





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 283416 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283416 has 309 members, 37 are drafts.

Phages represented in each track:

- Track 1 : WST1\_5, IdentityCrisis\_5
- Track 2 : Jeilious\_5, ShaboiShabazz\_5, Sweets\_5, Peeb\_5, Maliketh\_5, Phloodle\_5, Taheera\_5, Cherrybomb426\_5, Sizemore\_5, Mowgli\_5, AzulaCat\_5, Marmie\_5, Aroostook\_5, Crespo\_5, Darionha\_5, Barkley26\_5, Ruriko\_5, Halo\_5, Gideon\_5, Terror\_5, LouisV14\_5, TinaBug\_5, BruceB\_5, Gomashi\_5, Hope\_5, ECartman\_5, GoldenAsh\_5, Jolene\_5, JorRay\_5, Frosty24\_5, Avrafan\_5, Jane\_5, TomBrady\_5, Coleslaw\_5, DMoney\_5, ZoMa\_5, Zombie\_5, Grizzly\_5, AizenPogi\_5, CLED96\_5, Annihilator\_5, Jonghyun\_5, Phish\_5, OctaviousRex\_5, Camri\_5, Phreak\_5, Chance64\_5, Kasen3\_5, Rattrick\_5, BPs\_5, DingDing\_5, Renaissance\_5, PinkYoshi\_5, Neoh\_5, Liefie\_5, BQuat\_5, Kareem\_5, Rabbs\_5, Cedasite\_5, Wendigo\_5, Periodt\_5, CassieYates\_5, Paito\_5, Remy19\_5, Angel\_5, Sneeze\_5, Hotshotbaby7\_5, DNAlll\_005, Olga\_5, Plagueis\_5, Schiebel\_5, Richarlison\_5
- Track 3 : GodSpeed\_5
- Track 4 : Avocado\_5, Cambiare\_6
- Track 5 : FlagStaff\_5, Pace1224\_5
- Track 6 : Cloudyecho\_5
- Track 7 : Pinnie\_6
- Track 8 : MOOREtheMARYer\_5
- Track 9 : Lemuria\_5
- Track 10 : Jolie2\_5
- Track 11 : Mercurio\_6
- Track 12 : YangYin\_5
- Track 13 : Stargaze\_5
- Track 14 : Antsirabe\_5
- Track 15 : Padpat\_11, Clipper\_11, JAWS\_11, Capricorn\_11, CheetoDust\_11, Blizzard\_11, ShiaSurprise\_11, CallaLilly\_11, Adonis\_11, Lunahalos\_11, BEEEST\_11, Belladonna\_11, Adephagia\_11, Emerson\_11, HedwigODU\_11, Mynx\_11, Homura\_11, Durfee\_11, Veliki\_11, Spock\_11, Twitch\_11, QuincyRose\_10, MeaningOfLife\_11, Ganymede\_11, Beezoo\_11, Llorens\_11, Jayhawk\_11, Rapunzel97\_11, AlishaPH\_11, YoureAdopted\_10, CaseJules\_11, Tiri\_11, TruffulaTree\_11, Asayake\_11, Boiii\_11, Peel\_11, Rosmarinus\_11, BGlluviae\_11, CREW\_11, Geraldini\_11, MackKat\_11, Ramen\_11, Apocalypse\_11, Topper\_11, Piatt\_11, Dalmuri\_11, Hyperbowlee\_11, Padfoot\_11, ActinUp\_11, Jarvi\_11, Inky\_11, Tachez\_11, Jeckyll\_11, BarrelRoll\_11, Atiba\_11, Zabiza\_11, BaghaKamala\_11, Zavala\_11, Slimphazie\_11, Pokerus\_10
- Track 16 : Yunkel11\_11, Guanica15\_11, Efra2\_11, Curiosium\_12
- Track 17 : Dartin\_11, Shaobing\_11, Richo\_11, McMater\_11, Peanam\_11, Niklas\_11

