



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 308168 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308168 has 165 members, 29 are drafts.

Phages represented in each track:

- Track 1 : Blackdragon\_187, Trinitium\_190, Nidhogg\_194, Belieber\_187, SilverDipper\_196, Kboogie\_197, Roots515\_195, Littleton\_196, BackyardAgain\_190, Turret\_187, JulietS\_184, ZygoTaiga\_189, Babyland\_195, Daffodil\_197, ChickenPhender\_190, Willis\_193, Rahel\_194, Amataga\_193, Flabslab\_189, FudgeTart\_188, McWolfish\_190, Phlegm\_196, Audrick\_196, Chargie21\_191, Erdmann\_194, Rabinovish\_187, GlutenPhree\_193, Napoleon13\_191, Bezza\_181, Cactojaque\_189, Blackbrain\_190, Ading\_193, BobaPhatt\_186, Latch\_192, Alice\_180, JustHall\_188, NedWong\_192, Naija\_193, Gizmo\_198, McGee\_193, Phox\_193, Delylah\_194, Khaleesi\_192, BeanWater\_184, Delilah\_191, Jezreel\_190, Lethe\_193, Naval22\_200, EasyJones\_197, Janiyra\_197, Norm\_192, StubbySaigey\_197, Halldule\_185, Domi\_187, NoodleTree\_199, Capablanca\_197, Phusco\_192, Dessert\_190, Bipolarisk\_191, Asterius\_194, Zeenon\_195, Melpomini\_187, CharlieB\_186, JPickles\_189, Zalkecks\_192, JayJay\_195, Quasimodo\_196, EmToTheThree\_194, Izajani\_191, LinStu\_191, SoilZilla\_189, Koguma\_191, ChaylaJr\_191, MikeLiesIn\_194, Stubby\_178, SrishMeg2525\_190, Lukilu\_183, Cleatunium\_186, DeejaClivia\_181, Rocha\_190, Dietrick\_183, Pinkcreek\_177, Fixie\_192, Matsumoto\_192, SVoro\_189, OrediggerDelux\_189, Moiqah\_188, Mikro\_188, PurduePete\_193, Pleione\_197, Momo\_193, Mangeria\_193, Lee7\_193, StephanieG\_190, Fludd\_194, CindyLou\_194, Grungle\_178, RoMag\_188, Moby\_189, Gamgam\_193, Yucca\_193, ErnieJ\_186, ValleyTerrace\_193, DrPhinkDaddy\_190, Ablatia\_193, Atlantean\_192, Chomp\_192, TinyTim\_191, Maby2021\_192, Loanshark\_190, Ewok\_192, Basquiat\_191, Pivoine\_193, InigoMontoya\_195, Megamind\_190, Morizzled23\_191, Sprinklers\_190, Shaqnato\_185, YemiJoy2021\_193, Jessibeth14\_193, Bread\_188, Ghost\_193, Bonray\_195, Ngannou\_189, ParkTD\_191, HyRo\_181
- Track 2 : Ronan\_188, LolaVinca\_191, Bowman\_191, Labradorite\_191, Guwapp\_188, Darko\_192, Shrimp\_194, Pupusa\_197, BananaFence\_190, Grasshills\_200, Sauce\_189, Breeniome\_192, Primadonna\_187, Duckfeet\_187, Patter\_193, FrayBell\_196, SmallFry\_193, Concombre\_197, ArcherS7\_192, I3\_201, Iota\_187, Demodog\_198, Salacia\_193, DirtMonster\_186, LordLeafolot\_194, Derek\_190, EggyFarm\_201, YoungMoneyMata\_192, ShiaLabeouf\_190, Tainan\_194, DTDevon\_195, PharkleMinkus\_195, Astraea\_187, Yassified\_189, BigCity\_201, Spec\_188, Nappy\_193, Jedediah\_193
- Track 3 : Jemmno\_192

### **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 136 of the 136 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_193, Ading\_193, Alice\_180, Amataga\_193, ArcherS7\_192, Asterius\_194, Astraea\_187, Atlantean\_192, Audrick\_196, Babyland\_195, BackyardAgain\_190, BananaFence\_190, Basquiat\_191, BeanWater\_184, Belieber\_187, Bezza\_181, BigCity\_201, Bipolarisk\_191, Blackbrain\_190, Blackdragon\_187, BobaPhatt\_186, Bonray\_195, Bowman\_191, Bread\_188, Breeniome\_192, Cactojaque\_189, Capablanca\_197, Chargie21\_191, CharlieB\_186, ChaylaJr\_191, ChickenPhender\_190, Chomp\_192, CindyLou\_194, Cleatunium\_186, Concombre\_197, DTDevon\_195, Daffodil\_197, Darko\_192, DeejaClivia\_181, Delilah\_191, Delylah\_194, Demodog\_198, Derek\_190, Dessert\_190, Dietrick\_183, DirtMonster\_186, Domi\_187, DrPhinkDaddy\_190, Duckfeet\_187, EasyJones\_197, EggyFarm\_201, EmToTheThree\_194, Erdmann\_194, ErnieJ\_186, Ewok\_192, Fixie\_192, Flabslab\_189, Fludd\_194, FrayBell\_196, FudgeTart\_188, Gamgam\_193, Ghost\_193, Gizmo\_198, GlutenPhree\_193, Grasshills\_200, Grungle\_178, Guwapp\_188, Halldule\_185, HyRo\_181, I3\_201, InigoMontoya\_195, Iota\_187, Izajani\_191, JPickles\_189, Janiyra\_197, JayJay\_195, Jedediah\_193, Jemmno\_192, Jessibeth14\_193, Jezreel\_190, JulietS\_184, JustHall\_188, Kboogie\_197, Khaleesi\_192, Koguma\_191, Labradorite\_191, Latch\_192, Lee7\_193, Lethe\_193, LinStu\_191, Littleton\_196, Loanshark\_190, LolaVinca\_191, LordLeafolot\_194, Lukilu\_183, Maby2021\_192, Mangeria\_193, Matsumoto\_192, McGee\_193, McWolfish\_190, Megamind\_190, Melpomini\_187, MikeLiesIn\_194, Mikro\_188, Moby\_189, Moiqah\_188, Momo\_193, Morizzled23\_191, Naija\_193, Napoleon13\_191, Nappy\_193, Naval22\_200, NedWong\_192, Ngannou\_189, Nidhogg\_194, NoodleTree\_199, Norm\_192, OrediggerDelux\_189, ParkTD\_191, Patter\_193, PharkleMinkus\_195, Phlegm\_196, Phox\_193, Phusco\_192, Pinkcreek\_177, Pivoine\_193, Pleione\_197, Primadonna\_187, Pupusa\_197, PurduePete\_193, Quasimodo\_196, Rabinovish\_187, Rahel\_194, RoMag\_188, Rocha\_190, Ronan\_188, Roots515\_195, SVoro\_189, Salacia\_193, Sauce\_189, Shaqnato\_185, ShiaLabeouf\_190, Shrimp\_194, SilverDipper\_196, SmallFry\_193, SoilZilla\_189, Spec\_188, Sprinklers\_190, SrishMeg2525\_190, StephanieG\_190, StubbySaigey\_197, Stubby\_178, Tainan\_194, TinyTim\_191, Trinitium\_190, Turret\_187, ValleyTerrace\_193, Willis\_193, Yassified\_189, YemiJoy2021\_193, YoungMoneyMata\_192, Yucca\_193, Zalkecks\_192, Zeenon\_195, ZygoTaiga\_189,

