



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 215957 Report

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

Pham number 215957 has 128 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Settecandela\_2, Phrappuccino\_2
- Track 2 : JPickles\_251, Blackbrain\_252, EasyJones\_254, Essence\_251, ChaylaJr\_252, Chargie21\_251, Basquiat\_251, ChickenPhender\_249, JustHall\_247, Morizzled23\_251, Cactojaque\_248, Wally\_251, Matsumoto\_251
- Track 3 : Ghost\_253, Naija\_254, Gamgam\_255, Pivoine\_254, Jedediah\_255, CindyLou\_254, Audrick\_256, Willis\_254, Latch\_253, ValleyTerrace\_254, YoungMoneyMata\_253, Atlantean\_253, Fludd\_253, Amataga\_254, Phlegm\_258, Ngannou\_248, Jemmno\_253, Babyland\_256, Ading\_256, SilverDipper\_258, GlutenPhree\_252, Quasimodo\_256, Momo\_255, InigoMontoya\_257
- Track 4 : Grungle\_235, Koguma\_252, FrayBell\_256, Izajani\_249, Issimir\_247, Mikro\_247, Nidhogg\_254, LolaVinca\_249, ZygoTaiga\_250, Iota\_250, LordLeafolot\_255, Specks\_258, Tainan\_253, NoodleTree\_249, Halldule\_245, InterFolia\_255, Lee7\_254
- Track 5 : StubbySaigey\_260, Dietrick\_242, EmmaElysia\_258, Melpomini\_248, Ablatia\_252, Kboogie\_257, Napoleon13\_250, BackyardAgain\_248, Turret\_244, Catera\_242, McGee\_255, Janiyra\_257, Littleton\_257, ScottMcG\_245, Trinitium\_250
- Track 6 : LinStu\_250
- Track 7 : Blackdragon\_248
- Track 8 : Spud\_245, Spec\_247, Drazdys\_250, ArcherS7\_254, LRRHood\_245, Phusco\_252, Sprinklers\_251, Jaygup\_250, Breeniome\_253, Capablanca\_258, Shaqnato\_244, Derek\_249, Flabslab\_248, Naval22\_258, Rahel\_255, SmallFry\_254, Rizal\_242, Gabriel\_256, CharlieB\_248, LifeSavor\_254
- Track 9 : Pier\_252
- Track 10 : IkeLoa\_247, RoMag\_248, Kamryn\_252, Lukilu\_242, BadAgartude\_247, StephanieG\_247
- Track 11 : Darko\_253, BananaFence\_251, Mangeria\_253
- Track 12 : Colt\_244
- Track 13 : JulietS\_245, Yassified\_249, ET08\_239, Ronan\_249
- Track 14 : Jezreel\_249
- Track 15 : QBert\_245, Sauce\_250
- Track 16 : Stubby\_236, Alice\_239
- Track 17 : Domi\_247
- Track 18 : Patter\_255
- Track 19 : Bonray\_256
- Track 20 : Cali\_243
- Track 21 : Cane17\_243
- Track 22 : Astraea\_249, Primadonna\_249

- Track 23 : Belieber\_247
- Track 24 : DirtMonster\_242
- Track 25 : Blubba\_241
- Track 26 : ErnieJ\_247
- Track 27 : Rabinovish\_246
- Track 28 : Chomp\_252
- Track 29 : Pinkcreek\_233
- Track 30 : Teardrop\_252

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

The start number called the most often in the published annotations is 4, it was called in 111 of the 113 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_252, Ading\_256, Alice\_239, Amataga\_254, ArcherS7\_254, Astraea\_249, Atlantean\_253, Audrick\_256, Babyland\_256, BackyardAgain\_248, BadAgartude\_247, BananaFence\_251, Basquiat\_251, Belieber\_247, Blackbrain\_252, Blackdragon\_248, Blubba\_241, Bonray\_256, Breeniome\_253, Cactojaque\_248, Cali\_243, Cane17\_243, Capablanca\_258, Catera\_242, Chargie21\_251, CharlieB\_248, ChaylaJr\_252, ChickenPhender\_249, Chomp\_252, CindyLou\_254, Colt\_244, Darko\_253, Derek\_249, Dietrick\_242, DirtMonster\_242, Domi\_247, Drazdys\_250, ET08\_239, EasyJones\_254, EmmaElysia\_258, ErnieJ\_247, Essence\_251, Flabslab\_248, Fludd\_253, FrayBell\_256, Gabriel\_256, Gangam\_255, Ghost\_253, GlutenPhree\_252, Grungle\_235, Halldule\_245, IkeLoa\_247, InigoMontoya\_257, InterFolia\_255, Iota\_250, Issimir\_247, Izajani\_249, JPickles\_251, Janiyra\_257, Jaygup\_250, Jedediah\_255, Jemmno\_253, Jezreel\_249, JulietS\_245, JustHall\_247, Kamryn\_252, Kboogie\_257, Koguma\_252, LRRHood\_245, Latch\_253, Lee7\_254, LifeSavor\_254, LinStu\_250, Littleton\_257, LolaVinca\_249, LordLeafolot\_255, Lukilu\_242, Mangeria\_253, Matsumoto\_251, McGee\_255, Melpomini\_248, Mikro\_247, Momo\_255, Morizzled23\_251, Naija\_254, Napoleon13\_250, Naval22\_258, Ngannou\_248, Nidhogg\_254, NoodleTree\_249, Patter\_255, Phlegm\_258, Phusco\_252, Pier\_252, Pinkcreek\_233, Pivoine\_254, Primadonna\_249, QBert\_245, Quasimodo\_256, Rabinovish\_246, Rahel\_255, Rizal\_242, RoMag\_248, Ronan\_249, Sauce\_250, ScottMcG\_245, Shaqnato\_244, SilverDipper\_258, SmallFry\_254, Spec\_247, Specks\_258, Sprinklers\_251, Spud\_245, StephanieG\_247, StubbySaigey\_260, Stubby\_236, Tainan\_253, Teardrop\_252, Trinitium\_250, Turret\_244, ValleyTerrace\_254, Wally\_251, Willis\_254, Yassified\_249, YoungMoneyMata\_253, ZygoTaiga\_250,

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

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

- Phrappuccino\_2, Settecandela\_2,

**Summary by start number:**

Start 2:

- Found in 2 of 128 ( 1.6% ) of genes in pham

- Manual Annotations of this start: 2 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phrappuccino\_2 (AA), Settecandela\_2 (AA),

#### Start 4:

- Found in 126 of 128 ( 98.4% ) of genes in pham
- Manual Annotations of this start: 111 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ablatia\_252 (C1), Ading\_256 (C1), Alice\_239 (C1), Amataga\_254 (C1), ArcherS7\_254 (C1), Astraea\_249 (C1), Atlantean\_253 (C1), Audrick\_256 (C1), Babyland\_256 (C1), BackyardAgain\_248 (C1), BadAgartude\_247 (C1), BananaFence\_251 (C1), Basquiat\_251 (C1), Belieber\_247 (C1), Blackbrain\_252 (C1), Blackdragon\_248 (C1), Blubba\_241 (C1), Bonray\_256 (C1), Breeniome\_253 (C1), Cactojaque\_248 (C1), Cali\_243 (C1), Cane17\_243 (C1), Capablanca\_258 (C1), Catera\_242 (C1), Chargie21\_251 (C1), CharlieB\_248 (C1), ChaylaJr\_252 (C1), ChickenPhender\_249 (C1), Chomp\_252 (C1), CindyLou\_254 (C1), Colt\_244 (C1), Darko\_253 (C1), Derek\_249 (C1), Dietrick\_242 (C1), DirtMonster\_242 (C1), Domi\_247 (C1), Drazdys\_250 (C1), ET08\_239 (C1), EasyJones\_254 (C1), EmmaElysia\_258 (C1), ErnieJ\_247 (C1), Essence\_251 (C1), Flabslab\_248 (C1), Fludd\_253 (C1), FrayBell\_256 (C1), Gabriel\_256 (C1), Gamgam\_255 (C1), Ghost\_253 (C1), GlutenPhree\_252 (C1), Grungle\_235 (C1), Halldule\_245 (C1), IkeLoa\_247 (C1), InigoMontoya\_257 (C1), InterFolia\_255 (C1), Iota\_250 (C1), Issimir\_247 (C1), Izajani\_249 (C1), JPickles\_251 (C1), Janiyr\_257 (C1), Jaygup\_250 (C1), Jedediah\_255 (C1), Jemmno\_253 (C1), Jezreel\_249 (C1), JulietS\_245 (C1), JustHall\_247 (C1), Kamryn\_252 (C1), Kboogie\_257 (C1), Koguma\_252 (C1), LRRHood\_245 (C1), Latch\_253 (C1), Lee7\_254 (C1), LifeSavor\_254 (C1), LinStu\_250 (C1), Littleton\_257 (C1), LolaVinca\_249 (C1), LordLeafolot\_255 (C1), Lukilu\_242 (C1), Mangeria\_253 (C1), Matsumoto\_251 (C1), McGee\_255 (C1), Melpomini\_248 (C1), Mikro\_247 (C1), Momo\_255 (C1), Morizzled23\_251 (C1), Naija\_254 (C1), Napoleon13\_250 (C1), Naval22\_258 (C1), Ngannou\_248 (C1), Nidhogg\_254 (C1), NoodleTree\_249 (C1), Patter\_255 (C1), Phlegm\_258 (C1), Phusco\_252 (C1), Pier\_252 (C1), Pinkcreek\_233 (C1), Pivoine\_254 (C1), Primadonna\_249 (C1), QBert\_245 (C1), Quasimodo\_256 (C1), Rabinovish\_246 (C1), Rahel\_255 (C1), Rizal\_242 (C1), RoMag\_248 (C1), Ronan\_249 (C1), Sauce\_250 (C1), ScottMcG\_245 (C1), Shaqnato\_244 (C1), SilverDipper\_258 (C1), SmallFry\_254 (C1), Spec\_247 (C1), Specks\_258 (C1), Sprinklers\_251 (C1), Spud\_245 (C1), StephanieG\_247 (C1), StubbySaigey\_260 (C1), Stubby\_236 (C1), Tainan\_253 (C1), Teardrop\_252 (C1), Trinitium\_250 (C1), Turret\_244 (C1), ValleyTerrace\_254 (C1), Wally\_251 (C1), Willis\_254 (C1), Yassified\_249 (C1), YoungMoneyMata\_253 (C1), ZygoTaiga\_250 (C1),

#### Summary by clusters:

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

Info for manual annotations of cluster AA:

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

Info for manual annotations of cluster C1:

- Start number 4 was manually annotated 111 times for cluster C1.

### **Gene Information:**

Gene: Ablatia\_252 Start: 145237, Stop: 148260, Start Num: 4

Candidate Starts for Ablatia\_252:

(1, 144955), (Start: 4 @145237 has 111 MA's), (5, 145303), (6, 145345), (7, 145369), (8, 145387), (9, 145426), (11, 145498), (12, 145513), (14, 145570), (15, 145576), (16, 145603), (19, 145678), (20, 145690), (23, 145765), (24, 145768), (29, 145876), (33, 145987), (35, 146074), (36, 146104), (37, 146122), (39, 146146), (41, 146161), (50, 146452), (51, 146512), (53, 146560), (54, 146569), (56, 146641), (58, 146743), (60, 146788), (62, 146818), (63, 146881), (64, 146896), (72, 147055), (73, 147079), (74, 147136), (77, 147223), (80, 147331), (81, 147391), (86, 147502), (87, 147514), (89, 147565), (92, 147622), (97, 147769), (101, 147892), (102, 147919), (103, 147922), (104, 147925), (105, 147928), (107, 147985), (108, 148033), (110, 148093), (111, 148102), (112, 148213),

Gene: Ading\_256 Start: 147670, Stop: 150693, Start Num: 4

Candidate Starts for Ading\_256:

(1, 147388), (Start: 4 @147670 has 111 MA's), (5, 147736), (6, 147778), (7, 147802), (8, 147820), (9, 147859), (11, 147931), (12, 147946), (14, 148003), (15, 148009), (16, 148036), (19, 148111), (20, 148123), (23, 148198), (24, 148201), (29, 148309), (33, 148420), (35, 148507), (36, 148537), (37, 148555), (39, 148579), (41, 148594), (50, 148885), (51, 148945), (53, 148993), (54, 149002), (56, 149074), (58, 149176), (60, 149221), (62, 149251), (63, 149314), (64, 149329), (72, 149488), (73, 149512), (74, 149569), (77, 149656), (80, 149764), (86, 149935), (87, 149947), (89, 149998), (92, 150055), (97, 150202), (101, 150325), (102, 150352), (103, 150355), (104, 150358), (105, 150361), (107, 150418), (108, 150466), (110, 150526), (111, 150535), (112, 150646),

Gene: Alice\_239 Start: 142901, Stop: 145924, Start Num: 4

Candidate Starts for Alice\_239:

(Start: 4 @142901 has 111 MA's), (5, 142967), (6, 143009), (7, 143033), (8, 143051), (9, 143090), (11, 143162), (12, 143177), (14, 143234), (15, 143240), (16, 143267), (19, 143342), (20, 143354), (23, 143429), (24, 143432), (29, 143540), (33, 143651), (35, 143738), (36, 143768), (37, 143786), (39, 143810), (41, 143825), (50, 144116), (51, 144176), (53, 144224), (54, 144233), (55, 144257), (58, 144407), (60, 144452), (62, 144482), (63, 144545), (64, 144560), (72, 144719), (73, 144743), (74, 144800), (77, 144887), (80, 144995), (81, 145055), (86, 145166), (87, 145178), (88, 145187), (89, 145229), (92, 145286), (97, 145433), (101, 145556), (102, 145583), (103, 145586), (104, 145589), (105, 145592), (107, 145649), (108, 145697), (110, 145757), (111, 145766), (112, 145877),

Gene: Amataga\_254 Start: 144824, Stop: 147847, Start Num: 4

Candidate Starts for Amataga\_254:

(1, 144542), (Start: 4 @144824 has 111 MA's), (5, 144890), (6, 144932), (7, 144956), (8, 144974), (9, 145013), (11, 145085), (12, 145100), (14, 145157), (15, 145163), (16, 145190), (19, 145265), (20, 145277), (23, 145352), (24, 145355), (29, 145463), (33, 145574), (35, 145661), (36, 145691), (37, 145709), (39, 145733), (41, 145748), (50, 146039), (51, 146099), (53, 146147), (54, 146156), (56, 146228), (58, 146330), (60, 146375), (62, 146405), (63, 146468), (64, 146483), (72, 146642), (73, 146666), (74, 146723), (77, 146810), (80, 146918), (86, 147089), (87, 147101), (89, 147152), (92, 147209), (97, 147356), (101, 147479), (102, 147506), (103, 147509), (104, 147512), (105, 147515), (107, 147572), (108, 147620), (110, 147680), (111, 147689), (112, 147800),

Gene: ArcherS7\_254 Start: 146569, Stop: 149592, Start Num: 4

Candidate Starts for ArcherS7\_254:

(1, 146287), (Start: 4 @146569 has 111 MA's), (5, 146635), (6, 146677), (7, 146701), (8, 146719), (9, 146758), (11, 146830), (12, 146845), (14, 146902), (15, 146908), (16, 146935), (19, 147010), (20, 147022), (23, 147097), (24, 147100), (29, 147208), (31, 147292), (33, 147319), (35, 147406), (36, 147436), (37, 147454), (39, 147478), (41, 147493), (50, 147784), (51, 147844), (53, 147892), (54, 147901), (56, 147973), (58, 148075), (60, 148120), (62, 148150), (63, 148213), (64, 148228), (72,

148387), (73, 148411), (74, 148468), (77, 148555), (80, 148663), (81, 148723), (86, 148834), (87, 148846), (88, 148855), (89, 148897), (92, 148954), (94, 149086), (97, 149101), (101, 149224), (102, 149251), (103, 149254), (104, 149257), (105, 149260), (107, 149317), (108, 149365), (110, 149425), (111, 149434), (112, 149545),

Gene: Astraea\_249 Start: 144877, Stop: 147900, Start Num: 4

Candidate Starts for Astraea\_249:

(1, 144595), (Start: 4 @144877 has 111 MA's), (5, 144943), (6, 144985), (7, 145009), (8, 145027), (9, 145066), (11, 145138), (12, 145153), (14, 145210), (15, 145216), (16, 145243), (19, 145318), (20, 145330), (23, 145405), (24, 145408), (29, 145516), (31, 145600), (33, 145627), (35, 145714), (36, 145744), (37, 145762), (39, 145786), (41, 145801), (50, 146092), (51, 146152), (53, 146200), (54, 146209), (55, 146233), (58, 146383), (60, 146428), (62, 146458), (63, 146521), (64, 146536), (72, 146695), (73, 146719), (74, 146776), (77, 146863), (80, 146971), (81, 147031), (86, 147142), (87, 147154), (89, 147205), (92, 147262), (97, 147409), (101, 147532), (102, 147559), (103, 147562), (104, 147565), (105, 147568), (107, 147625), (108, 147673), (110, 147733), (111, 147742), (112, 147853),

Gene: Atlantean\_253 Start: 144824, Stop: 147847, Start Num: 4

Candidate Starts for Atlantean\_253:

(1, 144542), (Start: 4 @144824 has 111 MA's), (5, 144890), (6, 144932), (7, 144956), (8, 144974), (9, 145013), (11, 145085), (12, 145100), (14, 145157), (15, 145163), (16, 145190), (19, 145265), (20, 145277), (23, 145352), (24, 145355), (29, 145463), (33, 145574), (35, 145661), (36, 145691), (37, 145709), (39, 145733), (41, 145748), (50, 146039), (51, 146099), (53, 146147), (54, 146156), (56, 146228), (58, 146330), (60, 146375), (62, 146405), (63, 146468), (64, 146483), (72, 146642), (73, 146666), (74, 146723), (77, 146810), (80, 146918), (86, 147089), (87, 147101), (89, 147152), (92, 147209), (97, 147356), (101, 147479), (102, 147506), (103, 147509), (104, 147512), (105, 147515), (107, 147572), (108, 147620), (110, 147680), (111, 147689), (112, 147800),

Gene: Audrick\_256 Start: 144714, Stop: 147737, Start Num: 4

Candidate Starts for Audrick\_256:

(1, 144432), (Start: 4 @144714 has 111 MA's), (5, 144780), (6, 144822), (7, 144846), (8, 144864), (9, 144903), (11, 144975), (12, 144990), (14, 145047), (15, 145053), (16, 145080), (19, 145155), (20, 145167), (23, 145242), (24, 145245), (29, 145353), (33, 145464), (35, 145551), (36, 145581), (37, 145599), (39, 145623), (41, 145638), (50, 145929), (51, 145989), (53, 146037), (54, 146046), (56, 146118), (58, 146220), (60, 146265), (62, 146295), (63, 146358), (64, 146373), (72, 146532), (73, 146556), (74, 146613), (77, 146700), (80, 146808), (86, 146979), (87, 146991), (89, 147042), (92, 147099), (97, 147246), (101, 147369), (102, 147396), (103, 147399), (104, 147402), (105, 147405), (107, 147462), (108, 147510), (110, 147570), (111, 147579), (112, 147690),

