



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 163357 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163357 has 198 members, 20 are drafts.

Phages represented in each track:

- Track 1 : Settecandela\_53, Phrappuccino\_53
- Track 2 : Tonenili\_111
- Track 3 : Flabslab\_92, Roots515\_96, BackyardAgain\_94, ChaylaJr\_92, ErnieJ\_93, Loanshark\_97, Cactojaque\_92, Chargie21\_94, Melpomini\_91, Khaleesi\_96, Megamind\_96, Catera\_94, MikeLiesIn\_98, ScottMcG\_94, Ewok\_98, ParkTD\_98, TinyTim\_97, Zalkecks\_98, EmToTheThree\_100, Bonray\_97, Willis\_98, NedWong\_98, Dietrick\_89, YemiJoy2021\_98, Kboogie\_101, DrPhinkDaddy\_96, Shelob\_99, Blackbrain\_92, Bipolarisk\_96, Turret\_92, Basquiat\_94, Delilah\_97, Zeenon\_99, Lukilu\_88, Janiyra\_99, Ava3\_98, Quasimodo\_98, Izajani\_97, Jessibeth14\_96, Morizzled23\_97, ZygoTaiga\_96, EasyJones\_100, Maby2021\_97, Erdmann\_98, SrishMeg2525\_96, Daffodil\_102, Spud\_97, ChickenPhender\_93, Shrimp\_97, Lee7\_95
- Track 4 : LordLeafolot\_102, Atlantean\_97, JPickles\_96, CharlieB\_93, CindyLou\_99, Naija\_97, Salacia\_101, FrayBell\_103, BananaFence\_96, NuevoMundo\_103, ValleyTerrace\_98, Napoleon13\_93, LifeSavor\_97, LolaVinca\_99, Audrick\_100, Ngannou\_94, Babyland\_98, Teardrop\_97, Rahel\_97, Amataga\_98, Guwapp\_97, Essence\_95, SilverDipper\_99, InigoMontoya\_99, DTDevon\_98, Tyke\_99, Derek\_98, ShiaLabeouf\_97, Jemmno\_98, Jedediah\_101, Spec\_94, Gizmo\_101, NoodleTree\_105, Gabriel\_99, EmmaElysia\_97, BadAgartude\_94, StubbySaigey\_100, Trinitium\_94, Darko\_97, Wally\_96, Specks\_103, Pivoine\_97, Shnickers\_98, Pio\_101, Drazdys\_97, Norm\_98, Momo\_97, Jaygup\_98, ArcherS7\_97, Phusco\_98, Ghost\_97, Tortoise16\_95, Astraea\_95, Gamgam\_98, Matsumoto\_95, Phlegm\_100, SmallFry\_98, Chomp\_96, McGee\_99, DirtMonster\_91, Patter\_98, Bxz1\_95, Latch\_98, Ading\_98, Adlitam\_98, YoungMoneyMata\_98, Burrough\_97, InterFolia\_106, JustHall\_94, Bangla1971\_99, Breeniome\_97, Rizal\_94, Fludd\_98
- Track 5 : l3\_103
- Track 6 : Sebata\_99, BeanWater\_89, Caravan\_92, Halldule\_91, Sauce\_98, LinStu\_97, JulietS\_92, Ronan\_91, LRRHood\_92, Yassified\_94, ET08\_86, Delylah\_100, Dandelion\_104, QBert\_91, Grungle\_85, RoMag\_92, Shaqnato\_90, Sprinklers\_93, JayJay\_99, Nidhogg\_98, MoMoMixon\_98
- Track 7 : Iota\_92, Cali\_93
- Track 8 : Pier\_101, Blubba\_88, Cane17\_86, Colt\_87
- Track 9 : Concombre\_104
- Track 10 : Mikro\_95, IkeLoa\_91, Kamryn\_97, StephanieG\_96
- Track 11 : Alice\_90, Phox\_94, HyRo\_89, Stubby\_90
- Track 12 : Capablanca\_99, FoxtrotP1\_97, Pleione\_100, Issimir\_96, Yucca\_97
- Track 13 : Grasshills\_104, EggyFarm\_105, BigCity\_105

- Track 14 : Naval22\_102
- Track 15 : Nappy\_100
- Track 16 : Asterius\_94, McWolfish\_95, FudgeTart\_97, PurduePete\_97
- Track 17 : Mangeria\_97
- Track 18 : Bigswole\_102
- Track 19 : Shifa\_86
- Track 20 : Rabinovish\_94
- Track 21 : Bread\_97
- Track 22 : Koguma\_94
- Track 23 : Pinkcreek\_88
- Track 24 : Littleton\_97
- Track 25 : Phabba\_102
- Track 26 : Myrna\_97
- Track 27 : ScoobyDoobyDoo\_90
- Track 28 : Greely\_99
- Track 29 : Pupper\_94, SCentae\_93
- Track 30 : CherryTomatoes\_97
- Track 31 : Skog\_157
- Track 32 : Stormageddon\_13, RedWattleHog\_13
- Track 33 : Finch\_17
- Track 34 : E3\_gp77
- Track 35 : JeanGrey\_30

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

The start number called the most often in the published annotations is 3, it was called in 170 of the 178 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Ading\_98, Adlitam\_98, Alice\_90, Amataga\_98, ArcherS7\_97, Asterius\_94, Astraea\_95, Atlantean\_97, Audrick\_100, Ava3\_98, Babyland\_98, BackyardAgain\_94, BadAgartude\_94, BananaFence\_96, Bangla1971\_99, Basquiat\_94, BeanWater\_89, BigCity\_105, Bigswole\_102, Bipolarisk\_96, Blackbrain\_92, Blubba\_88, Bonray\_97, Bread\_97, Breeniome\_97, Burrough\_97, Bxz1\_95, Cactojaque\_92, Cali\_93, Cane17\_86, Capablanca\_99, Caravan\_92, Catera\_94, Chargie21\_94, CharlieB\_93, ChaylaJr\_92, ChickenPhender\_93, Chomp\_96, CindyLou\_99, Colt\_87, Concombre\_104, DTDevon\_98, Daffodil\_102, Dandelion\_104, Darko\_97, Delilah\_97, Delylah\_100, Derek\_98, Dietrick\_89, DirtMonster\_91, DrPhinkDaddy\_96, Drazdys\_97, ET08\_86, EasyJones\_100, EggyFarm\_105, EmToTheThree\_100, EmmaElysia\_97, Erdmann\_98, ErnieJ\_93, Essence\_95, Ewok\_98, Flabslab\_92, Fludd\_98, FoxtrotP1\_97, FrayBell\_103, FudgeTart\_97, Gabriel\_99, Gamgam\_98, Ghost\_97, Gizmo\_101, Grasshills\_104, Greely\_99, Grungle\_85, Guwapp\_97, Halldule\_91, HyRo\_89, I3\_103, IkeLoa\_91, InigoMontoya\_99, InterFolia\_106, Iota\_92, Issimir\_96, Izajani\_97, JPickles\_96, Janiyra\_99, JayJay\_99, Jaygup\_98, Jedediah\_101, Jemmno\_98, Jessibeth14\_96, JulietS\_92, JustHall\_94, Kamryn\_97, Kboogie\_101, Khaleesi\_96, Koguma\_94, LRRHood\_92, Latch\_98, Lee7\_95, LifeSavor\_97, LinStu\_97, Littleton\_97, Loanshark\_97, LolaVinca\_99, LordLeafolot\_102, Lukilu\_88, Maby2021\_97, Mangeria\_97, Matsumoto\_95, McGee\_99, McWolfish\_95, Megamind\_96, Melpomini\_91, MikeLiesIn\_98, Mikro\_95, MoMoMixon\_98, Momo\_97, Morizzled23\_97, Myrna\_97, Naija\_97, Napoleon13\_93,

Nappy\_100, Naval22\_102, NedWong\_98, Ngannou\_94, Nidhogg\_98, NoodleTree\_105, Norm\_98, NuevoMundo\_103, ParkTD\_98, Patter\_98, Phabba\_102, Phlegm\_100, Phox\_94, Phusco\_98, Pier\_101, Pinkcreek\_88, Pio\_101, Pivoine\_97, Pleione\_100, PurduePete\_97, QBert\_91, Quasimodo\_98, Rabinovish\_94, Rahel\_97, Rizal\_94, RoMag\_92, Ronan\_91, Roots515\_96, Salacia\_101, Sauce\_98, ScoobyDoobyDoo\_90, ScottMcG\_94, Sebata\_99, Shaqnato\_90, Shelob\_99, ShiaLabeouf\_97, Shifa\_86, Shnickers\_98, Shrimp\_97, SilverDipper\_99, SmallFry\_98, Spec\_94, Specks\_103, Sprinklers\_93, Spud\_97, SrishMeg2525\_96, StephanieG\_96, StubbySaigey\_100, Stubby\_90, Teardrop\_97, TinyTim\_97, Tonenili\_111, Tortoise16\_95, Trinitium\_94, Turret\_92, Tyke\_99, ValleyTerrace\_98, Wally\_96, Willis\_98, Yassified\_94, YemiJoy2021\_98, YoungMoneyMata\_98, Yucca\_97, Zalkecks\_98, Zeenon\_99, ZygoTaiga\_96,

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

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

- CherryTomatoes\_97, E3\_gp77, Finch\_17, JeanGrey\_30, Phrappuccino\_53, Pupper\_94, RedWattleHog\_13, SCentae\_93, Settecandela\_53, Skog\_157, Stormageddon\_13,

### Summary by start number:

Start 1:

- Found in 4 of 198 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 3 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CherryTomatoes\_97 (DO), Pupper\_94 (DO), SCentae\_93 (DO), Skog\_157 (DO),

Start 2:

- Found in 3 of 198 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 3 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Finch\_17 (singleton), RedWattleHog\_13 (DX), Stormageddon\_13 (DX),

Start 3:

- Found in 187 of 198 ( 94.4% ) of genes in pham
- Manual Annotations of this start: 170 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ading\_98 (C1), Adlitam\_98 (C1), Alice\_90 (C1), Amataga\_98 (C1), ArcherS7\_97 (C1), Asterius\_94 (C1), Astraea\_95 (C1), Atlantean\_97 (C1), Audrick\_100 (C1), Ava3\_98 (C1), Babyland\_98 (C1), BackyardAgain\_94 (C1), BadAgartude\_94 (C1), BananaFence\_96 (C1), Bangla1971\_99 (C1), Basquiat\_94 (C1), BeanWater\_89 (C1), BigCity\_105 (C1), Bigswole\_102 (C1), Bipolarisk\_96 (C1), Blackbrain\_92 (C1), Blubba\_88 (C1), Bonray\_97 (C1), Bread\_97 (C1), Breeniome\_97 (C1), Burrough\_97 (C1), Bxz1\_95 (C1), Cactojaque\_92 (C1), Cali\_93 (C1), Cane17\_86 (C1), Capablanca\_99 (C1), Caravan\_92 (C1), Catera\_94 (C1), Chargie21\_94 (C1), CharlieB\_93 (C1), ChaylaJr\_92 (C1), ChickenPhender\_93 (C1), Chomp\_96 (C1), CindyLou\_99 (C1), Colt\_87 (C1), Concombre\_104 (C1), DTDevon\_98 (C1), Daffodil\_102 (C1), Dandelion\_104 (C1), Darko\_97 (C1), Delilah\_97 (C1), Delylah\_100 (C1), Derek\_98

(C1), Dietrick\_89 (C1), DirtMonster\_91 (C1), DrPhinkDaddy\_96 (C1), Drazdys\_97 (C1), ET08\_86 (C1), EasyJones\_100 (C1), EggyFarm\_105 (C1), EmToTheThree\_100 (C1), EmmaElysia\_97 (C1), Erdmann\_98 (C1), ErnieJ\_93 (C1), Essence\_95 (C1), Ewok\_98 (C1), Flabslab\_92 (C1), Fludd\_98 (C1), FoxtrotP1\_97 (C1), FrayBell\_103 (C1), FudgeTart\_97 (C1), Gabriel\_99 (C1), Gamgam\_98 (C1), Ghost\_97 (C1), Gizmo\_101 (C1), Grasshills\_104 (C1), Greely\_99 (C2), Grungle\_85 (C1), Guwapp\_97 (C1), Halldule\_91 (C1), HyRo\_89 (C1), I3\_103 (C1), IkeLoa\_91 (C1), InigoMontoya\_99 (C1), InterFolia\_106 (C1), Iota\_92 (C1), Issimir\_96 (C1), Izajani\_97 (C1), JPickles\_96 (C1), Janiyra\_99 (C1), JayJay\_99 (C1), Jaygup\_98 (C1), Jedediah\_101 (C1), Jemmno\_98 (C1), Jessibeth14\_96 (C1), JulietS\_92 (C1), JustHall\_94 (C1), Kamryn\_97 (C1), Kboogie\_101 (C1), Khaleesi\_96 (C1), Koguma\_94 (C1), LRRHood\_92 (C1), Latch\_98 (C1), Lee7\_95 (C1), LifeSavor\_97 (C1), LinStu\_97 (C1), Littleton\_97 (C1), Loanshark\_97 (C1), LolaVinca\_99 (C1), LordLeafolot\_102 (C1), Lukilu\_88 (C1), Maby2021\_97 (C1), Mangeria\_97 (C1), Matsumoto\_95 (C1), McGee\_99 (C1), McWolfish\_95 (C1), Megamind\_96 (C1), Melpomini\_91 (C1), MikeLiesIn\_98 (C1), Mikro\_95 (C1), MoMoMixon\_98 (C1), Momo\_97 (C1), Morizzled23\_97 (C1), Myrna\_97 (C2), Naija\_97 (C1), Napoleon13\_93 (C1), Nappy\_100 (C1), Naval22\_102 (C1), NedWong\_98 (C1), Ngannou\_94 (C1), Nidhogg\_98 (C1), NoodleTree\_105 (C1), Norm\_98 (C1), NuevoMundo\_103 (C1), ParkTD\_98 (C1), Patter\_98 (C1), Phabba\_102 (C2), Phlegm\_100 (C1), Phox\_94 (C1), Phusco\_98 (C1), Pier\_101 (C1), Pinkcreek\_88 (C1), Pio\_101 (C1), Pivoine\_97 (C1), Pleione\_100 (C1), PurduePete\_97 (C1), QBert\_91 (C1), Quasimodo\_98 (C1), Rabinovish\_94 (C1), Rahel\_97 (C1), Rizal\_94 (C1), RoMag\_92 (C1), Ronan\_91 (C1), Roots515\_96 (C1), Salacia\_101 (C1), Sauce\_98 (C1), ScoobyDoobyDoo\_90 (C2), ScottMcG\_94 (C1), Sebata\_99 (C1), Shaq nato\_90 (C1), Shelob\_99 (C1), ShiaLabeouf\_97 (C1), Shifa\_86 (C1), Shnickers\_98 (C1), Shrimp\_97 (C1), SilverDipper\_99 (C1), SmallFry\_98 (C1), Spec\_94 (C1), Specks\_103 (C1), Sprinklers\_93 (C1), Spud\_97 (C1), SrishMeg2525\_96 (C1), StephanieG\_96 (C1), StubbySaigey\_100 (C1), Stubby\_90 (C1), Teardrop\_97 (C1), TinyTim\_97 (C1), Tonenili\_111 (C1), Tortoise16\_95 (C1), Trinitium\_94 (C1), Turret\_92 (C1), Tyke\_99 (C1), ValleyTerrace\_98 (C1), Wally\_96 (C1), Willis\_98 (C1), Yassified\_94 (C1), YemiJoy2021\_98 (C1), YoungMoneyMata\_98 (C1), Yucca\_97 (C1), Zalkecks\_98 (C1), Zeenon\_99 (C1), ZyoTaiga\_96 (C1),

#### Start 5:

- Found in 1 of 198 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: E3\_gp77 (singleton),

#### Start 64:

- Found in 1 of 198 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JeanGrey\_30 (singleton),

#### Start 67:

- Found in 2 of 198 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 178
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phrappuccino\_53 (AA), Settecandela\_53 (AA),

## Summary by clusters:

There are 6 clusters represented in this pham: AA, DO, singleton, DX, C2, C1,

Info for manual annotations of cluster AA:

- Start number 67 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster C1:

- Start number 3 was manually annotated 167 times for cluster C1.

Info for manual annotations of cluster C2:

- Start number 3 was manually annotated 3 times for cluster C2.

Info for manual annotations of cluster DO:

- Start number 1 was manually annotated 3 times for cluster DO.

Info for manual annotations of cluster DX:

- Start number 2 was manually annotated 2 times for cluster DX.

## Gene Information:

Gene: Ading\_98 Start: 45221, Stop: 49333, Start Num: 3

Candidate Starts for Ading\_98:

(Start: 3 @45221 has 170 MA's), (13, 45332), (15, 45356), (28, 45620), (29, 45626), (33, 45692), (36, 45728), (41, 45809), (43, 45845), (45, 45857), (46, 45863), (47, 46064), (58, 46445), (66, 46598), (68, 46667), (71, 46694), (78, 46775), (83, 46817), (87, 46853), (90, 46865), (97, 46922), (102, 46955), (106, 47000), (111, 47018), (118, 47063), (125, 47111), (128, 47144), (134, 47168), (142, 47222), (148, 47249), (153, 47270), (158, 47318), (161, 47339), (170, 47465), (174, 47516), (179, 47537), (180, 47549), (182, 47591), (196, 47741), (199, 47774), (200, 47777), (202, 47828), (204, 47873), (205, 47879), (208, 47921), (214, 47984), (221, 48062), (224, 48119), (225, 48137), (229, 48170), (230, 48173), (232, 48212), (233, 48215), (237, 48296), (238, 48299), (242, 48359), (243, 48383), (246, 48434), (248, 48458), (251, 48482), (262, 48734), (265, 48791), (279, 49049), (281, 49118), (287, 49166), (294, 49253), (296, 49286), (298, 49289),

Gene: Adlitam\_98 Start: 45238, Stop: 49350, Start Num: 3

Candidate Starts for Adlitam\_98:

(Start: 3 @45238 has 170 MA's), (13, 45349), (15, 45373), (28, 45637), (29, 45643), (33, 45709), (36, 45745), (41, 45826), (43, 45862), (45, 45874), (46, 45880), (47, 46081), (58, 46462), (66, 46615), (68, 46684), (71, 46711), (78, 46792), (83, 46834), (87, 46870), (90, 46882), (97, 46939), (102, 46972), (106, 47017), (111, 47035), (118, 47080), (125, 47128), (128, 47161), (134, 47185), (142, 47239), (148, 47266), (153, 47287), (158, 47335), (161, 47356), (170, 47482), (174, 47533), (179, 47554), (180, 47566), (182, 47608), (196, 47758), (199, 47791), (200, 47794), (202, 47845), (204, 47890), (205, 47896), (208, 47938), (214, 48001), (221, 48079), (224, 48136), (225, 48154), (229, 48187), (230, 48190), (232, 48229), (233, 48232), (237, 48313), (238, 48316), (242, 48376), (243, 48400), (246, 48451), (248, 48475), (251, 48499), (262, 48751), (265, 48808), (279, 49066), (281, 49135), (287, 49183), (294, 49270), (296, 49303), (298, 49306),

Gene: Alice\_90 Start: 42678, Stop: 47213, Start Num: 3

Candidate Starts for Alice\_90:

(Start: 3 @42678 has 170 MA's), (13, 42789), (15, 42813), (28, 43077), (29, 43083), (33, 43149), (36, 43185), (41, 43266), (43, 43302), (45, 43314), (46, 43320), (47, 43521), (48, 43581), (61, 43971), (63, 44007), (68, 44127), (70, 44145), (78, 44241), (82, 44274), (83, 44283), (91, 44379), (93, 44397), (102, 44469), (107, 44589), (109, 44652), (110, 44688), (115, 44736), (119, 44787), (120, 44793), (121, 44796), (126, 44832), (129, 44880), (131, 44898), (135, 44943), (141, 44991), (142, 45024), (149, 45102), (150, 45129), (158, 45198), (161, 45219), (170, 45345), (174, 45396), (179, 45417), (180, 45429), (182, 45471), (196, 45621), (199, 45654), (200, 45657), (202, 45708), (204, 45753), (205, 45759), (208, 45801), (214, 45864), (221, 45942), (224, 45999), (225, 46017), (229, 46050), (230, 46053), (232, 46092), (233, 46095), (237, 46176), (238, 46179), (242, 46239), (243, 46263), (246, 46314), (248, 46338), (251, 46362), (262, 46614), (265, 46671), (279, 46929), (281, 46998), (287, 47046), (294, 47133), (296, 47166), (298, 47169),

Gene: Amataga\_98 Start: 44483, Stop: 48595, Start Num: 3

Candidate Starts for Amataga\_98:

(Start: 3 @44483 has 170 MA's), (13, 44594), (15, 44618), (28, 44882), (29, 44888), (33, 44954), (36, 44990), (41, 45071), (43, 45107), (45, 45119), (46, 45125), (47, 45326), (58, 45707), (66, 45860), (68, 45929), (71, 45956), (78, 46037), (83, 46079), (87, 46115), (90, 46127), (97, 46184), (102, 46217), (106, 46262), (111, 46280), (118, 46325), (125, 46373), (128, 46406), (134, 46430), (142, 46484), (148, 46511), (153, 46532), (158, 46580), (161, 46601), (170, 46727), (174, 46778), (179, 46799), (180, 46811), (182, 46853), (196, 47003), (199, 47036), (200, 47039), (202, 47090), (204, 47135), (205, 47141), (208, 47183), (214, 47246), (221, 47324), (224, 47381), (225, 47399), (229, 47432), (230, 47435), (232, 47474), (233, 47477), (237, 47558), (238, 47561), (242, 47621), (243, 47645), (246, 47696), (248, 47720), (251, 47744), (262, 47996), (265, 48053), (279, 48311), (281, 48380), (287, 48428), (294, 48515), (296, 48548), (298, 48551),

Gene: ArcherS7\_97 Start: 44801, Stop: 48913, Start Num: 3

Candidate Starts for ArcherS7\_97:

(Start: 3 @44801 has 170 MA's), (13, 44912), (15, 44936), (28, 45200), (29, 45206), (33, 45272), (36, 45308), (41, 45389), (43, 45425), (45, 45437), (46, 45443), (47, 45644), (58, 46025), (66, 46178), (68, 46247), (71, 46274), (78, 46355), (83, 46397), (87, 46433), (90, 46445), (97, 46502), (102, 46535), (106, 46580), (111, 46598), (118, 46643), (125, 46691), (128, 46724), (134, 46748), (142, 46802), (148, 46829), (153, 46850), (158, 46898), (161, 46919), (170, 47045), (174, 47096), (179, 47117), (180, 47129), (182, 47171), (196, 47321), (199, 47354), (200, 47357), (202, 47408), (204, 47453), (205, 47459), (208, 47501), (214, 47564), (221, 47642), (224, 47699), (225, 47717), (229, 47750), (230, 47753), (232, 47792), (233, 47795), (237, 47876), (238, 47879), (242, 47939), (243, 47963), (246, 48014), (248, 48038), (251, 48062), (262, 48314), (265, 48371), (279, 48629), (281, 48698), (287, 48746), (294, 48833), (296, 48866), (298, 48869),

Gene: Asterius\_94 Start: 44379, Stop: 48548, Start Num: 3

Candidate Starts for Asterius\_94:

(Start: 3 @44379 has 170 MA's), (13, 44490), (15, 44514), (28, 44778), (29, 44784), (33, 44850), (36, 44886), (41, 44967), (43, 45003), (45, 45015), (46, 45021), (47, 45222), (48, 45282), (60, 45651), (61, 45672), (63, 45708), (68, 45828), (78, 45942), (82, 45975), (83, 45984), (91, 46080), (93, 46098), (102, 46170), (106, 46215), (111, 46233), (118, 46278), (125, 46326), (128, 46359), (134, 46383), (142, 46437), (148, 46464), (153, 46485), (158, 46533), (161, 46554), (170, 46680), (174, 46731), (179, 46752), (180, 46764), (182, 46806), (196, 46956), (199, 46989), (200, 46992), (202, 47043), (204, 47088), (205, 47094), (208, 47136), (214, 47199), (221, 47277), (224, 47334), (225, 47352), (229, 47385), (230, 47388), (232, 47427), (233, 47430), (237, 47511), (238, 47514), (242, 47574), (243, 47598), (246, 47649), (248, 47673), (251, 47697), (262, 47949), (265, 48006), (279, 48264), (281, 48333), (287, 48381), (294, 48468), (296, 48501), (298, 48504),

Gene: Astraea\_95 Start: 44252, Stop: 48364, Start Num: 3

Candidate Starts for Astraea\_95:

(Start: 3 @44252 has 170 MA's), (13, 44363), (15, 44387), (28, 44651), (29, 44657), (33, 44723), (36, 44759), (41, 44840), (43, 44876), (45, 44888), (46, 44894), (47, 45095), (58, 45476), (66, 45629), (68, 45698), (71, 45725), (78, 45806), (83, 45848), (87, 45884), (90, 45896), (97, 45953), (102, 45986), (106, 46031), (111, 46049), (118, 46094), (125, 46142), (128, 46175), (134, 46199), (142, 46253), (148, 46280), (153, 46301), (158, 46349), (161, 46370), (170, 46496), (174, 46547), (179, 46568), (180, 46580), (182, 46622), (196, 46772), (199, 46805), (200, 46808), (202, 46859), (204, 46904), (205, 46910), (208, 46952), (214, 47015), (221, 47093), (224, 47150), (225, 47168), (229, 47201), (230, 47204), (232, 47243), (233, 47246), (237, 47327), (238, 47330), (242, 47390), (243, 47414), (246, 47465), (248, 47489), (251, 47513), (262, 47765), (265, 47822), (279, 48080), (281, 48149), (287, 48197), (294, 48284), (296, 48317), (298, 48320),

Gene: Atlantean\_97 Start: 44483, Stop: 48595, Start Num: 3

Candidate Starts for Atlantean\_97:

(Start: 3 @44483 has 170 MA's), (13, 44594), (15, 44618), (28, 44882), (29, 44888), (33, 44954), (36, 44990), (41, 45071), (43, 45107), (45, 45119), (46, 45125), (47, 45326), (58, 45707), (66, 45860), (68, 45929), (71, 45956), (78, 46037), (83, 46079), (87, 46115), (90, 46127), (97, 46184), (102, 46217), (106, 46262), (111, 46280), (118, 46325), (125, 46373), (128, 46406), (134, 46430), (142, 46484), (148, 46511), (153, 46532), (158, 46580), (161, 46601), (170, 46727), (174, 46778), (179, 46799), (180, 46811), (182, 46853), (196, 47003), (199, 47036), (200, 47039), (202, 47090), (204, 47135), (205, 47141), (208, 47183), (214, 47246), (221, 47324), (224, 47381), (225, 47399), (229, 47432), (230, 47435), (232, 47474), (233, 47477), (237, 47558), (238, 47561), (242, 47621), (243, 47645), (246, 47696), (248, 47720), (251, 47744), (262, 47996), (265, 48053), (279, 48311), (281, 48380), (287, 48428), (294, 48515), (296, 48548), (298, 48551),

Gene: Audrick\_100 Start: 44462, Stop: 48574, Start Num: 3

Candidate Starts for Audrick\_100:

(Start: 3 @44462 has 170 MA's), (13, 44573), (15, 44597), (28, 44861), (29, 44867), (33, 44933), (36, 44969), (41, 45050), (43, 45086), (45, 45098), (46, 45104), (47, 45305), (58, 45686), (66, 45839), (68, 45908), (71, 45935), (78, 46016), (83, 46058), (87, 46094), (90, 46106), (97, 46163), (102, 46196), (106, 46241), (111, 46259), (118, 46304), (125, 46352), (128, 46385), (134, 46409), (142, 46463), (148, 46490), (153, 46511), (158, 46559), (161, 46580), (170, 46706), (174, 46757), (179, 46778), (180, 46790), (182, 46832), (196, 46982), (199, 47015), (200, 47018), (202, 47069), (204, 47114), (205, 47120), (208, 47162), (214, 47225), (221, 47303), (224, 47360), (225, 47378), (229, 47411), (230, 47414), (232, 47453), (233, 47456), (237, 47537), (238, 47540), (242, 47600), (243, 47624), (246, 47675), (248, 47699), (251, 47723), (262, 47975), (265, 48032), (279, 48290), (281, 48359), (287, 48407), (294, 48494), (296, 48527), (298, 48530),

Gene: Ava3\_98 Start: 44752, Stop: 48861, Start Num: 3

Candidate Starts for Ava3\_98:

(Start: 3 @44752 has 170 MA's), (13, 44863), (15, 44887), (28, 45151), (29, 45157), (33, 45223), (36, 45259), (41, 45340), (43, 45376), (45, 45388), (46, 45394), (47, 45595), (48, 45655), (58, 45973), (66, 46126), (68, 46195), (71, 46222), (78, 46303), (83, 46345), (87, 46381), (90, 46393), (97, 46450), (102, 46483), (106, 46528), (111, 46546), (118, 46591), (125, 46639), (128, 46672), (142, 46750), (148, 46777), (158, 46846), (161, 46867), (170, 46993), (174, 47044), (179, 47065), (180, 47077), (182, 47119), (196, 47269), (199, 47302), (200, 47305), (202, 47356), (204, 47401), (205, 47407), (208, 47449), (214, 47512), (221, 47590), (224, 47647), (225, 47665), (229, 47698), (230, 47701), (232, 47740), (233, 47743), (237, 47824), (238, 47827), (242, 47887), (243, 47911), (246, 47962), (248, 47986), (251, 48010), (262, 48262), (265, 48319), (279, 48577), (281, 48646), (287, 48694), (294, 48781), (296, 48814), (298, 48817),

Gene: Babyland\_98 Start: 43922, Stop: 48034, Start Num: 3

Candidate Starts for Babyland\_98:



(Start: 3 @43922 has 170 MA's), (13, 44033), (15, 44057), (28, 44321), (29, 44327), (33, 44393), (36, 44429), (41, 44510), (43, 44546), (45, 44558), (46, 44564), (47, 44765), (58, 45146), (66, 45299), (68, 45368), (71, 45395), (78, 45476), (83, 45518), (87, 45554), (90, 45566), (97, 45623), (102, 45656), (106, 45701), (111, 45719), (118, 45764), (125, 45812), (128, 45845), (134, 45869), (142, 45923), (148, 45950), (153, 45971), (158, 46019), (161, 46040), (170, 46166), (174, 46217), (179, 46238), (180, 46250), (182, 46292), (196, 46442), (199, 46475), (200, 46478), (202, 46529), (204, 46574), (205, 46580), (208, 46622), (214, 46685), (221, 46763), (224, 46820), (225, 46838), (229, 46871), (230, 46874), (232, 46913), (233, 46916), (237, 46997), (238, 47000), (242, 47060), (243, 47084), (246, 47135), (248, 47159), (251, 47183), (262, 47435), (265, 47492), (279, 47750), (281, 47819), (287, 47867), (294, 47954), (296, 47987), (298, 47990),

Gene: BackyardAgain\_94 Start: 43755, Stop: 47864, Start Num: 3

Candidate Starts for BackyardAgain\_94:

(Start: 3 @43755 has 170 MA's), (13, 43866), (15, 43890), (28, 44154), (29, 44160), (33, 44226), (36, 44262), (41, 44343), (43, 44379), (45, 44391), (46, 44397), (47, 44598), (48, 44658), (58, 44976), (66, 45129), (68, 45198), (71, 45225), (78, 45306), (83, 45348), (87, 45384), (90, 45396), (97, 45453), (102, 45486), (106, 45531), (111, 45549), (118, 45594), (125, 45642), (128, 45675), (142, 45753), (148, 45780), (158, 45849), (161, 45870), (170, 45996), (174, 46047), (179, 46068), (180, 46080), (182, 46122), (196, 46272), (199, 46305), (200, 46308), (202, 46359), (204, 46404), (205, 46410), (208, 46452), (214, 46515), (221, 46593), (224, 46650), (225, 46668), (229, 46701), (230, 46704), (232, 46743), (233, 46746), (237, 46827), (238, 46830), (242, 46890), (243, 46914), (246, 46965), (248, 46989), (251, 47013), (262, 47265), (265, 47322), (279, 47580), (281, 47649), (287, 47697), (294, 47784), (296, 47817), (298, 47820),

Gene: BadAgartude\_94 Start: 45921, Stop: 50033, Start Num: 3

Candidate Starts for BadAgartude\_94:

(Start: 3 @45921 has 170 MA's), (13, 46032), (15, 46056), (28, 46320), (29, 46326), (33, 46392), (36, 46428), (41, 46509), (43, 46545), (45, 46557), (46, 46563), (47, 46764), (58, 47145), (66, 47298), (68, 47367), (71, 47394), (78, 47475), (83, 47517), (87, 47553), (90, 47565), (97, 47622), (102, 47655), (106, 47700), (111, 47718), (118, 47763), (125, 47811), (128, 47844), (134, 47868), (142, 47922), (148, 47949), (153, 47970), (158, 48018), (161, 48039), (170, 48165), (174, 48216), (179, 48237), (180, 48249), (182, 48291), (196, 48441), (199, 48474), (200, 48477), (202, 48528), (204, 48573), (205, 48579), (208, 48621), (214, 48684), (221, 48762), (224, 48819), (225, 48837), (229, 48870), (230, 48873), (232, 48912), (233, 48915), (237, 48996), (238, 48999), (242, 49059), (243, 49083), (246, 49134), (248, 49158), (251, 49182), (262, 49434), (265, 49491), (279, 49749), (281, 49818), (287, 49866), (294, 49953), (296, 49986), (298, 49989),

Gene: BananaFence\_96 Start: 44620, Stop: 48732, Start Num: 3

Candidate Starts for BananaFence\_96:

(Start: 3 @44620 has 170 MA's), (13, 44731), (15, 44755), (28, 45019), (29, 45025), (33, 45091), (36, 45127), (41, 45208), (43, 45244), (45, 45256), (46, 45262), (47, 45463), (58, 45844), (66, 45997), (68, 46066), (71, 46093), (78, 46174), (83, 46216), (87, 46252), (90, 46264), (97, 46321), (102, 46354), (106, 46399), (111, 46417), (118, 46462), (125, 46510), (128, 46543), (134, 46567), (142, 46621), (148, 46648), (153, 46669), (158, 46717), (161, 46738), (170, 46864), (174, 46915), (179, 46936), (180, 46948), (182, 46990), (196, 47140), (199, 47173), (200, 47176), (202, 47227), (204, 47272), (205, 47278), (208, 47320), (214, 47383), (221, 47461), (224, 47518), (225, 47536), (229, 47569), (230, 47572), (232, 47611), (233, 47614), (237, 47695), (238, 47698), (242, 47758), (243, 47782), (246, 47833), (248, 47857), (251, 47881), (262, 48133), (265, 48190), (279, 48448), (281, 48517), (287, 48565), (294, 48652), (296, 48685), (298, 48688),

Gene: Bangla1971\_99 Start: 44931, Stop: 49043, Start Num: 3

Candidate Starts for Bangla1971\_99:

(Start: 3 @44931 has 170 MA's), (13, 45042), (15, 45066), (28, 45330), (29, 45336), (33, 45402), (36, 45438), (41, 45519), (43, 45555), (45, 45567), (46, 45573), (47, 45774), (58, 46155), (66, 46308), (68, 46377), (71, 46404), (78, 46485), (83, 46527), (87, 46563), (90, 46575), (97, 46632), (102, 46665), (106, 46710), (111, 46728), (118, 46773), (125, 46821), (128, 46854), (134, 46878), (142, 46932), (148, 46959), (153, 46980), (158, 47028), (161, 47049), (170, 47175), (174, 47226), (179, 47247), (180, 47259), (182, 47301), (196, 47451), (199, 47484), (200, 47487), (202, 47538), (204, 47583), (205, 47589), (208, 47631), (214, 47694), (221, 47772), (224, 47829), (225, 47847), (229, 47880), (230, 47883), (232, 47922), (233, 47925), (237, 48006), (238, 48009), (242, 48069), (243, 48093), (246, 48144), (248, 48168), (251, 48192), (262, 48444), (265, 48501), (279, 48759), (281, 48828), (287, 48876), (294, 48963), (296, 48996), (298, 48999),

Gene: Basquiat\_94 Start: 43491, Stop: 47600, Start Num: 3

Candidate Starts for Basquiat\_94:

(Start: 3 @43491 has 170 MA's), (13, 43602), (15, 43626), (28, 43890), (29, 43896), (33, 43962), (36, 43998), (41, 44079), (43, 44115), (45, 44127), (46, 44133), (47, 44334), (48, 44394), (58, 44712), (66, 44865), (68, 44934), (71, 44961), (78, 45042), (83, 45084), (87, 45120), (90, 45132), (97, 45189), (102, 45222), (106, 45267), (111, 45285), (118, 45330), (125, 45378), (128, 45411), (142, 45489), (148, 45516), (158, 45585), (161, 45606), (170, 45732), (174, 45783), (179, 45804), (180, 45816), (182, 45858), (196, 46008), (199, 46041), (200, 46044), (202, 46095), (204, 46140), (205, 46146), (208, 46188), (214, 46251), (221, 46329), (224, 46386), (225, 46404), (229, 46437), (230, 46440), (232, 46479), (233, 46482), (237, 46563), (238, 46566), (242, 46626), (243, 46650), (246, 46701), (248, 46725), (251, 46749), (262, 47001), (265, 47058), (279, 47316), (281, 47385), (287, 47433), (294, 47520), (296, 47553), (298, 47556),

Gene: BeanWater\_89 Start: 44468, Stop: 48328, Start Num: 3

Candidate Starts for BeanWater\_89:

(Start: 3 @44468 has 170 MA's), (13, 44579), (15, 44603), (28, 44867), (29, 44873), (33, 44939), (36, 44975), (41, 45056), (43, 45092), (45, 45104), (46, 45110), (60, 45431), (61, 45452), (63, 45488), (68, 45608), (78, 45722), (82, 45755), (83, 45764), (91, 45860), (93, 45878), (102, 45950), (106, 45995), (111, 46013), (118, 46058), (125, 46106), (128, 46139), (134, 46163), (142, 46217), (148, 46244), (153, 46265), (158, 46313), (161, 46334), (170, 46460), (174, 46511), (179, 46532), (180, 46544), (182, 46586), (196, 46736), (199, 46769), (200, 46772), (202, 46823), (204, 46868), (205, 46874), (208, 46916), (214, 46979), (221, 47057), (224, 47114), (225, 47132), (229, 47165), (230, 47168), (232, 47207), (233, 47210), (237, 47291), (238, 47294), (242, 47354), (243, 47378), (246, 47429), (248, 47453), (251, 47477), (262, 47729), (265, 47786), (279, 48044), (281, 48113), (287, 48161), (294, 48248), (296, 48281), (298, 48284),

Gene: BigCity\_105 Start: 47262, Stop: 51122, Start Num: 3

Candidate Starts for BigCity\_105:

(Start: 3 @47262 has 170 MA's), (13, 47373), (28, 47661), (29, 47667), (33, 47733), (36, 47769), (41, 47850), (43, 47886), (45, 47898), (46, 47904), (61, 48246), (63, 48282), (68, 48402), (76, 48486), (78, 48516), (82, 48549), (83, 48558), (91, 48654), (93, 48672), (102, 48744), (106, 48789), (111, 48807), (118, 48852), (125, 48900), (128, 48933), (134, 48957), (142, 49011), (148, 49038), (153, 49059), (158, 49107), (161, 49128), (170, 49254), (174, 49305), (179, 49326), (180, 49338), (182, 49380), (196, 49530), (199, 49563), (200, 49566), (202, 49617), (204, 49662), (205, 49668), (208, 49710), (214, 49773), (221, 49851), (224, 49908), (225, 49926), (229, 49959), (230, 49962), (232, 50001), (233, 50004), (237, 50085), (238, 50088), (242, 50148), (243, 50172), (246, 50223), (248, 50247), (251, 50271), (262, 50523), (265, 50580), (279, 50838), (281, 50907), (287, 50955), (294, 51042), (296, 51075), (298, 51078),

Gene: Bigswole\_102 Start: 47610, Stop: 51575, Start Num: 3

Candidate Starts for Bigswole\_102:

(Start: 3 @47610 has 170 MA's), (13, 47721), (15, 47745), (28, 48009), (29, 48015), (33, 48081), (36, 48117), (41, 48198), (43, 48234), (45, 48246), (46, 48252), (61, 48594), (63, 48630), (68, 48750), (70, 48768), (78, 48864), (82, 48897), (83, 48906), (91, 49002), (93, 49020), (102, 49092), (108, 49221), (112, 49293), (127, 49422), (130, 49437), (132, 49446), (133, 49449), (153, 49602), (154, 49605), (170, 49713), (173, 49743), (178, 49770), (182, 49827), (196, 49977), (199, 50010), (200, 50013), (202, 50064), (204, 50109), (205, 50115), (208, 50163), (214, 50226), (221, 50304), (224, 50361), (225, 50379), (229, 50412), (230, 50415), (232, 50454), (233, 50457), (237, 50538), (238, 50541), (242, 50601), (243, 50625), (246, 50676), (248, 50700), (251, 50724), (262, 50976), (265, 51033), (279, 51291), (281, 51360), (287, 51408), (294, 51495), (296, 51528), (298, 51531),

Gene: Bipolarisk\_96 Start: 44770, Stop: 48879, Start Num: 3

Candidate Starts for Bipolarisk\_96:

(Start: 3 @44770 has 170 MA's), (13, 44881), (15, 44905), (28, 45169), (29, 45175), (33, 45241), (36, 45277), (41, 45358), (43, 45394), (45, 45406), (46, 45412), (47, 45613), (48, 45673), (58, 45991), (66, 46144), (68, 46213), (71, 46240), (78, 46321), (83, 46363), (87, 46399), (90, 46411), (97, 46468), (102, 46501), (106, 46546), (111, 46564), (118, 46609), (125, 46657), (128, 46690), (142, 46768), (148, 46795), (158, 46864), (161, 46885), (170, 47011), (174, 47062), (179, 47083), (180, 47095), (182, 47137), (196, 47287), (199, 47320), (200, 47323), (202, 47374), (204, 47419), (205, 47425), (208, 47467), (214, 47530), (221, 47608), (224, 47665), (225, 47683), (229, 47716), (230, 47719), (232, 47758), (233, 47761), (237, 47842), (238, 47845), (242, 47905), (243, 47929), (246, 47980), (248, 48004), (251, 48028), (262, 48280), (265, 48337), (279, 48595), (281, 48664), (287, 48712), (294, 48799), (296, 48832), (298, 48835),

Gene: Blackbrain\_92 Start: 43069, Stop: 47178, Start Num: 3

Candidate Starts for Blackbrain\_92:

(Start: 3 @43069 has 170 MA's), (13, 43180), (15, 43204), (28, 43468), (29, 43474), (33, 43540), (36, 43576), (41, 43657), (43, 43693), (45, 43705), (46, 43711), (47, 43912), (48, 43972), (58, 44290), (66, 44443), (68, 44512), (71, 44539), (78, 44620), (83, 44662), (87, 44698), (90, 44710), (97, 44767), (102, 44800), (106, 44845), (111, 44863), (118, 44908), (125, 44956), (128, 44989), (142, 45067), (148, 45094), (158, 45163), (161, 45184), (170, 45310), (174, 45361), (179, 45382), (180, 45394), (182, 45436), (196, 45586), (199, 45619), (200, 45622), (202, 45673), (204, 45718), (205, 45724), (208, 45766), (214, 45829), (221, 45907), (224, 45964), (225, 45982), (229, 46015), (230, 46018), (232, 46057), (233, 46060), (237, 46141), (238, 46144), (242, 46204), (243, 46228), (246, 46279), (248, 46303), (251, 46327), (262, 46579), (265, 46636), (279, 46894), (281, 46963), (287, 47011), (294, 47098), (296, 47131), (298, 47134),

Gene: Blubba\_88 Start: 43400, Stop: 47122, Start Num: 3

Candidate Starts for Blubba\_88:

(Start: 3 @43400 has 170 MA's), (8, 43439), (13, 43511), (15, 43535), (28, 43799), (29, 43805), (33, 43871), (36, 43907), (41, 43988), (43, 44024), (45, 44036), (46, 44042), (60, 44225), (61, 44246), (63, 44282), (68, 44402), (70, 44420), (78, 44516), (82, 44549), (83, 44558), (91, 44654), (93, 44672), (102, 44744), (106, 44789), (111, 44807), (118, 44852), (125, 44900), (128, 44933), (134, 44957), (142, 45011), (148, 45038), (153, 45059), (158, 45107), (161, 45128), (170, 45254), (174, 45305), (179, 45326), (180, 45338), (182, 45380), (196, 45530), (199, 45563), (200, 45566), (202, 45617), (204, 45662), (205, 45668), (208, 45710), (214, 45773), (221, 45851), (224, 45908), (225, 45926), (229, 45959), (230, 45962), (232, 46001), (233, 46004), (237, 46085), (238, 46088), (242, 46148), (243, 46172), (246, 46223), (248, 46247), (251, 46271), (262, 46523), (265, 46580), (279, 46838), (281, 46907), (287, 46955), (294, 47042), (296, 47075), (298, 47078),

Gene: Bonray\_97 Start: 45178, Stop: 49287, Start Num: 3

Candidate Starts for Bonray\_97:

(Start: 3 @45178 has 170 MA's), (13, 45289), (15, 45313), (28, 45577), (29, 45583), (33, 45649), (36, 45685), (41, 45766), (43, 45802), (45, 45814), (46, 45820), (47, 46021), (48, 46081), (58, 46399), (66,

46552), (68, 46621), (71, 46648), (78, 46729), (83, 46771), (87, 46807), (90, 46819), (97, 46876), (102, 46909), (106, 46954), (111, 46972), (118, 47017), (125, 47065), (128, 47098), (142, 47176), (148, 47203), (158, 47272), (161, 47293), (170, 47419), (174, 47470), (179, 47491), (180, 47503), (182, 47545), (196, 47695), (199, 47728), (200, 47731), (202, 47782), (204, 47827), (205, 47833), (208, 47875), (214, 47938), (221, 48016), (224, 48073), (225, 48091), (229, 48124), (230, 48127), (232, 48166), (233, 48169), (237, 48250), (238, 48253), (242, 48313), (243, 48337), (246, 48388), (248, 48412), (251, 48436), (262, 48688), (265, 48745), (279, 49003), (281, 49072), (287, 49120), (294, 49207), (296, 49240), (298, 49243),

Gene: Bread\_97 Start: 44838, Stop: 48947, Start Num: 3

Candidate Starts for Bread\_97:

(Start: 3 @44838 has 170 MA's), (13, 44949), (15, 44973), (28, 45237), (29, 45243), (33, 45309), (36, 45345), (41, 45426), (43, 45462), (45, 45474), (46, 45480), (47, 45681), (48, 45741), (58, 46059), (66, 46212), (68, 46281), (71, 46308), (78, 46389), (83, 46431), (87, 46467), (90, 46479), (97, 46536), (102, 46569), (106, 46614), (111, 46632), (118, 46677), (125, 46725), (128, 46758), (142, 46836), (148, 46863), (153, 46884), (158, 46932), (161, 46953), (170, 47079), (174, 47130), (179, 47151), (180, 47163), (182, 47205), (196, 47355), (199, 47388), (200, 47391), (202, 47442), (204, 47487), (205, 47493), (208, 47535), (214, 47598), (221, 47676), (224, 47733), (225, 47751), (229, 47784), (230, 47787), (232, 47826), (233, 47829), (237, 47910), (238, 47913), (242, 47973), (243, 47997), (246, 48048), (248, 48072), (251, 48096), (262, 48348), (265, 48405), (279, 48663), (281, 48732), (287, 48780), (294, 48867), (296, 48900), (298, 48903),

Gene: Breeniome\_97 Start: 44064, Stop: 48176, Start Num: 3

Candidate Starts for Breeniome\_97:

(Start: 3 @44064 has 170 MA's), (13, 44175), (15, 44199), (28, 44463), (29, 44469), (33, 44535), (36, 44571), (41, 44652), (43, 44688), (45, 44700), (46, 44706), (47, 44907), (58, 45288), (66, 45441), (68, 45510), (71, 45537), (78, 45618), (83, 45660), (87, 45696), (90, 45708), (97, 45765), (102, 45798), (106, 45843), (111, 45861), (118, 45906), (125, 45954), (128, 45987), (134, 46011), (142, 46065), (148, 46092), (153, 46113), (158, 46161), (161, 46182), (170, 46308), (174, 46359), (179, 46380), (180, 46392), (182, 46434), (196, 46584), (199, 46617), (200, 46620), (202, 46671), (204, 46716), (205, 46722), (208, 46764), (214, 46827), (221, 46905), (224, 46962), (225, 46980), (229, 47013), (230, 47016), (232, 47055), (233, 47058), (237, 47139), (238, 47142), (242, 47202), (243, 47226), (246, 47277), (248, 47301), (251, 47325), (262, 47577), (265, 47634), (279, 47892), (281, 47961), (287, 48009), (294, 48096), (296, 48129), (298, 48132),

Gene: Burrough\_97 Start: 45334, Stop: 49446, Start Num: 3

Candidate Starts for Burrough\_97:

(Start: 3 @45334 has 170 MA's), (13, 45445), (15, 45469), (28, 45733), (29, 45739), (33, 45805), (36, 45841), (41, 45922), (43, 45958), (45, 45970), (46, 45976), (47, 46177), (58, 46558), (66, 46711), (68, 46780), (71, 46807), (78, 46888), (83, 46930), (87, 46966), (90, 46978), (97, 47035), (102, 47068), (106, 47113), (111, 47131), (118, 47176), (125, 47224), (128, 47257), (134, 47281), (142, 47335), (148, 47362), (153, 47383), (158, 47431), (161, 47452), (170, 47578), (174, 47629), (179, 47650), (180, 47662), (182, 47704), (196, 47854), (199, 47887), (200, 47890), (202, 47941), (204, 47986), (205, 47992), (208, 48034), (214, 48097), (221, 48175), (224, 48232), (225, 48250), (229, 48283), (230, 48286), (232, 48325), (233, 48328), (237, 48409), (238, 48412), (242, 48472), (243, 48496), (246, 48547), (248, 48571), (251, 48595), (262, 48847), (265, 48904), (279, 49162), (281, 49231), (287, 49279), (294, 49366), (296, 49399), (298, 49402),

Gene: Bxz1\_95 Start: 46385, Stop: 50497, Start Num: 3

Candidate Starts for Bxz1\_95:

(Start: 3 @46385 has 170 MA's), (13, 46496), (15, 46520), (28, 46784), (29, 46790), (33, 46856), (36, 46892), (41, 46973), (43, 47009), (45, 47021), (46, 47027), (47, 47228), (58, 47609), (66, 47762), (68, 47831), (71, 47858), (78, 47939), (83, 47981), (87, 48017), (90, 48029), (97, 48086), (102, 48119),

(106, 48164), (111, 48182), (118, 48227), (125, 48275), (128, 48308), (134, 48332), (142, 48386), (148, 48413), (153, 48434), (158, 48482), (161, 48503), (170, 48629), (174, 48680), (179, 48701), (180, 48713), (182, 48755), (196, 48905), (199, 48938), (200, 48941), (202, 48992), (204, 49037), (205, 49043), (208, 49085), (214, 49148), (221, 49226), (224, 49283), (225, 49301), (229, 49334), (230, 49337), (232, 49376), (233, 49379), (237, 49460), (238, 49463), (242, 49523), (243, 49547), (246, 49598), (248, 49622), (251, 49646), (262, 49898), (265, 49955), (279, 50213), (281, 50282), (287, 50330), (294, 50417), (296, 50450), (298, 50453),

Gene: Cactojaque\_92 Start: 43176, Stop: 47285, Start Num: 3

Candidate Starts for Cactojaque\_92:

(Start: 3 @43176 has 170 MA's), (13, 43287), (15, 43311), (28, 43575), (29, 43581), (33, 43647), (36, 43683), (41, 43764), (43, 43800), (45, 43812), (46, 43818), (47, 44019), (48, 44079), (58, 44397), (66, 44550), (68, 44619), (71, 44646), (78, 44727), (83, 44769), (87, 44805), (90, 44817), (97, 44874), (102, 44907), (106, 44952), (111, 44970), (118, 45015), (125, 45063), (128, 45096), (142, 45174), (148, 45201), (158, 45270), (161, 45291), (170, 45417), (174, 45468), (179, 45489), (180, 45501), (182, 45543), (196, 45693), (199, 45726), (200, 45729), (202, 45780), (204, 45825), (205, 45831), (208, 45873), (214, 45936), (221, 46014), (224, 46071), (225, 46089), (229, 46122), (230, 46125), (232, 46164), (233, 46167), (237, 46248), (238, 46251), (242, 46311), (243, 46335), (246, 46386), (248, 46410), (251, 46434), (262, 46686), (265, 46743), (279, 47001), (281, 47070), (287, 47118), (294, 47205), (296, 47238), (298, 47241),

Gene: Cali\_93 Start: 45351, Stop: 49211, Start Num: 3

Candidate Starts for Cali\_93:

(Start: 3 @45351 has 170 MA's), (13, 45462), (15, 45486), (28, 45750), (29, 45756), (33, 45822), (36, 45858), (41, 45939), (45, 45987), (46, 45993), (60, 46314), (61, 46335), (63, 46371), (68, 46491), (70, 46509), (78, 46605), (82, 46638), (83, 46647), (91, 46743), (93, 46761), (102, 46833), (106, 46878), (111, 46896), (118, 46941), (125, 46989), (128, 47022), (134, 47046), (142, 47100), (148, 47127), (153, 47148), (158, 47196), (161, 47217), (170, 47343), (174, 47394), (179, 47415), (180, 47427), (182, 47469), (196, 47619), (199, 47652), (200, 47655), (202, 47706), (204, 47751), (205, 47757), (208, 47799), (214, 47862), (221, 47940), (224, 47997), (225, 48015), (229, 48048), (230, 48051), (232, 48090), (233, 48093), (237, 48174), (238, 48177), (242, 48237), (243, 48261), (246, 48312), (248, 48336), (251, 48360), (262, 48612), (265, 48669), (279, 48927), (281, 48996), (287, 49044), (294, 49131), (296, 49164), (298, 49167),

Gene: Cane17\_86 Start: 43473, Stop: 47195, Start Num: 3

Candidate Starts for Cane17\_86:

(Start: 3 @43473 has 170 MA's), (8, 43512), (13, 43584), (15, 43608), (28, 43872), (29, 43878), (33, 43944), (36, 43980), (41, 44061), (43, 44097), (45, 44109), (46, 44115), (60, 44298), (61, 44319), (63, 44355), (68, 44475), (70, 44493), (78, 44589), (82, 44622), (83, 44631), (91, 44727), (93, 44745), (102, 44817), (106, 44862), (111, 44880), (118, 44925), (125, 44973), (128, 45006), (134, 45030), (142, 45084), (148, 45111), (153, 45132), (158, 45180), (161, 45201), (170, 45327), (174, 45378), (179, 45399), (180, 45411), (182, 45453), (196, 45603), (199, 45636), (200, 45639), (202, 45690), (204, 45735), (205, 45741), (208, 45783), (214, 45846), (221, 45924), (224, 45981), (225, 45999), (229, 46032), (230, 46035), (232, 46074), (233, 46077), (237, 46158), (238, 46161), (242, 46221), (243, 46245), (246, 46296), (248, 46320), (251, 46344), (262, 46596), (265, 46653), (279, 46911), (281, 46980), (287, 47028), (294, 47115), (296, 47148), (298, 47151),

Gene: Capablanca\_99 Start: 45201, Stop: 49310, Start Num: 3

Candidate Starts for Capablanca\_99:

(Start: 3 @45201 has 170 MA's), (13, 45312), (15, 45336), (28, 45600), (29, 45606), (33, 45672), (36, 45708), (41, 45789), (43, 45825), (45, 45837), (46, 45843), (47, 46044), (48, 46104), (58, 46422), (66, 46575), (68, 46644), (71, 46671), (78, 46752), (83, 46794), (87, 46830), (90, 46842), (97, 46899), (102, 46932), (106, 46977), (111, 46995), (118, 47040), (125, 47088), (128, 47121), (134, 47145),

(142, 47199), (148, 47226), (153, 47247), (158, 47295), (161, 47316), (170, 47442), (174, 47493), (179, 47514), (180, 47526), (182, 47568), (196, 47718), (199, 47751), (200, 47754), (202, 47805), (204, 47850), (205, 47856), (208, 47898), (214, 47961), (221, 48039), (224, 48096), (225, 48114), (229, 48147), (230, 48150), (232, 48189), (233, 48192), (237, 48273), (238, 48276), (242, 48336), (243, 48360), (246, 48411), (248, 48435), (251, 48459), (262, 48711), (265, 48768), (279, 49026), (281, 49095), (287, 49143), (294, 49230), (296, 49263), (298, 49266),

Gene: Caravan\_92 Start: 44705, Stop: 48565, Start Num: 3

Candidate Starts for Caravan\_92:

(Start: 3 @44705 has 170 MA's), (13, 44816), (15, 44840), (28, 45104), (29, 45110), (33, 45176), (36, 45212), (41, 45293), (43, 45329), (45, 45341), (46, 45347), (60, 45668), (61, 45689), (63, 45725), (68, 45845), (78, 45959), (82, 45992), (83, 46001), (91, 46097), (93, 46115), (102, 46187), (106, 46232), (111, 46250), (118, 46295), (125, 46343), (128, 46376), (134, 46400), (142, 46454), (148, 46481), (153, 46502), (158, 46550), (161, 46571), (170, 46697), (174, 46748), (179, 46769), (180, 46781), (182, 46823), (196, 46973), (199, 47006), (200, 47009), (202, 47060), (204, 47105), (205, 47111), (208, 47153), (214, 47216), (221, 47294), (224, 47351), (225, 47369), (229, 47402), (230, 47405), (232, 47444), (233, 47447), (237, 47528), (238, 47531), (242, 47591), (243, 47615), (246, 47666), (248, 47690), (251, 47714), (262, 47966), (265, 48023), (279, 48281), (281, 48350), (287, 48398), (294, 48485), (296, 48518), (298, 48521),

Gene: Catera\_94 Start: 43341, Stop: 47450, Start Num: 3

Candidate Starts for Catera\_94:

(Start: 3 @43341 has 170 MA's), (13, 43452), (15, 43476), (28, 43740), (29, 43746), (33, 43812), (36, 43848), (41, 43929), (43, 43965), (45, 43977), (46, 43983), (47, 44184), (48, 44244), (58, 44562), (66, 44715), (68, 44784), (71, 44811), (78, 44892), (83, 44934), (87, 44970), (90, 44982), (97, 45039), (102, 45072), (106, 45117), (111, 45135), (118, 45180), (125, 45228), (128, 45261), (142, 45339), (148, 45366), (158, 45435), (161, 45456), (170, 45582), (174, 45633), (179, 45654), (180, 45666), (182, 45708), (196, 45858), (199, 45891), (200, 45894), (202, 45945), (204, 45990), (205, 45996), (208, 46038), (214, 46101), (221, 46179), (224, 46236), (225, 46254), (229, 46287), (230, 46290), (232, 46329), (233, 46332), (237, 46413), (238, 46416), (242, 46476), (243, 46500), (246, 46551), (248, 46575), (251, 46599), (262, 46851), (265, 46908), (279, 47166), (281, 47235), (287, 47283), (294, 47370), (296, 47403), (298, 47406),

Gene: Chargie21\_94 Start: 43491, Stop: 47600, Start Num: 3

Candidate Starts for Chargie21\_94:

(Start: 3 @43491 has 170 MA's), (13, 43602), (15, 43626), (28, 43890), (29, 43896), (33, 43962), (36, 43998), (41, 44079), (43, 44115), (45, 44127), (46, 44133), (47, 44334), (48, 44394), (58, 44712), (66, 44865), (68, 44934), (71, 44961), (78, 45042), (83, 45084), (87, 45120), (90, 45132), (97, 45189), (102, 45222), (106, 45267), (111, 45285), (118, 45330), (125, 45378), (128, 45411), (142, 45489), (148, 45516), (158, 45585), (161, 45606), (170, 45732), (174, 45783), (179, 45804), (180, 45816), (182, 45858), (196, 46008), (199, 46041), (200, 46044), (202, 46095), (204, 46140), (205, 46146), (208, 46188), (214, 46251), (221, 46329), (224, 46386), (225, 46404), (229, 46437), (230, 46440), (232, 46479), (233, 46482), (237, 46563), (238, 46566), (242, 46626), (243, 46650), (246, 46701), (248, 46725), (251, 46749), (262, 47001), (265, 47058), (279, 47316), (281, 47385), (287, 47433), (294, 47520), (296, 47553), (298, 47556),

Gene: CharlieB\_93 Start: 43349, Stop: 47461, Start Num: 3

Candidate Starts for CharlieB\_93:

(Start: 3 @43349 has 170 MA's), (13, 43460), (15, 43484), (28, 43748), (29, 43754), (33, 43820), (36, 43856), (41, 43937), (43, 43973), (45, 43985), (46, 43991), (47, 44192), (58, 44573), (66, 44726), (68, 44795), (71, 44822), (78, 44903), (83, 44945), (87, 44981), (90, 44993), (97, 45050), (102, 45083), (106, 45128), (111, 45146), (118, 45191), (125, 45239), (128, 45272), (134, 45296), (142, 45350), (148, 45377), (153, 45398), (158, 45446), (161, 45467), (170, 45593), (174, 45644), (179, 45665),

(180, 45677), (182, 45719), (196, 45869), (199, 45902), (200, 45905), (202, 45956), (204, 46001), (205, 46007), (208, 46049), (214, 46112), (221, 46190), (224, 46247), (225, 46265), (229, 46298), (230, 46301), (232, 46340), (233, 46343), (237, 46424), (238, 46427), (242, 46487), (243, 46511), (246, 46562), (248, 46586), (251, 46610), (262, 46862), (265, 46919), (279, 47177), (281, 47246), (287, 47294), (294, 47381), (296, 47414), (298, 47417),

Gene: ChaylaJr\_92 Start: 42967, Stop: 47076, Start Num: 3

Candidate Starts for ChaylaJr\_92:

(Start: 3 @42967 has 170 MA's), (13, 43078), (15, 43102), (28, 43366), (29, 43372), (33, 43438), (36, 43474), (41, 43555), (43, 43591), (45, 43603), (46, 43609), (47, 43810), (48, 43870), (58, 44188), (66, 44341), (68, 44410), (71, 44437), (78, 44518), (83, 44560), (87, 44596), (90, 44608), (97, 44665), (102, 44698), (106, 44743), (111, 44761), (118, 44806), (125, 44854), (128, 44887), (142, 44965), (148, 44992), (158, 45061), (161, 45082), (170, 45208), (174, 45259), (179, 45280), (180, 45292), (182, 45334), (196, 45484), (199, 45517), (200, 45520), (202, 45571), (204, 45616), (205, 45622), (208, 45664), (214, 45727), (221, 45805), (224, 45862), (225, 45880), (229, 45913), (230, 45916), (232, 45955), (233, 45958), (237, 46039), (238, 46042), (242, 46102), (243, 46126), (246, 46177), (248, 46201), (251, 46225), (262, 46477), (265, 46534), (279, 46792), (281, 46861), (287, 46909), (294, 46996), (296, 47029), (298, 47032),

Gene: CherryTomatoes\_97 Start: 43720, Stop: 46974, Start Num: 1

Candidate Starts for CherryTomatoes\_97:

(Start: 1 @43720 has 3 MA's), (9, 43801), (15, 43876), (16, 43879), (18, 43936), (19, 43960), (23, 44023), (26, 44104), (27, 44119), (29, 44146), (35, 44230), (38, 44278), (43, 44365), (46, 44383), (51, 44422), (56, 44461), (57, 44470), (73, 44659), (83, 44740), (97, 44845), (99, 44866), (102, 44872), (121, 44959), (155, 45082), (157, 45100), (165, 45124), (172, 45211), (177, 45250), (203, 45538), (205, 45583), (209, 45601), (217, 45682), (225, 45805), (241, 46015), (242, 46024), (249, 46120), (250, 46123), (256, 46231), (260, 46357), (261, 46375), (264, 46429), (275, 46591), (277, 46675), (281, 46756), (293, 46891), (298, 46930), (299, 46960),

Gene: ChickenPhender\_93 Start: 43300, Stop: 47409, Start Num: 3

Candidate Starts for ChickenPhender\_93:

(Start: 3 @43300 has 170 MA's), (13, 43411), (15, 43435), (28, 43699), (29, 43705), (33, 43771), (36, 43807), (41, 43888), (43, 43924), (45, 43936), (46, 43942), (47, 44143), (48, 44203), (58, 44521), (66, 44674), (68, 44743), (71, 44770), (78, 44851), (83, 44893), (87, 44929), (90, 44941), (97, 44998), (102, 45031), (106, 45076), (111, 45094), (118, 45139), (125, 45187), (128, 45220), (142, 45298), (148, 45325), (158, 45394), (161, 45415), (170, 45541), (174, 45592), (179, 45613), (180, 45625), (182, 45667), (196, 45817), (199, 45850), (200, 45853), (202, 45904), (204, 45949), (205, 45955), (208, 45997), (214, 46060), (221, 46138), (224, 46195), (225, 46213), (229, 46246), (230, 46249), (232, 46288), (233, 46291), (237, 46372), (238, 46375), (242, 46435), (243, 46459), (246, 46510), (248, 46534), (251, 46558), (262, 46810), (265, 46867), (279, 47125), (281, 47194), (287, 47242), (294, 47329), (296, 47362), (298, 47365),

Gene: Chomp\_96 Start: 45771, Stop: 49883, Start Num: 3

Candidate Starts for Chomp\_96:

(Start: 3 @45771 has 170 MA's), (13, 45882), (15, 45906), (28, 46170), (29, 46176), (33, 46242), (36, 46278), (41, 46359), (43, 46395), (45, 46407), (46, 46413), (47, 46614), (58, 46995), (66, 47148), (68, 47217), (71, 47244), (78, 47325), (83, 47367), (87, 47403), (90, 47415), (97, 47472), (102, 47505), (106, 47550), (111, 47568), (118, 47613), (125, 47661), (128, 47694), (134, 47718), (142, 47772), (148, 47799), (153, 47820), (158, 47868), (161, 47889), (170, 48015), (174, 48066), (179, 48087), (180, 48099), (182, 48141), (196, 48291), (199, 48324), (200, 48327), (202, 48378), (204, 48423), (205, 48429), (208, 48471), (214, 48534), (221, 48612), (224, 48669), (225, 48687), (229, 48720), (230, 48723), (232, 48762), (233, 48765), (237, 48846), (238, 48849), (242, 48909), (243, 48933), (246, 48984), (248, 49008), (251, 49032), (262, 49284), (265, 49341), (279, 49599), (281, 49668),

(287, 49716), (294, 49803), (296, 49836), (298, 49839),

Gene: CindyLou\_99 Start: 45812, Stop: 49924, Start Num: 3

Candidate Starts for CindyLou\_99:

(Start: 3 @45812 has 170 MA's), (13, 45923), (15, 45947), (28, 46211), (29, 46217), (33, 46283), (36, 46319), (41, 46400), (43, 46436), (45, 46448), (46, 46454), (47, 46655), (58, 47036), (66, 47189), (68, 47258), (71, 47285), (78, 47366), (83, 47408), (87, 47444), (90, 47456), (97, 47513), (102, 47546), (106, 47591), (111, 47609), (118, 47654), (125, 47702), (128, 47735), (134, 47759), (142, 47813), (148, 47840), (153, 47861), (158, 47909), (161, 47930), (170, 48056), (174, 48107), (179, 48128), (180, 48140), (182, 48182), (196, 48332), (199, 48365), (200, 48368), (202, 48419), (204, 48464), (205, 48470), (208, 48512), (214, 48575), (221, 48653), (224, 48710), (225, 48728), (229, 48761), (230, 48764), (232, 48803), (233, 48806), (237, 48887), (238, 48890), (242, 48950), (243, 48974), (246, 49025), (248, 49049), (251, 49073), (262, 49325), (265, 49382), (279, 49640), (281, 49709), (287, 49757), (294, 49844), (296, 49877), (298, 49880),

Gene: Colt\_87 Start: 44069, Stop: 47791, Start Num: 3

Candidate Starts for Colt\_87:

(Start: 3 @44069 has 170 MA's), (8, 44108), (13, 44180), (15, 44204), (28, 44468), (29, 44474), (33, 44540), (36, 44576), (41, 44657), (43, 44693), (45, 44705), (46, 44711), (60, 44894), (61, 44915), (63, 44951), (68, 45071), (70, 45089), (78, 45185), (82, 45218), (83, 45227), (91, 45323), (93, 45341), (102, 45413), (106, 45458), (111, 45476), (118, 45521), (125, 45569), (128, 45602), (134, 45626), (142, 45680), (148, 45707), (153, 45728), (158, 45776), (161, 45797), (170, 45923), (174, 45974), (179, 45995), (180, 46007), (182, 46049), (196, 46199), (199, 46232), (200, 46235), (202, 46286), (204, 46331), (205, 46337), (208, 46379), (214, 46442), (221, 46520), (224, 46577), (225, 46595), (229, 46628), (230, 46631), (232, 46670), (233, 46673), (237, 46754), (238, 46757), (242, 46817), (243, 46841), (246, 46892), (248, 46916), (251, 46940), (262, 47192), (265, 47249), (279, 47507), (281, 47576), (287, 47624), (294, 47711), (296, 47744), (298, 47747),

Gene: Concombre\_104 Start: 47487, Stop: 51347, Start Num: 3

Candidate Starts for Concombre\_104:

(Start: 3 @47487 has 170 MA's), (13, 47598), (28, 47886), (29, 47892), (33, 47958), (36, 47994), (41, 48075), (43, 48111), (45, 48123), (46, 48129), (61, 48471), (63, 48507), (68, 48627), (78, 48741), (82, 48774), (83, 48783), (91, 48879), (93, 48897), (102, 48969), (106, 49014), (111, 49032), (118, 49077), (125, 49125), (128, 49158), (134, 49182), (142, 49236), (148, 49263), (153, 49284), (158, 49332), (161, 49353), (170, 49479), (174, 49530), (179, 49551), (180, 49563), (182, 49605), (196, 49755), (199, 49788), (200, 49791), (202, 49842), (204, 49887), (205, 49893), (208, 49935), (214, 49998), (221, 50076), (224, 50133), (225, 50151), (229, 50184), (230, 50187), (232, 50226), (233, 50229), (237, 50310), (238, 50313), (242, 50373), (243, 50397), (246, 50448), (248, 50472), (251, 50496), (262, 50748), (265, 50805), (279, 51063), (281, 51132), (287, 51180), (294, 51267), (296, 51300), (298, 51303),

Gene: DTDevon\_98 Start: 45371, Stop: 49483, Start Num: 3

Candidate Starts for DTDevon\_98:

(Start: 3 @45371 has 170 MA's), (13, 45482), (15, 45506), (28, 45770), (29, 45776), (33, 45842), (36, 45878), (41, 45959), (43, 45995), (45, 46007), (46, 46013), (47, 46214), (58, 46595), (66, 46748), (68, 46817), (71, 46844), (78, 46925), (83, 46967), (87, 47003), (90, 47015), (97, 47072), (102, 47105), (106, 47150), (111, 47168), (118, 47213), (125, 47261), (128, 47294), (134, 47318), (142, 47372), (148, 47399), (153, 47420), (158, 47468), (161, 47489), (170, 47615), (174, 47666), (179, 47687), (180, 47699), (182, 47741), (196, 47891), (199, 47924), (200, 47927), (202, 47978), (204, 48023), (205, 48029), (208, 48071), (214, 48134), (221, 48212), (224, 48269), (225, 48287), (229, 48320), (230, 48323), (232, 48362), (233, 48365), (237, 48446), (238, 48449), (242, 48509), (243, 48533), (246, 48584), (248, 48608), (251, 48632), (262, 48884), (265, 48941), (279, 49199), (281, 49268), (287, 49316), (294, 49403), (296, 49436), (298, 49439),



Gene: Daffodil\_102 Start: 45070, Stop: 49179, Start Num: 3

Candidate Starts for Daffodil\_102:

(Start: 3 @45070 has 170 MA's), (13, 45181), (15, 45205), (28, 45469), (29, 45475), (33, 45541), (36, 45577), (41, 45658), (43, 45694), (45, 45706), (46, 45712), (47, 45913), (48, 45973), (58, 46291), (66, 46444), (68, 46513), (71, 46540), (78, 46621), (83, 46663), (87, 46699), (90, 46711), (97, 46768), (102, 46801), (106, 46846), (111, 46864), (118, 46909), (125, 46957), (128, 46990), (142, 47068), (148, 47095), (158, 47164), (161, 47185), (170, 47311), (174, 47362), (179, 47383), (180, 47395), (182, 47437), (196, 47587), (199, 47620), (200, 47623), (202, 47674), (204, 47719), (205, 47725), (208, 47767), (214, 47830), (221, 47908), (224, 47965), (225, 47983), (229, 48016), (230, 48019), (232, 48058), (233, 48061), (237, 48142), (238, 48145), (242, 48205), (243, 48229), (246, 48280), (248, 48304), (251, 48328), (262, 48580), (265, 48637), (279, 48895), (281, 48964), (287, 49012), (294, 49099), (296, 49132), (298, 49135),

Gene: Dandelion\_104 Start: 47734, Stop: 51594, Start Num: 3

Candidate Starts for Dandelion\_104:

(Start: 3 @47734 has 170 MA's), (13, 47845), (15, 47869), (28, 48133), (29, 48139), (33, 48205), (36, 48241), (41, 48322), (43, 48358), (45, 48370), (46, 48376), (60, 48697), (61, 48718), (63, 48754), (68, 48874), (78, 48988), (82, 49021), (83, 49030), (91, 49126), (93, 49144), (102, 49216), (106, 49261), (111, 49279), (118, 49324), (125, 49372), (128, 49405), (134, 49429), (142, 49483), (148, 49510), (153, 49531), (158, 49579), (161, 49600), (170, 49726), (174, 49777), (179, 49798), (180, 49810), (182, 49852), (196, 50002), (199, 50035), (200, 50038), (202, 50089), (204, 50134), (205, 50140), (208, 50182), (214, 50245), (221, 50323), (224, 50380), (225, 50398), (229, 50431), (230, 50434), (232, 50473), (233, 50476), (237, 50557), (238, 50560), (242, 50620), (243, 50644), (246, 50695), (248, 50719), (251, 50743), (262, 50995), (265, 51052), (279, 51310), (281, 51379), (287, 51427), (294, 51514), (296, 51547), (298, 51550),

Gene: Darko\_97 Start: 45008, Stop: 49120, Start Num: 3

Candidate Starts for Darko\_97:

(Start: 3 @45008 has 170 MA's), (13, 45119), (15, 45143), (28, 45407), (29, 45413), (33, 45479), (36, 45515), (41, 45596), (43, 45632), (45, 45644), (46, 45650), (47, 45851), (58, 46232), (66, 46385), (68, 46454), (71, 46481), (78, 46562), (83, 46604), (87, 46640), (90, 46652), (97, 46709), (102, 46742), (106, 46787), (111, 46805), (118, 46850), (125, 46898), (128, 46931), (134, 46955), (142, 47009), (148, 47036), (153, 47057), (158, 47105), (161, 47126), (170, 47252), (174, 47303), (179, 47324), (180, 47336), (182, 47378), (196, 47528), (199, 47561), (200, 47564), (202, 47615), (204, 47660), (205, 47666), (208, 47708), (214, 47771), (221, 47849), (224, 47906), (225, 47924), (229, 47957), (230, 47960), (232, 47999), (233, 48002), (237, 48083), (238, 48086), (242, 48146), (243, 48170), (246, 48221), (248, 48245), (251, 48269), (262, 48521), (265, 48578), (279, 48836), (281, 48905), (287, 48953), (294, 49040), (296, 49073), (298, 49076),

Gene: Delilah\_97 Start: 45071, Stop: 49180, Start Num: 3

Candidate Starts for Delilah\_97:

(Start: 3 @45071 has 170 MA's), (13, 45182), (15, 45206), (28, 45470), (29, 45476), (33, 45542), (36, 45578), (41, 45659), (43, 45695), (45, 45707), (46, 45713), (47, 45914), (48, 45974), (58, 46292), (66, 46445), (68, 46514), (71, 46541), (78, 46622), (83, 46664), (87, 46700), (90, 46712), (97, 46769), (102, 46802), (106, 46847), (111, 46865), (118, 46910), (125, 46958), (128, 46991), (142, 47069), (148, 47096), (158, 47165), (161, 47186), (170, 47312), (174, 47363), (179, 47384), (180, 47396), (182, 47438), (196, 47588), (199, 47621), (200, 47624), (202, 47675), (204, 47720), (205, 47726), (208, 47768), (214, 47831), (221, 47909), (224, 47966), (225, 47984), (229, 48017), (230, 48020), (232, 48059), (233, 48062), (237, 48143), (238, 48146), (242, 48206), (243, 48230), (246, 48281), (248, 48305), (251, 48329), (262, 48581), (265, 48638), (279, 48896), (281, 48965), (287, 49013), (294, 49100), (296, 49133), (298, 49136),

Gene: Delylah\_100 Start: 44864, Stop: 48724, Start Num: 3

Candidate Starts for Delylah\_100:

(Start: 3 @44864 has 170 MA's), (13, 44975), (15, 44999), (28, 45263), (29, 45269), (33, 45335), (36, 45371), (41, 45452), (43, 45488), (45, 45500), (46, 45506), (60, 45827), (61, 45848), (63, 45884), (68, 46004), (78, 46118), (82, 46151), (83, 46160), (91, 46256), (93, 46274), (102, 46346), (106, 46391), (111, 46409), (118, 46454), (125, 46502), (128, 46535), (134, 46559), (142, 46613), (148, 46640), (153, 46661), (158, 46709), (161, 46730), (170, 46856), (174, 46907), (179, 46928), (180, 46940), (182, 46982), (196, 47132), (199, 47165), (200, 47168), (202, 47219), (204, 47264), (205, 47270), (208, 47312), (214, 47375), (221, 47453), (224, 47510), (225, 47528), (229, 47561), (230, 47564), (232, 47603), (233, 47606), (237, 47687), (238, 47690), (242, 47750), (243, 47774), (246, 47825), (248, 47849), (251, 47873), (262, 48125), (265, 48182), (279, 48440), (281, 48509), (287, 48557), (294, 48644), (296, 48677), (298, 48680),

Gene: Derek\_98 Start: 45573, Stop: 49685, Start Num: 3

Candidate Starts for Derek\_98:

(Start: 3 @45573 has 170 MA's), (13, 45684), (15, 45708), (28, 45972), (29, 45978), (33, 46044), (36, 46080), (41, 46161), (43, 46197), (45, 46209), (46, 46215), (47, 46416), (58, 46797), (66, 46950), (68, 47019), (71, 47046), (78, 47127), (83, 47169), (87, 47205), (90, 47217), (97, 47274), (102, 47307), (106, 47352), (111, 47370), (118, 47415), (125, 47463), (128, 47496), (134, 47520), (142, 47574), (148, 47601), (153, 47622), (158, 47670), (161, 47691), (170, 47817), (174, 47868), (179, 47889), (180, 47901), (182, 47943), (196, 48093), (199, 48126), (200, 48129), (202, 48180), (204, 48225), (205, 48231), (208, 48273), (214, 48336), (221, 48414), (224, 48471), (225, 48489), (229, 48522), (230, 48525), (232, 48564), (233, 48567), (237, 48648), (238, 48651), (242, 48711), (243, 48735), (246, 48786), (248, 48810), (251, 48834), (262, 49086), (265, 49143), (279, 49401), (281, 49470), (287, 49518), (294, 49605), (296, 49638), (298, 49641),

Gene: Dietrick\_89 Start: 43003, Stop: 47112, Start Num: 3

Candidate Starts for Dietrick\_89:

(Start: 3 @43003 has 170 MA's), (13, 43114), (15, 43138), (28, 43402), (29, 43408), (33, 43474), (36, 43510), (41, 43591), (43, 43627), (45, 43639), (46, 43645), (47, 43846), (48, 43906), (58, 44224), (66, 44377), (68, 44446), (71, 44473), (78, 44554), (83, 44596), (87, 44632), (90, 44644), (97, 44701), (102, 44734), (106, 44779), (111, 44797), (118, 44842), (125, 44890), (128, 44923), (142, 45001), (148, 45028), (158, 45097), (161, 45118), (170, 45244), (174, 45295), (179, 45316), (180, 45328), (182, 45370), (196, 45520), (199, 45553), (200, 45556), (202, 45607), (204, 45652), (205, 45658), (208, 45700), (214, 45763), (221, 45841), (224, 45898), (225, 45916), (229, 45949), (230, 45952), (232, 45991), (233, 45994), (237, 46075), (238, 46078), (242, 46138), (243, 46162), (246, 46213), (248, 46237), (251, 46261), (262, 46513), (265, 46570), (279, 46828), (281, 46897), (287, 46945), (294, 47032), (296, 47065), (298, 47068),

Gene: DirtMonster\_91 Start: 44105, Stop: 48217, Start Num: 3

Candidate Starts for DirtMonster\_91:

(Start: 3 @44105 has 170 MA's), (13, 44216), (15, 44240), (28, 44504), (29, 44510), (33, 44576), (36, 44612), (41, 44693), (43, 44729), (45, 44741), (46, 44747), (47, 44948), (58, 45329), (66, 45482), (68, 45551), (71, 45578), (78, 45659), (83, 45701), (87, 45737), (90, 45749), (97, 45806), (102, 45839), (106, 45884), (111, 45902), (118, 45947), (125, 45995), (128, 46028), (134, 46052), (142, 46106), (148, 46133), (153, 46154), (158, 46202), (161, 46223), (170, 46349), (174, 46400), (179, 46421), (180, 46433), (182, 46475), (196, 46625), (199, 46658), (200, 46661), (202, 46712), (204, 46757), (205, 46763), (208, 46805), (214, 46868), (221, 46946), (224, 47003), (225, 47021), (229, 47054), (230, 47057), (232, 47096), (233, 47099), (237, 47180), (238, 47183), (242, 47243), (243, 47267), (246, 47318), (248, 47342), (251, 47366), (262, 47618), (265, 47675), (279, 47933), (281, 48002), (287, 48050), (294, 48137), (296, 48170), (298, 48173),

Gene: DrPhinkDaddy\_96 Start: 45290, Stop: 49399, Start Num: 3

Candidate Starts for DrPhinkDaddy\_96:

(Start: 3 @45290 has 170 MA's), (13, 45401), (15, 45425), (28, 45689), (29, 45695), (33, 45761), (36, 45797), (41, 45878), (43, 45914), (45, 45926), (46, 45932), (47, 46133), (48, 46193), (58, 46511), (66, 46664), (68, 46733), (71, 46760), (78, 46841), (83, 46883), (87, 46919), (90, 46931), (97, 46988), (102, 47021), (106, 47066), (111, 47084), (118, 47129), (125, 47177), (128, 47210), (142, 47288), (148, 47315), (158, 47384), (161, 47405), (170, 47531), (174, 47582), (179, 47603), (180, 47615), (182, 47657), (196, 47807), (199, 47840), (200, 47843), (202, 47894), (204, 47939), (205, 47945), (208, 47987), (214, 48050), (221, 48128), (224, 48185), (225, 48203), (229, 48236), (230, 48239), (232, 48278), (233, 48281), (237, 48362), (238, 48365), (242, 48425), (243, 48449), (246, 48500), (248, 48524), (251, 48548), (262, 48800), (265, 48857), (279, 49115), (281, 49184), (287, 49232), (294, 49319), (296, 49352), (298, 49355),

Gene: Drazdys\_97 Start: 44871, Stop: 48983, Start Num: 3

Candidate Starts for Drazdys\_97:

(Start: 3 @44871 has 170 MA's), (13, 44982), (15, 45006), (28, 45270), (29, 45276), (33, 45342), (36, 45378), (41, 45459), (43, 45495), (45, 45507), (46, 45513), (47, 45714), (58, 46095), (66, 46248), (68, 46317), (71, 46344), (78, 46425), (83, 46467), (87, 46503), (90, 46515), (97, 46572), (102, 46605), (106, 46650), (111, 46668), (118, 46713), (125, 46761), (128, 46794), (134, 46818), (142, 46872), (148, 46899), (153, 46920), (158, 46968), (161, 46989), (170, 47115), (174, 47166), (179, 47187), (180, 47199), (182, 47241), (196, 47391), (199, 47424), (200, 47427), (202, 47478), (204, 47523), (205, 47529), (208, 47571), (214, 47634), (221, 47712), (224, 47769), (225, 47787), (229, 47820), (230, 47823), (232, 47862), (233, 47865), (237, 47946), (238, 47949), (242, 48009), (243, 48033), (246, 48084), (248, 48108), (251, 48132), (262, 48384), (265, 48441), (279, 48699), (281, 48768), (287, 48816), (294, 48903), (296, 48936), (298, 48939),

Gene: E3\_gp77 Start: 38464, Stop: 41151, Start Num: 5

Candidate Starts for E3\_gp77:

(5, 38464), (14, 38575), (15, 38584), (17, 38608), (22, 38728), (23, 38731), (29, 38854), (33, 38920), (34, 38932), (45, 39079), (79, 39328), (116, 39463), (125, 39514), (145, 39616), (159, 39649), (169, 39748), (176, 39808), (192, 39865), (215, 39976), (228, 40075), (231, 40114), (235, 40186), (237, 40195), (258, 40513), (260, 40552), (267, 40642), (270, 40669), (276, 40858),

Gene: ET08\_86 Start: 43857, Stop: 47717, Start Num: 3

Candidate Starts for ET08\_86:

(Start: 3 @43857 has 170 MA's), (13, 43968), (15, 43992), (28, 44256), (29, 44262), (33, 44328), (36, 44364), (41, 44445), (43, 44481), (45, 44493), (46, 44499), (60, 44820), (61, 44841), (63, 44877), (68, 44997), (78, 45111), (82, 45144), (83, 45153), (91, 45249), (93, 45267), (102, 45339), (106, 45384), (111, 45402), (118, 45447), (125, 45495), (128, 45528), (134, 45552), (142, 45606), (148, 45633), (153, 45654), (158, 45702), (161, 45723), (170, 45849), (174, 45900), (179, 45921), (180, 45933), (182, 45975), (196, 46125), (199, 46158), (200, 46161), (202, 46212), (204, 46257), (205, 46263), (208, 46305), (214, 46368), (221, 46446), (224, 46503), (225, 46521), (229, 46554), (230, 46557), (232, 46596), (233, 46599), (237, 46680), (238, 46683), (242, 46743), (243, 46767), (246, 46818), (248, 46842), (251, 46866), (262, 47118), (265, 47175), (279, 47433), (281, 47502), (287, 47550), (294, 47637), (296, 47670), (298, 47673),

Gene: EasyJones\_100 Start: 44359, Stop: 48468, Start Num: 3

Candidate Starts for EasyJones\_100:

(Start: 3 @44359 has 170 MA's), (13, 44470), (15, 44494), (28, 44758), (29, 44764), (33, 44830), (36, 44866), (41, 44947), (43, 44983), (45, 44995), (46, 45001), (47, 45202), (48, 45262), (58, 45580), (66, 45733), (68, 45802), (71, 45829), (78, 45910), (83, 45952), (87, 45988), (90, 46000), (97, 46057), (102, 46090), (106, 46135), (111, 46153), (118, 46198), (125, 46246), (128, 46279), (142, 46357), (148, 46384), (158, 46453), (161, 46474), (170, 46600), (174, 46651), (179, 46672), (180, 46684), (182, 46726), (196, 46876), (199, 46909), (200, 46912), (202, 46963), (204, 47008), (205, 47014),

(208, 47056), (214, 47119), (221, 47197), (224, 47254), (225, 47272), (229, 47305), (230, 47308), (232, 47347), (233, 47350), (237, 47431), (238, 47434), (242, 47494), (243, 47518), (246, 47569), (248, 47593), (251, 47617), (262, 47869), (265, 47926), (279, 48184), (281, 48253), (287, 48301), (294, 48388), (296, 48421), (298, 48424),

Gene: EggyFarm\_105 Start: 47262, Stop: 51122, Start Num: 3

Candidate Starts for EggyFarm\_105:

(Start: 3 @47262 has 170 MA's), (13, 47373), (28, 47661), (29, 47667), (33, 47733), (36, 47769), (41, 47850), (43, 47886), (45, 47898), (46, 47904), (61, 48246), (63, 48282), (68, 48402), (76, 48486), (78, 48516), (82, 48549), (83, 48558), (91, 48654), (93, 48672), (102, 48744), (106, 48789), (111, 48807), (118, 48852), (125, 48900), (128, 48933), (134, 48957), (142, 49011), (148, 49038), (153, 49059), (158, 49107), (161, 49128), (170, 49254), (174, 49305), (179, 49326), (180, 49338), (182, 49380), (196, 49530), (199, 49563), (200, 49566), (202, 49617), (204, 49662), (205, 49668), (208, 49710), (214, 49773), (221, 49851), (224, 49908), (225, 49926), (229, 49959), (230, 49962), (232, 50001), (233, 50004), (237, 50085), (238, 50088), (242, 50148), (243, 50172), (246, 50223), (248, 50247), (251, 50271), (262, 50523), (265, 50580), (279, 50838), (281, 50907), (287, 50955), (294, 51042), (296, 51075), (298, 51078),

Gene: EmToTheThree\_100 Start: 46522, Stop: 50631, Start Num: 3

Candidate Starts for EmToTheThree\_100:

(Start: 3 @46522 has 170 MA's), (13, 46633), (15, 46657), (28, 46921), (29, 46927), (33, 46993), (36, 47029), (41, 47110), (43, 47146), (45, 47158), (46, 47164), (47, 47365), (48, 47425), (58, 47743), (66, 47896), (68, 47965), (71, 47992), (78, 48073), (83, 48115), (87, 48151), (90, 48163), (97, 48220), (102, 48253), (106, 48298), (111, 48316), (118, 48361), (125, 48409), (128, 48442), (142, 48520), (148, 48547), (158, 48616), (161, 48637), (170, 48763), (174, 48814), (179, 48835), (180, 48847), (182, 48889), (196, 49039), (199, 49072), (200, 49075), (202, 49126), (204, 49171), (205, 49177), (208, 49219), (214, 49282), (221, 49360), (224, 49417), (225, 49435), (229, 49468), (230, 49471), (232, 49510), (233, 49513), (237, 49594), (238, 49597), (242, 49657), (243, 49681), (246, 49732), (248, 49756), (251, 49780), (262, 50032), (265, 50089), (279, 50347), (281, 50416), (287, 50464), (294, 50551), (296, 50584), (298, 50587),

Gene: EmmaElysia\_97 Start: 44050, Stop: 48162, Start Num: 3

Candidate Starts for EmmaElysia\_97:

(Start: 3 @44050 has 170 MA's), (13, 44161), (15, 44185), (28, 44449), (29, 44455), (33, 44521), (36, 44557), (41, 44638), (43, 44674), (45, 44686), (46, 44692), (47, 44893), (58, 45274), (66, 45427), (68, 45496), (71, 45523), (78, 45604), (83, 45646), (87, 45682), (90, 45694), (97, 45751), (102, 45784), (106, 45829), (111, 45847), (118, 45892), (125, 45940), (128, 45973), (134, 45997), (142, 46051), (148, 46078), (153, 46099), (158, 46147), (161, 46168), (170, 46294), (174, 46345), (179, 46366), (180, 46378), (182, 46420), (196, 46570), (199, 46603), (200, 46606), (202, 46657), (204, 46702), (205, 46708), (208, 46750), (214, 46813), (221, 46891), (224, 46948), (225, 46966), (229, 46999), (230, 47002), (232, 47041), (233, 47044), (237, 47125), (238, 47128), (242, 47188), (243, 47212), (246, 47263), (248, 47287), (251, 47311), (262, 47563), (265, 47620), (279, 47878), (281, 47947), (287, 47995), (294, 48082), (296, 48115), (298, 48118),

Gene: Erdmann\_98 Start: 45071, Stop: 49180, Start Num: 3

Candidate Starts for Erdmann\_98:

(Start: 3 @45071 has 170 MA's), (13, 45182), (15, 45206), (28, 45470), (29, 45476), (33, 45542), (36, 45578), (41, 45659), (43, 45695), (45, 45707), (46, 45713), (47, 45914), (48, 45974), (58, 46292), (66, 46445), (68, 46514), (71, 46541), (78, 46622), (83, 46664), (87, 46700), (90, 46712), (97, 46769), (102, 46802), (106, 46847), (111, 46865), (118, 46910), (125, 46958), (128, 46991), (142, 47069), (148, 47096), (158, 47165), (161, 47186), (170, 47312), (174, 47363), (179, 47384), (180, 47396), (182, 47438), (196, 47588), (199, 47621), (200, 47624), (202, 47675), (204, 47720), (205, 47726), (208, 47768), (214, 47831), (221, 47909), (224, 47966), (225, 47984), (229, 48017), (230, 48020),

(232, 48059), (233, 48062), (237, 48143), (238, 48146), (242, 48206), (243, 48230), (246, 48281), (248, 48305), (251, 48329), (262, 48581), (265, 48638), (279, 48896), (281, 48965), (287, 49013), (294, 49100), (296, 49133), (298, 49136),

Gene: ErnieJ\_93 Start: 43281, Stop: 47390, Start Num: 3

Candidate Starts for ErnieJ\_93:

(Start: 3 @43281 has 170 MA's), (13, 43392), (15, 43416), (28, 43680), (29, 43686), (33, 43752), (36, 43788), (41, 43869), (43, 43905), (45, 43917), (46, 43923), (47, 44124), (48, 44184), (58, 44502), (66, 44655), (68, 44724), (71, 44751), (78, 44832), (83, 44874), (87, 44910), (90, 44922), (97, 44979), (102, 45012), (106, 45057), (111, 45075), (118, 45120), (125, 45168), (128, 45201), (142, 45279), (148, 45306), (158, 45375), (161, 45396), (170, 45522), (174, 45573), (179, 45594), (180, 45606), (182, 45648), (196, 45798), (199, 45831), (200, 45834), (202, 45885), (204, 45930), (205, 45936), (208, 45978), (214, 46041), (221, 46119), (224, 46176), (225, 46194), (229, 46227), (230, 46230), (232, 46269), (233, 46272), (237, 46353), (238, 46356), (242, 46416), (243, 46440), (246, 46491), (248, 46515), (251, 46539), (262, 46791), (265, 46848), (279, 47106), (281, 47175), (287, 47223), (294, 47310), (296, 47343), (298, 47346),

Gene: Essence\_95 Start: 45037, Stop: 49149, Start Num: 3

Candidate Starts for Essence\_95:

(Start: 3 @45037 has 170 MA's), (13, 45148), (15, 45172), (28, 45436), (29, 45442), (33, 45508), (36, 45544), (41, 45625), (43, 45661), (45, 45673), (46, 45679), (47, 45880), (58, 46261), (66, 46414), (68, 46483), (71, 46510), (78, 46591), (83, 46633), (87, 46669), (90, 46681), (97, 46738), (102, 46771), (106, 46816), (111, 46834), (118, 46879), (125, 46927), (128, 46960), (134, 46984), (142, 47038), (148, 47065), (153, 47086), (158, 47134), (161, 47155), (170, 47281), (174, 47332), (179, 47353), (180, 47365), (182, 47407), (196, 47557), (199, 47590), (200, 47593), (202, 47644), (204, 47689), (205, 47695), (208, 47737), (214, 47800), (221, 47878), (224, 47935), (225, 47953), (229, 47986), (230, 47989), (232, 48028), (233, 48031), (237, 48112), (238, 48115), (242, 48175), (243, 48199), (246, 48250), (248, 48274), (251, 48298), (262, 48550), (265, 48607), (279, 48865), (281, 48934), (287, 48982), (294, 49069), (296, 49102), (298, 49105),

Gene: Ewok\_98 Start: 44698, Stop: 48807, Start Num: 3

Candidate Starts for Ewok\_98:

(Start: 3 @44698 has 170 MA's), (13, 44809), (15, 44833), (28, 45097), (29, 45103), (33, 45169), (36, 45205), (41, 45286), (43, 45322), (45, 45334), (46, 45340), (47, 45541), (48, 45601), (58, 45919), (66, 46072), (68, 46141), (71, 46168), (78, 46249), (83, 46291), (87, 46327), (90, 46339), (97, 46396), (102, 46429), (106, 46474), (111, 46492), (118, 46537), (125, 46585), (128, 46618), (142, 46696), (148, 46723), (158, 46792), (161, 46813), (170, 46939), (174, 46990), (179, 47011), (180, 47023), (182, 47065), (196, 47215), (199, 47248), (200, 47251), (202, 47302), (204, 47347), (205, 47353), (208, 47395), (214, 47458), (221, 47536), (224, 47593), (225, 47611), (229, 47644), (230, 47647), (232, 47686), (233, 47689), (237, 47770), (238, 47773), (242, 47833), (243, 47857), (246, 47908), (248, 47932), (251, 47956), (262, 48208), (265, 48265), (279, 48523), (281, 48592), (287, 48640), (294, 48727), (296, 48760), (298, 48763),

Gene: Finch\_17 Start: 15514, Stop: 18483, Start Num: 2

Candidate Starts for Finch\_17:

(Start: 2 @15514 has 3 MA's), (10, 15580), (22, 15796), (23, 15799), (24, 15856), (29, 15922), (30, 15946), (32, 15979), (33, 15988), (34, 16000), (37, 16033), (38, 16048), (40, 16063), (43, 16135), (44, 16138), (45, 16147), (55, 16171), (62, 16252), (72, 16384), (81, 16474), (85, 16525), (98, 16582), (146, 16777), (157, 16825), (168, 16936), (198, 17182), (218, 17302), (233, 17440), (247, 17647), (280, 18202), (281, 18265), (294, 18394), (301, 18475),

Gene: Flabslab\_92 Start: 43037, Stop: 47146, Start Num: 3

Candidate Starts for Flabslab\_92:

(Start: 3 @43037 has 170 MA's), (13, 43148), (15, 43172), (28, 43436), (29, 43442), (33, 43508), (36, 43544), (41, 43625), (43, 43661), (45, 43673), (46, 43679), (47, 43880), (48, 43940), (58, 44258), (66, 44411), (68, 44480), (71, 44507), (78, 44588), (83, 44630), (87, 44666), (90, 44678), (97, 44735), (102, 44768), (106, 44813), (111, 44831), (118, 44876), (125, 44924), (128, 44957), (142, 45035), (148, 45062), (158, 45131), (161, 45152), (170, 45278), (174, 45329), (179, 45350), (180, 45362), (182, 45404), (196, 45554), (199, 45587), (200, 45590), (202, 45641), (204, 45686), (205, 45692), (208, 45734), (214, 45797), (221, 45875), (224, 45932), (225, 45950), (229, 45983), (230, 45986), (232, 46025), (233, 46028), (237, 46109), (238, 46112), (242, 46172), (243, 46196), (246, 46247), (248, 46271), (251, 46295), (262, 46547), (265, 46604), (279, 46862), (281, 46931), (287, 46979), (294, 47066), (296, 47099), (298, 47102),

Gene: Fludd\_98 Start: 43923, Stop: 48035, Start Num: 3

Candidate Starts for Fludd\_98:

(Start: 3 @43923 has 170 MA's), (13, 44034), (15, 44058), (28, 44322), (29, 44328), (33, 44394), (36, 44430), (41, 44511), (43, 44547), (45, 44559), (46, 44565), (47, 44766), (58, 45147), (66, 45300), (68, 45369), (71, 45396), (78, 45477), (83, 45519), (87, 45555), (90, 45567), (97, 45624), (102, 45657), (106, 45702), (111, 45720), (118, 45765), (125, 45813), (128, 45846), (134, 45870), (142, 45924), (148, 45951), (153, 45972), (158, 46020), (161, 46041), (170, 46167), (174, 46218), (179, 46239), (180, 46251), (182, 46293), (196, 46443), (199, 46476), (200, 46479), (202, 46530), (204, 46575), (205, 46581), (208, 46623), (214, 46686), (221, 46764), (224, 46821), (225, 46839), (229, 46872), (230, 46875), (232, 46914), (233, 46917), (237, 46998), (238, 47001), (242, 47061), (243, 47085), (246, 47136), (248, 47160), (251, 47184), (262, 47436), (265, 47493), (279, 47751), (281, 47820), (287, 47868), (294, 47955), (296, 47988), (298, 47991),

Gene: FoxtrotP1\_97 Start: 46241, Stop: 50350, Start Num: 3

Candidate Starts for FoxtrotP1\_97:

(Start: 3 @46241 has 170 MA's), (13, 46352), (15, 46376), (28, 46640), (29, 46646), (33, 46712), (36, 46748), (41, 46829), (43, 46865), (45, 46877), (46, 46883), (47, 47084), (48, 47144), (58, 47462), (66, 47615), (68, 47684), (71, 47711), (78, 47792), (83, 47834), (87, 47870), (90, 47882), (97, 47939), (102, 47972), (106, 48017), (111, 48035), (118, 48080), (125, 48128), (128, 48161), (134, 48185), (142, 48239), (148, 48266), (153, 48287), (158, 48335), (161, 48356), (170, 48482), (174, 48533), (179, 48554), (180, 48566), (182, 48608), (196, 48758), (199, 48791), (200, 48794), (202, 48845), (204, 48890), (205, 48896), (208, 48938), (214, 49001), (221, 49079), (224, 49136), (225, 49154), (229, 49187), (230, 49190), (232, 49229), (233, 49232), (237, 49313), (238, 49316), (242, 49376), (243, 49400), (246, 49451), (248, 49475), (251, 49499), (262, 49751), (265, 49808), (279, 50066), (281, 50135), (287, 50183), (294, 50270), (296, 50303), (298, 50306),

Gene: FrayBell\_103 Start: 46523, Stop: 50635, Start Num: 3

Candidate Starts for FrayBell\_103:

(Start: 3 @46523 has 170 MA's), (13, 46634), (15, 46658), (28, 46922), (29, 46928), (33, 46994), (36, 47030), (41, 47111), (43, 47147), (45, 47159), (46, 47165), (47, 47366), (58, 47747), (66, 47900), (68, 47969), (71, 47996), (78, 48077), (83, 48119), (87, 48155), (90, 48167), (97, 48224), (102, 48257), (106, 48302), (111, 48320), (118, 48365), (125, 48413), (128, 48446), (134, 48470), (142, 48524), (148, 48551), (153, 48572), (158, 48620), (161, 48641), (170, 48767), (174, 48818), (179, 48839), (180, 48851), (182, 48893), (196, 49043), (199, 49076), (200, 49079), (202, 49130), (204, 49175), (205, 49181), (208, 49223), (214, 49286), (221, 49364), (224, 49421), (225, 49439), (229, 49472), (230, 49475), (232, 49514), (233, 49517), (237, 49598), (238, 49601), (242, 49661), (243, 49685), (246, 49736), (248, 49760), (251, 49784), (262, 50036), (265, 50093), (279, 50351), (281, 50420), (287, 50468), (294, 50555), (296, 50588), (298, 50591),

Gene: FudgeTart\_97 Start: 44279, Stop: 48448, Start Num: 3

Candidate Starts for FudgeTart\_97:

(Start: 3 @44279 has 170 MA's), (13, 44390), (15, 44414), (28, 44678), (29, 44684), (33, 44750), (36, 44786), (41, 44867), (43, 44903), (45, 44915), (46, 44921), (47, 45122), (48, 45182), (60, 45551), (61, 45572), (63, 45608), (68, 45728), (78, 45842), (82, 45875), (83, 45884), (91, 45980), (93, 45998), (102, 46070), (106, 46115), (111, 46133), (118, 46178), (125, 46226), (128, 46259), (134, 46283), (142, 46337), (148, 46364), (153, 46385), (158, 46433), (161, 46454), (170, 46580), (174, 46631), (179, 46652), (180, 46664), (182, 46706), (196, 46856), (199, 46889), (200, 46892), (202, 46943), (204, 46988), (205, 46994), (208, 47036), (214, 47099), (221, 47177), (224, 47234), (225, 47252), (229, 47285), (230, 47288), (232, 47327), (233, 47330), (237, 47411), (238, 47414), (242, 47474), (243, 47498), (246, 47549), (248, 47573), (251, 47597), (262, 47849), (265, 47906), (279, 48164), (281, 48233), (287, 48281), (294, 48368), (296, 48401), (298, 48404),

Gene: Gabriel\_99 Start: 44443, Stop: 48555, Start Num: 3

Candidate Starts for Gabriel\_99:

(Start: 3 @44443 has 170 MA's), (13, 44554), (15, 44578), (28, 44842), (29, 44848), (33, 44914), (36, 44950), (41, 45031), (43, 45067), (45, 45079), (46, 45085), (47, 45286), (58, 45667), (66, 45820), (68, 45889), (71, 45916), (78, 45997), (83, 46039), (87, 46075), (90, 46087), (97, 46144), (102, 46177), (106, 46222), (111, 46240), (118, 46285), (125, 46333), (128, 46366), (134, 46390), (142, 46444), (148, 46471), (153, 46492), (158, 46540), (161, 46561), (170, 46687), (174, 46738), (179, 46759), (180, 46771), (182, 46813), (196, 46963), (199, 46996), (200, 46999), (202, 47050), (204, 47095), (205, 47101), (208, 47143), (214, 47206), (221, 47284), (224, 47341), (225, 47359), (229, 47392), (230, 47395), (232, 47434), (233, 47437), (237, 47518), (238, 47521), (242, 47581), (243, 47605), (246, 47656), (248, 47680), (251, 47704), (262, 47956), (265, 48013), (279, 48271), (281, 48340), (287, 48388), (294, 48475), (296, 48508), (298, 48511),

Gene: Gamgam\_98 Start: 44483, Stop: 48595, Start Num: 3

Candidate Starts for Gamgam\_98:

(Start: 3 @44483 has 170 MA's), (13, 44594), (15, 44618), (28, 44882), (29, 44888), (33, 44954), (36, 44990), (41, 45071), (43, 45107), (45, 45119), (46, 45125), (47, 45326), (58, 45707), (66, 45860), (68, 45929), (71, 45956), (78, 46037), (83, 46079), (87, 46115), (90, 46127), (97, 46184), (102, 46217), (106, 46262), (111, 46280), (118, 46325), (125, 46373), (128, 46406), (134, 46430), (142, 46484), (148, 46511), (153, 46532), (158, 46580), (161, 46601), (170, 46727), (174, 46778), (179, 46799), (180, 46811), (182, 46853), (196, 47003), (199, 47036), (200, 47039), (202, 47090), (204, 47135), (205, 47141), (208, 47183), (214, 47246), (221, 47324), (224, 47381), (225, 47399), (229, 47432), (230, 47435), (232, 47474), (233, 47477), (237, 47558), (238, 47561), (242, 47621), (243, 47645), (246, 47696), (248, 47720), (251, 47744), (262, 47996), (265, 48053), (279, 48311), (281, 48380), (287, 48428), (294, 48515), (296, 48548), (298, 48551),

Gene: Ghost\_97 Start: 44483, Stop: 48595, Start Num: 3

Candidate Starts for Ghost\_97:

(Start: 3 @44483 has 170 MA's), (13, 44594), (15, 44618), (28, 44882), (29, 44888), (33, 44954), (36, 44990), (41, 45071), (43, 45107), (45, 45119), (46, 45125), (47, 45326), (58, 45707), (66, 45860), (68, 45929), (71, 45956), (78, 46037), (83, 46079), (87, 46115), (90, 46127), (97, 46184), (102, 46217), (106, 46262), (111, 46280), (118, 46325), (125, 46373), (128, 46406), (134, 46430), (142, 46484), (148, 46511), (153, 46532), (158, 46580), (161, 46601), (170, 46727), (174, 46778), (179, 46799), (180, 46811), (182, 46853), (196, 47003), (199, 47036), (200, 47039), (202, 47090), (204, 47135), (205, 47141), (208, 47183), (214, 47246), (221, 47324), (224, 47381), (225, 47399), (229, 47432), (230, 47435), (232, 47474), (233, 47477), (237, 47558), (238, 47561), (242, 47621), (243, 47645), (246, 47696), (248, 47720), (251, 47744), (262, 47996), (265, 48053), (279, 48311), (281, 48380), (287, 48428), (294, 48515), (296, 48548), (298, 48551),

Gene: Gizmo\_101 Start: 46218, Stop: 50330, Start Num: 3

Candidate Starts for Gizmo\_101:

(Start: 3 @46218 has 170 MA's), (13, 46329), (15, 46353), (28, 46617), (29, 46623), (33, 46689), (36, 46725), (41, 46806), (43, 46842), (45, 46854), (46, 46860), (47, 47061), (58, 47442), (66, 47595), (68, 47664), (71, 47691), (78, 47772), (83, 47814), (87, 47850), (90, 47862), (97, 47919), (102, 47952), (106, 47997), (111, 48015), (118, 48060), (125, 48108), (128, 48141), (134, 48165), (142, 48219), (148, 48246), (153, 48267), (158, 48315), (161, 48336), (170, 48462), (174, 48513), (179, 48534), (180, 48546), (182, 48588), (196, 48738), (199, 48771), (200, 48774), (202, 48825), (204, 48870), (205, 48876), (208, 48918), (214, 48981), (221, 49059), (224, 49116), (225, 49134), (229, 49167), (230, 49170), (232, 49209), (233, 49212), (237, 49293), (238, 49296), (242, 49356), (243, 49380), (246, 49431), (248, 49455), (251, 49479), (262, 49731), (265, 49788), (279, 50046), (281, 50115), (287, 50163), (294, 50250), (296, 50283), (298, 50286),

Gene: Grasshills\_104 Start: 47262, Stop: 51122, Start Num: 3

Candidate Starts for Grasshills\_104:

(Start: 3 @47262 has 170 MA's), (13, 47373), (28, 47661), (29, 47667), (33, 47733), (36, 47769), (41, 47850), (43, 47886), (45, 47898), (46, 47904), (61, 48246), (63, 48282), (68, 48402), (76, 48486), (78, 48516), (82, 48549), (83, 48558), (91, 48654), (93, 48672), (102, 48744), (106, 48789), (111, 48807), (118, 48852), (125, 48900), (128, 48933), (134, 48957), (142, 49011), (148, 49038), (153, 49059), (158, 49107), (161, 49128), (170, 49254), (174, 49305), (179, 49326), (180, 49338), (182, 49380), (196, 49530), (199, 49563), (200, 49566), (202, 49617), (204, 49662), (205, 49668), (208, 49710), (214, 49773), (221, 49851), (224, 49908), (225, 49926), (229, 49959), (230, 49962), (232, 50001), (233, 50004), (237, 50085), (238, 50088), (242, 50148), (243, 50172), (246, 50223), (248, 50247), (251, 50271), (262, 50523), (265, 50580), (279, 50838), (281, 50907), (287, 50955), (294, 51042), (296, 51075), (298, 51078),

Gene: Greely\_99 Start: 46059, Stop: 49655, Start Num: 3

Candidate Starts for Greely\_99:

(Start: 3 @46059 has 170 MA's), (7, 46083), (15, 46194), (19, 46278), (21, 46335), (22, 46338), (29, 46464), (32, 46521), (33, 46530), (38, 46596), (46, 46701), (63, 46899), (68, 47010), (74, 47076), (78, 47124), (82, 47157), (83, 47166), (100, 47232), (121, 47343), (138, 47487), (139, 47496), (140, 47499), (143, 47526), (164, 47652), (167, 47718), (175, 47811), (179, 47832), (188, 47973), (192, 48021), (196, 48051), (202, 48135), (206, 48180), (207, 48186), (212, 48237), (214, 48261), (224, 48393), (225, 48411), (226, 48429), (233, 48483), (239, 48570), (241, 48618), (262, 49053), (264, 49101), (267, 49116), (279, 49353), (281, 49422), (284, 49440), (285, 49455), (288, 49473), (291, 49548), (300, 49644),

Gene: Grungle\_85 Start: 41901, Stop: 45761, Start Num: 3

Candidate Starts for Grungle\_85:

(Start: 3 @41901 has 170 MA's), (13, 42012), (15, 42036), (28, 42300), (29, 42306), (33, 42372), (36, 42408), (41, 42489), (43, 42525), (45, 42537), (46, 42543), (60, 42864), (61, 42885), (63, 42921), (68, 43041), (78, 43155), (82, 43188), (83, 43197), (91, 43293), (93, 43311), (102, 43383), (106, 43428), (111, 43446), (118, 43491), (125, 43539), (128, 43572), (134, 43596), (142, 43650), (148, 43677), (153, 43698), (158, 43746), (161, 43767), (170, 43893), (174, 43944), (179, 43965), (180, 43977), (182, 44019), (196, 44169), (199, 44202), (200, 44205), (202, 44256), (204, 44301), (205, 44307), (208, 44349), (214, 44412), (221, 44490), (224, 44547), (225, 44565), (229, 44598), (230, 44601), (232, 44640), (233, 44643), (237, 44724), (238, 44727), (242, 44787), (243, 44811), (246, 44862), (248, 44886), (251, 44910), (262, 45162), (265, 45219), (279, 45477), (281, 45546), (287, 45594), (294, 45681), (296, 45714), (298, 45717),

Gene: Guwapp\_97 Start: 44608, Stop: 48720, Start Num: 3

Candidate Starts for Guwapp\_97:

(Start: 3 @44608 has 170 MA's), (13, 44719), (15, 44743), (28, 45007), (29, 45013), (33, 45079), (36, 45115), (41, 45196), (43, 45232), (45, 45244), (46, 45250), (47, 45451), (58, 45832), (66, 45985), (68, 46054), (71, 46081), (78, 46162), (83, 46204), (87, 46240), (90, 46252), (97, 46309), (102, 46342),



(106, 46387), (111, 46405), (118, 46450), (125, 46498), (128, 46531), (134, 46555), (142, 46609), (148, 46636), (153, 46657), (158, 46705), (161, 46726), (170, 46852), (174, 46903), (179, 46924), (180, 46936), (182, 46978), (196, 47128), (199, 47161), (200, 47164), (202, 47215), (204, 47260), (205, 47266), (208, 47308), (214, 47371), (221, 47449), (224, 47506), (225, 47524), (229, 47557), (230, 47560), (232, 47599), (233, 47602), (237, 47683), (238, 47686), (242, 47746), (243, 47770), (246, 47821), (248, 47845), (251, 47869), (262, 48121), (265, 48178), (279, 48436), (281, 48505), (287, 48553), (294, 48640), (296, 48673), (298, 48676),

Gene: Halldule\_91 Start: 42931, Stop: 46791, Start Num: 3

Candidate Starts for Halldule\_91:

(Start: 3 @42931 has 170 MA's), (13, 43042), (15, 43066), (28, 43330), (29, 43336), (33, 43402), (36, 43438), (41, 43519), (43, 43555), (45, 43567), (46, 43573), (60, 43894), (61, 43915), (63, 43951), (68, 44071), (78, 44185), (82, 44218), (83, 44227), (91, 44323), (93, 44341), (102, 44413), (106, 44458), (111, 44476), (118, 44521), (125, 44569), (128, 44602), (134, 44626), (142, 44680), (148, 44707), (153, 44728), (158, 44776), (161, 44797), (170, 44923), (174, 44974), (179, 44995), (180, 45007), (182, 45049), (196, 45199), (199, 45232), (200, 45235), (202, 45286), (204, 45331), (205, 45337), (208, 45379), (214, 45442), (221, 45520), (224, 45577), (225, 45595), (229, 45628), (230, 45631), (232, 45670), (233, 45673), (237, 45754), (238, 45757), (242, 45817), (243, 45841), (246, 45892), (248, 45916), (251, 45940), (262, 46192), (265, 46249), (279, 46507), (281, 46576), (287, 46624), (294, 46711), (296, 46744), (298, 46747),

Gene: HyRo\_89 Start: 43430, Stop: 47965, Start Num: 3

Candidate Starts for HyRo\_89:

(Start: 3 @43430 has 170 MA's), (13, 43541), (15, 43565), (28, 43829), (29, 43835), (33, 43901), (36, 43937), (41, 44018), (43, 44054), (45, 44066), (46, 44072), (47, 44273), (48, 44333), (61, 44723), (63, 44759), (68, 44879), (70, 44897), (78, 44993), (82, 45026), (83, 45035), (91, 45131), (93, 45149), (102, 45221), (107, 45341), (109, 45404), (110, 45440), (115, 45488), (119, 45539), (120, 45545), (121, 45548), (126, 45584), (129, 45632), (131, 45650), (135, 45695), (141, 45743), (142, 45776), (149, 45854), (150, 45881), (158, 45950), (161, 45971), (170, 46097), (174, 46148), (179, 46169), (180, 46181), (182, 46223), (196, 46373), (199, 46406), (200, 46409), (202, 46460), (204, 46505), (205, 46511), (208, 46553), (214, 46616), (221, 46694), (224, 46751), (225, 46769), (229, 46802), (230, 46805), (232, 46844), (233, 46847), (237, 46928), (238, 46931), (242, 46991), (243, 47015), (246, 47066), (248, 47090), (251, 47114), (262, 47366), (265, 47423), (279, 47681), (281, 47750), (287, 47798), (294, 47885), (296, 47918), (298, 47921),

Gene: I3\_103 Start: 45365, Stop: 49591, Start Num: 3

Candidate Starts for I3\_103:

(Start: 3 @45365 has 170 MA's), (13, 45476), (15, 45500), (28, 45764), (29, 45770), (33, 45836), (36, 45872), (41, 45953), (45, 46001), (46, 46007), (61, 46349), (63, 46385), (68, 46505), (70, 46523), (78, 46619), (82, 46652), (83, 46661), (91, 46757), (93, 46775), (102, 46847), (107, 46967), (109, 47030), (110, 47066), (115, 47114), (119, 47165), (120, 47171), (121, 47174), (126, 47210), (129, 47258), (131, 47276), (135, 47321), (141, 47369), (142, 47402), (144, 47426), (149, 47480), (150, 47507), (153, 47528), (158, 47576), (161, 47597), (170, 47723), (174, 47774), (179, 47795), (180, 47807), (182, 47849), (196, 47999), (199, 48032), (200, 48035), (202, 48086), (204, 48131), (205, 48137), (208, 48179), (214, 48242), (221, 48320), (224, 48377), (225, 48395), (229, 48428), (230, 48431), (232, 48470), (233, 48473), (237, 48554), (238, 48557), (242, 48617), (243, 48641), (246, 48692), (248, 48716), (251, 48740), (262, 48992), (265, 49049), (279, 49307), (281, 49376), (287, 49424), (294, 49511), (296, 49544), (298, 49547),

Gene: IkeLoa\_91 Start: 43600, Stop: 47769, Start Num: 3

Candidate Starts for IkeLoa\_91:

(Start: 3 @43600 has 170 MA's), (13, 43711), (15, 43735), (28, 43999), (29, 44005), (33, 44071), (36, 44107), (41, 44188), (43, 44224), (45, 44236), (46, 44242), (47, 44443), (48, 44503), (61, 44893), (63,

44929), (68, 45049), (70, 45067), (78, 45163), (82, 45196), (83, 45205), (91, 45301), (93, 45319), (102, 45391), (106, 45436), (111, 45454), (118, 45499), (125, 45547), (128, 45580), (134, 45604), (142, 45658), (148, 45685), (153, 45706), (158, 45754), (161, 45775), (170, 45901), (174, 45952), (179, 45973), (180, 45985), (182, 46027), (196, 46177), (199, 46210), (200, 46213), (202, 46264), (204, 46309), (205, 46315), (208, 46357), (214, 46420), (221, 46498), (224, 46555), (225, 46573), (229, 46606), (230, 46609), (232, 46648), (233, 46651), (237, 46732), (238, 46735), (242, 46795), (243, 46819), (246, 46870), (248, 46894), (251, 46918), (262, 47170), (265, 47227), (279, 47485), (281, 47554), (287, 47602), (294, 47689), (296, 47722), (298, 47725),

Gene: InigoMontoya\_99 Start: 44444, Stop: 48556, Start Num: 3

Candidate Starts for InigoMontoya\_99:

(Start: 3 @44444 has 170 MA's), (13, 44555), (15, 44579), (28, 44843), (29, 44849), (33, 44915), (36, 44951), (41, 45032), (43, 45068), (45, 45080), (46, 45086), (47, 45287), (58, 45668), (66, 45821), (68, 45890), (71, 45917), (78, 45998), (83, 46040), (87, 46076), (90, 46088), (97, 46145), (102, 46178), (106, 46223), (111, 46241), (118, 46286), (125, 46334), (128, 46367), (134, 46391), (142, 46445), (148, 46472), (153, 46493), (158, 46541), (161, 46562), (170, 46688), (174, 46739), (179, 46760), (180, 46772), (182, 46814), (196, 46964), (199, 46997), (200, 47000), (202, 47051), (204, 47096), (205, 47102), (208, 47144), (214, 47207), (221, 47285), (224, 47342), (225, 47360), (229, 47393), (230, 47396), (232, 47435), (233, 47438), (237, 47519), (238, 47522), (242, 47582), (243, 47606), (246, 47657), (248, 47681), (251, 47705), (262, 47957), (265, 48014), (279, 48272), (281, 48341), (287, 48389), (294, 48476), (296, 48509), (298, 48512),

Gene: InterFolia\_106 Start: 47458, Stop: 51570, Start Num: 3

Candidate Starts for InterFolia\_106:

(Start: 3 @47458 has 170 MA's), (13, 47569), (15, 47593), (28, 47857), (29, 47863), (33, 47929), (36, 47965), (41, 48046), (43, 48082), (45, 48094), (46, 48100), (47, 48301), (58, 48682), (66, 48835), (68, 48904), (71, 48931), (78, 49012), (83, 49054), (87, 49090), (90, 49102), (97, 49159), (102, 49192), (106, 49237), (111, 49255), (118, 49300), (125, 49348), (128, 49381), (134, 49405), (142, 49459), (148, 49486), (153, 49507), (158, 49555), (161, 49576), (170, 49702), (174, 49753), (179, 49774), (180, 49786), (182, 49828), (196, 49978), (199, 50011), (200, 50014), (202, 50065), (204, 50110), (205, 50116), (208, 50158), (214, 50221), (221, 50299), (224, 50356), (225, 50374), (229, 50407), (230, 50410), (232, 50449), (233, 50452), (237, 50533), (238, 50536), (242, 50596), (243, 50620), (246, 50671), (248, 50695), (251, 50719), (262, 50971), (265, 51028), (279, 51286), (281, 51355), (287, 51403), (294, 51490), (296, 51523), (298, 51526),

Gene: Iota\_92 Start: 44260, Stop: 48120, Start Num: 3

Candidate Starts for Iota\_92:

(Start: 3 @44260 has 170 MA's), (13, 44371), (15, 44395), (28, 44659), (29, 44665), (33, 44731), (36, 44767), (41, 44848), (45, 44896), (46, 44902), (60, 45223), (61, 45244), (63, 45280), (68, 45400), (70, 45418), (78, 45514), (82, 45547), (83, 45556), (91, 45652), (93, 45670), (102, 45742), (106, 45787), (111, 45805), (118, 45850), (125, 45898), (128, 45931), (134, 45955), (142, 46009), (148, 46036), (153, 46057), (158, 46105), (161, 46126), (170, 46252), (174, 46303), (179, 46324), (180, 46336), (182, 46378), (196, 46528), (199, 46561), (200, 46564), (202, 46615), (204, 46660), (205, 46666), (208, 46708), (214, 46771), (221, 46849), (224, 46906), (225, 46924), (229, 46957), (230, 46960), (232, 46999), (233, 47002), (237, 47083), (238, 47086), (242, 47146), (243, 47170), (246, 47221), (248, 47245), (251, 47269), (262, 47521), (265, 47578), (279, 47836), (281, 47905), (287, 47953), (294, 48040), (296, 48073), (298, 48076),

Gene: Issimir\_96 Start: 45014, Stop: 49123, Start Num: 3

Candidate Starts for Issimir\_96:

(Start: 3 @45014 has 170 MA's), (13, 45125), (15, 45149), (28, 45413), (29, 45419), (33, 45485), (36, 45521), (41, 45602), (43, 45638), (45, 45650), (46, 45656), (47, 45857), (48, 45917), (58, 46235), (66, 46388), (68, 46457), (71, 46484), (78, 46565), (83, 46607), (87, 46643), (90, 46655), (97, 46712),

(102, 46745), (106, 46790), (111, 46808), (118, 46853), (125, 46901), (128, 46934), (134, 46958), (142, 47012), (148, 47039), (153, 47060), (158, 47108), (161, 47129), (170, 47255), (174, 47306), (179, 47327), (180, 47339), (182, 47381), (196, 47531), (199, 47564), (200, 47567), (202, 47618), (204, 47663), (205, 47669), (208, 47711), (214, 47774), (221, 47852), (224, 47909), (225, 47927), (229, 47960), (230, 47963), (232, 48002), (233, 48005), (237, 48086), (238, 48089), (242, 48149), (243, 48173), (246, 48224), (248, 48248), (251, 48272), (262, 48524), (265, 48581), (279, 48839), (281, 48908), (287, 48956), (294, 49043), (296, 49076), (298, 49079),

Gene: Izajani\_97 Start: 45251, Stop: 49360, Start Num: 3

Candidate Starts for Izajani\_97:

(Start: 3 @45251 has 170 MA's), (13, 45362), (15, 45386), (28, 45650), (29, 45656), (33, 45722), (36, 45758), (41, 45839), (43, 45875), (45, 45887), (46, 45893), (47, 46094), (48, 46154), (58, 46472), (66, 46625), (68, 46694), (71, 46721), (78, 46802), (83, 46844), (87, 46880), (90, 46892), (97, 46949), (102, 46982), (106, 47027), (111, 47045), (118, 47090), (125, 47138), (128, 47171), (142, 47249), (148, 47276), (158, 47345), (161, 47366), (170, 47492), (174, 47543), (179, 47564), (180, 47576), (182, 47618), (196, 47768), (199, 47801), (200, 47804), (202, 47855), (204, 47900), (205, 47906), (208, 47948), (214, 48011), (221, 48089), (224, 48146), (225, 48164), (229, 48197), (230, 48200), (232, 48239), (233, 48242), (237, 48323), (238, 48326), (242, 48386), (243, 48410), (246, 48461), (248, 48485), (251, 48509), (262, 48761), (265, 48818), (279, 49076), (281, 49145), (287, 49193), (294, 49280), (296, 49313), (298, 49316),

Gene: JPickles\_96 Start: 43714, Stop: 47826, Start Num: 3

Candidate Starts for JPickles\_96:

(Start: 3 @43714 has 170 MA's), (13, 43825), (15, 43849), (28, 44113), (29, 44119), (33, 44185), (36, 44221), (41, 44302), (43, 44338), (45, 44350), (46, 44356), (47, 44557), (58, 44938), (66, 45091), (68, 45160), (71, 45187), (78, 45268), (83, 45310), (87, 45346), (90, 45358), (97, 45415), (102, 45448), (106, 45493), (111, 45511), (118, 45556), (125, 45604), (128, 45637), (134, 45661), (142, 45715), (148, 45742), (153, 45763), (158, 45811), (161, 45832), (170, 45958), (174, 46009), (179, 46030), (180, 46042), (182, 46084), (196, 46234), (199, 46267), (200, 46270), (202, 46321), (204, 46366), (205, 46372), (208, 46414), (214, 46477), (221, 46555), (224, 46612), (225, 46630), (229, 46663), (230, 46666), (232, 46705), (233, 46708), (237, 46789), (238, 46792), (242, 46852), (243, 46876), (246, 46927), (248, 46951), (251, 46975), (262, 47227), (265, 47284), (279, 47542), (281, 47611), (287, 47659), (294, 47746), (296, 47779), (298, 47782),

Gene: Janiyra\_99 Start: 44529, Stop: 48638, Start Num: 3

Candidate Starts for Janiyra\_99:

(Start: 3 @44529 has 170 MA's), (13, 44640), (15, 44664), (28, 44928), (29, 44934), (33, 45000), (36, 45036), (41, 45117), (43, 45153), (45, 45165), (46, 45171), (47, 45372), (48, 45432), (58, 45750), (66, 45903), (68, 45972), (71, 45999), (78, 46080), (83, 46122), (87, 46158), (90, 46170), (97, 46227), (102, 46260), (106, 46305), (111, 46323), (118, 46368), (125, 46416), (128, 46449), (142, 46527), (148, 46554), (158, 46623), (161, 46644), (170, 46770), (174, 46821), (179, 46842), (180, 46854), (182, 46896), (196, 47046), (199, 47079), (200, 47082), (202, 47133), (204, 47178), (205, 47184), (208, 47226), (214, 47289), (221, 47367), (224, 47424), (225, 47442), (229, 47475), (230, 47478), (232, 47517), (233, 47520), (237, 47601), (238, 47604), (242, 47664), (243, 47688), (246, 47739), (248, 47763), (251, 47787), (262, 48039), (265, 48096), (279, 48354), (281, 48423), (287, 48471), (294, 48558), (296, 48591), (298, 48594),

Gene: JayJay\_99 Start: 46545, Stop: 50405, Start Num: 3

Candidate Starts for JayJay\_99:

(Start: 3 @46545 has 170 MA's), (13, 46656), (15, 46680), (28, 46944), (29, 46950), (33, 47016), (36, 47052), (41, 47133), (43, 47169), (45, 47181), (46, 47187), (60, 47508), (61, 47529), (63, 47565), (68, 47685), (78, 47799), (82, 47832), (83, 47841), (91, 47937), (93, 47955), (102, 48027), (106, 48072), (111, 48090), (118, 48135), (125, 48183), (128, 48216), (134, 48240), (142, 48294), (148, 48321),

(153, 48342), (158, 48390), (161, 48411), (170, 48537), (174, 48588), (179, 48609), (180, 48621), (182, 48663), (196, 48813), (199, 48846), (200, 48849), (202, 48900), (204, 48945), (205, 48951), (208, 48993), (214, 49056), (221, 49134), (224, 49191), (225, 49209), (229, 49242), (230, 49245), (232, 49284), (233, 49287), (237, 49368), (238, 49371), (242, 49431), (243, 49455), (246, 49506), (248, 49530), (251, 49554), (262, 49806), (265, 49863), (279, 50121), (281, 50190), (287, 50238), (294, 50325), (296, 50358), (298, 50361),

Gene: Jaygup\_98 Start: 45239, Stop: 49351, Start Num: 3

Candidate Starts for Jaygup\_98:

(Start: 3 @45239 has 170 MA's), (13, 45350), (15, 45374), (28, 45638), (29, 45644), (33, 45710), (36, 45746), (41, 45827), (43, 45863), (45, 45875), (46, 45881), (47, 46082), (58, 46463), (66, 46616), (68, 46685), (71, 46712), (78, 46793), (83, 46835), (87, 46871), (90, 46883), (97, 46940), (102, 46973), (106, 47018), (111, 47036), (118, 47081), (125, 47129), (128, 47162), (134, 47186), (142, 47240), (148, 47267), (153, 47288), (158, 47336), (161, 47357), (170, 47483), (174, 47534), (179, 47555), (180, 47567), (182, 47609), (196, 47759), (199, 47792), (200, 47795), (202, 47846), (204, 47891), (205, 47897), (208, 47939), (214, 48002), (221, 48080), (224, 48137), (225, 48155), (229, 48188), (230, 48191), (232, 48230), (233, 48233), (237, 48314), (238, 48317), (242, 48377), (243, 48401), (246, 48452), (248, 48476), (251, 48500), (262, 48752), (265, 48809), (279, 49067), (281, 49136), (287, 49184), (294, 49271), (296, 49304), (298, 49307),

Gene: JeanGrey\_30 Start: 18216, Stop: 20945, Start Num: 64

Candidate Starts for JeanGrey\_30:

(64, 18216), (83, 18456), (104, 18618), (105, 18624), (124, 18753), (136, 18852), (151, 18933), (163, 19029), (166, 19092), (186, 19317), (216, 19635), (252, 20133), (256, 20223), (275, 20586), (278, 20673), (279, 20685), (282, 20757),

Gene: Jedediah\_101 Start: 45772, Stop: 49884, Start Num: 3

Candidate Starts for Jedediah\_101:

(Start: 3 @45772 has 170 MA's), (13, 45883), (15, 45907), (28, 46171), (29, 46177), (33, 46243), (36, 46279), (41, 46360), (43, 46396), (45, 46408), (46, 46414), (47, 46615), (58, 46996), (66, 47149), (68, 47218), (71, 47245), (78, 47326), (83, 47368), (87, 47404), (90, 47416), (97, 47473), (102, 47506), (106, 47551), (111, 47569), (118, 47614), (125, 47662), (128, 47695), (134, 47719), (142, 47773), (148, 47800), (153, 47821), (158, 47869), (161, 47890), (170, 48016), (174, 48067), (179, 48088), (180, 48100), (182, 48142), (196, 48292), (199, 48325), (200, 48328), (202, 48379), (204, 48424), (205, 48430), (208, 48472), (214, 48535), (221, 48613), (224, 48670), (225, 48688), (229, 48721), (230, 48724), (232, 48763), (233, 48766), (237, 48847), (238, 48850), (242, 48910), (243, 48934), (246, 48985), (248, 49009), (251, 49033), (262, 49285), (265, 49342), (279, 49600), (281, 49669), (287, 49717), (294, 49804), (296, 49837), (298, 49840),

Gene: Jemmno\_98 Start: 45219, Stop: 49331, Start Num: 3

Candidate Starts for Jemmno\_98:

(Start: 3 @45219 has 170 MA's), (13, 45330), (15, 45354), (28, 45618), (29, 45624), (33, 45690), (36, 45726), (41, 45807), (43, 45843), (45, 45855), (46, 45861), (47, 46062), (58, 46443), (66, 46596), (68, 46665), (71, 46692), (78, 46773), (83, 46815), (87, 46851), (90, 46863), (97, 46920), (102, 46953), (106, 46998), (111, 47016), (118, 47061), (125, 47109), (128, 47142), (134, 47166), (142, 47220), (148, 47247), (153, 47268), (158, 47316), (161, 47337), (170, 47463), (174, 47514), (179, 47535), (180, 47547), (182, 47589), (196, 47739), (199, 47772), (200, 47775), (202, 47826), (204, 47871), (205, 47877), (208, 47919), (214, 47982), (221, 48060), (224, 48117), (225, 48135), (229, 48168), (230, 48171), (232, 48210), (233, 48213), (237, 48294), (238, 48297), (242, 48357), (243, 48381), (246, 48432), (248, 48456), (251, 48480), (262, 48732), (265, 48789), (279, 49047), (281, 49116), (287, 49164), (294, 49251), (296, 49284), (298, 49287),

