017), (31, 10032), (40, 10200), (44, 10296), (63, 10569), (67, 10590), (74, 10620), (76, 10650), (86, 10737), (99, 10860), (109, 10935), (117, 10998), (123, 11031), (126, 11052), (127, 11058), (131, 11076), (133, 11082), (136, 11106), (144, 11148), (146, 11163), (147, 11169), (152, 11196), (161, 11247), (165, 11280),

(167, 11289), (171, 11310), (174, 11322), (181, 11349), (184, 11361), (186, 11370), (188, 11382), (189, 11388), (190, 11391), (194, 11412), (197, 11442), (200, 11460), (205, 11481), (208, 11490), (209, 11499), (214, 11532), (215, 11535), (217, 11547), (219, 11562), (227, 11646), (228, 11652), (232, 11688), (239, 11745), (241, 11754), (243, 11796), (251, 11853), (259, 11928), (260, 11931), (264, 11961), (267, 11985), (273, 12042), (274, 12072), (275, 12081), (276, 12105), (278, 12117), (286, 12243),

Gene: Kojax4\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Kojax4\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: Korra\_19 Start: 12572, Stop: 15133, Start Num: 5

Candidate Starts for Korra\_19:

(3, 12551), (Start: 5 @12572 has 55 MA's), (9, 12620), (13, 12653), (15, 12701), (17, 12725), (18, 12737), (26, 12797), (30, 12845), (31, 12860), (32, 12866), (39, 12986), (40, 13028), (44, 13124), (45, 13127), (48, 13157), (52, 13211), (59, 13352), (60, 13373), (63, 13397), (67, 13418), (68, 13427), (76, 13478), (77, 13496), (98, 13682), (117, 13826), (123, 13859), (127, 13886), (131, 13904), (133, 13910), (136, 13934), (138, 13943), (146, 13991), (150, 14018), (151, 14021), (155, 14042), (157, 14054), (164, 14105), (168, 14120), (170, 14132), (172, 14141), (174, 14150), (181, 14177), (184, 14189), (186, 14198), (188, 14210), (189, 14216), (193, 14237), (196, 14261), (197, 14270), (205, 14309), (214, 14360), (215, 14363), (216, 14372), (217, 14375), (219, 14390), (228, 14480), (232, 14516), (243, 14624), (248, 14660), (259, 14756), (260, 14759), (267, 14813), (270, 14852), (274, 14900), (275, 14909), (276, 14933), (279, 14951), (282, 15002), (284, 15026), (286, 15074),

Gene: KyriosFaba\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for KyriosFaba\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Lasagna\_14 Start: 9717, Stop: 12278, Start Num: 5

Candidate Starts for Lasagna\_14:

(3, 9696), (Start: 5 @9717 has 55 MA's), (9, 9765), (15, 9846), (17, 9870), (26, 9942), (30, 9990), (31, 10005), (32, 10011), (39, 10131), (40, 10173), (44, 10269), (45, 10272), (48, 10302), (56, 10440), (60, 10518), (67, 10563), (68, 10572), (76, 10623), (77, 10641), (78, 10653), (83, 10677), (107, 10893), (118, 10983), (123, 11004), (127, 11031), (131, 11049), (133, 11055), (136, 11079), (138, 11088), (146, 11136), (150, 11163), (156, 11193), (164, 11250), (168, 11265), (170, 11277), (171, 11283), (172, 11286), (174, 11295), (181, 11322), (184, 11334), (186, 11343), (188, 11355), (189, 11361), (194, 11385), (196, 11406), (197, 11415), (199, 11430), (205, 11454), (214, 11505), (215, 11508), (217, 11520), (224, 11595), (228, 11625), (232, 11661), (243, 11769), (244, 11781), (248, 11805), (259, 11901), (260, 11904), (265, 11937), (267, 11958), (270, 11997), (273, 12015), (274, 12045), (275, 12054), (276, 12078), (283, 12153), (286, 12219),

Gene: LaviMo\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for LaviMo\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: Leafy\_12 Start: 7556, Stop: 9661, Start Num: 10

Candidate Starts for Leafy\_12:

(Start: 10 @7556 has 135 MA's), (Start: 12 @7577 has 3 MA's), (28, 7754), (30, 7763), (33, 7787), (34, 7859), (36, 7883), (37, 7889), (42, 7982), (43, 8039), (46, 8060), (47, 8072), (49, 8081), (60, 8288), (62, 8306), (81, 8393), (92, 8462), (98, 8474), (105, 8522), (111, 8552), (112, 8567), (121, 8630), (125, 8654), (130, 8675), (134, 8699), (135, 8705), (141, 8732), (146, 8765), (153, 8804), (159, 8837), (162, 8852), (163, 8867), (175, 8894), (176, 8897), (184, 8930), (185, 8936), (195, 8984), (211, 9068), (215, 9095), (218, 9116), (225, 9179), (229, 9203), (235, 9260), (246, 9365), (250, 9386), (252, 9398), (256, 9440), (258, 9461), (261, 9482), (274, 9611),

Gene: LemonPepper\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for LemonPepper\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Lennox\_14 Start: 9717, Stop: 12278, Start Num: 5

Candidate Starts for Lennox\_14:

(3, 9696), (Start: 5 @9717 has 55 MA's), (9, 9765), (15, 9846), (17, 9870), (26, 9942), (30, 9990), (31, 10005), (32, 10011), (40, 10173), (44, 10269), (48, 10302), (56, 10440), (60, 10518), (67, 10563), (68, 10572), (76, 10623), (77, 10641), (78, 10653), (83, 10677), (107, 10893), (118, 10983), (123, 11004), (127, 11031), (131, 11049), (133, 11055), (136, 11079), (138, 11088), (146, 11136), (150, 11163), (156, 11193), (164, 11250), (168, 11265), (170, 11277), (171, 11283), (172, 11286), (174, 11295), (181, 11322), (184, 11334), (186, 11343), (188, 11355), (189, 11361), (194, 11385), (196, 11406), (197, 11415), (199, 11430), (205, 11454), (214, 11505), (215, 11508), (217, 11520), (228, 11625), (232, 11661), (243, 11769), (244, 11781), (248, 11805), (259, 11901), (260, 11904), (265, 11937), (267, 11958), (270, 11997), (273, 12015), (274, 12045), (275, 12054), (276, 12078), (283, 12153), (286, 12219),

Gene: LilStuart\_14 Start: 9717, Stop: 12278, Start Num: 5

Candidate Starts for LilStuart\_14:

(3, 9696), (Start: 5 @9717 has 55 MA's), (9, 9765), (15, 9846), (17, 9870), (26, 9942), (30, 9990), (31, 10005), (32, 10011), (40, 10173), (44, 10269), (48, 10302), (56, 10440), (60, 10518), (67, 10563), (68, 10572), (76, 10623), (77, 10641), (78, 10653), (83, 10677), (107, 10893), (118, 10983), (123, 11004), (127, 11031), (131, 11049), (133, 11055), (136, 11079), (138, 11088), (146, 11136), (150, 11163), (156, 11193), (164, 11250), (168, 11265), (170, 11277), (171, 11283), (172, 11286), (174, 11295), (181, 11322), (184, 11334), (186, 11343), (188, 11355), (189, 11361), (194, 11385), (196, 11406), (197, 11415), (199, 11430), (205, 11454), (214, 11505), (215, 11508), (217, 11520), (228, 11625), (232, 11661), (243, 11769), (244, 11781), (248, 11805), (259, 11901), (260, 11904), (265, 11937),

(267, 11958), (270, 11997), (273, 12015), (274, 12045), (275, 12054), (276, 12078), (283, 12153), (286, 12219),

Gene: LionelHutz\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for LionelHutz\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Livingwater\_12 Start: 7533, Stop: 9638, Start Num: 10

Candidate Starts for Livingwater\_12:

(Start: 10 @7533 has 135 MA's), (Start: 12 @7554 has 3 MA's), (28, 7731), (30, 7740), (33, 7764), (34, 7836), (36, 7860), (37, 7866), (42, 7959), (43, 8016), (46, 8037), (47, 8049), (49, 8058), (60, 8265), (62, 8283), (81, 8370), (92, 8439), (98, 8451), (105, 8499), (111, 8529), (112, 8544), (121, 8607), (125, 8631), (130, 8652), (134, 8676), (135, 8682), (141, 8709), (146, 8742), (153, 8781), (162, 8829), (163, 8844), (175, 8871), (176, 8874), (184, 8907), (185, 8913), (195, 8961), (211, 9045), (215, 9072), (218, 9093), (225, 9156), (229, 9180), (235, 9237), (246, 9342), (250, 9363), (252, 9375), (256, 9417), (258, 9438), (261, 9459), (274, 9588),

Gene: Loca\_12 Start: 7559, Stop: 9664, Start Num: 10

Candidate Starts for Loca\_12:

(Start: 10 @7559 has 135 MA's), (Start: 12 @7580 has 3 MA's), (28, 7757), (30, 7766), (33, 7790), (34, 7862), (36, 7886), (37, 7892), (42, 7985), (43, 8042), (46, 8063), (47, 8075), (49, 8084), (60, 8291), (62, 8309), (81, 8396), (92, 8465), (98, 8477), (105, 8525), (111, 8555), (112, 8570), (121, 8633), (130, 8678), (134, 8702), (135, 8708), (141, 8735), (146, 8768), (153, 8807), (162, 8855), (163, 8870), (175, 8897), (176, 8900), (184, 8933), (185, 8939), (195, 8987), (211, 9071), (215, 9098), (218, 9119), (225, 9182), (229, 9206), (235, 9263), (246, 9368), (250, 9389), (252, 9401), (256, 9443), (258, 9464), (261, 9485), (274, 9614),

Gene: Lola20\_12 Start: 7538, Stop: 9646, Start Num: 10

Candidate Starts for Lola20\_12:

(Start: 10 @7538 has 135 MA's), (Start: 12 @7559 has 3 MA's), (28, 7736), (30, 7745), (33, 7769), (34, 7841), (36, 7865), (37, 7871), (42, 7964), (43, 8021), (46, 8042), (47, 8054), (49, 8063), (60, 8270), (62, 8288), (81, 8375), (92, 8444), (98, 8456), (105, 8504), (111, 8534), (112, 8549), (116, 8585), (121, 8612), (130, 8657), (134, 8681), (135, 8687), (141, 8714), (146, 8747), (153, 8786), (158, 8813), (162, 8834), (163, 8849), (175, 8876), (176, 8879), (184, 8912), (185, 8918), (195, 8966), (199, 9002), (211, 9050), (215, 9077), (218, 9098), (225, 9161), (229, 9185), (235, 9242), (246, 9347), (250, 9368), (252, 9380), (256, 9422), (261, 9464), (274, 9596),

Gene: Lucy\_14 Start: 9709, Stop: 12270, Start Num: 5

Candidate Starts for Lucy\_14:

(3, 9688), (Start: 5 @9709 has 55 MA's), (9, 9757), (15, 9838), (17, 9862), (26, 9934), (30, 9982), (31, 9997), (32, 10003), (40, 10165), (44, 10261), (45, 10264), (48, 10294), (56, 10432), (60, 10510), (67, 10555), (68, 10564), (76, 10615), (77, 10633), (78, 10645), (83, 10669), (107, 10885), (118, 10975), (123, 10996), (127, 11023), (131, 11041), (133, 11047), (136, 11071), (138, 11080), (146, 11128), (150, 11155), (156, 11185), (164, 11242), (168, 11257), (170, 11269), (171, 11275), (172, 11278), (174, 11287), (181, 11314), (184, 11326), (186, 11335), (188, 11347), (189, 11353), (194, 11377), (196, 11398), (197, 11407), (199, 11422), (205, 11446), (209, 11464), (214, 11497), (215, 11500), (217, 11512), (224, 11587), (228, 11617), (232, 11653), (243, 11761), (244, 11773), (248, 11797),

(259, 11893), (260, 11896), (267, 11950), (270, 11989), (273, 12007), (274, 12037), (275, 12046), (276, 12070), (283, 12145), (284, 12163), (286, 12211),

Gene: Lunatic\_12 Start: 7531, Stop: 9636, Start Num: 10

Candidate Starts for Lunatic\_12:

(Start: 10 @7531 has 135 MA's), (Start: 12 @7552 has 3 MA's), (28, 7729), (30, 7738), (33, 7762), (34, 7834), (36, 7858), (42, 7957), (43, 8014), (46, 8035), (47, 8047), (49, 8056), (60, 8263), (62, 8281), (81, 8368), (92, 8437), (98, 8449), (105, 8497), (111, 8527), (112, 8542), (124, 8626), (125, 8629), (130, 8650), (135, 8680), (141, 8707), (146, 8740), (153, 8779), (158, 8806), (159, 8812), (162, 8827), (163, 8842), (176, 8872), (181, 8893), (184, 8905), (185, 8911), (195, 8959), (199, 8995), (211, 9043), (215, 9070), (218, 9091), (225, 9154), (229, 9178), (235, 9235), (246, 9340), (250, 9361), (256, 9415), (258, 9436), (261, 9457),

Gene: Luxx\_12 Start: 7564, Stop: 9669, Start Num: 10

Candidate Starts for Luxx\_12:

(Start: 10 @7564 has 135 MA's), (Start: 12 @7585 has 3 MA's), (28, 7762), (30, 7771), (33, 7795), (34, 7867), (36, 7891), (37, 7897), (43, 8047), (46, 8068), (47, 8080), (49, 8089), (60, 8296), (62, 8314), (81, 8401), (92, 8470), (98, 8482), (105, 8530), (111, 8560), (112, 8575), (116, 8611), (121, 8638), (124, 8659), (130, 8683), (134, 8707), (135, 8713), (141, 8740), (146, 8773), (153, 8812), (158, 8839), (162, 8860), (163, 8875), (175, 8902), (176, 8905), (181, 8926), (184, 8938), (185, 8944), (195, 8992), (209, 9067), (211, 9076), (215, 9103), (218, 9124), (225, 9187), (229, 9211), (235, 9268), (246, 9373), (250, 9394), (252, 9406), (256, 9448), (258, 9469), (261, 9490),

Gene: Madebyisha\_12 Start: 7627, Stop: 9732, Start Num: 10

Candidate Starts for Madebyisha\_12:

(Start: 10 @7627 has 135 MA's), (Start: 12 @7648 has 3 MA's), (28, 7825), (30, 7834), (33, 7858), (34, 7930), (36, 7954), (37, 7960), (43, 8110), (46, 8131), (47, 8143), (49, 8152), (60, 8359), (62, 8377), (81, 8464), (92, 8533), (98, 8545), (105, 8593), (111, 8623), (112, 8638), (121, 8701), (124, 8722), (130, 8746), (134, 8770), (135, 8776), (141, 8803), (146, 8836), (153, 8875), (158, 8902), (162, 8923), (163, 8938), (175, 8965), (176, 8968), (181, 8989), (184, 9001), (185, 9007), (195, 9055), (199, 9091), (209, 9130), (211, 9139), (215, 9166), (218, 9187), (225, 9250), (229, 9274), (235, 9331), (246, 9436), (250, 9457), (252, 9469), (256, 9511), (258, 9532), (261, 9553), (274, 9682),

Gene: Majesty\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for Majesty\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Makoto\_14 Start: 9718, Stop: 12279, Start Num: 5

Candidate Starts for Makoto\_14:

(3, 9697), (Start: 5 @9718 has 55 MA's), (9, 9766), (15, 9847), (17, 9871), (26, 9943), (30, 9991), (31, 10006), (32, 10012), (40, 10174), (44, 10270), (48, 10303), (56, 10441), (60, 10519), (67, 10564), (68, 10573), (76, 10624), (77, 10642), (78, 10654), (83, 10678), (107, 10894), (123, 11005), (127, 11032), (131, 11050), (133, 11056), (136, 11080), (138, 11089), (146, 11137), (150, 11164), (156, 11194), (164, 11251), (168, 11266), (170, 11278), (171, 11284), (172, 11287), (174, 11296), (181, 11323), (184, 11335), (186, 11344), (188, 11356), (189, 11362), (194, 11386), (196, 11407), (197, 11416), (199, 11431), (205, 11455), (214, 11506), (215, 11509), (217, 11521), (224, 11596), (228, 11626), (232, 11662), (243, 11770), (244, 11782), (248, 11806), (259, 11902), (260, 11905), (265, 11938),

(267, 11959), (273, 12016), (274, 12046), (275, 12055), (276, 12079), (283, 12154), (286, 12220),

Gene: ManAs\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for ManAs\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Maneater\_12 Start: 7528, Stop: 9633, Start Num: 10

Candidate Starts for Maneater\_12:

(Start: 10 @7528 has 135 MA's), (Start: 12 @7549 has 3 MA's), (28, 7726), (30, 7735), (33, 7759), (34, 7831), (36, 7855), (37, 7861), (43, 8011), (46, 8032), (47, 8044), (49, 8053), (60, 8260), (62, 8278), (81, 8365), (92, 8434), (98, 8446), (105, 8494), (111, 8524), (112, 8539), (116, 8575), (121, 8602), (124, 8623), (130, 8647), (134, 8671), (135, 8677), (141, 8704), (146, 8737), (153, 8776), (158, 8803), (162, 8824), (163, 8839), (175, 8866), (176, 8869), (181, 8890), (184, 8902), (185, 8908), (195, 8956), (209, 9031), (211, 9040), (215, 9067), (218, 9088), (225, 9151), (229, 9175), (235, 9232), (246, 9337), (250, 9358), (252, 9370), (256, 9412), (258, 9433), (261, 9454),

Gene: Maria1952\_14 Start: 9744, Stop: 12302, Start Num: 5

Candidate Starts for Maria1952\_14:

(Start: 5 @9744 has 55 MA's), (7, 9753), (8, 9783), (15, 9873), (18, 9909), (30, 10017), (31, 10032), (40, 10200), (44, 10296), (63, 10569), (67, 10590), (74, 10620), (76, 10650), (86, 10737), (99, 10860), (109, 10935), (117, 10998), (123, 11031), (126, 11052), (127, 11058), (131, 11076), (133, 11082), (136, 11106), (144, 11148), (146, 11163), (147, 11169), (152, 11196), (161, 11247), (165, 11280), (167, 11289), (171, 11310), (174, 11322), (181, 11349), (184, 11361), (186, 11370), (188, 11382), (189, 11388), (190, 11391), (194, 11412), (197, 11442), (200, 11460), (205, 11481), (208, 11490), (209, 11499), (214, 11532), (215, 11535), (217, 11547), (219, 11562), (227, 11646), (228, 11652), (232, 11688), (239, 11745), (241, 11754), (243, 11796), (251, 11853), (259, 11928), (260, 11931), (264, 11961), (267, 11985), (273, 12042), (274, 12072), (275, 12081), (276, 12105), (278, 12117), (286, 12243),

Gene: Marichuy\_12 Start: 7639, Stop: 9744, Start Num: 10

Candidate Starts for Marichuy\_12:

(Start: 10 @7639 has 135 MA's), (Start: 12 @7660 has 3 MA's), (28, 7837), (30, 7846), (33, 7870), (34, 7942), (36, 7966), (37, 7972), (43, 8122), (46, 8143), (47, 8155), (49, 8164), (60, 8371), (62, 8389), (81, 8476), (92, 8545), (98, 8557), (105, 8605), (111, 8635), (112, 8650), (116, 8686), (121, 8713), (124, 8734), (130, 8758), (134, 8782), (135, 8788), (141, 8815), (146, 8848), (153, 8887), (158, 8914), (162, 8935), (163, 8950), (175, 8977), (176, 8980), (181, 9001), (184, 9013), (185, 9019), (195, 9067), (209, 9142), (211, 9151), (215, 9178), (218, 9199), (225, 9262), (229, 9286), (235, 9343), (246, 9448), (250, 9469), (252, 9481), (256, 9523), (258, 9544), (261, 9565), (274, 9694),

Gene: MasterPitts\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for MasterPitts\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256,

9430), (258, 9451), (261, 9472), (274, 9601),

Gene: Mauilvory\_11 Start: 7646, Stop: 9751, Start Num: 10

Candidate Starts for Mauilvory\_11:

(Start: 10 @7646 has 135 MA's), (Start: 12 @7667 has 3 MA's), (28, 7844), (30, 7853), (33, 7877), (34, 7949), (36, 7973), (42, 8072), (46, 8150), (47, 8162), (49, 8171), (60, 8378), (62, 8396), (81, 8483), (92, 8552), (98, 8564), (105, 8612), (111, 8642), (112, 8657), (124, 8741), (125, 8744), (130, 8765), (135, 8795), (141, 8822), (146, 8855), (153, 8894), (158, 8921), (159, 8927), (162, 8942), (163, 8957), (176, 8987), (181, 9008), (184, 9020), (185, 9026), (195, 9074), (199, 9110), (211, 9158), (215, 9185), (218, 9206), (225, 9269), (229, 9293), (235, 9350), (246, 9455), (250, 9476), (256, 9530), (258, 9551), (261, 9572),

Gene: McShie\_12 Start: 7529, Stop: 9634, Start Num: 10

Candidate Starts for McShie\_12:

(Start: 10 @7529 has 135 MA's), (Start: 12 @7550 has 3 MA's), (28, 7727), (30, 7736), (33, 7760), (34, 7832), (36, 7856), (37, 7862), (42, 7955), (43, 8012), (46, 8033), (47, 8045), (49, 8054), (60, 8261), (62, 8279), (81, 8366), (92, 8435), (98, 8447), (105, 8495), (111, 8525), (112, 8540), (121, 8603), (124, 8624), (125, 8627), (135, 8678), (141, 8705), (146, 8738), (153, 8777), (158, 8804), (162, 8825), (163, 8840), (175, 8867), (181, 8891), (184, 8903), (185, 8909), (195, 8957), (211, 9041), (215, 9068), (218, 9089), (225, 9152), (229, 9176), (235, 9233), (246, 9338), (250, 9359), (252, 9371), (256, 9413), (258, 9434), (261, 9455), (274, 9584),

Gene: Megan\_30 Start: 21999, Stop: 24323, Start Num: 6

Candidate Starts for Megan\_30:

(2, 21969), (Start: 6 @21999 has 8 MA's), (19, 22179), (20, 22188), (25, 22215), (30, 22275), (35, 22383), (40, 22461), (43, 22554), (45, 22560), (48, 22590), (58, 22737), (69, 22860), (72, 22872), (82, 22938), (84, 22959), (95, 23064), (96, 23070), (102, 23118), (114, 23202), (119, 23250), (148, 23409), (153, 23433), (159, 23466), (170, 23502), (173, 23517), (175, 23523), (185, 23565), (192, 23598), (195, 23613), (196, 23625), (199, 23649), (203, 23664), (211, 23697), (218, 23745), (221, 23757), (225, 23808), (226, 23811), (231, 23856), (236, 23895), (240, 23928), (254, 24045), (256, 24069), (257, 24078), (277, 24279), (280, 24309), (281, 24312),

Gene: MeganNoll\_18 Start: 12624, Stop: 15185, Start Num: 5

Candidate Starts for MeganNoll\_18:

(3, 12603), (Start: 5 @12624 has 55 MA's), (9, 12672), (13, 12705), (15, 12753), (17, 12777), (18, 12789), (26, 12849), (30, 12897), (31, 12912), (32, 12918), (39, 13038), (40, 13080), (44, 13176), (45, 13179), (48, 13209), (52, 13263), (53, 13266), (59, 13404), (60, 13425), (63, 13449), (67, 13470), (68, 13479), (76, 13530), (77, 13548), (98, 13734), (117, 13878), (123, 13911), (127, 13938), (131, 13956), (133, 13962), (136, 13986), (138, 13995), (146, 14043), (150, 14070), (151, 14073), (155, 14094), (156, 14100), (157, 14106), (164, 14157), (168, 14172), (170, 14184), (171, 14190), (172, 14193), (174, 14202), (181, 14229), (184, 14241), (186, 14250), (188, 14262), (189, 14268), (193, 14289), (197, 14322), (205, 14361), (214, 14412), (215, 14415), (216, 14424), (217, 14427), (219, 14442), (228, 14532), (232, 14568), (243, 14676), (248, 14712), (259, 14808), (260, 14811), (267, 14865), (270, 14904), (274, 14952), (275, 14961), (276, 14985), (279, 15003), (282, 15054), (284, 15078), (285, 15096), (286, 15126),

Gene: MelBee03\_12 Start: 7533, Stop: 9638, Start Num: 10

Candidate Starts for MelBee03\_12:

(Start: 10 @7533 has 135 MA's), (Start: 12 @7554 has 3 MA's), (28, 7731), (30, 7740), (33, 7764), (34, 7836), (36, 7860), (37, 7866), (42, 7959), (43, 8016), (46, 8037), (47, 8049), (49, 8058), (60, 8265), (62, 8283), (81, 8370), (92, 8439), (98, 8451), (105, 8499), (111, 8529), (112, 8544), (116, 8580), (121, 8607), (125, 8631), (130, 8652), (134, 8676), (135, 8682), (141, 8709), (146, 8742), (153, 8781), (158, 8808), (162, 8829), (163, 8844), (175, 8871), (176, 8874), (184, 8907), (185, 8913), (195, 8961), (199,