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 2:

- Found in 165 of 165 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 136 of 136
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Ablatia\_193 (C1), Ading\_193 (C1), Alice\_180 (C1), Amataga\_193 (C1), ArcherS7\_192 (C1), Asterius\_194 (C1), Astraea\_187 (C1), Atlantean\_192 (C1), Audrick\_196 (C1), Babyland\_195 (C1), BackyardAgain\_190 (C1), BananaFence\_190 (C1), Basquiat\_191 (C1), BeanWater\_184 (C1), Belieber\_187 (C1), Bezza\_181 (C1), BigCity\_201 (C1), Bipolarisk\_191 (C1), Blackbrain\_190 (C1), Blackdragon\_187 (C1), BobaPhatt\_186 (C1), Bonray\_195 (C1), Bowman\_191 (C1), Bread\_188 (C1), Breeniome\_192 (C1), Cactojaque\_189 (C1), Capablanca\_197 (C1), Chargie21\_191 (C1), CharlieB\_186 (C1), ChaylaJr\_191 (C1), ChickenPhender\_190 (C1), Chomp\_192 (C1), CindyLou\_194 (C1), Cleatunium\_186 (C1), Concombre\_197 (C1), DTDevon\_195 (C1), Daffodil\_197 (C1), Darko\_192 (C1), DeejaClivia\_181 (C1), Delilah\_191 (C1), Delylah\_194 (C1), Demodog\_198 (C1), Derek\_190 (C1), Dessert\_190 (C1), Dietrick\_183 (C1), DirtMonster\_186 (C1), Domi\_187 (C1), DrPhinkDaddy\_190 (C1), Duckfeet\_187 (C1), EasyJones\_197 (C1), EggyFarm\_201 (C1), EmToTheThree\_194 (C1), Erdmann\_194 (C1), ErnieJ\_186 (C1), Ewok\_192 (C1), Fixie\_192 (C1), Flabslab\_189 (C1), Fludd\_194 (C1), FrayBell\_196 (C1), FudgeTart\_188 (C1), Gamgam\_193 (C1), Ghost\_193 (C1), Gizmo\_198 (C1), GlutenPhree\_193 (C1), Grasshills\_200 (C1), Grungle\_178 (C1), Guwapp\_188 (C1), Halldule\_185 (C1), HyRo\_181 (C1), I3\_201 (C1), InigoMontoya\_195 (C1), Iota\_187 (C1), Izajani\_191 (C1), JPickles\_189 (C1), Janiyra\_197 (C1), JayJay\_195 (C1), Jedediah\_193 (C1), Jemmno\_192 (C1), Jessibeth14\_193 (C1), Jezreel\_190 (C1), JulietS\_184 (C1), JustHall\_188 (C1), Kboogie\_197 (C1), Khaleesi\_192 (C1), Koguma\_191 (C1), Labradorite\_191 (C1), Latch\_192 (C1), Lee7\_193 (C1), Lethe\_193 (C1), LinStu\_191 (C1), Littleton\_196 (C1), Loanshark\_190 (C1), LolaVinca\_191 (C1), LordLeafolot\_194 (C1), Lukilu\_183 (C1), Maby2021\_192 (C1), Mangeria\_193 (C1), Matsumoto\_192 (C1), McGee\_193 (C1), McWolfish\_190 (C1), Megamind\_190 (C1), Melpomini\_187 (C1), MikeLiesIn\_194 (C1), Mikro\_188 (C1), Moby\_189 (C1), Moiqah\_188 (C1), Momo\_193 (C1), Morizzled23\_191 (C1), Naija\_193 (C1), Napoleon13\_191 (C1), Nappy\_193 (C1), Naval22\_200 (C1), NedWong\_192 (C1), Ngannou\_189 (C1), Nidhogg\_194 (C1), NoodleTree\_199 (C1), Norm\_192 (C1), OrediggerDelux\_189 (C1), ParkTD\_191 (C1), Patter\_193 (C1), PharkleMinkus\_195 (C1), Phlegm\_196 (C1), Phox\_193 (C1), Phusco\_192 (C1), Pinkcreek\_177 (C1), Pivoine\_193 (C1), Pleione\_197 (C1), Primadonna\_187 (C1), Pupusa\_197 (C1), PurduePete\_193 (C1), Quasimodo\_196 (C1), Rabinovish\_187 (C1), Rahel\_194 (C1), RoMag\_188 (C1), Rocha\_190 (C1), Ronan\_188 (C1), Roots515\_195 (C1), SVoro\_189 (C1), Salacia\_193 (C1), Sauce\_189 (C1), Shaqnato\_185 (C1), ShiaLabeouf\_190 (C1), Shrimp\_194 (C1), SilverDipper\_196 (C1), SmallFry\_193 (C1), SoilZilla\_189 (C1), Spec\_188 (C1), Sprinklers\_190 (C1), SrishMeg2525\_190 (C1), StephanieG\_190 (C1), StubbySaigey\_197 (C1), Stubby\_178 (C1), Tainan\_194 (C1), TinyTim\_191 (C1), Trinitium\_190 (C1), Turret\_187 (C1), ValleyTerrace\_193 (C1), Willis\_193 (C1), Yassified\_189 (C1), YemiJoy2021\_193 (C1), YoungMoneyMata\_192 (C1), Yucca\_193 (C1), Zalkecks\_192 (C1), Zeenon\_195 (C1), ZygoTaiga\_189 (C1),

### Summary by clusters:

There is one cluster represented in this pham: C1

Info for manual annotations of cluster C1:

- Start number 2 was manually annotated 136 times for cluster C1.