Gene: Jessibeth14\_96 Start: 44856, Stop: 48965, Start Num: 3

Candidate Starts for Jessibeth14\_96:

(Start: 3 @44856 has 170 MA's), (13, 44967), (15, 44991), (28, 45255), (29, 45261), (33, 45327), (36, 45363), (41, 45444), (43, 45480), (45, 45492), (46, 45498), (47, 45699), (48, 45759), (58, 46077), (66, 46230), (68, 46299), (71, 46326), (78, 46407), (83, 46449), (87, 46485), (90, 46497), (97, 46554), (102, 46587), (106, 46632), (111, 46650), (118, 46695), (125, 46743), (128, 46776), (142, 46854), (148, 46881), (158, 46950), (161, 46971), (170, 47097), (174, 47148), (179, 47169), (180, 47181), (182, 47223), (196, 47373), (199, 47406), (200, 47409), (202, 47460), (204, 47505), (205, 47511), (208, 47553), (214, 47616), (221, 47694), (224, 47751), (225, 47769), (229, 47802), (230, 47805), (232, 47844), (233, 47847), (237, 47928), (238, 47931), (242, 47991), (243, 48015), (246, 48066), (248, 48090), (251, 48114), (262, 48366), (265, 48423), (279, 48681), (281, 48750), (287, 48798), (294, 48885), (296, 48918), (298, 48921),

Gene: JulietS\_92 Start: 42782, Stop: 46642, Start Num: 3

Candidate Starts for JulietS\_92:

(Start: 3 @42782 has 170 MA's), (13, 42893), (15, 42917), (28, 43181), (29, 43187), (33, 43253), (36, 43289), (41, 43370), (43, 43406), (45, 43418), (46, 43424), (60, 43745), (61, 43766), (63, 43802), (68, 43922), (78, 44036), (82, 44069), (83, 44078), (91, 44174), (93, 44192), (102, 44264), (106, 44309), (111, 44327), (118, 44372), (125, 44420), (128, 44453), (134, 44477), (142, 44531), (148, 44558), (153, 44579), (158, 44627), (161, 44648), (170, 44774), (174, 44825), (179, 44846), (180, 44858), (182, 44900), (196, 45050), (199, 45083), (200, 45086), (202, 45137), (204, 45182), (205, 45188), (208, 45230), (214, 45293), (221, 45371), (224, 45428), (225, 45446), (229, 45479), (230, 45482), (232, 45521), (233, 45524), (237, 45605), (238, 45608), (242, 45668), (243, 45692), (246, 45743), (248, 45767), (251, 45791), (262, 46043), (265, 46100), (279, 46358), (281, 46427), (287, 46475), (294, 46562), (296, 46595), (298, 46598),

Gene: JustHall\_94 Start: 44391, Stop: 48503, Start Num: 3

Candidate Starts for JustHall\_94:

(Start: 3 @44391 has 170 MA's), (13, 44502), (15, 44526), (28, 44790), (29, 44796), (33, 44862), (36, 44898), (41, 44979), (43, 45015), (45, 45027), (46, 45033), (47, 45234), (58, 45615), (66, 45768), (68, 45837), (71, 45864), (78, 45945), (83, 45987), (87, 46023), (90, 46035), (97, 46092), (102, 46125), (106, 46170), (111, 46188), (118, 46233), (125, 46281), (128, 46314), (134, 46338), (142, 46392), (148, 46419), (153, 46440), (158, 46488), (161, 46509), (170, 46635), (174, 46686), (179, 46707), (180, 46719), (182, 46761), (196, 46911), (199, 46944), (200, 46947), (202, 46998), (204, 47043), (205, 47049), (208, 47091), (214, 47154), (221, 47232), (224, 47289), (225, 47307), (229, 47340), (230, 47343), (232, 47382), (233, 47385), (237, 47466), (238, 47469), (242, 47529), (243, 47553), (246, 47604), (248, 47628), (251, 47652), (262, 47904), (265, 47961), (279, 48219), (281, 48288), (287, 48336), (294, 48423), (296, 48456), (298, 48459),

Gene: Kamryn\_97 Start: 45595, Stop: 49764, Start Num: 3

Candidate Starts for Kamryn\_97:

(Start: 3 @45595 has 170 MA's), (13, 45706), (15, 45730), (28, 45994), (29, 46000), (33, 46066), (36, 46102), (41, 46183), (43, 46219), (45, 46231), (46, 46237), (47, 46438), (48, 46498), (61, 46888), (63, 46924), (68, 47044), (70, 47062), (78, 47158), (82, 47191), (83, 47200), (91, 47296), (93, 47314), (102, 47386), (106, 47431), (111, 47449), (118, 47494), (125, 47542), (128, 47575), (134, 47599), (142, 47653), (148, 47680), (153, 47701), (158, 47749), (161, 47770), (170, 47896), (174, 47947), (179, 47968), (180, 47980), (182, 48022), (196, 48172), (199, 48205), (200, 48208), (202, 48259), (204, 48304), (205, 48310), (208, 48352), (214, 48415), (221, 48493), (224, 48550), (225, 48568), (229, 48601), (230, 48604), (232, 48643), (233, 48646), (237, 48727), (238, 48730), (242, 48790), (243, 48814), (246, 48865), (248, 48889), (251, 48913), (262, 49165), (265, 49222), (279, 49480), (281, 49549), (287, 49597), (294, 49684), (296, 49717), (298, 49720),

Gene: Kboogie\_101 Start: 44035, Stop: 48144, Start Num: 3

Candidate Starts for Kboogie\_101:

(Start: 3 @44035 has 170 MA's), (13, 44146), (15, 44170), (28, 44434), (29, 44440), (33, 44506), (36, 44542), (41, 44623), (43, 44659), (45, 44671), (46, 44677), (47, 44878), (48, 44938), (58, 45256), (66, 45409), (68, 45478), (71, 45505), (78, 45586), (83, 45628), (87, 45664), (90, 45676), (97, 45733), (102, 45766), (106, 45811), (111, 45829), (118, 45874), (125, 45922), (128, 45955), (142, 46033), (148, 46060), (158, 46129), (161, 46150), (170, 46276), (174, 46327), (179, 46348), (180, 46360), (182, 46402), (196, 46552), (199, 46585), (200, 46588), (202, 46639), (204, 46684), (205, 46690), (208, 46732), (214, 46795), (221, 46873), (224, 46930), (225, 46948), (229, 46981), (230, 46984), (232, 47023), (233, 47026), (237, 47107), (238, 47110), (242, 47170), (243, 47194), (246, 47245), (248, 47269), (251, 47293), (262, 47545), (265, 47602), (279, 47860), (281, 47929), (287, 47977), (294, 48064), (296, 48097), (298, 48100),

Gene: Khaleesi\_96 Start: 44818, Stop: 48927, Start Num: 3

Candidate Starts for Khaleesi\_96:

(Start: 3 @44818 has 170 MA's), (13, 44929), (15, 44953), (28, 45217), (29, 45223), (33, 45289), (36, 45325), (41, 45406), (43, 45442), (45, 45454), (46, 45460), (47, 45661), (48, 45721), (58, 46039), (66, 46192), (68, 46261), (71, 46288), (78, 46369), (83, 46411), (87, 46447), (90, 46459), (97, 46516), (102, 46549), (106, 46594), (111, 46612), (118, 46657), (125, 46705), (128, 46738), (142, 46816), (148, 46843), (158, 46912), (161, 46933), (170, 47059), (174, 47110), (179, 47131), (180, 47143), (182, 47185), (196, 47335), (199, 47368), (200, 47371), (202, 47422), (204, 47467), (205, 47473), (208, 47515), (214, 47578), (221, 47656), (224, 47713), (225, 47731), (229, 47764), (230, 47767), (232, 47806), (233, 47809), (237, 47890), (238, 47893), (242, 47953), (243, 47977), (246, 48028), (248, 48052), (251, 48076), (262, 48328), (265, 48385), (279, 48643), (281, 48712), (287, 48760), (294, 48847), (296, 48880), (298, 48883),

Gene: Koguma\_94 Start: 43002, Stop: 46862, Start Num: 3

Candidate Starts for Koguma\_94:

(Start: 3 @43002 has 170 MA's), (13, 43113), (15, 43137), (28, 43401), (29, 43407), (33, 43473), (36, 43509), (41, 43590), (45, 43638), (46, 43644), (60, 43965), (61, 43986), (63, 44022), (68, 44142), (78, 44256), (82, 44289), (83, 44298), (91, 44394), (93, 44412), (102, 44484), (106, 44529), (111, 44547), (118, 44592), (125, 44640), (128, 44673), (134, 44697), (142, 44751), (148, 44778), (153, 44799), (158, 44847), (161, 44868), (170, 44994), (174, 45045), (179, 45066), (180, 45078), (182, 45120), (196, 45270), (199, 45303), (200, 45306), (202, 45357), (204, 45402), (205, 45408), (208, 45450), (214, 45513), (221, 45591), (224, 45648), (225, 45666), (229, 45699), (230, 45702), (232, 45741), (233, 45744), (237, 45825), (238, 45828), (242, 45888), (243, 45912), (246, 45963), (248, 45987), (251, 46011), (262, 46263), (265, 46320), (279, 46578), (281, 46647), (287, 46695), (294, 46782), (296, 46815), (298, 46818),

Gene: LRRHood\_92 Start: 44821, Stop: 48681, Start Num: 3

Candidate Starts for LRRHood\_92:

(Start: 3 @44821 has 170 MA's), (13, 44932), (15, 44956), (28, 45220), (29, 45226), (33, 45292), (36, 45328), (41, 45409), (43, 45445), (45, 45457), (46, 45463), (60, 45784), (61, 45805), (63, 45841), (68, 45961), (78, 46075), (82, 46108), (83, 46117), (91, 46213), (93, 46231), (102, 46303), (106, 46348), (111, 46366), (118, 46411), (125, 46459), (128, 46492), (134, 46516), (142, 46570), (148, 46597), (153, 46618), (158, 46666), (161, 46687), (170, 46813), (174, 46864), (179, 46885), (180, 46897), (182, 46939), (196, 47089), (199, 47122), (200, 47125), (202, 47176), (204, 47221), (205, 47227), (208, 47269), (214, 47332), (221, 47410), (224, 47467), (225, 47485), (229, 47518), (230, 47521), (232, 47560), (233, 47563), (237, 47644), (238, 47647), (242, 47707), (243, 47731), (246, 47782), (248, 47806), (251, 47830), (262, 48082), (265, 48139), (279, 48397), (281, 48466), (287, 48514), (294, 48601), (296, 48634), (298, 48637),

Gene: Latch\_98 Start: 44483, Stop: 48595, Start Num: 3

Candidate Starts for Latch\_98:

(Start: 3 @44483 has 170 MA's), (13, 44594), (15, 44618), (28, 44882), (29, 44888), (33, 44954), (36, 44990), (41, 45071), (43, 45107), (45, 45119), (46, 45125), (47, 45326), (58, 45707), (66, 45860), (68, 45929), (71, 45956), (78, 46037), (83, 46079), (87, 46115), (90, 46127), (97, 46184), (102, 46217), (106, 46262), (111, 46280), (118, 46325), (125, 46373), (128, 46406), (134, 46430), (142, 46484), (148, 46511), (153, 46532), (158, 46580), (161, 46601), (170, 46727), (174, 46778), (179, 46799), (180, 46811), (182, 46853), (196, 47003), (199, 47036), (200, 47039), (202, 47090), (204, 47135), (205, 47141), (208, 47183), (214, 47246), (221, 47324), (224, 47381), (225, 47399), (229, 47432), (230, 47435), (232, 47474), (233, 47477), (237, 47558), (238, 47561), (242, 47621), (243, 47645), (246, 47696), (248, 47720), (251, 47744), (262, 47996), (265, 48053), (279, 48311), (281, 48380), (287, 48428), (294, 48515), (296, 48548), (298, 48551),

Gene: Lee7\_95 Start: 45452, Stop: 49561, Start Num: 3

Candidate Starts for Lee7\_95:

(Start: 3 @45452 has 170 MA's), (13, 45563), (15, 45587), (28, 45851), (29, 45857), (33, 45923), (36, 45959), (41, 46040), (43, 46076), (45, 46088), (46, 46094), (47, 46295), (48, 46355), (58, 46673), (66, 46826), (68, 46895), (71, 46922), (78, 47003), (83, 47045), (87, 47081), (90, 47093), (97, 47150), (102, 47183), (106, 47228), (111, 47246), (118, 47291), (125, 47339), (128, 47372), (142, 47450), (148, 47477), (158, 47546), (161, 47567), (170, 47693), (174, 47744), (179, 47765), (180, 47777), (182, 47819), (196, 47969), (199, 48002), (200, 48005), (202, 48056), (204, 48101), (205, 48107), (208, 48149), (214, 48212), (221, 48290), (224, 48347), (225, 48365), (229, 48398), (230, 48401), (232, 48440), (233, 48443), (237, 48524), (238, 48527), (242, 48587), (243, 48611), (246, 48662), (248, 48686), (251, 48710), (262, 48962), (265, 49019), (279, 49277), (281, 49346), (287, 49394), (294, 49481), (296, 49514), (298, 49517),

Gene: LifeSavor\_97 Start: 45171, Stop: 49283, Start Num: 3

Candidate Starts for LifeSavor\_97:

(Start: 3 @45171 has 170 MA's), (13, 45282), (15, 45306), (28, 45570), (29, 45576), (33, 45642), (36, 45678), (41, 45759), (43, 45795), (45, 45807), (46, 45813), (47, 46014), (58, 46395), (66, 46548), (68, 46617), (71, 46644), (78, 46725), (83, 46767), (87, 46803), (90, 46815), (97, 46872), (102, 46905), (106, 46950), (111, 46968), (118, 47013), (125, 47061), (128, 47094), (134, 47118), (142, 47172), (148, 47199), (153, 47220), (158, 47268), (161, 47289), (170, 47415), (174, 47466), (179, 47487), (180, 47499), (182, 47541), (196, 47691), (199, 47724), (200, 47727), (202, 47778), (204, 47823), (205, 47829), (208, 47871), (214, 47934), (221, 48012), (224, 48069), (225, 48087), (229, 48120), (230, 48123), (232, 48162), (233, 48165), (237, 48246), (238, 48249), (242, 48309), (243, 48333), (246, 48384), (248, 48408), (251, 48432), (262, 48684), (265, 48741), (279, 48999), (281, 49068), (287, 49116), (294, 49203), (296, 49236), (298, 49239),

Gene: LinStu\_97 Start: 45409, Stop: 49269, Start Num: 3

Candidate Starts for LinStu\_97:

(Start: 3 @45409 has 170 MA's), (13, 45520), (15, 45544), (28, 45808), (29, 45814), (33, 45880), (36, 45916), (41, 45997), (43, 46033), (45, 46045), (46, 46051), (60, 46372), (61, 46393), (63, 46429), (68, 46549), (78, 46663), (82, 46696), (83, 46705), (91, 46801), (93, 46819), (102, 46891), (106, 46936), (111, 46954), (118, 46999), (125, 47047), (128, 47080), (134, 47104), (142, 47158), (148, 47185), (153, 47206), (158, 47254), (161, 47275), (170, 47401), (174, 47452), (179, 47473), (180, 47485), (182, 47527), (196, 47677), (199, 47710), (200, 47713), (202, 47764), (204, 47809), (205, 47815), (208, 47857), (214, 47920), (221, 47998), (224, 48055), (225, 48073), (229, 48106), (230, 48109), (232, 48148), (233, 48151), (237, 48232), (238, 48235), (242, 48295), (243, 48319), (246, 48370), (248, 48394), (251, 48418), (262, 48670), (265, 48727), (279, 48985), (281, 49054), (287, 49102), (294, 49189), (296, 49222), (298, 49225),

Gene: Littleton\_97 Start: 44390, Stop: 48502, Start Num: 3

Candidate Starts for Littleton\_97:

(Start: 3 @44390 has 170 MA's), (13, 44501), (15, 44525), (28, 44789), (29, 44795), (33, 44861), (36, 44897), (41, 44978), (43, 45014), (45, 45026), (46, 45032), (47, 45233), (58, 45614), (66, 45767), (68, 45836), (71, 45863), (78, 45944), (83, 45986), (87, 46022), (90, 46034), (97, 46091), (102, 46124), (106, 46169), (111, 46187), (118, 46232), (125, 46280), (128, 46313), (142, 46391), (148, 46418), (153, 46439), (158, 46487), (161, 46508), (170, 46634), (174, 46685), (179, 46706), (180, 46718), (182, 46760), (196, 46910), (199, 46943), (200, 46946), (202, 46997), (204, 47042), (205, 47048), (208, 47090), (214, 47153), (221, 47231), (224, 47288), (225, 47306), (229, 47339), (230, 47342), (232, 47381), (233, 47384), (237, 47465), (238, 47468), (242, 47528), (243, 47552), (246, 47603), (248, 47627), (251, 47651), (262, 47903), (265, 47960), (279, 48218), (281, 48287), (287, 48335), (294, 48422), (296, 48455), (298, 48458),

Gene: Loanshark\_97 Start: 45041, Stop: 49150, Start Num: 3

Candidate Starts for Loanshark\_97:

(Start: 3 @45041 has 170 MA's), (13, 45152), (15, 45176), (28, 45440), (29, 45446), (33, 45512), (36, 45548), (41, 45629), (43, 45665), (45, 45677), (46, 45683), (47, 45884), (48, 45944), (58, 46262), (66, 46415), (68, 46484), (71, 46511), (78, 46592), (83, 46634), (87, 46670), (90, 46682), (97, 46739), (102, 46772), (106, 46817), (111, 46835), (118, 46880), (125, 46928), (128, 46961), (142, 47039), (148, 47066), (158, 47135), (161, 47156), (170, 47282), (174, 47333), (179, 47354), (180, 47366), (182, 47408), (196, 47558), (199, 47591), (200, 47594), (202, 47645), (204, 47690), (205, 47696), (208, 47738), (214, 47801), (221, 47879), (224, 47936), (225, 47954), (229, 47987), (230, 47990), (232, 48029), (233, 48032), (237, 48113), (238, 48116), (242, 48176), (243, 48200), (246, 48251), (248, 48275), (251, 48299), (262, 48551), (265, 48608), (279, 48866), (281, 48935), (287, 48983), (294, 49070), (296, 49103), (298, 49106),

Gene: LolaVinca\_99 Start: 46177, Stop: 50289, Start Num: 3

Candidate Starts for LolaVinca\_99:

(Start: 3 @46177 has 170 MA's), (13, 46288), (15, 46312), (28, 46576), (29, 46582), (33, 46648), (36, 46684), (41, 46765), (43, 46801), (45, 46813), (46, 46819), (47, 47020), (58, 47401), (66, 47554), (68, 47623), (71, 47650), (78, 47731), (83, 47773), (87, 47809), (90, 47821), (97, 47878), (102, 47911), (106, 47956), (111, 47974), (118, 48019), (125, 48067), (128, 48100), (134, 48124), (142, 48178), (148, 48205), (153, 48226), (158, 48274), (161, 48295), (170, 48421), (174, 48472), (179, 48493), (180, 48505), (182, 48547), (196, 48697), (199, 48730), (200, 48733), (202, 48784), (204, 48829), (205, 48835), (208, 48877), (214, 48940), (221, 49018), (224, 49075), (225, 49093), (229, 49126), (230, 49129), (232, 49168), (233, 49171), (237, 49252), (238, 49255), (242, 49315), (243, 49339), (246, 49390), (248, 49414), (251, 49438), (262, 49690), (265, 49747), (279, 50005), (281, 50074), (287, 50122), (294, 50209), (296, 50242), (298, 50245),

Gene: LordLeafolot\_102 Start: 47141, Stop: 51253, Start Num: 3

Candidate Starts for LordLeafolot\_102:

(Start: 3 @47141 has 170 MA's), (13, 47252), (15, 47276), (28, 47540), (29, 47546), (33, 47612), (36, 47648), (41, 47729), (43, 47765), (45, 47777), (46, 47783), (47, 47984), (58, 48365), (66, 48518), (68, 48587), (71, 48614), (78, 48695), (83, 48737), (87, 48773), (90, 48785), (97, 48842), (102, 48875), (106, 48920), (111, 48938), (118, 48983), (125, 49031), (128, 49064), (134, 49088), (142, 49142), (148, 49169), (153, 49190), (158, 49238), (161, 49259), (170, 49385), (174, 49436), (179, 49457), (180, 49469), (182, 49511), (196, 49661), (199, 49694), (200, 49697), (202, 49748), (204, 49793), (205, 49799), (208, 49841), (214, 49904), (221, 49982), (224, 50039), (225, 50057), (229, 50090), (230, 50093), (232, 50132), (233, 50135), (237, 50216), (238, 50219), (242, 50279), (243, 50303), (246, 50354), (248, 50378), (251, 50402), (262, 50654), (265, 50711), (279, 50969), (281, 51038), (287, 51086), (294, 51173), (296, 51206), (298, 51209),

Gene: Lukilu\_88 Start: 44682, Stop: 48791, Start Num: 3

Candidate Starts for Lukilu\_88:



(Start: 3 @44682 has 170 MA's), (13, 44793), (15, 44817), (28, 45081), (29, 45087), (33, 45153), (36, 45189), (41, 45270), (43, 45306), (45, 45318), (46, 45324), (47, 45525), (48, 45585), (58, 45903), (66, 46056), (68, 46125), (71, 46152), (78, 46233), (83, 46275), (87, 46311), (90, 46323), (97, 46380), (102, 46413), (106, 46458), (111, 46476), (118, 46521), (125, 46569), (128, 46602), (142, 46680), (148, 46707), (158, 46776), (161, 46797), (170, 46923), (174, 46974), (179, 46995), (180, 47007), (182, 47049), (196, 47199), (199, 47232), (200, 47235), (202, 47286), (204, 47331), (205, 47337), (208, 47379), (214, 47442), (221, 47520), (224, 47577), (225, 47595), (229, 47628), (230, 47631), (232, 47670), (233, 47673), (237, 47754), (238, 47757), (242, 47817), (243, 47841), (246, 47892), (248, 47916), (251, 47940), (262, 48192), (265, 48249), (279, 48507), (281, 48576), (287, 48624), (294, 48711), (296, 48744), (298, 48747),

Gene: Maby2021\_97 Start: 44916, Stop: 49025, Start Num: 3

Candidate Starts for Maby2021\_97:

(Start: 3 @44916 has 170 MA's), (13, 45027), (15, 45051), (28, 45315), (29, 45321), (33, 45387), (36, 45423), (41, 45504), (43, 45540), (45, 45552), (46, 45558), (47, 45759), (48, 45819), (58, 46137), (66, 46290), (68, 46359), (71, 46386), (78, 46467), (83, 46509), (87, 46545), (90, 46557), (97, 46614), (102, 46647), (106, 46692), (111, 46710), (118, 46755), (125, 46803), (128, 46836), (142, 46914), (148, 46941), (158, 47010), (161, 47031), (170, 47157), (174, 47208), (179, 47229), (180, 47241), (182, 47283), (196, 47433), (199, 47466), (200, 47469), (202, 47520), (204, 47565), (205, 47571), (208, 47613), (214, 47676), (221, 47754), (224, 47811), (225, 47829), (229, 47862), (230, 47865), (232, 47904), (233, 47907), (237, 47988), (238, 47991), (242, 48051), (243, 48075), (246, 48126), (248, 48150), (251, 48174), (262, 48426), (265, 48483), (279, 48741), (281, 48810), (287, 48858), (294, 48945), (296, 48978), (298, 48981),

Gene: Mangeria\_97 Start: 45021, Stop: 49247, Start Num: 3

Candidate Starts for Mangeria\_97:

(Start: 3 @45021 has 170 MA's), (13, 45132), (15, 45156), (28, 45420), (29, 45426), (33, 45492), (36, 45528), (41, 45609), (43, 45645), (45, 45657), (46, 45663), (61, 46005), (63, 46041), (68, 46161), (70, 46179), (78, 46275), (82, 46308), (83, 46317), (91, 46413), (93, 46431), (102, 46503), (107, 46623), (109, 46686), (110, 46722), (115, 46770), (119, 46821), (120, 46827), (121, 46830), (126, 46866), (129, 46914), (131, 46932), (135, 46977), (141, 47025), (142, 47058), (144, 47082), (149, 47136), (150, 47163), (153, 47184), (158, 47232), (161, 47253), (170, 47379), (174, 47430), (179, 47451), (180, 47463), (182, 47505), (196, 47655), (199, 47688), (200, 47691), (202, 47742), (204, 47787), (205, 47793), (208, 47835), (214, 47898), (221, 47976), (224, 48033), (225, 48051), (229, 48084), (230, 48087), (232, 48126), (233, 48129), (237, 48210), (238, 48213), (242, 48273), (243, 48297), (246, 48348), (248, 48372), (251, 48396), (262, 48648), (265, 48705), (279, 48963), (281, 49032), (287, 49080), (294, 49167), (296, 49200), (298, 49203),

Gene: Matsumoto\_95 Start: 44799, Stop: 48911, Start Num: 3

Candidate Starts for Matsumoto\_95:

(Start: 3 @44799 has 170 MA's), (13, 44910), (15, 44934), (28, 45198), (29, 45204), (33, 45270), (36, 45306), (41, 45387), (43, 45423), (45, 45435), (46, 45441), (47, 45642), (58, 46023), (66, 46176), (68, 46245), (71, 46272), (78, 46353), (83, 46395), (87, 46431), (90, 46443), (97, 46500), (102, 46533), (106, 46578), (111, 46596), (118, 46641), (125, 46689), (128, 46722), (134, 46746), (142, 46800), (148, 46827), (153, 46848), (158, 46896), (161, 46917), (170, 47043), (174, 47094), (179, 47115), (180, 47127), (182, 47169), (196, 47319), (199, 47352), (200, 47355), (202, 47406), (204, 47451), (205, 47457), (208, 47499), (214, 47562), (221, 47640), (224, 47697), (225, 47715), (229, 47748), (230, 47751), (232, 47790), (233, 47793), (237, 47874), (238, 47877), (242, 47937), (243, 47961), (246, 48012), (248, 48036), (251, 48060), (262, 48312), (265, 48369), (279, 48627), (281, 48696), (287, 48744), (294, 48831), (296, 48864), (298, 48867),

Gene: McGee\_99 Start: 43667, Stop: 47779, Start Num: 3

Candidate Starts for McGee\_99:

(Start: 3 @43667 has 170 MA's), (13, 43778), (15, 43802), (28, 44066), (29, 44072), (33, 44138), (36, 44174), (41, 44255), (43, 44291), (45, 44303), (46, 44309), (47, 44510), (58, 44891), (66, 45044), (68, 45113), (71, 45140), (78, 45221), (83, 45263), (87, 45299), (90, 45311), (97, 45368), (102, 45401), (106, 45446), (111, 45464), (118, 45509), (125, 45557), (128, 45590), (134, 45614), (142, 45668), (148, 45695), (153, 45716), (158, 45764), (161, 45785), (170, 45911), (174, 45962), (179, 45983), (180, 45995), (182, 46037), (196, 46187), (199, 46220), (200, 46223), (202, 46274), (204, 46319), (205, 46325), (208, 46367), (214, 46430), (221, 46508), (224, 46565), (225, 46583), (229, 46616), (230, 46619), (232, 46658), (233, 46661), (237, 46742), (238, 46745), (242, 46805), (243, 46829), (246, 46880), (248, 46904), (251, 46928), (262, 47180), (265, 47237), (279, 47495), (281, 47564), (287, 47612), (294, 47699), (296, 47732), (298, 47735),

Gene: McWolfish\_95 Start: 44641, Stop: 48810, Start Num: 3

Candidate Starts for McWolfish\_95:

(Start: 3 @44641 has 170 MA's), (13, 44752), (15, 44776), (28, 45040), (29, 45046), (33, 45112), (36, 45148), (41, 45229), (43, 45265), (45, 45277), (46, 45283), (47, 45484), (48, 45544), (60, 45913), (61, 45934), (63, 45970), (68, 46090), (78, 46204), (82, 46237), (83, 46246), (91, 46342), (93, 46360), (102, 46432), (106, 46477), (111, 46495), (118, 46540), (125, 46588), (128, 46621), (134, 46645), (142, 46699), (148, 46726), (153, 46747), (158, 46795), (161, 46816), (170, 46942), (174, 46993), (179, 47014), (180, 47026), (182, 47068), (196, 47218), (199, 47251), (200, 47254), (202, 47305), (204, 47350), (205, 47356), (208, 47398), (214, 47461), (221, 47539), (224, 47596), (225, 47614), (229, 47647), (230, 47650), (232, 47689), (233, 47692), (237, 47773), (238, 47776), (242, 47836), (243, 47860), (246, 47911), (248, 47935), (251, 47959), (262, 48211), (265, 48268), (279, 48526), (281, 48595), (287, 48643), (294, 48730), (296, 48763), (298, 48766),

Gene: Megamind\_96 Start: 44737, Stop: 48846, Start Num: 3

Candidate Starts for Megamind\_96:

(Start: 3 @44737 has 170 MA's), (13, 44848), (15, 44872), (28, 45136), (29, 45142), (33, 45208), (36, 45244), (41, 45325), (43, 45361), (45, 45373), (46, 45379), (47, 45580), (48, 45640), (58, 45958), (66, 46111), (68, 46180), (71, 46207), (78, 46288), (83, 46330), (87, 46366), (90, 46378), (97, 46435), (102, 46468), (106, 46513), (111, 46531), (118, 46576), (125, 46624), (128, 46657), (142, 46735), (148, 46762), (158, 46831), (161, 46852), (170, 46978), (174, 47029), (179, 47050), (180, 47062), (182, 47104), (196, 47254), (199, 47287), (200, 47290), (202, 47341), (204, 47386), (205, 47392), (208, 47434), (214, 47497), (221, 47575), (224, 47632), (225, 47650), (229, 47683), (230, 47686), (232, 47725), (233, 47728), (237, 47809), (238, 47812), (242, 47872), (243, 47896), (246, 47947), (248, 47971), (251, 47995), (262, 48247), (265, 48304), (279, 48562), (281, 48631), (287, 48679), (294, 48766), (296, 48799), (298, 48802),

Gene: Melpomini\_91 Start: 42444, Stop: 46553, Start Num: 3

Candidate Starts for Melpomini\_91:

(Start: 3 @42444 has 170 MA's), (13, 42555), (15, 42579), (28, 42843), (29, 42849), (33, 42915), (36, 42951), (41, 43032), (43, 43068), (45, 43080), (46, 43086), (47, 43287), (48, 43347), (58, 43665), (66, 43818), (68, 43887), (71, 43914), (78, 43995), (83, 44037), (87, 44073), (90, 44085), (97, 44142), (102, 44175), (106, 44220), (111, 44238), (118, 44283), (125, 44331), (128, 44364), (142, 44442), (148, 44469), (158, 44538), (161, 44559), (170, 44685), (174, 44736), (179, 44757), (180, 44769), (182, 44811), (196, 44961), (199, 44994), (200, 44997), (202, 45048), (204, 45093), (205, 45099), (208, 45141), (214, 45204), (221, 45282), (224, 45339), (225, 45357), (229, 45390), (230, 45393), (232, 45432), (233, 45435), (237, 45516), (238, 45519), (242, 45579), (243, 45603), (246, 45654), (248, 45678), (251, 45702), (262, 45954), (265, 46011), (279, 46269), (281, 46338), (287, 46386), (294, 46473), (296, 46506), (298, 46509),

Gene: MikeLiesIn\_98 Start: 45084, Stop: 49193, Start Num: 3

Candidate Starts for MikeLiesIn\_98:

(Start: 3 @45084 has 170 MA's), (13, 45195), (15, 45219), (28, 45483), (29, 45489), (33, 45555), (36, 45591), (41, 45672), (43, 45708), (45, 45720), (46, 45726), (47, 45927), (48, 45987), (58, 46305), (66, 46458), (68, 46527), (71, 46554), (78, 46635), (83, 46677), (87, 46713), (90, 46725), (97, 46782), (102, 46815), (106, 46860), (111, 46878), (118, 46923), (125, 46971), (128, 47004), (142, 47082), (148, 47109), (158, 47178), (161, 47199), (170, 47325), (174, 47376), (179, 47397), (180, 47409), (182, 47451), (196, 47601), (199, 47634), (200, 47637), (202, 47688), (204, 47733), (205, 47739), (208, 47781), (214, 47844), (221, 47922), (224, 47979), (225, 47997), (229, 48030), (230, 48033), (232, 48072), (233, 48075), (237, 48156), (238, 48159), (242, 48219), (243, 48243), (246, 48294), (248, 48318), (251, 48342), (262, 48594), (265, 48651), (279, 48909), (281, 48978), (287, 49026), (294, 49113), (296, 49146), (298, 49149),

Gene: Mikro\_95 Start: 46159, Stop: 50328, Start Num: 3

Candidate Starts for Mikro\_95:

(Start: 3 @46159 has 170 MA's), (13, 46270), (15, 46294), (28, 46558), (29, 46564), (33, 46630), (36, 46666), (41, 46747), (43, 46783), (45, 46795), (46, 46801), (47, 47002), (48, 47062), (61, 47452), (63, 47488), (68, 47608), (70, 47626), (78, 47722), (82, 47755), (83, 47764), (91, 47860), (93, 47878), (102, 47950), (106, 47995), (111, 48013), (118, 48058), (125, 48106), (128, 48139), (134, 48163), (142, 48217), (148, 48244), (153, 48265), (158, 48313), (161, 48334), (170, 48460), (174, 48511), (179, 48532), (180, 48544), (182, 48586), (196, 48736), (199, 48769), (200, 48772), (202, 48823), (204, 48868), (205, 48874), (208, 48916), (214, 48979), (221, 49057), (224, 49114), (225, 49132), (229, 49165), (230, 49168), (232, 49207), (233, 49210), (237, 49291), (238, 49294), (242, 49354), (243, 49378), (246, 49429), (248, 49453), (251, 49477), (262, 49729), (265, 49786), (279, 50044), (281, 50113), (287, 50161), (294, 50248), (296, 50281), (298, 50284),

Gene: MoMoMixon\_98 Start: 44809, Stop: 48669, Start Num: 3

Candidate Starts for MoMoMixon\_98:

(Start: 3 @44809 has 170 MA's), (13, 44920), (15, 44944), (28, 45208), (29, 45214), (33, 45280), (36, 45316), (41, 45397), (43, 45433), (45, 45445), (46, 45451), (60, 45772), (61, 45793), (63, 45829), (68, 45949), (78, 46063), (82, 46096), (83, 46105), (91, 46201), (93, 46219), (102, 46291), (106, 46336), (111, 46354), (118, 46399), (125, 46447), (128, 46480), (134, 46504), (142, 46558), (148, 46585), (153, 46606), (158, 46654), (161, 46675), (170, 46801), (174, 46852), (179, 46873), (180, 46885), (182, 46927), (196, 47077), (199, 47110), (200, 47113), (202, 47164), (204, 47209), (205, 47215), (208, 47257), (214, 47320), (221, 47398), (224, 47455), (225, 47473), (229, 47506), (230, 47509), (232, 47548), (233, 47551), (237, 47632), (238, 47635), (242, 47695), (243, 47719), (246, 47770), (248, 47794), (251, 47818), (262, 48070), (265, 48127), (279, 48385), (281, 48454), (287, 48502), (294, 48589), (296, 48622), (298, 48625),

Gene: Momo\_97 Start: 44483, Stop: 48595, Start Num: 3

Candidate Starts for Momo\_97:

(Start: 3 @44483 has 170 MA's), (13, 44594), (15, 44618), (28, 44882), (29, 44888), (33, 44954), (36, 44990), (41, 45071), (43, 45107), (45, 45119), (46, 45125), (47, 45326), (58, 45707), (66, 45860), (68, 45929), (71, 45956), (78, 46037), (83, 46079), (87, 46115), (90, 46127), (97, 46184), (102, 46217), (106, 46262), (111, 46280), (118, 46325), (125, 46373), (128, 46406), (134, 46430), (142, 46484), (148, 46511), (153, 46532), (158, 46580), (161, 46601), (170, 46727), (174, 46778), (179, 46799), (180, 46811), (182, 46853), (196, 47003), (199, 47036), (200, 47039), (202, 47090), (204, 47135), (205, 47141), (208, 47183), (214, 47246), (221, 47324), (224, 47381), (225, 47399), (229, 47432), (230, 47435), (232, 47474), (233, 47477), (237, 47558), (238, 47561), (242, 47621), (243, 47645), (246, 47696), (248, 47720), (251, 47744), (262, 47996), (265, 48053), (279, 48311), (281, 48380), (287, 48428), (294, 48515), (296, 48548), (298, 48551),

Gene: Morizzled23\_97 Start: 43964, Stop: 48073, Start Num: 3

Candidate Starts for Morizzled23\_97:

(Start: 3 @43964 has 170 MA's), (13, 44075), (15, 44099), (28, 44363), (29, 44369), (33, 44435), (36, 44471), (41, 44552), (43, 44588), (45, 44600), (46, 44606), (47, 44807), (48, 44867), (58, 45185), (66, 45338), (68, 45407), (71, 45434), (78, 45515), (83, 45557), (87, 45593), (90, 45605), (97, 45662), (102, 45695), (106, 45740), (111, 45758), (118, 45803), (125, 45851), (128, 45884), (142, 45962), (148, 45989), (158, 46058), (161, 46079), (170, 46205), (174, 46256), (179, 46277), (180, 46289), (182, 46331), (196, 46481), (199, 46514), (200, 46517), (202, 46568), (204, 46613), (205, 46619), (208, 46661), (214, 46724), (221, 46802), (224, 46859), (225, 46877), (229, 46910), (230, 46913), (232, 46952), (233, 46955), (237, 47036), (238, 47039), (242, 47099), (243, 47123), (246, 47174), (248, 47198), (251, 47222), (262, 47474), (265, 47531), (279, 47789), (281, 47858), (287, 47906), (294, 47993), (296, 48026), (298, 48029),

Gene: Myrna\_97 Start: 46700, Stop: 50335, Start Num: 3

Candidate Starts for Myrna\_97:

(Start: 3 @46700 has 170 MA's), (6, 46721), (7, 46724), (15, 46835), (20, 46931), (22, 46979), (25, 47048), (29, 47105), (32, 47162), (33, 47171), (34, 47183), (38, 47237), (43, 47324), (63, 47552), (68, 47663), (74, 47729), (78, 47777), (82, 47810), (83, 47819), (100, 47885), (121, 47996), (134, 48101), (138, 48140), (139, 48149), (140, 48152), (143, 48179), (158, 48269), (167, 48371), (175, 48464), (179, 48485), (181, 48500), (188, 48626), (195, 48695), (196, 48710), (202, 48800), (207, 48869), (211, 48911), (212, 48920), (225, 49094), (226, 49109), (233, 49163), (241, 49298), (245, 49388), (248, 49433), (251, 49457), (259, 49703), (262, 49733), (264, 49781), (267, 49796), (279, 50033), (281, 50102), (284, 50120), (288, 50153), (289, 50156), (292, 50240), (298, 50291), (300, 50324),

Gene: Naija\_97 Start: 44483, Stop: 48595, Start Num: 3

Candidate Starts for Naija\_97:

(Start: 3 @44483 has 170 MA's), (13, 44594), (15, 44618), (28, 44882), (29, 44888), (33, 44954), (36, 44990), (41, 45071), (43, 45107), (45, 45119), (46, 45125), (47, 45326), (58, 45707), (66, 45860), (68, 45929), (71, 45956), (78, 46037), (83, 46079), (87, 46115), (90, 46127), (97, 46184), (102, 46217), (106, 46262), (111, 46280), (118, 46325), (125, 46373), (128, 46406), (134, 46430), (142, 46484), (148, 46511), (153, 46532), (158, 46580), (161, 46601), (170, 46727), (174, 46778), (179, 46799), (180, 46811), (182, 46853), (196, 47003), (199, 47036), (200, 47039), (202, 47090), (204, 47135), (205, 47141), (208, 47183), (214, 47246), (221, 47324), (224, 47381), (225, 47399), (229, 47432), (230, 47435), (232, 47474), (233, 47477), (237, 47558), (238, 47561), (242, 47621), (243, 47645), (246, 47696), (248, 47720), (251, 47744), (262, 47996), (265, 48053), (279, 48311), (281, 48380), (287, 48428), (294, 48515), (296, 48548), (298, 48551),

Gene: Napoleon13\_93 Start: 42879, Stop: 46991, Start Num: 3

Candidate Starts for Napoleon13\_93:

(Start: 3 @42879 has 170 MA's), (13, 42990), (15, 43014), (28, 43278), (29, 43284), (33, 43350), (36, 43386), (41, 43467), (43, 43503), (45, 43515), (46, 43521), (47, 43722), (58, 44103), (66, 44256), (68, 44325), (71, 44352), (78, 44433), (83, 44475), (87, 44511), (90, 44523), (97, 44580), (102, 44613), (106, 44658), (111, 44676), (118, 44721), (125, 44769), (128, 44802), (134, 44826), (142, 44880), (148, 44907), (153, 44928), (158, 44976), (161, 44997), (170, 45123), (174, 45174), (179, 45195), (180, 45207), (182, 45249), (196, 45399), (199, 45432), (200, 45435), (202, 45486), (204, 45531), (205, 45537), (208, 45579), (214, 45642), (221, 45720), (224, 45777), (225, 45795), (229, 45828), (230, 45831), (232, 45870), (233, 45873), (237, 45954), (238, 45957), (242, 46017), (243, 46041), (246, 46092), (248, 46116), (251, 46140), (262, 46392), (265, 46449), (279, 46707), (281, 46776), (287, 46824), (294, 46911), (296, 46944), (298, 46947),

Gene: Nappy\_100 Start: 46245, Stop: 50108, Start Num: 3

Candidate Starts for Nappy\_100:

(Start: 3 @46245 has 170 MA's), (13, 46356), (15, 46380), (28, 46644), (29, 46650), (33, 46716), (36, 46752), (41, 46833), (43, 46869), (45, 46881), (46, 46887), (60, 47208), (61, 47229), (63, 47265), (68, 47385), (70, 47403), (78, 47499), (82, 47532), (83, 47541), (91, 47637), (93, 47655), (102, 47730),

(106, 47775), (111, 47793), (118, 47838), (125, 47886), (128, 47919), (134, 47943), (142, 47997), (148, 48024), (153, 48045), (158, 48093), (161, 48114), (170, 48240), (174, 48291), (179, 48312), (180, 48324), (182, 48366), (196, 48516), (199, 48549), (200, 48552), (202, 48603), (204, 48648), (205, 48654), (208, 48696), (214, 48759), (221, 48837), (224, 48894), (225, 48912), (229, 48945), (230, 48948), (232, 48987), (233, 48990), (237, 49071), (238, 49074), (242, 49134), (243, 49158), (246, 49209), (248, 49233), (251, 49257), (262, 49509), (265, 49566), (279, 49824), (281, 49893), (287, 49941), (294, 50028), (296, 50061), (298, 50064),

Gene: Naval22\_102 Start: 46675, Stop: 50535, Start Num: 3

Candidate Starts for Naval22\_102:

(Start: 3 @46675 has 170 MA's), (13, 46786), (15, 46810), (28, 47074), (29, 47080), (33, 47146), (36, 47182), (41, 47263), (43, 47299), (45, 47311), (46, 47317), (61, 47659), (63, 47695), (68, 47815), (70, 47833), (78, 47929), (82, 47962), (83, 47971), (91, 48067), (93, 48085), (102, 48157), (106, 48202), (111, 48220), (118, 48265), (125, 48313), (128, 48346), (134, 48370), (142, 48424), (148, 48451), (153, 48472), (158, 48520), (161, 48541), (170, 48667), (174, 48718), (179, 48739), (180, 48751), (182, 48793), (196, 48943), (199, 48976), (200, 48979), (202, 49030), (204, 49075), (205, 49081), (208, 49123), (214, 49186), (221, 49264), (224, 49321), (225, 49339), (229, 49372), (230, 49375), (232, 49414), (233, 49417), (237, 49498), (238, 49501), (242, 49561), (243, 49585), (246, 49636), (248, 49660), (251, 49684), (262, 49936), (265, 49993), (279, 50251), (281, 50320), (287, 50368), (294, 50455), (296, 50488), (298, 50491),

Gene: NedWong\_98 Start: 45071, Stop: 49180, Start Num: 3

Candidate Starts for NedWong\_98:

(Start: 3 @45071 has 170 MA's), (13, 45182), (15, 45206), (28, 45470), (29, 45476), (33, 45542), (36, 45578), (41, 45659), (43, 45695), (45, 45707), (46, 45713), (47, 45914), (48, 45974), (58, 46292), (66, 46445), (68, 46514), (71, 46541), (78, 46622), (83, 46664), (87, 46700), (90, 46712), (97, 46769), (102, 46802), (106, 46847), (111, 46865), (118, 46910), (125, 46958), (128, 46991), (142, 47069), (148, 47096), (158, 47165), (161, 47186), (170, 47312), (174, 47363), (179, 47384), (180, 47396), (182, 47438), (196, 47588), (199, 47621), (200, 47624), (202, 47675), (204, 47720), (205, 47726), (208, 47768), (214, 47831), (221, 47909), (224, 47966), (225, 47984), (229, 48017), (230, 48020), (232, 48059), (233, 48062), (237, 48143), (238, 48146), (242, 48206), (243, 48230), (246, 48281), (248, 48305), (251, 48329), (262, 48581), (265, 48638), (279, 48896), (281, 48965), (287, 49013), (294, 49100), (296, 49133), (298, 49136),

Gene: Ngannou\_94 Start: 43465, Stop: 47577, Start Num: 3

Candidate Starts for Ngannou\_94:

(Start: 3 @43465 has 170 MA's), (13, 43576), (15, 43600), (28, 43864), (29, 43870), (33, 43936), (36, 43972), (41, 44053), (43, 44089), (45, 44101), (46, 44107), (47, 44308), (58, 44689), (66, 44842), (68, 44911), (71, 44938), (78, 45019), (83, 45061), (87, 45097), (90, 45109), (97, 45166), (102, 45199), (106, 45244), (111, 45262), (118, 45307), (125, 45355), (128, 45388), (134, 45412), (142, 45466), (148, 45493), (153, 45514), (158, 45562), (161, 45583), (170, 45709), (174, 45760), (179, 45781), (180, 45793), (182, 45835), (196, 45985), (199, 46018), (200, 46021), (202, 46072), (204, 46117), (205, 46123), (208, 46165), (214, 46228), (221, 46306), (224, 46363), (225, 46381), (229, 46414), (230, 46417), (232, 46456), (233, 46459), (237, 46540), (238, 46543), (242, 46603), (243, 46627), (246, 46678), (248, 46702), (251, 46726), (262, 46978), (265, 47035), (279, 47293), (281, 47362), (287, 47410), (294, 47497), (296, 47530), (298, 47533),

Gene: Nidhogg\_98 Start: 45059, Stop: 48919, Start Num: 3

Candidate Starts for Nidhogg\_98:

(Start: 3 @45059 has 170 MA's), (13, 45170), (15, 45194), (28, 45458), (29, 45464), (33, 45530), (36, 45566), (41, 45647), (43, 45683), (45, 45695), (46, 45701), (60, 46022), (61, 46043), (63, 46079), (68, 46199), (78, 46313), (82, 46346), (83, 46355), (91, 46451), (93, 46469), (102, 46541), (106, 46586), (111, 46604), (118, 46649), (125, 46697), (128, 46730), (134, 46754), (142, 46808), (148, 46835),

(153, 46856), (158, 46904), (161, 46925), (170, 47051), (174, 47102), (179, 47123), (180, 47135), (182, 47177), (196, 47327), (199, 47360), (200, 47363), (202, 47414), (204, 47459), (205, 47465), (208, 47507), (214, 47570), (221, 47648), (224, 47705), (225, 47723), (229, 47756), (230, 47759), (232, 47798), (233, 47801), (237, 47882), (238, 47885), (242, 47945), (243, 47969), (246, 48020), (248, 48044), (251, 48068), (262, 48320), (265, 48377), (279, 48635), (281, 48704), (287, 48752), (294, 48839), (296, 48872), (298, 48875),

Gene: NoodleTree\_105 Start: 46281, Stop: 50393, Start Num: 3

Candidate Starts for NoodleTree\_105:

(Start: 3 @46281 has 170 MA's), (13, 46392), (15, 46416), (28, 46680), (29, 46686), (33, 46752), (36, 46788), (41, 46869), (43, 46905), (45, 46917), (46, 46923), (47, 47124), (58, 47505), (66, 47658), (68, 47727), (71, 47754), (78, 47835), (83, 47877), (87, 47913), (90, 47925), (97, 47982), (102, 48015), (106, 48060), (111, 48078), (118, 48123), (125, 48171), (128, 48204), (134, 48228), (142, 48282), (148, 48309), (153, 48330), (158, 48378), (161, 48399), (170, 48525), (174, 48576), (179, 48597), (180, 48609), (182, 48651), (196, 48801), (199, 48834), (200, 48837), (202, 48888), (204, 48933), (205, 48939), (208, 48981), (214, 49044), (221, 49122), (224, 49179), (225, 49197), (229, 49230), (230, 49233), (232, 49272), (233, 49275), (237, 49356), (238, 49359), (242, 49419), (243, 49443), (246, 49494), (248, 49518), (251, 49542), (262, 49794), (265, 49851), (279, 50109), (281, 50178), (287, 50226), (294, 50313), (296, 50346), (298, 50349),

Gene: Norm\_98 Start: 45844, Stop: 49956, Start Num: 3

Candidate Starts for Norm\_98:

(Start: 3 @45844 has 170 MA's), (13, 45955), (15, 45979), (28, 46243), (29, 46249), (33, 46315), (36, 46351), (41, 46432), (43, 46468), (45, 46480), (46, 46486), (47, 46687), (58, 47068), (66, 47221), (68, 47290), (71, 47317), (78, 47398), (83, 47440), (87, 47476), (90, 47488), (97, 47545), (102, 47578), (106, 47623), (111, 47641), (118, 47686), (125, 47734), (128, 47767), (134, 47791), (142, 47845), (148, 47872), (153, 47893), (158, 47941), (161, 47962), (170, 48088), (174, 48139), (179, 48160), (180, 48172), (182, 48214), (196, 48364), (199, 48397), (200, 48400), (202, 48451), (204, 48496), (205, 48502), (208, 48544), (214, 48607), (221, 48685), (224, 48742), (225, 48760), (229, 48793), (230, 48796), (232, 48835), (233, 48838), (237, 48919), (238, 48922), (242, 48982), (243, 49006), (246, 49057), (248, 49081), (251, 49105), (262, 49357), (265, 49414), (279, 49672), (281, 49741), (287, 49789), (294, 49876), (296, 49909), (298, 49912),

Gene: NuevoMundo\_103 Start: 47196, Stop: 51308, Start Num: 3

Candidate Starts for NuevoMundo\_103:

(Start: 3 @47196 has 170 MA's), (13, 47307), (15, 47331), (28, 47595), (29, 47601), (33, 47667), (36, 47703), (41, 47784), (43, 47820), (45, 47832), (46, 47838), (47, 48039), (58, 48420), (66, 48573), (68, 48642), (71, 48669), (78, 48750), (83, 48792), (87, 48828), (90, 48840), (97, 48897), (102, 48930), (106, 48975), (111, 48993), (118, 49038), (125, 49086), (128, 49119), (134, 49143), (142, 49197), (148, 49224), (153, 49245), (158, 49293), (161, 49314), (170, 49440), (174, 49491), (179, 49512), (180, 49524), (182, 49566), (196, 49716), (199, 49749), (200, 49752), (202, 49803), (204, 49848), (205, 49854), (208, 49896), (214, 49959), (221, 50037), (224, 50094), (225, 50112), (229, 50145), (230, 50148), (232, 50187), (233, 50190), (237, 50271), (238, 50274), (242, 50334), (243, 50358), (246, 50409), (248, 50433), (251, 50457), (262, 50709), (265, 50766), (279, 51024), (281, 51093), (287, 51141), (294, 51228), (296, 51261), (298, 51264),

Gene: ParkTD\_98 Start: 45067, Stop: 49176, Start Num: 3

Candidate Starts for ParkTD\_98:

(Start: 3 @45067 has 170 MA's), (13, 45178), (15, 45202), (28, 45466), (29, 45472), (33, 45538), (36, 45574), (41, 45655), (43, 45691), (45, 45703), (46, 45709), (47, 45910), (48, 45970), (58, 46288), (66, 46441), (68, 46510), (71, 46537), (78, 46618), (83, 46660), (87, 46696), (90, 46708), (97, 46765), (102, 46798), (106, 46843), (111, 46861), (118, 46906), (125, 46954), (128, 46987), (142, 47065), (148, 47092), (158, 47161), (161, 47182), (170, 47308), (174, 47359), (179, 47380), (180, 47392),

(182, 47434), (196, 47584), (199, 47617), (200, 47620), (202, 47671), (204, 47716), (205, 47722), (208, 47764), (214, 47827), (221, 47905), (224, 47962), (225, 47980), (229, 48013), (230, 48016), (232, 48055), (233, 48058), (237, 48139), (238, 48142), (242, 48202), (243, 48226), (246, 48277), (248, 48301), (251, 48325), (262, 48577), (265, 48634), (279, 48892), (281, 48961), (287, 49009), (294, 49096), (296, 49129), (298, 49132),

Gene: Patter\_98 Start: 44500, Stop: 48612, Start Num: 3

Candidate Starts for Patter\_98:

(Start: 3 @44500 has 170 MA's), (13, 44611), (15, 44635), (28, 44899), (29, 44905), (33, 44971), (36, 45007), (41, 45088), (43, 45124), (45, 45136), (46, 45142), (47, 45343), (58, 45724), (66, 45877), (68, 45946), (71, 45973), (78, 46054), (83, 46096), (87, 46132), (90, 46144), (97, 46201), (102, 46234), (106, 46279), (111, 46297), (118, 46342), (125, 46390), (128, 46423), (134, 46447), (142, 46501), (148, 46528), (153, 46549), (158, 46597), (161, 46618), (170, 46744), (174, 46795), (179, 46816), (180, 46828), (182, 46870), (196, 47020), (199, 47053), (200, 47056), (202, 47107), (204, 47152), (205, 47158), (208, 47200), (214, 47263), (221, 47341), (224, 47398), (225, 47416), (229, 47449), (230, 47452), (232, 47491), (233, 47494), (237, 47575), (238, 47578), (242, 47638), (243, 47662), (246, 47713), (248, 47737), (251, 47761), (262, 48013), (265, 48070), (279, 48328), (281, 48397), (287, 48445), (294, 48532), (296, 48565), (298, 48568),

Gene: Phabba\_102 Start: 45879, Stop: 49508, Start Num: 3

Candidate Starts for Phabba\_102:

(Start: 3 @45879 has 170 MA's), (7, 45903), (15, 46014), (19, 46098), (21, 46155), (22, 46158), (29, 46284), (32, 46341), (33, 46350), (38, 46416), (46, 46521), (50, 46545), (52, 46584), (53, 46587), (59, 46671), (63, 46725), (68, 46839), (70, 46857), (74, 46905), (78, 46953), (82, 46986), (83, 46995), (121, 47172), (138, 47316), (139, 47325), (140, 47328), (143, 47355), (156, 47424), (158, 47445), (167, 47547), (175, 47640), (179, 47661), (188, 47802), (192, 47850), (196, 47886), (201, 47937), (202, 47970), (206, 48033), (207, 48039), (212, 48090), (214, 48114), (224, 48246), (225, 48264), (226, 48282), (233, 48336), (241, 48471), (262, 48906), (264, 48954), (267, 48969), (279, 49206), (281, 49275), (284, 49293), (288, 49326), (291, 49401), (300, 49497),

Gene: Phlegm\_100 Start: 44483, Stop: 48595, Start Num: 3

Candidate Starts for Phlegm\_100:

(Start: 3 @44483 has 170 MA's), (13, 44594), (15, 44618), (28, 44882), (29, 44888), (33, 44954), (36, 44990), (41, 45071), (43, 45107), (45, 45119), (46, 45125), (47, 45326), (58, 45707), (66, 45860), (68, 45929), (71, 45956), (78, 46037), (83, 46079), (87, 46115), (90, 46127), (97, 46184), (102, 46217), (106, 46262), (111, 46280), (118, 46325), (125, 46373), (128, 46406), (134, 46430), (142, 46484), (148, 46511), (153, 46532), (158, 46580), (161, 46601), (170, 46727), (174, 46778), (179, 46799), (180, 46811), (182, 46853), (196, 47003), (199, 47036), (200, 47039), (202, 47090), (204, 47135), (205, 47141), (208, 47183), (214, 47246), (221, 47324), (224, 47381), (225, 47399), (229, 47432), (230, 47435), (232, 47474), (233, 47477), (237, 47558), (238, 47561), (242, 47621), (243, 47645), (246, 47696), (248, 47720), (251, 47744), (262, 47996), (265, 48053), (279, 48311), (281, 48380), (287, 48428), (294, 48515), (296, 48548), (298, 48551),

Gene: Phox\_94 Start: 44924, Stop: 49459, Start Num: 3

Candidate Starts for Phox\_94:

(Start: 3 @44924 has 170 MA's), (13, 45035), (15, 45059), (28, 45323), (29, 45329), (33, 45395), (36, 45431), (41, 45512), (43, 45548), (45, 45560), (46, 45566), (47, 45767), (48, 45827), (61, 46217), (63, 46253), (68, 46373), (70, 46391), (78, 46487), (82, 46520), (83, 46529), (91, 46625), (93, 46643), (102, 46715), (107, 46835), (109, 46898), (110, 46934), (115, 46982), (119, 47033), (120, 47039), (121, 47042), (126, 47078), (129, 47126), (131, 47144), (135, 47189), (141, 47237), (142, 47270), (149, 47348), (150, 47375), (158, 47444), (161, 47465), (170, 47591), (174, 47642), (179, 47663), (180, 47675), (182, 47717), (196, 47867), (199, 47900), (200, 47903), (202, 47954), (204, 47999), (205, 48005), (208, 48047), (214, 48110), (221, 48188), (224, 48245), (225, 48263), (229, 48296),

(230, 48299), (232, 48338), (233, 48341), (237, 48422), (238, 48425), (242, 48485), (243, 48509), (246, 48560), (248, 48584), (251, 48608), (262, 48860), (265, 48917), (279, 49175), (281, 49244), (287, 49292), (294, 49379), (296, 49412), (298, 49415),

Gene: Phrappuccino\_53 Start: 34080, Stop: 36638, Start Num: 67

Candidate Starts for Phrappuccino\_53:

(Start: 67 @34080 has 2 MA's), (68, 34092), (77, 34179), (80, 34224), (83, 34245), (87, 34305), (94, 34344), (95, 34365), (96, 34368), (103, 34419), (113, 34491), (114, 34497), (123, 34569), (152, 34722), (153, 34725), (155, 34746), (171, 34917), (182, 35013), (185, 35040), (189, 35115), (213, 35340), (223, 35472), (227, 35523), (234, 35637), (236, 35652), (240, 35691), (244, 35760), (263, 36114), (270, 36168), (271, 36174), (273, 36186), (276, 36345), (281, 36435), (283, 36447), (286, 36480),

Gene: Phusco\_98 Start: 45248, Stop: 49360, Start Num: 3

Candidate Starts for Phusco\_98:

(Start: 3 @45248 has 170 MA's), (13, 45359), (15, 45383), (28, 45647), (29, 45653), (33, 45719), (36, 45755), (41, 45836), (43, 45872), (45, 45884), (46, 45890), (47, 46091), (58, 46472), (66, 46625), (68, 46694), (71, 46721), (78, 46802), (83, 46844), (87, 46880), (90, 46892), (97, 46949), (102, 46982), (106, 47027), (111, 47045), (118, 47090), (125, 47138), (128, 47171), (134, 47195), (142, 47249), (148, 47276), (153, 47297), (158, 47345), (161, 47366), (170, 47492), (174, 47543), (179, 47564), (180, 47576), (182, 47618), (196, 47768), (199, 47801), (200, 47804), (202, 47855), (204, 47900), (205, 47906), (208, 47948), (214, 48011), (221, 48089), (224, 48146), (225, 48164), (229, 48197), (230, 48200), (232, 48239), (233, 48242), (237, 48323), (238, 48326), (242, 48386), (243, 48410), (246, 48461), (248, 48485), (251, 48509), (262, 48761), (265, 48818), (279, 49076), (281, 49145), (287, 49193), (294, 49280), (296, 49313), (298, 49316),

Gene: Pier\_101 Start: 46081, Stop: 49803, Start Num: 3

Candidate Starts for Pier\_101:

(Start: 3 @46081 has 170 MA's), (8, 46120), (13, 46192), (15, 46216), (28, 46480), (29, 46486), (33, 46552), (36, 46588), (41, 46669), (43, 46705), (45, 46717), (46, 46723), (60, 46906), (61, 46927), (63, 46963), (68, 47083), (70, 47101), (78, 47197), (82, 47230), (83, 47239), (91, 47335), (93, 47353), (102, 47425), (106, 47470), (111, 47488), (118, 47533), (125, 47581), (128, 47614), (134, 47638), (142, 47692), (148, 47719), (153, 47740), (158, 47788), (161, 47809), (170, 47935), (174, 47986), (179, 48007), (180, 48019), (182, 48061), (196, 48211), (199, 48244), (200, 48247), (202, 48298), (204, 48343), (205, 48349), (208, 48391), (214, 48454), (221, 48532), (224, 48589), (225, 48607), (229, 48640), (230, 48643), (232, 48682), (233, 48685), (237, 48766), (238, 48769), (242, 48829), (243, 48853), (246, 48904), (248, 48928), (251, 48952), (262, 49204), (265, 49261), (279, 49519), (281, 49588), (287, 49636), (294, 49723), (296, 49756), (298, 49759),

Gene: Pinkcreek\_88 Start: 42010, Stop: 46119, Start Num: 3

Candidate Starts for Pinkcreek\_88:

(Start: 3 @42010 has 170 MA's), (12, 42088), (13, 42121), (15, 42145), (28, 42409), (29, 42415), (33, 42481), (36, 42517), (41, 42598), (43, 42634), (45, 42646), (46, 42652), (47, 42853), (48, 42913), (58, 43231), (66, 43384), (68, 43453), (71, 43480), (78, 43561), (83, 43603), (87, 43639), (90, 43651), (97, 43708), (102, 43741), (106, 43786), (111, 43804), (118, 43849), (125, 43897), (128, 43930), (142, 44008), (148, 44035), (158, 44104), (161, 44125), (170, 44251), (174, 44302), (179, 44323), (180, 44335), (182, 44377), (196, 44527), (199, 44560), (200, 44563), (202, 44614), (204, 44659), (205, 44665), (208, 44707), (214, 44770), (221, 44848), (224, 44905), (225, 44923), (229, 44956), (230, 44959), (232, 44998), (233, 45001), (237, 45082), (238, 45085), (242, 45145), (243, 45169), (246, 45220), (248, 45244), (251, 45268), (262, 45520), (265, 45577), (279, 45835), (281, 45904), (287, 45952), (294, 46039), (296, 46072), (298, 46075),

Gene: Pio\_101 Start: 46807, Stop: 50919, Start Num: 3



Candidate Starts for Pio\_101:

(Start: 3 @46807 has 170 MA's), (13, 46918), (15, 46942), (28, 47206), (29, 47212), (33, 47278), (36, 47314), (41, 47395), (43, 47431), (45, 47443), (46, 47449), (47, 47650), (58, 48031), (66, 48184), (68, 48253), (71, 48280), (78, 48361), (83, 48403), (87, 48439), (90, 48451), (97, 48508), (102, 48541), (106, 48586), (111, 48604), (118, 48649), (125, 48697), (128, 48730), (134, 48754), (142, 48808), (148, 48835), (153, 48856), (158, 48904), (161, 48925), (170, 49051), (174, 49102), (179, 49123), (180, 49135), (182, 49177), (196, 49327), (199, 49360), (200, 49363), (202, 49414), (204, 49459), (205, 49465), (208, 49507), (214, 49570), (221, 49648), (224, 49705), (225, 49723), (229, 49756), (230, 49759), (232, 49798), (233, 49801), (237, 49882), (238, 49885), (242, 49945), (243, 49969), (246, 50020), (248, 50044), (251, 50068), (262, 50320), (265, 50377), (279, 50635), (281, 50704), (287, 50752), (294, 50839), (296, 50872), (298, 50875),

Gene: Pivoine\_97 Start: 44483, Stop: 48595, Start Num: 3

Candidate Starts for Pivoine\_97:

(Start: 3 @44483 has 170 MA's), (13, 44594), (15, 44618), (28, 44882), (29, 44888), (33, 44954), (36, 44990), (41, 45071), (43, 45107), (45, 45119), (46, 45125), (47, 45326), (58, 45707), (66, 45860), (68, 45929), (71, 45956), (78, 46037), (83, 46079), (87, 46115), (90, 46127), (97, 46184), (102, 46217), (106, 46262), (111, 46280), (118, 46325), (125, 46373), (128, 46406), (134, 46430), (142, 46484), (148, 46511), (153, 46532), (158, 46580), (161, 46601), (170, 46727), (174, 46778), (179, 46799), (180, 46811), (182, 46853), (196, 47003), (199, 47036), (200, 47039), (202, 47090), (204, 47135), (205, 47141), (208, 47183), (214, 47246), (221, 47324), (224, 47381), (225, 47399), (229, 47432), (230, 47435), (232, 47474), (233, 47477), (237, 47558), (238, 47561), (242, 47621), (243, 47645), (246, 47696), (248, 47720), (251, 47744), (262, 47996), (265, 48053), (279, 48311), (281, 48380), (287, 48428), (294, 48515), (296, 48548), (298, 48551),

Gene: Pleione\_100 Start: 45085, Stop: 49194, Start Num: 3

Candidate Starts for Pleione\_100:

(Start: 3 @45085 has 170 MA's), (13, 45196), (15, 45220), (28, 45484), (29, 45490), (33, 45556), (36, 45592), (41, 45673), (43, 45709), (45, 45721), (46, 45727), (47, 45928), (48, 45988), (58, 46306), (66, 46459), (68, 46528), (71, 46555), (78, 46636), (83, 46678), (87, 46714), (90, 46726), (97, 46783), (102, 46816), (106, 46861), (111, 46879), (118, 46924), (125, 46972), (128, 47005), (134, 47029), (142, 47083), (148, 47110), (153, 47131), (158, 47179), (161, 47200), (170, 47326), (174, 47377), (179, 47398), (180, 47410), (182, 47452), (196, 47602), (199, 47635), (200, 47638), (202, 47689), (204, 47734), (205, 47740), (208, 47782), (214, 47845), (221, 47923), (224, 47980), (225, 47998), (229, 48031), (230, 48034), (232, 48073), (233, 48076), (237, 48157), (238, 48160), (242, 48220), (243, 48244), (246, 48295), (248, 48319), (251, 48343), (262, 48595), (265, 48652), (279, 48910), (281, 48979), (287, 49027), (294, 49114), (296, 49147), (298, 49150),

