

# Pham 215850



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 215850 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215850 has 205 members, 26 are drafts.

Phages represented in each track:

- Track 1 : Zalkecks\_133, Lee7\_130, EasyJones\_135, Tyke\_132, Yucca\_131, Izajani\_132, BananaFence\_131, Gabriel\_132, Dandelion\_137, FudgeTart\_130, Domi\_125, Wally\_131, Mikro\_129, BackyardAgain\_129, StephanieG\_130, Cane17\_124, Pier\_136, Maby2021\_132, TinyTim\_132, ScottMcG\_128, StubbySaigey\_136, Blubba\_124, Ablatia\_131, Nappy\_134, Lukilu\_122, Morizzled23\_133, DTDevon\_132, IkeLoa\_126, Jessibeth14\_131, SrishMeg2525\_131, ParkTD\_133, Demodog\_139, NuevoMundo\_137, BeanWater\_124, Erdmann\_132, Bigswole\_135, Nidhogg\_134, Gizmo\_137, Tainan\_135, NedWong\_133, Willis\_133, Shrimp\_132, Darko\_132, YemiJoy2021\_133, LordLeafolot\_136, Quasimodo\_134, Spud\_131, MoMoMixon\_132, Babyland\_134, Daffodil\_137, Concombre\_138, ZygoTaiga\_130, Breeniome\_131, HyRo\_123, Rizal\_127, I3\_137, Dietrick\_124, Sauce\_132, Naval22\_137, YoungMoneyMata\_134, Zeenon\_133, Shifa\_121, Megamind\_131, MikeLiesIn\_133, Bread\_131, Khaleesi\_131, Trinitium\_130, Lethe\_132, Pleione\_135, Ava3\_133, JayJay\_137, Salacia\_136, ChaylaJr\_128, Asterius\_135, Delylah\_135
- Track 2 : EggyFarm\_140, Grasshills\_139, BigCity\_140
- Track 3 : Audrick\_135, Bxz1\_129, Sprinklers\_128, Bangla1971\_133, DirtMonster\_126, Grungle\_119, InigoMontoya\_135, Momo\_132, Guwapp\_131, Gamgam\_133, Ghost\_131, GlutenPhree\_132, Jemmno\_132, Drazdys\_130, Jaygup\_132, Jedediah\_135, ET08\_120, Matsumoto\_129, ShiaLabeouf\_131, Astraea\_128, Primadonna\_126, CindyLou\_134, Chomp\_132, Kboogie\_136, Ronan\_126, Yassified\_129, LifeSavor\_130, Spec\_128, Roots515\_131, Littleton\_132, LolaVinca\_132, JPickles\_129, Ading\_132, Cali\_127, SilverDipper\_134, Capablanca\_135, Derek\_131, Phlegm\_136, LRRHood\_125, Latch\_133, Ngannou\_129, Burrough\_132, Issimir\_130, ArcherS7\_131, Belieber\_128, Koguma\_129, ErnieJ\_126, Catera\_128, Janiyra\_135, Adlitam\_133
- Track 4 : PurduePete\_132, EmToTheThree\_134, NoodleTree\_139, Basquiat\_129, Jezreel\_130, FoxtrotP1\_132, Cactojaque\_128, DrPhinkDaddy\_131, Mangeria\_132, Iota\_127, Flabslab\_127, Fongie\_130, Ewok\_133, Kamryn\_132, Chargie21\_129, Loanshark\_131, Fludd\_133, Blackbrain\_128, McWolfish\_130, RoMag\_127, Shelob\_134, ChickenPhender\_128, Colt\_124, Bipolarisk\_131, BadAgartude\_128, Norm\_133, Melpomini\_126, Napoleon13\_128, Delilah\_132, Tortoise16\_129, FrayBell\_137, EmmaElysia\_133
- Track 5 : Halldule\_126, JustHall\_130, Shnickers\_132, Atlantean\_132, Specks\_137, Pivoine\_132, Shaqnato\_125, Essence\_129, ValleyTerrace\_133, Teardrop\_131, Amataga\_133, Patter\_133, Naija\_132, InterFolia\_138, SmallFry\_132, Rahel\_131, Phusco\_132

- Track 6 : Alice\_125, Pinkcreek\_123, LinStu\_130, Rabinovish\_131, Sebata\_132
- Track 7 : DeejaClivia\_119
- Track 8 : CharlieB\_129, JigglyPuff\_140, JulietS\_127, SVoro\_130, Blackdragon\_128, Turret\_128, McGee\_134, Phox\_129
- Track 9 : QBert\_126
- Track 10 : Bonray\_133
- Track 11 : Caravan\_126
- Track 12 : Stubby\_125
- Track 13 : Pio\_136
- Track 14 : Tonenili\_145
- Track 15 : Myrna\_128
- Track 16 : ScoobyDoobyDoo\_124
- Track 17 : Phabba\_133
- Track 18 : Greely\_131
- Track 19 : Skog\_181
- Track 20 : CherryTomatoes\_118
- Track 21 : Pupper\_119
- Track 22 : SCentae\_118

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

The start number called the most often in the published annotations is 5, it was called in 128 of the 179 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_131, Ading\_132, Adlitam\_133, Alice\_125, ArcherS7\_131, Asterius\_135, Astraea\_128, Audrick\_135, Ava3\_133, Babyland\_134, BackyardAgain\_129, BananaFence\_131, Bangla1971\_133, BeanWater\_124, Belieber\_128, BigCity\_140, Bigswole\_135, Blackdragon\_128, Blubba\_124, Bread\_131, Breeniome\_131, Burrough\_132, Bxz1\_129, Cali\_127, Cane17\_124, Capablanca\_135, Caravan\_126, Catera\_128, CharlieB\_129, ChaylaJr\_128, CherryTomatoes\_118, Chomp\_132, CindyLou\_134, Concombre\_138, DTDevon\_132, Daffodil\_137, Dandelion\_137, Darko\_132, Delylah\_135, Demodog\_139, Derek\_131, Dietrick\_124, DirtMonster\_126, Domi\_125, Drazdys\_130, ET08\_120, EasyJones\_135, EggyFarm\_140, Erdmann\_132, ErnieJ\_126, FudgeTart\_130, Gabriel\_132, Gangam\_133, Ghost\_131, Gizmo\_137, GlutenPhree\_132, Grasshills\_139, Greely\_131, Grungle\_119, Guwapp\_131, HyRo\_123, I3\_137, IkeLoa\_126, InigoMontoya\_135, Issimir\_130, Izajani\_132, JPickles\_129, Janiyra\_135, JayJay\_137, Jaygup\_132, Jediah\_135, Jemmno\_132, Jessibeth14\_131, JigglyPuff\_140, JulietS\_127, Kboogie\_136, Khaleesi\_131, Koguma\_129, LRRHood\_125, Latch\_133, Lee7\_130, Lethe\_132, LifeSavor\_130, LinStu\_130, Littleton\_132, LolaVinca\_132, LordLeafolot\_136, Lukilu\_122, Maby2021\_132, Matsumoto\_129, McGee\_134, Megamind\_131, MikeLiesIn\_133, Mikro\_129, MoMoMixon\_132, Momo\_132, Morizzled23\_133, Myrna\_128, Nappy\_134, Naval22\_137, NedWong\_133, Ngannou\_129, Nidhogg\_134, NuevoMundo\_137, ParkTD\_133, Phabba\_133, Phlegm\_136, Phox\_129, Pier\_136, Pinkcreek\_123, Pio\_136, Pleione\_135, Primadonna\_126, Pupper\_119, Quasimodo\_134, Rabinovish\_131, Rizal\_127, Ronan\_126, Roots515\_131, SVoro\_130, Salacia\_136, Sauce\_132, ScottMcG\_128, Sebata\_132, ShiaLabeouf\_131, Shifa\_121, Shrimp\_132, SilverDipper\_134, Skog\_181, Spec\_128, Sprinklers\_128, Spud\_131, SrishMeg2525\_131, StephanieG\_130,

StubbySaigey\_136, Tainan\_135, TinyTim\_132, Tonenili\_145, Trinitium\_130, Turret\_128, Tyke\_132, Wally\_131, Willis\_133, Yassified\_129, YemiJoy2021\_133, YoungMoneyMata\_134, Yucca\_131, Zalkecks\_133, Zeenon\_133, ZygoTaiga\_130,

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

- Amataga\_133, Atlantean\_132, BadAgartude\_128, Basquiat\_129, Bipolarisk\_131, Blackbrain\_128, Bonray\_133, Cactojaque\_128, Chargie21\_129, ChickenPhender\_128, Colt\_124, DeejaClivia\_119, Delilah\_132, DrPhinkDaddy\_131, EmToTheThree\_134, EmmaElysia\_133, Essence\_129, Ewok\_133, Flabslab\_127, Fludd\_133, Fongie\_130, FoxtrotP1\_132, FrayBell\_137, Halldule\_126, InterFolia\_138, Iota\_127, Jezreel\_130, JustHall\_130, Kamryn\_132, Loanshark\_131, Mangeria\_132, McWolfish\_130, Melpomini\_126, Naija\_132, Napoleon13\_128, NoodleTree\_139, Norm\_133, Patter\_133, Phusco\_132, Pivoine\_132, PurduePete\_132, QBert\_126, Rahel\_131, RoMag\_127, SCentae\_118, Shaq nato\_125, Shelob\_134, Shnickers\_132, SmallFry\_132, Specks\_137, Stubby\_125, Teardrop\_131, Tortoise16\_129, ValleyTerrace\_133,

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

- ScoobyDoobyDoo\_124,

### Summary by start number:

Start 1:

- Found in 4 of 205 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 179
- Called 25.0% of time when present
- Phage (with cluster) where this start called: SCentae\_118 (DO),

Start 4:

- Found in 200 of 205 ( 97.6% ) of genes in pham
- Manual Annotations of this start: 50 of 179
- Called 27.0% of time when present
- Phage (with cluster) where this start called: Amataga\_133 (C1), Atlantean\_132 (C1), BadAgartude\_128 (C1), Basquiat\_129 (C1), Bipolarisk\_131 (C1), Blackbrain\_128 (C1), Bonray\_133 (C1), Cactojaque\_128 (C1), Chargie21\_129 (C1), ChickenPhender\_128 (C1), Colt\_124 (C1), DeejaClivia\_119 (C1), Delilah\_132 (C1), DrPhinkDaddy\_131 (C1), EmToTheThree\_134 (C1), EmmaElysia\_133 (C1), Essence\_129 (C1), Ewok\_133 (C1), Flabslab\_127 (C1), Fludd\_133 (C1), Fongie\_130 (C1), FoxtrotP1\_132 (C1), FrayBell\_137 (C1), Halldule\_126 (C1), InterFolia\_138 (C1), Iota\_127 (C1), Jezreel\_130 (C1), JustHall\_130 (C1), Kamryn\_132 (C1), Loanshark\_131 (C1), Mangeria\_132 (C1), McWolfish\_130 (C1), Melpomini\_126 (C1), Naija\_132 (C1), Napoleon13\_128 (C1), NoodleTree\_139 (C1), Norm\_133 (C1), Patter\_133 (C1), Phusco\_132 (C1), Pivoine\_132 (C1), PurduePete\_132 (C1), QBert\_126 (C1), Rahel\_131 (C1), RoMag\_127 (C1), ScoobyDoobyDoo\_124 (C2), Shaq nato\_125 (C1), Shelob\_134 (C1), Shnickers\_132 (C1), SmallFry\_132 (C1), Specks\_137 (C1), Stubby\_125 (C1), Teardrop\_131 (C1), Tortoise16\_129 (C1), ValleyTerrace\_133 (C1),

Start 5:

- Found in 204 of 205 ( 99.5% ) of genes in pham
- Manual Annotations of this start: 128 of 179
- Called 73.5% of time when present

- Phage (with cluster) where this start called: Ablatia\_131 (C1), Ading\_132 (C1), Adlitam\_133 (C1), Alice\_125 (C1), ArcherS7\_131 (C1), Asterius\_135 (C1), Astraea\_128 (C1), Audrick\_135 (C1), Ava3\_133 (C1), Babyland\_134 (C1), BackyardAgain\_129 (C1), BananaFence\_131 (C1), Bangla1971\_133 (C1), BeanWater\_124 (C1), Belieber\_128 (C1), BigCity\_140 (C1), Bigswole\_135 (C1), Blackdragon\_128 (C1), Blubba\_124 (C1), Bread\_131 (C1), Breeniome\_131 (C1), Burrough\_132 (C1), Bxz1\_129 (C1), Cali\_127 (C1), Cane17\_124 (C1), Capablanca\_135 (C1), Caravan\_126 (C1), Catera\_128 (C1), CharlieB\_129 (C1), ChaylaJr\_128 (C1), CherryTomatoes\_118 (DO), Chomp\_132 (C1), CindyLou\_134 (C1), Concombre\_138 (C1), DTDevon\_132 (C1), Daffodil\_137 (C1), Dandelion\_137 (C1), Darko\_132 (C1), Delylah\_135 (C1), Demodog\_139 (C1), Derek\_131 (C1), Dietrick\_124 (C1), DirtMonster\_126 (C1), Domi\_125 (C1), Drazdys\_130 (C1), ET08\_120 (C1), EasyJones\_135 (C1), EggyFarm\_140 (C1), Erdmann\_132 (C1), ErnieJ\_126 (C1), FudgeTart\_130 (C1), Gabriel\_132 (C1), Gamgam\_133 (C1), Ghost\_131 (C1), Gizmo\_137 (C1), GlutenPhree\_132 (C1), Grasshills\_139 (C1), Greely\_131 (C2), Grungle\_119 (C1), Guwapp\_131 (C1), HyRo\_123 (C1), I3\_137 (C1), IkeLoa\_126 (C1), InigoMontoya\_135 (C1), Issimir\_130 (C1), Izajani\_132 (C1), JPickles\_129 (C1), Janiyra\_135 (C1), JayJay\_137 (C1), Jaygup\_132 (C1), Jedediah\_135 (C1), Jemmno\_132 (C1), Jessibeth14\_131 (C1), JigglyPuff\_140 (C1), JulietS\_127 (C1), Kboogie\_136 (C1), Khaleesi\_131 (C1), Koguma\_129 (C1), LRRHood\_125 (C1), Latch\_133 (C1), Lee7\_130 (C1), Lethe\_132 (C1), LifeSavor\_130 (C1), LinStu\_130 (C1), Littleton\_132 (C1), LolaVinca\_132 (C1), LordLeafolot\_136 (C1), Lukilu\_122 (C1), Maby2021\_132 (C1), Matsumoto\_129 (C1), McGee\_134 (C1), Megamind\_131 (C1), MikeLiesIn\_133 (C1), Mikro\_129 (C1), MoMoMixon\_132 (C1), Momo\_132 (C1), Morizzled23\_133 (C1), Myrna\_128 (C2), Nappy\_134 (C1), Naval22\_137 (C1), NedWong\_133 (C1), Ngannou\_129 (C1), Nidhogg\_134 (C1), NuevoMundo\_137 (C1), ParkTD\_133 (C1), Phabba\_133 (C2), Phlegm\_136 (C1), Phox\_129 (C1), Pier\_136 (C1), Pinkcreek\_123 (C1), Pio\_136 (C1), Pleione\_135 (C1), Primadonna\_126 (C1), Pupper\_119 (DO), Quasimodo\_134 (C1), Rabinovich\_131 (C1), Rizal\_127 (C1), Ronan\_126 (C1), Roots515\_131 (C1), SVoro\_130 (C1), Salacia\_136 (C1), Sauce\_132 (C1), ScottMcG\_128 (C1), Sebata\_132 (C1), ShiaLabeouf\_131 (C1), Shifa\_121 (C1), Shrimp\_132 (C1), SilverDipper\_134 (C1), Skog\_181 (DO), Spec\_128 (C1), Sprinklers\_128 (C1), Spud\_131 (C1), SrishMeg2525\_131 (C1), StephanieG\_130 (C1), StubbySaigey\_136 (C1), Tainan\_135 (C1), TinyTim\_132 (C1), Tonenili\_145 (C1), Trinitium\_130 (C1), Turret\_128 (C1), Tyke\_132 (C1), Wally\_131 (C1), Willis\_133 (C1), Yassified\_129 (C1), YemiJoy2021\_133 (C1), YoungMoneyMata\_134 (C1), Yucca\_131 (C1), Zalkecks\_133 (C1), Zeenon\_133 (C1), ZygoTaiga\_130 (C1),

### Summary by clusters:

There are 3 clusters represented in this pham: DO, C1, C2,

Info for manual annotations of cluster C1:

- Start number 4 was manually annotated 49 times for cluster C1.
- Start number 5 was manually annotated 123 times for cluster C1.

Info for manual annotations of cluster C2:

- Start number 4 was manually annotated 1 time for cluster C2.
- Start number 5 was manually annotated 2 times for cluster C2.

Info for manual annotations of cluster DO:

- Start number 1 was manually annotated 1 time for cluster DO.

- Start number 5 was manually annotated 3 times for cluster DO.

### **Gene Information:**

Gene: Ablatia\_131 Start: 71595, Stop: 73853, Start Num: 5

Candidate Starts for Ablatia\_131:

(Start: 4 @71586 has 50 MA's), (Start: 5 @71595 has 128 MA's), (6, 71634), (8, 71703), (9, 71712), (13, 71808), (15, 71829), (16, 71838), (17, 71859), (19, 71895), (24, 71979), (26, 71988), (38, 72063), (39, 72066), (40, 72087), (41, 72108), (43, 72123), (44, 72132), (45, 72171), (47, 72201), (50, 72339), (51, 72342), (59, 72510), (66, 72609), (68, 72636), (70, 72660), (74, 72708), (75, 72714), (78, 72759), (80, 72768), (81, 72789), (82, 72795), (84, 72813), (86, 72852), (92, 72894), (105, 73062), (108, 73104), (109, 73110), (113, 73131), (114, 73155), (123, 73242), (127, 73284), (129, 73299), (130, 73302), (132, 73305), (135, 73383), (138, 73473), (143, 73575), (148, 73662), (150, 73680), (153, 73704),

Gene: Ading\_132 Start: 71564, Stop: 73822, Start Num: 5

Candidate Starts for Ading\_132:

(Start: 4 @71555 has 50 MA's), (Start: 5 @71564 has 128 MA's), (6, 71603), (8, 71672), (9, 71681), (13, 71777), (15, 71798), (16, 71807), (17, 71828), (19, 71864), (24, 71948), (26, 71957), (38, 72032), (39, 72035), (40, 72056), (41, 72077), (43, 72092), (44, 72101), (45, 72140), (47, 72170), (50, 72308), (51, 72311), (59, 72479), (64, 72530), (66, 72578), (68, 72605), (70, 72629), (74, 72677), (75, 72683), (78, 72728), (80, 72737), (81, 72758), (82, 72764), (84, 72782), (86, 72821), (92, 72863), (107, 73055), (108, 73073), (109, 73079), (113, 73100), (114, 73124), (123, 73211), (127, 73253), (129, 73268), (130, 73271), (132, 73274), (135, 73352), (138, 73442), (143, 73544), (148, 73631), (150, 73649), (153, 73673),

Gene: Adlitam\_133 Start: 72060, Stop: 74318, Start Num: 5

Candidate Starts for Adlitam\_133:

(Start: 4 @72051 has 50 MA's), (Start: 5 @72060 has 128 MA's), (6, 72099), (8, 72168), (9, 72177), (13, 72273), (15, 72294), (16, 72303), (17, 72324), (19, 72360), (24, 72444), (26, 72453), (38, 72528), (39, 72531), (40, 72552), (41, 72573), (43, 72588), (44, 72597), (45, 72636), (47, 72666), (50, 72804), (51, 72807), (59, 72975), (64, 73026), (66, 73074), (68, 73101), (70, 73125), (74, 73173), (75, 73179), (78, 73224), (80, 73233), (81, 73254), (82, 73260), (84, 73278), (86, 73317), (92, 73359), (107, 73551), (108, 73569), (109, 73575), (113, 73596), (114, 73620), (123, 73707), (127, 73749), (129, 73764), (130, 73767), (132, 73770), (135, 73848), (138, 73938), (143, 74040), (148, 74127), (150, 74145), (153, 74169),

Gene: Alice\_125 Start: 71285, Stop: 73543, Start Num: 5

Candidate Starts for Alice\_125:

(Start: 4 @71276 has 50 MA's), (Start: 5 @71285 has 128 MA's), (6, 71324), (8, 71393), (9, 71402), (13, 71498), (15, 71519), (16, 71528), (17, 71549), (19, 71585), (24, 71669), (26, 71678), (38, 71753), (39, 71756), (40, 71777), (41, 71798), (43, 71813), (44, 71822), (45, 71861), (47, 71891), (50, 72029), (51, 72032), (59, 72200), (66, 72299), (68, 72326), (70, 72350), (74, 72398), (75, 72404), (78, 72449), (80, 72458), (81, 72479), (82, 72485), (84, 72503), (86, 72542), (92, 72584), (108, 72794), (109, 72800), (113, 72821), (114, 72845), (123, 72932), (127, 72974), (129, 72989), (130, 72992), (132, 72995), (135, 73073), (138, 73163), (143, 73265), (148, 73352), (150, 73370), (153, 73394),

Gene: Amataga\_133 Start: 71296, Stop: 73563, Start Num: 4

Candidate Starts for Amataga\_133:

(Start: 4 @71296 has 50 MA's), (Start: 5 @71305 has 128 MA's), (6, 71344), (8, 71413), (9, 71422), (13, 71518), (15, 71539), (16, 71548), (17, 71569), (19, 71605), (24, 71689), (26, 71698), (38, 71773),

(39, 71776), (40, 71797), (41, 71818), (43, 71833), (44, 71842), (45, 71881), (47, 71911), (50, 72049), (51, 72052), (59, 72220), (64, 72271), (66, 72319), (68, 72346), (70, 72370), (74, 72418), (75, 72424), (78, 72469), (80, 72478), (81, 72499), (82, 72505), (84, 72523), (86, 72562), (92, 72604), (107, 72796), (108, 72814), (109, 72820), (113, 72841), (114, 72865), (123, 72952), (127, 72994), (129, 73009), (130, 73012), (132, 73015), (135, 73093), (138, 73183), (143, 73285), (148, 73372), (150, 73390), (153, 73414),

Gene: ArcherS7\_131 Start: 71144, Stop: 73402, Start Num: 5

Candidate Starts for ArcherS7\_131:

(Start: 4 @71135 has 50 MA's), (Start: 5 @71144 has 128 MA's), (6, 71183), (8, 71252), (9, 71261), (13, 71357), (15, 71378), (16, 71387), (17, 71408), (19, 71444), (24, 71528), (26, 71537), (38, 71612), (39, 71615), (40, 71636), (41, 71657), (43, 71672), (44, 71681), (45, 71720), (47, 71750), (50, 71888), (51, 71891), (59, 72059), (64, 72110), (66, 72158), (68, 72185), (70, 72209), (74, 72257), (75, 72263), (78, 72308), (80, 72317), (81, 72338), (82, 72344), (84, 72362), (86, 72401), (92, 72443), (107, 72635), (108, 72653), (109, 72659), (113, 72680), (114, 72704), (123, 72791), (127, 72833), (129, 72848), (130, 72851), (132, 72854), (135, 72932), (138, 73022), (143, 73124), (148, 73211), (150, 73229), (153, 73253),

Gene: Asterius\_135 Start: 71820, Stop: 74078, Start Num: 5

Candidate Starts for Asterius\_135:

(Start: 4 @71811 has 50 MA's), (Start: 5 @71820 has 128 MA's), (6, 71859), (8, 71928), (9, 71937), (13, 72033), (15, 72054), (16, 72063), (17, 72084), (19, 72120), (24, 72204), (26, 72213), (38, 72288), (39, 72291), (40, 72312), (41, 72333), (43, 72348), (44, 72357), (45, 72396), (47, 72426), (50, 72564), (51, 72567), (59, 72735), (66, 72834), (68, 72861), (70, 72885), (74, 72933), (75, 72939), (78, 72984), (80, 72993), (81, 73014), (82, 73020), (84, 73038), (86, 73077), (92, 73119), (105, 73287), (108, 73329), (109, 73335), (113, 73356), (114, 73380), (123, 73467), (127, 73509), (129, 73524), (130, 73527), (132, 73530), (135, 73608), (138, 73698), (143, 73800), (148, 73887), (150, 73905), (153, 73929),

Gene: Astraea\_128 Start: 70585, Stop: 72843, Start Num: 5

Candidate Starts for Astraea\_128:

(Start: 4 @70576 has 50 MA's), (Start: 5 @70585 has 128 MA's), (6, 70624), (8, 70693), (9, 70702), (13, 70798), (15, 70819), (16, 70828), (17, 70849), (19, 70885), (24, 70969), (26, 70978), (38, 71053), (39, 71056), (40, 71077), (41, 71098), (43, 71113), (44, 71122), (45, 71161), (47, 71191), (50, 71329), (51, 71332), (59, 71500), (64, 71551), (66, 71599), (68, 71626), (70, 71650), (74, 71698), (75, 71704), (78, 71749), (80, 71758), (81, 71779), (82, 71785), (84, 71803), (86, 71842), (92, 71884), (107, 72076), (108, 72094), (109, 72100), (113, 72121), (114, 72145), (123, 72232), (127, 72274), (129, 72289), (130, 72292), (132, 72295), (135, 72373), (138, 72463), (143, 72565), (148, 72652), (150, 72670), (153, 72694),

Gene: Atlantean\_132 Start: 71296, Stop: 73563, Start Num: 4

Candidate Starts for Atlantean\_132:

(Start: 4 @71296 has 50 MA's), (Start: 5 @71305 has 128 MA's), (6, 71344), (8, 71413), (9, 71422), (13, 71518), (15, 71539), (16, 71548), (17, 71569), (19, 71605), (24, 71689), (26, 71698), (38, 71773), (39, 71776), (40, 71797), (41, 71818), (43, 71833), (44, 71842), (45, 71881), (47, 71911), (50, 72049), (51, 72052), (59, 72220), (64, 72271), (66, 72319), (68, 72346), (70, 72370), (74, 72418), (75, 72424), (78, 72469), (80, 72478), (81, 72499), (82, 72505), (84, 72523), (86, 72562), (92, 72604), (107, 72796), (108, 72814), (109, 72820), (113, 72841), (114, 72865), (123, 72952), (127, 72994), (129, 73009), (130, 73012), (132, 73015), (135, 73093), (138, 73183), (143, 73285), (148, 73372), (150, 73390), (153, 73414),

Gene: Audrick\_135 Start: 71284, Stop: 73542, Start Num: 5

Candidate Starts for Audrick\_135:

(Start: 4 @71275 has 50 MA's), (Start: 5 @71284 has 128 MA's), (6, 71323), (8, 71392), (9, 71401), (13, 71497), (15, 71518), (16, 71527), (17, 71548), (19, 71584), (24, 71668), (26, 71677), (38, 71752), (39, 71755), (40, 71776), (41, 71797), (43, 71812), (44, 71821), (45, 71860), (47, 71890), (50, 72028), (51, 72031), (59, 72199), (64, 72250), (66, 72298), (68, 72325), (70, 72349), (74, 72397), (75, 72403), (78, 72448), (80, 72457), (81, 72478), (82, 72484), (84, 72502), (86, 72541), (92, 72583), (107, 72775), (108, 72793), (109, 72799), (113, 72820), (114, 72844), (123, 72931), (127, 72973), (129, 72988), (130, 72991), (132, 72994), (135, 73072), (138, 73162), (143, 73264), (148, 73351), (150, 73369), (153, 73393),

Gene: Ava3\_133 Start: 71729, Stop: 73987, Start Num: 5

Candidate Starts for Ava3\_133:

(Start: 4 @71720 has 50 MA's), (Start: 5 @71729 has 128 MA's), (6, 71768), (8, 71837), (9, 71846), (13, 71942), (15, 71963), (16, 71972), (17, 71993), (19, 72029), (24, 72113), (26, 72122), (38, 72197), (39, 72200), (40, 72221), (41, 72242), (43, 72257), (44, 72266), (45, 72305), (47, 72335), (50, 72473), (51, 72476), (59, 72644), (66, 72743), (68, 72770), (70, 72794), (74, 72842), (75, 72848), (78, 72893), (80, 72902), (81, 72923), (82, 72929), (84, 72947), (86, 72986), (92, 73028), (105, 73196), (108, 73238), (109, 73244), (113, 73265), (114, 73289), (123, 73376), (127, 73418), (129, 73433), (130, 73436), (132, 73439), (135, 73517), (138, 73607), (143, 73709), (148, 73796), (150, 73814), (153, 73838),

Gene: Babyland\_134 Start: 71383, Stop: 73641, Start Num: 5

Candidate Starts for Babyland\_134:

(Start: 4 @71374 has 50 MA's), (Start: 5 @71383 has 128 MA's), (6, 71422), (8, 71491), (9, 71500), (13, 71596), (15, 71617), (16, 71626), (17, 71647), (19, 71683), (24, 71767), (26, 71776), (38, 71851), (39, 71854), (40, 71875), (41, 71896), (43, 71911), (44, 71920), (45, 71959), (47, 71989), (50, 72127), (51, 72130), (59, 72298), (66, 72397), (68, 72424), (70, 72448), (74, 72496), (75, 72502), (78, 72547), (80, 72556), (81, 72577), (82, 72583), (84, 72601), (86, 72640), (92, 72682), (105, 72850), (108, 72892), (109, 72898), (113, 72919), (114, 72943), (123, 73030), (127, 73072), (129, 73087), (130, 73090), (132, 73093), (135, 73171), (138, 73261), (143, 73363), (148, 73450), (150, 73468), (153, 73492),

Gene: BackyardAgain\_129 Start: 70732, Stop: 72990, Start Num: 5

Candidate Starts for BackyardAgain\_129:

(Start: 4 @70723 has 50 MA's), (Start: 5 @70732 has 128 MA's), (6, 70771), (8, 70840), (9, 70849), (13, 70945), (15, 70966), (16, 70975), (17, 70996), (19, 71032), (24, 71116), (26, 71125), (38, 71200), (39, 71203), (40, 71224), (41, 71245), (43, 71260), (44, 71269), (45, 71308), (47, 71338), (50, 71476), (51, 71479), (59, 71647), (66, 71746), (68, 71773), (70, 71797), (74, 71845), (75, 71851), (78, 71896), (80, 71905), (81, 71926), (82, 71932), (84, 71950), (86, 71989), (92, 72031), (105, 72199), (108, 72241), (109, 72247), (113, 72268), (114, 72292), (123, 72379), (127, 72421), (129, 72436), (130, 72439), (132, 72442), (135, 72520), (138, 72610), (143, 72712), (148, 72799), (150, 72817), (153, 72841),

Gene: BadAgartude\_128 Start: 72022, Stop: 74289, Start Num: 4

Candidate Starts for BadAgartude\_128:

(Start: 4 @72022 has 50 MA's), (Start: 5 @72031 has 128 MA's), (6, 72070), (8, 72139), (9, 72148), (13, 72244), (15, 72265), (16, 72274), (17, 72295), (19, 72331), (24, 72415), (26, 72424), (38, 72499), (39, 72502), (40, 72523), (41, 72544), (43, 72559), (44, 72568), (45, 72607), (47, 72637), (50, 72775), (51, 72778), (59, 72946), (66, 73045), (68, 73072), (70, 73096), (74, 73144), (75, 73150), (78, 73195), (80, 73204), (81, 73225), (82, 73231), (84, 73249), (86, 73288), (92, 73330), (105, 73498), (108, 73540), (109, 73546), (113, 73567), (114, 73591), (123, 73678), (127, 73720), (129, 73735), (130, 73738), (132, 73741), (135, 73819), (138, 73909), (143, 74011), (148, 74098), (150, 74116), (153, 74140),



Gene: BananaFence\_131 Start: 71985, Stop: 74243, Start Num: 5

Candidate Starts for BananaFence\_131:

(Start: 4 @71976 has 50 MA's), (Start: 5 @71985 has 128 MA's), (6, 72024), (8, 72093), (9, 72102), (13, 72198), (15, 72219), (16, 72228), (17, 72249), (19, 72285), (24, 72369), (26, 72378), (38, 72453), (39, 72456), (40, 72477), (41, 72498), (43, 72513), (44, 72522), (45, 72561), (47, 72591), (50, 72729), (51, 72732), (59, 72900), (66, 72999), (68, 73026), (70, 73050), (74, 73098), (75, 73104), (78, 73149), (80, 73158), (81, 73179), (82, 73185), (84, 73203), (86, 73242), (92, 73284), (105, 73452), (108, 73494), (109, 73500), (113, 73521), (114, 73545), (123, 73632), (127, 73674), (129, 73689), (130, 73692), (132, 73695), (135, 73773), (138, 73863), (143, 73965), (148, 74052), (150, 74070), (153, 74094),

Gene: Bangla1971\_133 Start: 71274, Stop: 73532, Start Num: 5

Candidate Starts for Bangla1971\_133:

(Start: 4 @71265 has 50 MA's), (Start: 5 @71274 has 128 MA's), (6, 71313), (8, 71382), (9, 71391), (13, 71487), (15, 71508), (16, 71517), (17, 71538), (19, 71574), (24, 71658), (26, 71667), (38, 71742), (39, 71745), (40, 71766), (41, 71787), (43, 71802), (44, 71811), (45, 71850), (47, 71880), (50, 72018), (51, 72021), (59, 72189), (64, 72240), (66, 72288), (68, 72315), (70, 72339), (74, 72387), (75, 72393), (78, 72438), (80, 72447), (81, 72468), (82, 72474), (84, 72492), (86, 72531), (92, 72573), (107, 72765), (108, 72783), (109, 72789), (113, 72810), (114, 72834), (123, 72921), (127, 72963), (129, 72978), (130, 72981), (132, 72984), (135, 73062), (138, 73152), (143, 73254), (148, 73341), (150, 73359), (153, 73383),

Gene: Basquiat\_129 Start: 70874, Stop: 73141, Start Num: 4

Candidate Starts for Basquiat\_129:

(Start: 4 @70874 has 50 MA's), (Start: 5 @70883 has 128 MA's), (6, 70922), (8, 70991), (9, 71000), (13, 71096), (15, 71117), (16, 71126), (17, 71147), (19, 71183), (24, 71267), (26, 71276), (38, 71351), (39, 71354), (40, 71375), (41, 71396), (43, 71411), (44, 71420), (45, 71459), (47, 71489), (50, 71627), (51, 71630), (59, 71798), (66, 71897), (68, 71924), (70, 71948), (74, 71996), (75, 72002), (78, 72047), (80, 72056), (81, 72077), (82, 72083), (84, 72101), (86, 72140), (92, 72182), (105, 72350), (108, 72392), (109, 72398), (113, 72419), (114, 72443), (123, 72530), (127, 72572), (129, 72587), (130, 72590), (132, 72593), (135, 72671), (138, 72761), (143, 72863), (148, 72950), (150, 72968), (153, 72992),

Gene: BeanWater\_124 Start: 71583, Stop: 73841, Start Num: 5

Candidate Starts for BeanWater\_124:

(Start: 4 @71574 has 50 MA's), (Start: 5 @71583 has 128 MA's), (6, 71622), (8, 71691), (9, 71700), (13, 71796), (15, 71817), (16, 71826), (17, 71847), (19, 71883), (24, 71967), (26, 71976), (38, 72051), (39, 72054), (40, 72075), (41, 72096), (43, 72111), (44, 72120), (45, 72159), (47, 72189), (50, 72327), (51, 72330), (59, 72498), (66, 72597), (68, 72624), (70, 72648), (74, 72696), (75, 72702), (78, 72747), (80, 72756), (81, 72777), (82, 72783), (84, 72801), (86, 72840), (92, 72882), (105, 73050), (108, 73092), (109, 73098), (113, 73119), (114, 73143), (123, 73230), (127, 73272), (129, 73287), (130, 73290), (132, 73293), (135, 73371), (138, 73461), (143, 73563), (148, 73650), (150, 73668), (153, 73692),

Gene: Belieber\_128 Start: 71058, Stop: 73316, Start Num: 5

Candidate Starts for Belieber\_128:

(Start: 4 @71049 has 50 MA's), (Start: 5 @71058 has 128 MA's), (6, 71097), (8, 71166), (9, 71175), (13, 71271), (15, 71292), (16, 71301), (17, 71322), (19, 71358), (24, 71442), (26, 71451), (38, 71526), (39, 71529), (40, 71550), (41, 71571), (43, 71586), (44, 71595), (45, 71634), (47, 71664), (50, 71802), (51, 71805), (59, 71973), (64, 72024), (66, 72072), (68, 72099), (70, 72123), (74, 72171), (75, 72177), (78, 72222), (80, 72231), (81, 72252), (82, 72258), (84, 72276), (86, 72315), (92, 72357), (107, 72549), (108, 72567), (109, 72573), (113, 72594), (114, 72618), (123, 72705), (127, 72747), (129, 72762), (130, 72765), (132, 72768), (135, 72846), (138, 72936), (143, 73038), (148, 73125), (150, 73143),

(153, 73167),

Gene: BigCity\_140 Start: 74255, Stop: 76513, Start Num: 5

Candidate Starts for BigCity\_140:

(Start: 4 @74246 has 50 MA's), (Start: 5 @74255 has 128 MA's), (6, 74294), (8, 74363), (9, 74372), (13, 74468), (15, 74489), (16, 74498), (17, 74519), (19, 74555), (24, 74639), (26, 74648), (38, 74723), (39, 74726), (40, 74747), (41, 74768), (43, 74783), (44, 74792), (45, 74831), (47, 74861), (50, 74999), (51, 75002), (59, 75170), (66, 75269), (68, 75296), (70, 75320), (74, 75368), (75, 75374), (78, 75419), (80, 75428), (81, 75449), (82, 75455), (84, 75473), (86, 75512), (92, 75554), (105, 75722), (108, 75764), (109, 75770), (113, 75791), (114, 75815), (123, 75902), (127, 75944), (130, 75962), (132, 75965), (135, 76043), (138, 76133), (143, 76235), (148, 76322), (150, 76340), (153, 76364),

Gene: Bigswole\_135 Start: 73540, Stop: 75798, Start Num: 5

Candidate Starts for Bigswole\_135:

(Start: 4 @73531 has 50 MA's), (Start: 5 @73540 has 128 MA's), (6, 73579), (8, 73648), (9, 73657), (13, 73753), (15, 73774), (16, 73783), (17, 73804), (19, 73840), (24, 73924), (26, 73933), (38, 74008), (39, 74011), (40, 74032), (41, 74053), (43, 74068), (44, 74077), (45, 74116), (47, 74146), (50, 74284), (51, 74287), (59, 74455), (66, 74554), (68, 74581), (70, 74605), (74, 74653), (75, 74659), (78, 74704), (80, 74713), (81, 74734), (82, 74740), (84, 74758), (86, 74797), (92, 74839), (105, 75007), (108, 75049), (109, 75055), (113, 75076), (114, 75100), (123, 75187), (127, 75229), (129, 75244), (130, 75247), (132, 75250), (135, 75328), (138, 75418), (143, 75520), (148, 75607), (150, 75625), (153, 75649),

Gene: Bipolarisk\_131 Start: 71988, Stop: 74255, Start Num: 4

Candidate Starts for Bipolarisk\_131:

(Start: 4 @71988 has 50 MA's), (Start: 5 @71997 has 128 MA's), (6, 72036), (8, 72105), (9, 72114), (13, 72210), (15, 72231), (16, 72240), (17, 72261), (19, 72297), (24, 72381), (26, 72390), (38, 72465), (39, 72468), (40, 72489), (41, 72510), (43, 72525), (44, 72534), (45, 72573), (47, 72603), (50, 72741), (51, 72744), (59, 72912), (66, 73011), (68, 73038), (70, 73062), (74, 73110), (75, 73116), (78, 73161), (80, 73170), (81, 73191), (82, 73197), (84, 73215), (86, 73254), (92, 73296), (105, 73464), (108, 73506), (109, 73512), (113, 73533), (114, 73557), (123, 73644), (127, 73686), (129, 73701), (130, 73704), (132, 73707), (135, 73785), (138, 73875), (143, 73977), (148, 74064), (150, 74082), (153, 74106),

Gene: Blackbrain\_128 Start: 70759, Stop: 73026, Start Num: 4

Candidate Starts for Blackbrain\_128:

(Start: 4 @70759 has 50 MA's), (Start: 5 @70768 has 128 MA's), (6, 70807), (8, 70876), (9, 70885), (13, 70981), (15, 71002), (16, 71011), (17, 71032), (19, 71068), (24, 71152), (26, 71161), (38, 71236), (39, 71239), (40, 71260), (41, 71281), (43, 71296), (44, 71305), (45, 71344), (47, 71374), (50, 71512), (51, 71515), (59, 71683), (66, 71782), (68, 71809), (70, 71833), (74, 71881), (75, 71887), (78, 71932), (80, 71941), (81, 71962), (82, 71968), (84, 71986), (86, 72025), (92, 72067), (105, 72235), (108, 72277), (109, 72283), (113, 72304), (114, 72328), (123, 72415), (127, 72457), (129, 72472), (130, 72475), (132, 72478), (135, 72556), (138, 72646), (143, 72748), (148, 72835), (150, 72853), (153, 72877),

Gene: Blackdragon\_128 Start: 71412, Stop: 73670, Start Num: 5

Candidate Starts for Blackdragon\_128:

(Start: 4 @71403 has 50 MA's), (Start: 5 @71412 has 128 MA's), (6, 71451), (8, 71520), (9, 71529), (13, 71625), (15, 71646), (16, 71655), (17, 71676), (19, 71712), (24, 71796), (26, 71805), (38, 71880), (39, 71883), (40, 71904), (41, 71925), (43, 71940), (44, 71949), (45, 71988), (47, 72018), (50, 72156), (51, 72159), (59, 72327), (64, 72378), (66, 72426), (68, 72453), (70, 72477), (74, 72525), (75, 72531), (78, 72576), (80, 72585), (81, 72606), (82, 72612), (84, 72630), (86, 72669), (92, 72711), (105, 72879), (108, 72921), (109, 72927), (113, 72948), (114, 72972), (123, 73059), (127, 73101), (129, 73116),

(130, 73119), (132, 73122), (135, 73200), (138, 73290), (143, 73392), (148, 73479), (150, 73497), (153, 73521),

Gene: Blubba\_124 Start: 73130, Stop: 75388, Start Num: 5

Candidate Starts for Blubba\_124:

(Start: 4 @73121 has 50 MA's), (Start: 5 @73130 has 128 MA's), (6, 73169), (8, 73238), (9, 73247), (13, 73343), (15, 73364), (16, 73373), (17, 73394), (19, 73430), (24, 73514), (26, 73523), (38, 73598), (39, 73601), (40, 73622), (41, 73643), (43, 73658), (44, 73667), (45, 73706), (47, 73736), (50, 73874), (51, 73877), (59, 74045), (66, 74144), (68, 74171), (70, 74195), (74, 74243), (75, 74249), (78, 74294), (80, 74303), (81, 74324), (82, 74330), (84, 74348), (86, 74387), (92, 74429), (105, 74597), (108, 74639), (109, 74645), (113, 74666), (114, 74690), (123, 74777), (127, 74819), (129, 74834), (130, 74837), (132, 74840), (135, 74918), (138, 75008), (143, 75110), (148, 75197), (150, 75215), (153, 75239),

Gene: Bonray\_133 Start: 72630, Stop: 74897, Start Num: 4

Candidate Starts for Bonray\_133:

(Start: 4 @72630 has 50 MA's), (Start: 5 @72639 has 128 MA's), (6, 72678), (8, 72747), (9, 72756), (13, 72852), (15, 72873), (16, 72882), (17, 72903), (19, 72939), (24, 73023), (26, 73032), (38, 73107), (39, 73110), (40, 73131), (41, 73152), (43, 73167), (44, 73176), (45, 73215), (47, 73245), (50, 73383), (51, 73386), (59, 73554), (66, 73653), (68, 73680), (70, 73704), (74, 73752), (75, 73758), (78, 73803), (80, 73812), (81, 73833), (82, 73839), (84, 73857), (86, 73896), (92, 73938), (105, 74106), (108, 74148), (109, 74154), (112, 74169), (113, 74175), (114, 74199), (123, 74286), (127, 74328), (129, 74343), (130, 74346), (132, 74349), (135, 74427), (138, 74517), (143, 74619), (148, 74706), (150, 74724), (153, 74748),

Gene: Bread\_131 Start: 71815, Stop: 74073, Start Num: 5

Candidate Starts for Bread\_131:

(Start: 4 @71806 has 50 MA's), (Start: 5 @71815 has 128 MA's), (6, 71854), (8, 71923), (9, 71932), (13, 72028), (15, 72049), (16, 72058), (17, 72079), (19, 72115), (24, 72199), (26, 72208), (38, 72283), (39, 72286), (40, 72307), (41, 72328), (43, 72343), (44, 72352), (45, 72391), (47, 72421), (50, 72559), (51, 72562), (59, 72730), (66, 72829), (68, 72856), (70, 72880), (74, 72928), (75, 72934), (78, 72979), (80, 72988), (81, 73009), (82, 73015), (84, 73033), (86, 73072), (92, 73114), (105, 73282), (108, 73324), (109, 73330), (113, 73351), (114, 73375), (123, 73462), (127, 73504), (129, 73519), (130, 73522), (132, 73525), (135, 73603), (138, 73693), (143, 73795), (148, 73882), (150, 73900), (153, 73924),

Gene: Breeniome\_131 Start: 70173, Stop: 72431, Start Num: 5

Candidate Starts for Breeniome\_131:

(Start: 4 @70164 has 50 MA's), (Start: 5 @70173 has 128 MA's), (6, 70212), (8, 70281), (9, 70290), (13, 70386), (15, 70407), (16, 70416), (17, 70437), (19, 70473), (24, 70557), (26, 70566), (38, 70641), (39, 70644), (40, 70665), (41, 70686), (43, 70701), (44, 70710), (45, 70749), (47, 70779), (50, 70917), (51, 70920), (59, 71088), (66, 71187), (68, 71214), (70, 71238), (74, 71286), (75, 71292), (78, 71337), (80, 71346), (81, 71367), (82, 71373), (84, 71391), (86, 71430), (92, 71472), (105, 71640), (108, 71682), (109, 71688), (113, 71709), (114, 71733), (123, 71820), (127, 71862), (129, 71877), (130, 71880), (132, 71883), (135, 71961), (138, 72051), (143, 72153), (148, 72240), (150, 72258), (153, 72282),

Gene: Burrough\_132 Start: 72324, Stop: 74582, Start Num: 5

Candidate Starts for Burrough\_132:

(Start: 4 @72315 has 50 MA's), (Start: 5 @72324 has 128 MA's), (6, 72363), (8, 72432), (9, 72441), (13, 72537), (15, 72558), (16, 72567), (17, 72588), (19, 72624), (24, 72708), (26, 72717), (38, 72792), (39, 72795), (40, 72816), (41, 72837), (43, 72852), (44, 72861), (45, 72900), (47, 72930), (50, 73068), (51, 73071), (59, 73239), (64, 73290), (66, 73338), (68, 73365), (70, 73389), (74, 73437), (75, 73443),

(78, 73488), (80, 73497), (81, 73518), (82, 73524), (84, 73542), (86, 73581), (92, 73623), (107, 73815), (108, 73833), (109, 73839), (113, 73860), (114, 73884), (123, 73971), (127, 74013), (129, 74028), (130, 74031), (132, 74034), (135, 74112), (138, 74202), (143, 74304), (148, 74391), (150, 74409), (153, 74433),

Gene: Bxz1\_129 Start: 73527, Stop: 75785, Start Num: 5

Candidate Starts for Bxz1\_129:

(Start: 4 @73518 has 50 MA's), (Start: 5 @73527 has 128 MA's), (6, 73566), (8, 73635), (9, 73644), (13, 73740), (15, 73761), (16, 73770), (17, 73791), (19, 73827), (24, 73911), (26, 73920), (38, 73995), (39, 73998), (40, 74019), (41, 74040), (43, 74055), (44, 74064), (45, 74103), (47, 74133), (50, 74271), (51, 74274), (59, 74442), (64, 74493), (66, 74541), (68, 74568), (70, 74592), (74, 74640), (75, 74646), (78, 74691), (80, 74700), (81, 74721), (82, 74727), (84, 74745), (86, 74784), (92, 74826), (107, 75018), (108, 75036), (109, 75042), (113, 75063), (114, 75087), (123, 75174), (127, 75216), (129, 75231), (130, 75234), (132, 75237), (135, 75315), (138, 75405), (143, 75507), (148, 75594), (150, 75612), (153, 75636),

Gene: Cactojaque\_128 Start: 70866, Stop: 73133, Start Num: 4

Candidate Starts for Cactojaque\_128:

(Start: 4 @70866 has 50 MA's), (Start: 5 @70875 has 128 MA's), (6, 70914), (8, 70983), (9, 70992), (13, 71088), (15, 71109), (16, 71118), (17, 71139), (19, 71175), (24, 71259), (26, 71268), (38, 71343), (39, 71346), (40, 71367), (41, 71388), (43, 71403), (44, 71412), (45, 71451), (47, 71481), (50, 71619), (51, 71622), (59, 71790), (66, 71889), (68, 71916), (70, 71940), (74, 71988), (75, 71994), (78, 72039), (80, 72048), (81, 72069), (82, 72075), (84, 72093), (86, 72132), (92, 72174), (105, 72342), (108, 72384), (109, 72390), (113, 72411), (114, 72435), (123, 72522), (127, 72564), (129, 72579), (130, 72582), (132, 72585), (135, 72663), (138, 72753), (143, 72855), (148, 72942), (150, 72960), (153, 72984),

Gene: Cali\_127 Start: 72326, Stop: 74584, Start Num: 5

Candidate Starts for Cali\_127:

(Start: 4 @72317 has 50 MA's), (Start: 5 @72326 has 128 MA's), (6, 72365), (8, 72434), (9, 72443), (13, 72539), (15, 72560), (16, 72569), (17, 72590), (19, 72626), (24, 72710), (26, 72719), (38, 72794), (39, 72797), (40, 72818), (41, 72839), (43, 72854), (44, 72863), (45, 72902), (47, 72932), (50, 73070), (51, 73073), (59, 73241), (64, 73292), (66, 73340), (68, 73367), (70, 73391), (74, 73439), (75, 73445), (78, 73490), (80, 73499), (81, 73520), (82, 73526), (84, 73544), (86, 73583), (92, 73625), (107, 73817), (108, 73835), (109, 73841), (113, 73862), (114, 73886), (123, 73973), (127, 74015), (129, 74030), (130, 74033), (132, 74036), (135, 74114), (138, 74204), (143, 74306), (148, 74393), (150, 74411), (153, 74435),

Gene: Cane17\_124 Start: 73188, Stop: 75446, Start Num: 5

Candidate Starts for Cane17\_124:

(Start: 4 @73179 has 50 MA's), (Start: 5 @73188 has 128 MA's), (6, 73227), (8, 73296), (9, 73305), (13, 73401), (15, 73422), (16, 73431), (17, 73452), (19, 73488), (24, 73572), (26, 73581), (38, 73656), (39, 73659), (40, 73680), (41, 73701), (43, 73716), (44, 73725), (45, 73764), (47, 73794), (50, 73932), (51, 73935), (59, 74103), (66, 74202), (68, 74229), (70, 74253), (74, 74301), (75, 74307), (78, 74352), (80, 74361), (81, 74382), (82, 74388), (84, 74406), (86, 74445), (92, 74487), (105, 74655), (108, 74697), (109, 74703), (113, 74724), (114, 74748), (123, 74835), (127, 74877), (129, 74892), (130, 74895), (132, 74898), (135, 74976), (138, 75066), (143, 75168), (148, 75255), (150, 75273), (153, 75297),

Gene: Capablanca\_135 Start: 73055, Stop: 75313, Start Num: 5

Candidate Starts for Capablanca\_135:

(Start: 4 @73046 has 50 MA's), (Start: 5 @73055 has 128 MA's), (6, 73094), (8, 73163), (9, 73172), (13, 73268), (15, 73289), (16, 73298), (17, 73319), (19, 73355), (24, 73439), (26, 73448), (38, 73523),

(39, 73526), (40, 73547), (41, 73568), (43, 73583), (44, 73592), (45, 73631), (47, 73661), (50, 73799), (51, 73802), (59, 73970), (64, 74021), (66, 74069), (68, 74096), (70, 74120), (74, 74168), (75, 74174), (78, 74219), (80, 74228), (81, 74249), (82, 74255), (84, 74273), (86, 74312), (92, 74354), (107, 74546), (108, 74564), (109, 74570), (113, 74591), (114, 74615), (123, 74702), (127, 74744), (129, 74759), (130, 74762), (132, 74765), (135, 74843), (138, 74933), (143, 75035), (148, 75122), (150, 75140), (153, 75164),

Gene: Caravan\_126 Start: 71683, Stop: 73941, Start Num: 5

Candidate Starts for Caravan\_126:

(Start: 4 @71674 has 50 MA's), (Start: 5 @71683 has 128 MA's), (6, 71722), (8, 71791), (9, 71800), (13, 71896), (15, 71917), (16, 71926), (17, 71947), (19, 71983), (24, 72067), (38, 72151), (39, 72154), (40, 72175), (41, 72196), (43, 72211), (44, 72220), (45, 72259), (47, 72289), (50, 72427), (51, 72430), (59, 72598), (66, 72697), (68, 72724), (70, 72748), (74, 72796), (75, 72802), (78, 72847), (80, 72856), (81, 72877), (82, 72883), (84, 72901), (86, 72940), (92, 72982), (105, 73150), (108, 73192), (109, 73198), (113, 73219), (114, 73243), (123, 73330), (127, 73372), (129, 73387), (130, 73390), (132, 73393), (135, 73471), (138, 73561), (143, 73663), (148, 73750), (150, 73768), (153, 73792),

Gene: Catera\_128 Start: 70590, Stop: 72848, Start Num: 5

Candidate Starts for Catera\_128:

(Start: 4 @70581 has 50 MA's), (Start: 5 @70590 has 128 MA's), (6, 70629), (8, 70698), (9, 70707), (13, 70803), (15, 70824), (16, 70833), (17, 70854), (19, 70890), (24, 70974), (26, 70983), (38, 71058), (39, 71061), (40, 71082), (41, 71103), (43, 71118), (44, 71127), (45, 71166), (47, 71196), (50, 71334), (51, 71337), (59, 71505), (64, 71556), (66, 71604), (68, 71631), (70, 71655), (74, 71703), (75, 71709), (78, 71754), (80, 71763), (81, 71784), (82, 71790), (84, 71808), (86, 71847), (92, 71889), (107, 72081), (108, 72099), (109, 72105), (113, 72126), (114, 72150), (123, 72237), (127, 72279), (129, 72294), (130, 72297), (132, 72300), (135, 72378), (138, 72468), (143, 72570), (148, 72657), (150, 72675), (153, 72699),

Gene: Chargie21\_129 Start: 70874, Stop: 73141, Start Num: 4

Candidate Starts for Chargie21\_129:

(Start: 4 @70874 has 50 MA's), (Start: 5 @70883 has 128 MA's), (6, 70922), (8, 70991), (9, 71000), (13, 71096), (15, 71117), (16, 71126), (17, 71147), (19, 71183), (24, 71267), (26, 71276), (38, 71351), (39, 71354), (40, 71375), (41, 71396), (43, 71411), (44, 71420), (45, 71459), (47, 71489), (50, 71627), (51, 71630), (59, 71798), (66, 71897), (68, 71924), (70, 71948), (74, 71996), (75, 72002), (78, 72047), (80, 72056), (81, 72077), (82, 72083), (84, 72101), (86, 72140), (92, 72182), (105, 72350), (108, 72392), (109, 72398), (113, 72419), (114, 72443), (123, 72530), (127, 72572), (129, 72587), (130, 72590), (132, 72593), (135, 72671), (138, 72761), (143, 72863), (148, 72950), (150, 72968), (153, 72992),

Gene: CharlieB\_129 Start: 71209, Stop: 73467, Start Num: 5

Candidate Starts for CharlieB\_129:

(Start: 4 @71200 has 50 MA's), (Start: 5 @71209 has 128 MA's), (6, 71248), (8, 71317), (9, 71326), (13, 71422), (15, 71443), (16, 71452), (17, 71473), (19, 71509), (24, 71593), (26, 71602), (38, 71677), (39, 71680), (40, 71701), (41, 71722), (43, 71737), (44, 71746), (45, 71785), (47, 71815), (50, 71953), (51, 71956), (59, 72124), (64, 72175), (66, 72223), (68, 72250), (70, 72274), (74, 72322), (75, 72328), (78, 72373), (80, 72382), (81, 72403), (82, 72409), (84, 72427), (86, 72466), (92, 72508), (105, 72676), (108, 72718), (109, 72724), (113, 72745), (114, 72769), (123, 72856), (127, 72898), (129, 72913), (130, 72916), (132, 72919), (135, 72997), (138, 73087), (143, 73189), (148, 73276), (150, 73294), (153, 73318),

Gene: ChaylaJr\_128 Start: 70691, Stop: 72949, Start Num: 5

Candidate Starts for ChaylaJr\_128:

(Start: 4 @70682 has 50 MA's), (Start: 5 @70691 has 128 MA's), (6, 70730), (8, 70799), (9, 70808), (13, 70904), (15, 70925), (16, 70934), (17, 70955), (19, 70991), (24, 71075), (26, 71084), (38, 71159), (39, 71162), (40, 71183), (41, 71204), (43, 71219), (44, 71228), (45, 71267), (47, 71297), (50, 71435), (51, 71438), (59, 71606), (66, 71705), (68, 71732), (70, 71756), (74, 71804), (75, 71810), (78, 71855), (80, 71864), (81, 71885), (82, 71891), (84, 71909), (86, 71948), (92, 71990), (105, 72158), (108, 72200), (109, 72206), (113, 72227), (114, 72251), (123, 72338), (127, 72380), (129, 72395), (130, 72398), (132, 72401), (135, 72479), (138, 72569), (143, 72671), (148, 72758), (150, 72776), (153, 72800),