- Track 18 : Oscar\_10, KiSi\_10, Scarlett\_10, LeMond\_10
- Track 19 : SgtBeansprout\_7, Collard\_9, Heftyboy\_9, Lavahound\_9, Enkosi\_7, Teejan\_7, Applecrisp\_9, SoSeph\_9, Gengar\_9, Torres\_7, Guillsminger\_9, Binglebops\_7, Nutello\_7, Amelie\_7, Fefferhead\_10, Nikao\_7, Ellie\_8, Miryou\_9, OkiRoe\_9, Paola\_9, Trice\_7, Leston\_9, Amgine\_9, BananenDer11\_9, LilPharaoh\_7, Mdavu\_7, DoubleChamp\_9
- Track 20 : Ageofdapage\_11, Illumine\_11, Murucutumbu\_11, Dole\_11, Devera\_11, LaterM\_11, Stinson\_11
- Track 21 : SamuelLPlaqson\_11, DartGoblin\_11, TiniBug\_11, DrHayes\_11, Anma\_11, Bella96\_11, Urkel\_11
- Track 22 : Pisa4\_10, Bern\_11
- Track 23 : Angelica\_11, Deby\_11, Sulley\_11
- Track 24 : CrimD\_11, Anaya\_12, Prithvi\_11, Megsy\_11, LindNT\_11, TreyKay\_11, TaiwanKao\_11
- Track 25 : LastHope\_11
- Track 26 : Chris\_10, MarkPhew\_10
- Track 27 : TingHuaYa\_11
- Track 28 : Chavito\_11
- Track 29 : Pisa1\_10
- Track 30 : Nibb\_10
- Track 31 : Validus\_11
- Track 32 : Joy99\_11
- Track 33 : Strobilo\_7, Doughnut\_7, DismalFunk\_7, TM4\_7, BoostSeason\_7, Findley\_7, Milly\_7, Mufasa\_7, ZoeJ\_7, DismalStressor\_7, Marcoliusprime\_7
- Track 34 : Pharb\_10
- Track 35 : TribbleTrouble\_9
- Track 36 : MacnCheese\_11
- Track 37 : TBond007\_10, Lea83\_10, ShedlockHolmes\_10, Pixie\_10
- Track 38 : Hurricane\_10
- Track 39 : Keshu\_10
- Track 40 : JF1\_12, Wintermute\_12, OmniCritical\_12, Y10\_12, Malthus\_12, Mitti\_12, Y2\_12, Kraw\_12, MissDaisy\_12, SamScheppers\_10, Fionnbharth\_12, Patt\_12, Reptar3000\_12
- Track 41 : Eponine\_12, Ruthiejr\_11, Juliette\_12
- Track 42 : Slarp\_12, Chancellor\_12, Qhanda\_12, Taquito\_10, Cheetobro\_12
- Track 43 : Lebo14\_12, DanSyl44\_12
- Track 44 : Bobquesha\_12, YasnayaPolyana\_12
- Track 45 : Agent47\_9, LilDirt\_8, Edugator\_8, Psycho\_9, InvictusManeo\_9, AlleyCat\_9, ViviJ\_8, Thyatira\_9, Feyre\_9, Kratio\_8, Neighly\_9, Larva\_9, Dadosky\_9, Waterfoul\_9
- Track 46 : Rando14\_9
- Track 47 : Omnicron\_9
- Track 48 : Tigress9\_10, Krueger\_10
- Track 49 : Bryler\_10, Cain\_10, Tierra\_10, Sunflower1121\_9
- Track 50 : Yuna\_11
- Track 51 : Syra333\_10, Ximenita\_11, Unicorn\_10, PhelpsODU\_10
- Track 52 : TClif\_10
- Track 53 : DarthP\_10
- Track 54 : November\_9
- Track 55 : Marshawn\_12
- Track 56 : Amohnition\_10
- Track 57 : SirPhilip\_10
- Track 58 : Ekdilam\_8

