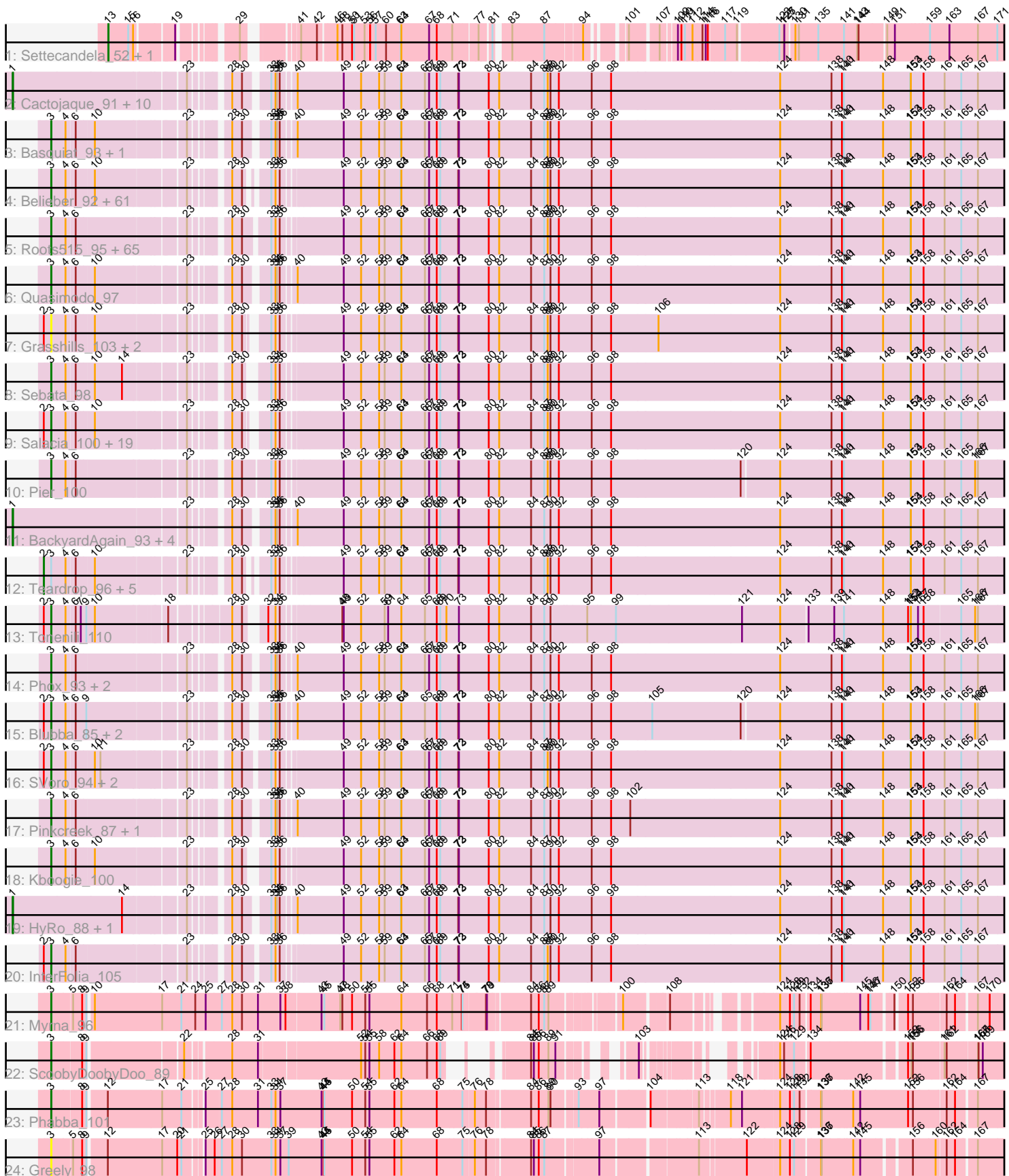


# Pham 200011



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 200011 Report

This analysis was run 01/18/25 on database version 583.

Pham number 200011 has 200 members, 25 are drafts.

Phages represented in each track:

- Track 1 : Settecandela\_52, Phrappuccino\_52
- Track 2 : Cactojaque\_91, Flabslab\_91, ChaylaJr\_91, ErnieJ\_92, Melpomini\_90, Rabinovish\_93, Turret\_91, Blackbrain\_91, Janiyra\_98, EasyJones\_99, ChickenPhender\_92
- Track 3 : Basquiat\_93, Chargie21\_93
- Track 4 : Belieber\_92, Atlantean\_96, JPickles\_95, StubbySaigey\_99, CindyLou\_98, Naija\_96, Ngannou\_93, Iota\_91, Shnickers\_97, ValleyTerrace\_97, LifeSavor\_96, Halldule\_90, Audrick\_99, McGee\_98, Sauce\_97, Babyland\_97, Amataga\_97, Guwapp\_96, Essence\_94, InigoMontoya\_98, ArcherS7\_96, Blackdragon\_92, LRRHood\_91, Ronan\_90, JulietS\_91, Derek\_97, GlutenPhree\_96, Cali\_92, Jemmno\_97, Nappy\_99, Ablatia\_94, Jedediah\_100, EmmaElysia\_96, Yassified\_93, Rahel\_96, Ading\_97, Spec\_93, JustHall\_93, Pivoine\_96, Grungle\_84, Momo\_96, Trinitium\_93, Jaygup\_97, Ghost\_96, Shaqnato\_89, Gangam\_97, Koguma\_93, Sprinklers\_92, Phlegm\_99, SmallFry\_97, Chomp\_96, Patter\_97, DirtMonster\_90, CharlieB\_92, YoungMoneyMata\_97, Adlitam\_97, JigglyPuff\_104, Bangla1971\_98, SilverDipper\_98, Fludd\_97, Phusco\_97, Latch\_97
- Track 5 : Roots515\_95, Loanshark\_96, BananaFence\_95, Lethe\_96, BeanWater\_88, Tainan\_101, LolaVinca\_98, Napoleon13\_92, Caravan\_91, Khaleesi\_95, Megamind\_95, MikeLiesIn\_97, Ewok\_97, ParkTD\_97, FoxtrotP1\_96, ShiaLabeouf\_96, TinyTim\_96, BadAgartude\_93, Zalkecks\_97, Naval22\_101, Kamryn\_96, EmToTheThree\_99, Domi\_90, YemiJoy2021\_97, ET08\_85, Delylah\_99, Gizmo\_100, Erdmann\_97, Bonray\_96, NedWong\_97, FrayBell\_102, Willis\_97, Darko\_96, Lee7\_94, Wally\_95, QBert\_90, Shelob\_98, Bipolarisk\_95, Delilah\_96, Lukilu\_87, Pio\_100, Asterius\_93, Zeenon\_98, Drazdys\_96, Mangeria\_96, Norm\_97, Ava3\_97, Jessibeth14\_95, StephanieG\_95, Capablanca\_98, ZygoTaiga\_95, Matsumoto\_94, LordLeafolot\_101, Pleione\_99, Daffodil\_101, Issimir\_95, MoMoMixon\_97, Gabriel\_98, SrishMeg2525\_95, Bxz1\_94, Shrimp\_96, Littleton\_96, Yucca\_96, FudgeTart\_96, Burrough\_96, Rizal\_93
- Track 6 : Quasimodo\_97
- Track 7 : Grasshills\_103, EggyFarm\_104, BigCity\_104
- Track 8 : Sebata\_98
- Track 9 : Salacia\_100, Concombre\_103, Bigswole\_101, Mikro\_94, IkeLoa\_90, LinStu\_96, I3\_102, DTDevon\_97, NoodleTree\_104, Dandelion\_103, Demodog\_103, DrPhinkDaddy\_95, Specks\_102, Tyke\_98, Izajani\_96, NuevoMundo\_102, Maby2021\_96, JayJay\_98, Bread\_96, Jezreel\_94
- Track 10 : Pier\_100

- Track 11 : BackyardAgain\_93, Morizzled23\_96, ScottMcG\_93, Catera\_93, Dietrick\_88
- Track 12 : Teardrop\_96, Nidhogg\_97, Tortoise16\_94, Astraea\_94, RoMag\_91, Breeniome\_96
- Track 13 : Tonenili\_110
- Track 14 : Phox\_93, Alice\_89, Spud\_96
- Track 15 : Blubba\_85, Cane17\_85, Colt\_86
- Track 16 : SVoro\_94, McWolfish\_94, PurduePete\_96
- Track 17 : Pinkcreek\_87, Stubby\_89
- Track 18 : Kboogie\_100
- Track 19 : HyRo\_88, Shifa\_85
- Track 20 : InterFolia\_105
- Track 21 : Myrna\_96
- Track 22 : ScoobyDoobyDoo\_89
- Track 23 : Phabba\_101
- Track 24 : Greely\_98

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

The start number called the most often in the published annotations is 3, it was called in 149 of the 175 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_94, Ading\_97, Adlitam\_97, Alice\_89, Amataga\_97, ArcherS7\_96, Asterius\_93, Atlantean\_96, Audrick\_99, Ava3\_97, Babyland\_97, BadAgartude\_93, BananaFence\_95, Bangla1971\_98, Basquiat\_93, BeanWater\_88, Belieber\_92, BigCity\_104, Bigswole\_101, Bipolarisk\_95, Blackdragon\_92, Blubba\_85, Bonray\_96, Bread\_96, Burrough\_96, Bxz1\_94, Cali\_92, Cane17\_85, Capablanca\_98, Caravan\_91, Chargie21\_93, CharlieB\_92, Chomp\_96, CindyLou\_98, Colt\_86, Concombre\_103, DTDevon\_97, Daffodil\_101, Dandelion\_103, Darko\_96, Delilah\_96, Delylah\_99, Demodog\_103, Derek\_97, DirtMonster\_90, Domi\_90, DrPhinkDaddy\_95, Drazdys\_96, ET08\_85, EggyFarm\_104, EmToTheThree\_99, EmmaElysia\_96, Erdmann\_97, Essence\_94, Ewok\_97, Fludd\_97, FoxtrotP1\_96, FrayBell\_102, FudgeTart\_96, Gabriel\_98, Gangam\_97, Ghost\_96, Gizmo\_100, GlutenPhree\_96, Grasshills\_103, Greely\_98, Grungle\_84, Guwapp\_96, Halldule\_90, I3\_102, IkeLoa\_90, InigoMontoya\_98, InterFolia\_105, Iota\_91, Issimir\_95, Izajani\_96, JPickles\_95, JayJay\_98, Jaygup\_97, Jediah\_100, Jemmno\_97, Jessibeth14\_95, Jezreel\_94, JigglyPuff\_104, JulietS\_91, JustHall\_93, Kamryn\_96, Kboogie\_100, Khaleesi\_95, Koguma\_93, LRRHood\_91, Latch\_97, Lee7\_94, Lethe\_96, LifeSavor\_96, LinStu\_96, Littleton\_96, Loanshark\_96, LolaVinca\_98, LordLeafolot\_101, Lukilu\_87, Maby2021\_96, Mangeria\_96, Matsumoto\_94, McGee\_98, McWolfish\_94, Megamind\_95, MikeLiesIn\_97, Mikro\_94, MoMoMixon\_97, Momo\_96, Myrna\_96, Naija\_96, Napoleon13\_92, Nappy\_99, Naval22\_101, NedWong\_97, Ngannou\_93, NoodleTree\_104, Norm\_97, NuevoMundo\_102, ParkTD\_97, Patter\_97, Phabba\_101, Phlegm\_99, Phox\_93, Phusco\_97, Pier\_100, Pinkcreek\_87, Pio\_100, Pivoine\_96, Pleione\_99, PurduePete\_96, QBert\_90, Quasimodo\_97, Rahel\_96, Rizal\_93, Ronan\_90, Roots515\_95, SVoro\_94, Salacia\_100, Sauce\_97, ScoobyDoobyDoo\_89, Sebata\_98, Shaqnato\_89, Shelob\_98, ShiaLabeouf\_96, Shnickers\_97, Shrimp\_96, SilverDipper\_98, SmallFry\_97, Spec\_93, Specks\_102, Sprinklers\_92, Spud\_96,

SrishMeg2525\_95, StephanieG\_95, StubbySaigey\_99, Stubby\_89, Tainan\_101, TinyTim\_96, Tonenili\_110, Trinitium\_93, Tyke\_98, ValleyTerrace\_97, Wally\_95, Willis\_97, Yassified\_93, YemiJoy2021\_97, YoungMoneyMata\_97, Yucca\_96, Zalkecks\_97, Zeenon\_98, ZygoTaiga\_95,

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

- Astraea\_94, Breeniome\_96, Nidhogg\_97, RoMag\_91, Teardrop\_96, Tortoise16\_94,

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

- BackyardAgain\_93, Blackbrain\_91, Cactojaque\_91, Catera\_93, ChaylaJr\_91, ChickenPhender\_92, Dietrick\_88, EasyJones\_99, ErnieJ\_92, Flabslab\_91, HyRo\_88, Janiyra\_98, Melpomini\_90, Morizzled23\_96, Phrappuccino\_52, Rabinovish\_93, ScottMcG\_93, Settecandela\_52, Shifa\_85, Turret\_91,

### Summary by start number:

Start 1:

- Found in 18 of 200 ( 9.0% ) of genes in pham
- Manual Annotations of this start: 18 of 175
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BackyardAgain\_93 (C1), Blackbrain\_91 (C1), Cactojaque\_91 (C1), Catera\_93 (C1), ChaylaJr\_91 (C1), ChickenPhender\_92 (C1), Dietrick\_88 (C1), EasyJones\_99 (C1), ErnieJ\_92 (C1), Flabslab\_91 (C1), HyRo\_88 (C1), Janiyra\_98 (C1), Melpomini\_90 (C1), Morizzled23\_96 (C1), Rabinovish\_93 (C1), ScottMcG\_93 (C1), Shifa\_85 (C1), Turret\_91 (C1),

Start 2:

- Found in 37 of 200 ( 18.5% ) of genes in pham
- Manual Annotations of this start: 6 of 175
- Called 16.2% of time when present
- Phage (with cluster) where this start called: Astraea\_94 (C1), Breeniome\_96 (C1), Nidhogg\_97 (C1), RoMag\_91 (C1), Teardrop\_96 (C1), Tortoise16\_94 (C1),

Start 3:

- Found in 180 of 200 ( 90.0% ) of genes in pham
- Manual Annotations of this start: 149 of 175
- Called 96.7% of time when present
- Phage (with cluster) where this start called: Ablatia\_94 (C1), Ading\_97 (C1), Adlitam\_97 (C1), Alice\_89 (C1), Amataga\_97 (C1), ArcherS7\_96 (C1), Asterius\_93 (C1), Atlantean\_96 (C1), Audrick\_99 (C1), Ava3\_97 (C1), Babyland\_97 (C1), BadAgartude\_93 (C1), BananaFence\_95 (C1), Bangla1971\_98 (C1), Basquiat\_93 (C1), BeanWater\_88 (C1), Belieber\_92 (C1), BigCity\_104 (C1), Bigswole\_101 (C1), Bipolarisk\_95 (C1), Blackdragon\_92 (C1), Blubba\_85 (C1), Bonray\_96 (C1), Bread\_96 (C1), Burrough\_96 (C1), Bxz1\_94 (C1), Cali\_92 (C1), Cane17\_85 (C1), Capablanca\_98 (C1), Caravan\_91 (C1), Chargie21\_93 (C1), CharlieB\_92 (C1), Chomp\_96 (C1), CindyLou\_98 (C1), Colt\_86 (C1), Concombre\_103 (C1), DTDevon\_97 (C1), Daffodil\_101 (C1), Dandelion\_103 (C1), Darko\_96 (C1), Delilah\_96 (C1), Delylah\_99 (C1), Demodog\_103 (C1), Derek\_97 (C1), DirtMonster\_90 (C1), Domi\_90 (C1), DrPhinkDaddy\_95 (C1), Drazdys\_96 (C1), ET08\_85 (C1), EggyFarm\_104 (C1), EmToTheThree\_99 (C1), EmmaElysia\_96 (C1), Erdmann\_97 (C1), Essence\_94 (C1), Ewok\_97 (C1), Fludd\_97 (C1), FoxtrotP1\_96 (C1), FrayBell\_102 (C1), FudgeTart\_96 (C1), Gabriel\_98 (C1), Gamgam\_97 (C1), Ghost\_96 (C1), Gizmo\_100 (C1), GlutenPhree\_96 (C1), Grasshills\_103 (C1),

Greely\_98 (C2), Grungle\_84 (C1), Guwapp\_96 (C1), Halldule\_90 (C1), I3\_102 (C1), IkeLoa\_90 (C1), InigoMontoya\_98 (C1), InterFolia\_105 (C1), Iota\_91 (C1), Issimir\_95 (C1), Izajani\_96 (C1), JPickles\_95 (C1), JayJay\_98 (C1), Jaygup\_97 (C1), Jedediah\_100 (C1), Jemmno\_97 (C1), Jessibeth14\_95 (C1), Jezreel\_94 (C1), JigglyPuff\_104 (C1), JulietS\_91 (C1), JustHall\_93 (C1), Kamryn\_96 (C1), Kboogie\_100 (C1), Khaleesi\_95 (C1), Koguma\_93 (C1), LRRHood\_91 (C1), Latch\_97 (C1), Lee7\_94 (C1), Lethe\_96 (C1), LifeSavor\_96 (C1), LinStu\_96 (C1), Littleton\_96 (C1), Loanshark\_96 (C1), LolaVinca\_98 (C1), LordLeafolot\_101 (C1), Lukilu\_87 (C1), Maby2021\_96 (C1), Mangeria\_96 (C1), Matsumoto\_94 (C1), McGee\_98 (C1), McWolfish\_94 (C1), Megamind\_95 (C1), MikeLiesIn\_97 (C1), Mikro\_94 (C1), MoMoMixon\_97 (C1), Momo\_96 (C1), Myrna\_96 (C2), Naija\_96 (C1), Napoleon13\_92 (C1), Nappy\_99 (C1), Naval22\_101 (C1), NedWong\_97 (C1), Ngannou\_93 (C1), NoodleTree\_104 (C1), Norm\_97 (C1), NuevoMundo\_102 (C1), ParkTD\_97 (C1), Patter\_97 (C1), Phabba\_101 (C2), Phlegm\_99 (C1), Phox\_93 (C1), Phusco\_97 (C1), Pier\_100 (C1), Pinkcreek\_87 (C1), Pio\_100 (C1), Pivoine\_96 (C1), Pleione\_99 (C1), PurduePete\_96 (C1), QBert\_90 (C1), Quasimodo\_97 (C1), Rahel\_96 (C1), Rizal\_93 (C1), Ronan\_90 (C1), Roots515\_95 (C1), SVoro\_94 (C1), Salacia\_100 (C1), Sauce\_97 (C1), ScoobyDoobyDoo\_89 (C2), Sebata\_98 (C1), Shaq nato\_89 (C1), Shelob\_98 (C1), ShiaLabeouf\_96 (C1), Shnickers\_97 (C1), Shrimp\_96 (C1), SilverDipper\_98 (C1), SmallFry\_97 (C1), Spec\_93 (C1), Specks\_102 (C1), Sprinklers\_92 (C1), Spud\_96 (C1), SrishMeg2525\_95 (C1), StephanieG\_95 (C1), StubbySaigey\_99 (C1), Stubby\_89 (C1), Tainan\_101 (C1), TinyTim\_96 (C1), Tonenili\_110 (C1), Trinitium\_93 (C1), Tyke\_98 (C1), ValleyTerrace\_97 (C1), Wally\_95 (C1), Willis\_97 (C1), Yassified\_93 (C1), YemiJoy2021\_97 (C1), YoungMoneyMata\_97 (C1), Yucca\_96 (C1), Zalkecks\_97 (C1), Zeenon\_98 (C1), ZygoTaiga\_95 (C1),

Start 13:

- Found in 2 of 200 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 175
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phrappuccino\_52 (AA), Settecandela\_52 (AA),

### **Summary by clusters:**

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

Info for manual annotations of cluster AA:

- Start number 13 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster C1:

- Start number 1 was manually annotated 18 times for cluster C1.
- Start number 2 was manually annotated 6 times for cluster C1.
- Start number 3 was manually annotated 146 times for cluster C1.