Gene: CherryTomatoes\_118 Start: 71847, Stop: 74345, Start Num: 5

Candidate Starts for CherryTomatoes\_118:

(Start: 1 @71805 has 1 MA's), (Start: 5 @71847 has 128 MA's), (11, 71979), (15, 72084), (20, 72210), (22, 72267), (25, 72294), (27, 72300), (30, 72327), (38, 72396), (39, 72399), (61, 72963), (65, 73023), (66, 73047), (73, 73119), (89, 73320), (102, 73455), (106, 73530), (111, 73563), (116, 73602), (119, 73611), (121, 73626), (127, 73728), (129, 73743), (133, 73773), (141, 74031), (145, 74100), (149, 74166), (155, 74277),

Gene: ChickenPhender\_128 Start: 70506, Stop: 72773, Start Num: 4

Candidate Starts for ChickenPhender\_128:

(Start: 4 @70506 has 50 MA's), (Start: 5 @70515 has 128 MA's), (6, 70554), (8, 70623), (9, 70632), (13, 70728), (15, 70749), (16, 70758), (17, 70779), (19, 70815), (24, 70899), (26, 70908), (38, 70983), (39, 70986), (40, 71007), (41, 71028), (43, 71043), (44, 71052), (45, 71091), (47, 71121), (50, 71259), (51, 71262), (59, 71430), (66, 71529), (68, 71556), (70, 71580), (74, 71628), (75, 71634), (78, 71679), (80, 71688), (81, 71709), (82, 71715), (84, 71733), (86, 71772), (92, 71814), (105, 71982), (108, 72024), (109, 72030), (113, 72051), (114, 72075), (123, 72162), (127, 72204), (129, 72219), (130, 72222), (132, 72225), (135, 72303), (138, 72393), (143, 72495), (148, 72582), (150, 72600), (153, 72624),

Gene: Chomp\_132 Start: 72594, Stop: 74852, Start Num: 5

Candidate Starts for Chomp\_132:

(Start: 4 @72585 has 50 MA's), (Start: 5 @72594 has 128 MA's), (6, 72633), (8, 72702), (9, 72711), (13, 72807), (15, 72828), (16, 72837), (17, 72858), (19, 72894), (24, 72978), (26, 72987), (38, 73062), (39, 73065), (40, 73086), (41, 73107), (43, 73122), (44, 73131), (45, 73170), (47, 73200), (50, 73338), (51, 73341), (59, 73509), (64, 73560), (66, 73608), (68, 73635), (70, 73659), (74, 73707), (75, 73713), (78, 73758), (80, 73767), (81, 73788), (82, 73794), (84, 73812), (86, 73851), (92, 73893), (107, 74085), (108, 74103), (109, 74109), (113, 74130), (114, 74154), (123, 74241), (127, 74283), (129, 74298), (130, 74301), (132, 74304), (135, 74382), (138, 74472), (143, 74574), (148, 74661), (150, 74679), (153, 74703),

Gene: CindyLou\_134 Start: 72634, Stop: 74892, Start Num: 5

Candidate Starts for CindyLou\_134:

(Start: 4 @72625 has 50 MA's), (Start: 5 @72634 has 128 MA's), (6, 72673), (8, 72742), (9, 72751), (13, 72847), (15, 72868), (16, 72877), (17, 72898), (19, 72934), (24, 73018), (26, 73027), (38, 73102), (39, 73105), (40, 73126), (41, 73147), (43, 73162), (44, 73171), (45, 73210), (47, 73240), (50, 73378), (51, 73381), (59, 73549), (64, 73600), (66, 73648), (68, 73675), (70, 73699), (74, 73747), (75, 73753), (78, 73798), (80, 73807), (81, 73828), (82, 73834), (84, 73852), (86, 73891), (92, 73933), (107, 74125), (108, 74143), (109, 74149), (113, 74170), (114, 74194), (123, 74281), (127, 74323), (129, 74338), (130, 74341), (132, 74344), (135, 74422), (138, 74512), (143, 74614), (148, 74701), (150, 74719), (153, 74743),

Gene: Colt\_124 Start: 73296, Stop: 75563, Start Num: 4

Candidate Starts for Colt\_124:

(Start: 4 @73296 has 50 MA's), (Start: 5 @73305 has 128 MA's), (6, 73344), (8, 73413), (9, 73422), (13, 73518), (15, 73539), (16, 73548), (17, 73569), (19, 73605), (24, 73689), (26, 73698), (38, 73773), (39, 73776), (40, 73797), (41, 73818), (43, 73833), (44, 73842), (45, 73881), (47, 73911), (50, 74049), (51, 74052), (59, 74220), (66, 74319), (68, 74346), (70, 74370), (74, 74418), (75, 74424), (78, 74469), (80, 74478), (81, 74499), (82, 74505), (84, 74523), (86, 74562), (92, 74604), (105, 74772), (108, 74814), (109, 74820), (113, 74841), (114, 74865), (123, 74952), (127, 74994), (129, 75009), (130, 75012), (132, 75015), (135, 75093), (138, 75183), (143, 75285), (148, 75372), (150, 75390), (153, 75414),

Gene: Concombre\_138 Start: 74488, Stop: 76746, Start Num: 5

Candidate Starts for Concombre\_138:

(Start: 4 @74479 has 50 MA's), (Start: 5 @74488 has 128 MA's), (6, 74527), (8, 74596), (9, 74605), (13, 74701), (15, 74722), (16, 74731), (17, 74752), (19, 74788), (24, 74872), (26, 74881), (38, 74956), (39, 74959), (40, 74980), (41, 75001), (43, 75016), (44, 75025), (45, 75064), (47, 75094), (50, 75232), (51, 75235), (59, 75403), (66, 75502), (68, 75529), (70, 75553), (74, 75601), (75, 75607), (78, 75652), (80, 75661), (81, 75682), (82, 75688), (84, 75706), (86, 75745), (92, 75787), (105, 75955), (108, 75997), (109, 76003), (113, 76024), (114, 76048), (123, 76135), (127, 76177), (129, 76192), (130, 76195), (132, 76198), (135, 76276), (138, 76366), (143, 76468), (148, 76555), (150, 76573), (153, 76597),

Gene: DTDevon\_132 Start: 72356, Stop: 74614, Start Num: 5

Candidate Starts for DTDevon\_132:

(Start: 4 @72347 has 50 MA's), (Start: 5 @72356 has 128 MA's), (6, 72395), (8, 72464), (9, 72473), (13, 72569), (15, 72590), (16, 72599), (17, 72620), (19, 72656), (24, 72740), (26, 72749), (38, 72824), (39, 72827), (40, 72848), (41, 72869), (43, 72884), (44, 72893), (45, 72932), (47, 72962), (50, 73100), (51, 73103), (59, 73271), (66, 73370), (68, 73397), (70, 73421), (74, 73469), (75, 73475), (78, 73520), (80, 73529), (81, 73550), (82, 73556), (84, 73574), (86, 73613), (92, 73655), (105, 73823), (108, 73865), (109, 73871), (113, 73892), (114, 73916), (123, 74003), (127, 74045), (129, 74060), (130, 74063), (132, 74066), (135, 74144), (138, 74234), (143, 74336), (148, 74423), (150, 74441), (153, 74465),

Gene: Daffodil\_137 Start: 72297, Stop: 74555, Start Num: 5

Candidate Starts for Daffodil\_137:

(Start: 4 @72288 has 50 MA's), (Start: 5 @72297 has 128 MA's), (6, 72336), (8, 72405), (9, 72414), (13, 72510), (15, 72531), (16, 72540), (17, 72561), (19, 72597), (24, 72681), (26, 72690), (38, 72765), (39, 72768), (40, 72789), (41, 72810), (43, 72825), (44, 72834), (45, 72873), (47, 72903), (50, 73041), (51, 73044), (59, 73212), (66, 73311), (68, 73338), (70, 73362), (74, 73410), (75, 73416), (78, 73461), (80, 73470), (81, 73491), (82, 73497), (84, 73515), (86, 73554), (92, 73596), (105, 73764), (108, 73806), (109, 73812), (113, 73833), (114, 73857), (123, 73944), (127, 73986), (129, 74001), (130, 74004), (132, 74007), (135, 74085), (138, 74175), (143, 74277), (148, 74364), (150, 74382), (153, 74406),

Gene: Dandelion\_137 Start: 74489, Stop: 76747, Start Num: 5

Candidate Starts for Dandelion\_137:

(Start: 4 @74480 has 50 MA's), (Start: 5 @74489 has 128 MA's), (6, 74528), (8, 74597), (9, 74606), (13, 74702), (15, 74723), (16, 74732), (17, 74753), (19, 74789), (24, 74873), (26, 74882), (38, 74957), (39, 74960), (40, 74981), (41, 75002), (43, 75017), (44, 75026), (45, 75065), (47, 75095), (50, 75233), (51, 75236), (59, 75404), (66, 75503), (68, 75530), (70, 75554), (74, 75602), (75, 75608), (78, 75653), (80, 75662), (81, 75683), (82, 75689), (84, 75707), (86, 75746), (92, 75788), (105, 75956), (108, 75998), (109, 76004), (113, 76025), (114, 76049), (123, 76136), (127, 76178), (129, 76193), (130, 76196), (132, 76199), (135, 76277), (138, 76367), (143, 76469), (148, 76556), (150, 76574), (153, 76598),

Gene: Darko\_132 Start: 71989, Stop: 74247, Start Num: 5

Candidate Starts for Darko\_132:

(Start: 4 @71980 has 50 MA's), (Start: 5 @71989 has 128 MA's), (6, 72028), (8, 72097), (9, 72106), (13, 72202), (15, 72223), (16, 72232), (17, 72253), (19, 72289), (24, 72373), (26, 72382), (38, 72457), (39, 72460), (40, 72481), (41, 72502), (43, 72517), (44, 72526), (45, 72565), (47, 72595), (50, 72733), (51, 72736), (59, 72904), (66, 73003), (68, 73030), (70, 73054), (74, 73102), (75, 73108), (78, 73153), (80, 73162), (81, 73183), (82, 73189), (84, 73207), (86, 73246), (92, 73288), (105, 73456), (108, 73498), (109, 73504), (113, 73525), (114, 73549), (123, 73636), (127, 73678), (129, 73693), (130, 73696), (132, 73699), (135, 73777), (138, 73867), (143, 73969), (148, 74056), (150, 74074), (153, 74098),

Gene: DeejaClivia\_119 Start: 68646, Stop: 70913, Start Num: 4

Candidate Starts for DeejaClivia\_119:

(Start: 4 @68646 has 50 MA's), (Start: 5 @68655 has 128 MA's), (6, 68694), (8, 68763), (9, 68772), (13, 68868), (15, 68889), (16, 68898), (17, 68919), (19, 68955), (24, 69039), (26, 69048), (38, 69123), (39, 69126), (40, 69147), (41, 69168), (43, 69183), (44, 69192), (45, 69231), (47, 69261), (50, 69399), (51, 69402), (58, 69561), (59, 69570), (66, 69669), (68, 69696), (70, 69720), (74, 69768), (75, 69774), (78, 69819), (80, 69828), (81, 69849), (82, 69855), (84, 69873), (86, 69912), (92, 69954), (108, 70164), (109, 70170), (113, 70191), (114, 70215), (123, 70302), (127, 70344), (129, 70359), (130, 70362), (132, 70365), (135, 70443), (138, 70533), (143, 70635), (148, 70722), (150, 70740), (153, 70764),

Gene: Delilah\_132 Start: 72442, Stop: 74709, Start Num: 4

Candidate Starts for Delilah\_132:

(Start: 4 @72442 has 50 MA's), (Start: 5 @72451 has 128 MA's), (6, 72490), (8, 72559), (9, 72568), (13, 72664), (15, 72685), (16, 72694), (17, 72715), (19, 72751), (24, 72835), (26, 72844), (38, 72919), (39, 72922), (40, 72943), (41, 72964), (43, 72979), (44, 72988), (45, 73027), (47, 73057), (50, 73195), (51, 73198), (59, 73366), (66, 73465), (68, 73492), (70, 73516), (74, 73564), (75, 73570), (78, 73615), (80, 73624), (81, 73645), (82, 73651), (84, 73669), (86, 73708), (92, 73750), (105, 73918), (108, 73960), (109, 73966), (113, 73987), (114, 74011), (123, 74098), (127, 74140), (129, 74155), (130, 74158), (132, 74161), (135, 74239), (138, 74329), (143, 74431), (148, 74518), (150, 74536), (153, 74560),

Gene: Delylah\_135 Start: 71990, Stop: 74248, Start Num: 5

Candidate Starts for Delylah\_135:

(Start: 4 @71981 has 50 MA's), (Start: 5 @71990 has 128 MA's), (6, 72029), (8, 72098), (9, 72107), (13, 72203), (15, 72224), (16, 72233), (17, 72254), (19, 72290), (24, 72374), (26, 72383), (38, 72458), (39, 72461), (40, 72482), (41, 72503), (43, 72518), (44, 72527), (45, 72566), (47, 72596), (50, 72734), (51, 72737), (59, 72905), (66, 73004), (68, 73031), (70, 73055), (74, 73103), (75, 73109), (78, 73154), (80, 73163), (81, 73184), (82, 73190), (84, 73208), (86, 73247), (92, 73289), (105, 73457), (108, 73499), (109, 73505), (113, 73526), (114, 73550), (123, 73637), (127, 73679), (129, 73694), (130, 73697), (132, 73700), (135, 73778), (138, 73868), (143, 73970), (148, 74057), (150, 74075), (153, 74099),

Gene: Demodog\_139 Start: 74497, Stop: 76755, Start Num: 5

Candidate Starts for Demodog\_139:

(Start: 4 @74488 has 50 MA's), (Start: 5 @74497 has 128 MA's), (6, 74536), (8, 74605), (9, 74614), (13, 74710), (15, 74731), (16, 74740), (17, 74761), (19, 74797), (24, 74881), (26, 74890), (38, 74965), (39, 74968), (40, 74989), (41, 75010), (43, 75025), (44, 75034), (45, 75073), (47, 75103), (50, 75241), (51, 75244), (59, 75412), (66, 75511), (68, 75538), (70, 75562), (74, 75610), (75, 75616), (78, 75661), (80, 75670), (81, 75691), (82, 75697), (84, 75715), (86, 75754), (92, 75796), (105, 75964), (108, 76006), (109, 76012), (113, 76033), (114, 76057), (123, 76144), (127, 76186), (129, 76201), (130, 76204), (132, 76207), (135, 76285), (138, 76375), (143, 76477), (148, 76564), (150, 76582), (153, 76606),



Gene: Derek\_131 Start: 71916, Stop: 74174, Start Num: 5

Candidate Starts for Derek\_131:

(Start: 4 @71907 has 50 MA's), (Start: 5 @71916 has 128 MA's), (6, 71955), (8, 72024), (9, 72033), (13, 72129), (15, 72150), (16, 72159), (17, 72180), (19, 72216), (24, 72300), (26, 72309), (38, 72384), (39, 72387), (40, 72408), (41, 72429), (43, 72444), (44, 72453), (45, 72492), (47, 72522), (50, 72660), (51, 72663), (59, 72831), (64, 72882), (66, 72930), (68, 72957), (70, 72981), (74, 73029), (75, 73035), (78, 73080), (80, 73089), (81, 73110), (82, 73116), (84, 73134), (86, 73173), (92, 73215), (107, 73407), (108, 73425), (109, 73431), (113, 73452), (114, 73476), (123, 73563), (127, 73605), (129, 73620), (130, 73623), (132, 73626), (135, 73704), (138, 73794), (143, 73896), (148, 73983), (150, 74001), (153, 74025),

Gene: Dietrick\_124 Start: 69992, Stop: 72250, Start Num: 5

Candidate Starts for Dietrick\_124:

(Start: 4 @69983 has 50 MA's), (Start: 5 @69992 has 128 MA's), (6, 70031), (8, 70100), (9, 70109), (13, 70205), (15, 70226), (16, 70235), (17, 70256), (19, 70292), (24, 70376), (26, 70385), (38, 70460), (39, 70463), (40, 70484), (41, 70505), (43, 70520), (44, 70529), (45, 70568), (47, 70598), (50, 70736), (51, 70739), (59, 70907), (66, 71006), (68, 71033), (70, 71057), (74, 71105), (75, 71111), (78, 71156), (80, 71165), (81, 71186), (82, 71192), (84, 71210), (86, 71249), (92, 71291), (105, 71459), (108, 71501), (109, 71507), (113, 71528), (114, 71552), (123, 71639), (127, 71681), (129, 71696), (130, 71699), (132, 71702), (135, 71780), (138, 71870), (143, 71972), (148, 72059), (150, 72077), (153, 72101),

Gene: DirtMonster\_126 Start: 71250, Stop: 73508, Start Num: 5

Candidate Starts for DirtMonster\_126:

(Start: 4 @71241 has 50 MA's), (Start: 5 @71250 has 128 MA's), (6, 71289), (8, 71358), (9, 71367), (13, 71463), (15, 71484), (16, 71493), (17, 71514), (19, 71550), (24, 71634), (26, 71643), (38, 71718), (39, 71721), (40, 71742), (41, 71763), (43, 71778), (44, 71787), (45, 71826), (47, 71856), (50, 71994), (51, 71997), (59, 72165), (64, 72216), (66, 72264), (68, 72291), (70, 72315), (74, 72363), (75, 72369), (78, 72414), (80, 72423), (81, 72444), (82, 72450), (84, 72468), (86, 72507), (92, 72549), (107, 72741), (108, 72759), (109, 72765), (113, 72786), (114, 72810), (123, 72897), (127, 72939), (129, 72954), (130, 72957), (132, 72960), (135, 73038), (138, 73128), (143, 73230), (148, 73317), (150, 73335), (153, 73359),

Gene: Domi\_125 Start: 71329, Stop: 73587, Start Num: 5

Candidate Starts for Domi\_125:

(Start: 4 @71320 has 50 MA's), (Start: 5 @71329 has 128 MA's), (6, 71368), (8, 71437), (9, 71446), (13, 71542), (15, 71563), (16, 71572), (17, 71593), (19, 71629), (24, 71713), (26, 71722), (38, 71797), (39, 71800), (40, 71821), (41, 71842), (43, 71857), (44, 71866), (45, 71905), (47, 71935), (50, 72073), (51, 72076), (59, 72244), (66, 72343), (68, 72370), (70, 72394), (74, 72442), (75, 72448), (78, 72493), (80, 72502), (81, 72523), (82, 72529), (84, 72547), (86, 72586), (92, 72628), (105, 72796), (108, 72838), (109, 72844), (113, 72865), (114, 72889), (123, 72976), (127, 73018), (129, 73033), (130, 73036), (132, 73039), (135, 73117), (138, 73207), (143, 73309), (148, 73396), (150, 73414), (153, 73438),

Gene: DrPhinkDaddy\_131 Start: 72500, Stop: 74767, Start Num: 4

Candidate Starts for DrPhinkDaddy\_131:

(Start: 4 @72500 has 50 MA's), (Start: 5 @72509 has 128 MA's), (6, 72548), (8, 72617), (9, 72626), (13, 72722), (15, 72743), (16, 72752), (17, 72773), (19, 72809), (24, 72893), (26, 72902), (38, 72977), (39, 72980), (40, 73001), (41, 73022), (43, 73037), (44, 73046), (45, 73085), (47, 73115), (50, 73253), (51, 73256), (59, 73424), (66, 73523), (68, 73550), (70, 73574), (74, 73622), (75, 73628), (78, 73673), (80, 73682), (81, 73703), (82, 73709), (84, 73727), (86, 73766), (92, 73808), (105, 73976), (108, 74018), (109, 74024), (113, 74045), (114, 74069), (123, 74156), (127, 74198), (129, 74213), (130,

74216), (132, 74219), (135, 74297), (138, 74387), (143, 74489), (148, 74576), (150, 74594), (153, 74618),

Gene: Drazdys\_130 Start: 70980, Stop: 73238, Start Num: 5

Candidate Starts for Drazdys\_130:

(Start: 4 @70971 has 50 MA's), (Start: 5 @70980 has 128 MA's), (6, 71019), (8, 71088), (9, 71097), (13, 71193), (15, 71214), (16, 71223), (17, 71244), (19, 71280), (24, 71364), (26, 71373), (38, 71448), (39, 71451), (40, 71472), (41, 71493), (43, 71508), (44, 71517), (45, 71556), (47, 71586), (50, 71724), (51, 71727), (59, 71895), (64, 71946), (66, 71994), (68, 72021), (70, 72045), (74, 72093), (75, 72099), (78, 72144), (80, 72153), (81, 72174), (82, 72180), (84, 72198), (86, 72237), (92, 72279), (107, 72471), (108, 72489), (109, 72495), (113, 72516), (114, 72540), (123, 72627), (127, 72669), (129, 72684), (130, 72687), (132, 72690), (135, 72768), (138, 72858), (143, 72960), (148, 73047), (150, 73065), (153, 73089),

Gene: ET08\_120 Start: 70970, Stop: 73228, Start Num: 5

Candidate Starts for ET08\_120:

(Start: 4 @70961 has 50 MA's), (Start: 5 @70970 has 128 MA's), (6, 71009), (8, 71078), (9, 71087), (13, 71183), (15, 71204), (16, 71213), (17, 71234), (19, 71270), (24, 71354), (26, 71363), (38, 71438), (39, 71441), (40, 71462), (41, 71483), (43, 71498), (44, 71507), (45, 71546), (47, 71576), (50, 71714), (51, 71717), (59, 71885), (64, 71936), (66, 71984), (68, 72011), (70, 72035), (74, 72083), (75, 72089), (78, 72134), (80, 72143), (81, 72164), (82, 72170), (84, 72188), (86, 72227), (92, 72269), (107, 72461), (108, 72479), (109, 72485), (113, 72506), (114, 72530), (123, 72617), (127, 72659), (129, 72674), (130, 72677), (132, 72680), (135, 72758), (138, 72848), (143, 72950), (148, 73037), (150, 73055), (153, 73079),

Gene: EasyJones\_135 Start: 71537, Stop: 73795, Start Num: 5

Candidate Starts for EasyJones\_135:

(Start: 4 @71528 has 50 MA's), (Start: 5 @71537 has 128 MA's), (6, 71576), (8, 71645), (9, 71654), (13, 71750), (15, 71771), (16, 71780), (17, 71801), (19, 71837), (24, 71921), (26, 71930), (38, 72005), (39, 72008), (40, 72029), (41, 72050), (43, 72065), (44, 72074), (45, 72113), (47, 72143), (50, 72281), (51, 72284), (59, 72452), (66, 72551), (68, 72578), (70, 72602), (74, 72650), (75, 72656), (78, 72701), (80, 72710), (81, 72731), (82, 72737), (84, 72755), (86, 72794), (92, 72836), (105, 73004), (108, 73046), (109, 73052), (113, 73073), (114, 73097), (123, 73184), (127, 73226), (129, 73241), (130, 73244), (132, 73247), (135, 73325), (138, 73415), (143, 73517), (148, 73604), (150, 73622), (153, 73646),

Gene: EggyFarm\_140 Start: 74255, Stop: 76513, Start Num: 5

Candidate Starts for EggyFarm\_140:

(Start: 4 @74246 has 50 MA's), (Start: 5 @74255 has 128 MA's), (6, 74294), (8, 74363), (9, 74372), (13, 74468), (15, 74489), (16, 74498), (17, 74519), (19, 74555), (24, 74639), (26, 74648), (38, 74723), (39, 74726), (40, 74747), (41, 74768), (43, 74783), (44, 74792), (45, 74831), (47, 74861), (50, 74999), (51, 75002), (59, 75170), (66, 75269), (68, 75296), (70, 75320), (74, 75368), (75, 75374), (78, 75419), (80, 75428), (81, 75449), (82, 75455), (84, 75473), (86, 75512), (92, 75554), (105, 75722), (108, 75764), (109, 75770), (113, 75791), (114, 75815), (123, 75902), (127, 75944), (130, 75962), (132, 75965), (135, 76043), (138, 76133), (143, 76235), (148, 76322), (150, 76340), (153, 76364),

Gene: EmToTheThree\_134 Start: 73240, Stop: 75507, Start Num: 4

Candidate Starts for EmToTheThree\_134:

(Start: 4 @73240 has 50 MA's), (Start: 5 @73249 has 128 MA's), (6, 73288), (8, 73357), (9, 73366), (13, 73462), (15, 73483), (16, 73492), (17, 73513), (19, 73549), (24, 73633), (26, 73642), (38, 73717), (39, 73720), (40, 73741), (41, 73762), (43, 73777), (44, 73786), (45, 73825), (47, 73855), (50, 73993), (51, 73996), (59, 74164), (66, 74263), (68, 74290), (70, 74314), (74, 74362), (75, 74368), (78, 74413), (80, 74422), (81, 74443), (82, 74449), (84, 74467), (86, 74506), (92, 74548), (105, 74716), (108,

74758), (109, 74764), (113, 74785), (114, 74809), (123, 74896), (127, 74938), (129, 74953), (130, 74956), (132, 74959), (135, 75037), (138, 75127), (143, 75229), (148, 75316), (150, 75334), (153, 75358),

Gene: EmmaElysia\_133 Start: 71515, Stop: 73782, Start Num: 4

Candidate Starts for EmmaElysia\_133:

(Start: 4 @71515 has 50 MA's), (Start: 5 @71524 has 128 MA's), (6, 71563), (8, 71632), (9, 71641), (13, 71737), (15, 71758), (16, 71767), (17, 71788), (19, 71824), (24, 71908), (26, 71917), (38, 71992), (39, 71995), (40, 72016), (41, 72037), (43, 72052), (44, 72061), (45, 72100), (47, 72130), (50, 72268), (51, 72271), (59, 72439), (66, 72538), (68, 72565), (70, 72589), (74, 72637), (75, 72643), (78, 72688), (80, 72697), (81, 72718), (82, 72724), (84, 72742), (86, 72781), (92, 72823), (105, 72991), (108, 73033), (109, 73039), (113, 73060), (114, 73084), (123, 73171), (127, 73213), (129, 73228), (130, 73231), (132, 73234), (135, 73312), (138, 73402), (143, 73504), (148, 73591), (150, 73609), (153, 73633),

Gene: Erdmann\_132 Start: 72298, Stop: 74556, Start Num: 5

Candidate Starts for Erdmann\_132:

(Start: 4 @72289 has 50 MA's), (Start: 5 @72298 has 128 MA's), (6, 72337), (8, 72406), (9, 72415), (13, 72511), (15, 72532), (16, 72541), (17, 72562), (19, 72598), (24, 72682), (26, 72691), (38, 72766), (39, 72769), (40, 72790), (41, 72811), (43, 72826), (44, 72835), (45, 72874), (47, 72904), (50, 73042), (51, 73045), (59, 73213), (66, 73312), (68, 73339), (70, 73363), (74, 73411), (75, 73417), (78, 73462), (80, 73471), (81, 73492), (82, 73498), (84, 73516), (86, 73555), (92, 73597), (105, 73765), (108, 73807), (109, 73813), (113, 73834), (114, 73858), (123, 73945), (127, 73987), (129, 74002), (130, 74005), (132, 74008), (135, 74086), (138, 74176), (143, 74278), (148, 74365), (150, 74383), (153, 74407),

Gene: ErnieJ\_126 Start: 70267, Stop: 72525, Start Num: 5

Candidate Starts for ErnieJ\_126:

(Start: 4 @70258 has 50 MA's), (Start: 5 @70267 has 128 MA's), (6, 70306), (8, 70375), (9, 70384), (13, 70480), (15, 70501), (16, 70510), (17, 70531), (19, 70567), (24, 70651), (26, 70660), (38, 70735), (39, 70738), (40, 70759), (41, 70780), (43, 70795), (44, 70804), (45, 70843), (47, 70873), (50, 71011), (51, 71014), (59, 71182), (64, 71233), (66, 71281), (68, 71308), (70, 71332), (74, 71380), (75, 71386), (78, 71431), (80, 71440), (81, 71461), (82, 71467), (84, 71485), (86, 71524), (92, 71566), (107, 71758), (108, 71776), (109, 71782), (113, 71803), (114, 71827), (123, 71914), (127, 71956), (129, 71971), (130, 71974), (132, 71977), (135, 72055), (138, 72145), (143, 72247), (148, 72334), (150, 72352), (153, 72376),

Gene: Essence\_129 Start: 71137, Stop: 73404, Start Num: 4

Candidate Starts for Essence\_129:

(Start: 4 @71137 has 50 MA's), (Start: 5 @71146 has 128 MA's), (6, 71185), (8, 71254), (9, 71263), (13, 71359), (15, 71380), (16, 71389), (17, 71410), (19, 71446), (24, 71530), (26, 71539), (38, 71614), (39, 71617), (40, 71638), (41, 71659), (43, 71674), (44, 71683), (45, 71722), (47, 71752), (50, 71890), (51, 71893), (59, 72061), (64, 72112), (66, 72160), (68, 72187), (70, 72211), (74, 72259), (75, 72265), (78, 72310), (80, 72319), (81, 72340), (82, 72346), (84, 72364), (86, 72403), (92, 72445), (107, 72637), (108, 72655), (109, 72661), (113, 72682), (114, 72706), (123, 72793), (127, 72835), (129, 72850), (130, 72853), (132, 72856), (135, 72934), (138, 73024), (143, 73126), (148, 73213), (150, 73231), (153, 73255),

