



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 197872 Report

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

Pham number 197872 has 176 members, 22 are drafts.

Phages represented in each track:

- Track 1 : Roots515\_103, Atlantean\_103, BackyardAgain\_101, Colt\_95, ValleyTerrace\_104, Gamgam\_104, JPickles\_102, CharlieB\_100, YemiJoy2021\_105, Maby2021\_104, Drazdys\_103, Naija\_103, Phox\_101, Rizal\_100, CindyLou\_105, Delylah\_107, NedWong\_105, Patter\_104, ArcherS7\_103, Delilah\_104, BananaFence\_103, Naval22\_109, Belieber\_100, Issimir\_103, ChaylaJr\_99, DTDevon\_105, Ewok\_105, BadAgartude\_100, LifeSavor\_103, Ngannou\_100, Teardrop\_103, Khaleesi\_103, Phusco\_104, Shelob\_106, Tainan\_108, Megamind\_103, Derek\_104, Erdmann\_105, Essence\_101, Caravan\_99, Cali\_100, Quasimodo\_105, Napoleon13\_100, Melpomini\_98, Grasshills\_111, Kboogie\_108, ScottMcG\_101, LolaVinca\_105, ShiaLabeouf\_103, Catera\_101, Ghost\_103, Blubba\_94, ChickenPhender\_100, Mangeria\_104, Bigswole\_109, Ading\_104, Shrimp\_104, Yassified\_101, Dietrick\_96, Blackdragon\_100, Phlegm\_106, Amataga\_104, EggyFarm\_112, DrPhinkDaddy\_103, TinyTim\_104, MoMoMixon\_105, Ablatia\_102, Gizmo\_108, JustHall\_101, Burrough\_104, Specks\_109, Blackbrain\_99, Flabslab\_98, Bonray\_104, Trinitium\_101, Jemmno\_104, MikeLiesIn\_105, Cane17\_94, McWolfish\_102, Pier\_109, Zeenon\_106, Sprinklers\_100, Capablanca\_106, YoungMoneyMata\_105, Jaygup\_104, FrayBell\_109, McGee\_106, Wally\_103, SmallFry\_104, Shnickers\_104, Rahel\_103, Bread\_104, Asterius\_101, Latch\_104, Tonenili\_119, Pivoine\_103, Spud\_104, Ava3\_105, Lethe\_104, InigoMontoya\_105, Morizzled23\_104, StubbySaigey\_107, BigCity\_112, Janiyra\_106, Kamryn\_104, Nappy\_107, Momo\_103, Adlitam\_104, Jessibeth14\_103, Turret\_99, ParkTD\_105, QBert\_98, NoodleTree\_111, EmmaElysia\_104, Jedediah\_107, ZygoTaiga\_103, Spec\_100, Bipolarisk\_103, Iota\_99, GlutenPhree\_103, Astraea\_101, Zalkecks\_105, Tortoise16\_101, Tyke\_105, Lukilu\_95, Nidhogg\_105, Littleton\_104, Matsumoto\_101, PurduePete\_104, Cactojaque\_99, Izajani\_104, Gabriel\_105, Bangla1971\_105, Guwapp\_103, Babyland\_105, Jezreel\_102, Daffodil\_109, Chomp\_103, DirtMonster\_98, Mikro\_102, Salacia\_108, FoxtrotP1\_104, Willis\_105, Pio\_108, LordLeafolot\_108, NuevoMundo\_110, Koguma\_101, Darko\_104, Rabinovish\_102, Bxz1\_102, Yucca\_104, InterFolia\_112, SrishMeg2525\_103, SilverDipper\_105, Pleione\_107, Audrick\_106, Norm\_105, JigglyPuff\_112, Lee7\_102, SVoro\_102, Breeniome\_103
- Track 2 : BeanWater\_96, RoMag\_99, Domi\_98, Halldule\_98, StephanieG\_103, ET08\_93, JulietS\_99, Shaqnato\_97, Grungle\_92, Demodog\_111, Ronan\_98
- Track 3 : Pupper\_100, SCentae\_99, CherryTomatoes\_100
- Track 4 : Skog\_163

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

The start number called the most often in the published annotations is 2, it was called in 150 of the 154 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_102, Ading\_104, Adlitam\_104, Amataga\_104, ArcherS7\_103, Asterius\_101, Astraea\_101, Atlantean\_103, Audrick\_106, Ava3\_105, Babyland\_105, BackyardAgain\_101, BadAgartude\_100, BananaFence\_103, Bangla1971\_105, BeanWater\_96, Belieber\_100, BigCity\_112, Bigswole\_109, Bipolarisk\_103, Blackbrain\_99, Blackdragon\_100, Blubba\_94, Bonray\_104, Bread\_104, Breeniome\_103, Burrough\_104, Bxz1\_102, Cactojaque\_99, Cali\_100, Cane17\_94, Capablanca\_106, Caravan\_99, Catera\_101, CharlieB\_100, ChaylaJr\_99, ChickenPhender\_100, Chomp\_103, CindyLou\_105, Colt\_95, DTDevon\_105, Daffodil\_109, Darko\_104, Delilah\_104, Delylah\_107, Demodog\_111, Derek\_104, Dietrick\_96, DirtMonster\_98, Domi\_98, DrPhinkDaddy\_103, Drazdys\_103, ET08\_93, EggyFarm\_112, EmmaElysia\_104, Erdmann\_105, Essence\_101, Ewok\_105, Flabslab\_98, FoxtrotP1\_104, FrayBell\_109, Gabriel\_105, Gamgam\_104, Ghost\_103, Gizmo\_108, GlutenPhree\_103, Grasshills\_111, Grungle\_92, Guwapp\_103, Halldule\_98, InigoMontoya\_105, InterFolia\_112, Iota\_99, Issimir\_103, Izajani\_104, JPickles\_102, Janiyra\_106, Jaygup\_104, Jedediah\_107, Jemmno\_104, Jessibeth14\_103, Jezreel\_102, JigglyPuff\_112, JulietS\_99, JustHall\_101, Kamryn\_104, Kboogie\_108, Khaleesi\_103, Koguma\_101, Latch\_104, Lee7\_102, Lethe\_104, LifeSavor\_103, Littleton\_104, LolaVinca\_105, LordLeafolot\_108, Lukilu\_95, Maby2021\_104, Mangeria\_104, Matsumoto\_101, McGee\_106, McWolfish\_102, Megamind\_103, Melpomini\_98, MikeLiesIn\_105, Mikro\_102, MoMoMixon\_105, Momo\_103, Morizzled23\_104, Naija\_103, Napoleon13\_100, Nappy\_107, Naval22\_109, NedWong\_105, Ngannou\_100, Nidhogg\_105, NoodleTree\_111, Norm\_105, NuevoMundo\_110, ParkTD\_105, Patter\_104, Phlegm\_106, Phox\_101, Phusco\_104, Pier\_109, Pio\_108, Pivoine\_103, Pleione\_107, PurduePete\_104, QBert\_98, Quasimodo\_105, Rabinovish\_102, Rahel\_103, Rizal\_100, RoMag\_99, Ronan\_98, Roots515\_103, SVoro\_102, Salacia\_108, ScottMcG\_101, Shaqnato\_97, Shelob\_106, ShiaLabeouf\_103, Shnickers\_104, Shrimp\_104, SilverDipper\_105, SmallFry\_104, Spec\_100, Specks\_109, Sprinklers\_100, Spud\_104, SrishMeg2525\_103, StephanieG\_103, StubbySaigey\_107, Tainan\_108, Teardrop\_103, TinyTim\_104, Tonenili\_119, Tortoise16\_101, Trinitium\_101, Turret\_99, Tyke\_105, ValleyTerrace\_104, Wally\_103, Willis\_105, Yassified\_101, YemiJoy2021\_105, YoungMoneyMata\_105, Yucca\_104, Zalkecks\_105, Zeenon\_106, ZygoTaiga\_103,