Info for manual annotations of cluster C2:

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

### **Gene Information:**

Gene: Ablatia\_94 Start: 40116, Stop: 43916, Start Num: 3

Candidate Starts for Ablatia\_94:

(Start: 3 @40116 has 149 MA's), (4, 40170), (6, 40200), (10, 40269), (23, 40620), (28, 40734), (30, 40776), (33, 40833), (34, 40851), (36, 40869), (49, 41088), (52, 41160), (58, 41238), (59, 41262), (63, 41331), (64, 41334), (65, 41436), (67, 41454), (68, 41487), (69, 41502), (72, 41580), (73, 41583), (80, 41712), (82, 41757), (84, 41892), (87, 41949), (88, 41964), (90, 41976), (92, 42009), (96, 42150), (98, 42234), (124, 42936), (138, 43152), (140, 43194), (141, 43203), (148, 43371), (153, 43488), (154, 43491), (158, 43542), (161, 43629), (165, 43701), (167, 43770),

Gene: Ading\_97 Start: 41385, Stop: 45185, Start Num: 3

Candidate Starts for Ading\_97:

(Start: 3 @41385 has 149 MA's), (4, 41439), (6, 41469), (10, 41538), (23, 41889), (28, 42003), (30, 42045), (33, 42102), (34, 42120), (36, 42138), (49, 42357), (52, 42429), (58, 42507), (59, 42531), (63, 42600), (64, 42603), (65, 42705), (67, 42723), (68, 42756), (69, 42771), (72, 42849), (73, 42852), (80, 42981), (82, 43026), (84, 43161), (87, 43218), (88, 43233), (90, 43245), (92, 43278), (96, 43419), (98, 43503), (124, 44205), (138, 44421), (140, 44463), (141, 44472), (148, 44640), (153, 44757), (154, 44760), (158, 44811), (161, 44898), (165, 44970), (167, 45039),

Gene: Adlitam\_97 Start: 41402, Stop: 45202, Start Num: 3

Candidate Starts for Adlitam\_97:

(Start: 3 @41402 has 149 MA's), (4, 41456), (6, 41486), (10, 41555), (23, 41906), (28, 42020), (30, 42062), (33, 42119), (34, 42137), (36, 42155), (49, 42374), (52, 42446), (58, 42524), (59, 42548), (63, 42617), (64, 42620), (65, 42722), (67, 42740), (68, 42773), (69, 42788), (72, 42866), (73, 42869), (80, 42998), (82, 43043), (84, 43178), (87, 43235), (88, 43250), (90, 43262), (92, 43295), (96, 43436), (98, 43520), (124, 44222), (138, 44438), (140, 44480), (141, 44489), (148, 44657), (153, 44774), (154, 44777), (158, 44828), (161, 44915), (165, 44987), (167, 45056),

Gene: Alice\_89 Start: 38827, Stop: 42642, Start Num: 3

Candidate Starts for Alice\_89:

(Start: 3 @38827 has 149 MA's), (4, 38881), (6, 38911), (23, 39331), (28, 39445), (30, 39487), (33, 39562), (34, 39580), (35, 39586), (36, 39598), (40, 39637), (49, 39814), (52, 39886), (58, 39964), (59, 39988), (63, 40057), (64, 40060), (65, 40162), (67, 40180), (68, 40213), (69, 40228), (72, 40306), (73, 40309), (80, 40438), (82, 40483), (84, 40618), (87, 40675), (90, 40702), (92, 40735), (96, 40876), (98, 40960), (124, 41662), (138, 41878), (140, 41920), (141, 41929), (148, 42097), (153, 42214), (154, 42217), (158, 42268), (161, 42355), (165, 42427), (167, 42496),

Gene: Amataga\_97 Start: 40647, Stop: 44447, Start Num: 3

Candidate Starts for Amataga\_97:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: ArcherS7\_96 Start: 40965, Stop: 44765, Start Num: 3

Candidate Starts for ArcherS7\_96:

(Start: 3 @40965 has 149 MA's), (4, 41019), (6, 41049), (10, 41118), (23, 41469), (28, 41583), (30, 41625), (33, 41682), (34, 41700), (36, 41718), (49, 41937), (52, 42009), (58, 42087), (59, 42111), (63, 42180), (64, 42183), (65, 42285), (67, 42303), (68, 42336), (69, 42351), (72, 42429), (73, 42432), (80, 42561), (82, 42606), (84, 42741), (87, 42798), (88, 42813), (90, 42825), (92, 42858), (96, 42999), (98, 43083), (124, 43785), (138, 44001), (140, 44043), (141, 44052), (148, 44220), (153, 44337), (154, 44340), (158, 44391), (161, 44478), (165, 44550), (167, 44619),

Gene: Asterius\_93 Start: 40513, Stop: 44343, Start Num: 3

Candidate Starts for Asterius\_93:

(Start: 3 @40513 has 149 MA's), (4, 40567), (6, 40597), (23, 41017), (28, 41131), (30, 41173), (33, 41260), (34, 41278), (36, 41296), (49, 41515), (52, 41587), (58, 41665), (59, 41689), (63, 41758), (64, 41761), (65, 41863), (67, 41881), (68, 41914), (69, 41929), (72, 42007), (73, 42010), (80, 42139), (82, 42184), (84, 42319), (87, 42376), (88, 42391), (90, 42403), (92, 42436), (96, 42577), (98, 42661), (124, 43363), (138, 43579), (140, 43621), (141, 43630), (148, 43798), (153, 43915), (154, 43918), (158, 43969), (161, 44056), (165, 44128), (167, 44197),

Gene: Astraea\_94 Start: 40359, Stop: 44216, Start Num: 2

Candidate Starts for Astraea\_94:

(Start: 2 @40359 has 6 MA's), (Start: 3 @40386 has 149 MA's), (4, 40440), (6, 40470), (10, 40539), (23, 40890), (28, 41004), (30, 41046), (33, 41133), (34, 41151), (36, 41169), (49, 41388), (52, 41460), (58, 41538), (59, 41562), (63, 41631), (64, 41634), (65, 41736), (67, 41754), (68, 41787), (69, 41802), (72, 41880), (73, 41883), (80, 42012), (82, 42057), (84, 42192), (87, 42249), (88, 42264), (90, 42276), (92, 42309), (96, 42450), (98, 42534), (124, 43236), (138, 43452), (140, 43494), (141, 43503), (148, 43671), (153, 43788), (154, 43791), (158, 43842), (161, 43929), (165, 44001), (167, 44070),

Gene: Atlantean\_96 Start: 40647, Stop: 44447, Start Num: 3

Candidate Starts for Atlantean\_96:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: Audrick\_99 Start: 40626, Stop: 44426, Start Num: 3

Candidate Starts for Audrick\_99:

(Start: 3 @40626 has 149 MA's), (4, 40680), (6, 40710), (10, 40779), (23, 41130), (28, 41244), (30, 41286), (33, 41343), (34, 41361), (36, 41379), (49, 41598), (52, 41670), (58, 41748), (59, 41772), (63, 41841), (64, 41844), (65, 41946), (67, 41964), (68, 41997), (69, 42012), (72, 42090), (73, 42093), (80, 42222), (82, 42267), (84, 42402), (87, 42459), (88, 42474), (90, 42486), (92, 42519), (96, 42660), (98, 42744), (124, 43446), (138, 43662), (140, 43704), (141, 43713), (148, 43881), (153, 43998), (154, 44001), (158, 44052), (161, 44139), (165, 44211), (167, 44280),

Gene: Ava3\_97 Start: 40886, Stop: 44716, Start Num: 3

Candidate Starts for Ava3\_97:

(Start: 3 @40886 has 149 MA's), (4, 40940), (6, 40970), (23, 41390), (28, 41504), (30, 41546), (33, 41633), (34, 41651), (36, 41669), (49, 41888), (52, 41960), (58, 42038), (59, 42062), (63, 42131), (64, 42134), (65, 42236), (67, 42254), (68, 42287), (69, 42302), (72, 42380), (73, 42383), (80, 42512), (82, 42557), (84, 42692), (87, 42749), (88, 42764), (90, 42776), (92, 42809), (96, 42950), (98, 43034), (124, 43736), (138, 43952), (140, 43994), (141, 44003), (148, 44171), (153, 44288), (154, 44291), (158, 44342), (161, 44429), (165, 44501), (167, 44570),

Gene: Babyland\_97 Start: 40086, Stop: 43886, Start Num: 3

Candidate Starts for Babyland\_97:

(Start: 3 @40086 has 149 MA's), (4, 40140), (6, 40170), (10, 40239), (23, 40590), (28, 40704), (30, 40746), (33, 40803), (34, 40821), (36, 40839), (49, 41058), (52, 41130), (58, 41208), (59, 41232), (63, 41301), (64, 41304), (65, 41406), (67, 41424), (68, 41457), (69, 41472), (72, 41550), (73, 41553), (80, 41682), (82, 41727), (84, 41862), (87, 41919), (88, 41934), (90, 41946), (92, 41979), (96, 42120), (98, 42204), (124, 42906), (138, 43122), (140, 43164), (141, 43173), (148, 43341), (153, 43458), (154,

43461), (158, 43512), (161, 43599), (165, 43671), (167, 43740),

Gene: BackyardAgain\_93 Start: 39706, Stop: 43719, Start Num: 1

Candidate Starts for BackyardAgain\_93:

(Start: 1 @39706 has 18 MA's), (23, 40408), (28, 40522), (30, 40564), (33, 40639), (34, 40657), (35, 40663), (36, 40675), (40, 40714), (49, 40891), (52, 40963), (58, 41041), (59, 41065), (63, 41134), (64, 41137), (65, 41239), (67, 41257), (68, 41290), (69, 41305), (72, 41383), (73, 41386), (80, 41515), (82, 41560), (84, 41695), (87, 41752), (90, 41779), (92, 41812), (96, 41953), (98, 42037), (124, 42739), (138, 42955), (140, 42997), (141, 43006), (148, 43174), (153, 43291), (154, 43294), (158, 43345), (161, 43432), (165, 43504), (167, 43573),

Gene: BadAgartude\_93 Start: 42040, Stop: 45885, Start Num: 3

Candidate Starts for BadAgartude\_93:

(Start: 3 @42040 has 149 MA's), (4, 42094), (6, 42124), (23, 42544), (28, 42658), (30, 42700), (33, 42802), (34, 42820), (36, 42838), (49, 43057), (52, 43129), (58, 43207), (59, 43231), (63, 43300), (64, 43303), (65, 43405), (67, 43423), (68, 43456), (69, 43471), (72, 43549), (73, 43552), (80, 43681), (82, 43726), (84, 43861), (87, 43918), (88, 43933), (90, 43945), (92, 43978), (96, 44119), (98, 44203), (124, 44905), (138, 45121), (140, 45163), (141, 45172), (148, 45340), (153, 45457), (154, 45460), (158, 45511), (161, 45598), (165, 45670), (167, 45739),

Gene: BananaFence\_95 Start: 40751, Stop: 44584, Start Num: 3

Candidate Starts for BananaFence\_95:

(Start: 3 @40751 has 149 MA's), (4, 40805), (6, 40835), (23, 41258), (28, 41372), (30, 41414), (33, 41501), (34, 41519), (36, 41537), (49, 41756), (52, 41828), (58, 41906), (59, 41930), (63, 41999), (64, 42002), (65, 42104), (67, 42122), (68, 42155), (69, 42170), (72, 42248), (73, 42251), (80, 42380), (82, 42425), (84, 42560), (87, 42617), (88, 42632), (90, 42644), (92, 42677), (96, 42818), (98, 42902), (124, 43604), (138, 43820), (140, 43862), (141, 43871), (148, 44039), (153, 44156), (154, 44159), (158, 44210), (161, 44297), (165, 44369), (167, 44438),

Gene: Bangla1971\_98 Start: 41095, Stop: 44895, Start Num: 3

Candidate Starts for Bangla1971\_98:

(Start: 3 @41095 has 149 MA's), (4, 41149), (6, 41179), (10, 41248), (23, 41599), (28, 41713), (30, 41755), (33, 41812), (34, 41830), (36, 41848), (49, 42067), (52, 42139), (58, 42217), (59, 42241), (63, 42310), (64, 42313), (65, 42415), (67, 42433), (68, 42466), (69, 42481), (72, 42559), (73, 42562), (80, 42691), (82, 42736), (84, 42871), (87, 42928), (88, 42943), (90, 42955), (92, 42988), (96, 43129), (98, 43213), (124, 43915), (138, 44131), (140, 44173), (141, 44182), (148, 44350), (153, 44467), (154, 44470), (158, 44521), (161, 44608), (165, 44680), (167, 44749),

Gene: Basquiat\_93 Start: 39640, Stop: 43455, Start Num: 3

Candidate Starts for Basquiat\_93:

(Start: 3 @39640 has 149 MA's), (4, 39694), (6, 39724), (10, 39793), (23, 40144), (28, 40258), (30, 40300), (33, 40375), (34, 40393), (35, 40399), (36, 40411), (40, 40450), (49, 40627), (52, 40699), (58, 40777), (59, 40801), (63, 40870), (64, 40873), (65, 40975), (67, 40993), (68, 41026), (69, 41041), (72, 41119), (73, 41122), (80, 41251), (82, 41296), (84, 41431), (87, 41488), (88, 41503), (90, 41515), (92, 41548), (96, 41689), (98, 41773), (124, 42475), (138, 42691), (140, 42733), (141, 42742), (148, 42910), (153, 43027), (154, 43030), (158, 43081), (161, 43168), (165, 43240), (167, 43309),

Gene: BeanWater\_88 Start: 40602, Stop: 44432, Start Num: 3

Candidate Starts for BeanWater\_88:

(Start: 3 @40602 has 149 MA's), (4, 40656), (6, 40686), (23, 41106), (28, 41220), (30, 41262), (33, 41349), (34, 41367), (36, 41385), (49, 41604), (52, 41676), (58, 41754), (59, 41778), (63, 41847), (64, 41850), (65, 41952), (67, 41970), (68, 42003), (69, 42018), (72, 42096), (73, 42099), (80, 42228), (82, 42273), (84, 42408), (87, 42465), (88, 42480), (90, 42492), (92, 42525), (96, 42666), (98, 42750), (124,



43452), (138, 43668), (140, 43710), (141, 43719), (148, 43887), (153, 44004), (154, 44007), (158, 44058), (161, 44145), (165, 44217), (167, 44286),

Gene: Belieber\_92 Start: 39999, Stop: 43799, Start Num: 3

Candidate Starts for Belieber\_92:

(Start: 3 @39999 has 149 MA's), (4, 40053), (6, 40083), (10, 40152), (23, 40503), (28, 40617), (30, 40659), (33, 40716), (34, 40734), (36, 40752), (49, 40971), (52, 41043), (58, 41121), (59, 41145), (63, 41214), (64, 41217), (65, 41319), (67, 41337), (68, 41370), (69, 41385), (72, 41463), (73, 41466), (80, 41595), (82, 41640), (84, 41775), (87, 41832), (88, 41847), (90, 41859), (92, 41892), (96, 42033), (98, 42117), (124, 42819), (138, 43035), (140, 43077), (141, 43086), (148, 43254), (153, 43371), (154, 43374), (158, 43425), (161, 43512), (165, 43584), (167, 43653),

Gene: BigCity\_104 Start: 43426, Stop: 47226, Start Num: 3

Candidate Starts for BigCity\_104:

(Start: 2 @43399 has 6 MA's), (Start: 3 @43426 has 149 MA's), (4, 43480), (6, 43510), (10, 43579), (23, 43930), (28, 44044), (30, 44086), (33, 44143), (34, 44161), (36, 44179), (49, 44398), (52, 44470), (58, 44548), (59, 44572), (63, 44641), (64, 44644), (65, 44746), (67, 44764), (68, 44797), (69, 44812), (72, 44890), (73, 44893), (80, 45022), (82, 45067), (84, 45202), (87, 45259), (88, 45274), (90, 45286), (92, 45319), (96, 45460), (98, 45544), (106, 45745), (124, 46246), (138, 46462), (140, 46504), (141, 46513), (148, 46681), (153, 46798), (154, 46801), (158, 46852), (161, 46939), (165, 47011), (167, 47080),

Gene: Bigswole\_101 Start: 43774, Stop: 47574, Start Num: 3

Candidate Starts for Bigswole\_101:

(Start: 2 @43747 has 6 MA's), (Start: 3 @43774 has 149 MA's), (4, 43828), (6, 43858), (10, 43927), (23, 44278), (28, 44392), (30, 44434), (33, 44491), (34, 44509), (36, 44527), (49, 44746), (52, 44818), (58, 44896), (59, 44920), (63, 44989), (64, 44992), (65, 45094), (67, 45112), (68, 45145), (69, 45160), (72, 45238), (73, 45241), (80, 45370), (82, 45415), (84, 45550), (87, 45607), (88, 45622), (90, 45634), (92, 45667), (96, 45808), (98, 45892), (124, 46594), (138, 46810), (140, 46852), (141, 46861), (148, 47029), (153, 47146), (154, 47149), (158, 47200), (161, 47287), (165, 47359), (167, 47428),

Gene: Bipolarisk\_95 Start: 40916, Stop: 44734, Start Num: 3

Candidate Starts for Bipolarisk\_95:

(Start: 3 @40916 has 149 MA's), (4, 40970), (6, 41000), (23, 41423), (28, 41537), (30, 41579), (33, 41651), (34, 41669), (36, 41687), (49, 41906), (52, 41978), (58, 42056), (59, 42080), (63, 42149), (64, 42152), (65, 42254), (67, 42272), (68, 42305), (69, 42320), (72, 42398), (73, 42401), (80, 42530), (82, 42575), (84, 42710), (87, 42767), (88, 42782), (90, 42794), (92, 42827), (96, 42968), (98, 43052), (124, 43754), (138, 43970), (140, 44012), (141, 44021), (148, 44189), (153, 44306), (154, 44309), (158, 44360), (161, 44447), (165, 44519), (167, 44588),

Gene: Blackbrain\_91 Start: 39020, Stop: 43033, Start Num: 1

Candidate Starts for Blackbrain\_91:

(Start: 1 @39020 has 18 MA's), (23, 39722), (28, 39836), (30, 39878), (33, 39953), (34, 39971), (35, 39977), (36, 39989), (40, 40028), (49, 40205), (52, 40277), (58, 40355), (59, 40379), (63, 40448), (64, 40451), (65, 40553), (67, 40571), (68, 40604), (69, 40619), (72, 40697), (73, 40700), (80, 40829), (82, 40874), (84, 41009), (87, 41066), (88, 41081), (90, 41093), (92, 41126), (96, 41267), (98, 41351), (124, 42053), (138, 42269), (140, 42311), (141, 42320), (148, 42488), (153, 42605), (154, 42608), (158, 42659), (161, 42746), (165, 42818), (167, 42887),

Gene: Blackdragon\_92 Start: 40171, Stop: 44007, Start Num: 3

Candidate Starts for Blackdragon\_92:

(Start: 3 @40171 has 149 MA's), (4, 40225), (6, 40255), (10, 40324), (23, 40675), (28, 40789), (30, 40831), (33, 40924), (34, 40942), (36, 40960), (49, 41179), (52, 41251), (58, 41329), (59, 41353), (63,

41422), (64, 41425), (65, 41527), (67, 41545), (68, 41578), (69, 41593), (72, 41671), (73, 41674), (80, 41803), (82, 41848), (84, 41983), (87, 42040), (88, 42055), (90, 42067), (92, 42100), (96, 42241), (98, 42325), (124, 43027), (138, 43243), (140, 43285), (141, 43294), (148, 43462), (153, 43579), (154, 43582), (158, 43633), (161, 43720), (165, 43792), (167, 43861),

Gene: Blubba\_85 Start: 39561, Stop: 43364, Start Num: 3

Candidate Starts for Blubba\_85:

(Start: 2 @39534 has 6 MA's), (Start: 3 @39561 has 149 MA's), (4, 39615), (6, 39645), (9, 39684), (23, 40065), (28, 40179), (30, 40221), (33, 40290), (34, 40308), (35, 40314), (36, 40326), (40, 40365), (49, 40542), (52, 40614), (58, 40692), (59, 40716), (63, 40785), (64, 40788), (65, 40890), (68, 40941), (69, 40956), (72, 41034), (73, 41037), (80, 41166), (82, 41211), (84, 41346), (87, 41403), (90, 41430), (92, 41463), (96, 41604), (98, 41688), (105, 41862), (120, 42225), (124, 42381), (138, 42597), (140, 42639), (141, 42648), (148, 42816), (153, 42933), (154, 42936), (158, 42987), (161, 43074), (165, 43146), (166, 43206), (167, 43218),

Gene: Bonray\_96 Start: 41312, Stop: 45142, Start Num: 3

Candidate Starts for Bonray\_96:

(Start: 3 @41312 has 149 MA's), (4, 41366), (6, 41396), (23, 41816), (28, 41930), (30, 41972), (33, 42059), (34, 42077), (36, 42095), (49, 42314), (52, 42386), (58, 42464), (59, 42488), (63, 42557), (64, 42560), (65, 42662), (67, 42680), (68, 42713), (69, 42728), (72, 42806), (73, 42809), (80, 42938), (82, 42983), (84, 43118), (87, 43175), (88, 43190), (90, 43202), (92, 43235), (96, 43376), (98, 43460), (124, 44162), (138, 44378), (140, 44420), (141, 44429), (148, 44597), (153, 44714), (154, 44717), (158, 44768), (161, 44855), (165, 44927), (167, 44996),

Gene: Bread\_96 Start: 40972, Stop: 44802, Start Num: 3

Candidate Starts for Bread\_96:

(Start: 2 @40945 has 6 MA's), (Start: 3 @40972 has 149 MA's), (4, 41026), (6, 41056), (10, 41125), (23, 41476), (28, 41590), (30, 41632), (33, 41719), (34, 41737), (36, 41755), (49, 41974), (52, 42046), (58, 42124), (59, 42148), (63, 42217), (64, 42220), (65, 42322), (67, 42340), (68, 42373), (69, 42388), (72, 42466), (73, 42469), (80, 42598), (82, 42643), (84, 42778), (87, 42835), (88, 42850), (90, 42862), (92, 42895), (96, 43036), (98, 43120), (124, 43822), (138, 44038), (140, 44080), (141, 44089), (148, 44257), (153, 44374), (154, 44377), (158, 44428), (161, 44515), (165, 44587), (167, 44656),

Gene: Breeniome\_96 Start: 40168, Stop: 44028, Start Num: 2

Candidate Starts for Breeniome\_96:

(Start: 2 @40168 has 6 MA's), (Start: 3 @40195 has 149 MA's), (4, 40249), (6, 40279), (10, 40348), (23, 40702), (28, 40816), (30, 40858), (33, 40945), (34, 40963), (36, 40981), (49, 41200), (52, 41272), (58, 41350), (59, 41374), (63, 41443), (64, 41446), (65, 41548), (67, 41566), (68, 41599), (69, 41614), (72, 41692), (73, 41695), (80, 41824), (82, 41869), (84, 42004), (87, 42061), (88, 42076), (90, 42088), (92, 42121), (96, 42262), (98, 42346), (124, 43048), (138, 43264), (140, 43306), (141, 43315), (148, 43483), (153, 43600), (154, 43603), (158, 43654), (161, 43741), (165, 43813), (167, 43882),

Gene: Burrough\_96 Start: 41465, Stop: 45298, Start Num: 3

Candidate Starts for Burrough\_96:

(Start: 3 @41465 has 149 MA's), (4, 41519), (6, 41549), (23, 41972), (28, 42086), (30, 42128), (33, 42215), (34, 42233), (36, 42251), (49, 42470), (52, 42542), (58, 42620), (59, 42644), (63, 42713), (64, 42716), (65, 42818), (67, 42836), (68, 42869), (69, 42884), (72, 42962), (73, 42965), (80, 43094), (82, 43139), (84, 43274), (87, 43331), (88, 43346), (90, 43358), (92, 43391), (96, 43532), (98, 43616), (124, 44318), (138, 44534), (140, 44576), (141, 44585), (148, 44753), (153, 44870), (154, 44873), (158, 44924), (161, 45011), (165, 45083), (167, 45152),

Gene: Bxz1\_94 Start: 42516, Stop: 46349, Start Num: 3

Candidate Starts for Bxz1\_94:

(Start: 3 @42516 has 149 MA's), (4, 42570), (6, 42600), (23, 43023), (28, 43137), (30, 43179), (33, 43266), (34, 43284), (36, 43302), (49, 43521), (52, 43593), (58, 43671), (59, 43695), (63, 43764), (64, 43767), (65, 43869), (67, 43887), (68, 43920), (69, 43935), (72, 44013), (73, 44016), (80, 44145), (82, 44190), (84, 44325), (87, 44382), (88, 44397), (90, 44409), (92, 44442), (96, 44583), (98, 44667), (124, 45369), (138, 45585), (140, 45627), (141, 45636), (148, 45804), (153, 45921), (154, 45924), (158, 45975), (161, 46062), (165, 46134), (167, 46203),

Gene: Cactojaque\_91 Start: 39127, Stop: 43140, Start Num: 1

Candidate Starts for Cactojaque\_91:

(Start: 1 @39127 has 18 MA's), (23, 39829), (28, 39943), (30, 39985), (33, 40060), (34, 40078), (35, 40084), (36, 40096), (40, 40135), (49, 40312), (52, 40384), (58, 40462), (59, 40486), (63, 40555), (64, 40558), (65, 40660), (67, 40678), (68, 40711), (69, 40726), (72, 40804), (73, 40807), (80, 40936), (82, 40981), (84, 41116), (87, 41173), (88, 41188), (90, 41200), (92, 41233), (96, 41374), (98, 41458), (124, 42160), (138, 42376), (140, 42418), (141, 42427), (148, 42595), (153, 42712), (154, 42715), (158, 42766), (161, 42853), (165, 42925), (167, 42994),

Gene: Cali\_92 Start: 41479, Stop: 45315, Start Num: 3

Candidate Starts for Cali\_92:

(Start: 3 @41479 has 149 MA's), (4, 41533), (6, 41563), (10, 41632), (23, 41983), (28, 42097), (30, 42139), (33, 42232), (34, 42250), (36, 42268), (49, 42487), (52, 42559), (58, 42637), (59, 42661), (63, 42730), (64, 42733), (65, 42835), (67, 42853), (68, 42886), (69, 42901), (72, 42979), (73, 42982), (80, 43111), (82, 43156), (84, 43291), (87, 43348), (88, 43363), (90, 43375), (92, 43408), (96, 43549), (98, 43633), (124, 44335), (138, 44551), (140, 44593), (141, 44602), (148, 44770), (153, 44887), (154, 44890), (158, 44941), (161, 45028), (165, 45100), (167, 45169),

Gene: Cane17\_85 Start: 39634, Stop: 43437, Start Num: 3

Candidate Starts for Cane17\_85:

(Start: 2 @39607 has 6 MA's), (Start: 3 @39634 has 149 MA's), (4, 39688), (6, 39718), (9, 39757), (23, 40138), (28, 40252), (30, 40294), (33, 40363), (34, 40381), (35, 40387), (36, 40399), (40, 40438), (49, 40615), (52, 40687), (58, 40765), (59, 40789), (63, 40858), (64, 40861), (65, 40963), (68, 41014), (69, 41029), (72, 41107), (73, 41110), (80, 41239), (82, 41284), (84, 41419), (87, 41476), (90, 41503), (92, 41536), (96, 41677), (98, 41761), (105, 41935), (120, 42298), (124, 42454), (138, 42670), (140, 42712), (141, 42721), (148, 42889), (153, 43006), (154, 43009), (158, 43060), (161, 43147), (165, 43219), (166, 43279), (167, 43291),

Gene: Capablanca\_98 Start: 41335, Stop: 45165, Start Num: 3

Candidate Starts for Capablanca\_98:

(Start: 3 @41335 has 149 MA's), (4, 41389), (6, 41419), (23, 41839), (28, 41953), (30, 41995), (33, 42082), (34, 42100), (36, 42118), (49, 42337), (52, 42409), (58, 42487), (59, 42511), (63, 42580), (64, 42583), (65, 42685), (67, 42703), (68, 42736), (69, 42751), (72, 42829), (73, 42832), (80, 42961), (82, 43006), (84, 43141), (87, 43198), (88, 43213), (90, 43225), (92, 43258), (96, 43399), (98, 43483), (124, 44185), (138, 44401), (140, 44443), (141, 44452), (148, 44620), (153, 44737), (154, 44740), (158, 44791), (161, 44878), (165, 44950), (167, 45019),

Gene: Caravan\_91 Start: 40839, Stop: 44669, Start Num: 3

Candidate Starts for Caravan\_91:

(Start: 3 @40839 has 149 MA's), (4, 40893), (6, 40923), (23, 41343), (28, 41457), (30, 41499), (33, 41586), (34, 41604), (36, 41622), (49, 41841), (52, 41913), (58, 41991), (59, 42015), (63, 42084), (64, 42087), (65, 42189), (67, 42207), (68, 42240), (69, 42255), (72, 42333), (73, 42336), (80, 42465), (82, 42510), (84, 42645), (87, 42702), (88, 42717), (90, 42729), (92, 42762), (96, 42903), (98, 42987), (124, 43689), (138, 43905), (140, 43947), (141, 43956), (148, 44124), (153, 44241), (154, 44244), (158, 44295), (161, 44382), (165, 44454), (167, 44523),

Gene: Catera\_93 Start: 39292, Stop: 43305, Start Num: 1

Candidate Starts for Catera\_93:

(Start: 1 @39292 has 18 MA's), (23, 39994), (28, 40108), (30, 40150), (33, 40225), (34, 40243), (35, 40249), (36, 40261), (40, 40300), (49, 40477), (52, 40549), (58, 40627), (59, 40651), (63, 40720), (64, 40723), (65, 40825), (67, 40843), (68, 40876), (69, 40891), (72, 40969), (73, 40972), (80, 41101), (82, 41146), (84, 41281), (87, 41338), (90, 41365), (92, 41398), (96, 41539), (98, 41623), (124, 42325), (138, 42541), (140, 42583), (141, 42592), (148, 42760), (153, 42877), (154, 42880), (158, 42931), (161, 43018), (165, 43090), (167, 43159),

Gene: Chargie21\_93 Start: 39640, Stop: 43455, Start Num: 3

Candidate Starts for Chargie21\_93:

(Start: 3 @39640 has 149 MA's), (4, 39694), (6, 39724), (10, 39793), (23, 40144), (28, 40258), (30, 40300), (33, 40375), (34, 40393), (35, 40399), (36, 40411), (40, 40450), (49, 40627), (52, 40699), (58, 40777), (59, 40801), (63, 40870), (64, 40873), (65, 40975), (67, 40993), (68, 41026), (69, 41041), (72, 41119), (73, 41122), (80, 41251), (82, 41296), (84, 41431), (87, 41488), (88, 41503), (90, 41515), (92, 41548), (96, 41689), (98, 41773), (124, 42475), (138, 42691), (140, 42733), (141, 42742), (148, 42910), (153, 43027), (154, 43030), (158, 43081), (161, 43168), (165, 43240), (167, 43309),

Gene: CharlieB\_92 Start: 39477, Stop: 43313, Start Num: 3

Candidate Starts for CharlieB\_92:

(Start: 3 @39477 has 149 MA's), (4, 39531), (6, 39561), (10, 39630), (23, 39981), (28, 40095), (30, 40137), (33, 40230), (34, 40248), (36, 40266), (49, 40485), (52, 40557), (58, 40635), (59, 40659), (63, 40728), (64, 40731), (65, 40833), (67, 40851), (68, 40884), (69, 40899), (72, 40977), (73, 40980), (80, 41109), (82, 41154), (84, 41289), (87, 41346), (88, 41361), (90, 41373), (92, 41406), (96, 41547), (98, 41631), (124, 42333), (138, 42549), (140, 42591), (141, 42600), (148, 42768), (153, 42885), (154, 42888), (158, 42939), (161, 43026), (165, 43098), (167, 43167),

Gene: ChaylaJr\_91 Start: 38918, Stop: 42931, Start Num: 1

Candidate Starts for ChaylaJr\_91:

(Start: 1 @38918 has 18 MA's), (23, 39620), (28, 39734), (30, 39776), (33, 39851), (34, 39869), (35, 39875), (36, 39887), (40, 39926), (49, 40103), (52, 40175), (58, 40253), (59, 40277), (63, 40346), (64, 40349), (65, 40451), (67, 40469), (68, 40502), (69, 40517), (72, 40595), (73, 40598), (80, 40727), (82, 40772), (84, 40907), (87, 40964), (88, 40979), (90, 40991), (92, 41024), (96, 41165), (98, 41249), (124, 41951), (138, 42167), (140, 42209), (141, 42218), (148, 42386), (153, 42503), (154, 42506), (158, 42557), (161, 42644), (165, 42716), (167, 42785),

Gene: ChickenPhender\_92 Start: 39251, Stop: 43264, Start Num: 1

Candidate Starts for ChickenPhender\_92:

(Start: 1 @39251 has 18 MA's), (23, 39953), (28, 40067), (30, 40109), (33, 40184), (34, 40202), (35, 40208), (36, 40220), (40, 40259), (49, 40436), (52, 40508), (58, 40586), (59, 40610), (63, 40679), (64, 40682), (65, 40784), (67, 40802), (68, 40835), (69, 40850), (72, 40928), (73, 40931), (80, 41060), (82, 41105), (84, 41240), (87, 41297), (88, 41312), (90, 41324), (92, 41357), (96, 41498), (98, 41582), (124, 42284), (138, 42500), (140, 42542), (141, 42551), (148, 42719), (153, 42836), (154, 42839), (158, 42890), (161, 42977), (165, 43049), (167, 43118),

Gene: Chomp\_96 Start: 41935, Stop: 45735, Start Num: 3

Candidate Starts for Chomp\_96:

(Start: 3 @41935 has 149 MA's), (4, 41989), (6, 42019), (10, 42088), (23, 42439), (28, 42553), (30, 42595), (33, 42652), (34, 42670), (36, 42688), (49, 42907), (52, 42979), (58, 43057), (59, 43081), (63, 43150), (64, 43153), (65, 43255), (67, 43273), (68, 43306), (69, 43321), (72, 43399), (73, 43402), (80, 43531), (82, 43576), (84, 43711), (87, 43768), (88, 43783), (90, 43795), (92, 43828), (96, 43969), (98, 44053), (124, 44755), (138, 44971), (140, 45013), (141, 45022), (148, 45190), (153, 45307), (154, 45310), (158, 45361), (161, 45448), (165, 45520), (167, 45589),

Gene: CindyLou\_98 Start: 41976, Stop: 45776, Start Num: 3

Candidate Starts for CindyLou\_98:

(Start: 3 @41976 has 149 MA's), (4, 42030), (6, 42060), (10, 42129), (23, 42480), (28, 42594), (30, 42636), (33, 42693), (34, 42711), (36, 42729), (49, 42948), (52, 43020), (58, 43098), (59, 43122), (63, 43191), (64, 43194), (65, 43296), (67, 43314), (68, 43347), (69, 43362), (72, 43440), (73, 43443), (80, 43572), (82, 43617), (84, 43752), (87, 43809), (88, 43824), (90, 43836), (92, 43869), (96, 44010), (98, 44094), (124, 44796), (138, 45012), (140, 45054), (141, 45063), (148, 45231), (153, 45348), (154, 45351), (158, 45402), (161, 45489), (165, 45561), (167, 45630),

Gene: Colt\_86 Start: 40230, Stop: 44033, Start Num: 3

Candidate Starts for Colt\_86:

(Start: 2 @40203 has 6 MA's), (Start: 3 @40230 has 149 MA's), (4, 40284), (6, 40314), (9, 40353), (23, 40734), (28, 40848), (30, 40890), (33, 40959), (34, 40977), (35, 40983), (36, 40995), (40, 41034), (49, 41211), (52, 41283), (58, 41361), (59, 41385), (63, 41454), (64, 41457), (65, 41559), (68, 41610), (69, 41625), (72, 41703), (73, 41706), (80, 41835), (82, 41880), (84, 42015), (87, 42072), (90, 42099), (92, 42132), (96, 42273), (98, 42357), (105, 42531), (120, 42894), (124, 43050), (138, 43266), (140, 43308), (141, 43317), (148, 43485), (153, 43602), (154, 43605), (158, 43656), (161, 43743), (165, 43815), (166, 43875), (167, 43887),

Gene: Concombre\_103 Start: 43615, Stop: 47451, Start Num: 3

Candidate Starts for Concombre\_103:

(Start: 2 @43588 has 6 MA's), (Start: 3 @43615 has 149 MA's), (4, 43669), (6, 43699), (10, 43768), (23, 44119), (28, 44233), (30, 44275), (33, 44368), (34, 44386), (36, 44404), (49, 44623), (52, 44695), (58, 44773), (59, 44797), (63, 44866), (64, 44869), (65, 44971), (67, 44989), (68, 45022), (69, 45037), (72, 45115), (73, 45118), (80, 45247), (82, 45292), (84, 45427), (87, 45484), (88, 45499), (90, 45511), (92, 45544), (96, 45685), (98, 45769), (124, 46471), (138, 46687), (140, 46729), (141, 46738), (148, 46906), (153, 47023), (154, 47026), (158, 47077), (161, 47164), (165, 47236), (167, 47305),

Gene: DTDevon\_97 Start: 41535, Stop: 45335, Start Num: 3

Candidate Starts for DTDevon\_97:

(Start: 2 @41508 has 6 MA's), (Start: 3 @41535 has 149 MA's), (4, 41589), (6, 41619), (10, 41688), (23, 42039), (28, 42153), (30, 42195), (33, 42252), (34, 42270), (36, 42288), (49, 42507), (52, 42579), (58, 42657), (59, 42681), (63, 42750), (64, 42753), (65, 42855), (67, 42873), (68, 42906), (69, 42921), (72, 42999), (73, 43002), (80, 43131), (82, 43176), (84, 43311), (87, 43368), (88, 43383), (90, 43395), (92, 43428), (96, 43569), (98, 43653), (124, 44355), (138, 44571), (140, 44613), (141, 44622), (148, 44790), (153, 44907), (154, 44910), (158, 44961), (161, 45048), (165, 45120), (167, 45189),

Gene: Daffodil\_101 Start: 41204, Stop: 45034, Start Num: 3

Candidate Starts for Daffodil\_101:

(Start: 3 @41204 has 149 MA's), (4, 41258), (6, 41288), (23, 41708), (28, 41822), (30, 41864), (33, 41951), (34, 41969), (36, 41987), (49, 42206), (52, 42278), (58, 42356), (59, 42380), (63, 42449), (64, 42452), (65, 42554), (67, 42572), (68, 42605), (69, 42620), (72, 42698), (73, 42701), (80, 42830), (82, 42875), (84, 43010), (87, 43067), (88, 43082), (90, 43094), (92, 43127), (96, 43268), (98, 43352), (124, 44054), (138, 44270), (140, 44312), (141, 44321), (148, 44489), (153, 44606), (154, 44609), (158, 44660), (161, 44747), (165, 44819), (167, 44888),

Gene: Dandelion\_103 Start: 43898, Stop: 47698, Start Num: 3

Candidate Starts for Dandelion\_103:

(Start: 2 @43871 has 6 MA's), (Start: 3 @43898 has 149 MA's), (4, 43952), (6, 43982), (10, 44051), (23, 44402), (28, 44516), (30, 44558), (33, 44615), (34, 44633), (36, 44651), (49, 44870), (52, 44942), (58, 45020), (59, 45044), (63, 45113), (64, 45116), (65, 45218), (67, 45236), (68, 45269), (69, 45284), (72, 45362), (73, 45365), (80, 45494), (82, 45539), (84, 45674), (87, 45731), (88, 45746), (90, 45758),

(92, 45791), (96, 45932), (98, 46016), (124, 46718), (138, 46934), (140, 46976), (141, 46985), (148, 47153), (153, 47270), (154, 47273), (158, 47324), (161, 47411), (165, 47483), (167, 47552),

Gene: Darko\_96 Start: 41139, Stop: 44972, Start Num: 3

Candidate Starts for Darko\_96:

(Start: 3 @41139 has 149 MA's), (4, 41193), (6, 41223), (23, 41646), (28, 41760), (30, 41802), (33, 41889), (34, 41907), (36, 41925), (49, 42144), (52, 42216), (58, 42294), (59, 42318), (63, 42387), (64, 42390), (65, 42492), (67, 42510), (68, 42543), (69, 42558), (72, 42636), (73, 42639), (80, 42768), (82, 42813), (84, 42948), (87, 43005), (88, 43020), (90, 43032), (92, 43065), (96, 43206), (98, 43290), (124, 43992), (138, 44208), (140, 44250), (141, 44259), (148, 44427), (153, 44544), (154, 44547), (158, 44598), (161, 44685), (165, 44757), (167, 44826),

Gene: Delilah\_96 Start: 41205, Stop: 45035, Start Num: 3

Candidate Starts for Delilah\_96:

(Start: 3 @41205 has 149 MA's), (4, 41259), (6, 41289), (23, 41709), (28, 41823), (30, 41865), (33, 41952), (34, 41970), (36, 41988), (49, 42207), (52, 42279), (58, 42357), (59, 42381), (63, 42450), (64, 42453), (65, 42555), (67, 42573), (68, 42606), (69, 42621), (72, 42699), (73, 42702), (80, 42831), (82, 42876), (84, 43011), (87, 43068), (88, 43083), (90, 43095), (92, 43128), (96, 43269), (98, 43353), (124, 44055), (138, 44271), (140, 44313), (141, 44322), (148, 44490), (153, 44607), (154, 44610), (158, 44661), (161, 44748), (165, 44820), (167, 44889),

Gene: Delylah\_99 Start: 40998, Stop: 44828, Start Num: 3

Candidate Starts for Delylah\_99:

(Start: 3 @40998 has 149 MA's), (4, 41052), (6, 41082), (23, 41502), (28, 41616), (30, 41658), (33, 41745), (34, 41763), (36, 41781), (49, 42000), (52, 42072), (58, 42150), (59, 42174), (63, 42243), (64, 42246), (65, 42348), (67, 42366), (68, 42399), (69, 42414), (72, 42492), (73, 42495), (80, 42624), (82, 42669), (84, 42804), (87, 42861), (88, 42876), (90, 42888), (92, 42921), (96, 43062), (98, 43146), (124, 43848), (138, 44064), (140, 44106), (141, 44115), (148, 44283), (153, 44400), (154, 44403), (158, 44454), (161, 44541), (165, 44613), (167, 44682),

Gene: Demodog\_103 Start: 43615, Stop: 47451, Start Num: 3

Candidate Starts for Demodog\_103:

(Start: 2 @43588 has 6 MA's), (Start: 3 @43615 has 149 MA's), (4, 43669), (6, 43699), (10, 43768), (23, 44119), (28, 44233), (30, 44275), (33, 44368), (34, 44386), (36, 44404), (49, 44623), (52, 44695), (58, 44773), (59, 44797), (63, 44866), (64, 44869), (65, 44971), (67, 44989), (68, 45022), (69, 45037), (72, 45115), (73, 45118), (80, 45247), (82, 45292), (84, 45427), (87, 45484), (88, 45499), (90, 45511), (92, 45544), (96, 45685), (98, 45769), (124, 46471), (138, 46687), (140, 46729), (141, 46738), (148, 46906), (153, 47023), (154, 47026), (158, 47077), (161, 47164), (165, 47236), (167, 47305),

Gene: Derek\_97 Start: 41737, Stop: 45537, Start Num: 3

Candidate Starts for Derek\_97:

(Start: 3 @41737 has 149 MA's), (4, 41791), (6, 41821), (10, 41890), (23, 42241), (28, 42355), (30, 42397), (33, 42454), (34, 42472), (36, 42490), (49, 42709), (52, 42781), (58, 42859), (59, 42883), (63, 42952), (64, 42955), (65, 43057), (67, 43075), (68, 43108), (69, 43123), (72, 43201), (73, 43204), (80, 43333), (82, 43378), (84, 43513), (87, 43570), (88, 43585), (90, 43597), (92, 43630), (96, 43771), (98, 43855), (124, 44557), (138, 44773), (140, 44815), (141, 44824), (148, 44992), (153, 45109), (154, 45112), (158, 45163), (161, 45250), (165, 45322), (167, 45391),

Gene: Dietrick\_88 Start: 38954, Stop: 42967, Start Num: 1

Candidate Starts for Dietrick\_88:

(Start: 1 @38954 has 18 MA's), (23, 39656), (28, 39770), (30, 39812), (33, 39887), (34, 39905), (35, 39911), (36, 39923), (40, 39962), (49, 40139), (52, 40211), (58, 40289), (59, 40313), (63, 40382), (64, 40385), (65, 40487), (67, 40505), (68, 40538), (69, 40553), (72, 40631), (73, 40634), (80, 40763), (82,

40808), (84, 40943), (87, 41000), (90, 41027), (92, 41060), (96, 41201), (98, 41285), (124, 41987), (138, 42203), (140, 42245), (141, 42254), (148, 42422), (153, 42539), (154, 42542), (158, 42593), (161, 42680), (165, 42752), (167, 42821),

Gene: DirtMonster\_90 Start: 40233, Stop: 44069, Start Num: 3

Candidate Starts for DirtMonster\_90:

(Start: 3 @40233 has 149 MA's), (4, 40287), (6, 40317), (10, 40386), (23, 40737), (28, 40851), (30, 40893), (33, 40986), (34, 41004), (36, 41022), (49, 41241), (52, 41313), (58, 41391), (59, 41415), (63, 41484), (64, 41487), (65, 41589), (67, 41607), (68, 41640), (69, 41655), (72, 41733), (73, 41736), (80, 41865), (82, 41910), (84, 42045), (87, 42102), (88, 42117), (90, 42129), (92, 42162), (96, 42303), (98, 42387), (124, 43089), (138, 43305), (140, 43347), (141, 43356), (148, 43524), (153, 43641), (154, 43644), (158, 43695), (161, 43782), (165, 43854), (167, 43923),

Gene: Domi\_90 Start: 40533, Stop: 44378, Start Num: 3

Candidate Starts for Domi\_90:

(Start: 3 @40533 has 149 MA's), (4, 40587), (6, 40617), (23, 41037), (28, 41151), (30, 41193), (33, 41295), (34, 41313), (36, 41331), (49, 41550), (52, 41622), (58, 41700), (59, 41724), (63, 41793), (64, 41796), (65, 41898), (67, 41916), (68, 41949), (69, 41964), (72, 42042), (73, 42045), (80, 42174), (82, 42219), (84, 42354), (87, 42411), (88, 42426), (90, 42438), (92, 42471), (96, 42612), (98, 42696), (124, 43398), (138, 43614), (140, 43656), (141, 43665), (148, 43833), (153, 43950), (154, 43953), (158, 44004), (161, 44091), (165, 44163), (167, 44232),

Gene: DrPhinkDaddy\_95 Start: 41424, Stop: 45254, Start Num: 3

Candidate Starts for DrPhinkDaddy\_95:

(Start: 2 @41397 has 6 MA's), (Start: 3 @41424 has 149 MA's), (4, 41478), (6, 41508), (10, 41577), (23, 41928), (28, 42042), (30, 42084), (33, 42171), (34, 42189), (36, 42207), (49, 42426), (52, 42498), (58, 42576), (59, 42600), (63, 42669), (64, 42672), (65, 42774), (67, 42792), (68, 42825), (69, 42840), (72, 42918), (73, 42921), (80, 43050), (82, 43095), (84, 43230), (87, 43287), (88, 43302), (90, 43314), (92, 43347), (96, 43488), (98, 43572), (124, 44274), (138, 44490), (140, 44532), (141, 44541), (148, 44709), (153, 44826), (154, 44829), (158, 44880), (161, 44967), (165, 45039), (167, 45108),

Gene: Drazdys\_96 Start: 41002, Stop: 44835, Start Num: 3

Candidate Starts for Drazdys\_96:

(Start: 3 @41002 has 149 MA's), (4, 41056), (6, 41086), (23, 41509), (28, 41623), (30, 41665), (33, 41752), (34, 41770), (36, 41788), (49, 42007), (52, 42079), (58, 42157), (59, 42181), (63, 42250), (64, 42253), (65, 42355), (67, 42373), (68, 42406), (69, 42421), (72, 42499), (73, 42502), (80, 42631), (82, 42676), (84, 42811), (87, 42868), (88, 42883), (90, 42895), (92, 42928), (96, 43069), (98, 43153), (124, 43855), (138, 44071), (140, 44113), (141, 44122), (148, 44290), (153, 44407), (154, 44410), (158, 44461), (161, 44548), (165, 44620), (167, 44689),

Gene: ET08\_85 Start: 39976, Stop: 43821, Start Num: 3

Candidate Starts for ET08\_85:

(Start: 3 @39976 has 149 MA's), (4, 40030), (6, 40060), (23, 40480), (28, 40594), (30, 40636), (33, 40738), (34, 40756), (36, 40774), (49, 40993), (52, 41065), (58, 41143), (59, 41167), (63, 41236), (64, 41239), (65, 41341), (67, 41359), (68, 41392), (69, 41407), (72, 41485), (73, 41488), (80, 41617), (82, 41662), (84, 41797), (87, 41854), (88, 41869), (90, 41881), (92, 41914), (96, 42055), (98, 42139), (124, 42841), (138, 43057), (140, 43099), (141, 43108), (148, 43276), (153, 43393), (154, 43396), (158, 43447), (161, 43534), (165, 43606), (167, 43675),

Gene: EasyJones\_99 Start: 40310, Stop: 44323, Start Num: 1

Candidate Starts for EasyJones\_99:

(Start: 1 @40310 has 18 MA's), (23, 41012), (28, 41126), (30, 41168), (33, 41243), (34, 41261), (35, 41267), (36, 41279), (40, 41318), (49, 41495), (52, 41567), (58, 41645), (59, 41669), (63, 41738), (64,

41741), (65, 41843), (67, 41861), (68, 41894), (69, 41909), (72, 41987), (73, 41990), (80, 42119), (82, 42164), (84, 42299), (87, 42356), (88, 42371), (90, 42383), (92, 42416), (96, 42557), (98, 42641), (124, 43343), (138, 43559), (140, 43601), (141, 43610), (148, 43778), (153, 43895), (154, 43898), (158, 43949), (161, 44036), (165, 44108), (167, 44177),

