



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 171231 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171231 has 184 members, 17 are drafts.

Phages represented in each track:

- Track 1 : I3\_115, Ghost\_109, Teardrop\_109, Caravan\_105, Essence\_107, BadAgartude\_106, Bipolarisk\_109, LordLeafolot\_114, Colt\_101, BeanWater\_102, Naval22\_115, Chargie21\_106, Cactojaque\_105, Gamgam\_110, Naija\_109, LRRHood\_104, Drazdys\_109, InterFolia\_117, ShiaLabeouf\_109, Rizal\_106, Khaleesi\_109, CindyLou\_111, ArcherS7\_109, Spud\_110, ValleyTerrace\_110, NedWong\_111, EasyJones\_112, Pivoine\_109, IkeLoa\_103, Delilah\_110, Ewok\_111, DTDevon\_111, Melpomini\_104, Koguma\_107, Grasshills\_117, CharlieB\_106, Kboogie\_114, ErnieJ\_105, SrishMeg2525\_109, Loanshark\_109, ChaylaJr\_105, Shelob\_112, Jessibeth14\_109, Blackdragon\_106, Sebata\_111, Atlantean\_109, Bigswole\_114, Erdmann\_111, Yassified\_107, Derek\_110, ParkTD\_111, Astraea\_107, Jaygup\_110, Roots515\_109, FoxtrotP1\_110, EggyFarm\_118, Spec\_106, Quasimodo\_111, LolaVinca\_111, ET08\_99, Mikro\_108, Gizmo\_114, Issimir\_109, BackyardAgain\_107, Wally\_109, Mangeria\_110, Rahel\_109, StephanieG\_109, Blubba\_102, Shrimp\_110, Ading\_110, Trinitium\_107, HyRo\_101, Phlegm\_112, Cali\_106, Pier\_115, Dietrick\_102, Amataga\_110, Maby2021\_110, Momo\_109, Napoleon13\_106, Sprinklers\_106, TinyTim\_110, YemiJoy2021\_111, ZygoTaiga\_109, QBert\_104, MoMoMixon\_111, Breeniome\_109, Rabinovish\_108, ChickenPhender\_106, ScottMcG\_107, Burrough\_110, Basquiat\_106, Bonray\_110, DirtMonster\_104, Cane17\_100, MikeLiesIn\_111, Jemmno\_110, Stubby\_102, Zeenon\_112, Flabslab\_104, Megamind\_109, BananaFence\_109, Adlitam\_110, Sauce\_110, JustHall\_107, McGee\_112, YoungMoneyMata\_111, DrPhinkDaddy\_109, Delylah\_113, SmallFry\_110, Shifa\_98, RoMag\_105, Latch\_110, Grungle\_98, Bread\_110, Shnickers\_110, Pinkcreek\_101, Ngannou\_106, Tortoise16\_107, StubbySaigey\_113, Specks\_115, Audrick\_112, JayJay\_111, Morizzled23\_110, Shaqnato\_103, InigoMontoya\_111, Ava3\_111, Kamryn\_110, Chomp\_108, JulietS\_105, Norm\_111, Janiyra\_112, Turret\_105, NoodleTree\_117, Salacia\_114, EmmaElysia\_110, Ronan\_104, FrayBell\_115, Phusco\_110, Fludd\_110, Blackbrain\_105, Jedediah\_113, Catera\_107, Phox\_107, Lee7\_108, Zalkecks\_111, NuevoMundo\_116, Nidhogg\_111, Littleton\_110, Guwapp\_109, McWolfish\_108, Lukilu\_101, Tyke\_111, BigCity\_118, EmToTheThree\_112, Halldule\_104, FudgeTart\_109, Iota\_105, Dandelion\_116, Yucca\_110, LifeSavor\_109, Gabriel\_111, Bxz1\_108, Izajani\_110, PurduePete\_110, Matsumoto\_107, Asterius\_107, Bangla1971\_111, Willis\_111, Pio\_114, Capablanca\_112, JPickles\_108, Darko\_110, Pleione\_113, SilverDipper\_111, LinStu\_109, Nappy\_113, Alice\_103, Concombre\_116, Babyland\_111, Daffodil\_115, Patter\_110
- Track 2 : Tonenili\_125

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

The start number called the most often in the published annotations is 1, it was called in 167 of the 167 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ading\_110, Adlitam\_110, Alice\_103, Amataga\_110, ArcherS7\_109, Asterius\_107, Astraea\_107, Atlantean\_109, Audrick\_112, Ava3\_111, Babyland\_111, BackyardAgain\_107, BadAgartude\_106, BananaFence\_109, Bangla1971\_111, Basquiat\_106, BeanWater\_102, BigCity\_118, Bigswole\_114, Bipolarisk\_109, Blackbrain\_105, Blackdragon\_106, Blubba\_102, Bonray\_110, Bread\_110, Breeniome\_109, Burrough\_110, Bxz1\_108, Cactojaque\_105, Cali\_106, Cane17\_100, Capablanca\_112, Caravan\_105, Catera\_107, Chargie21\_106, CharlieB\_106, ChaylaJr\_105, ChickenPhender\_106, Chomp\_108, CindyLou\_111, Colt\_101, Concombre\_116, DTDevon\_111, Daffodil\_115, Dandelion\_116, Darko\_110, Delilah\_110, Delylah\_113, Derek\_110, Dietrick\_102, DirtMonster\_104, DrPhinkDaddy\_109, Drazdys\_109, ET08\_99, EasyJones\_112, EggyFarm\_118, EmToTheThree\_112, EmmaElysia\_110, Erdmann\_111, ErnieJ\_105, Essence\_107, Ewok\_111, Flabslab\_104, Fludd\_110, FoxtrotP1\_110, FrayBell\_115, FudgeTart\_109, Gabriel\_111, Gangam\_110, Ghost\_109, Gizmo\_114, Grasshills\_117, Grungle\_98, Guwapp\_109, Halldule\_104, HyRo\_101, I3\_115, IkeLoa\_103, InigoMontoya\_111, InterFolia\_117, Iota\_105, Issimir\_109, Izajani\_110, JPickles\_108, Janiyra\_112, JayJay\_111, Jaygup\_110, Jedediah\_113, Jemmno\_110, Jessibeth14\_109, JulietS\_105, JustHall\_107, Kamryn\_110, Kboogie\_114, Khaleesi\_109, Koguma\_107, LRRHood\_104, Latch\_110, Lee7\_108, LifeSavor\_109, LinStu\_109, Littleton\_110, Loanshark\_109, LolaVinca\_111, LordLeafolot\_114, Lukilu\_101, Maby2021\_110, Mangeria\_110, Matsumoto\_107, McGee\_112, McWolfish\_108, Megamind\_109, Melpomini\_104, MikeLiesIn\_111, Mikro\_108, MoMoMixon\_111, Momo\_109, Morizzled23\_110, Naija\_109, Napoleon13\_106, Nappy\_113, Naval22\_115, NedWong\_111, Ngannou\_106, Nidhogg\_111, NoodleTree\_117, Norm\_111, NuevoMundo\_116, ParkTD\_111, Patter\_110, Phlegm\_112, Phox\_107, Phusco\_110, Pier\_115, Pinkcreek\_101, Pio\_114, Pivoine\_109, Pleione\_113, PurduePete\_110, QBert\_104, Quasimodo\_111, Rabinovish\_108, Rahel\_109, Rizal\_106, RoMag\_105, Ronan\_104, Roots515\_109, Salacia\_114, Sauce\_110, ScottMcG\_107, Sebata\_111, Shaqnato\_103, Shelob\_112, ShiaLabeouf\_109, Shifa\_98, Shnickers\_110, Shrimp\_110, SilverDipper\_111, SmallFry\_110, Spec\_106, Specks\_115, Sprinklers\_106, Spud\_110, SrishMeg2525\_109, StephanieG\_109, StubbySaigey\_113, Stubby\_102, Teardrop\_109, TinyTim\_110, Tonenili\_125, Tortoise16\_107, Trinitium\_107, Turret\_105, Tyke\_111, ValleyTerrace\_110, Wally\_109, Willis\_111, Yassified\_107, YemiJoy2021\_111, YoungMoneyMata\_111, Yucca\_110, Zalkecks\_111, Zeenon\_112, ZygoTaiga\_109,

