



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 193736 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193736 has 203 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Settecandela\_46, Phrappuccino\_46
- Track 2 : EggyFarm\_98, Grasshills\_97, BigCity\_98
- Track 3 : Teardrop\_90, Bangla1971\_91, ArcherS7\_89, Specks\_96, Littleton\_90, Drazdys\_90, Astraea\_88, LolaVinca\_92, SmallFry\_90
- Track 4 : Chargie21\_86, Flabslab\_85, ChaylaJr\_85, ErnieJ\_86, Fludd\_90, BackyardAgain\_87, StubbySaigey\_92, Melpomini\_84, ScottMcG\_87, Phox\_87, Catera\_88, ChickenPhender\_86, Basquiat\_86, Morizzled23\_90, HyRo\_82, Kboogie\_93, Spud\_90, Janiyra\_92, Alice\_83, Quasimodo\_90, Rabinovish\_87, Turret\_85, JustHall\_86, Blackbrain\_85, Trinitium\_86, Cactojaque\_85, Dietrick\_82, Stubby\_83, EasyJones\_93
- Track 5 : JulietS\_83, Bxz1\_89, Shrimp\_90, Ngannou\_86, Iota\_84, Yucca\_90, Salacia\_94, Guwapp\_89, Lee7\_88, Ronan\_83, MikeLiesIn\_91, Amataga\_90, Caravan\_85, Pleione\_93, Naija\_89, Ghost\_89, Ewok\_91, ParkTD\_91, DTDevon\_91, Grungle\_77, Loanshark\_90, Concombre\_97, EmToTheThree\_93, ValleyTerrace\_90, Blackdragon\_84, Kamryn\_90, LRRHood\_84, SilverDipper\_91, Audrick\_92, Babyland\_90, Sauce\_90, Cali\_85, Willis\_91, NedWong\_91, Naval22\_95, Khaleesi\_89, InigoMontoya\_91, LinStu\_90, Erdmann\_91, Tainan\_95, TinyTim\_90, DrPhinkDaddy\_89, Bipolarisk\_89, Pivoine\_89, Jessibeth14\_89, Momo\_89, Norm\_91, SrishMeg2525\_89, Izajani\_90, Lukilu\_81, Phusco\_90, QBert\_84, Delylah\_93, EmmaElysia\_89, Bonray\_90, Latch\_90, Tortoise16\_88, Gamgam\_90, Zalkecks\_91, YemiJoy2021\_91, Megamind\_89, Koguma\_86, Issimir\_89, Shelob\_92, YoungMoneyMata\_90, Delilah\_90, Patter\_90, Zeenon\_92, Ava3\_91, FudgeTart\_90, Sprinklers\_85, Daffodil\_95, FoxtrotP1\_90, Halldule\_83, Breeniome\_90, Yassified\_86, Burrough\_90, ZygoTaiga\_89, Roots515\_89, Atlantean\_89, Dandelion\_97, CharlieB\_85, Phlegm\_92, Demodog\_97, Shaqnato\_82, Sebata\_91, MoMoMixon\_91, Gabriel\_92, McGee\_91
- Track 6 : Ading\_90, JayJay\_92, Rahel\_89, Essence\_87, Tyke\_92, CindyLou\_91, Pier\_94, LifeSavor\_89, Jaygup\_90, BeanWater\_82, Derek\_90, ShiaLabeouf\_90, Pio\_94, Jemmno\_90, Spec\_85, Adlitam\_90, JPickles\_88, Matsumoto\_88, Chomp\_89, Shnickers\_90
- Track 7 : I3\_96, FrayBell\_96, DirtMonster\_83, BananaFence\_89, IkeLoa\_84, Bigswole\_95, Nappy\_92, BadAgartude\_87, Domi\_84, StephanieG\_89, InterFolia\_99, NoodleTree\_98, Darko\_90, LordLeafolot\_95, Mikro\_88, NuevoMundo\_96, RoMag\_85
- Track 8 : PurduePete\_90, Napoleon13\_86, Bread\_90, Asterius\_87, Capablanca\_92, McWolfish\_88, Maby2021\_90, Wally\_89, Nidhogg\_91, Rizal\_88
- Track 9 : Shifa\_79
- Track 10 : Tonenili\_104

- Track 11 : Colt\_80
- Track 12 : Jedediah\_93
- Track 13 : Blubba\_79
- Track 14 : Pinkcreek\_81
- Track 15 : Gizmo\_94, ET08\_79
- Track 16 : JigglyPuff\_96
- Track 17 : Mangeria\_90
- Track 18 : Cane17\_79
- Track 19 : Phabba\_94
- Track 20 : Myrna\_89
- Track 21 : Greely\_91
- Track 22 : ScoobyDoobyDoo\_84
- Track 23 : SCentae\_87
- Track 24 : CherryTomatoes\_88
- Track 25 : Skog\_151
- Track 26 : Pupper\_88
- Track 27 : Stormageddon\_11, RedWattleHog\_11
- Track 28 : Finch\_15
- Track 29 : E3\_gp72
- Track 30 : JeanGrey\_27

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

The start number called the most often in the published annotations is 24, it was called in 152 of the 182 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Alice\_83, Amataga\_90, ArcherS7\_89, Asterius\_87, Astraea\_88, Atlantean\_89, Audrick\_92, Ava3\_91, Babyland\_90, BackyardAgain\_87, BadAgartude\_87, BananaFence\_89, Bangla1971\_91, Basquiat\_86, BigCity\_98, Bigswole\_95, Bipolarisk\_89, Blackbrain\_85, Blackdragon\_84, Blubba\_79, Bonray\_90, Bread\_90, Breeniome\_90, Burrough\_90, Bxz1\_89, Cactojaque\_85, Cali\_85, Cane17\_79, Capablanca\_92, Caravan\_85, Catera\_88, Chargie21\_86, CharlieB\_85, ChaylaJr\_85, ChickenPhender\_86, Colt\_80, Concombre\_97, DTDevon\_91, Daffodil\_95, Dandelion\_97, Darko\_90, Delilah\_90, Delylah\_93, Demodog\_97, Dietrick\_82, DirtMonster\_83, Domi\_84, DrPhinkDaddy\_89, Drazdys\_90, ET08\_79, EasyJones\_93, EggyFarm\_98, EmToTheThree\_93, EmmaElysia\_89, Erdmann\_91, ErnieJ\_86, Ewok\_91, Flabslab\_85, Fludd\_90, FoxtrotP1\_90, FrayBell\_96, FudgeTart\_90, Gabriel\_92, Gamgam\_90, Ghost\_89, Gizmo\_94, Grasshills\_97, Grungle\_77, Guwapp\_89, Halldule\_83, HyRo\_82, I3\_96, IkeLoa\_84, InigoMontoya\_91, InterFolia\_99, Iota\_84, Issimir\_89, Izajani\_90, Janiyra\_92, Jessibeth14\_89, JigglyPuff\_96, JulietS\_83, JustHall\_86, Kamryn\_90, Kboogie\_93, Khaleesi\_89, Koguma\_86, LRRHood\_84, Latch\_90, Lee7\_88, LinStu\_90, Littleton\_90, Loanshark\_90, LolaVinca\_92, LordLeafot\_95, Lukilu\_81, Maby2021\_90, Mangeria\_90, McGee\_91, McWolfish\_88, Megamind\_89, Melpomini\_84, MikeLiesIn\_91, Mikro\_88, MoMoMixon\_91, Momo\_89, Morizzled23\_90, Naija\_89, Napoleon13\_86, Nappy\_92, Naval22\_95, NedWong\_91, Ngannou\_86, Nidhogg\_91, NoodleTree\_98, Norm\_91, NuevoMundo\_96, ParkTD\_91, Patter\_90, Phlegm\_92, Phox\_87, Phusco\_90, Pinkcreek\_81, Pivoine\_89, Pleione\_93, PurduePete\_90, QBert\_84, Quasimodo\_90, Rabinovish\_87, Rizal\_88, RoMag\_85, Ronan\_83,

Roots515\_89, Salacia\_94, Sauce\_90, ScottMcG\_87, Sebata\_91, Shaqnato\_82, Shelob\_92, Shifa\_79, Shrimp\_90, SilverDipper\_91, SmallFry\_90, Specks\_96, Sprinklers\_85, Spud\_90, SrishMeg2525\_89, StephanieG\_89, StubbySaigey\_92, Stubby\_83, Tainan\_95, Teardrop\_90, TinyTim\_90, Tonenili\_104, Tortoise16\_88, Trinitium\_86, Turret\_85, ValleyTerrace\_90, Wally\_89, Willis\_91, Yassified\_86, YemiJoy2021\_91, YoungMoneyMata\_90, Yucca\_90, Zalkecks\_91, Zeenon\_92, ZygoTaiga\_89,

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

- 

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

- Ading\_90, Adlitam\_90, BeanWater\_82, CherryTomatoes\_88, Chomp\_89, CindyLou\_91, Derek\_90, E3\_gp72, Essence\_87, Finch\_15, Greely\_91, JPickles\_88, JayJay\_92, Jaygup\_90, JeanGrey\_27, Jedediah\_93, Jemmno\_90, LifeSavor\_89, Matsumoto\_88, Myrna\_89, Phabba\_94, Phrappuccino\_46, Pier\_94, Pio\_94, Pupper\_88, Rahel\_89, RedWattleHog\_11, SCentae\_87, ScoobyDoobyDoo\_84, Settecandela\_46, ShiaLabeouf\_90, Shnickers\_90, Skog\_151, Spec\_85, Stormageddon\_11, Tyke\_92,

### Summary by start number:

Start 1:

- Found in 21 of 203 ( 10.3% ) of genes in pham
- Manual Annotations of this start: 18 of 182
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ading\_90 (C1), Adlitam\_90 (C1), BeanWater\_82 (C1), Chomp\_89 (C1), CindyLou\_91 (C1), Derek\_90 (C1), Essence\_87 (C1), JPickles\_88 (C1), JayJay\_92 (C1), Jaygup\_90 (C1), Jedediah\_93 (C1), Jemmno\_90 (C1), LifeSavor\_89 (C1), Matsumoto\_88 (C1), Pier\_94 (C1), Pio\_94 (C1), Rahel\_89 (C1), ShiaLabeouf\_90 (C1), Shnickers\_90 (C1), Spec\_85 (C1), Tyke\_92 (C1),

Start 2:

- Found in 22 of 203 ( 10.8% ) of genes in pham
- Manual Annotations of this start: 1 of 182
- Called 4.5% of time when present
- Phage (with cluster) where this start called: ScoobyDoobyDoo\_84 (C2),

Start 24:

- Found in 167 of 203 ( 82.3% ) of genes in pham
- Manual Annotations of this start: 152 of 182
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alice\_83 (C1), Amataga\_90 (C1), ArcherS7\_89 (C1), Asterius\_87 (C1), Astraea\_88 (C1), Atlantean\_89 (C1), Audrick\_92 (C1), Ava3\_91 (C1), Babyland\_90 (C1), BackyardAgain\_87 (C1), BadAgartude\_87 (C1), BananaFence\_89 (C1), Bangla1971\_91 (C1), Basquiat\_86 (C1), BigCity\_98 (C1), Bigswole\_95 (C1), Bipolarisk\_89 (C1), Blackbrain\_85 (C1), Blackdragon\_84 (C1), Blubba\_79 (C1), Bonray\_90 (C1), Bread\_90 (C1), Breeniome\_90 (C1), Burrough\_90 (C1), Bxz1\_89 (C1), Cactojaque\_85 (C1), Cali\_85 (C1), Cane17\_79 (C1), Capablanca\_92 (C1), Caravan\_85 (C1), Catera\_88 (C1), Chargie21\_86 (C1), CharlieB\_85 (C1), ChaylaJr\_85 (C1), ChickenPhender\_86 (C1), Colt\_80 (C1), Concombre\_97 (C1), DTDevon\_91 (C1), Daffodil\_95 (C1),

Dandelion\_97 (C1), Darko\_90 (C1), Delilah\_90 (C1), Delylah\_93 (C1), Demodog\_97 (C1), Dietrick\_82 (C1), DirtMonster\_83 (C1), Domi\_84 (C1), DrPhinkDaddy\_89 (C1), Drazdys\_90 (C1), ET08\_79 (C1), EasyJones\_93 (C1), EggyFarm\_98 (C1), EmToTheThree\_93 (C1), EmmaElysia\_89 (C1), Erdmann\_91 (C1), ErnieJ\_86 (C1), Ewok\_91 (C1), Flabslab\_85 (C1), Fludd\_90 (C1), FoxtrotP1\_90 (C1), FrayBell\_96 (C1), FudgeTart\_90 (C1), Gabriel\_92 (C1), Gamgam\_90 (C1), Ghost\_89 (C1), Gizmo\_94 (C1), Grasshills\_97 (C1), Grungle\_77 (C1), Guwapp\_89 (C1), Halldule\_83 (C1), HyRo\_82 (C1), I3\_96 (C1), IkeLoa\_84 (C1), InigoMontoya\_91 (C1), InterFolia\_99 (C1), Iota\_84 (C1), Issimir\_89 (C1), Izajani\_90 (C1), Janiyra\_92 (C1), Jessibeth14\_89 (C1), JigglyPuff\_96 (C1), JulietS\_83 (C1), JustHall\_86 (C1), Kamryn\_90 (C1), Kboogie\_93 (C1), Khaleesi\_89 (C1), Koguma\_86 (C1), LRRHood\_84 (C1), Latch\_90 (C1), Lee7\_88 (C1), LinStu\_90 (C1), Littleton\_90 (C1), Loanshark\_90 (C1), LolaVinca\_92 (C1), LordLeafolot\_95 (C1), Lukilu\_81 (C1), Maby2021\_90 (C1), Mangeria\_90 (C1), McGee\_91 (C1), McWolfish\_88 (C1), Megamind\_89 (C1), Melpomini\_84 (C1), MikeLiesIn\_91 (C1), Mikro\_88 (C1), MoMoMixon\_91 (C1), Momo\_89 (C1), Morizzled23\_90 (C1), Naija\_89 (C1), Napoleon13\_86 (C1), Nappy\_92 (C1), Naval22\_95 (C1), NedWong\_91 (C1), Ngannou\_86 (C1), Nidhogg\_91 (C1), NoodleTree\_98 (C1), Norm\_91 (C1), NuevoMundo\_96 (C1), ParkTD\_91 (C1), Patter\_90 (C1), Phlegm\_92 (C1), Phox\_87 (C1), Phusco\_90 (C1), Pinkcreek\_81 (C1), Pivoine\_89 (C1), Pleione\_93 (C1), PurduePete\_90 (C1), QBert\_84 (C1), Quasimodo\_90 (C1), Rabinovich\_87 (C1), Rizal\_88 (C1), RoMag\_85 (C1), Ronan\_83 (C1), Roots515\_89 (C1), Salacia\_94 (C1), Sauce\_90 (C1), ScottMcG\_87 (C1), Sebata\_91 (C1), Shaqnato\_82 (C1), Shelob\_92 (C1), Shifa\_79 (C1), Shrimp\_90 (C1), SilverDipper\_91 (C1), SmallFry\_90 (C1), Specks\_96 (C1), Sprinklers\_85 (C1), Spud\_90 (C1), SrishMeg2525\_89 (C1), StephanieG\_89 (C1), StubbySaigey\_92 (C1), Stubby\_83 (C1), Tainan\_95 (C1), Teardrop\_90 (C1), TinyTim\_90 (C1), Tonenili\_104 (C1), Tortoise16\_88 (C1), Trinitium\_86 (C1), Turret\_85 (C1), ValleyTerrace\_90 (C1), Wally\_89 (C1), Willis\_91 (C1), Yassified\_86 (C1), YemiJoy2021\_91 (C1), YoungMoneyMata\_90 (C1), Yucca\_90 (C1), Zalkecks\_91 (C1), Zeenon\_92 (C1), ZygoTaiga\_89 (C1),

#### Start 27:

- Found in 4 of 203 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 3 of 182
- Called 100.0% of time when present
- Phage (with cluster) where this start called: E3\_gp72 (singleton), Finch\_15 (singleton), RedWattleHog\_11 (DX), Stormageddon\_11 (DX),

#### Start 28:

- Found in 2 of 203 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 182
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phrappuccino\_46 (AA), Settecandela\_46 (AA),

#### Start 29:

- Found in 4 of 203 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 3 of 182
- Called 75.0% of time when present
- Phage (with cluster) where this start called: CherryTomatoes\_88 (DO), SCentae\_87 (DO), Skog\_151 (DO),

#### Start 31:

- Found in 4 of 203 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 182
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Pupper\_88 (DO),

Start 36:

- Found in 1 of 203 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JeanGrey\_27 (singleton),

Start 37:

- Found in 169 of 203 ( 83.3% ) of genes in pham
- Manual Annotations of this start: 2 of 182
- Called 1.8% of time when present
- Phage (with cluster) where this start called: Greely\_91 (C2), Myrna\_89 (C2), Phabba\_94 (C2),

### **Summary by clusters:**

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

Info for manual annotations of cluster AA:

- Start number 28 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster C1:

- Start number 1 was manually annotated 18 times for cluster C1.
- Start number 24 was manually annotated 152 times for cluster C1.

Info for manual annotations of cluster C2:

- Start number 2 was manually annotated 1 time for cluster C2.
- Start number 37 was manually annotated 2 times for cluster C2.

Info for manual annotations of cluster DO:

- Start number 29 was manually annotated 3 times for cluster DO.
- Start number 31 was manually annotated 1 time for cluster DO.

Info for manual annotations of cluster DX:

- Start number 27 was manually annotated 2 times for cluster DX.

### **Gene Information:**

Gene: Ading\_90 Start: 35182, Stop: 38610, Start Num: 1

Candidate Starts for Ading\_90:

(Start: 1 @35182 has 18 MA's), (Start: 2 @35251 has 1 MA's), (3, 35257), (4, 35275), (6, 35311), (10, 35419), (11, 35431), (13, 35554), (14, 35605), (15, 35659), (16, 35671), (17, 35692), (32, 35986), (38, 36031), (49, 36109), (55, 36145), (63, 36178), (67, 36193), (74, 36238), (76, 36247), (80, 36280), (83, 36316), (89, 36400), (90, 36406), (100, 36601), (103, 36622), (105, 36643), (106, 36652), (112, 36709), (114, 36751), (116, 36805), (117, 36850), (125, 36919), (127, 36955), (129, 36982), (131, 37009), (135, 37069), (138, 37102), (139, 37105), (143, 37135), (144, 37153), (152, 37294), (157, 37345), (208, 37555), (209, 37561), (213, 37600), (214, 37642), (216, 37654), (218, 37672), (241,

37846), (243, 37855), (245, 37858), (246, 37861), (247, 37873), (249, 37885), (250, 37888), (254, 37903), (268, 37990), (271, 38005), (286, 38149), (287, 38161), (307, 38341), (310, 38359), (319, 38440), (323, 38476), (326, 38497), (329, 38563),

Gene: Adlitam\_90 Start: 35199, Stop: 38627, Start Num: 1

Candidate Starts for Adlitam\_90:

(Start: 1 @35199 has 18 MA's), (Start: 2 @35268 has 1 MA's), (3, 35274), (4, 35292), (6, 35328), (10, 35436), (11, 35448), (13, 35571), (14, 35622), (15, 35676), (16, 35688), (17, 35709), (32, 36003), (38, 36048), (49, 36126), (55, 36162), (63, 36195), (67, 36210), (74, 36255), (76, 36264), (80, 36297), (83, 36333), (89, 36417), (90, 36423), (100, 36618), (103, 36639), (105, 36660), (106, 36669), (112, 36726), (114, 36768), (116, 36822), (117, 36867), (125, 36936), (127, 36972), (129, 36999), (131, 37026), (135, 37086), (138, 37119), (139, 37122), (143, 37152), (144, 37170), (152, 37311), (157, 37362), (208, 37572), (209, 37578), (213, 37617), (214, 37659), (216, 37671), (218, 37689), (241, 37863), (243, 37872), (245, 37875), (246, 37878), (247, 37890), (249, 37902), (250, 37905), (254, 37920), (268, 38007), (271, 38022), (286, 38166), (287, 38178), (307, 38358), (310, 38376), (319, 38457), (323, 38493), (326, 38514), (329, 38580),

Gene: Alice\_83 Start: 33887, Stop: 36490, Start Num: 24

Candidate Starts for Alice\_83:

(Start: 24 @33887 has 152 MA's), (33, 33956), (34, 33962), (Start: 37 @33980 has 2 MA's), (43, 34016), (69, 34124), (72, 34136), (89, 34301), (90, 34307), (100, 34502), (103, 34523), (105, 34544), (106, 34553), (112, 34610), (114, 34652), (116, 34706), (117, 34751), (125, 34820), (127, 34856), (129, 34883), (131, 34910), (135, 34970), (138, 35003), (139, 35006), (142, 35027), (144, 35054), (148, 35126), (152, 35195), (157, 35246), (208, 35456), (209, 35462), (210, 35468), (213, 35501), (214, 35543), (216, 35555), (218, 35573), (241, 35747), (243, 35756), (245, 35759), (246, 35762), (247, 35774), (249, 35786), (250, 35789), (254, 35804), (268, 35870), (271, 35885), (286, 36029), (287, 36041), (307, 36221), (310, 36239), (319, 36320), (323, 36356), (326, 36377), (329, 36443),

Gene: Amataga\_90 Start: 35248, Stop: 37872, Start Num: 24

Candidate Starts for Amataga\_90:

(Start: 24 @35248 has 152 MA's), (33, 35317), (34, 35323), (Start: 37 @35341 has 2 MA's), (43, 35377), (69, 35485), (72, 35497), (89, 35662), (90, 35668), (100, 35863), (103, 35884), (105, 35905), (106, 35914), (112, 35971), (114, 36013), (116, 36067), (117, 36112), (125, 36181), (127, 36217), (129, 36244), (131, 36271), (135, 36331), (138, 36364), (139, 36367), (143, 36397), (144, 36415), (152, 36556), (157, 36607), (208, 36817), (209, 36823), (213, 36862), (214, 36904), (216, 36916), (218, 36934), (241, 37108), (243, 37117), (245, 37120), (246, 37123), (247, 37135), (249, 37147), (250, 37150), (254, 37165), (268, 37252), (271, 37267), (286, 37411), (287, 37423), (307, 37603), (310, 37621), (319, 37702), (323, 37738), (326, 37759), (329, 37825),

Gene: ArcherS7\_89 Start: 35566, Stop: 38190, Start Num: 24

Candidate Starts for ArcherS7\_89:

(Start: 24 @35566 has 152 MA's), (33, 35635), (34, 35641), (Start: 37 @35659 has 2 MA's), (43, 35695), (69, 35803), (72, 35815), (89, 35980), (90, 35986), (100, 36181), (103, 36202), (105, 36223), (106, 36232), (112, 36289), (114, 36331), (116, 36385), (117, 36430), (125, 36499), (127, 36535), (129, 36562), (131, 36589), (135, 36649), (136, 36661), (138, 36682), (139, 36685), (143, 36715), (144, 36733), (152, 36874), (157, 36925), (208, 37135), (209, 37141), (213, 37180), (214, 37222), (216, 37234), (218, 37252), (241, 37426), (243, 37435), (245, 37438), (246, 37441), (247, 37453), (249, 37465), (250, 37468), (254, 37483), (268, 37570), (271, 37585), (286, 37729), (287, 37741), (307, 37921), (310, 37939), (319, 38020), (323, 38056), (326, 38077), (329, 38143),

Gene: Asterius\_87 Start: 35551, Stop: 38175, Start Num: 24

Candidate Starts for Asterius\_87:

(Start: 24 @35551 has 152 MA's), (33, 35620), (34, 35626), (Start: 37 @35644 has 2 MA's), (43, 35680), (69, 35788), (72, 35800), (89, 35965), (90, 35971), (100, 36166), (103, 36187), (105, 36208), (106, 36217), (112, 36274), (114, 36316), (116, 36370), (117, 36415), (125, 36484), (127, 36520), (129, 36547), (131, 36574), (135, 36634), (138, 36667), (139, 36670), (142, 36691), (144, 36718), (148, 36790), (152, 36859), (157, 36910), (208, 37120), (209, 37126), (213, 37165), (214, 37207), (216, 37219), (218, 37237), (241, 37411), (243, 37420), (245, 37423), (246, 37426), (247, 37438), (249, 37450), (250, 37453), (254, 37468), (268, 37555), (271, 37570), (286, 37714), (287, 37726), (307, 37906), (310, 37924), (319, 38005), (323, 38041), (326, 38062), (329, 38128),

Gene: *Astraea\_88* Start: 35427, Stop: 38051, Start Num: 24

Candidate Starts for *Astraea\_88*:

(Start: 24 @35427 has 152 MA's), (33, 35496), (34, 35502), (Start: 37 @35520 has 2 MA's), (43, 35556), (69, 35664), (72, 35676), (89, 35841), (90, 35847), (100, 36042), (103, 36063), (105, 36084), (106, 36093), (112, 36150), (114, 36192), (116, 36246), (117, 36291), (125, 36360), (127, 36396), (129, 36423), (131, 36450), (135, 36510), (136, 36522), (138, 36543), (139, 36546), (143, 36576), (144, 36594), (152, 36735), (157, 36786), (208, 36996), (209, 37002), (213, 37041), (214, 37083), (216, 37095), (218, 37113), (241, 37287), (243, 37296), (245, 37299), (246, 37302), (247, 37314), (249, 37326), (250, 37329), (254, 37344), (268, 37431), (271, 37446), (286, 37590), (287, 37602), (307, 37782), (310, 37800), (319, 37881), (323, 37917), (326, 37938), (329, 38004),

Gene: *Atlantean\_89* Start: 35248, Stop: 37872, Start Num: 24

Candidate Starts for *Atlantean\_89*:

(Start: 24 @35248 has 152 MA's), (33, 35317), (34, 35323), (Start: 37 @35341 has 2 MA's), (43, 35377), (69, 35485), (72, 35497), (89, 35662), (90, 35668), (100, 35863), (103, 35884), (105, 35905), (106, 35914), (112, 35971), (114, 36013), (116, 36067), (117, 36112), (125, 36181), (127, 36217), (129, 36244), (131, 36271), (135, 36331), (138, 36364), (139, 36367), (143, 36397), (144, 36415), (152, 36556), (157, 36607), (208, 36817), (209, 36823), (213, 36862), (214, 36904), (216, 36916), (218, 36934), (241, 37108), (243, 37117), (245, 37120), (246, 37123), (247, 37135), (249, 37147), (250, 37150), (254, 37165), (268, 37252), (271, 37267), (286, 37411), (287, 37423), (307, 37603), (310, 37621), (319, 37702), (323, 37738), (326, 37759), (329, 37825),

Gene: *Audrick\_92* Start: 35227, Stop: 37851, Start Num: 24

Candidate Starts for *Audrick\_92*:

(Start: 24 @35227 has 152 MA's), (33, 35296), (34, 35302), (Start: 37 @35320 has 2 MA's), (43, 35356), (69, 35464), (72, 35476), (89, 35641), (90, 35647), (100, 35842), (103, 35863), (105, 35884), (106, 35893), (112, 35950), (114, 35992), (116, 36046), (117, 36091), (125, 36160), (127, 36196), (129, 36223), (131, 36250), (135, 36310), (138, 36343), (139, 36346), (143, 36376), (144, 36394), (152, 36535), (157, 36586), (208, 36796), (209, 36802), (213, 36841), (214, 36883), (216, 36895), (218, 36913), (241, 37087), (243, 37096), (245, 37099), (246, 37102), (247, 37114), (249, 37126), (250, 37129), (254, 37144), (268, 37231), (271, 37246), (286, 37390), (287, 37402), (307, 37582), (310, 37600), (319, 37681), (323, 37717), (326, 37738), (329, 37804),

Gene: *Ava3\_91* Start: 35924, Stop: 38548, Start Num: 24

Candidate Starts for *Ava3\_91*:

(Start: 24 @35924 has 152 MA's), (33, 35993), (34, 35999), (Start: 37 @36017 has 2 MA's), (43, 36053), (69, 36161), (72, 36173), (89, 36338), (90, 36344), (100, 36539), (103, 36560), (105, 36581), (106, 36590), (112, 36647), (114, 36689), (116, 36743), (117, 36788), (125, 36857), (127, 36893), (129, 36920), (131, 36947), (135, 37007), (138, 37040), (139, 37043), (143, 37073), (144, 37091), (152, 37232), (157, 37283), (208, 37493), (209, 37499), (213, 37538), (214, 37580), (216, 37592), (218, 37610), (241, 37784), (243, 37793), (245, 37796), (246, 37799), (247, 37811), (249, 37823), (250, 37826), (254, 37841), (268, 37928), (271, 37943), (286, 38087), (287, 38099), (307, 38279), (310, 38297), (319, 38378), (323, 38414), (326, 38435), (329, 38501),



Gene: Babyland\_90 Start: 34687, Stop: 37311, Start Num: 24

Candidate Starts for Babyland\_90:

(Start: 24 @34687 has 152 MA's), (33, 34756), (34, 34762), (Start: 37 @34780 has 2 MA's), (43, 34816), (69, 34924), (72, 34936), (89, 35101), (90, 35107), (100, 35302), (103, 35323), (105, 35344), (106, 35353), (112, 35410), (114, 35452), (116, 35506), (117, 35551), (125, 35620), (127, 35656), (129, 35683), (131, 35710), (135, 35770), (138, 35803), (139, 35806), (143, 35836), (144, 35854), (152, 35995), (157, 36046), (208, 36256), (209, 36262), (213, 36301), (214, 36343), (216, 36355), (218, 36373), (241, 36547), (243, 36556), (245, 36559), (246, 36562), (247, 36574), (249, 36586), (250, 36589), (254, 36604), (268, 36691), (271, 36706), (286, 36850), (287, 36862), (307, 37042), (310, 37060), (319, 37141), (323, 37177), (326, 37198), (329, 37264),

Gene: BackyardAgain\_87 Start: 34766, Stop: 37369, Start Num: 24

Candidate Starts for BackyardAgain\_87:

(Start: 24 @34766 has 152 MA's), (33, 34835), (34, 34841), (Start: 37 @34859 has 2 MA's), (43, 34895), (69, 35003), (72, 35015), (89, 35180), (90, 35186), (100, 35381), (103, 35402), (105, 35423), (106, 35432), (112, 35489), (114, 35531), (116, 35585), (117, 35630), (125, 35699), (127, 35735), (129, 35762), (131, 35789), (135, 35849), (138, 35882), (139, 35885), (142, 35906), (144, 35933), (148, 36005), (152, 36074), (157, 36125), (208, 36335), (209, 36341), (210, 36347), (213, 36380), (214, 36422), (216, 36434), (218, 36452), (241, 36626), (243, 36635), (245, 36638), (246, 36641), (247, 36653), (249, 36665), (250, 36668), (254, 36683), (268, 36749), (271, 36764), (286, 36908), (287, 36920), (307, 37100), (310, 37118), (319, 37199), (323, 37235), (326, 37256), (329, 37322),