Gene: Pupper\_94 Start: 43847, Stop: 47095, Start Num: 1

Candidate Starts for Pupper\_94:

(Start: 1 @43847 has 3 MA's), (9, 43928), (15, 44003), (16, 44006), (18, 44063), (19, 44087), (23, 44150), (26, 44231), (27, 44246), (29, 44273), (35, 44357), (38, 44405), (43, 44492), (46, 44510), (51, 44549), (57, 44597), (73, 44786), (83, 44867), (97, 44972), (99, 44993), (102, 44999), (155, 45209), (157, 45227), (165, 45251), (172, 45338), (177, 45377), (182, 45440), (203, 45659), (205, 45704), (209, 45722), (217, 45803), (225, 45926), (241, 46136), (242, 46145), (249, 46241), (250, 46244), (254, 46304), (256, 46352), (260, 46478), (261, 46496), (264, 46550), (275, 46712), (277, 46796), (281, 46877), (293, 47012), (298, 47051), (299, 47081),

Gene: PurduePete\_97 Start: 45279, Stop: 49448, Start Num: 3

Candidate Starts for PurduePete\_97:

(Start: 3 @45279 has 170 MA's), (13, 45390), (15, 45414), (28, 45678), (29, 45684), (33, 45750), (36, 45786), (41, 45867), (43, 45903), (45, 45915), (46, 45921), (47, 46122), (48, 46182), (60, 46551), (61, 46572), (63, 46608), (68, 46728), (78, 46842), (82, 46875), (83, 46884), (91, 46980), (93, 46998),

(102, 47070), (106, 47115), (111, 47133), (118, 47178), (125, 47226), (128, 47259), (134, 47283), (142, 47337), (148, 47364), (153, 47385), (158, 47433), (161, 47454), (170, 47580), (174, 47631), (179, 47652), (180, 47664), (182, 47706), (196, 47856), (199, 47889), (200, 47892), (202, 47943), (204, 47988), (205, 47994), (208, 48036), (214, 48099), (221, 48177), (224, 48234), (225, 48252), (229, 48285), (230, 48288), (232, 48327), (233, 48330), (237, 48411), (238, 48414), (242, 48474), (243, 48498), (246, 48549), (248, 48573), (251, 48597), (262, 48849), (265, 48906), (279, 49164), (281, 49233), (287, 49281), (294, 49368), (296, 49401), (298, 49404),

Gene: QBert\_91 Start: 44601, Stop: 48461, Start Num: 3

Candidate Starts for QBert\_91:

(Start: 3 @44601 has 170 MA's), (13, 44712), (15, 44736), (28, 45000), (29, 45006), (33, 45072), (36, 45108), (41, 45189), (43, 45225), (45, 45237), (46, 45243), (60, 45564), (61, 45585), (63, 45621), (68, 45741), (78, 45855), (82, 45888), (83, 45897), (91, 45993), (93, 46011), (102, 46083), (106, 46128), (111, 46146), (118, 46191), (125, 46239), (128, 46272), (134, 46296), (142, 46350), (148, 46377), (153, 46398), (158, 46446), (161, 46467), (170, 46593), (174, 46644), (179, 46665), (180, 46677), (182, 46719), (196, 46869), (199, 46902), (200, 46905), (202, 46956), (204, 47001), (205, 47007), (208, 47049), (214, 47112), (221, 47190), (224, 47247), (225, 47265), (229, 47298), (230, 47301), (232, 47340), (233, 47343), (237, 47424), (238, 47427), (242, 47487), (243, 47511), (246, 47562), (248, 47586), (251, 47610), (262, 47862), (265, 47919), (279, 48177), (281, 48246), (287, 48294), (294, 48381), (296, 48414), (298, 48417),

Gene: Quasimodo\_98 Start: 45028, Stop: 49137, Start Num: 3

Candidate Starts for Quasimodo\_98:

(Start: 3 @45028 has 170 MA's), (13, 45139), (15, 45163), (28, 45427), (29, 45433), (33, 45499), (36, 45535), (41, 45616), (43, 45652), (45, 45664), (46, 45670), (47, 45871), (48, 45931), (58, 46249), (66, 46402), (68, 46471), (71, 46498), (78, 46579), (83, 46621), (87, 46657), (90, 46669), (97, 46726), (102, 46759), (106, 46804), (111, 46822), (118, 46867), (125, 46915), (128, 46948), (142, 47026), (148, 47053), (158, 47122), (161, 47143), (170, 47269), (174, 47320), (179, 47341), (180, 47353), (182, 47395), (196, 47545), (199, 47578), (200, 47581), (202, 47632), (204, 47677), (205, 47683), (208, 47725), (214, 47788), (221, 47866), (224, 47923), (225, 47941), (229, 47974), (230, 47977), (232, 48016), (233, 48019), (237, 48100), (238, 48103), (242, 48163), (243, 48187), (246, 48238), (248, 48262), (251, 48286), (262, 48538), (265, 48595), (279, 48853), (281, 48922), (287, 48970), (294, 49057), (296, 49090), (298, 49093),

Gene: Rabinovish\_94 Start: 45095, Stop: 49204, Start Num: 3

Candidate Starts for Rabinovish\_94:

(Start: 3 @45095 has 170 MA's), (11, 45158), (13, 45206), (15, 45230), (28, 45494), (29, 45500), (33, 45566), (36, 45602), (41, 45683), (43, 45719), (45, 45731), (46, 45737), (47, 45938), (48, 45998), (58, 46316), (66, 46469), (68, 46538), (71, 46565), (78, 46646), (83, 46688), (87, 46724), (90, 46736), (97, 46793), (102, 46826), (106, 46871), (111, 46889), (118, 46934), (125, 46982), (128, 47015), (142, 47093), (148, 47120), (158, 47189), (161, 47210), (170, 47336), (174, 47387), (179, 47408), (180, 47420), (182, 47462), (196, 47612), (199, 47645), (200, 47648), (202, 47699), (204, 47744), (205, 47750), (208, 47792), (214, 47855), (221, 47933), (224, 47990), (225, 48008), (229, 48041), (230, 48044), (232, 48083), (233, 48086), (237, 48167), (238, 48170), (242, 48230), (243, 48254), (246, 48305), (248, 48329), (251, 48353), (262, 48605), (265, 48662), (279, 48920), (281, 48989), (287, 49037), (294, 49124), (296, 49157), (298, 49160),

Gene: Rahel\_97 Start: 44840, Stop: 48952, Start Num: 3

Candidate Starts for Rahel\_97:

(Start: 3 @44840 has 170 MA's), (13, 44951), (15, 44975), (28, 45239), (29, 45245), (33, 45311), (36, 45347), (41, 45428), (43, 45464), (45, 45476), (46, 45482), (47, 45683), (58, 46064), (66, 46217), (68, 46286), (71, 46313), (78, 46394), (83, 46436), (87, 46472), (90, 46484), (97, 46541), (102, 46574), (106, 46619), (111, 46637), (118, 46682), (125, 46730), (128, 46763), (134, 46787), (142, 46841),

(148, 46868), (153, 46889), (158, 46937), (161, 46958), (170, 47084), (174, 47135), (179, 47156), (180, 47168), (182, 47210), (196, 47360), (199, 47393), (200, 47396), (202, 47447), (204, 47492), (205, 47498), (208, 47540), (214, 47603), (221, 47681), (224, 47738), (225, 47756), (229, 47789), (230, 47792), (232, 47831), (233, 47834), (237, 47915), (238, 47918), (242, 47978), (243, 48002), (246, 48053), (248, 48077), (251, 48101), (262, 48353), (265, 48410), (279, 48668), (281, 48737), (287, 48785), (294, 48872), (296, 48905), (298, 48908),

Gene: RedWattleHog\_13 Start: 15163, Stop: 18432, Start Num: 2

Candidate Starts for RedWattleHog\_13:

(Start: 2 @15163 has 3 MA's), (8, 15208), (15, 15301), (17, 15325), (20, 15397), (28, 15565), (29, 15571), (31, 15616), (32, 15628), (33, 15637), (34, 15649), (39, 15706), (42, 15757), (44, 15787), (46, 15802), (69, 16048), (75, 16117), (81, 16171), (84, 16195), (92, 16240), (117, 16321), (122, 16348), (145, 16486), (160, 16561), (162, 16579), (166, 16636), (183, 16831), (184, 16837), (190, 16927), (191, 16930), (197, 16978), (212, 17119), (218, 17185), (233, 17362), (255, 17695), (257, 17737), (266, 17905), (268, 17920), (269, 17926), (270, 17947), (279, 18154), (286, 18262), (293, 18349), (295, 18364), (297, 18382),

Gene: Rizal\_94 Start: 43988, Stop: 48100, Start Num: 3

Candidate Starts for Rizal\_94:

(Start: 3 @43988 has 170 MA's), (13, 44099), (15, 44123), (28, 44387), (29, 44393), (33, 44459), (36, 44495), (41, 44576), (43, 44612), (45, 44624), (46, 44630), (47, 44831), (58, 45212), (66, 45365), (68, 45434), (71, 45461), (78, 45542), (83, 45584), (87, 45620), (90, 45632), (97, 45689), (102, 45722), (106, 45767), (111, 45785), (118, 45830), (125, 45878), (128, 45911), (134, 45935), (142, 45989), (148, 46016), (153, 46037), (158, 46085), (161, 46106), (170, 46232), (174, 46283), (179, 46304), (180, 46316), (182, 46358), (196, 46508), (199, 46541), (200, 46544), (202, 46595), (204, 46640), (205, 46646), (208, 46688), (214, 46751), (221, 46829), (224, 46886), (225, 46904), (229, 46937), (230, 46940), (232, 46979), (233, 46982), (237, 47063), (238, 47066), (242, 47126), (243, 47150), (246, 47201), (248, 47225), (251, 47249), (262, 47501), (265, 47558), (279, 47816), (281, 47885), (287, 47933), (294, 48020), (296, 48053), (298, 48056),

Gene: RoMag\_92 Start: 44442, Stop: 48302, Start Num: 3

Candidate Starts for RoMag\_92:

(Start: 3 @44442 has 170 MA's), (13, 44553), (15, 44577), (28, 44841), (29, 44847), (33, 44913), (36, 44949), (41, 45030), (43, 45066), (45, 45078), (46, 45084), (60, 45405), (61, 45426), (63, 45462), (68, 45582), (78, 45696), (82, 45729), (83, 45738), (91, 45834), (93, 45852), (102, 45924), (106, 45969), (111, 45987), (118, 46032), (125, 46080), (128, 46113), (134, 46137), (142, 46191), (148, 46218), (153, 46239), (158, 46287), (161, 46308), (170, 46434), (174, 46485), (179, 46506), (180, 46518), (182, 46560), (196, 46710), (199, 46743), (200, 46746), (202, 46797), (204, 46842), (205, 46848), (208, 46890), (214, 46953), (221, 47031), (224, 47088), (225, 47106), (229, 47139), (230, 47142), (232, 47181), (233, 47184), (237, 47265), (238, 47268), (242, 47328), (243, 47352), (246, 47403), (248, 47427), (251, 47451), (262, 47703), (265, 47760), (279, 48018), (281, 48087), (287, 48135), (294, 48222), (296, 48255), (298, 48258),

Gene: Ronan\_91 Start: 42329, Stop: 46189, Start Num: 3

Candidate Starts for Ronan\_91:

(Start: 3 @42329 has 170 MA's), (13, 42440), (15, 42464), (28, 42728), (29, 42734), (33, 42800), (36, 42836), (41, 42917), (43, 42953), (45, 42965), (46, 42971), (60, 43292), (61, 43313), (63, 43349), (68, 43469), (78, 43583), (82, 43616), (83, 43625), (91, 43721), (93, 43739), (102, 43811), (106, 43856), (111, 43874), (118, 43919), (125, 43967), (128, 44000), (134, 44024), (142, 44078), (148, 44105), (153, 44126), (158, 44174), (161, 44195), (170, 44321), (174, 44372), (179, 44393), (180, 44405), (182, 44447), (196, 44597), (199, 44630), (200, 44633), (202, 44684), (204, 44729), (205, 44735), (208, 44777), (214, 44840), (221, 44918), (224, 44975), (225, 44993), (229, 45026), (230, 45029), (232, 45068), (233, 45071), (237, 45152), (238, 45155), (242, 45215), (243, 45239), (246, 45290),

(248, 45314), (251, 45338), (262, 45590), (265, 45647), (279, 45905), (281, 45974), (287, 46022), (294, 46109), (296, 46142), (298, 46145),

Gene: Roots515\_96 Start: 45264, Stop: 49373, Start Num: 3

Candidate Starts for Roots515\_96:

(Start: 3 @45264 has 170 MA's), (13, 45375), (15, 45399), (28, 45663), (29, 45669), (33, 45735), (36, 45771), (41, 45852), (43, 45888), (45, 45900), (46, 45906), (47, 46107), (48, 46167), (58, 46485), (66, 46638), (68, 46707), (71, 46734), (78, 46815), (83, 46857), (87, 46893), (90, 46905), (97, 46962), (102, 46995), (106, 47040), (111, 47058), (118, 47103), (125, 47151), (128, 47184), (142, 47262), (148, 47289), (158, 47358), (161, 47379), (170, 47505), (174, 47556), (179, 47577), (180, 47589), (182, 47631), (196, 47781), (199, 47814), (200, 47817), (202, 47868), (204, 47913), (205, 47919), (208, 47961), (214, 48024), (221, 48102), (224, 48159), (225, 48177), (229, 48210), (230, 48213), (232, 48252), (233, 48255), (237, 48336), (238, 48339), (242, 48399), (243, 48423), (246, 48474), (248, 48498), (251, 48522), (262, 48774), (265, 48831), (279, 49089), (281, 49158), (287, 49206), (294, 49293), (296, 49326), (298, 49329),

Gene: SCentae\_93 Start: 43993, Stop: 47241, Start Num: 1

Candidate Starts for SCentae\_93:

(Start: 1 @43993 has 3 MA's), (9, 44074), (15, 44149), (16, 44152), (18, 44209), (19, 44233), (23, 44296), (26, 44377), (27, 44392), (29, 44419), (35, 44503), (38, 44551), (43, 44638), (46, 44656), (51, 44695), (57, 44743), (73, 44932), (83, 45013), (97, 45118), (99, 45139), (102, 45145), (155, 45355), (157, 45373), (165, 45397), (172, 45484), (177, 45523), (182, 45586), (203, 45805), (205, 45850), (209, 45868), (217, 45949), (225, 46072), (241, 46282), (242, 46291), (249, 46387), (250, 46390), (254, 46450), (256, 46498), (260, 46624), (261, 46642), (264, 46696), (275, 46858), (277, 46942), (281, 47023), (293, 47158), (298, 47197), (299, 47227),

Gene: Salacia\_101 Start: 45319, Stop: 49431, Start Num: 3

Candidate Starts for Salacia\_101:

(Start: 3 @45319 has 170 MA's), (13, 45430), (15, 45454), (28, 45718), (29, 45724), (33, 45790), (36, 45826), (41, 45907), (43, 45943), (45, 45955), (46, 45961), (47, 46162), (58, 46543), (66, 46696), (68, 46765), (71, 46792), (78, 46873), (83, 46915), (87, 46951), (90, 46963), (97, 47020), (102, 47053), (106, 47098), (111, 47116), (118, 47161), (125, 47209), (128, 47242), (134, 47266), (142, 47320), (148, 47347), (153, 47368), (158, 47416), (161, 47437), (170, 47563), (174, 47614), (179, 47635), (180, 47647), (182, 47689), (196, 47839), (199, 47872), (200, 47875), (202, 47926), (204, 47971), (205, 47977), (208, 48019), (214, 48082), (221, 48160), (224, 48217), (225, 48235), (229, 48268), (230, 48271), (232, 48310), (233, 48313), (237, 48394), (238, 48397), (242, 48457), (243, 48481), (246, 48532), (248, 48556), (251, 48580), (262, 48832), (265, 48889), (279, 49147), (281, 49216), (287, 49264), (294, 49351), (296, 49384), (298, 49387),

Gene: Sauce\_98 Start: 44368, Stop: 48228, Start Num: 3

Candidate Starts for Sauce\_98:

(Start: 3 @44368 has 170 MA's), (13, 44479), (15, 44503), (28, 44767), (29, 44773), (33, 44839), (36, 44875), (41, 44956), (43, 44992), (45, 45004), (46, 45010), (60, 45331), (61, 45352), (63, 45388), (68, 45508), (78, 45622), (82, 45655), (83, 45664), (91, 45760), (93, 45778), (102, 45850), (106, 45895), (111, 45913), (118, 45958), (125, 46006), (128, 46039), (134, 46063), (142, 46117), (148, 46144), (153, 46165), (158, 46213), (161, 46234), (170, 46360), (174, 46411), (179, 46432), (180, 46444), (182, 46486), (196, 46636), (199, 46669), (200, 46672), (202, 46723), (204, 46768), (205, 46774), (208, 46816), (214, 46879), (221, 46957), (224, 47014), (225, 47032), (229, 47065), (230, 47068), (232, 47107), (233, 47110), (237, 47191), (238, 47194), (242, 47254), (243, 47278), (246, 47329), (248, 47353), (251, 47377), (262, 47629), (265, 47686), (279, 47944), (281, 48013), (287, 48061), (294, 48148), (296, 48181), (298, 48184),

Gene: ScoobyDoobyDoo\_90 Start: 42672, Stop: 46445, Start Num: 3

Candidate Starts for ScoobyDoobyDoo\_90:

(Start: 3 @42672 has 170 MA's), (15, 42807), (17, 42831), (19, 42891), (20, 42903), (21, 42948), (22, 42951), (23, 42954), (29, 43077), (32, 43134), (33, 43143), (38, 43209), (41, 43260), (42, 43269), (43, 43296), (46, 43314), (54, 43374), (59, 43449), (63, 43509), (68, 43623), (78, 43737), (82, 43770), (83, 43779), (86, 43839), (88, 43845), (89, 43851), (101, 43944), (137, 44250), (138, 44265), (140, 44277), (143, 44304), (147, 44325), (156, 44373), (158, 44394), (175, 44592), (187, 44730), (188, 44754), (194, 44817), (196, 44838), (201, 44889), (202, 44916), (207, 44979), (210, 45018), (216, 45078), (224, 45186), (225, 45204), (226, 45219), (239, 45360), (241, 45408), (250, 45555), (253, 45633), (260, 45819), (264, 45891), (267, 45906), (270, 45939), (272, 45954), (275, 46050), (279, 46143), (281, 46212), (288, 46263), (291, 46338),

Gene: ScottMcG\_94 Start: 44239, Stop: 48348, Start Num: 3

Candidate Starts for ScottMcG\_94:

(Start: 3 @44239 has 170 MA's), (13, 44350), (15, 44374), (28, 44638), (29, 44644), (33, 44710), (36, 44746), (41, 44827), (43, 44863), (45, 44875), (46, 44881), (47, 45082), (48, 45142), (58, 45460), (66, 45613), (68, 45682), (71, 45709), (78, 45790), (83, 45832), (87, 45868), (90, 45880), (97, 45937), (102, 45970), (106, 46015), (111, 46033), (118, 46078), (125, 46126), (128, 46159), (142, 46237), (148, 46264), (158, 46333), (161, 46354), (170, 46480), (174, 46531), (179, 46552), (180, 46564), (182, 46606), (196, 46756), (199, 46789), (200, 46792), (202, 46843), (204, 46888), (205, 46894), (208, 46936), (214, 46999), (221, 47077), (224, 47134), (225, 47152), (229, 47185), (230, 47188), (232, 47227), (233, 47230), (237, 47311), (238, 47314), (242, 47374), (243, 47398), (246, 47449), (248, 47473), (251, 47497), (262, 47749), (265, 47806), (279, 48064), (281, 48133), (287, 48181), (294, 48268), (296, 48301), (298, 48304),

Gene: Sebata\_99 Start: 45968, Stop: 49828, Start Num: 3

Candidate Starts for Sebata\_99:

(Start: 3 @45968 has 170 MA's), (13, 46079), (15, 46103), (28, 46367), (29, 46373), (33, 46439), (36, 46475), (41, 46556), (43, 46592), (45, 46604), (46, 46610), (60, 46931), (61, 46952), (63, 46988), (68, 47108), (78, 47222), (82, 47255), (83, 47264), (91, 47360), (93, 47378), (102, 47450), (106, 47495), (111, 47513), (118, 47558), (125, 47606), (128, 47639), (134, 47663), (142, 47717), (148, 47744), (153, 47765), (158, 47813), (161, 47834), (170, 47960), (174, 48011), (179, 48032), (180, 48044), (182, 48086), (196, 48236), (199, 48269), (200, 48272), (202, 48323), (204, 48368), (205, 48374), (208, 48416), (214, 48479), (221, 48557), (224, 48614), (225, 48632), (229, 48665), (230, 48668), (232, 48707), (233, 48710), (237, 48791), (238, 48794), (242, 48854), (243, 48878), (246, 48929), (248, 48953), (251, 48977), (262, 49229), (265, 49286), (279, 49544), (281, 49613), (287, 49661), (294, 49748), (296, 49781), (298, 49784),

Gene: Settecandela\_53 Start: 34080, Stop: 36638, Start Num: 67

Candidate Starts for Settecandela\_53:

(Start: 67 @34080 has 2 MA's), (68, 34092), (77, 34179), (80, 34224), (83, 34245), (87, 34305), (94, 34344), (95, 34365), (96, 34368), (103, 34419), (113, 34491), (114, 34497), (123, 34569), (152, 34722), (153, 34725), (155, 34746), (171, 34917), (182, 35013), (185, 35040), (189, 35115), (213, 35340), (223, 35472), (227, 35523), (234, 35637), (236, 35652), (240, 35691), (244, 35760), (263, 36114), (270, 36168), (271, 36174), (273, 36186), (276, 36345), (281, 36435), (283, 36447), (286, 36480),

Gene: Shaqnato\_90 Start: 43243, Stop: 47103, Start Num: 3

Candidate Starts for Shaqnato\_90:

(Start: 3 @43243 has 170 MA's), (13, 43354), (15, 43378), (28, 43642), (29, 43648), (33, 43714), (36, 43750), (41, 43831), (43, 43867), (45, 43879), (46, 43885), (60, 44206), (61, 44227), (63, 44263), (68, 44383), (78, 44497), (82, 44530), (83, 44539), (91, 44635), (93, 44653), (102, 44725), (106, 44770), (111, 44788), (118, 44833), (125, 44881), (128, 44914), (134, 44938), (142, 44992), (148, 45019), (153, 45040), (158, 45088), (161, 45109), (170, 45235), (174, 45286), (179, 45307), (180, 45319),

(182, 45361), (196, 45511), (199, 45544), (200, 45547), (202, 45598), (204, 45643), (205, 45649), (208, 45691), (214, 45754), (221, 45832), (224, 45889), (225, 45907), (229, 45940), (230, 45943), (232, 45982), (233, 45985), (237, 46066), (238, 46069), (242, 46129), (243, 46153), (246, 46204), (248, 46228), (251, 46252), (262, 46504), (265, 46561), (279, 46819), (281, 46888), (287, 46936), (294, 47023), (296, 47056), (298, 47059),

Gene: Shelob\_99 Start: 46063, Stop: 50172, Start Num: 3

Candidate Starts for Shelob\_99:

(Start: 3 @46063 has 170 MA's), (13, 46174), (15, 46198), (28, 46462), (29, 46468), (33, 46534), (36, 46570), (41, 46651), (43, 46687), (45, 46699), (46, 46705), (47, 46906), (48, 46966), (58, 47284), (66, 47437), (68, 47506), (71, 47533), (78, 47614), (83, 47656), (87, 47692), (90, 47704), (97, 47761), (102, 47794), (106, 47839), (111, 47857), (118, 47902), (125, 47950), (128, 47983), (142, 48061), (148, 48088), (158, 48157), (161, 48178), (170, 48304), (174, 48355), (179, 48376), (180, 48388), (182, 48430), (196, 48580), (199, 48613), (200, 48616), (202, 48667), (204, 48712), (205, 48718), (208, 48760), (214, 48823), (221, 48901), (224, 48958), (225, 48976), (229, 49009), (230, 49012), (232, 49051), (233, 49054), (237, 49135), (238, 49138), (242, 49198), (243, 49222), (246, 49273), (248, 49297), (251, 49321), (262, 49573), (265, 49630), (279, 49888), (281, 49957), (287, 50005), (294, 50092), (296, 50125), (298, 50128),

Gene: ShiaLabeouf\_97 Start: 45275, Stop: 49387, Start Num: 3

Candidate Starts for ShiaLabeouf\_97:

(Start: 3 @45275 has 170 MA's), (13, 45386), (15, 45410), (28, 45674), (29, 45680), (33, 45746), (36, 45782), (41, 45863), (43, 45899), (45, 45911), (46, 45917), (47, 46118), (58, 46499), (66, 46652), (68, 46721), (71, 46748), (78, 46829), (83, 46871), (87, 46907), (90, 46919), (97, 46976), (102, 47009), (106, 47054), (111, 47072), (118, 47117), (125, 47165), (128, 47198), (134, 47222), (142, 47276), (148, 47303), (153, 47324), (158, 47372), (161, 47393), (170, 47519), (174, 47570), (179, 47591), (180, 47603), (182, 47645), (196, 47795), (199, 47828), (200, 47831), (202, 47882), (204, 47927), (205, 47933), (208, 47975), (214, 48038), (221, 48116), (224, 48173), (225, 48191), (229, 48224), (230, 48227), (232, 48266), (233, 48269), (237, 48350), (238, 48353), (242, 48413), (243, 48437), (246, 48488), (248, 48512), (251, 48536), (262, 48788), (265, 48845), (279, 49103), (281, 49172), (287, 49220), (294, 49307), (296, 49340), (298, 49343),

Gene: Shifa\_86 Start: 42697, Stop: 47232, Start Num: 3

Candidate Starts for Shifa\_86:

(Start: 3 @42697 has 170 MA's), (13, 42808), (15, 42832), (26, 43060), (28, 43096), (29, 43102), (33, 43168), (36, 43204), (41, 43285), (43, 43321), (45, 43333), (46, 43339), (47, 43540), (48, 43600), (61, 43990), (63, 44026), (68, 44146), (70, 44164), (78, 44260), (82, 44293), (83, 44302), (91, 44398), (93, 44416), (102, 44488), (107, 44608), (109, 44671), (110, 44707), (115, 44755), (119, 44806), (120, 44812), (121, 44815), (126, 44851), (129, 44899), (131, 44917), (135, 44962), (141, 45010), (142, 45043), (149, 45121), (150, 45148), (158, 45217), (161, 45238), (170, 45364), (174, 45415), (179, 45436), (180, 45448), (182, 45490), (196, 45640), (199, 45673), (200, 45676), (202, 45727), (204, 45772), (205, 45778), (208, 45820), (214, 45883), (221, 45961), (224, 46018), (225, 46036), (229, 46069), (230, 46072), (232, 46111), (233, 46114), (237, 46195), (238, 46198), (242, 46258), (243, 46282), (246, 46333), (248, 46357), (251, 46381), (262, 46633), (265, 46690), (279, 46948), (281, 47017), (287, 47065), (294, 47152), (296, 47185), (298, 47188),

Gene: Shnickers\_98 Start: 45239, Stop: 49351, Start Num: 3

Candidate Starts for Shnickers\_98:

(Start: 3 @45239 has 170 MA's), (13, 45350), (15, 45374), (28, 45638), (29, 45644), (33, 45710), (36, 45746), (41, 45827), (43, 45863), (45, 45875), (46, 45881), (47, 46082), (58, 46463), (66, 46616), (68, 46685), (71, 46712), (78, 46793), (83, 46835), (87, 46871), (90, 46883), (97, 46940), (102, 46973), (106, 47018), (111, 47036), (118, 47081), (125, 47129), (128, 47162), (134, 47186), (142, 47240), (148, 47267), (153, 47288), (158, 47336), (161, 47357), (170, 47483), (174, 47534), (179, 47555),

(180, 47567), (182, 47609), (196, 47759), (199, 47792), (200, 47795), (202, 47846), (204, 47891), (205, 47897), (208, 47939), (214, 48002), (221, 48080), (224, 48137), (225, 48155), (229, 48188), (230, 48191), (232, 48230), (233, 48233), (237, 48314), (238, 48317), (242, 48377), (243, 48401), (246, 48452), (248, 48476), (251, 48500), (262, 48752), (265, 48809), (279, 49067), (281, 49136), (287, 49184), (294, 49271), (296, 49304), (298, 49307),

Gene: Shrimp\_97 Start: 45075, Stop: 49184, Start Num: 3

Candidate Starts for Shrimp\_97:

(Start: 3 @45075 has 170 MA's), (13, 45186), (15, 45210), (28, 45474), (29, 45480), (33, 45546), (36, 45582), (41, 45663), (43, 45699), (45, 45711), (46, 45717), (47, 45918), (48, 45978), (58, 46296), (66, 46449), (68, 46518), (71, 46545), (78, 46626), (83, 46668), (87, 46704), (90, 46716), (97, 46773), (102, 46806), (106, 46851), (111, 46869), (118, 46914), (125, 46962), (128, 46995), (142, 47073), (148, 47100), (158, 47169), (161, 47190), (170, 47316), (174, 47367), (179, 47388), (180, 47400), (182, 47442), (196, 47592), (199, 47625), (200, 47628), (202, 47679), (204, 47724), (205, 47730), (208, 47772), (214, 47835), (221, 47913), (224, 47970), (225, 47988), (229, 48021), (230, 48024), (232, 48063), (233, 48066), (237, 48147), (238, 48150), (242, 48210), (243, 48234), (246, 48285), (248, 48309), (251, 48333), (262, 48585), (265, 48642), (279, 48900), (281, 48969), (287, 49017), (294, 49104), (296, 49137), (298, 49140),

Gene: SilverDipper\_99 Start: 44483, Stop: 48595, Start Num: 3

Candidate Starts for SilverDipper\_99:

(Start: 3 @44483 has 170 MA's), (13, 44594), (15, 44618), (28, 44882), (29, 44888), (33, 44954), (36, 44990), (41, 45071), (43, 45107), (45, 45119), (46, 45125), (47, 45326), (58, 45707), (66, 45860), (68, 45929), (71, 45956), (78, 46037), (83, 46079), (87, 46115), (90, 46127), (97, 46184), (102, 46217), (106, 46262), (111, 46280), (118, 46325), (125, 46373), (128, 46406), (134, 46430), (142, 46484), (148, 46511), (153, 46532), (158, 46580), (161, 46601), (170, 46727), (174, 46778), (179, 46799), (180, 46811), (182, 46853), (196, 47003), (199, 47036), (200, 47039), (202, 47090), (204, 47135), (205, 47141), (208, 47183), (214, 47246), (221, 47324), (224, 47381), (225, 47399), (229, 47432), (230, 47435), (232, 47474), (233, 47477), (237, 47558), (238, 47561), (242, 47621), (243, 47645), (246, 47696), (248, 47720), (251, 47744), (262, 47996), (265, 48053), (279, 48311), (281, 48380), (287, 48428), (294, 48515), (296, 48548), (298, 48551),

Gene: Skog\_157 Start: 73546, Stop: 76794, Start Num: 1

Candidate Starts for Skog\_157:

(Start: 1 @73546 has 3 MA's), (15, 73705), (16, 73708), (23, 73852), (28, 73969), (29, 73975), (35, 74059), (43, 74194), (45, 74206), (46, 74212), (51, 74251), (56, 74290), (57, 74299), (65, 74380), (73, 74488), (78, 74527), (83, 74569), (97, 74674), (99, 74695), (102, 74701), (121, 74788), (155, 74911), (157, 74929), (165, 74953), (172, 75040), (177, 75079), (182, 75145), (205, 75406), (211, 75436), (217, 75508), (219, 75526), (220, 75535), (222, 75556), (225, 75631), (237, 75787), (243, 75874), (249, 75946), (256, 76057), (260, 76183), (261, 76201), (264, 76255), (274, 76369), (277, 76501), (281, 76582), (283, 76594), (290, 76678), (293, 76717), (298, 76750), (300, 76783),

Gene: SmallFry\_98 Start: 44464, Stop: 48576, Start Num: 3

Candidate Starts for SmallFry\_98:

(Start: 3 @44464 has 170 MA's), (13, 44575), (15, 44599), (28, 44863), (29, 44869), (33, 44935), (36, 44971), (41, 45052), (43, 45088), (45, 45100), (46, 45106), (47, 45307), (58, 45688), (66, 45841), (68, 45910), (71, 45937), (78, 46018), (83, 46060), (87, 46096), (90, 46108), (97, 46165), (102, 46198), (106, 46243), (111, 46261), (118, 46306), (125, 46354), (128, 46387), (134, 46411), (142, 46465), (148, 46492), (153, 46513), (158, 46561), (161, 46582), (170, 46708), (174, 46759), (179, 46780), (180, 46792), (182, 46834), (196, 46984), (199, 47017), (200, 47020), (202, 47071), (204, 47116), (205, 47122), (208, 47164), (214, 47227), (221, 47305), (224, 47362), (225, 47380), (229, 47413), (230, 47416), (232, 47455), (233, 47458), (237, 47539), (238, 47542), (242, 47602), (243, 47626), (246, 47677), (248, 47701), (251, 47725), (262, 47977), (265, 48034), (279, 48292), (281, 48361),