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

- 

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

- 

**Summary by start number:**

Start 1:

- Found in 184 of 184 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 167 of 167
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ading\_110 (C1), Adlitam\_110 (C1), Alice\_103 (C1), Amataga\_110 (C1), ArcherS7\_109 (C1), Asterius\_107 (C1), Astraea\_107 (C1), Atlantean\_109 (C1), Audrick\_112 (C1), Ava3\_111 (C1), Babyland\_111 (C1), BackyardAgain\_107 (C1), BadAgartude\_106 (C1), BananaFence\_109 (C1), Bangla1971\_111 (C1), Basquiat\_106 (C1), BeanWater\_102 (C1), BigCity\_118 (C1), Bigswole\_114 (C1), Bipolarisk\_109 (C1), Blackbrain\_105 (C1), Blackdragon\_106 (C1), Blubba\_102 (C1), Bonray\_110 (C1), Bread\_110 (C1), Breeniome\_109 (C1), Burrough\_110 (C1), Bxz1\_108 (C1), Cactojaque\_105 (C1), Cali\_106 (C1), Cane17\_100 (C1), Capablanca\_112 (C1), Caravan\_105 (C1), Catera\_107 (C1), Chargie21\_106 (C1), CharlieB\_106 (C1), ChaylaJr\_105 (C1), ChickenPhender\_106 (C1), Chomp\_108 (C1), CindyLou\_111 (C1), Colt\_101 (C1), Concombre\_116 (C1), DTDevon\_111 (C1), Daffodil\_115 (C1), Dandelion\_116 (C1), Darko\_110 (C1), Delilah\_110 (C1), Delylah\_113 (C1), Derek\_110 (C1), Dietrick\_102 (C1), DirtMonster\_104 (C1), DrPhinkDaddy\_109 (C1), Drazdys\_109 (C1), ET08\_99 (C1), EasyJones\_112 (C1), EggyFarm\_118 (C1), EmToTheThree\_112 (C1), EmmaElysia\_110 (C1), Erdmann\_111 (C1), ErnieJ\_105 (C1), Essence\_107 (C1), Ewok\_111 (C1), Flabslab\_104 (C1), Fludd\_110 (C1), FoxtrotP1\_110 (C1), FrayBell\_115 (C1), FudgeTart\_109 (C1), Gabriel\_111 (C1), Gamgam\_110 (C1), Ghost\_109 (C1), Gizmo\_114 (C1), Grasshills\_117 (C1), Grungle\_98 (C1), Guwapp\_109 (C1), Halldule\_104 (C1), HyRo\_101 (C1), I3\_115 (C1), IkeLoa\_103 (C1), InigoMontoya\_111 (C1), InterFolia\_117 (C1), Iota\_105 (C1), Issimir\_109 (C1), Izajani\_110 (C1), JPickles\_108 (C1), Janiyr\_112 (C1), JayJay\_111 (C1), Jaygup\_110 (C1), Jedediah\_113 (C1), Jemmno\_110 (C1), Jessibeth14\_109 (C1), JulietS\_105 (C1), JustHall\_107 (C1), Kamryn\_110 (C1), Kboogie\_114 (C1), Khaleesi\_109 (C1), Koguma\_107 (C1), LRRHood\_104 (C1), Latch\_110 (C1), Lee7\_108 (C1), LifeSavor\_109 (C1), LinStu\_109 (C1), Littleton\_110 (C1), Loanshark\_109 (C1), LolaVinca\_111 (C1), LordLeafolot\_114 (C1), Lukilu\_101 (C1), Maby2021\_110 (C1), Mangeria\_110 (C1), Matsumoto\_107 (C1), McGee\_112 (C1), McWolfish\_108 (C1), Megamind\_109 (C1), Melpomini\_104 (C1), MikeLiesIn\_111 (C1), Mikro\_108 (C1), MoMoMixon\_111 (C1), Momo\_109 (C1), Morizzled23\_110 (C1), Naija\_109 (C1), Napoleon13\_106 (C1), Nappy\_113 (C1), Naval22\_115 (C1), NedWong\_111 (C1), Ngannou\_106 (C1), Nidhogg\_111 (C1), NoodleTree\_117 (C1), Norm\_111 (C1), NuevoMundo\_116 (C1), ParkTD\_111 (C1), Patter\_110 (C1), Phlegm\_112 (C1), Phox\_107 (C1), Phusco\_110 (C1), Pier\_115 (C1), Pinkcreek\_101 (C1), Pio\_114 (C1), Pivoine\_109 (C1), Pleione\_113 (C1), PurduePete\_110 (C1), QBert\_104 (C1), Quasimodo\_111 (C1), Rabinovish\_108 (C1), Rahel\_109 (C1), Rizal\_106 (C1), RoMag\_105 (C1), Ronan\_104 (C1), Roots515\_109 (C1), Salacia\_114 (C1), Sauce\_110 (C1), ScottMcG\_107 (C1), Sebata\_111 (C1), Shaqato\_103 (C1), Shelob\_112 (C1), ShiaLabeouf\_109 (C1), Shifa\_98 (C1), Shnickers\_110 (C1), Shrimp\_110 (C1), SilverDipper\_111 (C1), SmallFry\_110 (C1), Spec\_106 (C1), Specks\_115 (C1), Sprinklers\_106 (C1), Spud\_110 (C1), SrishMeg2525\_109 (C1), StephanieG\_109 (C1), StubbySaigey\_113 (C1), Stubby\_102 (C1), Teardrop\_109 (C1), TinyTim\_110 (C1), Tonenili\_125 (C1), Tortoise16\_107 (C1), Trinitium\_107 (C1), Turret\_105 (C1), Tyke\_111 (C1), ValleyTerrace\_110 (C1), Wally\_109 (C1), Willis\_111 (C1), Yassified\_107 (C1), YemiJoy2021\_111 (C1), YoungMoneyMata\_111 (C1), Yucca\_110 (C1), Zalkecks\_111 (C1), Zeenon\_112 (C1), ZygoTaiga\_109 (C1),

**Summary by clusters:**

There is one cluster represented in this pham: C1

Info for manual annotations of cluster C1:

•Start number 1 was manually annotated 167 times for cluster C1.