Gene: BadAgartude\_87 Start: 36307, Stop: 38931, Start Num: 24

Candidate Starts for BadAgartude\_87:

(Start: 24 @36307 has 152 MA's), (33, 36376), (34, 36382), (Start: 37 @36400 has 2 MA's), (43, 36436), (69, 36544), (72, 36556), (89, 36721), (90, 36727), (100, 36922), (103, 36943), (105, 36964), (106, 36973), (112, 37030), (114, 37072), (116, 37126), (117, 37171), (125, 37240), (127, 37276), (129, 37303), (131, 37330), (135, 37390), (138, 37423), (139, 37426), (143, 37456), (144, 37474), (152, 37615), (157, 37666), (208, 37876), (209, 37882), (210, 37888), (213, 37921), (214, 37963), (216, 37975), (218, 37993), (241, 38167), (243, 38176), (245, 38179), (246, 38182), (247, 38194), (249, 38206), (250, 38209), (254, 38224), (268, 38311), (271, 38326), (286, 38470), (287, 38482), (307, 38662), (310, 38680), (319, 38761), (323, 38797), (326, 38818), (329, 38884),

Gene: BananaFence\_89 Start: 35789, Stop: 38413, Start Num: 24

Candidate Starts for BananaFence\_89:

(Start: 24 @35789 has 152 MA's), (33, 35858), (34, 35864), (Start: 37 @35882 has 2 MA's), (43, 35918), (69, 36026), (72, 36038), (89, 36203), (90, 36209), (100, 36404), (103, 36425), (105, 36446), (106, 36455), (112, 36512), (114, 36554), (116, 36608), (117, 36653), (125, 36722), (127, 36758), (129, 36785), (131, 36812), (135, 36872), (138, 36905), (139, 36908), (143, 36938), (144, 36956), (152, 37097), (157, 37148), (208, 37358), (209, 37364), (210, 37370), (213, 37403), (214, 37445), (216, 37457), (218, 37475), (241, 37649), (243, 37658), (245, 37661), (246, 37664), (247, 37676), (249, 37688), (250, 37691), (254, 37706), (268, 37793), (271, 37808), (286, 37952), (287, 37964), (307, 38144), (310, 38162), (319, 38243), (323, 38279), (326, 38300), (329, 38366),

Gene: Bangla1971\_91 Start: 35696, Stop: 38320, Start Num: 24

Candidate Starts for Bangla1971\_91:

(Start: 24 @35696 has 152 MA's), (33, 35765), (34, 35771), (Start: 37 @35789 has 2 MA's), (43, 35825), (69, 35933), (72, 35945), (89, 36110), (90, 36116), (100, 36311), (103, 36332), (105, 36353), (106, 36362), (112, 36419), (114, 36461), (116, 36515), (117, 36560), (125, 36629), (127, 36665), (129, 36692), (131, 36719), (135, 36779), (136, 36791), (138, 36812), (139, 36815), (143, 36845), (144, 36863), (152, 37004), (157, 37055), (208, 37265), (209, 37271), (213, 37310), (214, 37352), (216, 37364), (218, 37382), (241, 37556), (243, 37565), (245, 37568), (246, 37571), (247, 37583), (249, 37595), (250, 37598), (254, 37613), (268, 37700), (271, 37715), (286, 37859), (287, 37871),

(307, 38051), (310, 38069), (319, 38150), (323, 38186), (326, 38207), (329, 38273),

Gene: Basquiat\_86 Start: 34263, Stop: 36866, Start Num: 24

Candidate Starts for Basquiat\_86:

(Start: 24 @34263 has 152 MA's), (33, 34332), (34, 34338), (Start: 37 @34356 has 2 MA's), (43, 34392), (69, 34500), (72, 34512), (89, 34677), (90, 34683), (100, 34878), (103, 34899), (105, 34920), (106, 34929), (112, 34986), (114, 35028), (116, 35082), (117, 35127), (125, 35196), (127, 35232), (129, 35259), (131, 35286), (135, 35346), (138, 35379), (139, 35382), (142, 35403), (144, 35430), (148, 35502), (152, 35571), (157, 35622), (208, 35832), (209, 35838), (210, 35844), (213, 35877), (214, 35919), (216, 35931), (218, 35949), (241, 36123), (243, 36132), (245, 36135), (246, 36138), (247, 36150), (249, 36162), (250, 36165), (254, 36180), (268, 36246), (271, 36261), (286, 36405), (287, 36417), (307, 36597), (310, 36615), (319, 36696), (323, 36732), (326, 36753), (329, 36819),

Gene: BeanWater\_82 Start: 34836, Stop: 38264, Start Num: 1

Candidate Starts for BeanWater\_82:

(Start: 1 @34836 has 18 MA's), (Start: 2 @34905 has 1 MA's), (3, 34911), (4, 34929), (6, 34965), (10, 35073), (11, 35085), (13, 35208), (14, 35259), (15, 35313), (16, 35325), (17, 35346), (32, 35640), (38, 35685), (49, 35763), (55, 35799), (63, 35832), (67, 35847), (74, 35892), (76, 35901), (80, 35934), (83, 35970), (89, 36054), (90, 36060), (100, 36255), (103, 36276), (105, 36297), (106, 36306), (112, 36363), (114, 36405), (116, 36459), (117, 36504), (125, 36573), (127, 36609), (129, 36636), (131, 36663), (135, 36723), (138, 36756), (139, 36759), (143, 36789), (144, 36807), (152, 36948), (157, 36999), (208, 37209), (209, 37215), (213, 37254), (214, 37296), (216, 37308), (218, 37326), (241, 37500), (243, 37509), (245, 37512), (246, 37515), (247, 37527), (249, 37539), (250, 37542), (254, 37557), (268, 37644), (271, 37659), (286, 37803), (287, 37815), (307, 37995), (310, 38013), (319, 38094), (323, 38130), (326, 38151), (329, 38217),

Gene: BigCity\_98 Start: 38300, Stop: 40924, Start Num: 24

Candidate Starts for BigCity\_98:

(Start: 24 @38300 has 152 MA's), (33, 38369), (34, 38375), (Start: 37 @38393 has 2 MA's), (43, 38429), (69, 38537), (72, 38549), (90, 38720), (100, 38915), (103, 38936), (105, 38957), (106, 38966), (112, 39023), (114, 39065), (116, 39119), (117, 39164), (125, 39233), (127, 39269), (129, 39296), (131, 39323), (135, 39383), (138, 39416), (139, 39419), (143, 39449), (144, 39467), (152, 39608), (157, 39659), (208, 39869), (209, 39875), (210, 39881), (213, 39914), (214, 39956), (216, 39968), (218, 39986), (241, 40160), (243, 40169), (245, 40172), (246, 40175), (247, 40187), (249, 40199), (250, 40202), (254, 40217), (268, 40304), (271, 40319), (286, 40463), (287, 40475), (307, 40655), (310, 40673), (319, 40754), (323, 40790), (326, 40811), (329, 40877),

Gene: Bigswole\_95 Start: 38669, Stop: 41272, Start Num: 24

Candidate Starts for Bigswole\_95:

(Start: 24 @38669 has 152 MA's), (33, 38738), (34, 38744), (Start: 37 @38762 has 2 MA's), (43, 38798), (69, 38906), (72, 38918), (89, 39083), (90, 39089), (100, 39284), (103, 39305), (105, 39326), (106, 39335), (112, 39392), (114, 39434), (116, 39488), (117, 39533), (125, 39602), (127, 39638), (129, 39665), (131, 39692), (135, 39752), (138, 39785), (139, 39788), (143, 39818), (144, 39836), (152, 39977), (157, 40028), (208, 40238), (209, 40244), (210, 40250), (213, 40283), (214, 40325), (216, 40337), (218, 40355), (241, 40529), (243, 40538), (245, 40541), (246, 40544), (247, 40556), (249, 40568), (250, 40571), (254, 40586), (268, 40652), (271, 40667), (286, 40811), (287, 40823), (307, 41003), (310, 41021), (319, 41102), (323, 41138), (326, 41159), (329, 41225),

Gene: Bipolarisk\_89 Start: 35954, Stop: 38578, Start Num: 24

Candidate Starts for Bipolarisk\_89:

(Start: 24 @35954 has 152 MA's), (33, 36023), (34, 36029), (Start: 37 @36047 has 2 MA's), (43, 36083), (69, 36191), (72, 36203), (89, 36368), (90, 36374), (100, 36569), (103, 36590), (105, 36611), (106, 36620), (112, 36677), (114, 36719), (116, 36773), (117, 36818), (125, 36887), (127, 36923),

(129, 36950), (131, 36977), (135, 37037), (138, 37070), (139, 37073), (143, 37103), (144, 37121), (152, 37262), (157, 37313), (208, 37523), (209, 37529), (213, 37568), (214, 37610), (216, 37622), (218, 37640), (241, 37814), (243, 37823), (245, 37826), (246, 37829), (247, 37841), (249, 37853), (250, 37856), (254, 37871), (268, 37958), (271, 37973), (286, 38117), (287, 38129), (307, 38309), (310, 38327), (319, 38408), (323, 38444), (326, 38465), (329, 38531),

Gene: Blackbrain\_85 Start: 34080, Stop: 36683, Start Num: 24

Candidate Starts for Blackbrain\_85:

(Start: 24 @34080 has 152 MA's), (33, 34149), (34, 34155), (Start: 37 @34173 has 2 MA's), (43, 34209), (69, 34317), (72, 34329), (89, 34494), (90, 34500), (100, 34695), (103, 34716), (105, 34737), (106, 34746), (112, 34803), (114, 34845), (116, 34899), (117, 34944), (125, 35013), (127, 35049), (129, 35076), (131, 35103), (135, 35163), (138, 35196), (139, 35199), (142, 35220), (144, 35247), (148, 35319), (152, 35388), (157, 35439), (208, 35649), (209, 35655), (210, 35661), (213, 35694), (214, 35736), (216, 35748), (218, 35766), (241, 35940), (243, 35949), (245, 35952), (246, 35955), (247, 35967), (249, 35979), (250, 35982), (254, 35997), (268, 36063), (271, 36078), (286, 36222), (287, 36234), (307, 36414), (310, 36432), (319, 36513), (323, 36549), (326, 36570), (329, 36636),

Gene: Blackdragon\_84 Start: 34772, Stop: 37396, Start Num: 24

Candidate Starts for Blackdragon\_84:

(Start: 24 @34772 has 152 MA's), (33, 34841), (34, 34847), (Start: 37 @34865 has 2 MA's), (43, 34901), (69, 35009), (72, 35021), (89, 35186), (90, 35192), (100, 35387), (103, 35408), (105, 35429), (106, 35438), (112, 35495), (114, 35537), (116, 35591), (117, 35636), (125, 35705), (127, 35741), (129, 35768), (131, 35795), (135, 35855), (138, 35888), (139, 35891), (143, 35921), (144, 35939), (152, 36080), (157, 36131), (208, 36341), (209, 36347), (213, 36386), (214, 36428), (216, 36440), (218, 36458), (241, 36632), (243, 36641), (245, 36644), (246, 36647), (247, 36659), (249, 36671), (250, 36674), (254, 36689), (268, 36776), (271, 36791), (286, 36935), (287, 36947), (307, 37127), (310, 37145), (319, 37226), (323, 37262), (326, 37283), (329, 37349),

Gene: Blubba\_79 Start: 32769, Stop: 36464, Start Num: 24

Candidate Starts for Blubba\_79:

(Start: 24 @32769 has 152 MA's), (33, 32838), (34, 32844), (Start: 37 @32862 has 2 MA's), (43, 32898), (69, 33006), (72, 33018), (89, 33183), (90, 33189), (100, 33384), (103, 33405), (105, 33426), (106, 33435), (112, 33492), (114, 33534), (116, 33588), (117, 33633), (125, 33702), (127, 33738), (129, 33765), (131, 33792), (135, 33852), (138, 33885), (139, 33888), (143, 33918), (144, 33936), (152, 34077), (157, 34128), (169, 34284), (175, 34437), (176, 34461), (177, 34506), (178, 34560), (179, 34596), (181, 34650), (183, 34677), (184, 34710), (186, 34755), (188, 34842), (189, 34872), (190, 34881), (191, 34884), (194, 35013), (195, 35046), (196, 35091), (198, 35109), (199, 35139), (201, 35196), (202, 35238), (205, 35262), (206, 35340), (208, 35409), (209, 35415), (213, 35454), (214, 35496), (216, 35508), (218, 35526), (241, 35700), (243, 35709), (245, 35712), (246, 35715), (247, 35727), (249, 35739), (250, 35742), (254, 35757), (268, 35844), (271, 35859), (286, 36003), (287, 36015), (307, 36195), (310, 36213), (319, 36294), (323, 36330), (326, 36351), (329, 36417),

Gene: Bonray\_90 Start: 36351, Stop: 38975, Start Num: 24

Candidate Starts for Bonray\_90:

(Start: 24 @36351 has 152 MA's), (33, 36420), (34, 36426), (Start: 37 @36444 has 2 MA's), (43, 36480), (69, 36588), (72, 36600), (89, 36765), (90, 36771), (100, 36966), (103, 36987), (105, 37008), (106, 37017), (112, 37074), (114, 37116), (116, 37170), (117, 37215), (125, 37284), (127, 37320), (129, 37347), (131, 37374), (135, 37434), (138, 37467), (139, 37470), (143, 37500), (144, 37518), (152, 37659), (157, 37710), (208, 37920), (209, 37926), (213, 37965), (214, 38007), (216, 38019), (218, 38037), (241, 38211), (243, 38220), (245, 38223), (246, 38226), (247, 38238), (249, 38250), (250, 38253), (254, 38268), (268, 38355), (271, 38370), (286, 38514), (287, 38526), (307, 38706), (310, 38724), (319, 38805), (323, 38841), (326, 38862), (329, 38928),

Gene: Bread\_90 Start: 35846, Stop: 38470, Start Num: 24

Candidate Starts for Bread\_90:

(Start: 24 @35846 has 152 MA's), (33, 35915), (34, 35921), (Start: 37 @35939 has 2 MA's), (43, 35975), (69, 36083), (72, 36095), (89, 36260), (90, 36266), (100, 36461), (103, 36482), (105, 36503), (106, 36512), (112, 36569), (114, 36611), (116, 36665), (117, 36710), (125, 36779), (127, 36815), (129, 36842), (131, 36869), (135, 36929), (138, 36962), (139, 36965), (142, 36986), (144, 37013), (148, 37085), (152, 37154), (157, 37205), (208, 37415), (209, 37421), (213, 37460), (214, 37502), (216, 37514), (218, 37532), (241, 37706), (243, 37715), (245, 37718), (246, 37721), (247, 37733), (249, 37745), (250, 37748), (254, 37763), (268, 37850), (271, 37865), (286, 38009), (287, 38021), (307, 38201), (310, 38219), (319, 38300), (323, 38336), (326, 38357), (329, 38423),

Gene: Breeniome\_90 Start: 35069, Stop: 37693, Start Num: 24

Candidate Starts for Breeniome\_90:

(Start: 24 @35069 has 152 MA's), (33, 35138), (34, 35144), (Start: 37 @35162 has 2 MA's), (43, 35198), (69, 35306), (72, 35318), (89, 35483), (90, 35489), (100, 35684), (103, 35705), (105, 35726), (106, 35735), (112, 35792), (114, 35834), (116, 35888), (117, 35933), (125, 36002), (127, 36038), (129, 36065), (131, 36092), (135, 36152), (138, 36185), (139, 36188), (143, 36218), (144, 36236), (152, 36377), (157, 36428), (208, 36638), (209, 36644), (213, 36683), (214, 36725), (216, 36737), (218, 36755), (241, 36929), (243, 36938), (245, 36941), (246, 36944), (247, 36956), (249, 36968), (250, 36971), (254, 36986), (268, 37073), (271, 37088), (286, 37232), (287, 37244), (307, 37424), (310, 37442), (319, 37523), (323, 37559), (326, 37580), (329, 37646),

Gene: Burrough\_90 Start: 36503, Stop: 39127, Start Num: 24

Candidate Starts for Burrough\_90:

(Start: 24 @36503 has 152 MA's), (33, 36572), (34, 36578), (Start: 37 @36596 has 2 MA's), (43, 36632), (69, 36740), (72, 36752), (89, 36917), (90, 36923), (100, 37118), (103, 37139), (105, 37160), (106, 37169), (112, 37226), (114, 37268), (116, 37322), (117, 37367), (125, 37436), (127, 37472), (129, 37499), (131, 37526), (135, 37586), (138, 37619), (139, 37622), (143, 37652), (144, 37670), (152, 37811), (157, 37862), (208, 38072), (209, 38078), (213, 38117), (214, 38159), (216, 38171), (218, 38189), (241, 38363), (243, 38372), (245, 38375), (246, 38378), (247, 38390), (249, 38402), (250, 38405), (254, 38420), (268, 38507), (271, 38522), (286, 38666), (287, 38678), (307, 38858), (310, 38876), (319, 38957), (323, 38993), (326, 39014), (329, 39080),

Gene: Bxz1\_89 Start: 37554, Stop: 40178, Start Num: 24

Candidate Starts for Bxz1\_89:

(Start: 24 @37554 has 152 MA's), (33, 37623), (34, 37629), (Start: 37 @37647 has 2 MA's), (43, 37683), (69, 37791), (72, 37803), (89, 37968), (90, 37974), (100, 38169), (103, 38190), (105, 38211), (106, 38220), (112, 38277), (114, 38319), (116, 38373), (117, 38418), (125, 38487), (127, 38523), (129, 38550), (131, 38577), (135, 38637), (138, 38670), (139, 38673), (143, 38703), (144, 38721), (152, 38862), (157, 38913), (208, 39123), (209, 39129), (213, 39168), (214, 39210), (216, 39222), (218, 39240), (241, 39414), (243, 39423), (245, 39426), (246, 39429), (247, 39441), (249, 39453), (250, 39456), (254, 39471), (268, 39558), (271, 39573), (286, 39717), (287, 39729), (307, 39909), (310, 39927), (319, 40008), (323, 40044), (326, 40065), (329, 40131),

Gene: Cactojaque\_85 Start: 34187, Stop: 36790, Start Num: 24

Candidate Starts for Cactojaque\_85:

(Start: 24 @34187 has 152 MA's), (33, 34256), (34, 34262), (Start: 37 @34280 has 2 MA's), (43, 34316), (69, 34424), (72, 34436), (89, 34601), (90, 34607), (100, 34802), (103, 34823), (105, 34844), (106, 34853), (112, 34910), (114, 34952), (116, 35006), (117, 35051), (125, 35120), (127, 35156), (129, 35183), (131, 35210), (135, 35270), (138, 35303), (139, 35306), (142, 35327), (144, 35354), (148, 35426), (152, 35495), (157, 35546), (208, 35756), (209, 35762), (210, 35768), (213, 35801), (214, 35843), (216, 35855), (218, 35873), (241, 36047), (243, 36056), (245, 36059), (246, 36062), (247, 36074), (249, 36086), (250, 36089), (254, 36104), (268, 36170), (271, 36185), (286, 36329),

(287, 36341), (307, 36521), (310, 36539), (319, 36620), (323, 36656), (326, 36677), (329, 36743),

Gene: Cali\_85 Start: 36080, Stop: 38704, Start Num: 24

Candidate Starts for Cali\_85:

(Start: 24 @36080 has 152 MA's), (33, 36149), (34, 36155), (Start: 37 @36173 has 2 MA's), (43, 36209), (69, 36317), (72, 36329), (89, 36494), (90, 36500), (100, 36695), (103, 36716), (105, 36737), (106, 36746), (112, 36803), (114, 36845), (116, 36899), (117, 36944), (125, 37013), (127, 37049), (129, 37076), (131, 37103), (135, 37163), (138, 37196), (139, 37199), (143, 37229), (144, 37247), (152, 37388), (157, 37439), (208, 37649), (209, 37655), (213, 37694), (214, 37736), (216, 37748), (218, 37766), (241, 37940), (243, 37949), (245, 37952), (246, 37955), (247, 37967), (249, 37979), (250, 37982), (254, 37997), (268, 38084), (271, 38099), (286, 38243), (287, 38255), (307, 38435), (310, 38453), (319, 38534), (323, 38570), (326, 38591), (329, 38657),

Gene: Cane17\_79 Start: 32842, Stop: 36537, Start Num: 24

Candidate Starts for Cane17\_79:

(Start: 24 @32842 has 152 MA's), (33, 32911), (34, 32917), (Start: 37 @32935 has 2 MA's), (43, 32971), (69, 33079), (72, 33091), (90, 33262), (100, 33457), (103, 33478), (105, 33499), (106, 33508), (112, 33565), (114, 33607), (116, 33661), (117, 33706), (125, 33775), (127, 33811), (129, 33838), (131, 33865), (135, 33925), (138, 33958), (139, 33961), (143, 33991), (144, 34009), (152, 34150), (157, 34201), (169, 34357), (175, 34510), (176, 34534), (177, 34579), (178, 34633), (179, 34669), (181, 34723), (183, 34750), (184, 34783), (186, 34828), (188, 34915), (189, 34945), (190, 34954), (191, 34957), (194, 35086), (195, 35119), (196, 35164), (198, 35182), (199, 35212), (201, 35269), (202, 35311), (205, 35335), (206, 35413), (208, 35482), (209, 35488), (213, 35527), (214, 35569), (216, 35581), (218, 35599), (241, 35773), (243, 35782), (245, 35785), (246, 35788), (247, 35800), (249, 35812), (250, 35815), (254, 35830), (268, 35917), (271, 35932), (286, 36076), (287, 36088), (307, 36268), (310, 36286), (319, 36367), (323, 36403), (326, 36424), (329, 36490),

Gene: Capablanca\_92 Start: 36373, Stop: 38997, Start Num: 24

Candidate Starts for Capablanca\_92:

(Start: 24 @36373 has 152 MA's), (33, 36442), (34, 36448), (Start: 37 @36466 has 2 MA's), (43, 36502), (69, 36610), (72, 36622), (89, 36787), (90, 36793), (100, 36988), (103, 37009), (105, 37030), (106, 37039), (112, 37096), (114, 37138), (116, 37192), (117, 37237), (125, 37306), (127, 37342), (129, 37369), (131, 37396), (135, 37456), (138, 37489), (139, 37492), (142, 37513), (144, 37540), (148, 37612), (152, 37681), (157, 37732), (208, 37942), (209, 37948), (213, 37987), (214, 38029), (216, 38041), (218, 38059), (241, 38233), (243, 38242), (245, 38245), (246, 38248), (247, 38260), (249, 38272), (250, 38275), (254, 38290), (268, 38377), (271, 38392), (286, 38536), (287, 38548), (307, 38728), (310, 38746), (319, 38827), (323, 38863), (326, 38884), (329, 38950),

Gene: Caravan\_85 Start: 35898, Stop: 38501, Start Num: 24

Candidate Starts for Caravan\_85:

(Start: 24 @35898 has 152 MA's), (33, 35967), (34, 35973), (Start: 37 @35991 has 2 MA's), (43, 36027), (69, 36135), (72, 36147), (89, 36312), (90, 36318), (100, 36513), (103, 36534), (105, 36555), (106, 36564), (112, 36621), (114, 36663), (116, 36717), (117, 36762), (125, 36831), (127, 36867), (129, 36894), (131, 36921), (135, 36981), (138, 37014), (139, 37017), (143, 37047), (144, 37065), (152, 37206), (157, 37257), (208, 37467), (209, 37473), (213, 37512), (214, 37554), (216, 37566), (218, 37584), (241, 37758), (243, 37767), (245, 37770), (246, 37773), (247, 37785), (249, 37797), (250, 37800), (254, 37815), (268, 37881), (271, 37896), (286, 38040), (287, 38052), (307, 38232), (310, 38250), (319, 38331), (323, 38367), (326, 38388), (329, 38454),

Gene: Catera\_88 Start: 34352, Stop: 36955, Start Num: 24

Candidate Starts for Catera\_88:

(Start: 24 @34352 has 152 MA's), (33, 34421), (34, 34427), (Start: 37 @34445 has 2 MA's), (43, 34481), (69, 34589), (72, 34601), (89, 34766), (90, 34772), (100, 34967), (103, 34988), (105, 35009),

(106, 35018), (112, 35075), (114, 35117), (116, 35171), (117, 35216), (125, 35285), (127, 35321), (129, 35348), (131, 35375), (135, 35435), (138, 35468), (139, 35471), (142, 35492), (144, 35519), (148, 35591), (152, 35660), (157, 35711), (208, 35921), (209, 35927), (210, 35933), (213, 35966), (214, 36008), (216, 36020), (218, 36038), (241, 36212), (243, 36221), (245, 36224), (246, 36227), (247, 36239), (249, 36251), (250, 36254), (254, 36269), (268, 36335), (271, 36350), (286, 36494), (287, 36506), (307, 36686), (310, 36704), (319, 36785), (323, 36821), (326, 36842), (329, 36908),

Gene: Chargie21\_86 Start: 34263, Stop: 36866, Start Num: 24

Candidate Starts for Chargie21\_86:

(Start: 24 @34263 has 152 MA's), (33, 34332), (34, 34338), (Start: 37 @34356 has 2 MA's), (43, 34392), (69, 34500), (72, 34512), (89, 34677), (90, 34683), (100, 34878), (103, 34899), (105, 34920), (106, 34929), (112, 34986), (114, 35028), (116, 35082), (117, 35127), (125, 35196), (127, 35232), (129, 35259), (131, 35286), (135, 35346), (138, 35379), (139, 35382), (142, 35403), (144, 35430), (148, 35502), (152, 35571), (157, 35622), (208, 35832), (209, 35838), (210, 35844), (213, 35877), (214, 35919), (216, 35931), (218, 35949), (241, 36123), (243, 36132), (245, 36135), (246, 36138), (247, 36150), (249, 36162), (250, 36165), (254, 36180), (268, 36246), (271, 36261), (286, 36405), (287, 36417), (307, 36597), (310, 36615), (319, 36696), (323, 36732), (326, 36753), (329, 36819),

Gene: CharlieB\_85 Start: 34078, Stop: 36702, Start Num: 24

Candidate Starts for CharlieB\_85:

(Start: 24 @34078 has 152 MA's), (33, 34147), (34, 34153), (Start: 37 @34171 has 2 MA's), (43, 34207), (69, 34315), (72, 34327), (89, 34492), (90, 34498), (100, 34693), (103, 34714), (105, 34735), (106, 34744), (112, 34801), (114, 34843), (116, 34897), (117, 34942), (125, 35011), (127, 35047), (129, 35074), (131, 35101), (135, 35161), (138, 35194), (139, 35197), (143, 35227), (144, 35245), (152, 35386), (157, 35437), (208, 35647), (209, 35653), (213, 35692), (214, 35734), (216, 35746), (218, 35764), (241, 35938), (243, 35947), (245, 35950), (246, 35953), (247, 35965), (249, 35977), (250, 35980), (254, 35995), (268, 36082), (271, 36097), (286, 36241), (287, 36253), (307, 36433), (310, 36451), (319, 36532), (323, 36568), (326, 36589), (329, 36655),

Gene: ChaylaJr\_85 Start: 33978, Stop: 36581, Start Num: 24

Candidate Starts for ChaylaJr\_85:

(Start: 24 @33978 has 152 MA's), (33, 34047), (34, 34053), (Start: 37 @34071 has 2 MA's), (43, 34107), (69, 34215), (72, 34227), (89, 34392), (90, 34398), (100, 34593), (103, 34614), (105, 34635), (106, 34644), (112, 34701), (114, 34743), (116, 34797), (117, 34842), (125, 34911), (127, 34947), (129, 34974), (131, 35001), (135, 35061), (138, 35094), (139, 35097), (142, 35118), (144, 35145), (148, 35217), (152, 35286), (157, 35337), (208, 35547), (209, 35553), (210, 35559), (213, 35592), (214, 35634), (216, 35646), (218, 35664), (241, 35838), (243, 35847), (245, 35850), (246, 35853), (247, 35865), (249, 35877), (250, 35880), (254, 35895), (268, 35961), (271, 35976), (286, 36120), (287, 36132), (307, 36312), (310, 36330), (319, 36411), (323, 36447), (326, 36468), (329, 36534),

Gene: CherryTomatoes\_88 Start: 36603, Stop: 39215, Start Num: 29

Candidate Starts for CherryTomatoes\_88:

(Start: 29 @36603 has 3 MA's), (Start: 31 @36621 has 1 MA's), (50, 36720), (57, 36759), (69, 36822), (72, 36834), (78, 36864), (92, 37053), (94, 37080), (100, 37200), (102, 37209), (103, 37221), (104, 37227), (105, 37242), (106, 37251), (107, 37263), (109, 37275), (115, 37389), (117, 37449), (120, 37476), (124, 37515), (125, 37518), (127, 37554), (128, 37578), (135, 37668), (144, 37752), (147, 37797), (150, 37881), (151, 37890), (152, 37893), (157, 37944), (158, 37947), (208, 38154), (209, 38160), (214, 38241), (215, 38250), (216, 38253), (218, 38271), (222, 38289), (226, 38340), (229, 38382), (234, 38424), (238, 38439), (241, 38448), (245, 38466), (246, 38469), (247, 38481), (249, 38493), (253, 38508), (254, 38511), (258, 38541), (273, 38637), (281, 38715), (284, 38760), (289, 38799), (304, 38901), (311, 38976), (315, 39000), (316, 39003), (323, 39075), (329, 39168), (330, 39177), (331, 39189),

Gene: ChickenPhender\_86 Start: 34311, Stop: 36914, Start Num: 24

Candidate Starts for ChickenPhender\_86:

(Start: 24 @34311 has 152 MA's), (33, 34380), (34, 34386), (Start: 37 @34404 has 2 MA's), (43, 34440), (69, 34548), (72, 34560), (89, 34725), (90, 34731), (100, 34926), (103, 34947), (105, 34968), (106, 34977), (112, 35034), (114, 35076), (116, 35130), (117, 35175), (125, 35244), (127, 35280), (129, 35307), (131, 35334), (135, 35394), (138, 35427), (139, 35430), (142, 35451), (144, 35478), (148, 35550), (152, 35619), (157, 35670), (208, 35880), (209, 35886), (210, 35892), (213, 35925), (214, 35967), (216, 35979), (218, 35997), (241, 36171), (243, 36180), (245, 36183), (246, 36186), (247, 36198), (249, 36210), (250, 36213), (254, 36228), (268, 36294), (271, 36309), (286, 36453), (287, 36465), (307, 36645), (310, 36663), (319, 36744), (323, 36780), (326, 36801), (329, 36867),