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

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

- CherryTomatoes\_100, Pupper\_100, SCentae\_99, Skog\_163,

### **Summary by start number:**

Start 1:

- Found in 4 of 176 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 4 of 154
- Called 100.0% of time when present

- Phage (with cluster) where this start called: CherryTomatoes\_100 (DO), Pupper\_100 (DO), SCentae\_99 (DO), Skog\_163 (DO),

#### Start 2:

- Found in 172 of 176 ( 97.7% ) of genes in pham
- Manual Annotations of this start: 150 of 154
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ablatia\_102 (C1), Ading\_104 (C1), Adlitam\_104 (C1), Amataga\_104 (C1), ArcherS7\_103 (C1), Asterius\_101 (C1), Astraea\_101 (C1), Atlantean\_103 (C1), Audrick\_106 (C1), Ava3\_105 (C1), Babyland\_105 (C1), BackyardAgain\_101 (C1), BadAgartude\_100 (C1), BananaFence\_103 (C1), Bangla1971\_105 (C1), BeanWater\_96 (C1), Belieber\_100 (C1), BigCity\_112 (C1), Bigswole\_109 (C1), Bipolarisk\_103 (C1), Blackbrain\_99 (C1), Blackdragon\_100 (C1), Blubba\_94 (C1), Bonray\_104 (C1), Bread\_104 (C1), Breeniome\_103 (C1), Burrough\_104 (C1), Bxz1\_102 (C1), Cactojaque\_99 (C1), Cali\_100 (C1), Cane17\_94 (C1), Capablanca\_106 (C1), Caravan\_99 (C1), Catera\_101 (C1), CharlieB\_100 (C1), ChaylaJr\_99 (C1), ChickenPhender\_100 (C1), Chomp\_103 (C1), CindyLou\_105 (C1), Colt\_95 (C1), DTDevon\_105 (C1), Daffodil\_109 (C1), Darko\_104 (C1), Delilah\_104 (C1), Delylah\_107 (C1), Demodog\_111 (C1), Derek\_104 (C1), Dietrick\_96 (C1), DirtMonster\_98 (C1), Domi\_98 (C1), DrPhinkDaddy\_103 (C1), Drazdys\_103 (C1), ET08\_93 (C1), EggyFarm\_112 (C1), EmmaElysia\_104 (C1), Erdmann\_105 (C1), Essence\_101 (C1), Ewok\_105 (C1), Flabslab\_98 (C1), FoxtrotP1\_104 (C1), FrayBell\_109 (C1), Gabriel\_105 (C1), Gamgam\_104 (C1), Ghost\_103 (C1), Gizmo\_108 (C1), GlutenPhree\_103 (C1), Grasshills\_111 (C1), Grungle\_92 (C1), Guwapp\_103 (C1), Haldule\_98 (C1), InigoMontoya\_105 (C1), InterFolia\_112 (C1), Iota\_99 (C1), Issimir\_103 (C1), Izajani\_104 (C1), JPickles\_102 (C1), Janiyra\_106 (C1), Jaygup\_104 (C1), Jedediah\_107 (C1), Jemmno\_104 (C1), Jessibeth14\_103 (C1), Jezreel\_102 (C1), JigglyPuff\_112 (C1), JulietS\_99 (C1), JustHall\_101 (C1), Kamryn\_104 (C1), Kboogie\_108 (C1), Khaleesi\_103 (C1), Koguma\_101 (C1), Latch\_104 (C1), Lee7\_102 (C1), Lethe\_104 (C1), LifeSavor\_103 (C1), Littleton\_104 (C1), LolaVinca\_105 (C1), LordLeafolot\_108 (C1), Lukilu\_95 (C1), Maby2021\_104 (C1), Mangeria\_104 (C1), Matsumoto\_101 (C1), McGee\_106 (C1), McWolfish\_102 (C1), Megamind\_103 (C1), Melpomini\_98 (C1), MikeLiesIn\_105 (C1), Mikro\_102 (C1), MoMoMixon\_105 (C1), Momo\_103 (C1), Morizzled23\_104 (C1), Naija\_103 (C1), Napoleon13\_100 (C1), Nappy\_107 (C1), Naval22\_109 (C1), NedWong\_105 (C1), Ngannou\_100 (C1), Nidhogg\_105 (C1), NoodleTree\_111 (C1), Norm\_105 (C1), NuevoMundo\_110 (C1), ParkTD\_105 (C1), Patter\_104 (C1), Phlegm\_106 (C1), Phox\_101 (C1), Phusco\_104 (C1), Pier\_109 (C1), Pio\_108 (C1), Pivoine\_103 (C1), Pleione\_107 (C1), PurduePete\_104 (C1), QBert\_98 (C1), Quasimodo\_105 (C1), Rabinovich\_102 (C1), Rahel\_103 (C1), Rizal\_100 (C1), RoMag\_99 (C1), Ronan\_98 (C1), Roots515\_103 (C1), SVoro\_102 (C1), Salacia\_108 (C1), ScottMcG\_101 (C1), Shaqnato\_97 (C1), Shelob\_106 (C1), ShiaLabeouf\_103 (C1), Shnickers\_104 (C1), Shrimp\_104 (C1), SilverDipper\_105 (C1), SmallFry\_104 (C1), Spec\_100 (C1), Specks\_109 (C1), Sprinklers\_100 (C1), Spud\_104 (C1), SrishMeg2525\_103 (C1), StephanieG\_103 (C1), StubbySaigey\_107 (C1), Tainan\_108 (C1), Teardrop\_103 (C1), TinyTim\_104 (C1), Tonenili\_119 (C1), Tortoise16\_101 (C1), Trinitium\_101 (C1), Turret\_99 (C1), Tyke\_105 (C1), ValleyTerrace\_104 (C1), Wally\_103 (C1), Willis\_105 (C1), Yassified\_101 (C1), YemiJoy2021\_105 (C1), YoungMoneyMata\_105 (C1), Yucca\_104 (C1), Zalkecks\_105 (C1), Zeenon\_106 (C1), ZygoTaiga\_103 (C1),