### Gene Information:

Gene: Ablatia\_193 Start: 103165, Stop: 103254, Start Num: 2  
Candidate Starts for Ablatia\_193:  
(1, 102913), (Start: 2 @103165 has 136 MA's), (3, 103210),

Gene: Ading\_193 Start: 103000, Stop: 103089, Start Num: 2  
Candidate Starts for Ading\_193:  
(1, 102748), (Start: 2 @103000 has 136 MA's), (3, 103045),

Gene: Alice\_180 Start: 102055, Stop: 102144, Start Num: 2  
Candidate Starts for Alice\_180:  
(1, 101803), (Start: 2 @102055 has 136 MA's), (3, 102100),

Gene: Amataga\_193 Start: 101416, Stop: 101505, Start Num: 2  
Candidate Starts for Amataga\_193:  
(1, 101164), (Start: 2 @101416 has 136 MA's), (3, 101461),

Gene: ArcherS7\_192 Start: 102446, Stop: 102538, Start Num: 2  
Candidate Starts for ArcherS7\_192:  
(1, 102194), (Start: 2 @102446 has 136 MA's),

Gene: Asterius\_194 Start: 102133, Stop: 102222, Start Num: 2  
Candidate Starts for Asterius\_194:  
(1, 101881), (Start: 2 @102133 has 136 MA's), (3, 102178),

Gene: Astraea\_187 Start: 101508, Stop: 101600, Start Num: 2  
Candidate Starts for Astraea\_187:  
(1, 101256), (Start: 2 @101508 has 136 MA's),

Gene: Atlantean\_192 Start: 101416, Stop: 101505, Start Num: 2  
Candidate Starts for Atlantean\_192:  
(1, 101164), (Start: 2 @101416 has 136 MA's), (3, 101461),

Gene: Audrick\_196 Start: 102098, Stop: 102187, Start Num: 2  
Candidate Starts for Audrick\_196:  
(1, 101846), (Start: 2 @102098 has 136 MA's), (3, 102143),

Gene: Babyland\_195 Start: 102193, Stop: 102282, Start Num: 2  
Candidate Starts for Babyland\_195:  
(1, 101941), (Start: 2 @102193 has 136 MA's), (3, 102238),

Gene: BackyardAgain\_190 Start: 100894, Stop: 100983, Start Num: 2  
Candidate Starts for BackyardAgain\_190:  
(1, 100642), (Start: 2 @100894 has 136 MA's), (3, 100939),

Gene: BananaFence\_190 Start: 102137, Stop: 102229, Start Num: 2  
Candidate Starts for BananaFence\_190:  
(1, 101885), (Start: 2 @102137 has 136 MA's),

Gene: Basquiat\_191 Start: 101720, Stop: 101809, Start Num: 2  
Candidate Starts for Basquiat\_191:  
(1, 101468), (Start: 2 @101720 has 136 MA's), (3, 101765),

Gene: BeanWater\_184 Start: 101460, Stop: 101549, Start Num: 2

Candidate Starts for BeanWater\_184:

(1, 101208), (Start: 2 @101460 has 136 MA's), (3, 101505),

Gene: Belieber\_187 Start: 101034, Stop: 101123, Start Num: 2

Candidate Starts for Belieber\_187:

(1, 100782), (Start: 2 @101034 has 136 MA's), (3, 101079),

Gene: Bezza\_181 Start: 101972, Stop: 102061, Start Num: 2

Candidate Starts for Bezza\_181:

(1, 101720), (Start: 2 @101972 has 136 MA's), (3, 102017),

Gene: BigCity\_201 Start: 105025, Stop: 105117, Start Num: 2

Candidate Starts for BigCity\_201:

(1, 104773), (Start: 2 @105025 has 136 MA's),

Gene: Bipolarisk\_191 Start: 102427, Stop: 102516, Start Num: 2

Candidate Starts for Bipolarisk\_191:

(1, 102175), (Start: 2 @102427 has 136 MA's), (3, 102472),

Gene: Blackbrain\_190 Start: 102322, Stop: 102411, Start Num: 2

Candidate Starts for Blackbrain\_190:

(1, 102070), (Start: 2 @102322 has 136 MA's), (3, 102367),

Gene: Blackdragon\_187 Start: 101758, Stop: 101847, Start Num: 2

Candidate Starts for Blackdragon\_187:

(1, 101506), (Start: 2 @101758 has 136 MA's), (3, 101803),

Gene: BobaPhatt\_186 Start: 100919, Stop: 101008, Start Num: 2

Candidate Starts for BobaPhatt\_186:

(1, 100667), (Start: 2 @100919 has 136 MA's), (3, 100964),

Gene: Bonray\_195 Start: 103830, Stop: 103919, Start Num: 2

Candidate Starts for Bonray\_195:

(1, 103578), (Start: 2 @103830 has 136 MA's), (3, 103875),

Gene: Bowman\_191 Start: 103114, Stop: 103206, Start Num: 2

Candidate Starts for Bowman\_191:

(1, 102862), (Start: 2 @103114 has 136 MA's),

Gene: Bread\_188 Start: 101828, Stop: 101917, Start Num: 2

Candidate Starts for Bread\_188:

(1, 101576), (Start: 2 @101828 has 136 MA's), (3, 101873),

Gene: Breeniome\_192 Start: 101459, Stop: 101551, Start Num: 2

Candidate Starts for Breeniome\_192:

(1, 101207), (Start: 2 @101459 has 136 MA's),

Gene: Cactojaque\_189 Start: 101740, Stop: 101829, Start Num: 2

Candidate Starts for Cactojaque\_189:

(1, 101488), (Start: 2 @101740 has 136 MA's), (3, 101785),

Gene: Capablanca\_197 Start: 104425, Stop: 104514, Start Num: 2

Candidate Starts for Capablanca\_197:

(1, 104173), (Start: 2 @104425 has 136 MA's), (3, 104470),

Gene: Chargie21\_191 Start: 101720, Stop: 101809, Start Num: 2

Candidate Starts for Chargie21\_191:

(1, 101468), (Start: 2 @101720 has 136 MA's), (3, 101765),

Gene: CharlieB\_186 Start: 101662, Stop: 101751, Start Num: 2

Candidate Starts for CharlieB\_186:

(1, 101410), (Start: 2 @101662 has 136 MA's), (3, 101707),

Gene: ChaylaJr\_191 Start: 102148, Stop: 102237, Start Num: 2

Candidate Starts for ChaylaJr\_191:

(1, 101896), (Start: 2 @102148 has 136 MA's), (3, 102193),

Gene: ChickenPhender\_190 Start: 101867, Stop: 101956, Start Num: 2

Candidate Starts for ChickenPhender\_190:

(1, 101615), (Start: 2 @101867 has 136 MA's), (3, 101912),

Gene: Chomp\_192 Start: 102705, Stop: 102794, Start Num: 2

Candidate Starts for Chomp\_192:

(1, 102453), (Start: 2 @102705 has 136 MA's), (3, 102750),

Gene: CindyLou\_194 Start: 103448, Stop: 103537, Start Num: 2

Candidate Starts for CindyLou\_194:

(1, 103196), (Start: 2 @103448 has 136 MA's), (3, 103493),

Gene: Cleatunium\_186 Start: 101657, Stop: 101746, Start Num: 2

Candidate Starts for Cleatunium\_186:

(1, 101405), (Start: 2 @101657 has 136 MA's), (3, 101702),

Gene: Concombres\_197 Start: 104556, Stop: 104648, Start Num: 2

Candidate Starts for Concombres\_197:

(1, 104304), (Start: 2 @104556 has 136 MA's),

Gene: DTDevon\_195 Start: 103940, Stop: 104032, Start Num: 2

Candidate Starts for DTDevon\_195:

(1, 103688), (Start: 2 @103940 has 136 MA's),

Gene: Daffodil\_197 Start: 102727, Stop: 102816, Start Num: 2

Candidate Starts for Daffodil\_197:

(1, 102475), (Start: 2 @102727 has 136 MA's), (3, 102772),

Gene: Darko\_192 Start: 102141, Stop: 102233, Start Num: 2

Candidate Starts for Darko\_192:

(1, 101889), (Start: 2 @102141 has 136 MA's),

Gene: DeejaClivia\_181 Start: 101097, Stop: 101186, Start Num: 2

Candidate Starts for DeejaClivia\_181:

(1, 100845), (Start: 2 @101097 has 136 MA's), (3, 101142),

Gene: Delilah\_191 Start: 102845, Stop: 102934, Start Num: 2

Candidate Starts for Delilah\_191:

(1, 102593), (Start: 2 @102845 has 136 MA's), (3, 102890),

Gene: Delylah\_194 Start: 102826, Stop: 102915, Start Num: 2  
Candidate Starts for Delylah\_194:  
(1, 102574), (Start: 2 @102826 has 136 MA's), (3, 102871),

Gene: Demodog\_198 Start: 104566, Stop: 104658, Start Num: 2  
Candidate Starts for Demodog\_198:  
(1, 104314), (Start: 2 @104566 has 136 MA's),

Gene: Derek\_190 Start: 102468, Stop: 102560, Start Num: 2  
Candidate Starts for Derek\_190:  
(1, 102216), (Start: 2 @102468 has 136 MA's),

Gene: Dessert\_190 Start: 100982, Stop: 101071, Start Num: 2  
Candidate Starts for Dessert\_190:  
(1, 100730), (Start: 2 @100982 has 136 MA's), (3, 101027),

Gene: Dietrick\_183 Start: 101450, Stop: 101539, Start Num: 2  
Candidate Starts for Dietrick\_183:  
(1, 101198), (Start: 2 @101450 has 136 MA's), (3, 101495),

Gene: DirtMonster\_186 Start: 102210, Stop: 102302, Start Num: 2  
Candidate Starts for DirtMonster\_186:  
(1, 101958), (Start: 2 @102210 has 136 MA's),

Gene: Domi\_187 Start: 102492, Stop: 102581, Start Num: 2  
Candidate Starts for Domi\_187:  
(1, 102240), (Start: 2 @102492 has 136 MA's), (3, 102537),

Gene: DrPhinkDaddy\_190 Start: 103506, Stop: 103595, Start Num: 2  
Candidate Starts for DrPhinkDaddy\_190:  
(1, 103254), (Start: 2 @103506 has 136 MA's), (3, 103551),

Gene: Duckfeet\_187 Start: 102111, Stop: 102203, Start Num: 2  
Candidate Starts for Duckfeet\_187:  
(1, 101859), (Start: 2 @102111 has 136 MA's),

Gene: EasyJones\_197 Start: 102962, Stop: 103051, Start Num: 2  
Candidate Starts for EasyJones\_197:  
(1, 102710), (Start: 2 @102962 has 136 MA's), (3, 103007),

Gene: EggyFarm\_201 Start: 105026, Stop: 105118, Start Num: 2  
Candidate Starts for EggyFarm\_201:  
(1, 104774), (Start: 2 @105026 has 136 MA's),

Gene: EmToTheThree\_194 Start: 103362, Stop: 103451, Start Num: 2  
Candidate Starts for EmToTheThree\_194:  
(1, 103110), (Start: 2 @103362 has 136 MA's), (3, 103407),

Gene: Erdmann\_194 Start: 102837, Stop: 102926, Start Num: 2  
Candidate Starts for Erdmann\_194:  
(1, 102585), (Start: 2 @102837 has 136 MA's), (3, 102882),