Gene: Ewok\_133 Start: 71666, Stop: 73933, Start Num: 4

Candidate Starts for Ewok\_133:

(Start: 4 @71666 has 50 MA's), (Start: 5 @71675 has 128 MA's), (6, 71714), (8, 71783), (9, 71792), (13, 71888), (15, 71909), (16, 71918), (17, 71939), (19, 71975), (24, 72059), (26, 72068), (38, 72143), (39, 72146), (40, 72167), (41, 72188), (43, 72203), (44, 72212), (45, 72251), (47, 72281), (50, 72419),

(51, 72422), (59, 72590), (66, 72689), (68, 72716), (70, 72740), (74, 72788), (75, 72794), (78, 72839), (80, 72848), (81, 72869), (82, 72875), (84, 72893), (86, 72932), (92, 72974), (105, 73142), (108, 73184), (109, 73190), (113, 73211), (114, 73235), (123, 73322), (127, 73364), (129, 73379), (130, 73382), (132, 73385), (135, 73463), (138, 73553), (143, 73655), (148, 73742), (150, 73760), (153, 73784),

Gene: Flabslab\_127 Start: 69848, Stop: 72115, Start Num: 4

Candidate Starts for Flabslab\_127:

(Start: 4 @69848 has 50 MA's), (Start: 5 @69857 has 128 MA's), (6, 69896), (8, 69965), (9, 69974), (13, 70070), (15, 70091), (16, 70100), (17, 70121), (19, 70157), (24, 70241), (26, 70250), (38, 70325), (39, 70328), (40, 70349), (41, 70370), (43, 70385), (44, 70394), (45, 70433), (47, 70463), (50, 70601), (51, 70604), (59, 70772), (66, 70871), (68, 70898), (70, 70922), (74, 70970), (75, 70976), (78, 71021), (80, 71030), (81, 71051), (82, 71057), (84, 71075), (86, 71114), (92, 71156), (105, 71324), (108, 71366), (109, 71372), (113, 71393), (114, 71417), (123, 71504), (127, 71546), (129, 71561), (130, 71564), (132, 71567), (135, 71645), (138, 71735), (143, 71837), (148, 71924), (150, 71942), (153, 71966),

Gene: Fludd\_133 Start: 71314, Stop: 73581, Start Num: 4

Candidate Starts for Fludd\_133:

(Start: 4 @71314 has 50 MA's), (Start: 5 @71323 has 128 MA's), (6, 71362), (8, 71431), (9, 71440), (13, 71536), (15, 71557), (16, 71566), (17, 71587), (19, 71623), (24, 71707), (26, 71716), (38, 71791), (39, 71794), (40, 71815), (41, 71836), (43, 71851), (44, 71860), (45, 71899), (47, 71929), (50, 72067), (51, 72070), (59, 72238), (66, 72337), (68, 72364), (70, 72388), (74, 72436), (75, 72442), (78, 72487), (80, 72496), (81, 72517), (82, 72523), (84, 72541), (86, 72580), (92, 72622), (105, 72790), (108, 72832), (109, 72838), (113, 72859), (114, 72883), (123, 72970), (127, 73012), (129, 73027), (130, 73030), (132, 73033), (135, 73111), (138, 73201), (143, 73303), (148, 73390), (150, 73408), (153, 73432),

Gene: Fongie\_130 Start: 71879, Stop: 74146, Start Num: 4

Candidate Starts for Fongie\_130:

(Start: 4 @71879 has 50 MA's), (Start: 5 @71888 has 128 MA's), (6, 71927), (8, 71996), (9, 72005), (13, 72101), (15, 72122), (16, 72131), (17, 72152), (19, 72188), (24, 72272), (26, 72281), (38, 72356), (39, 72359), (40, 72380), (41, 72401), (43, 72416), (44, 72425), (45, 72464), (47, 72494), (50, 72632), (51, 72635), (59, 72803), (66, 72902), (68, 72929), (70, 72953), (74, 73001), (75, 73007), (78, 73052), (80, 73061), (81, 73082), (82, 73088), (84, 73106), (86, 73145), (92, 73187), (105, 73355), (108, 73397), (109, 73403), (113, 73424), (114, 73448), (123, 73535), (127, 73577), (129, 73592), (130, 73595), (132, 73598), (135, 73676), (138, 73766), (143, 73868), (148, 73955), (150, 73973), (153, 73997),

Gene: FoxtrotP1\_132 Start: 73449, Stop: 75716, Start Num: 4

Candidate Starts for FoxtrotP1\_132:

(Start: 4 @73449 has 50 MA's), (Start: 5 @73458 has 128 MA's), (6, 73497), (8, 73566), (9, 73575), (13, 73671), (15, 73692), (16, 73701), (17, 73722), (19, 73758), (24, 73842), (26, 73851), (38, 73926), (39, 73929), (40, 73950), (41, 73971), (43, 73986), (44, 73995), (45, 74034), (47, 74064), (50, 74202), (51, 74205), (59, 74373), (66, 74472), (68, 74499), (70, 74523), (74, 74571), (75, 74577), (78, 74622), (80, 74631), (81, 74652), (82, 74658), (84, 74676), (86, 74715), (92, 74757), (105, 74925), (108, 74967), (109, 74973), (113, 74994), (114, 75018), (123, 75105), (127, 75147), (129, 75162), (130, 75165), (132, 75168), (135, 75246), (138, 75336), (143, 75438), (148, 75525), (150, 75543), (153, 75567),

Gene: FrayBell\_137 Start: 72613, Stop: 74880, Start Num: 4

Candidate Starts for FrayBell\_137:

(Start: 4 @72613 has 50 MA's), (Start: 5 @72622 has 128 MA's), (6, 72661), (8, 72730), (9, 72739), (13, 72835), (15, 72856), (16, 72865), (17, 72886), (19, 72922), (24, 73006), (26, 73015), (38, 73090), (39, 73093), (40, 73114), (41, 73135), (43, 73150), (44, 73159), (45, 73198), (47, 73228), (50, 73366), (51, 73369), (59, 73537), (66, 73636), (68, 73663), (70, 73687), (74, 73735), (75, 73741), (78, 73786), (80, 73795), (81, 73816), (82, 73822), (84, 73840), (86, 73879), (92, 73921), (105, 74089), (108, 74131), (109, 74137), (113, 74158), (114, 74182), (123, 74269), (127, 74311), (129, 74326), (130, 74329), (132, 74332), (135, 74410), (138, 74500), (143, 74602), (148, 74689), (150, 74707), (153, 74731),

Gene: FudgeTart\_130 Start: 71328, Stop: 73586, Start Num: 5

Candidate Starts for FudgeTart\_130:

(Start: 4 @71319 has 50 MA's), (Start: 5 @71328 has 128 MA's), (6, 71367), (8, 71436), (9, 71445), (13, 71541), (15, 71562), (16, 71571), (17, 71592), (19, 71628), (24, 71712), (26, 71721), (38, 71796), (39, 71799), (40, 71820), (41, 71841), (43, 71856), (44, 71865), (45, 71904), (47, 71934), (50, 72072), (51, 72075), (59, 72243), (66, 72342), (68, 72369), (70, 72393), (74, 72441), (75, 72447), (78, 72492), (80, 72501), (81, 72522), (82, 72528), (84, 72546), (86, 72585), (92, 72627), (105, 72795), (108, 72837), (109, 72843), (113, 72864), (114, 72888), (123, 72975), (127, 73017), (129, 73032), (130, 73035), (132, 73038), (135, 73116), (138, 73206), (143, 73308), (148, 73395), (150, 73413), (153, 73437),

Gene: Gabriel\_132 Start: 70552, Stop: 72810, Start Num: 5

Candidate Starts for Gabriel\_132:

(Start: 4 @70543 has 50 MA's), (Start: 5 @70552 has 128 MA's), (6, 70591), (8, 70660), (9, 70669), (13, 70765), (15, 70786), (16, 70795), (17, 70816), (19, 70852), (24, 70936), (26, 70945), (38, 71020), (39, 71023), (40, 71044), (41, 71065), (43, 71080), (44, 71089), (45, 71128), (47, 71158), (50, 71296), (51, 71299), (59, 71467), (66, 71566), (68, 71593), (70, 71617), (74, 71665), (75, 71671), (78, 71716), (80, 71725), (81, 71746), (82, 71752), (84, 71770), (86, 71809), (92, 71851), (105, 72019), (108, 72061), (109, 72067), (113, 72088), (114, 72112), (123, 72199), (127, 72241), (129, 72256), (130, 72259), (132, 72262), (135, 72340), (138, 72430), (143, 72532), (148, 72619), (150, 72637), (153, 72661),

Gene: Gamgam\_133 Start: 71295, Stop: 73553, Start Num: 5

Candidate Starts for Gamgam\_133:

(Start: 4 @71286 has 50 MA's), (Start: 5 @71295 has 128 MA's), (6, 71334), (8, 71403), (9, 71412), (13, 71508), (15, 71529), (16, 71538), (17, 71559), (19, 71595), (24, 71679), (26, 71688), (38, 71763), (39, 71766), (40, 71787), (41, 71808), (43, 71823), (44, 71832), (45, 71871), (47, 71901), (50, 72039), (51, 72042), (59, 72210), (64, 72261), (66, 72309), (68, 72336), (70, 72360), (74, 72408), (75, 72414), (78, 72459), (80, 72468), (81, 72489), (82, 72495), (84, 72513), (86, 72552), (92, 72594), (107, 72786), (108, 72804), (109, 72810), (113, 72831), (114, 72855), (123, 72942), (127, 72984), (129, 72999), (130, 73002), (132, 73005), (135, 73083), (138, 73173), (143, 73275), (148, 73362), (150, 73380), (153, 73404),

Gene: Ghost\_131 Start: 71305, Stop: 73563, Start Num: 5

Candidate Starts for Ghost\_131:

(Start: 4 @71296 has 50 MA's), (Start: 5 @71305 has 128 MA's), (6, 71344), (8, 71413), (9, 71422), (13, 71518), (15, 71539), (16, 71548), (17, 71569), (19, 71605), (24, 71689), (26, 71698), (38, 71773), (39, 71776), (40, 71797), (41, 71818), (43, 71833), (44, 71842), (45, 71881), (47, 71911), (50, 72049), (51, 72052), (59, 72220), (64, 72271), (66, 72319), (68, 72346), (70, 72370), (74, 72418), (75, 72424), (78, 72469), (80, 72478), (81, 72499), (82, 72505), (84, 72523), (86, 72562), (92, 72604), (107, 72796), (108, 72814), (109, 72820), (113, 72841), (114, 72865), (123, 72952), (127, 72994), (129, 73009), (130, 73012), (132, 73015), (135, 73093), (138, 73183), (143, 73285), (148, 73372), (150, 73390), (153, 73414),

Gene: Gizmo\_137 Start: 73927, Stop: 76185, Start Num: 5

Candidate Starts for Gizmo\_137:

(Start: 4 @73918 has 50 MA's), (Start: 5 @73927 has 128 MA's), (6, 73966), (8, 74035), (9, 74044), (13, 74140), (15, 74161), (16, 74170), (17, 74191), (19, 74227), (24, 74311), (26, 74320), (38, 74395), (39, 74398), (40, 74419), (41, 74440), (43, 74455), (44, 74464), (45, 74503), (47, 74533), (50, 74671), (51, 74674), (59, 74842), (66, 74941), (68, 74968), (70, 74992), (74, 75040), (75, 75046), (78, 75091), (80, 75100), (81, 75121), (82, 75127), (84, 75145), (86, 75184), (92, 75226), (105, 75394), (108, 75436), (109, 75442), (113, 75463), (114, 75487), (123, 75574), (127, 75616), (129, 75631), (130, 75634), (132, 75637), (135, 75715), (138, 75805), (143, 75907), (148, 75994), (150, 76012), (153, 76036),

Gene: GlutenPhree\_132 Start: 71305, Stop: 73563, Start Num: 5

Candidate Starts for GlutenPhree\_132:

(Start: 4 @71296 has 50 MA's), (Start: 5 @71305 has 128 MA's), (6, 71344), (8, 71413), (9, 71422), (13, 71518), (15, 71539), (16, 71548), (17, 71569), (19, 71605), (24, 71689), (26, 71698), (38, 71773), (39, 71776), (40, 71797), (41, 71818), (43, 71833), (44, 71842), (45, 71881), (47, 71911), (50, 72049), (51, 72052), (59, 72220), (64, 72271), (66, 72319), (68, 72346), (70, 72370), (74, 72418), (75, 72424), (78, 72469), (80, 72478), (81, 72499), (82, 72505), (84, 72523), (86, 72562), (92, 72604), (107, 72796), (108, 72814), (109, 72820), (113, 72841), (114, 72865), (123, 72952), (127, 72994), (129, 73009), (130, 73012), (132, 73015), (135, 73093), (138, 73183), (143, 73285), (148, 73372), (150, 73390), (153, 73414),

Gene: Grasshills\_139 Start: 74255, Stop: 76513, Start Num: 5

Candidate Starts for Grasshills\_139:

(Start: 4 @74246 has 50 MA's), (Start: 5 @74255 has 128 MA's), (6, 74294), (8, 74363), (9, 74372), (13, 74468), (15, 74489), (16, 74498), (17, 74519), (19, 74555), (24, 74639), (26, 74648), (38, 74723), (39, 74726), (40, 74747), (41, 74768), (43, 74783), (44, 74792), (45, 74831), (47, 74861), (50, 74999), (51, 75002), (59, 75170), (66, 75269), (68, 75296), (70, 75320), (74, 75368), (75, 75374), (78, 75419), (80, 75428), (81, 75449), (82, 75455), (84, 75473), (86, 75512), (92, 75554), (105, 75722), (108, 75764), (109, 75770), (113, 75791), (114, 75815), (123, 75902), (127, 75944), (130, 75962), (132, 75965), (135, 76043), (138, 76133), (143, 76235), (148, 76322), (150, 76340), (153, 76364),

Gene: Greely\_131 Start: 72598, Stop: 74934, Start Num: 5

Candidate Starts for Greely\_131:

(Start: 4 @72589 has 50 MA's), (Start: 5 @72598 has 128 MA's), (7, 72694), (8, 72706), (10, 72721), (12, 72778), (14, 72820), (16, 72841), (19, 72901), (21, 72967), (28, 73000), (30, 73015), (32, 73027), (33, 73036), (35, 73039), (36, 73042), (38, 73069), (45, 73171), (47, 73201), (52, 73363), (53, 73369), (61, 73588), (64, 73624), (67, 73690), (69, 73711), (71, 73726), (72, 73732), (74, 73771), (77, 73819), (79, 73828), (80, 73831), (81, 73852), (82, 73858), (84, 73876), (90, 73939), (94, 73981), (101, 74038), (110, 74173), (114, 74215), (118, 74230), (122, 74293), (125, 74344), (126, 74347), (139, 74557), (155, 74848), (156, 74863),

Gene: Grungle\_119 Start: 68570, Stop: 70828, Start Num: 5

Candidate Starts for Grungle\_119:

(Start: 4 @68561 has 50 MA's), (Start: 5 @68570 has 128 MA's), (6, 68609), (8, 68678), (9, 68687), (13, 68783), (15, 68804), (16, 68813), (17, 68834), (19, 68870), (24, 68954), (26, 68963), (38, 69038), (39, 69041), (40, 69062), (41, 69083), (43, 69098), (44, 69107), (45, 69146), (47, 69176), (50, 69314), (51, 69317), (59, 69485), (64, 69536), (66, 69584), (68, 69611), (70, 69635), (74, 69683), (75, 69689), (78, 69734), (80, 69743), (81, 69764), (82, 69770), (84, 69788), (86, 69827), (92, 69869), (107, 70061), (108, 70079), (109, 70085), (113, 70106), (114, 70130), (123, 70217), (127, 70259), (129, 70274), (130, 70277), (132, 70280), (135, 70358), (138, 70448), (143, 70550), (148, 70637), (150, 70655), (153, 70679),

Gene: Guwapp\_131 Start: 70717, Stop: 72975, Start Num: 5

Candidate Starts for Guwapp\_131:

(Start: 4 @70708 has 50 MA's), (Start: 5 @70717 has 128 MA's), (6, 70756), (8, 70825), (9, 70834), (13, 70930), (15, 70951), (16, 70960), (17, 70981), (19, 71017), (24, 71101), (26, 71110), (38, 71185), (39, 71188), (40, 71209), (41, 71230), (43, 71245), (44, 71254), (45, 71293), (47, 71323), (50, 71461), (51, 71464), (59, 71632), (64, 71683), (66, 71731), (68, 71758), (70, 71782), (74, 71830), (75, 71836), (78, 71881), (80, 71890), (81, 71911), (82, 71917), (84, 71935), (86, 71974), (92, 72016), (107, 72208), (108, 72226), (109, 72232), (113, 72253), (114, 72277), (123, 72364), (127, 72406), (129, 72421), (130, 72424), (132, 72427), (135, 72505), (138, 72595), (143, 72697), (148, 72784), (150, 72802), (153, 72826),

Gene: Halldule\_126 Start: 69587, Stop: 71854, Start Num: 4

Candidate Starts for Halldule\_126:

(Start: 4 @69587 has 50 MA's), (Start: 5 @69596 has 128 MA's), (6, 69635), (8, 69704), (9, 69713), (13, 69809), (15, 69830), (16, 69839), (17, 69860), (19, 69896), (24, 69980), (26, 69989), (38, 70064), (39, 70067), (40, 70088), (41, 70109), (43, 70124), (44, 70133), (45, 70172), (47, 70202), (50, 70340), (51, 70343), (59, 70511), (64, 70562), (66, 70610), (68, 70637), (70, 70661), (74, 70709), (75, 70715), (78, 70760), (80, 70769), (81, 70790), (82, 70796), (84, 70814), (86, 70853), (92, 70895), (107, 71087), (108, 71105), (109, 71111), (113, 71132), (114, 71156), (123, 71243), (127, 71285), (129, 71300), (130, 71303), (132, 71306), (135, 71384), (138, 71474), (143, 71576), (148, 71663), (150, 71681), (153, 71705),

Gene: HyRo\_123 Start: 71248, Stop: 73506, Start Num: 5

Candidate Starts for HyRo\_123:

(Start: 4 @71239 has 50 MA's), (Start: 5 @71248 has 128 MA's), (6, 71287), (8, 71356), (9, 71365), (13, 71461), (15, 71482), (16, 71491), (17, 71512), (19, 71548), (24, 71632), (26, 71641), (38, 71716), (39, 71719), (40, 71740), (41, 71761), (43, 71776), (44, 71785), (45, 71824), (47, 71854), (50, 71992), (51, 71995), (59, 72163), (66, 72262), (68, 72289), (70, 72313), (74, 72361), (75, 72367), (78, 72412), (80, 72421), (81, 72442), (82, 72448), (84, 72466), (86, 72505), (92, 72547), (105, 72715), (108, 72757), (109, 72763), (113, 72784), (114, 72808), (123, 72895), (127, 72937), (129, 72952), (130, 72955), (132, 72958), (135, 73036), (138, 73126), (143, 73228), (148, 73315), (150, 73333), (153, 73357),

Gene: I3\_137 Start: 72783, Stop: 75041, Start Num: 5

Candidate Starts for I3\_137:

(Start: 4 @72774 has 50 MA's), (Start: 5 @72783 has 128 MA's), (6, 72822), (8, 72891), (9, 72900), (13, 72996), (15, 73017), (16, 73026), (17, 73047), (19, 73083), (24, 73167), (26, 73176), (38, 73251), (39, 73254), (40, 73275), (41, 73296), (43, 73311), (44, 73320), (45, 73359), (47, 73389), (50, 73527), (51, 73530), (59, 73698), (66, 73797), (68, 73824), (70, 73848), (74, 73896), (75, 73902), (78, 73947), (80, 73956), (81, 73977), (82, 73983), (84, 74001), (86, 74040), (92, 74082), (105, 74250), (108, 74292), (109, 74298), (113, 74319), (114, 74343), (123, 74430), (127, 74472), (129, 74487), (130, 74490), (132, 74493), (135, 74571), (138, 74661), (143, 74763), (148, 74850), (150, 74868), (153, 74892),

Gene: IkeLoa\_126 Start: 71203, Stop: 73461, Start Num: 5

Candidate Starts for IkeLoa\_126:

(Start: 4 @71194 has 50 MA's), (Start: 5 @71203 has 128 MA's), (6, 71242), (8, 71311), (9, 71320), (13, 71416), (15, 71437), (16, 71446), (17, 71467), (19, 71503), (24, 71587), (26, 71596), (38, 71671), (39, 71674), (40, 71695), (41, 71716), (43, 71731), (44, 71740), (45, 71779), (47, 71809), (50, 71947), (51, 71950), (59, 72118), (66, 72217), (68, 72244), (70, 72268), (74, 72316), (75, 72322), (78, 72367), (80, 72376), (81, 72397), (82, 72403), (84, 72421), (86, 72460), (92, 72502), (105, 72670), (108, 72712), (109, 72718), (113, 72739), (114, 72763), (123, 72850), (127, 72892), (129, 72907), (130, 72910), (132, 72913), (135, 72991), (138, 73081), (143, 73183), (148, 73270), (150, 73288), (153,

73312),

Gene: InigoMontoya\_135 Start: 71266, Stop: 73524, Start Num: 5

Candidate Starts for InigoMontoya\_135:

(Start: 4 @71257 has 50 MA's), (Start: 5 @71266 has 128 MA's), (6, 71305), (8, 71374), (9, 71383), (13, 71479), (15, 71500), (16, 71509), (17, 71530), (19, 71566), (24, 71650), (26, 71659), (38, 71734), (39, 71737), (40, 71758), (41, 71779), (43, 71794), (44, 71803), (45, 71842), (47, 71872), (50, 72010), (51, 72013), (59, 72181), (64, 72232), (66, 72280), (68, 72307), (70, 72331), (74, 72379), (75, 72385), (78, 72430), (80, 72439), (81, 72460), (82, 72466), (84, 72484), (86, 72523), (92, 72565), (107, 72757), (108, 72775), (109, 72781), (113, 72802), (114, 72826), (123, 72913), (127, 72955), (129, 72970), (130, 72973), (132, 72976), (135, 73054), (138, 73144), (143, 73246), (148, 73333), (150, 73351), (153, 73375),

Gene: InterFolia\_138 Start: 73548, Stop: 75815, Start Num: 4

Candidate Starts for InterFolia\_138:

(Start: 4 @73548 has 50 MA's), (Start: 5 @73557 has 128 MA's), (6, 73596), (8, 73665), (9, 73674), (13, 73770), (15, 73791), (16, 73800), (17, 73821), (19, 73857), (24, 73941), (26, 73950), (38, 74025), (39, 74028), (40, 74049), (41, 74070), (43, 74085), (44, 74094), (45, 74133), (47, 74163), (50, 74301), (51, 74304), (59, 74472), (64, 74523), (66, 74571), (68, 74598), (70, 74622), (74, 74670), (75, 74676), (78, 74721), (80, 74730), (81, 74751), (82, 74757), (84, 74775), (86, 74814), (92, 74856), (107, 75048), (108, 75066), (109, 75072), (113, 75093), (114, 75117), (123, 75204), (127, 75246), (129, 75261), (130, 75264), (132, 75267), (135, 75345), (138, 75435), (143, 75537), (148, 75624), (150, 75642), (153, 75666),

Gene: Iota\_127 Start: 71245, Stop: 73512, Start Num: 4

Candidate Starts for Iota\_127:

(Start: 4 @71245 has 50 MA's), (Start: 5 @71254 has 128 MA's), (6, 71293), (8, 71362), (9, 71371), (13, 71467), (15, 71488), (16, 71497), (17, 71518), (19, 71554), (24, 71638), (26, 71647), (38, 71722), (39, 71725), (40, 71746), (41, 71767), (43, 71782), (44, 71791), (45, 71830), (47, 71860), (50, 71998), (51, 72001), (59, 72169), (66, 72268), (68, 72295), (70, 72319), (74, 72367), (75, 72373), (78, 72418), (80, 72427), (81, 72448), (82, 72454), (84, 72472), (86, 72511), (92, 72553), (105, 72721), (108, 72763), (109, 72769), (113, 72790), (114, 72814), (123, 72901), (127, 72943), (129, 72958), (130, 72961), (132, 72964), (135, 73042), (138, 73132), (143, 73234), (148, 73321), (150, 73339), (153, 73363),

Gene: Issimir\_130 Start: 72262, Stop: 74520, Start Num: 5

Candidate Starts for Issimir\_130:

(Start: 4 @72253 has 50 MA's), (Start: 5 @72262 has 128 MA's), (6, 72301), (8, 72370), (9, 72379), (13, 72475), (15, 72496), (16, 72505), (17, 72526), (19, 72562), (24, 72646), (26, 72655), (38, 72730), (39, 72733), (40, 72754), (41, 72775), (43, 72790), (44, 72799), (45, 72838), (47, 72868), (50, 73006), (51, 73009), (59, 73177), (64, 73228), (66, 73276), (68, 73303), (70, 73327), (74, 73375), (75, 73381), (78, 73426), (80, 73435), (81, 73456), (82, 73462), (84, 73480), (86, 73519), (92, 73561), (107, 73753), (108, 73771), (109, 73777), (113, 73798), (114, 73822), (123, 73909), (127, 73951), (129, 73966), (130, 73969), (132, 73972), (135, 74050), (138, 74140), (143, 74242), (148, 74329), (150, 74347), (153, 74371),

Gene: Izajani\_132 Start: 72468, Stop: 74726, Start Num: 5

Candidate Starts for Izajani\_132:

(Start: 4 @72459 has 50 MA's), (Start: 5 @72468 has 128 MA's), (6, 72507), (8, 72576), (9, 72585), (13, 72681), (15, 72702), (16, 72711), (17, 72732), (19, 72768), (24, 72852), (26, 72861), (38, 72936), (39, 72939), (40, 72960), (41, 72981), (43, 72996), (44, 73005), (45, 73044), (47, 73074), (50, 73212), (51, 73215), (59, 73383), (66, 73482), (68, 73509), (70, 73533), (74, 73581), (75, 73587), (78, 73632), (80, 73641), (81, 73662), (82, 73668), (84, 73686), (86, 73725), (92, 73767), (105, 73935), (108,



73977), (109, 73983), (113, 74004), (114, 74028), (123, 74115), (127, 74157), (129, 74172), (130, 74175), (132, 74178), (135, 74256), (138, 74346), (143, 74448), (148, 74535), (150, 74553), (153, 74577),

Gene: JPickles\_129 Start: 70057, Stop: 72315, Start Num: 5

Candidate Starts for JPickles\_129:

(Start: 4 @70048 has 50 MA's), (Start: 5 @70057 has 128 MA's), (6, 70096), (8, 70165), (9, 70174), (13, 70270), (15, 70291), (16, 70300), (17, 70321), (19, 70357), (24, 70441), (26, 70450), (38, 70525), (39, 70528), (40, 70549), (41, 70570), (43, 70585), (44, 70594), (45, 70633), (47, 70663), (50, 70801), (51, 70804), (59, 70972), (64, 71023), (66, 71071), (68, 71098), (70, 71122), (74, 71170), (75, 71176), (78, 71221), (80, 71230), (81, 71251), (82, 71257), (84, 71275), (86, 71314), (92, 71356), (107, 71548), (108, 71566), (109, 71572), (113, 71593), (114, 71617), (123, 71704), (127, 71746), (129, 71761), (130, 71764), (132, 71767), (135, 71845), (138, 71935), (143, 72037), (148, 72124), (150, 72142), (153, 72166),

Gene: Janiyra\_135 Start: 72232, Stop: 74490, Start Num: 5

Candidate Starts for Janiyra\_135:

(Start: 4 @72223 has 50 MA's), (Start: 5 @72232 has 128 MA's), (6, 72271), (8, 72340), (9, 72349), (13, 72445), (15, 72466), (16, 72475), (17, 72496), (19, 72532), (24, 72616), (26, 72625), (38, 72700), (39, 72703), (40, 72724), (41, 72745), (43, 72760), (44, 72769), (45, 72808), (47, 72838), (50, 72976), (51, 72979), (59, 73147), (64, 73198), (66, 73246), (68, 73273), (70, 73297), (74, 73345), (75, 73351), (78, 73396), (80, 73405), (81, 73426), (82, 73432), (84, 73450), (86, 73489), (92, 73531), (107, 73723), (108, 73741), (109, 73747), (113, 73768), (114, 73792), (123, 73879), (127, 73921), (129, 73936), (130, 73939), (132, 73942), (135, 74020), (138, 74110), (143, 74212), (148, 74299), (150, 74317), (153, 74341),

Gene: JayJay\_137 Start: 73263, Stop: 75521, Start Num: 5

Candidate Starts for JayJay\_137:

(Start: 4 @73254 has 50 MA's), (Start: 5 @73263 has 128 MA's), (6, 73302), (8, 73371), (9, 73380), (13, 73476), (15, 73497), (16, 73506), (17, 73527), (19, 73563), (24, 73647), (26, 73656), (38, 73731), (39, 73734), (40, 73755), (41, 73776), (43, 73791), (44, 73800), (45, 73839), (47, 73869), (50, 74007), (51, 74010), (59, 74178), (66, 74277), (68, 74304), (70, 74328), (74, 74376), (75, 74382), (78, 74427), (80, 74436), (81, 74457), (82, 74463), (84, 74481), (86, 74520), (92, 74562), (105, 74730), (108, 74772), (109, 74778), (113, 74799), (114, 74823), (123, 74910), (127, 74952), (129, 74967), (130, 74970), (132, 74973), (135, 75051), (138, 75141), (143, 75243), (148, 75330), (150, 75348), (153, 75372),

Gene: Jaygup\_132 Start: 71582, Stop: 73840, Start Num: 5

Candidate Starts for Jaygup\_132:

(Start: 4 @71573 has 50 MA's), (Start: 5 @71582 has 128 MA's), (6, 71621), (8, 71690), (9, 71699), (13, 71795), (15, 71816), (16, 71825), (17, 71846), (19, 71882), (24, 71966), (26, 71975), (38, 72050), (39, 72053), (40, 72074), (41, 72095), (43, 72110), (44, 72119), (45, 72158), (47, 72188), (50, 72326), (51, 72329), (59, 72497), (64, 72548), (66, 72596), (68, 72623), (70, 72647), (74, 72695), (75, 72701), (78, 72746), (80, 72755), (81, 72776), (82, 72782), (84, 72800), (86, 72839), (92, 72881), (107, 73073), (108, 73091), (109, 73097), (113, 73118), (114, 73142), (123, 73229), (127, 73271), (129, 73286), (130, 73289), (132, 73292), (135, 73370), (138, 73460), (143, 73562), (148, 73649), (150, 73667), (153, 73691),

Gene: Jedediah\_135 Start: 72115, Stop: 74373, Start Num: 5

Candidate Starts for Jedediah\_135:

(Start: 4 @72106 has 50 MA's), (Start: 5 @72115 has 128 MA's), (6, 72154), (8, 72223), (9, 72232), (13, 72328), (15, 72349), (16, 72358), (17, 72379), (19, 72415), (24, 72499), (26, 72508), (38, 72583), (39, 72586), (40, 72607), (41, 72628), (43, 72643), (44, 72652), (45, 72691), (47, 72721), (50, 72859),

(51, 72862), (59, 73030), (64, 73081), (66, 73129), (68, 73156), (70, 73180), (74, 73228), (75, 73234), (78, 73279), (80, 73288), (81, 73309), (82, 73315), (84, 73333), (86, 73372), (92, 73414), (107, 73606), (108, 73624), (109, 73630), (113, 73651), (114, 73675), (123, 73762), (127, 73804), (129, 73819), (130, 73822), (132, 73825), (135, 73903), (138, 73993), (143, 74095), (148, 74182), (150, 74200), (153, 74224),

Gene: Jemmno\_132 Start: 71562, Stop: 73820, Start Num: 5

Candidate Starts for Jemmno\_132:

(Start: 4 @71553 has 50 MA's), (Start: 5 @71562 has 128 MA's), (6, 71601), (8, 71670), (9, 71679), (13, 71775), (15, 71796), (16, 71805), (17, 71826), (19, 71862), (24, 71946), (26, 71955), (38, 72030), (39, 72033), (40, 72054), (41, 72075), (43, 72090), (44, 72099), (45, 72138), (47, 72168), (50, 72306), (51, 72309), (59, 72477), (64, 72528), (66, 72576), (68, 72603), (70, 72627), (74, 72675), (75, 72681), (78, 72726), (80, 72735), (81, 72756), (82, 72762), (84, 72780), (86, 72819), (92, 72861), (107, 73053), (108, 73071), (109, 73077), (113, 73098), (114, 73122), (123, 73209), (127, 73251), (129, 73266), (130, 73269), (132, 73272), (135, 73350), (138, 73440), (143, 73542), (148, 73629), (150, 73647), (153, 73671),

Gene: Jessibeth14\_131 Start: 72094, Stop: 74352, Start Num: 5

Candidate Starts for Jessibeth14\_131:

(Start: 4 @72085 has 50 MA's), (Start: 5 @72094 has 128 MA's), (6, 72133), (8, 72202), (9, 72211), (13, 72307), (15, 72328), (16, 72337), (17, 72358), (19, 72394), (24, 72478), (26, 72487), (38, 72562), (39, 72565), (40, 72586), (41, 72607), (43, 72622), (44, 72631), (45, 72670), (47, 72700), (50, 72838), (51, 72841), (59, 73009), (66, 73108), (68, 73135), (70, 73159), (74, 73207), (75, 73213), (78, 73258), (80, 73267), (81, 73288), (82, 73294), (84, 73312), (86, 73351), (92, 73393), (105, 73561), (108, 73603), (109, 73609), (113, 73630), (114, 73654), (123, 73741), (127, 73783), (129, 73798), (130, 73801), (132, 73804), (135, 73882), (138, 73972), (143, 74074), (148, 74161), (150, 74179), (153, 74203),

Gene: Jezreel\_130 Start: 72239, Stop: 74506, Start Num: 4

Candidate Starts for Jezreel\_130:

(Start: 4 @72239 has 50 MA's), (Start: 5 @72248 has 128 MA's), (6, 72287), (8, 72356), (9, 72365), (13, 72461), (15, 72482), (16, 72491), (17, 72512), (19, 72548), (24, 72632), (26, 72641), (38, 72716), (39, 72719), (40, 72740), (41, 72761), (43, 72776), (44, 72785), (45, 72824), (47, 72854), (50, 72992), (51, 72995), (59, 73163), (66, 73262), (68, 73289), (70, 73313), (74, 73361), (75, 73367), (78, 73412), (80, 73421), (81, 73442), (82, 73448), (84, 73466), (86, 73505), (92, 73547), (105, 73715), (108, 73757), (109, 73763), (113, 73784), (114, 73808), (123, 73895), (127, 73937), (129, 73952), (130, 73955), (132, 73958), (135, 74036), (138, 74126), (143, 74228), (148, 74315), (150, 74333), (153, 74357),

Gene: JigglyPuff\_140 Start: 74412, Stop: 76670, Start Num: 5

Candidate Starts for JigglyPuff\_140:

(Start: 4 @74403 has 50 MA's), (Start: 5 @74412 has 128 MA's), (6, 74451), (8, 74520), (9, 74529), (13, 74625), (15, 74646), (16, 74655), (17, 74676), (19, 74712), (24, 74796), (26, 74805), (38, 74880), (39, 74883), (40, 74904), (41, 74925), (43, 74940), (44, 74949), (45, 74988), (47, 75018), (50, 75156), (51, 75159), (59, 75327), (64, 75378), (66, 75426), (68, 75453), (70, 75477), (74, 75525), (75, 75531), (78, 75576), (80, 75585), (81, 75606), (82, 75612), (84, 75630), (86, 75669), (92, 75711), (105, 75879), (108, 75921), (109, 75927), (113, 75948), (114, 75972), (123, 76059), (127, 76101), (129, 76116), (130, 76119), (132, 76122), (135, 76200), (138, 76290), (143, 76392), (148, 76479), (150, 76497), (153, 76521),

Gene: JulietS\_127 Start: 69449, Stop: 71707, Start Num: 5

Candidate Starts for JulietS\_127:

(Start: 4 @69440 has 50 MA's), (Start: 5 @69449 has 128 MA's), (6, 69488), (8, 69557), (9, 69566), (13, 69662), (15, 69683), (16, 69692), (17, 69713), (19, 69749), (24, 69833), (26, 69842), (38, 69917), (39, 69920), (40, 69941), (41, 69962), (43, 69977), (44, 69986), (45, 70025), (47, 70055), (50, 70193), (51, 70196), (59, 70364), (64, 70415), (66, 70463), (68, 70490), (70, 70514), (74, 70562), (75, 70568), (78, 70613), (80, 70622), (81, 70643), (82, 70649), (84, 70667), (86, 70706), (92, 70748), (105, 70916), (108, 70958), (109, 70964), (113, 70985), (114, 71009), (123, 71096), (127, 71138), (129, 71153), (130, 71156), (132, 71159), (135, 71237), (138, 71327), (143, 71429), (148, 71516), (150, 71534), (153, 71558),

Gene: JustHall\_130 Start: 72081, Stop: 74348, Start Num: 4

Candidate Starts for JustHall\_130:

(Start: 4 @72081 has 50 MA's), (Start: 5 @72090 has 128 MA's), (6, 72129), (8, 72198), (9, 72207), (13, 72303), (15, 72324), (16, 72333), (17, 72354), (19, 72390), (24, 72474), (26, 72483), (38, 72558), (39, 72561), (40, 72582), (41, 72603), (43, 72618), (44, 72627), (45, 72666), (47, 72696), (50, 72834), (51, 72837), (59, 73005), (64, 73056), (66, 73104), (68, 73131), (70, 73155), (74, 73203), (75, 73209), (78, 73254), (80, 73263), (81, 73284), (82, 73290), (84, 73308), (86, 73347), (92, 73389), (107, 73581), (108, 73599), (109, 73605), (113, 73626), (114, 73650), (123, 73737), (127, 73779), (129, 73794), (130, 73797), (132, 73800), (135, 73878), (138, 73968), (143, 74070), (148, 74157), (150, 74175), (153, 74199),

Gene: Kamryn\_132 Start: 72891, Stop: 75158, Start Num: 4

Candidate Starts for Kamryn\_132:

(Start: 4 @72891 has 50 MA's), (Start: 5 @72900 has 128 MA's), (6, 72939), (8, 73008), (9, 73017), (13, 73113), (15, 73134), (16, 73143), (17, 73164), (19, 73200), (24, 73284), (26, 73293), (38, 73368), (39, 73371), (40, 73392), (41, 73413), (43, 73428), (44, 73437), (45, 73476), (47, 73506), (50, 73644), (51, 73647), (59, 73815), (66, 73914), (68, 73941), (70, 73965), (74, 74013), (75, 74019), (78, 74064), (80, 74073), (81, 74094), (82, 74100), (84, 74118), (86, 74157), (92, 74199), (105, 74367), (108, 74409), (109, 74415), (113, 74436), (114, 74460), (123, 74547), (127, 74589), (129, 74604), (130, 74607), (132, 74610), (135, 74688), (138, 74778), (143, 74880), (148, 74967), (150, 74985), (153, 75009),

Gene: Kboogie\_136 Start: 71255, Stop: 73513, Start Num: 5

Candidate Starts for Kboogie\_136:

(Start: 4 @71246 has 50 MA's), (Start: 5 @71255 has 128 MA's), (6, 71294), (8, 71363), (9, 71372), (13, 71468), (15, 71489), (16, 71498), (17, 71519), (19, 71555), (24, 71639), (26, 71648), (38, 71723), (39, 71726), (40, 71747), (41, 71768), (43, 71783), (44, 71792), (45, 71831), (47, 71861), (50, 71999), (51, 72002), (59, 72170), (64, 72221), (66, 72269), (68, 72296), (70, 72320), (74, 72368), (75, 72374), (78, 72419), (80, 72428), (81, 72449), (82, 72455), (84, 72473), (86, 72512), (92, 72554), (107, 72746), (108, 72764), (109, 72770), (113, 72791), (114, 72815), (123, 72902), (127, 72944), (129, 72959), (130, 72962), (132, 72965), (135, 73043), (138, 73133), (143, 73235), (148, 73322), (150, 73340), (153, 73364),

Gene: Khaleesi\_131 Start: 72197, Stop: 74455, Start Num: 5

Candidate Starts for Khaleesi\_131:

(Start: 4 @72188 has 50 MA's), (Start: 5 @72197 has 128 MA's), (6, 72236), (8, 72305), (9, 72314), (13, 72410), (15, 72431), (16, 72440), (17, 72461), (19, 72497), (24, 72581), (26, 72590), (38, 72665), (39, 72668), (40, 72689), (41, 72710), (43, 72725), (44, 72734), (45, 72773), (47, 72803), (50, 72941), (51, 72944), (59, 73112), (66, 73211), (68, 73238), (70, 73262), (74, 73310), (75, 73316), (78, 73361), (80, 73370), (81, 73391), (82, 73397), (84, 73415), (86, 73454), (92, 73496), (105, 73664), (108, 73706), (109, 73712), (113, 73733), (114, 73757), (123, 73844), (127, 73886), (129, 73901), (130, 73904), (132, 73907), (135, 73985), (138, 74075), (143, 74177), (148, 74264), (150, 74282), (153, 74306),

Gene: Koguma\_129 Start: 69732, Stop: 71990, Start Num: 5

Candidate Starts for Koguma\_129:

(Start: 4 @69723 has 50 MA's), (Start: 5 @69732 has 128 MA's), (6, 69771), (8, 69840), (9, 69849), (13, 69945), (15, 69966), (16, 69975), (17, 69996), (19, 70032), (24, 70116), (26, 70125), (38, 70200), (39, 70203), (40, 70224), (41, 70245), (43, 70260), (44, 70269), (45, 70308), (47, 70338), (50, 70476), (51, 70479), (59, 70647), (64, 70698), (66, 70746), (68, 70773), (70, 70797), (74, 70845), (75, 70851), (78, 70896), (80, 70905), (81, 70926), (82, 70932), (84, 70950), (86, 70989), (92, 71031), (107, 71223), (108, 71241), (109, 71247), (113, 71268), (114, 71292), (123, 71379), (127, 71421), (129, 71436), (130, 71439), (132, 71442), (135, 71520), (138, 71610), (143, 71712), (148, 71799), (150, 71817), (153, 71841),

Gene: LRRHood\_125 Start: 71540, Stop: 73798, Start Num: 5

Candidate Starts for LRRHood\_125:

(Start: 4 @71531 has 50 MA's), (Start: 5 @71540 has 128 MA's), (6, 71579), (8, 71648), (9, 71657), (13, 71753), (15, 71774), (16, 71783), (17, 71804), (19, 71840), (24, 71924), (26, 71933), (38, 72008), (39, 72011), (40, 72032), (41, 72053), (43, 72068), (44, 72077), (45, 72116), (47, 72146), (50, 72284), (51, 72287), (59, 72455), (64, 72506), (66, 72554), (68, 72581), (70, 72605), (74, 72653), (75, 72659), (78, 72704), (80, 72713), (81, 72734), (82, 72740), (84, 72758), (86, 72797), (92, 72839), (107, 73031), (108, 73049), (109, 73055), (113, 73076), (114, 73100), (123, 73187), (127, 73229), (129, 73244), (130, 73247), (132, 73250), (135, 73328), (138, 73418), (143, 73520), (148, 73607), (150, 73625), (153, 73649),

Gene: Latch\_133 Start: 71305, Stop: 73563, Start Num: 5

Candidate Starts for Latch\_133:

(Start: 4 @71296 has 50 MA's), (Start: 5 @71305 has 128 MA's), (6, 71344), (8, 71413), (9, 71422), (13, 71518), (15, 71539), (16, 71548), (17, 71569), (19, 71605), (24, 71689), (26, 71698), (38, 71773), (39, 71776), (40, 71797), (41, 71818), (43, 71833), (44, 71842), (45, 71881), (47, 71911), (50, 72049), (51, 72052), (59, 72220), (64, 72271), (66, 72319), (68, 72346), (70, 72370), (74, 72418), (75, 72424), (78, 72469), (80, 72478), (81, 72499), (82, 72505), (84, 72523), (86, 72562), (92, 72604), (107, 72796), (108, 72814), (109, 72820), (113, 72841), (114, 72865), (123, 72952), (127, 72994), (129, 73009), (130, 73012), (132, 73015), (135, 73093), (138, 73183), (143, 73285), (148, 73372), (150, 73390), (153, 73414),

Gene: Lee7\_130 Start: 72821, Stop: 75079, Start Num: 5

Candidate Starts for Lee7\_130:

(Start: 4 @72812 has 50 MA's), (Start: 5 @72821 has 128 MA's), (6, 72860), (8, 72929), (9, 72938), (13, 73034), (15, 73055), (16, 73064), (17, 73085), (19, 73121), (24, 73205), (26, 73214), (38, 73289), (39, 73292), (40, 73313), (41, 73334), (43, 73349), (44, 73358), (45, 73397), (47, 73427), (50, 73565), (51, 73568), (59, 73736), (66, 73835), (68, 73862), (70, 73886), (74, 73934), (75, 73940), (78, 73985), (80, 73994), (81, 74015), (82, 74021), (84, 74039), (86, 74078), (92, 74120), (105, 74288), (108, 74330), (109, 74336), (113, 74357), (114, 74381), (123, 74468), (127, 74510), (129, 74525), (130, 74528), (132, 74531), (135, 74609), (138, 74699), (143, 74801), (148, 74888), (150, 74906), (153, 74930),

Gene: Lethe\_132 Start: 72259, Stop: 74517, Start Num: 5

Candidate Starts for Lethe\_132:

(Start: 4 @72250 has 50 MA's), (Start: 5 @72259 has 128 MA's), (6, 72298), (8, 72367), (9, 72376), (13, 72472), (15, 72493), (16, 72502), (17, 72523), (19, 72559), (24, 72643), (26, 72652), (38, 72727), (39, 72730), (40, 72751), (41, 72772), (43, 72787), (44, 72796), (45, 72835), (47, 72865), (50, 73003), (51, 73006), (59, 73174), (66, 73273), (68, 73300), (70, 73324), (74, 73372), (75, 73378), (78, 73423), (80, 73432), (81, 73453), (82, 73459), (84, 73477), (86, 73516), (92, 73558), (105, 73726), (108, 73768), (109, 73774), (113, 73795), (114, 73819), (123, 73906), (127, 73948), (129, 73963), (130, 73966), (132, 73969), (135, 74047), (138, 74137), (143, 74239), (148, 74326), (150, 74344), (153,

74368),

Gene: LifeSavor\_130 Start: 71514, Stop: 73772, Start Num: 5

Candidate Starts for LifeSavor\_130:

(Start: 4 @71505 has 50 MA's), (Start: 5 @71514 has 128 MA's), (6, 71553), (8, 71622), (9, 71631), (13, 71727), (15, 71748), (16, 71757), (17, 71778), (19, 71814), (24, 71898), (26, 71907), (38, 71982), (39, 71985), (40, 72006), (41, 72027), (43, 72042), (44, 72051), (45, 72090), (47, 72120), (50, 72258), (51, 72261), (59, 72429), (64, 72480), (66, 72528), (68, 72555), (70, 72579), (74, 72627), (75, 72633), (78, 72678), (80, 72687), (81, 72708), (82, 72714), (84, 72732), (86, 72771), (92, 72813), (107, 73005), (108, 73023), (109, 73029), (113, 73050), (114, 73074), (123, 73161), (127, 73203), (129, 73218), (130, 73221), (132, 73224), (135, 73302), (138, 73392), (143, 73494), (148, 73581), (150, 73599), (153, 73623),

Gene: LinStu\_130 Start: 72149, Stop: 74407, Start Num: 5

Candidate Starts for LinStu\_130:

(Start: 4 @72140 has 50 MA's), (Start: 5 @72149 has 128 MA's), (6, 72188), (8, 72257), (9, 72266), (13, 72362), (15, 72383), (16, 72392), (17, 72413), (19, 72449), (24, 72533), (26, 72542), (38, 72617), (39, 72620), (40, 72641), (41, 72662), (43, 72677), (44, 72686), (45, 72725), (47, 72755), (50, 72893), (51, 72896), (59, 73064), (66, 73163), (68, 73190), (70, 73214), (74, 73262), (75, 73268), (78, 73313), (80, 73322), (81, 73343), (82, 73349), (84, 73367), (86, 73406), (92, 73448), (108, 73658), (109, 73664), (113, 73685), (114, 73709), (123, 73796), (127, 73838), (129, 73853), (130, 73856), (132, 73859), (135, 73937), (138, 74027), (143, 74129), (148, 74216), (150, 74234), (153, 74258),

Gene: Littleton\_132 Start: 71634, Stop: 73892, Start Num: 5

Candidate Starts for Littleton\_132:

(Start: 4 @71625 has 50 MA's), (Start: 5 @71634 has 128 MA's), (6, 71673), (8, 71742), (9, 71751), (13, 71847), (15, 71868), (16, 71877), (17, 71898), (19, 71934), (24, 72018), (26, 72027), (38, 72102), (39, 72105), (40, 72126), (41, 72147), (43, 72162), (44, 72171), (45, 72210), (47, 72240), (50, 72378), (51, 72381), (59, 72549), (64, 72600), (66, 72648), (68, 72675), (70, 72699), (74, 72747), (75, 72753), (78, 72798), (80, 72807), (81, 72828), (82, 72834), (84, 72852), (86, 72891), (92, 72933), (107, 73125), (108, 73143), (109, 73149), (113, 73170), (114, 73194), (123, 73281), (127, 73323), (129, 73338), (130, 73341), (132, 73344), (135, 73422), (138, 73512), (143, 73614), (148, 73701), (150, 73719), (153, 73743),

Gene: Loanshark\_131 Start: 72156, Stop: 74423, Start Num: 4

Candidate Starts for Loanshark\_131:

(Start: 4 @72156 has 50 MA's), (Start: 5 @72165 has 128 MA's), (6, 72204), (8, 72273), (9, 72282), (13, 72378), (15, 72399), (16, 72408), (17, 72429), (19, 72465), (24, 72549), (26, 72558), (38, 72633), (39, 72636), (40, 72657), (41, 72678), (43, 72693), (44, 72702), (45, 72741), (47, 72771), (50, 72909), (51, 72912), (59, 73080), (66, 73179), (68, 73206), (70, 73230), (74, 73278), (75, 73284), (78, 73329), (80, 73338), (81, 73359), (82, 73365), (84, 73383), (86, 73422), (92, 73464), (105, 73632), (108, 73674), (109, 73680), (113, 73701), (114, 73725), (123, 73812), (127, 73854), (129, 73869), (130, 73872), (132, 73875), (135, 73953), (138, 74043), (143, 74145), (148, 74232), (150, 74250), (153, 74274),

Gene: LolaVinca\_132 Start: 72508, Stop: 74766, Start Num: 5

Candidate Starts for LolaVinca\_132:

(Start: 4 @72499 has 50 MA's), (Start: 5 @72508 has 128 MA's), (6, 72547), (8, 72616), (9, 72625), (13, 72721), (15, 72742), (16, 72751), (17, 72772), (19, 72808), (24, 72892), (26, 72901), (38, 72976), (39, 72979), (40, 73000), (41, 73021), (43, 73036), (44, 73045), (45, 73084), (47, 73114), (50, 73252), (51, 73255), (59, 73423), (64, 73474), (66, 73522), (68, 73549), (70, 73573), (74, 73621), (75, 73627), (78, 73672), (80, 73681), (81, 73702), (82, 73708), (84, 73726), (86, 73765), (92, 73807), (107, 73999), (108, 74017), (109, 74023), (113, 74044), (114, 74068), (123, 74155), (127, 74197), (129, 74212),

(130, 74215), (132, 74218), (135, 74296), (138, 74386), (143, 74488), (148, 74575), (150, 74593), (153, 74617),

Gene: LordLeafolot\_136 Start: 73474, Stop: 75732, Start Num: 5

Candidate Starts for LordLeafolot\_136:

(Start: 4 @73465 has 50 MA's), (Start: 5 @73474 has 128 MA's), (6, 73513), (8, 73582), (9, 73591), (13, 73687), (15, 73708), (16, 73717), (17, 73738), (19, 73774), (24, 73858), (26, 73867), (38, 73942), (39, 73945), (40, 73966), (41, 73987), (43, 74002), (44, 74011), (45, 74050), (47, 74080), (50, 74218), (51, 74221), (59, 74389), (66, 74488), (68, 74515), (70, 74539), (74, 74587), (75, 74593), (78, 74638), (80, 74647), (81, 74668), (82, 74674), (84, 74692), (86, 74731), (92, 74773), (105, 74941), (108, 74983), (109, 74989), (113, 75010), (114, 75034), (123, 75121), (127, 75163), (129, 75178), (130, 75181), (132, 75184), (135, 75262), (138, 75352), (143, 75454), (148, 75541), (150, 75559), (153, 75583),

Gene: Lukilu\_122 Start: 72550, Stop: 74808, Start Num: 5

Candidate Starts for Lukilu\_122:

(Start: 4 @72541 has 50 MA's), (Start: 5 @72550 has 128 MA's), (6, 72589), (8, 72658), (9, 72667), (13, 72763), (15, 72784), (16, 72793), (17, 72814), (19, 72850), (24, 72934), (26, 72943), (38, 73018), (39, 73021), (40, 73042), (41, 73063), (43, 73078), (44, 73087), (45, 73126), (47, 73156), (50, 73294), (51, 73297), (59, 73465), (66, 73564), (68, 73591), (70, 73615), (74, 73663), (75, 73669), (78, 73714), (80, 73723), (81, 73744), (82, 73750), (84, 73768), (86, 73807), (92, 73849), (105, 74017), (108, 74059), (109, 74065), (113, 74086), (114, 74110), (123, 74197), (127, 74239), (129, 74254), (130, 74257), (132, 74260), (135, 74338), (138, 74428), (143, 74530), (148, 74617), (150, 74635), (153, 74659),

Gene: Maby2021\_132 Start: 72281, Stop: 74539, Start Num: 5

Candidate Starts for Maby2021\_132:

(Start: 4 @72272 has 50 MA's), (Start: 5 @72281 has 128 MA's), (6, 72320), (8, 72389), (9, 72398), (13, 72494), (15, 72515), (16, 72524), (17, 72545), (19, 72581), (24, 72665), (26, 72674), (38, 72749), (39, 72752), (40, 72773), (41, 72794), (43, 72809), (44, 72818), (45, 72857), (47, 72887), (50, 73025), (51, 73028), (59, 73196), (66, 73295), (68, 73322), (70, 73346), (74, 73394), (75, 73400), (78, 73445), (80, 73454), (81, 73475), (82, 73481), (84, 73499), (86, 73538), (92, 73580), (105, 73748), (108, 73790), (109, 73796), (113, 73817), (114, 73841), (123, 73928), (127, 73970), (129, 73985), (130, 73988), (132, 73991), (135, 74069), (138, 74159), (143, 74261), (148, 74348), (150, 74366), (153, 74390),

Gene: Mangeria\_132 Start: 72342, Stop: 74609, Start Num: 4

Candidate Starts for Mangeria\_132:

(Start: 4 @72342 has 50 MA's), (Start: 5 @72351 has 128 MA's), (6, 72390), (8, 72459), (9, 72468), (13, 72564), (15, 72585), (16, 72594), (17, 72615), (19, 72651), (24, 72735), (26, 72744), (38, 72819), (39, 72822), (40, 72843), (41, 72864), (43, 72879), (44, 72888), (45, 72927), (47, 72957), (50, 73095), (51, 73098), (59, 73266), (66, 73365), (68, 73392), (70, 73416), (74, 73464), (75, 73470), (78, 73515), (80, 73524), (81, 73545), (82, 73551), (84, 73569), (86, 73608), (92, 73650), (105, 73818), (108, 73860), (109, 73866), (113, 73887), (114, 73911), (123, 73998), (127, 74040), (129, 74055), (130, 74058), (132, 74061), (135, 74139), (138, 74229), (143, 74331), (148, 74418), (150, 74436), (153, 74460),

Gene: Matsumoto\_129 Start: 71142, Stop: 73400, Start Num: 5

Candidate Starts for Matsumoto\_129:

(Start: 4 @71133 has 50 MA's), (Start: 5 @71142 has 128 MA's), (6, 71181), (8, 71250), (9, 71259), (13, 71355), (15, 71376), (16, 71385), (17, 71406), (19, 71442), (24, 71526), (26, 71535), (38, 71610), (39, 71613), (40, 71634), (41, 71655), (43, 71670), (44, 71679), (45, 71718), (47, 71748), (50, 71886), (51, 71889), (59, 72057), (64, 72108), (66, 72156), (68, 72183), (70, 72207), (74, 72255), (75, 72261),

(78, 72306), (80, 72315), (81, 72336), (82, 72342), (84, 72360), (86, 72399), (92, 72441), (107, 72633), (108, 72651), (109, 72657), (113, 72678), (114, 72702), (123, 72789), (127, 72831), (129, 72846), (130, 72849), (132, 72852), (135, 72930), (138, 73020), (143, 73122), (148, 73209), (150, 73227), (153, 73251),

Gene: McGee\_134 Start: 70896, Stop: 73154, Start Num: 5

Candidate Starts for McGee\_134:

(Start: 4 @70887 has 50 MA's), (Start: 5 @70896 has 128 MA's), (6, 70935), (8, 71004), (9, 71013), (13, 71109), (15, 71130), (16, 71139), (17, 71160), (19, 71196), (24, 71280), (26, 71289), (38, 71364), (39, 71367), (40, 71388), (41, 71409), (43, 71424), (44, 71433), (45, 71472), (47, 71502), (50, 71640), (51, 71643), (59, 71811), (64, 71862), (66, 71910), (68, 71937), (70, 71961), (74, 72009), (75, 72015), (78, 72060), (80, 72069), (81, 72090), (82, 72096), (84, 72114), (86, 72153), (92, 72195), (105, 72363), (108, 72405), (109, 72411), (113, 72432), (114, 72456), (123, 72543), (127, 72585), (129, 72600), (130, 72603), (132, 72606), (135, 72684), (138, 72774), (143, 72876), (148, 72963), (150, 72981), (153, 73005),