Gene: Babyland\_256 Start: 145601, Stop: 148624, Start Num: 4

Candidate Starts for Babyland\_256:

(1, 145319), (Start: 4 @145601 has 111 MA's), (5, 145667), (6, 145709), (7, 145733), (8, 145751), (9, 145790), (11, 145862), (12, 145877), (14, 145934), (15, 145940), (16, 145967), (19, 146042), (20, 146054), (23, 146129), (24, 146132), (29, 146240), (33, 146351), (35, 146438), (36, 146468), (37, 146486), (39, 146510), (41, 146525), (50, 146816), (51, 146876), (53, 146924), (54, 146933), (56, 147005), (58, 147107), (60, 147152), (62, 147182), (63, 147245), (64, 147260), (72, 147419), (73, 147443), (74, 147500), (77, 147587), (80, 147695), (86, 147866), (87, 147878), (89, 147929), (92, 147986), (97, 148133), (101, 148256), (102, 148283), (103, 148286), (104, 148289), (105, 148292), (107, 148349), (108, 148397), (110, 148457), (111, 148466), (112, 148577),

Gene: BackyardAgain\_248 Start: 142974, Stop: 145997, Start Num: 4

Candidate Starts for BackyardAgain\_248:

(1, 142692), (Start: 4 @142974 has 111 MA's), (5, 143040), (6, 143082), (7, 143106), (8, 143124), (9, 143163), (11, 143235), (12, 143250), (14, 143307), (15, 143313), (16, 143340), (19, 143415), (20,

143427), (23, 143502), (24, 143505), (29, 143613), (33, 143724), (35, 143811), (36, 143841), (37, 143859), (39, 143883), (41, 143898), (50, 144189), (51, 144249), (53, 144297), (54, 144306), (56, 144378), (58, 144480), (60, 144525), (62, 144555), (63, 144618), (64, 144633), (72, 144792), (73, 144816), (74, 144873), (77, 144960), (80, 145068), (81, 145128), (86, 145239), (87, 145251), (89, 145302), (92, 145359), (97, 145506), (101, 145629), (102, 145656), (103, 145659), (104, 145662), (105, 145665), (107, 145722), (108, 145770), (110, 145830), (111, 145839), (112, 145950),

Gene: BadAgartude\_247 Start: 144886, Stop: 147909, Start Num: 4

Candidate Starts for BadAgartude\_247:

(1, 144604), (Start: 4 @144886 has 111 MA's), (5, 144952), (6, 144994), (7, 145018), (8, 145036), (9, 145075), (11, 145147), (12, 145162), (14, 145219), (15, 145225), (16, 145252), (19, 145327), (20, 145339), (23, 145414), (24, 145417), (29, 145525), (31, 145609), (33, 145636), (35, 145723), (36, 145753), (37, 145771), (39, 145795), (41, 145810), (50, 146101), (51, 146161), (53, 146209), (54, 146218), (55, 146242), (58, 146392), (60, 146437), (62, 146467), (63, 146530), (64, 146545), (72, 146704), (73, 146728), (74, 146785), (77, 146872), (80, 146980), (81, 147040), (86, 147151), (87, 147163), (88, 147172), (89, 147214), (92, 147271), (94, 147403), (97, 147418), (101, 147541), (102, 147568), (103, 147571), (104, 147574), (105, 147577), (107, 147634), (108, 147682), (110, 147742), (111, 147751), (112, 147862),

Gene: BananaFence\_251 Start: 145506, Stop: 148529, Start Num: 4

Candidate Starts for BananaFence\_251:

(1, 145224), (Start: 4 @145506 has 111 MA's), (5, 145572), (6, 145614), (7, 145638), (8, 145656), (9, 145695), (11, 145767), (12, 145782), (14, 145839), (15, 145845), (16, 145872), (19, 145947), (20, 145959), (23, 146034), (24, 146037), (29, 146145), (33, 146256), (35, 146343), (36, 146373), (37, 146391), (39, 146415), (41, 146430), (50, 146721), (51, 146781), (53, 146829), (54, 146838), (55, 146862), (58, 147012), (60, 147057), (62, 147087), (63, 147150), (64, 147165), (72, 147324), (73, 147348), (74, 147405), (77, 147492), (80, 147600), (81, 147660), (86, 147771), (87, 147783), (88, 147792), (89, 147834), (92, 147891), (94, 148023), (97, 148038), (101, 148161), (102, 148188), (103, 148191), (104, 148194), (105, 148197), (107, 148254), (108, 148302), (110, 148362), (111, 148371), (112, 148482),

Gene: Basquiat\_251 Start: 143792, Stop: 146815, Start Num: 4

Candidate Starts for Basquiat\_251:

(1, 143510), (Start: 4 @143792 has 111 MA's), (5, 143858), (6, 143900), (7, 143924), (8, 143942), (9, 143981), (11, 144053), (12, 144068), (14, 144125), (15, 144131), (16, 144158), (19, 144233), (20, 144245), (23, 144320), (24, 144323), (29, 144431), (31, 144515), (33, 144542), (35, 144629), (36, 144659), (37, 144677), (39, 144701), (41, 144716), (50, 145007), (51, 145067), (53, 145115), (54, 145124), (56, 145196), (58, 145298), (60, 145343), (62, 145373), (63, 145436), (64, 145451), (72, 145610), (73, 145634), (74, 145691), (77, 145778), (80, 145886), (81, 145946), (86, 146057), (87, 146069), (89, 146120), (92, 146177), (97, 146324), (101, 146447), (102, 146474), (103, 146477), (104, 146480), (105, 146483), (107, 146540), (108, 146588), (110, 146648), (111, 146657), (112, 146768),

Gene: Belieber\_247 Start: 143919, Stop: 146942, Start Num: 4

Candidate Starts for Belieber\_247:

(1, 143637), (Start: 4 @143919 has 111 MA's), (5, 143985), (6, 144027), (7, 144051), (8, 144069), (9, 144108), (11, 144180), (12, 144195), (14, 144252), (15, 144258), (16, 144285), (19, 144360), (20, 144372), (23, 144447), (24, 144450), (29, 144558), (33, 144669), (35, 144756), (36, 144786), (37, 144804), (39, 144828), (41, 144843), (50, 145134), (51, 145194), (53, 145242), (54, 145251), (56, 145323), (58, 145425), (60, 145470), (62, 145500), (63, 145563), (64, 145578), (72, 145737), (73, 145761), (74, 145818), (77, 145905), (80, 146013), (81, 146073), (86, 146184), (87, 146196), (88, 146205), (89, 146247), (92, 146304), (94, 146436), (97, 146451), (101, 146574), (102, 146601), (103, 146604), (104, 146607), (105, 146610), (107, 146667), (108, 146715), (110, 146775), (111, 146784), (112, 146895),

Gene: Blackbrain\_252 Start: 145569, Stop: 148592, Start Num: 4

Candidate Starts for Blackbrain\_252:

(1, 145287), (Start: 4 @145569 has 111 MA's), (5, 145635), (6, 145677), (7, 145701), (8, 145719), (9, 145758), (11, 145830), (12, 145845), (14, 145902), (15, 145908), (16, 145935), (19, 146010), (20, 146022), (23, 146097), (24, 146100), (29, 146208), (31, 146292), (33, 146319), (35, 146406), (36, 146436), (37, 146454), (39, 146478), (41, 146493), (50, 146784), (51, 146844), (53, 146892), (54, 146901), (56, 146973), (58, 147075), (60, 147120), (62, 147150), (63, 147213), (64, 147228), (72, 147387), (73, 147411), (74, 147468), (77, 147555), (80, 147663), (81, 147723), (86, 147834), (87, 147846), (89, 147897), (92, 147954), (97, 148101), (101, 148224), (102, 148251), (103, 148254), (104, 148257), (105, 148260), (107, 148317), (108, 148365), (110, 148425), (111, 148434), (112, 148545),

Gene: Blackdragon\_248 Start: 145117, Stop: 148140, Start Num: 4

Candidate Starts for Blackdragon\_248:

(1, 144835), (Start: 4 @145117 has 111 MA's), (5, 145183), (6, 145225), (7, 145249), (8, 145267), (9, 145306), (11, 145378), (12, 145393), (14, 145450), (15, 145456), (16, 145483), (19, 145558), (20, 145570), (23, 145645), (24, 145648), (29, 145756), (31, 145840), (33, 145867), (35, 145954), (36, 145984), (37, 146002), (39, 146026), (41, 146041), (50, 146332), (51, 146392), (53, 146440), (54, 146449), (56, 146521), (58, 146623), (60, 146668), (62, 146698), (63, 146761), (64, 146776), (72, 146935), (73, 146959), (74, 147016), (77, 147103), (80, 147211), (81, 147271), (86, 147382), (87, 147394), (89, 147445), (92, 147502), (97, 147649), (101, 147772), (102, 147799), (103, 147802), (104, 147805), (105, 147808), (107, 147865), (108, 147913), (110, 147973), (111, 147982), (112, 148093),

Gene: Blubba\_241 Start: 148830, Stop: 151853, Start Num: 4

Candidate Starts for Blubba\_241:

(Start: 4 @148830 has 111 MA's), (5, 148896), (6, 148938), (7, 148962), (8, 148980), (9, 149019), (11, 149091), (12, 149106), (14, 149163), (15, 149169), (16, 149196), (19, 149271), (20, 149283), (23, 149358), (24, 149361), (29, 149469), (33, 149580), (35, 149667), (36, 149697), (37, 149715), (39, 149739), (41, 149754), (50, 150045), (51, 150105), (53, 150153), (54, 150162), (55, 150186), (58, 150336), (60, 150381), (62, 150411), (63, 150474), (64, 150489), (72, 150648), (73, 150672), (74, 150729), (77, 150816), (80, 150924), (81, 150984), (86, 151095), (87, 151107), (88, 151116), (89, 151158), (92, 151215), (97, 151362), (101, 151485), (102, 151512), (103, 151515), (104, 151518), (105, 151521), (107, 151578), (108, 151626), (110, 151686), (111, 151695), (112, 151806),

Gene: Bonray\_256 Start: 147369, Stop: 150392, Start Num: 4

Candidate Starts for Bonray\_256:

(1, 147087), (Start: 4 @147369 has 111 MA's), (5, 147435), (6, 147477), (7, 147501), (8, 147519), (9, 147558), (11, 147630), (12, 147645), (14, 147702), (15, 147708), (16, 147735), (19, 147810), (20, 147822), (23, 147897), (24, 147900), (29, 148008), (31, 148092), (33, 148119), (35, 148206), (36, 148236), (37, 148254), (39, 148278), (41, 148293), (50, 148584), (51, 148644), (53, 148692), (54, 148701), (56, 148773), (58, 148875), (60, 148920), (62, 148950), (63, 149013), (64, 149028), (72, 149187), (73, 149211), (74, 149268), (77, 149355), (80, 149463), (81, 149523), (86, 149634), (87, 149646), (88, 149655), (89, 149697), (92, 149754), (97, 149901), (101, 150024), (102, 150051), (103, 150054), (104, 150057), (105, 150060), (107, 150117), (108, 150165), (110, 150225), (111, 150234), (112, 150345),

Gene: Breeniome\_253 Start: 144324, Stop: 147347, Start Num: 4

Candidate Starts for Breeniome\_253:

(1, 144042), (Start: 4 @144324 has 111 MA's), (5, 144390), (6, 144432), (7, 144456), (8, 144474), (9, 144513), (11, 144585), (12, 144600), (14, 144657), (15, 144663), (16, 144690), (19, 144765), (20, 144777), (23, 144852), (24, 144855), (29, 144963), (31, 145047), (33, 145074), (35, 145161), (36, 145191), (37, 145209), (39, 145233), (41, 145248), (50, 145539), (51, 145599), (53, 145647), (54, 145656), (56, 145728), (58, 145830), (60, 145875), (62, 145905), (63, 145968), (64, 145983), (72,



146142), (73, 146166), (74, 146223), (77, 146310), (80, 146418), (81, 146478), (86, 146589), (87, 146601), (88, 146610), (89, 146652), (92, 146709), (94, 146841), (97, 146856), (101, 146979), (102, 147006), (103, 147009), (104, 147012), (105, 147015), (107, 147072), (108, 147120), (110, 147180), (111, 147189), (112, 147300),

Gene: Cactojaque\_248 Start: 144515, Stop: 147538, Start Num: 4

Candidate Starts for Cactojaque\_248:

(1, 144233), (Start: 4 @144515 has 111 MA's), (5, 144581), (6, 144623), (7, 144647), (8, 144665), (9, 144704), (11, 144776), (12, 144791), (14, 144848), (15, 144854), (16, 144881), (19, 144956), (20, 144968), (23, 145043), (24, 145046), (29, 145154), (31, 145238), (33, 145265), (35, 145352), (36, 145382), (37, 145400), (39, 145424), (41, 145439), (50, 145730), (51, 145790), (53, 145838), (54, 145847), (56, 145919), (58, 146021), (60, 146066), (62, 146096), (63, 146159), (64, 146174), (72, 146333), (73, 146357), (74, 146414), (77, 146501), (80, 146609), (81, 146669), (86, 146780), (87, 146792), (89, 146843), (92, 146900), (97, 147047), (101, 147170), (102, 147197), (103, 147200), (104, 147203), (105, 147206), (107, 147263), (108, 147311), (110, 147371), (111, 147380), (112, 147491),

Gene: Cali\_243 Start: 145294, Stop: 148317, Start Num: 4

Candidate Starts for Cali\_243:

(Start: 4 @145294 has 111 MA's), (5, 145360), (6, 145402), (7, 145426), (8, 145444), (9, 145483), (11, 145555), (12, 145570), (14, 145627), (15, 145633), (16, 145660), (19, 145735), (20, 145747), (23, 145822), (24, 145825), (29, 145933), (31, 146017), (33, 146044), (35, 146131), (36, 146161), (37, 146179), (39, 146203), (41, 146218), (50, 146509), (51, 146569), (53, 146617), (54, 146626), (56, 146698), (58, 146800), (60, 146845), (62, 146875), (63, 146938), (64, 146953), (72, 147112), (73, 147136), (74, 147193), (77, 147280), (80, 147388), (81, 147448), (86, 147559), (87, 147571), (88, 147580), (89, 147622), (92, 147679), (94, 147811), (97, 147826), (101, 147949), (102, 147976), (103, 147979), (104, 147982), (105, 147985), (107, 148042), (108, 148090), (110, 148150), (111, 148159), (112, 148270),

Gene: Cane17\_243 Start: 149239, Stop: 152262, Start Num: 4

Candidate Starts for Cane17\_243:

(Start: 4 @149239 has 111 MA's), (5, 149305), (6, 149347), (7, 149371), (8, 149389), (9, 149428), (11, 149500), (12, 149515), (14, 149572), (15, 149578), (16, 149605), (19, 149680), (20, 149692), (23, 149767), (24, 149770), (29, 149878), (31, 149962), (33, 149989), (35, 150076), (36, 150106), (37, 150124), (39, 150148), (41, 150163), (50, 150454), (51, 150514), (54, 150571), (55, 150595), (58, 150745), (60, 150790), (62, 150820), (63, 150883), (64, 150898), (72, 151057), (73, 151081), (74, 151138), (77, 151225), (80, 151333), (81, 151393), (86, 151504), (87, 151516), (88, 151525), (89, 151567), (92, 151624), (97, 151771), (101, 151894), (102, 151921), (103, 151924), (104, 151927), (105, 151930), (107, 151987), (108, 152035), (110, 152095), (111, 152104), (112, 152215),

Gene: Capablanca\_258 Start: 147548, Stop: 150571, Start Num: 4

Candidate Starts for Capablanca\_258:

(1, 147266), (Start: 4 @147548 has 111 MA's), (5, 147614), (6, 147656), (7, 147680), (8, 147698), (9, 147737), (11, 147809), (12, 147824), (14, 147881), (15, 147887), (16, 147914), (19, 147989), (20, 148001), (23, 148076), (24, 148079), (29, 148187), (31, 148271), (33, 148298), (35, 148385), (36, 148415), (37, 148433), (39, 148457), (41, 148472), (50, 148763), (51, 148823), (53, 148871), (54, 148880), (56, 148952), (58, 149054), (60, 149099), (62, 149129), (63, 149192), (64, 149207), (72, 149366), (73, 149390), (74, 149447), (77, 149534), (80, 149642), (81, 149702), (86, 149813), (87, 149825), (88, 149834), (89, 149876), (92, 149933), (94, 150065), (97, 150080), (101, 150203), (102, 150230), (103, 150233), (104, 150236), (105, 150239), (107, 150296), (108, 150344), (110, 150404), (111, 150413), (112, 150524),

Gene: Catera\_242 Start: 144037, Stop: 147060, Start Num: 4

Candidate Starts for Catera\_242:

(1, 143755), (Start: 4 @144037 has 111 MA's), (5, 144103), (6, 144145), (7, 144169), (8, 144187), (9, 144226), (11, 144298), (12, 144313), (14, 144370), (15, 144376), (16, 144403), (19, 144478), (20, 144490), (23, 144565), (24, 144568), (29, 144676), (33, 144787), (35, 144874), (36, 144904), (37, 144922), (39, 144946), (41, 144961), (50, 145252), (51, 145312), (53, 145360), (54, 145369), (56, 145441), (58, 145543), (60, 145588), (62, 145618), (63, 145681), (64, 145696), (72, 145855), (73, 145879), (74, 145936), (77, 146023), (80, 146131), (81, 146191), (86, 146302), (87, 146314), (89, 146365), (92, 146422), (97, 146569), (101, 146692), (102, 146719), (103, 146722), (104, 146725), (105, 146728), (107, 146785), (108, 146833), (110, 146893), (111, 146902), (112, 147013),

Gene: Chargie21\_251 Start: 143792, Stop: 146815, Start Num: 4

Candidate Starts for Chargie21\_251:

(1, 143510), (Start: 4 @143792 has 111 MA's), (5, 143858), (6, 143900), (7, 143924), (8, 143942), (9, 143981), (11, 144053), (12, 144068), (14, 144125), (15, 144131), (16, 144158), (19, 144233), (20, 144245), (23, 144320), (24, 144323), (29, 144431), (31, 144515), (33, 144542), (35, 144629), (36, 144659), (37, 144677), (39, 144701), (41, 144716), (50, 145007), (51, 145067), (53, 145115), (54, 145124), (56, 145196), (58, 145298), (60, 145343), (62, 145373), (63, 145436), (64, 145451), (72, 145610), (73, 145634), (74, 145691), (77, 145778), (80, 145886), (81, 145946), (86, 146057), (87, 146069), (89, 146120), (92, 146177), (97, 146324), (101, 146447), (102, 146474), (103, 146477), (104, 146480), (105, 146483), (107, 146540), (108, 146588), (110, 146648), (111, 146657), (112, 146768),

Gene: CharlieB\_248 Start: 145060, Stop: 148083, Start Num: 4

Candidate Starts for CharlieB\_248:

(1, 144778), (Start: 4 @145060 has 111 MA's), (5, 145126), (6, 145168), (7, 145192), (8, 145210), (9, 145249), (11, 145321), (12, 145336), (14, 145393), (15, 145399), (16, 145426), (19, 145501), (20, 145513), (23, 145588), (24, 145591), (29, 145699), (31, 145783), (33, 145810), (35, 145897), (36, 145927), (37, 145945), (39, 145969), (41, 145984), (50, 146275), (51, 146335), (53, 146383), (54, 146392), (56, 146464), (58, 146566), (60, 146611), (62, 146641), (63, 146704), (64, 146719), (72, 146878), (73, 146902), (74, 146959), (77, 147046), (80, 147154), (81, 147214), (86, 147325), (87, 147337), (88, 147346), (89, 147388), (92, 147445), (94, 147577), (97, 147592), (101, 147715), (102, 147742), (103, 147745), (104, 147748), (105, 147751), (107, 147808), (108, 147856), (110, 147916), (111, 147925), (112, 148036),

Gene: ChaylaJr\_252 Start: 144734, Stop: 147757, Start Num: 4

Candidate Starts for ChaylaJr\_252:

(1, 144452), (Start: 4 @144734 has 111 MA's), (5, 144800), (6, 144842), (7, 144866), (8, 144884), (9, 144923), (11, 144995), (12, 145010), (14, 145067), (15, 145073), (16, 145100), (19, 145175), (20, 145187), (23, 145262), (24, 145265), (29, 145373), (31, 145457), (33, 145484), (35, 145571), (36, 145601), (37, 145619), (39, 145643), (41, 145658), (50, 145949), (51, 146009), (53, 146057), (54, 146066), (56, 146138), (58, 146240), (60, 146285), (62, 146315), (63, 146378), (64, 146393), (72, 146552), (73, 146576), (74, 146633), (77, 146720), (80, 146828), (81, 146888), (86, 146999), (87, 147011), (89, 147062), (92, 147119), (97, 147266), (101, 147389), (102, 147416), (103, 147419), (104, 147422), (105, 147425), (107, 147482), (108, 147530), (110, 147590), (111, 147599), (112, 147710),

Gene: ChickenPhender\_249 Start: 143490, Stop: 146513, Start Num: 4

Candidate Starts for ChickenPhender\_249:

(1, 143208), (Start: 4 @143490 has 111 MA's), (5, 143556), (6, 143598), (7, 143622), (8, 143640), (9, 143679), (11, 143751), (12, 143766), (14, 143823), (15, 143829), (16, 143856), (19, 143931), (20, 143943), (23, 144018), (24, 144021), (29, 144129), (31, 144213), (33, 144240), (35, 144327), (36, 144357), (37, 144375), (39, 144399), (41, 144414), (50, 144705), (51, 144765), (53, 144813), (54, 144822), (56, 144894), (58, 144996), (60, 145041), (62, 145071), (63, 145134), (64, 145149), (72, 145308), (73, 145332), (74, 145389), (77, 145476), (80, 145584), (81, 145644), (86, 145755), (87, 145767), (89, 145818), (92, 145875), (97, 146022), (101, 146145), (102, 146172), (103, 146175), (104, 146178), (105, 146181), (107, 146238), (108, 146286), (110, 146346), (111, 146355), (112, 146466),

Gene: Chomp\_252 Start: 146926, Stop: 149949, Start Num: 4

Candidate Starts for Chomp\_252:

(1, 146644), (Start: 4 @146926 has 111 MA's), (5, 146992), (6, 147034), (7, 147058), (8, 147076), (9, 147115), (11, 147187), (12, 147202), (14, 147259), (15, 147265), (16, 147292), (19, 147367), (20, 147379), (23, 147454), (24, 147457), (29, 147565), (31, 147649), (33, 147676), (35, 147763), (36, 147793), (37, 147811), (39, 147835), (41, 147850), (50, 148141), (51, 148201), (53, 148249), (54, 148258), (56, 148330), (58, 148432), (60, 148477), (62, 148507), (63, 148570), (64, 148585), (72, 148744), (73, 148768), (74, 148825), (77, 148912), (80, 149020), (86, 149191), (87, 149203), (89, 149254), (92, 149311), (97, 149458), (101, 149581), (102, 149608), (103, 149611), (104, 149614), (105, 149617), (107, 149674), (108, 149722), (110, 149782), (111, 149791), (112, 149902),

Gene: CindyLou\_254 Start: 147186, Stop: 150209, Start Num: 4

Candidate Starts for CindyLou\_254:

(1, 146904), (Start: 4 @147186 has 111 MA's), (5, 147252), (6, 147294), (7, 147318), (8, 147336), (9, 147375), (11, 147447), (12, 147462), (14, 147519), (15, 147525), (16, 147552), (19, 147627), (20, 147639), (23, 147714), (24, 147717), (29, 147825), (33, 147936), (35, 148023), (36, 148053), (37, 148071), (39, 148095), (41, 148110), (50, 148401), (51, 148461), (53, 148509), (54, 148518), (56, 148590), (58, 148692), (60, 148737), (62, 148767), (63, 148830), (64, 148845), (72, 149004), (73, 149028), (74, 149085), (77, 149172), (80, 149280), (86, 149451), (87, 149463), (89, 149514), (92, 149571), (97, 149718), (101, 149841), (102, 149868), (103, 149871), (104, 149874), (105, 149877), (107, 149934), (108, 149982), (110, 150042), (111, 150051), (112, 150162),

Gene: Colt\_244 Start: 148431, Stop: 151454, Start Num: 4

Candidate Starts for Colt\_244:

(Start: 4 @148431 has 111 MA's), (5, 148497), (6, 148539), (7, 148563), (8, 148581), (9, 148620), (11, 148692), (12, 148707), (14, 148764), (15, 148770), (16, 148797), (19, 148872), (20, 148884), (23, 148959), (24, 148962), (29, 149070), (31, 149154), (33, 149181), (35, 149268), (36, 149298), (37, 149316), (39, 149340), (41, 149355), (50, 149646), (51, 149706), (53, 149754), (54, 149763), (55, 149787), (58, 149937), (60, 149982), (62, 150012), (63, 150075), (64, 150090), (72, 150249), (73, 150273), (74, 150330), (77, 150417), (80, 150525), (81, 150585), (86, 150696), (87, 150708), (88, 150717), (89, 150759), (92, 150816), (97, 150963), (101, 151086), (102, 151113), (103, 151116), (104, 151119), (105, 151122), (107, 151179), (108, 151227), (110, 151287), (111, 151296), (112, 151407),

Gene: Darko\_253 Start: 145510, Stop: 148533, Start Num: 4

Candidate Starts for Darko\_253:

(1, 145228), (Start: 4 @145510 has 111 MA's), (5, 145576), (6, 145618), (7, 145642), (8, 145660), (9, 145699), (11, 145771), (12, 145786), (14, 145843), (15, 145849), (16, 145876), (19, 145951), (20, 145963), (23, 146038), (24, 146041), (29, 146149), (33, 146260), (35, 146347), (36, 146377), (37, 146395), (39, 146419), (41, 146434), (50, 146725), (51, 146785), (53, 146833), (54, 146842), (55, 146866), (58, 147016), (60, 147061), (62, 147091), (63, 147154), (64, 147169), (72, 147328), (73, 147352), (74, 147409), (77, 147496), (80, 147604), (81, 147664), (86, 147775), (87, 147787), (88, 147796), (89, 147838), (92, 147895), (94, 148027), (97, 148042), (101, 148165), (102, 148192), (103, 148195), (104, 148198), (105, 148201), (107, 148258), (108, 148306), (110, 148366), (111, 148375), (112, 148486),

Gene: Derek\_249 Start: 146203, Stop: 149226, Start Num: 4

Candidate Starts for Derek\_249:

(1, 145921), (Start: 4 @146203 has 111 MA's), (5, 146269), (6, 146311), (7, 146335), (8, 146353), (9, 146392), (11, 146464), (12, 146479), (14, 146536), (15, 146542), (16, 146569), (19, 146644), (20, 146656), (23, 146731), (24, 146734), (29, 146842), (31, 146926), (33, 146953), (35, 147040), (36, 147070), (37, 147088), (39, 147112), (41, 147127), (50, 147418), (51, 147478), (53, 147526), (54, 147535), (56, 147607), (58, 147709), (60, 147754), (62, 147784), (63, 147847), (64, 147862), (72,

148021), (73, 148045), (74, 148102), (77, 148189), (80, 148297), (81, 148357), (86, 148468), (87, 148480), (88, 148489), (89, 148531), (92, 148588), (94, 148720), (97, 148735), (101, 148858), (102, 148885), (103, 148888), (104, 148891), (105, 148894), (107, 148951), (108, 148999), (110, 149059), (111, 149068), (112, 149179),

Gene: Dietrick\_242 Start: 144066, Stop: 147089, Start Num: 4

Candidate Starts for Dietrick\_242:

(1, 143784), (Start: 4 @144066 has 111 MA's), (5, 144132), (6, 144174), (7, 144198), (8, 144216), (9, 144255), (11, 144327), (12, 144342), (14, 144399), (15, 144405), (16, 144432), (19, 144507), (20, 144519), (23, 144594), (24, 144597), (29, 144705), (33, 144816), (35, 144903), (36, 144933), (37, 144951), (39, 144975), (41, 144990), (50, 145281), (51, 145341), (53, 145389), (54, 145398), (56, 145470), (58, 145572), (60, 145617), (62, 145647), (63, 145710), (64, 145725), (72, 145884), (73, 145908), (74, 145965), (77, 146052), (80, 146160), (81, 146220), (86, 146331), (87, 146343), (89, 146394), (92, 146451), (97, 146598), (101, 146721), (102, 146748), (103, 146751), (104, 146754), (105, 146757), (107, 146814), (108, 146862), (110, 146922), (111, 146931), (112, 147042),

Gene: DirtMonster\_242 Start: 144798, Stop: 147821, Start Num: 4

Candidate Starts for DirtMonster\_242:

(1, 144516), (Start: 4 @144798 has 111 MA's), (5, 144864), (6, 144906), (7, 144930), (8, 144948), (9, 144987), (11, 145059), (12, 145074), (14, 145131), (15, 145137), (16, 145164), (19, 145239), (20, 145251), (23, 145326), (24, 145329), (29, 145437), (31, 145521), (33, 145548), (35, 145635), (37, 145683), (38, 145698), (39, 145707), (41, 145722), (50, 146013), (51, 146073), (53, 146121), (54, 146130), (55, 146154), (58, 146304), (60, 146349), (62, 146379), (63, 146442), (64, 146457), (72, 146616), (73, 146640), (74, 146697), (77, 146784), (80, 146892), (81, 146952), (86, 147063), (87, 147075), (89, 147126), (92, 147183), (97, 147330), (101, 147453), (102, 147480), (103, 147483), (104, 147486), (105, 147489), (107, 147546), (108, 147594), (110, 147654), (111, 147663), (112, 147774),

Gene: Domi\_247 Start: 145405, Stop: 148428, Start Num: 4

Candidate Starts for Domi\_247:

(1, 145123), (Start: 4 @145405 has 111 MA's), (5, 145471), (6, 145513), (7, 145537), (8, 145555), (9, 145594), (11, 145666), (12, 145681), (14, 145738), (15, 145744), (16, 145771), (19, 145846), (20, 145858), (23, 145933), (24, 145936), (29, 146044), (31, 146128), (33, 146155), (35, 146242), (36, 146272), (37, 146290), (39, 146314), (41, 146329), (50, 146620), (51, 146680), (53, 146728), (54, 146737), (55, 146761), (58, 146911), (60, 146956), (62, 146986), (63, 147049), (64, 147064), (72, 147223), (73, 147247), (74, 147304), (77, 147391), (80, 147499), (81, 147559), (86, 147670), (87, 147682), (89, 147733), (92, 147790), (97, 147937), (101, 148060), (102, 148087), (103, 148090), (104, 148093), (105, 148096), (107, 148153), (108, 148201), (110, 148261), (111, 148270), (112, 148381),

Gene: Drazdys\_250 Start: 146210, Stop: 149233, Start Num: 4

Candidate Starts for Drazdys\_250:

(1, 145928), (Start: 4 @146210 has 111 MA's), (5, 146276), (6, 146318), (7, 146342), (8, 146360), (9, 146399), (11, 146471), (12, 146486), (14, 146543), (15, 146549), (16, 146576), (19, 146651), (20, 146663), (23, 146738), (24, 146741), (29, 146849), (31, 146933), (33, 146960), (35, 147047), (36, 147077), (37, 147095), (39, 147119), (41, 147134), (50, 147425), (51, 147485), (53, 147533), (54, 147542), (56, 147614), (58, 147716), (60, 147761), (62, 147791), (63, 147854), (64, 147869), (72, 148028), (73, 148052), (74, 148109), (77, 148196), (80, 148304), (81, 148364), (86, 148475), (87, 148487), (88, 148496), (89, 148538), (92, 148595), (94, 148727), (97, 148742), (101, 148865), (102, 148892), (103, 148895), (104, 148898), (105, 148901), (107, 148958), (108, 149006), (110, 149066), (111, 149075), (112, 149186),

Gene: ET08\_239 Start: 144534, Stop: 147557, Start Num: 4

Candidate Starts for ET08\_239:

(Start: 4 @144534 has 111 MA's), (5, 144600), (6, 144642), (7, 144666), (8, 144684), (9, 144723), (11, 144795), (12, 144810), (14, 144867), (15, 144873), (16, 144900), (19, 144975), (20, 144987), (23, 145062), (24, 145065), (29, 145173), (31, 145257), (33, 145284), (35, 145371), (36, 145401), (37, 145419), (39, 145443), (41, 145458), (50, 145749), (51, 145809), (53, 145857), (54, 145866), (55, 145890), (58, 146040), (60, 146085), (62, 146115), (63, 146178), (64, 146193), (72, 146352), (73, 146376), (74, 146433), (77, 146520), (80, 146628), (81, 146688), (86, 146799), (87, 146811), (88, 146820), (89, 146862), (92, 146919), (94, 147051), (97, 147066), (101, 147189), (102, 147216), (103, 147219), (104, 147222), (105, 147225), (107, 147282), (108, 147330), (110, 147390), (111, 147399), (112, 147510),

Gene: EasyJones\_254 Start: 144586, Stop: 147609, Start Num: 4

Candidate Starts for EasyJones\_254:

(1, 144304), (Start: 4 @144586 has 111 MA's), (5, 144652), (6, 144694), (7, 144718), (8, 144736), (9, 144775), (11, 144847), (12, 144862), (14, 144919), (15, 144925), (16, 144952), (19, 145027), (20, 145039), (23, 145114), (24, 145117), (29, 145225), (31, 145309), (33, 145336), (35, 145423), (36, 145453), (37, 145471), (39, 145495), (41, 145510), (50, 145801), (51, 145861), (53, 145909), (54, 145918), (56, 145990), (58, 146092), (60, 146137), (62, 146167), (63, 146230), (64, 146245), (72, 146404), (73, 146428), (74, 146485), (77, 146572), (80, 146680), (81, 146740), (86, 146851), (87, 146863), (89, 146914), (92, 146971), (97, 147118), (101, 147241), (102, 147268), (103, 147271), (104, 147274), (105, 147277), (107, 147334), (108, 147382), (110, 147442), (111, 147451), (112, 147562),

Gene: EmmaElysia\_258 Start: 147081, Stop: 150104, Start Num: 4

Candidate Starts for EmmaElysia\_258:

(1, 146799), (Start: 4 @147081 has 111 MA's), (5, 147147), (6, 147189), (7, 147213), (8, 147231), (9, 147270), (11, 147342), (12, 147357), (14, 147414), (15, 147420), (16, 147447), (19, 147522), (20, 147534), (23, 147609), (24, 147612), (29, 147720), (33, 147831), (35, 147918), (36, 147948), (37, 147966), (39, 147990), (41, 148005), (50, 148296), (51, 148356), (53, 148404), (54, 148413), (56, 148485), (58, 148587), (60, 148632), (62, 148662), (63, 148725), (64, 148740), (72, 148899), (73, 148923), (74, 148980), (77, 149067), (80, 149175), (81, 149235), (86, 149346), (87, 149358), (89, 149409), (92, 149466), (97, 149613), (101, 149736), (102, 149763), (103, 149766), (104, 149769), (105, 149772), (107, 149829), (108, 149877), (110, 149937), (111, 149946), (112, 150057),

Gene: ErnieJ\_247 Start: 143214, Stop: 146237, Start Num: 4

Candidate Starts for ErnieJ\_247:

(Start: 4 @143214 has 111 MA's), (5, 143280), (6, 143322), (7, 143346), (8, 143364), (9, 143403), (11, 143475), (12, 143490), (14, 143547), (15, 143553), (16, 143580), (19, 143655), (20, 143667), (23, 143742), (24, 143745), (29, 143853), (31, 143937), (33, 143964), (35, 144051), (36, 144081), (37, 144099), (39, 144123), (41, 144138), (50, 144429), (51, 144489), (53, 144537), (54, 144546), (56, 144618), (58, 144720), (60, 144765), (62, 144795), (63, 144858), (64, 144873), (72, 145032), (73, 145056), (74, 145113), (77, 145200), (80, 145308), (81, 145368), (86, 145479), (87, 145491), (89, 145542), (92, 145599), (97, 145746), (101, 145869), (102, 145896), (103, 145899), (104, 145902), (105, 145905), (107, 145962), (108, 146010), (110, 146070), (111, 146079), (112, 146190),

Gene: Essence\_251 Start: 145422, Stop: 148445, Start Num: 4

Candidate Starts for Essence\_251:

(1, 145140), (Start: 4 @145422 has 111 MA's), (5, 145488), (6, 145530), (7, 145554), (8, 145572), (9, 145611), (11, 145683), (12, 145698), (14, 145755), (15, 145761), (16, 145788), (19, 145863), (20, 145875), (23, 145950), (24, 145953), (29, 146061), (31, 146145), (33, 146172), (35, 146259), (36, 146289), (37, 146307), (39, 146331), (41, 146346), (50, 146637), (51, 146697), (53, 146745), (54, 146754), (56, 146826), (58, 146928), (60, 146973), (62, 147003), (63, 147066), (64, 147081), (72, 147240), (73, 147264), (74, 147321), (77, 147408), (80, 147516), (81, 147576), (86, 147687), (87, 147699), (89, 147750), (92, 147807), (97, 147954), (101, 148077), (102, 148104), (103, 148107), (104, 148110), (105, 148113), (107, 148170), (108, 148218), (110, 148278), (111, 148287), (112, 148398),

Gene: Flabslab\_248 Start: 142479, Stop: 145502, Start Num: 4

Candidate Starts for Flabslab\_248:

(1, 142197), (Start: 4 @142479 has 111 MA's), (5, 142545), (6, 142587), (7, 142611), (8, 142629), (9, 142668), (11, 142740), (12, 142755), (14, 142812), (15, 142818), (16, 142845), (19, 142920), (20, 142932), (23, 143007), (24, 143010), (29, 143118), (31, 143202), (33, 143229), (35, 143316), (36, 143346), (37, 143364), (39, 143388), (41, 143403), (50, 143694), (51, 143754), (53, 143802), (54, 143811), (56, 143883), (58, 143985), (60, 144030), (62, 144060), (63, 144123), (64, 144138), (72, 144297), (73, 144321), (74, 144378), (77, 144465), (80, 144573), (81, 144633), (86, 144744), (87, 144756), (88, 144765), (89, 144807), (92, 144864), (94, 144996), (97, 145011), (101, 145134), (102, 145161), (103, 145164), (104, 145167), (105, 145170), (107, 145227), (108, 145275), (110, 145335), (111, 145344), (112, 145455),

Gene: Fludd\_253 Start: 144298, Stop: 147321, Start Num: 4

Candidate Starts for Fludd\_253:

(1, 144016), (Start: 4 @144298 has 111 MA's), (5, 144364), (6, 144406), (7, 144430), (8, 144448), (9, 144487), (11, 144559), (12, 144574), (14, 144631), (15, 144637), (16, 144664), (19, 144739), (20, 144751), (23, 144826), (24, 144829), (29, 144937), (33, 145048), (35, 145135), (36, 145165), (37, 145183), (39, 145207), (41, 145222), (50, 145513), (51, 145573), (53, 145621), (54, 145630), (56, 145702), (58, 145804), (60, 145849), (62, 145879), (63, 145942), (64, 145957), (72, 146116), (73, 146140), (74, 146197), (77, 146284), (80, 146392), (86, 146563), (87, 146575), (89, 146626), (92, 146683), (97, 146830), (101, 146953), (102, 146980), (103, 146983), (104, 146986), (105, 146989), (107, 147046), (108, 147094), (110, 147154), (111, 147163), (112, 147274),

Gene: FrayBell\_256 Start: 144429, Stop: 147452, Start Num: 4

Candidate Starts for FrayBell\_256:

(1, 144147), (Start: 4 @144429 has 111 MA's), (5, 144495), (6, 144537), (7, 144561), (8, 144579), (9, 144618), (11, 144690), (12, 144705), (14, 144762), (15, 144768), (16, 144795), (19, 144870), (20, 144882), (23, 144957), (24, 144960), (29, 145068), (31, 145152), (33, 145179), (35, 145266), (36, 145296), (37, 145314), (39, 145338), (41, 145353), (50, 145644), (51, 145704), (53, 145752), (54, 145761), (55, 145785), (58, 145935), (60, 145980), (62, 146010), (63, 146073), (64, 146088), (72, 146247), (73, 146271), (74, 146328), (77, 146415), (80, 146523), (81, 146583), (86, 146694), (87, 146706), (88, 146715), (89, 146757), (92, 146814), (94, 146946), (97, 146961), (101, 147084), (102, 147111), (103, 147114), (104, 147117), (105, 147120), (107, 147177), (108, 147225), (110, 147285), (111, 147294), (112, 147405),

Gene: Gabriel\_256 Start: 144457, Stop: 147480, Start Num: 4

Candidate Starts for Gabriel\_256:

(1, 144175), (Start: 4 @144457 has 111 MA's), (5, 144523), (6, 144565), (7, 144589), (8, 144607), (9, 144646), (11, 144718), (12, 144733), (14, 144790), (15, 144796), (16, 144823), (19, 144898), (20, 144910), (23, 144985), (24, 144988), (29, 145096), (31, 145180), (33, 145207), (35, 145294), (36, 145324), (37, 145342), (39, 145366), (41, 145381), (50, 145672), (51, 145732), (53, 145780), (54, 145789), (56, 145861), (58, 145963), (60, 146008), (62, 146038), (63, 146101), (64, 146116), (72, 146275), (73, 146299), (74, 146356), (77, 146443), (80, 146551), (81, 146611), (86, 146722), (87, 146734), (88, 146743), (89, 146785), (92, 146842), (94, 146974), (97, 146989), (101, 147112), (102, 147139), (103, 147142), (104, 147145), (105, 147148), (107, 147205), (108, 147253), (110, 147313), (111, 147322), (112, 147433),

Gene: Gamgam\_255 Start: 144814, Stop: 147837, Start Num: 4

Candidate Starts for Gamgam\_255:

(1, 144532), (Start: 4 @144814 has 111 MA's), (5, 144880), (6, 144922), (7, 144946), (8, 144964), (9, 145003), (11, 145075), (12, 145090), (14, 145147), (15, 145153), (16, 145180), (19, 145255), (20, 145267), (23, 145342), (24, 145345), (29, 145453), (33, 145564), (35, 145651), (36, 145681), (37,

145699), (39, 145723), (41, 145738), (50, 146029), (51, 146089), (53, 146137), (54, 146146), (56, 146218), (58, 146320), (60, 146365), (62, 146395), (63, 146458), (64, 146473), (72, 146632), (73, 146656), (74, 146713), (77, 146800), (80, 146908), (86, 147079), (87, 147091), (89, 147142), (92, 147199), (97, 147346), (101, 147469), (102, 147496), (103, 147499), (104, 147502), (105, 147505), (107, 147562), (108, 147610), (110, 147670), (111, 147679), (112, 147790),

Gene: Ghost\_253 Start: 145438, Stop: 148461, Start Num: 4

Candidate Starts for Ghost\_253:

(1, 145156), (Start: 4 @145438 has 111 MA's), (5, 145504), (6, 145546), (7, 145570), (8, 145588), (9, 145627), (11, 145699), (12, 145714), (14, 145771), (15, 145777), (16, 145804), (19, 145879), (20, 145891), (23, 145966), (24, 145969), (29, 146077), (33, 146188), (35, 146275), (36, 146305), (37, 146323), (39, 146347), (41, 146362), (50, 146653), (51, 146713), (53, 146761), (54, 146770), (56, 146842), (58, 146944), (60, 146989), (62, 147019), (63, 147082), (64, 147097), (72, 147256), (73, 147280), (74, 147337), (77, 147424), (80, 147532), (86, 147703), (87, 147715), (89, 147766), (92, 147823), (97, 147970), (101, 148093), (102, 148120), (103, 148123), (104, 148126), (105, 148129), (107, 148186), (108, 148234), (110, 148294), (111, 148303), (112, 148414),

Gene: GlutenPhree\_252 Start: 144825, Stop: 147848, Start Num: 4

Candidate Starts for GlutenPhree\_252:

(1, 144543), (Start: 4 @144825 has 111 MA's), (5, 144891), (6, 144933), (7, 144957), (8, 144975), (9, 145014), (11, 145086), (12, 145101), (14, 145158), (15, 145164), (16, 145191), (19, 145266), (20, 145278), (23, 145353), (24, 145356), (29, 145464), (33, 145575), (35, 145662), (36, 145692), (37, 145710), (39, 145734), (41, 145749), (50, 146040), (51, 146100), (53, 146148), (54, 146157), (56, 146229), (58, 146331), (60, 146376), (62, 146406), (63, 146469), (64, 146484), (72, 146643), (73, 146667), (74, 146724), (77, 146811), (80, 146919), (86, 147090), (87, 147102), (89, 147153), (92, 147210), (97, 147357), (101, 147480), (102, 147507), (103, 147510), (104, 147513), (105, 147516), (107, 147573), (108, 147621), (110, 147681), (111, 147690), (112, 147801),

Gene: Grungle\_235 Start: 142703, Stop: 145726, Start Num: 4

Candidate Starts for Grungle\_235:

(1, 142421), (Start: 4 @142703 has 111 MA's), (5, 142769), (6, 142811), (7, 142835), (8, 142853), (9, 142892), (11, 142964), (12, 142979), (14, 143036), (15, 143042), (16, 143069), (19, 143144), (20, 143156), (23, 143231), (24, 143234), (29, 143342), (31, 143426), (33, 143453), (35, 143540), (36, 143570), (37, 143588), (39, 143612), (41, 143627), (50, 143918), (51, 143978), (53, 144026), (54, 144035), (55, 144059), (58, 144209), (60, 144254), (62, 144284), (63, 144347), (64, 144362), (72, 144521), (73, 144545), (74, 144602), (77, 144689), (80, 144797), (81, 144857), (86, 144968), (87, 144980), (88, 144989), (89, 145031), (92, 145088), (94, 145220), (97, 145235), (101, 145358), (102, 145385), (103, 145388), (104, 145391), (105, 145394), (107, 145451), (108, 145499), (110, 145559), (111, 145568), (112, 145679),

Gene: Halldule\_245 Start: 143885, Stop: 146908, Start Num: 4

Candidate Starts for Halldule\_245:

(1, 143603), (Start: 4 @143885 has 111 MA's), (5, 143951), (6, 143993), (7, 144017), (8, 144035), (9, 144074), (11, 144146), (12, 144161), (14, 144218), (15, 144224), (16, 144251), (19, 144326), (20, 144338), (23, 144413), (24, 144416), (29, 144524), (31, 144608), (33, 144635), (35, 144722), (36, 144752), (37, 144770), (39, 144794), (41, 144809), (50, 145100), (51, 145160), (53, 145208), (54, 145217), (55, 145241), (58, 145391), (60, 145436), (62, 145466), (63, 145529), (64, 145544), (72, 145703), (73, 145727), (74, 145784), (77, 145871), (80, 145979), (81, 146039), (86, 146150), (87, 146162), (88, 146171), (89, 146213), (92, 146270), (94, 146402), (97, 146417), (101, 146540), (102, 146567), (103, 146570), (104, 146573), (105, 146576), (107, 146633), (108, 146681), (110, 146741), (111, 146750), (112, 146861),

Gene: IkeLoa\_247 Start: 145170, Stop: 148193, Start Num: 4

Candidate Starts for IkeLoa\_247:

(1, 144888), (Start: 4 @145170 has 111 MA's), (5, 145236), (6, 145278), (7, 145302), (8, 145320), (9, 145359), (11, 145431), (12, 145446), (14, 145503), (15, 145509), (16, 145536), (19, 145611), (20, 145623), (23, 145698), (24, 145701), (29, 145809), (31, 145893), (33, 145920), (35, 146007), (36, 146037), (37, 146055), (39, 146079), (41, 146094), (50, 146385), (51, 146445), (53, 146493), (54, 146502), (55, 146526), (58, 146676), (60, 146721), (62, 146751), (63, 146814), (64, 146829), (72, 146988), (73, 147012), (74, 147069), (77, 147156), (80, 147264), (81, 147324), (86, 147435), (87, 147447), (88, 147456), (89, 147498), (92, 147555), (94, 147687), (97, 147702), (101, 147825), (102, 147852), (103, 147855), (104, 147858), (105, 147861), (107, 147918), (108, 147966), (110, 148026), (111, 148035), (112, 148146),

Gene: InigoMontoya\_257 Start: 145488, Stop: 148511, Start Num: 4

Candidate Starts for InigoMontoya\_257:

(1, 145206), (Start: 4 @145488 has 111 MA's), (5, 145554), (6, 145596), (7, 145620), (8, 145638), (9, 145677), (11, 145749), (12, 145764), (14, 145821), (15, 145827), (16, 145854), (19, 145929), (20, 145941), (23, 146016), (24, 146019), (29, 146127), (33, 146238), (35, 146325), (36, 146355), (37, 146373), (39, 146397), (41, 146412), (50, 146703), (51, 146763), (53, 146811), (54, 146820), (56, 146892), (58, 146994), (60, 147039), (62, 147069), (63, 147132), (64, 147147), (72, 147306), (73, 147330), (74, 147387), (77, 147474), (80, 147582), (86, 147753), (87, 147765), (89, 147816), (92, 147873), (97, 148020), (101, 148143), (102, 148170), (103, 148173), (104, 148176), (105, 148179), (107, 148236), (108, 148284), (110, 148344), (111, 148353), (112, 148464),

Gene: InterFolia\_255 Start: 146234, Stop: 149257, Start Num: 4

Candidate Starts for InterFolia\_255:

(1, 145952), (Start: 4 @146234 has 111 MA's), (5, 146300), (6, 146342), (7, 146366), (8, 146384), (9, 146423), (11, 146495), (12, 146510), (14, 146567), (15, 146573), (16, 146600), (19, 146675), (20, 146687), (23, 146762), (24, 146765), (29, 146873), (31, 146957), (33, 146984), (35, 147071), (36, 147101), (37, 147119), (39, 147143), (41, 147158), (50, 147449), (51, 147509), (53, 147557), (54, 147566), (55, 147590), (58, 147740), (60, 147785), (62, 147815), (63, 147878), (64, 147893), (72, 148052), (73, 148076), (74, 148133), (77, 148220), (80, 148328), (81, 148388), (86, 148499), (87, 148511), (88, 148520), (89, 148562), (92, 148619), (94, 148751), (97, 148766), (101, 148889), (102, 148916), (103, 148919), (104, 148922), (105, 148925), (107, 148982), (108, 149030), (110, 149090), (111, 149099), (112, 149210),

Gene: Iota\_250 Start: 145200, Stop: 148223, Start Num: 4

Candidate Starts for Iota\_250:

(1, 144918), (Start: 4 @145200 has 111 MA's), (5, 145266), (6, 145308), (7, 145332), (8, 145350), (9, 145389), (11, 145461), (12, 145476), (14, 145533), (15, 145539), (16, 145566), (19, 145641), (20, 145653), (23, 145728), (24, 145731), (29, 145839), (31, 145923), (33, 145950), (35, 146037), (36, 146067), (37, 146085), (39, 146109), (41, 146124), (50, 146415), (51, 146475), (53, 146523), (54, 146532), (55, 146556), (58, 146706), (60, 146751), (62, 146781), (63, 146844), (64, 146859), (72, 147018), (73, 147042), (74, 147099), (77, 147186), (80, 147294), (81, 147354), (86, 147465), (87, 147477), (88, 147486), (89, 147528), (92, 147585), (94, 147717), (97, 147732), (101, 147855), (102, 147882), (103, 147885), (104, 147888), (105, 147891), (107, 147948), (108, 147996), (110, 148056), (111, 148065), (112, 148176),

Gene: Issimir\_247 Start: 145575, Stop: 148598, Start Num: 4

Candidate Starts for Issimir\_247:

(1, 145293), (Start: 4 @145575 has 111 MA's), (5, 145641), (6, 145683), (7, 145707), (8, 145725), (9, 145764), (11, 145836), (12, 145851), (14, 145908), (15, 145914), (16, 145941), (19, 146016), (20, 146028), (23, 146103), (24, 146106), (29, 146214), (31, 146298), (33, 146325), (35, 146412), (36, 146442), (37, 146460), (39, 146484), (41, 146499), (50, 146790), (51, 146850), (53, 146898), (54, 146907), (55, 146931), (58, 147081), (60, 147126), (62, 147156), (63, 147219), (64, 147234), (72,



147393), (73, 147417), (74, 147474), (77, 147561), (80, 147669), (81, 147729), (86, 147840), (87, 147852), (88, 147861), (89, 147903), (92, 147960), (94, 148092), (97, 148107), (101, 148230), (102, 148257), (103, 148260), (104, 148263), (105, 148266), (107, 148323), (108, 148371), (110, 148431), (111, 148440), (112, 148551),

Gene: Izajani\_249 Start: 146020, Stop: 149043, Start Num: 4

Candidate Starts for Izajani\_249:

(1, 145738), (Start: 4 @146020 has 111 MA's), (5, 146086), (6, 146128), (7, 146152), (8, 146170), (9, 146209), (11, 146281), (12, 146296), (14, 146353), (15, 146359), (16, 146386), (19, 146461), (20, 146473), (23, 146548), (24, 146551), (29, 146659), (31, 146743), (33, 146770), (35, 146857), (36, 146887), (37, 146905), (39, 146929), (41, 146944), (50, 147235), (51, 147295), (53, 147343), (54, 147352), (55, 147376), (58, 147526), (60, 147571), (62, 147601), (63, 147664), (64, 147679), (72, 147838), (73, 147862), (74, 147919), (77, 148006), (80, 148114), (81, 148174), (86, 148285), (87, 148297), (88, 148306), (89, 148348), (92, 148405), (94, 148537), (97, 148552), (101, 148675), (102, 148702), (103, 148705), (104, 148708), (105, 148711), (107, 148768), (108, 148816), (110, 148876), (111, 148885), (112, 148996),

Gene: JPickles\_251 Start: 144625, Stop: 147648, Start Num: 4

Candidate Starts for JPickles\_251:

(1, 144343), (Start: 4 @144625 has 111 MA's), (5, 144691), (6, 144733), (7, 144757), (8, 144775), (9, 144814), (11, 144886), (12, 144901), (14, 144958), (15, 144964), (16, 144991), (19, 145066), (20, 145078), (23, 145153), (24, 145156), (29, 145264), (31, 145348), (33, 145375), (35, 145462), (36, 145492), (37, 145510), (39, 145534), (41, 145549), (50, 145840), (51, 145900), (53, 145948), (54, 145957), (56, 146029), (58, 146131), (60, 146176), (62, 146206), (63, 146269), (64, 146284), (72, 146443), (73, 146467), (74, 146524), (77, 146611), (80, 146719), (81, 146779), (86, 146890), (87, 146902), (89, 146953), (92, 147010), (97, 147157), (101, 147280), (102, 147307), (103, 147310), (104, 147313), (105, 147316), (107, 147373), (108, 147421), (110, 147481), (111, 147490), (112, 147601),

Gene: Janiyra\_257 Start: 146162, Stop: 149185, Start Num: 4

Candidate Starts for Janiyra\_257:

(1, 145880), (Start: 4 @146162 has 111 MA's), (5, 146228), (6, 146270), (7, 146294), (8, 146312), (9, 146351), (11, 146423), (12, 146438), (14, 146495), (15, 146501), (16, 146528), (19, 146603), (20, 146615), (23, 146690), (24, 146693), (29, 146801), (33, 146912), (35, 146999), (36, 147029), (37, 147047), (39, 147071), (41, 147086), (50, 147377), (51, 147437), (53, 147485), (54, 147494), (56, 147566), (58, 147668), (60, 147713), (62, 147743), (63, 147806), (64, 147821), (72, 147980), (73, 148004), (74, 148061), (77, 148148), (80, 148256), (81, 148316), (86, 148427), (87, 148439), (89, 148490), (92, 148547), (97, 148694), (101, 148817), (102, 148844), (103, 148847), (104, 148850), (105, 148853), (107, 148910), (108, 148958), (110, 149018), (111, 149027), (112, 149138),

Gene: Jaygup\_250 Start: 145347, Stop: 148370, Start Num: 4

Candidate Starts for Jaygup\_250:

(1, 145065), (Start: 4 @145347 has 111 MA's), (5, 145413), (6, 145455), (7, 145479), (8, 145497), (9, 145536), (11, 145608), (12, 145623), (14, 145680), (15, 145686), (16, 145713), (19, 145788), (20, 145800), (23, 145875), (24, 145878), (29, 145986), (31, 146070), (33, 146097), (35, 146184), (36, 146214), (37, 146232), (39, 146256), (41, 146271), (50, 146562), (51, 146622), (53, 146670), (54, 146679), (56, 146751), (58, 146853), (60, 146898), (62, 146928), (63, 146991), (64, 147006), (72, 147165), (73, 147189), (74, 147246), (77, 147333), (80, 147441), (81, 147501), (86, 147612), (87, 147624), (88, 147633), (89, 147675), (92, 147732), (94, 147864), (97, 147879), (101, 148002), (102, 148029), (103, 148032), (104, 148035), (105, 148038), (107, 148095), (108, 148143), (110, 148203), (111, 148212), (112, 148323),

Gene: Jedediah\_255 Start: 146400, Stop: 149423, Start Num: 4

Candidate Starts for Jedediah\_255:

(1, 146118), (Start: 4 @146400 has 111 MA's), (5, 146466), (6, 146508), (7, 146532), (8, 146550), (9, 146589), (11, 146661), (12, 146676), (14, 146733), (15, 146739), (16, 146766), (19, 146841), (20, 146853), (23, 146928), (24, 146931), (29, 147039), (33, 147150), (35, 147237), (36, 147267), (37, 147285), (39, 147309), (41, 147324), (50, 147615), (51, 147675), (53, 147723), (54, 147732), (56, 147804), (58, 147906), (60, 147951), (62, 147981), (63, 148044), (64, 148059), (72, 148218), (73, 148242), (74, 148299), (77, 148386), (80, 148494), (86, 148665), (87, 148677), (89, 148728), (92, 148785), (97, 148932), (101, 149055), (102, 149082), (103, 149085), (104, 149088), (105, 149091), (107, 149148), (108, 149196), (110, 149256), (111, 149265), (112, 149376),

Gene: Jemmno\_253 Start: 145119, Stop: 148142, Start Num: 4

Candidate Starts for Jemmno\_253:

(1, 144837), (Start: 4 @145119 has 111 MA's), (5, 145185), (6, 145227), (7, 145251), (8, 145269), (9, 145308), (11, 145380), (12, 145395), (14, 145452), (15, 145458), (16, 145485), (19, 145560), (20, 145572), (23, 145647), (24, 145650), (29, 145758), (33, 145869), (35, 145956), (36, 145986), (37, 146004), (39, 146028), (41, 146043), (50, 146334), (51, 146394), (53, 146442), (54, 146451), (56, 146523), (58, 146625), (60, 146670), (62, 146700), (63, 146763), (64, 146778), (72, 146937), (73, 146961), (74, 147018), (77, 147105), (80, 147213), (86, 147384), (87, 147396), (89, 147447), (92, 147504), (97, 147651), (101, 147774), (102, 147801), (103, 147804), (104, 147807), (105, 147810), (107, 147867), (108, 147915), (110, 147975), (111, 147984), (112, 148095),

Gene: Jezreel\_249 Start: 145664, Stop: 148687, Start Num: 4

Candidate Starts for Jezreel\_249:

(3, 145658), (Start: 4 @145664 has 111 MA's), (5, 145730), (6, 145772), (7, 145796), (8, 145814), (9, 145853), (11, 145925), (12, 145940), (14, 145997), (15, 146003), (16, 146030), (19, 146105), (20, 146117), (23, 146192), (24, 146195), (29, 146303), (31, 146387), (33, 146414), (35, 146501), (36, 146531), (37, 146549), (39, 146573), (41, 146588), (50, 146879), (51, 146939), (53, 146987), (54, 146996), (55, 147020), (58, 147170), (60, 147215), (62, 147245), (63, 147308), (64, 147323), (72, 147482), (73, 147506), (74, 147563), (77, 147650), (80, 147758), (81, 147818), (86, 147929), (87, 147941), (88, 147950), (89, 147992), (92, 148049), (94, 148181), (97, 148196), (101, 148319), (102, 148346), (103, 148349), (104, 148352), (105, 148355), (107, 148412), (108, 148460), (110, 148520), (111, 148529), (112, 148640),

Gene: JulietS\_245 Start: 142699, Stop: 145722, Start Num: 4

Candidate Starts for JulietS\_245:

(Start: 4 @142699 has 111 MA's), (5, 142765), (6, 142807), (7, 142831), (8, 142849), (9, 142888), (11, 142960), (12, 142975), (14, 143032), (15, 143038), (16, 143065), (19, 143140), (20, 143152), (23, 143227), (24, 143230), (29, 143338), (31, 143422), (33, 143449), (35, 143536), (36, 143566), (37, 143584), (39, 143608), (41, 143623), (50, 143914), (51, 143974), (53, 144022), (54, 144031), (55, 144055), (58, 144205), (60, 144250), (62, 144280), (63, 144343), (64, 144358), (72, 144517), (73, 144541), (74, 144598), (77, 144685), (80, 144793), (81, 144853), (86, 144964), (87, 144976), (88, 144985), (89, 145027), (92, 145084), (94, 145216), (97, 145231), (101, 145354), (102, 145381), (103, 145384), (104, 145387), (105, 145390), (107, 145447), (108, 145495), (110, 145555), (111, 145564), (112, 145675),

Gene: JustHall\_247 Start: 144649, Stop: 147672, Start Num: 4

Candidate Starts for JustHall\_247:

(1, 144367), (Start: 4 @144649 has 111 MA's), (5, 144715), (6, 144757), (7, 144781), (8, 144799), (9, 144838), (11, 144910), (12, 144925), (14, 144982), (15, 144988), (16, 145015), (19, 145090), (20, 145102), (23, 145177), (24, 145180), (29, 145288), (31, 145372), (33, 145399), (35, 145486), (36, 145516), (37, 145534), (39, 145558), (41, 145573), (50, 145864), (51, 145924), (53, 145972), (54, 145981), (56, 146053), (58, 146155), (60, 146200), (62, 146230), (63, 146293), (64, 146308), (72, 146467), (73, 146491), (74, 146548), (77, 146635), (80, 146743), (81, 146803), (86, 146914), (87, 146926), (89, 146977), (92, 147034), (97, 147181), (101, 147304), (102, 147331), (103, 147334), (104,

147337), (105, 147340), (107, 147397), (108, 147445), (110, 147505), (111, 147514), (112, 147625),

Gene: Kamryn\_252 Start: 146239, Stop: 149262, Start Num: 4

Candidate Starts for Kamryn\_252:

(1, 145957), (Start: 4 @146239 has 111 MA's), (5, 146305), (6, 146347), (7, 146371), (8, 146389), (9, 146428), (11, 146500), (12, 146515), (14, 146572), (15, 146578), (16, 146605), (19, 146680), (20, 146692), (23, 146767), (24, 146770), (29, 146878), (31, 146962), (33, 146989), (35, 147076), (36, 147106), (37, 147124), (39, 147148), (41, 147163), (50, 147454), (51, 147514), (53, 147562), (54, 147571), (55, 147595), (58, 147745), (60, 147790), (62, 147820), (63, 147883), (64, 147898), (72, 148057), (73, 148081), (74, 148138), (77, 148225), (80, 148333), (81, 148393), (86, 148504), (87, 148516), (88, 148525), (89, 148567), (92, 148624), (94, 148756), (97, 148771), (101, 148894), (102, 148921), (103, 148924), (104, 148927), (105, 148930), (107, 148987), (108, 149035), (110, 149095), (111, 149104), (112, 149215),

Gene: Kboogie\_257 Start: 145278, Stop: 148301, Start Num: 4

Candidate Starts for Kboogie\_257:

(1, 144996), (Start: 4 @145278 has 111 MA's), (5, 145344), (6, 145386), (7, 145410), (8, 145428), (9, 145467), (11, 145539), (12, 145554), (14, 145611), (15, 145617), (16, 145644), (19, 145719), (20, 145731), (23, 145806), (24, 145809), (29, 145917), (33, 146028), (35, 146115), (36, 146145), (37, 146163), (39, 146187), (41, 146202), (50, 146493), (51, 146553), (53, 146601), (54, 146610), (56, 146682), (58, 146784), (60, 146829), (62, 146859), (63, 146922), (64, 146937), (72, 147096), (73, 147120), (74, 147177), (77, 147264), (80, 147372), (81, 147432), (86, 147543), (87, 147555), (89, 147606), (92, 147663), (97, 147810), (101, 147933), (102, 147960), (103, 147963), (104, 147966), (105, 147969), (107, 148026), (108, 148074), (110, 148134), (111, 148143), (112, 148254),

Gene: Koguma\_252 Start: 144861, Stop: 147884, Start Num: 4

Candidate Starts for Koguma\_252:

(1, 144579), (Start: 4 @144861 has 111 MA's), (5, 144927), (6, 144969), (7, 144993), (8, 145011), (9, 145050), (11, 145122), (12, 145137), (14, 145194), (15, 145200), (16, 145227), (19, 145302), (20, 145314), (23, 145389), (24, 145392), (29, 145500), (31, 145584), (33, 145611), (35, 145698), (36, 145728), (37, 145746), (39, 145770), (41, 145785), (50, 146076), (51, 146136), (53, 146184), (54, 146193), (55, 146217), (58, 146367), (60, 146412), (62, 146442), (63, 146505), (64, 146520), (72, 146679), (73, 146703), (74, 146760), (77, 146847), (80, 146955), (81, 147015), (86, 147126), (87, 147138), (88, 147147), (89, 147189), (92, 147246), (94, 147378), (97, 147393), (101, 147516), (102, 147543), (103, 147546), (104, 147549), (105, 147552), (107, 147609), (108, 147657), (110, 147717), (111, 147726), (112, 147837),

Gene: LRRHood\_245 Start: 144271, Stop: 147294, Start Num: 4

Candidate Starts for LRRHood\_245:

(1, 143989), (Start: 4 @144271 has 111 MA's), (5, 144337), (6, 144379), (7, 144403), (8, 144421), (9, 144460), (11, 144532), (12, 144547), (14, 144604), (15, 144610), (16, 144637), (19, 144712), (20, 144724), (23, 144799), (24, 144802), (29, 144910), (31, 144994), (33, 145021), (35, 145108), (36, 145138), (37, 145156), (39, 145180), (41, 145195), (50, 145486), (51, 145546), (53, 145594), (54, 145603), (56, 145675), (58, 145777), (60, 145822), (62, 145852), (63, 145915), (64, 145930), (72, 146089), (73, 146113), (74, 146170), (77, 146257), (80, 146365), (81, 146425), (86, 146536), (87, 146548), (88, 146557), (89, 146599), (92, 146656), (94, 146788), (97, 146803), (101, 146926), (102, 146953), (103, 146956), (104, 146959), (105, 146962), (107, 147019), (108, 147067), (110, 147127), (111, 147136), (112, 147247),

Gene: Latch\_253 Start: 144824, Stop: 147847, Start Num: 4

Candidate Starts for Latch\_253:

(1, 144542), (Start: 4 @144824 has 111 MA's), (5, 144890), (6, 144932), (7, 144956), (8, 144974), (9, 145013), (11, 145085), (12, 145100), (14, 145157), (15, 145163), (16, 145190), (19, 145265), (20,

145277), (23, 145352), (24, 145355), (29, 145463), (33, 145574), (35, 145661), (36, 145691), (37, 145709), (39, 145733), (41, 145748), (50, 146039), (51, 146099), (53, 146147), (54, 146156), (56, 146228), (58, 146330), (60, 146375), (62, 146405), (63, 146468), (64, 146483), (72, 146642), (73, 146666), (74, 146723), (77, 146810), (80, 146918), (86, 147089), (87, 147101), (89, 147152), (92, 147209), (97, 147356), (101, 147479), (102, 147506), (103, 147509), (104, 147512), (105, 147515), (107, 147572), (108, 147620), (110, 147680), (111, 147689), (112, 147800),

Gene: Lee7\_254 Start: 147925, Stop: 150948, Start Num: 4

Candidate Starts for Lee7\_254:

(1, 147643), (Start: 4 @147925 has 111 MA's), (5, 147991), (6, 148033), (7, 148057), (8, 148075), (9, 148114), (11, 148186), (12, 148201), (14, 148258), (15, 148264), (16, 148291), (19, 148366), (20, 148378), (23, 148453), (24, 148456), (29, 148564), (31, 148648), (33, 148675), (35, 148762), (36, 148792), (37, 148810), (39, 148834), (41, 148849), (50, 149140), (51, 149200), (53, 149248), (54, 149257), (55, 149281), (58, 149431), (60, 149476), (62, 149506), (63, 149569), (64, 149584), (72, 149743), (73, 149767), (74, 149824), (77, 149911), (80, 150019), (81, 150079), (86, 150190), (87, 150202), (88, 150211), (89, 150253), (92, 150310), (94, 150442), (97, 150457), (101, 150580), (102, 150607), (103, 150610), (104, 150613), (105, 150616), (107, 150673), (108, 150721), (110, 150781), (111, 150790), (112, 150901),

Gene: LifeSavor\_254 Start: 146052, Stop: 149075, Start Num: 4

Candidate Starts for LifeSavor\_254:

(1, 145770), (Start: 4 @146052 has 111 MA's), (5, 146118), (6, 146160), (7, 146184), (8, 146202), (9, 146241), (11, 146313), (12, 146328), (14, 146385), (15, 146391), (16, 146418), (19, 146493), (20, 146505), (23, 146580), (24, 146583), (29, 146691), (31, 146775), (33, 146802), (35, 146889), (36, 146919), (37, 146937), (39, 146961), (41, 146976), (50, 147267), (51, 147327), (53, 147375), (54, 147384), (56, 147456), (58, 147558), (60, 147603), (62, 147633), (63, 147696), (64, 147711), (72, 147870), (73, 147894), (74, 147951), (77, 148038), (80, 148146), (81, 148206), (86, 148317), (87, 148329), (88, 148338), (89, 148380), (92, 148437), (94, 148569), (97, 148584), (101, 148707), (102, 148734), (103, 148737), (104, 148740), (105, 148743), (107, 148800), (108, 148848), (110, 148908), (111, 148917), (112, 149028),

Gene: LinStu\_250 Start: 144153, Stop: 147176, Start Num: 4

Candidate Starts for LinStu\_250:

(Start: 4 @144153 has 111 MA's), (5, 144219), (6, 144261), (7, 144285), (8, 144303), (9, 144342), (11, 144414), (12, 144429), (14, 144486), (15, 144492), (16, 144519), (19, 144594), (20, 144606), (23, 144681), (24, 144684), (29, 144792), (33, 144903), (35, 144990), (36, 145020), (37, 145038), (39, 145062), (41, 145077), (50, 145368), (51, 145428), (53, 145476), (54, 145485), (56, 145557), (58, 145659), (60, 145704), (62, 145734), (63, 145797), (64, 145812), (72, 145971), (73, 145995), (74, 146052), (77, 146139), (80, 146247), (81, 146307), (86, 146418), (87, 146430), (89, 146481), (92, 146538), (97, 146685), (101, 146808), (102, 146835), (103, 146838), (104, 146841), (105, 146844), (107, 146901), (108, 146949), (110, 147009), (111, 147018), (112, 147129),

Gene: Littleton\_257 Start: 146061, Stop: 149084, Start Num: 4

Candidate Starts for Littleton\_257:

(1, 145779), (Start: 4 @146061 has 111 MA's), (5, 146127), (6, 146169), (7, 146193), (8, 146211), (9, 146250), (11, 146322), (12, 146337), (14, 146394), (15, 146400), (16, 146427), (19, 146502), (20, 146514), (23, 146589), (24, 146592), (29, 146700), (33, 146811), (35, 146898), (36, 146928), (37, 146946), (39, 146970), (41, 146985), (50, 147276), (51, 147336), (53, 147384), (54, 147393), (56, 147465), (58, 147567), (60, 147612), (62, 147642), (63, 147705), (64, 147720), (72, 147879), (73, 147903), (74, 147960), (77, 148047), (80, 148155), (81, 148215), (86, 148326), (87, 148338), (89, 148389), (92, 148446), (97, 148593), (101, 148716), (102, 148743), (103, 148746), (104, 148749), (105, 148752), (107, 148809), (108, 148857), (110, 148917), (111, 148926), (112, 149037),

Gene: LolaVinca\_249 Start: 145664, Stop: 148687, Start Num: 4

Candidate Starts for LolaVinca\_249:

(1, 145382), (Start: 4 @145664 has 111 MA's), (5, 145730), (6, 145772), (7, 145796), (8, 145814), (9, 145853), (11, 145925), (12, 145940), (14, 145997), (15, 146003), (16, 146030), (19, 146105), (20, 146117), (23, 146192), (24, 146195), (29, 146303), (31, 146387), (33, 146414), (35, 146501), (36, 146531), (37, 146549), (39, 146573), (41, 146588), (50, 146879), (51, 146939), (53, 146987), (54, 146996), (55, 147020), (58, 147170), (60, 147215), (62, 147245), (63, 147308), (64, 147323), (72, 147482), (73, 147506), (74, 147563), (77, 147650), (80, 147758), (81, 147818), (86, 147929), (87, 147941), (88, 147950), (89, 147992), (92, 148049), (94, 148181), (97, 148196), (101, 148319), (102, 148346), (103, 148349), (104, 148352), (105, 148355), (107, 148412), (108, 148460), (110, 148520), (111, 148529), (112, 148640),

Gene: LordLeafolot\_255 Start: 145277, Stop: 148300, Start Num: 4

Candidate Starts for LordLeafolot\_255:

(1, 144995), (Start: 4 @145277 has 111 MA's), (5, 145343), (6, 145385), (7, 145409), (8, 145427), (9, 145466), (11, 145538), (12, 145553), (14, 145610), (15, 145616), (16, 145643), (19, 145718), (20, 145730), (23, 145805), (24, 145808), (29, 145916), (31, 146000), (33, 146027), (35, 146114), (36, 146144), (37, 146162), (39, 146186), (41, 146201), (50, 146492), (51, 146552), (53, 146600), (54, 146609), (55, 146633), (58, 146783), (60, 146828), (62, 146858), (63, 146921), (64, 146936), (72, 147095), (73, 147119), (74, 147176), (77, 147263), (80, 147371), (81, 147431), (86, 147542), (87, 147554), (88, 147563), (89, 147605), (92, 147662), (94, 147794), (97, 147809), (101, 147932), (102, 147959), (103, 147962), (104, 147965), (105, 147968), (107, 148025), (108, 148073), (110, 148133), (111, 148142), (112, 148253),

Gene: Lukilu\_242 Start: 146280, Stop: 149303, Start Num: 4

Candidate Starts for Lukilu\_242:

(1, 145998), (Start: 4 @146280 has 111 MA's), (5, 146346), (6, 146388), (7, 146412), (8, 146430), (9, 146469), (11, 146541), (12, 146556), (14, 146613), (15, 146619), (16, 146646), (19, 146721), (20, 146733), (23, 146808), (24, 146811), (29, 146919), (31, 147003), (33, 147030), (35, 147117), (36, 147147), (37, 147165), (39, 147189), (41, 147204), (50, 147495), (51, 147555), (53, 147603), (54, 147612), (55, 147636), (58, 147786), (60, 147831), (62, 147861), (63, 147924), (64, 147939), (72, 148098), (73, 148122), (74, 148179), (77, 148266), (80, 148374), (81, 148434), (86, 148545), (87, 148557), (88, 148566), (89, 148608), (92, 148665), (94, 148797), (97, 148812), (101, 148935), (102, 148962), (103, 148965), (104, 148968), (105, 148971), (107, 149028), (108, 149076), (110, 149136), (111, 149145), (112, 149256),

