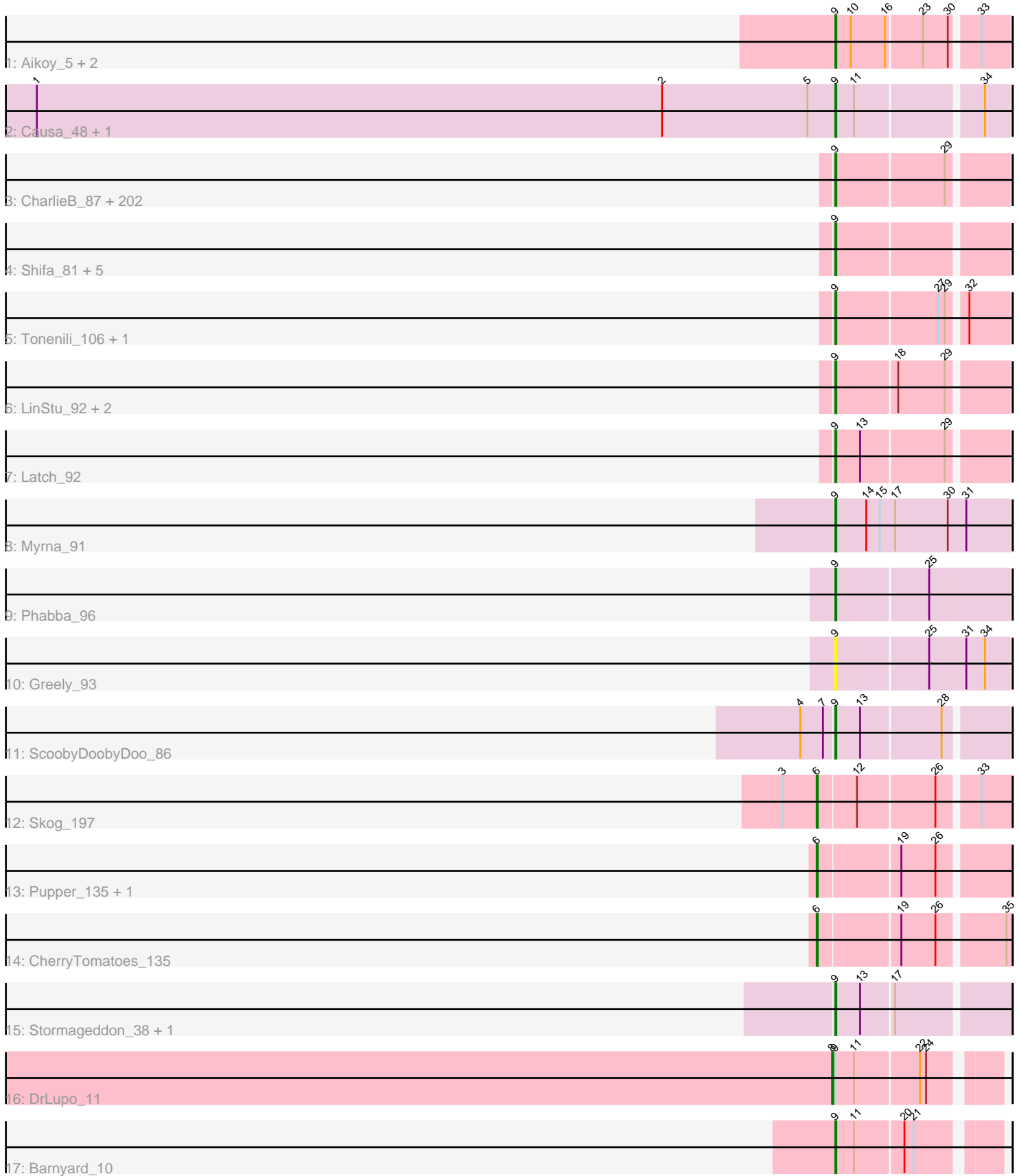


Pham 308038



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 308038 Report

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

Pham number 308038 has 232 members, 38 are drafts.

Phages represented in each track:

- Track 1 : Aikoy\_5, Leopard\_6, Onyinye\_6
- Track 2 : Causa\_48, StAugustine\_46
- Track 3 : CharlieB\_87, JulietS\_85, EggyFarm\_100, Lethe\_91, Chargie21\_88, Flabslab\_87, Belieber\_86, Shrimp\_92, Ading\_92, StubbySaigey\_94, ChaylaJr\_87, I3\_98, Moby\_83, Tyke\_94, Khaleesi\_91, ErnieJ\_88, Moiqah\_83, FrayBell\_98, Montpel\_89, PurduePete\_92, Ngannou\_88, Salacia\_96, Iota\_86, Gabriel\_94, Duckfeet\_83, Bangla1971\_93, Fludd\_92, Lee7\_90, Amataga\_92, Rahel\_91, Labradorite\_92, Nidhogg\_93, JPickles\_90, BeanWater\_84, Guwapp\_91, Rabinovish\_89, BackyardAgain\_89, NuevoMundo\_98, ZygoTaiga\_91, Fixie\_87, Caravan\_87, CindyLou\_93, Halldule\_85, Naija\_91, Melpomini\_86, Napoleon13\_88, ScottMcG\_89, Audrick\_94, Lunareta\_89, Bowman\_90, ParkTD\_93, DTDevon\_93, Ewok\_93, Substance289\_89, Asterius\_95, TinyTim\_92, Phox\_89, Fongie\_90, Loanshark\_92, Concombre\_99, Grasshills\_99, Zalkecks\_93, IkeLoa\_86, Bigswole\_97, Primadonna\_86, Jemmno\_92, Blackdragon\_86, Kamryn\_92, LifeSavor\_91, ValleyTerrace\_92, SoilZilla\_88, Ablatia\_90, Jaygup\_92, LRRHood\_86, SilverDipper\_93, Sauce\_92, Bezza\_81, OrediggerDelux\_90, LolaVince\_94, Pinkcreek\_83, Issimir\_91, Naval22\_100, Cali\_87, Willis\_93, NedWong\_93, BadAgartude\_89, JigglyPuff\_98, Nappy\_94, Domi\_86, EmToTheThree\_95, DrPhinkDaddy\_91, Pleione\_95, Jedediah\_95, ShiaLabeouf\_92, Bipolarisk\_91, Gizmo\_96, Delylah\_95, Derek\_92, NoodleTree\_100, FoxtrotP1\_92, Pupusa\_97, Yucca\_92, Pivoine\_91, Basquiat\_88, Dietrick\_84, Quasimodo\_92, Spud\_92, Pier\_96, Norm\_93, SrishMeg2525\_91, Mangeria\_92, ArcherS7\_91, Bonray\_92, ET08\_81, Phusco\_92, Demodog\_99, Izajani\_92, Lukilu\_83, Kboogie\_95, Spec\_87, Turret\_87, Specks\_98, InterFolia\_101, Erdmann\_93, SVoro\_90, EmmaElysia\_91, InigoMontoya\_93, StephanieG\_91, JustHall\_88, Blackbrain\_87, Stubby\_85, Alice\_85, JayJay\_98, Tortoise16\_90, Pio\_96, McWolfish\_90, Janiyra\_94, Cactojaque\_87, Trinitium\_88, Darko\_92, LordLeafolot\_98, Gamgam\_92, BananaFence\_91, FudgeTart\_92, Grungle\_79, YemiJoy2021\_93, EasyJones\_95, Mikro\_90, Rocha\_91, Megamind\_91, Ava3\_93, SmallFry\_92, Bread\_92, Cleatunium\_87, Zeenon\_94, Patter\_92, Delilah\_92, Capablanca\_94, Ronan\_85, BigCity\_100, MikeLiesIn\_93, Koguma\_88, Dessert\_90, Drazdys\_92, Littleton\_92, Shaqnato\_84, Shelob\_94, Daffodil\_97, Phlegm\_94, Adlitam\_92, LookingGlass\_93, Jessibeth14\_91, Ghost\_91, Burrough\_92, Breeniome\_92, GlutenPhree\_93, Tainan\_97, DirtMonster\_85, Astraea\_90, Morizzled23\_92, Maturis\_90, Roots515\_91, Atlantean\_91, Teardrop\_92, ChickenPhender\_88, Babyland\_92, Matsumoto\_91, Sprinklers\_87, Essence\_89, Wally\_91, Yassified\_88, RoMag\_87, BobaPhatt\_86, Momo\_91, QBert\_86, McGee\_93, Maby2021\_92, PharkleMinkus\_97, YoungMoneyMata\_92, Shnickers\_92,