**Gene Information:**

Gene: Ading\_110 Start: 56843, Stop: 57064, Start Num: 1

Candidate Starts for Ading\_110:

(Start: 1 @56843 has 167 MA's), (2, 56861), (3, 56930), (4, 56948),

Gene: Adlitam\_110 Start: 56860, Stop: 57081, Start Num: 1

Candidate Starts for Adlitam\_110:

(Start: 1 @56860 has 167 MA's), (2, 56878), (3, 56947), (4, 56965),

Gene: Alice\_103 Start: 56137, Stop: 56358, Start Num: 1

Candidate Starts for Alice\_103:

(Start: 1 @56137 has 167 MA's), (2, 56155), (3, 56224), (4, 56242),

Gene: Amataga\_110 Start: 56105, Stop: 56326, Start Num: 1

Candidate Starts for Amataga\_110:

(Start: 1 @56105 has 167 MA's), (2, 56123), (3, 56192), (4, 56210),

Gene: ArcherS7\_109 Start: 56423, Stop: 56644, Start Num: 1

Candidate Starts for ArcherS7\_109:

(Start: 1 @56423 has 167 MA's), (2, 56441), (3, 56510), (4, 56528),

Gene: Asterius\_107 Start: 57098, Stop: 57319, Start Num: 1

Candidate Starts for Asterius\_107:

(Start: 1 @57098 has 167 MA's), (2, 57116), (3, 57185), (4, 57203),

Gene: Astraea\_107 Start: 55874, Stop: 56095, Start Num: 1

Candidate Starts for Astraea\_107:

(Start: 1 @55874 has 167 MA's), (2, 55892), (3, 55961), (4, 55979),

Gene: Atlantean\_109 Start: 56105, Stop: 56326, Start Num: 1

Candidate Starts for Atlantean\_109:

(Start: 1 @56105 has 167 MA's), (2, 56123), (3, 56192), (4, 56210),

Gene: Audrick\_112 Start: 56084, Stop: 56305, Start Num: 1

Candidate Starts for Audrick\_112:

(Start: 1 @56084 has 167 MA's), (2, 56102), (3, 56171), (4, 56189),

Gene: Ava3\_111 Start: 57018, Stop: 57239, Start Num: 1

Candidate Starts for Ava3\_111:

(Start: 1 @57018 has 167 MA's), (2, 57036), (3, 57105), (4, 57123),

Gene: Babyland\_111 Start: 56193, Stop: 56414, Start Num: 1

Candidate Starts for Babyland\_111:

(Start: 1 @56193 has 167 MA's), (2, 56211), (3, 56280), (4, 56298),

Gene: BackyardAgain\_107 Start: 56020, Stop: 56241, Start Num: 1  
Candidate Starts for BackyardAgain\_107:  
(Start: 1 @56020 has 167 MA's), (2, 56038), (3, 56107), (4, 56125),

Gene: BadAgartude\_106 Start: 57309, Stop: 57530, Start Num: 1  
Candidate Starts for BadAgartude\_106:  
(Start: 1 @57309 has 167 MA's), (2, 57327), (3, 57396), (4, 57414),

Gene: BananaFence\_109 Start: 57274, Stop: 57495, Start Num: 1  
Candidate Starts for BananaFence\_109:  
(Start: 1 @57274 has 167 MA's), (2, 57292), (3, 57361), (4, 57379),

Gene: Bangla1971\_111 Start: 56553, Stop: 56774, Start Num: 1  
Candidate Starts for Bangla1971\_111:  
(Start: 1 @56553 has 167 MA's), (2, 56571), (3, 56640), (4, 56658),

Gene: Basquiat\_106 Start: 55736, Stop: 55957, Start Num: 1  
Candidate Starts for Basquiat\_106:  
(Start: 1 @55736 has 167 MA's), (2, 55754), (3, 55823), (4, 55841),

Gene: BeanWater\_102 Start: 56870, Stop: 57091, Start Num: 1  
Candidate Starts for BeanWater\_102:  
(Start: 1 @56870 has 167 MA's), (2, 56888), (3, 56957), (4, 56975),

Gene: BigCity\_118 Start: 59534, Stop: 59755, Start Num: 1  
Candidate Starts for BigCity\_118:  
(Start: 1 @59534 has 167 MA's), (2, 59552), (3, 59621), (4, 59639),

Gene: Bigswole\_114 Start: 58819, Stop: 59040, Start Num: 1  
Candidate Starts for Bigswole\_114:  
(Start: 1 @58819 has 167 MA's), (2, 58837), (3, 58906), (4, 58924),

Gene: Bipolarisk\_109 Start: 57276, Stop: 57497, Start Num: 1  
Candidate Starts for Bipolarisk\_109:  
(Start: 1 @57276 has 167 MA's), (2, 57294), (3, 57363), (4, 57381),

Gene: Blackbrain\_105 Start: 55567, Stop: 55788, Start Num: 1  
Candidate Starts for Blackbrain\_105:  
(Start: 1 @55567 has 167 MA's), (2, 55585), (3, 55654), (4, 55672),

Gene: Blackdragon\_106 Start: 56700, Stop: 56921, Start Num: 1  
Candidate Starts for Blackdragon\_106:  
(Start: 1 @56700 has 167 MA's), (2, 56718), (3, 56787), (4, 56805),

Gene: Blubba\_102 Start: 57307, Stop: 57528, Start Num: 1  
Candidate Starts for Blubba\_102:  
(Start: 1 @57307 has 167 MA's), (2, 57325), (3, 57394), (4, 57412),

Gene: Bonray\_110 Start: 57449, Stop: 57670, Start Num: 1  
Candidate Starts for Bonray\_110:  
(Start: 1 @57449 has 167 MA's), (2, 57467), (3, 57536), (4, 57554),

Gene: Bread\_110 Start: 57104, Stop: 57325, Start Num: 1  
Candidate Starts for Bread\_110:  
(Start: 1 @57104 has 167 MA's), (2, 57122), (3, 57191), (4, 57209),

Gene: Breeniome\_109 Start: 55452, Stop: 55673, Start Num: 1  
Candidate Starts for Breeniome\_109:  
(Start: 1 @55452 has 167 MA's), (2, 55470), (3, 55539), (4, 55557),

Gene: Burrough\_110 Start: 57603, Stop: 57824, Start Num: 1  
Candidate Starts for Burrough\_110:  
(Start: 1 @57603 has 167 MA's), (2, 57621), (3, 57690), (4, 57708),

Gene: Bxz1\_108 Start: 58807, Stop: 59028, Start Num: 1  
Candidate Starts for Bxz1\_108:  
(Start: 1 @58807 has 167 MA's), (2, 58825), (3, 58894), (4, 58912),

Gene: Cactojaque\_105 Start: 55674, Stop: 55895, Start Num: 1  
Candidate Starts for Cactojaque\_105:  
(Start: 1 @55674 has 167 MA's), (2, 55692), (3, 55761), (4, 55779),

Gene: Cali\_106 Start: 57605, Stop: 57826, Start Num: 1  
Candidate Starts for Cali\_106:  
(Start: 1 @57605 has 167 MA's), (2, 57623), (3, 57692), (4, 57710),

Gene: Cane17\_100 Start: 57365, Stop: 57586, Start Num: 1  
Candidate Starts for Cane17\_100:  
(Start: 1 @57365 has 167 MA's), (2, 57383), (3, 57452), (4, 57470),