Gene: EggyFarm\_104 Start: 43426, Stop: 47226, Start Num: 3

Candidate Starts for EggyFarm\_104:

(Start: 2 @43399 has 6 MA's), (Start: 3 @43426 has 149 MA's), (4, 43480), (6, 43510), (10, 43579), (23, 43930), (28, 44044), (30, 44086), (33, 44143), (34, 44161), (36, 44179), (49, 44398), (52, 44470), (58, 44548), (59, 44572), (63, 44641), (64, 44644), (65, 44746), (67, 44764), (68, 44797), (69, 44812), (72, 44890), (73, 44893), (80, 45022), (82, 45067), (84, 45202), (87, 45259), (88, 45274), (90, 45286), (92, 45319), (96, 45460), (98, 45544), (106, 45745), (124, 46246), (138, 46462), (140, 46504), (141, 46513), (148, 46681), (153, 46798), (154, 46801), (158, 46852), (161, 46939), (165, 47011), (167, 47080),

Gene: EmToTheThree\_99 Start: 42656, Stop: 46486, Start Num: 3

Candidate Starts for EmToTheThree\_99:

(Start: 3 @42656 has 149 MA's), (4, 42710), (6, 42740), (23, 43160), (28, 43274), (30, 43316), (33, 43403), (34, 43421), (36, 43439), (49, 43658), (52, 43730), (58, 43808), (59, 43832), (63, 43901), (64, 43904), (65, 44006), (67, 44024), (68, 44057), (69, 44072), (72, 44150), (73, 44153), (80, 44282), (82, 44327), (84, 44462), (87, 44519), (88, 44534), (90, 44546), (92, 44579), (96, 44720), (98, 44804), (124, 45506), (138, 45722), (140, 45764), (141, 45773), (148, 45941), (153, 46058), (154, 46061), (158, 46112), (161, 46199), (165, 46271), (167, 46340),

Gene: EmmaElysia\_96 Start: 40214, Stop: 44014, Start Num: 3

Candidate Starts for EmmaElysia\_96:

(Start: 3 @40214 has 149 MA's), (4, 40268), (6, 40298), (10, 40367), (23, 40718), (28, 40832), (30, 40874), (33, 40931), (34, 40949), (36, 40967), (49, 41186), (52, 41258), (58, 41336), (59, 41360), (63, 41429), (64, 41432), (65, 41534), (67, 41552), (68, 41585), (69, 41600), (72, 41678), (73, 41681), (80, 41810), (82, 41855), (84, 41990), (87, 42047), (88, 42062), (90, 42074), (92, 42107), (96, 42248), (98, 42332), (124, 43034), (138, 43250), (140, 43292), (141, 43301), (148, 43469), (153, 43586), (154, 43589), (158, 43640), (161, 43727), (165, 43799), (167, 43868),

Gene: Erdmann\_97 Start: 41205, Stop: 45035, Start Num: 3

Candidate Starts for Erdmann\_97:

(Start: 3 @41205 has 149 MA's), (4, 41259), (6, 41289), (23, 41709), (28, 41823), (30, 41865), (33, 41952), (34, 41970), (36, 41988), (49, 42207), (52, 42279), (58, 42357), (59, 42381), (63, 42450), (64, 42453), (65, 42555), (67, 42573), (68, 42606), (69, 42621), (72, 42699), (73, 42702), (80, 42831), (82, 42876), (84, 43011), (87, 43068), (88, 43083), (90, 43095), (92, 43128), (96, 43269), (98, 43353), (124, 44055), (138, 44271), (140, 44313), (141, 44322), (148, 44490), (153, 44607), (154, 44610), (158, 44661), (161, 44748), (165, 44820), (167, 44889),

Gene: ErnieJ\_92 Start: 39232, Stop: 43245, Start Num: 1

Candidate Starts for ErnieJ\_92:

(Start: 1 @39232 has 18 MA's), (23, 39934), (28, 40048), (30, 40090), (33, 40165), (34, 40183), (35, 40189), (36, 40201), (40, 40240), (49, 40417), (52, 40489), (58, 40567), (59, 40591), (63, 40660), (64, 40663), (65, 40765), (67, 40783), (68, 40816), (69, 40831), (72, 40909), (73, 40912), (80, 41041), (82, 41086), (84, 41221), (87, 41278), (88, 41293), (90, 41305), (92, 41338), (96, 41479), (98, 41563), (124, 42265), (138, 42481), (140, 42523), (141, 42532), (148, 42700), (153, 42817), (154, 42820), (158, 42871), (161, 42958), (165, 43030), (167, 43099),

Gene: Essence\_94 Start: 41201, Stop: 45001, Start Num: 3

Candidate Starts for Essence\_94:



(Start: 3 @41201 has 149 MA's), (4, 41255), (6, 41285), (10, 41354), (23, 41705), (28, 41819), (30, 41861), (33, 41918), (34, 41936), (36, 41954), (49, 42173), (52, 42245), (58, 42323), (59, 42347), (63, 42416), (64, 42419), (65, 42521), (67, 42539), (68, 42572), (69, 42587), (72, 42665), (73, 42668), (80, 42797), (82, 42842), (84, 42977), (87, 43034), (88, 43049), (90, 43061), (92, 43094), (96, 43235), (98, 43319), (124, 44021), (138, 44237), (140, 44279), (141, 44288), (148, 44456), (153, 44573), (154, 44576), (158, 44627), (161, 44714), (165, 44786), (167, 44855),

Gene: Ewok\_97 Start: 40832, Stop: 44662, Start Num: 3

Candidate Starts for Ewok\_97:

(Start: 3 @40832 has 149 MA's), (4, 40886), (6, 40916), (23, 41336), (28, 41450), (30, 41492), (33, 41579), (34, 41597), (36, 41615), (49, 41834), (52, 41906), (58, 41984), (59, 42008), (63, 42077), (64, 42080), (65, 42182), (67, 42200), (68, 42233), (69, 42248), (72, 42326), (73, 42329), (80, 42458), (82, 42503), (84, 42638), (87, 42695), (88, 42710), (90, 42722), (92, 42755), (96, 42896), (98, 42980), (124, 43682), (138, 43898), (140, 43940), (141, 43949), (148, 44117), (153, 44234), (154, 44237), (158, 44288), (161, 44375), (165, 44447), (167, 44516),

Gene: Flabslab\_91 Start: 38988, Stop: 43001, Start Num: 1

Candidate Starts for Flabslab\_91:

(Start: 1 @38988 has 18 MA's), (23, 39690), (28, 39804), (30, 39846), (33, 39921), (34, 39939), (35, 39945), (36, 39957), (40, 39996), (49, 40173), (52, 40245), (58, 40323), (59, 40347), (63, 40416), (64, 40419), (65, 40521), (67, 40539), (68, 40572), (69, 40587), (72, 40665), (73, 40668), (80, 40797), (82, 40842), (84, 40977), (87, 41034), (88, 41049), (90, 41061), (92, 41094), (96, 41235), (98, 41319), (124, 42021), (138, 42237), (140, 42279), (141, 42288), (148, 42456), (153, 42573), (154, 42576), (158, 42627), (161, 42714), (165, 42786), (167, 42855),

Gene: Fludd\_97 Start: 40087, Stop: 43887, Start Num: 3

Candidate Starts for Fludd\_97:

(Start: 3 @40087 has 149 MA's), (4, 40141), (6, 40171), (10, 40240), (23, 40591), (28, 40705), (30, 40747), (33, 40804), (34, 40822), (36, 40840), (49, 41059), (52, 41131), (58, 41209), (59, 41233), (63, 41302), (64, 41305), (65, 41407), (67, 41425), (68, 41458), (69, 41473), (72, 41551), (73, 41554), (80, 41683), (82, 41728), (84, 41863), (87, 41920), (88, 41935), (90, 41947), (92, 41980), (96, 42121), (98, 42205), (124, 42907), (138, 43123), (140, 43165), (141, 43174), (148, 43342), (153, 43459), (154, 43462), (158, 43513), (161, 43600), (165, 43672), (167, 43741),

Gene: FoxtrotP1\_96 Start: 42375, Stop: 46205, Start Num: 3

Candidate Starts for FoxtrotP1\_96:

(Start: 3 @42375 has 149 MA's), (4, 42429), (6, 42459), (23, 42879), (28, 42993), (30, 43035), (33, 43122), (34, 43140), (36, 43158), (49, 43377), (52, 43449), (58, 43527), (59, 43551), (63, 43620), (64, 43623), (65, 43725), (67, 43743), (68, 43776), (69, 43791), (72, 43869), (73, 43872), (80, 44001), (82, 44046), (84, 44181), (87, 44238), (88, 44253), (90, 44265), (92, 44298), (96, 44439), (98, 44523), (124, 45225), (138, 45441), (140, 45483), (141, 45492), (148, 45660), (153, 45777), (154, 45780), (158, 45831), (161, 45918), (165, 45990), (167, 46059),

Gene: FrayBell\_102 Start: 42654, Stop: 46487, Start Num: 3

Candidate Starts for FrayBell\_102:

(Start: 3 @42654 has 149 MA's), (4, 42708), (6, 42738), (23, 43161), (28, 43275), (30, 43317), (33, 43404), (34, 43422), (36, 43440), (49, 43659), (52, 43731), (58, 43809), (59, 43833), (63, 43902), (64, 43905), (65, 44007), (67, 44025), (68, 44058), (69, 44073), (72, 44151), (73, 44154), (80, 44283), (82, 44328), (84, 44463), (87, 44520), (88, 44535), (90, 44547), (92, 44580), (96, 44721), (98, 44805), (124, 45507), (138, 45723), (140, 45765), (141, 45774), (148, 45942), (153, 46059), (154, 46062), (158, 46113), (161, 46200), (165, 46272), (167, 46341),

Gene: FudgeTart\_96 Start: 40398, Stop: 44243, Start Num: 3

Candidate Starts for FudgeTart\_96:

(Start: 3 @40398 has 149 MA's), (4, 40452), (6, 40482), (23, 40902), (28, 41016), (30, 41058), (33, 41160), (34, 41178), (36, 41196), (49, 41415), (52, 41487), (58, 41565), (59, 41589), (63, 41658), (64, 41661), (65, 41763), (67, 41781), (68, 41814), (69, 41829), (72, 41907), (73, 41910), (80, 42039), (82, 42084), (84, 42219), (87, 42276), (88, 42291), (90, 42303), (92, 42336), (96, 42477), (98, 42561), (124, 43263), (138, 43479), (140, 43521), (141, 43530), (148, 43698), (153, 43815), (154, 43818), (158, 43869), (161, 43956), (165, 44028), (167, 44097),

Gene: Gabriel\_98 Start: 40607, Stop: 44407, Start Num: 3

Candidate Starts for Gabriel\_98:

(Start: 3 @40607 has 149 MA's), (4, 40661), (6, 40691), (23, 41111), (28, 41225), (30, 41267), (33, 41324), (34, 41342), (36, 41360), (49, 41579), (52, 41651), (58, 41729), (59, 41753), (63, 41822), (64, 41825), (65, 41927), (67, 41945), (68, 41978), (69, 41993), (72, 42071), (73, 42074), (80, 42203), (82, 42248), (84, 42383), (87, 42440), (88, 42455), (90, 42467), (92, 42500), (96, 42641), (98, 42725), (124, 43427), (138, 43643), (140, 43685), (141, 43694), (148, 43862), (153, 43979), (154, 43982), (158, 44033), (161, 44120), (165, 44192), (167, 44261),

Gene: Gamgam\_97 Start: 40647, Stop: 44447, Start Num: 3

Candidate Starts for Gamgam\_97:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: Ghost\_96 Start: 40647, Stop: 44447, Start Num: 3

Candidate Starts for Ghost\_96:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: Gizmo\_100 Start: 42352, Stop: 46182, Start Num: 3

Candidate Starts for Gizmo\_100:

(Start: 3 @42352 has 149 MA's), (4, 42406), (6, 42436), (23, 42856), (28, 42970), (30, 43012), (33, 43099), (34, 43117), (36, 43135), (49, 43354), (52, 43426), (58, 43504), (59, 43528), (63, 43597), (64, 43600), (65, 43702), (67, 43720), (68, 43753), (69, 43768), (72, 43846), (73, 43849), (80, 43978), (82, 44023), (84, 44158), (87, 44215), (88, 44230), (90, 44242), (92, 44275), (96, 44416), (98, 44500), (124, 45202), (138, 45418), (140, 45460), (141, 45469), (148, 45637), (153, 45754), (154, 45757), (158, 45808), (161, 45895), (165, 45967), (167, 46036),

Gene: GlutenPhree\_96 Start: 40647, Stop: 44447, Start Num: 3

Candidate Starts for GlutenPhree\_96:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: Grasshills\_103 Start: 43426, Stop: 47226, Start Num: 3

Candidate Starts for Grasshills\_103:

(Start: 2 @43399 has 6 MA's), (Start: 3 @43426 has 149 MA's), (4, 43480), (6, 43510), (10, 43579), (23, 43930), (28, 44044), (30, 44086), (33, 44143), (34, 44161), (36, 44179), (49, 44398), (52, 44470), (58, 44548), (59, 44572), (63, 44641), (64, 44644), (65, 44746), (67, 44764), (68, 44797), (69, 44812), (72, 44890), (73, 44893), (80, 45022), (82, 45067), (84, 45202), (87, 45259), (88, 45274), (90, 45286), (92, 45319), (96, 45460), (98, 45544), (106, 45745), (124, 46246), (138, 46462), (140, 46504), (141, 46513), (148, 46681), (153, 46798), (154, 46801), (158, 46852), (161, 46939), (165, 47011), (167, 47080),

Gene: Greely\_98 Start: 42373, Stop: 46023, Start Num: 3

Candidate Starts for Greely\_98:

(Start: 3 @42373 has 149 MA's), (5, 42454), (8, 42481), (9, 42496), (12, 42565), (17, 42796), (20, 42859), (21, 42877), (25, 42943), (26, 42982), (27, 43006), (28, 43051), (30, 43090), (33, 43216), (34, 43234), (37, 43255), (39, 43285), (43, 43426), (44, 43435), (45, 43438), (50, 43549), (54, 43603), (55, 43621), (62, 43729), (64, 43759), (68, 43909), (75, 44014), (76, 44059), (78, 44104), (84, 44269), (85, 44281), (86, 44302), (87, 44326), (97, 44527), (113, 44893), (122, 45061), (124, 45193), (128, 45220), (129, 45235), (136, 45328), (137, 45331), (142, 45454), (145, 45481), (156, 45649), (160, 45739), (162, 45772), (164, 45805), (167, 45877),

Gene: Grungle\_84 Start: 38029, Stop: 41865, Start Num: 3

Candidate Starts for Grungle\_84:

(Start: 3 @38029 has 149 MA's), (4, 38083), (6, 38113), (10, 38182), (23, 38533), (28, 38647), (30, 38689), (33, 38782), (34, 38800), (36, 38818), (49, 39037), (52, 39109), (58, 39187), (59, 39211), (63, 39280), (64, 39283), (65, 39385), (67, 39403), (68, 39436), (69, 39451), (72, 39529), (73, 39532), (80, 39661), (82, 39706), (84, 39841), (87, 39898), (88, 39913), (90, 39925), (92, 39958), (96, 40099), (98, 40183), (124, 40885), (138, 41101), (140, 41143), (141, 41152), (148, 41320), (153, 41437), (154, 41440), (158, 41491), (161, 41578), (165, 41650), (167, 41719),

Gene: Guwapp\_96 Start: 40742, Stop: 44572, Start Num: 3

Candidate Starts for Guwapp\_96:

(Start: 3 @40742 has 149 MA's), (4, 40796), (6, 40826), (10, 40895), (23, 41246), (28, 41360), (30, 41402), (33, 41489), (34, 41507), (36, 41525), (49, 41744), (52, 41816), (58, 41894), (59, 41918), (63, 41987), (64, 41990), (65, 42092), (67, 42110), (68, 42143), (69, 42158), (72, 42236), (73, 42239), (80, 42368), (82, 42413), (84, 42548), (87, 42605), (88, 42620), (90, 42632), (92, 42665), (96, 42806), (98, 42890), (124, 43592), (138, 43808), (140, 43850), (141, 43859), (148, 44027), (153, 44144), (154, 44147), (158, 44198), (161, 44285), (165, 44357), (167, 44426),

Gene: Halldule\_90 Start: 39059, Stop: 42895, Start Num: 3

Candidate Starts for Halldule\_90:

(Start: 3 @39059 has 149 MA's), (4, 39113), (6, 39143), (10, 39212), (23, 39563), (28, 39677), (30, 39719), (33, 39812), (34, 39830), (36, 39848), (49, 40067), (52, 40139), (58, 40217), (59, 40241), (63, 40310), (64, 40313), (65, 40415), (67, 40433), (68, 40466), (69, 40481), (72, 40559), (73, 40562), (80, 40691), (82, 40736), (84, 40871), (87, 40928), (88, 40943), (90, 40955), (92, 40988), (96, 41129), (98, 41213), (124, 41915), (138, 42131), (140, 42173), (141, 42182), (148, 42350), (153, 42467), (154, 42470), (158, 42521), (161, 42608), (165, 42680), (167, 42749),

Gene: HyRo\_88 Start: 39381, Stop: 43394, Start Num: 1

Candidate Starts for HyRo\_88:

(Start: 1 @39381 has 18 MA's), (14, 39849), (23, 40083), (28, 40197), (30, 40239), (33, 40314), (34, 40332), (35, 40338), (36, 40350), (40, 40389), (49, 40566), (52, 40638), (58, 40716), (59, 40740), (63, 40809), (64, 40812), (65, 40914), (67, 40932), (68, 40965), (69, 40980), (72, 41058), (73, 41061), (80, 41190), (82, 41235), (84, 41370), (87, 41427), (90, 41454), (92, 41487), (96, 41628), (98, 41712), (124,

42414), (138, 42630), (140, 42672), (141, 42681), (148, 42849), (153, 42966), (154, 42969), (158, 43020), (161, 43107), (165, 43179), (167, 43248),

Gene: I3\_102 Start: 41529, Stop: 45329, Start Num: 3

Candidate Starts for I3\_102:

(Start: 2 @41502 has 6 MA's), (Start: 3 @41529 has 149 MA's), (4, 41583), (6, 41613), (10, 41682), (23, 42033), (28, 42147), (30, 42189), (33, 42246), (34, 42264), (36, 42282), (49, 42501), (52, 42573), (58, 42651), (59, 42675), (63, 42744), (64, 42747), (65, 42849), (67, 42867), (68, 42900), (69, 42915), (72, 42993), (73, 42996), (80, 43125), (82, 43170), (84, 43305), (87, 43362), (88, 43377), (90, 43389), (92, 43422), (96, 43563), (98, 43647), (124, 44349), (138, 44565), (140, 44607), (141, 44616), (148, 44784), (153, 44901), (154, 44904), (158, 44955), (161, 45042), (165, 45114), (167, 45183),

Gene: IkeLoa\_90 Start: 39734, Stop: 43564, Start Num: 3

Candidate Starts for IkeLoa\_90:

(Start: 2 @39707 has 6 MA's), (Start: 3 @39734 has 149 MA's), (4, 39788), (6, 39818), (10, 39887), (23, 40238), (28, 40352), (30, 40394), (33, 40481), (34, 40499), (36, 40517), (49, 40736), (52, 40808), (58, 40886), (59, 40910), (63, 40979), (64, 40982), (65, 41084), (67, 41102), (68, 41135), (69, 41150), (72, 41228), (73, 41231), (80, 41360), (82, 41405), (84, 41540), (87, 41597), (88, 41612), (90, 41624), (92, 41657), (96, 41798), (98, 41882), (124, 42584), (138, 42800), (140, 42842), (141, 42851), (148, 43019), (153, 43136), (154, 43139), (158, 43190), (161, 43277), (165, 43349), (167, 43418),

Gene: InigoMontoya\_98 Start: 40608, Stop: 44408, Start Num: 3

Candidate Starts for InigoMontoya\_98:

(Start: 3 @40608 has 149 MA's), (4, 40662), (6, 40692), (10, 40761), (23, 41112), (28, 41226), (30, 41268), (33, 41325), (34, 41343), (36, 41361), (49, 41580), (52, 41652), (58, 41730), (59, 41754), (63, 41823), (64, 41826), (65, 41928), (67, 41946), (68, 41979), (69, 41994), (72, 42072), (73, 42075), (80, 42204), (82, 42249), (84, 42384), (87, 42441), (88, 42456), (90, 42468), (92, 42501), (96, 42642), (98, 42726), (124, 43428), (138, 43644), (140, 43686), (141, 43695), (148, 43863), (153, 43980), (154, 43983), (158, 44034), (161, 44121), (165, 44193), (167, 44262),

Gene: InterFolia\_105 Start: 43589, Stop: 47422, Start Num: 3

Candidate Starts for InterFolia\_105:

(Start: 2 @43562 has 6 MA's), (Start: 3 @43589 has 149 MA's), (4, 43643), (6, 43673), (23, 44096), (28, 44210), (30, 44252), (33, 44339), (34, 44357), (36, 44375), (49, 44594), (52, 44666), (58, 44744), (59, 44768), (63, 44837), (64, 44840), (65, 44942), (67, 44960), (68, 44993), (69, 45008), (72, 45086), (73, 45089), (80, 45218), (82, 45263), (84, 45398), (87, 45455), (88, 45470), (90, 45482), (92, 45515), (96, 45656), (98, 45740), (124, 46442), (138, 46658), (140, 46700), (141, 46709), (148, 46877), (153, 46994), (154, 46997), (158, 47048), (161, 47135), (165, 47207), (167, 47276),

Gene: Iota\_91 Start: 40388, Stop: 44224, Start Num: 3

Candidate Starts for Iota\_91:

(Start: 3 @40388 has 149 MA's), (4, 40442), (6, 40472), (10, 40541), (23, 40892), (28, 41006), (30, 41048), (33, 41141), (34, 41159), (36, 41177), (49, 41396), (52, 41468), (58, 41546), (59, 41570), (63, 41639), (64, 41642), (65, 41744), (67, 41762), (68, 41795), (69, 41810), (72, 41888), (73, 41891), (80, 42020), (82, 42065), (84, 42200), (87, 42257), (88, 42272), (90, 42284), (92, 42317), (96, 42458), (98, 42542), (124, 43244), (138, 43460), (140, 43502), (141, 43511), (148, 43679), (153, 43796), (154, 43799), (158, 43850), (161, 43937), (165, 44009), (167, 44078),

Gene: Issimir\_95 Start: 41148, Stop: 44978, Start Num: 3

Candidate Starts for Issimir\_95:

(Start: 3 @41148 has 149 MA's), (4, 41202), (6, 41232), (23, 41652), (28, 41766), (30, 41808), (33, 41895), (34, 41913), (36, 41931), (49, 42150), (52, 42222), (58, 42300), (59, 42324), (63, 42393), (64, 42396), (65, 42498), (67, 42516), (68, 42549), (69, 42564), (72, 42642), (73, 42645), (80, 42774), (82,

42819), (84, 42954), (87, 43011), (88, 43026), (90, 43038), (92, 43071), (96, 43212), (98, 43296), (124, 43998), (138, 44214), (140, 44256), (141, 44265), (148, 44433), (153, 44550), (154, 44553), (158, 44604), (161, 44691), (165, 44763), (167, 44832),

Gene: Izajani\_96 Start: 41385, Stop: 45215, Start Num: 3

Candidate Starts for Izajani\_96:

(Start: 2 @41358 has 6 MA's), (Start: 3 @41385 has 149 MA's), (4, 41439), (6, 41469), (10, 41538), (23, 41889), (28, 42003), (30, 42045), (33, 42132), (34, 42150), (36, 42168), (49, 42387), (52, 42459), (58, 42537), (59, 42561), (63, 42630), (64, 42633), (65, 42735), (67, 42753), (68, 42786), (69, 42801), (72, 42879), (73, 42882), (80, 43011), (82, 43056), (84, 43191), (87, 43248), (88, 43263), (90, 43275), (92, 43308), (96, 43449), (98, 43533), (124, 44235), (138, 44451), (140, 44493), (141, 44502), (148, 44670), (153, 44787), (154, 44790), (158, 44841), (161, 44928), (165, 45000), (167, 45069),

Gene: JPickles\_95 Start: 39878, Stop: 43678, Start Num: 3

Candidate Starts for JPickles\_95:

(Start: 3 @39878 has 149 MA's), (4, 39932), (6, 39962), (10, 40031), (23, 40382), (28, 40496), (30, 40538), (33, 40595), (34, 40613), (36, 40631), (49, 40850), (52, 40922), (58, 41000), (59, 41024), (63, 41093), (64, 41096), (65, 41198), (67, 41216), (68, 41249), (69, 41264), (72, 41342), (73, 41345), (80, 41474), (82, 41519), (84, 41654), (87, 41711), (88, 41726), (90, 41738), (92, 41771), (96, 41912), (98, 41996), (124, 42698), (138, 42914), (140, 42956), (141, 42965), (148, 43133), (153, 43250), (154, 43253), (158, 43304), (161, 43391), (165, 43463), (167, 43532),

Gene: Janiyra\_98 Start: 40480, Stop: 44493, Start Num: 1

Candidate Starts for Janiyra\_98:

(Start: 1 @40480 has 18 MA's), (23, 41182), (28, 41296), (30, 41338), (33, 41413), (34, 41431), (35, 41437), (36, 41449), (40, 41488), (49, 41665), (52, 41737), (58, 41815), (59, 41839), (63, 41908), (64, 41911), (65, 42013), (67, 42031), (68, 42064), (69, 42079), (72, 42157), (73, 42160), (80, 42289), (82, 42334), (84, 42469), (87, 42526), (88, 42541), (90, 42553), (92, 42586), (96, 42727), (98, 42811), (124, 43513), (138, 43729), (140, 43771), (141, 43780), (148, 43948), (153, 44065), (154, 44068), (158, 44119), (161, 44206), (165, 44278), (167, 44347),

Gene: JayJay\_98 Start: 42673, Stop: 46509, Start Num: 3

Candidate Starts for JayJay\_98:

(Start: 2 @42646 has 6 MA's), (Start: 3 @42673 has 149 MA's), (4, 42727), (6, 42757), (10, 42826), (23, 43177), (28, 43291), (30, 43333), (33, 43426), (34, 43444), (36, 43462), (49, 43681), (52, 43753), (58, 43831), (59, 43855), (63, 43924), (64, 43927), (65, 44029), (67, 44047), (68, 44080), (69, 44095), (72, 44173), (73, 44176), (80, 44305), (82, 44350), (84, 44485), (87, 44542), (88, 44557), (90, 44569), (92, 44602), (96, 44743), (98, 44827), (124, 45529), (138, 45745), (140, 45787), (141, 45796), (148, 45964), (153, 46081), (154, 46084), (158, 46135), (161, 46222), (165, 46294), (167, 46363),

Gene: Jaygup\_97 Start: 41403, Stop: 45203, Start Num: 3

Candidate Starts for Jaygup\_97:

(Start: 3 @41403 has 149 MA's), (4, 41457), (6, 41487), (10, 41556), (23, 41907), (28, 42021), (30, 42063), (33, 42120), (34, 42138), (36, 42156), (49, 42375), (52, 42447), (58, 42525), (59, 42549), (63, 42618), (64, 42621), (65, 42723), (67, 42741), (68, 42774), (69, 42789), (72, 42867), (73, 42870), (80, 42999), (82, 43044), (84, 43179), (87, 43236), (88, 43251), (90, 43263), (92, 43296), (96, 43437), (98, 43521), (124, 44223), (138, 44439), (140, 44481), (141, 44490), (148, 44658), (153, 44775), (154, 44778), (158, 44829), (161, 44916), (165, 44988), (167, 45057),

Gene: Jedediah\_100 Start: 41903, Stop: 45736, Start Num: 3

Candidate Starts for Jedediah\_100:

(Start: 3 @41903 has 149 MA's), (4, 41957), (6, 41987), (10, 42056), (23, 42410), (28, 42524), (30, 42566), (33, 42653), (34, 42671), (36, 42689), (49, 42908), (52, 42980), (58, 43058), (59, 43082), (63,

43151), (64, 43154), (65, 43256), (67, 43274), (68, 43307), (69, 43322), (72, 43400), (73, 43403), (80, 43532), (82, 43577), (84, 43712), (87, 43769), (88, 43784), (90, 43796), (92, 43829), (96, 43970), (98, 44054), (124, 44756), (138, 44972), (140, 45014), (141, 45023), (148, 45191), (153, 45308), (154, 45311), (158, 45362), (161, 45449), (165, 45521), (167, 45590),

Gene: Jemmno\_97 Start: 41353, Stop: 45183, Start Num: 3

Candidate Starts for Jemmno\_97:

(Start: 3 @41353 has 149 MA's), (4, 41407), (6, 41437), (10, 41506), (23, 41857), (28, 41971), (30, 42013), (33, 42100), (34, 42118), (36, 42136), (49, 42355), (52, 42427), (58, 42505), (59, 42529), (63, 42598), (64, 42601), (65, 42703), (67, 42721), (68, 42754), (69, 42769), (72, 42847), (73, 42850), (80, 42979), (82, 43024), (84, 43159), (87, 43216), (88, 43231), (90, 43243), (92, 43276), (96, 43417), (98, 43501), (124, 44203), (138, 44419), (140, 44461), (141, 44470), (148, 44638), (153, 44755), (154, 44758), (158, 44809), (161, 44896), (165, 44968), (167, 45037),

Gene: Jessibeth14\_95 Start: 40990, Stop: 44820, Start Num: 3

Candidate Starts for Jessibeth14\_95:

(Start: 3 @40990 has 149 MA's), (4, 41044), (6, 41074), (23, 41494), (28, 41608), (30, 41650), (33, 41737), (34, 41755), (36, 41773), (49, 41992), (52, 42064), (58, 42142), (59, 42166), (63, 42235), (64, 42238), (65, 42340), (67, 42358), (68, 42391), (69, 42406), (72, 42484), (73, 42487), (80, 42616), (82, 42661), (84, 42796), (87, 42853), (88, 42868), (90, 42880), (92, 42913), (96, 43054), (98, 43138), (124, 43840), (138, 44056), (140, 44098), (141, 44107), (148, 44275), (153, 44392), (154, 44395), (158, 44446), (161, 44533), (165, 44605), (167, 44674),

Gene: Jezreel\_94 Start: 41068, Stop: 44898, Start Num: 3

Candidate Starts for Jezreel\_94:

(Start: 2 @41041 has 6 MA's), (Start: 3 @41068 has 149 MA's), (4, 41122), (6, 41152), (10, 41221), (23, 41572), (28, 41686), (30, 41728), (33, 41815), (34, 41833), (36, 41851), (49, 42070), (52, 42142), (58, 42220), (59, 42244), (63, 42313), (64, 42316), (65, 42418), (67, 42436), (68, 42469), (69, 42484), (72, 42562), (73, 42565), (80, 42694), (82, 42739), (84, 42874), (87, 42931), (88, 42946), (90, 42958), (92, 42991), (96, 43132), (98, 43216), (124, 43918), (138, 44134), (140, 44176), (141, 44185), (148, 44353), (153, 44470), (154, 44473), (158, 44524), (161, 44611), (165, 44683), (167, 44752),

Gene: JigglyPuff\_104 Start: 43562, Stop: 47398, Start Num: 3

Candidate Starts for JigglyPuff\_104:

(Start: 3 @43562 has 149 MA's), (4, 43616), (6, 43646), (10, 43715), (23, 44066), (28, 44180), (30, 44222), (33, 44315), (34, 44333), (36, 44351), (49, 44570), (52, 44642), (58, 44720), (59, 44744), (63, 44813), (64, 44816), (65, 44918), (67, 44936), (68, 44969), (69, 44984), (72, 45062), (73, 45065), (80, 45194), (82, 45239), (84, 45374), (87, 45431), (88, 45446), (90, 45458), (92, 45491), (96, 45632), (98, 45716), (124, 46418), (138, 46634), (140, 46676), (141, 46685), (148, 46853), (153, 46970), (154, 46973), (158, 47024), (161, 47111), (165, 47183), (167, 47252),

Gene: JulietS\_91 Start: 38910, Stop: 42746, Start Num: 3

Candidate Starts for JulietS\_91:

(Start: 3 @38910 has 149 MA's), (4, 38964), (6, 38994), (10, 39063), (23, 39414), (28, 39528), (30, 39570), (33, 39663), (34, 39681), (36, 39699), (49, 39918), (52, 39990), (58, 40068), (59, 40092), (63, 40161), (64, 40164), (65, 40266), (67, 40284), (68, 40317), (69, 40332), (72, 40410), (73, 40413), (80, 40542), (82, 40587), (84, 40722), (87, 40779), (88, 40794), (90, 40806), (92, 40839), (96, 40980), (98, 41064), (124, 41766), (138, 41982), (140, 42024), (141, 42033), (148, 42201), (153, 42318), (154, 42321), (158, 42372), (161, 42459), (165, 42531), (167, 42600),

Gene: JustHall\_93 Start: 40555, Stop: 44355, Start Num: 3

Candidate Starts for JustHall\_93:

(Start: 3 @40555 has 149 MA's), (4, 40609), (6, 40639), (10, 40708), (23, 41059), (28, 41173), (30, 41215), (33, 41272), (34, 41290), (36, 41308), (49, 41527), (52, 41599), (58, 41677), (59, 41701), (63, 41770), (64, 41773), (65, 41875), (67, 41893), (68, 41926), (69, 41941), (72, 42019), (73, 42022), (80, 42151), (82, 42196), (84, 42331), (87, 42388), (88, 42403), (90, 42415), (92, 42448), (96, 42589), (98, 42673), (124, 43375), (138, 43591), (140, 43633), (141, 43642), (148, 43810), (153, 43927), (154, 43930), (158, 43981), (161, 44068), (165, 44140), (167, 44209),

Gene: Kamryn\_96 Start: 41729, Stop: 45559, Start Num: 3

Candidate Starts for Kamryn\_96:

(Start: 3 @41729 has 149 MA's), (4, 41783), (6, 41813), (23, 42233), (28, 42347), (30, 42389), (33, 42476), (34, 42494), (36, 42512), (49, 42731), (52, 42803), (58, 42881), (59, 42905), (63, 42974), (64, 42977), (65, 43079), (67, 43097), (68, 43130), (69, 43145), (72, 43223), (73, 43226), (80, 43355), (82, 43400), (84, 43535), (87, 43592), (88, 43607), (90, 43619), (92, 43652), (96, 43793), (98, 43877), (124, 44579), (138, 44795), (140, 44837), (141, 44846), (148, 45014), (153, 45131), (154, 45134), (158, 45185), (161, 45272), (165, 45344), (167, 45413),

Gene: Kboogie\_100 Start: 40199, Stop: 43999, Start Num: 3

Candidate Starts for Kboogie\_100:

(Start: 3 @40199 has 149 MA's), (4, 40253), (6, 40283), (10, 40352), (23, 40703), (28, 40817), (30, 40859), (33, 40916), (34, 40934), (36, 40952), (49, 41171), (52, 41243), (58, 41321), (59, 41345), (63, 41414), (64, 41417), (65, 41519), (67, 41537), (68, 41570), (69, 41585), (72, 41663), (73, 41666), (80, 41795), (82, 41840), (84, 41975), (87, 42032), (90, 42059), (92, 42092), (96, 42233), (98, 42317), (124, 43019), (138, 43235), (140, 43277), (141, 43286), (148, 43454), (153, 43571), (154, 43574), (158, 43625), (161, 43712), (165, 43784), (167, 43853),

Gene: Khaleesi\_95 Start: 40952, Stop: 44782, Start Num: 3

Candidate Starts for Khaleesi\_95:

(Start: 3 @40952 has 149 MA's), (4, 41006), (6, 41036), (23, 41456), (28, 41570), (30, 41612), (33, 41699), (34, 41717), (36, 41735), (49, 41954), (52, 42026), (58, 42104), (59, 42128), (63, 42197), (64, 42200), (65, 42302), (67, 42320), (68, 42353), (69, 42368), (72, 42446), (73, 42449), (80, 42578), (82, 42623), (84, 42758), (87, 42815), (88, 42830), (90, 42842), (92, 42875), (96, 43016), (98, 43100), (124, 43802), (138, 44018), (140, 44060), (141, 44069), (148, 44237), (153, 44354), (154, 44357), (158, 44408), (161, 44495), (165, 44567), (167, 44636),

Gene: Koguma\_93 Start: 39130, Stop: 42966, Start Num: 3

Candidate Starts for Koguma\_93:

(Start: 3 @39130 has 149 MA's), (4, 39184), (6, 39214), (10, 39283), (23, 39634), (28, 39748), (30, 39790), (33, 39883), (34, 39901), (36, 39919), (49, 40138), (52, 40210), (58, 40288), (59, 40312), (63, 40381), (64, 40384), (65, 40486), (67, 40504), (68, 40537), (69, 40552), (72, 40630), (73, 40633), (80, 40762), (82, 40807), (84, 40942), (87, 40999), (88, 41014), (90, 41026), (92, 41059), (96, 41200), (98, 41284), (124, 41986), (138, 42202), (140, 42244), (141, 42253), (148, 42421), (153, 42538), (154, 42541), (158, 42592), (161, 42679), (165, 42751), (167, 42820),

Gene: LRRHood\_91 Start: 40949, Stop: 44785, Start Num: 3

Candidate Starts for LRRHood\_91:

(Start: 3 @40949 has 149 MA's), (4, 41003), (6, 41033), (10, 41102), (23, 41453), (28, 41567), (30, 41609), (33, 41702), (34, 41720), (36, 41738), (49, 41957), (52, 42029), (58, 42107), (59, 42131), (63, 42200), (64, 42203), (65, 42305), (67, 42323), (68, 42356), (69, 42371), (72, 42449), (73, 42452), (80, 42581), (82, 42626), (84, 42761), (87, 42818), (88, 42833), (90, 42845), (92, 42878), (96, 43019), (98, 43103), (124, 43805), (138, 44021), (140, 44063), (141, 44072), (148, 44240), (153, 44357), (154, 44360), (158, 44411), (161, 44498), (165, 44570), (167, 44639),

Gene: Latch\_97 Start: 40647, Stop: 44447, Start Num: 3

Candidate Starts for Latch\_97:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: Lee7\_94 Start: 41586, Stop: 45416, Start Num: 3

Candidate Starts for Lee7\_94:

(Start: 3 @41586 has 149 MA's), (4, 41640), (6, 41670), (23, 42090), (28, 42204), (30, 42246), (33, 42333), (34, 42351), (36, 42369), (49, 42588), (52, 42660), (58, 42738), (59, 42762), (63, 42831), (64, 42834), (65, 42936), (67, 42954), (68, 42987), (69, 43002), (72, 43080), (73, 43083), (80, 43212), (82, 43257), (84, 43392), (87, 43449), (88, 43464), (90, 43476), (92, 43509), (96, 43650), (98, 43734), (124, 44436), (138, 44652), (140, 44694), (141, 44703), (148, 44871), (153, 44988), (154, 44991), (158, 45042), (161, 45129), (165, 45201), (167, 45270),

Gene: Lethe\_96 Start: 41400, Stop: 45230, Start Num: 3

Candidate Starts for Lethe\_96:

(Start: 3 @41400 has 149 MA's), (4, 41454), (6, 41484), (23, 41904), (28, 42018), (30, 42060), (33, 42147), (34, 42165), (36, 42183), (49, 42402), (52, 42474), (58, 42552), (59, 42576), (63, 42645), (64, 42648), (65, 42750), (67, 42768), (68, 42801), (69, 42816), (72, 42894), (73, 42897), (80, 43026), (82, 43071), (84, 43206), (87, 43263), (88, 43278), (90, 43290), (92, 43323), (96, 43464), (98, 43548), (124, 44250), (138, 44466), (140, 44508), (141, 44517), (148, 44685), (153, 44802), (154, 44805), (158, 44856), (161, 44943), (165, 45015), (167, 45084),

Gene: LifeSavor\_96 Start: 41335, Stop: 45135, Start Num: 3

Candidate Starts for LifeSavor\_96:

(Start: 3 @41335 has 149 MA's), (4, 41389), (6, 41419), (10, 41488), (23, 41839), (28, 41953), (30, 41995), (33, 42052), (34, 42070), (36, 42088), (49, 42307), (52, 42379), (58, 42457), (59, 42481), (63, 42550), (64, 42553), (65, 42655), (67, 42673), (68, 42706), (69, 42721), (72, 42799), (73, 42802), (80, 42931), (82, 42976), (84, 43111), (87, 43168), (88, 43183), (90, 43195), (92, 43228), (96, 43369), (98, 43453), (124, 44155), (138, 44371), (140, 44413), (141, 44422), (148, 44590), (153, 44707), (154, 44710), (158, 44761), (161, 44848), (165, 44920), (167, 44989),

Gene: LinStu\_96 Start: 41573, Stop: 45373, Start Num: 3

Candidate Starts for LinStu\_96:

(Start: 2 @41546 has 6 MA's), (Start: 3 @41573 has 149 MA's), (4, 41627), (6, 41657), (10, 41726), (23, 42077), (28, 42191), (30, 42233), (33, 42290), (34, 42308), (36, 42326), (49, 42545), (52, 42617), (58, 42695), (59, 42719), (63, 42788), (64, 42791), (65, 42893), (67, 42911), (68, 42944), (69, 42959), (72, 43037), (73, 43040), (80, 43169), (82, 43214), (84, 43349), (87, 43406), (88, 43421), (90, 43433), (92, 43466), (96, 43607), (98, 43691), (124, 44393), (138, 44609), (140, 44651), (141, 44660), (148, 44828), (153, 44945), (154, 44948), (158, 44999), (161, 45086), (165, 45158), (167, 45227),

Gene: Littleton\_96 Start: 40524, Stop: 44354, Start Num: 3

Candidate Starts for Littleton\_96:

(Start: 3 @40524 has 149 MA's), (4, 40578), (6, 40608), (23, 41028), (28, 41142), (30, 41184), (33, 41271), (34, 41289), (36, 41307), (49, 41526), (52, 41598), (58, 41676), (59, 41700), (63, 41769), (64, 41772), (65, 41874), (67, 41892), (68, 41925), (69, 41940), (72, 42018), (73, 42021), (80, 42150), (82, 42195), (84, 42330), (87, 42387), (88, 42402), (90, 42414), (92, 42447), (96, 42588), (98, 42672), (124, 43374), (138, 43590), (140, 43632), (141, 43641), (148, 43809), (153, 43926), (154, 43929), (158, 43980), (161, 44067), (165, 44139), (167, 44208),



Gene: Loanshark\_96 Start: 41205, Stop: 45005, Start Num: 3

Candidate Starts for Loanshark\_96:

(Start: 3 @41205 has 149 MA's), (4, 41259), (6, 41289), (23, 41709), (28, 41823), (30, 41865), (33, 41922), (34, 41940), (36, 41958), (49, 42177), (52, 42249), (58, 42327), (59, 42351), (63, 42420), (64, 42423), (65, 42525), (67, 42543), (68, 42576), (69, 42591), (72, 42669), (73, 42672), (80, 42801), (82, 42846), (84, 42981), (87, 43038), (88, 43053), (90, 43065), (92, 43098), (96, 43239), (98, 43323), (124, 44025), (138, 44241), (140, 44283), (141, 44292), (148, 44460), (153, 44577), (154, 44580), (158, 44631), (161, 44718), (165, 44790), (167, 44859),

Gene: LolaVinca\_98 Start: 42311, Stop: 46141, Start Num: 3

Candidate Starts for LolaVinca\_98:

(Start: 3 @42311 has 149 MA's), (4, 42365), (6, 42395), (23, 42815), (28, 42929), (30, 42971), (33, 43058), (34, 43076), (36, 43094), (49, 43313), (52, 43385), (58, 43463), (59, 43487), (63, 43556), (64, 43559), (65, 43661), (67, 43679), (68, 43712), (69, 43727), (72, 43805), (73, 43808), (80, 43937), (82, 43982), (84, 44117), (87, 44174), (88, 44189), (90, 44201), (92, 44234), (96, 44375), (98, 44459), (124, 45161), (138, 45377), (140, 45419), (141, 45428), (148, 45596), (153, 45713), (154, 45716), (158, 45767), (161, 45854), (165, 45926), (167, 45995),

Gene: LordLeafolot\_101 Start: 43302, Stop: 47105, Start Num: 3

Candidate Starts for LordLeafolot\_101:

(Start: 3 @43302 has 149 MA's), (4, 43356), (6, 43386), (23, 43809), (28, 43923), (30, 43965), (33, 44022), (34, 44040), (36, 44058), (49, 44277), (52, 44349), (58, 44427), (59, 44451), (63, 44520), (64, 44523), (65, 44625), (67, 44643), (68, 44676), (69, 44691), (72, 44769), (73, 44772), (80, 44901), (82, 44946), (84, 45081), (87, 45138), (88, 45153), (90, 45165), (92, 45198), (96, 45339), (98, 45423), (124, 46125), (138, 46341), (140, 46383), (141, 46392), (148, 46560), (153, 46677), (154, 46680), (158, 46731), (161, 46818), (165, 46890), (167, 46959),

Gene: Lukilu\_87 Start: 40816, Stop: 44646, Start Num: 3

Candidate Starts for Lukilu\_87:

(Start: 3 @40816 has 149 MA's), (4, 40870), (6, 40900), (23, 41320), (28, 41434), (30, 41476), (33, 41563), (34, 41581), (36, 41599), (49, 41818), (52, 41890), (58, 41968), (59, 41992), (63, 42061), (64, 42064), (65, 42166), (67, 42184), (68, 42217), (69, 42232), (72, 42310), (73, 42313), (80, 42442), (82, 42487), (84, 42622), (87, 42679), (88, 42694), (90, 42706), (92, 42739), (96, 42880), (98, 42964), (124, 43666), (138, 43882), (140, 43924), (141, 43933), (148, 44101), (153, 44218), (154, 44221), (158, 44272), (161, 44359), (165, 44431), (167, 44500),

Gene: Maby2021\_96 Start: 41050, Stop: 44880, Start Num: 3

Candidate Starts for Maby2021\_96:

(Start: 2 @41023 has 6 MA's), (Start: 3 @41050 has 149 MA's), (4, 41104), (6, 41134), (10, 41203), (23, 41554), (28, 41668), (30, 41710), (33, 41797), (34, 41815), (36, 41833), (49, 42052), (52, 42124), (58, 42202), (59, 42226), (63, 42295), (64, 42298), (65, 42400), (67, 42418), (68, 42451), (69, 42466), (72, 42544), (73, 42547), (80, 42676), (82, 42721), (84, 42856), (87, 42913), (88, 42928), (90, 42940), (92, 42973), (96, 43114), (98, 43198), (124, 43900), (138, 44116), (140, 44158), (141, 44167), (148, 44335), (153, 44452), (154, 44455), (158, 44506), (161, 44593), (165, 44665), (167, 44734),