Gene: ErnieJ\_186 Start: 101142, Stop: 101231, Start Num: 2  
Candidate Starts for ErnieJ\_186:  
(1, 100890), (Start: 2 @101142 has 136 MA's), (3, 101187),

Gene: Ewok\_192 Start: 102756, Stop: 102845, Start Num: 2  
Candidate Starts for Ewok\_192:  
(1, 102504), (Start: 2 @102756 has 136 MA's), (3, 102801),

Gene: Fixie\_192 Start: 102091, Stop: 102180, Start Num: 2  
Candidate Starts for Fixie\_192:  
(1, 101839), (Start: 2 @102091 has 136 MA's), (3, 102136),

Gene: Flabslab\_189 Start: 101284, Stop: 101373, Start Num: 2  
Candidate Starts for Flabslab\_189:  
(1, 101032), (Start: 2 @101284 has 136 MA's), (3, 101329),

Gene: Fludd\_194 Start: 102675, Stop: 102764, Start Num: 2  
Candidate Starts for Fludd\_194:  
(1, 102423), (Start: 2 @102675 has 136 MA's), (3, 102720),

Gene: FrayBell\_196 Start: 102460, Stop: 102552, Start Num: 2  
Candidate Starts for FrayBell\_196:  
(1, 102208), (Start: 2 @102460 has 136 MA's),

Gene: FudgeTart\_188 Start: 101903, Stop: 101992, Start Num: 2  
Candidate Starts for FudgeTart\_188:  
(1, 101651), (Start: 2 @101903 has 136 MA's), (3, 101948),

Gene: Gamgam\_193 Start: 101406, Stop: 101495, Start Num: 2  
Candidate Starts for Gamgam\_193:  
(1, 101154), (Start: 2 @101406 has 136 MA's), (3, 101451),

Gene: Ghost\_193 Start: 102119, Stop: 102208, Start Num: 2  
Candidate Starts for Ghost\_193:  
(1, 101867), (Start: 2 @102119 has 136 MA's), (3, 102164),

Gene: Gizmo\_198 Start: 104754, Stop: 104843, Start Num: 2  
Candidate Starts for Gizmo\_198:  
(1, 104502), (Start: 2 @104754 has 136 MA's), (3, 104799),

Gene: GlutenPhree\_193 Start: 101417, Stop: 101506, Start Num: 2  
Candidate Starts for GlutenPhree\_193:  
(1, 101165), (Start: 2 @101417 has 136 MA's), (3, 101462),

Gene: Grasshills\_200 Start: 105025, Stop: 105117, Start Num: 2  
Candidate Starts for Grasshills\_200:  
(1, 104773), (Start: 2 @105025 has 136 MA's),

Gene: Grungle\_178 Start: 100156, Stop: 100245, Start Num: 2  
Candidate Starts for Grungle\_178:  
(1, 99904), (Start: 2 @100156 has 136 MA's), (3, 100201),

Gene: Guwapp\_188 Start: 100647, Stop: 100739, Start Num: 2

Candidate Starts for Guwapp\_188:  
(1, 100395), (Start: 2 @100647 has 136 MA's),

Gene: Halldule\_185 Start: 100552, Stop: 100641, Start Num: 2  
Candidate Starts for Halldule\_185:  
(1, 100300), (Start: 2 @100552 has 136 MA's), (3, 100597),

Gene: HyRo\_181 Start: 102153, Stop: 102242, Start Num: 2  
Candidate Starts for HyRo\_181:  
(1, 101901), (Start: 2 @102153 has 136 MA's), (3, 102198),

Gene: I3\_201 Start: 104106, Stop: 104198, Start Num: 2  
Candidate Starts for I3\_201:  
(1, 103854), (Start: 2 @104106 has 136 MA's),

Gene: InigoMontoya\_195 Start: 102080, Stop: 102169, Start Num: 2  
Candidate Starts for InigoMontoya\_195:  
(1, 101828), (Start: 2 @102080 has 136 MA's), (3, 102125),

Gene: Iota\_187 Start: 101753, Stop: 101845, Start Num: 2  
Candidate Starts for Iota\_187:  
(1, 101501), (Start: 2 @101753 has 136 MA's),

Gene: Izajani\_191 Start: 102896, Stop: 102985, Start Num: 2  
Candidate Starts for Izajani\_191:  
(1, 102644), (Start: 2 @102896 has 136 MA's), (3, 102941),

Gene: JPickles\_189 Start: 100548, Stop: 100637, Start Num: 2  
Candidate Starts for JPickles\_189:  
(1, 100296), (Start: 2 @100548 has 136 MA's), (3, 100593),

Gene: Janiyra\_197 Start: 103097, Stop: 103186, Start Num: 2  
Candidate Starts for Janiyra\_197:  
(1, 102845), (Start: 2 @103097 has 136 MA's), (3, 103142),

Gene: JayJay\_195 Start: 103311, Stop: 103400, Start Num: 2  
Candidate Starts for JayJay\_195:  
(1, 103059), (Start: 2 @103311 has 136 MA's), (3, 103356),

Gene: Jedediah\_193 Start: 102665, Stop: 102757, Start Num: 2  
Candidate Starts for Jedediah\_193:  
(1, 102413), (Start: 2 @102665 has 136 MA's),

Gene: Jemmno\_192 Start: 101491, Stop: 101580, Start Num: 2  
Candidate Starts for Jemmno\_192:  
(1, 101239), (Start: 2 @101491 has 136 MA's), (3, 101536), (4, 101551),

Gene: Jessibeth14\_193 Start: 103505, Stop: 103594, Start Num: 2  
Candidate Starts for Jessibeth14\_193:  
(1, 103253), (Start: 2 @103505 has 136 MA's), (3, 103550),

Gene: Jezreel\_190 Start: 102574, Stop: 102663, Start Num: 2  
Candidate Starts for Jezreel\_190:

(1, 102322), (Start: 2 @102574 has 136 MA's), (3, 102619),

Gene: JulietS\_184 Start: 99780, Stop: 99869, Start Num: 2

Candidate Starts for JulietS\_184:

(1, 99528), (Start: 2 @99780 has 136 MA's), (3, 99825),

Gene: JustHall\_188 Start: 102004, Stop: 102093, Start Num: 2

Candidate Starts for JustHall\_188:

(1, 101752), (Start: 2 @102004 has 136 MA's), (3, 102049),

Gene: Kboogie\_197 Start: 102662, Stop: 102751, Start Num: 2

Candidate Starts for Kboogie\_197:

(1, 102410), (Start: 2 @102662 has 136 MA's), (3, 102707),

Gene: Khaleesi\_192 Start: 102972, Stop: 103061, Start Num: 2

Candidate Starts for Khaleesi\_192:

(1, 102720), (Start: 2 @102972 has 136 MA's), (3, 103017),

Gene: Koguma\_191 Start: 101529, Stop: 101618, Start Num: 2

Candidate Starts for Koguma\_191:

(1, 101277), (Start: 2 @101529 has 136 MA's), (3, 101574),

Gene: Labradorite\_191 Start: 101104, Stop: 101196, Start Num: 2

Candidate Starts for Labradorite\_191:

(1, 100852), (Start: 2 @101104 has 136 MA's),

Gene: Latch\_192 Start: 101416, Stop: 101505, Start Num: 2

Candidate Starts for Latch\_192:

(1, 101164), (Start: 2 @101416 has 136 MA's), (3, 101461),

Gene: Lee7\_193 Start: 104352, Stop: 104441, Start Num: 2

Candidate Starts for Lee7\_193:

(1, 104100), (Start: 2 @104352 has 136 MA's), (3, 104397),

Gene: Lethe\_193 Start: 103615, Stop: 103704, Start Num: 2

Candidate Starts for Lethe\_193:

(1, 103363), (Start: 2 @103615 has 136 MA's), (3, 103660),

Gene: LinStu\_191 Start: 102470, Stop: 102559, Start Num: 2

Candidate Starts for LinStu\_191:

(1, 102218), (Start: 2 @102470 has 136 MA's), (3, 102515),

Gene: Littleton\_196 Start: 103136, Stop: 103225, Start Num: 2

Candidate Starts for Littleton\_196:

(1, 102884), (Start: 2 @103136 has 136 MA's), (3, 103181),

Gene: Loanshark\_190 Start: 102287, Stop: 102376, Start Num: 2

Candidate Starts for Loanshark\_190:

(1, 102035), (Start: 2 @102287 has 136 MA's), (3, 102332),

Gene: LolaVince\_191 Start: 103696, Stop: 103788, Start Num: 2

Candidate Starts for LolaVince\_191:

(1, 103444), (Start: 2 @103696 has 136 MA's),

Gene: LordLeafolot\_194 Start: 103308, Stop: 103400, Start Num: 2  
Candidate Starts for LordLeafolot\_194:  
(1, 103056), (Start: 2 @103308 has 136 MA's),

Gene: Lukilu\_183 Start: 102884, Stop: 102973, Start Num: 2  
Candidate Starts for Lukilu\_183:  
(1, 102632), (Start: 2 @102884 has 136 MA's), (3, 102929),

Gene: Maby2021\_192 Start: 103416, Stop: 103505, Start Num: 2  
Candidate Starts for Maby2021\_192:  
(1, 103164), (Start: 2 @103416 has 136 MA's), (3, 103461),

Gene: Mangeria\_193 Start: 103209, Stop: 103298, Start Num: 2  
Candidate Starts for Mangeria\_193:  
(1, 102957), (Start: 2 @103209 has 136 MA's), (3, 103254),

Gene: Matsumoto\_192 Start: 102650, Stop: 102739, Start Num: 2  
Candidate Starts for Matsumoto\_192:  
(1, 102398), (Start: 2 @102650 has 136 MA's), (3, 102695),

Gene: McGee\_193 Start: 101844, Stop: 101933, Start Num: 2  
Candidate Starts for McGee\_193:  
(1, 101592), (Start: 2 @101844 has 136 MA's), (3, 101889),

Gene: McWolfish\_190 Start: 102183, Stop: 102272, Start Num: 2  
Candidate Starts for McWolfish\_190:  
(1, 101931), (Start: 2 @102183 has 136 MA's), (3, 102228),

Gene: Megamind\_190 Start: 102474, Stop: 102563, Start Num: 2  
Candidate Starts for Megamind\_190:  
(1, 102222), (Start: 2 @102474 has 136 MA's), (3, 102519),

Gene: Melpomini\_187 Start: 100950, Stop: 101039, Start Num: 2  
Candidate Starts for Melpomini\_187:  
(1, 100698), (Start: 2 @100950 has 136 MA's), (3, 100995),

Gene: MikeLiesIn\_194 Start: 103610, Stop: 103699, Start Num: 2  
Candidate Starts for MikeLiesIn\_194:  
(1, 103358), (Start: 2 @103610 has 136 MA's), (3, 103655),

Gene: Mikro\_188 Start: 103850, Stop: 103939, Start Num: 2  
Candidate Starts for Mikro\_188:  
(1, 103598), (Start: 2 @103850 has 136 MA's), (3, 103895),

Gene: Moby\_189 Start: 101624, Stop: 101713, Start Num: 2  
Candidate Starts for Moby\_189:  
(1, 101372), (Start: 2 @101624 has 136 MA's), (3, 101669),

Gene: Moiqah\_188 Start: 101601, Stop: 101690, Start Num: 2  
Candidate Starts for Moiqah\_188:  
(1, 101349), (Start: 2 @101601 has 136 MA's), (3, 101646),

Gene: Momo\_193 Start: 101416, Stop: 101505, Start Num: 2  
Candidate Starts for Momo\_193:  
(1, 101164), (Start: 2 @101416 has 136 MA's), (3, 101461),

Gene: Morizzled23\_191 Start: 101574, Stop: 101663, Start Num: 2  
Candidate Starts for Morizzled23\_191:  
(1, 101322), (Start: 2 @101574 has 136 MA's), (3, 101619),

Gene: Naija\_193 Start: 102119, Stop: 102208, Start Num: 2  
Candidate Starts for Naija\_193:  
(1, 101867), (Start: 2 @102119 has 136 MA's), (3, 102164),

