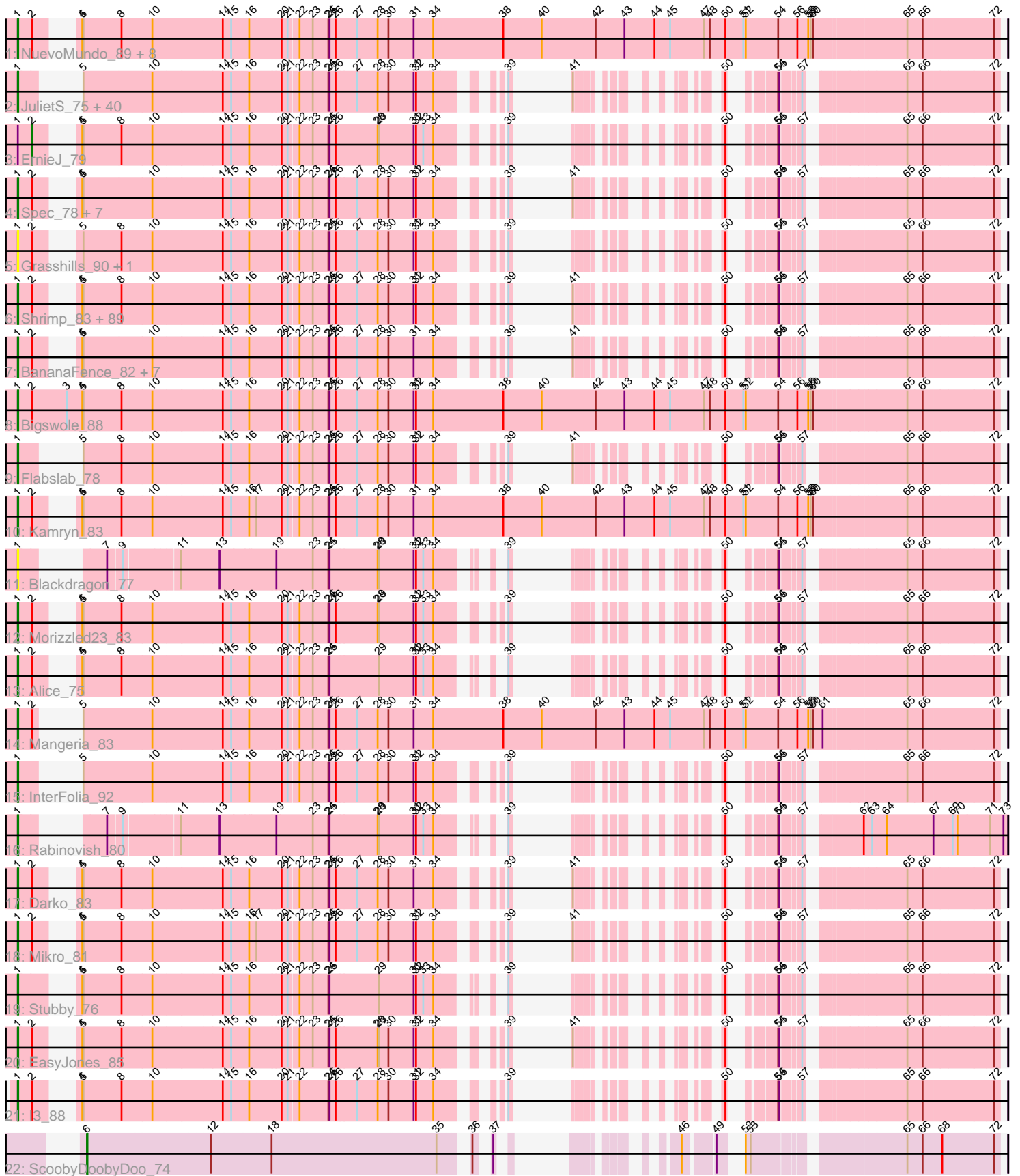


Pham 165904



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 165904 Report

This analysis was run 07/09/24 on database version 566.

Pham number 165904 has 174 members, 12 are drafts.

Phages represented in each track:

- Track 1 : NuevoMundo\_89, Bxz1\_83, Naval22\_88, Pio\_86, Caravan\_78, NoodleTree\_86, Burrough\_83, Dandelion\_89, Chomp\_80
- Track 2 : JulietS\_75, Ading\_83, DirtMonster\_76, Bangla1971\_84, Iota\_77, Koguma\_79, Rahel\_82, Ronan\_76, Shifa\_72, BackyardAgain\_80, Cali\_78, Sauce\_83, Bread\_83, QBert\_77, LinStu\_82, ArcherS7\_83, BeanWater\_75, Derek\_83, HyRo\_76, LRRHood\_77, ET08\_72, Jaygup\_83, Phusco\_83, Grungle\_71, SmallFry\_83, JustHall\_79, Sprinklers\_78, Drazdys\_83, Littleton\_83, Adlitam\_83, FudgeTart\_83, Phox\_79, Halldule\_75, CharlieB\_79, Roots515\_82, Matsumoto\_81, ShiaLabeouf\_83, Sebata\_83, Shaqnato\_75, Shnickers\_83, Jedediah\_86
- Track 3 : ErnieJ\_79
- Track 4 : Spec\_78, Breeniome\_83, Tyke\_85, DTDevon\_84, LifeSavor\_82, Tortoise16\_81, Salacia\_87, Gabriel\_85
- Track 5 : Grasshills\_90, Concombre\_90
- Track 6 : Shrimp\_83, PurduePete\_83, ScottMcG\_79, Khaleesi\_82, Yucca\_82, Cactojaque\_78, Lee7\_81, Megamind\_82, Amataga\_83, Nidhogg\_83, Guwapp\_82, StubbySaigey\_84, CindyLou\_84, Naija\_82, Ewok\_84, ParkTD\_84, YoungMoneyMata\_83, Ghost\_82, Loanshark\_83, Melpomini\_77, TinyTim\_83, Catera\_81, Momo\_82, Ngannou\_79, Jemmno\_83, Zalkecks\_84, Nappy\_84, EmToTheThree\_86, Audrick\_85, Gizmo\_87, Pinkcreek\_73, NedWong\_84, Willis\_84, Basquiat\_79, InigoMontoya\_84, Specks\_89, DrPhinkDaddy\_82, FoxtrotP1\_83, Asterius\_80, Kboogie\_86, Bipolarisk\_82, LolaVinca\_85, JayJay\_85, Pivoine\_82, Janiyra\_85, ChickenPhender\_79, Norm\_84, Spud\_82, Blackbrain\_78, Quasimodo\_83, SrishMeg2525\_82, Izajani\_83, Jessibeth14\_82, ChaylaJr\_78, Delylah\_86, EmmaElysia\_82, Turret\_78, Erdmann\_83, Teardrop\_83, Latch\_83, Pleione\_85, Fludd\_83, McWolfish\_81, Capablanca\_85, Gamgam\_83, Maby2021\_83, Daffodil\_87, Napoleon13\_79, Dietrick\_76, Wally\_81, YemiJoy2021\_84, Shelob\_85, ValleyTerrace\_83, Delilah\_83, Patter\_83, Zeenon\_84, Ava3\_84, MoMoMixon\_83, MikeLiesIn\_83, Trinitium\_79, ZygoTaiga\_82, Yassified\_79, Astraea\_81, Chargie21\_79, Atlantean\_82, JPickles\_81, SilverDipper\_84, Phlegm\_85, Rizal\_80, McGee\_84
- Track 7 : BananaFence\_82, FrayBell\_89, RoMag\_78, BadAgartude\_80, IkeLoa\_77, StephanieG\_83, Bonray\_83, Pier\_87
- Track 8 : Bigswole\_88
- Track 9 : Flabslab\_78
- Track 10 : Kamryn\_83
- Track 11 : Blackdragon\_77
- Track 12 : Morizzled23\_83

- Track 13 : Alice\_75
- Track 14 : Mangeria\_83
- Track 15 : InterFolia\_92
- Track 16 : Rabinovish\_80
- Track 17 : Darko\_83
- Track 18 : Mikro\_81
- Track 19 : Stubby\_76
- Track 20 : EasyJones\_85
- Track 21 : I3\_88
- Track 22 : ScoobyDoobyDoo\_74

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

The start number called the most often in the published annotations is 1, it was called in 160 of the 162 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ading\_83, Adlitam\_83, Alice\_75, Amataga\_83, ArcherS7\_83, Asterius\_80, Astraea\_81, Atlantean\_82, Audrick\_85, Ava3\_84, BackyardAgain\_80, BadAgartude\_80, BananaFence\_82, Bangla1971\_84, Basquiat\_79, BeanWater\_75, Bigswole\_88, Bipolarisk\_82, Blackbrain\_78, Blackdragon\_77, Bonray\_83, Bread\_83, Breeniome\_83, Burrough\_83, Bxz1\_83, Cactojaque\_78, Cali\_78, Capablanca\_85, Caravan\_78, Catera\_81, Chargie21\_79, CharlieB\_79, ChaylaJr\_78, ChickenPhender\_79, Chomp\_80, CindyLou\_84, Concombre\_90, DTDevon\_84, Daffodil\_87, Dandelion\_89, Darko\_83, Delilah\_83, Delylah\_86, Derek\_83, Dietrick\_76, DirtMonster\_76, DrPhinkDaddy\_82, Drazdys\_83, ET08\_72, EasyJones\_85, EmToTheThree\_86, EmmaElysia\_82, Erdmann\_83, Ewok\_84, Flabslab\_78, Fludd\_83, FoxtrotP1\_83, FrayBell\_89, FudgeTart\_83, Gabriel\_85, Gangam\_83, Ghost\_82, Gizmo\_87, Grasshills\_90, Grungle\_71, Guwapp\_82, Halldule\_75, HyRo\_76, I3\_88, IkeLoa\_77, InigoMontoya\_84, InterFolia\_92, Iota\_77, Izajani\_83, JPickles\_81, Janiyra\_85, JayJay\_85, Jaygup\_83, Jedediah\_86, Jemmno\_83, Jessibeth14\_82, JulietS\_75, JustHall\_79, Kamryn\_83, Kboogie\_86, Khaleesi\_82, Koguma\_79, LRRHood\_77, Latch\_83, Lee7\_81, LifeSavor\_82, LinStu\_82, Littleton\_83, Loanshark\_83, LolaVinca\_85, Maby2021\_83, Mangeria\_83, Matsumoto\_81, McGee\_84, McWolfish\_81, Megamind\_82, Melpomini\_77, MikeLiesIn\_83, Mikro\_81, MoMoMixon\_83, Momo\_82, Morizzled23\_83, Naija\_82, Napoleon13\_79, Nappy\_84, Naval22\_88, NedWong\_84, Ngannou\_79, Nidhogg\_83, NoodleTree\_86, Norm\_84, NuevoMundo\_89, ParkTD\_84, Patter\_83, Phlegm\_85, Phox\_79, Phusco\_83, Pier\_87, Pinkcreek\_73, Pio\_86, Pivoine\_82, Pleione\_85, PurduePete\_83, QBert\_77, Quasimodo\_83, Rabinovish\_80, Rahel\_82, Rizal\_80, RoMag\_78, Ronan\_76, Roots515\_82, Salacia\_87, Sauce\_83, ScottMcG\_79, Sebata\_83, Shaqnato\_75, Shelob\_85, ShiaLabeouf\_83, Shifa\_72, Shnickers\_83, Shrimp\_83, SilverDipper\_84, SmallFry\_83, Spec\_78, Specks\_89, Sprinklers\_78, Spud\_82, SrishMeg2525\_82, StephanieG\_83, StubbySaigey\_84, Stubby\_76, Teardrop\_83, TinyTim\_83, Tortoise16\_81, Trinitium\_79, Turret\_78, Tyke\_85, ValleyTerrace\_83, Wally\_81, Willis\_84, Yassified\_79, YemiJoy2021\_84, YoungMoneyMata\_83, Yucca\_82, Zalkecks\_84, Zeenon\_84, ZygoTaiga\_82,

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

- ErnieJ\_79,

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

- ScoobyDoobyDoo\_74,

### Summary by start number:

Start 1:

- Found in 173 of 174 ( 99.4% ) of genes in pham
- Manual Annotations of this start: 160 of 162
- Called 99.4% of time when present
- Phage (with cluster) where this start called: Ading\_83 (C1), Adlitam\_83 (C1), Alice\_75 (C1), Amataga\_83 (C1), ArcherS7\_83 (C1), Asterius\_80 (C1), Astraea\_81 (C1), Atlantean\_82 (C1), Audrick\_85 (C1), Ava3\_84 (C1), BackyardAgain\_80 (C1), BadAgartude\_80 (C1), BananaFence\_82 (C1), Bangla1971\_84 (C1), Basquiat\_79 (C1), BeanWater\_75 (C1), Bigswole\_88 (C1), Bipolarisk\_82 (C1), Blackbrain\_78 (C1), Blackdragon\_77 (C1), Bonray\_83 (C1), Bread\_83 (C1), Breeniome\_83 (C1), Burrough\_83 (C1), Bxz1\_83 (C1), Cactojaque\_78 (C1), Cali\_78 (C1), Capablanca\_85 (C1), Caravan\_78 (C1), Catera\_81 (C1), Chargie21\_79 (C1), CharlieB\_79 (C1), ChaylaJr\_78 (C1), ChickenPhender\_79 (C1), Chomp\_80 (C1), CindyLou\_84 (C1), Concombre\_90 (C1), DTDevon\_84 (C1), Daffodil\_87 (C1), Dandelion\_89 (C1), Darko\_83 (C1), Delilah\_83 (C1), Delylah\_86 (C1), Derek\_83 (C1), Dietrick\_76 (C1), DirtMonster\_76 (C1), DrPhinkDaddy\_82 (C1), Drazdys\_83 (C1), ET08\_72 (C1), EasyJones\_85 (C1), EmToTheThree\_86 (C1), EmmaElysia\_82 (C1), Erdmann\_83 (C1), Ewok\_84 (C1), Flabslab\_78 (C1), Fludd\_83 (C1), FoxtrotP1\_83 (C1), FrayBell\_89 (C1), FudgeTart\_83 (C1), Gabriel\_85 (C1), Gangam\_83 (C1), Ghost\_82 (C1), Gizmo\_87 (C1), Grasshills\_90 (C1), Grungle\_71 (C1), Guwapp\_82 (C1), Haldule\_75 (C1), HyRo\_76 (C1), I3\_88 (C1), IkeLoa\_77 (C1), InigoMontoya\_84 (C1), InterFolia\_92 (C1), Iota\_77 (C1), Izajani\_83 (C1), JPickles\_81 (C1), Janiyra\_85 (C1), JayJay\_85 (C1), Jaygup\_83 (C1), Jedediah\_86 (C1), Jemmno\_83 (C1), Jessibeth14\_82 (C1), JulietS\_75 (C1), JustHall\_79 (C1), Kamryn\_83 (C1), Kboogie\_86 (C1), Khaleesi\_82 (C1), Koguma\_79 (C1), LRRHood\_77 (C1), Latch\_83 (C1), Lee7\_81 (C1), LifeSavor\_82 (C1), LinStu\_82 (C1), Littleton\_83 (C1), Loanshark\_83 (C1), LolaVinca\_85 (C1), Maby2021\_83 (C1), Mangeria\_83 (C1), Matsumoto\_81 (C1), McGee\_84 (C1), McWolfish\_81 (C1), Megamind\_82 (C1), Melpomini\_77 (C1), MikeLiesIn\_83 (C1), Mikro\_81 (C1), MoMoMixon\_83 (C1), Momo\_82 (C1), Morizzled23\_83 (C1), Naija\_82 (C1), Napoleon13\_79 (C1), Nappy\_84 (C1), Naval22\_88 (C1), NedWong\_84 (C1), Ngannou\_79 (C1), Nidhogg\_83 (C1), NoodleTree\_86 (C1), Norm\_84 (C1), NuevoMundo\_89 (C1), ParkTD\_84 (C1), Patter\_83 (C1), Phlegm\_85 (C1), Phox\_79 (C1), Phusco\_83 (C1), Pier\_87 (C1), Pinkcreek\_73 (C1), Pio\_86 (C1), Pivoine\_82 (C1), Pleione\_85 (C1), PurduePete\_83 (C1), QBert\_77 (C1), Quasimodo\_83 (C1), Rabinovich\_80 (C1), Rahel\_82 (C1), Rizal\_80 (C1), RoMag\_78 (C1), Ronan\_76 (C1), Roots515\_82 (C1), Salacia\_87 (C1), Sauce\_83 (C1), ScottMcG\_79 (C1), Sebata\_83 (C1), Shaqnato\_75 (C1), Shelob\_85 (C1), ShiaLabeouf\_83 (C1), Shifa\_72 (C1), Shnickers\_83 (C1), Shrimp\_83 (C1), SilverDipper\_84 (C1), SmallFry\_83 (C1), Spec\_78 (C1), Specks\_89 (C1), Sprinklers\_78 (C1), Spud\_82 (C1), SrishMeg2525\_82 (C1), StephanieG\_83 (C1), StubbySaigey\_84 (C1), Stubby\_76 (C1), Teardrop\_83 (C1), TinyTim\_83 (C1), Tortoise16\_81 (C1), Trinitium\_79 (C1), Turret\_78 (C1), Tyke\_85 (C1), ValleyTerrace\_83 (C1), Wally\_81 (C1), Willis\_84 (C1), Yassified\_79 (C1), YemiJoy2021\_84 (C1), YoungMoneyMata\_83 (C1), Yucca\_82 (C1), Zalkecks\_84 (C1), Zeenon\_84 (C1), ZygoTaiga\_82 (C1),

Start 2:

- Found in 127 of 174 ( 73.0% ) of genes in pham
- Manual Annotations of this start: 1 of 162
- Called 0.8% of time when present
- Phage (with cluster) where this start called: ErnieJ\_79 (C1),

Start 6:

- Found in 1 of 174 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 162
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ScoobyDoobyDoo\_74 (C2),

### Summary by clusters:

There are 2 clusters represented in this pham: C2, C1,

Info for manual annotations of cluster C1:

- Start number 1 was manually annotated 160 times for cluster C1.
- Start number 2 was manually annotated 1 time for cluster C1.