(287, 48409), (294, 48496), (296, 48529), (298, 48532),

Gene: Spec\_94 Start: 45004, Stop: 49116, Start Num: 3

Candidate Starts for Spec\_94:

(Start: 3 @45004 has 170 MA's), (13, 45115), (15, 45139), (28, 45403), (29, 45409), (33, 45475), (36, 45511), (41, 45592), (43, 45628), (45, 45640), (46, 45646), (47, 45847), (58, 46228), (66, 46381), (68, 46450), (71, 46477), (78, 46558), (83, 46600), (87, 46636), (90, 46648), (97, 46705), (102, 46738), (106, 46783), (111, 46801), (118, 46846), (125, 46894), (128, 46927), (134, 46951), (142, 47005), (148, 47032), (153, 47053), (158, 47101), (161, 47122), (170, 47248), (174, 47299), (179, 47320), (180, 47332), (182, 47374), (196, 47524), (199, 47557), (200, 47560), (202, 47611), (204, 47656), (205, 47662), (208, 47704), (214, 47767), (221, 47845), (224, 47902), (225, 47920), (229, 47953), (230, 47956), (232, 47995), (233, 47998), (237, 48079), (238, 48082), (242, 48142), (243, 48166), (246, 48217), (248, 48241), (251, 48265), (262, 48517), (265, 48574), (279, 48832), (281, 48901), (287, 48949), (294, 49036), (296, 49069), (298, 49072),

Gene: Specks\_103 Start: 47138, Stop: 51250, Start Num: 3

Candidate Starts for Specks\_103:

(Start: 3 @47138 has 170 MA's), (13, 47249), (15, 47273), (28, 47537), (29, 47543), (33, 47609), (36, 47645), (41, 47726), (43, 47762), (45, 47774), (46, 47780), (47, 47981), (58, 48362), (66, 48515), (68, 48584), (71, 48611), (78, 48692), (83, 48734), (87, 48770), (90, 48782), (97, 48839), (102, 48872), (106, 48917), (111, 48935), (118, 48980), (125, 49028), (128, 49061), (134, 49085), (142, 49139), (148, 49166), (153, 49187), (158, 49235), (161, 49256), (170, 49382), (174, 49433), (179, 49454), (180, 49466), (182, 49508), (196, 49658), (199, 49691), (200, 49694), (202, 49745), (204, 49790), (205, 49796), (208, 49838), (214, 49901), (221, 49979), (224, 50036), (225, 50054), (229, 50087), (230, 50090), (232, 50129), (233, 50132), (237, 50213), (238, 50216), (242, 50276), (243, 50300), (246, 50351), (248, 50375), (251, 50399), (262, 50651), (265, 50708), (279, 50966), (281, 51035), (287, 51083), (294, 51170), (296, 51203), (298, 51206),

Gene: Sprinklers\_93 Start: 43740, Stop: 47600, Start Num: 3

Candidate Starts for Sprinklers\_93:

(Start: 3 @43740 has 170 MA's), (13, 43851), (15, 43875), (28, 44139), (29, 44145), (33, 44211), (36, 44247), (41, 44328), (43, 44364), (45, 44376), (46, 44382), (60, 44703), (61, 44724), (63, 44760), (68, 44880), (78, 44994), (82, 45027), (83, 45036), (91, 45132), (93, 45150), (102, 45222), (106, 45267), (111, 45285), (118, 45330), (125, 45378), (128, 45411), (134, 45435), (142, 45489), (148, 45516), (153, 45537), (158, 45585), (161, 45606), (170, 45732), (174, 45783), (179, 45804), (180, 45816), (182, 45858), (196, 46008), (199, 46041), (200, 46044), (202, 46095), (204, 46140), (205, 46146), (208, 46188), (214, 46251), (221, 46329), (224, 46386), (225, 46404), (229, 46437), (230, 46440), (232, 46479), (233, 46482), (237, 46563), (238, 46566), (242, 46626), (243, 46650), (246, 46701), (248, 46725), (251, 46749), (262, 47001), (265, 47058), (279, 47316), (281, 47385), (287, 47433), (294, 47520), (296, 47553), (298, 47556),

Gene: Spud\_97 Start: 45003, Stop: 49112, Start Num: 3

Candidate Starts for Spud\_97:

(Start: 3 @45003 has 170 MA's), (13, 45114), (15, 45138), (28, 45402), (29, 45408), (33, 45474), (36, 45510), (41, 45591), (43, 45627), (45, 45639), (46, 45645), (47, 45846), (48, 45906), (58, 46224), (66, 46377), (68, 46446), (71, 46473), (78, 46554), (83, 46596), (87, 46632), (90, 46644), (97, 46701), (102, 46734), (106, 46779), (111, 46797), (118, 46842), (125, 46890), (128, 46923), (142, 47001), (148, 47028), (158, 47097), (161, 47118), (170, 47244), (174, 47295), (179, 47316), (180, 47328), (182, 47370), (196, 47520), (199, 47553), (200, 47556), (202, 47607), (204, 47652), (205, 47658), (208, 47700), (214, 47763), (221, 47841), (224, 47898), (225, 47916), (229, 47949), (230, 47952), (232, 47991), (233, 47994), (237, 48075), (238, 48078), (242, 48138), (243, 48162), (246, 48213), (248, 48237), (251, 48261), (262, 48513), (265, 48570), (279, 48828), (281, 48897), (287, 48945), (294, 49032), (296, 49065), (298, 49068),



Gene: SrishMeg2525\_96 Start: 45178, Stop: 49287, Start Num: 3

Candidate Starts for SrishMeg2525\_96:

(Start: 3 @45178 has 170 MA's), (13, 45289), (15, 45313), (28, 45577), (29, 45583), (33, 45649), (36, 45685), (41, 45766), (43, 45802), (45, 45814), (46, 45820), (47, 46021), (48, 46081), (58, 46399), (66, 46552), (68, 46621), (71, 46648), (78, 46729), (83, 46771), (87, 46807), (90, 46819), (97, 46876), (102, 46909), (106, 46954), (111, 46972), (118, 47017), (125, 47065), (128, 47098), (142, 47176), (148, 47203), (158, 47272), (161, 47293), (170, 47419), (174, 47470), (179, 47491), (180, 47503), (182, 47545), (196, 47695), (199, 47728), (200, 47731), (202, 47782), (204, 47827), (205, 47833), (208, 47875), (214, 47938), (221, 48016), (224, 48073), (225, 48091), (229, 48124), (230, 48127), (232, 48166), (233, 48169), (237, 48250), (238, 48253), (242, 48313), (243, 48337), (246, 48388), (248, 48412), (251, 48436), (262, 48688), (265, 48745), (279, 49003), (281, 49072), (287, 49120), (294, 49207), (296, 49240), (298, 49243),

Gene: StephanieG\_96 Start: 45902, Stop: 50071, Start Num: 3

Candidate Starts for StephanieG\_96:

(Start: 3 @45902 has 170 MA's), (13, 46013), (15, 46037), (28, 46301), (29, 46307), (33, 46373), (36, 46409), (41, 46490), (43, 46526), (45, 46538), (46, 46544), (47, 46745), (48, 46805), (61, 47195), (63, 47231), (68, 47351), (70, 47369), (78, 47465), (82, 47498), (83, 47507), (91, 47603), (93, 47621), (102, 47693), (106, 47738), (111, 47756), (118, 47801), (125, 47849), (128, 47882), (134, 47906), (142, 47960), (148, 47987), (153, 48008), (158, 48056), (161, 48077), (170, 48203), (174, 48254), (179, 48275), (180, 48287), (182, 48329), (196, 48479), (199, 48512), (200, 48515), (202, 48566), (204, 48611), (205, 48617), (208, 48659), (214, 48722), (221, 48800), (224, 48857), (225, 48875), (229, 48908), (230, 48911), (232, 48950), (233, 48953), (237, 49034), (238, 49037), (242, 49097), (243, 49121), (246, 49172), (248, 49196), (251, 49220), (262, 49472), (265, 49529), (279, 49787), (281, 49856), (287, 49904), (294, 49991), (296, 50024), (298, 50027),

Gene: Stormageddon\_13 Start: 15160, Stop: 18429, Start Num: 2

Candidate Starts for Stormageddon\_13:

(Start: 2 @15160 has 3 MA's), (8, 15205), (15, 15298), (17, 15322), (20, 15394), (28, 15562), (29, 15568), (31, 15613), (32, 15625), (33, 15634), (34, 15646), (39, 15703), (42, 15754), (44, 15784), (46, 15799), (69, 16045), (75, 16114), (81, 16168), (84, 16192), (92, 16237), (117, 16318), (122, 16345), (145, 16483), (160, 16558), (162, 16576), (166, 16633), (183, 16828), (184, 16834), (190, 16924), (191, 16927), (197, 16975), (212, 17116), (218, 17182), (233, 17359), (255, 17692), (257, 17734), (266, 17902), (268, 17917), (269, 17923), (270, 17944), (279, 18151), (286, 18259), (293, 18346), (295, 18361), (297, 18379),

Gene: Stubby\_90 Start: 43088, Stop: 47623, Start Num: 3

Candidate Starts for Stubby\_90:

(Start: 3 @43088 has 170 MA's), (13, 43199), (15, 43223), (28, 43487), (29, 43493), (33, 43559), (36, 43595), (41, 43676), (43, 43712), (45, 43724), (46, 43730), (47, 43931), (48, 43991), (61, 44381), (63, 44417), (68, 44537), (70, 44555), (78, 44651), (82, 44684), (83, 44693), (91, 44789), (93, 44807), (102, 44879), (107, 44999), (109, 45062), (110, 45098), (115, 45146), (119, 45197), (120, 45203), (121, 45206), (126, 45242), (129, 45290), (131, 45308), (135, 45353), (141, 45401), (142, 45434), (149, 45512), (150, 45539), (158, 45608), (161, 45629), (170, 45755), (174, 45806), (179, 45827), (180, 45839), (182, 45881), (196, 46031), (199, 46064), (200, 46067), (202, 46118), (204, 46163), (205, 46169), (208, 46211), (214, 46274), (221, 46352), (224, 46409), (225, 46427), (229, 46460), (230, 46463), (232, 46502), (233, 46505), (237, 46586), (238, 46589), (242, 46649), (243, 46673), (246, 46724), (248, 46748), (251, 46772), (262, 47024), (265, 47081), (279, 47339), (281, 47408), (287, 47456), (294, 47543), (296, 47576), (298, 47579),

Gene: StubbySaigey\_100 Start: 43771, Stop: 47883, Start Num: 3

Candidate Starts for StubbySaigey\_100:

(Start: 3 @43771 has 170 MA's), (13, 43882), (15, 43906), (28, 44170), (29, 44176), (33, 44242), (36, 44278), (41, 44359), (43, 44395), (45, 44407), (46, 44413), (47, 44614), (58, 44995), (66, 45148), (68, 45217), (71, 45244), (78, 45325), (83, 45367), (87, 45403), (90, 45415), (97, 45472), (102, 45505), (106, 45550), (111, 45568), (118, 45613), (125, 45661), (128, 45694), (134, 45718), (142, 45772), (148, 45799), (153, 45820), (158, 45868), (161, 45889), (170, 46015), (174, 46066), (179, 46087), (180, 46099), (182, 46141), (196, 46291), (199, 46324), (200, 46327), (202, 46378), (204, 46423), (205, 46429), (208, 46471), (214, 46534), (221, 46612), (224, 46669), (225, 46687), (229, 46720), (230, 46723), (232, 46762), (233, 46765), (237, 46846), (238, 46849), (242, 46909), (243, 46933), (246, 46984), (248, 47008), (251, 47032), (262, 47284), (265, 47341), (279, 47599), (281, 47668), (287, 47716), (294, 47803), (296, 47836), (298, 47839),

Gene: Teardrop\_97 Start: 44462, Stop: 48574, Start Num: 3

Candidate Starts for Teardrop\_97:

(Start: 3 @44462 has 170 MA's), (13, 44573), (15, 44597), (28, 44861), (29, 44867), (33, 44933), (36, 44969), (41, 45050), (43, 45086), (45, 45098), (46, 45104), (47, 45305), (58, 45686), (66, 45839), (68, 45908), (71, 45935), (78, 46016), (83, 46058), (87, 46094), (90, 46106), (97, 46163), (102, 46196), (106, 46241), (111, 46259), (118, 46304), (125, 46352), (128, 46385), (134, 46409), (142, 46463), (148, 46490), (153, 46511), (158, 46559), (161, 46580), (170, 46706), (174, 46757), (179, 46778), (180, 46790), (182, 46832), (196, 46982), (199, 47015), (200, 47018), (202, 47069), (204, 47114), (205, 47120), (208, 47162), (214, 47225), (221, 47303), (224, 47360), (225, 47378), (229, 47411), (230, 47414), (232, 47453), (233, 47456), (237, 47537), (238, 47540), (242, 47600), (243, 47624), (246, 47675), (248, 47699), (251, 47723), (262, 47975), (265, 48032), (279, 48290), (281, 48359), (287, 48407), (294, 48494), (296, 48527), (298, 48530),

Gene: TinyTim\_97 Start: 45071, Stop: 49180, Start Num: 3

Candidate Starts for TinyTim\_97:

(Start: 3 @45071 has 170 MA's), (13, 45182), (15, 45206), (28, 45470), (29, 45476), (33, 45542), (36, 45578), (41, 45659), (43, 45695), (45, 45707), (46, 45713), (47, 45914), (48, 45974), (58, 46292), (66, 46445), (68, 46514), (71, 46541), (78, 46622), (83, 46664), (87, 46700), (90, 46712), (97, 46769), (102, 46802), (106, 46847), (111, 46865), (118, 46910), (125, 46958), (128, 46991), (142, 47069), (148, 47096), (158, 47165), (161, 47186), (170, 47312), (174, 47363), (179, 47384), (180, 47396), (182, 47438), (196, 47588), (199, 47621), (200, 47624), (202, 47675), (204, 47720), (205, 47726), (208, 47768), (214, 47831), (221, 47909), (224, 47966), (225, 47984), (229, 48017), (230, 48020), (232, 48059), (233, 48062), (237, 48143), (238, 48146), (242, 48206), (243, 48230), (246, 48281), (248, 48305), (251, 48329), (262, 48581), (265, 48638), (279, 48896), (281, 48965), (287, 49013), (294, 49100), (296, 49133), (298, 49136),

Gene: Tonenili\_111 Start: 49216, Stop: 52926, Start Num: 3

Candidate Starts for Tonenili\_111:

(Start: 3 @49216 has 170 MA's), (4, 49231), (13, 49327), (15, 49351), (28, 49615), (29, 49621), (36, 49723), (41, 49804), (42, 49813), (43, 49840), (49, 49858), (61, 50062), (63, 50098), (68, 50218), (70, 50236), (78, 50332), (82, 50365), (83, 50374), (93, 50488), (102, 50560), (106, 50605), (111, 50623), (118, 50668), (125, 50716), (128, 50749), (142, 50827), (148, 50854), (158, 50923), (161, 50944), (163, 50956), (170, 51070), (174, 51121), (180, 51154), (182, 51196), (193, 51334), (199, 51385), (200, 51388), (202, 51424), (204, 51472), (205, 51478), (214, 51577), (221, 51655), (225, 51730), (229, 51763), (230, 51766), (232, 51805), (233, 51808), (237, 51889), (238, 51892), (242, 51952), (243, 51976), (248, 52051), (262, 52327), (265, 52384), (279, 52642), (281, 52711), (287, 52759), (296, 52879), (298, 52882),

Gene: Tortoise16\_95 Start: 45063, Stop: 49175, Start Num: 3

Candidate Starts for Tortoise16\_95:

(Start: 3 @45063 has 170 MA's), (13, 45174), (15, 45198), (28, 45462), (29, 45468), (33, 45534), (36, 45570), (41, 45651), (43, 45687), (45, 45699), (46, 45705), (47, 45906), (58, 46287), (66, 46440), (68,

46509), (71, 46536), (78, 46617), (83, 46659), (87, 46695), (90, 46707), (97, 46764), (102, 46797), (106, 46842), (111, 46860), (118, 46905), (125, 46953), (128, 46986), (134, 47010), (142, 47064), (148, 47091), (153, 47112), (158, 47160), (161, 47181), (170, 47307), (174, 47358), (179, 47379), (180, 47391), (182, 47433), (196, 47583), (199, 47616), (200, 47619), (202, 47670), (204, 47715), (205, 47721), (208, 47763), (214, 47826), (221, 47904), (224, 47961), (225, 47979), (229, 48012), (230, 48015), (232, 48054), (233, 48057), (237, 48138), (238, 48141), (242, 48201), (243, 48225), (246, 48276), (248, 48300), (251, 48324), (262, 48576), (265, 48633), (279, 48891), (281, 48960), (287, 49008), (294, 49095), (296, 49128), (298, 49131),

Gene: Trinitium\_94 Start: 43509, Stop: 47621, Start Num: 3

Candidate Starts for Trinitium\_94:

(Start: 3 @43509 has 170 MA's), (13, 43620), (15, 43644), (28, 43908), (29, 43914), (33, 43980), (36, 44016), (41, 44097), (43, 44133), (45, 44145), (46, 44151), (47, 44352), (58, 44733), (66, 44886), (68, 44955), (71, 44982), (78, 45063), (83, 45105), (87, 45141), (90, 45153), (97, 45210), (102, 45243), (106, 45288), (111, 45306), (118, 45351), (125, 45399), (128, 45432), (134, 45456), (142, 45510), (148, 45537), (153, 45558), (158, 45606), (161, 45627), (170, 45753), (174, 45804), (179, 45825), (180, 45837), (182, 45879), (196, 46029), (199, 46062), (200, 46065), (202, 46116), (204, 46161), (205, 46167), (208, 46209), (214, 46272), (221, 46350), (224, 46407), (225, 46425), (229, 46458), (230, 46461), (232, 46500), (233, 46503), (237, 46584), (238, 46587), (242, 46647), (243, 46671), (246, 46722), (248, 46746), (251, 46770), (262, 47022), (265, 47079), (279, 47337), (281, 47406), (287, 47454), (294, 47541), (296, 47574), (298, 47577),

Gene: Turret\_92 Start: 42951, Stop: 47060, Start Num: 3

Candidate Starts for Turret\_92:

(Start: 3 @42951 has 170 MA's), (13, 43062), (15, 43086), (28, 43350), (29, 43356), (33, 43422), (36, 43458), (41, 43539), (43, 43575), (45, 43587), (46, 43593), (47, 43794), (48, 43854), (58, 44172), (66, 44325), (68, 44394), (71, 44421), (78, 44502), (83, 44544), (87, 44580), (90, 44592), (97, 44649), (102, 44682), (106, 44727), (111, 44745), (118, 44790), (125, 44838), (128, 44871), (142, 44949), (148, 44976), (158, 45045), (161, 45066), (170, 45192), (174, 45243), (179, 45264), (180, 45276), (182, 45318), (196, 45468), (199, 45501), (200, 45504), (202, 45555), (204, 45600), (205, 45606), (208, 45648), (214, 45711), (221, 45789), (224, 45846), (225, 45864), (229, 45897), (230, 45900), (232, 45939), (233, 45942), (237, 46023), (238, 46026), (242, 46086), (243, 46110), (246, 46161), (248, 46185), (251, 46209), (262, 46461), (265, 46518), (279, 46776), (281, 46845), (287, 46893), (294, 46980), (296, 47013), (298, 47016),

Gene: Tyke\_99 Start: 46604, Stop: 50716, Start Num: 3

Candidate Starts for Tyke\_99:

(Start: 3 @46604 has 170 MA's), (13, 46715), (15, 46739), (28, 47003), (29, 47009), (33, 47075), (36, 47111), (41, 47192), (43, 47228), (45, 47240), (46, 47246), (47, 47447), (58, 47828), (66, 47981), (68, 48050), (71, 48077), (78, 48158), (83, 48200), (87, 48236), (90, 48248), (97, 48305), (102, 48338), (106, 48383), (111, 48401), (118, 48446), (125, 48494), (128, 48527), (134, 48551), (142, 48605), (148, 48632), (153, 48653), (158, 48701), (161, 48722), (170, 48848), (174, 48899), (179, 48920), (180, 48932), (182, 48974), (196, 49124), (199, 49157), (200, 49160), (202, 49211), (204, 49256), (205, 49262), (208, 49304), (214, 49367), (221, 49445), (224, 49502), (225, 49520), (229, 49553), (230, 49556), (232, 49595), (233, 49598), (237, 49679), (238, 49682), (242, 49742), (243, 49766), (246, 49817), (248, 49841), (251, 49865), (262, 50117), (265, 50174), (279, 50432), (281, 50501), (287, 50549), (294, 50636), (296, 50669), (298, 50672),

Gene: ValleyTerrace\_98 Start: 44483, Stop: 48595, Start Num: 3

Candidate Starts for ValleyTerrace\_98:

(Start: 3 @44483 has 170 MA's), (13, 44594), (15, 44618), (28, 44882), (29, 44888), (33, 44954), (36, 44990), (41, 45071), (43, 45107), (45, 45119), (46, 45125), (47, 45326), (58, 45707), (66, 45860), (68, 45929), (71, 45956), (78, 46037), (83, 46079), (87, 46115), (90, 46127), (97, 46184), (102, 46217),

(106, 46262), (111, 46280), (118, 46325), (125, 46373), (128, 46406), (134, 46430), (142, 46484), (148, 46511), (153, 46532), (158, 46580), (161, 46601), (170, 46727), (174, 46778), (179, 46799), (180, 46811), (182, 46853), (196, 47003), (199, 47036), (200, 47039), (202, 47090), (204, 47135), (205, 47141), (208, 47183), (214, 47246), (221, 47324), (224, 47381), (225, 47399), (229, 47432), (230, 47435), (232, 47474), (233, 47477), (237, 47558), (238, 47561), (242, 47621), (243, 47645), (246, 47696), (248, 47720), (251, 47744), (262, 47996), (265, 48053), (279, 48311), (281, 48380), (287, 48428), (294, 48515), (296, 48548), (298, 48551),

Gene: Wally\_96 Start: 43611, Stop: 47723, Start Num: 3

Candidate Starts for Wally\_96:

(Start: 3 @43611 has 170 MA's), (13, 43722), (15, 43746), (28, 44010), (29, 44016), (33, 44082), (36, 44118), (41, 44199), (43, 44235), (45, 44247), (46, 44253), (47, 44454), (58, 44835), (66, 44988), (68, 45057), (71, 45084), (78, 45165), (83, 45207), (87, 45243), (90, 45255), (97, 45312), (102, 45345), (106, 45390), (111, 45408), (118, 45453), (125, 45501), (128, 45534), (134, 45558), (142, 45612), (148, 45639), (153, 45660), (158, 45708), (161, 45729), (170, 45855), (174, 45906), (179, 45927), (180, 45939), (182, 45981), (196, 46131), (199, 46164), (200, 46167), (202, 46218), (204, 46263), (205, 46269), (208, 46311), (214, 46374), (221, 46452), (224, 46509), (225, 46527), (229, 46560), (230, 46563), (232, 46602), (233, 46605), (237, 46686), (238, 46689), (242, 46749), (243, 46773), (246, 46824), (248, 46848), (251, 46872), (262, 47124), (265, 47181), (279, 47439), (281, 47508), (287, 47556), (294, 47643), (296, 47676), (298, 47679),

Gene: Willis\_98 Start: 44966, Stop: 49075, Start Num: 3

Candidate Starts for Willis\_98:

(Start: 3 @44966 has 170 MA's), (13, 45077), (15, 45101), (28, 45365), (29, 45371), (33, 45437), (36, 45473), (41, 45554), (43, 45590), (45, 45602), (46, 45608), (47, 45809), (48, 45869), (58, 46187), (66, 46340), (68, 46409), (71, 46436), (78, 46517), (83, 46559), (87, 46595), (90, 46607), (97, 46664), (102, 46697), (106, 46742), (111, 46760), (118, 46805), (125, 46853), (128, 46886), (142, 46964), (148, 46991), (158, 47060), (161, 47081), (170, 47207), (174, 47258), (179, 47279), (180, 47291), (182, 47333), (196, 47483), (199, 47516), (200, 47519), (202, 47570), (204, 47615), (205, 47621), (208, 47663), (214, 47726), (221, 47804), (224, 47861), (225, 47879), (229, 47912), (230, 47915), (232, 47954), (233, 47957), (237, 48038), (238, 48041), (242, 48101), (243, 48125), (246, 48176), (248, 48200), (251, 48224), (262, 48476), (265, 48533), (279, 48791), (281, 48860), (287, 48908), (294, 48995), (296, 49028), (298, 49031),

Gene: Yassified\_94 Start: 43787, Stop: 47647, Start Num: 3

Candidate Starts for Yassified\_94:

(Start: 3 @43787 has 170 MA's), (13, 43898), (15, 43922), (28, 44186), (29, 44192), (33, 44258), (36, 44294), (41, 44375), (43, 44411), (45, 44423), (46, 44429), (60, 44750), (61, 44771), (63, 44807), (68, 44927), (78, 45041), (82, 45074), (83, 45083), (91, 45179), (93, 45197), (102, 45269), (106, 45314), (111, 45332), (118, 45377), (125, 45425), (128, 45458), (134, 45482), (142, 45536), (148, 45563), (153, 45584), (158, 45632), (161, 45653), (170, 45779), (174, 45830), (179, 45851), (180, 45863), (182, 45905), (196, 46055), (199, 46088), (200, 46091), (202, 46142), (204, 46187), (205, 46193), (208, 46235), (214, 46298), (221, 46376), (224, 46433), (225, 46451), (229, 46484), (230, 46487), (232, 46526), (233, 46529), (237, 46610), (238, 46613), (242, 46673), (243, 46697), (246, 46748), (248, 46772), (251, 46796), (262, 47048), (265, 47105), (279, 47363), (281, 47432), (287, 47480), (294, 47567), (296, 47600), (298, 47603),

Gene: YemiJoy2021\_98 Start: 45068, Stop: 49177, Start Num: 3

Candidate Starts for YemiJoy2021\_98:

(Start: 3 @45068 has 170 MA's), (13, 45179), (15, 45203), (28, 45467), (29, 45473), (33, 45539), (36, 45575), (41, 45656), (43, 45692), (45, 45704), (46, 45710), (47, 45911), (48, 45971), (58, 46289), (66, 46442), (68, 46511), (71, 46538), (78, 46619), (83, 46661), (87, 46697), (90, 46709), (97, 46766), (102, 46799), (106, 46844), (111, 46862), (118, 46907), (125, 46955), (128, 46988), (142, 47066),

(148, 47093), (158, 47162), (161, 47183), (170, 47309), (174, 47360), (179, 47381), (180, 47393), (182, 47435), (196, 47585), (199, 47618), (200, 47621), (202, 47672), (204, 47717), (205, 47723), (208, 47765), (214, 47828), (221, 47906), (224, 47963), (225, 47981), (229, 48014), (230, 48017), (232, 48056), (233, 48059), (237, 48140), (238, 48143), (242, 48203), (243, 48227), (246, 48278), (248, 48302), (251, 48326), (262, 48578), (265, 48635), (279, 48893), (281, 48962), (287, 49010), (294, 49097), (296, 49130), (298, 49133),

Gene: YoungMoneyMata\_98 Start: 44234, Stop: 48346, Start Num: 3

Candidate Starts for YoungMoneyMata\_98:

(Start: 3 @44234 has 170 MA's), (13, 44345), (15, 44369), (28, 44633), (29, 44639), (33, 44705), (36, 44741), (41, 44822), (43, 44858), (45, 44870), (46, 44876), (47, 45077), (58, 45458), (66, 45611), (68, 45680), (71, 45707), (78, 45788), (83, 45830), (87, 45866), (90, 45878), (97, 45935), (102, 45968), (106, 46013), (111, 46031), (118, 46076), (125, 46124), (128, 46157), (134, 46181), (142, 46235), (148, 46262), (153, 46283), (158, 46331), (161, 46352), (170, 46478), (174, 46529), (179, 46550), (180, 46562), (182, 46604), (196, 46754), (199, 46787), (200, 46790), (202, 46841), (204, 46886), (205, 46892), (208, 46934), (214, 46997), (221, 47075), (224, 47132), (225, 47150), (229, 47183), (230, 47186), (232, 47225), (233, 47228), (237, 47309), (238, 47312), (242, 47372), (243, 47396), (246, 47447), (248, 47471), (251, 47495), (262, 47747), (265, 47804), (279, 48062), (281, 48131), (287, 48179), (294, 48266), (296, 48299), (298, 48302),

Gene: Yucca\_97 Start: 44990, Stop: 49099, Start Num: 3

Candidate Starts for Yucca\_97:

(Start: 3 @44990 has 170 MA's), (13, 45101), (15, 45125), (28, 45389), (29, 45395), (33, 45461), (36, 45497), (41, 45578), (43, 45614), (45, 45626), (46, 45632), (47, 45833), (48, 45893), (58, 46211), (66, 46364), (68, 46433), (71, 46460), (78, 46541), (83, 46583), (87, 46619), (90, 46631), (97, 46688), (102, 46721), (106, 46766), (111, 46784), (118, 46829), (125, 46877), (128, 46910), (134, 46934), (142, 46988), (148, 47015), (153, 47036), (158, 47084), (161, 47105), (170, 47231), (174, 47282), (179, 47303), (180, 47315), (182, 47357), (196, 47507), (199, 47540), (200, 47543), (202, 47594), (204, 47639), (205, 47645), (208, 47687), (214, 47750), (221, 47828), (224, 47885), (225, 47903), (229, 47936), (230, 47939), (232, 47978), (233, 47981), (237, 48062), (238, 48065), (242, 48125), (243, 48149), (246, 48200), (248, 48224), (251, 48248), (262, 48500), (265, 48557), (279, 48815), (281, 48884), (287, 48932), (294, 49019), (296, 49052), (298, 49055),

Gene: Zalkecks\_98 Start: 44756, Stop: 48865, Start Num: 3

Candidate Starts for Zalkecks\_98:

(Start: 3 @44756 has 170 MA's), (13, 44867), (15, 44891), (28, 45155), (29, 45161), (33, 45227), (36, 45263), (41, 45344), (43, 45380), (45, 45392), (46, 45398), (47, 45599), (48, 45659), (58, 45977), (66, 46130), (68, 46199), (71, 46226), (78, 46307), (83, 46349), (87, 46385), (90, 46397), (97, 46454), (102, 46487), (106, 46532), (111, 46550), (118, 46595), (125, 46643), (128, 46676), (142, 46754), (148, 46781), (158, 46850), (161, 46871), (170, 46997), (174, 47048), (179, 47069), (180, 47081), (182, 47123), (196, 47273), (199, 47306), (200, 47309), (202, 47360), (204, 47405), (205, 47411), (208, 47453), (214, 47516), (221, 47594), (224, 47651), (225, 47669), (229, 47702), (230, 47705), (232, 47744), (233, 47747), (237, 47828), (238, 47831), (242, 47891), (243, 47915), (246, 47966), (248, 47990), (251, 48014), (262, 48266), (265, 48323), (279, 48581), (281, 48650), (287, 48698), (294, 48785), (296, 48818), (298, 48821),

Gene: Zeenon\_99 Start: 44686, Stop: 48798, Start Num: 3

Candidate Starts for Zeenon\_99:

(Start: 3 @44686 has 170 MA's), (13, 44797), (15, 44821), (28, 45085), (29, 45091), (33, 45157), (36, 45193), (41, 45274), (43, 45310), (45, 45322), (46, 45328), (47, 45529), (48, 45589), (58, 45910), (66, 46063), (68, 46132), (71, 46159), (78, 46240), (83, 46282), (87, 46318), (90, 46330), (97, 46387), (102, 46420), (106, 46465), (111, 46483), (118, 46528), (125, 46576), (128, 46609), (142, 46687), (148, 46714), (158, 46783), (161, 46804), (170, 46930), (174, 46981), (179, 47002), (180, 47014),

(182, 47056), (196, 47206), (199, 47239), (200, 47242), (202, 47293), (204, 47338), (205, 47344), (208, 47386), (214, 47449), (221, 47527), (224, 47584), (225, 47602), (229, 47635), (230, 47638), (232, 47677), (233, 47680), (237, 47761), (238, 47764), (242, 47824), (243, 47848), (246, 47899), (248, 47923), (251, 47947), (262, 48199), (265, 48256), (279, 48514), (281, 48583), (287, 48631), (294, 48718), (296, 48751), (298, 48754),

Gene: ZygoTaiga\_96 Start: 45843, Stop: 49952, Start Num: 3

Candidate Starts for ZygoTaiga\_96:

(Start: 3 @45843 has 170 MA's), (13, 45954), (15, 45978), (28, 46242), (29, 46248), (33, 46314), (36, 46350), (41, 46431), (43, 46467), (45, 46479), (46, 46485), (47, 46686), (48, 46746), (58, 47064), (66, 47217), (68, 47286), (71, 47313), (78, 47394), (83, 47436), (87, 47472), (90, 47484), (97, 47541), (102, 47574), (106, 47619), (111, 47637), (118, 47682), (125, 47730), (128, 47763), (142, 47841), (148, 47868), (158, 47937), (161, 47958), (170, 48084), (174, 48135), (179, 48156), (180, 48168), (182, 48210), (196, 48360), (199, 48393), (200, 48396), (202, 48447), (204, 48492), (205, 48498), (208, 48540), (214, 48603), (221, 48681), (224, 48738), (225, 48756), (229, 48789), (230, 48792), (232, 48831), (233, 48834), (237, 48915), (238, 48918), (242, 48978), (243, 49002), (246, 49053), (248, 49077), (251, 49101), (262, 49353), (265, 49410), (279, 49668), (281, 49737), (287, 49785), (294, 49872), (296, 49905), (298, 49908),