MoMoMixon\_93, Chomp\_91, Jezreel\_92

- Track 4 : Shifa\_81, DeejaClivia\_81, Blubba\_81, HyRo\_84, Cane17\_81, Colt\_82
- Track 5 : Tonenili\_106, Vortrix\_107
- Track 6 : LinStu\_92, Dandelion\_99, Sebata\_93
- Track 7 : Latch\_92
- Track 8 : Myrna\_91
- Track 9 : Phabba\_96
- Track 10 : Greely\_93
- Track 11 : ScoobyDoobyDoo\_86
- Track 12 : Skog\_197
- Track 13 : Pupper\_135, SCentae\_134
- Track 14 : CherryTomatoes\_135
- Track 15 : Stormageddon\_38, RedWattleHog\_41
- Track 16 : DrLupo\_11
- Track 17 : Barnyard\_10

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

The start number called the most often in the published annotations is 9, it was called in 189 of the 194 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_90, Ading\_92, Adlitam\_92, Aikoy\_5, Alice\_85, Amataga\_92, ArcherS7\_91, Asterius\_95, Astraea\_90, Atlantean\_91, Audrick\_94, Ava3\_93, Babyland\_92, BackyardAgain\_89, BadAgartude\_89, BananaFence\_91, Bangla1971\_93, Barnyard\_10, Basquiat\_88, BeanWater\_84, Belieber\_86, Bezza\_81, BigCity\_100, Bigswole\_97, Bipolarisk\_91, Blackbrain\_87, Blackdragon\_86, Blubba\_81, BobaPhatt\_86, Bonray\_92, Bowman\_90, Bread\_92, Breeniome\_92, Burrough\_92, Cactojaque\_87, Cali\_87, Cane17\_81, Capablanca\_94, Caravan\_87, Causa\_48, Chargie21\_88, CharlieB\_87, ChaylaJr\_87, ChickenPhender\_88, Chomp\_91, CindyLou\_93, Cleatunium\_87, Colt\_82, Concombre\_99, DTDevon\_93, Daffodil\_97, Dandelion\_99, Darko\_92, DeejaClivia\_81, Delilah\_92, Delylah\_95, Demodog\_99, Derek\_92, Dessert\_90, Dietrick\_84, DirtMonster\_85, Domi\_86, DrPhinkDaddy\_91, Drazdys\_92, Duckfeet\_83, ET08\_81, EasyJones\_95, EggyFarm\_100, EmToTheThree\_95, EmmaElysia\_91, Erdmann\_93, ErnieJ\_88, Essence\_89, Ewok\_93, Fixie\_87, Flabslab\_87, Fludd\_92, Fongie\_90, FoxtrotP1\_92, FrayBell\_98, FudgeTart\_92, Gabriel\_94, Gamgam\_92, Ghost\_91, Gizmo\_96, GlutenPhree\_93, Grasshills\_99, Greely\_93, Grungle\_79, Guwapp\_91, Halldule\_85, HyRo\_84, I3\_98, IkeLoa\_86, InigoMontoya\_93, InterFolia\_101, Iota\_86, Issimir\_91, Izajani\_92, JPickles\_90, Janiyra\_94, JayJay\_98, Jaygup\_92, Jedediah\_95, Jemmno\_92, Jessibeth14\_91, Jezreel\_92, JigglyPuff\_98, JulietS\_85, JustHall\_88, Kamryn\_92, Kboogie\_95, Khaleesi\_91, Koguma\_88, LRRHood\_86, Labradorite\_92, Latch\_92, Lee7\_90, Leopard\_6, Lethe\_91, LifeSavor\_91, LinStu\_92, Littleton\_92, Loanshark\_92, LolaVinca\_94, LookingGlass\_93, LordLeafolot\_98, Lukilu\_83, Lunareta\_89, Maby2021\_92, Mangeria\_92, Matsumoto\_91, Maturis\_90, McGee\_93, McWolfish\_90, Megamind\_91, Melpomini\_86, MikeLiesIn\_93, Mikro\_90, MoMoMixon\_93, Moby\_83, Moiqah\_83, Momo\_91, Montpel\_89, Morizzled23\_92, Myrna\_91, Naija\_91, Napoleon13\_88, Nappy\_94, Naval22\_100, NedWong\_93, Ngannou\_88, Nidhogg\_93, NoodleTree\_100, Norm\_93, NuevoMundo\_98, Onyinye\_6, OrediggerDelux\_90, ParkTD\_93, Patter\_92, Phabba\_96,

PharkleMinkus\_97, Phlegm\_94, Phox\_89, Phusco\_92, Pier\_96, Pinkcreek\_83, Pio\_96, Pivoine\_91, Pleione\_95, Primadonna\_86, Pupusa\_97, PurduePete\_92, QBert\_86, Quasimodo\_92, Rabinovish\_89, Rahel\_91, RedWattleHog\_41, RoMag\_87, Rocha\_91, Ronan\_85, Roots515\_91, SVoro\_90, Salacia\_96, Sauce\_92, ScoobyDoobyDoo\_86, ScottMcG\_89, Sebata\_93, Shaqnato\_84, Shelob\_94, ShiaLabeouf\_92, Shifa\_81, Shnickers\_92, Shrimp\_92, SilverDipper\_93, SmallFry\_92, SoilZilla\_88, Spec\_87, Specks\_98, Sprinklers\_87, Spud\_92, SrishMeg2525\_91, StAugustine\_46, StephanieG\_91, Stormageddon\_38, StubbySaigey\_94, Stubby\_85, Substance289\_89, Tainan\_97, Teardrop\_92, TinyTim\_92, Tonenili\_106, Tortoise16\_90, Trinitium\_88, Turret\_87, Tyke\_94, ValleyTerrace\_92, Vortrix\_107, Wally\_91, Willis\_93, Yassified\_88, YemiJoy2021\_93, YoungMoneyMata\_92, Yucca\_92, Zalkecks\_93, Zeenon\_94, ZygoTaiga\_91,

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

- DrLupo\_11,

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

- CherryTomatoes\_135, Pupper\_135, SCentae\_134, Skog\_197,

### Summary by start number:

Start 6:

- Found in 4 of 232 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 4 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CherryTomatoes\_135 (DO), Pupper\_135 (DO), SCentae\_134 (DO), Skog\_197 (DO),

Start 8:

- Found in 1 of 232 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 194
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DrLupo\_11 (H2),

Start 9:

- Found in 228 of 232 ( 98.3% ) of genes in pham
- Manual Annotations of this start: 189 of 194
- Called 99.6% of time when present
- Phage (with cluster) where this start called: Ablatia\_90 (C1), Ading\_92 (C1), Adlitam\_92 (C1), Aikoy\_5 (AE), Alice\_85 (C1), Amataga\_92 (C1), ArcherS7\_91 (C1), Asterius\_95 (C1), Astraea\_90 (C1), Atlantean\_91 (C1), Audrick\_94 (C1), Ava3\_93 (C1), Babyland\_92 (C1), BackyardAgain\_89 (C1), BadAgartude\_89 (C1), BananaFence\_91 (C1), Bangla1971\_93 (C1), Barnyard\_10 (H2), Basquiat\_88 (C1), BeanWater\_84 (C1), Belieber\_86 (C1), Bezza\_81 (C1), BigCity\_100 (C1), Bigswole\_97 (C1), Bipolarisk\_91 (C1), Blackbrain\_87 (C1), Blackdragon\_86 (C1), Blubba\_81 (C1), BobaPhatt\_86 (C1), Bonray\_92 (C1), Bowman\_90 (C1), Bread\_92 (C1), Breeniome\_92 (C1), Burrough\_92 (C1), Cactojaque\_87 (C1), Cali\_87 (C1), Cane17\_81 (C1), Capablanca\_94 (C1), Caravan\_87 (C1), Causa\_48 (AI), Chargie21\_88 (C1), CharlieB\_87 (C1), ChaylaJr\_87 (C1), ChickenPhender\_88 (C1), Chomp\_91 (C1), CindyLou\_93 (C1), Cleatunium\_87 (C1), Colt\_82 (C1), Concombre\_99 (C1), DTDevon\_93 (C1), Daffodil\_97 (C1), Dandelion\_99 (C1), Darko\_92 (C1), DeejaClivia\_81 (C1), Delilah\_92 (C1), Delylah\_95 (C1), Demodog\_99 (C1), Derek\_92 (C1), Dessert\_90 (C1), Dietrick\_84 (C1), DirtMonster\_85 (C1),