Info for manual annotations of cluster C2:

- Start number 6 was manually annotated 1 time for cluster C2.

### Gene Information:

Gene: Ading\_83 Start: 28623, Stop: 30308, Start Num: 1

Candidate Starts for Ading\_83:

(Start: 1 @28623 has 160 MA's), (5, 28671), (10, 28839), (14, 29007), (15, 29028), (16, 29073), (20, 29151), (21, 29166), (22, 29190), (23, 29223), (24, 29262), (25, 29265), (26, 29280), (27, 29331), (28, 29382), (30, 29409), (31, 29472), (32, 29478), (34, 29520), (39, 29616), (41, 29628), (50, 29787), (54, 29853), (55, 29856), (57, 29895), (65, 30093), (66, 30129), (72, 30294),

Gene: Adlitam\_83 Start: 28640, Stop: 30325, Start Num: 1

Candidate Starts for Adlitam\_83:

(Start: 1 @28640 has 160 MA's), (5, 28688), (10, 28856), (14, 29024), (15, 29045), (16, 29090), (20, 29168), (21, 29183), (22, 29207), (23, 29240), (24, 29279), (25, 29282), (26, 29297), (27, 29348), (28, 29399), (30, 29426), (31, 29489), (32, 29495), (34, 29537), (39, 29633), (41, 29645), (50, 29804), (54, 29870), (55, 29873), (57, 29912), (65, 30110), (66, 30146), (72, 30311),

Gene: Alice\_75 Start: 27514, Stop: 29223, Start Num: 1

Candidate Starts for Alice\_75:

(Start: 1 @27514 has 160 MA's), (Start: 2 @27547 has 1 MA's), (4, 27601), (5, 27604), (8, 27697), (10, 27772), (14, 27940), (15, 27961), (16, 28006), (20, 28084), (21, 28099), (22, 28123), (23, 28156), (24, 28195), (25, 28198), (29, 28318), (31, 28405), (32, 28411), (33, 28429), (34, 28453), (39, 28531), (50, 28702), (54, 28768), (55, 28771), (57, 28810), (65, 29008), (66, 29044), (72, 29209),

Gene: Amataga\_83 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for Amataga\_83:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156),

(66, 30192), (72, 30357),

Gene: ArcherS7\_83 Start: 29007, Stop: 30692, Start Num: 1

Candidate Starts for ArcherS7\_83:

(Start: 1 @29007 has 160 MA's), (5, 29055), (10, 29223), (14, 29391), (15, 29412), (16, 29457), (20, 29535), (21, 29550), (22, 29574), (23, 29607), (24, 29646), (25, 29649), (26, 29664), (27, 29715), (28, 29766), (30, 29793), (31, 29856), (32, 29862), (34, 29904), (39, 30000), (41, 30012), (50, 30171), (54, 30237), (55, 30240), (57, 30279), (65, 30477), (66, 30513), (72, 30678),

Gene: Asterius\_80 Start: 29042, Stop: 30769, Start Num: 1

Candidate Starts for Asterius\_80:

(Start: 1 @29042 has 160 MA's), (Start: 2 @29075 has 1 MA's), (4, 29129), (5, 29132), (8, 29225), (10, 29300), (14, 29468), (15, 29489), (16, 29534), (20, 29612), (21, 29627), (22, 29651), (23, 29684), (24, 29723), (25, 29726), (26, 29741), (27, 29792), (28, 29843), (30, 29870), (31, 29933), (32, 29939), (34, 29981), (39, 30077), (41, 30089), (50, 30248), (54, 30314), (55, 30317), (57, 30356), (65, 30554), (66, 30590), (72, 30755),

Gene: Astraea\_81 Start: 28921, Stop: 30648, Start Num: 1

Candidate Starts for Astraea\_81:

(Start: 1 @28921 has 160 MA's), (Start: 2 @28954 has 1 MA's), (4, 29008), (5, 29011), (8, 29104), (10, 29179), (14, 29347), (15, 29368), (16, 29413), (20, 29491), (21, 29506), (22, 29530), (23, 29563), (24, 29602), (25, 29605), (26, 29620), (27, 29671), (28, 29722), (30, 29749), (31, 29812), (32, 29818), (34, 29860), (39, 29956), (41, 29968), (50, 30127), (54, 30193), (55, 30196), (57, 30235), (65, 30433), (66, 30469), (72, 30634),

Gene: Atlantean\_82 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for Atlantean\_82:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156), (66, 30192), (72, 30357),

Gene: Audrick\_85 Start: 28623, Stop: 30350, Start Num: 1

Candidate Starts for Audrick\_85:

(Start: 1 @28623 has 160 MA's), (Start: 2 @28656 has 1 MA's), (4, 28710), (5, 28713), (8, 28806), (10, 28881), (14, 29049), (15, 29070), (16, 29115), (20, 29193), (21, 29208), (22, 29232), (23, 29265), (24, 29304), (25, 29307), (26, 29322), (27, 29373), (28, 29424), (30, 29451), (31, 29514), (32, 29520), (34, 29562), (39, 29658), (41, 29670), (50, 29829), (54, 29895), (55, 29898), (57, 29937), (65, 30135), (66, 30171), (72, 30336),

Gene: Ava3\_84 Start: 29793, Stop: 31520, Start Num: 1

Candidate Starts for Ava3\_84:

(Start: 1 @29793 has 160 MA's), (Start: 2 @29826 has 1 MA's), (4, 29880), (5, 29883), (8, 29976), (10, 30051), (14, 30219), (15, 30240), (16, 30285), (20, 30363), (21, 30378), (22, 30402), (23, 30435), (24, 30474), (25, 30477), (26, 30492), (27, 30543), (28, 30594), (30, 30621), (31, 30684), (32, 30690), (34, 30732), (39, 30828), (41, 30840), (50, 30999), (54, 31065), (55, 31068), (57, 31107), (65, 31305), (66, 31341), (72, 31506),

Gene: BackyardAgain\_80 Start: 28575, Stop: 30260, Start Num: 1

Candidate Starts for BackyardAgain\_80:

(Start: 1 @28575 has 160 MA's), (5, 28623), (10, 28791), (14, 28959), (15, 28980), (16, 29025), (20, 29103), (21, 29118), (22, 29142), (23, 29175), (24, 29214), (25, 29217), (26, 29232), (27, 29283), (28,

29334), (30, 29361), (31, 29424), (32, 29430), (34, 29472), (39, 29568), (41, 29580), (50, 29739), (54, 29805), (55, 29808), (57, 29847), (65, 30045), (66, 30081), (72, 30246),

Gene: BadAgartude\_80 Start: 29681, Stop: 31408, Start Num: 1

Candidate Starts for BadAgartude\_80:

(Start: 1 @29681 has 160 MA's), (Start: 2 @29714 has 1 MA's), (4, 29768), (5, 29771), (10, 29939), (14, 30107), (15, 30128), (16, 30173), (20, 30251), (21, 30266), (22, 30290), (23, 30323), (24, 30362), (25, 30365), (26, 30380), (27, 30431), (28, 30482), (30, 30509), (31, 30572), (34, 30620), (39, 30716), (41, 30728), (50, 30887), (54, 30953), (55, 30956), (57, 30995), (65, 31193), (66, 31229), (72, 31394),

Gene: BananaFence\_82 Start: 29163, Stop: 30890, Start Num: 1

Candidate Starts for BananaFence\_82:

(Start: 1 @29163 has 160 MA's), (Start: 2 @29196 has 1 MA's), (4, 29250), (5, 29253), (10, 29421), (14, 29589), (15, 29610), (16, 29655), (20, 29733), (21, 29748), (22, 29772), (23, 29805), (24, 29844), (25, 29847), (26, 29862), (27, 29913), (28, 29964), (30, 29991), (31, 30054), (34, 30102), (39, 30198), (41, 30210), (50, 30369), (54, 30435), (55, 30438), (57, 30477), (65, 30675), (66, 30711), (72, 30876),

Gene: Bangla1971\_84 Start: 29137, Stop: 30822, Start Num: 1

Candidate Starts for Bangla1971\_84:

(Start: 1 @29137 has 160 MA's), (5, 29185), (10, 29353), (14, 29521), (15, 29542), (16, 29587), (20, 29665), (21, 29680), (22, 29704), (23, 29737), (24, 29776), (25, 29779), (26, 29794), (27, 29845), (28, 29896), (30, 29923), (31, 29986), (32, 29992), (34, 30034), (39, 30130), (41, 30142), (50, 30301), (54, 30367), (55, 30370), (57, 30409), (65, 30607), (66, 30643), (72, 30808),

Gene: Basquiat\_79 Start: 28126, Stop: 29853, Start Num: 1

Candidate Starts for Basquiat\_79:

(Start: 1 @28126 has 160 MA's), (Start: 2 @28159 has 1 MA's), (4, 28213), (5, 28216), (8, 28309), (10, 28384), (14, 28552), (15, 28573), (16, 28618), (20, 28696), (21, 28711), (22, 28735), (23, 28768), (24, 28807), (25, 28810), (26, 28825), (27, 28876), (28, 28927), (30, 28954), (31, 29017), (32, 29023), (34, 29065), (39, 29161), (41, 29173), (50, 29332), (54, 29398), (55, 29401), (57, 29440), (65, 29638), (66, 29674), (72, 29839),

Gene: BeanWater\_75 Start: 28277, Stop: 29962, Start Num: 1

Candidate Starts for BeanWater\_75:

(Start: 1 @28277 has 160 MA's), (5, 28325), (10, 28493), (14, 28661), (15, 28682), (16, 28727), (20, 28805), (21, 28820), (22, 28844), (23, 28877), (24, 28916), (25, 28919), (26, 28934), (27, 28985), (28, 29036), (30, 29063), (31, 29126), (32, 29132), (34, 29174), (39, 29270), (41, 29282), (50, 29441), (54, 29507), (55, 29510), (57, 29549), (65, 29747), (66, 29783), (72, 29948),

Gene: Bigswole\_88 Start: 31408, Stop: 33789, Start Num: 1

Candidate Starts for Bigswole\_88:

(Start: 1 @31408 has 160 MA's), (Start: 2 @31441 has 1 MA's), (3, 31528), (4, 31567), (5, 31570), (8, 31663), (10, 31738), (14, 31906), (15, 31927), (16, 31972), (20, 32050), (21, 32065), (22, 32089), (23, 32122), (24, 32161), (25, 32164), (26, 32179), (27, 32230), (28, 32281), (30, 32308), (31, 32371), (32, 32377), (34, 32419), (38, 32593), (40, 32689), (42, 32824), (43, 32896), (44, 32971), (45, 33010), (47, 33094), (48, 33109), (50, 33148), (51, 33193), (52, 33199), (54, 33277), (56, 33325), (58, 33352), (59, 33358), (60, 33364), (65, 33574), (66, 33610), (72, 33775),

Gene: Bipolarisk\_82 Start: 29445, Stop: 31172, Start Num: 1

Candidate Starts for Bipolarisk\_82:

(Start: 1 @29445 has 160 MA's), (Start: 2 @29478 has 1 MA's), (4, 29532), (5, 29535), (8, 29628), (10, 29703), (14, 29871), (15, 29892), (16, 29937), (20, 30015), (21, 30030), (22, 30054), (23, 30087), (24, 30126), (25, 30129), (26, 30144), (27, 30195), (28, 30246), (30, 30273), (31, 30336), (32, 30342),

(34, 30384), (39, 30480), (41, 30492), (50, 30651), (54, 30717), (55, 30720), (57, 30759), (65, 30957), (66, 30993), (72, 31158),

Gene: Blackbrain\_78 Start: 27943, Stop: 29670, Start Num: 1

Candidate Starts for Blackbrain\_78:

(Start: 1 @27943 has 160 MA's), (Start: 2 @27976 has 1 MA's), (4, 28030), (5, 28033), (8, 28126), (10, 28201), (14, 28369), (15, 28390), (16, 28435), (20, 28513), (21, 28528), (22, 28552), (23, 28585), (24, 28624), (25, 28627), (26, 28642), (27, 28693), (28, 28744), (30, 28771), (31, 28834), (32, 28840), (34, 28882), (39, 28978), (41, 28990), (50, 29149), (54, 29215), (55, 29218), (57, 29257), (65, 29455), (66, 29491), (72, 29656),

Gene: Blackdragon\_77 Start: 28246, Stop: 29898, Start Num: 1

Candidate Starts for Blackdragon\_77:

(Start: 1 @28246 has 160 MA's), (7, 28351), (9, 28381), (11, 28510), (13, 28606), (19, 28741), (23, 28831), (24, 28870), (25, 28873), (28, 28990), (29, 28993), (31, 29080), (32, 29086), (33, 29104), (34, 29128), (39, 29206), (50, 29377), (54, 29443), (55, 29446), (57, 29485), (65, 29683), (66, 29719), (72, 29884),

Gene: Bonray\_83 Start: 29725, Stop: 31452, Start Num: 1

Candidate Starts for Bonray\_83:

(Start: 1 @29725 has 160 MA's), (Start: 2 @29758 has 1 MA's), (4, 29812), (5, 29815), (10, 29983), (14, 30151), (15, 30172), (16, 30217), (20, 30295), (21, 30310), (22, 30334), (23, 30367), (24, 30406), (25, 30409), (26, 30424), (27, 30475), (28, 30526), (30, 30553), (31, 30616), (34, 30664), (39, 30760), (41, 30772), (50, 30931), (54, 30997), (55, 31000), (57, 31039), (65, 31237), (66, 31273), (72, 31438),

Gene: Bread\_83 Start: 29379, Stop: 31064, Start Num: 1

Candidate Starts for Bread\_83:

(Start: 1 @29379 has 160 MA's), (5, 29427), (10, 29595), (14, 29763), (15, 29784), (16, 29829), (20, 29907), (21, 29922), (22, 29946), (23, 29979), (24, 30018), (25, 30021), (26, 30036), (27, 30087), (28, 30138), (30, 30165), (31, 30228), (32, 30234), (34, 30276), (39, 30372), (41, 30384), (50, 30543), (54, 30609), (55, 30612), (57, 30651), (65, 30849), (66, 30885), (72, 31050),

Gene: Breeniome\_83 Start: 28468, Stop: 30195, Start Num: 1

Candidate Starts for Breeniome\_83:

(Start: 1 @28468 has 160 MA's), (Start: 2 @28501 has 1 MA's), (4, 28555), (5, 28558), (10, 28726), (14, 28894), (15, 28915), (16, 28960), (20, 29038), (21, 29053), (22, 29077), (23, 29110), (24, 29149), (25, 29152), (26, 29167), (27, 29218), (28, 29269), (30, 29296), (31, 29359), (32, 29365), (34, 29407), (39, 29503), (41, 29515), (50, 29674), (54, 29740), (55, 29743), (57, 29782), (65, 29980), (66, 30016), (72, 30181),

Gene: Burrough\_83 Start: 29412, Stop: 31721, Start Num: 1

Candidate Starts for Burrough\_83:

(Start: 1 @29412 has 160 MA's), (Start: 2 @29445 has 1 MA's), (4, 29499), (5, 29502), (8, 29595), (10, 29670), (14, 29838), (15, 29859), (16, 29904), (20, 29982), (21, 29997), (22, 30021), (23, 30054), (24, 30093), (25, 30096), (26, 30111), (27, 30162), (28, 30213), (30, 30240), (31, 30303), (34, 30351), (38, 30525), (40, 30621), (42, 30756), (43, 30828), (44, 30903), (45, 30942), (47, 31026), (48, 31041), (50, 31080), (51, 31125), (52, 31131), (54, 31209), (56, 31257), (58, 31284), (59, 31290), (60, 31296), (65, 31506), (66, 31542), (72, 31707),

Gene: Bxz1\_83 Start: 30463, Stop: 32772, Start Num: 1

Candidate Starts for Bxz1\_83:

(Start: 1 @30463 has 160 MA's), (Start: 2 @30496 has 1 MA's), (4, 30550), (5, 30553), (8, 30646), (10, 30721), (14, 30889), (15, 30910), (16, 30955), (20, 31033), (21, 31048), (22, 31072), (23, 31105),



(24, 31144), (25, 31147), (26, 31162), (27, 31213), (28, 31264), (30, 31291), (31, 31354), (34, 31402), (38, 31576), (40, 31672), (42, 31807), (43, 31879), (44, 31954), (45, 31993), (47, 32077), (48, 32092), (50, 32131), (51, 32176), (52, 32182), (54, 32260), (56, 32308), (58, 32335), (59, 32341), (60, 32347), (65, 32557), (66, 32593), (72, 32758),

Gene: Cactojaque\_78 Start: 28050, Stop: 29777, Start Num: 1

Candidate Starts for Cactojaque\_78:

(Start: 1 @28050 has 160 MA's), (Start: 2 @28083 has 1 MA's), (4, 28137), (5, 28140), (8, 28233), (10, 28308), (14, 28476), (15, 28497), (16, 28542), (20, 28620), (21, 28635), (22, 28659), (23, 28692), (24, 28731), (25, 28734), (26, 28749), (27, 28800), (28, 28851), (30, 28878), (31, 28941), (32, 28947), (34, 28989), (39, 29085), (41, 29097), (50, 29256), (54, 29322), (55, 29325), (57, 29364), (65, 29562), (66, 29598), (72, 29763),

Gene: Cali\_78 Start: 29514, Stop: 31199, Start Num: 1

Candidate Starts for Cali\_78:

(Start: 1 @29514 has 160 MA's), (5, 29562), (10, 29730), (14, 29898), (15, 29919), (16, 29964), (20, 30042), (21, 30057), (22, 30081), (23, 30114), (24, 30153), (25, 30156), (26, 30171), (27, 30222), (28, 30273), (30, 30300), (31, 30363), (32, 30369), (34, 30411), (39, 30507), (41, 30519), (50, 30678), (54, 30744), (55, 30747), (57, 30786), (65, 30984), (66, 31020), (72, 31185),

Gene: Capablanca\_85 Start: 29769, Stop: 31496, Start Num: 1

Candidate Starts for Capablanca\_85:

(Start: 1 @29769 has 160 MA's), (Start: 2 @29802 has 1 MA's), (4, 29856), (5, 29859), (8, 29952), (10, 30027), (14, 30195), (15, 30216), (16, 30261), (20, 30339), (21, 30354), (22, 30378), (23, 30411), (24, 30450), (25, 30453), (26, 30468), (27, 30519), (28, 30570), (30, 30597), (31, 30660), (32, 30666), (34, 30708), (39, 30804), (41, 30816), (50, 30975), (54, 31041), (55, 31044), (57, 31083), (65, 31281), (66, 31317), (72, 31482),

Gene: Caravan\_78 Start: 28807, Stop: 31116, Start Num: 1

Candidate Starts for Caravan\_78:

(Start: 1 @28807 has 160 MA's), (Start: 2 @28840 has 1 MA's), (4, 28894), (5, 28897), (8, 28990), (10, 29065), (14, 29233), (15, 29254), (16, 29299), (20, 29377), (21, 29392), (22, 29416), (23, 29449), (24, 29488), (25, 29491), (26, 29506), (27, 29557), (28, 29608), (30, 29635), (31, 29698), (34, 29746), (38, 29920), (40, 30016), (42, 30151), (43, 30223), (44, 30298), (45, 30337), (47, 30421), (48, 30436), (50, 30475), (51, 30520), (52, 30526), (54, 30604), (56, 30652), (58, 30679), (59, 30685), (60, 30691), (65, 30901), (66, 30937), (72, 31102),

Gene: Catera\_81 Start: 28190, Stop: 29917, Start Num: 1

Candidate Starts for Catera\_81:

(Start: 1 @28190 has 160 MA's), (Start: 2 @28223 has 1 MA's), (4, 28277), (5, 28280), (8, 28373), (10, 28448), (14, 28616), (15, 28637), (16, 28682), (20, 28760), (21, 28775), (22, 28799), (23, 28832), (24, 28871), (25, 28874), (26, 28889), (27, 28940), (28, 28991), (30, 29018), (31, 29081), (32, 29087), (34, 29129), (39, 29225), (41, 29237), (50, 29396), (54, 29462), (55, 29465), (57, 29504), (65, 29702), (66, 29738), (72, 29903),

Gene: Chargie21\_79 Start: 28126, Stop: 29853, Start Num: 1

Candidate Starts for Chargie21\_79:

(Start: 1 @28126 has 160 MA's), (Start: 2 @28159 has 1 MA's), (4, 28213), (5, 28216), (8, 28309), (10, 28384), (14, 28552), (15, 28573), (16, 28618), (20, 28696), (21, 28711), (22, 28735), (23, 28768), (24, 28807), (25, 28810), (26, 28825), (27, 28876), (28, 28927), (30, 28954), (31, 29017), (32, 29023), (34, 29065), (39, 29161), (41, 29173), (50, 29332), (54, 29398), (55, 29401), (57, 29440), (65, 29638), (66, 29674), (72, 29839),

Gene: CharlieB\_79 Start: 27512, Stop: 29197, Start Num: 1

Candidate Starts for CharlieB\_79:

(Start: 1 @27512 has 160 MA's), (5, 27560), (10, 27728), (14, 27896), (15, 27917), (16, 27962), (20, 28040), (21, 28055), (22, 28079), (23, 28112), (24, 28151), (25, 28154), (26, 28169), (27, 28220), (28, 28271), (30, 28298), (31, 28361), (32, 28367), (34, 28409), (39, 28505), (41, 28517), (50, 28676), (54, 28742), (55, 28745), (57, 28784), (65, 28982), (66, 29018), (72, 29183),

Gene: ChaylaJr\_78 Start: 27841, Stop: 29568, Start Num: 1

Candidate Starts for ChaylaJr\_78:

(Start: 1 @27841 has 160 MA's), (Start: 2 @27874 has 1 MA's), (4, 27928), (5, 27931), (8, 28024), (10, 28099), (14, 28267), (15, 28288), (16, 28333), (20, 28411), (21, 28426), (22, 28450), (23, 28483), (24, 28522), (25, 28525), (26, 28540), (27, 28591), (28, 28642), (30, 28669), (31, 28732), (32, 28738), (34, 28780), (39, 28876), (41, 28888), (50, 29047), (54, 29113), (55, 29116), (57, 29155), (65, 29353), (66, 29389), (72, 29554),

Gene: ChickenPhender\_79 Start: 28174, Stop: 29901, Start Num: 1

Candidate Starts for ChickenPhender\_79:

(Start: 1 @28174 has 160 MA's), (Start: 2 @28207 has 1 MA's), (4, 28261), (5, 28264), (8, 28357), (10, 28432), (14, 28600), (15, 28621), (16, 28666), (20, 28744), (21, 28759), (22, 28783), (23, 28816), (24, 28855), (25, 28858), (26, 28873), (27, 28924), (28, 28975), (30, 29002), (31, 29065), (32, 29071), (34, 29113), (39, 29209), (41, 29221), (50, 29380), (54, 29446), (55, 29449), (57, 29488), (65, 29686), (66, 29722), (72, 29887),

Gene: Chomp\_80 Start: 28644, Stop: 30953, Start Num: 1

Candidate Starts for Chomp\_80:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (34, 29583), (38, 29757), (40, 29853), (42, 29988), (43, 30060), (44, 30135), (45, 30174), (47, 30258), (48, 30273), (50, 30312), (51, 30357), (52, 30363), (54, 30441), (56, 30489), (58, 30516), (59, 30522), (60, 30528), (65, 30738), (66, 30774), (72, 30939),

Gene: CindyLou\_84 Start: 29169, Stop: 30896, Start Num: 1

Candidate Starts for CindyLou\_84:

(Start: 1 @29169 has 160 MA's), (Start: 2 @29202 has 1 MA's), (4, 29256), (5, 29259), (8, 29352), (10, 29427), (14, 29595), (15, 29616), (16, 29661), (20, 29739), (21, 29754), (22, 29778), (23, 29811), (24, 29850), (25, 29853), (26, 29868), (27, 29919), (28, 29970), (30, 29997), (31, 30060), (32, 30066), (34, 30108), (39, 30204), (41, 30216), (50, 30375), (54, 30441), (55, 30444), (57, 30483), (65, 30681), (66, 30717), (72, 30882),

Gene: Concombre\_90 Start: 32098, Stop: 33825, Start Num: 1

Candidate Starts for Concombre\_90:

(Start: 1 @32098 has 160 MA's), (Start: 2 @32131 has 1 MA's), (5, 32188), (8, 32281), (10, 32356), (14, 32524), (15, 32545), (16, 32590), (20, 32668), (21, 32683), (22, 32707), (23, 32740), (24, 32779), (25, 32782), (26, 32797), (27, 32848), (28, 32899), (30, 32926), (31, 32989), (32, 32995), (34, 33037), (39, 33133), (50, 33304), (54, 33370), (55, 33373), (57, 33412), (65, 33610), (66, 33646), (72, 33811),

Gene: DTDevon\_84 Start: 29808, Stop: 31535, Start Num: 1

Candidate Starts for DTDevon\_84:

(Start: 1 @29808 has 160 MA's), (Start: 2 @29841 has 1 MA's), (4, 29895), (5, 29898), (10, 30066), (14, 30234), (15, 30255), (16, 30300), (20, 30378), (21, 30393), (22, 30417), (23, 30450), (24, 30489), (25, 30492), (26, 30507), (27, 30558), (28, 30609), (30, 30636), (31, 30699), (32, 30705), (34, 30747), (39, 30843), (41, 30855), (50, 31014), (54, 31080), (55, 31083), (57, 31122), (65, 31320), (66, 31356),

(72, 31521),

Gene: Daffodil\_87 Start: 29733, Stop: 31460, Start Num: 1

Candidate Starts for Daffodil\_87:

(Start: 1 @29733 has 160 MA's), (Start: 2 @29766 has 1 MA's), (4, 29820), (5, 29823), (8, 29916), (10, 29991), (14, 30159), (15, 30180), (16, 30225), (20, 30303), (21, 30318), (22, 30342), (23, 30375), (24, 30414), (25, 30417), (26, 30432), (27, 30483), (28, 30534), (30, 30561), (31, 30624), (32, 30630), (34, 30672), (39, 30768), (41, 30780), (50, 30939), (54, 31005), (55, 31008), (57, 31047), (65, 31245), (66, 31281), (72, 31446),

Gene: Dandelion\_89 Start: 31814, Stop: 34132, Start Num: 1

Candidate Starts for Dandelion\_89:

(Start: 1 @31814 has 160 MA's), (Start: 2 @31847 has 1 MA's), (4, 31910), (5, 31913), (8, 32006), (10, 32081), (14, 32249), (15, 32270), (16, 32315), (20, 32393), (21, 32408), (22, 32432), (23, 32465), (24, 32504), (25, 32507), (26, 32522), (27, 32573), (28, 32624), (30, 32651), (31, 32714), (34, 32762), (38, 32936), (40, 33032), (42, 33167), (43, 33239), (44, 33314), (45, 33353), (47, 33437), (48, 33452), (50, 33491), (51, 33536), (52, 33542), (54, 33620), (56, 33668), (58, 33695), (59, 33701), (60, 33707), (65, 33917), (66, 33953), (72, 34118),

Gene: Darko\_83 Start: 29551, Stop: 31278, Start Num: 1

Candidate Starts for Darko\_83:

(Start: 1 @29551 has 160 MA's), (Start: 2 @29584 has 1 MA's), (4, 29638), (5, 29641), (8, 29734), (10, 29809), (14, 29977), (15, 29998), (16, 30043), (20, 30121), (21, 30136), (22, 30160), (23, 30193), (24, 30232), (25, 30235), (26, 30250), (27, 30301), (28, 30352), (30, 30379), (31, 30442), (34, 30490), (39, 30586), (41, 30598), (50, 30757), (54, 30823), (55, 30826), (57, 30865), (65, 31063), (66, 31099), (72, 31264),

Gene: Delilah\_83 Start: 29734, Stop: 31461, Start Num: 1

Candidate Starts for Delilah\_83:

(Start: 1 @29734 has 160 MA's), (Start: 2 @29767 has 1 MA's), (4, 29821), (5, 29824), (8, 29917), (10, 29992), (14, 30160), (15, 30181), (16, 30226), (20, 30304), (21, 30319), (22, 30343), (23, 30376), (24, 30415), (25, 30418), (26, 30433), (27, 30484), (28, 30535), (30, 30562), (31, 30625), (32, 30631), (34, 30673), (39, 30769), (41, 30781), (50, 30940), (54, 31006), (55, 31009), (57, 31048), (65, 31246), (66, 31282), (72, 31447),

Gene: Delylah\_86 Start: 29527, Stop: 31254, Start Num: 1

Candidate Starts for Delylah\_86:

(Start: 1 @29527 has 160 MA's), (Start: 2 @29560 has 1 MA's), (4, 29614), (5, 29617), (8, 29710), (10, 29785), (14, 29953), (15, 29974), (16, 30019), (20, 30097), (21, 30112), (22, 30136), (23, 30169), (24, 30208), (25, 30211), (26, 30226), (27, 30277), (28, 30328), (30, 30355), (31, 30418), (32, 30424), (34, 30466), (39, 30562), (41, 30574), (50, 30733), (54, 30799), (55, 30802), (57, 30841), (65, 31039), (66, 31075), (72, 31240),

Gene: Derek\_83 Start: 28975, Stop: 30660, Start Num: 1

Candidate Starts for Derek\_83:

(Start: 1 @28975 has 160 MA's), (5, 29023), (10, 29191), (14, 29359), (15, 29380), (16, 29425), (20, 29503), (21, 29518), (22, 29542), (23, 29575), (24, 29614), (25, 29617), (26, 29632), (27, 29683), (28, 29734), (30, 29761), (31, 29824), (32, 29830), (34, 29872), (39, 29968), (41, 29980), (50, 30139), (54, 30205), (55, 30208), (57, 30247), (65, 30445), (66, 30481), (72, 30646),

Gene: Dietrick\_76 Start: 27852, Stop: 29579, Start Num: 1

Candidate Starts for Dietrick\_76:

(Start: 1 @27852 has 160 MA's), (Start: 2 @27885 has 1 MA's), (4, 27939), (5, 27942), (8, 28035), (10, 28110), (14, 28278), (15, 28299), (16, 28344), (20, 28422), (21, 28437), (22, 28461), (23, 28494), (24, 28533), (25, 28536), (26, 28551), (27, 28602), (28, 28653), (30, 28680), (31, 28743), (32, 28749), (34, 28791), (39, 28887), (41, 28899), (50, 29058), (54, 29124), (55, 29127), (57, 29166), (65, 29364), (66, 29400), (72, 29565),

Gene: DirtMonster\_76 Start: 28371, Stop: 30056, Start Num: 1

Candidate Starts for DirtMonster\_76:

(Start: 1 @28371 has 160 MA's), (5, 28419), (10, 28587), (14, 28755), (15, 28776), (16, 28821), (20, 28899), (21, 28914), (22, 28938), (23, 28971), (24, 29010), (25, 29013), (26, 29028), (27, 29079), (28, 29130), (30, 29157), (31, 29220), (32, 29226), (34, 29268), (39, 29364), (41, 29376), (50, 29535), (54, 29601), (55, 29604), (57, 29643), (65, 29841), (66, 29877), (72, 30042),

Gene: DrPhinkDaddy\_82 Start: 29789, Stop: 31516, Start Num: 1

Candidate Starts for DrPhinkDaddy\_82:

(Start: 1 @29789 has 160 MA's), (Start: 2 @29822 has 1 MA's), (4, 29876), (5, 29879), (8, 29972), (10, 30047), (14, 30215), (15, 30236), (16, 30281), (20, 30359), (21, 30374), (22, 30398), (23, 30431), (24, 30470), (25, 30473), (26, 30488), (27, 30539), (28, 30590), (30, 30617), (31, 30680), (32, 30686), (34, 30728), (39, 30824), (41, 30836), (50, 30995), (54, 31061), (55, 31064), (57, 31103), (65, 31301), (66, 31337), (72, 31502),