8997), (211, 9045), (215, 9072), (218, 9093), (225, 9156), (229, 9180), (235, 9237), (246, 9342), (250, 9363), (252, 9375), (256, 9417), (258, 9438), (261, 9459), (274, 9588),

Gene: Miaurora\_12 Start: 7648, Stop: 9753, Start Num: 10

Candidate Starts for Miaurora\_12:

(Start: 10 @7648 has 135 MA's), (Start: 12 @7669 has 3 MA's), (28, 7846), (30, 7855), (33, 7879), (34, 7951), (36, 7975), (42, 8074), (43, 8131), (46, 8152), (47, 8164), (49, 8173), (60, 8380), (62, 8398), (81, 8485), (92, 8554), (98, 8566), (105, 8614), (111, 8644), (112, 8659), (119, 8713), (124, 8743), (125, 8746), (130, 8767), (135, 8797), (141, 8824), (146, 8857), (153, 8896), (158, 8923), (159, 8929), (162, 8944), (163, 8959), (175, 8986), (176, 8989), (181, 9010), (184, 9022), (185, 9028), (195, 9076), (199, 9112), (211, 9160), (215, 9187), (218, 9208), (225, 9271), (229, 9295), (235, 9352), (246, 9457), (250, 9478), (256, 9532), (258, 9553), (261, 9574),

Gene: Minima\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Minima\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: MirimarMandM\_12 Start: 7615, Stop: 9720, Start Num: 10

Candidate Starts for MirimarMandM\_12:

(Start: 10 @7615 has 135 MA's), (Start: 12 @7636 has 3 MA's), (28, 7813), (30, 7822), (33, 7846), (34, 7918), (36, 7942), (42, 8041), (43, 8098), (46, 8119), (47, 8131), (49, 8140), (60, 8347), (62, 8365), (81, 8452), (92, 8521), (98, 8533), (105, 8581), (111, 8611), (112, 8626), (119, 8680), (124, 8710), (125, 8713), (130, 8734), (135, 8764), (141, 8791), (146, 8824), (153, 8863), (158, 8890), (159, 8896), (162, 8911), (163, 8926), (176, 8956), (181, 8977), (184, 8989), (185, 8995), (195, 9043), (199, 9079), (211, 9127), (215, 9154), (218, 9175), (225, 9238), (229, 9262), (235, 9319), (246, 9424), (250, 9445), (252, 9457), (256, 9499), (258, 9520), (261, 9541),

Gene: MrGloopy\_18 Start: 12558, Stop: 15119, Start Num: 5

Candidate Starts for MrGloopy\_18:

(3, 12537), (Start: 5 @12558 has 55 MA's), (9, 12606), (13, 12639), (15, 12687), (17, 12711), (18, 12723), (26, 12783), (30, 12831), (31, 12846), (32, 12852), (39, 12972), (40, 13014), (44, 13110), (45, 13113), (48, 13143), (52, 13197), (59, 13338), (60, 13359), (63, 13383), (67, 13404), (68, 13413), (76, 13464), (77, 13482), (98, 13668), (117, 13812), (123, 13845), (127, 13872), (131, 13890), (133, 13896), (136, 13920), (138, 13929), (146, 13977), (150, 14004), (156, 14034), (157, 14040), (164, 14091), (168, 14106), (170, 14118), (171, 14124), (172, 14127), (174, 14136), (181, 14163), (184, 14175), (186, 14184), (188, 14196), (189, 14202), (193, 14223), (197, 14256), (205, 14295), (214, 14346), (215, 14349), (216, 14358), (217, 14361), (219, 14376), (228, 14466), (232, 14502), (243, 14610), (248, 14646), (259, 14742), (260, 14745), (267, 14799), (270, 14838), (274, 14886), (275, 14895), (276, 14919), (279, 14937), (282, 14988), (284, 15012), (285, 15030), (286, 15060),

Gene: MrGreen\_12 Start: 7553, Stop: 9658, Start Num: 10

Candidate Starts for MrGreen\_12:

(Start: 10 @7553 has 135 MA's), (Start: 12 @7574 has 3 MA's), (28, 7751), (30, 7760), (33, 7784), (34, 7856), (36, 7880), (37, 7886), (42, 7979), (43, 8036), (46, 8057), (47, 8069), (49, 8078), (60, 8285), (62, 8303), (81, 8390), (92, 8459), (98, 8471), (105, 8519), (111, 8549), (112, 8564), (121, 8627), (125, 8651), (130, 8672), (134, 8696), (135, 8702), (141, 8729), (146, 8762), (153, 8801), (159, 8834), (162, 8849), (163, 8864), (175, 8891), (184, 8927), (185, 8933), (195, 8981), (211, 9065), (215, 9092), (218,

9113), (225, 9176), (229, 9200), (235, 9257), (246, 9362), (250, 9383), (252, 9395), (256, 9437), (258, 9458), (261, 9479), (274, 9608),

Gene: Myram\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Myram\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Naby\_12 Start: 7240, Stop: 9339, Start Num: 10

Candidate Starts for Naby\_12:

(Start: 10 @7240 has 135 MA's), (11, 7255), (Start: 12 @7261 has 3 MA's), (16, 7321), (22, 7375), (28, 7438), (30, 7447), (33, 7471), (34, 7543), (36, 7567), (42, 7666), (43, 7723), (47, 7756), (49, 7765), (71, 8032), (81, 8077), (97, 8149), (100, 8179), (111, 8236), (112, 8251), (122, 8320), (132, 8365), (134, 8383), (135, 8389), (146, 8449), (147, 8455), (149, 8470), (153, 8488), (158, 8515), (170, 8557), (181, 8602), (185, 8620), (191, 8647), (208, 8734), (211, 8752), (215, 8779), (222, 8821), (225, 8863), (226, 8866), (229, 8887), (242, 8998), (250, 9070), (252, 9082), (255, 9112), (256, 9124), (258, 9145), (262, 9169), (272, 9253), (274, 9289),

Gene: Namsahir\_12 Start: 7603, Stop: 9708, Start Num: 10

Candidate Starts for Namsahir\_12:

(Start: 10 @7603 has 135 MA's), (Start: 12 @7624 has 3 MA's), (28, 7801), (30, 7810), (33, 7834), (34, 7906), (36, 7930), (42, 8029), (46, 8107), (47, 8119), (49, 8128), (60, 8335), (62, 8353), (81, 8440), (92, 8509), (98, 8521), (105, 8569), (111, 8599), (112, 8614), (119, 8668), (124, 8698), (125, 8701), (130, 8722), (135, 8752), (141, 8779), (146, 8812), (153, 8851), (158, 8878), (159, 8884), (162, 8899), (163, 8914), (175, 8941), (176, 8944), (181, 8965), (184, 8977), (185, 8983), (195, 9031), (199, 9067), (211, 9115), (215, 9142), (218, 9163), (225, 9226), (229, 9250), (235, 9307), (246, 9412), (250, 9433), (256, 9487), (258, 9508), (261, 9529),

Gene: Nancia\_14 Start: 9717, Stop: 12278, Start Num: 5

Candidate Starts for Nancia\_14:

(3, 9696), (Start: 5 @9717 has 55 MA's), (9, 9765), (15, 9846), (17, 9870), (26, 9942), (30, 9990), (31, 10005), (32, 10011), (39, 10131), (40, 10173), (44, 10269), (45, 10272), (48, 10302), (56, 10440), (60, 10518), (67, 10563), (68, 10572), (76, 10623), (77, 10641), (78, 10653), (83, 10677), (107, 10893), (118, 10983), (123, 11004), (127, 11031), (131, 11049), (133, 11055), (136, 11079), (138, 11088), (146, 11136), (150, 11163), (156, 11193), (164, 11250), (168, 11265), (170, 11277), (171, 11283), (172, 11286), (174, 11295), (181, 11322), (184, 11334), (186, 11343), (188, 11355), (189, 11361), (194, 11385), (196, 11406), (197, 11415), (199, 11430), (205, 11454), (214, 11505), (215, 11508), (217, 11520), (224, 11595), (228, 11625), (232, 11661), (243, 11769), (244, 11781), (248, 11805), (259, 11901), (260, 11904), (265, 11937), (267, 11958), (270, 11997), (273, 12015), (274, 12045), (275, 12054), (276, 12078), (283, 12153), (286, 12219),

Gene: NeumannU\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for NeumannU\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209,

9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Niffler\_12 Start: 7621, Stop: 9726, Start Num: 10

Candidate Starts for Niffler\_12:

(Start: 10 @7621 has 135 MA's), (Start: 12 @7642 has 3 MA's), (28, 7819), (30, 7828), (33, 7852), (34, 7924), (36, 7948), (42, 8047), (43, 8104), (46, 8125), (47, 8137), (49, 8146), (60, 8353), (62, 8371), (81, 8458), (92, 8527), (98, 8539), (105, 8587), (111, 8617), (112, 8632), (124, 8716), (125, 8719), (130, 8740), (135, 8770), (141, 8797), (146, 8830), (153, 8869), (158, 8896), (159, 8902), (162, 8917), (163, 8932), (176, 8962), (181, 8983), (184, 8995), (185, 9001), (195, 9049), (199, 9085), (211, 9133), (215, 9160), (218, 9181), (225, 9244), (229, 9268), (235, 9325), (246, 9430), (250, 9451), (256, 9505), (258, 9526), (261, 9547),

Gene: Nobel\_12 Start: 7648, Stop: 9753, Start Num: 10

Candidate Starts for Nobel\_12:

(Start: 10 @7648 has 135 MA's), (Start: 12 @7669 has 3 MA's), (28, 7846), (30, 7855), (33, 7879), (34, 7951), (36, 7975), (42, 8074), (43, 8131), (46, 8152), (47, 8164), (49, 8173), (60, 8380), (62, 8398), (81, 8485), (92, 8554), (98, 8566), (105, 8614), (111, 8644), (112, 8659), (124, 8743), (125, 8746), (130, 8767), (135, 8797), (141, 8824), (146, 8857), (153, 8896), (158, 8923), (159, 8929), (162, 8944), (163, 8959), (176, 8989), (181, 9010), (184, 9022), (185, 9028), (195, 9076), (199, 9112), (211, 9160), (215, 9187), (218, 9208), (225, 9271), (229, 9295), (235, 9352), (246, 9457), (250, 9478), (256, 9532), (258, 9553), (261, 9574),

Gene: Noelani\_12 Start: 7514, Stop: 9619, Start Num: 10

Candidate Starts for Noelani\_12:

(Start: 10 @7514 has 135 MA's), (Start: 12 @7535 has 3 MA's), (27, 7703), (28, 7712), (33, 7745), (34, 7817), (36, 7841), (43, 7997), (46, 8018), (49, 8039), (60, 8246), (62, 8264), (81, 8351), (92, 8420), (105, 8480), (111, 8510), (112, 8525), (116, 8561), (121, 8588), (124, 8609), (130, 8633), (134, 8657), (135, 8663), (141, 8690), (153, 8762), (158, 8789), (162, 8810), (163, 8825), (175, 8852), (176, 8855), (181, 8876), (184, 8888), (185, 8894), (195, 8942), (209, 9017), (211, 9026), (215, 9053), (218, 9074), (225, 9137), (229, 9161), (231, 9185), (235, 9218), (242, 9272), (250, 9344), (252, 9356), (256, 9398), (258, 9419), (261, 9440), (269, 9518), (274, 9569),

Gene: OMalley\_14 Start: 9738, Stop: 12296, Start Num: 5

Candidate Starts for OMalley\_14:

(Start: 5 @9738 has 55 MA's), (7, 9747), (8, 9777), (15, 9867), (26, 9963), (29, 10008), (31, 10026), (40, 10194), (44, 10290), (45, 10293), (46, 10308), (54, 10395), (70, 10599), (71, 10602), (79, 10686), (117, 10992), (127, 11052), (131, 11070), (133, 11076), (138, 11109), (140, 11121), (146, 11157), (150, 11184), (155, 11208), (156, 11214), (164, 11271), (169, 11295), (171, 11304), (175, 11319), (181, 11343), (184, 11355), (188, 11376), (189, 11382), (193, 11403), (196, 11427), (197, 11436), (200, 11454), (205, 11475), (207, 11481), (209, 11493), (214, 11526), (215, 11529), (217, 11541), (219, 11556), (220, 11559), (228, 11646), (238, 11736), (239, 11739), (243, 11790), (251, 11847), (253, 11856), (254, 11868), (259, 11922), (260, 11925), (267, 11979), (270, 12018), (274, 12066), (275, 12075), (276, 12099), (278, 12111), (285, 12207), (286, 12237),