Gene: Capablanca\_112 Start: 57855, Stop: 58076, Start Num: 1  
Candidate Starts for Capablanca\_112:  
(Start: 1 @57855 has 167 MA's), (2, 57873), (3, 57942), (4, 57960),

Gene: Caravan\_105 Start: 56962, Stop: 57183, Start Num: 1  
Candidate Starts for Caravan\_105:  
(Start: 1 @56962 has 167 MA's), (2, 56980), (3, 57049), (4, 57067),

Gene: Catera\_107 Start: 55878, Stop: 56099, Start Num: 1  
Candidate Starts for Catera\_107:  
(Start: 1 @55878 has 167 MA's), (2, 55896), (3, 55965), (4, 55983),

Gene: Chargie21\_106 Start: 55736, Stop: 55957, Start Num: 1  
Candidate Starts for Chargie21\_106:  
(Start: 1 @55736 has 167 MA's), (2, 55754), (3, 55823), (4, 55841),

Gene: CharlieB\_106 Start: 56007, Stop: 56228, Start Num: 1  
Candidate Starts for CharlieB\_106:  
(Start: 1 @56007 has 167 MA's), (2, 56025), (3, 56094), (4, 56112),

Gene: ChaylaJr\_105 Start: 55501, Stop: 55722, Start Num: 1  
Candidate Starts for ChaylaJr\_105:  
(Start: 1 @55501 has 167 MA's), (2, 55519), (3, 55588), (4, 55606),

Gene: ChickenPhender\_106 Start: 55804, Stop: 56025, Start Num: 1

Candidate Starts for ChickenPhender\_106:  
(Start: 1 @55804 has 167 MA's), (2, 55822), (3, 55891), (4, 55909),

Gene: Chomp\_108 Start: 57393, Stop: 57614, Start Num: 1  
Candidate Starts for Chomp\_108:  
(Start: 1 @57393 has 167 MA's), (2, 57411), (3, 57480), (4, 57498),

Gene: CindyLou\_111 Start: 57434, Stop: 57655, Start Num: 1  
Candidate Starts for CindyLou\_111:  
(Start: 1 @57434 has 167 MA's), (2, 57452), (3, 57521), (4, 57539),

Gene: Colt\_101 Start: 57961, Stop: 58182, Start Num: 1  
Candidate Starts for Colt\_101:  
(Start: 1 @57961 has 167 MA's), (2, 57979), (3, 58048), (4, 58066),

Gene: Concombres\_116 Start: 59765, Stop: 59986, Start Num: 1  
Candidate Starts for Concombres\_116:  
(Start: 1 @59765 has 167 MA's), (2, 59783), (3, 59852), (4, 59870),

Gene: DTDevon\_111 Start: 57645, Stop: 57866, Start Num: 1  
Candidate Starts for DTDevon\_111:  
(Start: 1 @57645 has 167 MA's), (2, 57663), (3, 57732), (4, 57750),

Gene: Daffodil\_115 Start: 57576, Stop: 57797, Start Num: 1  
Candidate Starts for Daffodil\_115:  
(Start: 1 @57576 has 167 MA's), (2, 57594), (3, 57663), (4, 57681),

Gene: Dandelion\_116 Start: 59757, Stop: 59978, Start Num: 1  
Candidate Starts for Dandelion\_116:  
(Start: 1 @59757 has 167 MA's), (2, 59775), (3, 59844), (4, 59862),

Gene: Darko\_110 Start: 57278, Stop: 57499, Start Num: 1  
Candidate Starts for Darko\_110:  
(Start: 1 @57278 has 167 MA's), (2, 57296), (3, 57365), (4, 57383),

Gene: Delilah\_110 Start: 57730, Stop: 57951, Start Num: 1  
Candidate Starts for Delilah\_110:  
(Start: 1 @57730 has 167 MA's), (2, 57748), (3, 57817), (4, 57835),

Gene: Delylah\_113 Start: 57269, Stop: 57490, Start Num: 1  
Candidate Starts for Delylah\_113:  
(Start: 1 @57269 has 167 MA's), (2, 57287), (3, 57356), (4, 57374),

Gene: Derek\_110 Start: 57195, Stop: 57416, Start Num: 1  
Candidate Starts for Derek\_110:  
(Start: 1 @57195 has 167 MA's), (2, 57213), (3, 57282), (4, 57300),

Gene: Dietrick\_102 Start: 55271, Stop: 55492, Start Num: 1  
Candidate Starts for Dietrick\_102:  
(Start: 1 @55271 has 167 MA's), (2, 55289), (3, 55358), (4, 55376),

Gene: DirtMonster\_104 Start: 56529, Stop: 56750, Start Num: 1  
Candidate Starts for DirtMonster\_104:



(Start: 1 @56529 has 167 MA's), (2, 56547), (3, 56616), (4, 56634),

Gene: DrPhinkDaddy\_109 Start: 57798, Stop: 58019, Start Num: 1  
Candidate Starts for DrPhinkDaddy\_109:  
(Start: 1 @57798 has 167 MA's), (2, 57816), (3, 57885), (4, 57903),

Gene: Drazdys\_109 Start: 56259, Stop: 56480, Start Num: 1  
Candidate Starts for Drazdys\_109:  
(Start: 1 @56259 has 167 MA's), (2, 56277), (3, 56346), (4, 56364),

Gene: ET08\_99 Start: 56259, Stop: 56480, Start Num: 1  
Candidate Starts for ET08\_99:  
(Start: 1 @56259 has 167 MA's), (2, 56277), (3, 56346), (4, 56364),

Gene: EasyJones\_112 Start: 56400, Stop: 56621, Start Num: 1  
Candidate Starts for EasyJones\_112:  
(Start: 1 @56400 has 167 MA's), (2, 56418), (3, 56487), (4, 56505),

Gene: EggyFarm\_118 Start: 59534, Stop: 59755, Start Num: 1  
Candidate Starts for EggyFarm\_118:  
(Start: 1 @59534 has 167 MA's), (2, 59552), (3, 59621), (4, 59639),

Gene: EmToTheThree\_112 Start: 58537, Stop: 58758, Start Num: 1  
Candidate Starts for EmToTheThree\_112:  
(Start: 1 @58537 has 167 MA's), (2, 58555), (3, 58624), (4, 58642),

Gene: EmmaElysia\_110 Start: 56324, Stop: 56545, Start Num: 1  
Candidate Starts for EmmaElysia\_110:  
(Start: 1 @56324 has 167 MA's), (2, 56342), (3, 56411), (4, 56429),

Gene: Erdmann\_111 Start: 57577, Stop: 57798, Start Num: 1  
Candidate Starts for Erdmann\_111:  
(Start: 1 @57577 has 167 MA's), (2, 57595), (3, 57664), (4, 57682),

Gene: ErnieJ\_105 Start: 55531, Stop: 55752, Start Num: 1  
Candidate Starts for ErnieJ\_105:  
(Start: 1 @55531 has 167 MA's), (2, 55549), (3, 55618), (4, 55636),

Gene: Essence\_107 Start: 56425, Stop: 56646, Start Num: 1  
Candidate Starts for Essence\_107:  
(Start: 1 @56425 has 167 MA's), (2, 56443), (3, 56512), (4, 56530),