Gene: Drazdys\_83 Start: 29481, Stop: 31166, Start Num: 1

Candidate Starts for Drazdys\_83:

(Start: 1 @29481 has 160 MA's), (5, 29529), (10, 29697), (14, 29865), (15, 29886), (16, 29931), (20, 30009), (21, 30024), (22, 30048), (23, 30081), (24, 30120), (25, 30123), (26, 30138), (27, 30189), (28, 30240), (30, 30267), (31, 30330), (32, 30336), (34, 30378), (39, 30474), (41, 30486), (50, 30645), (54, 30711), (55, 30714), (57, 30753), (65, 30951), (66, 30987), (72, 31152),

Gene: ET08\_72 Start: 27380, Stop: 29065, Start Num: 1

Candidate Starts for ET08\_72:

(Start: 1 @27380 has 160 MA's), (5, 27428), (10, 27596), (14, 27764), (15, 27785), (16, 27830), (20, 27908), (21, 27923), (22, 27947), (23, 27980), (24, 28019), (25, 28022), (26, 28037), (27, 28088), (28, 28139), (30, 28166), (31, 28229), (32, 28235), (34, 28277), (39, 28373), (41, 28385), (50, 28544), (54, 28610), (55, 28613), (57, 28652), (65, 28850), (66, 28886), (72, 29051),

Gene: EasyJones\_85 Start: 29233, Stop: 30960, Start Num: 1

Candidate Starts for EasyJones\_85:

(Start: 1 @29233 has 160 MA's), (Start: 2 @29266 has 1 MA's), (4, 29320), (5, 29323), (8, 29416), (10, 29491), (14, 29659), (15, 29680), (16, 29725), (20, 29803), (21, 29818), (22, 29842), (23, 29875), (24, 29914), (25, 29917), (26, 29932), (28, 30034), (29, 30037), (30, 30061), (31, 30124), (32, 30130), (34, 30172), (39, 30268), (41, 30280), (50, 30439), (54, 30505), (55, 30508), (57, 30547), (65, 30745), (66, 30781), (72, 30946),

Gene: EmToTheThree\_86 Start: 31206, Stop: 32933, Start Num: 1

Candidate Starts for EmToTheThree\_86:

(Start: 1 @31206 has 160 MA's), (Start: 2 @31239 has 1 MA's), (4, 31293), (5, 31296), (8, 31389), (10, 31464), (14, 31632), (15, 31653), (16, 31698), (20, 31776), (21, 31791), (22, 31815), (23, 31848), (24, 31887), (25, 31890), (26, 31905), (27, 31956), (28, 32007), (30, 32034), (31, 32097), (32, 32103), (34, 32145), (39, 32241), (41, 32253), (50, 32412), (54, 32478), (55, 32481), (57, 32520), (65, 32718), (66, 32754), (72, 32919),

Gene: EmmaElysia\_82 Start: 28214, Stop: 29941, Start Num: 1

Candidate Starts for EmmaElysia\_82:

(Start: 1 @28214 has 160 MA's), (Start: 2 @28247 has 1 MA's), (4, 28301), (5, 28304), (8, 28397), (10, 28472), (14, 28640), (15, 28661), (16, 28706), (20, 28784), (21, 28799), (22, 28823), (23, 28856), (24, 28895), (25, 28898), (26, 28913), (27, 28964), (28, 29015), (30, 29042), (31, 29105), (32, 29111), (34, 29153), (39, 29249), (41, 29261), (50, 29420), (54, 29486), (55, 29489), (57, 29528), (65, 29726), (66, 29762), (72, 29927),

Gene: Erdmann\_83 Start: 29734, Stop: 31461, Start Num: 1

Candidate Starts for Erdmann\_83:

(Start: 1 @29734 has 160 MA's), (Start: 2 @29767 has 1 MA's), (4, 29821), (5, 29824), (8, 29917), (10, 29992), (14, 30160), (15, 30181), (16, 30226), (20, 30304), (21, 30319), (22, 30343), (23, 30376), (24, 30415), (25, 30418), (26, 30433), (27, 30484), (28, 30535), (30, 30562), (31, 30625), (32, 30631), (34, 30673), (39, 30769), (41, 30781), (50, 30940), (54, 31006), (55, 31009), (57, 31048), (65, 31246), (66, 31282), (72, 31447),

Gene: ErnieJ\_79 Start: 28163, Stop: 29857, Start Num: 2

Candidate Starts for ErnieJ\_79:

(Start: 1 @28130 has 160 MA's), (Start: 2 @28163 has 1 MA's), (4, 28217), (5, 28220), (8, 28313), (10, 28388), (14, 28556), (15, 28577), (16, 28622), (20, 28700), (21, 28715), (22, 28739), (23, 28772), (24, 28811), (25, 28814), (26, 28829), (28, 28931), (29, 28934), (31, 29021), (32, 29027), (33, 29045), (34, 29069), (39, 29165), (50, 29336), (54, 29402), (55, 29405), (57, 29444), (65, 29642), (66, 29678), (72, 29843),

Gene: Ewok\_84 Start: 29736, Stop: 31463, Start Num: 1

Candidate Starts for Ewok\_84:

(Start: 1 @29736 has 160 MA's), (Start: 2 @29769 has 1 MA's), (4, 29823), (5, 29826), (8, 29919), (10, 29994), (14, 30162), (15, 30183), (16, 30228), (20, 30306), (21, 30321), (22, 30345), (23, 30378), (24, 30417), (25, 30420), (26, 30435), (27, 30486), (28, 30537), (30, 30564), (31, 30627), (32, 30633), (34, 30675), (39, 30771), (41, 30783), (50, 30942), (54, 31008), (55, 31011), (57, 31050), (65, 31248), (66, 31284), (72, 31449),

Gene: Flabslab\_78 Start: 27953, Stop: 29638, Start Num: 1

Candidate Starts for Flabslab\_78:

(Start: 1 @27953 has 160 MA's), (5, 28001), (8, 28094), (10, 28169), (14, 28337), (15, 28358), (16, 28403), (20, 28481), (21, 28496), (22, 28520), (23, 28553), (24, 28592), (25, 28595), (26, 28610), (27, 28661), (28, 28712), (30, 28739), (31, 28802), (32, 28808), (34, 28850), (39, 28946), (41, 28958), (50, 29117), (54, 29183), (55, 29186), (57, 29225), (65, 29423), (66, 29459), (72, 29624),

Gene: Fludd\_83 Start: 28573, Stop: 30300, Start Num: 1

Candidate Starts for Fludd\_83:

(Start: 1 @28573 has 160 MA's), (Start: 2 @28606 has 1 MA's), (4, 28660), (5, 28663), (8, 28756), (10, 28831), (14, 28999), (15, 29020), (16, 29065), (20, 29143), (21, 29158), (22, 29182), (23, 29215), (24, 29254), (25, 29257), (26, 29272), (27, 29323), (28, 29374), (30, 29401), (31, 29464), (32, 29470), (34, 29512), (39, 29608), (41, 29620), (50, 29779), (54, 29845), (55, 29848), (57, 29887), (65, 30085), (66, 30121), (72, 30286),

Gene: FoxtrotP1\_83 Start: 30136, Stop: 31863, Start Num: 1

Candidate Starts for FoxtrotP1\_83:

(Start: 1 @30136 has 160 MA's), (Start: 2 @30169 has 1 MA's), (4, 30223), (5, 30226), (8, 30319), (10, 30394), (14, 30562), (15, 30583), (16, 30628), (20, 30706), (21, 30721), (22, 30745), (23, 30778), (24, 30817), (25, 30820), (26, 30835), (27, 30886), (28, 30937), (30, 30964), (31, 31027), (32, 31033), (34, 31075), (39, 31171), (41, 31183), (50, 31342), (54, 31408), (55, 31411), (57, 31450), (65, 31648), (66, 31684), (72, 31849),

Gene: FrayBell\_89 Start: 31066, Stop: 32793, Start Num: 1

Candidate Starts for FrayBell\_89:

(Start: 1 @31066 has 160 MA's), (Start: 2 @31099 has 1 MA's), (4, 31153), (5, 31156), (10, 31324), (14, 31492), (15, 31513), (16, 31558), (20, 31636), (21, 31651), (22, 31675), (23, 31708), (24, 31747), (25, 31750), (26, 31765), (27, 31816), (28, 31867), (30, 31894), (31, 31957), (34, 32005), (39, 32101), (41, 32113), (50, 32272), (54, 32338), (55, 32341), (57, 32380), (65, 32578), (66, 32614), (72, 32779),

Gene: FudgeTart\_83 Start: 28849, Stop: 30534, Start Num: 1

Candidate Starts for FudgeTart\_83:

(Start: 1 @28849 has 160 MA's), (5, 28897), (10, 29065), (14, 29233), (15, 29254), (16, 29299), (20, 29377), (21, 29392), (22, 29416), (23, 29449), (24, 29488), (25, 29491), (26, 29506), (27, 29557), (28, 29608), (30, 29635), (31, 29698), (32, 29704), (34, 29746), (39, 29842), (41, 29854), (50, 30013), (54, 30079), (55, 30082), (57, 30121), (65, 30319), (66, 30355), (72, 30520),

Gene: Gabriel\_85 Start: 28877, Stop: 30604, Start Num: 1

Candidate Starts for Gabriel\_85:

(Start: 1 @28877 has 160 MA's), (Start: 2 @28910 has 1 MA's), (4, 28964), (5, 28967), (10, 29135), (14, 29303), (15, 29324), (16, 29369), (20, 29447), (21, 29462), (22, 29486), (23, 29519), (24, 29558), (25, 29561), (26, 29576), (27, 29627), (28, 29678), (30, 29705), (31, 29768), (32, 29774), (34, 29816), (39, 29912), (41, 29924), (50, 30083), (54, 30149), (55, 30152), (57, 30191), (65, 30389), (66, 30425), (72, 30590),

Gene: Gamgam\_83 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for Gamgam\_83:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156), (66, 30192), (72, 30357),

Gene: Ghost\_82 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for Ghost\_82:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156), (66, 30192), (72, 30357),

Gene: Gizmo\_87 Start: 29417, Stop: 31144, Start Num: 1

Candidate Starts for Gizmo\_87:

(Start: 1 @29417 has 160 MA's), (Start: 2 @29450 has 1 MA's), (4, 29504), (5, 29507), (8, 29600), (10, 29675), (14, 29843), (15, 29864), (16, 29909), (20, 29987), (21, 30002), (22, 30026), (23, 30059), (24, 30098), (25, 30101), (26, 30116), (27, 30167), (28, 30218), (30, 30245), (31, 30308), (32, 30314), (34, 30356), (39, 30452), (41, 30464), (50, 30623), (54, 30689), (55, 30692), (57, 30731), (65, 30929), (66, 30965), (72, 31130),

Gene: Grasshills\_90 Start: 31820, Stop: 33547, Start Num: 1

Candidate Starts for Grasshills\_90:

(Start: 1 @31820 has 160 MA's), (Start: 2 @31853 has 1 MA's), (5, 31910), (8, 32003), (10, 32078), (14, 32246), (15, 32267), (16, 32312), (20, 32390), (21, 32405), (22, 32429), (23, 32462), (24, 32501), (25, 32504), (26, 32519), (27, 32570), (28, 32621), (30, 32648), (31, 32711), (32, 32717), (34, 32759), (39, 32855), (50, 33026), (54, 33092), (55, 33095), (57, 33134), (65, 33332), (66, 33368), (72, 33533),

Gene: Grungle\_71 Start: 26064, Stop: 27749, Start Num: 1

Candidate Starts for Grungle\_71:

(Start: 1 @26064 has 160 MA's), (5, 26112), (10, 26280), (14, 26448), (15, 26469), (16, 26514), (20, 26592), (21, 26607), (22, 26631), (23, 26664), (24, 26703), (25, 26706), (26, 26721), (27, 26772), (28, 26823), (30, 26850), (31, 26913), (32, 26919), (34, 26961), (39, 27057), (41, 27069), (50, 27228), (54, 27294), (55, 27297), (57, 27336), (65, 27534), (66, 27570), (72, 27735),

Gene: Guwapp\_82 Start: 28739, Stop: 30466, Start Num: 1

Candidate Starts for Guwapp\_82:

(Start: 1 @28739 has 160 MA's), (Start: 2 @28772 has 1 MA's), (4, 28826), (5, 28829), (8, 28922), (10, 28997), (14, 29165), (15, 29186), (16, 29231), (20, 29309), (21, 29324), (22, 29348), (23, 29381), (24, 29420), (25, 29423), (26, 29438), (27, 29489), (28, 29540), (30, 29567), (31, 29630), (32, 29636), (34, 29678), (39, 29774), (41, 29786), (50, 29945), (54, 30011), (55, 30014), (57, 30053), (65, 30251), (66, 30287), (72, 30452),

Gene: Halldule\_75 Start: 27094, Stop: 28779, Start Num: 1

Candidate Starts for Halldule\_75:

(Start: 1 @27094 has 160 MA's), (5, 27142), (10, 27310), (14, 27478), (15, 27499), (16, 27544), (20, 27622), (21, 27637), (22, 27661), (23, 27694), (24, 27733), (25, 27736), (26, 27751), (27, 27802), (28, 27853), (30, 27880), (31, 27943), (32, 27949), (34, 27991), (39, 28087), (41, 28099), (50, 28258), (54, 28324), (55, 28327), (57, 28366), (65, 28564), (66, 28600), (72, 28765),

Gene: HyRo\_76 Start: 28344, Stop: 30029, Start Num: 1

Candidate Starts for HyRo\_76:

(Start: 1 @28344 has 160 MA's), (5, 28392), (10, 28560), (14, 28728), (15, 28749), (16, 28794), (20, 28872), (21, 28887), (22, 28911), (23, 28944), (24, 28983), (25, 28986), (26, 29001), (27, 29052), (28, 29103), (30, 29130), (31, 29193), (32, 29199), (34, 29241), (39, 29337), (41, 29349), (50, 29508), (54, 29574), (55, 29577), (57, 29616), (65, 29814), (66, 29850), (72, 30015),

Gene: I3\_88 Start: 30016, Stop: 31743, Start Num: 1

Candidate Starts for I3\_88:

(Start: 1 @30016 has 160 MA's), (Start: 2 @30049 has 1 MA's), (4, 30103), (5, 30106), (8, 30199), (10, 30274), (14, 30442), (15, 30463), (16, 30508), (20, 30586), (21, 30601), (22, 30625), (24, 30697), (25, 30700), (26, 30715), (27, 30766), (28, 30817), (30, 30844), (31, 30907), (32, 30913), (34, 30955), (39, 31051), (50, 31222), (54, 31288), (55, 31291), (57, 31330), (65, 31528), (66, 31564), (72, 31729),

Gene: IkeLoa\_77 Start: 27982, Stop: 29709, Start Num: 1

Candidate Starts for IkeLoa\_77:

(Start: 1 @27982 has 160 MA's), (Start: 2 @28015 has 1 MA's), (4, 28069), (5, 28072), (10, 28240), (14, 28408), (15, 28429), (16, 28474), (20, 28552), (21, 28567), (22, 28591), (23, 28624), (24, 28663), (25, 28666), (26, 28681), (27, 28732), (28, 28783), (30, 28810), (31, 28873), (34, 28921), (39, 29017), (41, 29029), (50, 29188), (54, 29254), (55, 29257), (57, 29296), (65, 29494), (66, 29530), (72, 29695),

Gene: InigoMontoya\_84 Start: 28605, Stop: 30332, Start Num: 1

Candidate Starts for InigoMontoya\_84:

(Start: 1 @28605 has 160 MA's), (Start: 2 @28638 has 1 MA's), (4, 28692), (5, 28695), (8, 28788), (10, 28863), (14, 29031), (15, 29052), (16, 29097), (20, 29175), (21, 29190), (22, 29214), (23, 29247), (24, 29286), (25, 29289), (26, 29304), (27, 29355), (28, 29406), (30, 29433), (31, 29496), (32, 29502), (34, 29544), (39, 29640), (41, 29652), (50, 29811), (54, 29877), (55, 29880), (57, 29919), (65, 30117), (66, 30153), (72, 30318),

Gene: InterFolia\_92 Start: 32186, Stop: 33871, Start Num: 1

Candidate Starts for InterFolia\_92:

(Start: 1 @32186 has 160 MA's), (5, 32234), (10, 32402), (14, 32570), (15, 32591), (16, 32636), (20, 32714), (21, 32729), (22, 32753), (23, 32786), (24, 32825), (25, 32828), (26, 32843), (27, 32894), (28, 32945), (30, 32972), (31, 33035), (32, 33041), (34, 33083), (39, 33179), (50, 33350), (54, 33416), (55, 33419), (57, 33458), (65, 33656), (66, 33692), (72, 33857),