Gene: Oaklynn\_12 Start: 7555, Stop: 9639, Start Num: 12

Candidate Starts for Oaklynn\_12:

(Start: 10 @7534 has 135 MA's), (Start: 12 @7555 has 3 MA's), (28, 7732), (30, 7741), (33, 7765), (34, 7837), (36, 7861), (37, 7867), (43, 8017), (46, 8038), (47, 8050), (49, 8059), (60, 8266), (62, 8284), (81, 8371), (92, 8440), (98, 8452), (105, 8500), (111, 8530), (112, 8545), (121, 8608), (124, 8629), (125, 8632), (135, 8683), (141, 8710), (146, 8743), (153, 8782), (158, 8809), (162, 8830), (163, 8845), (175, 8872), (181, 8896), (184, 8908), (185, 8914), (195, 8962), (211, 9046), (215, 9073), (218, 9094), (225, 9157), (229, 9181), (231, 9205), (233, 9226), (246, 9343), (250, 9364), (252, 9376), (256, 9418), (258,

9439), (261, 9460), (274, 9589),

Gene: Octopus\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Octopus\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: OdetoJoy\_14 Start: 7627, Stop: 9732, Start Num: 10

Candidate Starts for OdetoJoy\_14:

(Start: 10 @7627 has 135 MA's), (Start: 12 @7648 has 3 MA's), (28, 7825), (30, 7834), (33, 7858), (34, 7930), (36, 7954), (37, 7960), (43, 8110), (46, 8131), (47, 8143), (49, 8152), (60, 8359), (62, 8377), (81, 8464), (92, 8533), (98, 8545), (105, 8593), (111, 8623), (112, 8638), (121, 8701), (124, 8722), (130, 8746), (134, 8770), (135, 8776), (141, 8803), (146, 8836), (153, 8875), (158, 8902), (162, 8923), (163, 8938), (175, 8965), (176, 8968), (181, 8989), (184, 9001), (185, 9007), (195, 9055), (199, 9091), (209, 9130), (211, 9139), (215, 9166), (218, 9187), (225, 9250), (229, 9274), (235, 9331), (246, 9436), (250, 9457), (252, 9469), (256, 9511), (258, 9532), (261, 9553), (274, 9682),

Gene: Otwor\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Otwor\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: OurGirlNessie\_14 Start: 9709, Stop: 12270, Start Num: 5

Candidate Starts for OurGirlNessie\_14:

(3, 9688), (Start: 5 @9709 has 55 MA's), (9, 9757), (15, 9838), (17, 9862), (26, 9934), (30, 9982), (31, 9997), (32, 10003), (40, 10165), (44, 10261), (48, 10294), (56, 10432), (60, 10510), (63, 10534), (67, 10555), (68, 10564), (76, 10615), (77, 10633), (78, 10645), (83, 10669), (107, 10885), (118, 10975), (123, 10996), (127, 11023), (131, 11041), (133, 11047), (136, 11071), (138, 11080), (146, 11128), (150, 11155), (156, 11185), (164, 11242), (168, 11257), (170, 11269), (171, 11275), (172, 11278), (174, 11287), (181, 11314), (184, 11326), (186, 11335), (188, 11347), (189, 11353), (194, 11377), (196, 11398), (197, 11407), (199, 11422), (205, 11446), (209, 11464), (214, 11497), (215, 11500), (217, 11512), (224, 11587), (228, 11617), (232, 11653), (234, 11674), (243, 11761), (244, 11773), (247, 11794), (248, 11797), (259, 11893), (260, 11896), (265, 11929), (267, 11950), (270, 11989), (273, 12007), (274, 12037), (275, 12046), (283, 12145), (286, 12211),

Gene: Owens\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for Owens\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250,

9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: PaoPu\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for PaoPu\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Picconator\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for Picconator\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Picnic\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Picnic\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: PinkFriday\_14 Start: 9750, Stop: 12308, Start Num: 5

Candidate Starts for PinkFriday\_14:

(Start: 5 @9750 has 55 MA's), (7, 9759), (15, 9879), (30, 10023), (31, 10038), (40, 10206), (44, 10302), (50, 10347), (53, 10392), (63, 10575), (67, 10596), (68, 10605), (70, 10611), (73, 10623), (76, 10656), (86, 10743), (123, 11037), (126, 11058), (127, 11064), (131, 11082), (133, 11088), (136, 11112), (146, 11169), (150, 11196), (156, 11226), (157, 11232), (164, 11283), (168, 11298), (170, 11310), (172, 11319), (174, 11328), (181, 11355), (184, 11367), (186, 11376), (188, 11388), (189, 11394), (197, 11448), (200, 11466), (204, 11484), (205, 11487), (208, 11496), (209, 11505), (212, 11517), (214, 11538), (215, 11541), (217, 11553), (219, 11568), (227, 11652), (228, 11658), (232, 11694), (239, 11751), (243, 11802), (244, 11814), (251, 11859), (259, 11934), (260, 11937), (264, 11967), (265, 11970), (270, 12030), (273, 12048), (274, 12078), (275, 12087), (276, 12111), (278, 12123), (285, 12219), (286, 12249),

Gene: PitaDog\_14 Start: 9708, Stop: 12269, Start Num: 5

Candidate Starts for PitaDog\_14:

(3, 9687), (Start: 5 @9708 has 55 MA's), (9, 9756), (15, 9837), (17, 9861), (26, 9933), (30, 9981), (31, 9996), (32, 10002), (40, 10164), (44, 10260), (48, 10293), (56, 10431), (60, 10509), (67, 10554), (68, 10563), (76, 10614), (77, 10632), (83, 10668), (107, 10884), (118, 10974), (123, 10995), (127, 11022), (131, 11040), (133, 11046), (136, 11070), (138, 11079), (146, 11127), (150, 11154), (156, 11184), (164, 11241), (168, 11256), (170, 11268), (171, 11274), (172, 11277), (174, 11286), (181, 11313), (184, 11325), (186, 11334), (188, 11346), (189, 11352), (194, 11376), (196, 11397), (197, 11406),

(199, 11421), (205, 11445), (209, 11463), (214, 11496), (215, 11499), (217, 11511), (228, 11616), (232, 11652), (243, 11760), (244, 11772), (248, 11796), (259, 11892), (260, 11895), (265, 11928), (267, 11949), (270, 11988), (273, 12006), (274, 12036), (275, 12045), (276, 12069), (283, 12144), (286, 12210),

Gene: PoRanda\_12 Start: 7615, Stop: 9720, Start Num: 10

Candidate Starts for PoRanda\_12:

(Start: 10 @7615 has 135 MA's), (Start: 12 @7636 has 3 MA's), (28, 7813), (30, 7822), (33, 7846), (34, 7918), (36, 7942), (42, 8041), (43, 8098), (46, 8119), (47, 8131), (49, 8140), (60, 8347), (62, 8365), (81, 8452), (92, 8521), (98, 8533), (105, 8581), (111, 8611), (112, 8626), (119, 8680), (124, 8710), (125, 8713), (130, 8734), (135, 8764), (141, 8791), (146, 8824), (153, 8863), (158, 8890), (159, 8896), (162, 8911), (163, 8926), (176, 8956), (181, 8977), (184, 8989), (185, 8995), (195, 9043), (199, 9079), (211, 9127), (215, 9154), (218, 9175), (225, 9238), (229, 9262), (235, 9319), (246, 9424), (250, 9445), (252, 9457), (256, 9499), (258, 9520), (261, 9541),

Gene: Pondwater\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Pondwater\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Potatoes\_18 Start: 12619, Stop: 15180, Start Num: 5

Candidate Starts for Potatoes\_18:

(3, 12598), (Start: 5 @12619 has 55 MA's), (9, 12667), (13, 12700), (15, 12748), (17, 12772), (18, 12784), (26, 12844), (30, 12892), (31, 12907), (32, 12913), (39, 13033), (40, 13075), (43, 13168), (44, 13171), (45, 13174), (48, 13204), (52, 13258), (59, 13399), (60, 13420), (63, 13444), (67, 13465), (68, 13474), (76, 13525), (77, 13543), (80, 13567), (98, 13729), (117, 13873), (123, 13906), (127, 13933), (131, 13951), (133, 13957), (136, 13981), (138, 13990), (146, 14038), (150, 14065), (155, 14089), (156, 14095), (157, 14101), (164, 14152), (168, 14167), (170, 14179), (171, 14185), (172, 14188), (174, 14197), (181, 14224), (184, 14236), (186, 14245), (188, 14257), (189, 14263), (193, 14284), (197, 14317), (205, 14356), (214, 14407), (215, 14410), (216, 14419), (217, 14422), (219, 14437), (227, 14521), (228, 14527), (232, 14563), (243, 14671), (244, 14683), (248, 14707), (259, 14803), (260, 14806), (267, 14860), (270, 14899), (274, 14947), (275, 14956), (276, 14980), (279, 14998), (282, 15049), (284, 15073), (285, 15091), (286, 15121),

Gene: Pterodactyl\_14 Start: 9710, Stop: 12271, Start Num: 5

Candidate Starts for Pterodactyl\_14:

(3, 9689), (Start: 5 @9710 has 55 MA's), (9, 9758), (15, 9839), (17, 9863), (26, 9935), (30, 9983), (31, 9998), (32, 10004), (40, 10166), (44, 10262), (48, 10295), (56, 10433), (60, 10511), (67, 10556), (68, 10565), (76, 10616), (77, 10634), (78, 10646), (83, 10670), (107, 10886), (123, 10997), (127, 11024), (131, 11042), (133, 11048), (136, 11072), (138, 11081), (146, 11129), (150, 11156), (156, 11186), (164, 11243), (168, 11258), (170, 11270), (171, 11276), (172, 11279), (174, 11288), (181, 11315), (184, 11327), (186, 11336), (188, 11348), (189, 11354), (194, 11378), (196, 11399), (197, 11408), (199, 11423), (205, 11447), (214, 11498), (215, 11501), (217, 11513), (224, 11588), (228, 11618), (232, 11654), (243, 11762), (244, 11774), (248, 11798), (259, 11894), (260, 11897), (265, 11930), (267, 11951), (270, 11990), (273, 12008), (274, 12038), (275, 12047), (283, 12146), (286, 12212),

Gene: Publix\_12 Start: 7603, Stop: 9708, Start Num: 10

Candidate Starts for Publix\_12:

(Start: 10 @7603 has 135 MA's), (Start: 12 @7624 has 3 MA's), (28, 7801), (30, 7810), (33, 7834), (34, 7906), (36, 7930), (42, 8029), (46, 8107), (47, 8119), (49, 8128), (60, 8335), (62, 8353), (81, 8440), (92, 8509), (98, 8521), (105, 8569), (111, 8599), (112, 8614), (119, 8668), (124, 8698), (125, 8701), (130, 8722), (135, 8752), (141, 8779), (146, 8812), (153, 8851), (158, 8878), (159, 8884), (162, 8899), (163, 8914), (175, 8941), (176, 8944), (181, 8965), (184, 8977), (185, 8983), (195, 9031), (199, 9067), (211, 9115), (215, 9142), (218, 9163), (225, 9226), (229, 9250), (235, 9307), (246, 9412), (250, 9433), (256, 9487), (258, 9508), (261, 9529),

Gene: Puddles3\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Puddles3\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: PuffyCat\_12 Start: 7573, Stop: 9678, Start Num: 10

Candidate Starts for PuffyCat\_12:

(Start: 10 @7573 has 135 MA's), (Start: 12 @7594 has 3 MA's), (28, 7771), (30, 7780), (33, 7804), (34, 7876), (36, 7900), (42, 7999), (43, 8056), (46, 8077), (47, 8089), (49, 8098), (60, 8305), (62, 8323), (81, 8410), (92, 8479), (98, 8491), (105, 8539), (111, 8569), (112, 8584), (124, 8668), (125, 8671), (130, 8692), (135, 8722), (141, 8749), (146, 8782), (153, 8821), (158, 8848), (159, 8854), (162, 8869), (163, 8884), (176, 8914), (181, 8935), (184, 8947), (185, 8953), (195, 9001), (199, 9037), (211, 9085), (215, 9112), (218, 9133), (225, 9196), (229, 9220), (235, 9277), (246, 9382), (250, 9403), (256, 9457), (258, 9478), (261, 9499),