Gene: Chomp\_89 Start: 35732, Stop: 39160, Start Num: 1

Candidate Starts for Chomp\_89:

(Start: 1 @35732 has 18 MA's), (Start: 2 @35801 has 1 MA's), (3, 35807), (4, 35825), (6, 35861), (10, 35969), (11, 35981), (13, 36104), (14, 36155), (15, 36209), (16, 36221), (17, 36242), (32, 36536), (38, 36581), (49, 36659), (55, 36695), (63, 36728), (67, 36743), (74, 36788), (76, 36797), (80, 36830), (83, 36866), (89, 36950), (90, 36956), (100, 37151), (103, 37172), (105, 37193), (106, 37202), (112, 37259), (114, 37301), (116, 37355), (117, 37400), (125, 37469), (127, 37505), (129, 37532), (131, 37559), (135, 37619), (138, 37652), (139, 37655), (143, 37685), (144, 37703), (152, 37844), (157, 37895), (208, 38105), (209, 38111), (213, 38150), (214, 38192), (216, 38204), (218, 38222), (241, 38396), (243, 38405), (245, 38408), (246, 38411), (247, 38423), (249, 38435), (250, 38438), (254, 38453), (268, 38540), (271, 38555), (286, 38699), (287, 38711), (307, 38891), (310, 38909), (319, 38990), (323, 39026), (326, 39047), (329, 39113),

Gene: CindyLou\_91 Start: 35773, Stop: 39201, Start Num: 1

Candidate Starts for CindyLou\_91:

(Start: 1 @35773 has 18 MA's), (Start: 2 @35842 has 1 MA's), (3, 35848), (4, 35866), (6, 35902), (10, 36010), (11, 36022), (13, 36145), (14, 36196), (15, 36250), (16, 36262), (17, 36283), (32, 36577), (38, 36622), (49, 36700), (55, 36736), (63, 36769), (67, 36784), (74, 36829), (76, 36838), (80, 36871), (83, 36907), (89, 36991), (90, 36997), (100, 37192), (103, 37213), (105, 37234), (106, 37243), (112, 37300), (114, 37342), (116, 37396), (117, 37441), (125, 37510), (127, 37546), (129, 37573), (131, 37600), (135, 37660), (138, 37693), (139, 37696), (143, 37726), (144, 37744), (152, 37885), (157, 37936), (208, 38146), (209, 38152), (213, 38191), (214, 38233), (216, 38245), (218, 38263), (241, 38437), (243, 38446), (245, 38449), (246, 38452), (247, 38464), (249, 38476), (250, 38479), (254, 38494), (268, 38581), (271, 38596), (286, 38740), (287, 38752), (307, 38932), (310, 38950), (319, 39031), (323, 39067), (326, 39088), (329, 39154),

Gene: Colt\_80 Start: 33441, Stop: 37133, Start Num: 24

Candidate Starts for Colt\_80:

(Start: 24 @33441 has 152 MA's), (33, 33510), (34, 33516), (Start: 37 @33534 has 2 MA's), (43, 33570), (69, 33678), (72, 33690), (89, 33855), (90, 33861), (100, 34056), (103, 34077), (105, 34098), (106, 34107), (112, 34164), (114, 34206), (116, 34260), (117, 34305), (125, 34374), (127, 34410), (129, 34437), (131, 34464), (135, 34524), (138, 34557), (139, 34560), (142, 34581), (144, 34608), (148, 34680), (152, 34749), (157, 34800), (169, 34956), (170, 34959), (171, 34974), (172, 35055), (173, 35058), (174, 35070), (175, 35109), (177, 35178), (180, 35271), (181, 35322), (182, 35334), (184, 35382), (185, 35388), (187, 35475), (188, 35514), (189, 35544), (191, 35556), (192, 35640), (193, 35667), (194, 35685), (196, 35763), (197, 35772), (199, 35811), (200, 35814), (201, 35868), (202, 35910), (203, 35925), (204, 35928), (205, 35934), (206, 36009), (208, 36078), (209, 36084), (213, 36123), (214, 36165), (216, 36177), (218, 36195), (241, 36369), (243, 36378), (245, 36381), (246, 36384), (247, 36396), (249, 36408), (250, 36411), (254, 36426), (268, 36513), (271, 36528), (286, 36672), (287, 36684), (307, 36864), (310, 36882), (319, 36963), (323, 36999), (326, 37020), (329, 37086),

Gene: Concombre\_97 Start: 38489, Stop: 41113, Start Num: 24

Candidate Starts for Concombre\_97:

(Start: 24 @38489 has 152 MA's), (33, 38558), (34, 38564), (Start: 37 @38582 has 2 MA's), (43, 38618), (69, 38726), (72, 38738), (89, 38903), (90, 38909), (100, 39104), (103, 39125), (105, 39146), (106, 39155), (112, 39212), (114, 39254), (116, 39308), (117, 39353), (125, 39422), (127, 39458), (129, 39485), (131, 39512), (135, 39572), (138, 39605), (139, 39608), (143, 39638), (144, 39656), (152, 39797), (157, 39848), (208, 40058), (209, 40064), (213, 40103), (214, 40145), (216, 40157), (218, 40175), (241, 40349), (243, 40358), (245, 40361), (246, 40364), (247, 40376), (249, 40388), (250, 40391), (254, 40406), (268, 40493), (271, 40508), (286, 40652), (287, 40664), (307, 40844), (310, 40862), (319, 40943), (323, 40979), (326, 41000), (329, 41066),

Gene: DTDevon\_91 Start: 36409, Stop: 39033, Start Num: 24

Candidate Starts for DTDevon\_91:

(Start: 24 @36409 has 152 MA's), (33, 36478), (34, 36484), (Start: 37 @36502 has 2 MA's), (43, 36538), (69, 36646), (72, 36658), (89, 36823), (90, 36829), (100, 37024), (103, 37045), (105, 37066), (106, 37075), (112, 37132), (114, 37174), (116, 37228), (117, 37273), (125, 37342), (127, 37378), (129, 37405), (131, 37432), (135, 37492), (138, 37525), (139, 37528), (143, 37558), (144, 37576), (152, 37717), (157, 37768), (208, 37978), (209, 37984), (213, 38023), (214, 38065), (216, 38077), (218, 38095), (241, 38269), (243, 38278), (245, 38281), (246, 38284), (247, 38296), (249, 38308), (250, 38311), (254, 38326), (268, 38413), (271, 38428), (286, 38572), (287, 38584), (307, 38764), (310, 38782), (319, 38863), (323, 38899), (326, 38920), (329, 38986),

Gene: Daffodil\_95 Start: 36242, Stop: 38866, Start Num: 24

Candidate Starts for Daffodil\_95:

(Start: 24 @36242 has 152 MA's), (33, 36311), (34, 36317), (Start: 37 @36335 has 2 MA's), (43, 36371), (69, 36479), (72, 36491), (89, 36656), (90, 36662), (100, 36857), (103, 36878), (105, 36899), (106, 36908), (112, 36965), (114, 37007), (116, 37061), (117, 37106), (125, 37175), (127, 37211), (129, 37238), (131, 37265), (135, 37325), (138, 37358), (139, 37361), (143, 37391), (144, 37409), (152, 37550), (157, 37601), (208, 37811), (209, 37817), (213, 37856), (214, 37898), (216, 37910), (218, 37928), (241, 38102), (243, 38111), (245, 38114), (246, 38117), (247, 38129), (249, 38141), (250, 38144), (254, 38159), (268, 38246), (271, 38261), (286, 38405), (287, 38417), (307, 38597), (310, 38615), (319, 38696), (323, 38732), (326, 38753), (329, 38819),

Gene: Dandelion\_97 Start: 38939, Stop: 41563, Start Num: 24

Candidate Starts for Dandelion\_97:

(Start: 24 @38939 has 152 MA's), (33, 39008), (34, 39014), (Start: 37 @39032 has 2 MA's), (43, 39068), (69, 39176), (72, 39188), (89, 39353), (90, 39359), (100, 39554), (103, 39575), (105, 39596), (106, 39605), (112, 39662), (114, 39704), (116, 39758), (117, 39803), (125, 39872), (127, 39908), (129, 39935), (131, 39962), (135, 40022), (138, 40055), (139, 40058), (143, 40088), (144, 40106), (152, 40247), (157, 40298), (208, 40508), (209, 40514), (213, 40553), (214, 40595), (216, 40607), (218, 40625), (241, 40799), (243, 40808), (245, 40811), (246, 40814), (247, 40826), (249, 40838), (250, 40841), (254, 40856), (268, 40943), (271, 40958), (286, 41102), (287, 41114), (307, 41294), (310, 41312), (319, 41393), (323, 41429), (326, 41450), (329, 41516),

Gene: Darko\_90 Start: 36177, Stop: 38801, Start Num: 24

Candidate Starts for Darko\_90:

(Start: 24 @36177 has 152 MA's), (33, 36246), (34, 36252), (Start: 37 @36270 has 2 MA's), (43, 36306), (69, 36414), (72, 36426), (89, 36591), (90, 36597), (100, 36792), (103, 36813), (105, 36834), (106, 36843), (112, 36900), (114, 36942), (116, 36996), (117, 37041), (125, 37110), (127, 37146), (129, 37173), (131, 37200), (135, 37260), (138, 37293), (139, 37296), (143, 37326), (144, 37344), (152, 37485), (157, 37536), (208, 37746), (209, 37752), (210, 37758), (213, 37791), (214, 37833), (216, 37845), (218, 37863), (241, 38037), (243, 38046), (245, 38049), (246, 38052), (247, 38064), (249, 38076), (250, 38079), (254, 38094), (268, 38181), (271, 38196), (286, 38340), (287, 38352),



(307, 38532), (310, 38550), (319, 38631), (323, 38667), (326, 38688), (329, 38754),

Gene: Delilah\_90 Start: 36243, Stop: 38867, Start Num: 24

Candidate Starts for Delilah\_90:

(Start: 24 @36243 has 152 MA's), (33, 36312), (34, 36318), (Start: 37 @36336 has 2 MA's), (43, 36372), (69, 36480), (72, 36492), (89, 36657), (90, 36663), (100, 36858), (103, 36879), (105, 36900), (106, 36909), (112, 36966), (114, 37008), (116, 37062), (117, 37107), (125, 37176), (127, 37212), (129, 37239), (131, 37266), (135, 37326), (138, 37359), (139, 37362), (143, 37392), (144, 37410), (152, 37551), (157, 37602), (208, 37812), (209, 37818), (213, 37857), (214, 37899), (216, 37911), (218, 37929), (241, 38103), (243, 38112), (245, 38115), (246, 38118), (247, 38130), (249, 38142), (250, 38145), (254, 38160), (268, 38247), (271, 38262), (286, 38406), (287, 38418), (307, 38598), (310, 38616), (319, 38697), (323, 38733), (326, 38754), (329, 38820),

Gene: Delylah\_93 Start: 36036, Stop: 38660, Start Num: 24

Candidate Starts for Delylah\_93:

(Start: 24 @36036 has 152 MA's), (33, 36105), (34, 36111), (Start: 37 @36129 has 2 MA's), (43, 36165), (69, 36273), (72, 36285), (89, 36450), (90, 36456), (100, 36651), (103, 36672), (105, 36693), (106, 36702), (112, 36759), (114, 36801), (116, 36855), (117, 36900), (125, 36969), (127, 37005), (129, 37032), (131, 37059), (135, 37119), (138, 37152), (139, 37155), (143, 37185), (144, 37203), (152, 37344), (157, 37395), (208, 37605), (209, 37611), (213, 37650), (214, 37692), (216, 37704), (218, 37722), (241, 37896), (243, 37905), (245, 37908), (246, 37911), (247, 37923), (249, 37935), (250, 37938), (254, 37953), (268, 38040), (271, 38055), (286, 38199), (287, 38211), (307, 38391), (310, 38409), (319, 38490), (323, 38526), (326, 38547), (329, 38613),

Gene: Demodog\_97 Start: 38489, Stop: 41113, Start Num: 24

Candidate Starts for Demodog\_97:

(Start: 24 @38489 has 152 MA's), (33, 38558), (34, 38564), (Start: 37 @38582 has 2 MA's), (43, 38618), (69, 38726), (72, 38738), (89, 38903), (90, 38909), (100, 39104), (103, 39125), (105, 39146), (106, 39155), (112, 39212), (114, 39254), (116, 39308), (117, 39353), (125, 39422), (127, 39458), (129, 39485), (131, 39512), (135, 39572), (138, 39605), (139, 39608), (143, 39638), (144, 39656), (152, 39797), (157, 39848), (208, 40058), (209, 40064), (213, 40103), (214, 40145), (216, 40157), (218, 40175), (241, 40349), (243, 40358), (245, 40361), (246, 40364), (247, 40376), (249, 40388), (250, 40391), (254, 40406), (268, 40493), (271, 40508), (286, 40652), (287, 40664), (307, 40844), (310, 40862), (319, 40943), (323, 40979), (326, 41000), (329, 41066),

Gene: Derek\_90 Start: 35534, Stop: 38962, Start Num: 1

Candidate Starts for Derek\_90:

(Start: 1 @35534 has 18 MA's), (Start: 2 @35603 has 1 MA's), (3, 35609), (4, 35627), (6, 35663), (10, 35771), (11, 35783), (13, 35906), (14, 35957), (15, 36011), (16, 36023), (17, 36044), (32, 36338), (38, 36383), (49, 36461), (55, 36497), (63, 36530), (67, 36545), (74, 36590), (76, 36599), (80, 36632), (83, 36668), (89, 36752), (90, 36758), (100, 36953), (103, 36974), (105, 36995), (106, 37004), (112, 37061), (114, 37103), (116, 37157), (117, 37202), (125, 37271), (127, 37307), (129, 37334), (131, 37361), (135, 37421), (138, 37454), (139, 37457), (143, 37487), (144, 37505), (152, 37646), (157, 37697), (208, 37907), (209, 37913), (213, 37952), (214, 37994), (216, 38006), (218, 38024), (241, 38198), (243, 38207), (245, 38210), (246, 38213), (247, 38225), (249, 38237), (250, 38240), (254, 38255), (268, 38342), (271, 38357), (286, 38501), (287, 38513), (307, 38693), (310, 38711), (319, 38792), (323, 38828), (326, 38849), (329, 38915),

Gene: Dietrick\_82 Start: 34014, Stop: 36617, Start Num: 24

Candidate Starts for Dietrick\_82:

(Start: 24 @34014 has 152 MA's), (33, 34083), (34, 34089), (Start: 37 @34107 has 2 MA's), (43, 34143), (69, 34251), (72, 34263), (89, 34428), (90, 34434), (100, 34629), (103, 34650), (105, 34671), (106, 34680), (112, 34737), (114, 34779), (116, 34833), (117, 34878), (125, 34947), (127, 34983),

(129, 35010), (131, 35037), (135, 35097), (138, 35130), (139, 35133), (142, 35154), (144, 35181), (148, 35253), (152, 35322), (157, 35373), (208, 35583), (209, 35589), (210, 35595), (213, 35628), (214, 35670), (216, 35682), (218, 35700), (241, 35874), (243, 35883), (245, 35886), (246, 35889), (247, 35901), (249, 35913), (250, 35916), (254, 35931), (268, 35997), (271, 36012), (286, 36156), (287, 36168), (307, 36348), (310, 36366), (319, 36447), (323, 36483), (326, 36504), (329, 36570),

Gene: DirtMonster\_83 Start: 34835, Stop: 37459, Start Num: 24

Candidate Starts for DirtMonster\_83:

(Start: 24 @34835 has 152 MA's), (33, 34904), (34, 34910), (Start: 37 @34928 has 2 MA's), (43, 34964), (69, 35072), (72, 35084), (89, 35249), (90, 35255), (100, 35450), (103, 35471), (105, 35492), (106, 35501), (112, 35558), (114, 35600), (116, 35654), (117, 35699), (125, 35768), (127, 35804), (129, 35831), (131, 35858), (135, 35918), (138, 35951), (139, 35954), (143, 35984), (144, 36002), (152, 36143), (157, 36194), (208, 36404), (209, 36410), (210, 36416), (213, 36449), (214, 36491), (216, 36503), (218, 36521), (241, 36695), (243, 36704), (245, 36707), (246, 36710), (247, 36722), (249, 36734), (250, 36737), (254, 36752), (268, 36839), (271, 36854), (286, 36998), (287, 37010), (307, 37190), (310, 37208), (319, 37289), (323, 37325), (326, 37346), (329, 37412),

Gene: Domi\_84 Start: 35571, Stop: 38195, Start Num: 24

Candidate Starts for Domi\_84:

(Start: 24 @35571 has 152 MA's), (33, 35640), (34, 35646), (Start: 37 @35664 has 2 MA's), (43, 35700), (69, 35808), (72, 35820), (89, 35985), (90, 35991), (100, 36186), (103, 36207), (105, 36228), (106, 36237), (112, 36294), (114, 36336), (116, 36390), (117, 36435), (125, 36504), (127, 36540), (129, 36567), (131, 36594), (135, 36654), (138, 36687), (139, 36690), (143, 36720), (144, 36738), (152, 36879), (157, 36930), (208, 37140), (209, 37146), (210, 37152), (213, 37185), (214, 37227), (216, 37239), (218, 37257), (241, 37431), (243, 37440), (245, 37443), (246, 37446), (247, 37458), (249, 37470), (250, 37473), (254, 37488), (268, 37575), (271, 37590), (286, 37734), (287, 37746), (307, 37926), (310, 37944), (319, 38025), (323, 38061), (326, 38082), (329, 38148),

Gene: DrPhinkDaddy\_89 Start: 36298, Stop: 38922, Start Num: 24

Candidate Starts for DrPhinkDaddy\_89:

(Start: 24 @36298 has 152 MA's), (33, 36367), (34, 36373), (Start: 37 @36391 has 2 MA's), (43, 36427), (69, 36535), (72, 36547), (89, 36712), (90, 36718), (100, 36913), (103, 36934), (105, 36955), (106, 36964), (112, 37021), (114, 37063), (116, 37117), (117, 37162), (125, 37231), (127, 37267), (129, 37294), (131, 37321), (135, 37381), (138, 37414), (139, 37417), (143, 37447), (144, 37465), (152, 37606), (157, 37657), (208, 37867), (209, 37873), (213, 37912), (214, 37954), (216, 37966), (218, 37984), (241, 38158), (243, 38167), (245, 38170), (246, 38173), (247, 38185), (249, 38197), (250, 38200), (254, 38215), (268, 38302), (271, 38317), (286, 38461), (287, 38473), (307, 38653), (310, 38671), (319, 38752), (323, 38788), (326, 38809), (329, 38875),

Gene: Drazdys\_90 Start: 36040, Stop: 38664, Start Num: 24

Candidate Starts for Drazdys\_90:

(Start: 24 @36040 has 152 MA's), (33, 36109), (34, 36115), (Start: 37 @36133 has 2 MA's), (43, 36169), (69, 36277), (72, 36289), (89, 36454), (90, 36460), (100, 36655), (103, 36676), (105, 36697), (106, 36706), (112, 36763), (114, 36805), (116, 36859), (117, 36904), (125, 36973), (127, 37009), (129, 37036), (131, 37063), (135, 37123), (136, 37135), (138, 37156), (139, 37159), (143, 37189), (144, 37207), (152, 37348), (157, 37399), (208, 37609), (209, 37615), (213, 37654), (214, 37696), (216, 37708), (218, 37726), (241, 37900), (243, 37909), (245, 37912), (246, 37915), (247, 37927), (249, 37939), (250, 37942), (254, 37957), (268, 38044), (271, 38059), (286, 38203), (287, 38215), (307, 38395), (310, 38413), (319, 38494), (323, 38530), (326, 38551), (329, 38617),

Gene: E3\_gp72 Start: 32680, Stop: 35169, Start Num: 27

Candidate Starts for E3\_gp72:

(23, 32617), (25, 32665), (Start: 27 @32680 has 3 MA's), (30, 32698), (35, 32737), (41, 32776), (60, 32887), (66, 32908), (82, 33019), (89, 33106), (90, 33112), (91, 33121), (92, 33163), (93, 33169), (102, 33313), (103, 33325), (105, 33346), (107, 33367), (118, 33532), (119, 33541), (122, 33574), (123, 33577), (125, 33598), (126, 33601), (135, 33748), (138, 33781), (139, 33784), (142, 33805), (143, 33814), (144, 33832), (147, 33877), (151, 33970), (152, 33973), (154, 33994), (165, 34141), (166, 34156), (218, 34351), (224, 34405), (229, 34462), (232, 34489), (233, 34495), (237, 34516), (245, 34537), (246, 34540), (248, 34558), (250, 34567), (252, 34573), (253, 34579), (270, 34678), (271, 34684), (274, 34705), (275, 34723), (279, 34768), (280, 34777), (282, 34813), (290, 34882), (294, 34894), (301, 34948), (302, 34954), (306, 35014), (321, 35143),

Gene: ET08\_79 Start: 33946, Stop: 37638, Start Num: 24

Candidate Starts for ET08\_79:

(Start: 24 @33946 has 152 MA's), (33, 34015), (34, 34021), (Start: 37 @34039 has 2 MA's), (43, 34075), (69, 34183), (72, 34195), (89, 34360), (90, 34366), (100, 34561), (103, 34582), (105, 34603), (106, 34612), (112, 34669), (114, 34711), (116, 34765), (117, 34810), (125, 34879), (127, 34915), (129, 34942), (131, 34969), (135, 35029), (138, 35062), (139, 35065), (143, 35095), (144, 35113), (152, 35254), (157, 35305), (169, 35461), (170, 35464), (171, 35479), (172, 35560), (173, 35563), (174, 35575), (175, 35614), (177, 35683), (180, 35776), (181, 35827), (182, 35839), (184, 35887), (185, 35893), (187, 35980), (188, 36019), (189, 36049), (191, 36061), (192, 36145), (193, 36172), (194, 36190), (196, 36268), (197, 36277), (199, 36316), (200, 36319), (201, 36373), (202, 36415), (203, 36430), (204, 36433), (205, 36439), (206, 36514), (208, 36583), (209, 36589), (213, 36628), (214, 36670), (216, 36682), (218, 36700), (241, 36874), (243, 36883), (245, 36886), (246, 36889), (247, 36901), (249, 36913), (250, 36916), (254, 36931), (268, 37018), (271, 37033), (286, 37177), (287, 37189), (307, 37369), (310, 37387), (319, 37468), (323, 37504), (326, 37525), (329, 37591),

Gene: EasyJones\_93 Start: 35370, Stop: 37973, Start Num: 24

Candidate Starts for EasyJones\_93:

(Start: 24 @35370 has 152 MA's), (33, 35439), (34, 35445), (Start: 37 @35463 has 2 MA's), (43, 35499), (69, 35607), (72, 35619), (89, 35784), (90, 35790), (100, 35985), (103, 36006), (105, 36027), (106, 36036), (112, 36093), (114, 36135), (116, 36189), (117, 36234), (125, 36303), (127, 36339), (129, 36366), (131, 36393), (135, 36453), (138, 36486), (139, 36489), (142, 36510), (144, 36537), (148, 36609), (152, 36678), (157, 36729), (208, 36939), (209, 36945), (210, 36951), (213, 36984), (214, 37026), (216, 37038), (218, 37056), (241, 37230), (243, 37239), (245, 37242), (246, 37245), (247, 37257), (249, 37269), (250, 37272), (254, 37287), (268, 37353), (271, 37368), (286, 37512), (287, 37524), (307, 37704), (310, 37722), (319, 37803), (323, 37839), (326, 37860), (329, 37926),

Gene: EggyFarm\_98 Start: 38300, Stop: 40924, Start Num: 24

Candidate Starts for EggyFarm\_98:

(Start: 24 @38300 has 152 MA's), (33, 38369), (34, 38375), (Start: 37 @38393 has 2 MA's), (43, 38429), (69, 38537), (72, 38549), (90, 38720), (100, 38915), (103, 38936), (105, 38957), (106, 38966), (112, 39023), (114, 39065), (116, 39119), (117, 39164), (125, 39233), (127, 39269), (129, 39296), (131, 39323), (135, 39383), (138, 39416), (139, 39419), (143, 39449), (144, 39467), (152, 39608), (157, 39659), (208, 39869), (209, 39875), (210, 39881), (213, 39914), (214, 39956), (216, 39968), (218, 39986), (241, 40160), (243, 40169), (245, 40172), (246, 40175), (247, 40187), (249, 40199), (250, 40202), (254, 40217), (268, 40304), (271, 40319), (286, 40463), (287, 40475), (307, 40655), (310, 40673), (319, 40754), (323, 40790), (326, 40811), (329, 40877),

Gene: EmToTheThree\_93 Start: 37694, Stop: 40318, Start Num: 24

Candidate Starts for EmToTheThree\_93:

(Start: 24 @37694 has 152 MA's), (33, 37763), (34, 37769), (Start: 37 @37787 has 2 MA's), (43, 37823), (69, 37931), (72, 37943), (89, 38108), (90, 38114), (100, 38309), (103, 38330), (105, 38351), (106, 38360), (112, 38417), (114, 38459), (116, 38513), (117, 38558), (125, 38627), (127, 38663), (129, 38690), (131, 38717), (135, 38777), (138, 38810), (139, 38813), (143, 38843), (144, 38861),

(152, 39002), (157, 39053), (208, 39263), (209, 39269), (213, 39308), (214, 39350), (216, 39362), (218, 39380), (241, 39554), (243, 39563), (245, 39566), (246, 39569), (247, 39581), (249, 39593), (250, 39596), (254, 39611), (268, 39698), (271, 39713), (286, 39857), (287, 39869), (307, 40049), (310, 40067), (319, 40148), (323, 40184), (326, 40205), (329, 40271),

Gene: EmmaElysia\_89 Start: 34815, Stop: 37439, Start Num: 24

Candidate Starts for EmmaElysia\_89:

(Start: 24 @34815 has 152 MA's), (33, 34884), (34, 34890), (Start: 37 @34908 has 2 MA's), (43, 34944), (69, 35052), (72, 35064), (89, 35229), (90, 35235), (100, 35430), (103, 35451), (105, 35472), (106, 35481), (112, 35538), (114, 35580), (116, 35634), (117, 35679), (125, 35748), (127, 35784), (129, 35811), (131, 35838), (135, 35898), (138, 35931), (139, 35934), (143, 35964), (144, 35982), (152, 36123), (157, 36174), (208, 36384), (209, 36390), (213, 36429), (214, 36471), (216, 36483), (218, 36501), (241, 36675), (243, 36684), (245, 36687), (246, 36690), (247, 36702), (249, 36714), (250, 36717), (254, 36732), (268, 36819), (271, 36834), (286, 36978), (287, 36990), (307, 37170), (310, 37188), (319, 37269), (323, 37305), (326, 37326), (329, 37392),

Gene: Erdmann\_91 Start: 36243, Stop: 38867, Start Num: 24

Candidate Starts for Erdmann\_91:

(Start: 24 @36243 has 152 MA's), (33, 36312), (34, 36318), (Start: 37 @36336 has 2 MA's), (43, 36372), (69, 36480), (72, 36492), (89, 36657), (90, 36663), (100, 36858), (103, 36879), (105, 36900), (106, 36909), (112, 36966), (114, 37008), (116, 37062), (117, 37107), (125, 37176), (127, 37212), (129, 37239), (131, 37266), (135, 37326), (138, 37359), (139, 37362), (143, 37392), (144, 37410), (152, 37551), (157, 37602), (208, 37812), (209, 37818), (213, 37857), (214, 37899), (216, 37911), (218, 37929), (241, 38103), (243, 38112), (245, 38115), (246, 38118), (247, 38130), (249, 38142), (250, 38145), (254, 38160), (268, 38247), (271, 38262), (286, 38406), (287, 38418), (307, 38598), (310, 38616), (319, 38697), (323, 38733), (326, 38754), (329, 38820),

Gene: ErnieJ\_86 Start: 34292, Stop: 36895, Start Num: 24

Candidate Starts for ErnieJ\_86:

(Start: 24 @34292 has 152 MA's), (33, 34361), (34, 34367), (Start: 37 @34385 has 2 MA's), (43, 34421), (69, 34529), (72, 34541), (89, 34706), (90, 34712), (100, 34907), (103, 34928), (105, 34949), (106, 34958), (112, 35015), (114, 35057), (116, 35111), (117, 35156), (125, 35225), (127, 35261), (129, 35288), (131, 35315), (135, 35375), (138, 35408), (139, 35411), (142, 35432), (144, 35459), (148, 35531), (152, 35600), (157, 35651), (208, 35861), (209, 35867), (210, 35873), (213, 35906), (214, 35948), (216, 35960), (218, 35978), (241, 36152), (243, 36161), (245, 36164), (246, 36167), (247, 36179), (249, 36191), (250, 36194), (254, 36209), (268, 36275), (271, 36290), (286, 36434), (287, 36446), (307, 36626), (310, 36644), (319, 36725), (323, 36761), (326, 36782), (329, 36848),

Gene: Essence\_87 Start: 34998, Stop: 38426, Start Num: 1

Candidate Starts for Essence\_87:

(Start: 1 @34998 has 18 MA's), (Start: 2 @35067 has 1 MA's), (3, 35073), (4, 35091), (6, 35127), (10, 35235), (11, 35247), (13, 35370), (14, 35421), (15, 35475), (16, 35487), (17, 35508), (32, 35802), (38, 35847), (49, 35925), (55, 35961), (63, 35994), (67, 36009), (74, 36054), (76, 36063), (80, 36096), (83, 36132), (89, 36216), (90, 36222), (100, 36417), (103, 36438), (105, 36459), (106, 36468), (112, 36525), (114, 36567), (116, 36621), (117, 36666), (125, 36735), (127, 36771), (129, 36798), (131, 36825), (135, 36885), (138, 36918), (139, 36921), (143, 36951), (144, 36969), (152, 37110), (157, 37161), (208, 37371), (209, 37377), (213, 37416), (214, 37458), (216, 37470), (218, 37488), (241, 37662), (243, 37671), (245, 37674), (246, 37677), (247, 37689), (249, 37701), (250, 37704), (254, 37719), (268, 37806), (271, 37821), (286, 37965), (287, 37977), (307, 38157), (310, 38175), (319, 38256), (323, 38292), (326, 38313), (329, 38379),

Gene: Ewok\_91 Start: 35870, Stop: 38494, Start Num: 24

Candidate Starts for Ewok\_91:

(Start: 24 @35870 has 152 MA's), (33, 35939), (34, 35945), (Start: 37 @35963 has 2 MA's), (43, 35999), (69, 36107), (72, 36119), (89, 36284), (90, 36290), (100, 36485), (103, 36506), (105, 36527), (106, 36536), (112, 36593), (114, 36635), (116, 36689), (117, 36734), (125, 36803), (127, 36839), (129, 36866), (131, 36893), (135, 36953), (138, 36986), (139, 36989), (143, 37019), (144, 37037), (152, 37178), (157, 37229), (208, 37439), (209, 37445), (213, 37484), (214, 37526), (216, 37538), (218, 37556), (241, 37730), (243, 37739), (245, 37742), (246, 37745), (247, 37757), (249, 37769), (250, 37772), (254, 37787), (268, 37874), (271, 37889), (286, 38033), (287, 38045), (307, 38225), (310, 38243), (319, 38324), (323, 38360), (326, 38381), (329, 38447),

Gene: Finch\_15 Start: 10444, Stop: 13083, Start Num: 27

Candidate Starts for Finch\_15:

(Start: 27 @10444 has 3 MA's), (53, 10603), (63, 10642), (71, 10675), (76, 10702), (86, 10783), (92, 10900), (93, 10906), (102, 11050), (103, 11062), (107, 11104), (108, 11107), (111, 11134), (126, 11353), (127, 11386), (135, 11500), (138, 11533), (141, 11551), (143, 11566), (147, 11629), (151, 11722), (152, 11725), (164, 11863), (165, 11893), (168, 11923), (209, 11992), (211, 12007), (214, 12073), (218, 12103), (223, 12133), (228, 12196), (240, 12277), (242, 12292), (246, 12301), (251, 12334), (261, 12391), (268, 12457), (278, 12556), (288, 12649), (292, 12682), (293, 12688), (309, 12826), (310, 12835), (314, 12868), (317, 12892), (320, 12913), (327, 13024), (329, 13036),

Gene: Flabslab\_85 Start: 34048, Stop: 36651, Start Num: 24

Candidate Starts for Flabslab\_85:

(Start: 24 @34048 has 152 MA's), (33, 34117), (34, 34123), (Start: 37 @34141 has 2 MA's), (43, 34177), (69, 34285), (72, 34297), (89, 34462), (90, 34468), (100, 34663), (103, 34684), (105, 34705), (106, 34714), (112, 34771), (114, 34813), (116, 34867), (117, 34912), (125, 34981), (127, 35017), (129, 35044), (131, 35071), (135, 35131), (138, 35164), (139, 35167), (142, 35188), (144, 35215), (148, 35287), (152, 35356), (157, 35407), (208, 35617), (209, 35623), (210, 35629), (213, 35662), (214, 35704), (216, 35716), (218, 35734), (241, 35908), (243, 35917), (245, 35920), (246, 35923), (247, 35935), (249, 35947), (250, 35950), (254, 35965), (268, 36031), (271, 36046), (286, 36190), (287, 36202), (307, 36382), (310, 36400), (319, 36481), (323, 36517), (326, 36538), (329, 36604),

Gene: Fludd\_90 Start: 34710, Stop: 37313, Start Num: 24

Candidate Starts for Fludd\_90:

(Start: 24 @34710 has 152 MA's), (33, 34779), (34, 34785), (Start: 37 @34803 has 2 MA's), (43, 34839), (69, 34947), (72, 34959), (89, 35124), (90, 35130), (100, 35325), (103, 35346), (105, 35367), (106, 35376), (112, 35433), (114, 35475), (116, 35529), (117, 35574), (125, 35643), (127, 35679), (129, 35706), (131, 35733), (135, 35793), (138, 35826), (139, 35829), (142, 35850), (144, 35877), (148, 35949), (152, 36018), (157, 36069), (208, 36279), (209, 36285), (210, 36291), (213, 36324), (214, 36366), (216, 36378), (218, 36396), (241, 36570), (243, 36579), (245, 36582), (246, 36585), (247, 36597), (249, 36609), (250, 36612), (254, 36627), (268, 36693), (271, 36708), (286, 36852), (287, 36864), (307, 37044), (310, 37062), (319, 37143), (323, 37179), (326, 37200), (329, 37266),

Gene: FoxtrotP1\_90 Start: 36642, Stop: 39266, Start Num: 24

Candidate Starts for FoxtrotP1\_90:

(Start: 24 @36642 has 152 MA's), (33, 36711), (34, 36717), (Start: 37 @36735 has 2 MA's), (43, 36771), (69, 36879), (72, 36891), (89, 37056), (90, 37062), (100, 37257), (103, 37278), (105, 37299), (106, 37308), (112, 37365), (114, 37407), (116, 37461), (117, 37506), (125, 37575), (127, 37611), (129, 37638), (131, 37665), (135, 37725), (138, 37758), (139, 37761), (143, 37791), (144, 37809), (152, 37950), (157, 38001), (208, 38211), (209, 38217), (213, 38256), (214, 38298), (216, 38310), (218, 38328), (241, 38502), (243, 38511), (245, 38514), (246, 38517), (247, 38529), (249, 38541), (250, 38544), (254, 38559), (268, 38646), (271, 38661), (286, 38805), (287, 38817), (307, 38997), (310, 39015), (319, 39096), (323, 39132), (326, 39153), (329, 39219),

Gene: FrayBell\_96 Start: 37692, Stop: 40316, Start Num: 24

Candidate Starts for FrayBell\_96:

(Start: 24 @37692 has 152 MA's), (33, 37761), (34, 37767), (Start: 37 @37785 has 2 MA's), (43, 37821), (69, 37929), (72, 37941), (89, 38106), (90, 38112), (100, 38307), (103, 38328), (105, 38349), (106, 38358), (112, 38415), (114, 38457), (116, 38511), (117, 38556), (125, 38625), (127, 38661), (129, 38688), (131, 38715), (135, 38775), (138, 38808), (139, 38811), (143, 38841), (144, 38859), (152, 39000), (157, 39051), (208, 39261), (209, 39267), (210, 39273), (213, 39306), (214, 39348), (216, 39360), (218, 39378), (241, 39552), (243, 39561), (245, 39564), (246, 39567), (247, 39579), (249, 39591), (250, 39594), (254, 39609), (268, 39696), (271, 39711), (286, 39855), (287, 39867), (307, 40047), (310, 40065), (319, 40146), (323, 40182), (326, 40203), (329, 40269),

Gene: FudgeTart\_90 Start: 35436, Stop: 38060, Start Num: 24

Candidate Starts for FudgeTart\_90:

(Start: 24 @35436 has 152 MA's), (33, 35505), (34, 35511), (Start: 37 @35529 has 2 MA's), (43, 35565), (69, 35673), (72, 35685), (89, 35850), (90, 35856), (100, 36051), (103, 36072), (105, 36093), (106, 36102), (112, 36159), (114, 36201), (116, 36255), (117, 36300), (125, 36369), (127, 36405), (129, 36432), (131, 36459), (135, 36519), (138, 36552), (139, 36555), (143, 36585), (144, 36603), (152, 36744), (157, 36795), (208, 37005), (209, 37011), (213, 37050), (214, 37092), (216, 37104), (218, 37122), (241, 37296), (243, 37305), (245, 37308), (246, 37311), (247, 37323), (249, 37335), (250, 37338), (254, 37353), (268, 37440), (271, 37455), (286, 37599), (287, 37611), (307, 37791), (310, 37809), (319, 37890), (323, 37926), (326, 37947), (329, 38013),

Gene: Gabriel\_92 Start: 35478, Stop: 38102, Start Num: 24

Candidate Starts for Gabriel\_92:

(Start: 24 @35478 has 152 MA's), (33, 35547), (34, 35553), (Start: 37 @35571 has 2 MA's), (43, 35607), (69, 35715), (72, 35727), (89, 35892), (90, 35898), (100, 36093), (103, 36114), (105, 36135), (106, 36144), (112, 36201), (114, 36243), (116, 36297), (117, 36342), (125, 36411), (127, 36447), (129, 36474), (131, 36501), (135, 36561), (138, 36594), (139, 36597), (143, 36627), (144, 36645), (152, 36786), (157, 36837), (208, 37047), (209, 37053), (213, 37092), (214, 37134), (216, 37146), (218, 37164), (241, 37338), (243, 37347), (245, 37350), (246, 37353), (247, 37365), (249, 37377), (250, 37380), (254, 37395), (268, 37482), (271, 37497), (286, 37641), (287, 37653), (307, 37833), (310, 37851), (319, 37932), (323, 37968), (326, 37989), (329, 38055),

Gene: Gamgam\_90 Start: 35248, Stop: 37872, Start Num: 24

Candidate Starts for Gamgam\_90:

(Start: 24 @35248 has 152 MA's), (33, 35317), (34, 35323), (Start: 37 @35341 has 2 MA's), (43, 35377), (69, 35485), (72, 35497), (89, 35662), (90, 35668), (100, 35863), (103, 35884), (105, 35905), (106, 35914), (112, 35971), (114, 36013), (116, 36067), (117, 36112), (125, 36181), (127, 36217), (129, 36244), (131, 36271), (135, 36331), (138, 36364), (139, 36367), (143, 36397), (144, 36415), (152, 36556), (157, 36607), (208, 36817), (209, 36823), (213, 36862), (214, 36904), (216, 36916), (218, 36934), (241, 37108), (243, 37117), (245, 37120), (246, 37123), (247, 37135), (249, 37147), (250, 37150), (254, 37165), (268, 37252), (271, 37267), (286, 37411), (287, 37423), (307, 37603), (310, 37621), (319, 37702), (323, 37738), (326, 37759), (329, 37825),

Gene: Ghost\_89 Start: 35248, Stop: 37872, Start Num: 24

Candidate Starts for Ghost\_89:

(Start: 24 @35248 has 152 MA's), (33, 35317), (34, 35323), (Start: 37 @35341 has 2 MA's), (43, 35377), (69, 35485), (72, 35497), (89, 35662), (90, 35668), (100, 35863), (103, 35884), (105, 35905), (106, 35914), (112, 35971), (114, 36013), (116, 36067), (117, 36112), (125, 36181), (127, 36217), (129, 36244), (131, 36271), (135, 36331), (138, 36364), (139, 36367), (143, 36397), (144, 36415), (152, 36556), (157, 36607), (208, 36817), (209, 36823), (213, 36862), (214, 36904), (216, 36916), (218, 36934), (241, 37108), (243, 37117), (245, 37120), (246, 37123), (247, 37135), (249, 37147), (250, 37150), (254, 37165), (268, 37252), (271, 37267), (286, 37411), (287, 37423), (307, 37603), (310, 37621), (319, 37702), (323, 37738), (326, 37759), (329, 37825),

Gene: Gizmo\_94 Start: 35551, Stop: 39243, Start Num: 24

Candidate Starts for Gizmo\_94:

(Start: 24 @35551 has 152 MA's), (33, 35620), (34, 35626), (Start: 37 @35644 has 2 MA's), (43, 35680), (69, 35788), (72, 35800), (89, 35965), (90, 35971), (100, 36166), (103, 36187), (105, 36208), (106, 36217), (112, 36274), (114, 36316), (116, 36370), (117, 36415), (125, 36484), (127, 36520), (129, 36547), (131, 36574), (135, 36634), (138, 36667), (139, 36670), (143, 36700), (144, 36718), (152, 36859), (157, 36910), (169, 37066), (170, 37069), (171, 37084), (172, 37165), (173, 37168), (174, 37180), (175, 37219), (177, 37288), (180, 37381), (181, 37432), (182, 37444), (184, 37492), (185, 37498), (187, 37585), (188, 37624), (189, 37654), (191, 37666), (192, 37750), (193, 37777), (194, 37795), (196, 37873), (197, 37882), (199, 37921), (200, 37924), (201, 37978), (202, 38020), (203, 38035), (204, 38038), (205, 38044), (206, 38119), (208, 38188), (209, 38194), (213, 38233), (214, 38275), (216, 38287), (218, 38305), (241, 38479), (243, 38488), (245, 38491), (246, 38494), (247, 38506), (249, 38518), (250, 38521), (254, 38536), (268, 38623), (271, 38638), (286, 38782), (287, 38794), (307, 38974), (310, 38992), (319, 39073), (323, 39109), (326, 39130), (329, 39196),

Gene: Grasshills\_97 Start: 38300, Stop: 40924, Start Num: 24

Candidate Starts for Grasshills\_97:

(Start: 24 @38300 has 152 MA's), (33, 38369), (34, 38375), (Start: 37 @38393 has 2 MA's), (43, 38429), (69, 38537), (72, 38549), (90, 38720), (100, 38915), (103, 38936), (105, 38957), (106, 38966), (112, 39023), (114, 39065), (116, 39119), (117, 39164), (125, 39233), (127, 39269), (129, 39296), (131, 39323), (135, 39383), (138, 39416), (139, 39419), (143, 39449), (144, 39467), (152, 39608), (157, 39659), (208, 39869), (209, 39875), (210, 39881), (213, 39914), (214, 39956), (216, 39968), (218, 39986), (241, 40160), (243, 40169), (245, 40172), (246, 40175), (247, 40187), (249, 40199), (250, 40202), (254, 40217), (268, 40304), (271, 40319), (286, 40463), (287, 40475), (307, 40655), (310, 40673), (319, 40754), (323, 40790), (326, 40811), (329, 40877),

Gene: Greely\_91 Start: 37183, Stop: 39693, Start Num: 37

Candidate Starts for Greely\_91:

(Start: 37 @37183 has 2 MA's), (39, 37189), (45, 37228), (48, 37246), (56, 37291), (59, 37312), (65, 37330), (66, 37339), (69, 37360), (87, 37498), (90, 37543), (92, 37591), (100, 37738), (103, 37759), (105, 37780), (106, 37789), (107, 37801), (108, 37804), (110, 37828), (117, 37987), (125, 38056), (127, 38092), (139, 38242), (143, 38272), (144, 38290), (150, 38419), (151, 38428), (152, 38431), (153, 38434), (159, 38530), (160, 38536), (165, 38599), (167, 38623), (208, 38692), (209, 38698), (210, 38704), (212, 38719), (213, 38737), (216, 38791), (218, 38809), (231, 38938), (236, 38971), (241, 38983), (245, 38995), (249, 39022), (254, 39040), (269, 39145), (308, 39448), (313, 39490), (331, 39667),

Gene: Grungle\_77 Start: 32630, Stop: 35254, Start Num: 24

Candidate Starts for Grungle\_77:

(Start: 24 @32630 has 152 MA's), (33, 32699), (34, 32705), (Start: 37 @32723 has 2 MA's), (43, 32759), (69, 32867), (72, 32879), (89, 33044), (90, 33050), (100, 33245), (103, 33266), (105, 33287), (106, 33296), (112, 33353), (114, 33395), (116, 33449), (117, 33494), (125, 33563), (127, 33599), (129, 33626), (131, 33653), (135, 33713), (138, 33746), (139, 33749), (143, 33779), (144, 33797), (152, 33938), (157, 33989), (208, 34199), (209, 34205), (213, 34244), (214, 34286), (216, 34298), (218, 34316), (241, 34490), (243, 34499), (245, 34502), (246, 34505), (247, 34517), (249, 34529), (250, 34532), (254, 34547), (268, 34634), (271, 34649), (286, 34793), (287, 34805), (307, 34985), (310, 35003), (319, 35084), (323, 35120), (326, 35141), (329, 35207),

Gene: Guwapp\_89 Start: 35343, Stop: 37967, Start Num: 24

Candidate Starts for Guwapp\_89:

(Start: 24 @35343 has 152 MA's), (33, 35412), (34, 35418), (Start: 37 @35436 has 2 MA's), (43, 35472), (69, 35580), (72, 35592), (89, 35757), (90, 35763), (100, 35958), (103, 35979), (105, 36000),

(106, 36009), (112, 36066), (114, 36108), (116, 36162), (117, 36207), (125, 36276), (127, 36312), (129, 36339), (131, 36366), (135, 36426), (138, 36459), (139, 36462), (143, 36492), (144, 36510), (152, 36651), (157, 36702), (208, 36912), (209, 36918), (213, 36957), (214, 36999), (216, 37011), (218, 37029), (241, 37203), (243, 37212), (245, 37215), (246, 37218), (247, 37230), (249, 37242), (250, 37245), (254, 37260), (268, 37347), (271, 37362), (286, 37506), (287, 37518), (307, 37698), (310, 37716), (319, 37797), (323, 37833), (326, 37854), (329, 37920),

Gene: Halldule\_83 Start: 33660, Stop: 36284, Start Num: 24

Candidate Starts for Halldule\_83:

(Start: 24 @33660 has 152 MA's), (33, 33729), (34, 33735), (Start: 37 @33753 has 2 MA's), (43, 33789), (69, 33897), (72, 33909), (89, 34074), (90, 34080), (100, 34275), (103, 34296), (105, 34317), (106, 34326), (112, 34383), (114, 34425), (116, 34479), (117, 34524), (125, 34593), (127, 34629), (129, 34656), (131, 34683), (135, 34743), (138, 34776), (139, 34779), (143, 34809), (144, 34827), (152, 34968), (157, 35019), (208, 35229), (209, 35235), (213, 35274), (214, 35316), (216, 35328), (218, 35346), (241, 35520), (243, 35529), (245, 35532), (246, 35535), (247, 35547), (249, 35559), (250, 35562), (254, 35577), (268, 35664), (271, 35679), (286, 35823), (287, 35835), (307, 36015), (310, 36033), (319, 36114), (323, 36150), (326, 36171), (329, 36237),

Gene: HyRo\_82 Start: 34439, Stop: 37042, Start Num: 24

Candidate Starts for HyRo\_82:

(Start: 24 @34439 has 152 MA's), (33, 34508), (34, 34514), (Start: 37 @34532 has 2 MA's), (43, 34568), (69, 34676), (72, 34688), (89, 34853), (90, 34859), (100, 35054), (103, 35075), (105, 35096), (106, 35105), (112, 35162), (114, 35204), (116, 35258), (117, 35303), (125, 35372), (127, 35408), (129, 35435), (131, 35462), (135, 35522), (138, 35555), (139, 35558), (142, 35579), (144, 35606), (148, 35678), (152, 35747), (157, 35798), (208, 36008), (209, 36014), (210, 36020), (213, 36053), (214, 36095), (216, 36107), (218, 36125), (241, 36299), (243, 36308), (245, 36311), (246, 36314), (247, 36326), (249, 36338), (250, 36341), (254, 36356), (268, 36422), (271, 36437), (286, 36581), (287, 36593), (307, 36773), (310, 36791), (319, 36872), (323, 36908), (326, 36929), (329, 36995),

Gene: I3\_96 Start: 36210, Stop: 38834, Start Num: 24

Candidate Starts for I3\_96:

(Start: 24 @36210 has 152 MA's), (33, 36279), (34, 36285), (Start: 37 @36303 has 2 MA's), (43, 36339), (69, 36447), (72, 36459), (89, 36624), (90, 36630), (100, 36825), (103, 36846), (105, 36867), (106, 36876), (112, 36933), (114, 36975), (116, 37029), (117, 37074), (125, 37143), (127, 37179), (129, 37206), (131, 37233), (135, 37293), (138, 37326), (139, 37329), (143, 37359), (144, 37377), (152, 37518), (157, 37569), (208, 37779), (209, 37785), (210, 37791), (213, 37824), (214, 37866), (216, 37878), (218, 37896), (241, 38070), (243, 38079), (245, 38082), (246, 38085), (247, 38097), (249, 38109), (250, 38112), (254, 38127), (268, 38214), (271, 38229), (286, 38373), (287, 38385), (307, 38565), (310, 38583), (319, 38664), (323, 38700), (326, 38721), (329, 38787),

Gene: IkeLoa\_84 Start: 34608, Stop: 37232, Start Num: 24

Candidate Starts for IkeLoa\_84:

(Start: 24 @34608 has 152 MA's), (33, 34677), (34, 34683), (Start: 37 @34701 has 2 MA's), (43, 34737), (69, 34845), (72, 34857), (89, 35022), (90, 35028), (100, 35223), (103, 35244), (105, 35265), (106, 35274), (112, 35331), (114, 35373), (116, 35427), (117, 35472), (125, 35541), (127, 35577), (129, 35604), (131, 35631), (135, 35691), (138, 35724), (139, 35727), (143, 35757), (144, 35775), (152, 35916), (157, 35967), (208, 36177), (209, 36183), (210, 36189), (213, 36222), (214, 36264), (216, 36276), (218, 36294), (241, 36468), (243, 36477), (245, 36480), (246, 36483), (247, 36495), (249, 36507), (250, 36510), (254, 36525), (268, 36612), (271, 36627), (286, 36771), (287, 36783), (307, 36963), (310, 36981), (319, 37062), (323, 37098), (326, 37119), (329, 37185),

Gene: InigoMontoya\_91 Start: 35209, Stop: 37833, Start Num: 24

Candidate Starts for InigoMontoya\_91:



(Start: 24 @35209 has 152 MA's), (33, 35278), (34, 35284), (Start: 37 @35302 has 2 MA's), (43, 35338), (69, 35446), (72, 35458), (89, 35623), (90, 35629), (100, 35824), (103, 35845), (105, 35866), (106, 35875), (112, 35932), (114, 35974), (116, 36028), (117, 36073), (125, 36142), (127, 36178), (129, 36205), (131, 36232), (135, 36292), (138, 36325), (139, 36328), (143, 36358), (144, 36376), (152, 36517), (157, 36568), (208, 36778), (209, 36784), (213, 36823), (214, 36865), (216, 36877), (218, 36895), (241, 37069), (243, 37078), (245, 37081), (246, 37084), (247, 37096), (249, 37108), (250, 37111), (254, 37126), (268, 37213), (271, 37228), (286, 37372), (287, 37384), (307, 37564), (310, 37582), (319, 37663), (323, 37699), (326, 37720), (329, 37786),

Gene: InterFolia\_99 Start: 38630, Stop: 41254, Start Num: 24

Candidate Starts for InterFolia\_99:

(Start: 24 @38630 has 152 MA's), (33, 38699), (34, 38705), (Start: 37 @38723 has 2 MA's), (43, 38759), (69, 38867), (72, 38879), (89, 39044), (90, 39050), (100, 39245), (103, 39266), (105, 39287), (106, 39296), (112, 39353), (114, 39395), (116, 39449), (117, 39494), (125, 39563), (127, 39599), (129, 39626), (131, 39653), (135, 39713), (138, 39746), (139, 39749), (143, 39779), (144, 39797), (152, 39938), (157, 39989), (208, 40199), (209, 40205), (210, 40211), (213, 40244), (214, 40286), (216, 40298), (218, 40316), (241, 40490), (243, 40499), (245, 40502), (246, 40505), (247, 40517), (249, 40529), (250, 40532), (254, 40547), (268, 40634), (271, 40649), (286, 40793), (287, 40805), (307, 40985), (310, 41003), (319, 41084), (323, 41120), (326, 41141), (329, 41207),

Gene: Iota\_84 Start: 34989, Stop: 37613, Start Num: 24

Candidate Starts for Iota\_84:

(Start: 24 @34989 has 152 MA's), (33, 35058), (34, 35064), (Start: 37 @35082 has 2 MA's), (43, 35118), (69, 35226), (72, 35238), (89, 35403), (90, 35409), (100, 35604), (103, 35625), (105, 35646), (106, 35655), (112, 35712), (114, 35754), (116, 35808), (117, 35853), (125, 35922), (127, 35958), (129, 35985), (131, 36012), (135, 36072), (138, 36105), (139, 36108), (143, 36138), (144, 36156), (152, 36297), (157, 36348), (208, 36558), (209, 36564), (213, 36603), (214, 36645), (216, 36657), (218, 36675), (241, 36849), (243, 36858), (245, 36861), (246, 36864), (247, 36876), (249, 36888), (250, 36891), (254, 36906), (268, 36993), (271, 37008), (286, 37152), (287, 37164), (307, 37344), (310, 37362), (319, 37443), (323, 37479), (326, 37500), (329, 37566),

Gene: Issimir\_89 Start: 36186, Stop: 38810, Start Num: 24

Candidate Starts for Issimir\_89:

(Start: 24 @36186 has 152 MA's), (33, 36255), (34, 36261), (Start: 37 @36279 has 2 MA's), (43, 36315), (69, 36423), (72, 36435), (89, 36600), (90, 36606), (100, 36801), (103, 36822), (105, 36843), (106, 36852), (112, 36909), (114, 36951), (116, 37005), (117, 37050), (125, 37119), (127, 37155), (129, 37182), (131, 37209), (135, 37269), (138, 37302), (139, 37305), (143, 37335), (144, 37353), (152, 37494), (157, 37545), (208, 37755), (209, 37761), (213, 37800), (214, 37842), (216, 37854), (218, 37872), (241, 38046), (243, 38055), (245, 38058), (246, 38061), (247, 38073), (249, 38085), (250, 38088), (254, 38103), (268, 38190), (271, 38205), (286, 38349), (287, 38361), (307, 38541), (310, 38559), (319, 38640), (323, 38676), (326, 38697), (329, 38763),

Gene: Izajani\_90 Start: 36259, Stop: 38883, Start Num: 24

Candidate Starts for Izajani\_90:

(Start: 24 @36259 has 152 MA's), (33, 36328), (34, 36334), (Start: 37 @36352 has 2 MA's), (43, 36388), (69, 36496), (72, 36508), (89, 36673), (90, 36679), (100, 36874), (103, 36895), (105, 36916), (106, 36925), (112, 36982), (114, 37024), (116, 37078), (117, 37123), (125, 37192), (127, 37228), (129, 37255), (131, 37282), (135, 37342), (138, 37375), (139, 37378), (143, 37408), (144, 37426), (152, 37567), (157, 37618), (208, 37828), (209, 37834), (213, 37873), (214, 37915), (216, 37927), (218, 37945), (241, 38119), (243, 38128), (245, 38131), (246, 38134), (247, 38146), (249, 38158), (250, 38161), (254, 38176), (268, 38263), (271, 38278), (286, 38422), (287, 38434), (307, 38614), (310, 38632), (319, 38713), (323, 38749), (326, 38770), (329, 38836),

Gene: JPickles\_88 Start: 33675, Stop: 37103, Start Num: 1

Candidate Starts for JPickles\_88:

(Start: 1 @33675 has 18 MA's), (Start: 2 @33744 has 1 MA's), (3, 33750), (4, 33768), (6, 33804), (10, 33912), (11, 33924), (13, 34047), (14, 34098), (15, 34152), (16, 34164), (17, 34185), (32, 34479), (38, 34524), (49, 34602), (55, 34638), (63, 34671), (67, 34686), (74, 34731), (76, 34740), (80, 34773), (83, 34809), (89, 34893), (90, 34899), (100, 35094), (103, 35115), (105, 35136), (106, 35145), (112, 35202), (114, 35244), (116, 35298), (117, 35343), (125, 35412), (127, 35448), (129, 35475), (131, 35502), (135, 35562), (138, 35595), (139, 35598), (143, 35628), (144, 35646), (152, 35787), (157, 35838), (208, 36048), (209, 36054), (213, 36093), (214, 36135), (216, 36147), (218, 36165), (241, 36339), (243, 36348), (245, 36351), (246, 36354), (247, 36366), (249, 36378), (250, 36381), (254, 36396), (268, 36483), (271, 36498), (286, 36642), (287, 36654), (307, 36834), (310, 36852), (319, 36933), (323, 36969), (326, 36990), (329, 37056),

Gene: Janiyra\_92 Start: 35540, Stop: 38143, Start Num: 24

Candidate Starts for Janiyra\_92:

(Start: 24 @35540 has 152 MA's), (33, 35609), (34, 35615), (Start: 37 @35633 has 2 MA's), (43, 35669), (69, 35777), (72, 35789), (89, 35954), (90, 35960), (100, 36155), (103, 36176), (105, 36197), (106, 36206), (112, 36263), (114, 36305), (116, 36359), (117, 36404), (125, 36473), (127, 36509), (129, 36536), (131, 36563), (135, 36623), (138, 36656), (139, 36659), (142, 36680), (144, 36707), (148, 36779), (152, 36848), (157, 36899), (208, 37109), (209, 37115), (210, 37121), (213, 37154), (214, 37196), (216, 37208), (218, 37226), (241, 37400), (243, 37409), (245, 37412), (246, 37415), (247, 37427), (249, 37439), (250, 37442), (254, 37457), (268, 37523), (271, 37538), (286, 37682), (287, 37694), (307, 37874), (310, 37892), (319, 37973), (323, 38009), (326, 38030), (329, 38096),

Gene: JayJay\_92 Start: 36743, Stop: 40171, Start Num: 1

Candidate Starts for JayJay\_92:

(Start: 1 @36743 has 18 MA's), (Start: 2 @36812 has 1 MA's), (3, 36818), (4, 36836), (6, 36872), (10, 36980), (11, 36992), (13, 37115), (14, 37166), (15, 37220), (16, 37232), (17, 37253), (32, 37547), (38, 37592), (49, 37670), (55, 37706), (63, 37739), (67, 37754), (74, 37799), (76, 37808), (80, 37841), (83, 37877), (89, 37961), (90, 37967), (100, 38162), (103, 38183), (105, 38204), (106, 38213), (112, 38270), (114, 38312), (116, 38366), (117, 38411), (125, 38480), (127, 38516), (129, 38543), (131, 38570), (135, 38630), (138, 38663), (139, 38666), (143, 38696), (144, 38714), (152, 38855), (157, 38906), (208, 39116), (209, 39122), (213, 39161), (214, 39203), (216, 39215), (218, 39233), (241, 39407), (243, 39416), (245, 39419), (246, 39422), (247, 39434), (249, 39446), (250, 39449), (254, 39464), (268, 39551), (271, 39566), (286, 39710), (287, 39722), (307, 39902), (310, 39920), (319, 40001), (323, 40037), (326, 40058), (329, 40124),

Gene: Jaygup\_90 Start: 35200, Stop: 38628, Start Num: 1

Candidate Starts for Jaygup\_90:

(Start: 1 @35200 has 18 MA's), (Start: 2 @35269 has 1 MA's), (3, 35275), (4, 35293), (6, 35329), (10, 35437), (11, 35449), (13, 35572), (14, 35623), (15, 35677), (16, 35689), (17, 35710), (32, 36004), (38, 36049), (49, 36127), (55, 36163), (63, 36196), (67, 36211), (74, 36256), (76, 36265), (80, 36298), (83, 36334), (89, 36418), (90, 36424), (100, 36619), (103, 36640), (105, 36661), (106, 36670), (112, 36727), (114, 36769), (116, 36823), (117, 36868), (125, 36937), (127, 36973), (129, 37000), (131, 37027), (135, 37087), (138, 37120), (139, 37123), (143, 37153), (144, 37171), (152, 37312), (157, 37363), (208, 37573), (209, 37579), (213, 37618), (214, 37660), (216, 37672), (218, 37690), (241, 37864), (243, 37873), (245, 37876), (246, 37879), (247, 37891), (249, 37903), (250, 37906), (254, 37921), (268, 38008), (271, 38023), (286, 38167), (287, 38179), (307, 38359), (310, 38377), (319, 38458), (323, 38494), (326, 38515), (329, 38581),