Gene: Iota\_77 Start: 28423, Stop: 30108, Start Num: 1

Candidate Starts for Iota\_77:

(Start: 1 @28423 has 160 MA's), (5, 28471), (10, 28639), (14, 28807), (15, 28828), (16, 28873), (20, 28951), (21, 28966), (22, 28990), (23, 29023), (24, 29062), (25, 29065), (26, 29080), (27, 29131), (28, 29182), (30, 29209), (31, 29272), (32, 29278), (34, 29320), (39, 29416), (41, 29428), (50, 29587), (54, 29653), (55, 29656), (57, 29695), (65, 29893), (66, 29929), (72, 30094),

Gene: Izajani\_83 Start: 29750, Stop: 31477, Start Num: 1

Candidate Starts for Izajani\_83:

(Start: 1 @29750 has 160 MA's), (Start: 2 @29783 has 1 MA's), (4, 29837), (5, 29840), (8, 29933), (10, 30008), (14, 30176), (15, 30197), (16, 30242), (20, 30320), (21, 30335), (22, 30359), (23, 30392), (24, 30431), (25, 30434), (26, 30449), (27, 30500), (28, 30551), (30, 30578), (31, 30641), (32, 30647), (34, 30689), (39, 30785), (41, 30797), (50, 30956), (54, 31022), (55, 31025), (57, 31064), (65, 31262), (66, 31298), (72, 31463),

Gene: JPickles\_81 Start: 27071, Stop: 28798, Start Num: 1

Candidate Starts for JPickles\_81:

(Start: 1 @27071 has 160 MA's), (Start: 2 @27104 has 1 MA's), (4, 27158), (5, 27161), (8, 27254), (10, 27329), (14, 27497), (15, 27518), (16, 27563), (20, 27641), (21, 27656), (22, 27680), (23, 27713), (24, 27752), (25, 27755), (26, 27770), (27, 27821), (28, 27872), (30, 27899), (31, 27962), (32, 27968), (34, 28010), (39, 28106), (41, 28118), (50, 28277), (54, 28343), (55, 28346), (57, 28385), (65, 28583), (66, 28619), (72, 28784),

Gene: Janiyra\_85 Start: 29403, Stop: 31130, Start Num: 1

Candidate Starts for Janiyra\_85:

(Start: 1 @29403 has 160 MA's), (Start: 2 @29436 has 1 MA's), (4, 29490), (5, 29493), (8, 29586), (10, 29661), (14, 29829), (15, 29850), (16, 29895), (20, 29973), (21, 29988), (22, 30012), (23, 30045), (24, 30084), (25, 30087), (26, 30102), (27, 30153), (28, 30204), (30, 30231), (31, 30294), (32, 30300), (34, 30342), (39, 30438), (41, 30450), (50, 30609), (54, 30675), (55, 30678), (57, 30717), (65, 30915), (66, 30951), (72, 31116),

Gene: JayJay\_85 Start: 30230, Stop: 31957, Start Num: 1

Candidate Starts for JayJay\_85:

(Start: 1 @30230 has 160 MA's), (Start: 2 @30263 has 1 MA's), (4, 30317), (5, 30320), (8, 30413), (10, 30488), (14, 30656), (15, 30677), (16, 30722), (20, 30800), (21, 30815), (22, 30839), (23, 30872), (24, 30911), (25, 30914), (26, 30929), (27, 30980), (28, 31031), (30, 31058), (31, 31121), (32, 31127), (34, 31169), (39, 31265), (41, 31277), (50, 31436), (54, 31502), (55, 31505), (57, 31544), (65, 31742), (66, 31778), (72, 31943),

Gene: Jaygup\_83 Start: 28641, Stop: 30326, Start Num: 1

Candidate Starts for Jaygup\_83:

(Start: 1 @28641 has 160 MA's), (5, 28689), (10, 28857), (14, 29025), (15, 29046), (16, 29091), (20, 29169), (21, 29184), (22, 29208), (23, 29241), (24, 29280), (25, 29283), (26, 29298), (27, 29349), (28, 29400), (30, 29427), (31, 29490), (32, 29496), (34, 29538), (39, 29634), (41, 29646), (50, 29805), (54, 29871), (55, 29874), (57, 29913), (65, 30111), (66, 30147), (72, 30312),

Gene: Jedediah\_86 Start: 29141, Stop: 30826, Start Num: 1

Candidate Starts for Jedediah\_86:



(Start: 1 @29141 has 160 MA's), (5, 29189), (10, 29357), (14, 29525), (15, 29546), (16, 29591), (20, 29669), (21, 29684), (22, 29708), (23, 29741), (24, 29780), (25, 29783), (26, 29798), (27, 29849), (28, 29900), (30, 29927), (31, 29990), (32, 29996), (34, 30038), (39, 30134), (41, 30146), (50, 30305), (54, 30371), (55, 30374), (57, 30413), (65, 30611), (66, 30647), (72, 30812),

Gene: Jemmno\_83 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for Jemmno\_83:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156), (66, 30192), (72, 30357),

Gene: Jessibeth14\_82 Start: 29519, Stop: 31246, Start Num: 1

Candidate Starts for Jessibeth14\_82:

(Start: 1 @29519 has 160 MA's), (Start: 2 @29552 has 1 MA's), (4, 29606), (5, 29609), (8, 29702), (10, 29777), (14, 29945), (15, 29966), (16, 30011), (20, 30089), (21, 30104), (22, 30128), (23, 30161), (24, 30200), (25, 30203), (26, 30218), (27, 30269), (28, 30320), (30, 30347), (31, 30410), (32, 30416), (34, 30458), (39, 30554), (41, 30566), (50, 30725), (54, 30791), (55, 30794), (57, 30833), (65, 31031), (66, 31067), (72, 31232),

Gene: JulietS\_75 Start: 26945, Stop: 28630, Start Num: 1

Candidate Starts for JulietS\_75:

(Start: 1 @26945 has 160 MA's), (5, 26993), (10, 27161), (14, 27329), (15, 27350), (16, 27395), (20, 27473), (21, 27488), (22, 27512), (23, 27545), (24, 27584), (25, 27587), (26, 27602), (27, 27653), (28, 27704), (30, 27731), (31, 27794), (32, 27800), (34, 27842), (39, 27938), (41, 27950), (50, 28109), (54, 28175), (55, 28178), (57, 28217), (65, 28415), (66, 28451), (72, 28616),

Gene: JustHall\_79 Start: 28963, Stop: 30648, Start Num: 1

Candidate Starts for JustHall\_79:

(Start: 1 @28963 has 160 MA's), (5, 29011), (10, 29179), (14, 29347), (15, 29368), (16, 29413), (20, 29491), (21, 29506), (22, 29530), (23, 29563), (24, 29602), (25, 29605), (26, 29620), (27, 29671), (28, 29722), (30, 29749), (31, 29812), (32, 29818), (34, 29860), (39, 29956), (41, 29968), (50, 30127), (54, 30193), (55, 30196), (57, 30235), (65, 30433), (66, 30469), (72, 30634),

Gene: Kamryn\_83 Start: 29676, Stop: 31985, Start Num: 1

Candidate Starts for Kamryn\_83:

(Start: 1 @29676 has 160 MA's), (Start: 2 @29709 has 1 MA's), (4, 29763), (5, 29766), (8, 29859), (10, 29934), (14, 30102), (15, 30123), (16, 30168), (17, 30186), (20, 30246), (21, 30261), (22, 30285), (23, 30318), (24, 30357), (25, 30360), (26, 30375), (27, 30426), (28, 30477), (30, 30504), (31, 30567), (34, 30615), (38, 30789), (40, 30885), (42, 31020), (43, 31092), (44, 31167), (45, 31206), (47, 31290), (48, 31305), (50, 31344), (51, 31389), (52, 31395), (54, 31473), (56, 31521), (58, 31548), (59, 31554), (60, 31560), (65, 31770), (66, 31806), (72, 31971),

Gene: Kboogie\_86 Start: 28685, Stop: 30412, Start Num: 1

Candidate Starts for Kboogie\_86:

(Start: 1 @28685 has 160 MA's), (Start: 2 @28718 has 1 MA's), (4, 28772), (5, 28775), (8, 28868), (10, 28943), (14, 29111), (15, 29132), (16, 29177), (20, 29255), (21, 29270), (22, 29294), (23, 29327), (24, 29366), (25, 29369), (26, 29384), (27, 29435), (28, 29486), (30, 29513), (31, 29576), (32, 29582), (34, 29624), (39, 29720), (41, 29732), (50, 29891), (54, 29957), (55, 29960), (57, 29999), (65, 30197), (66, 30233), (72, 30398),

Gene: Khaleesi\_82 Start: 29481, Stop: 31208, Start Num: 1

Candidate Starts for Khaleesi\_82:

(Start: 1 @29481 has 160 MA's), (Start: 2 @29514 has 1 MA's), (4, 29568), (5, 29571), (8, 29664), (10, 29739), (14, 29907), (15, 29928), (16, 29973), (20, 30051), (21, 30066), (22, 30090), (23, 30123), (24, 30162), (25, 30165), (26, 30180), (27, 30231), (28, 30282), (30, 30309), (31, 30372), (32, 30378), (34, 30420), (39, 30516), (41, 30528), (50, 30687), (54, 30753), (55, 30756), (57, 30795), (65, 30993), (66, 31029), (72, 31194),

Gene: Koguma\_79 Start: 27165, Stop: 28850, Start Num: 1

Candidate Starts for Koguma\_79:

(Start: 1 @27165 has 160 MA's), (5, 27213), (10, 27381), (14, 27549), (15, 27570), (16, 27615), (20, 27693), (21, 27708), (22, 27732), (23, 27765), (24, 27804), (25, 27807), (26, 27822), (27, 27873), (28, 27924), (30, 27951), (31, 28014), (32, 28020), (34, 28062), (39, 28158), (41, 28170), (50, 28329), (54, 28395), (55, 28398), (57, 28437), (65, 28635), (66, 28671), (72, 28836),

Gene: LRRHood\_77 Start: 28984, Stop: 30669, Start Num: 1

Candidate Starts for LRRHood\_77:

(Start: 1 @28984 has 160 MA's), (5, 29032), (10, 29200), (14, 29368), (15, 29389), (16, 29434), (20, 29512), (21, 29527), (22, 29551), (23, 29584), (24, 29623), (25, 29626), (26, 29641), (27, 29692), (28, 29743), (30, 29770), (31, 29833), (32, 29839), (34, 29881), (39, 29977), (41, 29989), (50, 30148), (54, 30214), (55, 30217), (57, 30256), (65, 30454), (66, 30490), (72, 30655),

Gene: Latch\_83 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for Latch\_83:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156), (66, 30192), (72, 30357),

Gene: Lee7\_81 Start: 29734, Stop: 31461, Start Num: 1

Candidate Starts for Lee7\_81:

(Start: 1 @29734 has 160 MA's), (Start: 2 @29767 has 1 MA's), (4, 29821), (5, 29824), (8, 29917), (10, 29992), (14, 30160), (15, 30181), (16, 30226), (20, 30304), (21, 30319), (22, 30343), (23, 30376), (24, 30415), (25, 30418), (26, 30433), (27, 30484), (28, 30535), (30, 30562), (31, 30625), (32, 30631), (34, 30673), (39, 30769), (41, 30781), (50, 30940), (54, 31006), (55, 31009), (57, 31048), (65, 31246), (66, 31282), (72, 31447),

Gene: LifeSavor\_82 Start: 28364, Stop: 30091, Start Num: 1

Candidate Starts for LifeSavor\_82:

(Start: 1 @28364 has 160 MA's), (Start: 2 @28397 has 1 MA's), (4, 28451), (5, 28454), (10, 28622), (14, 28790), (15, 28811), (16, 28856), (20, 28934), (21, 28949), (22, 28973), (23, 29006), (24, 29045), (25, 29048), (26, 29063), (27, 29114), (28, 29165), (30, 29192), (31, 29255), (32, 29261), (34, 29303), (39, 29399), (41, 29411), (50, 29570), (54, 29636), (55, 29639), (57, 29678), (65, 29876), (66, 29912), (72, 30077),

Gene: LinStu\_82 Start: 30143, Stop: 31828, Start Num: 1

Candidate Starts for LinStu\_82:

(Start: 1 @30143 has 160 MA's), (5, 30191), (10, 30359), (14, 30527), (15, 30548), (16, 30593), (20, 30671), (21, 30686), (22, 30710), (23, 30743), (24, 30782), (25, 30785), (26, 30800), (27, 30851), (28, 30902), (30, 30929), (31, 30992), (32, 30998), (34, 31040), (39, 31136), (41, 31148), (50, 31307), (54, 31373), (55, 31376), (57, 31415), (65, 31613), (66, 31649), (72, 31814),

Gene: Littleton\_83 Start: 28644, Stop: 30329, Start Num: 1

Candidate Starts for Littleton\_83:

(Start: 1 @28644 has 160 MA's), (5, 28692), (10, 28860), (14, 29028), (15, 29049), (16, 29094), (20, 29172), (21, 29187), (22, 29211), (23, 29244), (24, 29283), (25, 29286), (26, 29301), (27, 29352), (28, 29403), (30, 29430), (31, 29493), (32, 29499), (34, 29541), (39, 29637), (41, 29649), (50, 29808), (54, 29874), (55, 29877), (57, 29916), (65, 30114), (66, 30150), (72, 30315),

Gene: Loanshark\_83 Start: 29734, Stop: 31461, Start Num: 1

Candidate Starts for Loanshark\_83:

(Start: 1 @29734 has 160 MA's), (Start: 2 @29767 has 1 MA's), (4, 29821), (5, 29824), (8, 29917), (10, 29992), (14, 30160), (15, 30181), (16, 30226), (20, 30304), (21, 30319), (22, 30343), (23, 30376), (24, 30415), (25, 30418), (26, 30433), (27, 30484), (28, 30535), (30, 30562), (31, 30625), (32, 30631), (34, 30673), (39, 30769), (41, 30781), (50, 30940), (54, 31006), (55, 31009), (57, 31048), (65, 31246), (66, 31282), (72, 31447),

Gene: LolaVinca\_85 Start: 30894, Stop: 32621, Start Num: 1

Candidate Starts for LolaVinca\_85:

(Start: 1 @30894 has 160 MA's), (Start: 2 @30927 has 1 MA's), (4, 30981), (5, 30984), (8, 31077), (10, 31152), (14, 31320), (15, 31341), (16, 31386), (20, 31464), (21, 31479), (22, 31503), (23, 31536), (24, 31575), (25, 31578), (26, 31593), (27, 31644), (28, 31695), (30, 31722), (31, 31785), (32, 31791), (34, 31833), (39, 31929), (41, 31941), (50, 32100), (54, 32166), (55, 32169), (57, 32208), (65, 32406), (66, 32442), (72, 32607),

Gene: Maby2021\_83 Start: 29415, Stop: 31142, Start Num: 1

Candidate Starts for Maby2021\_83:

(Start: 1 @29415 has 160 MA's), (Start: 2 @29448 has 1 MA's), (4, 29502), (5, 29505), (8, 29598), (10, 29673), (14, 29841), (15, 29862), (16, 29907), (20, 29985), (21, 30000), (22, 30024), (23, 30057), (24, 30096), (25, 30099), (26, 30114), (27, 30165), (28, 30216), (30, 30243), (31, 30306), (32, 30312), (34, 30354), (39, 30450), (41, 30462), (50, 30621), (54, 30687), (55, 30690), (57, 30729), (65, 30927), (66, 30963), (72, 31128),

Gene: Mangeria\_83 Start: 29155, Stop: 31422, Start Num: 1

Candidate Starts for Mangeria\_83:

(Start: 1 @29155 has 160 MA's), (Start: 2 @29188 has 1 MA's), (5, 29203), (10, 29371), (14, 29539), (15, 29560), (16, 29605), (20, 29683), (21, 29698), (22, 29722), (23, 29755), (24, 29794), (25, 29797), (26, 29812), (27, 29863), (28, 29914), (30, 29941), (31, 30004), (34, 30052), (38, 30226), (40, 30322), (42, 30457), (43, 30529), (44, 30604), (45, 30643), (47, 30727), (48, 30742), (50, 30781), (51, 30826), (52, 30832), (54, 30910), (56, 30958), (58, 30985), (59, 30991), (60, 30997), (61, 31021), (65, 31207), (66, 31243), (72, 31408),

Gene: Matsumoto\_81 Start: 28605, Stop: 30290, Start Num: 1

Candidate Starts for Matsumoto\_81:

(Start: 1 @28605 has 160 MA's), (5, 28653), (10, 28821), (14, 28989), (15, 29010), (16, 29055), (20, 29133), (21, 29148), (22, 29172), (23, 29205), (24, 29244), (25, 29247), (26, 29262), (27, 29313), (28, 29364), (30, 29391), (31, 29454), (32, 29460), (34, 29502), (39, 29598), (41, 29610), (50, 29769), (54, 29835), (55, 29838), (57, 29877), (65, 30075), (66, 30111), (72, 30276),

Gene: McGee\_84 Start: 27828, Stop: 29555, Start Num: 1

Candidate Starts for McGee\_84:

(Start: 1 @27828 has 160 MA's), (Start: 2 @27861 has 1 MA's), (4, 27915), (5, 27918), (8, 28011), (10, 28086), (14, 28254), (15, 28275), (16, 28320), (20, 28398), (21, 28413), (22, 28437), (23, 28470), (24, 28509), (25, 28512), (26, 28527), (27, 28578), (28, 28629), (30, 28656), (31, 28719), (32, 28725), (34, 28767), (39, 28863), (41, 28875), (50, 29034), (54, 29100), (55, 29103), (57, 29142), (65, 29340), (66, 29376), (72, 29541),

Gene: McWolfish\_81 Start: 29162, Stop: 30889, Start Num: 1

Candidate Starts for McWolfish\_81:

(Start: 1 @29162 has 160 MA's), (Start: 2 @29195 has 1 MA's), (4, 29249), (5, 29252), (8, 29345), (10, 29420), (14, 29588), (15, 29609), (16, 29654), (20, 29732), (21, 29747), (22, 29771), (23, 29804), (24, 29843), (25, 29846), (26, 29861), (27, 29912), (28, 29963), (30, 29990), (31, 30053), (32, 30059), (34, 30101), (39, 30197), (41, 30209), (50, 30368), (54, 30434), (55, 30437), (57, 30476), (65, 30674), (66, 30710), (72, 30875),

Gene: Megamind\_82 Start: 29400, Stop: 31127, Start Num: 1

Candidate Starts for Megamind\_82:

(Start: 1 @29400 has 160 MA's), (Start: 2 @29433 has 1 MA's), (4, 29487), (5, 29490), (8, 29583), (10, 29658), (14, 29826), (15, 29847), (16, 29892), (20, 29970), (21, 29985), (22, 30009), (23, 30042), (24, 30081), (25, 30084), (26, 30099), (27, 30150), (28, 30201), (30, 30228), (31, 30291), (32, 30297), (34, 30339), (39, 30435), (41, 30447), (50, 30606), (54, 30672), (55, 30675), (57, 30714), (65, 30912), (66, 30948), (72, 31113),

Gene: Melpomini\_77 Start: 27198, Stop: 28925, Start Num: 1

Candidate Starts for Melpomini\_77:

(Start: 1 @27198 has 160 MA's), (Start: 2 @27231 has 1 MA's), (4, 27285), (5, 27288), (8, 27381), (10, 27456), (14, 27624), (15, 27645), (16, 27690), (20, 27768), (21, 27783), (22, 27807), (23, 27840), (24, 27879), (25, 27882), (26, 27897), (27, 27948), (28, 27999), (30, 28026), (31, 28089), (32, 28095), (34, 28137), (39, 28233), (41, 28245), (50, 28404), (54, 28470), (55, 28473), (57, 28512), (65, 28710), (66, 28746), (72, 28911),

Gene: MikeLiesIn\_83 Start: 29747, Stop: 31474, Start Num: 1

Candidate Starts for MikeLiesIn\_83:

(Start: 1 @29747 has 160 MA's), (Start: 2 @29780 has 1 MA's), (4, 29834), (5, 29837), (8, 29930), (10, 30005), (14, 30173), (15, 30194), (16, 30239), (20, 30317), (21, 30332), (22, 30356), (23, 30389), (24, 30428), (25, 30431), (26, 30446), (27, 30497), (28, 30548), (30, 30575), (31, 30638), (32, 30644), (34, 30686), (39, 30782), (41, 30794), (50, 30953), (54, 31019), (55, 31022), (57, 31061), (65, 31259), (66, 31295), (72, 31460),

Gene: Mikro\_81 Start: 30541, Stop: 32268, Start Num: 1

Candidate Starts for Mikro\_81:

(Start: 1 @30541 has 160 MA's), (Start: 2 @30574 has 1 MA's), (4, 30628), (5, 30631), (8, 30724), (10, 30799), (14, 30967), (15, 30988), (16, 31033), (17, 31051), (20, 31111), (21, 31126), (22, 31150), (23, 31183), (24, 31222), (25, 31225), (26, 31240), (27, 31291), (28, 31342), (30, 31369), (31, 31432), (32, 31438), (34, 31480), (39, 31576), (41, 31588), (50, 31747), (54, 31813), (55, 31816), (57, 31855), (65, 32053), (66, 32089), (72, 32254),

Gene: MoMoMixon\_83 Start: 29847, Stop: 31574, Start Num: 1

Candidate Starts for MoMoMixon\_83:

(Start: 1 @29847 has 160 MA's), (Start: 2 @29880 has 1 MA's), (4, 29934), (5, 29937), (8, 30030), (10, 30105), (14, 30273), (15, 30294), (16, 30339), (20, 30417), (21, 30432), (22, 30456), (23, 30489), (24, 30528), (25, 30531), (26, 30546), (27, 30597), (28, 30648), (30, 30675), (31, 30738), (32, 30744), (34, 30786), (39, 30882), (41, 30894), (50, 31053), (54, 31119), (55, 31122), (57, 31161), (65, 31359), (66, 31395), (72, 31560),

Gene: Momo\_82 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for Momo\_82:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286),

(24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156), (66, 30192), (72, 30357),

Gene: Morizzled23\_83 Start: 28813, Stop: 30540, Start Num: 1

Candidate Starts for Morizzled23\_83:

(Start: 1 @28813 has 160 MA's), (Start: 2 @28846 has 1 MA's), (4, 28900), (5, 28903), (8, 28996), (10, 29071), (14, 29239), (15, 29260), (16, 29305), (20, 29383), (21, 29398), (22, 29422), (23, 29455), (24, 29494), (25, 29497), (26, 29512), (28, 29614), (29, 29617), (31, 29704), (32, 29710), (33, 29728), (34, 29752), (39, 29848), (50, 30019), (54, 30085), (55, 30088), (57, 30127), (65, 30325), (66, 30361), (72, 30526),

Gene: Naija\_82 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for Naija\_82:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156), (66, 30192), (72, 30357),

Gene: Napoleon13\_79 Start: 27542, Stop: 29269, Start Num: 1

Candidate Starts for Napoleon13\_79:

(Start: 1 @27542 has 160 MA's), (Start: 2 @27575 has 1 MA's), (4, 27629), (5, 27632), (8, 27725), (10, 27800), (14, 27968), (15, 27989), (16, 28034), (20, 28112), (21, 28127), (22, 28151), (23, 28184), (24, 28223), (25, 28226), (26, 28241), (27, 28292), (28, 28343), (30, 28370), (31, 28433), (32, 28439), (34, 28481), (39, 28577), (41, 28589), (50, 28748), (54, 28814), (55, 28817), (57, 28856), (65, 29054), (66, 29090), (72, 29255),

Gene: Nappy\_84 Start: 30036, Stop: 31763, Start Num: 1

Candidate Starts for Nappy\_84:

(Start: 1 @30036 has 160 MA's), (Start: 2 @30069 has 1 MA's), (4, 30123), (5, 30126), (8, 30219), (10, 30294), (14, 30462), (15, 30483), (16, 30528), (20, 30606), (21, 30621), (22, 30645), (23, 30678), (24, 30717), (25, 30720), (26, 30735), (27, 30786), (28, 30837), (30, 30864), (31, 30927), (32, 30933), (34, 30975), (39, 31071), (41, 31083), (50, 31242), (54, 31308), (55, 31311), (57, 31350), (65, 31548), (66, 31584), (72, 31749),

Gene: Naval22\_88 Start: 30756, Stop: 33065, Start Num: 1

Candidate Starts for Naval22\_88:

(Start: 1 @30756 has 160 MA's), (Start: 2 @30789 has 1 MA's), (4, 30843), (5, 30846), (8, 30939), (10, 31014), (14, 31182), (15, 31203), (16, 31248), (20, 31326), (21, 31341), (22, 31365), (23, 31398), (24, 31437), (25, 31440), (26, 31455), (27, 31506), (28, 31557), (30, 31584), (31, 31647), (34, 31695), (38, 31869), (40, 31965), (42, 32100), (43, 32172), (44, 32247), (45, 32286), (47, 32370), (48, 32385), (50, 32424), (51, 32469), (52, 32475), (54, 32553), (56, 32601), (58, 32628), (59, 32634), (60, 32640), (65, 32850), (66, 32886), (72, 33051),

Gene: NedWong\_84 Start: 29734, Stop: 31461, Start Num: 1

Candidate Starts for NedWong\_84:

(Start: 1 @29734 has 160 MA's), (Start: 2 @29767 has 1 MA's), (4, 29821), (5, 29824), (8, 29917), (10, 29992), (14, 30160), (15, 30181), (16, 30226), (20, 30304), (21, 30319), (22, 30343), (23, 30376), (24, 30415), (25, 30418), (26, 30433), (27, 30484), (28, 30535), (30, 30562), (31, 30625), (32, 30631), (34, 30673), (39, 30769), (41, 30781), (50, 30940), (54, 31006), (55, 31009), (57, 31048), (65, 31246), (66, 31282), (72, 31447),

Gene: Ngannou\_79 Start: 27626, Stop: 29353, Start Num: 1

Candidate Starts for Ngannou\_79:

(Start: 1 @27626 has 160 MA's), (Start: 2 @27659 has 1 MA's), (4, 27713), (5, 27716), (8, 27809), (10, 27884), (14, 28052), (15, 28073), (16, 28118), (20, 28196), (21, 28211), (22, 28235), (23, 28268), (24, 28307), (25, 28310), (26, 28325), (27, 28376), (28, 28427), (30, 28454), (31, 28517), (32, 28523), (34, 28565), (39, 28661), (41, 28673), (50, 28832), (54, 28898), (55, 28901), (57, 28940), (65, 29138), (66, 29174), (72, 29339),

Gene: Nidhogg\_83 Start: 29588, Stop: 31315, Start Num: 1

Candidate Starts for Nidhogg\_83:

(Start: 1 @29588 has 160 MA's), (Start: 2 @29621 has 1 MA's), (4, 29675), (5, 29678), (8, 29771), (10, 29846), (14, 30014), (15, 30035), (16, 30080), (20, 30158), (21, 30173), (22, 30197), (23, 30230), (24, 30269), (25, 30272), (26, 30287), (27, 30338), (28, 30389), (30, 30416), (31, 30479), (32, 30485), (34, 30527), (39, 30623), (41, 30635), (50, 30794), (54, 30860), (55, 30863), (57, 30902), (65, 31100), (66, 31136), (72, 31301),

Gene: NoodleTree\_86 Start: 30183, Stop: 32492, Start Num: 1

Candidate Starts for NoodleTree\_86:

(Start: 1 @30183 has 160 MA's), (Start: 2 @30216 has 1 MA's), (4, 30270), (5, 30273), (8, 30366), (10, 30441), (14, 30609), (15, 30630), (16, 30675), (20, 30753), (21, 30768), (22, 30792), (23, 30825), (24, 30864), (25, 30867), (26, 30882), (27, 30933), (28, 30984), (30, 31011), (31, 31074), (34, 31122), (38, 31296), (40, 31392), (42, 31527), (43, 31599), (44, 31674), (45, 31713), (47, 31797), (48, 31812), (50, 31851), (51, 31896), (52, 31902), (54, 31980), (56, 32028), (58, 32055), (59, 32061), (60, 32067), (65, 32277), (66, 32313), (72, 32478),

Gene: Norm\_84 Start: 29736, Stop: 31463, Start Num: 1

Candidate Starts for Norm\_84:

(Start: 1 @29736 has 160 MA's), (Start: 2 @29769 has 1 MA's), (4, 29823), (5, 29826), (8, 29919), (10, 29994), (14, 30162), (15, 30183), (16, 30228), (20, 30306), (21, 30321), (22, 30345), (23, 30378), (24, 30417), (25, 30420), (26, 30435), (27, 30486), (28, 30537), (30, 30564), (31, 30627), (32, 30633), (34, 30675), (39, 30771), (41, 30783), (50, 30942), (54, 31008), (55, 31011), (57, 31050), (65, 31248), (66, 31284), (72, 31449),

Gene: NuevoMundo\_89 Start: 31113, Stop: 33422, Start Num: 1

Candidate Starts for NuevoMundo\_89:

(Start: 1 @31113 has 160 MA's), (Start: 2 @31146 has 1 MA's), (4, 31200), (5, 31203), (8, 31296), (10, 31371), (14, 31539), (15, 31560), (16, 31605), (20, 31683), (21, 31698), (22, 31722), (23, 31755), (24, 31794), (25, 31797), (26, 31812), (27, 31863), (28, 31914), (30, 31941), (31, 32004), (34, 32052), (38, 32226), (40, 32322), (42, 32457), (43, 32529), (44, 32604), (45, 32643), (47, 32727), (48, 32742), (50, 32781), (51, 32826), (52, 32832), (54, 32910), (56, 32958), (58, 32985), (59, 32991), (60, 32997), (65, 33207), (66, 33243), (72, 33408),

Gene: ParkTD\_84 Start: 29730, Stop: 31457, Start Num: 1

Candidate Starts for ParkTD\_84:

(Start: 1 @29730 has 160 MA's), (Start: 2 @29763 has 1 MA's), (4, 29817), (5, 29820), (8, 29913), (10, 29988), (14, 30156), (15, 30177), (16, 30222), (20, 30300), (21, 30315), (22, 30339), (23, 30372), (24, 30411), (25, 30414), (26, 30429), (27, 30480), (28, 30531), (30, 30558), (31, 30621), (32, 30627), (34, 30669), (39, 30765), (41, 30777), (50, 30936), (54, 31002), (55, 31005), (57, 31044), (65, 31242), (66, 31278), (72, 31443),

Gene: Patter\_83 Start: 28661, Stop: 30388, Start Num: 1

Candidate Starts for Patter\_83:

(Start: 1 @28661 has 160 MA's), (Start: 2 @28694 has 1 MA's), (4, 28748), (5, 28751), (8, 28844), (10, 28919), (14, 29087), (15, 29108), (16, 29153), (20, 29231), (21, 29246), (22, 29270), (23, 29303), (24, 29342), (25, 29345), (26, 29360), (27, 29411), (28, 29462), (30, 29489), (31, 29552), (32, 29558), (34, 29600), (39, 29696), (41, 29708), (50, 29867), (54, 29933), (55, 29936), (57, 29975), (65, 30173), (66, 30209), (72, 30374),

Gene: Phlegm\_85 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for Phlegm\_85:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156), (66, 30192), (72, 30357),

Gene: Phox\_79 Start: 29666, Stop: 31351, Start Num: 1

Candidate Starts for Phox\_79:

(Start: 1 @29666 has 160 MA's), (5, 29714), (10, 29882), (14, 30050), (15, 30071), (16, 30116), (20, 30194), (21, 30209), (22, 30233), (23, 30266), (24, 30305), (25, 30308), (26, 30323), (27, 30374), (28, 30425), (30, 30452), (31, 30515), (32, 30521), (34, 30563), (39, 30659), (41, 30671), (50, 30830), (54, 30896), (55, 30899), (57, 30938), (65, 31136), (66, 31172), (72, 31337),

Gene: Phusco\_83 Start: 29454, Stop: 31139, Start Num: 1

Candidate Starts for Phusco\_83:

(Start: 1 @29454 has 160 MA's), (5, 29502), (10, 29670), (14, 29838), (15, 29859), (16, 29904), (20, 29982), (21, 29997), (22, 30021), (23, 30054), (24, 30093), (25, 30096), (26, 30111), (27, 30162), (28, 30213), (30, 30240), (31, 30303), (32, 30309), (34, 30351), (39, 30447), (41, 30459), (50, 30618), (54, 30684), (55, 30687), (57, 30726), (65, 30924), (66, 30960), (72, 31125),

Gene: Pier\_87 Start: 29814, Stop: 31541, Start Num: 1

Candidate Starts for Pier\_87:

(Start: 1 @29814 has 160 MA's), (Start: 2 @29847 has 1 MA's), (4, 29901), (5, 29904), (10, 30072), (14, 30240), (15, 30261), (16, 30306), (20, 30384), (21, 30399), (22, 30423), (23, 30456), (24, 30495), (25, 30498), (26, 30513), (27, 30564), (28, 30615), (30, 30642), (31, 30705), (34, 30753), (39, 30849), (41, 30861), (50, 31020), (54, 31086), (55, 31089), (57, 31128), (65, 31326), (66, 31362), (72, 31527),