Gene: Pumancara\_14 Start: 9749, Stop: 12307, Start Num: 5

Candidate Starts for Pumancara\_14:

(Start: 5 @9749 has 55 MA's), (7, 9758), (15, 9878), (30, 10022), (31, 10037), (40, 10205), (44, 10301), (50, 10346), (53, 10391), (63, 10574), (67, 10595), (68, 10604), (70, 10610), (73, 10622), (76, 10655), (86, 10742), (99, 10865), (109, 10940), (117, 11003), (123, 11036), (126, 11057), (127, 11063), (131, 11081), (133, 11087), (136, 11111), (144, 11153), (146, 11168), (147, 11174), (161, 11252), (165, 11285), (167, 11294), (171, 11315), (174, 11327), (181, 11354), (184, 11366), (186, 11375), (188, 11387), (189, 11393), (190, 11396), (194, 11417), (197, 11447), (200, 11465), (204, 11483), (205, 11486), (208, 11495), (209, 11504), (214, 11537), (215, 11540), (217, 11552), (219, 11567), (227, 11651), (228, 11657), (232, 11693), (239, 11750), (243, 11801), (244, 11813), (251, 11858), (259, 11933), (260, 11936), (264, 11966), (270, 12029), (274, 12077), (275, 12086), (276, 12110), (278, 12122), (286, 12248),

Gene: Quaker\_12 Start: 7533, Stop: 9638, Start Num: 10

Candidate Starts for Quaker\_12:

(Start: 10 @7533 has 135 MA's), (Start: 12 @7554 has 3 MA's), (28, 7731), (30, 7740), (33, 7764), (34, 7836), (36, 7860), (37, 7866), (42, 7959), (43, 8016), (46, 8037), (47, 8049), (49, 8058), (60, 8265), (62, 8283), (81, 8370), (92, 8439), (98, 8451), (105, 8499), (111, 8529), (112, 8544), (121, 8607), (125, 8631), (130, 8652), (134, 8676), (135, 8682), (141, 8709), (146, 8742), (153, 8781), (162, 8829), (163, 8844), (175, 8871), (176, 8874), (184, 8907), (185, 8913), (195, 8961), (211, 9045), (215, 9072), (218, 9093), (225, 9156), (229, 9180), (235, 9237), (246, 9342), (250, 9363), (252, 9375), (256, 9417), (258, 9438), (261, 9459), (274, 9588),

Gene: RAP15\_18 Start: 12624, Stop: 15185, Start Num: 5

Candidate Starts for RAP15\_18:

(3, 12603), (Start: 5 @12624 has 55 MA's), (9, 12672), (13, 12705), (15, 12753), (17, 12777), (18, 12789), (26, 12849), (30, 12897), (31, 12912), (32, 12918), (39, 13038), (40, 13080), (44, 13176), (45, 13179), (48, 13209), (52, 13263), (53, 13266), (59, 13404), (60, 13425), (63, 13449), (67, 13470), (68, 13479), (76, 13530), (77, 13548), (98, 13734), (117, 13878), (123, 13911), (127, 13938), (131, 13956), (133, 13962), (136, 13986), (138, 13995), (146, 14043), (150, 14070), (151, 14073), (155, 14094), (156, 14100), (157, 14106), (164, 14157), (168, 14172), (170, 14184), (171, 14190), (172, 14193), (174, 14202), (181, 14229), (184, 14241), (186, 14250), (188, 14262), (189, 14268), (193, 14289), (197, 14322), (205, 14361), (214, 14412), (215, 14415), (216, 14424), (217, 14427), (219, 14442), (228, 14532), (232, 14568), (243, 14676), (248, 14712), (259, 14808), (260, 14811), (267, 14865), (270, 14904), (274, 14952), (275, 14961), (276, 14985), (279, 15003), (282, 15054), (284, 15078), (285, 15096), (286, 15126),

Gene: Rhogar\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for Rhogar\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Rhysand\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Rhysand\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: Riovina\_14 Start: 9738, Stop: 12296, Start Num: 5

Candidate Starts for Riovina\_14:

(Start: 5 @9738 has 55 MA's), (7, 9747), (8, 9777), (15, 9867), (26, 9963), (29, 10008), (31, 10026), (40, 10194), (44, 10290), (45, 10293), (46, 10308), (54, 10395), (70, 10599), (71, 10602), (79, 10686), (117, 10992), (127, 11052), (131, 11070), (133, 11076), (138, 11109), (140, 11121), (146, 11157), (150, 11184), (155, 11208), (156, 11214), (164, 11271), (169, 11295), (171, 11304), (175, 11319), (181, 11343), (184, 11355), (188, 11376), (189, 11382), (193, 11403), (196, 11427), (197, 11436), (200, 11454), (205, 11475), (207, 11481), (209, 11493), (214, 11526), (215, 11529), (217, 11541), (219, 11556), (220, 11559), (228, 11646), (238, 11736), (239, 11739), (243, 11790), (251, 11847), (253, 11856), (254, 11868), (259, 11922), (260, 11925), (267, 11979), (270, 12018), (274, 12066), (275, 12075), (276, 12099), (278, 12111), (285, 12207), (286, 12237),

Gene: Rira\_12 Start: 7579, Stop: 9684, Start Num: 10

Candidate Starts for Rira\_12:

(Start: 10 @7579 has 135 MA's), (Start: 12 @7600 has 3 MA's), (28, 7777), (30, 7786), (33, 7810), (34, 7882), (36, 7906), (42, 8005), (46, 8083), (47, 8095), (49, 8104), (60, 8311), (62, 8329), (81, 8416), (92, 8485), (98, 8497), (105, 8545), (111, 8575), (112, 8590), (119, 8644), (124, 8674), (125, 8677), (130, 8698), (135, 8728), (141, 8755), (146, 8788), (153, 8827), (158, 8854), (159, 8860), (162, 8875), (163, 8890), (175, 8917), (176, 8920), (181, 8941), (184, 8953), (185, 8959), (195, 9007), (199, 9043), (211, 9091), (215, 9118), (218, 9139), (225, 9202), (229, 9226), (235, 9283), (246, 9388), (250, 9409), (256, 9463), (258, 9484), (261, 9505),

Gene: Riverdale\_18 Start: 12554, Stop: 15115, Start Num: 5

Candidate Starts for Riverdale\_18:

(3, 12533), (Start: 5 @12554 has 55 MA's), (9, 12602), (13, 12635), (15, 12683), (17, 12707), (18, 12719), (26, 12779), (30, 12827), (31, 12842), (32, 12848), (39, 12968), (40, 13010), (44, 13106), (45, 13109), (48, 13139), (52, 13193), (59, 13334), (60, 13355), (63, 13379), (67, 13400), (68, 13409), (76, 13460), (77, 13478), (117, 13808), (123, 13841), (127, 13868), (131, 13886), (133, 13892), (136, 13916), (138, 13925), (146, 13973), (150, 14000), (156, 14030), (157, 14036), (164, 14087), (168, 14102), (170, 14114), (171, 14120), (172, 14123), (181, 14159), (184, 14171), (186, 14180), (188, 14192), (189, 14198), (193, 14219), (197, 14252), (205, 14291), (209, 14309), (214, 14342), (215, 14345), (216, 14354), (217, 14357), (219, 14372), (228, 14462), (232, 14498), (243, 14606), (248, 14642), (251, 14663), (259, 14738), (260, 14741), (267, 14795), (270, 14834), (274, 14882), (275, 14891), (276, 14915), (279, 14933), (282, 14984), (284, 15008), (285, 15026), (286, 15056),

Gene: RoscoWindex\_12 Start: 7553, Stop: 9658, Start Num: 10

Candidate Starts for RoscoWindex\_12:

(Start: 10 @7553 has 135 MA's), (Start: 12 @7574 has 3 MA's), (28, 7751), (30, 7760), (33, 7784), (34, 7856), (36, 7880), (37, 7886), (43, 8036), (46, 8057), (47, 8069), (49, 8078), (60, 8285), (62, 8303), (81, 8390), (92, 8459), (98, 8471), (105, 8519), (111, 8549), (112, 8564), (116, 8600), (121, 8627), (124, 8648), (130, 8672), (134, 8696), (135, 8702), (141, 8729), (146, 8762), (153, 8801), (158, 8828), (162, 8849), (163, 8864), (175, 8891), (176, 8894), (181, 8915), (184, 8927), (185, 8933), (195, 8981), (209, 9056), (211, 9065), (215, 9092), (218, 9113), (225, 9176), (229, 9200), (235, 9257), (246, 9362), (250, 9383), (252, 9395), (256, 9437), (258, 9458), (261, 9479),

Gene: Rozby\_18 Start: 12555, Stop: 15116, Start Num: 5

Candidate Starts for Rozby\_18:

(3, 12534), (Start: 5 @12555 has 55 MA's), (9, 12603), (13, 12636), (15, 12684), (17, 12708), (18, 12720), (26, 12780), (30, 12828), (31, 12843), (32, 12849), (39, 12969), (40, 13011), (44, 13107), (45, 13110), (48, 13140), (52, 13194), (59, 13335), (60, 13356), (63, 13380), (67, 13401), (68, 13410), (76, 13461), (77, 13479), (98, 13665), (117, 13809), (123, 13842), (127, 13869), (131, 13887), (133, 13893), (136, 13917), (138, 13926), (146, 13974), (150, 14001), (156, 14031), (157, 14037), (164, 14088), (168, 14103), (170, 14115), (171, 14121), (172, 14124), (181, 14160), (184, 14172), (186, 14181), (188, 14193), (189, 14199), (193, 14220), (197, 14253), (205, 14292), (209, 14310), (214, 14343), (215, 14346), (216, 14355), (217, 14358), (219, 14373), (228, 14463), (232, 14499), (243, 14607), (248, 14643), (251, 14664), (259, 14739), (260, 14742), (267, 14796), (270, 14835), (274, 14883), (275, 14892), (276, 14916), (279, 14934), (282, 14985), (284, 15009), (285, 15027), (286, 15057),

Gene: Sachet\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Sachet\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Sage7\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Sage7\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124,

8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: SantasSleigh\_12 Start: 7576, Stop: 9681, Start Num: 10

Candidate Starts for SantasSleigh\_12:

(Start: 10 @7576 has 135 MA's), (Start: 12 @7597 has 3 MA's), (28, 7774), (30, 7783), (33, 7807), (34, 7879), (36, 7903), (37, 7909), (43, 8059), (46, 8080), (47, 8092), (49, 8101), (60, 8308), (62, 8326), (81, 8413), (92, 8482), (98, 8494), (105, 8542), (111, 8572), (112, 8587), (116, 8623), (121, 8650), (124, 8671), (130, 8695), (134, 8719), (135, 8725), (141, 8752), (146, 8785), (153, 8824), (158, 8851), (162, 8872), (163, 8887), (175, 8914), (176, 8917), (181, 8938), (184, 8950), (185, 8956), (195, 9004), (209, 9079), (211, 9088), (215, 9115), (218, 9136), (225, 9199), (229, 9223), (235, 9280), (246, 9385), (250, 9406), (252, 9418), (256, 9460), (258, 9481), (261, 9502),

Gene: Sara\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for Sara\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Savage2526\_18 Start: 12618, Stop: 15179, Start Num: 5

Candidate Starts for Savage2526\_18:

(3, 12597), (Start: 5 @12618 has 55 MA's), (9, 12666), (13, 12699), (15, 12747), (17, 12771), (18, 12783), (26, 12843), (30, 12891), (31, 12906), (32, 12912), (39, 13032), (40, 13074), (44, 13170), (45, 13173), (48, 13203), (52, 13257), (59, 13398), (60, 13419), (63, 13443), (67, 13464), (68, 13473), (76, 13524), (77, 13542), (98, 13728), (117, 13872), (123, 13905), (127, 13932), (131, 13950), (133, 13956), (136, 13980), (138, 13989), (146, 14037), (150, 14064), (156, 14094), (157, 14100), (164, 14151), (168, 14166), (170, 14178), (171, 14184), (172, 14187), (174, 14196), (181, 14223), (184, 14235), (186, 14244), (188, 14256), (189, 14262), (193, 14283), (196, 14307), (197, 14316), (205, 14355), (209, 14373), (214, 14406), (215, 14409), (216, 14418), (217, 14421), (219, 14436), (228, 14526), (232, 14562), (243, 14670), (248, 14706), (259, 14802), (260, 14805), (267, 14859), (270, 14898), (274, 14946), (275, 14955), (276, 14979), (279, 14997), (282, 15048), (284, 15072), (285, 15090), (286, 15120),