Domi\_86 (C1), DrPhinkDaddy\_91 (C1), Drazdys\_92 (C1), Duckfeet\_83 (C1), ET08\_81 (C1), EasyJones\_95 (C1), EggyFarm\_100 (C1), EmToTheThree\_95 (C1), EmmaElysia\_91 (C1), Erdmann\_93 (C1), ErnieJ\_88 (C1), Essence\_89 (C1), Ewok\_93 (C1), Fixie\_87 (C1), Flabslab\_87 (C1), Fludd\_92 (C1), Fongie\_90 (C1), FoxtrotP1\_92 (C1), FrayBell\_98 (C1), FudgeTart\_92 (C1), Gabriel\_94 (C1), Gamgam\_92 (C1), Ghost\_91 (C1), Gizmo\_96 (C1), GlutenPhree\_93 (C1), Grasshills\_99 (C1), Greely\_93 (C2), Grungle\_79 (C1), Guwapp\_91 (C1), Halldule\_85 (C1), HyRo\_84 (C1), I3\_98 (C1), IkeLoa\_86 (C1), InigoMontoya\_93 (C1), InterFolia\_101 (C1), Iota\_86 (C1), Issimir\_91 (C1), Izajani\_92 (C1), JPickles\_90 (C1), Janiyra\_94 (C1), JayJay\_98 (C1), Jaygup\_92 (C1), Jedediah\_95 (C1), Jemmno\_92 (C1), Jessibeth14\_91 (C1), Jezreel\_92 (C1), JigglyPuff\_98 (C1), JulietS\_85 (C1), JustHall\_88 (C1), Kamryn\_92 (C1), Kboogie\_95 (C1), Khaleesi\_91 (C1), Koguma\_88 (C1), LRRHood\_86 (C1), Labradorite\_92 (C1), Latch\_92 (C1), Lee7\_90 (C1), Leopard\_6 (AE), Lethe\_91 (C1), LifeSavor\_91 (C1), LinStu\_92 (C1), Littleton\_92 (C1), Loanshark\_92 (C1), LolaVinca\_94 (C1), LookingGlass\_93 (C1), LordLeafolot\_98 (C1), Lukilu\_83 (C1), Lunareta\_89 (C1), Maby2021\_92 (C1), Mangeria\_92 (C1), Matsumoto\_91 (C1), Maturis\_90 (C1), McGee\_93 (C1), McWolfish\_90 (C1), Megamind\_91 (C1), Melpomini\_86 (C1), MikeLiesIn\_93 (C1), Mikro\_90 (C1), MoMoMixon\_93 (C1), Moby\_83 (C1), Moiqah\_83 (C1), Momo\_91 (C1), Montpel\_89 (C1), Morizzled23\_92 (C1), Myrna\_91 (C2), Naija\_91 (C1), Napoleon13\_88 (C1), Nappy\_94 (C1), Naval22\_100 (C1), NedWong\_93 (C1), Ngannou\_88 (C1), Nidhogg\_93 (C1), NoodleTree\_100 (C1), Norm\_93 (C1), NuevoMundo\_98 (C1), Onyinye\_6 (AE), OrediggerDelux\_90 (C1), ParkTD\_93 (C1), Patter\_92 (C1), Phabba\_96 (C2), PharkleMinkus\_97 (C1), Phlegm\_94 (C1), Phox\_89 (C1), Phusco\_92 (C1), Pier\_96 (C1), Pinkcreek\_83 (C1), Pio\_96 (C1), Pivoine\_91 (C1), Pleione\_95 (C1), Primadonna\_86 (C1), Pupusa\_97 (C1), PurduePete\_92 (C1), QBert\_86 (C1), Quasimodo\_92 (C1), Rabinovish\_89 (C1), Rahel\_91 (C1), RedWattleHog\_41 (DX), RoMag\_87 (C1), Rocha\_91 (C1), Ronan\_85 (C1), Roots515\_91 (C1), SVoro\_90 (C1), Salacia\_96 (C1), Sauce\_92 (C1), ScoobyDoobyDoo\_86 (C2), ScottMcG\_89 (C1), Sebata\_93 (C1), Shaqnato\_84 (C1), Shelob\_94 (C1), ShiaLabeouf\_92 (C1), Shifa\_81 (C1), Shnickers\_92 (C1), Shrimp\_92 (C1), SilverDipper\_93 (C1), SmallFry\_92 (C1), SoilZilla\_88 (C1), Spec\_87 (C1), Specks\_98 (C1), Sprinklers\_87 (C1), Spud\_92 (C1), SrishMeg2525\_91 (C1), StAugustine\_46 (AI), StephanieG\_91 (C1), Stormageddon\_38 (DX), StubbySaigey\_94 (C1), Stubby\_85 (C1), Substance289\_89 (C1), Tainan\_97 (C1), Teardrop\_92 (C1), TinyTim\_92 (C1), Tonenili\_106 (C1), Tortoise16\_90 (C1), Trinitium\_88 (C1), Turret\_87 (C1), Tyke\_94 (C1), ValleyTerrace\_92 (C1), Vortrix\_107 (C1), Wally\_91 (C1), Willis\_93 (C1), Yassified\_88 (C1), YemiJoy2021\_93 (C1), YoungMoneyMata\_92 (C1), Yucca\_92 (C1), Zalkecks\_93 (C1), Zeenon\_94 (C1), ZygoTaiga\_91 (C1),

### Summary by clusters:

There are 7 clusters represented in this pham: DO, AE, H2, AI, DX, C2, C1,

Info for manual annotations of cluster AE:

- Start number 9 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster AI:

- Start number 9 was manually annotated 2 times for cluster AI.

Info for manual annotations of cluster C1:

- Start number 9 was manually annotated 178 times for cluster C1.

Info for manual annotations of cluster C2:

- Start number 9 was manually annotated 3 times for cluster C2.

Info for manual annotations of cluster DO:

- Start number 6 was manually annotated 4 times for cluster DO.

Info for manual annotations of cluster DX:

- Start number 9 was manually annotated 2 times for cluster DX.

Info for manual annotations of cluster H2:

- Start number 8 was manually annotated 1 time for cluster H2.
- Start number 9 was manually annotated 1 time for cluster H2.

### ***Gene Information:***

Gene: Ablatia\_90 Start: 37880, Stop: 38035, Start Num: 9

Candidate Starts for Ablatia\_90:

(Start: 9 @37880 has 189 MA's), (29, 37982),

Gene: Ading\_92 Start: 39148, Stop: 39303, Start Num: 9

Candidate Starts for Ading\_92:

(Start: 9 @39148 has 189 MA's), (29, 39250),

Gene: Adlitam\_92 Start: 39165, Stop: 39320, Start Num: 9

Candidate Starts for Adlitam\_92:

(Start: 9 @39165 has 189 MA's), (29, 39267),

Gene: Aikoy\_5 Start: 2260, Stop: 2415, Start Num: 9

Candidate Starts for Aikoy\_5:

(Start: 9 @2260 has 189 MA's), (10, 2275), (16, 2308), (23, 2341), (30, 2365), (33, 2389),

Gene: Alice\_85 Start: 37028, Stop: 37183, Start Num: 9

Candidate Starts for Alice\_85:

(Start: 9 @37028 has 189 MA's), (29, 37130),

Gene: Amataga\_92 Start: 38410, Stop: 38565, Start Num: 9

Candidate Starts for Amataga\_92:

(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: ArcherS7\_91 Start: 38728, Stop: 38883, Start Num: 9

Candidate Starts for ArcherS7\_91:

(Start: 9 @38728 has 189 MA's), (29, 38830),

Gene: Asterius\_95 Start: 38713, Stop: 38868, Start Num: 9

Candidate Starts for Asterius\_95:

(Start: 9 @38713 has 189 MA's), (29, 38815),

Gene: Astraea\_90 Start: 38589, Stop: 38744, Start Num: 9

Candidate Starts for Astraea\_90:

(Start: 9 @38589 has 189 MA's), (29, 38691),

Gene: Atlantean\_91 Start: 38410, Stop: 38565, Start Num: 9  
Candidate Starts for Atlantean\_91:  
(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: Audrick\_94 Start: 38389, Stop: 38544, Start Num: 9  
Candidate Starts for Audrick\_94:  
(Start: 9 @38389 has 189 MA's), (29, 38491),

Gene: Ava3\_93 Start: 39086, Stop: 39241, Start Num: 9  
Candidate Starts for Ava3\_93:  
(Start: 9 @39086 has 189 MA's), (29, 39188),

Gene: Babyland\_92 Start: 37849, Stop: 38004, Start Num: 9  
Candidate Starts for Babyland\_92:  
(Start: 9 @37849 has 189 MA's), (29, 37951),

Gene: BackyardAgain\_89 Start: 37907, Stop: 38062, Start Num: 9  
Candidate Starts for BackyardAgain\_89:  
(Start: 9 @37907 has 189 MA's), (29, 38009),

Gene: BadAgartude\_89 Start: 39469, Stop: 39624, Start Num: 9  
Candidate Starts for BadAgartude\_89:  
(Start: 9 @39469 has 189 MA's), (29, 39571),

Gene: BananaFence\_91 Start: 38951, Stop: 39106, Start Num: 9  
Candidate Starts for BananaFence\_91:  
(Start: 9 @38951 has 189 MA's), (29, 39053),