Gene: JeanGrey\_27 Start: 14251, Stop: 16443, Start Num: 36

Candidate Starts for JeanGrey\_27:

(36, 14251), (62, 14386), (70, 14410), (71, 14413), (84, 14503), (88, 14554), (90, 14590), (92, 14638), (95, 14671), (96, 14680), (98, 14740), (101, 14782), (117, 15013), (119, 15025), (122, 15058), (125, 15082), (126, 15085), (135, 15235), (138, 15268), (151, 15457), (152, 15460), (156, 15505), (161, 15574), (207, 15703), (208, 15721), (218, 15838), (219, 15841), (235, 15985), (239, 16000), (266, 16126), (276, 16207), (277, 16210), (300, 16408),

Gene: Jedediah\_93 Start: 35700, Stop: 39128, Start Num: 1

Candidate Starts for Jedediah\_93:

(Start: 1 @35700 has 18 MA's), (Start: 2 @35769 has 1 MA's), (3, 35775), (4, 35793), (6, 35829), (10, 35937), (11, 35949), (13, 36072), (14, 36123), (15, 36177), (16, 36189), (17, 36210), (32, 36504), (38, 36549), (49, 36627), (55, 36663), (63, 36696), (67, 36711), (74, 36756), (76, 36765), (80, 36798), (83, 36834), (89, 36918), (90, 36924), (100, 37119), (103, 37140), (105, 37161), (106, 37170), (112, 37227), (114, 37269), (116, 37323), (117, 37368), (125, 37437), (127, 37473), (129, 37500), (131, 37527), (135, 37587), (136, 37599), (138, 37620), (139, 37623), (143, 37653), (144, 37671), (152, 37812), (157, 37863), (208, 38073), (209, 38079), (213, 38118), (214, 38160), (216, 38172), (218, 38190), (241, 38364), (243, 38373), (245, 38376), (246, 38379), (247, 38391), (249, 38403), (250, 38406), (254, 38421), (268, 38508), (271, 38523), (286, 38667), (287, 38679), (307, 38859), (310, 38877), (319, 38958), (323, 38994), (326, 39015), (329, 39081),

Gene: Jemmno\_90 Start: 35150, Stop: 38578, Start Num: 1

Candidate Starts for Jemmno\_90:

(Start: 1 @35150 has 18 MA's), (Start: 2 @35219 has 1 MA's), (3, 35225), (4, 35243), (6, 35279), (10, 35387), (11, 35399), (13, 35522), (14, 35573), (15, 35627), (16, 35639), (17, 35660), (32, 35954), (38, 35999), (49, 36077), (55, 36113), (63, 36146), (67, 36161), (74, 36206), (76, 36215), (80, 36248), (83, 36284), (89, 36368), (90, 36374), (100, 36569), (103, 36590), (105, 36611), (106, 36620), (112, 36677), (114, 36719), (116, 36773), (117, 36818), (125, 36887), (127, 36923), (129, 36950), (131, 36977), (135, 37037), (138, 37070), (139, 37073), (143, 37103), (144, 37121), (152, 37262), (157, 37313), (208, 37523), (209, 37529), (213, 37568), (214, 37610), (216, 37622), (218, 37640), (241, 37814), (243, 37823), (245, 37826), (246, 37829), (247, 37841), (249, 37853), (250, 37856), (254, 37871), (268, 37958), (271, 37973), (286, 38117), (287, 38129), (307, 38309), (310, 38327), (319, 38408), (323, 38444), (326, 38465), (329, 38531),

Gene: Jessibeth14\_89 Start: 36028, Stop: 38652, Start Num: 24

Candidate Starts for Jessibeth14\_89:

(Start: 24 @36028 has 152 MA's), (33, 36097), (34, 36103), (Start: 37 @36121 has 2 MA's), (43, 36157), (69, 36265), (72, 36277), (89, 36442), (90, 36448), (100, 36643), (103, 36664), (105, 36685), (106, 36694), (112, 36751), (114, 36793), (116, 36847), (117, 36892), (125, 36961), (127, 36997), (129, 37024), (131, 37051), (135, 37111), (138, 37144), (139, 37147), (143, 37177), (144, 37195), (152, 37336), (157, 37387), (208, 37597), (209, 37603), (213, 37642), (214, 37684), (216, 37696), (218, 37714), (241, 37888), (243, 37897), (245, 37900), (246, 37903), (247, 37915), (249, 37927), (250, 37930), (254, 37945), (268, 38032), (271, 38047), (286, 38191), (287, 38203), (307, 38383), (310, 38401), (319, 38482), (323, 38518), (326, 38539), (329, 38605),

Gene: JigglyPuff\_96 Start: 37803, Stop: 40427, Start Num: 24

Candidate Starts for JigglyPuff\_96:

(22, 37755), (Start: 24 @37803 has 152 MA's), (33, 37872), (34, 37878), (Start: 37 @37896 has 2 MA's), (43, 37932), (69, 38040), (72, 38052), (89, 38217), (90, 38223), (100, 38418), (103, 38439), (105, 38460), (106, 38469), (112, 38526), (114, 38568), (116, 38622), (117, 38667), (125, 38736), (127, 38772), (129, 38799), (131, 38826), (135, 38886), (138, 38919), (139, 38922), (143, 38952), (144, 38970), (152, 39111), (157, 39162), (208, 39372), (209, 39378), (210, 39384), (213, 39417), (214, 39459), (216, 39471), (218, 39489), (241, 39663), (243, 39672), (245, 39675), (246, 39678), (247, 39690), (249, 39702), (250, 39705), (254, 39720), (268, 39807), (271, 39822), (286, 39966), (287, 39978), (307, 40158), (310, 40176), (319, 40257), (323, 40293), (326, 40314), (329, 40380),

Gene: JulietS\_83 Start: 33511, Stop: 36135, Start Num: 24

Candidate Starts for JulietS\_83:

(Start: 24 @33511 has 152 MA's), (33, 33580), (34, 33586), (Start: 37 @33604 has 2 MA's), (43, 33640), (69, 33748), (72, 33760), (89, 33925), (90, 33931), (100, 34126), (103, 34147), (105, 34168), (106, 34177), (112, 34234), (114, 34276), (116, 34330), (117, 34375), (125, 34444), (127, 34480), (129, 34507), (131, 34534), (135, 34594), (138, 34627), (139, 34630), (143, 34660), (144, 34678), (152, 34819), (157, 34870), (208, 35080), (209, 35086), (213, 35125), (214, 35167), (216, 35179), (218, 35197), (241, 35371), (243, 35380), (245, 35383), (246, 35386), (247, 35398), (249, 35410), (250, 35413), (254, 35428), (268, 35515), (271, 35530), (286, 35674), (287, 35686), (307, 35866), (310, 35884), (319, 35965), (323, 36001), (326, 36022), (329, 36088),

Gene: JustHall\_86 Start: 35178, Stop: 37781, Start Num: 24

Candidate Starts for JustHall\_86:

(Start: 24 @35178 has 152 MA's), (33, 35247), (34, 35253), (Start: 37 @35271 has 2 MA's), (43, 35307), (69, 35415), (72, 35427), (89, 35592), (90, 35598), (100, 35793), (103, 35814), (105, 35835), (106, 35844), (112, 35901), (114, 35943), (116, 35997), (117, 36042), (125, 36111), (127, 36147), (129, 36174), (131, 36201), (135, 36261), (138, 36294), (139, 36297), (142, 36318), (144, 36345), (148, 36417), (152, 36486), (157, 36537), (208, 36747), (209, 36753), (210, 36759), (213, 36792), (214, 36834), (216, 36846), (218, 36864), (241, 37038), (243, 37047), (245, 37050), (246, 37053), (247, 37065), (249, 37077), (250, 37080), (254, 37095), (268, 37161), (271, 37176), (286, 37320), (287, 37332), (307, 37512), (310, 37530), (319, 37611), (323, 37647), (326, 37668), (329, 37734),

Gene: Kamryn\_90 Start: 36767, Stop: 39391, Start Num: 24

Candidate Starts for Kamryn\_90:

(Start: 24 @36767 has 152 MA's), (33, 36836), (34, 36842), (Start: 37 @36860 has 2 MA's), (43, 36896), (69, 37004), (72, 37016), (89, 37181), (90, 37187), (100, 37382), (103, 37403), (105, 37424), (106, 37433), (112, 37490), (114, 37532), (116, 37586), (117, 37631), (125, 37700), (127, 37736), (129, 37763), (131, 37790), (135, 37850), (138, 37883), (139, 37886), (143, 37916), (144, 37934), (152, 38075), (157, 38126), (208, 38336), (209, 38342), (213, 38381), (214, 38423), (216, 38435), (218, 38453), (241, 38627), (243, 38636), (245, 38639), (246, 38642), (247, 38654), (249, 38666), (250, 38669), (254, 38684), (268, 38771), (271, 38786), (286, 38930), (287, 38942), (307, 39122), (310, 39140), (319, 39221), (323, 39257), (326, 39278), (329, 39344),

Gene: Kboogie\_93 Start: 34822, Stop: 37425, Start Num: 24

Candidate Starts for Kboogie\_93:

(Start: 24 @34822 has 152 MA's), (33, 34891), (34, 34897), (Start: 37 @34915 has 2 MA's), (43, 34951), (69, 35059), (72, 35071), (89, 35236), (90, 35242), (100, 35437), (103, 35458), (105, 35479), (106, 35488), (112, 35545), (114, 35587), (116, 35641), (117, 35686), (125, 35755), (127, 35791), (129, 35818), (131, 35845), (135, 35905), (138, 35938), (139, 35941), (142, 35962), (144, 35989), (148, 36061), (152, 36130), (157, 36181), (208, 36391), (209, 36397), (210, 36403), (213, 36436), (214, 36478), (216, 36490), (218, 36508), (241, 36682), (243, 36691), (245, 36694), (246, 36697), (247, 36709), (249, 36721), (250, 36724), (254, 36739), (268, 36805), (271, 36820), (286, 36964), (287, 36976), (307, 37156), (310, 37174), (319, 37255), (323, 37291), (326, 37312), (329, 37378),

Gene: Khaleesi\_89 Start: 35990, Stop: 38614, Start Num: 24

Candidate Starts for Khaleesi\_89:

(Start: 24 @35990 has 152 MA's), (33, 36059), (34, 36065), (Start: 37 @36083 has 2 MA's), (43, 36119), (69, 36227), (72, 36239), (89, 36404), (90, 36410), (100, 36605), (103, 36626), (105, 36647), (106, 36656), (112, 36713), (114, 36755), (116, 36809), (117, 36854), (125, 36923), (127, 36959), (129, 36986), (131, 37013), (135, 37073), (138, 37106), (139, 37109), (143, 37139), (144, 37157), (152, 37298), (157, 37349), (208, 37559), (209, 37565), (213, 37604), (214, 37646), (216, 37658), (218, 37676), (241, 37850), (243, 37859), (245, 37862), (246, 37865), (247, 37877), (249, 37889),

(250, 37892), (254, 37907), (268, 37994), (271, 38009), (286, 38153), (287, 38165), (307, 38345), (310, 38363), (319, 38444), (323, 38480), (326, 38501), (329, 38567),

Gene: Koguma\_86 Start: 33731, Stop: 36355, Start Num: 24

Candidate Starts for Koguma\_86:

(Start: 24 @33731 has 152 MA's), (33, 33800), (34, 33806), (Start: 37 @33824 has 2 MA's), (43, 33860), (69, 33968), (72, 33980), (89, 34145), (90, 34151), (100, 34346), (103, 34367), (105, 34388), (106, 34397), (112, 34454), (114, 34496), (116, 34550), (117, 34595), (125, 34664), (127, 34700), (129, 34727), (131, 34754), (135, 34814), (138, 34847), (139, 34850), (143, 34880), (144, 34898), (152, 35039), (157, 35090), (208, 35300), (209, 35306), (213, 35345), (214, 35387), (216, 35399), (218, 35417), (241, 35591), (243, 35600), (245, 35603), (246, 35606), (247, 35618), (249, 35630), (250, 35633), (254, 35648), (268, 35735), (271, 35750), (286, 35894), (287, 35906), (307, 36086), (310, 36104), (319, 36185), (323, 36221), (326, 36242), (329, 36308),

Gene: LRRHood\_84 Start: 35550, Stop: 38174, Start Num: 24

Candidate Starts for LRRHood\_84:

(Start: 24 @35550 has 152 MA's), (33, 35619), (34, 35625), (Start: 37 @35643 has 2 MA's), (43, 35679), (69, 35787), (72, 35799), (89, 35964), (90, 35970), (100, 36165), (103, 36186), (105, 36207), (106, 36216), (112, 36273), (114, 36315), (116, 36369), (117, 36414), (125, 36483), (127, 36519), (129, 36546), (131, 36573), (135, 36633), (138, 36666), (139, 36669), (143, 36699), (144, 36717), (152, 36858), (157, 36909), (208, 37119), (209, 37125), (213, 37164), (214, 37206), (216, 37218), (218, 37236), (241, 37410), (243, 37419), (245, 37422), (246, 37425), (247, 37437), (249, 37449), (250, 37452), (254, 37467), (268, 37554), (271, 37569), (286, 37713), (287, 37725), (307, 37905), (310, 37923), (319, 38004), (323, 38040), (326, 38061), (329, 38127),

Gene: Latch\_90 Start: 35248, Stop: 37872, Start Num: 24

Candidate Starts for Latch\_90:

(Start: 24 @35248 has 152 MA's), (33, 35317), (34, 35323), (Start: 37 @35341 has 2 MA's), (43, 35377), (69, 35485), (72, 35497), (89, 35662), (90, 35668), (100, 35863), (103, 35884), (105, 35905), (106, 35914), (112, 35971), (114, 36013), (116, 36067), (117, 36112), (125, 36181), (127, 36217), (129, 36244), (131, 36271), (135, 36331), (138, 36364), (139, 36367), (143, 36397), (144, 36415), (152, 36556), (157, 36607), (208, 36817), (209, 36823), (213, 36862), (214, 36904), (216, 36916), (218, 36934), (241, 37108), (243, 37117), (245, 37120), (246, 37123), (247, 37135), (249, 37147), (250, 37150), (254, 37165), (268, 37252), (271, 37267), (286, 37411), (287, 37423), (307, 37603), (310, 37621), (319, 37702), (323, 37738), (326, 37759), (329, 37825),

Gene: Lee7\_88 Start: 35853, Stop: 38477, Start Num: 24

Candidate Starts for Lee7\_88:

(Start: 24 @35853 has 152 MA's), (33, 35922), (34, 35928), (Start: 37 @35946 has 2 MA's), (43, 35982), (69, 36090), (72, 36102), (89, 36267), (90, 36273), (100, 36468), (103, 36489), (105, 36510), (106, 36519), (112, 36576), (114, 36618), (116, 36672), (117, 36717), (125, 36786), (127, 36822), (129, 36849), (131, 36876), (135, 36936), (138, 36969), (139, 36972), (143, 37002), (144, 37020), (152, 37161), (157, 37212), (208, 37422), (209, 37428), (213, 37467), (214, 37509), (216, 37521), (218, 37539), (241, 37713), (243, 37722), (245, 37725), (246, 37728), (247, 37740), (249, 37752), (250, 37755), (254, 37770), (268, 37857), (271, 37872), (286, 38016), (287, 38028), (307, 38208), (310, 38226), (319, 38307), (323, 38343), (326, 38364), (329, 38430),

Gene: LifeSavor\_89 Start: 34965, Stop: 38393, Start Num: 1

Candidate Starts for LifeSavor\_89:

(Start: 1 @34965 has 18 MA's), (Start: 2 @35034 has 1 MA's), (3, 35040), (4, 35058), (6, 35094), (10, 35202), (11, 35214), (13, 35337), (14, 35388), (15, 35442), (16, 35454), (17, 35475), (32, 35769), (38, 35814), (49, 35892), (55, 35928), (63, 35961), (67, 35976), (74, 36021), (76, 36030), (80, 36063), (83, 36099), (89, 36183), (90, 36189), (100, 36384), (103, 36405), (105, 36426), (106, 36435), (112,

36492), (114, 36534), (116, 36588), (117, 36633), (125, 36702), (127, 36738), (129, 36765), (131, 36792), (135, 36852), (138, 36885), (139, 36888), (143, 36918), (144, 36936), (152, 37077), (157, 37128), (208, 37338), (209, 37344), (213, 37383), (214, 37425), (216, 37437), (218, 37455), (241, 37629), (243, 37638), (245, 37641), (246, 37644), (247, 37656), (249, 37668), (250, 37671), (254, 37686), (268, 37773), (271, 37788), (286, 37932), (287, 37944), (307, 38124), (310, 38142), (319, 38223), (323, 38259), (326, 38280), (329, 38346),

Gene: LinStu\_90 Start: 36614, Stop: 39238, Start Num: 24

Candidate Starts for LinStu\_90:

(Start: 24 @36614 has 152 MA's), (33, 36683), (34, 36689), (Start: 37 @36707 has 2 MA's), (43, 36743), (69, 36851), (72, 36863), (89, 37028), (90, 37034), (100, 37229), (103, 37250), (105, 37271), (106, 37280), (112, 37337), (114, 37379), (116, 37433), (117, 37478), (125, 37547), (127, 37583), (129, 37610), (131, 37637), (135, 37697), (138, 37730), (139, 37733), (143, 37763), (144, 37781), (152, 37922), (157, 37973), (208, 38183), (209, 38189), (213, 38228), (214, 38270), (216, 38282), (218, 38300), (241, 38474), (243, 38483), (245, 38486), (246, 38489), (247, 38501), (249, 38513), (250, 38516), (254, 38531), (268, 38618), (271, 38633), (286, 38777), (287, 38789), (307, 38969), (310, 38987), (319, 39068), (323, 39104), (326, 39125), (329, 39191),

Gene: Littleton\_90 Start: 35203, Stop: 37827, Start Num: 24

Candidate Starts for Littleton\_90:

(Start: 24 @35203 has 152 MA's), (33, 35272), (34, 35278), (Start: 37 @35296 has 2 MA's), (43, 35332), (69, 35440), (72, 35452), (89, 35617), (90, 35623), (100, 35818), (103, 35839), (105, 35860), (106, 35869), (112, 35926), (114, 35968), (116, 36022), (117, 36067), (125, 36136), (127, 36172), (129, 36199), (131, 36226), (135, 36286), (136, 36298), (138, 36319), (139, 36322), (143, 36352), (144, 36370), (152, 36511), (157, 36562), (208, 36772), (209, 36778), (213, 36817), (214, 36859), (216, 36871), (218, 36889), (241, 37063), (243, 37072), (245, 37075), (246, 37078), (247, 37090), (249, 37102), (250, 37105), (254, 37120), (268, 37207), (271, 37222), (286, 37366), (287, 37378), (307, 37558), (310, 37576), (319, 37657), (323, 37693), (326, 37714), (329, 37780),

Gene: Loanshark\_90 Start: 36243, Stop: 38867, Start Num: 24

Candidate Starts for Loanshark\_90:

(Start: 24 @36243 has 152 MA's), (33, 36312), (34, 36318), (Start: 37 @36336 has 2 MA's), (43, 36372), (69, 36480), (72, 36492), (89, 36657), (90, 36663), (100, 36858), (103, 36879), (105, 36900), (106, 36909), (112, 36966), (114, 37008), (116, 37062), (117, 37107), (125, 37176), (127, 37212), (129, 37239), (131, 37266), (135, 37326), (138, 37359), (139, 37362), (143, 37392), (144, 37410), (152, 37551), (157, 37602), (208, 37812), (209, 37818), (213, 37857), (214, 37899), (216, 37911), (218, 37929), (241, 38103), (243, 38112), (245, 38115), (246, 38118), (247, 38130), (249, 38142), (250, 38145), (254, 38160), (268, 38247), (271, 38262), (286, 38406), (287, 38418), (307, 38598), (310, 38616), (319, 38697), (323, 38733), (326, 38754), (329, 38820),

Gene: LolaVinca\_92 Start: 37349, Stop: 39973, Start Num: 24

Candidate Starts for LolaVinca\_92:

(Start: 24 @37349 has 152 MA's), (33, 37418), (34, 37424), (Start: 37 @37442 has 2 MA's), (43, 37478), (69, 37586), (72, 37598), (89, 37763), (90, 37769), (100, 37964), (103, 37985), (105, 38006), (106, 38015), (112, 38072), (114, 38114), (116, 38168), (117, 38213), (125, 38282), (127, 38318), (129, 38345), (131, 38372), (135, 38432), (136, 38444), (138, 38465), (139, 38468), (143, 38498), (144, 38516), (152, 38657), (157, 38708), (208, 38918), (209, 38924), (213, 38963), (214, 39005), (216, 39017), (218, 39035), (241, 39209), (243, 39218), (245, 39221), (246, 39224), (247, 39236), (249, 39248), (250, 39251), (254, 39266), (268, 39353), (271, 39368), (286, 39512), (287, 39524), (307, 39704), (310, 39722), (319, 39803), (323, 39839), (326, 39860), (329, 39926),

Gene: LordLeafolot\_95 Start: 38340, Stop: 40964, Start Num: 24

Candidate Starts for LordLeafolot\_95:

(Start: 24 @38340 has 152 MA's), (33, 38409), (34, 38415), (Start: 37 @38433 has 2 MA's), (43, 38469), (69, 38577), (72, 38589), (89, 38754), (90, 38760), (100, 38955), (103, 38976), (105, 38997), (106, 39006), (112, 39063), (114, 39105), (116, 39159), (117, 39204), (125, 39273), (127, 39309), (129, 39336), (131, 39363), (135, 39423), (138, 39456), (139, 39459), (143, 39489), (144, 39507), (152, 39648), (157, 39699), (208, 39909), (209, 39915), (210, 39921), (213, 39954), (214, 39996), (216, 40008), (218, 40026), (241, 40200), (243, 40209), (245, 40212), (246, 40215), (247, 40227), (249, 40239), (250, 40242), (254, 40257), (268, 40344), (271, 40359), (286, 40503), (287, 40515), (307, 40695), (310, 40713), (319, 40794), (323, 40830), (326, 40851), (329, 40917),

Gene: Lukilu\_81 Start: 35083, Stop: 37707, Start Num: 24

Candidate Starts for Lukilu\_81:

(Start: 24 @35083 has 152 MA's), (33, 35152), (34, 35158), (Start: 37 @35176 has 2 MA's), (43, 35212), (69, 35320), (72, 35332), (89, 35497), (90, 35503), (100, 35698), (103, 35719), (105, 35740), (106, 35749), (112, 35806), (114, 35848), (116, 35902), (117, 35947), (125, 36016), (127, 36052), (129, 36079), (131, 36106), (135, 36166), (138, 36199), (139, 36202), (143, 36232), (144, 36250), (152, 36391), (157, 36442), (208, 36652), (209, 36658), (213, 36697), (214, 36739), (216, 36751), (218, 36769), (241, 36943), (243, 36952), (245, 36955), (246, 36958), (247, 36970), (249, 36982), (250, 36985), (254, 37000), (268, 37087), (271, 37102), (286, 37246), (287, 37258), (307, 37438), (310, 37456), (319, 37537), (323, 37573), (326, 37594), (329, 37660),

Gene: Maby2021\_90 Start: 35924, Stop: 38548, Start Num: 24

Candidate Starts for Maby2021\_90:

(Start: 24 @35924 has 152 MA's), (33, 35993), (34, 35999), (Start: 37 @36017 has 2 MA's), (43, 36053), (69, 36161), (72, 36173), (89, 36338), (90, 36344), (100, 36539), (103, 36560), (105, 36581), (106, 36590), (112, 36647), (114, 36689), (116, 36743), (117, 36788), (125, 36857), (127, 36893), (129, 36920), (131, 36947), (135, 37007), (138, 37040), (139, 37043), (142, 37064), (144, 37091), (148, 37163), (152, 37232), (157, 37283), (208, 37493), (209, 37499), (213, 37538), (214, 37580), (216, 37592), (218, 37610), (241, 37784), (243, 37793), (245, 37796), (246, 37799), (247, 37811), (249, 37823), (250, 37826), (254, 37841), (268, 37928), (271, 37943), (286, 38087), (287, 38099), (307, 38279), (310, 38297), (319, 38378), (323, 38414), (326, 38435), (329, 38501),

Gene: Mangeria\_90 Start: 36205, Stop: 38829, Start Num: 24

Candidate Starts for Mangeria\_90:

(Start: 24 @36205 has 152 MA's), (33, 36274), (34, 36280), (Start: 37 @36298 has 2 MA's), (43, 36334), (69, 36442), (72, 36454), (89, 36619), (90, 36625), (100, 36820), (103, 36841), (105, 36862), (106, 36871), (112, 36928), (114, 36970), (116, 37024), (117, 37069), (125, 37138), (127, 37174), (129, 37201), (131, 37228), (135, 37288), (138, 37321), (139, 37324), (143, 37354), (144, 37372), (152, 37513), (157, 37564), (208, 37774), (209, 37780), (213, 37819), (214, 37861), (216, 37873), (218, 37891), (241, 38065), (245, 38077), (246, 38080), (247, 38092), (249, 38104), (250, 38107), (254, 38122), (268, 38209), (271, 38224), (286, 38368), (287, 38380), (307, 38560), (310, 38578), (319, 38659), (323, 38695), (326, 38716), (329, 38782),

Gene: Matsumoto\_88 Start: 35164, Stop: 38592, Start Num: 1

Candidate Starts for Matsumoto\_88:

(Start: 1 @35164 has 18 MA's), (Start: 2 @35233 has 1 MA's), (3, 35239), (4, 35257), (6, 35293), (10, 35401), (11, 35413), (13, 35536), (14, 35587), (15, 35641), (16, 35653), (17, 35674), (32, 35968), (38, 36013), (49, 36091), (55, 36127), (63, 36160), (67, 36175), (74, 36220), (76, 36229), (80, 36262), (83, 36298), (89, 36382), (90, 36388), (100, 36583), (103, 36604), (105, 36625), (106, 36634), (112, 36691), (114, 36733), (116, 36787), (117, 36832), (125, 36901), (127, 36937), (129, 36964), (131, 36991), (135, 37051), (138, 37084), (139, 37087), (143, 37117), (144, 37135), (152, 37276), (157, 37327), (208, 37537), (209, 37543), (213, 37582), (214, 37624), (216, 37636), (218, 37654), (241, 37828), (243, 37837), (245, 37840), (246, 37843), (247, 37855), (249, 37867), (250, 37870), (254, 37885), (268, 37972), (271, 37987), (286, 38131), (287, 38143), (307, 38323), (310, 38341), (319,

38422), (323, 38458), (326, 38479), (329, 38545),

Gene: McGee\_91 Start: 34432, Stop: 37056, Start Num: 24

Candidate Starts for McGee\_91:

(Start: 24 @34432 has 152 MA's), (33, 34501), (34, 34507), (Start: 37 @34525 has 2 MA's), (43, 34561), (69, 34669), (72, 34681), (89, 34846), (90, 34852), (100, 35047), (103, 35068), (105, 35089), (106, 35098), (112, 35155), (114, 35197), (116, 35251), (117, 35296), (125, 35365), (127, 35401), (129, 35428), (131, 35455), (135, 35515), (138, 35548), (139, 35551), (143, 35581), (144, 35599), (152, 35740), (157, 35791), (208, 36001), (209, 36007), (213, 36046), (214, 36088), (216, 36100), (218, 36118), (241, 36292), (243, 36301), (245, 36304), (246, 36307), (247, 36319), (249, 36331), (250, 36334), (254, 36349), (268, 36436), (271, 36451), (286, 36595), (287, 36607), (307, 36787), (310, 36805), (319, 36886), (323, 36922), (326, 36943), (329, 37009),

Gene: McWolfish\_88 Start: 35671, Stop: 38274, Start Num: 24

Candidate Starts for McWolfish\_88:

(Start: 24 @35671 has 152 MA's), (33, 35740), (34, 35746), (Start: 37 @35764 has 2 MA's), (43, 35800), (69, 35908), (72, 35920), (89, 36085), (90, 36091), (100, 36286), (103, 36307), (105, 36328), (106, 36337), (112, 36394), (114, 36436), (116, 36490), (117, 36535), (125, 36604), (127, 36640), (129, 36667), (131, 36694), (135, 36754), (138, 36787), (139, 36790), (142, 36811), (144, 36838), (148, 36910), (152, 36979), (157, 37030), (208, 37240), (209, 37246), (213, 37285), (214, 37327), (216, 37339), (218, 37357), (241, 37531), (243, 37540), (245, 37543), (246, 37546), (247, 37558), (249, 37570), (250, 37573), (254, 37588), (268, 37654), (271, 37669), (286, 37813), (287, 37825), (307, 38005), (310, 38023), (319, 38104), (323, 38140), (326, 38161), (329, 38227),

Gene: Megamind\_89 Start: 35909, Stop: 38533, Start Num: 24

Candidate Starts for Megamind\_89:

(Start: 24 @35909 has 152 MA's), (33, 35978), (34, 35984), (Start: 37 @36002 has 2 MA's), (43, 36038), (69, 36146), (72, 36158), (89, 36323), (90, 36329), (100, 36524), (103, 36545), (105, 36566), (106, 36575), (112, 36632), (114, 36674), (116, 36728), (117, 36773), (125, 36842), (127, 36878), (129, 36905), (131, 36932), (135, 36992), (138, 37025), (139, 37028), (143, 37058), (144, 37076), (152, 37217), (157, 37268), (208, 37478), (209, 37484), (213, 37523), (214, 37565), (216, 37577), (218, 37595), (241, 37769), (243, 37778), (245, 37781), (246, 37784), (247, 37796), (249, 37808), (250, 37811), (254, 37826), (268, 37913), (271, 37928), (286, 38072), (287, 38084), (307, 38264), (310, 38282), (319, 38363), (323, 38399), (326, 38420), (329, 38486),

Gene: Melpomini\_84 Start: 33455, Stop: 36058, Start Num: 24

Candidate Starts for Melpomini\_84:

(Start: 24 @33455 has 152 MA's), (33, 33524), (34, 33530), (Start: 37 @33548 has 2 MA's), (43, 33584), (69, 33692), (72, 33704), (89, 33869), (90, 33875), (100, 34070), (103, 34091), (105, 34112), (106, 34121), (112, 34178), (114, 34220), (116, 34274), (117, 34319), (125, 34388), (127, 34424), (129, 34451), (131, 34478), (135, 34538), (138, 34571), (139, 34574), (142, 34595), (144, 34622), (148, 34694), (152, 34763), (157, 34814), (208, 35024), (209, 35030), (210, 35036), (213, 35069), (214, 35111), (216, 35123), (218, 35141), (241, 35315), (243, 35324), (245, 35327), (246, 35330), (247, 35342), (249, 35354), (250, 35357), (254, 35372), (268, 35438), (271, 35453), (286, 35597), (287, 35609), (307, 35789), (310, 35807), (319, 35888), (323, 35924), (326, 35945), (329, 36011),

Gene: MikeLiesIn\_91 Start: 36256, Stop: 38880, Start Num: 24

Candidate Starts for MikeLiesIn\_91:

(Start: 24 @36256 has 152 MA's), (33, 36325), (34, 36331), (Start: 37 @36349 has 2 MA's), (43, 36385), (69, 36493), (72, 36505), (89, 36670), (90, 36676), (100, 36871), (103, 36892), (105, 36913), (106, 36922), (112, 36979), (114, 37021), (116, 37075), (117, 37120), (125, 37189), (127, 37225), (129, 37252), (131, 37279), (135, 37339), (138, 37372), (139, 37375), (143, 37405), (144, 37423), (152, 37564), (157, 37615), (208, 37825), (209, 37831), (213, 37870), (214, 37912), (216, 37924),



(218, 37942), (241, 38116), (243, 38125), (245, 38128), (246, 38131), (247, 38143), (249, 38155), (250, 38158), (254, 38173), (268, 38260), (271, 38275), (286, 38419), (287, 38431), (307, 38611), (310, 38629), (319, 38710), (323, 38746), (326, 38767), (329, 38833),

Gene: Mikro\_88 Start: 37167, Stop: 39791, Start Num: 24

Candidate Starts for Mikro\_88:

(Start: 24 @37167 has 152 MA's), (33, 37236), (34, 37242), (Start: 37 @37260 has 2 MA's), (43, 37296), (69, 37404), (72, 37416), (89, 37581), (90, 37587), (100, 37782), (103, 37803), (105, 37824), (106, 37833), (112, 37890), (114, 37932), (116, 37986), (117, 38031), (125, 38100), (127, 38136), (129, 38163), (131, 38190), (135, 38250), (138, 38283), (139, 38286), (143, 38316), (144, 38334), (152, 38475), (157, 38526), (208, 38736), (209, 38742), (210, 38748), (213, 38781), (214, 38823), (216, 38835), (218, 38853), (241, 39027), (243, 39036), (245, 39039), (246, 39042), (247, 39054), (249, 39066), (250, 39069), (254, 39084), (268, 39171), (271, 39186), (286, 39330), (287, 39342), (307, 39522), (310, 39540), (319, 39621), (323, 39657), (326, 39678), (329, 39744),

Gene: MoMoMixon\_91 Start: 36002, Stop: 38605, Start Num: 24

Candidate Starts for MoMoMixon\_91:

(Start: 24 @36002 has 152 MA's), (33, 36071), (34, 36077), (Start: 37 @36095 has 2 MA's), (43, 36131), (69, 36239), (72, 36251), (89, 36416), (90, 36422), (100, 36617), (103, 36638), (105, 36659), (106, 36668), (112, 36725), (114, 36767), (116, 36821), (117, 36866), (125, 36935), (127, 36971), (129, 36998), (131, 37025), (135, 37085), (138, 37118), (139, 37121), (143, 37151), (144, 37169), (152, 37310), (157, 37361), (208, 37571), (209, 37577), (213, 37616), (214, 37658), (216, 37670), (218, 37688), (241, 37862), (243, 37871), (245, 37874), (246, 37877), (247, 37889), (249, 37901), (250, 37904), (254, 37919), (268, 37985), (271, 38000), (286, 38144), (287, 38156), (307, 38336), (310, 38354), (319, 38435), (323, 38471), (326, 38492), (329, 38558),

Gene: Momo\_89 Start: 35248, Stop: 37872, Start Num: 24

Candidate Starts for Momo\_89:

(Start: 24 @35248 has 152 MA's), (33, 35317), (34, 35323), (Start: 37 @35341 has 2 MA's), (43, 35377), (69, 35485), (72, 35497), (89, 35662), (90, 35668), (100, 35863), (103, 35884), (105, 35905), (106, 35914), (112, 35971), (114, 36013), (116, 36067), (117, 36112), (125, 36181), (127, 36217), (129, 36244), (131, 36271), (135, 36331), (138, 36364), (139, 36367), (143, 36397), (144, 36415), (152, 36556), (157, 36607), (208, 36817), (209, 36823), (213, 36862), (214, 36904), (216, 36916), (218, 36934), (241, 37108), (243, 37117), (245, 37120), (246, 37123), (247, 37135), (249, 37147), (250, 37150), (254, 37165), (268, 37252), (271, 37267), (286, 37411), (287, 37423), (307, 37603), (310, 37621), (319, 37702), (323, 37738), (326, 37759), (329, 37825),

Gene: Morizzled23\_90 Start: 34975, Stop: 37578, Start Num: 24

Candidate Starts for Morizzled23\_90:

(Start: 24 @34975 has 152 MA's), (33, 35044), (34, 35050), (Start: 37 @35068 has 2 MA's), (43, 35104), (69, 35212), (72, 35224), (89, 35389), (90, 35395), (100, 35590), (103, 35611), (105, 35632), (106, 35641), (112, 35698), (114, 35740), (116, 35794), (117, 35839), (125, 35908), (127, 35944), (129, 35971), (131, 35998), (135, 36058), (138, 36091), (139, 36094), (142, 36115), (144, 36142), (148, 36214), (152, 36283), (157, 36334), (208, 36544), (209, 36550), (210, 36556), (213, 36589), (214, 36631), (216, 36643), (218, 36661), (241, 36835), (243, 36844), (245, 36847), (246, 36850), (247, 36862), (249, 36874), (250, 36877), (254, 36892), (268, 36958), (271, 36973), (286, 37117), (287, 37129), (307, 37309), (310, 37327), (319, 37408), (323, 37444), (326, 37465), (329, 37531),

Gene: Myrna\_89 Start: 37944, Stop: 40463, Start Num: 37

Candidate Starts for Myrna\_89:

(Start: 37 @37944 has 2 MA's), (39, 37947), (48, 38004), (54, 38040), (56, 38049), (59, 38070), (65, 38088), (66, 38097), (69, 38118), (72, 38130), (73, 38139), (87, 38256), (90, 38301), (92, 38349), (100, 38496), (103, 38517), (105, 38538), (106, 38547), (107, 38559), (108, 38562), (110, 38586),

(117, 38745), (125, 38814), (127, 38850), (139, 39000), (143, 39030), (144, 39048), (151, 39186), (152, 39189), (153, 39192), (159, 39288), (160, 39294), (165, 39357), (167, 39381), (208, 39450), (209, 39456), (210, 39462), (212, 39477), (213, 39495), (216, 39549), (218, 39567), (236, 39729), (241, 39741), (245, 39753), (249, 39780), (254, 39798), (255, 39804), (262, 39864), (265, 39894), (283, 40056), (287, 40080), (308, 40218), (310, 40233), (313, 40260), (318, 40284), (331, 40437),

Gene: Naija\_89 Start: 35248, Stop: 37872, Start Num: 24

Candidate Starts for Naija\_89:

(Start: 24 @35248 has 152 MA's), (33, 35317), (34, 35323), (Start: 37 @35341 has 2 MA's), (43, 35377), (69, 35485), (72, 35497), (89, 35662), (90, 35668), (100, 35863), (103, 35884), (105, 35905), (106, 35914), (112, 35971), (114, 36013), (116, 36067), (117, 36112), (125, 36181), (127, 36217), (129, 36244), (131, 36271), (135, 36331), (138, 36364), (139, 36367), (143, 36397), (144, 36415), (152, 36556), (157, 36607), (208, 36817), (209, 36823), (213, 36862), (214, 36904), (216, 36916), (218, 36934), (241, 37108), (243, 37117), (245, 37120), (246, 37123), (247, 37135), (249, 37147), (250, 37150), (254, 37165), (268, 37252), (271, 37267), (286, 37411), (287, 37423), (307, 37603), (310, 37621), (319, 37702), (323, 37738), (326, 37759), (329, 37825),

Gene: Napoleon13\_86 Start: 34051, Stop: 36675, Start Num: 24

Candidate Starts for Napoleon13\_86:

(Start: 24 @34051 has 152 MA's), (33, 34120), (34, 34126), (Start: 37 @34144 has 2 MA's), (43, 34180), (69, 34288), (72, 34300), (89, 34465), (90, 34471), (100, 34666), (103, 34687), (105, 34708), (106, 34717), (112, 34774), (114, 34816), (116, 34870), (117, 34915), (125, 34984), (127, 35020), (129, 35047), (131, 35074), (135, 35134), (138, 35167), (139, 35170), (142, 35191), (144, 35218), (148, 35290), (152, 35359), (157, 35410), (208, 35620), (209, 35626), (213, 35665), (214, 35707), (216, 35719), (218, 35737), (241, 35911), (243, 35920), (245, 35923), (246, 35926), (247, 35938), (249, 35950), (250, 35953), (254, 35968), (268, 36055), (271, 36070), (286, 36214), (287, 36226), (307, 36406), (310, 36424), (319, 36505), (323, 36541), (326, 36562), (329, 36628),

Gene: Nappy\_92 Start: 36807, Stop: 39431, Start Num: 24

Candidate Starts for Nappy\_92:

(Start: 24 @36807 has 152 MA's), (33, 36876), (34, 36882), (Start: 37 @36900 has 2 MA's), (43, 36936), (69, 37044), (72, 37056), (89, 37221), (90, 37227), (100, 37422), (103, 37443), (105, 37464), (106, 37473), (112, 37530), (114, 37572), (116, 37626), (117, 37671), (125, 37740), (127, 37776), (129, 37803), (131, 37830), (135, 37890), (138, 37923), (139, 37926), (143, 37956), (144, 37974), (152, 38115), (157, 38166), (208, 38376), (209, 38382), (210, 38388), (213, 38421), (214, 38463), (216, 38475), (218, 38493), (241, 38667), (243, 38676), (245, 38679), (246, 38682), (247, 38694), (249, 38706), (250, 38709), (254, 38724), (268, 38811), (271, 38826), (286, 38970), (287, 38982), (307, 39162), (310, 39180), (319, 39261), (323, 39297), (326, 39318), (329, 39384),

Gene: Naval22\_95 Start: 37847, Stop: 40471, Start Num: 24

Candidate Starts for Naval22\_95:

(Start: 24 @37847 has 152 MA's), (33, 37916), (34, 37922), (Start: 37 @37940 has 2 MA's), (43, 37976), (69, 38084), (72, 38096), (89, 38261), (90, 38267), (100, 38462), (103, 38483), (105, 38504), (106, 38513), (112, 38570), (114, 38612), (116, 38666), (117, 38711), (125, 38780), (127, 38816), (129, 38843), (131, 38870), (135, 38930), (138, 38963), (139, 38966), (143, 38996), (144, 39014), (152, 39155), (157, 39206), (208, 39416), (209, 39422), (213, 39461), (214, 39503), (216, 39515), (218, 39533), (241, 39707), (243, 39716), (245, 39719), (246, 39722), (247, 39734), (249, 39746), (250, 39749), (254, 39764), (268, 39851), (271, 39866), (286, 40010), (287, 40022), (307, 40202), (310, 40220), (319, 40301), (323, 40337), (326, 40358), (329, 40424),

Gene: NedWong\_91 Start: 36243, Stop: 38867, Start Num: 24

Candidate Starts for NedWong\_91:

(Start: 24 @36243 has 152 MA's), (33, 36312), (34, 36318), (Start: 37 @36336 has 2 MA's), (43, 36372), (69, 36480), (72, 36492), (89, 36657), (90, 36663), (100, 36858), (103, 36879), (105, 36900), (106, 36909), (112, 36966), (114, 37008), (116, 37062), (117, 37107), (125, 37176), (127, 37212), (129, 37239), (131, 37266), (135, 37326), (138, 37359), (139, 37362), (143, 37392), (144, 37410), (152, 37551), (157, 37602), (208, 37812), (209, 37818), (213, 37857), (214, 37899), (216, 37911), (218, 37929), (241, 38103), (243, 38112), (245, 38115), (246, 38118), (247, 38130), (249, 38142), (250, 38145), (254, 38160), (268, 38247), (271, 38262), (286, 38406), (287, 38418), (307, 38598), (310, 38616), (319, 38697), (323, 38733), (326, 38754), (329, 38820),

Gene: Ngannou\_86 Start: 34230, Stop: 36854, Start Num: 24

Candidate Starts for Ngannou\_86:

(Start: 24 @34230 has 152 MA's), (33, 34299), (34, 34305), (Start: 37 @34323 has 2 MA's), (43, 34359), (69, 34467), (72, 34479), (89, 34644), (90, 34650), (100, 34845), (103, 34866), (105, 34887), (106, 34896), (112, 34953), (114, 34995), (116, 35049), (117, 35094), (125, 35163), (127, 35199), (129, 35226), (131, 35253), (135, 35313), (138, 35346), (139, 35349), (143, 35379), (144, 35397), (152, 35538), (157, 35589), (208, 35799), (209, 35805), (213, 35844), (214, 35886), (216, 35898), (218, 35916), (241, 36090), (243, 36099), (245, 36102), (246, 36105), (247, 36117), (249, 36129), (250, 36132), (254, 36147), (268, 36234), (271, 36249), (286, 36393), (287, 36405), (307, 36585), (310, 36603), (319, 36684), (323, 36720), (326, 36741), (329, 36807),

Gene: Nidhogg\_91 Start: 36097, Stop: 38721, Start Num: 24

Candidate Starts for Nidhogg\_91:

(Start: 24 @36097 has 152 MA's), (33, 36166), (34, 36172), (Start: 37 @36190 has 2 MA's), (43, 36226), (69, 36334), (72, 36346), (89, 36511), (90, 36517), (100, 36712), (103, 36733), (105, 36754), (106, 36763), (112, 36820), (114, 36862), (116, 36916), (117, 36961), (125, 37030), (127, 37066), (129, 37093), (131, 37120), (135, 37180), (138, 37213), (139, 37216), (142, 37237), (144, 37264), (148, 37336), (152, 37405), (157, 37456), (208, 37666), (209, 37672), (213, 37711), (214, 37753), (216, 37765), (218, 37783), (241, 37957), (243, 37966), (245, 37969), (246, 37972), (247, 37984), (249, 37996), (250, 37999), (254, 38014), (268, 38101), (271, 38116), (286, 38260), (287, 38272), (307, 38452), (310, 38470), (319, 38551), (323, 38587), (326, 38608), (329, 38674),

Gene: NoodleTree\_98 Start: 37274, Stop: 39898, Start Num: 24

Candidate Starts for NoodleTree\_98:

(Start: 24 @37274 has 152 MA's), (33, 37343), (34, 37349), (Start: 37 @37367 has 2 MA's), (43, 37403), (69, 37511), (72, 37523), (89, 37688), (90, 37694), (100, 37889), (103, 37910), (105, 37931), (106, 37940), (112, 37997), (114, 38039), (116, 38093), (117, 38138), (125, 38207), (127, 38243), (129, 38270), (131, 38297), (135, 38357), (138, 38390), (139, 38393), (143, 38423), (144, 38441), (152, 38582), (157, 38633), (208, 38843), (209, 38849), (210, 38855), (213, 38888), (214, 38930), (216, 38942), (218, 38960), (241, 39134), (243, 39143), (245, 39146), (246, 39149), (247, 39161), (249, 39173), (250, 39176), (254, 39191), (268, 39278), (271, 39293), (286, 39437), (287, 39449), (307, 39629), (310, 39647), (319, 39728), (323, 39764), (326, 39785), (329, 39851),

Gene: Norm\_91 Start: 36245, Stop: 38869, Start Num: 24

Candidate Starts for Norm\_91:

(Start: 24 @36245 has 152 MA's), (33, 36314), (34, 36320), (Start: 37 @36338 has 2 MA's), (43, 36374), (69, 36482), (72, 36494), (89, 36659), (90, 36665), (100, 36860), (103, 36881), (105, 36902), (106, 36911), (112, 36968), (114, 37010), (116, 37064), (117, 37109), (125, 37178), (127, 37214), (129, 37241), (131, 37268), (135, 37328), (138, 37361), (139, 37364), (143, 37394), (144, 37412), (152, 37553), (157, 37604), (208, 37814), (209, 37820), (213, 37859), (214, 37901), (216, 37913), (218, 37931), (241, 38105), (243, 38114), (245, 38117), (246, 38120), (247, 38132), (249, 38144), (250, 38147), (254, 38162), (268, 38249), (271, 38264), (286, 38408), (287, 38420), (307, 38600), (310, 38618), (319, 38699), (323, 38735), (326, 38756), (329, 38822),

Gene: NuevoMundo\_96 Start: 38204, Stop: 40828, Start Num: 24

Candidate Starts for NuevoMundo\_96:

(Start: 24 @38204 has 152 MA's), (33, 38273), (34, 38279), (Start: 37 @38297 has 2 MA's), (43, 38333), (69, 38441), (72, 38453), (89, 38618), (90, 38624), (100, 38819), (103, 38840), (105, 38861), (106, 38870), (112, 38927), (114, 38969), (116, 39023), (117, 39068), (125, 39137), (127, 39173), (129, 39200), (131, 39227), (135, 39287), (138, 39320), (139, 39323), (143, 39353), (144, 39371), (152, 39512), (157, 39563), (208, 39773), (209, 39779), (210, 39785), (213, 39818), (214, 39860), (216, 39872), (218, 39890), (241, 40064), (243, 40073), (245, 40076), (246, 40079), (247, 40091), (249, 40103), (250, 40106), (254, 40121), (268, 40208), (271, 40223), (286, 40367), (287, 40379), (307, 40559), (310, 40577), (319, 40658), (323, 40694), (326, 40715), (329, 40781),

Gene: ParkTD\_91 Start: 36239, Stop: 38863, Start Num: 24

Candidate Starts for ParkTD\_91:

(Start: 24 @36239 has 152 MA's), (33, 36308), (34, 36314), (Start: 37 @36332 has 2 MA's), (43, 36368), (69, 36476), (72, 36488), (89, 36653), (90, 36659), (100, 36854), (103, 36875), (105, 36896), (106, 36905), (112, 36962), (114, 37004), (116, 37058), (117, 37103), (125, 37172), (127, 37208), (129, 37235), (131, 37262), (135, 37322), (138, 37355), (139, 37358), (143, 37388), (144, 37406), (152, 37547), (157, 37598), (208, 37808), (209, 37814), (213, 37853), (214, 37895), (216, 37907), (218, 37925), (241, 38099), (243, 38108), (245, 38111), (246, 38114), (247, 38126), (249, 38138), (250, 38141), (254, 38156), (268, 38243), (271, 38258), (286, 38402), (287, 38414), (307, 38594), (310, 38612), (319, 38693), (323, 38729), (326, 38750), (329, 38816),

Gene: Patter\_90 Start: 35265, Stop: 37889, Start Num: 24

Candidate Starts for Patter\_90:

(Start: 24 @35265 has 152 MA's), (33, 35334), (34, 35340), (Start: 37 @35358 has 2 MA's), (43, 35394), (69, 35502), (72, 35514), (89, 35679), (90, 35685), (100, 35880), (103, 35901), (105, 35922), (106, 35931), (112, 35988), (114, 36030), (116, 36084), (117, 36129), (125, 36198), (127, 36234), (129, 36261), (131, 36288), (135, 36348), (138, 36381), (139, 36384), (143, 36414), (144, 36432), (152, 36573), (157, 36624), (208, 36834), (209, 36840), (213, 36879), (214, 36921), (216, 36933), (218, 36951), (241, 37125), (243, 37134), (245, 37137), (246, 37140), (247, 37152), (249, 37164), (250, 37167), (254, 37182), (268, 37269), (271, 37284), (286, 37428), (287, 37440), (307, 37620), (310, 37638), (319, 37719), (323, 37755), (326, 37776), (329, 37842),

Gene: Phabba\_94 Start: 37026, Stop: 39536, Start Num: 37

Candidate Starts for Phabba\_94:

(Start: 37 @37026 has 2 MA's), (39, 37032), (45, 37071), (48, 37089), (56, 37134), (59, 37155), (65, 37173), (66, 37182), (69, 37203), (72, 37215), (73, 37224), (87, 37341), (90, 37386), (92, 37434), (100, 37581), (103, 37602), (105, 37623), (106, 37632), (107, 37644), (108, 37647), (110, 37671), (125, 37899), (127, 37935), (139, 38085), (143, 38115), (144, 38133), (151, 38271), (152, 38274), (153, 38277), (159, 38373), (160, 38379), (165, 38442), (166, 38457), (208, 38535), (209, 38541), (210, 38547), (212, 38562), (213, 38580), (216, 38634), (218, 38652), (231, 38781), (236, 38814), (241, 38826), (245, 38838), (249, 38865), (254, 38883), (308, 39291), (313, 39333), (327, 39477), (331, 39510),

Gene: Phlegm\_92 Start: 35248, Stop: 37872, Start Num: 24

Candidate Starts for Phlegm\_92:

(Start: 24 @35248 has 152 MA's), (33, 35317), (34, 35323), (Start: 37 @35341 has 2 MA's), (43, 35377), (69, 35485), (72, 35497), (89, 35662), (90, 35668), (100, 35863), (103, 35884), (105, 35905), (106, 35914), (112, 35971), (114, 36013), (116, 36067), (117, 36112), (125, 36181), (127, 36217), (129, 36244), (131, 36271), (135, 36331), (138, 36364), (139, 36367), (143, 36397), (144, 36415), (152, 36556), (157, 36607), (208, 36817), (209, 36823), (213, 36862), (214, 36904), (216, 36916), (218, 36934), (241, 37108), (243, 37117), (245, 37120), (246, 37123), (247, 37135), (249, 37147), (250, 37150), (254, 37165), (268, 37252), (271, 37267), (286, 37411), (287, 37423), (307, 37603),

(310, 37621), (319, 37702), (323, 37738), (326, 37759), (329, 37825),

Gene: Phox\_87 Start: 36133, Stop: 38736, Start Num: 24

Candidate Starts for Phox\_87:

(Start: 24 @36133 has 152 MA's), (33, 36202), (34, 36208), (Start: 37 @36226 has 2 MA's), (43, 36262), (69, 36370), (72, 36382), (89, 36547), (90, 36553), (100, 36748), (103, 36769), (105, 36790), (106, 36799), (112, 36856), (114, 36898), (116, 36952), (117, 36997), (125, 37066), (127, 37102), (129, 37129), (131, 37156), (135, 37216), (138, 37249), (139, 37252), (142, 37273), (144, 37300), (148, 37372), (152, 37441), (157, 37492), (208, 37702), (209, 37708), (210, 37714), (213, 37747), (214, 37789), (216, 37801), (218, 37819), (241, 37993), (243, 38002), (245, 38005), (246, 38008), (247, 38020), (249, 38032), (250, 38035), (254, 38050), (268, 38116), (271, 38131), (286, 38275), (287, 38287), (307, 38467), (310, 38485), (319, 38566), (323, 38602), (326, 38623), (329, 38689),

Gene: Phrappuccino\_46 Start: 26549, Stop: 28942, Start Num: 28

Candidate Starts for Phrappuccino\_46:

(Start: 28 @26549 has 2 MA's), (40, 26636), (42, 26660), (44, 26681), (51, 26708), (52, 26717), (58, 26759), (61, 26771), (65, 26786), (72, 26828), (73, 26837), (79, 26873), (85, 26918), (86, 26930), (87, 26954), (92, 27047), (102, 27200), (105, 27233), (106, 27242), (107, 27254), (123, 27473), (126, 27497), (127, 27530), (130, 27560), (131, 27584), (132, 27614), (135, 27644), (137, 27659), (140, 27689), (144, 27728), (146, 27764), (147, 27773), (149, 27860), (152, 27875), (162, 27998), (165, 28043), (210, 28148), (212, 28163), (214, 28223), (215, 28232), (217, 28250), (218, 28253), (221, 28268), (225, 28313), (227, 28331), (230, 28358), (233, 28388), (237, 28409), (238, 28412), (245, 28433), (249, 28457), (252, 28466), (254, 28475), (259, 28511), (263, 28535), (267, 28568), (269, 28580), (285, 28718), (287, 28733), (297, 28796), (299, 28805), (307, 28892), (312, 28928),

Gene: Phusco\_90 Start: 36013, Stop: 38637, Start Num: 24

Candidate Starts for Phusco\_90:

(Start: 24 @36013 has 152 MA's), (33, 36082), (34, 36088), (Start: 37 @36106 has 2 MA's), (43, 36142), (69, 36250), (72, 36262), (89, 36427), (90, 36433), (100, 36628), (103, 36649), (105, 36670), (106, 36679), (112, 36736), (114, 36778), (116, 36832), (117, 36877), (125, 36946), (127, 36982), (129, 37009), (131, 37036), (135, 37096), (138, 37129), (139, 37132), (143, 37162), (144, 37180), (152, 37321), (157, 37372), (208, 37582), (209, 37588), (213, 37627), (214, 37669), (216, 37681), (218, 37699), (241, 37873), (243, 37882), (245, 37885), (246, 37888), (247, 37900), (249, 37912), (250, 37915), (254, 37930), (268, 38017), (271, 38032), (286, 38176), (287, 38188), (307, 38368), (310, 38386), (319, 38467), (323, 38503), (326, 38524), (329, 38590),

Gene: Pier\_94 Start: 36440, Stop: 39868, Start Num: 1

Candidate Starts for Pier\_94:

(Start: 1 @36440 has 18 MA's), (Start: 2 @36509 has 1 MA's), (3, 36515), (4, 36533), (6, 36569), (10, 36677), (11, 36689), (13, 36812), (14, 36863), (15, 36917), (16, 36929), (17, 36950), (32, 37244), (38, 37289), (49, 37367), (55, 37403), (63, 37436), (67, 37451), (74, 37496), (76, 37505), (80, 37538), (83, 37574), (89, 37658), (90, 37664), (100, 37859), (103, 37880), (105, 37901), (106, 37910), (112, 37967), (114, 38009), (116, 38063), (117, 38108), (125, 38177), (127, 38213), (129, 38240), (131, 38267), (135, 38327), (138, 38360), (139, 38363), (143, 38393), (144, 38411), (152, 38552), (157, 38603), (208, 38813), (209, 38819), (213, 38858), (214, 38900), (216, 38912), (218, 38930), (241, 39104), (243, 39113), (245, 39116), (246, 39119), (247, 39131), (249, 39143), (250, 39146), (254, 39161), (268, 39248), (271, 39263), (286, 39407), (287, 39419), (307, 39599), (310, 39617), (319, 39698), (323, 39734), (326, 39755), (329, 39821),

Gene: Pinkcreek\_81 Start: 33219, Stop: 35822, Start Num: 24

Candidate Starts for Pinkcreek\_81:

(Start: 24 @33219 has 152 MA's), (33, 33288), (34, 33294), (Start: 37 @33312 has 2 MA's), (43, 33348), (69, 33456), (72, 33468), (87, 33594), (90, 33639), (100, 33834), (103, 33855), (105, 33876),

(106, 33885), (112, 33942), (114, 33984), (116, 34038), (117, 34083), (125, 34152), (127, 34188), (129, 34215), (131, 34242), (135, 34302), (138, 34335), (139, 34338), (142, 34359), (144, 34386), (148, 34458), (152, 34527), (157, 34578), (208, 34788), (209, 34794), (210, 34800), (213, 34833), (214, 34875), (216, 34887), (218, 34905), (241, 35079), (243, 35088), (245, 35091), (246, 35094), (247, 35106), (249, 35118), (250, 35121), (254, 35136), (268, 35202), (271, 35217), (286, 35361), (287, 35373), (307, 35553), (310, 35571), (319, 35652), (323, 35688), (326, 35709), (329, 35775),

Gene: Pio\_94 Start: 37172, Stop: 40600, Start Num: 1

Candidate Starts for Pio\_94:

(Start: 1 @37172 has 18 MA's), (Start: 2 @37241 has 1 MA's), (3, 37247), (4, 37265), (6, 37301), (10, 37409), (11, 37421), (13, 37544), (14, 37595), (15, 37649), (16, 37661), (17, 37682), (32, 37976), (38, 38021), (49, 38099), (55, 38135), (63, 38168), (67, 38183), (74, 38228), (76, 38237), (80, 38270), (83, 38306), (89, 38390), (90, 38396), (100, 38591), (103, 38612), (105, 38633), (106, 38642), (112, 38699), (114, 38741), (116, 38795), (117, 38840), (125, 38909), (127, 38945), (129, 38972), (131, 38999), (135, 39059), (138, 39092), (139, 39095), (143, 39125), (144, 39143), (152, 39284), (157, 39335), (208, 39545), (209, 39551), (213, 39590), (214, 39632), (216, 39644), (218, 39662), (241, 39836), (243, 39845), (245, 39848), (246, 39851), (247, 39863), (249, 39875), (250, 39878), (254, 39893), (268, 39980), (271, 39995), (286, 40139), (287, 40151), (307, 40331), (310, 40349), (319, 40430), (323, 40466), (326, 40487), (329, 40553),

Gene: Pivoine\_89 Start: 35248, Stop: 37872, Start Num: 24

Candidate Starts for Pivoine\_89:

(Start: 24 @35248 has 152 MA's), (33, 35317), (34, 35323), (Start: 37 @35341 has 2 MA's), (43, 35377), (69, 35485), (72, 35497), (89, 35662), (90, 35668), (100, 35863), (103, 35884), (105, 35905), (106, 35914), (112, 35971), (114, 36013), (116, 36067), (117, 36112), (125, 36181), (127, 36217), (129, 36244), (131, 36271), (135, 36331), (138, 36364), (139, 36367), (143, 36397), (144, 36415), (152, 36556), (157, 36607), (208, 36817), (209, 36823), (213, 36862), (214, 36904), (216, 36916), (218, 36934), (241, 37108), (243, 37117), (245, 37120), (246, 37123), (247, 37135), (249, 37147), (250, 37150), (254, 37165), (268, 37252), (271, 37267), (286, 37411), (287, 37423), (307, 37603), (310, 37621), (319, 37702), (323, 37738), (326, 37759), (329, 37825),