Gene: Mangeria\_96 Start: 41167, Stop: 44985, Start Num: 3

Candidate Starts for Mangeria\_96:

(Start: 3 @41167 has 149 MA's), (4, 41221), (6, 41251), (23, 41671), (28, 41785), (30, 41827), (33, 41902), (34, 41920), (36, 41938), (49, 42157), (52, 42229), (58, 42307), (59, 42331), (63, 42400), (64, 42403), (65, 42505), (67, 42523), (68, 42556), (69, 42571), (72, 42649), (73, 42652), (80, 42781), (82, 42826), (84, 42961), (87, 43018), (88, 43033), (90, 43045), (92, 43078), (96, 43219), (98, 43303), (124, 44005), (138, 44221), (140, 44263), (141, 44272), (148, 44440), (153, 44557), (154, 44560), (158, 44611), (161, 44698), (165, 44770), (167, 44839),

Gene: Matsumoto\_94 Start: 40930, Stop: 44763, Start Num: 3

Candidate Starts for Matsumoto\_94:

(Start: 3 @40930 has 149 MA's), (4, 40984), (6, 41014), (23, 41437), (28, 41551), (30, 41593), (33, 41680), (34, 41698), (36, 41716), (49, 41935), (52, 42007), (58, 42085), (59, 42109), (63, 42178), (64, 42181), (65, 42283), (67, 42301), (68, 42334), (69, 42349), (72, 42427), (73, 42430), (80, 42559), (82, 42604), (84, 42739), (87, 42796), (88, 42811), (90, 42823), (92, 42856), (96, 42997), (98, 43081), (124, 43783), (138, 43999), (140, 44041), (141, 44050), (148, 44218), (153, 44335), (154, 44338), (158, 44389), (161, 44476), (165, 44548), (167, 44617),

Gene: McGee\_98 Start: 39831, Stop: 43631, Start Num: 3

Candidate Starts for McGee\_98:

(Start: 3 @39831 has 149 MA's), (4, 39885), (6, 39915), (10, 39984), (23, 40335), (28, 40449), (30, 40491), (33, 40548), (34, 40566), (36, 40584), (49, 40803), (52, 40875), (58, 40953), (59, 40977), (63, 41046), (64, 41049), (65, 41151), (67, 41169), (68, 41202), (69, 41217), (72, 41295), (73, 41298), (80, 41427), (82, 41472), (84, 41607), (87, 41664), (88, 41679), (90, 41691), (92, 41724), (96, 41865), (98, 41949), (124, 42651), (138, 42867), (140, 42909), (141, 42918), (148, 43086), (153, 43203), (154, 43206), (158, 43257), (161, 43344), (165, 43416), (167, 43485),

Gene: McWolfish\_94 Start: 40775, Stop: 44605, Start Num: 3

Candidate Starts for McWolfish\_94:

(Start: 2 @40748 has 6 MA's), (Start: 3 @40775 has 149 MA's), (4, 40829), (6, 40859), (10, 40928), (11, 40952), (23, 41279), (28, 41393), (30, 41435), (33, 41522), (34, 41540), (36, 41558), (49, 41777), (52, 41849), (58, 41927), (59, 41951), (63, 42020), (64, 42023), (65, 42125), (67, 42143), (68, 42176), (69, 42191), (72, 42269), (73, 42272), (80, 42401), (82, 42446), (84, 42581), (87, 42638), (88, 42653), (90, 42665), (92, 42698), (96, 42839), (98, 42923), (124, 43625), (138, 43841), (140, 43883), (141, 43892), (148, 44060), (153, 44177), (154, 44180), (158, 44231), (161, 44318), (165, 44390), (167, 44459),

Gene: Megamind\_95 Start: 40871, Stop: 44701, Start Num: 3

Candidate Starts for Megamind\_95:

(Start: 3 @40871 has 149 MA's), (4, 40925), (6, 40955), (23, 41375), (28, 41489), (30, 41531), (33, 41618), (34, 41636), (36, 41654), (49, 41873), (52, 41945), (58, 42023), (59, 42047), (63, 42116), (64, 42119), (65, 42221), (67, 42239), (68, 42272), (69, 42287), (72, 42365), (73, 42368), (80, 42497), (82, 42542), (84, 42677), (87, 42734), (88, 42749), (90, 42761), (92, 42794), (96, 42935), (98, 43019), (124, 43721), (138, 43937), (140, 43979), (141, 43988), (148, 44156), (153, 44273), (154, 44276), (158, 44327), (161, 44414), (165, 44486), (167, 44555),

Gene: Melpomini\_90 Start: 38395, Stop: 42408, Start Num: 1

Candidate Starts for Melpomini\_90:

(Start: 1 @38395 has 18 MA's), (23, 39097), (28, 39211), (30, 39253), (33, 39328), (34, 39346), (35, 39352), (36, 39364), (40, 39403), (49, 39580), (52, 39652), (58, 39730), (59, 39754), (63, 39823), (64, 39826), (65, 39928), (67, 39946), (68, 39979), (69, 39994), (72, 40072), (73, 40075), (80, 40204), (82, 40249), (84, 40384), (87, 40441), (88, 40456), (90, 40468), (92, 40501), (96, 40642), (98, 40726), (124, 41428), (138, 41644), (140, 41686), (141, 41695), (148, 41863), (153, 41980), (154, 41983), (158, 42034), (161, 42121), (165, 42193), (167, 42262),

Gene: MikeLiesIn\_97 Start: 41218, Stop: 45048, Start Num: 3

Candidate Starts for MikeLiesIn\_97:

(Start: 3 @41218 has 149 MA's), (4, 41272), (6, 41302), (23, 41722), (28, 41836), (30, 41878), (33, 41965), (34, 41983), (36, 42001), (49, 42220), (52, 42292), (58, 42370), (59, 42394), (63, 42463), (64, 42466), (65, 42568), (67, 42586), (68, 42619), (69, 42634), (72, 42712), (73, 42715), (80, 42844), (82, 42889), (84, 43024), (87, 43081), (88, 43096), (90, 43108), (92, 43141), (96, 43282), (98, 43366), (124,

44068), (138, 44284), (140, 44326), (141, 44335), (148, 44503), (153, 44620), (154, 44623), (158, 44674), (161, 44761), (165, 44833), (167, 44902),

Gene: Mikro\_94 Start: 42293, Stop: 46123, Start Num: 3  
Candidate Starts for Mikro\_94:

(Start: 2 @42266 has 6 MA's), (Start: 3 @42293 has 149 MA's), (4, 42347), (6, 42377), (10, 42446), (23, 42797), (28, 42911), (30, 42953), (33, 43040), (34, 43058), (36, 43076), (49, 43295), (52, 43367), (58, 43445), (59, 43469), (63, 43538), (64, 43541), (65, 43643), (67, 43661), (68, 43694), (69, 43709), (72, 43787), (73, 43790), (80, 43919), (82, 43964), (84, 44099), (87, 44156), (88, 44171), (90, 44183), (92, 44216), (96, 44357), (98, 44441), (124, 45143), (138, 45359), (140, 45401), (141, 45410), (148, 45578), (153, 45695), (154, 45698), (158, 45749), (161, 45836), (165, 45908), (167, 45977),

Gene: MoMoMixon\_97 Start: 40943, Stop: 44773, Start Num: 3  
Candidate Starts for MoMoMixon\_97:

(Start: 3 @40943 has 149 MA's), (4, 40997), (6, 41027), (23, 41447), (28, 41561), (30, 41603), (33, 41690), (34, 41708), (36, 41726), (49, 41945), (52, 42017), (58, 42095), (59, 42119), (63, 42188), (64, 42191), (65, 42293), (67, 42311), (68, 42344), (69, 42359), (72, 42437), (73, 42440), (80, 42569), (82, 42614), (84, 42749), (87, 42806), (88, 42821), (90, 42833), (92, 42866), (96, 43007), (98, 43091), (124, 43793), (138, 44009), (140, 44051), (141, 44060), (148, 44228), (153, 44345), (154, 44348), (158, 44399), (161, 44486), (165, 44558), (167, 44627),

Gene: Momo\_96 Start: 40647, Stop: 44447, Start Num: 3  
Candidate Starts for Momo\_96:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: Morizzled23\_96 Start: 39915, Stop: 43928, Start Num: 1  
Candidate Starts for Morizzled23\_96:

(Start: 1 @39915 has 18 MA's), (23, 40617), (28, 40731), (30, 40773), (33, 40848), (34, 40866), (35, 40872), (36, 40884), (40, 40923), (49, 41100), (52, 41172), (58, 41250), (59, 41274), (63, 41343), (64, 41346), (65, 41448), (67, 41466), (68, 41499), (69, 41514), (72, 41592), (73, 41595), (80, 41724), (82, 41769), (84, 41904), (87, 41961), (90, 41988), (92, 42021), (96, 42162), (98, 42246), (124, 42948), (138, 43164), (140, 43206), (141, 43215), (148, 43383), (153, 43500), (154, 43503), (158, 43554), (161, 43641), (165, 43713), (167, 43782),

Gene: Myrna\_96 Start: 43197, Stop: 46664, Start Num: 3  
Candidate Starts for Myrna\_96:

(Start: 3 @43197 has 149 MA's), (5, 43278), (8, 43305), (9, 43320), (10, 43335), (17, 43620), (21, 43698), (24, 43758), (25, 43803), (27, 43872), (28, 43917), (30, 43956), (31, 44025), (37, 44112), (38, 44133), (43, 44274), (45, 44286), (47, 44352), (48, 44355), (50, 44397), (54, 44451), (55, 44469), (64, 44607), (66, 44715), (68, 44757), (71, 44820), (74, 44859), (75, 44862), (78, 44943), (79, 44946), (84, 45111), (86, 45144), (87, 45168), (89, 45186), (100, 45408), (108, 45555), (124, 45837), (128, 45861), (129, 45876), (132, 45897), (134, 45930), (136, 45969), (137, 45972), (145, 46122), (146, 46155), (147, 46164), (150, 46230), (152, 46269), (156, 46290), (162, 46413), (164, 46446), (167, 46518), (170, 46569),

Gene: Naija\_96 Start: 40647, Stop: 44447, Start Num: 3  
Candidate Starts for Naija\_96:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: Napoleon13\_92 Start: 39013, Stop: 42843, Start Num: 3

Candidate Starts for Napoleon13\_92:

(Start: 3 @39013 has 149 MA's), (4, 39067), (6, 39097), (23, 39517), (28, 39631), (30, 39673), (33, 39760), (34, 39778), (36, 39796), (49, 40015), (52, 40087), (58, 40165), (59, 40189), (63, 40258), (64, 40261), (65, 40363), (67, 40381), (68, 40414), (69, 40429), (72, 40507), (73, 40510), (80, 40639), (82, 40684), (84, 40819), (87, 40876), (88, 40891), (90, 40903), (92, 40936), (96, 41077), (98, 41161), (124, 41863), (138, 42079), (140, 42121), (141, 42130), (148, 42298), (153, 42415), (154, 42418), (158, 42469), (161, 42556), (165, 42628), (167, 42697),

Gene: Nappy\_99 Start: 42373, Stop: 46209, Start Num: 3

Candidate Starts for Nappy\_99:

(Start: 3 @42373 has 149 MA's), (4, 42427), (6, 42457), (10, 42526), (23, 42877), (28, 42991), (30, 43033), (33, 43126), (34, 43144), (36, 43162), (49, 43381), (52, 43453), (58, 43531), (59, 43555), (63, 43624), (64, 43627), (65, 43729), (67, 43747), (68, 43780), (69, 43795), (72, 43873), (73, 43876), (80, 44005), (82, 44050), (84, 44185), (87, 44242), (88, 44257), (90, 44269), (92, 44302), (96, 44443), (98, 44527), (124, 45229), (138, 45445), (140, 45487), (141, 45496), (148, 45664), (153, 45781), (154, 45784), (158, 45835), (161, 45922), (165, 45994), (167, 46063),

Gene: Naval22\_101 Start: 42809, Stop: 46639, Start Num: 3

Candidate Starts for Naval22\_101:

(Start: 3 @42809 has 149 MA's), (4, 42863), (6, 42893), (23, 43313), (28, 43427), (30, 43469), (33, 43556), (34, 43574), (36, 43592), (49, 43811), (52, 43883), (58, 43961), (59, 43985), (63, 44054), (64, 44057), (65, 44159), (67, 44177), (68, 44210), (69, 44225), (72, 44303), (73, 44306), (80, 44435), (82, 44480), (84, 44615), (87, 44672), (88, 44687), (90, 44699), (92, 44732), (96, 44873), (98, 44957), (124, 45659), (138, 45875), (140, 45917), (141, 45926), (148, 46094), (153, 46211), (154, 46214), (158, 46265), (161, 46352), (165, 46424), (167, 46493),

Gene: NedWong\_97 Start: 41205, Stop: 45035, Start Num: 3

Candidate Starts for NedWong\_97:

(Start: 3 @41205 has 149 MA's), (4, 41259), (6, 41289), (23, 41709), (28, 41823), (30, 41865), (33, 41952), (34, 41970), (36, 41988), (49, 42207), (52, 42279), (58, 42357), (59, 42381), (63, 42450), (64, 42453), (65, 42555), (67, 42573), (68, 42606), (69, 42621), (72, 42699), (73, 42702), (80, 42831), (82, 42876), (84, 43011), (87, 43068), (88, 43083), (90, 43095), (92, 43128), (96, 43269), (98, 43353), (124, 44055), (138, 44271), (140, 44313), (141, 44322), (148, 44490), (153, 44607), (154, 44610), (158, 44661), (161, 44748), (165, 44820), (167, 44889),

Gene: Ngannou\_93 Start: 39629, Stop: 43429, Start Num: 3

Candidate Starts for Ngannou\_93:

(Start: 3 @39629 has 149 MA's), (4, 39683), (6, 39713), (10, 39782), (23, 40133), (28, 40247), (30, 40289), (33, 40346), (34, 40364), (36, 40382), (49, 40601), (52, 40673), (58, 40751), (59, 40775), (63, 40844), (64, 40847), (65, 40949), (67, 40967), (68, 41000), (69, 41015), (72, 41093), (73, 41096), (80, 41225), (82, 41270), (84, 41405), (87, 41462), (88, 41477), (90, 41489), (92, 41522), (96, 41663), (98, 41747), (124, 42449), (138, 42665), (140, 42707), (141, 42716), (148, 42884), (153, 43001), (154, 43004), (158, 43055), (161, 43142), (165, 43214), (167, 43283),

Gene: Nidhogg\_97 Start: 41196, Stop: 45023, Start Num: 2

Candidate Starts for Nidhogg\_97:

(Start: 2 @41196 has 6 MA's), (Start: 3 @41223 has 149 MA's), (4, 41277), (6, 41307), (10, 41376), (23, 41727), (28, 41841), (30, 41883), (33, 41940), (34, 41958), (36, 41976), (49, 42195), (52, 42267), (58, 42345), (59, 42369), (63, 42438), (64, 42441), (65, 42543), (67, 42561), (68, 42594), (69, 42609), (72, 42687), (73, 42690), (80, 42819), (82, 42864), (84, 42999), (87, 43056), (88, 43071), (90, 43083), (92, 43116), (96, 43257), (98, 43341), (124, 44043), (138, 44259), (140, 44301), (141, 44310), (148, 44478), (153, 44595), (154, 44598), (158, 44649), (161, 44736), (165, 44808), (167, 44877),

Gene: NoodleTree\_104 Start: 42400, Stop: 46245, Start Num: 3

Candidate Starts for NoodleTree\_104:

(Start: 2 @42373 has 6 MA's), (Start: 3 @42400 has 149 MA's), (4, 42454), (6, 42484), (10, 42553), (23, 42904), (28, 43018), (30, 43060), (33, 43162), (34, 43180), (36, 43198), (49, 43417), (52, 43489), (58, 43567), (59, 43591), (63, 43660), (64, 43663), (65, 43765), (67, 43783), (68, 43816), (69, 43831), (72, 43909), (73, 43912), (80, 44041), (82, 44086), (84, 44221), (87, 44278), (88, 44293), (90, 44305), (92, 44338), (96, 44479), (98, 44563), (124, 45265), (138, 45481), (140, 45523), (141, 45532), (148, 45700), (153, 45817), (154, 45820), (158, 45871), (161, 45958), (165, 46030), (167, 46099),

Gene: Norm\_97 Start: 41978, Stop: 45808, Start Num: 3

Candidate Starts for Norm\_97:

(Start: 3 @41978 has 149 MA's), (4, 42032), (6, 42062), (23, 42482), (28, 42596), (30, 42638), (33, 42725), (34, 42743), (36, 42761), (49, 42980), (52, 43052), (58, 43130), (59, 43154), (63, 43223), (64, 43226), (65, 43328), (67, 43346), (68, 43379), (69, 43394), (72, 43472), (73, 43475), (80, 43604), (82, 43649), (84, 43784), (87, 43841), (88, 43856), (90, 43868), (92, 43901), (96, 44042), (98, 44126), (124, 44828), (138, 45044), (140, 45086), (141, 45095), (148, 45263), (153, 45380), (154, 45383), (158, 45434), (161, 45521), (165, 45593), (167, 45662),

Gene: NuevoMundo\_102 Start: 43330, Stop: 47160, Start Num: 3

Candidate Starts for NuevoMundo\_102:

(Start: 2 @43303 has 6 MA's), (Start: 3 @43330 has 149 MA's), (4, 43384), (6, 43414), (10, 43483), (23, 43834), (28, 43948), (30, 43990), (33, 44077), (34, 44095), (36, 44113), (49, 44332), (52, 44404), (58, 44482), (59, 44506), (63, 44575), (64, 44578), (65, 44680), (67, 44698), (68, 44731), (69, 44746), (72, 44824), (73, 44827), (80, 44956), (82, 45001), (84, 45136), (87, 45193), (88, 45208), (90, 45220), (92, 45253), (96, 45394), (98, 45478), (124, 46180), (138, 46396), (140, 46438), (141, 46447), (148, 46615), (153, 46732), (154, 46735), (158, 46786), (161, 46873), (165, 46945), (167, 47014),

Gene: ParkTD\_97 Start: 41201, Stop: 45031, Start Num: 3

Candidate Starts for ParkTD\_97:

(Start: 3 @41201 has 149 MA's), (4, 41255), (6, 41285), (23, 41705), (28, 41819), (30, 41861), (33, 41948), (34, 41966), (36, 41984), (49, 42203), (52, 42275), (58, 42353), (59, 42377), (63, 42446), (64, 42449), (65, 42551), (67, 42569), (68, 42602), (69, 42617), (72, 42695), (73, 42698), (80, 42827), (82, 42872), (84, 43007), (87, 43064), (88, 43079), (90, 43091), (92, 43124), (96, 43265), (98, 43349), (124, 44051), (138, 44267), (140, 44309), (141, 44318), (148, 44486), (153, 44603), (154, 44606), (158, 44657), (161, 44744), (165, 44816), (167, 44885),

Gene: Patter\_97 Start: 40664, Stop: 44464, Start Num: 3

Candidate Starts for Patter\_97:

(Start: 3 @40664 has 149 MA's), (4, 40718), (6, 40748), (10, 40817), (23, 41168), (28, 41282), (30, 41324), (33, 41381), (34, 41399), (36, 41417), (49, 41636), (52, 41708), (58, 41786), (59, 41810), (63, 41879), (64, 41882), (65, 41984), (67, 42002), (68, 42035), (69, 42050), (72, 42128), (73, 42131), (80, 42260), (82, 42305), (84, 42440), (87, 42497), (88, 42512), (90, 42524), (92, 42557), (96, 42698), (98, 42782), (124, 43484), (138, 43700), (140, 43742), (141, 43751), (148, 43919), (153, 44036), (154, 44039), (158, 44090), (161, 44177), (165, 44249), (167, 44318),

Gene: Phabba\_101 Start: 42154, Stop: 45843, Start Num: 3

Candidate Starts for Phabba\_101:

(Start: 3 @42154 has 149 MA's), (8, 42262), (9, 42277), (12, 42346), (17, 42577), (21, 42658), (25, 42724), (27, 42787), (28, 42832), (31, 42940), (33, 42997), (34, 43015), (37, 43036), (43, 43213), (44, 43222), (45, 43225), (50, 43336), (54, 43390), (55, 43408), (62, 43516), (64, 43546), (68, 43696), (75, 43801), (76, 43846), (78, 43891), (84, 44056), (86, 44089), (89, 44131), (90, 44140), (93, 44236), (97, 44314), (104, 44497), (113, 44671), (118, 44767), (121, 44812), (124, 44959), (128, 44986), (129, 45001), (132, 45022), (136, 45094), (137, 45097), (142, 45220), (145, 45247), (152, 45448), (156, 45469), (162, 45592), (164, 45625), (167, 45697),

Gene: Phlegm\_99 Start: 40647, Stop: 44447, Start Num: 3

Candidate Starts for Phlegm\_99:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: Phox\_93 Start: 41073, Stop: 44888, Start Num: 3

Candidate Starts for Phox\_93:

(Start: 3 @41073 has 149 MA's), (4, 41127), (6, 41157), (23, 41577), (28, 41691), (30, 41733), (33, 41808), (34, 41826), (35, 41832), (36, 41844), (40, 41883), (49, 42060), (52, 42132), (58, 42210), (59, 42234), (63, 42303), (64, 42306), (65, 42408), (67, 42426), (68, 42459), (69, 42474), (72, 42552), (73, 42555), (80, 42684), (82, 42729), (84, 42864), (87, 42921), (90, 42948), (92, 42981), (96, 43122), (98, 43206), (124, 43908), (138, 44124), (140, 44166), (141, 44175), (148, 44343), (153, 44460), (154, 44463), (158, 44514), (161, 44601), (165, 44673), (167, 44742),

Gene: Phrappuccino\_52 Start: 30830, Stop: 34024, Start Num: 13

Candidate Starts for Phrappuccino\_52:

(Start: 13 @30830 has 2 MA's), (15, 30905), (16, 30926), (19, 31061), (29, 31235), (41, 31391), (42, 31448), (46, 31517), (48, 31538), (50, 31580), (51, 31589), (53, 31634), (56, 31658), (57, 31682), (60, 31727), (63, 31790), (64, 31793), (67, 31913), (68, 31946), (71, 32012), (77, 32108), (81, 32150), (83, 32198), (87, 32324), (94, 32465), (101, 32582), (107, 32690), (109, 32744), (110, 32753), (111, 32768), (112, 32801), (114, 32837), (115, 32843), (116, 32852), (117, 32906), (119, 32957), (123, 33110), (125, 33128), (127, 33131), (130, 33164), (131, 33179), (135, 33257), (141, 33368), (143, 33425), (144, 33431), (149, 33539), (151, 33572), (159, 33713), (163, 33788), (167, 33896), (171, 33980),

Gene: Phusco\_97 Start: 41412, Stop: 45212, Start Num: 3

Candidate Starts for Phusco\_97:

(Start: 3 @41412 has 149 MA's), (4, 41466), (6, 41496), (10, 41565), (23, 41916), (28, 42030), (30, 42072), (33, 42129), (34, 42147), (36, 42165), (49, 42384), (52, 42456), (58, 42534), (59, 42558), (63, 42627), (64, 42630), (65, 42732), (67, 42750), (68, 42783), (69, 42798), (72, 42876), (73, 42879), (80, 43008), (82, 43053), (84, 43188), (87, 43245), (88, 43260), (90, 43272), (92, 43305), (96, 43446), (98, 43530), (124, 44232), (138, 44448), (140, 44490), (141, 44499), (148, 44667), (153, 44784), (154, 44787), (158, 44838), (161, 44925), (165, 44997), (167, 45066),