Gene: Bangla1971\_93 Start: 38858, Stop: 39013, Start Num: 9  
Candidate Starts for Bangla1971\_93:  
(Start: 9 @38858 has 189 MA's), (29, 38960),

Gene: Barnyard\_10 Start: 6469, Stop: 6612, Start Num: 9  
Candidate Starts for Barnyard\_10:  
(Start: 9 @6469 has 189 MA's), (11, 6487), (20, 6532), (21, 6541),

Gene: Basquiat\_88 Start: 37404, Stop: 37559, Start Num: 9  
Candidate Starts for Basquiat\_88:  
(Start: 9 @37404 has 189 MA's), (29, 37506),

Gene: BeanWater\_84 Start: 38802, Stop: 38957, Start Num: 9  
Candidate Starts for BeanWater\_84:  
(Start: 9 @38802 has 189 MA's), (29, 38904),

Gene: Belieber\_86 Start: 37762, Stop: 37917, Start Num: 9  
Candidate Starts for Belieber\_86:  
(Start: 9 @37762 has 189 MA's), (29, 37864),

Gene: Bezza\_81 Start: 37719, Stop: 37874, Start Num: 9  
Candidate Starts for Bezza\_81:  
(Start: 9 @37719 has 189 MA's), (29, 37821),

Gene: BigCity\_100 Start: 41462, Stop: 41617, Start Num: 9  
Candidate Starts for BigCity\_100:  
(Start: 9 @41462 has 189 MA's), (29, 41564),

Gene: Bigswole\_97 Start: 41810, Stop: 41965, Start Num: 9  
Candidate Starts for Bigswole\_97:  
(Start: 9 @41810 has 189 MA's), (29, 41912),

Gene: Bipolarisk\_91 Start: 39116, Stop: 39271, Start Num: 9  
Candidate Starts for Bipolarisk\_91:  
(Start: 9 @39116 has 189 MA's), (29, 39218),

Gene: Blackbrain\_87 Start: 37221, Stop: 37376, Start Num: 9  
Candidate Starts for Blackbrain\_87:  
(Start: 9 @37221 has 189 MA's), (29, 37323),

Gene: Blackdragon\_86 Start: 37934, Stop: 38089, Start Num: 9  
Candidate Starts for Blackdragon\_86:  
(Start: 9 @37934 has 189 MA's), (29, 38036),

Gene: Blubba\_81 Start: 37002, Stop: 37157, Start Num: 9  
Candidate Starts for Blubba\_81:  
(Start: 9 @37002 has 189 MA's),

Gene: BobaPhatt\_86 Start: 37043, Stop: 37198, Start Num: 9  
Candidate Starts for BobaPhatt\_86:  
(Start: 9 @37043 has 189 MA's), (29, 37145),

Gene: Bonray\_92 Start: 39513, Stop: 39668, Start Num: 9  
Candidate Starts for Bonray\_92:  
(Start: 9 @39513 has 189 MA's), (29, 39615),

Gene: Bowman\_90 Start: 39704, Stop: 39859, Start Num: 9  
Candidate Starts for Bowman\_90:  
(Start: 9 @39704 has 189 MA's), (29, 39806),

Gene: Bread\_92 Start: 39008, Stop: 39163, Start Num: 9  
Candidate Starts for Bread\_92:  
(Start: 9 @39008 has 189 MA's), (29, 39110),

Gene: Breeniome\_92 Start: 38231, Stop: 38386, Start Num: 9  
Candidate Starts for Breeniome\_92:  
(Start: 9 @38231 has 189 MA's), (29, 38333),

Gene: Burrough\_92 Start: 39665, Stop: 39820, Start Num: 9  
Candidate Starts for Burrough\_92:  
(Start: 9 @39665 has 189 MA's), (29, 39767),

Gene: Cactojaque\_87 Start: 37328, Stop: 37483, Start Num: 9  
Candidate Starts for Cactojaque\_87:  
(Start: 9 @37328 has 189 MA's), (29, 37430),

Gene: Cali\_87 Start: 39242, Stop: 39397, Start Num: 9

Candidate Starts for Cali\_87:  
(Start: 9 @39242 has 189 MA's), (29, 39344),

Gene: Cane17\_81 Start: 37075, Stop: 37230, Start Num: 9  
Candidate Starts for Cane17\_81:  
(Start: 9 @37075 has 189 MA's),

Gene: Capablanca\_94 Start: 39535, Stop: 39690, Start Num: 9  
Candidate Starts for Capablanca\_94:  
(Start: 9 @39535 has 189 MA's), (29, 39637),

Gene: Caravan\_87 Start: 39039, Stop: 39194, Start Num: 9  
Candidate Starts for Caravan\_87:  
(Start: 9 @39039 has 189 MA's), (29, 39141),

Gene: Causa\_48 Start: 43096, Stop: 43251, Start Num: 9  
Candidate Starts for Causa\_48:  
(1, 42322), (2, 42928), (5, 43069), (Start: 9 @43096 has 189 MA's), (11, 43114), (34, 43228),

Gene: Chargie21\_88 Start: 37404, Stop: 37559, Start Num: 9  
Candidate Starts for Chargie21\_88:  
(Start: 9 @37404 has 189 MA's), (29, 37506),

Gene: CharlieB\_87 Start: 37240, Stop: 37395, Start Num: 9  
Candidate Starts for CharlieB\_87:  
(Start: 9 @37240 has 189 MA's), (29, 37342),

Gene: ChaylaJr\_87 Start: 37119, Stop: 37274, Start Num: 9  
Candidate Starts for ChaylaJr\_87:  
(Start: 9 @37119 has 189 MA's), (29, 37221),

Gene: CherryTomatoes\_135 Start: 94647, Stop: 94820, Start Num: 6  
Candidate Starts for CherryTomatoes\_135:  
(Start: 6 @94647 has 4 MA's), (19, 94722), (26, 94755), (35, 94815),

Gene: ChickenPhender\_88 Start: 37452, Stop: 37607, Start Num: 9  
Candidate Starts for ChickenPhender\_88:  
(Start: 9 @37452 has 189 MA's), (29, 37554),

Gene: Chomp\_91 Start: 39698, Stop: 39853, Start Num: 9  
Candidate Starts for Chomp\_91:  
(Start: 9 @39698 has 189 MA's), (29, 39800),

Gene: CindyLou\_93 Start: 39739, Stop: 39894, Start Num: 9  
Candidate Starts for CindyLou\_93:  
(Start: 9 @39739 has 189 MA's), (29, 39841),

Gene: Cleatunium\_87 Start: 38800, Stop: 38955, Start Num: 9  
Candidate Starts for Cleatunium\_87:  
(Start: 9 @38800 has 189 MA's), (29, 38902),

Gene: Colt\_82 Start: 37671, Stop: 37826, Start Num: 9  
Candidate Starts for Colt\_82:

(Start: 9 @37671 has 189 MA's),

Gene: Concombres\_99 Start: 41651, Stop: 41806, Start Num: 9

Candidate Starts for Concombres\_99:

(Start: 9 @41651 has 189 MA's), (29, 41753),

Gene: DTDevon\_93 Start: 39571, Stop: 39726, Start Num: 9

Candidate Starts for DTDevon\_93:

(Start: 9 @39571 has 189 MA's), (29, 39673),

Gene: Daffodil\_97 Start: 39404, Stop: 39559, Start Num: 9

Candidate Starts for Daffodil\_97:

(Start: 9 @39404 has 189 MA's), (29, 39506),

Gene: Dandelion\_99 Start: 42101, Stop: 42256, Start Num: 9

Candidate Starts for Dandelion\_99:

(Start: 9 @42101 has 189 MA's), (18, 42158), (29, 42203),

Gene: Darko\_92 Start: 39339, Stop: 39494, Start Num: 9

Candidate Starts for Darko\_92:

(Start: 9 @39339 has 189 MA's), (29, 39441),

Gene: DeejaClivia\_81 Start: 35256, Stop: 35411, Start Num: 9

Candidate Starts for DeejaClivia\_81:

(Start: 9 @35256 has 189 MA's),

Gene: Delilah\_92 Start: 39405, Stop: 39560, Start Num: 9

Candidate Starts for Delilah\_92:

(Start: 9 @39405 has 189 MA's), (29, 39507),

Gene: Delylah\_95 Start: 39198, Stop: 39353, Start Num: 9

Candidate Starts for Delylah\_95:

(Start: 9 @39198 has 189 MA's), (29, 39300),

Gene: Demodog\_99 Start: 41651, Stop: 41806, Start Num: 9

Candidate Starts for Demodog\_99:

(Start: 9 @41651 has 189 MA's), (29, 41753),

Gene: Derek\_92 Start: 39500, Stop: 39655, Start Num: 9

Candidate Starts for Derek\_92:

(Start: 9 @39500 has 189 MA's), (29, 39602),

Gene: Dessert\_90 Start: 38410, Stop: 38565, Start Num: 9

Candidate Starts for Dessert\_90:

(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: Dietrick\_84 Start: 37155, Stop: 37310, Start Num: 9

Candidate Starts for Dietrick\_84:

(Start: 9 @37155 has 189 MA's), (29, 37257),

Gene: DirtMonster\_85 Start: 37997, Stop: 38152, Start Num: 9

Candidate Starts for DirtMonster\_85:

(Start: 9 @37997 has 189 MA's), (29, 38099),

Gene: Domi\_86 Start: 38733, Stop: 38888, Start Num: 9

Candidate Starts for Domi\_86:

(Start: 9 @38733 has 189 MA's), (29, 38835),

Gene: DrLupo\_11 Start: 6407, Stop: 6553, Start Num: 8

Candidate Starts for DrLupo\_11:

(Start: 8 @6407 has 1 MA's), (Start: 9 @6410 has 189 MA's), (11, 6428), (22, 6488), (24, 6494),

Gene: DrPhinkDaddy\_91 Start: 39460, Stop: 39615, Start Num: 9

Candidate Starts for DrPhinkDaddy\_91:

(Start: 9 @39460 has 189 MA's), (29, 39562),

Gene: Drazdys\_92 Start: 39202, Stop: 39357, Start Num: 9

Candidate Starts for Drazdys\_92:

(Start: 9 @39202 has 189 MA's), (29, 39304),

Gene: Duckfeet\_83 Start: 37207, Stop: 37362, Start Num: 9

Candidate Starts for Duckfeet\_83:

(Start: 9 @37207 has 189 MA's), (29, 37309),

Gene: ET08\_81 Start: 38176, Stop: 38331, Start Num: 9

Candidate Starts for ET08\_81:

(Start: 9 @38176 has 189 MA's), (29, 38278),

Gene: EasyJones\_95 Start: 38511, Stop: 38666, Start Num: 9

Candidate Starts for EasyJones\_95:

(Start: 9 @38511 has 189 MA's), (29, 38613),

Gene: EggyFarm\_100 Start: 41462, Stop: 41617, Start Num: 9

Candidate Starts for EggyFarm\_100:

(Start: 9 @41462 has 189 MA's), (29, 41564),

Gene: EmToTheThree\_95 Start: 40856, Stop: 41011, Start Num: 9

Candidate Starts for EmToTheThree\_95:

(Start: 9 @40856 has 189 MA's), (29, 40958),

Gene: EmmaElysia\_91 Start: 37977, Stop: 38132, Start Num: 9

Candidate Starts for EmmaElysia\_91:

(Start: 9 @37977 has 189 MA's), (29, 38079),

Gene: Erdmann\_93 Start: 39405, Stop: 39560, Start Num: 9

Candidate Starts for Erdmann\_93:

(Start: 9 @39405 has 189 MA's), (29, 39507),

Gene: ErnieJ\_88 Start: 37433, Stop: 37588, Start Num: 9

Candidate Starts for ErnieJ\_88:

(Start: 9 @37433 has 189 MA's), (29, 37535),

Gene: Essence\_89 Start: 38964, Stop: 39119, Start Num: 9

Candidate Starts for Essence\_89:

(Start: 9 @38964 has 189 MA's), (29, 39066),

Gene: Ewok\_93 Start: 39032, Stop: 39187, Start Num: 9  
Candidate Starts for Ewok\_93:  
(Start: 9 @39032 has 189 MA's), (29, 39134),

Gene: Fixie\_87 Start: 37610, Stop: 37765, Start Num: 9  
Candidate Starts for Fixie\_87:  
(Start: 9 @37610 has 189 MA's), (29, 37712),

Gene: Flabslab\_87 Start: 37189, Stop: 37344, Start Num: 9  
Candidate Starts for Flabslab\_87:  
(Start: 9 @37189 has 189 MA's), (29, 37291),

Gene: Fludd\_92 Start: 37851, Stop: 38006, Start Num: 9  
Candidate Starts for Fludd\_92:  
(Start: 9 @37851 has 189 MA's), (29, 37953),

Gene: Fongie\_90 Start: 39245, Stop: 39400, Start Num: 9  
Candidate Starts for Fongie\_90:  
(Start: 9 @39245 has 189 MA's), (29, 39347),

Gene: FoxtrotP1\_92 Start: 39804, Stop: 39959, Start Num: 9  
Candidate Starts for FoxtrotP1\_92:  
(Start: 9 @39804 has 189 MA's), (29, 39906),

Gene: FrayBell\_98 Start: 40854, Stop: 41009, Start Num: 9  
Candidate Starts for FrayBell\_98:  
(Start: 9 @40854 has 189 MA's), (29, 40956),

Gene: FudgeTart\_92 Start: 38598, Stop: 38753, Start Num: 9  
Candidate Starts for FudgeTart\_92:  
(Start: 9 @38598 has 189 MA's), (29, 38700),

Gene: Gabriel\_94 Start: 38640, Stop: 38795, Start Num: 9  
Candidate Starts for Gabriel\_94:  
(Start: 9 @38640 has 189 MA's), (29, 38742),

Gene: Gamgam\_92 Start: 38410, Stop: 38565, Start Num: 9  
Candidate Starts for Gamgam\_92:  
(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: Ghost\_91 Start: 38410, Stop: 38565, Start Num: 9  
Candidate Starts for Ghost\_91:  
(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: Gizmo\_96 Start: 39781, Stop: 39936, Start Num: 9  
Candidate Starts for Gizmo\_96:  
(Start: 9 @39781 has 189 MA's), (29, 39883),

Gene: GlutenPhree\_93 Start: 38410, Stop: 38565, Start Num: 9  
Candidate Starts for GlutenPhree\_93:  
(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: Grasshills\_99 Start: 41462, Stop: 41617, Start Num: 9

Candidate Starts for Grasshills\_99:  
(Start: 9 @41462 has 189 MA's), (29, 41564),

Gene: Greely\_93 Start: 40118, Stop: 40282, Start Num: 9  
Candidate Starts for Greely\_93:  
(Start: 9 @40118 has 189 MA's), (25, 40205), (31, 40241), (34, 40259),

Gene: Grungle\_79 Start: 35792, Stop: 35947, Start Num: 9  
Candidate Starts for Grungle\_79:  
(Start: 9 @35792 has 189 MA's), (29, 35894),

Gene: Guwapp\_91 Start: 38505, Stop: 38660, Start Num: 9  
Candidate Starts for Guwapp\_91:  
(Start: 9 @38505 has 189 MA's), (29, 38607),

Gene: Halldule\_85 Start: 36822, Stop: 36977, Start Num: 9  
Candidate Starts for Halldule\_85:  
(Start: 9 @36822 has 189 MA's), (29, 36924),

Gene: HyRo\_84 Start: 37580, Stop: 37735, Start Num: 9  
Candidate Starts for HyRo\_84:  
(Start: 9 @37580 has 189 MA's),

Gene: I3\_98 Start: 39372, Stop: 39527, Start Num: 9  
Candidate Starts for I3\_98:  
(Start: 9 @39372 has 189 MA's), (29, 39474),

Gene: IkeLoa\_86 Start: 37770, Stop: 37925, Start Num: 9  
Candidate Starts for IkeLoa\_86:  
(Start: 9 @37770 has 189 MA's), (29, 37872),

Gene: InigoMontoya\_93 Start: 38371, Stop: 38526, Start Num: 9  
Candidate Starts for InigoMontoya\_93:  
(Start: 9 @38371 has 189 MA's), (29, 38473),

Gene: InterFolia\_101 Start: 41792, Stop: 41947, Start Num: 9  
Candidate Starts for InterFolia\_101:  
(Start: 9 @41792 has 189 MA's), (29, 41894),

Gene: Iota\_86 Start: 38151, Stop: 38306, Start Num: 9  
Candidate Starts for Iota\_86:  
(Start: 9 @38151 has 189 MA's), (29, 38253),

Gene: Issimir\_91 Start: 39348, Stop: 39503, Start Num: 9  
Candidate Starts for Issimir\_91:  
(Start: 9 @39348 has 189 MA's), (29, 39450),

Gene: Izajani\_92 Start: 39421, Stop: 39576, Start Num: 9  
Candidate Starts for Izajani\_92:  
(Start: 9 @39421 has 189 MA's), (29, 39523),

Gene: JPickles\_90 Start: 37641, Stop: 37796, Start Num: 9  
Candidate Starts for JPickles\_90:

(Start: 9 @37641 has 189 MA's), (29, 37743),

Gene: Janiyra\_94 Start: 38681, Stop: 38836, Start Num: 9

Candidate Starts for Janiyra\_94:

(Start: 9 @38681 has 189 MA's), (29, 38783),

Gene: JayJay\_98 Start: 40709, Stop: 40864, Start Num: 9

Candidate Starts for JayJay\_98:

(Start: 9 @40709 has 189 MA's), (29, 40811),

Gene: Jaygup\_92 Start: 39166, Stop: 39321, Start Num: 9

Candidate Starts for Jaygup\_92:

(Start: 9 @39166 has 189 MA's), (29, 39268),

Gene: Jedediah\_95 Start: 39666, Stop: 39821, Start Num: 9

Candidate Starts for Jedediah\_95:

(Start: 9 @39666 has 189 MA's), (29, 39768),

Gene: Jemmno\_92 Start: 39116, Stop: 39271, Start Num: 9

Candidate Starts for Jemmno\_92:

(Start: 9 @39116 has 189 MA's), (29, 39218),

Gene: Jessibeth14\_91 Start: 39190, Stop: 39345, Start Num: 9

Candidate Starts for Jessibeth14\_91:

(Start: 9 @39190 has 189 MA's), (29, 39292),

Gene: Jezreel\_92 Start: 39104, Stop: 39259, Start Num: 9

Candidate Starts for Jezreel\_92:

(Start: 9 @39104 has 189 MA's), (29, 39206),

Gene: JigglyPuff\_98 Start: 40965, Stop: 41120, Start Num: 9

Candidate Starts for JigglyPuff\_98:

(Start: 9 @40965 has 189 MA's), (29, 41067),

Gene: JulietS\_85 Start: 36673, Stop: 36828, Start Num: 9

Candidate Starts for JulietS\_85:

(Start: 9 @36673 has 189 MA's), (29, 36775),

Gene: JustHall\_88 Start: 38319, Stop: 38474, Start Num: 9

Candidate Starts for JustHall\_88:

(Start: 9 @38319 has 189 MA's), (29, 38421),

Gene: Kamryn\_92 Start: 39929, Stop: 40084, Start Num: 9

Candidate Starts for Kamryn\_92:

(Start: 9 @39929 has 189 MA's), (29, 40031),

Gene: Kboogie\_95 Start: 37963, Stop: 38118, Start Num: 9

Candidate Starts for Kboogie\_95:

(Start: 9 @37963 has 189 MA's), (29, 38065),

Gene: Khaleesi\_91 Start: 39152, Stop: 39307, Start Num: 9

Candidate Starts for Khaleesi\_91:

(Start: 9 @39152 has 189 MA's), (29, 39254),

Gene: Koguma\_88 Start: 36893, Stop: 37048, Start Num: 9  
Candidate Starts for Koguma\_88:  
(Start: 9 @36893 has 189 MA's), (29, 36995),

Gene: LRRHood\_86 Start: 38712, Stop: 38867, Start Num: 9  
Candidate Starts for LRRHood\_86:  
(Start: 9 @38712 has 189 MA's), (29, 38814),

Gene: Labradorite\_92 Start: 38489, Stop: 38644, Start Num: 9  
Candidate Starts for Labradorite\_92:  
(Start: 9 @38489 has 189 MA's), (29, 38591),

Gene: Latch\_92 Start: 38410, Stop: 38565, Start Num: 9  
Candidate Starts for Latch\_92:  
(Start: 9 @38410 has 189 MA's), (13, 38434), (29, 38512),

Gene: Lee7\_90 Start: 39015, Stop: 39170, Start Num: 9  
Candidate Starts for Lee7\_90:  
(Start: 9 @39015 has 189 MA's), (29, 39117),

Gene: Leopard\_6 Start: 2486, Stop: 2641, Start Num: 9  
Candidate Starts for Leopard\_6:  
(Start: 9 @2486 has 189 MA's), (10, 2501), (16, 2534), (23, 2567), (30, 2591), (33, 2615),

Gene: Lethe\_91 Start: 39600, Stop: 39755, Start Num: 9  
Candidate Starts for Lethe\_91:  
(Start: 9 @39600 has 189 MA's), (29, 39702),

Gene: LifeSavor\_91 Start: 38931, Stop: 39086, Start Num: 9  
Candidate Starts for LifeSavor\_91:  
(Start: 9 @38931 has 189 MA's), (29, 39033),

Gene: LinStu\_92 Start: 39776, Stop: 39931, Start Num: 9  
Candidate Starts for LinStu\_92:  
(Start: 9 @39776 has 189 MA's), (18, 39833), (29, 39878),

Gene: Littleton\_92 Start: 38365, Stop: 38520, Start Num: 9  
Candidate Starts for Littleton\_92:  
(Start: 9 @38365 has 189 MA's), (29, 38467),

Gene: Loanshark\_92 Start: 39405, Stop: 39560, Start Num: 9  
Candidate Starts for Loanshark\_92:  
(Start: 9 @39405 has 189 MA's), (29, 39507),

Gene: LolaVinca\_94 Start: 40511, Stop: 40666, Start Num: 9  
Candidate Starts for LolaVinca\_94:  
(Start: 9 @40511 has 189 MA's), (29, 40613),

Gene: LookingGlass\_93 Start: 39514, Stop: 39669, Start Num: 9  
Candidate Starts for LookingGlass\_93:  
(Start: 9 @39514 has 189 MA's), (29, 39616),

Gene: LordLeafolot\_98 Start: 41502, Stop: 41657, Start Num: 9  
Candidate Starts for LordLeafolot\_98:  
(Start: 9 @41502 has 189 MA's), (29, 41604),

Gene: Lukilu\_83 Start: 38245, Stop: 38400, Start Num: 9  
Candidate Starts for Lukilu\_83:  
(Start: 9 @38245 has 189 MA's), (29, 38347),

Gene: Lunareta\_89 Start: 40031, Stop: 40186, Start Num: 9  
Candidate Starts for Lunareta\_89:  
(Start: 9 @40031 has 189 MA's), (29, 40133),

Gene: Maby2021\_92 Start: 39086, Stop: 39241, Start Num: 9  
Candidate Starts for Maby2021\_92:  
(Start: 9 @39086 has 189 MA's), (29, 39188),

Gene: Mangeria\_92 Start: 39367, Stop: 39522, Start Num: 9  
Candidate Starts for Mangeria\_92:  
(Start: 9 @39367 has 189 MA's), (29, 39469),

Gene: Matsumoto\_91 Start: 39130, Stop: 39285, Start Num: 9  
Candidate Starts for Matsumoto\_91:  
(Start: 9 @39130 has 189 MA's), (29, 39232),

Gene: Maturis\_90 Start: 39527, Stop: 39682, Start Num: 9  
Candidate Starts for Maturis\_90:  
(Start: 9 @39527 has 189 MA's), (29, 39629),

Gene: McGee\_93 Start: 37594, Stop: 37749, Start Num: 9  
Candidate Starts for McGee\_93:  
(Start: 9 @37594 has 189 MA's), (29, 37696),

Gene: McWolfish\_90 Start: 38812, Stop: 38967, Start Num: 9  
Candidate Starts for McWolfish\_90:  
(Start: 9 @38812 has 189 MA's), (29, 38914),

Gene: Megamind\_91 Start: 39071, Stop: 39226, Start Num: 9  
Candidate Starts for Megamind\_91:  
(Start: 9 @39071 has 189 MA's), (29, 39173),

Gene: Melpomini\_86 Start: 36596, Stop: 36751, Start Num: 9  
Candidate Starts for Melpomini\_86:  
(Start: 9 @36596 has 189 MA's), (29, 36698),

Gene: MikeLiesIn\_93 Start: 39418, Stop: 39573, Start Num: 9  
Candidate Starts for MikeLiesIn\_93:  
(Start: 9 @39418 has 189 MA's), (29, 39520),

Gene: Mikro\_90 Start: 40329, Stop: 40484, Start Num: 9  
Candidate Starts for Mikro\_90:  
(Start: 9 @40329 has 189 MA's), (29, 40431),

Gene: MoMoMixon\_93 Start: 39143, Stop: 39298, Start Num: 9

Candidate Starts for MoMoMixon\_93:  
(Start: 9 @39143 has 189 MA's), (29, 39245),

Gene: Moby\_83 Start: 34671, Stop: 34826, Start Num: 9  
Candidate Starts for Moby\_83:  
(Start: 9 @34671 has 189 MA's), (29, 34773),

Gene: Moiqah\_83 Start: 34671, Stop: 34826, Start Num: 9  
Candidate Starts for Moiqah\_83:  
(Start: 9 @34671 has 189 MA's), (29, 34773),

Gene: Momo\_91 Start: 38410, Stop: 38565, Start Num: 9  
Candidate Starts for Momo\_91:  
(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: Montpel\_89 Start: 40031, Stop: 40186, Start Num: 9  
Candidate Starts for Montpel\_89:  
(Start: 9 @40031 has 189 MA's), (29, 40133),