Gene: McWolfish\_130 Start: 72061, Stop: 74328, Start Num: 4

Candidate Starts for McWolfish\_130:

(Start: 4 @72061 has 50 MA's), (Start: 5 @72070 has 128 MA's), (6, 72109), (8, 72178), (9, 72187), (13, 72283), (15, 72304), (16, 72313), (17, 72334), (19, 72370), (24, 72454), (26, 72463), (38, 72538), (39, 72541), (40, 72562), (41, 72583), (43, 72598), (44, 72607), (45, 72646), (47, 72676), (50, 72814), (51, 72817), (59, 72985), (66, 73084), (68, 73111), (70, 73135), (74, 73183), (75, 73189), (78, 73234), (80, 73243), (81, 73264), (82, 73270), (84, 73288), (86, 73327), (92, 73369), (105, 73537), (108, 73579), (109, 73585), (113, 73606), (114, 73630), (123, 73717), (127, 73759), (129, 73774), (130, 73777), (132, 73780), (135, 73858), (138, 73948), (143, 74050), (148, 74137), (150, 74155), (153, 74179),

Gene: Megamind\_131 Start: 71954, Stop: 74212, Start Num: 5

Candidate Starts for Megamind\_131:

(Start: 4 @71945 has 50 MA's), (Start: 5 @71954 has 128 MA's), (6, 71993), (8, 72062), (9, 72071), (13, 72167), (15, 72188), (16, 72197), (17, 72218), (19, 72254), (24, 72338), (26, 72347), (38, 72422), (39, 72425), (40, 72446), (41, 72467), (43, 72482), (44, 72491), (45, 72530), (47, 72560), (50, 72698), (51, 72701), (59, 72869), (66, 72968), (68, 72995), (70, 73019), (74, 73067), (75, 73073), (78, 73118), (80, 73127), (81, 73148), (82, 73154), (84, 73172), (86, 73211), (92, 73253), (105, 73421), (108, 73463), (109, 73469), (113, 73490), (114, 73514), (123, 73601), (127, 73643), (129, 73658), (130, 73661), (132, 73664), (135, 73742), (138, 73832), (143, 73934), (148, 74021), (150, 74039), (153, 74063),

Gene: Melpomini\_126 Start: 69411, Stop: 71678, Start Num: 4

Candidate Starts for Melpomini\_126:

(Start: 4 @69411 has 50 MA's), (Start: 5 @69420 has 128 MA's), (6, 69459), (8, 69528), (9, 69537), (13, 69633), (15, 69654), (16, 69663), (17, 69684), (19, 69720), (24, 69804), (26, 69813), (38, 69888), (39, 69891), (40, 69912), (41, 69933), (43, 69948), (44, 69957), (45, 69996), (47, 70026), (50, 70164), (51, 70167), (59, 70335), (66, 70434), (68, 70461), (70, 70485), (74, 70533), (75, 70539), (78, 70584), (80, 70593), (81, 70614), (82, 70620), (84, 70638), (86, 70677), (92, 70719), (105, 70887), (108, 70929), (109, 70935), (113, 70956), (114, 70980), (123, 71067), (127, 71109), (129, 71124), (130, 71127), (132, 71130), (135, 71208), (138, 71298), (143, 71400), (148, 71487), (150, 71505), (153, 71529),

Gene: MikeLiesIn\_133 Start: 72311, Stop: 74569, Start Num: 5

Candidate Starts for MikeLiesIn\_133:

(Start: 4 @72302 has 50 MA's), (Start: 5 @72311 has 128 MA's), (6, 72350), (8, 72419), (9, 72428), (13, 72524), (15, 72545), (16, 72554), (17, 72575), (19, 72611), (24, 72695), (26, 72704), (38, 72779),

(39, 72782), (40, 72803), (41, 72824), (43, 72839), (44, 72848), (45, 72887), (47, 72917), (50, 73055), (51, 73058), (59, 73226), (66, 73325), (68, 73352), (70, 73376), (74, 73424), (75, 73430), (78, 73475), (80, 73484), (81, 73505), (82, 73511), (84, 73529), (86, 73568), (92, 73610), (105, 73778), (108, 73820), (109, 73826), (113, 73847), (114, 73871), (123, 73958), (127, 74000), (129, 74015), (130, 74018), (132, 74021), (135, 74099), (138, 74189), (143, 74291), (148, 74378), (150, 74396), (153, 74420),

Gene: Mikro\_129 Start: 73524, Stop: 75782, Start Num: 5

Candidate Starts for Mikro\_129:

(Start: 4 @73515 has 50 MA's), (Start: 5 @73524 has 128 MA's), (6, 73563), (8, 73632), (9, 73641), (13, 73737), (15, 73758), (16, 73767), (17, 73788), (19, 73824), (24, 73908), (26, 73917), (38, 73992), (39, 73995), (40, 74016), (41, 74037), (43, 74052), (44, 74061), (45, 74100), (47, 74130), (50, 74268), (51, 74271), (59, 74439), (66, 74538), (68, 74565), (70, 74589), (74, 74637), (75, 74643), (78, 74688), (80, 74697), (81, 74718), (82, 74724), (84, 74742), (86, 74781), (92, 74823), (105, 74991), (108, 75033), (109, 75039), (113, 75060), (114, 75084), (123, 75171), (127, 75213), (129, 75228), (130, 75231), (132, 75234), (135, 75312), (138, 75402), (143, 75504), (148, 75591), (150, 75609), (153, 75633),

Gene: MoMoMixon\_132 Start: 71787, Stop: 74045, Start Num: 5

Candidate Starts for MoMoMixon\_132:

(Start: 4 @71778 has 50 MA's), (Start: 5 @71787 has 128 MA's), (6, 71826), (8, 71895), (9, 71904), (13, 72000), (15, 72021), (16, 72030), (17, 72051), (19, 72087), (24, 72171), (26, 72180), (38, 72255), (39, 72258), (40, 72279), (41, 72300), (43, 72315), (44, 72324), (45, 72363), (47, 72393), (50, 72531), (51, 72534), (59, 72702), (66, 72801), (68, 72828), (70, 72852), (74, 72900), (75, 72906), (78, 72951), (80, 72960), (81, 72981), (82, 72987), (84, 73005), (86, 73044), (92, 73086), (105, 73254), (108, 73296), (109, 73302), (113, 73323), (114, 73347), (123, 73434), (127, 73476), (129, 73491), (130, 73494), (132, 73497), (135, 73575), (138, 73665), (143, 73767), (148, 73854), (150, 73872), (153, 73896),

Gene: Momo\_132 Start: 71305, Stop: 73563, Start Num: 5

Candidate Starts for Momo\_132:

(Start: 4 @71296 has 50 MA's), (Start: 5 @71305 has 128 MA's), (6, 71344), (8, 71413), (9, 71422), (13, 71518), (15, 71539), (16, 71548), (17, 71569), (19, 71605), (24, 71689), (26, 71698), (38, 71773), (39, 71776), (40, 71797), (41, 71818), (43, 71833), (44, 71842), (45, 71881), (47, 71911), (50, 72049), (51, 72052), (59, 72220), (64, 72271), (66, 72319), (68, 72346), (70, 72370), (74, 72418), (75, 72424), (78, 72469), (80, 72478), (81, 72499), (82, 72505), (84, 72523), (86, 72562), (92, 72604), (107, 72796), (108, 72814), (109, 72820), (113, 72841), (114, 72865), (123, 72952), (127, 72994), (129, 73009), (130, 73012), (132, 73015), (135, 73093), (138, 73183), (143, 73285), (148, 73372), (150, 73390), (153, 73414),

Gene: Morizzled23\_133 Start: 71660, Stop: 73918, Start Num: 5

Candidate Starts for Morizzled23\_133:

(Start: 4 @71651 has 50 MA's), (Start: 5 @71660 has 128 MA's), (6, 71699), (8, 71768), (9, 71777), (13, 71873), (15, 71894), (16, 71903), (17, 71924), (19, 71960), (24, 72044), (26, 72053), (38, 72128), (39, 72131), (40, 72152), (41, 72173), (43, 72188), (44, 72197), (45, 72236), (47, 72266), (50, 72404), (51, 72407), (59, 72575), (66, 72674), (68, 72701), (70, 72725), (74, 72773), (75, 72779), (78, 72824), (80, 72833), (81, 72854), (82, 72860), (84, 72878), (86, 72917), (92, 72959), (105, 73127), (108, 73169), (109, 73175), (113, 73196), (114, 73220), (123, 73307), (127, 73349), (129, 73364), (130, 73367), (132, 73370), (135, 73448), (138, 73538), (143, 73640), (148, 73727), (150, 73745), (153, 73769),

Gene: Myrna\_128 Start: 73298, Stop: 75631, Start Num: 5

Candidate Starts for Myrna\_128:



(Start: 4 @73289 has 50 MA's), (Start: 5 @73298 has 128 MA's), (14, 73520), (15, 73532), (16, 73541), (18, 73589), (19, 73604), (21, 73667), (27, 73694), (29, 73703), (30, 73712), (32, 73724), (33, 73733), (35, 73736), (36, 73739), (38, 73766), (45, 73868), (47, 73898), (53, 74066), (55, 74120), (56, 74138), (61, 74285), (63, 74306), (70, 74420), (71, 74423), (72, 74429), (74, 74468), (77, 74516), (79, 74525), (80, 74528), (81, 74549), (82, 74555), (84, 74573), (90, 74636), (94, 74678), (101, 74735), (105, 74819), (110, 74870), (113, 74888), (114, 74912), (118, 74927), (122, 74990), (125, 75041), (126, 75044), (136, 75191), (151, 75458), (155, 75545), (156, 75560),

Gene: Naija\_132 Start: 71296, Stop: 73563, Start Num: 4

Candidate Starts for Naija\_132:

(Start: 4 @71296 has 50 MA's), (Start: 5 @71305 has 128 MA's), (6, 71344), (8, 71413), (9, 71422), (13, 71518), (15, 71539), (16, 71548), (17, 71569), (19, 71605), (24, 71689), (26, 71698), (38, 71773), (39, 71776), (40, 71797), (41, 71818), (43, 71833), (44, 71842), (45, 71881), (47, 71911), (50, 72049), (51, 72052), (59, 72220), (64, 72271), (66, 72319), (68, 72346), (70, 72370), (74, 72418), (75, 72424), (78, 72469), (80, 72478), (81, 72499), (82, 72505), (84, 72523), (86, 72562), (92, 72604), (107, 72796), (108, 72814), (109, 72820), (113, 72841), (114, 72865), (123, 72952), (127, 72994), (129, 73009), (130, 73012), (132, 73015), (135, 73093), (138, 73183), (143, 73285), (148, 73372), (150, 73390), (153, 73414),

Gene: Napoleon13\_128 Start: 69849, Stop: 72116, Start Num: 4

Candidate Starts for Napoleon13\_128:

(Start: 4 @69849 has 50 MA's), (Start: 5 @69858 has 128 MA's), (6, 69897), (8, 69966), (9, 69975), (13, 70071), (15, 70092), (16, 70101), (17, 70122), (19, 70158), (24, 70242), (26, 70251), (38, 70326), (39, 70329), (40, 70350), (41, 70371), (43, 70386), (44, 70395), (45, 70434), (47, 70464), (50, 70602), (51, 70605), (59, 70773), (66, 70872), (68, 70899), (70, 70923), (74, 70971), (75, 70977), (78, 71022), (80, 71031), (81, 71052), (82, 71058), (84, 71076), (86, 71115), (92, 71157), (105, 71325), (108, 71367), (109, 71373), (113, 71394), (114, 71418), (123, 71505), (127, 71547), (129, 71562), (130, 71565), (132, 71568), (135, 71646), (138, 71736), (143, 71838), (148, 71925), (150, 71943), (153, 71967),

Gene: Nappy\_134 Start: 73221, Stop: 75479, Start Num: 5

Candidate Starts for Nappy\_134:

(Start: 4 @73212 has 50 MA's), (Start: 5 @73221 has 128 MA's), (6, 73260), (8, 73329), (9, 73338), (13, 73434), (15, 73455), (16, 73464), (17, 73485), (19, 73521), (24, 73605), (26, 73614), (38, 73689), (39, 73692), (40, 73713), (41, 73734), (43, 73749), (44, 73758), (45, 73797), (47, 73827), (50, 73965), (51, 73968), (59, 74136), (66, 74235), (68, 74262), (70, 74286), (74, 74334), (75, 74340), (78, 74385), (80, 74394), (81, 74415), (82, 74421), (84, 74439), (86, 74478), (92, 74520), (105, 74688), (108, 74730), (109, 74736), (113, 74757), (114, 74781), (123, 74868), (127, 74910), (129, 74925), (130, 74928), (132, 74931), (135, 75009), (138, 75099), (143, 75201), (148, 75288), (150, 75306), (153, 75330),

Gene: Naval22\_137 Start: 73754, Stop: 76012, Start Num: 5

Candidate Starts for Naval22\_137:

(Start: 4 @73745 has 50 MA's), (Start: 5 @73754 has 128 MA's), (6, 73793), (8, 73862), (9, 73871), (13, 73967), (15, 73988), (16, 73997), (17, 74018), (19, 74054), (24, 74138), (26, 74147), (38, 74222), (39, 74225), (40, 74246), (41, 74267), (43, 74282), (44, 74291), (45, 74330), (47, 74360), (50, 74498), (51, 74501), (59, 74669), (66, 74768), (68, 74795), (70, 74819), (74, 74867), (75, 74873), (78, 74918), (80, 74927), (81, 74948), (82, 74954), (84, 74972), (86, 75011), (92, 75053), (105, 75221), (108, 75263), (109, 75269), (113, 75290), (114, 75314), (123, 75401), (127, 75443), (129, 75458), (130, 75461), (132, 75464), (135, 75542), (138, 75632), (143, 75734), (148, 75821), (150, 75839), (153, 75863),

Gene: NedWong\_133 Start: 72288, Stop: 74546, Start Num: 5

Candidate Starts for NedWong\_133:

(Start: 4 @72279 has 50 MA's), (Start: 5 @72288 has 128 MA's), (6, 72327), (8, 72396), (9, 72405), (13, 72501), (15, 72522), (16, 72531), (17, 72552), (19, 72588), (24, 72672), (26, 72681), (38, 72756), (39, 72759), (40, 72780), (41, 72801), (43, 72816), (44, 72825), (45, 72864), (47, 72894), (50, 73032), (51, 73035), (59, 73203), (66, 73302), (68, 73329), (70, 73353), (74, 73401), (75, 73407), (78, 73452), (80, 73461), (81, 73482), (82, 73488), (84, 73506), (86, 73545), (92, 73587), (105, 73755), (108, 73797), (109, 73803), (113, 73824), (114, 73848), (123, 73935), (127, 73977), (129, 73992), (130, 73995), (132, 73998), (135, 74076), (138, 74166), (143, 74268), (148, 74355), (150, 74373), (153, 74397),

Gene: Ngannou\_129 Start: 70287, Stop: 72545, Start Num: 5

Candidate Starts for Ngannou\_129:

(Start: 4 @70278 has 50 MA's), (Start: 5 @70287 has 128 MA's), (6, 70326), (8, 70395), (9, 70404), (13, 70500), (15, 70521), (16, 70530), (17, 70551), (19, 70587), (24, 70671), (26, 70680), (38, 70755), (39, 70758), (40, 70779), (41, 70800), (43, 70815), (44, 70824), (45, 70863), (47, 70893), (50, 71031), (51, 71034), (59, 71202), (64, 71253), (66, 71301), (68, 71328), (70, 71352), (74, 71400), (75, 71406), (78, 71451), (80, 71460), (81, 71481), (82, 71487), (84, 71505), (86, 71544), (92, 71586), (107, 71778), (108, 71796), (109, 71802), (113, 71823), (114, 71847), (123, 71934), (127, 71976), (129, 71991), (130, 71994), (132, 71997), (135, 72075), (138, 72165), (143, 72267), (148, 72354), (150, 72372), (153, 72396),

Gene: Nidhogg\_134 Start: 72511, Stop: 74769, Start Num: 5

Candidate Starts for Nidhogg\_134:

(Start: 4 @72502 has 50 MA's), (Start: 5 @72511 has 128 MA's), (6, 72550), (8, 72619), (9, 72628), (13, 72724), (15, 72745), (16, 72754), (17, 72775), (19, 72811), (24, 72895), (26, 72904), (38, 72979), (39, 72982), (40, 73003), (41, 73024), (43, 73039), (44, 73048), (45, 73087), (47, 73117), (50, 73255), (51, 73258), (59, 73426), (66, 73525), (68, 73552), (70, 73576), (74, 73624), (75, 73630), (78, 73675), (80, 73684), (81, 73705), (82, 73711), (84, 73729), (86, 73768), (92, 73810), (105, 73978), (108, 74020), (109, 74026), (113, 74047), (114, 74071), (123, 74158), (127, 74200), (129, 74215), (130, 74218), (132, 74221), (135, 74299), (138, 74389), (143, 74491), (148, 74578), (150, 74596), (153, 74620),

Gene: NoodleTree\_139 Start: 72372, Stop: 74639, Start Num: 4

Candidate Starts for NoodleTree\_139:

(Start: 4 @72372 has 50 MA's), (Start: 5 @72381 has 128 MA's), (6, 72420), (8, 72489), (9, 72498), (13, 72594), (15, 72615), (16, 72624), (17, 72645), (19, 72681), (24, 72765), (26, 72774), (38, 72849), (39, 72852), (40, 72873), (41, 72894), (43, 72909), (44, 72918), (45, 72957), (47, 72987), (50, 73125), (51, 73128), (59, 73296), (66, 73395), (68, 73422), (70, 73446), (74, 73494), (75, 73500), (78, 73545), (80, 73554), (81, 73575), (82, 73581), (84, 73599), (86, 73638), (92, 73680), (105, 73848), (108, 73890), (109, 73896), (113, 73917), (114, 73941), (123, 74028), (127, 74070), (129, 74085), (130, 74088), (132, 74091), (135, 74169), (138, 74259), (143, 74361), (148, 74448), (150, 74466), (153, 74490),

Gene: Norm\_133 Start: 72974, Stop: 75241, Start Num: 4

Candidate Starts for Norm\_133:

(Start: 4 @72974 has 50 MA's), (Start: 5 @72983 has 128 MA's), (6, 73022), (8, 73091), (9, 73100), (13, 73196), (15, 73217), (16, 73226), (17, 73247), (19, 73283), (24, 73367), (26, 73376), (38, 73451), (39, 73454), (40, 73475), (41, 73496), (43, 73511), (44, 73520), (45, 73559), (47, 73589), (50, 73727), (51, 73730), (59, 73898), (66, 73997), (68, 74024), (70, 74048), (74, 74096), (75, 74102), (78, 74147), (80, 74156), (81, 74177), (82, 74183), (84, 74201), (86, 74240), (92, 74282), (105, 74450), (108, 74492), (109, 74498), (113, 74519), (114, 74543), (123, 74630), (127, 74672), (129, 74687), (130, 74690), (132, 74693), (135, 74771), (138, 74861), (143, 74963), (148, 75050), (150, 75068), (153, 75092),

Gene: NuevoMundo\_137 Start: 74563, Stop: 76821, Start Num: 5

Candidate Starts for NuevoMundo\_137:

(Start: 4 @74554 has 50 MA's), (Start: 5 @74563 has 128 MA's), (6, 74602), (8, 74671), (9, 74680), (13, 74776), (15, 74797), (16, 74806), (17, 74827), (19, 74863), (24, 74947), (26, 74956), (38, 75031), (39, 75034), (40, 75055), (41, 75076), (43, 75091), (44, 75100), (45, 75139), (47, 75169), (50, 75307), (51, 75310), (59, 75478), (66, 75577), (68, 75604), (70, 75628), (74, 75676), (75, 75682), (78, 75727), (80, 75736), (81, 75757), (82, 75763), (84, 75781), (86, 75820), (92, 75862), (105, 76030), (108, 76072), (109, 76078), (113, 76099), (114, 76123), (123, 76210), (127, 76252), (129, 76267), (130, 76270), (132, 76273), (135, 76351), (138, 76441), (143, 76543), (148, 76630), (150, 76648), (153, 76672),

Gene: ParkTD\_133 Start: 72294, Stop: 74552, Start Num: 5

Candidate Starts for ParkTD\_133:

(Start: 4 @72285 has 50 MA's), (Start: 5 @72294 has 128 MA's), (6, 72333), (8, 72402), (9, 72411), (13, 72507), (15, 72528), (16, 72537), (17, 72558), (19, 72594), (24, 72678), (26, 72687), (38, 72762), (39, 72765), (40, 72786), (41, 72807), (43, 72822), (44, 72831), (45, 72870), (47, 72900), (50, 73038), (51, 73041), (59, 73209), (66, 73308), (68, 73335), (70, 73359), (74, 73407), (75, 73413), (78, 73458), (80, 73467), (81, 73488), (82, 73494), (84, 73512), (86, 73551), (92, 73593), (105, 73761), (108, 73803), (109, 73809), (113, 73830), (114, 73854), (123, 73941), (127, 73983), (129, 73998), (130, 74001), (132, 74004), (135, 74082), (138, 74172), (143, 74274), (148, 74361), (150, 74379), (153, 74403),

Gene: Patter\_133 Start: 71313, Stop: 73580, Start Num: 4

Candidate Starts for Patter\_133:

(Start: 4 @71313 has 50 MA's), (Start: 5 @71322 has 128 MA's), (6, 71361), (8, 71430), (9, 71439), (13, 71535), (15, 71556), (16, 71565), (17, 71586), (19, 71622), (24, 71706), (26, 71715), (38, 71790), (39, 71793), (40, 71814), (41, 71835), (43, 71850), (44, 71859), (45, 71898), (47, 71928), (50, 72066), (51, 72069), (59, 72237), (64, 72288), (66, 72336), (68, 72363), (70, 72387), (74, 72435), (75, 72441), (78, 72486), (80, 72495), (81, 72516), (82, 72522), (84, 72540), (86, 72579), (92, 72621), (107, 72813), (108, 72831), (109, 72837), (113, 72858), (114, 72882), (123, 72969), (127, 73011), (129, 73026), (130, 73029), (132, 73032), (135, 73110), (138, 73200), (143, 73302), (148, 73389), (150, 73407), (153, 73431),

Gene: Phabba\_133 Start: 72298, Stop: 74628, Start Num: 5

Candidate Starts for Phabba\_133:

(Start: 4 @72289 has 50 MA's), (Start: 5 @72298 has 128 MA's), (7, 72394), (8, 72406), (10, 72421), (12, 72478), (14, 72520), (16, 72541), (19, 72601), (21, 72667), (28, 72700), (30, 72715), (32, 72727), (33, 72736), (35, 72739), (36, 72742), (38, 72769), (43, 72829), (45, 72871), (47, 72901), (52, 73063), (53, 73069), (61, 73282), (67, 73384), (69, 73405), (70, 73417), (71, 73420), (72, 73426), (74, 73465), (77, 73513), (79, 73522), (80, 73525), (81, 73546), (82, 73552), (84, 73570), (90, 73633), (94, 73675), (101, 73732), (110, 73867), (114, 73909), (118, 73924), (122, 73987), (125, 74038), (126, 74041), (131, 74062), (137, 74221), (139, 74251), (155, 74542), (156, 74557),

Gene: Phlegm\_136 Start: 71305, Stop: 73563, Start Num: 5

Candidate Starts for Phlegm\_136:

(Start: 4 @71296 has 50 MA's), (Start: 5 @71305 has 128 MA's), (6, 71344), (8, 71413), (9, 71422), (13, 71518), (15, 71539), (16, 71548), (17, 71569), (19, 71605), (24, 71689), (26, 71698), (38, 71773), (39, 71776), (40, 71797), (41, 71818), (43, 71833), (44, 71842), (45, 71881), (47, 71911), (50, 72049), (51, 72052), (59, 72220), (64, 72271), (66, 72319), (68, 72346), (70, 72370), (74, 72418), (75, 72424), (78, 72469), (80, 72478), (81, 72499), (82, 72505), (84, 72523), (86, 72562), (92, 72604), (107, 72796), (108, 72814), (109, 72820), (113, 72841), (114, 72865), (123, 72952), (127, 72994), (129, 73009), (130, 73012), (132, 73015), (135, 73093), (138, 73183), (143, 73285), (148, 73372), (150, 73390),

(153, 73414),

Gene: Phox\_129 Start: 72574, Stop: 74832, Start Num: 5

Candidate Starts for Phox\_129:

(Start: 4 @72565 has 50 MA's), (Start: 5 @72574 has 128 MA's), (6, 72613), (8, 72682), (9, 72691), (13, 72787), (15, 72808), (16, 72817), (17, 72838), (19, 72874), (24, 72958), (26, 72967), (38, 73042), (39, 73045), (40, 73066), (41, 73087), (43, 73102), (44, 73111), (45, 73150), (47, 73180), (50, 73318), (51, 73321), (59, 73489), (64, 73540), (66, 73588), (68, 73615), (70, 73639), (74, 73687), (75, 73693), (78, 73738), (80, 73747), (81, 73768), (82, 73774), (84, 73792), (86, 73831), (92, 73873), (105, 74041), (108, 74083), (109, 74089), (113, 74110), (114, 74134), (123, 74221), (127, 74263), (129, 74278), (130, 74281), (132, 74284), (135, 74362), (138, 74452), (143, 74554), (148, 74641), (150, 74659), (153, 74683),

Gene: Phusco\_132 Start: 71572, Stop: 73839, Start Num: 4

Candidate Starts for Phusco\_132:

(Start: 4 @71572 has 50 MA's), (Start: 5 @71581 has 128 MA's), (6, 71620), (8, 71689), (9, 71698), (13, 71794), (15, 71815), (16, 71824), (17, 71845), (19, 71881), (24, 71965), (26, 71974), (38, 72049), (39, 72052), (40, 72073), (41, 72094), (43, 72109), (44, 72118), (45, 72157), (47, 72187), (50, 72325), (51, 72328), (59, 72496), (64, 72547), (66, 72595), (68, 72622), (70, 72646), (74, 72694), (75, 72700), (78, 72745), (80, 72754), (81, 72775), (82, 72781), (84, 72799), (86, 72838), (92, 72880), (107, 73072), (108, 73090), (109, 73096), (113, 73117), (114, 73141), (123, 73228), (127, 73270), (129, 73285), (130, 73288), (132, 73291), (135, 73369), (138, 73459), (143, 73561), (148, 73648), (150, 73666), (153, 73690),

Gene: Pier\_136 Start: 74571, Stop: 76829, Start Num: 5

Candidate Starts for Pier\_136:

(Start: 4 @74562 has 50 MA's), (Start: 5 @74571 has 128 MA's), (6, 74610), (8, 74679), (9, 74688), (13, 74784), (15, 74805), (16, 74814), (17, 74835), (19, 74871), (24, 74955), (26, 74964), (38, 75039), (39, 75042), (40, 75063), (41, 75084), (43, 75099), (44, 75108), (45, 75147), (47, 75177), (50, 75315), (51, 75318), (59, 75486), (66, 75585), (68, 75612), (70, 75636), (74, 75684), (75, 75690), (78, 75735), (80, 75744), (81, 75765), (82, 75771), (84, 75789), (86, 75828), (92, 75870), (105, 76038), (108, 76080), (109, 76086), (113, 76107), (114, 76131), (123, 76218), (127, 76260), (129, 76275), (130, 76278), (132, 76281), (135, 76359), (138, 76449), (143, 76551), (148, 76638), (150, 76656), (153, 76680),

Gene: Pinkcreek\_123 Start: 69915, Stop: 72173, Start Num: 5

Candidate Starts for Pinkcreek\_123:

(Start: 4 @69906 has 50 MA's), (Start: 5 @69915 has 128 MA's), (6, 69954), (8, 70023), (9, 70032), (13, 70128), (15, 70149), (16, 70158), (17, 70179), (19, 70215), (24, 70299), (26, 70308), (38, 70383), (39, 70386), (40, 70407), (41, 70428), (43, 70443), (44, 70452), (45, 70491), (47, 70521), (50, 70659), (51, 70662), (59, 70830), (66, 70929), (68, 70956), (70, 70980), (74, 71028), (75, 71034), (78, 71079), (80, 71088), (81, 71109), (82, 71115), (84, 71133), (86, 71172), (92, 71214), (108, 71424), (109, 71430), (113, 71451), (114, 71475), (123, 71562), (127, 71604), (129, 71619), (130, 71622), (132, 71625), (135, 71703), (138, 71793), (143, 71895), (148, 71982), (150, 72000), (153, 72024),

Gene: Pio\_136 Start: 74183, Stop: 76441, Start Num: 5

Candidate Starts for Pio\_136:

(Start: 4 @74174 has 50 MA's), (Start: 5 @74183 has 128 MA's), (6, 74222), (8, 74291), (9, 74300), (13, 74396), (15, 74417), (16, 74426), (17, 74447), (19, 74483), (24, 74567), (26, 74576), (38, 74651), (39, 74654), (40, 74675), (41, 74696), (43, 74711), (44, 74720), (45, 74759), (47, 74789), (50, 74927), (51, 74930), (59, 75098), (66, 75197), (68, 75224), (70, 75248), (74, 75296), (75, 75302), (78, 75347), (80, 75356), (81, 75377), (82, 75383), (84, 75401), (86, 75440), (92, 75482), (105, 75650), (108, 75692), (109, 75698), (113, 75719), (114, 75743), (123, 75830), (127, 75872), (129, 75887), (130,

75890), (132, 75893), (135, 75971), (138, 76061), (143, 76163), (150, 76268), (153, 76292),

Gene: Pivoine\_132 Start: 71296, Stop: 73563, Start Num: 4

Candidate Starts for Pivoine\_132:

(Start: 4 @71296 has 50 MA's), (Start: 5 @71305 has 128 MA's), (6, 71344), (8, 71413), (9, 71422), (13, 71518), (15, 71539), (16, 71548), (17, 71569), (19, 71605), (24, 71689), (26, 71698), (38, 71773), (39, 71776), (40, 71797), (41, 71818), (43, 71833), (44, 71842), (45, 71881), (47, 71911), (50, 72049), (51, 72052), (59, 72220), (64, 72271), (66, 72319), (68, 72346), (70, 72370), (74, 72418), (75, 72424), (78, 72469), (80, 72478), (81, 72499), (82, 72505), (84, 72523), (86, 72562), (92, 72604), (107, 72796), (108, 72814), (109, 72820), (113, 72841), (114, 72865), (123, 72952), (127, 72994), (129, 73009), (130, 73012), (132, 73015), (135, 73093), (138, 73183), (143, 73285), (148, 73372), (150, 73390), (153, 73414),

Gene: Pleione\_135 Start: 72461, Stop: 74719, Start Num: 5

Candidate Starts for Pleione\_135:

(Start: 4 @72452 has 50 MA's), (Start: 5 @72461 has 128 MA's), (6, 72500), (8, 72569), (9, 72578), (13, 72674), (15, 72695), (16, 72704), (17, 72725), (19, 72761), (24, 72845), (26, 72854), (38, 72929), (39, 72932), (40, 72953), (41, 72974), (43, 72989), (44, 72998), (45, 73037), (47, 73067), (50, 73205), (51, 73208), (59, 73376), (66, 73475), (68, 73502), (70, 73526), (74, 73574), (75, 73580), (78, 73625), (80, 73634), (81, 73655), (82, 73661), (84, 73679), (86, 73718), (92, 73760), (105, 73928), (108, 73970), (109, 73976), (113, 73997), (114, 74021), (123, 74108), (127, 74150), (129, 74165), (130, 74168), (132, 74171), (135, 74249), (138, 74339), (143, 74441), (148, 74528), (150, 74546), (153, 74570),

Gene: Primadonna\_126 Start: 70946, Stop: 73204, Start Num: 5

Candidate Starts for Primadonna\_126:

(Start: 4 @70937 has 50 MA's), (Start: 5 @70946 has 128 MA's), (6, 70985), (8, 71054), (9, 71063), (13, 71159), (15, 71180), (16, 71189), (17, 71210), (19, 71246), (24, 71330), (26, 71339), (38, 71414), (39, 71417), (40, 71438), (41, 71459), (43, 71474), (44, 71483), (45, 71522), (47, 71552), (50, 71690), (51, 71693), (59, 71861), (64, 71912), (66, 71960), (68, 71987), (70, 72011), (74, 72059), (75, 72065), (78, 72110), (80, 72119), (81, 72140), (82, 72146), (84, 72164), (86, 72203), (92, 72245), (107, 72437), (108, 72455), (109, 72461), (113, 72482), (114, 72506), (123, 72593), (127, 72635), (129, 72650), (130, 72653), (132, 72656), (135, 72734), (138, 72824), (143, 72926), (148, 73013), (150, 73031), (153, 73055),

Gene: Pupper\_119 Start: 72687, Stop: 75194, Start Num: 5

Candidate Starts for Pupper\_119:

(Start: 1 @72645 has 1 MA's), (Start: 5 @72687 has 128 MA's), (11, 72819), (15, 72924), (20, 73050), (22, 73107), (25, 73134), (27, 73140), (30, 73167), (38, 73236), (39, 73239), (40, 73260), (61, 73812), (65, 73872), (66, 73896), (73, 73968), (89, 74169), (93, 74199), (102, 74304), (106, 74379), (111, 74412), (116, 74451), (119, 74460), (121, 74475), (127, 74577), (129, 74592), (133, 74622), (141, 74880), (145, 74949), (149, 75015), (155, 75126),

Gene: PurduePete\_132 Start: 72699, Stop: 74966, Start Num: 4

Candidate Starts for PurduePete\_132:

(Start: 4 @72699 has 50 MA's), (Start: 5 @72708 has 128 MA's), (6, 72747), (8, 72816), (9, 72825), (13, 72921), (15, 72942), (16, 72951), (17, 72972), (19, 73008), (24, 73092), (26, 73101), (38, 73176), (39, 73179), (40, 73200), (41, 73221), (43, 73236), (44, 73245), (45, 73284), (47, 73314), (50, 73452), (51, 73455), (59, 73623), (66, 73722), (68, 73749), (70, 73773), (74, 73821), (75, 73827), (78, 73872), (80, 73881), (81, 73902), (82, 73908), (84, 73926), (86, 73965), (92, 74007), (105, 74175), (108, 74217), (109, 74223), (113, 74244), (114, 74268), (123, 74355), (127, 74397), (129, 74412), (130, 74415), (132, 74418), (135, 74496), (138, 74586), (143, 74688), (148, 74775), (150, 74793), (153, 74817),

Gene: QBert\_126 Start: 71289, Stop: 73556, Start Num: 4

Candidate Starts for QBert\_126:

(Start: 4 @71289 has 50 MA's), (Start: 5 @71298 has 128 MA's), (6, 71337), (8, 71406), (9, 71415), (13, 71511), (15, 71532), (16, 71541), (17, 71562), (19, 71598), (24, 71682), (26, 71691), (38, 71766), (39, 71769), (40, 71790), (41, 71811), (43, 71826), (44, 71835), (45, 71874), (47, 71904), (50, 72042), (51, 72045), (59, 72213), (64, 72264), (66, 72312), (68, 72339), (70, 72363), (74, 72411), (75, 72417), (78, 72462), (80, 72471), (81, 72492), (82, 72498), (84, 72516), (86, 72555), (92, 72597), (105, 72765), (108, 72807), (109, 72813), (113, 72834), (114, 72858), (123, 72945), (127, 72987), (129, 73002), (130, 73005), (132, 73008), (135, 73086), (138, 73176), (143, 73278), (148, 73365), (150, 73383), (153, 73407),

Gene: Quasimodo\_134 Start: 72722, Stop: 74980, Start Num: 5

Candidate Starts for Quasimodo\_134:

(Start: 4 @72713 has 50 MA's), (Start: 5 @72722 has 128 MA's), (6, 72761), (8, 72830), (9, 72839), (13, 72935), (15, 72956), (16, 72965), (17, 72986), (19, 73022), (24, 73106), (26, 73115), (38, 73190), (39, 73193), (40, 73214), (41, 73235), (43, 73250), (44, 73259), (45, 73298), (47, 73328), (50, 73466), (51, 73469), (59, 73637), (66, 73736), (68, 73763), (70, 73787), (74, 73835), (75, 73841), (78, 73886), (80, 73895), (81, 73916), (82, 73922), (84, 73940), (86, 73979), (92, 74021), (105, 74189), (108, 74231), (109, 74237), (113, 74258), (114, 74282), (123, 74369), (127, 74411), (129, 74426), (130, 74429), (132, 74432), (135, 74510), (138, 74600), (143, 74702), (148, 74789), (150, 74807), (153, 74831),

Gene: Rabinovish\_131 Start: 72906, Stop: 75164, Start Num: 5

Candidate Starts for Rabinovish\_131:

(Start: 4 @72897 has 50 MA's), (Start: 5 @72906 has 128 MA's), (6, 72945), (8, 73014), (9, 73023), (13, 73119), (15, 73140), (16, 73149), (17, 73170), (19, 73206), (24, 73290), (26, 73299), (38, 73374), (39, 73377), (40, 73398), (41, 73419), (43, 73434), (44, 73443), (45, 73482), (47, 73512), (50, 73650), (51, 73653), (59, 73821), (66, 73920), (68, 73947), (70, 73971), (74, 74019), (75, 74025), (78, 74070), (80, 74079), (81, 74100), (82, 74106), (84, 74124), (86, 74163), (92, 74205), (108, 74415), (109, 74421), (113, 74442), (114, 74466), (123, 74553), (127, 74595), (129, 74610), (130, 74613), (132, 74616), (135, 74694), (138, 74784), (143, 74886), (148, 74973), (150, 74991), (153, 75015),

Gene: Rahel\_131 Start: 71174, Stop: 73441, Start Num: 4

Candidate Starts for Rahel\_131:

(Start: 4 @71174 has 50 MA's), (Start: 5 @71183 has 128 MA's), (6, 71222), (8, 71291), (9, 71300), (13, 71396), (15, 71417), (16, 71426), (17, 71447), (19, 71483), (24, 71567), (26, 71576), (38, 71651), (39, 71654), (40, 71675), (41, 71696), (43, 71711), (44, 71720), (45, 71759), (47, 71789), (50, 71927), (51, 71930), (59, 72098), (64, 72149), (66, 72197), (68, 72224), (70, 72248), (74, 72296), (75, 72302), (78, 72347), (80, 72356), (81, 72377), (82, 72383), (84, 72401), (86, 72440), (92, 72482), (107, 72674), (108, 72692), (109, 72698), (113, 72719), (114, 72743), (123, 72830), (127, 72872), (129, 72887), (130, 72890), (132, 72893), (135, 72971), (138, 73061), (143, 73163), (148, 73250), (150, 73268), (153, 73292),

Gene: Rizal\_127 Start: 70331, Stop: 72589, Start Num: 5

Candidate Starts for Rizal\_127:

(Start: 4 @70322 has 50 MA's), (Start: 5 @70331 has 128 MA's), (6, 70370), (8, 70439), (9, 70448), (13, 70544), (15, 70565), (16, 70574), (17, 70595), (19, 70631), (24, 70715), (26, 70724), (38, 70799), (39, 70802), (40, 70823), (41, 70844), (43, 70859), (44, 70868), (45, 70907), (47, 70937), (50, 71075), (51, 71078), (59, 71246), (66, 71345), (68, 71372), (70, 71396), (74, 71444), (75, 71450), (78, 71495), (80, 71504), (81, 71525), (82, 71531), (84, 71549), (86, 71588), (92, 71630), (105, 71798), (108, 71840), (109, 71846), (113, 71867), (114, 71891), (123, 71978), (127, 72020), (129, 72035), (130, 72038), (132, 72041), (135, 72119), (138, 72209), (143, 72311), (148, 72398), (150, 72416), (153,

72440),

Gene: RoMag\_127 Start: 71486, Stop: 73753, Start Num: 4

Candidate Starts for RoMag\_127:

(Start: 4 @71486 has 50 MA's), (Start: 5 @71495 has 128 MA's), (6, 71534), (8, 71603), (9, 71612), (13, 71708), (15, 71729), (16, 71738), (17, 71759), (19, 71795), (24, 71879), (26, 71888), (38, 71963), (39, 71966), (40, 71987), (41, 72008), (43, 72023), (44, 72032), (45, 72071), (47, 72101), (50, 72239), (51, 72242), (59, 72410), (66, 72509), (68, 72536), (70, 72560), (74, 72608), (75, 72614), (78, 72659), (80, 72668), (81, 72689), (82, 72695), (84, 72713), (86, 72752), (92, 72794), (105, 72962), (108, 73004), (109, 73010), (113, 73031), (114, 73055), (123, 73142), (127, 73184), (129, 73199), (130, 73202), (132, 73205), (135, 73283), (138, 73373), (143, 73475), (148, 73562), (150, 73580), (153, 73604),

Gene: Ronan\_126 Start: 69444, Stop: 71702, Start Num: 5

Candidate Starts for Ronan\_126:

(Start: 4 @69435 has 50 MA's), (Start: 5 @69444 has 128 MA's), (6, 69483), (8, 69552), (9, 69561), (13, 69657), (15, 69678), (16, 69687), (17, 69708), (19, 69744), (24, 69828), (26, 69837), (38, 69912), (39, 69915), (40, 69936), (41, 69957), (43, 69972), (44, 69981), (45, 70020), (47, 70050), (50, 70188), (51, 70191), (59, 70359), (64, 70410), (66, 70458), (68, 70485), (70, 70509), (74, 70557), (75, 70563), (78, 70608), (80, 70617), (81, 70638), (82, 70644), (84, 70662), (86, 70701), (92, 70743), (107, 70935), (108, 70953), (109, 70959), (113, 70980), (114, 71004), (123, 71091), (127, 71133), (129, 71148), (130, 71151), (132, 71154), (135, 71232), (138, 71322), (143, 71424), (148, 71511), (150, 71529), (153, 71553),

Gene: Roots515\_131 Start: 72960, Stop: 75218, Start Num: 5

Candidate Starts for Roots515\_131:

(Start: 4 @72951 has 50 MA's), (Start: 5 @72960 has 128 MA's), (6, 72999), (8, 73068), (9, 73077), (13, 73173), (15, 73194), (16, 73203), (17, 73224), (19, 73260), (24, 73344), (26, 73353), (38, 73428), (39, 73431), (40, 73452), (41, 73473), (43, 73488), (44, 73497), (45, 73536), (47, 73566), (50, 73704), (51, 73707), (59, 73875), (64, 73926), (66, 73974), (68, 74001), (70, 74025), (74, 74073), (75, 74079), (78, 74124), (80, 74133), (81, 74154), (82, 74160), (84, 74178), (86, 74217), (92, 74259), (107, 74451), (108, 74469), (109, 74475), (113, 74496), (114, 74520), (123, 74607), (127, 74649), (129, 74664), (130, 74667), (132, 74670), (135, 74748), (138, 74838), (143, 74940), (148, 75027), (150, 75045), (153, 75069),

Gene: SCentae\_118 Start: 72795, Stop: 75347, Start Num: 1

Candidate Starts for SCentae\_118:

(Start: 1 @72795 has 1 MA's), (Start: 5 @72837 has 128 MA's), (9, 72957), (11, 72969), (22, 73260), (25, 73287), (27, 73293), (30, 73320), (38, 73389), (39, 73392), (40, 73413), (61, 73965), (64, 74001), (65, 74025), (66, 74049), (73, 74121), (83, 74259), (93, 74352), (102, 74457), (106, 74532), (119, 74613), (121, 74628), (124, 74715), (127, 74730), (133, 74775), (134, 74778), (141, 75030), (145, 75099), (149, 75168), (155, 75279),

Gene: SVoro\_130 Start: 72668, Stop: 74926, Start Num: 5

Candidate Starts for SVoro\_130:

(Start: 4 @72659 has 50 MA's), (Start: 5 @72668 has 128 MA's), (6, 72707), (8, 72776), (9, 72785), (13, 72881), (15, 72902), (16, 72911), (17, 72932), (19, 72968), (24, 73052), (26, 73061), (38, 73136), (39, 73139), (40, 73160), (41, 73181), (43, 73196), (44, 73205), (45, 73244), (47, 73274), (50, 73412), (51, 73415), (59, 73583), (64, 73634), (66, 73682), (68, 73709), (70, 73733), (74, 73781), (75, 73787), (78, 73832), (80, 73841), (81, 73862), (82, 73868), (84, 73886), (86, 73925), (92, 73967), (105, 74135), (108, 74177), (109, 74183), (113, 74204), (114, 74228), (123, 74315), (127, 74357), (129, 74372), (130, 74375), (132, 74378), (135, 74456), (138, 74546), (143, 74648), (148, 74735), (150, 74753), (153, 74777),

Gene: Salacia\_136 Start: 72622, Stop: 74880, Start Num: 5

Candidate Starts for Salacia\_136:

(Start: 4 @72613 has 50 MA's), (Start: 5 @72622 has 128 MA's), (6, 72661), (8, 72730), (9, 72739), (13, 72835), (15, 72856), (16, 72865), (17, 72886), (19, 72922), (24, 73006), (26, 73015), (38, 73090), (39, 73093), (40, 73114), (41, 73135), (43, 73150), (44, 73159), (45, 73198), (47, 73228), (50, 73366), (51, 73369), (59, 73537), (66, 73636), (68, 73663), (70, 73687), (74, 73735), (75, 73741), (78, 73786), (80, 73795), (81, 73816), (82, 73822), (84, 73840), (86, 73879), (92, 73921), (105, 74089), (108, 74131), (109, 74137), (113, 74158), (114, 74182), (123, 74269), (127, 74311), (129, 74326), (130, 74329), (132, 74332), (135, 74410), (138, 74500), (143, 74602), (148, 74689), (150, 74707), (153, 74731),

Gene: Sauce\_132 Start: 71238, Stop: 73496, Start Num: 5

Candidate Starts for Sauce\_132:

(Start: 4 @71229 has 50 MA's), (Start: 5 @71238 has 128 MA's), (6, 71277), (8, 71346), (9, 71355), (13, 71451), (15, 71472), (16, 71481), (17, 71502), (19, 71538), (24, 71622), (26, 71631), (38, 71706), (39, 71709), (40, 71730), (41, 71751), (43, 71766), (44, 71775), (45, 71814), (47, 71844), (50, 71982), (51, 71985), (59, 72153), (66, 72252), (68, 72279), (70, 72303), (74, 72351), (75, 72357), (78, 72402), (80, 72411), (81, 72432), (82, 72438), (84, 72456), (86, 72495), (92, 72537), (105, 72705), (108, 72747), (109, 72753), (113, 72774), (114, 72798), (123, 72885), (127, 72927), (129, 72942), (130, 72945), (132, 72948), (135, 73026), (138, 73116), (143, 73218), (148, 73305), (150, 73323), (153, 73347),

Gene: ScoobyDoobyDoo\_124 Start: 71962, Stop: 74271, Start Num: 4

Candidate Starts for ScoobyDoobyDoo\_124:

(3, 71953), (Start: 4 @71962 has 50 MA's), (16, 72214), (17, 72235), (19, 72274), (21, 72337), (25, 72358), (30, 72367), (32, 72379), (33, 72388), (35, 72391), (36, 72394), (37, 72409), (38, 72421), (42, 72469), (43, 72481), (52, 72715), (53, 72721), (54, 72766), (57, 72883), (62, 72946), (63, 72949), (64, 72964), (69, 73051), (72, 73072), (80, 73171), (81, 73192), (82, 73198), (85, 73252), (87, 73267), (90, 73279), (94, 73318), (98, 73357), (99, 73366), (101, 73375), (104, 73441), (105, 73459), (107, 73483), (110, 73510), (114, 73552), (115, 73558), (117, 73564), (118, 73567), (120, 73582), (122, 73630), (125, 73681), (126, 73684), (131, 73705), (140, 73897), (142, 73966), (144, 74002), (146, 74056), (150, 74086), (152, 74107), (153, 74110), (154, 74173), (156, 74200),

Gene: ScottMcG\_128 Start: 71244, Stop: 73502, Start Num: 5

Candidate Starts for ScottMcG\_128:

(Start: 4 @71235 has 50 MA's), (Start: 5 @71244 has 128 MA's), (6, 71283), (8, 71352), (9, 71361), (13, 71457), (15, 71478), (16, 71487), (17, 71508), (19, 71544), (24, 71628), (26, 71637), (38, 71712), (39, 71715), (40, 71736), (41, 71757), (43, 71772), (44, 71781), (45, 71820), (47, 71850), (50, 71988), (51, 71991), (59, 72159), (66, 72258), (68, 72285), (70, 72309), (74, 72357), (75, 72363), (78, 72408), (80, 72417), (81, 72438), (82, 72444), (84, 72462), (86, 72501), (92, 72543), (105, 72711), (108, 72753), (109, 72759), (113, 72780), (114, 72804), (123, 72891), (127, 72933), (129, 72948), (130, 72951), (132, 72954), (135, 73032), (138, 73122), (143, 73224), (148, 73311), (150, 73329), (153, 73353),

Gene: Sebata\_132 Start: 72707, Stop: 74965, Start Num: 5

Candidate Starts for Sebata\_132:

(Start: 4 @72698 has 50 MA's), (Start: 5 @72707 has 128 MA's), (6, 72746), (8, 72815), (9, 72824), (13, 72920), (15, 72941), (16, 72950), (17, 72971), (19, 73007), (24, 73091), (26, 73100), (38, 73175), (39, 73178), (40, 73199), (41, 73220), (43, 73235), (44, 73244), (45, 73283), (47, 73313), (50, 73451), (51, 73454), (59, 73622), (66, 73721), (68, 73748), (70, 73772), (74, 73820), (75, 73826), (78, 73871), (80, 73880), (81, 73901), (82, 73907), (84, 73925), (86, 73964), (92, 74006), (108, 74216), (109, 74222), (113, 74243), (114, 74267), (123, 74354), (127, 74396), (129, 74411), (130, 74414), (132,



74417), (135, 74495), (138, 74585), (143, 74687), (148, 74774), (150, 74792), (153, 74816),

Gene: Shaqnato\_125 Start: 70279, Stop: 72546, Start Num: 4

Candidate Starts for Shaqnato\_125:

(Start: 4 @70279 has 50 MA's), (Start: 5 @70288 has 128 MA's), (6, 70327), (8, 70396), (9, 70405), (13, 70501), (15, 70522), (16, 70531), (17, 70552), (19, 70588), (24, 70672), (26, 70681), (38, 70756), (39, 70759), (40, 70780), (41, 70801), (43, 70816), (44, 70825), (45, 70864), (47, 70894), (50, 71032), (51, 71035), (59, 71203), (64, 71254), (66, 71302), (68, 71329), (70, 71353), (74, 71401), (75, 71407), (78, 71452), (80, 71461), (81, 71482), (82, 71488), (84, 71506), (86, 71545), (92, 71587), (107, 71779), (108, 71797), (109, 71803), (113, 71824), (114, 71848), (123, 71935), (127, 71977), (129, 71992), (130, 71995), (132, 71998), (135, 72076), (138, 72166), (143, 72268), (148, 72355), (150, 72373), (153, 72397),

Gene: Shelob\_134 Start: 73081, Stop: 75348, Start Num: 4

Candidate Starts for Shelob\_134:

(Start: 4 @73081 has 50 MA's), (Start: 5 @73090 has 128 MA's), (6, 73129), (8, 73198), (9, 73207), (13, 73303), (15, 73324), (16, 73333), (17, 73354), (19, 73390), (24, 73474), (26, 73483), (38, 73558), (39, 73561), (40, 73582), (41, 73603), (43, 73618), (44, 73627), (45, 73666), (47, 73696), (50, 73834), (51, 73837), (59, 74005), (66, 74104), (68, 74131), (70, 74155), (74, 74203), (75, 74209), (78, 74254), (80, 74263), (81, 74284), (82, 74290), (84, 74308), (86, 74347), (92, 74389), (105, 74557), (108, 74599), (109, 74605), (113, 74626), (114, 74650), (123, 74737), (127, 74779), (129, 74794), (130, 74797), (132, 74800), (135, 74878), (138, 74968), (143, 75070), (148, 75157), (150, 75175), (153, 75199),

Gene: ShiaLabeouf\_131 Start: 71618, Stop: 73876, Start Num: 5

Candidate Starts for ShiaLabeouf\_131:

(Start: 4 @71609 has 50 MA's), (Start: 5 @71618 has 128 MA's), (6, 71657), (8, 71726), (9, 71735), (13, 71831), (15, 71852), (16, 71861), (17, 71882), (19, 71918), (24, 72002), (26, 72011), (38, 72086), (39, 72089), (40, 72110), (41, 72131), (43, 72146), (44, 72155), (45, 72194), (47, 72224), (50, 72362), (51, 72365), (59, 72533), (64, 72584), (66, 72632), (68, 72659), (70, 72683), (74, 72731), (75, 72737), (78, 72782), (80, 72791), (81, 72812), (82, 72818), (84, 72836), (86, 72875), (92, 72917), (107, 73109), (108, 73127), (109, 73133), (113, 73154), (114, 73178), (123, 73265), (127, 73307), (129, 73322), (130, 73325), (132, 73328), (135, 73406), (138, 73496), (143, 73598), (148, 73685), (150, 73703), (153, 73727),

Gene: Shifa\_121 Start: 70514, Stop: 72772, Start Num: 5

Candidate Starts for Shifa\_121:

(Start: 4 @70505 has 50 MA's), (Start: 5 @70514 has 128 MA's), (6, 70553), (8, 70622), (9, 70631), (13, 70727), (15, 70748), (16, 70757), (17, 70778), (19, 70814), (24, 70898), (26, 70907), (38, 70982), (39, 70985), (40, 71006), (41, 71027), (43, 71042), (44, 71051), (45, 71090), (47, 71120), (50, 71258), (51, 71261), (59, 71429), (66, 71528), (68, 71555), (70, 71579), (74, 71627), (75, 71633), (78, 71678), (80, 71687), (81, 71708), (82, 71714), (84, 71732), (86, 71771), (92, 71813), (105, 71981), (108, 72023), (109, 72029), (113, 72050), (114, 72074), (123, 72161), (127, 72203), (129, 72218), (130, 72221), (132, 72224), (135, 72302), (138, 72392), (143, 72494), (148, 72581), (150, 72599), (153, 72623),

Gene: Shnickers\_132 Start: 71573, Stop: 73840, Start Num: 4

Candidate Starts for Shnickers\_132:

(Start: 4 @71573 has 50 MA's), (Start: 5 @71582 has 128 MA's), (6, 71621), (8, 71690), (9, 71699), (13, 71795), (15, 71816), (16, 71825), (17, 71846), (19, 71882), (24, 71966), (26, 71975), (38, 72050), (39, 72053), (40, 72074), (41, 72095), (43, 72110), (44, 72119), (45, 72158), (47, 72188), (50, 72326), (51, 72329), (59, 72497), (64, 72548), (66, 72596), (68, 72623), (70, 72647), (74, 72695), (75, 72701), (78, 72746), (80, 72755), (81, 72776), (82, 72782), (84, 72800), (86, 72839), (92, 72881), (107, 73073),

(108, 73091), (109, 73097), (113, 73118), (114, 73142), (123, 73229), (127, 73271), (129, 73286), (130, 73289), (132, 73292), (135, 73370), (138, 73460), (143, 73562), (148, 73649), (150, 73667), (153, 73691),

Gene: Shrimp\_132 Start: 72302, Stop: 74560, Start Num: 5

Candidate Starts for Shrimp\_132:

(Start: 4 @72293 has 50 MA's), (Start: 5 @72302 has 128 MA's), (6, 72341), (8, 72410), (9, 72419), (13, 72515), (15, 72536), (16, 72545), (17, 72566), (19, 72602), (24, 72686), (26, 72695), (38, 72770), (39, 72773), (40, 72794), (41, 72815), (43, 72830), (44, 72839), (45, 72878), (47, 72908), (50, 73046), (51, 73049), (59, 73217), (66, 73316), (68, 73343), (70, 73367), (74, 73415), (75, 73421), (78, 73466), (80, 73475), (81, 73496), (82, 73502), (84, 73520), (86, 73559), (92, 73601), (105, 73769), (108, 73811), (109, 73817), (113, 73838), (114, 73862), (123, 73949), (127, 73991), (129, 74006), (130, 74009), (132, 74012), (135, 74090), (138, 74180), (143, 74282), (148, 74369), (150, 74387), (153, 74411),

Gene: SilverDipper\_134 Start: 71305, Stop: 73563, Start Num: 5

Candidate Starts for SilverDipper\_134:

(Start: 4 @71296 has 50 MA's), (Start: 5 @71305 has 128 MA's), (6, 71344), (8, 71413), (9, 71422), (13, 71518), (15, 71539), (16, 71548), (17, 71569), (19, 71605), (24, 71689), (26, 71698), (38, 71773), (39, 71776), (40, 71797), (41, 71818), (43, 71833), (44, 71842), (45, 71881), (47, 71911), (50, 72049), (51, 72052), (59, 72220), (64, 72271), (66, 72319), (68, 72346), (70, 72370), (74, 72418), (75, 72424), (78, 72469), (80, 72478), (81, 72499), (82, 72505), (84, 72523), (86, 72562), (92, 72604), (107, 72796), (108, 72814), (109, 72820), (113, 72841), (114, 72865), (123, 72952), (127, 72994), (129, 73009), (130, 73012), (132, 73015), (135, 73093), (138, 73183), (143, 73285), (148, 73372), (150, 73390), (153, 73414),

Gene: Skog\_181 Start: 102669, Stop: 105125, Start Num: 5

Candidate Starts for Skog\_181:

(Start: 1 @102627 has 1 MA's), (2, 102636), (Start: 5 @102669 has 128 MA's), (11, 102801), (17, 102936), (22, 103086), (23, 103104), (27, 103119), (30, 103146), (34, 103182), (38, 103215), (39, 103218), (40, 103239), (46, 103347), (48, 103410), (49, 103437), (60, 103728), (65, 103797), (75, 103926), (91, 104106), (93, 104124), (95, 104148), (106, 104304), (116, 104385), (127, 104511), (128, 104520), (129, 104526), (133, 104556), (147, 104934), (149, 104946), (152, 104979), (155, 105057),

Gene: SmallFry\_132 Start: 70798, Stop: 73065, Start Num: 4

Candidate Starts for SmallFry\_132:

(Start: 4 @70798 has 50 MA's), (Start: 5 @70807 has 128 MA's), (6, 70846), (8, 70915), (9, 70924), (13, 71020), (15, 71041), (16, 71050), (17, 71071), (19, 71107), (24, 71191), (26, 71200), (38, 71275), (39, 71278), (40, 71299), (41, 71320), (43, 71335), (44, 71344), (45, 71383), (47, 71413), (50, 71551), (51, 71554), (59, 71722), (64, 71773), (66, 71821), (68, 71848), (70, 71872), (74, 71920), (75, 71926), (78, 71971), (80, 71980), (81, 72001), (82, 72007), (84, 72025), (86, 72064), (92, 72106), (107, 72298), (108, 72316), (109, 72322), (113, 72343), (114, 72367), (123, 72454), (127, 72496), (129, 72511), (130, 72514), (132, 72517), (135, 72595), (138, 72685), (143, 72787), (148, 72874), (150, 72892), (153, 72916),

Gene: Spec\_128 Start: 71347, Stop: 73605, Start Num: 5

Candidate Starts for Spec\_128:

(Start: 4 @71338 has 50 MA's), (Start: 5 @71347 has 128 MA's), (6, 71386), (8, 71455), (9, 71464), (13, 71560), (15, 71581), (16, 71590), (17, 71611), (19, 71647), (24, 71731), (26, 71740), (38, 71815), (39, 71818), (40, 71839), (41, 71860), (43, 71875), (44, 71884), (45, 71923), (47, 71953), (50, 72091), (51, 72094), (59, 72262), (64, 72313), (66, 72361), (68, 72388), (70, 72412), (74, 72460), (75, 72466), (78, 72511), (80, 72520), (81, 72541), (82, 72547), (84, 72565), (86, 72604), (92, 72646), (107, 72838), (108, 72856), (109, 72862), (113, 72883), (114, 72907), (123, 72994), (127, 73036), (129, 73051),

(130, 73054), (132, 73057), (135, 73135), (138, 73225), (143, 73327), (148, 73414), (150, 73432), (153, 73456),

Gene: Specks\_137 Start: 73463, Stop: 75730, Start Num: 4

Candidate Starts for Specks\_137:

(Start: 4 @73463 has 50 MA's), (Start: 5 @73472 has 128 MA's), (6, 73511), (8, 73580), (9, 73589), (13, 73685), (15, 73706), (16, 73715), (17, 73736), (19, 73772), (24, 73856), (26, 73865), (38, 73940), (39, 73943), (40, 73964), (41, 73985), (43, 74000), (44, 74009), (45, 74048), (47, 74078), (50, 74216), (51, 74219), (59, 74387), (64, 74438), (66, 74486), (68, 74513), (70, 74537), (74, 74585), (75, 74591), (78, 74636), (80, 74645), (81, 74666), (82, 74672), (84, 74690), (86, 74729), (92, 74771), (107, 74963), (108, 74981), (109, 74987), (113, 75008), (114, 75032), (123, 75119), (127, 75161), (129, 75176), (130, 75179), (132, 75182), (135, 75260), (138, 75350), (143, 75452), (148, 75539), (150, 75557), (153, 75581),

Gene: Sprinklers\_128 Start: 70863, Stop: 73121, Start Num: 5

Candidate Starts for Sprinklers\_128:

(Start: 4 @70854 has 50 MA's), (Start: 5 @70863 has 128 MA's), (6, 70902), (8, 70971), (9, 70980), (13, 71076), (15, 71097), (16, 71106), (17, 71127), (19, 71163), (24, 71247), (26, 71256), (38, 71331), (39, 71334), (40, 71355), (41, 71376), (43, 71391), (44, 71400), (45, 71439), (47, 71469), (50, 71607), (51, 71610), (59, 71778), (64, 71829), (66, 71877), (68, 71904), (70, 71928), (74, 71976), (75, 71982), (78, 72027), (80, 72036), (81, 72057), (82, 72063), (84, 72081), (86, 72120), (92, 72162), (107, 72354), (108, 72372), (109, 72378), (113, 72399), (114, 72423), (123, 72510), (127, 72552), (129, 72567), (130, 72570), (132, 72573), (135, 72651), (138, 72741), (143, 72843), (148, 72930), (150, 72948), (153, 72972),

Gene: Spud\_131 Start: 72368, Stop: 74626, Start Num: 5

Candidate Starts for Spud\_131:

(Start: 4 @72359 has 50 MA's), (Start: 5 @72368 has 128 MA's), (6, 72407), (8, 72476), (9, 72485), (13, 72581), (15, 72602), (16, 72611), (17, 72632), (19, 72668), (24, 72752), (26, 72761), (38, 72836), (39, 72839), (40, 72860), (41, 72881), (43, 72896), (44, 72905), (45, 72944), (47, 72974), (50, 73112), (51, 73115), (59, 73283), (66, 73382), (68, 73409), (70, 73433), (74, 73481), (75, 73487), (78, 73532), (80, 73541), (81, 73562), (82, 73568), (84, 73586), (86, 73625), (92, 73667), (105, 73835), (108, 73877), (109, 73883), (113, 73904), (114, 73928), (123, 74015), (127, 74057), (129, 74072), (130, 74075), (132, 74078), (135, 74156), (138, 74246), (143, 74348), (148, 74435), (150, 74453), (153, 74477),

Gene: SrishMeg2525\_131 Start: 72390, Stop: 74648, Start Num: 5

Candidate Starts for SrishMeg2525\_131:

(Start: 4 @72381 has 50 MA's), (Start: 5 @72390 has 128 MA's), (6, 72429), (8, 72498), (9, 72507), (13, 72603), (15, 72624), (16, 72633), (17, 72654), (19, 72690), (24, 72774), (26, 72783), (38, 72858), (39, 72861), (40, 72882), (41, 72903), (43, 72918), (44, 72927), (45, 72966), (47, 72996), (50, 73134), (51, 73137), (59, 73305), (66, 73404), (68, 73431), (70, 73455), (74, 73503), (75, 73509), (78, 73554), (80, 73563), (81, 73584), (82, 73590), (84, 73608), (86, 73647), (92, 73689), (105, 73857), (108, 73899), (109, 73905), (113, 73926), (114, 73950), (123, 74037), (127, 74079), (129, 74094), (130, 74097), (132, 74100), (135, 74178), (138, 74268), (143, 74370), (148, 74457), (150, 74475), (153, 74499),

Gene: StephanieG\_130 Start: 73200, Stop: 75458, Start Num: 5

Candidate Starts for StephanieG\_130:

(Start: 4 @73191 has 50 MA's), (Start: 5 @73200 has 128 MA's), (6, 73239), (8, 73308), (9, 73317), (13, 73413), (15, 73434), (16, 73443), (17, 73464), (19, 73500), (24, 73584), (26, 73593), (38, 73668), (39, 73671), (40, 73692), (41, 73713), (43, 73728), (44, 73737), (45, 73776), (47, 73806), (50, 73944), (51, 73947), (59, 74115), (66, 74214), (68, 74241), (70, 74265), (74, 74313), (75, 74319), (78, 74364),

(80, 74373), (81, 74394), (82, 74400), (84, 74418), (86, 74457), (92, 74499), (105, 74667), (108, 74709), (109, 74715), (113, 74736), (114, 74760), (123, 74847), (127, 74889), (129, 74904), (130, 74907), (132, 74910), (135, 74988), (138, 75078), (143, 75180), (148, 75267), (150, 75285), (153, 75309),

Gene: Stubby\_125 Start: 70821, Stop: 73088, Start Num: 4

Candidate Starts for Stubby\_125:

(Start: 4 @70821 has 50 MA's), (Start: 5 @70830 has 128 MA's), (6, 70869), (8, 70938), (9, 70947), (13, 71043), (15, 71064), (16, 71073), (17, 71094), (19, 71130), (24, 71214), (26, 71223), (38, 71298), (39, 71301), (40, 71322), (41, 71343), (43, 71358), (44, 71367), (45, 71406), (47, 71436), (50, 71574), (51, 71577), (59, 71745), (66, 71844), (68, 71871), (70, 71895), (74, 71943), (75, 71949), (78, 71994), (80, 72003), (81, 72024), (82, 72030), (84, 72048), (86, 72087), (92, 72129), (108, 72339), (109, 72345), (113, 72366), (114, 72390), (123, 72477), (127, 72519), (129, 72534), (130, 72537), (132, 72540), (135, 72618), (138, 72708), (143, 72810), (148, 72897), (150, 72915), (153, 72939),

Gene: StubbySaigey\_136 Start: 71465, Stop: 73723, Start Num: 5

Candidate Starts for StubbySaigey\_136:

(Start: 4 @71456 has 50 MA's), (Start: 5 @71465 has 128 MA's), (6, 71504), (8, 71573), (9, 71582), (13, 71678), (15, 71699), (16, 71708), (17, 71729), (19, 71765), (24, 71849), (26, 71858), (38, 71933), (39, 71936), (40, 71957), (41, 71978), (43, 71993), (44, 72002), (45, 72041), (47, 72071), (50, 72209), (51, 72212), (59, 72380), (66, 72479), (68, 72506), (70, 72530), (74, 72578), (75, 72584), (78, 72629), (80, 72638), (81, 72659), (82, 72665), (84, 72683), (86, 72722), (92, 72764), (105, 72932), (108, 72974), (109, 72980), (113, 73001), (114, 73025), (123, 73112), (127, 73154), (129, 73169), (130, 73172), (132, 73175), (135, 73253), (138, 73343), (143, 73445), (148, 73532), (150, 73550), (153, 73574),

Gene: Tainan\_135 Start: 72795, Stop: 75053, Start Num: 5

Candidate Starts for Tainan\_135:

(Start: 4 @72786 has 50 MA's), (Start: 5 @72795 has 128 MA's), (6, 72834), (8, 72903), (9, 72912), (13, 73008), (15, 73029), (16, 73038), (17, 73059), (19, 73095), (24, 73179), (26, 73188), (38, 73263), (39, 73266), (40, 73287), (41, 73308), (43, 73323), (44, 73332), (45, 73371), (47, 73401), (50, 73539), (51, 73542), (59, 73710), (66, 73809), (68, 73836), (70, 73860), (74, 73908), (75, 73914), (78, 73959), (80, 73968), (81, 73989), (82, 73995), (84, 74013), (86, 74052), (92, 74094), (105, 74262), (108, 74304), (109, 74310), (113, 74331), (114, 74355), (123, 74442), (127, 74484), (129, 74499), (130, 74502), (132, 74505), (135, 74583), (138, 74673), (143, 74775), (148, 74862), (150, 74880), (153, 74904),

Gene: Teardrop\_131 Start: 70787, Stop: 73054, Start Num: 4

Candidate Starts for Teardrop\_131:

(Start: 4 @70787 has 50 MA's), (Start: 5 @70796 has 128 MA's), (6, 70835), (8, 70904), (9, 70913), (13, 71009), (15, 71030), (16, 71039), (17, 71060), (19, 71096), (24, 71180), (26, 71189), (38, 71264), (39, 71267), (40, 71288), (41, 71309), (43, 71324), (44, 71333), (45, 71372), (47, 71402), (50, 71540), (51, 71543), (59, 71711), (64, 71762), (66, 71810), (68, 71837), (70, 71861), (74, 71909), (75, 71915), (78, 71960), (80, 71969), (81, 71990), (82, 71996), (84, 72014), (86, 72053), (92, 72095), (107, 72287), (108, 72305), (109, 72311), (113, 72332), (114, 72356), (123, 72443), (127, 72485), (129, 72500), (130, 72503), (132, 72506), (135, 72584), (138, 72674), (143, 72776), (148, 72863), (150, 72881), (153, 72905),

Gene: TinyTim\_132 Start: 72048, Stop: 74306, Start Num: 5

Candidate Starts for TinyTim\_132:

(Start: 4 @72039 has 50 MA's), (Start: 5 @72048 has 128 MA's), (6, 72087), (8, 72156), (9, 72165), (13, 72261), (15, 72282), (16, 72291), (17, 72312), (19, 72348), (24, 72432), (26, 72441), (38, 72516), (39, 72519), (40, 72540), (41, 72561), (43, 72576), (44, 72585), (45, 72624), (47, 72654), (50, 72792),

(51, 72795), (59, 72963), (66, 73062), (68, 73089), (70, 73113), (74, 73161), (75, 73167), (78, 73212), (80, 73221), (81, 73242), (82, 73248), (84, 73266), (86, 73305), (92, 73347), (105, 73515), (108, 73557), (109, 73563), (113, 73584), (114, 73608), (123, 73695), (127, 73737), (129, 73752), (130, 73755), (132, 73758), (135, 73836), (138, 73926), (143, 74028), (148, 74115), (150, 74133), (153, 74157),

Gene: Tonenili\_145 Start: 74823, Stop: 77069, Start Num: 5

Candidate Starts for Tonenili\_145:

(Start: 5 @74823 has 128 MA's), (8, 74931), (9, 74940), (13, 75036), (15, 75057), (16, 75066), (17, 75087), (24, 75201), (31, 75231), (38, 75285), (39, 75288), (40, 75309), (41, 75330), (42, 75333), (43, 75345), (45, 75393), (47, 75423), (50, 75561), (51, 75564), (59, 75732), (70, 75882), (74, 75930), (75, 75936), (76, 75942), (78, 75981), (80, 75990), (81, 76011), (84, 76035), (88, 76092), (91, 76107), (92, 76116), (96, 76161), (97, 76179), (100, 76194), (103, 76233), (105, 76284), (108, 76326), (109, 76332), (110, 76335), (112, 76347), (114, 76377), (127, 76506), (129, 76521), (132, 76527), (135, 76608), (138, 76698), (148, 76884), (151, 76914), (153, 76926),

Gene: Tortoise16\_129 Start: 71398, Stop: 73665, Start Num: 4

Candidate Starts for Tortoise16\_129:

(Start: 4 @71398 has 50 MA's), (Start: 5 @71407 has 128 MA's), (6, 71446), (8, 71515), (9, 71524), (13, 71620), (15, 71641), (16, 71650), (17, 71671), (19, 71707), (24, 71791), (26, 71800), (38, 71875), (39, 71878), (40, 71899), (41, 71920), (43, 71935), (44, 71944), (45, 71983), (47, 72013), (50, 72151), (51, 72154), (59, 72322), (66, 72421), (68, 72448), (70, 72472), (74, 72520), (75, 72526), (78, 72571), (80, 72580), (81, 72601), (82, 72607), (84, 72625), (86, 72664), (92, 72706), (105, 72874), (108, 72916), (109, 72922), (113, 72943), (114, 72967), (123, 73054), (127, 73096), (129, 73111), (130, 73114), (132, 73117), (135, 73195), (138, 73285), (143, 73387), (148, 73474), (150, 73492), (153, 73516),

Gene: Trinitium\_130 Start: 71231, Stop: 73489, Start Num: 5

Candidate Starts for Trinitium\_130:

(Start: 4 @71222 has 50 MA's), (Start: 5 @71231 has 128 MA's), (6, 71270), (8, 71339), (9, 71348), (13, 71444), (15, 71465), (16, 71474), (17, 71495), (19, 71531), (24, 71615), (26, 71624), (38, 71699), (39, 71702), (40, 71723), (41, 71744), (43, 71759), (44, 71768), (45, 71807), (47, 71837), (50, 71975), (51, 71978), (59, 72146), (66, 72245), (68, 72272), (70, 72296), (74, 72344), (75, 72350), (78, 72395), (80, 72404), (81, 72425), (82, 72431), (84, 72449), (86, 72488), (92, 72530), (105, 72698), (108, 72740), (109, 72746), (113, 72767), (114, 72791), (123, 72878), (127, 72920), (129, 72935), (130, 72938), (132, 72941), (135, 73019), (138, 73109), (143, 73211), (148, 73298), (150, 73316), (153, 73340),

Gene: Turret\_128 Start: 70676, Stop: 72934, Start Num: 5

Candidate Starts for Turret\_128:

(Start: 4 @70667 has 50 MA's), (Start: 5 @70676 has 128 MA's), (6, 70715), (8, 70784), (9, 70793), (13, 70889), (15, 70910), (16, 70919), (17, 70940), (19, 70976), (24, 71060), (26, 71069), (38, 71144), (39, 71147), (40, 71168), (41, 71189), (43, 71204), (44, 71213), (45, 71252), (47, 71282), (50, 71420), (51, 71423), (59, 71591), (64, 71642), (66, 71690), (68, 71717), (70, 71741), (74, 71789), (75, 71795), (78, 71840), (80, 71849), (81, 71870), (82, 71876), (84, 71894), (86, 71933), (92, 71975), (105, 72143), (108, 72185), (109, 72191), (113, 72212), (114, 72236), (123, 72323), (127, 72365), (129, 72380), (130, 72383), (132, 72386), (135, 72464), (138, 72554), (143, 72656), (148, 72743), (150, 72761), (153, 72785),

Gene: Tyke\_132 Start: 72703, Stop: 74961, Start Num: 5

Candidate Starts for Tyke\_132:

(Start: 4 @72694 has 50 MA's), (Start: 5 @72703 has 128 MA's), (6, 72742), (8, 72811), (9, 72820), (13, 72916), (15, 72937), (16, 72946), (17, 72967), (19, 73003), (24, 73087), (26, 73096), (38, 73171),

(39, 73174), (40, 73195), (41, 73216), (43, 73231), (44, 73240), (45, 73279), (47, 73309), (50, 73447), (51, 73450), (59, 73618), (66, 73717), (68, 73744), (70, 73768), (74, 73816), (75, 73822), (78, 73867), (80, 73876), (81, 73897), (82, 73903), (84, 73921), (86, 73960), (92, 74002), (105, 74170), (108, 74212), (109, 74218), (113, 74239), (114, 74263), (123, 74350), (127, 74392), (129, 74407), (130, 74410), (132, 74413), (135, 74491), (138, 74581), (143, 74683), (148, 74770), (150, 74788), (153, 74812),

Gene: ValleyTerrace\_133 Start: 71296, Stop: 73563, Start Num: 4

Candidate Starts for ValleyTerrace\_133:

(Start: 4 @71296 has 50 MA's), (Start: 5 @71305 has 128 MA's), (6, 71344), (8, 71413), (9, 71422), (13, 71518), (15, 71539), (16, 71548), (17, 71569), (19, 71605), (24, 71689), (26, 71698), (38, 71773), (39, 71776), (40, 71797), (41, 71818), (43, 71833), (44, 71842), (45, 71881), (47, 71911), (50, 72049), (51, 72052), (59, 72220), (64, 72271), (66, 72319), (68, 72346), (70, 72370), (74, 72418), (75, 72424), (78, 72469), (80, 72478), (81, 72499), (82, 72505), (84, 72523), (86, 72562), (92, 72604), (107, 72796), (108, 72814), (109, 72820), (113, 72841), (114, 72865), (123, 72952), (127, 72994), (129, 73009), (130, 73012), (132, 73015), (135, 73093), (138, 73183), (143, 73285), (148, 73372), (150, 73390), (153, 73414),

Gene: Wally\_131 Start: 70826, Stop: 73084, Start Num: 5

Candidate Starts for Wally\_131:

(Start: 4 @70817 has 50 MA's), (Start: 5 @70826 has 128 MA's), (6, 70865), (8, 70934), (9, 70943), (13, 71039), (15, 71060), (16, 71069), (17, 71090), (19, 71126), (24, 71210), (26, 71219), (38, 71294), (39, 71297), (40, 71318), (41, 71339), (43, 71354), (44, 71363), (45, 71402), (47, 71432), (50, 71570), (51, 71573), (59, 71741), (66, 71840), (68, 71867), (70, 71891), (74, 71939), (75, 71945), (78, 71990), (80, 71999), (81, 72020), (82, 72026), (84, 72044), (86, 72083), (92, 72125), (105, 72293), (108, 72335), (109, 72341), (113, 72362), (114, 72386), (123, 72473), (127, 72515), (129, 72530), (130, 72533), (132, 72536), (135, 72614), (138, 72704), (143, 72806), (148, 72893), (150, 72911), (153, 72935),

Gene: Willis\_133 Start: 72193, Stop: 74451, Start Num: 5

Candidate Starts for Willis\_133:

(Start: 4 @72184 has 50 MA's), (Start: 5 @72193 has 128 MA's), (6, 72232), (8, 72301), (9, 72310), (13, 72406), (15, 72427), (16, 72436), (17, 72457), (19, 72493), (24, 72577), (26, 72586), (38, 72661), (39, 72664), (40, 72685), (41, 72706), (43, 72721), (44, 72730), (45, 72769), (47, 72799), (50, 72937), (51, 72940), (59, 73108), (66, 73207), (68, 73234), (70, 73258), (74, 73306), (75, 73312), (78, 73357), (80, 73366), (81, 73387), (82, 73393), (84, 73411), (86, 73450), (92, 73492), (105, 73660), (108, 73702), (109, 73708), (113, 73729), (114, 73753), (123, 73840), (127, 73882), (129, 73897), (130, 73900), (132, 73903), (135, 73981), (138, 74071), (143, 74173), (148, 74260), (150, 74278), (153, 74302),

Gene: Yassified\_129 Start: 70903, Stop: 73161, Start Num: 5

Candidate Starts for Yassified\_129:

(Start: 4 @70894 has 50 MA's), (Start: 5 @70903 has 128 MA's), (6, 70942), (8, 71011), (9, 71020), (13, 71116), (15, 71137), (16, 71146), (17, 71167), (19, 71203), (24, 71287), (26, 71296), (38, 71371), (39, 71374), (40, 71395), (41, 71416), (43, 71431), (44, 71440), (45, 71479), (47, 71509), (50, 71647), (51, 71650), (59, 71818), (64, 71869), (66, 71917), (68, 71944), (70, 71968), (74, 72016), (75, 72022), (78, 72067), (80, 72076), (81, 72097), (82, 72103), (84, 72121), (86, 72160), (92, 72202), (107, 72394), (108, 72412), (109, 72418), (113, 72439), (114, 72463), (123, 72550), (127, 72592), (129, 72607), (130, 72610), (132, 72613), (135, 72691), (138, 72781), (143, 72883), (148, 72970), (150, 72988), (153, 73012),

Gene: YemiJoy2021\_133 Start: 72285, Stop: 74543, Start Num: 5

Candidate Starts for YemiJoy2021\_133:

(Start: 4 @72276 has 50 MA's), (Start: 5 @72285 has 128 MA's), (6, 72324), (8, 72393), (9, 72402), (13, 72498), (15, 72519), (16, 72528), (17, 72549), (19, 72585), (24, 72669), (26, 72678), (38, 72753), (39, 72756), (40, 72777), (41, 72798), (43, 72813), (44, 72822), (45, 72861), (47, 72891), (50, 73029), (51, 73032), (59, 73200), (66, 73299), (68, 73326), (70, 73350), (74, 73398), (75, 73404), (78, 73449), (80, 73458), (81, 73479), (82, 73485), (84, 73503), (86, 73542), (92, 73584), (105, 73752), (108, 73794), (109, 73800), (113, 73821), (114, 73845), (123, 73932), (127, 73974), (129, 73989), (130, 73992), (132, 73995), (135, 74073), (138, 74163), (143, 74265), (148, 74352), (150, 74370), (153, 74394),

Gene: YoungMoneyMata\_134 Start: 71931, Stop: 74189, Start Num: 5

Candidate Starts for YoungMoneyMata\_134:

(Start: 4 @71922 has 50 MA's), (Start: 5 @71931 has 128 MA's), (6, 71970), (8, 72039), (9, 72048), (13, 72144), (15, 72165), (16, 72174), (17, 72195), (19, 72231), (24, 72315), (26, 72324), (38, 72399), (39, 72402), (40, 72423), (41, 72444), (43, 72459), (44, 72468), (45, 72507), (47, 72537), (50, 72675), (51, 72678), (59, 72846), (66, 72945), (68, 72972), (70, 72996), (74, 73044), (75, 73050), (78, 73095), (80, 73104), (81, 73125), (82, 73131), (84, 73149), (86, 73188), (92, 73230), (105, 73398), (108, 73440), (109, 73446), (113, 73467), (114, 73491), (123, 73578), (127, 73620), (129, 73635), (130, 73638), (132, 73641), (135, 73719), (138, 73809), (143, 73911), (148, 73998), (150, 74016), (153, 74040),

Gene: Yucca\_131 Start: 71967, Stop: 74225, Start Num: 5

Candidate Starts for Yucca\_131:

(Start: 4 @71958 has 50 MA's), (Start: 5 @71967 has 128 MA's), (6, 72006), (8, 72075), (9, 72084), (13, 72180), (15, 72201), (16, 72210), (17, 72231), (19, 72267), (24, 72351), (26, 72360), (38, 72435), (39, 72438), (40, 72459), (41, 72480), (43, 72495), (44, 72504), (45, 72543), (47, 72573), (50, 72711), (51, 72714), (59, 72882), (66, 72981), (68, 73008), (70, 73032), (74, 73080), (75, 73086), (78, 73131), (80, 73140), (81, 73161), (82, 73167), (84, 73185), (86, 73224), (92, 73266), (105, 73434), (108, 73476), (109, 73482), (113, 73503), (114, 73527), (123, 73614), (127, 73656), (129, 73671), (130, 73674), (132, 73677), (135, 73755), (138, 73845), (143, 73947), (148, 74034), (150, 74052), (153, 74076),

Gene: Zalkecks\_133 Start: 71968, Stop: 74226, Start Num: 5

Candidate Starts for Zalkecks\_133:

(Start: 4 @71959 has 50 MA's), (Start: 5 @71968 has 128 MA's), (6, 72007), (8, 72076), (9, 72085), (13, 72181), (15, 72202), (16, 72211), (17, 72232), (19, 72268), (24, 72352), (26, 72361), (38, 72436), (39, 72439), (40, 72460), (41, 72481), (43, 72496), (44, 72505), (45, 72544), (47, 72574), (50, 72712), (51, 72715), (59, 72883), (66, 72982), (68, 73009), (70, 73033), (74, 73081), (75, 73087), (78, 73132), (80, 73141), (81, 73162), (82, 73168), (84, 73186), (86, 73225), (92, 73267), (105, 73435), (108, 73477), (109, 73483), (113, 73504), (114, 73528), (123, 73615), (127, 73657), (129, 73672), (130, 73675), (132, 73678), (135, 73756), (138, 73846), (143, 73948), (148, 74035), (150, 74053), (153, 74077),

Gene: Zeenon\_133 Start: 72053, Stop: 74311, Start Num: 5

Candidate Starts for Zeenon\_133:

(Start: 4 @72044 has 50 MA's), (Start: 5 @72053 has 128 MA's), (6, 72092), (8, 72161), (9, 72170), (13, 72266), (15, 72287), (16, 72296), (17, 72317), (19, 72353), (24, 72437), (26, 72446), (38, 72521), (39, 72524), (40, 72545), (41, 72566), (43, 72581), (44, 72590), (45, 72629), (47, 72659), (50, 72797), (51, 72800), (59, 72968), (66, 73067), (68, 73094), (70, 73118), (74, 73166), (75, 73172), (78, 73217), (80, 73226), (81, 73247), (82, 73253), (84, 73271), (86, 73310), (92, 73352), (105, 73520), (108, 73562), (109, 73568), (113, 73589), (114, 73613), (123, 73700), (127, 73742), (129, 73757), (130, 73760), (132, 73763), (135, 73841), (138, 73931), (143, 74033), (148, 74120), (150, 74138), (153, 74162),

Gene: ZygoTaiga\_130 Start: 73213, Stop: 75471, Start Num: 5

Candidate Starts for ZygoTaiga\_130:

(Start: 4 @73204 has 50 MA's), (Start: 5 @73213 has 128 MA's), (6, 73252), (8, 73321), (9, 73330), (13, 73426), (15, 73447), (16, 73456), (17, 73477), (19, 73513), (24, 73597), (26, 73606), (38, 73681), (39, 73684), (40, 73705), (41, 73726), (43, 73741), (44, 73750), (45, 73789), (47, 73819), (50, 73957), (51, 73960), (59, 74128), (66, 74227), (68, 74254), (70, 74278), (74, 74326), (75, 74332), (78, 74377), (80, 74386), (81, 74407), (82, 74413), (84, 74431), (86, 74470), (92, 74512), (105, 74680), (108, 74722), (109, 74728), (113, 74749), (114, 74773), (123, 74860), (127, 74902), (129, 74917), (130, 74920), (132, 74923), (135, 75001), (138, 75091), (143, 75193), (148, 75280), (150, 75298), (153, 75322),