#### Summary by clusters:

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

Info for manual annotations of cluster C1:

•Start number 2 was manually annotated 150 times for cluster C1.

Info for manual annotations of cluster DO:

•Start number 1 was manually annotated 4 times for cluster DO.

**Gene Information:**

Gene: Ablatia\_102 Start: 52252, Stop: 52416, Start Num: 2

Candidate Starts for Ablatia\_102:

(Start: 2 @52252 has 150 MA's), (3, 52282), (4, 52309),

Gene: Ading\_104 Start: 52636, Stop: 52800, Start Num: 2

Candidate Starts for Ading\_104:

(Start: 2 @52636 has 150 MA's), (3, 52666), (4, 52693),

Gene: Adlitam\_104 Start: 52653, Stop: 52817, Start Num: 2

Candidate Starts for Adlitam\_104:

(Start: 2 @52653 has 150 MA's), (3, 52683), (4, 52710),

Gene: Amataga\_104 Start: 51898, Stop: 52062, Start Num: 2

Candidate Starts for Amataga\_104:

(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: ArcherS7\_103 Start: 52216, Stop: 52380, Start Num: 2

Candidate Starts for ArcherS7\_103:

(Start: 2 @52216 has 150 MA's), (3, 52246), (4, 52273),

Gene: Asterius\_101 Start: 52891, Stop: 53055, Start Num: 2

Candidate Starts for Asterius\_101:

(Start: 2 @52891 has 150 MA's), (3, 52921), (4, 52948),

Gene: Astraea\_101 Start: 51667, Stop: 51831, Start Num: 2

Candidate Starts for Astraea\_101:

(Start: 2 @51667 has 150 MA's), (3, 51697), (4, 51724),

Gene: Atlantean\_103 Start: 51898, Stop: 52062, Start Num: 2

Candidate Starts for Atlantean\_103:

(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: Audrick\_106 Start: 51877, Stop: 52041, Start Num: 2

Candidate Starts for Audrick\_106:

(Start: 2 @51877 has 150 MA's), (3, 51907), (4, 51934),

Gene: Ava3\_105 Start: 52811, Stop: 52975, Start Num: 2

Candidate Starts for Ava3\_105:

(Start: 2 @52811 has 150 MA's), (3, 52841), (4, 52868),

Gene: Babyland\_105 Start: 51986, Stop: 52150, Start Num: 2

Candidate Starts for Babyland\_105:  
(Start: 2 @51986 has 150 MA's), (3, 52016), (4, 52043),

Gene: BackyardAgain\_101 Start: 51813, Stop: 51977, Start Num: 2  
Candidate Starts for BackyardAgain\_101:  
(Start: 2 @51813 has 150 MA's), (3, 51843), (4, 51870),

Gene: BadAgartude\_100 Start: 53336, Stop: 53500, Start Num: 2  
Candidate Starts for BadAgartude\_100:  
(Start: 2 @53336 has 150 MA's), (3, 53366), (4, 53393),

Gene: BananaFence\_103 Start: 53067, Stop: 53231, Start Num: 2  
Candidate Starts for BananaFence\_103:  
(Start: 2 @53067 has 150 MA's), (3, 53097), (4, 53124),

Gene: Bangla1971\_105 Start: 52346, Stop: 52510, Start Num: 2  
Candidate Starts for Bangla1971\_105:  
(Start: 2 @52346 has 150 MA's), (3, 52376), (4, 52403),

Gene: BeanWater\_96 Start: 52663, Stop: 52827, Start Num: 2  
Candidate Starts for BeanWater\_96:  
(Start: 2 @52663 has 150 MA's), (3, 52693),

Gene: Belieber\_100 Start: 52129, Stop: 52293, Start Num: 2  
Candidate Starts for Belieber\_100:  
(Start: 2 @52129 has 150 MA's), (3, 52159), (4, 52186),

Gene: BigCity\_112 Start: 55327, Stop: 55491, Start Num: 2  
Candidate Starts for BigCity\_112:  
(Start: 2 @55327 has 150 MA's), (3, 55357), (4, 55384),

Gene: Bigswole\_109 Start: 55856, Stop: 56020, Start Num: 2  
Candidate Starts for Bigswole\_109:  
(Start: 2 @55856 has 150 MA's), (3, 55886), (4, 55913),

Gene: Bipolarisk\_103 Start: 53069, Stop: 53233, Start Num: 2  
Candidate Starts for Bipolarisk\_103:  
(Start: 2 @53069 has 150 MA's), (3, 53099), (4, 53126),

Gene: Blackbrain\_99 Start: 51360, Stop: 51524, Start Num: 2  
Candidate Starts for Blackbrain\_99:  
(Start: 2 @51360 has 150 MA's), (3, 51390), (4, 51417),

Gene: Blackdragon\_100 Start: 52493, Stop: 52657, Start Num: 2  
Candidate Starts for Blackdragon\_100:  
(Start: 2 @52493 has 150 MA's), (3, 52523), (4, 52550),

Gene: Blubba\_94 Start: 53103, Stop: 53267, Start Num: 2  
Candidate Starts for Blubba\_94:  
(Start: 2 @53103 has 150 MA's), (3, 53133), (4, 53160),

Gene: Bonray\_104 Start: 53242, Stop: 53406, Start Num: 2  
Candidate Starts for Bonray\_104:

(Start: 2 @53242 has 150 MA's), (3, 53272), (4, 53299),

Gene: Bread\_104 Start: 52897, Stop: 53061, Start Num: 2

Candidate Starts for Bread\_104:

(Start: 2 @52897 has 150 MA's), (3, 52927), (4, 52954),

Gene: Breeniome\_103 Start: 51479, Stop: 51643, Start Num: 2

Candidate Starts for Breeniome\_103:

(Start: 2 @51479 has 150 MA's), (3, 51509), (4, 51536),

Gene: Burrough\_104 Start: 53396, Stop: 53560, Start Num: 2

Candidate Starts for Burrough\_104:

(Start: 2 @53396 has 150 MA's), (3, 53426), (4, 53453),

Gene: Bxz1\_102 Start: 54834, Stop: 54998, Start Num: 2

Candidate Starts for Bxz1\_102:

(Start: 2 @54834 has 150 MA's), (3, 54864), (4, 54891),

Gene: Cactojaque\_99 Start: 51467, Stop: 51631, Start Num: 2

Candidate Starts for Cactojaque\_99:

(Start: 2 @51467 has 150 MA's), (3, 51497), (4, 51524),

Gene: Cali\_100 Start: 53398, Stop: 53562, Start Num: 2

Candidate Starts for Cali\_100:

(Start: 2 @53398 has 150 MA's), (3, 53428), (4, 53455),

Gene: Cane17\_94 Start: 53161, Stop: 53325, Start Num: 2

Candidate Starts for Cane17\_94:

(Start: 2 @53161 has 150 MA's), (3, 53191), (4, 53218),

Gene: Capablanca\_106 Start: 53648, Stop: 53812, Start Num: 2

Candidate Starts for Capablanca\_106:

(Start: 2 @53648 has 150 MA's), (3, 53678), (4, 53705),

Gene: Caravan\_99 Start: 52755, Stop: 52919, Start Num: 2

Candidate Starts for Caravan\_99:

(Start: 2 @52755 has 150 MA's), (3, 52785), (4, 52812),

Gene: Catera\_101 Start: 51671, Stop: 51835, Start Num: 2

Candidate Starts for Catera\_101:

(Start: 2 @51671 has 150 MA's), (3, 51701), (4, 51728),

Gene: CharlieB\_100 Start: 51800, Stop: 51964, Start Num: 2

Candidate Starts for CharlieB\_100:

(Start: 2 @51800 has 150 MA's), (3, 51830), (4, 51857),

Gene: ChaylaJr\_99 Start: 51294, Stop: 51458, Start Num: 2

Candidate Starts for ChaylaJr\_99:

(Start: 2 @51294 has 150 MA's), (3, 51324), (4, 51351),

Gene: CherryTomatoes\_100 Start: 56885, Stop: 57067, Start Num: 1

Candidate Starts for CherryTomatoes\_100:

(Start: 1 @56885 has 4 MA's), (6, 57032), (7, 57062),

Gene: ChickenPhender\_100 Start: 51597, Stop: 51761, Start Num: 2  
Candidate Starts for ChickenPhender\_100:  
(Start: 2 @51597 has 150 MA's), (3, 51627), (4, 51654),

Gene: Chomp\_103 Start: 53186, Stop: 53350, Start Num: 2  
Candidate Starts for Chomp\_103:  
(Start: 2 @53186 has 150 MA's), (3, 53216), (4, 53243),

Gene: CindyLou\_105 Start: 53227, Stop: 53391, Start Num: 2  
Candidate Starts for CindyLou\_105:  
(Start: 2 @53227 has 150 MA's), (3, 53257), (4, 53284),

Gene: Colt\_95 Start: 53757, Stop: 53921, Start Num: 2  
Candidate Starts for Colt\_95:  
(Start: 2 @53757 has 150 MA's), (3, 53787), (4, 53814),

Gene: DTDevon\_105 Start: 53672, Stop: 53836, Start Num: 2  
Candidate Starts for DTDevon\_105:  
(Start: 2 @53672 has 150 MA's), (3, 53702), (4, 53729),

Gene: Daffodil\_109 Start: 53369, Stop: 53533, Start Num: 2  
Candidate Starts for Daffodil\_109:  
(Start: 2 @53369 has 150 MA's), (3, 53399), (4, 53426),

Gene: Darko\_104 Start: 53305, Stop: 53469, Start Num: 2  
Candidate Starts for Darko\_104:  
(Start: 2 @53305 has 150 MA's), (3, 53335), (4, 53362),

Gene: Delilah\_104 Start: 53523, Stop: 53687, Start Num: 2  
Candidate Starts for Delilah\_104:  
(Start: 2 @53523 has 150 MA's), (3, 53553), (4, 53580),

Gene: Delylah\_107 Start: 53062, Stop: 53226, Start Num: 2  
Candidate Starts for Delylah\_107:  
(Start: 2 @53062 has 150 MA's), (3, 53092), (4, 53119),

Gene: Demodog\_111 Start: 55568, Stop: 55732, Start Num: 2  
Candidate Starts for Demodog\_111:  
(Start: 2 @55568 has 150 MA's), (3, 55598),

Gene: Derek\_104 Start: 52988, Stop: 53152, Start Num: 2  
Candidate Starts for Derek\_104:  
(Start: 2 @52988 has 150 MA's), (3, 53018), (4, 53045),

Gene: Dietrick\_96 Start: 51064, Stop: 51228, Start Num: 2  
Candidate Starts for Dietrick\_96:  
(Start: 2 @51064 has 150 MA's), (3, 51094), (4, 51121),

Gene: DirtMonster\_98 Start: 52556, Stop: 52720, Start Num: 2  
Candidate Starts for DirtMonster\_98:  
(Start: 2 @52556 has 150 MA's), (3, 52586), (4, 52613),



Gene: Domi\_98 Start: 52410, Stop: 52574, Start Num: 2  
Candidate Starts for Domi\_98:  
(Start: 2 @52410 has 150 MA's), (3, 52440),

Gene: DrPhinkDaddy\_103 Start: 53591, Stop: 53755, Start Num: 2  
Candidate Starts for DrPhinkDaddy\_103:  
(Start: 2 @53591 has 150 MA's), (3, 53621), (4, 53648),

Gene: Drazdys\_103 Start: 52286, Stop: 52450, Start Num: 2  
Candidate Starts for Drazdys\_103:  
(Start: 2 @52286 has 150 MA's), (3, 52316), (4, 52343),

Gene: ET08\_93 Start: 52052, Stop: 52216, Start Num: 2  
Candidate Starts for ET08\_93:  
(Start: 2 @52052 has 150 MA's), (3, 52082),

Gene: EggyFarm\_112 Start: 55327, Stop: 55491, Start Num: 2  
Candidate Starts for EggyFarm\_112:  
(Start: 2 @55327 has 150 MA's), (3, 55357), (4, 55384),