Gene: Mangeria\_253 Start: 146175, Stop: 149198, Start Num: 4

Candidate Starts for Mangeria\_253:

(1, 145893), (Start: 4 @146175 has 111 MA's), (5, 146241), (6, 146283), (7, 146307), (8, 146325), (9, 146364), (11, 146436), (12, 146451), (14, 146508), (15, 146514), (16, 146541), (19, 146616), (20, 146628), (23, 146703), (24, 146706), (29, 146814), (33, 146925), (35, 147012), (36, 147042), (37, 147060), (39, 147084), (41, 147099), (50, 147390), (51, 147450), (53, 147498), (54, 147507), (55, 147531), (58, 147681), (60, 147726), (62, 147756), (63, 147819), (64, 147834), (72, 147993), (73, 148017), (74, 148074), (77, 148161), (80, 148269), (81, 148329), (86, 148440), (87, 148452), (88, 148461), (89, 148503), (92, 148560), (94, 148692), (97, 148707), (101, 148830), (102, 148857), (103, 148860), (104, 148863), (105, 148866), (107, 148923), (108, 148971), (110, 149031), (111, 149040), (112, 149151),

Gene: Matsumoto\_251 Start: 145266, Stop: 148289, Start Num: 4

Candidate Starts for Matsumoto\_251:

(1, 144984), (Start: 4 @145266 has 111 MA's), (5, 145332), (6, 145374), (7, 145398), (8, 145416), (9, 145455), (11, 145527), (12, 145542), (14, 145599), (15, 145605), (16, 145632), (19, 145707), (20, 145719), (23, 145794), (24, 145797), (29, 145905), (31, 145989), (33, 146016), (35, 146103), (36,

146133), (37, 146151), (39, 146175), (41, 146190), (50, 146481), (51, 146541), (53, 146589), (54, 146598), (56, 146670), (58, 146772), (60, 146817), (62, 146847), (63, 146910), (64, 146925), (72, 147084), (73, 147108), (74, 147165), (77, 147252), (80, 147360), (81, 147420), (86, 147531), (87, 147543), (89, 147594), (92, 147651), (97, 147798), (101, 147921), (102, 147948), (103, 147951), (104, 147954), (105, 147957), (107, 148014), (108, 148062), (110, 148122), (111, 148131), (112, 148242),

Gene: McGee\_255 Start: 145612, Stop: 148635, Start Num: 4

Candidate Starts for McGee\_255:

(1, 145330), (Start: 4 @145612 has 111 MA's), (5, 145678), (6, 145720), (7, 145744), (8, 145762), (9, 145801), (11, 145873), (12, 145888), (14, 145945), (15, 145951), (16, 145978), (19, 146053), (20, 146065), (23, 146140), (24, 146143), (29, 146251), (33, 146362), (35, 146449), (36, 146479), (37, 146497), (39, 146521), (41, 146536), (50, 146827), (51, 146887), (53, 146935), (54, 146944), (56, 147016), (58, 147118), (60, 147163), (62, 147193), (63, 147256), (64, 147271), (72, 147430), (73, 147454), (74, 147511), (77, 147598), (80, 147706), (81, 147766), (86, 147877), (87, 147889), (89, 147940), (92, 147997), (97, 148144), (101, 148267), (102, 148294), (103, 148297), (104, 148300), (105, 148303), (107, 148360), (108, 148408), (110, 148468), (111, 148477), (112, 148588),

Gene: Melpomini\_248 Start: 144358, Stop: 147381, Start Num: 4

Candidate Starts for Melpomini\_248:

(1, 144076), (Start: 4 @144358 has 111 MA's), (5, 144424), (6, 144466), (7, 144490), (8, 144508), (9, 144547), (11, 144619), (12, 144634), (14, 144691), (15, 144697), (16, 144724), (19, 144799), (20, 144811), (23, 144886), (24, 144889), (29, 144997), (33, 145108), (35, 145195), (36, 145225), (37, 145243), (39, 145267), (41, 145282), (50, 145573), (51, 145633), (53, 145681), (54, 145690), (56, 145762), (58, 145864), (60, 145909), (62, 145939), (63, 146002), (64, 146017), (72, 146176), (73, 146200), (74, 146257), (77, 146344), (80, 146452), (81, 146512), (86, 146623), (87, 146635), (89, 146686), (92, 146743), (97, 146890), (101, 147013), (102, 147040), (103, 147043), (104, 147046), (105, 147049), (107, 147106), (108, 147154), (110, 147214), (111, 147223), (112, 147334),

Gene: Mikro\_247 Start: 147177, Stop: 150200, Start Num: 4

Candidate Starts for Mikro\_247:

(1, 146895), (Start: 4 @147177 has 111 MA's), (5, 147243), (6, 147285), (7, 147309), (8, 147327), (9, 147366), (11, 147438), (12, 147453), (14, 147510), (15, 147516), (16, 147543), (19, 147618), (20, 147630), (23, 147705), (24, 147708), (29, 147816), (31, 147900), (33, 147927), (35, 148014), (36, 148044), (37, 148062), (39, 148086), (41, 148101), (50, 148392), (51, 148452), (53, 148500), (54, 148509), (55, 148533), (58, 148683), (60, 148728), (62, 148758), (63, 148821), (64, 148836), (72, 148995), (73, 149019), (74, 149076), (77, 149163), (80, 149271), (81, 149331), (86, 149442), (87, 149454), (88, 149463), (89, 149505), (92, 149562), (94, 149694), (97, 149709), (101, 149832), (102, 149859), (103, 149862), (104, 149865), (105, 149868), (107, 149925), (108, 149973), (110, 150033), (111, 150042), (112, 150153),

Gene: Momo\_255 Start: 144824, Stop: 147847, Start Num: 4

Candidate Starts for Momo\_255:

(1, 144542), (Start: 4 @144824 has 111 MA's), (5, 144890), (6, 144932), (7, 144956), (8, 144974), (9, 145013), (11, 145085), (12, 145100), (14, 145157), (15, 145163), (16, 145190), (19, 145265), (20, 145277), (23, 145352), (24, 145355), (29, 145463), (33, 145574), (35, 145661), (36, 145691), (37, 145709), (39, 145733), (41, 145748), (50, 146039), (51, 146099), (53, 146147), (54, 146156), (56, 146228), (58, 146330), (60, 146375), (62, 146405), (63, 146468), (64, 146483), (72, 146642), (73, 146666), (74, 146723), (77, 146810), (80, 146918), (86, 147089), (87, 147101), (89, 147152), (92, 147209), (97, 147356), (101, 147479), (102, 147506), (103, 147509), (104, 147512), (105, 147515), (107, 147572), (108, 147620), (110, 147680), (111, 147689), (112, 147800),

Gene: Morizzled23\_251 Start: 144640, Stop: 147663, Start Num: 4

Candidate Starts for Morizzled23\_251:

(1, 144358), (Start: 4 @144640 has 111 MA's), (5, 144706), (6, 144748), (7, 144772), (8, 144790), (9, 144829), (11, 144901), (12, 144916), (14, 144973), (15, 144979), (16, 145006), (19, 145081), (20, 145093), (23, 145168), (24, 145171), (29, 145279), (31, 145363), (33, 145390), (35, 145477), (36, 145507), (37, 145525), (39, 145549), (41, 145564), (50, 145855), (51, 145915), (53, 145963), (54, 145972), (56, 146044), (58, 146146), (60, 146191), (62, 146221), (63, 146284), (64, 146299), (72, 146458), (73, 146482), (74, 146539), (77, 146626), (80, 146734), (81, 146794), (86, 146905), (87, 146917), (89, 146968), (92, 147025), (97, 147172), (101, 147295), (102, 147322), (103, 147325), (104, 147328), (105, 147331), (107, 147388), (108, 147436), (110, 147496), (111, 147505), (112, 147616),

Gene: Naija\_254 Start: 145527, Stop: 148550, Start Num: 4

Candidate Starts for Naija\_254:

(1, 145245), (Start: 4 @145527 has 111 MA's), (5, 145593), (6, 145635), (7, 145659), (8, 145677), (9, 145716), (11, 145788), (12, 145803), (14, 145860), (15, 145866), (16, 145893), (19, 145968), (20, 145980), (23, 146055), (24, 146058), (29, 146166), (33, 146277), (35, 146364), (36, 146394), (37, 146412), (39, 146436), (41, 146451), (50, 146742), (51, 146802), (53, 146850), (54, 146859), (56, 146931), (58, 147033), (60, 147078), (62, 147108), (63, 147171), (64, 147186), (72, 147345), (73, 147369), (74, 147426), (77, 147513), (80, 147621), (86, 147792), (87, 147804), (89, 147855), (92, 147912), (97, 148059), (101, 148182), (102, 148209), (103, 148212), (104, 148215), (105, 148218), (107, 148275), (108, 148323), (110, 148383), (111, 148392), (112, 148503),

Gene: Napoleon13\_250 Start: 144556, Stop: 147579, Start Num: 4

Candidate Starts for Napoleon13\_250:

(1, 144274), (Start: 4 @144556 has 111 MA's), (5, 144622), (6, 144664), (7, 144688), (8, 144706), (9, 144745), (11, 144817), (12, 144832), (14, 144889), (15, 144895), (16, 144922), (19, 144997), (20, 145009), (23, 145084), (24, 145087), (29, 145195), (33, 145306), (35, 145393), (36, 145423), (37, 145441), (39, 145465), (41, 145480), (50, 145771), (51, 145831), (53, 145879), (54, 145888), (56, 145960), (58, 146062), (60, 146107), (62, 146137), (63, 146200), (64, 146215), (72, 146374), (73, 146398), (74, 146455), (77, 146542), (80, 146650), (81, 146710), (86, 146821), (87, 146833), (89, 146884), (92, 146941), (97, 147088), (101, 147211), (102, 147238), (103, 147241), (104, 147244), (105, 147247), (107, 147304), (108, 147352), (110, 147412), (111, 147421), (112, 147532),

Gene: Naval22\_258 Start: 147307, Stop: 150330, Start Num: 4

Candidate Starts for Naval22\_258:

(1, 147025), (Start: 4 @147307 has 111 MA's), (5, 147373), (6, 147415), (7, 147439), (8, 147457), (9, 147496), (11, 147568), (12, 147583), (14, 147640), (15, 147646), (16, 147673), (19, 147748), (20, 147760), (23, 147835), (24, 147838), (29, 147946), (31, 148030), (33, 148057), (35, 148144), (36, 148174), (37, 148192), (39, 148216), (41, 148231), (50, 148522), (51, 148582), (53, 148630), (54, 148639), (56, 148711), (58, 148813), (60, 148858), (62, 148888), (63, 148951), (64, 148966), (72, 149125), (73, 149149), (74, 149206), (77, 149293), (80, 149401), (81, 149461), (86, 149572), (87, 149584), (88, 149593), (89, 149635), (92, 149692), (94, 149824), (97, 149839), (101, 149962), (102, 149989), (103, 149992), (104, 149995), (105, 149998), (107, 150055), (108, 150103), (110, 150163), (111, 150172), (112, 150283),

Gene: Ngannou\_248 Start: 144509, Stop: 147532, Start Num: 4

Candidate Starts for Ngannou\_248:

(1, 144227), (Start: 4 @144509 has 111 MA's), (5, 144575), (6, 144617), (7, 144641), (8, 144659), (9, 144698), (11, 144770), (12, 144785), (14, 144842), (15, 144848), (16, 144875), (19, 144950), (20, 144962), (23, 145037), (24, 145040), (29, 145148), (33, 145259), (35, 145346), (36, 145376), (37, 145394), (39, 145418), (41, 145433), (50, 145724), (51, 145784), (53, 145832), (54, 145841), (56, 145913), (58, 146015), (60, 146060), (62, 146090), (63, 146153), (64, 146168), (72, 146327), (73, 146351), (74, 146408), (77, 146495), (80, 146603), (86, 146774), (87, 146786), (89, 146837), (92, 146894), (97, 147041), (101, 147164), (102, 147191), (103, 147194), (104, 147197), (105, 147200), (107, 147257), (108, 147305), (110, 147365), (111, 147374), (112, 147485),

Gene: Nidhogg\_254 Start: 146353, Stop: 149376, Start Num: 4

Candidate Starts for Nidhogg\_254:

(1, 146071), (Start: 4 @146353 has 111 MA's), (5, 146419), (6, 146461), (7, 146485), (8, 146503), (9, 146542), (11, 146614), (12, 146629), (14, 146686), (15, 146692), (16, 146719), (19, 146794), (20, 146806), (23, 146881), (24, 146884), (29, 146992), (31, 147076), (33, 147103), (35, 147190), (36, 147220), (37, 147238), (39, 147262), (41, 147277), (50, 147568), (51, 147628), (53, 147676), (54, 147685), (55, 147709), (58, 147859), (60, 147904), (62, 147934), (63, 147997), (64, 148012), (72, 148171), (73, 148195), (74, 148252), (77, 148339), (80, 148447), (81, 148507), (86, 148618), (87, 148630), (88, 148639), (89, 148681), (92, 148738), (94, 148870), (97, 148885), (101, 149008), (102, 149035), (103, 149038), (104, 149041), (105, 149044), (107, 149101), (108, 149149), (110, 149209), (111, 149218), (112, 149329),

Gene: NoodleTree\_249 Start: 141104, Stop: 144127, Start Num: 4

Candidate Starts for NoodleTree\_249:

(1, 140822), (Start: 4 @141104 has 111 MA's), (5, 141170), (6, 141212), (7, 141236), (8, 141254), (9, 141293), (11, 141365), (12, 141380), (14, 141437), (15, 141443), (16, 141470), (19, 141545), (20, 141557), (23, 141632), (24, 141635), (29, 141743), (31, 141827), (33, 141854), (35, 141941), (36, 141971), (37, 141989), (39, 142013), (41, 142028), (50, 142319), (51, 142379), (53, 142427), (54, 142436), (55, 142460), (58, 142610), (60, 142655), (62, 142685), (63, 142748), (64, 142763), (72, 142922), (73, 142946), (74, 143003), (77, 143090), (80, 143198), (81, 143258), (86, 143369), (87, 143381), (88, 143390), (89, 143432), (92, 143489), (94, 143621), (97, 143636), (101, 143759), (102, 143786), (103, 143789), (104, 143792), (105, 143795), (107, 143852), (108, 143900), (110, 143960), (111, 143969), (112, 144080),

Gene: Patter\_255 Start: 145484, Stop: 148507, Start Num: 4

Candidate Starts for Patter\_255:

(1, 145202), (Start: 4 @145484 has 111 MA's), (5, 145550), (6, 145592), (7, 145616), (8, 145634), (9, 145673), (11, 145745), (12, 145760), (14, 145817), (15, 145823), (16, 145850), (19, 145925), (20, 145937), (23, 146012), (24, 146015), (29, 146123), (33, 146234), (35, 146321), (36, 146351), (37, 146369), (39, 146393), (41, 146408), (50, 146699), (51, 146759), (53, 146807), (54, 146816), (56, 146888), (58, 146990), (60, 147035), (62, 147065), (63, 147128), (64, 147143), (72, 147302), (73, 147326), (74, 147383), (77, 147470), (80, 147578), (81, 147638), (86, 147749), (87, 147761), (89, 147812), (92, 147869), (97, 148016), (101, 148139), (102, 148166), (103, 148169), (104, 148172), (105, 148175), (107, 148232), (108, 148280), (110, 148340), (111, 148349), (112, 148460),

Gene: Phlegm\_258 Start: 146230, Stop: 149253, Start Num: 4

Candidate Starts for Phlegm\_258:

(1, 145948), (Start: 4 @146230 has 111 MA's), (5, 146296), (6, 146338), (7, 146362), (8, 146380), (9, 146419), (11, 146491), (12, 146506), (14, 146563), (15, 146569), (16, 146596), (19, 146671), (20, 146683), (23, 146758), (24, 146761), (29, 146869), (33, 146980), (35, 147067), (36, 147097), (37, 147115), (39, 147139), (41, 147154), (50, 147445), (51, 147505), (53, 147553), (54, 147562), (56, 147634), (58, 147736), (60, 147781), (62, 147811), (63, 147874), (64, 147889), (72, 148048), (73, 148072), (74, 148129), (77, 148216), (80, 148324), (86, 148495), (87, 148507), (89, 148558), (92, 148615), (97, 148762), (101, 148885), (102, 148912), (103, 148915), (104, 148918), (105, 148921), (107, 148978), (108, 149026), (110, 149086), (111, 149095), (112, 149206),

Gene: Phrappuccino\_2 Start: 1651, Stop: 4911, Start Num: 2

Candidate Starts for Phrappuccino\_2:

(Start: 2 @1651 has 2 MA's), (9, 1867), (10, 1930), (11, 1939), (13, 2005), (17, 2053), (18, 2116), (21, 2140), (22, 2203), (23, 2206), (25, 2245), (26, 2281), (27, 2299), (28, 2317), (29, 2332), (30, 2350), (32, 2422), (33, 2443), (34, 2446), (37, 2590), (40, 2617), (42, 2674), (43, 2698), (44, 2716), (45, 2770), (46, 2830), (47, 2851), (48, 2863), (49, 2890), (52, 3022), (57, 3283), (59, 3310), (60, 3349), (61, 3358), (65,



3517), (66, 3526), (67, 3559), (68, 3598), (69, 3616), (70, 3655), (71, 3661), (75, 3772), (76, 3835), (78, 3901), (79, 3955), (80, 3991), (82, 4102), (83, 4147), (84, 4171), (85, 4201), (88, 4234), (90, 4297), (91, 4300), (93, 4432), (95, 4492), (96, 4498), (98, 4552), (99, 4573), (100, 4588), (104, 4645), (105, 4648), (106, 4702), (109, 4807),

Gene: Phusco\_252 Start: 145062, Stop: 148085, Start Num: 4

Candidate Starts for Phusco\_252:

(1, 144780), (Start: 4 @145062 has 111 MA's), (5, 145128), (6, 145170), (7, 145194), (8, 145212), (9, 145251), (11, 145323), (12, 145338), (14, 145395), (15, 145401), (16, 145428), (19, 145503), (20, 145515), (23, 145590), (24, 145593), (29, 145701), (31, 145785), (33, 145812), (35, 145899), (36, 145929), (37, 145947), (39, 145971), (41, 145986), (50, 146277), (51, 146337), (53, 146385), (54, 146394), (56, 146466), (58, 146568), (60, 146613), (62, 146643), (63, 146706), (64, 146721), (72, 146880), (73, 146904), (74, 146961), (77, 147048), (80, 147156), (81, 147216), (86, 147327), (87, 147339), (88, 147348), (89, 147390), (92, 147447), (94, 147579), (97, 147594), (101, 147717), (102, 147744), (103, 147747), (104, 147750), (105, 147753), (107, 147810), (108, 147858), (110, 147918), (111, 147927), (112, 148038),