Gene: Ewok\_111 Start: 56964, Stop: 57185, Start Num: 1  
Candidate Starts for Ewok\_111:  
(Start: 1 @56964 has 167 MA's), (2, 56982), (3, 57051), (4, 57069),

Gene: Flabslab\_104 Start: 54656, Stop: 54877, Start Num: 1  
Candidate Starts for Flabslab\_104:  
(Start: 1 @54656 has 167 MA's), (2, 54674), (3, 54743), (4, 54761),

Gene: Fludd\_110 Start: 56171, Stop: 56392, Start Num: 1  
Candidate Starts for Fludd\_110:  
(Start: 1 @56171 has 167 MA's), (2, 56189), (3, 56258), (4, 56276),

Gene: FoxtrotP1\_110 Start: 58747, Stop: 58968, Start Num: 1  
Candidate Starts for FoxtrotP1\_110:  
(Start: 1 @58747 has 167 MA's), (2, 58765), (3, 58834), (4, 58852),

Gene: FrayBell\_115 Start: 57911, Stop: 58132, Start Num: 1  
Candidate Starts for FrayBell\_115:  
(Start: 1 @57911 has 167 MA's), (2, 57929), (3, 57998), (4, 58016),

Gene: FudgeTart\_109 Start: 56605, Stop: 56826, Start Num: 1  
Candidate Starts for FudgeTart\_109:  
(Start: 1 @56605 has 167 MA's), (2, 56623), (3, 56692), (4, 56710),

Gene: Gabriel\_111 Start: 55831, Stop: 56052, Start Num: 1  
Candidate Starts for Gabriel\_111:  
(Start: 1 @55831 has 167 MA's), (2, 55849), (3, 55918), (4, 55936),

Gene: Gamgam\_110 Start: 56105, Stop: 56326, Start Num: 1  
Candidate Starts for Gamgam\_110:  
(Start: 1 @56105 has 167 MA's), (2, 56123), (3, 56192), (4, 56210),

Gene: Ghost\_109 Start: 56105, Stop: 56326, Start Num: 1  
Candidate Starts for Ghost\_109:  
(Start: 1 @56105 has 167 MA's), (2, 56123), (3, 56192), (4, 56210),

Gene: Gizmo\_114 Start: 58727, Stop: 58948, Start Num: 1  
Candidate Starts for Gizmo\_114:  
(Start: 1 @58727 has 167 MA's), (2, 58745), (3, 58814), (4, 58832),

Gene: Grasshills\_117 Start: 59534, Stop: 59755, Start Num: 1  
Candidate Starts for Grasshills\_117:  
(Start: 1 @59534 has 167 MA's), (2, 59552), (3, 59621), (4, 59639),

Gene: Grungle\_98 Start: 53848, Stop: 54069, Start Num: 1  
Candidate Starts for Grungle\_98:  
(Start: 1 @53848 has 167 MA's), (2, 53866), (3, 53935), (4, 53953),

Gene: Guwapp\_109 Start: 55996, Stop: 56217, Start Num: 1  
Candidate Starts for Guwapp\_109:  
(Start: 1 @55996 has 167 MA's), (2, 56014), (3, 56083), (4, 56101),

Gene: Halldule\_104 Start: 54874, Stop: 55095, Start Num: 1  
Candidate Starts for Halldule\_104:  
(Start: 1 @54874 has 167 MA's), (2, 54892), (3, 54961), (4, 54979),

Gene: HyRo\_101 Start: 56101, Stop: 56322, Start Num: 1  
Candidate Starts for HyRo\_101:  
(Start: 1 @56101 has 167 MA's), (2, 56119), (3, 56188), (4, 56206),

Gene: I3\_115 Start: 58062, Stop: 58283, Start Num: 1  
Candidate Starts for I3\_115:  
(Start: 1 @58062 has 167 MA's), (2, 58080), (3, 58149), (4, 58167),

Gene: IkeLoa\_103 Start: 55931, Stop: 56152, Start Num: 1  
Candidate Starts for IkeLoa\_103:  
(Start: 1 @55931 has 167 MA's), (2, 55949), (3, 56018), (4, 56036),

Gene: InigoMontoya\_111 Start: 56066, Stop: 56287, Start Num: 1  
Candidate Starts for InigoMontoya\_111:  
(Start: 1 @56066 has 167 MA's), (2, 56084), (3, 56153), (4, 56171),

Gene: InterFolia\_117 Start: 58847, Stop: 59068, Start Num: 1  
Candidate Starts for InterFolia\_117:  
(Start: 1 @58847 has 167 MA's), (2, 58865), (3, 58934), (4, 58952),

Gene: Iota\_105 Start: 56542, Stop: 56763, Start Num: 1  
Candidate Starts for Iota\_105:  
(Start: 1 @56542 has 167 MA's), (2, 56560), (3, 56629), (4, 56647),

Gene: Issimir\_109 Start: 57551, Stop: 57772, Start Num: 1  
Candidate Starts for Issimir\_109:  
(Start: 1 @57551 has 167 MA's), (2, 57569), (3, 57638), (4, 57656),

Gene: Izajani\_110 Start: 57757, Stop: 57978, Start Num: 1  
Candidate Starts for Izajani\_110:  
(Start: 1 @57757 has 167 MA's), (2, 57775), (3, 57844), (4, 57862),

Gene: JPickles\_108 Start: 55336, Stop: 55557, Start Num: 1  
Candidate Starts for JPickles\_108:  
(Start: 1 @55336 has 167 MA's), (2, 55354), (3, 55423), (4, 55441),

Gene: Janiyra\_112 Start: 57032, Stop: 57253, Start Num: 1  
Candidate Starts for Janiyra\_112:  
(Start: 1 @57032 has 167 MA's), (2, 57050), (3, 57119), (4, 57137),

Gene: JayJay\_111 Start: 58541, Stop: 58762, Start Num: 1  
Candidate Starts for JayJay\_111:  
(Start: 1 @58541 has 167 MA's), (2, 58559), (3, 58628), (4, 58646),

Gene: Jaygup\_110 Start: 56861, Stop: 57082, Start Num: 1  
Candidate Starts for Jaygup\_110:  
(Start: 1 @56861 has 167 MA's), (2, 56879), (3, 56948), (4, 56966),

Gene: Jedediah\_113 Start: 57394, Stop: 57615, Start Num: 1  
Candidate Starts for Jedediah\_113:  
(Start: 1 @57394 has 167 MA's), (2, 57412), (3, 57481), (4, 57499),

Gene: Jemmno\_110 Start: 56841, Stop: 57062, Start Num: 1  
Candidate Starts for Jemmno\_110:  
(Start: 1 @56841 has 167 MA's), (2, 56859), (3, 56928), (4, 56946),

Gene: Jessibeth14\_109 Start: 57362, Stop: 57583, Start Num: 1  
Candidate Starts for Jessibeth14\_109:  
(Start: 1 @57362 has 167 MA's), (2, 57380), (3, 57449), (4, 57467),

Gene: JulietS\_105 Start: 54727, Stop: 54948, Start Num: 1

Candidate Starts for JulietS\_105:

(Start: 1 @54727 has 167 MA's), (2, 54745), (3, 54814), (4, 54832),

Gene: JustHall\_107 Start: 56900, Stop: 57121, Start Num: 1

Candidate Starts for JustHall\_107:

(Start: 1 @56900 has 167 MA's), (2, 56918), (3, 56987), (4, 57005),

Gene: Kamryn\_110 Start: 58177, Stop: 58398, Start Num: 1

Candidate Starts for Kamryn\_110:

(Start: 1 @58177 has 167 MA's), (2, 58195), (3, 58264), (4, 58282),

Gene: Kboogie\_114 Start: 56533, Stop: 56754, Start Num: 1

Candidate Starts for Kboogie\_114:

(Start: 1 @56533 has 167 MA's), (2, 56551), (3, 56620), (4, 56638),

Gene: Khaleesi\_109 Start: 57476, Stop: 57697, Start Num: 1

Candidate Starts for Khaleesi\_109:

(Start: 1 @57476 has 167 MA's), (2, 57494), (3, 57563), (4, 57581),

Gene: Koguma\_107 Start: 55021, Stop: 55242, Start Num: 1

Candidate Starts for Koguma\_107:

(Start: 1 @55021 has 167 MA's), (2, 55039), (3, 55108), (4, 55126),

Gene: LRRHood\_104 Start: 56819, Stop: 57040, Start Num: 1

Candidate Starts for LRRHood\_104:

(Start: 1 @56819 has 167 MA's), (2, 56837), (3, 56906), (4, 56924),

Gene: Latch\_110 Start: 56105, Stop: 56326, Start Num: 1

Candidate Starts for Latch\_110:

(Start: 1 @56105 has 167 MA's), (2, 56123), (3, 56192), (4, 56210),

Gene: Lee7\_108 Start: 58110, Stop: 58331, Start Num: 1

Candidate Starts for Lee7\_108:

(Start: 1 @58110 has 167 MA's), (2, 58128), (3, 58197), (4, 58215),

Gene: LifeSavor\_109 Start: 56793, Stop: 57014, Start Num: 1

Candidate Starts for LifeSavor\_109:

(Start: 1 @56793 has 167 MA's), (2, 56811), (3, 56880), (4, 56898),

Gene: LinStu\_109 Start: 57427, Stop: 57648, Start Num: 1

Candidate Starts for LinStu\_109:

(Start: 1 @57427 has 167 MA's), (2, 57445), (3, 57514), (4, 57532),

Gene: Littleton\_110 Start: 56922, Stop: 57143, Start Num: 1

Candidate Starts for Littleton\_110:

(Start: 1 @56922 has 167 MA's), (2, 56940), (3, 57009), (4, 57027),

Gene: Loanshark\_109 Start: 57444, Stop: 57665, Start Num: 1

Candidate Starts for Loanshark\_109:

(Start: 1 @57444 has 167 MA's), (2, 57462), (3, 57531), (4, 57549),

Gene: LolaVinca\_111 Start: 57796, Stop: 58017, Start Num: 1

Candidate Starts for LolaVinca\_111:

(Start: 1 @57796 has 167 MA's), (2, 57814), (3, 57883), (4, 57901),

Gene: LordLeafolot\_114 Start: 58763, Stop: 58984, Start Num: 1

Candidate Starts for LordLeafolot\_114:

(Start: 1 @58763 has 167 MA's), (2, 58781), (3, 58850), (4, 58868),

Gene: Lukilu\_101 Start: 57209, Stop: 57430, Start Num: 1

Candidate Starts for Lukilu\_101:

(Start: 1 @57209 has 167 MA's), (2, 57227), (3, 57296), (4, 57314),

Gene: Maby2021\_110 Start: 57570, Stop: 57791, Start Num: 1

Candidate Starts for Maby2021\_110:

(Start: 1 @57570 has 167 MA's), (2, 57588), (3, 57657), (4, 57675),

Gene: Mangeria\_110 Start: 57639, Stop: 57860, Start Num: 1

Candidate Starts for Mangeria\_110:

(Start: 1 @57639 has 167 MA's), (2, 57657), (3, 57726), (4, 57744),

Gene: Matsumoto\_107 Start: 56421, Stop: 56642, Start Num: 1

Candidate Starts for Matsumoto\_107:

(Start: 1 @56421 has 167 MA's), (2, 56439), (3, 56508), (4, 56526),

Gene: McGee\_112 Start: 56174, Stop: 56395, Start Num: 1

Candidate Starts for McGee\_112:

(Start: 1 @56174 has 167 MA's), (2, 56192), (3, 56261), (4, 56279),

Gene: McWolfish\_108 Start: 57359, Stop: 57580, Start Num: 1

Candidate Starts for McWolfish\_108:

(Start: 1 @57359 has 167 MA's), (2, 57377), (3, 57446), (4, 57464),

Gene: Megamind\_109 Start: 57243, Stop: 57464, Start Num: 1

Candidate Starts for Megamind\_109:

(Start: 1 @57243 has 167 MA's), (2, 57261), (3, 57330), (4, 57348),

Gene: Melpomini\_104 Start: 54709, Stop: 54930, Start Num: 1

Candidate Starts for Melpomini\_104:

(Start: 1 @54709 has 167 MA's), (2, 54727), (3, 54796), (4, 54814),

Gene: MikeLiesIn\_111 Start: 57590, Stop: 57811, Start Num: 1

Candidate Starts for MikeLiesIn\_111:

(Start: 1 @57590 has 167 MA's), (2, 57608), (3, 57677), (4, 57695),

Gene: Mikro\_108 Start: 58812, Stop: 59033, Start Num: 1

Candidate Starts for Mikro\_108:

(Start: 1 @58812 has 167 MA's), (2, 58830), (3, 58899), (4, 58917),

Gene: MoMoMixon\_111 Start: 57066, Stop: 57287, Start Num: 1

Candidate Starts for MoMoMixon\_111:

(Start: 1 @57066 has 167 MA's), (2, 57084), (3, 57153), (4, 57171),

Gene: Momo\_109 Start: 56105, Stop: 56326, Start Num: 1

Candidate Starts for Momo\_109:

(Start: 1 @56105 has 167 MA's), (2, 56123), (3, 56192), (4, 56210),

Gene: Morizzled23\_110 Start: 56470, Stop: 56691, Start Num: 1  
Candidate Starts for Morizzled23\_110:  
(Start: 1 @56470 has 167 MA's), (2, 56488), (3, 56557), (4, 56575),

Gene: Naija\_109 Start: 56105, Stop: 56326, Start Num: 1  
Candidate Starts for Naija\_109:  
(Start: 1 @56105 has 167 MA's), (2, 56123), (3, 56192), (4, 56210),

Gene: Napoleon13\_106 Start: 55147, Stop: 55368, Start Num: 1  
Candidate Starts for Napoleon13\_106:  
(Start: 1 @55147 has 167 MA's), (2, 55165), (3, 55234), (4, 55252),

Gene: Nappy\_113 Start: 58500, Stop: 58721, Start Num: 1  
Candidate Starts for Nappy\_113:  
(Start: 1 @58500 has 167 MA's), (2, 58518), (3, 58587), (4, 58605),

Gene: Naval22\_115 Start: 59033, Stop: 59254, Start Num: 1  
Candidate Starts for Naval22\_115:  
(Start: 1 @59033 has 167 MA's), (2, 59051), (3, 59120), (4, 59138),

Gene: NedWong\_111 Start: 57577, Stop: 57798, Start Num: 1  
Candidate Starts for NedWong\_111:  
(Start: 1 @57577 has 167 MA's), (2, 57595), (3, 57664), (4, 57682),