- Track 59 : Shadow1\_9
- Track 60 : Hammy\_10
- Track 61 : Phrank\_10
- Track 62 : Aminay\_9
- Track 63 : Boilgate\_8
- Track 64 : DS6A\_8

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

The start number called the most often in the published annotations is 10, it was called in 271 of the 272 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_11, Adephegia\_11, Adonis\_11, Agent47\_9, Ageofdapage\_11, AizenPogi\_5, AlishaPH\_11, AlleyCat\_9, Amelie\_7, Amgine\_9, Aminay\_9, Amohnition\_10, Anaya\_12, Angel\_5, Angelica\_11, Anma\_11, Annihilator\_5, Antsirabe\_5, Apocalypse\_11, Applecrisp\_9, Aroostook\_5, Asayake\_11, Atiba\_11, Avocado\_5, Avrafan\_5, AzulaCat\_5, BEEST\_11, BGIlluviae\_11, BPs\_5, BQuat\_5, BaghaKamala\_11, BananenDer11\_9, Barkley26\_5, BarrelRoll\_11, Beezoo\_11, Bella96\_11, Belladonna\_11, Bern\_11, Binglebops\_7, Blizzard\_11, Boiiii\_11, Boilgate\_8, BoostSeason\_7, BruceB\_5, Bryler\_10, CLED96\_5, CREW\_11, Cain\_10, CallaLilly\_11, Cambiare\_6, Camri\_5, Capricorn\_11, CaseJules\_11, CassieYates\_5, Cedasite\_5, Chance64\_5, Chancellor\_12, Chavito\_11, CheetoDust\_11, Cheetobro\_12, Cherrybomb426\_5, Chris\_10, Clipper\_11, Cloudyecho\_5, Coleslaw\_5, Collard\_9, Crespo\_5, CrimD\_11, Curiosium\_12, DMoney\_5, DNAll\_005, DS6A\_8, Dadosky\_9, Dalmuri\_11, DanSyl44\_12, Darionha\_5, DartGoblin\_11, DARTH\_10, Dartin\_11, Deby\_11, Devera\_11, DingDing\_5, DismalFunk\_7, DismalStressor\_7, Dole\_11, DoubleChamp\_9, Doughnut\_7, DrHayes\_11, Durfee\_11, ECartman\_5, Edugator\_8, Efra2\_11, Ekdilam\_8, Ellie\_8, Emerson\_11, Enkosi\_7, Eponine\_12, Fefferhead\_10, Feyre\_9, Findley\_7, Fionnbharth\_12, FlagStaff\_5, Frosty24\_5, Ganymede\_11, Gengar\_9, Geraldini\_11, Gideon\_5, GodSpeed\_5, GoldenAsh\_5, Gomashi\_5, Grizzly\_5, Guanica15\_11, Guillsminger\_9, Halo\_5, Hammy\_10, HedwigODU\_11, Heftyboy\_9, Homura\_11, Hope\_5, Hotshotbaby7\_5, Hurricane\_10, Hyperbowlee\_11, IdentityCrisis\_5, Illumine\_11, Inky\_11, InvictusManeo\_9, JAWS\_11, JF1\_12, Jane\_5, Jarvi\_11, Jayhawk\_11, Jeckyll\_11, Jeilious\_5, Jolene\_5, Jolie2\_5, Jonghyun\_5, JorRay\_5, Joy99\_11, Juliette\_12, Kareem\_5, Kasen3\_5, Keshu\_10, KiSi\_10, Kratio\_8, Kraw\_12, Krueger\_10, Larva\_9, LastHope\_11, LaterM\_11, Lavahound\_9, LeMond\_10, Lea83\_10, Lebo14\_12, Lemuria\_5, Leston\_9, Liefie\_5, LilDirt\_8, LilPharaoh\_7, LindNT\_11, Llorens\_11, LouisV14\_5, Lunahalos\_11, MOOREtheMARYer\_5, MacKat\_11, MacnCheese\_11, Maliketh\_5, Malthus\_12, Marcoliusprime\_7, MarkPhew\_10, Marmie\_5, Marshawn\_12, McMater\_11, Mdavu\_7, MeaningOfLife\_11, Megsy\_11, Mercurio\_6, Milly\_7, Miryou\_9, MissDaisy\_12, Mitti\_12, Mowgli\_5, Mufasa\_7, Murucutumbu\_11, Mynx\_11, Neighly\_9, Neoh\_5, Nibb\_10, Nikao\_7, Niklas\_11, November\_9, Nutello\_7, OctaviousRex\_5, OkiRoe\_9, Olga\_5, OmniCritical\_12, Omnicron\_9, Oscar\_10, Pace1224\_5, Padfoot\_11, Padpat\_11, Paito\_5, Paola\_9, Patt\_12, Peanam\_11, Peeb\_5, Peel\_11, Periodt\_5, Pharb\_10, PhelpsODU\_10, Phish\_5, Phloodle\_5, Phrank\_10, Phreak\_5, Piatt\_11, PinkYoshi\_5, Pinnie\_6, Pisa4\_10, Pixie\_10, Plagueis\_5, Pokerus\_10, Prithvi\_11, Psycho\_9, Qhanda\_12, QuincyRose\_10, Rabbs\_5, Ramen\_11, Rando14\_9, Rapunzel97\_11, Rattrick\_5, Remy19\_5,