Gene: Pier\_252 Start: 146355, Stop: 149378, Start Num: 4

Candidate Starts for Pier\_252:

(1, 146073), (Start: 4 @146355 has 111 MA's), (5, 146421), (6, 146463), (7, 146487), (8, 146505), (9, 146544), (11, 146616), (12, 146631), (14, 146688), (15, 146694), (16, 146721), (19, 146796), (20, 146808), (23, 146883), (24, 146886), (29, 146994), (31, 147078), (33, 147105), (35, 147192), (36, 147222), (37, 147240), (39, 147264), (41, 147279), (50, 147570), (51, 147630), (53, 147678), (54, 147687), (55, 147711), (58, 147861), (60, 147906), (62, 147936), (63, 147999), (64, 148014), (72, 148173), (73, 148197), (74, 148254), (77, 148341), (80, 148449), (81, 148509), (86, 148620), (87, 148632), (88, 148641), (89, 148683), (92, 148740), (94, 148872), (97, 148887), (101, 149010), (102, 149037), (103, 149040), (104, 149043), (105, 149046), (107, 149103), (108, 149151), (110, 149211), (111, 149220), (112, 149331),

Gene: Pinkcreek\_233 Start: 142681, Stop: 145704, Start Num: 4

Candidate Starts for Pinkcreek\_233:

(Start: 4 @142681 has 111 MA's), (5, 142747), (6, 142789), (7, 142813), (8, 142831), (9, 142870), (11, 142942), (12, 142957), (14, 143014), (15, 143020), (16, 143047), (19, 143122), (20, 143134), (23, 143209), (24, 143212), (29, 143320), (33, 143431), (35, 143518), (36, 143548), (37, 143566), (39, 143590), (41, 143605), (50, 143896), (51, 143956), (53, 144004), (54, 144013), (55, 144037), (58, 144187), (60, 144232), (62, 144262), (63, 144325), (64, 144340), (72, 144499), (73, 144523), (74, 144580), (77, 144667), (80, 144775), (81, 144835), (86, 144946), (87, 144958), (88, 144967), (89, 145009), (92, 145066), (94, 145198), (97, 145213), (101, 145336), (102, 145363), (103, 145366), (104, 145369), (105, 145372), (107, 145429), (108, 145477), (110, 145537), (111, 145546), (112, 145657),

Gene: Pivoine\_254 Start: 145527, Stop: 148550, Start Num: 4

Candidate Starts for Pivoine\_254:

(1, 145245), (Start: 4 @145527 has 111 MA's), (5, 145593), (6, 145635), (7, 145659), (8, 145677), (9, 145716), (11, 145788), (12, 145803), (14, 145860), (15, 145866), (16, 145893), (19, 145968), (20, 145980), (23, 146055), (24, 146058), (29, 146166), (33, 146277), (35, 146364), (36, 146394), (37, 146412), (39, 146436), (41, 146451), (50, 146742), (51, 146802), (53, 146850), (54, 146859), (56, 146931), (58, 147033), (60, 147078), (62, 147108), (63, 147171), (64, 147186), (72, 147345), (73, 147369), (74, 147426), (77, 147513), (80, 147621), (86, 147792), (87, 147804), (89, 147855), (92, 147912), (97, 148059), (101, 148182), (102, 148209), (103, 148212), (104, 148215), (105, 148218), (107, 148275), (108, 148323), (110, 148383), (111, 148392), (112, 148503),

Gene: Primadonna\_249 Start: 145639, Stop: 148662, Start Num: 4

Candidate Starts for Primadonna\_249:

(1, 145357), (Start: 4 @145639 has 111 MA's), (5, 145705), (6, 145747), (7, 145771), (8, 145789), (9, 145828), (11, 145900), (12, 145915), (14, 145972), (15, 145978), (16, 146005), (19, 146080), (20, 146092), (23, 146167), (24, 146170), (29, 146278), (31, 146362), (33, 146389), (35, 146476), (36, 146506), (37, 146524), (39, 146548), (41, 146563), (50, 146854), (51, 146914), (53, 146962), (54, 146971), (55, 146995), (58, 147145), (60, 147190), (62, 147220), (63, 147283), (64, 147298), (72, 147457), (73, 147481), (74, 147538), (77, 147625), (80, 147733), (81, 147793), (86, 147904), (87, 147916), (89, 147967), (92, 148024), (97, 148171), (101, 148294), (102, 148321), (103, 148324), (104, 148327), (105, 148330), (107, 148387), (108, 148435), (110, 148495), (111, 148504), (112, 148615),

Gene: QBert\_245 Start: 143877, Stop: 146900, Start Num: 4

Candidate Starts for QBert\_245:

(1, 143595), (Start: 4 @143877 has 111 MA's), (5, 143943), (6, 143985), (7, 144009), (8, 144027), (9, 144066), (11, 144138), (12, 144153), (14, 144210), (15, 144216), (16, 144243), (19, 144318), (20, 144330), (23, 144405), (24, 144408), (29, 144516), (31, 144600), (33, 144627), (35, 144714), (36, 144744), (37, 144762), (39, 144786), (41, 144801), (50, 145092), (51, 145152), (53, 145200), (54, 145209), (56, 145281), (58, 145383), (60, 145428), (62, 145458), (63, 145521), (64, 145536), (72, 145695), (73, 145719), (74, 145776), (77, 145863), (80, 145971), (81, 146031), (86, 146142), (87, 146154), (88, 146163), (89, 146205), (92, 146262), (94, 146394), (97, 146409), (101, 146532), (102, 146559), (103, 146562), (104, 146565), (105, 146568), (107, 146625), (108, 146673), (110, 146733), (111, 146742), (112, 146853),

Gene: Quasimodo\_256 Start: 145863, Stop: 148886, Start Num: 4

Candidate Starts for Quasimodo\_256:

(1, 145581), (Start: 4 @145863 has 111 MA's), (5, 145929), (6, 145971), (7, 145995), (8, 146013), (9, 146052), (11, 146124), (12, 146139), (14, 146196), (15, 146202), (16, 146229), (19, 146304), (20, 146316), (23, 146391), (24, 146394), (29, 146502), (33, 146613), (35, 146700), (36, 146730), (37, 146748), (39, 146772), (41, 146787), (50, 147078), (51, 147138), (53, 147186), (54, 147195), (56, 147267), (58, 147369), (60, 147414), (62, 147444), (63, 147507), (64, 147522), (72, 147681), (73, 147705), (74, 147762), (77, 147849), (80, 147957), (86, 148128), (87, 148140), (89, 148191), (92, 148248), (97, 148395), (101, 148518), (102, 148545), (103, 148548), (104, 148551), (105, 148554), (107, 148611), (108, 148659), (110, 148719), (111, 148728), (112, 148839),

Gene: Rabinovish\_246 Start: 144367, Stop: 147390, Start Num: 4

Candidate Starts for Rabinovish\_246:

(1, 144085), (Start: 4 @144367 has 111 MA's), (5, 144433), (6, 144475), (7, 144499), (8, 144517), (9, 144556), (11, 144628), (12, 144643), (14, 144700), (15, 144706), (16, 144733), (19, 144808), (20, 144820), (23, 144895), (24, 144898), (29, 145006), (33, 145117), (35, 145204), (36, 145234), (37, 145252), (39, 145276), (41, 145291), (50, 145582), (51, 145642), (53, 145690), (54, 145699), (55, 145723), (58, 145873), (60, 145918), (62, 145948), (63, 146011), (64, 146026), (72, 146185), (73, 146209), (74, 146266), (80, 146461), (81, 146521), (86, 146632), (87, 146644), (89, 146695), (92, 146752), (97, 146899), (101, 147022), (102, 147049), (103, 147052), (104, 147055), (105, 147058), (107, 147115), (108, 147163), (110, 147223), (111, 147232), (112, 147343),

Gene: Rahel\_255 Start: 145965, Stop: 148988, Start Num: 4

Candidate Starts for Rahel\_255:

(1, 145683), (Start: 4 @145965 has 111 MA's), (5, 146031), (6, 146073), (7, 146097), (8, 146115), (9, 146154), (11, 146226), (12, 146241), (14, 146298), (15, 146304), (16, 146331), (19, 146406), (20, 146418), (23, 146493), (24, 146496), (29, 146604), (31, 146688), (33, 146715), (35, 146802), (36, 146832), (37, 146850), (39, 146874), (41, 146889), (50, 147180), (51, 147240), (53, 147288), (54, 147297), (56, 147369), (58, 147471), (60, 147516), (62, 147546), (63, 147609), (64, 147624), (72, 147783), (73, 147807), (74, 147864), (77, 147951), (80, 148059), (81, 148119), (86, 148230), (87, 148242), (88, 148251), (89, 148293), (92, 148350), (94, 148482), (97, 148497), (101, 148620), (102, 148647), (103, 148650), (104, 148653), (105, 148656), (107, 148713), (108, 148761), (110, 148821),

(111, 148830), (112, 148941),

Gene: Rizal\_242 Start: 143780, Stop: 146803, Start Num: 4

Candidate Starts for Rizal\_242:

(1, 143498), (Start: 4 @143780 has 111 MA's), (5, 143846), (6, 143888), (7, 143912), (8, 143930), (9, 143969), (11, 144041), (12, 144056), (14, 144113), (15, 144119), (16, 144146), (19, 144221), (20, 144233), (23, 144308), (24, 144311), (29, 144419), (31, 144503), (33, 144530), (35, 144617), (36, 144647), (37, 144665), (39, 144689), (41, 144704), (50, 144995), (51, 145055), (53, 145103), (54, 145112), (56, 145184), (58, 145286), (60, 145331), (62, 145361), (63, 145424), (64, 145439), (72, 145598), (73, 145622), (74, 145679), (77, 145766), (80, 145874), (81, 145934), (86, 146045), (87, 146057), (88, 146066), (89, 146108), (92, 146165), (94, 146297), (97, 146312), (101, 146435), (102, 146462), (103, 146465), (104, 146468), (105, 146471), (107, 146528), (108, 146576), (110, 146636), (111, 146645), (112, 146756),

Gene: RoMag\_248 Start: 145561, Stop: 148584, Start Num: 4

Candidate Starts for RoMag\_248:

(1, 145279), (Start: 4 @145561 has 111 MA's), (5, 145627), (6, 145669), (7, 145693), (8, 145711), (9, 145750), (11, 145822), (12, 145837), (14, 145894), (15, 145900), (16, 145927), (19, 146002), (20, 146014), (23, 146089), (24, 146092), (29, 146200), (31, 146284), (33, 146311), (35, 146398), (36, 146428), (37, 146446), (39, 146470), (41, 146485), (50, 146776), (51, 146836), (53, 146884), (54, 146893), (55, 146917), (58, 147067), (60, 147112), (62, 147142), (63, 147205), (64, 147220), (72, 147379), (73, 147403), (74, 147460), (77, 147547), (80, 147655), (81, 147715), (86, 147826), (87, 147838), (88, 147847), (89, 147889), (92, 147946), (94, 148078), (97, 148093), (101, 148216), (102, 148243), (103, 148246), (104, 148249), (105, 148252), (107, 148309), (108, 148357), (110, 148417), (111, 148426), (112, 148537),

Gene: Ronan\_249 Start: 143942, Stop: 146965, Start Num: 4

Candidate Starts for Ronan\_249:

(Start: 4 @143942 has 111 MA's), (5, 144008), (6, 144050), (7, 144074), (8, 144092), (9, 144131), (11, 144203), (12, 144218), (14, 144275), (15, 144281), (16, 144308), (19, 144383), (20, 144395), (23, 144470), (24, 144473), (29, 144581), (31, 144665), (33, 144692), (35, 144779), (36, 144809), (37, 144827), (39, 144851), (41, 144866), (50, 145157), (51, 145217), (53, 145265), (54, 145274), (55, 145298), (58, 145448), (60, 145493), (62, 145523), (63, 145586), (64, 145601), (72, 145760), (73, 145784), (74, 145841), (77, 145928), (80, 146036), (81, 146096), (86, 146207), (87, 146219), (88, 146228), (89, 146270), (92, 146327), (94, 146459), (97, 146474), (101, 146597), (102, 146624), (103, 146627), (104, 146630), (105, 146633), (107, 146690), (108, 146738), (110, 146798), (111, 146807), (112, 146918),

Gene: Sauce\_250 Start: 145289, Stop: 148312, Start Num: 4

Candidate Starts for Sauce\_250:

(1, 145007), (Start: 4 @145289 has 111 MA's), (5, 145355), (6, 145397), (7, 145421), (8, 145439), (9, 145478), (11, 145550), (12, 145565), (14, 145622), (15, 145628), (16, 145655), (19, 145730), (20, 145742), (23, 145817), (24, 145820), (29, 145928), (31, 146012), (33, 146039), (35, 146126), (36, 146156), (37, 146174), (39, 146198), (41, 146213), (50, 146504), (51, 146564), (53, 146612), (54, 146621), (56, 146693), (58, 146795), (60, 146840), (62, 146870), (63, 146933), (64, 146948), (72, 147107), (73, 147131), (74, 147188), (77, 147275), (80, 147383), (81, 147443), (86, 147554), (87, 147566), (88, 147575), (89, 147617), (92, 147674), (94, 147806), (97, 147821), (101, 147944), (102, 147971), (103, 147974), (104, 147977), (105, 147980), (107, 148037), (108, 148085), (110, 148145), (111, 148154), (112, 148265),

Gene: ScottMcG\_245 Start: 144490, Stop: 147513, Start Num: 4

Candidate Starts for ScottMcG\_245:

(1, 144208), (Start: 4 @144490 has 111 MA's), (5, 144556), (6, 144598), (7, 144622), (8, 144640), (9, 144679), (11, 144751), (12, 144766), (14, 144823), (15, 144829), (16, 144856), (19, 144931), (20, 144943), (23, 145018), (24, 145021), (29, 145129), (33, 145240), (35, 145327), (36, 145357), (37, 145375), (39, 145399), (41, 145414), (50, 145705), (51, 145765), (53, 145813), (54, 145822), (56, 145894), (58, 145996), (60, 146041), (62, 146071), (63, 146134), (64, 146149), (72, 146308), (73, 146332), (74, 146389), (77, 146476), (80, 146584), (81, 146644), (86, 146755), (87, 146767), (89, 146818), (92, 146875), (97, 147022), (101, 147145), (102, 147172), (103, 147175), (104, 147178), (105, 147181), (107, 147238), (108, 147286), (110, 147346), (111, 147355), (112, 147466),

Gene: Settecandela\_2 Start: 1651, Stop: 4911, Start Num: 2

Candidate Starts for Settecandela\_2:

(Start: 2 @1651 has 2 MA's), (9, 1867), (10, 1930), (11, 1939), (13, 2005), (17, 2053), (18, 2116), (21, 2140), (22, 2203), (23, 2206), (25, 2245), (26, 2281), (27, 2299), (28, 2317), (29, 2332), (30, 2350), (32, 2422), (33, 2443), (34, 2446), (37, 2590), (40, 2617), (42, 2674), (43, 2698), (44, 2716), (45, 2770), (46, 2830), (47, 2851), (48, 2863), (49, 2890), (52, 3022), (57, 3283), (59, 3310), (60, 3349), (61, 3358), (65, 3517), (66, 3526), (67, 3559), (68, 3598), (69, 3616), (70, 3655), (71, 3661), (75, 3772), (76, 3835), (78, 3901), (79, 3955), (80, 3991), (82, 4102), (83, 4147), (84, 4171), (85, 4201), (88, 4234), (90, 4297), (91, 4300), (93, 4432), (95, 4492), (96, 4498), (98, 4552), (99, 4573), (100, 4588), (104, 4645), (105, 4648), (106, 4702), (109, 4807),

Gene: Shaqnato\_244 Start: 144698, Stop: 147721, Start Num: 4

Candidate Starts for Shaqnato\_244:

(1, 144416), (Start: 4 @144698 has 111 MA's), (5, 144764), (6, 144806), (7, 144830), (8, 144848), (9, 144887), (11, 144959), (12, 144974), (14, 145031), (15, 145037), (16, 145064), (19, 145139), (20, 145151), (23, 145226), (24, 145229), (29, 145337), (31, 145421), (33, 145448), (35, 145535), (36, 145565), (37, 145583), (39, 145607), (41, 145622), (50, 145913), (51, 145973), (53, 146021), (54, 146030), (56, 146102), (58, 146204), (60, 146249), (62, 146279), (63, 146342), (64, 146357), (72, 146516), (73, 146540), (74, 146597), (77, 146684), (80, 146792), (81, 146852), (86, 146963), (87, 146975), (88, 146984), (89, 147026), (92, 147083), (94, 147215), (97, 147230), (101, 147353), (102, 147380), (103, 147383), (104, 147386), (105, 147389), (107, 147446), (108, 147494), (110, 147554), (111, 147563), (112, 147674),

Gene: SilverDipper\_258 Start: 146083, Stop: 149106, Start Num: 4

Candidate Starts for SilverDipper\_258:

(1, 145801), (Start: 4 @146083 has 111 MA's), (5, 146149), (6, 146191), (7, 146215), (8, 146233), (9, 146272), (11, 146344), (12, 146359), (14, 146416), (15, 146422), (16, 146449), (19, 146524), (20, 146536), (23, 146611), (24, 146614), (29, 146722), (33, 146833), (35, 146920), (36, 146950), (37, 146968), (39, 146992), (41, 147007), (50, 147298), (51, 147358), (53, 147406), (54, 147415), (56, 147487), (58, 147589), (60, 147634), (62, 147664), (63, 147727), (64, 147742), (72, 147901), (73, 147925), (74, 147982), (77, 148069), (80, 148177), (86, 148348), (87, 148360), (89, 148411), (92, 148468), (97, 148615), (101, 148738), (102, 148765), (103, 148768), (104, 148771), (105, 148774), (107, 148831), (108, 148879), (110, 148939), (111, 148948), (112, 149059),

Gene: SmallFry\_254 Start: 145441, Stop: 148464, Start Num: 4

Candidate Starts for SmallFry\_254:

(1, 145159), (Start: 4 @145441 has 111 MA's), (5, 145507), (6, 145549), (7, 145573), (8, 145591), (9, 145630), (11, 145702), (12, 145717), (14, 145774), (15, 145780), (16, 145807), (19, 145882), (20, 145894), (23, 145969), (24, 145972), (29, 146080), (31, 146164), (33, 146191), (35, 146278), (36, 146308), (37, 146326), (39, 146350), (41, 146365), (50, 146656), (51, 146716), (53, 146764), (54, 146773), (56, 146845), (58, 146947), (60, 146992), (62, 147022), (63, 147085), (64, 147100), (72, 147259), (73, 147283), (74, 147340), (77, 147427), (80, 147535), (81, 147595), (86, 147706), (87, 147718), (88, 147727), (89, 147769), (92, 147826), (94, 147958), (97, 147973), (101, 148096), (102, 148123), (103, 148126), (104, 148129), (105, 148132), (107, 148189), (108, 148237), (110, 148297),