Gene: Pinkcreek\_73 Start: 26825, Stop: 28552, Start Num: 1

Candidate Starts for Pinkcreek\_73:

(Start: 1 @26825 has 160 MA's), (Start: 2 @26858 has 1 MA's), (4, 26912), (5, 26915), (8, 27008), (10, 27083), (14, 27251), (15, 27272), (16, 27317), (20, 27395), (21, 27410), (22, 27434), (23, 27467), (24, 27506), (25, 27509), (26, 27524), (27, 27575), (28, 27626), (30, 27653), (31, 27716), (32, 27722), (34, 27764), (39, 27860), (41, 27872), (50, 28031), (54, 28097), (55, 28100), (57, 28139), (65, 28337), (66, 28373), (72, 28538),

Gene: Pio\_86 Start: 30081, Stop: 32390, Start Num: 1

Candidate Starts for Pio\_86:

(Start: 1 @30081 has 160 MA's), (Start: 2 @30114 has 1 MA's), (4, 30168), (5, 30171), (8, 30264), (10, 30339), (14, 30507), (15, 30528), (16, 30573), (20, 30651), (21, 30666), (22, 30690), (23, 30723), (24, 30762), (25, 30765), (26, 30780), (27, 30831), (28, 30882), (30, 30909), (31, 30972), (34, 31020), (38, 31194), (40, 31290), (42, 31425), (43, 31497), (44, 31572), (45, 31611), (47, 31695), (48, 31710), (50, 31749), (51, 31794), (52, 31800), (54, 31878), (56, 31926), (58, 31953), (59, 31959), (60, 31965), (65, 32175), (66, 32211), (72, 32376),

Gene: Pivoine\_82 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for Pivoine\_82:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156), (66, 30192), (72, 30357),

Gene: Pleione\_85 Start: 29733, Stop: 31460, Start Num: 1

Candidate Starts for Pleione\_85:

(Start: 1 @29733 has 160 MA's), (Start: 2 @29766 has 1 MA's), (4, 29820), (5, 29823), (8, 29916), (10, 29991), (14, 30159), (15, 30180), (16, 30225), (20, 30303), (21, 30318), (22, 30342), (23, 30375), (24, 30414), (25, 30417), (26, 30432), (27, 30483), (28, 30534), (30, 30561), (31, 30624), (32, 30630), (34, 30672), (39, 30768), (41, 30780), (50, 30939), (54, 31005), (55, 31008), (57, 31047), (65, 31245), (66, 31281), (72, 31446),

Gene: PurduePete\_83 Start: 29778, Stop: 31505, Start Num: 1

Candidate Starts for PurduePete\_83:

(Start: 1 @29778 has 160 MA's), (Start: 2 @29811 has 1 MA's), (4, 29865), (5, 29868), (8, 29961), (10, 30036), (14, 30204), (15, 30225), (16, 30270), (20, 30348), (21, 30363), (22, 30387), (23, 30420), (24, 30459), (25, 30462), (26, 30477), (27, 30528), (28, 30579), (30, 30606), (31, 30669), (32, 30675), (34, 30717), (39, 30813), (41, 30825), (50, 30984), (54, 31050), (55, 31053), (57, 31092), (65, 31290), (66, 31326), (72, 31491),

Gene: QBert\_77 Start: 29177, Stop: 30862, Start Num: 1

Candidate Starts for QBert\_77:

(Start: 1 @29177 has 160 MA's), (5, 29225), (10, 29393), (14, 29561), (15, 29582), (16, 29627), (20, 29705), (21, 29720), (22, 29744), (23, 29777), (24, 29816), (25, 29819), (26, 29834), (27, 29885), (28, 29936), (30, 29963), (31, 30026), (32, 30032), (34, 30074), (39, 30170), (41, 30182), (50, 30341), (54, 30407), (55, 30410), (57, 30449), (65, 30647), (66, 30683), (72, 30848),

Gene: Quasimodo\_83 Start: 29662, Stop: 31389, Start Num: 1

Candidate Starts for Quasimodo\_83:

(Start: 1 @29662 has 160 MA's), (Start: 2 @29695 has 1 MA's), (4, 29749), (5, 29752), (8, 29845), (10, 29920), (14, 30088), (15, 30109), (16, 30154), (20, 30232), (21, 30247), (22, 30271), (23, 30304), (24, 30343), (25, 30346), (26, 30361), (27, 30412), (28, 30463), (30, 30490), (31, 30553), (32, 30559), (34, 30601), (39, 30697), (41, 30709), (50, 30868), (54, 30934), (55, 30937), (57, 30976), (65, 31174), (66, 31210), (72, 31375),

Gene: Rabinovish\_80 Start: 29539, Stop: 31248, Start Num: 1

Candidate Starts for Rabinovish\_80:

(Start: 1 @29539 has 160 MA's), (7, 29644), (9, 29674), (11, 29803), (13, 29899), (19, 30034), (23, 30124), (24, 30163), (25, 30166), (28, 30283), (29, 30286), (31, 30373), (32, 30379), (33, 30397), (34, 30421), (39, 30499), (50, 30670), (54, 30736), (55, 30739), (57, 30778), (62, 30889), (63, 30910), (64, 30946), (67, 31063), (69, 31111), (70, 31123), (71, 31204), (73, 31237),

Gene: Rahel\_82 Start: 28242, Stop: 29927, Start Num: 1

Candidate Starts for Rahel\_82:

(Start: 1 @28242 has 160 MA's), (5, 28290), (10, 28458), (14, 28626), (15, 28647), (16, 28692), (20, 28770), (21, 28785), (22, 28809), (23, 28842), (24, 28881), (25, 28884), (26, 28899), (27, 28950), (28, 29001), (30, 29028), (31, 29091), (32, 29097), (34, 29139), (39, 29235), (41, 29247), (50, 29406), (54, 29472), (55, 29475), (57, 29514), (65, 29712), (66, 29748), (72, 29913),

Gene: Rizal\_80 Start: 28651, Stop: 30378, Start Num: 1



Candidate Starts for Rizal\_80:

(Start: 1 @28651 has 160 MA's), (Start: 2 @28684 has 1 MA's), (4, 28738), (5, 28741), (8, 28834), (10, 28909), (14, 29077), (15, 29098), (16, 29143), (20, 29221), (21, 29236), (22, 29260), (23, 29293), (24, 29332), (25, 29335), (26, 29350), (27, 29401), (28, 29452), (30, 29479), (31, 29542), (32, 29548), (34, 29590), (39, 29686), (41, 29698), (50, 29857), (54, 29923), (55, 29926), (57, 29965), (65, 30163), (66, 30199), (72, 30364),

Gene: RoMag\_78 Start: 28976, Stop: 30703, Start Num: 1

Candidate Starts for RoMag\_78:

(Start: 1 @28976 has 160 MA's), (Start: 2 @29009 has 1 MA's), (4, 29063), (5, 29066), (10, 29234), (14, 29402), (15, 29423), (16, 29468), (20, 29546), (21, 29561), (22, 29585), (23, 29618), (24, 29657), (25, 29660), (26, 29675), (27, 29726), (28, 29777), (30, 29804), (31, 29867), (34, 29915), (39, 30011), (41, 30023), (50, 30182), (54, 30248), (55, 30251), (57, 30290), (65, 30488), (66, 30524), (72, 30689),

Gene: Ronan\_76 Start: 26483, Stop: 28168, Start Num: 1

Candidate Starts for Ronan\_76:

(Start: 1 @26483 has 160 MA's), (5, 26531), (10, 26699), (14, 26867), (15, 26888), (16, 26933), (20, 27011), (21, 27026), (22, 27050), (23, 27083), (24, 27122), (25, 27125), (26, 27140), (27, 27191), (28, 27242), (30, 27269), (31, 27332), (32, 27338), (34, 27380), (39, 27476), (41, 27488), (50, 27647), (54, 27713), (55, 27716), (57, 27755), (65, 27953), (66, 27989), (72, 28154),

Gene: Roots515\_82 Start: 29103, Stop: 30788, Start Num: 1

Candidate Starts for Roots515\_82:

(Start: 1 @29103 has 160 MA's), (5, 29151), (10, 29319), (14, 29487), (15, 29508), (16, 29553), (20, 29631), (21, 29646), (22, 29670), (23, 29703), (24, 29742), (25, 29745), (26, 29760), (27, 29811), (28, 29862), (30, 29889), (31, 29952), (32, 29958), (34, 30000), (39, 30096), (41, 30108), (50, 30267), (54, 30333), (55, 30336), (57, 30375), (65, 30573), (66, 30609), (72, 30774),

Gene: Salacia\_87 Start: 29756, Stop: 31483, Start Num: 1

Candidate Starts for Salacia\_87:

(Start: 1 @29756 has 160 MA's), (Start: 2 @29789 has 1 MA's), (4, 29843), (5, 29846), (10, 30014), (14, 30182), (15, 30203), (16, 30248), (20, 30326), (21, 30341), (22, 30365), (23, 30398), (24, 30437), (25, 30440), (26, 30455), (27, 30506), (28, 30557), (30, 30584), (31, 30647), (32, 30653), (34, 30695), (39, 30791), (41, 30803), (50, 30962), (54, 31028), (55, 31031), (57, 31070), (65, 31268), (66, 31304), (72, 31469),

Gene: Sauce\_83 Start: 28531, Stop: 30216, Start Num: 1

Candidate Starts for Sauce\_83:

(Start: 1 @28531 has 160 MA's), (5, 28579), (10, 28747), (14, 28915), (15, 28936), (16, 28981), (20, 29059), (21, 29074), (22, 29098), (23, 29131), (24, 29170), (25, 29173), (26, 29188), (27, 29239), (28, 29290), (30, 29317), (31, 29380), (32, 29386), (34, 29428), (39, 29524), (41, 29536), (50, 29695), (54, 29761), (55, 29764), (57, 29803), (65, 30001), (66, 30037), (72, 30202),

Gene: ScoobyDoobyDoo\_74 Start: 27112, Stop: 28845, Start Num: 6

Candidate Starts for ScoobyDoobyDoo\_74:

(Start: 6 @27112 has 1 MA's), (12, 27412), (18, 27556), (35, 27958), (36, 28006), (37, 28024), (46, 28201), (49, 28267), (52, 28294), (53, 28306), (65, 28630), (66, 28666), (68, 28708), (72, 28831),

Gene: ScottMcG\_79 Start: 29088, Stop: 30815, Start Num: 1

Candidate Starts for ScottMcG\_79:

(Start: 1 @29088 has 160 MA's), (Start: 2 @29121 has 1 MA's), (4, 29175), (5, 29178), (8, 29271), (10, 29346), (14, 29514), (15, 29535), (16, 29580), (20, 29658), (21, 29673), (22, 29697), (23, 29730), (24, 29769), (25, 29772), (26, 29787), (27, 29838), (28, 29889), (30, 29916), (31, 29979), (32, 29985),

(34, 30027), (39, 30123), (41, 30135), (50, 30294), (54, 30360), (55, 30363), (57, 30402), (65, 30600), (66, 30636), (72, 30801),

Gene: Sebata\_83 Start: 30262, Stop: 31947, Start Num: 1

Candidate Starts for Sebata\_83:

(Start: 1 @30262 has 160 MA's), (5, 30310), (10, 30478), (14, 30646), (15, 30667), (16, 30712), (20, 30790), (21, 30805), (22, 30829), (23, 30862), (24, 30901), (25, 30904), (26, 30919), (27, 30970), (28, 31021), (30, 31048), (31, 31111), (32, 31117), (34, 31159), (39, 31255), (41, 31267), (50, 31426), (54, 31492), (55, 31495), (57, 31534), (65, 31732), (66, 31768), (72, 31933),

Gene: Shaqnato\_75 Start: 27406, Stop: 29091, Start Num: 1

Candidate Starts for Shaqnato\_75:

(Start: 1 @27406 has 160 MA's), (5, 27454), (10, 27622), (14, 27790), (15, 27811), (16, 27856), (20, 27934), (21, 27949), (22, 27973), (23, 28006), (24, 28045), (25, 28048), (26, 28063), (27, 28114), (28, 28165), (30, 28192), (31, 28255), (32, 28261), (34, 28303), (39, 28399), (41, 28411), (50, 28570), (54, 28636), (55, 28639), (57, 28678), (65, 28876), (66, 28912), (72, 29077),

Gene: Shelob\_85 Start: 30726, Stop: 32453, Start Num: 1

Candidate Starts for Shelob\_85:

(Start: 1 @30726 has 160 MA's), (Start: 2 @30759 has 1 MA's), (4, 30813), (5, 30816), (8, 30909), (10, 30984), (14, 31152), (15, 31173), (16, 31218), (20, 31296), (21, 31311), (22, 31335), (23, 31368), (24, 31407), (25, 31410), (26, 31425), (27, 31476), (28, 31527), (30, 31554), (31, 31617), (32, 31623), (34, 31665), (39, 31761), (41, 31773), (50, 31932), (54, 31998), (55, 32001), (57, 32040), (65, 32238), (66, 32274), (72, 32439),

Gene: ShiaLabeouf\_83 Start: 29081, Stop: 30766, Start Num: 1

Candidate Starts for ShiaLabeouf\_83:

(Start: 1 @29081 has 160 MA's), (5, 29129), (10, 29297), (14, 29465), (15, 29486), (16, 29531), (20, 29609), (21, 29624), (22, 29648), (23, 29681), (24, 29720), (25, 29723), (26, 29738), (27, 29789), (28, 29840), (30, 29867), (31, 29930), (32, 29936), (34, 29978), (39, 30074), (41, 30086), (50, 30245), (54, 30311), (55, 30314), (57, 30353), (65, 30551), (66, 30587), (72, 30752),

Gene: Shifa\_72 Start: 27368, Stop: 29053, Start Num: 1

Candidate Starts for Shifa\_72:

(Start: 1 @27368 has 160 MA's), (5, 27416), (10, 27584), (14, 27752), (15, 27773), (16, 27818), (20, 27896), (21, 27911), (22, 27935), (23, 27968), (24, 28007), (25, 28010), (26, 28025), (27, 28076), (28, 28127), (30, 28154), (31, 28217), (32, 28223), (34, 28265), (39, 28361), (41, 28373), (50, 28532), (54, 28598), (55, 28601), (57, 28640), (65, 28838), (66, 28874), (72, 29039),

Gene: Shnickers\_83 Start: 28641, Stop: 30326, Start Num: 1

Candidate Starts for Shnickers\_83:

(Start: 1 @28641 has 160 MA's), (5, 28689), (10, 28857), (14, 29025), (15, 29046), (16, 29091), (20, 29169), (21, 29184), (22, 29208), (23, 29241), (24, 29280), (25, 29283), (26, 29298), (27, 29349), (28, 29400), (30, 29427), (31, 29490), (32, 29496), (34, 29538), (39, 29634), (41, 29646), (50, 29805), (54, 29871), (55, 29874), (57, 29913), (65, 30111), (66, 30147), (72, 30312),

Gene: Shrimp\_83 Start: 29738, Stop: 31465, Start Num: 1

Candidate Starts for Shrimp\_83:

(Start: 1 @29738 has 160 MA's), (Start: 2 @29771 has 1 MA's), (4, 29825), (5, 29828), (8, 29921), (10, 29996), (14, 30164), (15, 30185), (16, 30230), (20, 30308), (21, 30323), (22, 30347), (23, 30380), (24, 30419), (25, 30422), (26, 30437), (27, 30488), (28, 30539), (30, 30566), (31, 30629), (32, 30635), (34, 30677), (39, 30773), (41, 30785), (50, 30944), (54, 31010), (55, 31013), (57, 31052), (65, 31250), (66, 31286), (72, 31451),

Gene: SilverDipper\_84 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for SilverDipper\_84:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156), (66, 30192), (72, 30357),

Gene: SmallFry\_83 Start: 28640, Stop: 30325, Start Num: 1

Candidate Starts for SmallFry\_83:

(Start: 1 @28640 has 160 MA's), (5, 28688), (10, 28856), (14, 29024), (15, 29045), (16, 29090), (20, 29168), (21, 29183), (22, 29207), (23, 29240), (24, 29279), (25, 29282), (26, 29297), (27, 29348), (28, 29399), (30, 29426), (31, 29489), (32, 29495), (34, 29537), (39, 29633), (41, 29645), (50, 29804), (54, 29870), (55, 29873), (57, 29912), (65, 30110), (66, 30146), (72, 30311),

Gene: Spec\_78 Start: 28364, Stop: 30091, Start Num: 1

Candidate Starts for Spec\_78:

(Start: 1 @28364 has 160 MA's), (Start: 2 @28397 has 1 MA's), (4, 28451), (5, 28454), (10, 28622), (14, 28790), (15, 28811), (16, 28856), (20, 28934), (21, 28949), (22, 28973), (23, 29006), (24, 29045), (25, 29048), (26, 29063), (27, 29114), (28, 29165), (30, 29192), (31, 29255), (32, 29261), (34, 29303), (39, 29399), (41, 29411), (50, 29570), (54, 29636), (55, 29639), (57, 29678), (65, 29876), (66, 29912), (72, 30077),

Gene: Specks\_89 Start: 31528, Stop: 33255, Start Num: 1

Candidate Starts for Specks\_89:

(Start: 1 @31528 has 160 MA's), (Start: 2 @31561 has 1 MA's), (4, 31615), (5, 31618), (8, 31711), (10, 31786), (14, 31954), (15, 31975), (16, 32020), (20, 32098), (21, 32113), (22, 32137), (23, 32170), (24, 32209), (25, 32212), (26, 32227), (27, 32278), (28, 32329), (30, 32356), (31, 32419), (32, 32425), (34, 32467), (39, 32563), (41, 32575), (50, 32734), (54, 32800), (55, 32803), (57, 32842), (65, 33040), (66, 33076), (72, 33241),

Gene: Sprinklers\_78 Start: 27903, Stop: 29588, Start Num: 1

Candidate Starts for Sprinklers\_78:

(Start: 1 @27903 has 160 MA's), (5, 27951), (10, 28119), (14, 28287), (15, 28308), (16, 28353), (20, 28431), (21, 28446), (22, 28470), (23, 28503), (24, 28542), (25, 28545), (26, 28560), (27, 28611), (28, 28662), (30, 28689), (31, 28752), (32, 28758), (34, 28800), (39, 28896), (41, 28908), (50, 29067), (54, 29133), (55, 29136), (57, 29175), (65, 29373), (66, 29409), (72, 29574),

Gene: Spud\_82 Start: 30049, Stop: 31776, Start Num: 1

Candidate Starts for Spud\_82:

(Start: 1 @30049 has 160 MA's), (Start: 2 @30082 has 1 MA's), (4, 30136), (5, 30139), (8, 30232), (10, 30307), (14, 30475), (15, 30496), (16, 30541), (20, 30619), (21, 30634), (22, 30658), (23, 30691), (24, 30730), (25, 30733), (26, 30748), (27, 30799), (28, 30850), (30, 30877), (31, 30940), (32, 30946), (34, 30988), (39, 31084), (41, 31096), (50, 31255), (54, 31321), (55, 31324), (57, 31363), (65, 31561), (66, 31597), (72, 31762),

Gene: SrishMeg2525\_82 Start: 29445, Stop: 31172, Start Num: 1

Candidate Starts for SrishMeg2525\_82:

(Start: 1 @29445 has 160 MA's), (Start: 2 @29478 has 1 MA's), (4, 29532), (5, 29535), (8, 29628), (10, 29703), (14, 29871), (15, 29892), (16, 29937), (20, 30015), (21, 30030), (22, 30054), (23, 30087), (24, 30126), (25, 30129), (26, 30144), (27, 30195), (28, 30246), (30, 30273), (31, 30336), (32, 30342), (34, 30384), (39, 30480), (41, 30492), (50, 30651), (54, 30717), (55, 30720), (57, 30759), (65, 30957),

(66, 30993), (72, 31158),

Gene: StephanieG\_83 Start: 30433, Stop: 32160, Start Num: 1

Candidate Starts for StephanieG\_83:

(Start: 1 @30433 has 160 MA's), (Start: 2 @30466 has 1 MA's), (4, 30520), (5, 30523), (10, 30691), (14, 30859), (15, 30880), (16, 30925), (20, 31003), (21, 31018), (22, 31042), (23, 31075), (24, 31114), (25, 31117), (26, 31132), (27, 31183), (28, 31234), (30, 31261), (31, 31324), (34, 31372), (39, 31468), (41, 31480), (50, 31639), (54, 31705), (55, 31708), (57, 31747), (65, 31945), (66, 31981), (72, 32146),

Gene: Stubby\_76 Start: 28152, Stop: 29861, Start Num: 1

Candidate Starts for Stubby\_76:

(Start: 1 @28152 has 160 MA's), (4, 28239), (5, 28242), (8, 28335), (10, 28410), (14, 28578), (15, 28599), (16, 28644), (20, 28722), (21, 28737), (22, 28761), (23, 28794), (24, 28833), (25, 28836), (29, 28956), (31, 29043), (32, 29049), (33, 29067), (34, 29091), (39, 29169), (50, 29340), (54, 29406), (55, 29409), (57, 29448), (65, 29646), (66, 29682), (72, 29847),

Gene: StubbySaigey\_84 Start: 28374, Stop: 30101, Start Num: 1

Candidate Starts for StubbySaigey\_84:

(Start: 1 @28374 has 160 MA's), (Start: 2 @28407 has 1 MA's), (4, 28461), (5, 28464), (8, 28557), (10, 28632), (14, 28800), (15, 28821), (16, 28866), (20, 28944), (21, 28959), (22, 28983), (23, 29016), (24, 29055), (25, 29058), (26, 29073), (27, 29124), (28, 29175), (30, 29202), (31, 29265), (32, 29271), (34, 29313), (39, 29409), (41, 29421), (50, 29580), (54, 29646), (55, 29649), (57, 29688), (65, 29886), (66, 29922), (72, 30087),

Gene: Teardrop\_83 Start: 28852, Stop: 30579, Start Num: 1

Candidate Starts for Teardrop\_83:

(Start: 1 @28852 has 160 MA's), (Start: 2 @28885 has 1 MA's), (4, 28939), (5, 28942), (8, 29035), (10, 29110), (14, 29278), (15, 29299), (16, 29344), (20, 29422), (21, 29437), (22, 29461), (23, 29494), (24, 29533), (25, 29536), (26, 29551), (27, 29602), (28, 29653), (30, 29680), (31, 29743), (32, 29749), (34, 29791), (39, 29887), (41, 29899), (50, 30058), (54, 30124), (55, 30127), (57, 30166), (65, 30364), (66, 30400), (72, 30565),

Gene: TinyTim\_83 Start: 29734, Stop: 31461, Start Num: 1

Candidate Starts for TinyTim\_83:

(Start: 1 @29734 has 160 MA's), (Start: 2 @29767 has 1 MA's), (4, 29821), (5, 29824), (8, 29917), (10, 29992), (14, 30160), (15, 30181), (16, 30226), (20, 30304), (21, 30319), (22, 30343), (23, 30376), (24, 30415), (25, 30418), (26, 30433), (27, 30484), (28, 30535), (30, 30562), (31, 30625), (32, 30631), (34, 30673), (39, 30769), (41, 30781), (50, 30940), (54, 31006), (55, 31009), (57, 31048), (65, 31246), (66, 31282), (72, 31447),

Gene: Tortoise16\_81 Start: 29500, Stop: 31227, Start Num: 1

Candidate Starts for Tortoise16\_81:

(Start: 1 @29500 has 160 MA's), (Start: 2 @29533 has 1 MA's), (4, 29587), (5, 29590), (10, 29758), (14, 29926), (15, 29947), (16, 29992), (20, 30070), (21, 30085), (22, 30109), (23, 30142), (24, 30181), (25, 30184), (26, 30199), (27, 30250), (28, 30301), (30, 30328), (31, 30391), (32, 30397), (34, 30439), (39, 30535), (41, 30547), (50, 30706), (54, 30772), (55, 30775), (57, 30814), (65, 31012), (66, 31048), (72, 31213),

Gene: Trinitium\_79 Start: 28159, Stop: 29886, Start Num: 1

Candidate Starts for Trinitium\_79:

(Start: 1 @28159 has 160 MA's), (Start: 2 @28192 has 1 MA's), (4, 28246), (5, 28249), (8, 28342), (10, 28417), (14, 28585), (15, 28606), (16, 28651), (20, 28729), (21, 28744), (22, 28768), (23, 28801), (24, 28840), (25, 28843), (26, 28858), (27, 28909), (28, 28960), (30, 28987), (31, 29050), (32, 29056),

(34, 29098), (39, 29194), (41, 29206), (50, 29365), (54, 29431), (55, 29434), (57, 29473), (65, 29671), (66, 29707), (72, 29872),

Gene: Turret\_78 Start: 27825, Stop: 29552, Start Num: 1

Candidate Starts for Turret\_78:

(Start: 1 @27825 has 160 MA's), (Start: 2 @27858 has 1 MA's), (4, 27912), (5, 27915), (8, 28008), (10, 28083), (14, 28251), (15, 28272), (16, 28317), (20, 28395), (21, 28410), (22, 28434), (23, 28467), (24, 28506), (25, 28509), (26, 28524), (27, 28575), (28, 28626), (30, 28653), (31, 28716), (32, 28722), (34, 28764), (39, 28860), (41, 28872), (50, 29031), (54, 29097), (55, 29100), (57, 29139), (65, 29337), (66, 29373), (72, 29538),

Gene: Tyke\_85 Start: 30404, Stop: 32131, Start Num: 1

Candidate Starts for Tyke\_85:

(Start: 1 @30404 has 160 MA's), (Start: 2 @30437 has 1 MA's), (4, 30491), (5, 30494), (10, 30662), (14, 30830), (15, 30851), (16, 30896), (20, 30974), (21, 30989), (22, 31013), (23, 31046), (24, 31085), (25, 31088), (26, 31103), (27, 31154), (28, 31205), (30, 31232), (31, 31295), (32, 31301), (34, 31343), (39, 31439), (41, 31451), (50, 31610), (54, 31676), (55, 31679), (57, 31718), (65, 31916), (66, 31952), (72, 32117),

Gene: ValleyTerrace\_83 Start: 28644, Stop: 30371, Start Num: 1

Candidate Starts for ValleyTerrace\_83:

(Start: 1 @28644 has 160 MA's), (Start: 2 @28677 has 1 MA's), (4, 28731), (5, 28734), (8, 28827), (10, 28902), (14, 29070), (15, 29091), (16, 29136), (20, 29214), (21, 29229), (22, 29253), (23, 29286), (24, 29325), (25, 29328), (26, 29343), (27, 29394), (28, 29445), (30, 29472), (31, 29535), (32, 29541), (34, 29583), (39, 29679), (41, 29691), (50, 29850), (54, 29916), (55, 29919), (57, 29958), (65, 30156), (66, 30192), (72, 30357),

Gene: Wally\_81 Start: 28289, Stop: 30016, Start Num: 1

Candidate Starts for Wally\_81:

(Start: 1 @28289 has 160 MA's), (Start: 2 @28322 has 1 MA's), (4, 28376), (5, 28379), (8, 28472), (10, 28547), (14, 28715), (15, 28736), (16, 28781), (20, 28859), (21, 28874), (22, 28898), (23, 28931), (24, 28970), (25, 28973), (26, 28988), (27, 29039), (28, 29090), (30, 29117), (31, 29180), (32, 29186), (34, 29228), (39, 29324), (41, 29336), (50, 29495), (54, 29561), (55, 29564), (57, 29603), (65, 29801), (66, 29837), (72, 30002),

Gene: Willis\_84 Start: 29629, Stop: 31356, Start Num: 1

Candidate Starts for Willis\_84:

(Start: 1 @29629 has 160 MA's), (Start: 2 @29662 has 1 MA's), (4, 29716), (5, 29719), (8, 29812), (10, 29887), (14, 30055), (15, 30076), (16, 30121), (20, 30199), (21, 30214), (22, 30238), (23, 30271), (24, 30310), (25, 30313), (26, 30328), (27, 30379), (28, 30430), (30, 30457), (31, 30520), (32, 30526), (34, 30568), (39, 30664), (41, 30676), (50, 30835), (54, 30901), (55, 30904), (57, 30943), (65, 31141), (66, 31177), (72, 31342),

Gene: Yassified\_79 Start: 28144, Stop: 29871, Start Num: 1

Candidate Starts for Yassified\_79:

(Start: 1 @28144 has 160 MA's), (Start: 2 @28177 has 1 MA's), (4, 28231), (5, 28234), (8, 28327), (10, 28402), (14, 28570), (15, 28591), (16, 28636), (20, 28714), (21, 28729), (22, 28753), (23, 28786), (24, 28825), (25, 28828), (26, 28843), (27, 28894), (28, 28945), (30, 28972), (31, 29035), (32, 29041), (34, 29083), (39, 29179), (41, 29191), (50, 29350), (54, 29416), (55, 29419), (57, 29458), (65, 29656), (66, 29692), (72, 29857),

Gene: YemiJoy2021\_84 Start: 29731, Stop: 31458, Start Num: 1

Candidate Starts for YemiJoy2021\_84:

(Start: 1 @29731 has 160 MA's), (Start: 2 @29764 has 1 MA's), (4, 29818), (5, 29821), (8, 29914), (10, 29989), (14, 30157), (15, 30178), (16, 30223), (20, 30301), (21, 30316), (22, 30340), (23, 30373), (24, 30412), (25, 30415), (26, 30430), (27, 30481), (28, 30532), (30, 30559), (31, 30622), (32, 30628), (34, 30670), (39, 30766), (41, 30778), (50, 30937), (54, 31003), (55, 31006), (57, 31045), (65, 31243), (66, 31279), (72, 31444),

Gene: YoungMoneyMata\_83 Start: 28395, Stop: 30122, Start Num: 1

Candidate Starts for YoungMoneyMata\_83:

(Start: 1 @28395 has 160 MA's), (Start: 2 @28428 has 1 MA's), (4, 28482), (5, 28485), (8, 28578), (10, 28653), (14, 28821), (15, 28842), (16, 28887), (20, 28965), (21, 28980), (22, 29004), (23, 29037), (24, 29076), (25, 29079), (26, 29094), (27, 29145), (28, 29196), (30, 29223), (31, 29286), (32, 29292), (34, 29334), (39, 29430), (41, 29442), (50, 29601), (54, 29667), (55, 29670), (57, 29709), (65, 29907), (66, 29943), (72, 30108),

Gene: Yucca\_82 Start: 29656, Stop: 31383, Start Num: 1

Candidate Starts for Yucca\_82:

(Start: 1 @29656 has 160 MA's), (Start: 2 @29689 has 1 MA's), (4, 29743), (5, 29746), (8, 29839), (10, 29914), (14, 30082), (15, 30103), (16, 30148), (20, 30226), (21, 30241), (22, 30265), (23, 30298), (24, 30337), (25, 30340), (26, 30355), (27, 30406), (28, 30457), (30, 30484), (31, 30547), (32, 30553), (34, 30595), (39, 30691), (41, 30703), (50, 30862), (54, 30928), (55, 30931), (57, 30970), (65, 31168), (66, 31204), (72, 31369),

Gene: Zalkecks\_84 Start: 29419, Stop: 31146, Start Num: 1

Candidate Starts for Zalkecks\_84:

(Start: 1 @29419 has 160 MA's), (Start: 2 @29452 has 1 MA's), (4, 29506), (5, 29509), (8, 29602), (10, 29677), (14, 29845), (15, 29866), (16, 29911), (20, 29989), (21, 30004), (22, 30028), (23, 30061), (24, 30100), (25, 30103), (26, 30118), (27, 30169), (28, 30220), (30, 30247), (31, 30310), (32, 30316), (34, 30358), (39, 30454), (41, 30466), (50, 30625), (54, 30691), (55, 30694), (57, 30733), (65, 30931), (66, 30967), (72, 31132),

Gene: Zeenon\_84 Start: 29721, Stop: 31448, Start Num: 1

Candidate Starts for Zeenon\_84:

(Start: 1 @29721 has 160 MA's), (Start: 2 @29754 has 1 MA's), (4, 29808), (5, 29811), (8, 29904), (10, 29979), (14, 30147), (15, 30168), (16, 30213), (20, 30291), (21, 30306), (22, 30330), (23, 30363), (24, 30402), (25, 30405), (26, 30420), (27, 30471), (28, 30522), (30, 30549), (31, 30612), (32, 30618), (34, 30660), (39, 30756), (41, 30768), (50, 30927), (54, 30993), (55, 30996), (57, 31035), (65, 31233), (66, 31269), (72, 31434),

Gene: ZygoTaiga\_82 Start: 29735, Stop: 31462, Start Num: 1

Candidate Starts for ZygoTaiga\_82:

(Start: 1 @29735 has 160 MA's), (Start: 2 @29768 has 1 MA's), (4, 29822), (5, 29825), (8, 29918), (10, 29993), (14, 30161), (15, 30182), (16, 30227), (20, 30305), (21, 30320), (22, 30344), (23, 30377), (24, 30416), (25, 30419), (26, 30434), (27, 30485), (28, 30536), (30, 30563), (31, 30626), (32, 30632), (34, 30674), (39, 30770), (41, 30782), (50, 30941), (54, 31007), (55, 31010), (57, 31049), (65, 31247), (66, 31283), (72, 31448),