Gene: Scamander\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Scamander\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: Scrunchy\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for Scrunchy\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81,

8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Scuttle\_18 Start: 12623, Stop: 15184, Start Num: 5

Candidate Starts for Scuttle\_18:

(3, 12602), (Start: 5 @12623 has 55 MA's), (9, 12671), (13, 12704), (15, 12752), (17, 12776), (18, 12788), (26, 12848), (30, 12896), (31, 12911), (32, 12917), (39, 13037), (40, 13079), (44, 13175), (45, 13178), (48, 13208), (52, 13262), (59, 13403), (60, 13424), (63, 13448), (67, 13469), (68, 13478), (76, 13529), (77, 13547), (80, 13571), (98, 13733), (117, 13877), (123, 13910), (127, 13937), (131, 13955), (133, 13961), (136, 13985), (138, 13994), (146, 14042), (150, 14069), (155, 14093), (156, 14099), (157, 14105), (164, 14156), (168, 14171), (170, 14183), (171, 14189), (172, 14192), (174, 14201), (181, 14228), (184, 14240), (186, 14249), (188, 14261), (189, 14267), (193, 14288), (197, 14321), (205, 14360), (214, 14411), (215, 14414), (216, 14423), (217, 14426), (219, 14441), (227, 14525), (228, 14531), (232, 14567), (243, 14675), (248, 14711), (259, 14807), (260, 14810), (267, 14864), (270, 14903), (274, 14951), (275, 14960), (276, 14984), (279, 15002), (282, 15053), (284, 15077), (285, 15095), (286, 15125),

Gene: SeaWolves\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for SeaWolves\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Sergei\_14 Start: 9744, Stop: 12302, Start Num: 5

Candidate Starts for Sergei\_14:

(Start: 5 @9744 has 55 MA's), (7, 9753), (8, 9783), (15, 9873), (18, 9909), (30, 10017), (31, 10032), (40, 10200), (44, 10296), (63, 10569), (67, 10590), (74, 10620), (76, 10650), (86, 10737), (99, 10860), (109, 10935), (117, 10998), (123, 11031), (126, 11052), (127, 11058), (131, 11076), (133, 11082), (136, 11106), (144, 11148), (146, 11163), (147, 11169), (152, 11196), (161, 11247), (165, 11280), (167, 11289), (171, 11310), (174, 11322), (181, 11349), (184, 11361), (186, 11370), (188, 11382), (189, 11388), (190, 11391), (194, 11412), (197, 11442), (200, 11460), (205, 11481), (208, 11490), (209, 11499), (214, 11532), (215, 11535), (217, 11547), (219, 11562), (227, 11646), (228, 11652), (232, 11688), (239, 11745), (241, 11754), (243, 11796), (251, 11853), (259, 11928), (260, 11931), (264, 11961), (267, 11985), (273, 12042), (274, 12072), (275, 12081), (276, 12105), (278, 12117), (286, 12243),

Gene: Sippinontea\_12 Start: 7533, Stop: 9638, Start Num: 10

Candidate Starts for Sippinontea\_12:

(Start: 10 @7533 has 135 MA's), (Start: 12 @7554 has 3 MA's), (28, 7731), (30, 7740), (33, 7764), (34, 7836), (36, 7860), (37, 7866), (42, 7959), (43, 8016), (46, 8037), (47, 8049), (49, 8058), (60, 8265), (62, 8283), (81, 8370), (92, 8439), (98, 8451), (105, 8499), (111, 8529), (112, 8544), (116, 8580), (121, 8607), (125, 8631), (130, 8652), (134, 8676), (135, 8682), (141, 8709), (146, 8742), (153, 8781), (158, 8808), (162, 8829), (163, 8844), (175, 8871), (176, 8874), (184, 8907), (185, 8913), (195, 8961), (199, 8997), (211, 9045), (215, 9072), (218, 9093), (225, 9156), (229, 9180), (235, 9237), (246, 9342), (250, 9363), (252, 9375), (256, 9417), (258, 9438), (261, 9459), (274, 9588),

Gene: Slentz\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for Slentz\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Slizam\_12 Start: 7579, Stop: 9684, Start Num: 10

Candidate Starts for Slizam\_12:

(Start: 10 @7579 has 135 MA's), (Start: 12 @7600 has 3 MA's), (28, 7777), (30, 7786), (33, 7810), (34, 7882), (36, 7906), (42, 8005), (46, 8083), (47, 8095), (49, 8104), (60, 8311), (62, 8329), (81, 8416), (92, 8485), (98, 8497), (105, 8545), (111, 8575), (112, 8590), (119, 8644), (124, 8674), (125, 8677), (130, 8698), (135, 8728), (141, 8755), (146, 8788), (153, 8827), (158, 8854), (159, 8860), (162, 8875), (163, 8890), (175, 8917), (176, 8920), (181, 8941), (184, 8953), (185, 8959), (195, 9007), (199, 9043), (211, 9091), (215, 9118), (218, 9139), (225, 9202), (229, 9226), (235, 9283), (246, 9388), (250, 9409), (256, 9463), (258, 9484), (261, 9505),

Gene: Snuffles\_13 Start: 7751, Stop: 9856, Start Num: 10

Candidate Starts for Snuffles\_13:

(Start: 10 @7751 has 135 MA's), (Start: 12 @7772 has 3 MA's), (28, 7949), (30, 7958), (33, 7982), (34, 8054), (36, 8078), (42, 8177), (46, 8255), (47, 8267), (49, 8276), (60, 8483), (62, 8501), (81, 8588), (92, 8657), (98, 8669), (105, 8717), (111, 8747), (112, 8762), (119, 8816), (124, 8846), (125, 8849), (130, 8870), (135, 8900), (141, 8927), (146, 8960), (153, 8999), (158, 9026), (159, 9032), (162, 9047), (163, 9062), (175, 9089), (176, 9092), (181, 9113), (184, 9125), (185, 9131), (195, 9179), (199, 9215), (211, 9263), (215, 9290), (218, 9311), (225, 9374), (229, 9398), (235, 9455), (246, 9560), (250, 9581), (256, 9635), (258, 9656), (261, 9677),

Gene: Stem\_12 Start: 7579, Stop: 9684, Start Num: 10

Candidate Starts for Stem\_12:

(Start: 10 @7579 has 135 MA's), (Start: 12 @7600 has 3 MA's), (28, 7777), (30, 7786), (33, 7810), (34, 7882), (36, 7906), (42, 8005), (43, 8062), (46, 8083), (47, 8095), (49, 8104), (60, 8311), (62, 8329), (81, 8416), (92, 8485), (98, 8497), (105, 8545), (111, 8575), (112, 8590), (119, 8644), (124, 8674), (125, 8677), (130, 8698), (135, 8728), (141, 8755), (146, 8788), (153, 8827), (158, 8854), (159, 8860), (162, 8875), (163, 8890), (175, 8917), (176, 8920), (181, 8941), (184, 8953), (185, 8959), (195, 9007), (199, 9043), (211, 9091), (215, 9118), (218, 9139), (225, 9202), (229, 9226), (235, 9283), (246, 9388), (250, 9409), (256, 9463), (258, 9484), (261, 9505),

Gene: Supakev\_14 Start: 9740, Stop: 12298, Start Num: 5

Candidate Starts for Supakev\_14:

(Start: 5 @9740 has 55 MA's), (7, 9749), (8, 9779), (15, 9869), (26, 9965), (29, 10010), (31, 10028), (40, 10196), (44, 10292), (45, 10295), (46, 10310), (54, 10397), (70, 10601), (71, 10604), (79, 10688), (117, 10994), (127, 11054), (131, 11072), (133, 11078), (138, 11111), (140, 11123), (146, 11159), (150, 11186), (155, 11210), (156, 11216), (164, 11273), (169, 11297), (171, 11306), (175, 11321), (181, 11345), (184, 11357), (188, 11378), (189, 11384), (193, 11405), (196, 11429), (197, 11438), (200, 11456), (205, 11477), (207, 11483), (209, 11495), (214, 11528), (215, 11531), (217, 11543), (219, 11558), (220, 11561), (228, 11648), (238, 11738), (239, 11741), (243, 11792), (251, 11849), (253, 11858), (259, 11924), (260, 11927), (267, 11981), (270, 12020), (274, 12068), (275, 12077), (276, 12101), (278, 12113), (285, 12209), (286, 12239),

Gene: TattModd\_18 Start: 12617, Stop: 15178, Start Num: 5

Candidate Starts for TattModd\_18:

(3, 12596), (Start: 5 @12617 has 55 MA's), (9, 12665), (13, 12698), (15, 12746), (17, 12770), (18, 12782), (26, 12842), (30, 12890), (31, 12905), (32, 12911), (39, 13031), (40, 13073), (44, 13169), (45, 13172), (48, 13202), (52, 13256), (59, 13397), (60, 13418), (63, 13442), (67, 13463), (68, 13472), (76, 13523), (77, 13541), (98, 13727), (117, 13871), (123, 13904), (127, 13931), (131, 13949), (133, 13955), (136, 13979), (138, 13988), (146, 14036), (150, 14063), (156, 14093), (157, 14099), (164, 14150), (168, 14165), (170, 14177), (171, 14183), (172, 14186), (174, 14195), (181, 14222), (184, 14234), (186, 14243), (188, 14255), (189, 14261), (193, 14282), (196, 14306), (197, 14315), (205, 14354), (209, 14372), (214, 14405), (215, 14408), (216, 14417), (217, 14420), (219, 14435), (228, 14525), (232, 14561), (243, 14669), (248, 14705), (259, 14801), (260, 14804), (267, 14858), (270, 14897), (274, 14945), (275, 14954), (276, 14978), (279, 14996), (282, 15047), (284, 15071), (285, 15089), (286, 15119),

Gene: TeddyBoy\_12 Start: 7547, Stop: 9652, Start Num: 10

Candidate Starts for TeddyBoy\_12:

(Start: 10 @7547 has 135 MA's), (Start: 12 @7568 has 3 MA's), (28, 7745), (30, 7754), (33, 7778), (34, 7850), (36, 7874), (37, 7880), (43, 8030), (46, 8051), (47, 8063), (49, 8072), (60, 8279), (62, 8297), (81, 8384), (92, 8453), (98, 8465), (105, 8513), (111, 8543), (112, 8558), (116, 8594), (121, 8621), (124, 8642), (130, 8666), (134, 8690), (135, 8696), (141, 8723), (146, 8756), (153, 8795), (158, 8822), (162, 8843), (163, 8858), (175, 8885), (176, 8888), (181, 8909), (184, 8921), (185, 8927), (195, 8975), (209, 9050), (211, 9059), (215, 9086), (218, 9107), (225, 9170), (229, 9194), (235, 9251), (246, 9356), (250, 9377), (252, 9389), (256, 9431), (258, 9452), (261, 9473),

Gene: Temper16\_14 Start: 9744, Stop: 12302, Start Num: 5

Candidate Starts for Temper16\_14:

(Start: 5 @9744 has 55 MA's), (7, 9753), (8, 9783), (15, 9873), (18, 9909), (30, 10017), (31, 10032), (40, 10200), (44, 10296), (63, 10569), (67, 10590), (74, 10620), (76, 10650), (86, 10737), (99, 10860), (109, 10935), (117, 10998), (123, 11031), (126, 11052), (127, 11058), (131, 11076), (133, 11082), (136, 11106), (144, 11148), (146, 11163), (147, 11169), (152, 11196), (161, 11247), (165, 11280), (167, 11289), (171, 11310), (174, 11322), (181, 11349), (184, 11361), (186, 11370), (188, 11382), (189, 11388), (190, 11391), (194, 11412), (197, 11442), (200, 11460), (205, 11481), (208, 11490), (209, 11499), (214, 11532), (215, 11535), (217, 11547), (219, 11562), (227, 11646), (228, 11652), (232, 11688), (239, 11745), (241, 11754), (243, 11796), (251, 11853), (259, 11928), (260, 11931), (264, 11961), (267, 11985), (273, 12042), (274, 12072), (275, 12081), (276, 12105), (278, 12117), (286, 12243),

Gene: TimoTea\_12 Start: 7528, Stop: 9633, Start Num: 10

Candidate Starts for TimoTea\_12:

(Start: 10 @7528 has 135 MA's), (Start: 12 @7549 has 3 MA's), (28, 7726), (30, 7735), (33, 7759), (34, 7831), (36, 7855), (37, 7861), (43, 8011), (46, 8032), (47, 8044), (49, 8053), (60, 8260), (62, 8278), (81, 8365), (92, 8434), (98, 8446), (105, 8494), (111, 8524), (112, 8539), (116, 8575), (121, 8602), (124, 8623), (130, 8647), (134, 8671), (135, 8677), (141, 8704), (146, 8737), (153, 8776), (158, 8803), (162, 8824), (163, 8839), (175, 8866), (176, 8869), (181, 8890), (184, 8902), (185, 8908), (195, 8956), (209, 9031), (211, 9040), (215, 9067), (218, 9088), (225, 9151), (229, 9175), (235, 9232), (246, 9337), (250, 9358), (252, 9370), (256, 9412), (258, 9433), (261, 9454),

Gene: TinyTruffula\_12 Start: 7648, Stop: 9753, Start Num: 10

Candidate Starts for TinyTruffula\_12:

(Start: 10 @7648 has 135 MA's), (Start: 12 @7669 has 3 MA's), (28, 7846), (30, 7855), (33, 7879), (34, 7951), (36, 7975), (42, 8074), (43, 8131), (46, 8152), (47, 8164), (49, 8173), (60, 8380), (62, 8398), (81, 8485), (92, 8554), (98, 8566), (105, 8614), (111, 8644), (112, 8659), (124, 8743), (125, 8746), (130, 8767), (135, 8797), (141, 8824), (146, 8857), (153, 8896), (158, 8923), (159, 8929), (162, 8944), (163, 8959), (176, 8989), (181, 9010), (184, 9022), (185, 9028), (195, 9076), (199, 9112), (211, 9160), (215,

9187), (218, 9208), (225, 9271), (229, 9295), (235, 9352), (246, 9457), (250, 9478), (256, 9532), (258, 9553), (261, 9574),

Gene: TomBrady12\_12 Start: 7580, Stop: 9685, Start Num: 10

Candidate Starts for TomBrady12\_12:

(Start: 10 @7580 has 135 MA's), (Start: 12 @7601 has 3 MA's), (28, 7778), (30, 7787), (33, 7811), (34, 7883), (36, 7907), (42, 8006), (46, 8084), (47, 8096), (49, 8105), (60, 8312), (62, 8330), (81, 8417), (92, 8486), (98, 8498), (105, 8546), (111, 8576), (112, 8591), (119, 8645), (124, 8675), (125, 8678), (130, 8699), (135, 8729), (141, 8756), (146, 8789), (153, 8828), (158, 8855), (159, 8861), (162, 8876), (163, 8891), (175, 8918), (176, 8921), (181, 8942), (184, 8954), (185, 8960), (195, 9008), (199, 9044), (211, 9092), (215, 9119), (218, 9140), (225, 9203), (229, 9227), (235, 9284), (246, 9389), (250, 9410), (256, 9464), (258, 9485), (261, 9506),

Gene: Trackstar\_12 Start: 7648, Stop: 9753, Start Num: 10

Candidate Starts for Trackstar\_12:

(Start: 10 @7648 has 135 MA's), (Start: 12 @7669 has 3 MA's), (28, 7846), (30, 7855), (33, 7879), (34, 7951), (36, 7975), (42, 8074), (43, 8131), (46, 8152), (47, 8164), (49, 8173), (60, 8380), (62, 8398), (81, 8485), (92, 8554), (98, 8566), (105, 8614), (111, 8644), (112, 8659), (119, 8713), (124, 8743), (125, 8746), (130, 8767), (135, 8797), (141, 8824), (146, 8857), (153, 8896), (158, 8923), (159, 8929), (162, 8944), (163, 8959), (176, 8989), (181, 9010), (184, 9022), (185, 9028), (195, 9076), (199, 9112), (211, 9160), (215, 9187), (218, 9208), (225, 9271), (229, 9295), (235, 9352), (246, 9457), (250, 9478), (256, 9532), (258, 9553), (261, 9574),

Gene: Trireme\_12 Start: 7646, Stop: 9751, Start Num: 10

Candidate Starts for Trireme\_12:

(Start: 10 @7646 has 135 MA's), (Start: 12 @7667 has 3 MA's), (28, 7844), (30, 7853), (33, 7877), (34, 7949), (36, 7973), (42, 8072), (43, 8129), (46, 8150), (47, 8162), (49, 8171), (60, 8378), (62, 8396), (81, 8483), (92, 8552), (98, 8564), (105, 8612), (111, 8642), (112, 8657), (119, 8711), (124, 8741), (125, 8744), (130, 8765), (135, 8795), (141, 8822), (146, 8855), (153, 8894), (158, 8921), (159, 8927), (162, 8942), (163, 8957), (176, 8987), (181, 9008), (184, 9020), (185, 9026), (195, 9074), (199, 9110), (211, 9158), (215, 9185), (218, 9206), (225, 9269), (229, 9293), (235, 9350), (246, 9455), (250, 9476), (256, 9530), (258, 9551), (261, 9572),

Gene: Tyrellus\_12 Start: 7546, Stop: 9651, Start Num: 10

Candidate Starts for Tyrellus\_12:

(Start: 10 @7546 has 135 MA's), (Start: 12 @7567 has 3 MA's), (28, 7744), (30, 7753), (33, 7777), (34, 7849), (36, 7873), (37, 7879), (43, 8029), (46, 8050), (47, 8062), (49, 8071), (60, 8278), (62, 8296), (81, 8383), (92, 8452), (98, 8464), (105, 8512), (111, 8542), (112, 8557), (116, 8593), (121, 8620), (124, 8641), (130, 8665), (134, 8689), (135, 8695), (141, 8722), (146, 8755), (153, 8794), (158, 8821), (162, 8842), (163, 8857), (175, 8884), (176, 8887), (181, 8908), (184, 8920), (185, 8926), (195, 8974), (209, 9049), (211, 9058), (215, 9085), (218, 9106), (225, 9169), (229, 9193), (235, 9250), (246, 9355), (250, 9376), (252, 9388), (256, 9430), (258, 9451), (261, 9472),

Gene: Upsilon\_12 Start: 7615, Stop: 9720, Start Num: 10

Candidate Starts for Upsilon\_12:

(Start: 10 @7615 has 135 MA's), (Start: 12 @7636 has 3 MA's), (28, 7813), (30, 7822), (33, 7846), (34, 7918), (36, 7942), (42, 8041), (43, 8098), (46, 8119), (47, 8131), (49, 8140), (60, 8347), (62, 8365), (81, 8452), (92, 8521), (98, 8533), (105, 8581), (111, 8611), (112, 8626), (119, 8680), (124, 8710), (125, 8713), (130, 8734), (135, 8764), (141, 8791), (146, 8824), (153, 8863), (158, 8890), (159, 8896), (162, 8911), (163, 8926), (176, 8956), (181, 8977), (184, 8989), (185, 8995), (195, 9043), (199, 9079), (211, 9127), (215, 9154), (218, 9175), (225, 9238), (229, 9262), (235, 9319), (246, 9424), (250, 9445), (252, 9457), (256, 9499), (258, 9520), (261, 9541),

Gene: UtzChips\_14 Start: 9915, Stop: 12263, Start Num: 6

Candidate Starts for UtzChips\_14:

(Start: 6 @9915 has 8 MA's), (21, 10098), (33, 10194), (38, 10302), (41, 10362), (55, 10557), (57, 10620), (61, 10704), (62, 10716), (63, 10719), (74, 10770), (75, 10821), (85, 10908), (91, 10968), (94, 10992), (103, 11073), (110, 11133), (113, 11154), (121, 11214), (124, 11235), (127, 11244), (137, 11295), (151, 11382), (153, 11391), (177, 11487), (178, 11493), (185, 11526), (202, 11622), (211, 11661), (229, 11799), (236, 11862), (249, 11973), (261, 12078), (266, 12114),

Gene: Vallejo\_18 Start: 12556, Stop: 15117, Start Num: 5

Candidate Starts for Vallejo\_18:

(3, 12535), (Start: 5 @12556 has 55 MA's), (9, 12604), (13, 12637), (15, 12685), (17, 12709), (18, 12721), (26, 12781), (30, 12829), (31, 12844), (32, 12850), (39, 12970), (40, 13012), (44, 13108), (45, 13111), (48, 13141), (52, 13195), (53, 13198), (59, 13336), (60, 13357), (63, 13381), (67, 13402), (68, 13411), (76, 13462), (77, 13480), (98, 13666), (117, 13810), (123, 13843), (127, 13870), (131, 13888), (133, 13894), (136, 13918), (138, 13927), (146, 13975), (150, 14002), (151, 14005), (155, 14026), (156, 14032), (157, 14038), (164, 14089), (168, 14104), (170, 14116), (171, 14122), (172, 14125), (174, 14134), (181, 14161), (184, 14173), (186, 14182), (188, 14194), (189, 14200), (193, 14221), (197, 14254), (205, 14293), (214, 14344), (215, 14347), (216, 14356), (217, 14359), (219, 14374), (228, 14464), (232, 14500), (243, 14608), (248, 14644), (259, 14740), (260, 14743), (267, 14797), (270, 14836), (274, 14884), (275, 14893), (276, 14917), (279, 14935), (282, 14986), (284, 15010), (285, 15028), (286, 15058),

Gene: Vanisius\_12 Start: 7552, Stop: 9657, Start Num: 10

Candidate Starts for Vanisius\_12:

(Start: 10 @7552 has 135 MA's), (Start: 12 @7573 has 3 MA's), (28, 7750), (30, 7759), (33, 7783), (34, 7855), (36, 7879), (37, 7885), (43, 8035), (46, 8056), (47, 8068), (49, 8077), (60, 8284), (62, 8302), (81, 8389), (92, 8458), (98, 8470), (105, 8518), (111, 8548), (112, 8563), (116, 8599), (121, 8626), (124, 8647), (130, 8671), (134, 8695), (135, 8701), (141, 8728), (146, 8761), (153, 8800), (158, 8827), (162, 8848), (163, 8863), (175, 8890), (176, 8893), (181, 8914), (184, 8926), (185, 8932), (195, 8980), (209, 9055), (211, 9064), (215, 9091), (218, 9112), (225, 9175), (229, 9199), (235, 9256), (246, 9361), (250, 9382), (252, 9394), (256, 9436), (258, 9457), (261, 9478),

Gene: VitulaEligans\_12 Start: 7636, Stop: 9741, Start Num: 10

Candidate Starts for VitulaEligans\_12:

(Start: 10 @7636 has 135 MA's), (Start: 12 @7657 has 3 MA's), (28, 7834), (30, 7843), (33, 7867), (34, 7939), (36, 7963), (37, 7969), (43, 8119), (46, 8140), (47, 8152), (49, 8161), (60, 8368), (62, 8386), (81, 8473), (92, 8542), (98, 8554), (105, 8602), (111, 8632), (112, 8647), (121, 8710), (124, 8731), (130, 8755), (134, 8779), (135, 8785), (141, 8812), (146, 8845), (153, 8884), (158, 8911), (162, 8932), (163, 8947), (175, 8974), (176, 8977), (181, 8998), (184, 9010), (185, 9016), (195, 9064), (199, 9100), (209, 9139), (211, 9148), (215, 9175), (218, 9196), (225, 9259), (229, 9283), (235, 9340), (246, 9445), (250, 9466), (252, 9478), (256, 9520), (258, 9541), (261, 9562), (274, 9691),

Gene: Vulture\_14 Start: 9738, Stop: 12296, Start Num: 5

Candidate Starts for Vulture\_14:

(Start: 5 @9738 has 55 MA's), (7, 9747), (8, 9777), (15, 9867), (26, 9963), (31, 10026), (40, 10194), (44, 10290), (45, 10293), (46, 10308), (54, 10395), (56, 10461), (70, 10599), (71, 10602), (79, 10686), (117, 10992), (127, 11052), (131, 11070), (133, 11076), (138, 11109), (140, 11121), (146, 11157), (150, 11184), (155, 11208), (156, 11214), (164, 11271), (169, 11295), (171, 11304), (175, 11319), (181, 11343), (184, 11355), (188, 11376), (189, 11382), (193, 11403), (196, 11427), (197, 11436), (200, 11454), (205, 11475), (207, 11481), (209, 11493), (214, 11526), (215, 11529), (217, 11541), (219, 11556), (220, 11559), (228, 11646), (238, 11736), (239, 11739), (243, 11790), (251, 11847), (253, 11856), (254, 11868), (259, 11922), (260, 11925), (267, 11979), (270, 12018), (274, 12066), (275, 12075), (276, 12099), (278, 12111), (285, 12207), (286, 12237),