(111, 148306), (112, 148417),

Gene: Spec\_247 Start: 145453, Stop: 148476, Start Num: 4

Candidate Starts for Spec\_247:

(1, 145171), (Start: 4 @145453 has 111 MA's), (5, 145519), (6, 145561), (7, 145585), (8, 145603), (9, 145642), (11, 145714), (12, 145729), (14, 145786), (15, 145792), (16, 145819), (19, 145894), (20, 145906), (23, 145981), (24, 145984), (29, 146092), (31, 146176), (33, 146203), (35, 146290), (36, 146320), (37, 146338), (39, 146362), (41, 146377), (50, 146668), (51, 146728), (53, 146776), (54, 146785), (56, 146857), (58, 146959), (60, 147004), (62, 147034), (63, 147097), (64, 147112), (72, 147271), (73, 147295), (74, 147352), (77, 147439), (80, 147547), (81, 147607), (86, 147718), (87, 147730), (88, 147739), (89, 147781), (92, 147838), (94, 147970), (97, 147985), (101, 148108), (102, 148135), (103, 148138), (104, 148141), (105, 148144), (107, 148201), (108, 148249), (110, 148309), (111, 148318), (112, 148429),

Gene: Specks\_258 Start: 146381, Stop: 149404, Start Num: 4

Candidate Starts for Specks\_258:

(1, 146099), (Start: 4 @146381 has 111 MA's), (5, 146447), (6, 146489), (7, 146513), (8, 146531), (9, 146570), (11, 146642), (12, 146657), (14, 146714), (15, 146720), (16, 146747), (19, 146822), (20, 146834), (23, 146909), (24, 146912), (29, 147020), (31, 147104), (33, 147131), (35, 147218), (36, 147248), (37, 147266), (39, 147290), (41, 147305), (50, 147596), (51, 147656), (53, 147704), (54, 147713), (55, 147737), (58, 147887), (60, 147932), (62, 147962), (63, 148025), (64, 148040), (72, 148199), (73, 148223), (74, 148280), (77, 148367), (80, 148475), (81, 148535), (86, 148646), (87, 148658), (88, 148667), (89, 148709), (92, 148766), (94, 148898), (97, 148913), (101, 149036), (102, 149063), (103, 149066), (104, 149069), (105, 149072), (107, 149129), (108, 149177), (110, 149237), (111, 149246), (112, 149357),

Gene: Sprinklers\_251 Start: 145149, Stop: 148172, Start Num: 4

Candidate Starts for Sprinklers\_251:

(1, 144867), (Start: 4 @145149 has 111 MA's), (5, 145215), (6, 145257), (7, 145281), (8, 145299), (9, 145338), (11, 145410), (12, 145425), (14, 145482), (15, 145488), (16, 145515), (19, 145590), (20, 145602), (23, 145677), (24, 145680), (29, 145788), (31, 145872), (33, 145899), (35, 145986), (36, 146016), (37, 146034), (39, 146058), (41, 146073), (50, 146364), (51, 146424), (53, 146472), (54, 146481), (56, 146553), (58, 146655), (60, 146700), (62, 146730), (63, 146793), (64, 146808), (72, 146967), (73, 146991), (74, 147048), (77, 147135), (80, 147243), (81, 147303), (86, 147414), (87, 147426), (88, 147435), (89, 147477), (92, 147534), (94, 147666), (97, 147681), (101, 147804), (102, 147831), (103, 147834), (104, 147837), (105, 147840), (107, 147897), (108, 147945), (110, 148005), (111, 148014), (112, 148125),

Gene: Spud\_245 Start: 144898, Stop: 147921, Start Num: 4

Candidate Starts for Spud\_245:

(1, 144616), (Start: 4 @144898 has 111 MA's), (5, 144964), (6, 145006), (7, 145030), (8, 145048), (9, 145087), (11, 145159), (12, 145174), (14, 145231), (15, 145237), (16, 145264), (19, 145339), (20, 145351), (23, 145426), (24, 145429), (29, 145537), (31, 145621), (33, 145648), (35, 145735), (36, 145765), (37, 145783), (39, 145807), (41, 145822), (50, 146113), (51, 146173), (53, 146221), (54, 146230), (56, 146302), (58, 146404), (60, 146449), (62, 146479), (63, 146542), (64, 146557), (72, 146716), (73, 146740), (74, 146797), (77, 146884), (80, 146992), (81, 147052), (86, 147163), (87, 147175), (88, 147184), (89, 147226), (92, 147283), (94, 147415), (97, 147430), (101, 147553), (102, 147580), (103, 147583), (104, 147586), (105, 147589), (107, 147646), (108, 147694), (110, 147754), (111, 147763), (112, 147874),

Gene: StephanieG\_247 Start: 146084, Stop: 149107, Start Num: 4

Candidate Starts for StephanieG\_247:

(1, 145802), (Start: 4 @146084 has 111 MA's), (5, 146150), (6, 146192), (7, 146216), (8, 146234), (9, 146273), (11, 146345), (12, 146360), (14, 146417), (15, 146423), (16, 146450), (19, 146525), (20, 146537), (23, 146612), (24, 146615), (29, 146723), (31, 146807), (33, 146834), (35, 146921), (36, 146951), (37, 146969), (39, 146993), (41, 147008), (50, 147299), (51, 147359), (53, 147407), (54, 147416), (55, 147440), (58, 147590), (60, 147635), (62, 147665), (63, 147728), (64, 147743), (72, 147902), (73, 147926), (74, 147983), (77, 148070), (80, 148178), (81, 148238), (86, 148349), (87, 148361), (88, 148370), (89, 148412), (92, 148469), (94, 148601), (97, 148616), (101, 148739), (102, 148766), (103, 148769), (104, 148772), (105, 148775), (107, 148832), (108, 148880), (110, 148940), (111, 148949), (112, 149060),

Gene: Stubby\_236 Start: 142869, Stop: 145892, Start Num: 4

Candidate Starts for Stubby\_236:

(Start: 4 @142869 has 111 MA's), (5, 142935), (6, 142977), (7, 143001), (8, 143019), (9, 143058), (11, 143130), (12, 143145), (14, 143202), (15, 143208), (16, 143235), (19, 143310), (20, 143322), (23, 143397), (24, 143400), (29, 143508), (33, 143619), (35, 143706), (36, 143736), (37, 143754), (39, 143778), (41, 143793), (50, 144084), (51, 144144), (53, 144192), (54, 144201), (55, 144225), (58, 144375), (60, 144420), (62, 144450), (63, 144513), (64, 144528), (72, 144687), (73, 144711), (74, 144768), (77, 144855), (80, 144963), (81, 145023), (86, 145134), (87, 145146), (88, 145155), (89, 145197), (92, 145254), (97, 145401), (101, 145524), (102, 145551), (103, 145554), (104, 145557), (105, 145560), (107, 145617), (108, 145665), (110, 145725), (111, 145734), (112, 145845),

Gene: StubbySaigey\_260 Start: 146066, Stop: 149089, Start Num: 4

Candidate Starts for StubbySaigey\_260:

(1, 145784), (Start: 4 @146066 has 111 MA's), (5, 146132), (6, 146174), (7, 146198), (8, 146216), (9, 146255), (11, 146327), (12, 146342), (14, 146399), (15, 146405), (16, 146432), (19, 146507), (20, 146519), (23, 146594), (24, 146597), (29, 146705), (33, 146816), (35, 146903), (36, 146933), (37, 146951), (39, 146975), (41, 146990), (50, 147281), (51, 147341), (53, 147389), (54, 147398), (56, 147470), (58, 147572), (60, 147617), (62, 147647), (63, 147710), (64, 147725), (72, 147884), (73, 147908), (74, 147965), (77, 148052), (80, 148160), (81, 148220), (86, 148331), (87, 148343), (89, 148394), (92, 148451), (97, 148598), (101, 148721), (102, 148748), (103, 148751), (104, 148754), (105, 148757), (107, 148814), (108, 148862), (110, 148922), (111, 148931), (112, 149042),

Gene: Tainan\_253 Start: 145004, Stop: 148027, Start Num: 4

Candidate Starts for Tainan\_253:

(1, 144722), (Start: 4 @145004 has 111 MA's), (5, 145070), (6, 145112), (7, 145136), (8, 145154), (9, 145193), (11, 145265), (12, 145280), (14, 145337), (15, 145343), (16, 145370), (19, 145445), (20, 145457), (23, 145532), (24, 145535), (29, 145643), (31, 145727), (33, 145754), (35, 145841), (36, 145871), (37, 145889), (39, 145913), (41, 145928), (50, 146219), (51, 146279), (53, 146327), (54, 146336), (55, 146360), (58, 146510), (60, 146555), (62, 146585), (63, 146648), (64, 146663), (72, 146822), (73, 146846), (74, 146903), (77, 146990), (80, 147098), (81, 147158), (86, 147269), (87, 147281), (88, 147290), (89, 147332), (92, 147389), (94, 147521), (97, 147536), (101, 147659), (102, 147686), (103, 147689), (104, 147692), (105, 147695), (107, 147752), (108, 147800), (110, 147860), (111, 147869), (112, 147980),

Gene: Teardrop\_252 Start: 145393, Stop: 148416, Start Num: 4

Candidate Starts for Teardrop\_252:

(1, 145111), (Start: 4 @145393 has 111 MA's), (5, 145459), (6, 145501), (7, 145525), (8, 145543), (9, 145582), (11, 145654), (12, 145669), (14, 145726), (15, 145732), (16, 145759), (19, 145834), (20, 145846), (23, 145921), (24, 145924), (29, 146032), (31, 146116), (33, 146143), (35, 146230), (36, 146260), (37, 146278), (39, 146302), (41, 146317), (50, 146608), (51, 146668), (53, 146716), (54, 146725), (55, 146749), (58, 146899), (60, 146944), (62, 146974), (63, 147037), (64, 147052), (72, 147211), (73, 147235), (74, 147292), (77, 147379), (80, 147487), (81, 147547), (86, 147658), (87, 147670), (88, 147679), (89, 147721), (92, 147778), (95, 147916), (97, 147925), (101, 148048), (102,

148075), (103, 148078), (104, 148081), (105, 148084), (107, 148141), (108, 148189), (110, 148249), (111, 148258), (112, 148369),

Gene: Trinitium\_250 Start: 144114, Stop: 147137, Start Num: 4

Candidate Starts for Trinitium\_250:

(1, 143832), (Start: 4 @144114 has 111 MA's), (5, 144180), (6, 144222), (7, 144246), (8, 144264), (9, 144303), (11, 144375), (12, 144390), (14, 144447), (15, 144453), (16, 144480), (19, 144555), (20, 144567), (23, 144642), (24, 144645), (29, 144753), (33, 144864), (35, 144951), (36, 144981), (37, 144999), (39, 145023), (41, 145038), (50, 145329), (51, 145389), (53, 145437), (54, 145446), (56, 145518), (58, 145620), (60, 145665), (62, 145695), (63, 145758), (64, 145773), (72, 145932), (73, 145956), (74, 146013), (77, 146100), (80, 146208), (81, 146268), (86, 146379), (87, 146391), (89, 146442), (92, 146499), (97, 146646), (101, 146769), (102, 146796), (103, 146799), (104, 146802), (105, 146805), (107, 146862), (108, 146910), (110, 146970), (111, 146979), (112, 147090),

Gene: Turret\_244 Start: 143247, Stop: 146270, Start Num: 4

Candidate Starts for Turret\_244:

(1, 142965), (Start: 4 @143247 has 111 MA's), (5, 143313), (6, 143355), (7, 143379), (8, 143397), (9, 143436), (11, 143508), (12, 143523), (14, 143580), (15, 143586), (16, 143613), (19, 143688), (20, 143700), (23, 143775), (24, 143778), (29, 143886), (33, 143997), (35, 144084), (36, 144114), (37, 144132), (39, 144156), (41, 144171), (50, 144462), (51, 144522), (53, 144570), (54, 144579), (56, 144651), (58, 144753), (60, 144798), (62, 144828), (63, 144891), (64, 144906), (72, 145065), (73, 145089), (74, 145146), (77, 145233), (80, 145341), (81, 145401), (86, 145512), (87, 145524), (89, 145575), (92, 145632), (97, 145779), (101, 145902), (102, 145929), (103, 145932), (104, 145935), (105, 145938), (107, 145995), (108, 146043), (110, 146103), (111, 146112), (112, 146223),

Gene: ValleyTerrace\_254 Start: 144824, Stop: 147847, Start Num: 4

Candidate Starts for ValleyTerrace\_254:

(1, 144542), (Start: 4 @144824 has 111 MA's), (5, 144890), (6, 144932), (7, 144956), (8, 144974), (9, 145013), (11, 145085), (12, 145100), (14, 145157), (15, 145163), (16, 145190), (19, 145265), (20, 145277), (23, 145352), (24, 145355), (29, 145463), (33, 145574), (35, 145661), (36, 145691), (37, 145709), (39, 145733), (41, 145748), (50, 146039), (51, 146099), (53, 146147), (54, 146156), (56, 146228), (58, 146330), (60, 146375), (62, 146405), (63, 146468), (64, 146483), (72, 146642), (73, 146666), (74, 146723), (77, 146810), (80, 146918), (86, 147089), (87, 147101), (89, 147152), (92, 147209), (97, 147356), (101, 147479), (102, 147506), (103, 147509), (104, 147512), (105, 147515), (107, 147572), (108, 147620), (110, 147680), (111, 147689), (112, 147800),

Gene: Wally\_251 Start: 144808, Stop: 147831, Start Num: 4

Candidate Starts for Wally\_251:

(1, 144526), (Start: 4 @144808 has 111 MA's), (5, 144874), (6, 144916), (7, 144940), (8, 144958), (9, 144997), (11, 145069), (12, 145084), (14, 145141), (15, 145147), (16, 145174), (19, 145249), (20, 145261), (23, 145336), (24, 145339), (29, 145447), (31, 145531), (33, 145558), (35, 145645), (36, 145675), (37, 145693), (39, 145717), (41, 145732), (50, 146023), (51, 146083), (53, 146131), (54, 146140), (56, 146212), (58, 146314), (60, 146359), (62, 146389), (63, 146452), (64, 146467), (72, 146626), (73, 146650), (74, 146707), (77, 146794), (80, 146902), (81, 146962), (86, 147073), (87, 147085), (89, 147136), (92, 147193), (97, 147340), (101, 147463), (102, 147490), (103, 147493), (104, 147496), (105, 147499), (107, 147556), (108, 147604), (110, 147664), (111, 147673), (112, 147784),

Gene: Willis\_254 Start: 145747, Stop: 148770, Start Num: 4

Candidate Starts for Willis\_254:

(1, 145465), (Start: 4 @145747 has 111 MA's), (5, 145813), (6, 145855), (7, 145879), (8, 145897), (9, 145936), (11, 146008), (12, 146023), (14, 146080), (15, 146086), (16, 146113), (19, 146188), (20, 146200), (23, 146275), (24, 146278), (29, 146386), (33, 146497), (35, 146584), (36, 146614), (37, 146632), (39, 146656), (41, 146671), (50, 146962), (51, 147022), (53, 147070), (54, 147079), (56,

147151), (58, 147253), (60, 147298), (62, 147328), (63, 147391), (64, 147406), (72, 147565), (73, 147589), (74, 147646), (77, 147733), (80, 147841), (86, 148012), (87, 148024), (89, 148075), (92, 148132), (97, 148279), (101, 148402), (102, 148429), (103, 148432), (104, 148435), (105, 148438), (107, 148495), (108, 148543), (110, 148603), (111, 148612), (112, 148723),

Gene: Yassified\_249 Start: 144943, Stop: 147966, Start Num: 4

Candidate Starts for Yassified\_249:

(Start: 4 @144943 has 111 MA's), (5, 145009), (6, 145051), (7, 145075), (8, 145093), (9, 145132), (11, 145204), (12, 145219), (14, 145276), (15, 145282), (16, 145309), (19, 145384), (20, 145396), (23, 145471), (24, 145474), (29, 145582), (31, 145666), (33, 145693), (35, 145780), (36, 145810), (37, 145828), (39, 145852), (41, 145867), (50, 146158), (51, 146218), (53, 146266), (54, 146275), (55, 146299), (58, 146449), (60, 146494), (62, 146524), (63, 146587), (64, 146602), (72, 146761), (73, 146785), (74, 146842), (77, 146929), (80, 147037), (81, 147097), (86, 147208), (87, 147220), (88, 147229), (89, 147271), (92, 147328), (94, 147460), (97, 147475), (101, 147598), (102, 147625), (103, 147628), (104, 147631), (105, 147634), (107, 147691), (108, 147739), (110, 147799), (111, 147808), (112, 147919),

Gene: YoungMoneyMata\_253 Start: 145939, Stop: 148962, Start Num: 4

Candidate Starts for YoungMoneyMata\_253:

(1, 145657), (Start: 4 @145939 has 111 MA's), (5, 146005), (6, 146047), (7, 146071), (8, 146089), (9, 146128), (11, 146200), (12, 146215), (14, 146272), (15, 146278), (16, 146305), (19, 146380), (20, 146392), (23, 146467), (24, 146470), (29, 146578), (33, 146689), (35, 146776), (36, 146806), (37, 146824), (39, 146848), (41, 146863), (50, 147154), (51, 147214), (53, 147262), (54, 147271), (56, 147343), (58, 147445), (60, 147490), (62, 147520), (63, 147583), (64, 147598), (72, 147757), (73, 147781), (74, 147838), (77, 147925), (80, 148033), (86, 148204), (87, 148216), (89, 148267), (92, 148324), (97, 148471), (101, 148594), (102, 148621), (103, 148624), (104, 148627), (105, 148630), (107, 148687), (108, 148735), (110, 148795), (111, 148804), (112, 148915),

Gene: ZygoTaiga\_250 Start: 147216, Stop: 150239, Start Num: 4

Candidate Starts for ZygoTaiga\_250:

(1, 146934), (Start: 4 @147216 has 111 MA's), (5, 147282), (6, 147324), (7, 147348), (8, 147366), (9, 147405), (11, 147477), (12, 147492), (14, 147549), (15, 147555), (16, 147582), (19, 147657), (20, 147669), (23, 147744), (24, 147747), (29, 147855), (31, 147939), (33, 147966), (35, 148053), (36, 148083), (37, 148101), (39, 148125), (41, 148140), (50, 148431), (51, 148491), (53, 148539), (54, 148548), (55, 148572), (58, 148722), (60, 148767), (62, 148797), (63, 148860), (64, 148875), (72, 149034), (73, 149058), (74, 149115), (77, 149202), (80, 149310), (81, 149370), (86, 149481), (87, 149493), (88, 149502), (89, 149544), (92, 149601), (94, 149733), (97, 149748), (101, 149871), (102, 149898), (103, 149901), (104, 149904), (105, 149907), (107, 149964), (108, 150012), (110, 150072), (111, 150081), (112, 150192),