Gene: EmmaElysia\_104 Start: 52117, Stop: 52281, Start Num: 2  
Candidate Starts for EmmaElysia\_104:  
(Start: 2 @52117 has 150 MA's), (3, 52147), (4, 52174),

Gene: Erdmann\_105 Start: 53370, Stop: 53534, Start Num: 2  
Candidate Starts for Erdmann\_105:  
(Start: 2 @53370 has 150 MA's), (3, 53400), (4, 53427),

Gene: Essence\_101 Start: 52452, Stop: 52616, Start Num: 2  
Candidate Starts for Essence\_101:  
(Start: 2 @52452 has 150 MA's), (3, 52482), (4, 52509),

Gene: Ewok\_105 Start: 52757, Stop: 52921, Start Num: 2  
Candidate Starts for Ewok\_105:  
(Start: 2 @52757 has 150 MA's), (3, 52787), (4, 52814),

Gene: Flabslab\_98 Start: 50449, Stop: 50613, Start Num: 2  
Candidate Starts for Flabslab\_98:  
(Start: 2 @50449 has 150 MA's), (3, 50479), (4, 50506),

Gene: FoxtrotP1\_104 Start: 54540, Stop: 54704, Start Num: 2  
Candidate Starts for FoxtrotP1\_104:  
(Start: 2 @54540 has 150 MA's), (3, 54570), (4, 54597),

Gene: FrayBell\_109 Start: 53938, Stop: 54102, Start Num: 2  
Candidate Starts for FrayBell\_109:  
(Start: 2 @53938 has 150 MA's), (3, 53968), (4, 53995),

Gene: Gabriel\_105 Start: 51858, Stop: 52022, Start Num: 2  
Candidate Starts for Gabriel\_105:  
(Start: 2 @51858 has 150 MA's), (3, 51888), (4, 51915),

Gene: Gamgam\_104 Start: 51898, Stop: 52062, Start Num: 2

Candidate Starts for Gamgam\_104:  
(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: Ghost\_103 Start: 51898, Stop: 52062, Start Num: 2  
Candidate Starts for Ghost\_103:  
(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: Gizmo\_108 Start: 54520, Stop: 54684, Start Num: 2  
Candidate Starts for Gizmo\_108:  
(Start: 2 @54520 has 150 MA's), (3, 54550), (4, 54577),

Gene: GlutenPhree\_103 Start: 51898, Stop: 52062, Start Num: 2  
Candidate Starts for GlutenPhree\_103:  
(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: Grasshills\_111 Start: 55327, Stop: 55491, Start Num: 2  
Candidate Starts for Grasshills\_111:  
(Start: 2 @55327 has 150 MA's), (3, 55357), (4, 55384),

Gene: Grungle\_92 Start: 49710, Stop: 49874, Start Num: 2  
Candidate Starts for Grungle\_92:  
(Start: 2 @49710 has 150 MA's), (3, 49740),

Gene: Guwapp\_103 Start: 52023, Stop: 52187, Start Num: 2  
Candidate Starts for Guwapp\_103:  
(Start: 2 @52023 has 150 MA's), (3, 52053), (4, 52080),

Gene: Halldule\_98 Start: 50736, Stop: 50900, Start Num: 2  
Candidate Starts for Halldule\_98:  
(Start: 2 @50736 has 150 MA's), (3, 50766),

Gene: InigoMontoya\_105 Start: 51859, Stop: 52023, Start Num: 2  
Candidate Starts for InigoMontoya\_105:  
(Start: 2 @51859 has 150 MA's), (3, 51889), (4, 51916),

Gene: InterFolia\_112 Start: 54873, Stop: 55037, Start Num: 2  
Candidate Starts for InterFolia\_112:  
(Start: 2 @54873 has 150 MA's), (3, 54903), (4, 54930),

Gene: Iota\_99 Start: 52335, Stop: 52499, Start Num: 2  
Candidate Starts for Iota\_99:  
(Start: 2 @52335 has 150 MA's), (3, 52365), (4, 52392),

Gene: Issimir\_103 Start: 53344, Stop: 53508, Start Num: 2  
Candidate Starts for Issimir\_103:  
(Start: 2 @53344 has 150 MA's), (3, 53374), (4, 53401),

Gene: Izajani\_104 Start: 53550, Stop: 53714, Start Num: 2  
Candidate Starts for Izajani\_104:  
(Start: 2 @53550 has 150 MA's), (3, 53580), (4, 53607),

Gene: JPickles\_102 Start: 51129, Stop: 51293, Start Num: 2  
Candidate Starts for JPickles\_102:

(Start: 2 @51129 has 150 MA's), (3, 51159), (4, 51186),

Gene: Janiyra\_106 Start: 52825, Stop: 52989, Start Num: 2

Candidate Starts for Janiyra\_106:

(Start: 2 @52825 has 150 MA's), (3, 52855), (4, 52882),

Gene: Jaygup\_104 Start: 52654, Stop: 52818, Start Num: 2

Candidate Starts for Jaygup\_104:

(Start: 2 @52654 has 150 MA's), (3, 52684), (4, 52711),

Gene: Jedediah\_107 Start: 53187, Stop: 53351, Start Num: 2

Candidate Starts for Jedediah\_107:

(Start: 2 @53187 has 150 MA's), (3, 53217), (4, 53244),

Gene: Jemmno\_104 Start: 52634, Stop: 52798, Start Num: 2

Candidate Starts for Jemmno\_104:

(Start: 2 @52634 has 150 MA's), (3, 52664), (4, 52691),

Gene: Jessibeth14\_103 Start: 53155, Stop: 53319, Start Num: 2

Candidate Starts for Jessibeth14\_103:

(Start: 2 @53155 has 150 MA's), (3, 53185), (4, 53212),

Gene: Jezreel\_102 Start: 53318, Stop: 53482, Start Num: 2

Candidate Starts for Jezreel\_102:

(Start: 2 @53318 has 150 MA's), (3, 53348), (4, 53375),

Gene: JigglyPuff\_112 Start: 55484, Stop: 55648, Start Num: 2

Candidate Starts for JigglyPuff\_112:

(Start: 2 @55484 has 150 MA's), (3, 55514), (4, 55541),

Gene: JulietS\_99 Start: 50589, Stop: 50753, Start Num: 2

Candidate Starts for JulietS\_99:

(Start: 2 @50589 has 150 MA's), (3, 50619),

Gene: JustHall\_101 Start: 52693, Stop: 52857, Start Num: 2

Candidate Starts for JustHall\_101:

(Start: 2 @52693 has 150 MA's), (3, 52723), (4, 52750),

Gene: Kamryn\_104 Start: 53970, Stop: 54134, Start Num: 2

Candidate Starts for Kamryn\_104:

(Start: 2 @53970 has 150 MA's), (3, 54000), (4, 54027),

Gene: Kboogie\_108 Start: 52326, Stop: 52490, Start Num: 2

Candidate Starts for Kboogie\_108:

(Start: 2 @52326 has 150 MA's), (3, 52356), (4, 52383),

Gene: Khaleesi\_103 Start: 53269, Stop: 53433, Start Num: 2

Candidate Starts for Khaleesi\_103:

(Start: 2 @53269 has 150 MA's), (3, 53299), (4, 53326),

Gene: Koguma\_101 Start: 50814, Stop: 50978, Start Num: 2

Candidate Starts for Koguma\_101:

(Start: 2 @50814 has 150 MA's), (3, 50844), (4, 50871),

Gene: Latch\_104 Start: 51898, Stop: 52062, Start Num: 2  
Candidate Starts for Latch\_104:  
(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: Lee7\_102 Start: 53903, Stop: 54067, Start Num: 2  
Candidate Starts for Lee7\_102:  
(Start: 2 @53903 has 150 MA's), (3, 53933), (4, 53960),

Gene: Lethe\_104 Start: 53341, Stop: 53505, Start Num: 2  
Candidate Starts for Lethe\_104:  
(Start: 2 @53341 has 150 MA's), (3, 53371), (4, 53398),

Gene: LifeSavor\_103 Start: 52586, Stop: 52750, Start Num: 2  
Candidate Starts for LifeSavor\_103:  
(Start: 2 @52586 has 150 MA's), (3, 52616), (4, 52643),

Gene: Littleton\_104 Start: 52715, Stop: 52879, Start Num: 2  
Candidate Starts for Littleton\_104:  
(Start: 2 @52715 has 150 MA's), (3, 52745), (4, 52772),

Gene: LolaVinca\_105 Start: 53589, Stop: 53753, Start Num: 2  
Candidate Starts for LolaVinca\_105:  
(Start: 2 @53589 has 150 MA's), (3, 53619), (4, 53646),

Gene: LordLeafolot\_108 Start: 54556, Stop: 54720, Start Num: 2  
Candidate Starts for LordLeafolot\_108:  
(Start: 2 @54556 has 150 MA's), (3, 54586), (4, 54613),

Gene: Lukilu\_95 Start: 53002, Stop: 53166, Start Num: 2  
Candidate Starts for Lukilu\_95:  
(Start: 2 @53002 has 150 MA's), (3, 53032), (4, 53059),

Gene: Maby2021\_104 Start: 53363, Stop: 53527, Start Num: 2  
Candidate Starts for Maby2021\_104:  
(Start: 2 @53363 has 150 MA's), (3, 53393), (4, 53420),

Gene: Mangeria\_104 Start: 53432, Stop: 53596, Start Num: 2  
Candidate Starts for Mangeria\_104:  
(Start: 2 @53432 has 150 MA's), (3, 53462), (4, 53489),

Gene: Matsumoto\_101 Start: 52214, Stop: 52378, Start Num: 2  
Candidate Starts for Matsumoto\_101:  
(Start: 2 @52214 has 150 MA's), (3, 52244), (4, 52271),

Gene: McGee\_106 Start: 51967, Stop: 52131, Start Num: 2  
Candidate Starts for McGee\_106:  
(Start: 2 @51967 has 150 MA's), (3, 51997), (4, 52024),

Gene: McWolfish\_102 Start: 53152, Stop: 53316, Start Num: 2  
Candidate Starts for McWolfish\_102:  
(Start: 2 @53152 has 150 MA's), (3, 53182), (4, 53209),

Gene: Megamind\_103 Start: 53036, Stop: 53200, Start Num: 2  
Candidate Starts for Megamind\_103:  
(Start: 2 @53036 has 150 MA's), (3, 53066), (4, 53093),

Gene: Melpomini\_98 Start: 50502, Stop: 50666, Start Num: 2  
Candidate Starts for Melpomini\_98:  
(Start: 2 @50502 has 150 MA's), (3, 50532), (4, 50559),

Gene: MikeLiesIn\_105 Start: 53383, Stop: 53547, Start Num: 2  
Candidate Starts for MikeLiesIn\_105:  
(Start: 2 @53383 has 150 MA's), (3, 53413), (4, 53440),

Gene: Mikro\_102 Start: 54605, Stop: 54769, Start Num: 2  
Candidate Starts for Mikro\_102:  
(Start: 2 @54605 has 150 MA's), (3, 54635), (4, 54662),

Gene: MoMoMixon\_105 Start: 52859, Stop: 53023, Start Num: 2  
Candidate Starts for MoMoMixon\_105:  
(Start: 2 @52859 has 150 MA's), (3, 52889), (4, 52916),

Gene: Momo\_103 Start: 51898, Stop: 52062, Start Num: 2  
Candidate Starts for Momo\_103:  
(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: Morizzled23\_104 Start: 52263, Stop: 52427, Start Num: 2  
Candidate Starts for Morizzled23\_104:  
(Start: 2 @52263 has 150 MA's), (3, 52293), (4, 52320),

Gene: Naija\_103 Start: 51898, Stop: 52062, Start Num: 2  
Candidate Starts for Naija\_103:  
(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: Napoleon13\_100 Start: 50940, Stop: 51104, Start Num: 2  
Candidate Starts for Napoleon13\_100:  
(Start: 2 @50940 has 150 MA's), (3, 50970), (4, 50997),

Gene: Nappy\_107 Start: 54293, Stop: 54457, Start Num: 2  
Candidate Starts for Nappy\_107:  
(Start: 2 @54293 has 150 MA's), (3, 54323), (4, 54350),

Gene: Naval22\_109 Start: 54874, Stop: 55038, Start Num: 2  
Candidate Starts for Naval22\_109:  
(Start: 2 @54874 has 150 MA's), (3, 54904), (4, 54931),

Gene: NedWong\_105 Start: 53370, Stop: 53534, Start Num: 2  
Candidate Starts for NedWong\_105:  
(Start: 2 @53370 has 150 MA's), (3, 53400), (4, 53427),

Gene: Ngannou\_100 Start: 50880, Stop: 51044, Start Num: 2  
Candidate Starts for Ngannou\_100:  
(Start: 2 @50880 has 150 MA's), (3, 50910), (4, 50937),