Gene: Pleione\_93 Start: 36242, Stop: 38866, Start Num: 24

Candidate Starts for Pleione\_93:

(Start: 24 @36242 has 152 MA's), (33, 36311), (34, 36317), (Start: 37 @36335 has 2 MA's), (43, 36371), (69, 36479), (72, 36491), (89, 36656), (90, 36662), (100, 36857), (103, 36878), (105, 36899), (106, 36908), (112, 36965), (114, 37007), (116, 37061), (117, 37106), (125, 37175), (127, 37211), (129, 37238), (131, 37265), (135, 37325), (138, 37358), (139, 37361), (143, 37391), (144, 37409), (152, 37550), (157, 37601), (208, 37811), (209, 37817), (213, 37856), (214, 37898), (216, 37910), (218, 37928), (241, 38102), (243, 38111), (245, 38114), (246, 38117), (247, 38129), (249, 38141), (250, 38144), (254, 38159), (268, 38246), (271, 38261), (286, 38405), (287, 38417), (307, 38597), (310, 38615), (319, 38696), (323, 38732), (326, 38753), (329, 38819),

Gene: Pupper\_88 Start: 36748, Stop: 39342, Start Num: 31

Candidate Starts for Pupper\_88:

(Start: 29 @36730 has 3 MA's), (Start: 31 @36748 has 1 MA's), (50, 36847), (57, 36886), (69, 36949), (72, 36961), (78, 36991), (92, 37180), (94, 37207), (100, 37327), (102, 37336), (103, 37348), (104, 37354), (105, 37369), (106, 37378), (107, 37390), (109, 37402), (115, 37516), (117, 37576), (120, 37603), (124, 37642), (125, 37645), (127, 37681), (128, 37705), (135, 37795), (144, 37879), (147, 37924), (150, 38008), (151, 38017), (152, 38020), (157, 38071), (158, 38074), (208, 38281), (209, 38287), (214, 38368), (215, 38377), (216, 38380), (218, 38398), (222, 38416), (226, 38467), (229, 38509), (234, 38551), (238, 38566), (241, 38575), (245, 38593), (246, 38596), (247, 38608), (249, 38620), (253, 38635), (254, 38638), (258, 38668), (273, 38764), (281, 38842), (284, 38887), (289, 38926), (304, 39028), (311, 39103), (315, 39127), (316, 39130), (323, 39202), (329, 39295), (330,

39304), (331, 39316),

Gene: PurduePete\_90 Start: 36287, Stop: 38911, Start Num: 24

Candidate Starts for PurduePete\_90:

(Start: 24 @36287 has 152 MA's), (33, 36356), (34, 36362), (Start: 37 @36380 has 2 MA's), (43, 36416), (69, 36524), (72, 36536), (89, 36701), (90, 36707), (100, 36902), (103, 36923), (105, 36944), (106, 36953), (112, 37010), (114, 37052), (116, 37106), (117, 37151), (125, 37220), (127, 37256), (129, 37283), (131, 37310), (135, 37370), (138, 37403), (139, 37406), (142, 37427), (144, 37454), (148, 37526), (152, 37595), (157, 37646), (208, 37856), (209, 37862), (213, 37901), (214, 37943), (216, 37955), (218, 37973), (241, 38147), (243, 38156), (245, 38159), (246, 38162), (247, 38174), (249, 38186), (250, 38189), (254, 38204), (268, 38291), (271, 38306), (286, 38450), (287, 38462), (307, 38642), (310, 38660), (319, 38741), (323, 38777), (326, 38798), (329, 38864),

Gene: QBert\_84 Start: 35743, Stop: 38367, Start Num: 24

Candidate Starts for QBert\_84:

(Start: 24 @35743 has 152 MA's), (33, 35812), (34, 35818), (Start: 37 @35836 has 2 MA's), (43, 35872), (69, 35980), (72, 35992), (89, 36157), (90, 36163), (100, 36358), (103, 36379), (105, 36400), (106, 36409), (112, 36466), (114, 36508), (116, 36562), (117, 36607), (125, 36676), (127, 36712), (129, 36739), (131, 36766), (135, 36826), (138, 36859), (139, 36862), (143, 36892), (144, 36910), (152, 37051), (157, 37102), (208, 37312), (209, 37318), (213, 37357), (214, 37399), (216, 37411), (218, 37429), (241, 37603), (243, 37612), (245, 37615), (246, 37618), (247, 37630), (249, 37642), (250, 37645), (254, 37660), (268, 37747), (271, 37762), (286, 37906), (287, 37918), (307, 38098), (310, 38116), (319, 38197), (323, 38233), (326, 38254), (329, 38320),

Gene: Quasimodo\_90 Start: 35799, Stop: 38402, Start Num: 24

Candidate Starts for Quasimodo\_90:

(Start: 24 @35799 has 152 MA's), (33, 35868), (34, 35874), (Start: 37 @35892 has 2 MA's), (43, 35928), (69, 36036), (72, 36048), (89, 36213), (90, 36219), (100, 36414), (103, 36435), (105, 36456), (106, 36465), (112, 36522), (114, 36564), (116, 36618), (117, 36663), (125, 36732), (127, 36768), (129, 36795), (131, 36822), (135, 36882), (138, 36915), (139, 36918), (142, 36939), (144, 36966), (148, 37038), (152, 37107), (157, 37158), (208, 37368), (209, 37374), (210, 37380), (213, 37413), (214, 37455), (216, 37467), (218, 37485), (241, 37659), (243, 37668), (245, 37671), (246, 37674), (247, 37686), (249, 37698), (250, 37701), (254, 37716), (268, 37782), (271, 37797), (286, 37941), (287, 37953), (307, 38133), (310, 38151), (319, 38232), (323, 38268), (326, 38289), (329, 38355),

Gene: Rabinovish\_87 Start: 36106, Stop: 38709, Start Num: 24

Candidate Starts for Rabinovish\_87:

(Start: 24 @36106 has 152 MA's), (33, 36175), (34, 36181), (Start: 37 @36199 has 2 MA's), (43, 36235), (69, 36343), (72, 36355), (89, 36520), (90, 36526), (100, 36721), (103, 36742), (105, 36763), (106, 36772), (112, 36829), (114, 36871), (116, 36925), (117, 36970), (125, 37039), (127, 37075), (129, 37102), (131, 37129), (135, 37189), (138, 37222), (139, 37225), (142, 37246), (144, 37273), (148, 37345), (152, 37414), (157, 37465), (208, 37675), (209, 37681), (210, 37687), (213, 37720), (214, 37762), (216, 37774), (218, 37792), (241, 37966), (243, 37975), (245, 37978), (246, 37981), (247, 37993), (249, 38005), (250, 38008), (254, 38023), (268, 38089), (271, 38104), (286, 38248), (287, 38260), (307, 38440), (310, 38458), (319, 38539), (323, 38575), (326, 38596), (329, 38662),

Gene: Rahel\_89 Start: 34801, Stop: 38229, Start Num: 1

Candidate Starts for Rahel\_89:

(Start: 1 @34801 has 18 MA's), (Start: 2 @34870 has 1 MA's), (3, 34876), (4, 34894), (6, 34930), (10, 35038), (11, 35050), (13, 35173), (14, 35224), (15, 35278), (16, 35290), (17, 35311), (32, 35605), (38, 35650), (49, 35728), (55, 35764), (63, 35797), (67, 35812), (74, 35857), (76, 35866), (80, 35899), (83, 35935), (89, 36019), (90, 36025), (100, 36220), (103, 36241), (105, 36262), (106, 36271), (112, 36328), (114, 36370), (116, 36424), (117, 36469), (125, 36538), (127, 36574), (129, 36601), (131,

36628), (135, 36688), (138, 36721), (139, 36724), (143, 36754), (144, 36772), (152, 36913), (157, 36964), (208, 37174), (209, 37180), (213, 37219), (214, 37261), (216, 37273), (218, 37291), (241, 37465), (243, 37474), (245, 37477), (246, 37480), (247, 37492), (249, 37504), (250, 37507), (254, 37522), (268, 37609), (271, 37624), (286, 37768), (287, 37780), (307, 37960), (310, 37978), (319, 38059), (323, 38095), (326, 38116), (329, 38182),

Gene: RedWattleHog\_11 Start: 9594, Stop: 12170, Start Num: 27

Candidate Starts for RedWattleHog\_11:

(26, 9585), (Start: 27 @9594 has 3 MA's), (47, 9702), (60, 9765), (67, 9783), (71, 9810), (73, 9825), (76, 9837), (90, 9987), (92, 10035), (93, 10041), (99, 10143), (103, 10197), (105, 10218), (107, 10239), (113, 10302), (118, 10416), (119, 10425), (125, 10482), (126, 10485), (127, 10518), (134, 10629), (135, 10632), (138, 10665), (143, 10698), (144, 10716), (147, 10761), (151, 10854), (152, 10857), (154, 10878), (155, 10890), (161, 10971), (163, 10983), (209, 11124), (218, 11235), (251, 11451), (295, 11775), (305, 11889), (309, 11910), (322, 12024), (324, 12036), (325, 12045), (328, 12111), (329, 12120),

Gene: Rizal\_88 Start: 35160, Stop: 37784, Start Num: 24

Candidate Starts for Rizal\_88:

(Start: 24 @35160 has 152 MA's), (33, 35229), (34, 35235), (Start: 37 @35253 has 2 MA's), (43, 35289), (69, 35397), (72, 35409), (89, 35574), (90, 35580), (100, 35775), (103, 35796), (105, 35817), (106, 35826), (112, 35883), (114, 35925), (116, 35979), (117, 36024), (125, 36093), (127, 36129), (129, 36156), (131, 36183), (135, 36243), (138, 36276), (139, 36279), (142, 36300), (144, 36327), (148, 36399), (152, 36468), (157, 36519), (208, 36729), (209, 36735), (213, 36774), (214, 36816), (216, 36828), (218, 36846), (241, 37020), (243, 37029), (245, 37032), (246, 37035), (247, 37047), (249, 37059), (250, 37062), (254, 37077), (268, 37164), (271, 37179), (286, 37323), (287, 37335), (307, 37515), (310, 37533), (319, 37614), (323, 37650), (326, 37671), (329, 37737),

Gene: RoMag\_85 Start: 35602, Stop: 38226, Start Num: 24

Candidate Starts for RoMag\_85:

(Start: 24 @35602 has 152 MA's), (33, 35671), (34, 35677), (Start: 37 @35695 has 2 MA's), (43, 35731), (69, 35839), (72, 35851), (89, 36016), (90, 36022), (100, 36217), (103, 36238), (105, 36259), (106, 36268), (112, 36325), (114, 36367), (116, 36421), (117, 36466), (125, 36535), (127, 36571), (129, 36598), (131, 36625), (135, 36685), (138, 36718), (139, 36721), (143, 36751), (144, 36769), (152, 36910), (157, 36961), (208, 37171), (209, 37177), (210, 37183), (213, 37216), (214, 37258), (216, 37270), (218, 37288), (241, 37462), (243, 37471), (245, 37474), (246, 37477), (247, 37489), (249, 37501), (250, 37504), (254, 37519), (268, 37606), (271, 37621), (286, 37765), (287, 37777), (307, 37957), (310, 37975), (319, 38056), (323, 38092), (326, 38113), (329, 38179),

Gene: Ronan\_83 Start: 33049, Stop: 35673, Start Num: 24

Candidate Starts for Ronan\_83:

(Start: 24 @33049 has 152 MA's), (33, 33118), (34, 33124), (Start: 37 @33142 has 2 MA's), (43, 33178), (69, 33286), (72, 33298), (89, 33463), (90, 33469), (100, 33664), (103, 33685), (105, 33706), (106, 33715), (112, 33772), (114, 33814), (116, 33868), (117, 33913), (125, 33982), (127, 34018), (129, 34045), (131, 34072), (135, 34132), (138, 34165), (139, 34168), (143, 34198), (144, 34216), (152, 34357), (157, 34408), (208, 34618), (209, 34624), (213, 34663), (214, 34705), (216, 34717), (218, 34735), (241, 34909), (243, 34918), (245, 34921), (246, 34924), (247, 34936), (249, 34948), (250, 34951), (254, 34966), (268, 35053), (271, 35068), (286, 35212), (287, 35224), (307, 35404), (310, 35422), (319, 35503), (323, 35539), (326, 35560), (329, 35626),

Gene: Roots515\_89 Start: 35665, Stop: 38289, Start Num: 24

Candidate Starts for Roots515\_89:

(Start: 24 @35665 has 152 MA's), (33, 35734), (34, 35740), (Start: 37 @35758 has 2 MA's), (43, 35794), (69, 35902), (72, 35914), (89, 36079), (90, 36085), (100, 36280), (103, 36301), (105, 36322),



(106, 36331), (112, 36388), (114, 36430), (116, 36484), (117, 36529), (125, 36598), (127, 36634), (129, 36661), (131, 36688), (135, 36748), (138, 36781), (139, 36784), (143, 36814), (144, 36832), (152, 36973), (157, 37024), (208, 37234), (209, 37240), (213, 37279), (214, 37321), (216, 37333), (218, 37351), (241, 37525), (243, 37534), (245, 37537), (246, 37540), (247, 37552), (249, 37564), (250, 37567), (254, 37582), (268, 37669), (271, 37684), (286, 37828), (287, 37840), (307, 38020), (310, 38038), (319, 38119), (323, 38155), (326, 38176), (329, 38242),

Gene: SCentae\_87 Start: 36876, Stop: 39488, Start Num: 29

Candidate Starts for SCentae\_87:

(19, 36738), (20, 36747), (Start: 29 @36876 has 3 MA's), (Start: 31 @36894 has 1 MA's), (50, 36993), (57, 37032), (69, 37095), (72, 37107), (78, 37137), (92, 37326), (94, 37353), (100, 37473), (102, 37482), (103, 37494), (104, 37500), (105, 37515), (106, 37524), (107, 37536), (109, 37548), (115, 37662), (117, 37722), (120, 37749), (124, 37788), (125, 37791), (127, 37827), (128, 37851), (135, 37941), (144, 38025), (147, 38070), (150, 38154), (151, 38163), (152, 38166), (157, 38217), (158, 38220), (208, 38427), (209, 38433), (214, 38514), (215, 38523), (216, 38526), (218, 38544), (222, 38562), (226, 38613), (229, 38655), (234, 38697), (238, 38712), (241, 38721), (245, 38739), (246, 38742), (247, 38754), (249, 38766), (253, 38781), (254, 38784), (258, 38814), (273, 38910), (281, 38988), (284, 39033), (289, 39072), (304, 39174), (311, 39249), (315, 39273), (316, 39276), (323, 39348), (329, 39441), (330, 39450), (331, 39462),

Gene: Salacia\_94 Start: 36357, Stop: 38981, Start Num: 24

Candidate Starts for Salacia\_94:

(Start: 24 @36357 has 152 MA's), (33, 36426), (34, 36432), (Start: 37 @36450 has 2 MA's), (43, 36486), (69, 36594), (72, 36606), (89, 36771), (90, 36777), (100, 36972), (103, 36993), (105, 37014), (106, 37023), (112, 37080), (114, 37122), (116, 37176), (117, 37221), (125, 37290), (127, 37326), (129, 37353), (131, 37380), (135, 37440), (138, 37473), (139, 37476), (143, 37506), (144, 37524), (152, 37665), (157, 37716), (208, 37926), (209, 37932), (213, 37971), (214, 38013), (216, 38025), (218, 38043), (241, 38217), (243, 38226), (245, 38229), (246, 38232), (247, 38244), (249, 38256), (250, 38259), (254, 38274), (268, 38361), (271, 38376), (286, 38520), (287, 38532), (307, 38712), (310, 38730), (319, 38811), (323, 38847), (326, 38868), (329, 38934),

Gene: Sauce\_90 Start: 35097, Stop: 37721, Start Num: 24

Candidate Starts for Sauce\_90:

(Start: 24 @35097 has 152 MA's), (33, 35166), (34, 35172), (Start: 37 @35190 has 2 MA's), (43, 35226), (69, 35334), (72, 35346), (89, 35511), (90, 35517), (100, 35712), (103, 35733), (105, 35754), (106, 35763), (112, 35820), (114, 35862), (116, 35916), (117, 35961), (125, 36030), (127, 36066), (129, 36093), (131, 36120), (135, 36180), (138, 36213), (139, 36216), (143, 36246), (144, 36264), (152, 36405), (157, 36456), (208, 36666), (209, 36672), (213, 36711), (214, 36753), (216, 36765), (218, 36783), (241, 36957), (243, 36966), (245, 36969), (246, 36972), (247, 36984), (249, 36996), (250, 36999), (254, 37014), (268, 37101), (271, 37116), (286, 37260), (287, 37272), (307, 37452), (310, 37470), (319, 37551), (323, 37587), (326, 37608), (329, 37674),

Gene: ScoobyDoobyDoo\_84 Start: 34152, Stop: 37481, Start Num: 2

Candidate Starts for ScoobyDoobyDoo\_84:

(Start: 2 @34152 has 1 MA's), (5, 34191), (7, 34230), (8, 34257), (9, 34299), (10, 34320), (11, 34332), (12, 34371), (13, 34455), (14, 34506), (15, 34560), (18, 34665), (21, 34752), (46, 34989), (47, 34998), (49, 35010), (63, 35079), (67, 35094), (68, 35109), (75, 35139), (77, 35148), (81, 35181), (92, 35355), (100, 35502), (103, 35523), (105, 35544), (106, 35553), (107, 35565), (110, 35592), (112, 35610), (117, 35751), (121, 35787), (125, 35820), (128, 35880), (138, 36003), (144, 36054), (145, 36084), (147, 36099), (150, 36183), (151, 36192), (152, 36195), (153, 36198), (208, 36456), (209, 36462), (212, 36483), (213, 36501), (216, 36555), (218, 36573), (220, 36582), (226, 36642), (236, 36735), (241, 36747), (245, 36759), (249, 36786), (254, 36804), (261, 36849), (264, 36885), (286, 37071), (310, 37239), (311, 37251), (313, 37266), (320, 37314), (329, 37434), (332, 37464),

Gene: ScottMcG\_87 Start: 35250, Stop: 37853, Start Num: 24

Candidate Starts for ScottMcG\_87:

(Start: 24 @35250 has 152 MA's), (33, 35319), (34, 35325), (Start: 37 @35343 has 2 MA's), (43, 35379), (69, 35487), (72, 35499), (89, 35664), (90, 35670), (100, 35865), (103, 35886), (105, 35907), (106, 35916), (112, 35973), (114, 36015), (116, 36069), (117, 36114), (125, 36183), (127, 36219), (129, 36246), (131, 36273), (135, 36333), (138, 36366), (139, 36369), (142, 36390), (144, 36417), (148, 36489), (152, 36558), (157, 36609), (208, 36819), (209, 36825), (210, 36831), (213, 36864), (214, 36906), (216, 36918), (218, 36936), (241, 37110), (243, 37119), (245, 37122), (246, 37125), (247, 37137), (249, 37149), (250, 37152), (254, 37167), (268, 37233), (271, 37248), (286, 37392), (287, 37404), (307, 37584), (310, 37602), (319, 37683), (323, 37719), (326, 37740), (329, 37806),

Gene: Sebata\_91 Start: 36733, Stop: 39357, Start Num: 24

Candidate Starts for Sebata\_91:

(Start: 24 @36733 has 152 MA's), (33, 36802), (34, 36808), (Start: 37 @36826 has 2 MA's), (43, 36862), (69, 36970), (72, 36982), (89, 37147), (90, 37153), (100, 37348), (103, 37369), (105, 37390), (106, 37399), (112, 37456), (114, 37498), (116, 37552), (117, 37597), (125, 37666), (127, 37702), (129, 37729), (131, 37756), (135, 37816), (138, 37849), (139, 37852), (143, 37882), (144, 37900), (152, 38041), (157, 38092), (208, 38302), (209, 38308), (213, 38347), (214, 38389), (216, 38401), (218, 38419), (241, 38593), (243, 38602), (245, 38605), (246, 38608), (247, 38620), (249, 38632), (250, 38635), (254, 38650), (268, 38737), (271, 38752), (286, 38896), (287, 38908), (307, 39088), (310, 39106), (319, 39187), (323, 39223), (326, 39244), (329, 39310),

Gene: Settecandela\_46 Start: 26549, Stop: 28942, Start Num: 28

Candidate Starts for Settecandela\_46:

(Start: 28 @26549 has 2 MA's), (40, 26636), (42, 26660), (44, 26681), (51, 26708), (52, 26717), (58, 26759), (61, 26771), (65, 26786), (72, 26828), (73, 26837), (79, 26873), (85, 26918), (86, 26930), (87, 26954), (92, 27047), (102, 27200), (105, 27233), (106, 27242), (107, 27254), (123, 27473), (126, 27497), (127, 27530), (130, 27560), (131, 27584), (132, 27614), (135, 27644), (137, 27659), (140, 27689), (144, 27728), (146, 27764), (147, 27773), (149, 27860), (152, 27875), (162, 27998), (165, 28043), (210, 28148), (212, 28163), (214, 28223), (215, 28232), (217, 28250), (218, 28253), (221, 28268), (225, 28313), (227, 28331), (230, 28358), (233, 28388), (237, 28409), (238, 28412), (245, 28433), (249, 28457), (252, 28466), (254, 28475), (259, 28511), (263, 28535), (267, 28568), (269, 28580), (285, 28718), (287, 28733), (297, 28796), (299, 28805), (307, 28892), (312, 28928),

Gene: Shaqnato\_82 Start: 33972, Stop: 36596, Start Num: 24

Candidate Starts for Shaqnato\_82:

(Start: 24 @33972 has 152 MA's), (33, 34041), (34, 34047), (Start: 37 @34065 has 2 MA's), (43, 34101), (69, 34209), (72, 34221), (89, 34386), (90, 34392), (100, 34587), (103, 34608), (105, 34629), (106, 34638), (112, 34695), (114, 34737), (116, 34791), (117, 34836), (125, 34905), (127, 34941), (129, 34968), (131, 34995), (135, 35055), (138, 35088), (139, 35091), (143, 35121), (144, 35139), (152, 35280), (157, 35331), (208, 35541), (209, 35547), (213, 35586), (214, 35628), (216, 35640), (218, 35658), (241, 35832), (243, 35841), (245, 35844), (246, 35847), (247, 35859), (249, 35871), (250, 35874), (254, 35889), (268, 35976), (271, 35991), (286, 36135), (287, 36147), (307, 36327), (310, 36345), (319, 36426), (323, 36462), (326, 36483), (329, 36549),

Gene: Shelob\_92 Start: 37235, Stop: 39859, Start Num: 24

Candidate Starts for Shelob\_92:

(Start: 24 @37235 has 152 MA's), (33, 37304), (34, 37310), (Start: 37 @37328 has 2 MA's), (43, 37364), (69, 37472), (72, 37484), (89, 37649), (90, 37655), (100, 37850), (103, 37871), (105, 37892), (106, 37901), (112, 37958), (114, 38000), (116, 38054), (117, 38099), (125, 38168), (127, 38204), (129, 38231), (131, 38258), (135, 38318), (138, 38351), (139, 38354), (143, 38384), (144, 38402), (152, 38543), (157, 38594), (208, 38804), (209, 38810), (213, 38849), (214, 38891), (216, 38903),

(218, 38921), (241, 39095), (243, 39104), (245, 39107), (246, 39110), (247, 39122), (249, 39134), (250, 39137), (254, 39152), (268, 39239), (271, 39254), (286, 39398), (287, 39410), (307, 39590), (310, 39608), (319, 39689), (323, 39725), (326, 39746), (329, 39812),

Gene: ShiaLabeouf\_90 Start: 35640, Stop: 39068, Start Num: 1

Candidate Starts for ShiaLabeouf\_90:

(Start: 1 @35640 has 18 MA's), (Start: 2 @35709 has 1 MA's), (3, 35715), (4, 35733), (6, 35769), (10, 35877), (11, 35889), (13, 36012), (14, 36063), (15, 36117), (16, 36129), (17, 36150), (32, 36444), (38, 36489), (49, 36567), (55, 36603), (63, 36636), (67, 36651), (74, 36696), (76, 36705), (80, 36738), (83, 36774), (89, 36858), (90, 36864), (100, 37059), (103, 37080), (105, 37101), (106, 37110), (112, 37167), (114, 37209), (116, 37263), (117, 37308), (125, 37377), (127, 37413), (129, 37440), (131, 37467), (135, 37527), (138, 37560), (139, 37563), (143, 37593), (144, 37611), (152, 37752), (157, 37803), (208, 38013), (209, 38019), (213, 38058), (214, 38100), (216, 38112), (218, 38130), (241, 38304), (243, 38313), (245, 38316), (246, 38319), (247, 38331), (249, 38343), (250, 38346), (254, 38361), (268, 38448), (271, 38463), (286, 38607), (287, 38619), (307, 38799), (310, 38817), (319, 38898), (323, 38934), (326, 38955), (329, 39021),

Gene: Shifa\_79 Start: 33706, Stop: 36309, Start Num: 24

Candidate Starts for Shifa\_79:

(Start: 24 @33706 has 152 MA's), (33, 33775), (34, 33781), (Start: 37 @33799 has 2 MA's), (43, 33835), (69, 33943), (72, 33955), (87, 34081), (90, 34126), (100, 34321), (103, 34342), (105, 34363), (106, 34372), (112, 34429), (114, 34471), (116, 34525), (117, 34570), (125, 34639), (127, 34675), (129, 34702), (131, 34729), (135, 34789), (138, 34822), (139, 34825), (144, 34873), (148, 34945), (152, 35014), (157, 35065), (208, 35275), (209, 35281), (210, 35287), (213, 35320), (214, 35362), (216, 35374), (218, 35392), (241, 35566), (243, 35575), (245, 35578), (246, 35581), (247, 35593), (249, 35605), (250, 35608), (254, 35623), (268, 35689), (271, 35704), (286, 35848), (287, 35860), (307, 36040), (310, 36058), (319, 36139), (323, 36175), (326, 36196), (329, 36262),

Gene: Shnickers\_90 Start: 35200, Stop: 38628, Start Num: 1

Candidate Starts for Shnickers\_90:

(Start: 1 @35200 has 18 MA's), (Start: 2 @35269 has 1 MA's), (3, 35275), (4, 35293), (6, 35329), (10, 35437), (11, 35449), (13, 35572), (14, 35623), (15, 35677), (16, 35689), (17, 35710), (32, 36004), (38, 36049), (49, 36127), (55, 36163), (63, 36196), (67, 36211), (74, 36256), (76, 36265), (80, 36298), (83, 36334), (89, 36418), (90, 36424), (100, 36619), (103, 36640), (105, 36661), (106, 36670), (112, 36727), (114, 36769), (116, 36823), (117, 36868), (125, 36937), (127, 36973), (129, 37000), (131, 37027), (135, 37087), (138, 37120), (139, 37123), (143, 37153), (144, 37171), (152, 37312), (157, 37363), (208, 37573), (209, 37579), (213, 37618), (214, 37660), (216, 37672), (218, 37690), (241, 37864), (243, 37873), (245, 37876), (246, 37879), (247, 37891), (249, 37903), (250, 37906), (254, 37921), (268, 38008), (271, 38023), (286, 38167), (287, 38179), (307, 38359), (310, 38377), (319, 38458), (323, 38494), (326, 38515), (329, 38581),

Gene: Shrimp\_90 Start: 36247, Stop: 38871, Start Num: 24

Candidate Starts for Shrimp\_90:

(Start: 24 @36247 has 152 MA's), (33, 36316), (34, 36322), (Start: 37 @36340 has 2 MA's), (43, 36376), (69, 36484), (72, 36496), (89, 36661), (90, 36667), (100, 36862), (103, 36883), (105, 36904), (106, 36913), (112, 36970), (114, 37012), (116, 37066), (117, 37111), (125, 37180), (127, 37216), (129, 37243), (131, 37270), (135, 37330), (138, 37363), (139, 37366), (143, 37396), (144, 37414), (152, 37555), (157, 37606), (208, 37816), (209, 37822), (213, 37861), (214, 37903), (216, 37915), (218, 37933), (241, 38107), (243, 38116), (245, 38119), (246, 38122), (247, 38134), (249, 38146), (250, 38149), (254, 38164), (268, 38251), (271, 38266), (286, 38410), (287, 38422), (307, 38602), (310, 38620), (319, 38701), (323, 38737), (326, 38758), (329, 38824),

Gene: SilverDipper\_91 Start: 35248, Stop: 37872, Start Num: 24

Candidate Starts for SilverDipper\_91:

(Start: 24 @35248 has 152 MA's), (33, 35317), (34, 35323), (Start: 37 @35341 has 2 MA's), (43, 35377), (69, 35485), (72, 35497), (89, 35662), (90, 35668), (100, 35863), (103, 35884), (105, 35905), (106, 35914), (112, 35971), (114, 36013), (116, 36067), (117, 36112), (125, 36181), (127, 36217), (129, 36244), (131, 36271), (135, 36331), (138, 36364), (139, 36367), (143, 36397), (144, 36415), (152, 36556), (157, 36607), (208, 36817), (209, 36823), (213, 36862), (214, 36904), (216, 36916), (218, 36934), (241, 37108), (243, 37117), (245, 37120), (246, 37123), (247, 37135), (249, 37147), (250, 37150), (254, 37165), (268, 37252), (271, 37267), (286, 37411), (287, 37423), (307, 37603), (310, 37621), (319, 37702), (323, 37738), (326, 37759), (329, 37825),

Gene: Skog\_151 Start: 66444, Stop: 69053, Start Num: 29

Candidate Starts for Skog\_151:

(Start: 29 @66444 has 3 MA's), (Start: 31 @66462 has 1 MA's), (50, 66561), (57, 66600), (72, 66657), (78, 66687), (92, 66876), (94, 66903), (100, 67023), (102, 67032), (103, 67044), (104, 67050), (105, 67065), (106, 67074), (107, 67086), (117, 67272), (125, 67341), (127, 67377), (128, 67401), (133, 67479), (135, 67491), (144, 67575), (147, 67620), (150, 67704), (151, 67713), (152, 67716), (208, 67977), (209, 67983), (214, 68064), (215, 68073), (216, 68076), (218, 68094), (222, 68112), (228, 68187), (229, 68205), (234, 68247), (238, 68262), (241, 68271), (244, 68289), (245, 68295), (246, 68298), (256, 68352), (257, 68367), (272, 68463), (273, 68466), (281, 68544), (284, 68589), (289, 68628), (291, 68652), (296, 68667), (298, 68685), (303, 68724), (304, 68742), (310, 68805), (311, 68817), (318, 68868), (323, 68913), (327, 68994), (329, 69006), (331, 69027),

Gene: SmallFry\_90 Start: 35199, Stop: 37823, Start Num: 24

Candidate Starts for SmallFry\_90:

(Start: 24 @35199 has 152 MA's), (33, 35268), (34, 35274), (Start: 37 @35292 has 2 MA's), (43, 35328), (69, 35436), (72, 35448), (89, 35613), (90, 35619), (100, 35814), (103, 35835), (105, 35856), (106, 35865), (112, 35922), (114, 35964), (116, 36018), (117, 36063), (125, 36132), (127, 36168), (129, 36195), (131, 36222), (135, 36282), (136, 36294), (138, 36315), (139, 36318), (143, 36348), (144, 36366), (152, 36507), (157, 36558), (208, 36768), (209, 36774), (213, 36813), (214, 36855), (216, 36867), (218, 36885), (241, 37059), (243, 37068), (245, 37071), (246, 37074), (247, 37086), (249, 37098), (250, 37101), (254, 37116), (268, 37203), (271, 37218), (286, 37362), (287, 37374), (307, 37554), (310, 37572), (319, 37653), (323, 37689), (326, 37710), (329, 37776),

Gene: Spec\_85 Start: 34965, Stop: 38393, Start Num: 1

Candidate Starts for Spec\_85:

(Start: 1 @34965 has 18 MA's), (Start: 2 @35034 has 1 MA's), (3, 35040), (4, 35058), (6, 35094), (10, 35202), (11, 35214), (13, 35337), (14, 35388), (15, 35442), (16, 35454), (17, 35475), (32, 35769), (38, 35814), (49, 35892), (55, 35928), (63, 35961), (67, 35976), (74, 36021), (76, 36030), (80, 36063), (83, 36099), (89, 36183), (90, 36189), (100, 36384), (103, 36405), (105, 36426), (106, 36435), (112, 36492), (114, 36534), (116, 36588), (117, 36633), (125, 36702), (127, 36738), (129, 36765), (131, 36792), (135, 36852), (138, 36885), (139, 36888), (143, 36918), (144, 36936), (152, 37077), (157, 37128), (208, 37338), (209, 37344), (213, 37383), (214, 37425), (216, 37437), (218, 37455), (241, 37629), (243, 37638), (245, 37641), (246, 37644), (247, 37656), (249, 37668), (250, 37671), (254, 37686), (268, 37773), (271, 37788), (286, 37932), (287, 37944), (307, 38124), (310, 38142), (319, 38223), (323, 38259), (326, 38280), (329, 38346),

Gene: Specks\_96 Start: 37983, Stop: 40607, Start Num: 24

Candidate Starts for Specks\_96:

(Start: 24 @37983 has 152 MA's), (33, 38052), (34, 38058), (Start: 37 @38076 has 2 MA's), (43, 38112), (69, 38220), (72, 38232), (89, 38397), (90, 38403), (100, 38598), (103, 38619), (105, 38640), (106, 38649), (112, 38706), (114, 38748), (116, 38802), (117, 38847), (125, 38916), (127, 38952), (129, 38979), (131, 39006), (135, 39066), (136, 39078), (138, 39099), (139, 39102), (143, 39132), (144, 39150), (152, 39291), (157, 39342), (208, 39552), (209, 39558), (213, 39597), (214, 39639),

(216, 39651), (218, 39669), (241, 39843), (243, 39852), (245, 39855), (246, 39858), (247, 39870), (249, 39882), (250, 39885), (254, 39900), (268, 39987), (271, 40002), (286, 40146), (287, 40158), (307, 40338), (310, 40356), (319, 40437), (323, 40473), (326, 40494), (329, 40560),

Gene: Sprinklers\_85 Start: 34469, Stop: 37093, Start Num: 24

Candidate Starts for Sprinklers\_85:

(Start: 24 @34469 has 152 MA's), (33, 34538), (34, 34544), (Start: 37 @34562 has 2 MA's), (43, 34598), (69, 34706), (72, 34718), (89, 34883), (90, 34889), (100, 35084), (103, 35105), (105, 35126), (106, 35135), (112, 35192), (114, 35234), (116, 35288), (117, 35333), (125, 35402), (127, 35438), (129, 35465), (131, 35492), (135, 35552), (138, 35585), (139, 35588), (143, 35618), (144, 35636), (152, 35777), (157, 35828), (208, 36038), (209, 36044), (213, 36083), (214, 36125), (216, 36137), (218, 36155), (241, 36329), (243, 36338), (245, 36341), (246, 36344), (247, 36356), (249, 36368), (250, 36371), (254, 36386), (268, 36473), (271, 36488), (286, 36632), (287, 36644), (307, 36824), (310, 36842), (319, 36923), (323, 36959), (326, 36980), (329, 37046),

Gene: Spud\_90 Start: 36211, Stop: 38814, Start Num: 24

Candidate Starts for Spud\_90:

(Start: 24 @36211 has 152 MA's), (33, 36280), (34, 36286), (Start: 37 @36304 has 2 MA's), (43, 36340), (69, 36448), (72, 36460), (89, 36625), (90, 36631), (100, 36826), (103, 36847), (105, 36868), (106, 36877), (112, 36934), (114, 36976), (116, 37030), (117, 37075), (125, 37144), (127, 37180), (129, 37207), (131, 37234), (135, 37294), (138, 37327), (139, 37330), (142, 37351), (144, 37378), (148, 37450), (152, 37519), (157, 37570), (208, 37780), (209, 37786), (210, 37792), (213, 37825), (214, 37867), (216, 37879), (218, 37897), (241, 38071), (243, 38080), (245, 38083), (246, 38086), (247, 38098), (249, 38110), (250, 38113), (254, 38128), (268, 38194), (271, 38209), (286, 38353), (287, 38365), (307, 38545), (310, 38563), (319, 38644), (323, 38680), (326, 38701), (329, 38767),

Gene: SrishMeg2525\_89 Start: 35579, Stop: 38203, Start Num: 24

Candidate Starts for SrishMeg2525\_89:

(Start: 24 @35579 has 152 MA's), (33, 35648), (34, 35654), (Start: 37 @35672 has 2 MA's), (43, 35708), (69, 35816), (72, 35828), (89, 35993), (90, 35999), (100, 36194), (103, 36215), (105, 36236), (106, 36245), (112, 36302), (114, 36344), (116, 36398), (117, 36443), (125, 36512), (127, 36548), (129, 36575), (131, 36602), (135, 36662), (138, 36695), (139, 36698), (143, 36728), (144, 36746), (152, 36887), (157, 36938), (208, 37148), (209, 37154), (213, 37193), (214, 37235), (216, 37247), (218, 37265), (241, 37439), (243, 37448), (245, 37451), (246, 37454), (247, 37466), (249, 37478), (250, 37481), (254, 37496), (268, 37583), (271, 37598), (286, 37742), (287, 37754), (307, 37934), (310, 37952), (319, 38033), (323, 38069), (326, 38090), (329, 38156),

Gene: StephanieG\_89 Start: 37059, Stop: 39683, Start Num: 24

Candidate Starts for StephanieG\_89:

(Start: 24 @37059 has 152 MA's), (33, 37128), (34, 37134), (Start: 37 @37152 has 2 MA's), (43, 37188), (69, 37296), (72, 37308), (89, 37473), (90, 37479), (100, 37674), (103, 37695), (105, 37716), (106, 37725), (112, 37782), (114, 37824), (116, 37878), (117, 37923), (125, 37992), (127, 38028), (129, 38055), (131, 38082), (135, 38142), (138, 38175), (139, 38178), (143, 38208), (144, 38226), (152, 38367), (157, 38418), (208, 38628), (209, 38634), (210, 38640), (213, 38673), (214, 38715), (216, 38727), (218, 38745), (241, 38919), (243, 38928), (245, 38931), (246, 38934), (247, 38946), (249, 38958), (250, 38961), (254, 38976), (268, 39063), (271, 39078), (286, 39222), (287, 39234), (307, 39414), (310, 39432), (319, 39513), (323, 39549), (326, 39570), (329, 39636),

Gene: Stormageddon\_11 Start: 9594, Stop: 12167, Start Num: 27

Candidate Starts for Stormageddon\_11:

(26, 9585), (Start: 27 @9594 has 3 MA's), (47, 9702), (60, 9765), (67, 9783), (71, 9810), (73, 9825), (76, 9837), (90, 9987), (92, 10035), (93, 10041), (99, 10143), (103, 10197), (105, 10218), (107, 10239), (113, 10302), (118, 10416), (119, 10425), (125, 10482), (126, 10485), (127, 10518), (134,

10629), (135, 10632), (138, 10665), (143, 10698), (144, 10716), (147, 10761), (151, 10854), (152, 10857), (154, 10878), (155, 10890), (161, 10971), (163, 10983), (209, 11124), (218, 11235), (251, 11451), (295, 11772), (305, 11886), (309, 11907), (322, 12021), (324, 12033), (325, 12042), (328, 12108), (329, 12117),

Gene: Stubby\_83 Start: 34297, Stop: 36900, Start Num: 24

Candidate Starts for Stubby\_83:

(Start: 24 @34297 has 152 MA's), (33, 34366), (34, 34372), (Start: 37 @34390 has 2 MA's), (43, 34426), (69, 34534), (72, 34546), (89, 34711), (90, 34717), (100, 34912), (103, 34933), (105, 34954), (106, 34963), (112, 35020), (114, 35062), (116, 35116), (117, 35161), (125, 35230), (127, 35266), (129, 35293), (131, 35320), (135, 35380), (138, 35413), (139, 35416), (142, 35437), (144, 35464), (148, 35536), (152, 35605), (157, 35656), (208, 35866), (209, 35872), (210, 35878), (213, 35911), (214, 35953), (216, 35965), (218, 35983), (241, 36157), (243, 36166), (245, 36169), (246, 36172), (247, 36184), (249, 36196), (250, 36199), (254, 36214), (268, 36280), (271, 36295), (286, 36439), (287, 36451), (307, 36631), (310, 36649), (319, 36730), (323, 36766), (326, 36787), (329, 36853),

Gene: StubbySaigey\_92 Start: 34536, Stop: 37160, Start Num: 24

Candidate Starts for StubbySaigey\_92:

(Start: 24 @34536 has 152 MA's), (33, 34605), (34, 34611), (Start: 37 @34629 has 2 MA's), (43, 34665), (69, 34773), (72, 34785), (89, 34950), (90, 34956), (100, 35151), (103, 35172), (105, 35193), (106, 35202), (112, 35259), (114, 35301), (116, 35355), (117, 35400), (125, 35469), (127, 35505), (129, 35532), (131, 35559), (135, 35619), (138, 35652), (139, 35655), (142, 35676), (144, 35703), (148, 35775), (152, 35844), (157, 35895), (208, 36105), (209, 36111), (210, 36117), (213, 36150), (214, 36192), (216, 36204), (218, 36222), (241, 36396), (243, 36405), (245, 36408), (246, 36411), (247, 36423), (249, 36435), (250, 36438), (254, 36453), (268, 36540), (271, 36555), (286, 36699), (287, 36711), (307, 36891), (310, 36909), (319, 36990), (323, 37026), (326, 37047), (329, 37113),

Gene: Tainan\_95 Start: 37633, Stop: 40257, Start Num: 24

Candidate Starts for Tainan\_95:

(Start: 24 @37633 has 152 MA's), (33, 37702), (34, 37708), (Start: 37 @37726 has 2 MA's), (43, 37762), (69, 37870), (72, 37882), (89, 38047), (90, 38053), (100, 38248), (103, 38269), (105, 38290), (106, 38299), (112, 38356), (114, 38398), (116, 38452), (117, 38497), (125, 38566), (127, 38602), (129, 38629), (131, 38656), (135, 38716), (138, 38749), (139, 38752), (143, 38782), (144, 38800), (152, 38941), (157, 38992), (208, 39202), (209, 39208), (213, 39247), (214, 39289), (216, 39301), (218, 39319), (241, 39493), (243, 39502), (245, 39505), (246, 39508), (247, 39520), (249, 39532), (250, 39535), (254, 39550), (268, 39637), (271, 39652), (286, 39796), (287, 39808), (307, 39988), (310, 40006), (319, 40087), (323, 40123), (326, 40144), (329, 40210),

Gene: Teardrop\_90 Start: 35307, Stop: 37931, Start Num: 24

Candidate Starts for Teardrop\_90:

(Start: 24 @35307 has 152 MA's), (33, 35376), (34, 35382), (Start: 37 @35400 has 2 MA's), (43, 35436), (69, 35544), (72, 35556), (89, 35721), (90, 35727), (100, 35922), (103, 35943), (105, 35964), (106, 35973), (112, 36030), (114, 36072), (116, 36126), (117, 36171), (125, 36240), (127, 36276), (129, 36303), (131, 36330), (135, 36390), (136, 36402), (138, 36423), (139, 36426), (143, 36456), (144, 36474), (152, 36615), (157, 36666), (208, 36876), (209, 36882), (213, 36921), (214, 36963), (216, 36975), (218, 36993), (241, 37167), (243, 37176), (245, 37179), (246, 37182), (247, 37194), (249, 37206), (250, 37209), (254, 37224), (268, 37311), (271, 37326), (286, 37470), (287, 37482), (307, 37662), (310, 37680), (319, 37761), (323, 37797), (326, 37818), (329, 37884),

Gene: TinyTim\_90 Start: 36243, Stop: 38867, Start Num: 24

Candidate Starts for TinyTim\_90:

(Start: 24 @36243 has 152 MA's), (33, 36312), (34, 36318), (Start: 37 @36336 has 2 MA's), (43, 36372), (69, 36480), (72, 36492), (89, 36657), (90, 36663), (100, 36858), (103, 36879), (105, 36900),

(106, 36909), (112, 36966), (114, 37008), (116, 37062), (117, 37107), (125, 37176), (127, 37212), (129, 37239), (131, 37266), (135, 37326), (138, 37359), (139, 37362), (143, 37392), (144, 37410), (152, 37551), (157, 37602), (208, 37812), (209, 37818), (213, 37857), (214, 37899), (216, 37911), (218, 37929), (241, 38103), (243, 38112), (245, 38115), (246, 38118), (247, 38130), (249, 38142), (250, 38145), (254, 38160), (268, 38247), (271, 38262), (286, 38406), (287, 38418), (307, 38598), (310, 38616), (319, 38697), (323, 38733), (326, 38754), (329, 38820),

Gene: Tonenili\_104 Start: 40235, Stop: 42874, Start Num: 24

Candidate Starts for Tonenili\_104:

(Start: 24 @40235 has 152 MA's), (33, 40304), (34, 40310), (43, 40364), (64, 40457), (69, 40487), (72, 40499), (76, 40520), (89, 40664), (90, 40670), (97, 40796), (100, 40865), (102, 40874), (106, 40916), (112, 40973), (114, 41015), (116, 41069), (117, 41114), (123, 41162), (125, 41183), (127, 41219), (129, 41246), (131, 41273), (133, 41321), (135, 41333), (138, 41366), (139, 41369), (142, 41390), (144, 41417), (148, 41489), (152, 41558), (157, 41609), (208, 41819), (209, 41825), (210, 41831), (213, 41864), (214, 41906), (216, 41918), (218, 41936), (241, 42110), (245, 42122), (247, 42137), (250, 42152), (254, 42167), (260, 42203), (268, 42257), (271, 42272), (286, 42416), (287, 42428), (310, 42623), (323, 42740), (326, 42761), (329, 42827),

Gene: Tortoise16\_88 Start: 36101, Stop: 38725, Start Num: 24

Candidate Starts for Tortoise16\_88:

(Start: 24 @36101 has 152 MA's), (33, 36170), (34, 36176), (Start: 37 @36194 has 2 MA's), (43, 36230), (69, 36338), (72, 36350), (89, 36515), (90, 36521), (100, 36716), (103, 36737), (105, 36758), (106, 36767), (112, 36824), (114, 36866), (116, 36920), (117, 36965), (125, 37034), (127, 37070), (129, 37097), (131, 37124), (135, 37184), (138, 37217), (139, 37220), (143, 37250), (144, 37268), (152, 37409), (157, 37460), (208, 37670), (209, 37676), (213, 37715), (214, 37757), (216, 37769), (218, 37787), (241, 37961), (243, 37970), (245, 37973), (246, 37976), (247, 37988), (249, 38000), (250, 38003), (254, 38018), (268, 38105), (271, 38120), (286, 38264), (287, 38276), (307, 38456), (310, 38474), (319, 38555), (323, 38591), (326, 38612), (329, 38678),

Gene: Trinitium\_86 Start: 34296, Stop: 36899, Start Num: 24

Candidate Starts for Trinitium\_86:

(Start: 24 @34296 has 152 MA's), (33, 34365), (34, 34371), (Start: 37 @34389 has 2 MA's), (43, 34425), (69, 34533), (72, 34545), (89, 34710), (90, 34716), (100, 34911), (103, 34932), (105, 34953), (106, 34962), (112, 35019), (114, 35061), (116, 35115), (117, 35160), (125, 35229), (127, 35265), (129, 35292), (131, 35319), (135, 35379), (138, 35412), (139, 35415), (142, 35436), (144, 35463), (148, 35535), (152, 35604), (157, 35655), (208, 35865), (209, 35871), (210, 35877), (213, 35910), (214, 35952), (216, 35964), (218, 35982), (241, 36156), (243, 36165), (245, 36168), (246, 36171), (247, 36183), (249, 36195), (250, 36198), (254, 36213), (268, 36279), (271, 36294), (286, 36438), (287, 36450), (307, 36630), (310, 36648), (319, 36729), (323, 36765), (326, 36786), (329, 36852),

Gene: Turret\_85 Start: 33962, Stop: 36565, Start Num: 24

Candidate Starts for Turret\_85:

(Start: 24 @33962 has 152 MA's), (33, 34031), (34, 34037), (Start: 37 @34055 has 2 MA's), (43, 34091), (69, 34199), (72, 34211), (89, 34376), (90, 34382), (100, 34577), (103, 34598), (105, 34619), (106, 34628), (112, 34685), (114, 34727), (116, 34781), (117, 34826), (125, 34895), (127, 34931), (129, 34958), (131, 34985), (135, 35045), (138, 35078), (139, 35081), (142, 35102), (144, 35129), (148, 35201), (152, 35270), (157, 35321), (208, 35531), (209, 35537), (210, 35543), (213, 35576), (214, 35618), (216, 35630), (218, 35648), (241, 35822), (243, 35831), (245, 35834), (246, 35837), (247, 35849), (249, 35861), (250, 35864), (254, 35879), (268, 35945), (271, 35960), (286, 36104), (287, 36116), (307, 36296), (310, 36314), (319, 36395), (323, 36431), (326, 36452), (329, 36518),

Gene: Tyke\_92 Start: 37005, Stop: 40433, Start Num: 1

Candidate Starts for Tyke\_92:

(Start: 1 @37005 has 18 MA's), (Start: 2 @37074 has 1 MA's), (3, 37080), (4, 37098), (6, 37134), (10, 37242), (11, 37254), (13, 37377), (14, 37428), (15, 37482), (16, 37494), (17, 37515), (32, 37809), (38, 37854), (49, 37932), (55, 37968), (63, 38001), (67, 38016), (74, 38061), (76, 38070), (80, 38103), (83, 38139), (89, 38223), (90, 38229), (100, 38424), (103, 38445), (105, 38466), (106, 38475), (112, 38532), (114, 38574), (116, 38628), (117, 38673), (125, 38742), (127, 38778), (129, 38805), (131, 38832), (135, 38892), (138, 38925), (139, 38928), (143, 38958), (144, 38976), (152, 39117), (157, 39168), (208, 39378), (209, 39384), (213, 39423), (214, 39465), (216, 39477), (218, 39495), (241, 39669), (243, 39678), (245, 39681), (246, 39684), (247, 39696), (249, 39708), (250, 39711), (254, 39726), (268, 39813), (271, 39828), (286, 39972), (287, 39984), (307, 40164), (310, 40182), (319, 40263), (323, 40299), (326, 40320), (329, 40386),

Gene: ValleyTerrace\_90 Start: 35248, Stop: 37872, Start Num: 24

Candidate Starts for ValleyTerrace\_90:

(Start: 24 @35248 has 152 MA's), (33, 35317), (34, 35323), (Start: 37 @35341 has 2 MA's), (43, 35377), (69, 35485), (72, 35497), (89, 35662), (90, 35668), (100, 35863), (103, 35884), (105, 35905), (106, 35914), (112, 35971), (114, 36013), (116, 36067), (117, 36112), (125, 36181), (127, 36217), (129, 36244), (131, 36271), (135, 36331), (138, 36364), (139, 36367), (143, 36397), (144, 36415), (152, 36556), (157, 36607), (208, 36817), (209, 36823), (213, 36862), (214, 36904), (216, 36916), (218, 36934), (241, 37108), (243, 37117), (245, 37120), (246, 37123), (247, 37135), (249, 37147), (250, 37150), (254, 37165), (268, 37252), (271, 37267), (286, 37411), (287, 37423), (307, 37603), (310, 37621), (319, 37702), (323, 37738), (326, 37759), (329, 37825),

Gene: Wally\_89 Start: 34798, Stop: 37422, Start Num: 24

Candidate Starts for Wally\_89:

(Start: 24 @34798 has 152 MA's), (33, 34867), (34, 34873), (Start: 37 @34891 has 2 MA's), (43, 34927), (69, 35035), (72, 35047), (89, 35212), (90, 35218), (100, 35413), (103, 35434), (105, 35455), (106, 35464), (112, 35521), (114, 35563), (116, 35617), (117, 35662), (125, 35731), (127, 35767), (129, 35794), (131, 35821), (135, 35881), (138, 35914), (139, 35917), (142, 35938), (144, 35965), (148, 36037), (152, 36106), (157, 36157), (208, 36367), (209, 36373), (213, 36412), (214, 36454), (216, 36466), (218, 36484), (241, 36658), (243, 36667), (245, 36670), (246, 36673), (247, 36685), (249, 36697), (250, 36700), (254, 36715), (268, 36802), (271, 36817), (286, 36961), (287, 36973), (307, 37153), (310, 37171), (319, 37252), (323, 37288), (326, 37309), (329, 37375),

Gene: Willis\_91 Start: 36138, Stop: 38762, Start Num: 24

Candidate Starts for Willis\_91:

(Start: 24 @36138 has 152 MA's), (33, 36207), (34, 36213), (Start: 37 @36231 has 2 MA's), (43, 36267), (69, 36375), (72, 36387), (89, 36552), (90, 36558), (100, 36753), (103, 36774), (105, 36795), (106, 36804), (112, 36861), (114, 36903), (116, 36957), (117, 37002), (125, 37071), (127, 37107), (129, 37134), (131, 37161), (135, 37221), (138, 37254), (139, 37257), (143, 37287), (144, 37305), (152, 37446), (157, 37497), (208, 37707), (209, 37713), (213, 37752), (214, 37794), (216, 37806), (218, 37824), (241, 37998), (243, 38007), (245, 38010), (246, 38013), (247, 38025), (249, 38037), (250, 38040), (254, 38055), (268, 38142), (271, 38157), (286, 38301), (287, 38313), (307, 38493), (310, 38511), (319, 38592), (323, 38628), (326, 38649), (329, 38715),

Gene: Yassified\_86 Start: 34529, Stop: 37132, Start Num: 24

Candidate Starts for Yassified\_86:

(Start: 24 @34529 has 152 MA's), (33, 34598), (34, 34604), (Start: 37 @34622 has 2 MA's), (43, 34658), (69, 34766), (72, 34778), (89, 34943), (90, 34949), (100, 35144), (103, 35165), (105, 35186), (106, 35195), (112, 35252), (114, 35294), (116, 35348), (117, 35393), (125, 35462), (127, 35498), (129, 35525), (131, 35552), (135, 35612), (138, 35645), (139, 35648), (143, 35678), (144, 35696), (152, 35837), (157, 35888), (208, 36098), (209, 36104), (213, 36143), (214, 36185), (216, 36197), (218, 36215), (241, 36389), (243, 36398), (245, 36401), (246, 36404), (247, 36416), (249, 36428), (250, 36431), (254, 36446), (268, 36512), (271, 36527), (286, 36671), (287, 36683), (307, 36863),



(310, 36881), (319, 36962), (323, 36998), (326, 37019), (329, 37085),

Gene: YemiJoy2021\_91 Start: 36240, Stop: 38864, Start Num: 24

Candidate Starts for YemiJoy2021\_91:

(Start: 24 @36240 has 152 MA's), (33, 36309), (34, 36315), (Start: 37 @36333 has 2 MA's), (43, 36369), (69, 36477), (72, 36489), (89, 36654), (90, 36660), (100, 36855), (103, 36876), (105, 36897), (106, 36906), (112, 36963), (114, 37005), (116, 37059), (117, 37104), (125, 37173), (127, 37209), (129, 37236), (131, 37263), (135, 37323), (138, 37356), (139, 37359), (143, 37389), (144, 37407), (152, 37548), (157, 37599), (208, 37809), (209, 37815), (213, 37854), (214, 37896), (216, 37908), (218, 37926), (241, 38100), (243, 38109), (245, 38112), (246, 38115), (247, 38127), (249, 38139), (250, 38142), (254, 38157), (268, 38244), (271, 38259), (286, 38403), (287, 38415), (307, 38595), (310, 38613), (319, 38694), (323, 38730), (326, 38751), (329, 38817),

Gene: YoungMoneyMata\_90 Start: 34999, Stop: 37623, Start Num: 24

Candidate Starts for YoungMoneyMata\_90:

(Start: 24 @34999 has 152 MA's), (33, 35068), (34, 35074), (Start: 37 @35092 has 2 MA's), (43, 35128), (69, 35236), (72, 35248), (89, 35413), (90, 35419), (100, 35614), (103, 35635), (105, 35656), (106, 35665), (112, 35722), (114, 35764), (116, 35818), (117, 35863), (125, 35932), (127, 35968), (129, 35995), (131, 36022), (135, 36082), (138, 36115), (139, 36118), (143, 36148), (144, 36166), (152, 36307), (157, 36358), (208, 36568), (209, 36574), (213, 36613), (214, 36655), (216, 36667), (218, 36685), (241, 36859), (243, 36868), (245, 36871), (246, 36874), (247, 36886), (249, 36898), (250, 36901), (254, 36916), (268, 37003), (271, 37018), (286, 37162), (287, 37174), (307, 37354), (310, 37372), (319, 37453), (323, 37489), (326, 37510), (329, 37576),

Gene: Yucca\_90 Start: 36162, Stop: 38786, Start Num: 24

Candidate Starts for Yucca\_90:

(Start: 24 @36162 has 152 MA's), (33, 36231), (34, 36237), (Start: 37 @36255 has 2 MA's), (43, 36291), (69, 36399), (72, 36411), (89, 36576), (90, 36582), (100, 36777), (103, 36798), (105, 36819), (106, 36828), (112, 36885), (114, 36927), (116, 36981), (117, 37026), (125, 37095), (127, 37131), (129, 37158), (131, 37185), (135, 37245), (138, 37278), (139, 37281), (143, 37311), (144, 37329), (152, 37470), (157, 37521), (208, 37731), (209, 37737), (213, 37776), (214, 37818), (216, 37830), (218, 37848), (241, 38022), (243, 38031), (245, 38034), (246, 38037), (247, 38049), (249, 38061), (250, 38064), (254, 38079), (268, 38166), (271, 38181), (286, 38325), (287, 38337), (307, 38517), (310, 38535), (319, 38616), (323, 38652), (326, 38673), (329, 38739),

Gene: Zalkecks\_91 Start: 35928, Stop: 38552, Start Num: 24

Candidate Starts for Zalkecks\_91:

(Start: 24 @35928 has 152 MA's), (33, 35997), (34, 36003), (Start: 37 @36021 has 2 MA's), (43, 36057), (69, 36165), (72, 36177), (89, 36342), (90, 36348), (100, 36543), (103, 36564), (105, 36585), (106, 36594), (112, 36651), (114, 36693), (116, 36747), (117, 36792), (125, 36861), (127, 36897), (129, 36924), (131, 36951), (135, 37011), (138, 37044), (139, 37047), (143, 37077), (144, 37095), (152, 37236), (157, 37287), (208, 37497), (209, 37503), (213, 37542), (214, 37584), (216, 37596), (218, 37614), (241, 37788), (243, 37797), (245, 37800), (246, 37803), (247, 37815), (249, 37827), (250, 37830), (254, 37845), (268, 37932), (271, 37947), (286, 38091), (287, 38103), (307, 38283), (310, 38301), (319, 38382), (323, 38418), (326, 38439), (329, 38505),

Gene: Zeenon\_92 Start: 35855, Stop: 38479, Start Num: 24

Candidate Starts for Zeenon\_92:

(Start: 24 @35855 has 152 MA's), (33, 35924), (34, 35930), (Start: 37 @35948 has 2 MA's), (43, 35984), (69, 36092), (72, 36104), (89, 36269), (90, 36275), (100, 36470), (103, 36491), (105, 36512), (106, 36521), (112, 36578), (114, 36620), (116, 36674), (117, 36719), (125, 36788), (127, 36824), (129, 36851), (131, 36878), (135, 36938), (138, 36971), (139, 36974), (143, 37004), (144, 37022), (152, 37163), (157, 37214), (208, 37424), (209, 37430), (213, 37469), (214, 37511), (216, 37523),

(218, 37541), (241, 37715), (243, 37724), (245, 37727), (246, 37730), (247, 37742), (249, 37754),  
(250, 37757), (254, 37772), (268, 37859), (271, 37874), (286, 38018), (287, 38030), (307, 38210),  
(310, 38228), (319, 38309), (323, 38345), (326, 38366), (329, 38432),

Gene: ZygoTaiga\_89 Start: 36244, Stop: 38868, Start Num: 24

Candidate Starts for ZygoTaiga\_89:

(Start: 24 @36244 has 152 MA's), (33, 36313), (34, 36319), (Start: 37 @36337 has 2 MA's), (43,  
36373), (69, 36481), (72, 36493), (89, 36658), (90, 36664), (100, 36859), (103, 36880), (105, 36901),  
(106, 36910), (112, 36967), (114, 37009), (116, 37063), (117, 37108), (125, 37177), (127, 37213),  
(129, 37240), (131, 37267), (135, 37327), (138, 37360), (139, 37363), (143, 37393), (144, 37411),  
(152, 37552), (157, 37603), (208, 37813), (209, 37819), (213, 37858), (214, 37900), (216, 37912),  
(218, 37930), (241, 38104), (243, 38113), (245, 38116), (246, 38119), (247, 38131), (249, 38143),  
(250, 38146), (254, 38161), (268, 38248), (271, 38263), (286, 38407), (287, 38419), (307, 38599),  
(310, 38617), (319, 38698), (323, 38734), (326, 38755), (329, 38821),