Gene: Wawa\_18 Start: 12593, Stop: 15154, Start Num: 5

Candidate Starts for Wawa\_18:

(3, 12572), (Start: 5 @12593 has 55 MA's), (9, 12641), (13, 12674), (15, 12722), (17, 12746), (18, 12758), (26, 12818), (30, 12866), (31, 12881), (32, 12887), (39, 13007), (40, 13049), (44, 13145), (45, 13148), (48, 13178), (52, 13232), (59, 13373), (60, 13394), (63, 13418), (67, 13439), (68, 13448), (76, 13499), (77, 13517), (98, 13703), (117, 13847), (123, 13880), (127, 13907), (131, 13925), (133, 13931), (136, 13955), (138, 13964), (146, 14012), (150, 14039), (151, 14042), (155, 14063), (156, 14069), (157, 14075), (164, 14126), (168, 14141), (170, 14153), (171, 14159), (172, 14162), (174, 14171), (181, 14198), (184, 14210), (186, 14219), (188, 14231), (189, 14237), (193, 14258), (197, 14291), (205, 14330), (214, 14381), (215, 14384), (216, 14393), (217, 14396), (219, 14411), (228, 14501), (232, 14537), (243, 14645), (248, 14681), (259, 14777), (260, 14780), (267, 14834), (270, 14873), (274, 14921), (275, 14930), (276, 14954), (279, 14972), (282, 15023), (284, 15047), (285, 15065), (286, 15095),

Gene: Witch\_12 Start: 7541, Stop: 9646, Start Num: 10

Candidate Starts for Witch\_12:

(Start: 10 @7541 has 135 MA's), (Start: 12 @7562 has 3 MA's), (28, 7739), (30, 7748), (33, 7772), (34, 7844), (36, 7868), (37, 7874), (43, 8024), (46, 8045), (47, 8057), (49, 8066), (60, 8273), (62, 8291), (81, 8378), (92, 8447), (98, 8459), (105, 8507), (111, 8537), (112, 8552), (116, 8588), (121, 8615), (124, 8636), (130, 8660), (134, 8684), (135, 8690), (141, 8717), (146, 8750), (153, 8789), (158, 8816), (162, 8837), (163, 8852), (175, 8879), (176, 8882), (181, 8903), (184, 8915), (185, 8921), (195, 8969), (199, 9005), (211, 9053), (215, 9080), (218, 9101), (225, 9164), (229, 9188), (235, 9245), (246, 9350), (250, 9371), (252, 9383), (256, 9425), (258, 9446), (261, 9467), (274, 9596),

Gene: Wolfpack\_12 Start: 7533, Stop: 9638, Start Num: 10

Candidate Starts for Wolfpack\_12:

(Start: 10 @7533 has 135 MA's), (Start: 12 @7554 has 3 MA's), (28, 7731), (30, 7740), (33, 7764), (34, 7836), (36, 7860), (37, 7866), (42, 7959), (43, 8016), (46, 8037), (47, 8049), (49, 8058), (60, 8265), (62, 8283), (81, 8370), (92, 8439), (98, 8451), (105, 8499), (111, 8529), (112, 8544), (116, 8580), (121, 8607), (125, 8631), (130, 8652), (134, 8676), (135, 8682), (141, 8709), (146, 8742), (153, 8781), (158, 8808), (162, 8829), (163, 8844), (175, 8871), (176, 8874), (184, 8907), (185, 8913), (195, 8961), (199, 8997), (211, 9045), (215, 9072), (218, 9093), (225, 9156), (229, 9180), (235, 9237), (246, 9342), (250, 9363), (252, 9375), (256, 9417), (258, 9438), (261, 9459), (274, 9588),

Gene: WonderBoy\_14 Start: 9710, Stop: 12271, Start Num: 5

Candidate Starts for WonderBoy\_14:

(3, 9689), (Start: 5 @9710 has 55 MA's), (9, 9758), (15, 9839), (17, 9863), (26, 9935), (30, 9983), (31, 9998), (32, 10004), (40, 10166), (44, 10262), (45, 10265), (48, 10295), (56, 10433), (60, 10511), (67, 10556), (68, 10565), (76, 10616), (77, 10634), (78, 10646), (83, 10670), (107, 10886), (118, 10976), (123, 10997), (127, 11024), (131, 11042), (133, 11048), (136, 11072), (138, 11081), (146, 11129), (150, 11156), (156, 11186), (164, 11243), (168, 11258), (170, 11270), (171, 11276), (172, 11279), (174, 11288), (181, 11315), (184, 11327), (186, 11336), (188, 11348), (189, 11354), (194, 11378), (196, 11399), (197, 11408), (199, 11423), (205, 11447), (214, 11498), (215, 11501), (217, 11513), (220, 11531), (228, 11618), (232, 11654), (243, 11762), (244, 11774), (247, 11795), (248, 11798), (251, 11819), (259, 11894), (260, 11897), (265, 11930), (267, 11951), (270, 11990), (273, 12008), (274, 12038), (275, 12047), (283, 12146), (286, 12212),

Gene: Yami\_12 Start: 7552, Stop: 9636, Start Num: 12

Candidate Starts for Yami\_12:

(Start: 10 @7531 has 135 MA's), (Start: 12 @7552 has 3 MA's), (28, 7729), (30, 7738), (33, 7762), (34, 7834), (36, 7858), (42, 7957), (43, 8014), (46, 8035), (47, 8047), (49, 8056), (60, 8263), (62, 8281), (81, 8368), (92, 8437), (98, 8449), (105, 8497), (111, 8527), (112, 8542), (124, 8626), (125, 8629), (130,

8650), (135, 8680), (141, 8707), (146, 8740), (153, 8779), (158, 8806), (159, 8812), (162, 8827), (163, 8842), (176, 8872), (181, 8893), (184, 8905), (185, 8911), (195, 8959), (199, 8995), (211, 9043), (215, 9070), (218, 9091), (225, 9154), (229, 9178), (235, 9235), (246, 9340), (250, 9361), (256, 9415), (258, 9436), (261, 9457),

Gene: Yasuo\_12 Start: 7537, Stop: 9642, Start Num: 10

Candidate Starts for Yasuo\_12:

(Start: 10 @7537 has 135 MA's), (Start: 12 @7558 has 3 MA's), (28, 7735), (30, 7744), (33, 7768), (34, 7840), (36, 7864), (37, 7870), (43, 8020), (46, 8041), (47, 8053), (49, 8062), (60, 8269), (62, 8287), (81, 8374), (92, 8443), (98, 8455), (105, 8503), (111, 8533), (112, 8548), (116, 8584), (121, 8611), (124, 8632), (130, 8656), (134, 8680), (135, 8686), (141, 8713), (146, 8746), (153, 8785), (158, 8812), (162, 8833), (163, 8848), (175, 8875), (176, 8878), (181, 8899), (184, 8911), (185, 8917), (195, 8965), (209, 9040), (211, 9049), (215, 9076), (218, 9097), (225, 9160), (229, 9184), (235, 9241), (246, 9346), (250, 9367), (252, 9379), (256, 9421), (258, 9442), (261, 9463),

Gene: YertPhresh\_12 Start: 7540, Stop: 9645, Start Num: 10

Candidate Starts for YertPhresh\_12:

(Start: 10 @7540 has 135 MA's), (Start: 12 @7561 has 3 MA's), (28, 7738), (30, 7747), (33, 7771), (34, 7843), (36, 7867), (37, 7873), (43, 8023), (46, 8044), (47, 8056), (49, 8065), (60, 8272), (62, 8290), (81, 8377), (92, 8446), (98, 8458), (105, 8506), (111, 8536), (112, 8551), (116, 8587), (121, 8614), (124, 8635), (130, 8659), (134, 8683), (135, 8689), (141, 8716), (146, 8749), (153, 8788), (158, 8815), (162, 8836), (163, 8851), (175, 8878), (176, 8881), (181, 8902), (184, 8914), (185, 8920), (195, 8968), (199, 9004), (211, 9052), (215, 9079), (218, 9100), (225, 9163), (229, 9187), (235, 9244), (246, 9349), (250, 9370), (252, 9382), (256, 9424), (258, 9445), (261, 9466), (274, 9595),

Gene: Yubaba\_12 Start: 7574, Stop: 9679, Start Num: 10

Candidate Starts for Yubaba\_12:

(Start: 10 @7574 has 135 MA's), (Start: 12 @7595 has 3 MA's), (28, 7772), (30, 7781), (33, 7805), (34, 7877), (36, 7901), (37, 7907), (43, 8057), (46, 8078), (47, 8090), (49, 8099), (60, 8306), (62, 8324), (81, 8411), (92, 8480), (98, 8492), (105, 8540), (111, 8570), (112, 8585), (116, 8621), (121, 8648), (124, 8669), (130, 8693), (134, 8717), (135, 8723), (141, 8750), (146, 8783), (153, 8822), (158, 8849), (162, 8870), (163, 8885), (175, 8912), (176, 8915), (181, 8936), (184, 8948), (185, 8954), (195, 9002), (199, 9038), (211, 9086), (215, 9113), (218, 9134), (225, 9197), (229, 9221), (235, 9278), (246, 9383), (250, 9404), (252, 9416), (256, 9458), (258, 9479), (261, 9500), (274, 9629),

Gene: Zahlia\_12 Start: 7645, Stop: 9750, Start Num: 10

Candidate Starts for Zahlia\_12:

(Start: 10 @7645 has 135 MA's), (Start: 12 @7666 has 3 MA's), (28, 7843), (30, 7852), (33, 7876), (34, 7948), (36, 7972), (37, 7978), (43, 8128), (46, 8149), (47, 8161), (49, 8170), (60, 8377), (62, 8395), (81, 8482), (92, 8551), (98, 8563), (105, 8611), (111, 8641), (112, 8656), (116, 8692), (121, 8719), (124, 8740), (130, 8764), (134, 8788), (135, 8794), (141, 8821), (146, 8854), (153, 8893), (158, 8920), (162, 8941), (163, 8956), (175, 8983), (176, 8986), (181, 9007), (184, 9019), (185, 9025), (195, 9073), (209, 9148), (211, 9157), (215, 9184), (218, 9205), (225, 9268), (229, 9292), (235, 9349), (246, 9454), (250, 9475), (252, 9487), (256, 9529), (258, 9550), (261, 9571), (274, 9700),

Gene: Zeta1847\_14 Start: 9068, Stop: 11329, Start Num: 4

Candidate Starts for Zeta1847\_14:

(Start: 4 @9068 has 1 MA's), (14, 9158), (16, 9203), (18, 9230), (21, 9254), (23, 9260), (33, 9350), (38, 9458), (41, 9518), (55, 9713), (57, 9776), (63, 9875), (65, 9884), (83, 9986), (101, 10118), (104, 10139), (108, 10184), (123, 10283), (130, 10319), (132, 10325), (139, 10364), (147, 10415), (153, 10448), (160, 10487), (171, 10523), (185, 10580), (202, 10673), (203, 10679), (211, 10712), (218, 10760), (236, 10910), (237, 10922), (245, 11006), (268, 11186),

Gene: Zorro\_18 Start: 12572, Stop: 15133, Start Num: 5

Candidate Starts for Zorro\_18:

(3, 12551), (Start: 5 @12572 has 55 MA's), (9, 12620), (13, 12653), (15, 12701), (17, 12725), (18, 12737), (26, 12797), (30, 12845), (31, 12860), (32, 12866), (39, 12986), (40, 13028), (44, 13124), (45, 13127), (48, 13157), (52, 13211), (59, 13352), (60, 13373), (63, 13397), (67, 13418), (68, 13427), (76, 13478), (77, 13496), (98, 13682), (117, 13826), (123, 13859), (127, 13886), (131, 13904), (133, 13910), (136, 13934), (138, 13943), (146, 13991), (150, 14018), (151, 14021), (155, 14042), (157, 14054), (164, 14105), (168, 14120), (170, 14132), (172, 14141), (174, 14150), (181, 14177), (184, 14189), (186, 14198), (188, 14210), (189, 14216), (193, 14237), (196, 14261), (197, 14270), (205, 14309), (214, 14360), (215, 14363), (216, 14372), (217, 14375), (219, 14390), (228, 14480), (232, 14516), (243, 14624), (248, 14660), (259, 14756), (260, 14759), (267, 14813), (270, 14852), (274, 14900), (275, 14909), (276, 14933), (279, 14951), (282, 15002), (284, 15026), (285, 15044), (286, 15074),