Gene: Morizzled23\_92 Start: 38116, Stop: 38271, Start Num: 9  
Candidate Starts for Morizzled23\_92:  
(Start: 9 @38116 has 189 MA's), (29, 38218),

Gene: Myrna\_91 Start: 40892, Stop: 41059, Start Num: 9  
Candidate Starts for Myrna\_91:  
(Start: 9 @40892 has 189 MA's), (14, 40922), (15, 40934), (17, 40949), (30, 41000), (31, 41018),

Gene: Naija\_91 Start: 38410, Stop: 38565, Start Num: 9  
Candidate Starts for Naija\_91:  
(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: Napoleon13\_88 Start: 37213, Stop: 37368, Start Num: 9  
Candidate Starts for Napoleon13\_88:  
(Start: 9 @37213 has 189 MA's), (29, 37315),

Gene: Nappy\_94 Start: 39969, Stop: 40124, Start Num: 9  
Candidate Starts for Nappy\_94:  
(Start: 9 @39969 has 189 MA's), (29, 40071),

Gene: Naval22\_100 Start: 41009, Stop: 41164, Start Num: 9  
Candidate Starts for Naval22\_100:  
(Start: 9 @41009 has 189 MA's), (29, 41111),

Gene: NedWong\_93 Start: 39405, Stop: 39560, Start Num: 9  
Candidate Starts for NedWong\_93:  
(Start: 9 @39405 has 189 MA's), (29, 39507),

Gene: Ngannou\_88 Start: 37392, Stop: 37547, Start Num: 9  
Candidate Starts for Ngannou\_88:  
(Start: 9 @37392 has 189 MA's), (29, 37494),

Gene: Nidhogg\_93 Start: 39259, Stop: 39414, Start Num: 9  
Candidate Starts for Nidhogg\_93:

(Start: 9 @39259 has 189 MA's), (29, 39361),

Gene: NoodleTree\_100 Start: 40436, Stop: 40591, Start Num: 9

Candidate Starts for NoodleTree\_100:

(Start: 9 @40436 has 189 MA's), (29, 40538),

Gene: Norm\_93 Start: 39407, Stop: 39562, Start Num: 9

Candidate Starts for Norm\_93:

(Start: 9 @39407 has 189 MA's), (29, 39509),

Gene: NuevoMundo\_98 Start: 41366, Stop: 41521, Start Num: 9

Candidate Starts for NuevoMundo\_98:

(Start: 9 @41366 has 189 MA's), (29, 41468),

Gene: Onyinye\_6 Start: 2474, Stop: 2629, Start Num: 9

Candidate Starts for Onyinye\_6:

(Start: 9 @2474 has 189 MA's), (10, 2489), (16, 2522), (23, 2555), (30, 2579), (33, 2603),

Gene: OrediggerDelux\_90 Start: 39404, Stop: 39559, Start Num: 9

Candidate Starts for OrediggerDelux\_90:

(Start: 9 @39404 has 189 MA's), (29, 39506),

Gene: ParkTD\_93 Start: 39401, Stop: 39556, Start Num: 9

Candidate Starts for ParkTD\_93:

(Start: 9 @39401 has 189 MA's), (29, 39503),

Gene: Patter\_92 Start: 38427, Stop: 38582, Start Num: 9

Candidate Starts for Patter\_92:

(Start: 9 @38427 has 189 MA's), (29, 38529),

Gene: Phabba\_96 Start: 39961, Stop: 40125, Start Num: 9

Candidate Starts for Phabba\_96:

(Start: 9 @39961 has 189 MA's), (25, 40048),

Gene: PharkleMinkus\_97 Start: 40854, Stop: 41009, Start Num: 9

Candidate Starts for PharkleMinkus\_97:

(Start: 9 @40854 has 189 MA's), (29, 40956),

Gene: Phlegm\_94 Start: 38410, Stop: 38565, Start Num: 9

Candidate Starts for Phlegm\_94:

(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: Phox\_89 Start: 39274, Stop: 39429, Start Num: 9

Candidate Starts for Phox\_89:

(Start: 9 @39274 has 189 MA's), (29, 39376),

Gene: Phusco\_92 Start: 39175, Stop: 39330, Start Num: 9

Candidate Starts for Phusco\_92:

(Start: 9 @39175 has 189 MA's), (29, 39277),

Gene: Pier\_96 Start: 40406, Stop: 40561, Start Num: 9

Candidate Starts for Pier\_96:

(Start: 9 @40406 has 189 MA's), (29, 40508),

Gene: Pinkcreek\_83 Start: 36360, Stop: 36515, Start Num: 9  
Candidate Starts for Pinkcreek\_83:  
(Start: 9 @36360 has 189 MA's), (29, 36462),

Gene: Pio\_96 Start: 41138, Stop: 41293, Start Num: 9  
Candidate Starts for Pio\_96:  
(Start: 9 @41138 has 189 MA's), (29, 41240),

Gene: Pivoine\_91 Start: 38410, Stop: 38565, Start Num: 9  
Candidate Starts for Pivoine\_91:  
(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: Pleione\_95 Start: 39404, Stop: 39559, Start Num: 9  
Candidate Starts for Pleione\_95:  
(Start: 9 @39404 has 189 MA's), (29, 39506),

Gene: Primadonna\_86 Start: 38296, Stop: 38451, Start Num: 9  
Candidate Starts for Primadonna\_86:  
(Start: 9 @38296 has 189 MA's), (29, 38398),

Gene: Pupper\_135 Start: 95110, Stop: 95283, Start Num: 6  
Candidate Starts for Pupper\_135:  
(Start: 6 @95110 has 4 MA's), (19, 95185), (26, 95218),

Gene: Pupusa\_97 Start: 41221, Stop: 41376, Start Num: 9  
Candidate Starts for Pupusa\_97:  
(Start: 9 @41221 has 189 MA's), (29, 41323),

Gene: PurduePete\_92 Start: 39449, Stop: 39604, Start Num: 9  
Candidate Starts for PurduePete\_92:  
(Start: 9 @39449 has 189 MA's), (29, 39551),

Gene: QBert\_86 Start: 38905, Stop: 39060, Start Num: 9  
Candidate Starts for QBert\_86:  
(Start: 9 @38905 has 189 MA's), (29, 39007),

Gene: Quasimodo\_92 Start: 38940, Stop: 39095, Start Num: 9  
Candidate Starts for Quasimodo\_92:  
(Start: 9 @38940 has 189 MA's), (29, 39042),

Gene: Rabinovish\_89 Start: 39247, Stop: 39402, Start Num: 9  
Candidate Starts for Rabinovish\_89:  
(Start: 9 @39247 has 189 MA's), (29, 39349),

Gene: Rahel\_91 Start: 38767, Stop: 38922, Start Num: 9  
Candidate Starts for Rahel\_91:  
(Start: 9 @38767 has 189 MA's), (29, 38869),

Gene: RedWattleHog\_41 Start: 41152, Stop: 41310, Start Num: 9  
Candidate Starts for RedWattleHog\_41:  
(Start: 9 @41152 has 189 MA's), (13, 41176), (17, 41206),

Gene: RoMag\_87 Start: 38764, Stop: 38919, Start Num: 9  
Candidate Starts for RoMag\_87:  
(Start: 9 @38764 has 189 MA's), (29, 38866),

Gene: Rocha\_91 Start: 38847, Stop: 39002, Start Num: 9  
Candidate Starts for Rocha\_91:  
(Start: 9 @38847 has 189 MA's), (29, 38949),

Gene: Ronan\_85 Start: 36211, Stop: 36366, Start Num: 9  
Candidate Starts for Ronan\_85:  
(Start: 9 @36211 has 189 MA's), (29, 36313),

Gene: Roots515\_91 Start: 38827, Stop: 38982, Start Num: 9  
Candidate Starts for Roots515\_91:  
(Start: 9 @38827 has 189 MA's), (29, 38929),

Gene: SCentae\_134 Start: 95261, Stop: 95434, Start Num: 6  
Candidate Starts for SCentae\_134:  
(Start: 6 @95261 has 4 MA's), (19, 95336), (26, 95369),

Gene: SVoro\_90 Start: 39399, Stop: 39554, Start Num: 9  
Candidate Starts for SVoro\_90:  
(Start: 9 @39399 has 189 MA's), (29, 39501),

Gene: Salacia\_96 Start: 39519, Stop: 39674, Start Num: 9  
Candidate Starts for Salacia\_96:  
(Start: 9 @39519 has 189 MA's), (29, 39621),

Gene: Sauce\_92 Start: 38259, Stop: 38414, Start Num: 9  
Candidate Starts for Sauce\_92:  
(Start: 9 @38259 has 189 MA's), (29, 38361),

Gene: ScoobyDoobyDoo\_86 Start: 38013, Stop: 38168, Start Num: 9  
Candidate Starts for ScoobyDoobyDoo\_86:  
(4, 37983), (7, 38004), (Start: 9 @38013 has 189 MA's), (13, 38037), (28, 38112),