Gene: Napoleon13\_191 Start: 101939, Stop: 102028, Start Num: 2  
Candidate Starts for Napoleon13\_191:  
(1, 101687), (Start: 2 @101939 has 136 MA's), (3, 101984),

Gene: Nappy\_193 Start: 103821, Stop: 103913, Start Num: 2  
Candidate Starts for Nappy\_193:  
(1, 103569), (Start: 2 @103821 has 136 MA's),

Gene: Naval22\_200 Start: 104205, Stop: 104294, Start Num: 2  
Candidate Starts for Naval22\_200:  
(1, 103953), (Start: 2 @104205 has 136 MA's), (3, 104250),

Gene: NedWong\_192 Start: 102861, Stop: 102950, Start Num: 2  
Candidate Starts for NedWong\_192:  
(1, 102609), (Start: 2 @102861 has 136 MA's), (3, 102906),

Gene: Ngannou\_189 Start: 100398, Stop: 100487, Start Num: 2  
Candidate Starts for Ngannou\_189:  
(1, 100146), (Start: 2 @100398 has 136 MA's), (3, 100443),

Gene: Nidhogg\_194 Start: 103254, Stop: 103343, Start Num: 2  
Candidate Starts for Nidhogg\_194:  
(1, 103002), (Start: 2 @103254 has 136 MA's), (3, 103299),

Gene: NoodleTree\_199 Start: 103161, Stop: 103250, Start Num: 2  
Candidate Starts for NoodleTree\_199:  
(1, 102909), (Start: 2 @103161 has 136 MA's), (3, 103206),

Gene: Norm\_192 Start: 102860, Stop: 102949, Start Num: 2  
Candidate Starts for Norm\_192:  
(1, 102608), (Start: 2 @102860 has 136 MA's), (3, 102905),

Gene: OrediggerDelux\_189 Start: 103392, Stop: 103481, Start Num: 2  
Candidate Starts for OrediggerDelux\_189:  
(1, 103140), (Start: 2 @103392 has 136 MA's), (3, 103437),

Gene: ParkTD\_191 Start: 102724, Stop: 102813, Start Num: 2  
Candidate Starts for ParkTD\_191:  
(1, 102472), (Start: 2 @102724 has 136 MA's), (3, 102769),

Gene: Patter\_193 Start: 101433, Stop: 101525, Start Num: 2

Candidate Starts for Patter\_193:  
(1, 101181), (Start: 2 @101433 has 136 MA's),

Gene: PharkleMinkus\_195 Start: 102459, Stop: 102551, Start Num: 2  
Candidate Starts for PharkleMinkus\_195:  
(1, 102207), (Start: 2 @102459 has 136 MA's),

Gene: Phlegm\_196 Start: 102119, Stop: 102208, Start Num: 2  
Candidate Starts for Phlegm\_196:  
(1, 101867), (Start: 2 @102119 has 136 MA's), (3, 102164),

Gene: Phox\_193 Start: 103080, Stop: 103169, Start Num: 2  
Candidate Starts for Phox\_193:  
(1, 102828), (Start: 2 @103080 has 136 MA's), (3, 103125),

Gene: Phusco\_192 Start: 101743, Stop: 101832, Start Num: 2  
Candidate Starts for Phusco\_192:  
(1, 101491), (Start: 2 @101743 has 136 MA's), (3, 101788),

Gene: Pinkcreek\_177 Start: 101635, Stop: 101724, Start Num: 2  
Candidate Starts for Pinkcreek\_177:  
(1, 101383), (Start: 2 @101635 has 136 MA's), (3, 101680),

Gene: Pivoine\_193 Start: 102119, Stop: 102208, Start Num: 2  
Candidate Starts for Pivoine\_193:  
(1, 101867), (Start: 2 @102119 has 136 MA's), (3, 102164),

Gene: Pleione\_197 Start: 103203, Stop: 103292, Start Num: 2  
Candidate Starts for Pleione\_197:  
(1, 102951), (Start: 2 @103203 has 136 MA's), (3, 103248),

Gene: Primadonna\_187 Start: 101768, Stop: 101860, Start Num: 2  
Candidate Starts for Primadonna\_187:  
(1, 101516), (Start: 2 @101768 has 136 MA's),

Gene: Pupusa\_197 Start: 103934, Stop: 104026, Start Num: 2  
Candidate Starts for Pupusa\_197:  
(1, 103682), (Start: 2 @103934 has 136 MA's),

Gene: PurduePete\_193 Start: 103430, Stop: 103519, Start Num: 2  
Candidate Starts for PurduePete\_193:  
(1, 103178), (Start: 2 @103430 has 136 MA's), (3, 103475),

Gene: Quasimodo\_196 Start: 103537, Stop: 103626, Start Num: 2  
Candidate Starts for Quasimodo\_196:  
(1, 103285), (Start: 2 @103537 has 136 MA's), (3, 103582),

Gene: Rabinovish\_187 Start: 103811, Stop: 103900, Start Num: 2  
Candidate Starts for Rabinovish\_187:  
(1, 103559), (Start: 2 @103811 has 136 MA's), (3, 103856),

Gene: Rahel\_194 Start: 102337, Stop: 102426, Start Num: 2  
Candidate Starts for Rahel\_194:

(1, 102085), (Start: 2 @102337 has 136 MA's), (3, 102382),

Gene: RoMag\_188 Start: 102648, Stop: 102737, Start Num: 2

Candidate Starts for RoMag\_188:

(1, 102396), (Start: 2 @102648 has 136 MA's), (3, 102693),

Gene: Rocha\_190 Start: 101916, Stop: 102005, Start Num: 2

Candidate Starts for Rocha\_190:

(1, 101664), (Start: 2 @101916 has 136 MA's), (3, 101961),

Gene: Ronan\_188 Start: 100566, Stop: 100658, Start Num: 2

Candidate Starts for Ronan\_188:

(1, 100314), (Start: 2 @100566 has 136 MA's),

Gene: Roots515\_195 Start: 103982, Stop: 104071, Start Num: 2

Candidate Starts for Roots515\_195:

(1, 103730), (Start: 2 @103982 has 136 MA's), (3, 104027),

Gene: SVoro\_189 Start: 102949, Stop: 103038, Start Num: 2

Candidate Starts for SVoro\_189:

(1, 102697), (Start: 2 @102949 has 136 MA's), (3, 102994),

Gene: Salacia\_193 Start: 102743, Stop: 102835, Start Num: 2

Candidate Starts for Salacia\_193:

(1, 102491), (Start: 2 @102743 has 136 MA's),

Gene: Sauce\_189 Start: 101557, Stop: 101649, Start Num: 2

Candidate Starts for Sauce\_189:

(1, 101305), (Start: 2 @101557 has 136 MA's),

Gene: Shaqnato\_185 Start: 102080, Stop: 102169, Start Num: 2

Candidate Starts for Shaqnato\_185:

(1, 101828), (Start: 2 @102080 has 136 MA's), (3, 102125),

Gene: ShiaLabeouf\_190 Start: 101548, Stop: 101640, Start Num: 2

Candidate Starts for ShiaLabeouf\_190:

(1, 101296), (Start: 2 @101548 has 136 MA's),

Gene: Shrimp\_194 Start: 103180, Stop: 103284, Start Num: 2

Candidate Starts for Shrimp\_194:

(1, 102928), (Start: 2 @103180 has 136 MA's),

Gene: SilverDipper\_196 Start: 102675, Stop: 102764, Start Num: 2

Candidate Starts for SilverDipper\_196:

(1, 102423), (Start: 2 @102675 has 136 MA's), (3, 102720),

Gene: SmallFry\_193 Start: 101706, Stop: 101798, Start Num: 2

Candidate Starts for SmallFry\_193:

(1, 101454), (Start: 2 @101706 has 136 MA's),

Gene: SoilZilla\_189 Start: 102565, Stop: 102654, Start Num: 2

Candidate Starts for SoilZilla\_189:

(1, 102313), (Start: 2 @102565 has 136 MA's), (3, 102610),

Gene: Spec\_188 Start: 101897, Stop: 101989, Start Num: 2

Candidate Starts for Spec\_188:

(1, 101645), (Start: 2 @101897 has 136 MA's),

Gene: Sprinklers\_190 Start: 101784, Stop: 101873, Start Num: 2

Candidate Starts for Sprinklers\_190:

(1, 101532), (Start: 2 @101784 has 136 MA's), (3, 101829),

Gene: SrishMeg2525\_190 Start: 102963, Stop: 103052, Start Num: 2

Candidate Starts for SrishMeg2525\_190:

(1, 102711), (Start: 2 @102963 has 136 MA's), (3, 103008),

Gene: StephanieG\_190 Start: 103477, Stop: 103566, Start Num: 2

Candidate Starts for StephanieG\_190:

(1, 103225), (Start: 2 @103477 has 136 MA's), (3, 103522),

Gene: Stubby\_178 Start: 102322, Stop: 102411, Start Num: 2

Candidate Starts for Stubby\_178:

(1, 102070), (Start: 2 @102322 has 136 MA's), (3, 102367),

Gene: StubbySaigey\_197 Start: 102209, Stop: 102298, Start Num: 2

Candidate Starts for StubbySaigey\_197:

(1, 101957), (Start: 2 @102209 has 136 MA's), (3, 102254),

Gene: Tainan\_194 Start: 103034, Stop: 103126, Start Num: 2

Candidate Starts for Tainan\_194:

(1, 102782), (Start: 2 @103034 has 136 MA's),

Gene: TinyTim\_191 Start: 101812, Stop: 101901, Start Num: 2

Candidate Starts for TinyTim\_191:

(1, 101560), (Start: 2 @101812 has 136 MA's), (3, 101857),

Gene: Trinitium\_190 Start: 102042, Stop: 102131, Start Num: 2

Candidate Starts for Trinitium\_190:

(1, 101790), (Start: 2 @102042 has 136 MA's), (3, 102087),

Gene: Turret\_187 Start: 101624, Stop: 101713, Start Num: 2

Candidate Starts for Turret\_187:

(1, 101372), (Start: 2 @101624 has 136 MA's), (3, 101669),

Gene: ValleyTerrace\_193 Start: 101416, Stop: 101505, Start Num: 2

Candidate Starts for ValleyTerrace\_193:

(1, 101164), (Start: 2 @101416 has 136 MA's), (3, 101461),

Gene: Willis\_193 Start: 102623, Stop: 102712, Start Num: 2

Candidate Starts for Willis\_193:

(1, 102371), (Start: 2 @102623 has 136 MA's), (3, 102668),

Gene: Yassified\_189 Start: 101764, Stop: 101856, Start Num: 2

Candidate Starts for Yassified\_189:

(1, 101512), (Start: 2 @101764 has 136 MA's),

Gene: YemiJoy2021\_193 Start: 103379, Stop: 103468, Start Num: 2  
Candidate Starts for YemiJoy2021\_193:  
(1, 103127), (Start: 2 @103379 has 136 MA's), (3, 103424),

Gene: YoungMoneyMata\_192 Start: 102407, Stop: 102499, Start Num: 2  
Candidate Starts for YoungMoneyMata\_192:  
(1, 102155), (Start: 2 @102407 has 136 MA's),

Gene: Yucca\_193 Start: 103370, Stop: 103459, Start Num: 2  
Candidate Starts for Yucca\_193:  
(1, 103118), (Start: 2 @103370 has 136 MA's), (3, 103415),

Gene: Zalkecks\_192 Start: 102452, Stop: 102541, Start Num: 2  
Candidate Starts for Zalkecks\_192:  
(1, 102200), (Start: 2 @102452 has 136 MA's), (3, 102497),

Gene: Zeenon\_195 Start: 103022, Stop: 103111, Start Num: 2  
Candidate Starts for Zeenon\_195:  
(1, 102770), (Start: 2 @103022 has 136 MA's), (3, 103067),

Gene: ZygoTaiga\_189 Start: 103643, Stop: 103732, Start Num: 2  
Candidate Starts for ZygoTaiga\_189:  
(1, 103391), (Start: 2 @103643 has 136 MA's), (3, 103688),