Gene: Nidhogg\_105 Start: 53104, Stop: 53268, Start Num: 2

Candidate Starts for Nidhogg\_105:  
(Start: 2 @53104 has 150 MA's), (3, 53134), (4, 53161),

Gene: NoodleTree\_111 Start: 53696, Stop: 53860, Start Num: 2  
Candidate Starts for NoodleTree\_111:  
(Start: 2 @53696 has 150 MA's), (3, 53726), (4, 53753),

Gene: Norm\_105 Start: 54299, Stop: 54463, Start Num: 2  
Candidate Starts for Norm\_105:  
(Start: 2 @54299 has 150 MA's), (3, 54329), (4, 54356),

Gene: NuevoMundo\_110 Start: 55644, Stop: 55808, Start Num: 2  
Candidate Starts for NuevoMundo\_110:  
(Start: 2 @55644 has 150 MA's), (3, 55674), (4, 55701),

Gene: ParkTD\_105 Start: 53366, Stop: 53530, Start Num: 2  
Candidate Starts for ParkTD\_105:  
(Start: 2 @53366 has 150 MA's), (3, 53396), (4, 53423),

Gene: Patter\_104 Start: 51915, Stop: 52079, Start Num: 2  
Candidate Starts for Patter\_104:  
(Start: 2 @51915 has 150 MA's), (3, 51945), (4, 51972),

Gene: Phlegm\_106 Start: 51898, Stop: 52062, Start Num: 2  
Candidate Starts for Phlegm\_106:  
(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: Phox\_101 Start: 53646, Stop: 53810, Start Num: 2  
Candidate Starts for Phox\_101:  
(Start: 2 @53646 has 150 MA's), (3, 53676), (4, 53703),

Gene: Phusco\_104 Start: 52663, Stop: 52827, Start Num: 2  
Candidate Starts for Phusco\_104:  
(Start: 2 @52663 has 150 MA's), (3, 52693), (4, 52720),

Gene: Pier\_109 Start: 55652, Stop: 55816, Start Num: 2  
Candidate Starts for Pier\_109:  
(Start: 2 @55652 has 150 MA's), (3, 55682), (4, 55709),

Gene: Pio\_108 Start: 55256, Stop: 55420, Start Num: 2  
Candidate Starts for Pio\_108:  
(Start: 2 @55256 has 150 MA's), (3, 55286), (4, 55313),

Gene: Pivoine\_103 Start: 51898, Stop: 52062, Start Num: 2  
Candidate Starts for Pivoine\_103:  
(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: Pleione\_107 Start: 53533, Stop: 53697, Start Num: 2  
Candidate Starts for Pleione\_107:  
(Start: 2 @53533 has 150 MA's), (3, 53563), (4, 53590),

Gene: Pupper\_100 Start: 57006, Stop: 57188, Start Num: 1  
Candidate Starts for Pupper\_100:

(Start: 1 @57006 has 4 MA's), (6, 57153), (7, 57183),

Gene: PurduePete\_104 Start: 53790, Stop: 53954, Start Num: 2

Candidate Starts for PurduePete\_104:

(Start: 2 @53790 has 150 MA's), (3, 53820), (4, 53847),

Gene: QBert\_98 Start: 52438, Stop: 52602, Start Num: 2

Candidate Starts for QBert\_98:

(Start: 2 @52438 has 150 MA's), (3, 52468), (4, 52495),

Gene: Quasimodo\_105 Start: 53325, Stop: 53489, Start Num: 2

Candidate Starts for Quasimodo\_105:

(Start: 2 @53325 has 150 MA's), (3, 53355), (4, 53382),

Gene: Rabinovish\_102 Start: 53562, Stop: 53726, Start Num: 2

Candidate Starts for Rabinovish\_102:

(Start: 2 @53562 has 150 MA's), (3, 53592), (4, 53619),

Gene: Rahel\_103 Start: 52255, Stop: 52419, Start Num: 2

Candidate Starts for Rahel\_103:

(Start: 2 @52255 has 150 MA's), (3, 52285), (4, 52312),

Gene: Rizal\_100 Start: 51403, Stop: 51567, Start Num: 2

Candidate Starts for Rizal\_100:

(Start: 2 @51403 has 150 MA's), (3, 51433), (4, 51460),

Gene: RoMag\_99 Start: 52575, Stop: 52739, Start Num: 2

Candidate Starts for RoMag\_99:

(Start: 2 @52575 has 150 MA's), (3, 52605),

Gene: Ronan\_98 Start: 50526, Stop: 50690, Start Num: 2

Candidate Starts for Ronan\_98:

(Start: 2 @50526 has 150 MA's), (3, 50556),

Gene: Roots515\_103 Start: 53563, Stop: 53727, Start Num: 2

Candidate Starts for Roots515\_103:

(Start: 2 @53563 has 150 MA's), (3, 53593), (4, 53620),

Gene: SCentae\_99 Start: 57152, Stop: 57334, Start Num: 1

Candidate Starts for SCentae\_99:

(Start: 1 @57152 has 4 MA's), (6, 57299), (7, 57329),

Gene: SVoro\_102 Start: 53740, Stop: 53904, Start Num: 2

Candidate Starts for SVoro\_102:

(Start: 2 @53740 has 150 MA's), (3, 53770), (4, 53797),

Gene: Salacia\_108 Start: 53704, Stop: 53868, Start Num: 2

Candidate Starts for Salacia\_108:

(Start: 2 @53704 has 150 MA's), (3, 53734), (4, 53761),

Gene: ScottMcG\_101 Start: 52325, Stop: 52489, Start Num: 2

Candidate Starts for ScottMcG\_101:

(Start: 2 @52325 has 150 MA's), (3, 52355), (4, 52382),

Gene: Shaqnato\_97 Start: 51438, Stop: 51602, Start Num: 2  
Candidate Starts for Shaqnato\_97:  
(Start: 2 @51438 has 150 MA's), (3, 51468),

Gene: Shelob\_106 Start: 54151, Stop: 54315, Start Num: 2  
Candidate Starts for Shelob\_106:  
(Start: 2 @54151 has 150 MA's), (3, 54181), (4, 54208),

Gene: ShiaLabeouf\_103 Start: 52690, Stop: 52854, Start Num: 2  
Candidate Starts for ShiaLabeouf\_103:  
(Start: 2 @52690 has 150 MA's), (3, 52720), (4, 52747),

Gene: Shnickers\_104 Start: 52654, Stop: 52818, Start Num: 2  
Candidate Starts for Shnickers\_104:  
(Start: 2 @52654 has 150 MA's), (3, 52684), (4, 52711),