Gene: Ngannou\_106 Start: 55087, Stop: 55308, Start Num: 1  
Candidate Starts for Ngannou\_106:  
(Start: 1 @55087 has 167 MA's), (2, 55105), (3, 55174), (4, 55192),

Gene: Nidhogg\_111 Start: 57311, Stop: 57532, Start Num: 1  
Candidate Starts for Nidhogg\_111:  
(Start: 1 @57311 has 167 MA's), (2, 57329), (3, 57398), (4, 57416),

Gene: NoodleTree\_117 Start: 57669, Stop: 57890, Start Num: 1  
Candidate Starts for NoodleTree\_117:  
(Start: 1 @57669 has 167 MA's), (2, 57687), (3, 57756), (4, 57774),

Gene: Norm\_111 Start: 58272, Stop: 58493, Start Num: 1  
Candidate Starts for Norm\_111:  
(Start: 1 @58272 has 167 MA's), (2, 58290), (3, 58359), (4, 58377),

Gene: NuevoMundo\_116 Start: 59851, Stop: 60072, Start Num: 1  
Candidate Starts for NuevoMundo\_116:  
(Start: 1 @59851 has 167 MA's), (2, 59869), (3, 59938), (4, 59956),

Gene: ParkTD\_111 Start: 57573, Stop: 57794, Start Num: 1  
Candidate Starts for ParkTD\_111:  
(Start: 1 @57573 has 167 MA's), (2, 57591), (3, 57660), (4, 57678),

Gene: Patter\_110 Start: 56122, Stop: 56343, Start Num: 1  
Candidate Starts for Patter\_110:  
(Start: 1 @56122 has 167 MA's), (2, 56140), (3, 56209), (4, 56227),

Gene: Phlegm\_112 Start: 56105, Stop: 56326, Start Num: 1  
Candidate Starts for Phlegm\_112:  
(Start: 1 @56105 has 167 MA's), (2, 56123), (3, 56192), (4, 56210),

Gene: Phox\_107 Start: 57853, Stop: 58074, Start Num: 1  
Candidate Starts for Phox\_107:  
(Start: 1 @57853 has 167 MA's), (2, 57871), (3, 57940), (4, 57958),

Gene: Phusco\_110 Start: 56870, Stop: 57091, Start Num: 1  
Candidate Starts for Phusco\_110:  
(Start: 1 @56870 has 167 MA's), (2, 56888), (3, 56957), (4, 56975),

Gene: Pier\_115 Start: 59859, Stop: 60080, Start Num: 1  
Candidate Starts for Pier\_115:  
(Start: 1 @59859 has 167 MA's), (2, 59877), (3, 59946), (4, 59964),

Gene: Pinkcreek\_101 Start: 55193, Stop: 55414, Start Num: 1  
Candidate Starts for Pinkcreek\_101:  
(Start: 1 @55193 has 167 MA's), (2, 55211), (3, 55280), (4, 55298),

Gene: Pio\_114 Start: 59463, Stop: 59684, Start Num: 1  
Candidate Starts for Pio\_114:  
(Start: 1 @59463 has 167 MA's), (2, 59481), (3, 59550), (4, 59568),

Gene: Pivoine\_109 Start: 56105, Stop: 56326, Start Num: 1  
Candidate Starts for Pivoine\_109:  
(Start: 1 @56105 has 167 MA's), (2, 56123), (3, 56192), (4, 56210),

Gene: Pleione\_113 Start: 57740, Stop: 57961, Start Num: 1  
Candidate Starts for Pleione\_113:  
(Start: 1 @57740 has 167 MA's), (2, 57758), (3, 57827), (4, 57845),

Gene: PurduePete\_110 Start: 57997, Stop: 58218, Start Num: 1  
Candidate Starts for PurduePete\_110:  
(Start: 1 @57997 has 167 MA's), (2, 58015), (3, 58084), (4, 58102),

Gene: QBert\_104 Start: 56576, Stop: 56797, Start Num: 1  
Candidate Starts for QBert\_104:  
(Start: 1 @56576 has 167 MA's), (2, 56594), (3, 56663), (4, 56681),

Gene: Quasimodo\_111 Start: 57532, Stop: 57753, Start Num: 1  
Candidate Starts for Quasimodo\_111:  
(Start: 1 @57532 has 167 MA's), (2, 57550), (3, 57619), (4, 57637),

Gene: Rabinovish\_108 Start: 57769, Stop: 57990, Start Num: 1  
Candidate Starts for Rabinovish\_108:  
(Start: 1 @57769 has 167 MA's), (2, 57787), (3, 57856), (4, 57874),

Gene: Rahel\_109 Start: 56462, Stop: 56683, Start Num: 1  
Candidate Starts for Rahel\_109:  
(Start: 1 @56462 has 167 MA's), (2, 56480), (3, 56549), (4, 56567),

Gene: Rizal\_106 Start: 55610, Stop: 55831, Start Num: 1

Candidate Starts for Rizal\_106:

(Start: 1 @55610 has 167 MA's), (2, 55628), (3, 55697), (4, 55715),

Gene: RoMag\_105 Start: 56782, Stop: 57003, Start Num: 1

Candidate Starts for RoMag\_105:

(Start: 1 @56782 has 167 MA's), (2, 56800), (3, 56869), (4, 56887),

Gene: Ronan\_104 Start: 54733, Stop: 54954, Start Num: 1

Candidate Starts for Ronan\_104:

(Start: 1 @54733 has 167 MA's), (2, 54751), (3, 54820), (4, 54838),

Gene: Roots515\_109 Start: 57770, Stop: 57991, Start Num: 1

Candidate Starts for Roots515\_109:

(Start: 1 @57770 has 167 MA's), (2, 57788), (3, 57857), (4, 57875),

Gene: Salacia\_114 Start: 57911, Stop: 58132, Start Num: 1

Candidate Starts for Salacia\_114:

(Start: 1 @57911 has 167 MA's), (2, 57929), (3, 57998), (4, 58016),

Gene: Sauce\_110 Start: 56517, Stop: 56738, Start Num: 1

Candidate Starts for Sauce\_110:

(Start: 1 @56517 has 167 MA's), (2, 56535), (3, 56604), (4, 56622),

Gene: ScottMcG\_107 Start: 56532, Stop: 56753, Start Num: 1

Candidate Starts for ScottMcG\_107:

(Start: 1 @56532 has 167 MA's), (2, 56550), (3, 56619), (4, 56637),

Gene: Sebata\_111 Start: 57986, Stop: 58207, Start Num: 1

Candidate Starts for Sebata\_111:

(Start: 1 @57986 has 167 MA's), (2, 58004), (3, 58073), (4, 58091),

Gene: Shaqnato\_103 Start: 55576, Stop: 55797, Start Num: 1

Candidate Starts for Shaqnato\_103:

(Start: 1 @55576 has 167 MA's), (2, 55594), (3, 55663), (4, 55681),

Gene: Shelob\_112 Start: 58358, Stop: 58579, Start Num: 1

Candidate Starts for Shelob\_112:

(Start: 1 @58358 has 167 MA's), (2, 58376), (3, 58445), (4, 58463),

Gene: ShiaLabeouf\_109 Start: 56897, Stop: 57118, Start Num: 1

Candidate Starts for ShiaLabeouf\_109:

(Start: 1 @56897 has 167 MA's), (2, 56915), (3, 56984), (4, 57002),

Gene: Shifa\_98 Start: 55367, Stop: 55588, Start Num: 1

Candidate Starts for Shifa\_98:

(Start: 1 @55367 has 167 MA's), (2, 55385), (3, 55454), (4, 55472),

Gene: Shnickers\_110 Start: 56861, Stop: 57082, Start Num: 1

Candidate Starts for Shnickers\_110:

(Start: 1 @56861 has 167 MA's), (2, 56879), (3, 56948), (4, 56966),

Gene: Shrimp\_110 Start: 57581, Stop: 57802, Start Num: 1

Candidate Starts for Shrimp\_110:



(Start: 1 @57581 has 167 MA's), (2, 57599), (3, 57668), (4, 57686),

Gene: SilverDipper\_111 Start: 56105, Stop: 56326, Start Num: 1

Candidate Starts for SilverDipper\_111:

(Start: 1 @56105 has 167 MA's), (2, 56123), (3, 56192), (4, 56210),

Gene: SmallFry\_110 Start: 56086, Stop: 56307, Start Num: 1

Candidate Starts for SmallFry\_110:

(Start: 1 @56086 has 167 MA's), (2, 56104), (3, 56173), (4, 56191),

Gene: Spec\_106 Start: 56626, Stop: 56847, Start Num: 1

Candidate Starts for Spec\_106:

(Start: 1 @56626 has 167 MA's), (2, 56644), (3, 56713), (4, 56731),

Gene: Specks\_115 Start: 58760, Stop: 58981, Start Num: 1

Candidate Starts for Specks\_115:

(Start: 1 @58760 has 167 MA's), (2, 58778), (3, 58847), (4, 58865),

Gene: Sprinklers\_106 Start: 56142, Stop: 56363, Start Num: 1

Candidate Starts for Sprinklers\_106:

(Start: 1 @56142 has 167 MA's), (2, 56160), (3, 56229), (4, 56247),

Gene: Spud\_110 Start: 57657, Stop: 57878, Start Num: 1

Candidate Starts for Spud\_110:

(Start: 1 @57657 has 167 MA's), (2, 57675), (3, 57744), (4, 57762),

Gene: SrishMeg2525\_109 Start: 57679, Stop: 57900, Start Num: 1

Candidate Starts for SrishMeg2525\_109:

(Start: 1 @57679 has 167 MA's), (2, 57697), (3, 57766), (4, 57784),

Gene: StephanieG\_109 Start: 58487, Stop: 58708, Start Num: 1

Candidate Starts for StephanieG\_109:

(Start: 1 @58487 has 167 MA's), (2, 58505), (3, 58574), (4, 58592),

Gene: Stubby\_102 Start: 55683, Stop: 55904, Start Num: 1

Candidate Starts for Stubby\_102:

(Start: 1 @55683 has 167 MA's), (2, 55701), (3, 55770), (4, 55788),

Gene: StubbySaigey\_113 Start: 56274, Stop: 56495, Start Num: 1

Candidate Starts for StubbySaigey\_113:

(Start: 1 @56274 has 167 MA's), (2, 56292), (3, 56361), (4, 56379),

Gene: Teardrop\_109 Start: 56084, Stop: 56305, Start Num: 1

Candidate Starts for Teardrop\_109:

(Start: 1 @56084 has 167 MA's), (2, 56102), (3, 56171), (4, 56189),

Gene: TinyTim\_110 Start: 57337, Stop: 57558, Start Num: 1

Candidate Starts for TinyTim\_110:

(Start: 1 @57337 has 167 MA's), (2, 57355), (3, 57424), (4, 57442),

Gene: Tonenili\_125 Start: 60800, Stop: 61021, Start Num: 1

Candidate Starts for Tonenili\_125:

(Start: 1 @60800 has 167 MA's), (2, 60818), (3, 60887), (5, 60971),

Gene: Tortoise16\_107 Start: 56685, Stop: 56906, Start Num: 1  
Candidate Starts for Tortoise16\_107:  
(Start: 1 @56685 has 167 MA's), (2, 56703), (3, 56772), (4, 56790),

Gene: Trinitium\_107 Start: 56040, Stop: 56261, Start Num: 1  
Candidate Starts for Trinitium\_107:  
(Start: 1 @56040 has 167 MA's), (2, 56058), (3, 56127), (4, 56145),

Gene: Turret\_105 Start: 55485, Stop: 55706, Start Num: 1  
Candidate Starts for Turret\_105:  
(Start: 1 @55485 has 167 MA's), (2, 55503), (3, 55572), (4, 55590),

Gene: Tyke\_111 Start: 57992, Stop: 58213, Start Num: 1  
Candidate Starts for Tyke\_111:  
(Start: 1 @57992 has 167 MA's), (2, 58010), (3, 58079), (4, 58097),

Gene: ValleyTerrace\_110 Start: 56105, Stop: 56326, Start Num: 1  
Candidate Starts for ValleyTerrace\_110:  
(Start: 1 @56105 has 167 MA's), (2, 56123), (3, 56192), (4, 56210),

Gene: Wally\_109 Start: 56115, Stop: 56336, Start Num: 1  
Candidate Starts for Wally\_109:  
(Start: 1 @56115 has 167 MA's), (2, 56133), (3, 56202), (4, 56220),

Gene: Willis\_111 Start: 57472, Stop: 57693, Start Num: 1  
Candidate Starts for Willis\_111:  
(Start: 1 @57472 has 167 MA's), (2, 57490), (3, 57559), (4, 57577),

Gene: Yassified\_107 Start: 56192, Stop: 56413, Start Num: 1  
Candidate Starts for Yassified\_107:  
(Start: 1 @56192 has 167 MA's), (2, 56210), (3, 56279), (4, 56297),

Gene: YemiJoy2021\_111 Start: 57574, Stop: 57795, Start Num: 1  
Candidate Starts for YemiJoy2021\_111:  
(Start: 1 @57574 has 167 MA's), (2, 57592), (3, 57661), (4, 57679),

Gene: YoungMoneyMata\_111 Start: 56741, Stop: 56962, Start Num: 1  
Candidate Starts for YoungMoneyMata\_111:  
(Start: 1 @56741 has 167 MA's), (2, 56759), (3, 56828), (4, 56846),

Gene: Yucca\_110 Start: 57256, Stop: 57477, Start Num: 1  
Candidate Starts for Yucca\_110:  
(Start: 1 @57256 has 167 MA's), (2, 57274), (3, 57343), (4, 57361),

Gene: Zalkecks\_111 Start: 57257, Stop: 57478, Start Num: 1  
Candidate Starts for Zalkecks\_111:  
(Start: 1 @57257 has 167 MA's), (2, 57275), (3, 57344), (4, 57362),

Gene: Zeenon\_112 Start: 57342, Stop: 57563, Start Num: 1  
Candidate Starts for Zeenon\_112:  
(Start: 1 @57342 has 167 MA's), (2, 57360), (3, 57429), (4, 57447),

Gene: ZygoTaiga\_109 Start: 58502, Stop: 58723, Start Num: 1  
Candidate Starts for ZygoTaiga\_109:  
(Start: 1 @58502 has 167 MA's), (2, 58520), (3, 58589), (4, 58607),