Gene: ScottMcG\_89 Start: 38391, Stop: 38546, Start Num: 9  
Candidate Starts for ScottMcG\_89:  
(Start: 9 @38391 has 189 MA's), (29, 38493),

Gene: Sebata\_93 Start: 39895, Stop: 40050, Start Num: 9  
Candidate Starts for Sebata\_93:  
(Start: 9 @39895 has 189 MA's), (18, 39952), (29, 39997),

Gene: Shaqnato\_84 Start: 37134, Stop: 37289, Start Num: 9  
Candidate Starts for Shaqnato\_84:  
(Start: 9 @37134 has 189 MA's), (29, 37236),

Gene: Shelob\_94 Start: 40397, Stop: 40552, Start Num: 9  
Candidate Starts for Shelob\_94:  
(Start: 9 @40397 has 189 MA's), (29, 40499),

Gene: ShiaLabeouf\_92 Start: 39606, Stop: 39761, Start Num: 9

Candidate Starts for ShiaLabeouf\_92:  
(Start: 9 @39606 has 189 MA's), (29, 39708),

Gene: Shifa\_81 Start: 36847, Stop: 37002, Start Num: 9  
Candidate Starts for Shifa\_81:  
(Start: 9 @36847 has 189 MA's),

Gene: Shnickers\_92 Start: 39166, Stop: 39321, Start Num: 9  
Candidate Starts for Shnickers\_92:  
(Start: 9 @39166 has 189 MA's), (29, 39268),

Gene: Shrimp\_92 Start: 39409, Stop: 39564, Start Num: 9  
Candidate Starts for Shrimp\_92:  
(Start: 9 @39409 has 189 MA's), (29, 39511),

Gene: SilverDipper\_93 Start: 38410, Stop: 38565, Start Num: 9  
Candidate Starts for SilverDipper\_93:  
(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: Skog\_197 Start: 125040, Stop: 125213, Start Num: 6  
Candidate Starts for Skog\_197:  
(3, 125007), (Start: 6 @125040 has 4 MA's), (12, 125076), (26, 125148), (33, 125184),

Gene: SmallFry\_92 Start: 38361, Stop: 38516, Start Num: 9  
Candidate Starts for SmallFry\_92:  
(Start: 9 @38361 has 189 MA's), (29, 38463),

Gene: SoilZilla\_88 Start: 38496, Stop: 38651, Start Num: 9  
Candidate Starts for SoilZilla\_88:  
(Start: 9 @38496 has 189 MA's), (29, 38598),

Gene: Spec\_87 Start: 38931, Stop: 39086, Start Num: 9  
Candidate Starts for Spec\_87:  
(Start: 9 @38931 has 189 MA's), (29, 39033),

Gene: Specks\_98 Start: 41145, Stop: 41300, Start Num: 9  
Candidate Starts for Specks\_98:  
(Start: 9 @41145 has 189 MA's), (29, 41247),

Gene: Sprinklers\_87 Start: 37631, Stop: 37786, Start Num: 9  
Candidate Starts for Sprinklers\_87:  
(Start: 9 @37631 has 189 MA's), (29, 37733),

Gene: Spud\_92 Start: 39352, Stop: 39507, Start Num: 9  
Candidate Starts for Spud\_92:  
(Start: 9 @39352 has 189 MA's), (29, 39454),

Gene: SrishMeg2525\_91 Start: 38741, Stop: 38896, Start Num: 9  
Candidate Starts for SrishMeg2525\_91:  
(Start: 9 @38741 has 189 MA's), (29, 38843),

Gene: StAugustine\_46 Start: 43111, Stop: 43266, Start Num: 9  
Candidate Starts for StAugustine\_46:

(1, 42337), (2, 42943), (5, 43084), (Start: 9 @43111 has 189 MA's), (11, 43129), (34, 43243),

Gene: StephanieG\_91 Start: 40221, Stop: 40376, Start Num: 9

Candidate Starts for StephanieG\_91:

(Start: 9 @40221 has 189 MA's), (29, 40323),

Gene: Stormageddon\_38 Start: 41135, Stop: 41293, Start Num: 9

Candidate Starts for Stormageddon\_38:

(Start: 9 @41135 has 189 MA's), (13, 41159), (17, 41189),

Gene: Stubby\_85 Start: 37438, Stop: 37593, Start Num: 9

Candidate Starts for Stubby\_85:

(Start: 9 @37438 has 189 MA's), (29, 37540),

Gene: StubbySaigey\_94 Start: 37698, Stop: 37853, Start Num: 9

Candidate Starts for StubbySaigey\_94:

(Start: 9 @37698 has 189 MA's), (29, 37800),

Gene: Substance289\_89 Start: 38684, Stop: 38839, Start Num: 9

Candidate Starts for Substance289\_89:

(Start: 9 @38684 has 189 MA's), (29, 38786),

Gene: Tainan\_97 Start: 40795, Stop: 40950, Start Num: 9

Candidate Starts for Tainan\_97:

(Start: 9 @40795 has 189 MA's), (29, 40897),

Gene: Teardrop\_92 Start: 38469, Stop: 38624, Start Num: 9

Candidate Starts for Teardrop\_92:

(Start: 9 @38469 has 189 MA's), (29, 38571),

Gene: TinyTim\_92 Start: 39405, Stop: 39560, Start Num: 9

Candidate Starts for TinyTim\_92:

(Start: 9 @39405 has 189 MA's), (29, 39507),

Gene: Tonenili\_106 Start: 43411, Stop: 43566, Start Num: 9

Candidate Starts for Tonenili\_106:

(Start: 9 @43411 has 189 MA's), (27, 43507), (29, 43513), (32, 43528),

Gene: Tortoise16\_90 Start: 39263, Stop: 39418, Start Num: 9

Candidate Starts for Tortoise16\_90:

(Start: 9 @39263 has 189 MA's), (29, 39365),

Gene: Trinitium\_88 Start: 37437, Stop: 37592, Start Num: 9

Candidate Starts for Trinitium\_88:

(Start: 9 @37437 has 189 MA's), (29, 37539),

Gene: Turret\_87 Start: 37103, Stop: 37258, Start Num: 9

Candidate Starts for Turret\_87:

(Start: 9 @37103 has 189 MA's), (29, 37205),

Gene: Tyke\_94 Start: 40971, Stop: 41126, Start Num: 9

Candidate Starts for Tyke\_94:

(Start: 9 @40971 has 189 MA's), (29, 41073),

Gene: ValleyTerrace\_92 Start: 38410, Stop: 38565, Start Num: 9  
Candidate Starts for ValleyTerrace\_92:  
(Start: 9 @38410 has 189 MA's), (29, 38512),

Gene: Vortrix\_107 Start: 42817, Stop: 42972, Start Num: 9  
Candidate Starts for Vortrix\_107:  
(Start: 9 @42817 has 189 MA's), (27, 42913), (29, 42919), (32, 42934),

Gene: Wally\_91 Start: 37960, Stop: 38115, Start Num: 9  
Candidate Starts for Wally\_91:  
(Start: 9 @37960 has 189 MA's), (29, 38062),

Gene: Willis\_93 Start: 39300, Stop: 39455, Start Num: 9  
Candidate Starts for Willis\_93:  
(Start: 9 @39300 has 189 MA's), (29, 39402),

Gene: Yassified\_88 Start: 37670, Stop: 37825, Start Num: 9  
Candidate Starts for Yassified\_88:  
(Start: 9 @37670 has 189 MA's), (29, 37772),

Gene: YemiJoy2021\_93 Start: 39402, Stop: 39557, Start Num: 9  
Candidate Starts for YemiJoy2021\_93:  
(Start: 9 @39402 has 189 MA's), (29, 39504),

Gene: YoungMoneyMata\_92 Start: 38161, Stop: 38316, Start Num: 9  
Candidate Starts for YoungMoneyMata\_92:  
(Start: 9 @38161 has 189 MA's), (29, 38263),

Gene: Yucca\_92 Start: 39324, Stop: 39479, Start Num: 9  
Candidate Starts for Yucca\_92:  
(Start: 9 @39324 has 189 MA's), (29, 39426),

Gene: Zalkecks\_93 Start: 39090, Stop: 39245, Start Num: 9  
Candidate Starts for Zalkecks\_93:  
(Start: 9 @39090 has 189 MA's), (29, 39192),

Gene: Zeenon\_94 Start: 39017, Stop: 39172, Start Num: 9  
Candidate Starts for Zeenon\_94:  
(Start: 9 @39017 has 189 MA's), (29, 39119),

Gene: ZygoTaiga\_91 Start: 39406, Stop: 39561, Start Num: 9  
Candidate Starts for ZygoTaiga\_91:  
(Start: 9 @39406 has 189 MA's), (29, 39508),