Gene: Pier\_100 Start: 42206, Stop: 46045, Start Num: 3

Candidate Starts for Pier\_100:

(Start: 3 @42206 has 149 MA's), (4, 42260), (6, 42290), (23, 42710), (28, 42824), (30, 42866), (33, 42968), (34, 42986), (36, 43004), (49, 43223), (52, 43295), (58, 43373), (59, 43397), (63, 43466), (64, 43469), (65, 43571), (67, 43589), (68, 43622), (69, 43637), (72, 43715), (73, 43718), (80, 43847), (82,

43892), (84, 44027), (87, 44084), (88, 44099), (90, 44111), (92, 44144), (96, 44285), (98, 44369), (120, 44906), (124, 45062), (138, 45278), (140, 45320), (141, 45329), (148, 45497), (153, 45614), (154, 45617), (158, 45668), (161, 45755), (165, 45827), (166, 45887), (167, 45899),

Gene: Pinkcreek\_87 Start: 38159, Stop: 41974, Start Num: 3

Candidate Starts for Pinkcreek\_87:

(Start: 3 @38159 has 149 MA's), (4, 38213), (6, 38243), (23, 38663), (28, 38777), (30, 38819), (33, 38894), (34, 38912), (35, 38918), (36, 38930), (40, 38969), (49, 39146), (52, 39218), (58, 39296), (59, 39320), (63, 39389), (64, 39392), (65, 39494), (67, 39512), (68, 39545), (69, 39560), (72, 39638), (73, 39641), (80, 39770), (82, 39815), (84, 39950), (87, 40007), (90, 40034), (92, 40067), (96, 40208), (98, 40292), (102, 40373), (124, 40994), (138, 41210), (140, 41252), (141, 41261), (148, 41429), (153, 41546), (154, 41549), (158, 41600), (161, 41687), (165, 41759), (167, 41828),

Gene: Pio\_100 Start: 42938, Stop: 46771, Start Num: 3

Candidate Starts for Pio\_100:

(Start: 3 @42938 has 149 MA's), (4, 42992), (6, 43022), (23, 43445), (28, 43559), (30, 43601), (33, 43688), (34, 43706), (36, 43724), (49, 43943), (52, 44015), (58, 44093), (59, 44117), (63, 44186), (64, 44189), (65, 44291), (67, 44309), (68, 44342), (69, 44357), (72, 44435), (73, 44438), (80, 44567), (82, 44612), (84, 44747), (87, 44804), (88, 44819), (90, 44831), (92, 44864), (96, 45005), (98, 45089), (124, 45791), (138, 46007), (140, 46049), (141, 46058), (148, 46226), (153, 46343), (154, 46346), (158, 46397), (161, 46484), (165, 46556), (167, 46625),

Gene: Pivoine\_96 Start: 40647, Stop: 44447, Start Num: 3

Candidate Starts for Pivoine\_96:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: Pleione\_99 Start: 41204, Stop: 45049, Start Num: 3

Candidate Starts for Pleione\_99:

(Start: 3 @41204 has 149 MA's), (4, 41258), (6, 41288), (23, 41708), (28, 41822), (30, 41864), (33, 41966), (34, 41984), (36, 42002), (49, 42221), (52, 42293), (58, 42371), (59, 42395), (63, 42464), (64, 42467), (65, 42569), (67, 42587), (68, 42620), (69, 42635), (72, 42713), (73, 42716), (80, 42845), (82, 42890), (84, 43025), (87, 43082), (88, 43097), (90, 43109), (92, 43142), (96, 43283), (98, 43367), (124, 44069), (138, 44285), (140, 44327), (141, 44336), (148, 44504), (153, 44621), (154, 44624), (158, 44675), (161, 44762), (165, 44834), (167, 44903),

Gene: PurduePete\_96 Start: 41413, Stop: 45243, Start Num: 3

Candidate Starts for PurduePete\_96:

(Start: 2 @41386 has 6 MA's), (Start: 3 @41413 has 149 MA's), (4, 41467), (6, 41497), (10, 41566), (11, 41590), (23, 41917), (28, 42031), (30, 42073), (33, 42160), (34, 42178), (36, 42196), (49, 42415), (52, 42487), (58, 42565), (59, 42589), (63, 42658), (64, 42661), (65, 42763), (67, 42781), (68, 42814), (69, 42829), (72, 42907), (73, 42910), (80, 43039), (82, 43084), (84, 43219), (87, 43276), (88, 43291), (90, 43303), (92, 43336), (96, 43477), (98, 43561), (124, 44263), (138, 44479), (140, 44521), (141, 44530), (148, 44698), (153, 44815), (154, 44818), (158, 44869), (161, 44956), (165, 45028), (167, 45097),

Gene: QBert\_90 Start: 40705, Stop: 44565, Start Num: 3

Candidate Starts for QBert\_90:

(Start: 3 @40705 has 149 MA's), (4, 40759), (6, 40789), (23, 41209), (28, 41323), (30, 41365), (33, 41482), (34, 41500), (36, 41518), (49, 41737), (52, 41809), (58, 41887), (59, 41911), (63, 41980), (64, 41983), (65, 42085), (67, 42103), (68, 42136), (69, 42151), (72, 42229), (73, 42232), (80, 42361), (82, 42406), (84, 42541), (87, 42598), (88, 42613), (90, 42625), (92, 42658), (96, 42799), (98, 42883), (124, 43585), (138, 43801), (140, 43843), (141, 43852), (148, 44020), (153, 44137), (154, 44140), (158, 44191), (161, 44278), (165, 44350), (167, 44419),

Gene: Quasimodo\_97 Start: 41177, Stop: 44992, Start Num: 3

Candidate Starts for Quasimodo\_97:

(Start: 3 @41177 has 149 MA's), (4, 41231), (6, 41261), (10, 41330), (23, 41681), (28, 41795), (30, 41837), (33, 41912), (34, 41930), (35, 41936), (36, 41948), (40, 41987), (49, 42164), (52, 42236), (58, 42314), (59, 42338), (63, 42407), (64, 42410), (65, 42512), (67, 42530), (68, 42563), (69, 42578), (72, 42656), (73, 42659), (80, 42788), (82, 42833), (84, 42968), (87, 43025), (90, 43052), (92, 43085), (96, 43226), (98, 43310), (124, 44012), (138, 44228), (140, 44270), (141, 44279), (148, 44447), (153, 44564), (154, 44567), (158, 44618), (161, 44705), (165, 44777), (167, 44846),

Gene: Rabinovish\_93 Start: 41046, Stop: 45059, Start Num: 1

Candidate Starts for Rabinovish\_93:

(Start: 1 @41046 has 18 MA's), (23, 41748), (28, 41862), (30, 41904), (33, 41979), (34, 41997), (35, 42003), (36, 42015), (40, 42054), (49, 42231), (52, 42303), (58, 42381), (59, 42405), (63, 42474), (64, 42477), (65, 42579), (67, 42597), (68, 42630), (69, 42645), (72, 42723), (73, 42726), (80, 42855), (82, 42900), (84, 43035), (87, 43092), (88, 43107), (90, 43119), (92, 43152), (96, 43293), (98, 43377), (124, 44079), (138, 44295), (140, 44337), (141, 44346), (148, 44514), (153, 44631), (154, 44634), (158, 44685), (161, 44772), (165, 44844), (167, 44913),

Gene: Rahel\_96 Start: 41004, Stop: 44804, Start Num: 3

Candidate Starts for Rahel\_96:

(Start: 3 @41004 has 149 MA's), (4, 41058), (6, 41088), (10, 41157), (23, 41508), (28, 41622), (30, 41664), (33, 41721), (34, 41739), (36, 41757), (49, 41976), (52, 42048), (58, 42126), (59, 42150), (63, 42219), (64, 42222), (65, 42324), (67, 42342), (68, 42375), (69, 42390), (72, 42468), (73, 42471), (80, 42600), (82, 42645), (84, 42780), (87, 42837), (88, 42852), (90, 42864), (92, 42897), (96, 43038), (98, 43122), (124, 43824), (138, 44040), (140, 44082), (141, 44091), (148, 44259), (153, 44376), (154, 44379), (158, 44430), (161, 44517), (165, 44589), (167, 44658),

Gene: Rizal\_93 Start: 40122, Stop: 43952, Start Num: 3

Candidate Starts for Rizal\_93:

(Start: 3 @40122 has 149 MA's), (4, 40176), (6, 40206), (23, 40626), (28, 40740), (30, 40782), (33, 40869), (34, 40887), (36, 40905), (49, 41124), (52, 41196), (58, 41274), (59, 41298), (63, 41367), (64, 41370), (65, 41472), (67, 41490), (68, 41523), (69, 41538), (72, 41616), (73, 41619), (80, 41748), (82, 41793), (84, 41928), (87, 41985), (88, 42000), (90, 42012), (92, 42045), (96, 42186), (98, 42270), (124, 42972), (138, 43188), (140, 43230), (141, 43239), (148, 43407), (153, 43524), (154, 43527), (158, 43578), (161, 43665), (165, 43737), (167, 43806),

Gene: RoMag\_91 Start: 40534, Stop: 44406, Start Num: 2

Candidate Starts for RoMag\_91:

(Start: 2 @40534 has 6 MA's), (Start: 3 @40561 has 149 MA's), (4, 40615), (6, 40645), (10, 40714), (23, 41065), (28, 41179), (30, 41221), (33, 41323), (34, 41341), (36, 41359), (49, 41578), (52, 41650), (58, 41728), (59, 41752), (63, 41821), (64, 41824), (65, 41926), (67, 41944), (68, 41977), (69, 41992), (72, 42070), (73, 42073), (80, 42202), (82, 42247), (84, 42382), (87, 42439), (88, 42454), (90, 42466), (92, 42499), (96, 42640), (98, 42724), (124, 43426), (138, 43642), (140, 43684), (141, 43693), (148, 43861), (153, 43978), (154, 43981), (158, 44032), (161, 44119), (165, 44191), (167, 44260),

Gene: Ronan\_90 Start: 38448, Stop: 42293, Start Num: 3



Candidate Starts for Ronan\_90:

(Start: 3 @38448 has 149 MA's), (4, 38502), (6, 38532), (10, 38601), (23, 38952), (28, 39066), (30, 39108), (33, 39210), (34, 39228), (36, 39246), (49, 39465), (52, 39537), (58, 39615), (59, 39639), (63, 39708), (64, 39711), (65, 39813), (67, 39831), (68, 39864), (69, 39879), (72, 39957), (73, 39960), (80, 40089), (82, 40134), (84, 40269), (87, 40326), (88, 40341), (90, 40353), (92, 40386), (96, 40527), (98, 40611), (124, 41313), (138, 41529), (140, 41571), (141, 41580), (148, 41748), (153, 41865), (154, 41868), (158, 41919), (161, 42006), (165, 42078), (167, 42147),

Gene: Roots515\_95 Start: 41398, Stop: 45228, Start Num: 3

Candidate Starts for Roots515\_95:

(Start: 3 @41398 has 149 MA's), (4, 41452), (6, 41482), (23, 41902), (28, 42016), (30, 42058), (33, 42145), (34, 42163), (36, 42181), (49, 42400), (52, 42472), (58, 42550), (59, 42574), (63, 42643), (64, 42646), (65, 42748), (67, 42766), (68, 42799), (69, 42814), (72, 42892), (73, 42895), (80, 43024), (82, 43069), (84, 43204), (87, 43261), (88, 43276), (90, 43288), (92, 43321), (96, 43462), (98, 43546), (124, 44248), (138, 44464), (140, 44506), (141, 44515), (148, 44683), (153, 44800), (154, 44803), (158, 44854), (161, 44941), (165, 45013), (167, 45082),

Gene: SVoro\_94 Start: 41363, Stop: 45193, Start Num: 3

Candidate Starts for SVoro\_94:

(Start: 2 @41336 has 6 MA's), (Start: 3 @41363 has 149 MA's), (4, 41417), (6, 41447), (10, 41516), (11, 41540), (23, 41867), (28, 41981), (30, 42023), (33, 42110), (34, 42128), (36, 42146), (49, 42365), (52, 42437), (58, 42515), (59, 42539), (63, 42608), (64, 42611), (65, 42713), (67, 42731), (68, 42764), (69, 42779), (72, 42857), (73, 42860), (80, 42989), (82, 43034), (84, 43169), (87, 43226), (88, 43241), (90, 43253), (92, 43286), (96, 43427), (98, 43511), (124, 44213), (138, 44429), (140, 44471), (141, 44480), (148, 44648), (153, 44765), (154, 44768), (158, 44819), (161, 44906), (165, 44978), (167, 45047),

Gene: Salacia\_100 Start: 41483, Stop: 45283, Start Num: 3

Candidate Starts for Salacia\_100:

(Start: 2 @41456 has 6 MA's), (Start: 3 @41483 has 149 MA's), (4, 41537), (6, 41567), (10, 41636), (23, 41987), (28, 42101), (30, 42143), (33, 42200), (34, 42218), (36, 42236), (49, 42455), (52, 42527), (58, 42605), (59, 42629), (63, 42698), (64, 42701), (65, 42803), (67, 42821), (68, 42854), (69, 42869), (72, 42947), (73, 42950), (80, 43079), (82, 43124), (84, 43259), (87, 43316), (88, 43331), (90, 43343), (92, 43376), (96, 43517), (98, 43601), (124, 44303), (138, 44519), (140, 44561), (141, 44570), (148, 44738), (153, 44855), (154, 44858), (158, 44909), (161, 44996), (165, 45068), (167, 45137),

Gene: Sauce\_97 Start: 40496, Stop: 44332, Start Num: 3

Candidate Starts for Sauce\_97:

(Start: 3 @40496 has 149 MA's), (4, 40550), (6, 40580), (10, 40649), (23, 41000), (28, 41114), (30, 41156), (33, 41249), (34, 41267), (36, 41285), (49, 41504), (52, 41576), (58, 41654), (59, 41678), (63, 41747), (64, 41750), (65, 41852), (67, 41870), (68, 41903), (69, 41918), (72, 41996), (73, 41999), (80, 42128), (82, 42173), (84, 42308), (87, 42365), (88, 42380), (90, 42392), (92, 42425), (96, 42566), (98, 42650), (124, 43352), (138, 43568), (140, 43610), (141, 43619), (148, 43787), (153, 43904), (154, 43907), (158, 43958), (161, 44045), (165, 44117), (167, 44186),

Gene: ScoobyDoobyDoo\_89 Start: 39544, Stop: 42636, Start Num: 3

Candidate Starts for ScoobyDoobyDoo\_89:

(Start: 3 @39544 has 149 MA's), (8, 39658), (9, 39673), (22, 40036), (28, 40195), (31, 40303), (52, 40699), (54, 40717), (55, 40735), (58, 40777), (62, 40843), (64, 40873), (66, 40981), (68, 41023), (69, 41038), (84, 41191), (85, 41203), (86, 41224), (89, 41266), (91, 41293), (103, 41476), (124, 41770), (126, 41782), (129, 41821), (134, 41875), (152, 42217), (155, 42232), (156, 42238), (161, 42361), (162, 42370), (167, 42490), (168, 42493), (169, 42511),

Gene: ScottMcG\_93 Start: 40190, Stop: 44203, Start Num: 1

Candidate Starts for ScottMcG\_93:

(Start: 1 @40190 has 18 MA's), (23, 40892), (28, 41006), (30, 41048), (33, 41123), (34, 41141), (35, 41147), (36, 41159), (40, 41198), (49, 41375), (52, 41447), (58, 41525), (59, 41549), (63, 41618), (64, 41621), (65, 41723), (67, 41741), (68, 41774), (69, 41789), (72, 41867), (73, 41870), (80, 41999), (82, 42044), (84, 42179), (87, 42236), (90, 42263), (92, 42296), (96, 42437), (98, 42521), (124, 43223), (138, 43439), (140, 43481), (141, 43490), (148, 43658), (153, 43775), (154, 43778), (158, 43829), (161, 43916), (165, 43988), (167, 44057),

Gene: Sebata\_98 Start: 42132, Stop: 45932, Start Num: 3

Candidate Starts for Sebata\_98:

(Start: 3 @42132 has 149 MA's), (4, 42186), (6, 42216), (10, 42285), (14, 42402), (23, 42636), (28, 42750), (30, 42792), (33, 42849), (34, 42867), (36, 42885), (49, 43104), (52, 43176), (58, 43254), (59, 43278), (63, 43347), (64, 43350), (65, 43452), (67, 43470), (68, 43503), (69, 43518), (72, 43596), (73, 43599), (80, 43728), (82, 43773), (84, 43908), (87, 43965), (88, 43980), (90, 43992), (92, 44025), (96, 44166), (98, 44250), (124, 44952), (138, 45168), (140, 45210), (141, 45219), (148, 45387), (153, 45504), (154, 45507), (158, 45558), (161, 45645), (165, 45717), (167, 45786),

Gene: Settecandela\_52 Start: 30830, Stop: 34024, Start Num: 13

Candidate Starts for Settecandela\_52:

(Start: 13 @30830 has 2 MA's), (15, 30905), (16, 30926), (19, 31061), (29, 31235), (41, 31391), (42, 31448), (46, 31517), (48, 31538), (50, 31580), (51, 31589), (53, 31634), (56, 31658), (57, 31682), (60, 31727), (63, 31790), (64, 31793), (67, 31913), (68, 31946), (71, 32012), (77, 32108), (81, 32150), (83, 32198), (87, 32324), (94, 32465), (101, 32582), (107, 32690), (109, 32744), (110, 32753), (111, 32768), (112, 32801), (114, 32837), (115, 32843), (116, 32852), (117, 32906), (119, 32957), (123, 33110), (125, 33128), (127, 33131), (130, 33164), (131, 33179), (135, 33257), (141, 33368), (143, 33425), (144, 33431), (149, 33539), (151, 33572), (159, 33713), (163, 33788), (167, 33896), (171, 33980),

Gene: Shaqnato\_89 Start: 39371, Stop: 43207, Start Num: 3

Candidate Starts for Shaqnato\_89:

(Start: 3 @39371 has 149 MA's), (4, 39425), (6, 39455), (10, 39524), (23, 39875), (28, 39989), (30, 40031), (33, 40124), (34, 40142), (36, 40160), (49, 40379), (52, 40451), (58, 40529), (59, 40553), (63, 40622), (64, 40625), (65, 40727), (67, 40745), (68, 40778), (69, 40793), (72, 40871), (73, 40874), (80, 41003), (82, 41048), (84, 41183), (87, 41240), (88, 41255), (90, 41267), (92, 41300), (96, 41441), (98, 41525), (124, 42227), (138, 42443), (140, 42485), (141, 42494), (148, 42662), (153, 42779), (154, 42782), (158, 42833), (161, 42920), (165, 42992), (167, 43061),

Gene: Shelob\_98 Start: 42197, Stop: 46027, Start Num: 3

Candidate Starts for Shelob\_98:

(Start: 3 @42197 has 149 MA's), (4, 42251), (6, 42281), (23, 42701), (28, 42815), (30, 42857), (33, 42944), (34, 42962), (36, 42980), (49, 43199), (52, 43271), (58, 43349), (59, 43373), (63, 43442), (64, 43445), (65, 43547), (67, 43565), (68, 43598), (69, 43613), (72, 43691), (73, 43694), (80, 43823), (82, 43868), (84, 44003), (87, 44060), (88, 44075), (90, 44087), (92, 44120), (96, 44261), (98, 44345), (124, 45047), (138, 45263), (140, 45305), (141, 45314), (148, 45482), (153, 45599), (154, 45602), (158, 45653), (161, 45740), (165, 45812), (167, 45881),

Gene: ShiaLabeouf\_96 Start: 41406, Stop: 45239, Start Num: 3

Candidate Starts for ShiaLabeouf\_96:

(Start: 3 @41406 has 149 MA's), (4, 41460), (6, 41490), (23, 41913), (28, 42027), (30, 42069), (33, 42156), (34, 42174), (36, 42192), (49, 42411), (52, 42483), (58, 42561), (59, 42585), (63, 42654), (64, 42657), (65, 42759), (67, 42777), (68, 42810), (69, 42825), (72, 42903), (73, 42906), (80, 43035), (82, 43080), (84, 43215), (87, 43272), (88, 43287), (90, 43299), (92, 43332), (96, 43473), (98, 43557), (124,

44259), (138, 44475), (140, 44517), (141, 44526), (148, 44694), (153, 44811), (154, 44814), (158, 44865), (161, 44952), (165, 45024), (167, 45093),

Gene: Shifa\_85 Start: 38648, Stop: 42661, Start Num: 1

Candidate Starts for Shifa\_85:

(Start: 1 @38648 has 18 MA's), (14, 39116), (23, 39350), (28, 39464), (30, 39506), (33, 39581), (34, 39599), (35, 39605), (36, 39617), (40, 39656), (49, 39833), (52, 39905), (58, 39983), (59, 40007), (63, 40076), (64, 40079), (65, 40181), (67, 40199), (68, 40232), (69, 40247), (72, 40325), (73, 40328), (80, 40457), (82, 40502), (84, 40637), (87, 40694), (90, 40721), (92, 40754), (96, 40895), (98, 40979), (124, 41681), (138, 41897), (140, 41939), (141, 41948), (148, 42116), (153, 42233), (154, 42236), (158, 42287), (161, 42374), (165, 42446), (167, 42515),

Gene: Shnickers\_97 Start: 41403, Stop: 45203, Start Num: 3

Candidate Starts for Shnickers\_97:

(Start: 3 @41403 has 149 MA's), (4, 41457), (6, 41487), (10, 41556), (23, 41907), (28, 42021), (30, 42063), (33, 42120), (34, 42138), (36, 42156), (49, 42375), (52, 42447), (58, 42525), (59, 42549), (63, 42618), (64, 42621), (65, 42723), (67, 42741), (68, 42774), (69, 42789), (72, 42867), (73, 42870), (80, 42999), (82, 43044), (84, 43179), (87, 43236), (88, 43251), (90, 43263), (92, 43296), (96, 43437), (98, 43521), (124, 44223), (138, 44439), (140, 44481), (141, 44490), (148, 44658), (153, 44775), (154, 44778), (158, 44829), (161, 44916), (165, 44988), (167, 45057),

Gene: Shrimp\_96 Start: 41209, Stop: 45039, Start Num: 3

Candidate Starts for Shrimp\_96:

(Start: 3 @41209 has 149 MA's), (4, 41263), (6, 41293), (23, 41713), (28, 41827), (30, 41869), (33, 41956), (34, 41974), (36, 41992), (49, 42211), (52, 42283), (58, 42361), (59, 42385), (63, 42454), (64, 42457), (65, 42559), (67, 42577), (68, 42610), (69, 42625), (72, 42703), (73, 42706), (80, 42835), (82, 42880), (84, 43015), (87, 43072), (88, 43087), (90, 43099), (92, 43132), (96, 43273), (98, 43357), (124, 44059), (138, 44275), (140, 44317), (141, 44326), (148, 44494), (153, 44611), (154, 44614), (158, 44665), (161, 44752), (165, 44824), (167, 44893),

Gene: SilverDipper\_98 Start: 40647, Stop: 44447, Start Num: 3

Candidate Starts for SilverDipper\_98:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: SmallFry\_97 Start: 40598, Stop: 44428, Start Num: 3

Candidate Starts for SmallFry\_97:

(Start: 3 @40598 has 149 MA's), (4, 40652), (6, 40682), (10, 40751), (23, 41102), (28, 41216), (30, 41258), (33, 41345), (34, 41363), (36, 41381), (49, 41600), (52, 41672), (58, 41750), (59, 41774), (63, 41843), (64, 41846), (65, 41948), (67, 41966), (68, 41999), (69, 42014), (72, 42092), (73, 42095), (80, 42224), (82, 42269), (84, 42404), (87, 42461), (88, 42476), (90, 42488), (92, 42521), (96, 42662), (98, 42746), (124, 43448), (138, 43664), (140, 43706), (141, 43715), (148, 43883), (153, 44000), (154, 44003), (158, 44054), (161, 44141), (165, 44213), (167, 44282),

Gene: Spec\_93 Start: 41168, Stop: 44968, Start Num: 3

Candidate Starts for Spec\_93:

(Start: 3 @41168 has 149 MA's), (4, 41222), (6, 41252), (10, 41321), (23, 41672), (28, 41786), (30, 41828), (33, 41885), (34, 41903), (36, 41921), (49, 42140), (52, 42212), (58, 42290), (59, 42314), (63, 42383), (64, 42386), (65, 42488), (67, 42506), (68, 42539), (69, 42554), (72, 42632), (73, 42635), (80,

42764), (82, 42809), (84, 42944), (87, 43001), (88, 43016), (90, 43028), (92, 43061), (96, 43202), (98, 43286), (124, 43988), (138, 44204), (140, 44246), (141, 44255), (148, 44423), (153, 44540), (154, 44543), (158, 44594), (161, 44681), (165, 44753), (167, 44822),

Gene: Specks\_102 Start: 43302, Stop: 47102, Start Num: 3

Candidate Starts for Specks\_102:

(Start: 2 @43275 has 6 MA's), (Start: 3 @43302 has 149 MA's), (4, 43356), (6, 43386), (10, 43455), (23, 43806), (28, 43920), (30, 43962), (33, 44019), (34, 44037), (36, 44055), (49, 44274), (52, 44346), (58, 44424), (59, 44448), (63, 44517), (64, 44520), (65, 44622), (67, 44640), (68, 44673), (69, 44688), (72, 44766), (73, 44769), (80, 44898), (82, 44943), (84, 45078), (87, 45135), (88, 45150), (90, 45162), (92, 45195), (96, 45336), (98, 45420), (124, 46122), (138, 46338), (140, 46380), (141, 46389), (148, 46557), (153, 46674), (154, 46677), (158, 46728), (161, 46815), (165, 46887), (167, 46956),

Gene: Sprinklers\_92 Start: 39868, Stop: 43704, Start Num: 3

Candidate Starts for Sprinklers\_92:

(Start: 3 @39868 has 149 MA's), (4, 39922), (6, 39952), (10, 40021), (23, 40372), (28, 40486), (30, 40528), (33, 40621), (34, 40639), (36, 40657), (49, 40876), (52, 40948), (58, 41026), (59, 41050), (63, 41119), (64, 41122), (65, 41224), (67, 41242), (68, 41275), (69, 41290), (72, 41368), (73, 41371), (80, 41500), (82, 41545), (84, 41680), (87, 41737), (88, 41752), (90, 41764), (92, 41797), (96, 41938), (98, 42022), (124, 42724), (138, 42940), (140, 42982), (141, 42991), (148, 43159), (153, 43276), (154, 43279), (158, 43330), (161, 43417), (165, 43489), (167, 43558),

Gene: Spud\_96 Start: 41152, Stop: 44967, Start Num: 3

Candidate Starts for Spud\_96:

(Start: 3 @41152 has 149 MA's), (4, 41206), (6, 41236), (23, 41656), (28, 41770), (30, 41812), (33, 41887), (34, 41905), (35, 41911), (36, 41923), (40, 41962), (49, 42139), (52, 42211), (58, 42289), (59, 42313), (63, 42382), (64, 42385), (65, 42487), (67, 42505), (68, 42538), (69, 42553), (72, 42631), (73, 42634), (80, 42763), (82, 42808), (84, 42943), (87, 43000), (90, 43027), (92, 43060), (96, 43201), (98, 43285), (124, 43987), (138, 44203), (140, 44245), (141, 44254), (148, 44422), (153, 44539), (154, 44542), (158, 44593), (161, 44680), (165, 44752), (167, 44821),

Gene: SrishMeg2525\_95 Start: 41312, Stop: 45142, Start Num: 3

Candidate Starts for SrishMeg2525\_95:

(Start: 3 @41312 has 149 MA's), (4, 41366), (6, 41396), (23, 41816), (28, 41930), (30, 41972), (33, 42059), (34, 42077), (36, 42095), (49, 42314), (52, 42386), (58, 42464), (59, 42488), (63, 42557), (64, 42560), (65, 42662), (67, 42680), (68, 42713), (69, 42728), (72, 42806), (73, 42809), (80, 42938), (82, 42983), (84, 43118), (87, 43175), (88, 43190), (90, 43202), (92, 43235), (96, 43376), (98, 43460), (124, 44162), (138, 44378), (140, 44420), (141, 44429), (148, 44597), (153, 44714), (154, 44717), (158, 44768), (161, 44855), (165, 44927), (167, 44996),

Gene: StephanieG\_95 Start: 42021, Stop: 45866, Start Num: 3

Candidate Starts for StephanieG\_95:

(Start: 3 @42021 has 149 MA's), (4, 42075), (6, 42105), (23, 42525), (28, 42639), (30, 42681), (33, 42783), (34, 42801), (36, 42819), (49, 43038), (52, 43110), (58, 43188), (59, 43212), (63, 43281), (64, 43284), (65, 43386), (67, 43404), (68, 43437), (69, 43452), (72, 43530), (73, 43533), (80, 43662), (82, 43707), (84, 43842), (87, 43899), (88, 43914), (90, 43926), (92, 43959), (96, 44100), (98, 44184), (124, 44886), (138, 45102), (140, 45144), (141, 45153), (148, 45321), (153, 45438), (154, 45441), (158, 45492), (161, 45579), (165, 45651), (167, 45720),

Gene: Stubby\_89 Start: 39237, Stop: 43052, Start Num: 3

Candidate Starts for Stubby\_89:

(Start: 3 @39237 has 149 MA's), (4, 39291), (6, 39321), (23, 39741), (28, 39855), (30, 39897), (33, 39972), (34, 39990), (35, 39996), (36, 40008), (40, 40047), (49, 40224), (52, 40296), (58, 40374), (59,

40398), (63, 40467), (64, 40470), (65, 40572), (67, 40590), (68, 40623), (69, 40638), (72, 40716), (73, 40719), (80, 40848), (82, 40893), (84, 41028), (87, 41085), (90, 41112), (92, 41145), (96, 41286), (98, 41370), (102, 41451), (124, 42072), (138, 42288), (140, 42330), (141, 42339), (148, 42507), (153, 42624), (154, 42627), (158, 42678), (161, 42765), (165, 42837), (167, 42906),

Gene: StubbySaigey\_99 Start: 39935, Stop: 43735, Start Num: 3

Candidate Starts for StubbySaigey\_99:

(Start: 3 @39935 has 149 MA's), (4, 39989), (6, 40019), (10, 40088), (23, 40439), (28, 40553), (30, 40595), (33, 40652), (34, 40670), (36, 40688), (49, 40907), (52, 40979), (58, 41057), (59, 41081), (63, 41150), (64, 41153), (65, 41255), (67, 41273), (68, 41306), (69, 41321), (72, 41399), (73, 41402), (80, 41531), (82, 41576), (84, 41711), (87, 41768), (88, 41783), (90, 41795), (92, 41828), (96, 41969), (98, 42053), (124, 42755), (138, 42971), (140, 43013), (141, 43022), (148, 43190), (153, 43307), (154, 43310), (158, 43361), (161, 43448), (165, 43520), (167, 43589),

Gene: Tainan\_101 Start: 42595, Stop: 46425, Start Num: 3

Candidate Starts for Tainan\_101:

(Start: 3 @42595 has 149 MA's), (4, 42649), (6, 42679), (23, 43099), (28, 43213), (30, 43255), (33, 43342), (34, 43360), (36, 43378), (49, 43597), (52, 43669), (58, 43747), (59, 43771), (63, 43840), (64, 43843), (65, 43945), (67, 43963), (68, 43996), (69, 44011), (72, 44089), (73, 44092), (80, 44221), (82, 44266), (84, 44401), (87, 44458), (88, 44473), (90, 44485), (92, 44518), (96, 44659), (98, 44743), (124, 45445), (138, 45661), (140, 45703), (141, 45712), (148, 45880), (153, 45997), (154, 46000), (158, 46051), (161, 46138), (165, 46210), (167, 46279),

Gene: Teardrop\_96 Start: 40599, Stop: 44426, Start Num: 2

Candidate Starts for Teardrop\_96:

(Start: 2 @40599 has 6 MA's), (Start: 3 @40626 has 149 MA's), (4, 40680), (6, 40710), (10, 40779), (23, 41130), (28, 41244), (30, 41286), (33, 41343), (34, 41361), (36, 41379), (49, 41598), (52, 41670), (58, 41748), (59, 41772), (63, 41841), (64, 41844), (65, 41946), (67, 41964), (68, 41997), (69, 42012), (72, 42090), (73, 42093), (80, 42222), (82, 42267), (84, 42402), (87, 42459), (88, 42474), (90, 42486), (92, 42519), (96, 42660), (98, 42744), (124, 43446), (138, 43662), (140, 43704), (141, 43713), (148, 43881), (153, 43998), (154, 44001), (158, 44052), (161, 44139), (165, 44211), (167, 44280),

Gene: TinyTim\_96 Start: 41205, Stop: 45035, Start Num: 3

Candidate Starts for TinyTim\_96:

(Start: 3 @41205 has 149 MA's), (4, 41259), (6, 41289), (23, 41709), (28, 41823), (30, 41865), (33, 41952), (34, 41970), (36, 41988), (49, 42207), (52, 42279), (58, 42357), (59, 42381), (63, 42450), (64, 42453), (65, 42555), (67, 42573), (68, 42606), (69, 42621), (72, 42699), (73, 42702), (80, 42831), (82, 42876), (84, 43011), (87, 43068), (88, 43083), (90, 43095), (92, 43128), (96, 43269), (98, 43353), (124, 44055), (138, 44271), (140, 44313), (141, 44322), (148, 44490), (153, 44607), (154, 44610), (158, 44661), (161, 44748), (165, 44820), (167, 44889),

Gene: Tonenili\_110 Start: 45377, Stop: 49180, Start Num: 3

Candidate Starts for Tonenili\_110:

(Start: 2 @45350 has 6 MA's), (Start: 3 @45377 has 149 MA's), (4, 45431), (6, 45461), (7, 45479), (9, 45500), (10, 45530), (18, 45803), (28, 46004), (30, 46046), (32, 46091), (34, 46121), (36, 46139), (48, 46352), (49, 46358), (52, 46430), (59, 46532), (61, 46547), (64, 46604), (65, 46706), (68, 46757), (69, 46772), (70, 46799), (73, 46853), (80, 46982), (82, 47027), (84, 47162), (87, 47219), (90, 47246), (95, 47396), (99, 47516), (121, 48053), (124, 48218), (133, 48329), (139, 48437), (141, 48476), (148, 48644), (152, 48752), (153, 48761), (154, 48764), (157, 48794), (158, 48818), (165, 48968), (166, 49022), (167, 49034),

Gene: Tortoise16\_94 Start: 41200, Stop: 45027, Start Num: 2

Candidate Starts for Tortoise16\_94:

(Start: 2 @41200 has 6 MA's), (Start: 3 @41227 has 149 MA's), (4, 41281), (6, 41311), (10, 41380), (23, 41731), (28, 41845), (30, 41887), (33, 41944), (34, 41962), (36, 41980), (49, 42199), (52, 42271), (58, 42349), (59, 42373), (63, 42442), (64, 42445), (65, 42547), (67, 42565), (68, 42598), (69, 42613), (72, 42691), (73, 42694), (80, 42823), (82, 42868), (84, 43003), (87, 43060), (88, 43075), (90, 43087), (92, 43120), (96, 43261), (98, 43345), (124, 44047), (138, 44263), (140, 44305), (141, 44314), (148, 44482), (153, 44599), (154, 44602), (158, 44653), (161, 44740), (165, 44812), (167, 44881),

Gene: Trinitium\_93 Start: 39673, Stop: 43473, Start Num: 3

Candidate Starts for Trinitium\_93:

(Start: 3 @39673 has 149 MA's), (4, 39727), (6, 39757), (10, 39826), (23, 40177), (28, 40291), (30, 40333), (33, 40390), (34, 40408), (36, 40426), (49, 40645), (52, 40717), (58, 40795), (59, 40819), (63, 40888), (64, 40891), (65, 40993), (67, 41011), (68, 41044), (69, 41059), (72, 41137), (73, 41140), (80, 41269), (82, 41314), (84, 41449), (87, 41506), (88, 41521), (90, 41533), (92, 41566), (96, 41707), (98, 41791), (124, 42493), (138, 42709), (140, 42751), (141, 42760), (148, 42928), (153, 43045), (154, 43048), (158, 43099), (161, 43186), (165, 43258), (167, 43327),

Gene: Turret\_91 Start: 38902, Stop: 42915, Start Num: 1

Candidate Starts for Turret\_91:

(Start: 1 @38902 has 18 MA's), (23, 39604), (28, 39718), (30, 39760), (33, 39835), (34, 39853), (35, 39859), (36, 39871), (40, 39910), (49, 40087), (52, 40159), (58, 40237), (59, 40261), (63, 40330), (64, 40333), (65, 40435), (67, 40453), (68, 40486), (69, 40501), (72, 40579), (73, 40582), (80, 40711), (82, 40756), (84, 40891), (87, 40948), (88, 40963), (90, 40975), (92, 41008), (96, 41149), (98, 41233), (124, 41935), (138, 42151), (140, 42193), (141, 42202), (148, 42370), (153, 42487), (154, 42490), (158, 42541), (161, 42628), (165, 42700), (167, 42769),

Gene: Tyke\_98 Start: 42768, Stop: 46568, Start Num: 3

Candidate Starts for Tyke\_98:

(Start: 2 @42741 has 6 MA's), (Start: 3 @42768 has 149 MA's), (4, 42822), (6, 42852), (10, 42921), (23, 43272), (28, 43386), (30, 43428), (33, 43485), (34, 43503), (36, 43521), (49, 43740), (52, 43812), (58, 43890), (59, 43914), (63, 43983), (64, 43986), (65, 44088), (67, 44106), (68, 44139), (69, 44154), (72, 44232), (73, 44235), (80, 44364), (82, 44409), (84, 44544), (87, 44601), (88, 44616), (90, 44628), (92, 44661), (96, 44802), (98, 44886), (124, 45588), (138, 45804), (140, 45846), (141, 45855), (148, 46023), (153, 46140), (154, 46143), (158, 46194), (161, 46281), (165, 46353), (167, 46422),

Gene: ValleyTerrace\_97 Start: 40647, Stop: 44447, Start Num: 3

Candidate Starts for ValleyTerrace\_97:

(Start: 3 @40647 has 149 MA's), (4, 40701), (6, 40731), (10, 40800), (23, 41151), (28, 41265), (30, 41307), (33, 41364), (34, 41382), (36, 41400), (49, 41619), (52, 41691), (58, 41769), (59, 41793), (63, 41862), (64, 41865), (65, 41967), (67, 41985), (68, 42018), (69, 42033), (72, 42111), (73, 42114), (80, 42243), (82, 42288), (84, 42423), (87, 42480), (88, 42495), (90, 42507), (92, 42540), (96, 42681), (98, 42765), (124, 43467), (138, 43683), (140, 43725), (141, 43734), (148, 43902), (153, 44019), (154, 44022), (158, 44073), (161, 44160), (165, 44232), (167, 44301),

Gene: Wally\_95 Start: 39760, Stop: 43575, Start Num: 3

Candidate Starts for Wally\_95:

(Start: 3 @39760 has 149 MA's), (4, 39814), (6, 39844), (23, 40264), (28, 40378), (30, 40420), (33, 40492), (34, 40510), (36, 40528), (49, 40747), (52, 40819), (58, 40897), (59, 40921), (63, 40990), (64, 40993), (65, 41095), (67, 41113), (68, 41146), (69, 41161), (72, 41239), (73, 41242), (80, 41371), (82, 41416), (84, 41551), (87, 41608), (88, 41623), (90, 41635), (92, 41668), (96, 41809), (98, 41893), (124, 42595), (138, 42811), (140, 42853), (141, 42862), (148, 43030), (153, 43147), (154, 43150), (158, 43201), (161, 43288), (165, 43360), (167, 43429),

Gene: Willis\_97 Start: 41100, Stop: 44930, Start Num: 3

Candidate Starts for Willis\_97:

(Start: 3 @41100 has 149 MA's), (4, 41154), (6, 41184), (23, 41604), (28, 41718), (30, 41760), (33, 41847), (34, 41865), (36, 41883), (49, 42102), (52, 42174), (58, 42252), (59, 42276), (63, 42345), (64, 42348), (65, 42450), (67, 42468), (68, 42501), (69, 42516), (72, 42594), (73, 42597), (80, 42726), (82, 42771), (84, 42906), (87, 42963), (88, 42978), (90, 42990), (92, 43023), (96, 43164), (98, 43248), (124, 43950), (138, 44166), (140, 44208), (141, 44217), (148, 44385), (153, 44502), (154, 44505), (158, 44556), (161, 44643), (165, 44715), (167, 44784),

Gene: Yassified\_93 Start: 39906, Stop: 43751, Start Num: 3

Candidate Starts for Yassified\_93:

(Start: 3 @39906 has 149 MA's), (4, 39960), (6, 39990), (10, 40059), (23, 40410), (28, 40524), (30, 40566), (33, 40668), (34, 40686), (36, 40704), (49, 40923), (52, 40995), (58, 41073), (59, 41097), (63, 41166), (64, 41169), (65, 41271), (67, 41289), (68, 41322), (69, 41337), (72, 41415), (73, 41418), (80, 41547), (82, 41592), (84, 41727), (87, 41784), (88, 41799), (90, 41811), (92, 41844), (96, 41985), (98, 42069), (124, 42771), (138, 42987), (140, 43029), (141, 43038), (148, 43206), (153, 43323), (154, 43326), (158, 43377), (161, 43464), (165, 43536), (167, 43605),

Gene: YemiJoy2021\_97 Start: 41202, Stop: 45032, Start Num: 3

Candidate Starts for YemiJoy2021\_97:

(Start: 3 @41202 has 149 MA's), (4, 41256), (6, 41286), (23, 41706), (28, 41820), (30, 41862), (33, 41949), (34, 41967), (36, 41985), (49, 42204), (52, 42276), (58, 42354), (59, 42378), (63, 42447), (64, 42450), (65, 42552), (67, 42570), (68, 42603), (69, 42618), (72, 42696), (73, 42699), (80, 42828), (82, 42873), (84, 43008), (87, 43065), (88, 43080), (90, 43092), (92, 43125), (96, 43266), (98, 43350), (124, 44052), (138, 44268), (140, 44310), (141, 44319), (148, 44487), (153, 44604), (154, 44607), (158, 44658), (161, 44745), (165, 44817), (167, 44886),

Gene: YoungMoneyMata\_97 Start: 40398, Stop: 44198, Start Num: 3

Candidate Starts for YoungMoneyMata\_97:

(Start: 3 @40398 has 149 MA's), (4, 40452), (6, 40482), (10, 40551), (23, 40902), (28, 41016), (30, 41058), (33, 41115), (34, 41133), (36, 41151), (49, 41370), (52, 41442), (58, 41520), (59, 41544), (63, 41613), (64, 41616), (65, 41718), (67, 41736), (68, 41769), (69, 41784), (72, 41862), (73, 41865), (80, 41994), (82, 42039), (84, 42174), (87, 42231), (88, 42246), (90, 42258), (92, 42291), (96, 42432), (98, 42516), (124, 43218), (138, 43434), (140, 43476), (141, 43485), (148, 43653), (153, 43770), (154, 43773), (158, 43824), (161, 43911), (165, 43983), (167, 44052),

Gene: Yucca\_96 Start: 41124, Stop: 44954, Start Num: 3

Candidate Starts for Yucca\_96:

(Start: 3 @41124 has 149 MA's), (4, 41178), (6, 41208), (23, 41628), (28, 41742), (30, 41784), (33, 41871), (34, 41889), (36, 41907), (49, 42126), (52, 42198), (58, 42276), (59, 42300), (63, 42369), (64, 42372), (65, 42474), (67, 42492), (68, 42525), (69, 42540), (72, 42618), (73, 42621), (80, 42750), (82, 42795), (84, 42930), (87, 42987), (88, 43002), (90, 43014), (92, 43047), (96, 43188), (98, 43272), (124, 43974), (138, 44190), (140, 44232), (141, 44241), (148, 44409), (153, 44526), (154, 44529), (158, 44580), (161, 44667), (165, 44739), (167, 44808),

Gene: Zalkecks\_97 Start: 40890, Stop: 44720, Start Num: 3

Candidate Starts for Zalkecks\_97:

(Start: 3 @40890 has 149 MA's), (4, 40944), (6, 40974), (23, 41394), (28, 41508), (30, 41550), (33, 41637), (34, 41655), (36, 41673), (49, 41892), (52, 41964), (58, 42042), (59, 42066), (63, 42135), (64, 42138), (65, 42240), (67, 42258), (68, 42291), (69, 42306), (72, 42384), (73, 42387), (80, 42516), (82, 42561), (84, 42696), (87, 42753), (88, 42768), (90, 42780), (92, 42813), (96, 42954), (98, 43038), (124, 43740), (138, 43956), (140, 43998), (141, 44007), (148, 44175), (153, 44292), (154, 44295), (158, 44346), (161, 44433), (165, 44505), (167, 44574),

Gene: Zeenon\_98 Start: 40817, Stop: 44650, Start Num: 3

Candidate Starts for Zeenon\_98:

(Start: 3 @40817 has 149 MA's), (4, 40871), (6, 40901), (23, 41324), (28, 41438), (30, 41480), (33, 41567), (34, 41585), (36, 41603), (49, 41822), (52, 41894), (58, 41972), (59, 41996), (63, 42065), (64, 42068), (65, 42170), (67, 42188), (68, 42221), (69, 42236), (72, 42314), (73, 42317), (80, 42446), (82, 42491), (84, 42626), (87, 42683), (88, 42698), (90, 42710), (92, 42743), (96, 42884), (98, 42968), (124, 43670), (138, 43886), (140, 43928), (141, 43937), (148, 44105), (153, 44222), (154, 44225), (158, 44276), (161, 44363), (165, 44435), (167, 44504),

Gene: ZygoTaiga\_95 Start: 41977, Stop: 45807, Start Num: 3

Candidate Starts for ZygoTaiga\_95:

(Start: 3 @41977 has 149 MA's), (4, 42031), (6, 42061), (23, 42481), (28, 42595), (30, 42637), (33, 42724), (34, 42742), (36, 42760), (49, 42979), (52, 43051), (58, 43129), (59, 43153), (63, 43222), (64, 43225), (65, 43327), (67, 43345), (68, 43378), (69, 43393), (72, 43471), (73, 43474), (80, 43603), (82, 43648), (84, 43783), (87, 43840), (88, 43855), (90, 43867), (92, 43900), (96, 44041), (98, 44125), (124, 44827), (138, 45043), (140, 45085), (141, 45094), (148, 45262), (153, 45379), (154, 45382), (158, 45433), (161, 45520), (165, 45592), (167, 45661),