Gene: Shrimp\_104 Start: 53374, Stop: 53538, Start Num: 2  
Candidate Starts for Shrimp\_104:  
(Start: 2 @53374 has 150 MA's), (3, 53404), (4, 53431),

Gene: SilverDipper\_105 Start: 51898, Stop: 52062, Start Num: 2  
Candidate Starts for SilverDipper\_105:  
(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: Skog\_163 Start: 87702, Stop: 87884, Start Num: 1  
Candidate Starts for Skog\_163:  
(Start: 1 @87702 has 4 MA's), (5, 87846), (6, 87849), (7, 87879),

Gene: SmallFry\_104 Start: 51879, Stop: 52043, Start Num: 2  
Candidate Starts for SmallFry\_104:  
(Start: 2 @51879 has 150 MA's), (3, 51909), (4, 51936),

Gene: Spec\_100 Start: 52419, Stop: 52583, Start Num: 2  
Candidate Starts for Spec\_100:  
(Start: 2 @52419 has 150 MA's), (3, 52449), (4, 52476),

Gene: Specks\_109 Start: 54553, Stop: 54717, Start Num: 2  
Candidate Starts for Specks\_109:  
(Start: 2 @54553 has 150 MA's), (3, 54583), (4, 54610),

Gene: Sprinklers\_100 Start: 51935, Stop: 52099, Start Num: 2  
Candidate Starts for Sprinklers\_100:  
(Start: 2 @51935 has 150 MA's), (3, 51965), (4, 51992),

Gene: Spud\_104 Start: 53450, Stop: 53614, Start Num: 2  
Candidate Starts for Spud\_104:  
(Start: 2 @53450 has 150 MA's), (3, 53480), (4, 53507),

Gene: SrishMeg2525\_103 Start: 53472, Stop: 53636, Start Num: 2  
Candidate Starts for SrishMeg2525\_103:  
(Start: 2 @53472 has 150 MA's), (3, 53502), (4, 53529),



Gene: StephanieG\_103 Start: 54280, Stop: 54444, Start Num: 2  
Candidate Starts for StephanieG\_103:  
(Start: 2 @54280 has 150 MA's), (3, 54310),

Gene: StubbySaigey\_107 Start: 52067, Stop: 52231, Start Num: 2  
Candidate Starts for StubbySaigey\_107:  
(Start: 2 @52067 has 150 MA's), (3, 52097), (4, 52124),

Gene: Tainan\_108 Start: 53876, Stop: 54040, Start Num: 2  
Candidate Starts for Tainan\_108:  
(Start: 2 @53876 has 150 MA's), (3, 53906), (4, 53933),

Gene: Teardrop\_103 Start: 51877, Stop: 52041, Start Num: 2  
Candidate Starts for Teardrop\_103:  
(Start: 2 @51877 has 150 MA's), (3, 51907), (4, 51934),

Gene: TinyTim\_104 Start: 53130, Stop: 53294, Start Num: 2  
Candidate Starts for TinyTim\_104:  
(Start: 2 @53130 has 150 MA's), (3, 53160), (4, 53187),

Gene: Tonenili\_119 Start: 56876, Stop: 57040, Start Num: 2  
Candidate Starts for Tonenili\_119:  
(Start: 2 @56876 has 150 MA's), (3, 56906), (4, 56933),

Gene: Tortoise16\_101 Start: 52478, Stop: 52642, Start Num: 2  
Candidate Starts for Tortoise16\_101:  
(Start: 2 @52478 has 150 MA's), (3, 52508), (4, 52535),

Gene: Trinitium\_101 Start: 51833, Stop: 51997, Start Num: 2  
Candidate Starts for Trinitium\_101:  
(Start: 2 @51833 has 150 MA's), (3, 51863), (4, 51890),

Gene: Turret\_99 Start: 51278, Stop: 51442, Start Num: 2  
Candidate Starts for Turret\_99:  
(Start: 2 @51278 has 150 MA's), (3, 51308), (4, 51335),

Gene: Tyke\_105 Start: 54019, Stop: 54183, Start Num: 2  
Candidate Starts for Tyke\_105:  
(Start: 2 @54019 has 150 MA's), (3, 54049), (4, 54076),

Gene: ValleyTerrace\_104 Start: 51898, Stop: 52062, Start Num: 2  
Candidate Starts for ValleyTerrace\_104:  
(Start: 2 @51898 has 150 MA's), (3, 51928), (4, 51955),

Gene: Wally\_103 Start: 51908, Stop: 52072, Start Num: 2  
Candidate Starts for Wally\_103:  
(Start: 2 @51908 has 150 MA's), (3, 51938), (4, 51965),

Gene: Willis\_105 Start: 53265, Stop: 53429, Start Num: 2  
Candidate Starts for Willis\_105:  
(Start: 2 @53265 has 150 MA's), (3, 53295), (4, 53322),

Gene: Yassified\_101 Start: 51985, Stop: 52149, Start Num: 2

Candidate Starts for Yassified\_101:  
(Start: 2 @51985 has 150 MA's), (3, 52015), (4, 52042),

Gene: YemiJoy2021\_105 Start: 53367, Stop: 53531, Start Num: 2  
Candidate Starts for YemiJoy2021\_105:  
(Start: 2 @53367 has 150 MA's), (3, 53397), (4, 53424),

Gene: YoungMoneyMata\_105 Start: 52534, Stop: 52698, Start Num: 2  
Candidate Starts for YoungMoneyMata\_105:  
(Start: 2 @52534 has 150 MA's), (3, 52564), (4, 52591),

Gene: Yucca\_104 Start: 53049, Stop: 53213, Start Num: 2  
Candidate Starts for Yucca\_104:  
(Start: 2 @53049 has 150 MA's), (3, 53079), (4, 53106),

Gene: Zalkecks\_105 Start: 53050, Stop: 53214, Start Num: 2  
Candidate Starts for Zalkecks\_105:  
(Start: 2 @53050 has 150 MA's), (3, 53080), (4, 53107),

Gene: Zeenon\_106 Start: 53135, Stop: 53299, Start Num: 2  
Candidate Starts for Zeenon\_106:  
(Start: 2 @53135 has 150 MA's), (3, 53165), (4, 53192),

Gene: ZygoTaiga\_103 Start: 54295, Stop: 54459, Start Num: 2  
Candidate Starts for ZygoTaiga\_103:  
(Start: 2 @54295 has 150 MA's), (3, 54325), (4, 54352),