Renaissance\_5, Reptar3000\_12, Richarlison\_5, Richo\_11, Rosmarinus\_11, Ruriko\_5, Ruthiejr\_11, SamScheppers\_10, SamuelLPlaqson\_11, Scarlett\_10, Schiebel\_5, SgtBeansprout\_7, ShaboiShabazz\_5, Shadow1\_9, Shaobing\_11, ShedlockHolmes\_10, ShiaSurprise\_11, SirPhilip\_10, Sizemore\_5, Slarp\_12, Slimphazie\_11, Sneeze\_5, SoSeph\_9, Spock\_11, Stargaze\_5, Stinson\_11, Strobilo\_7, Sulley\_11, Sunflower1121\_9, Sweets\_5, Syra333\_10, TBond007\_10, TClif\_10, TM4\_7, Tachez\_11, Taheera\_5, TaiwanKao\_11, Taquito\_10, Teejan\_7, Terror\_5, Thyatira\_9, Tierra\_10, Tigress9\_10, TinaBug\_5, TingHuaYa\_11, TiniBug\_11, Tiri\_11, TomBrady\_5, Topper\_11, Torres\_7, TreyKay\_11, TripleTrouble\_9, Trice\_7, TruffulaTree\_11, Twitch\_11, Unicorn\_10, Urkel\_11, Validus\_11, Veliki\_11, ViviJ\_8, WST1\_5, Waterfoul\_9, Wendigo\_5, Wintermute\_12, Ximenita\_11, Y10\_12, Y2\_12, YangYin\_5, YoureAdopted\_10, Yuna\_11, Yunkel11\_11, Zabiza\_11, Zavala\_11, ZoMa\_5, ZoeJ\_7, Zombie\_5,

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

- Bobquesha\_12, Pisa1\_10, YasnayaPolyana\_12,

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

- 

### Summary by start number:

Start 10:

- Found in 309 of 309 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 271 of 272
- Called 99.0% of time when present
- Phage (with cluster) where this start called: ActinUp\_11 (K1), Adephagia\_11 (K1), Adonis\_11 (K1), Agent47\_9 (K5), Ageofdapage\_11 (K1), AizenPogi\_5 (G1), AlishaPH\_11 (K1), AlleyCat\_9 (K5), Amelie\_7 (K1), Amgine\_9 (K6), Aminay\_9 (K7), Amohntion\_10 (K6), Anaya\_12 (K1), Angel\_5 (G1), Angelica\_11 (K1), Anma\_11 (K1), Annihilator\_5 (G1), Antsirabe\_5 (G5), Apocalypse\_11 (K1), Applecrisp\_9 (K6), Aroostook\_5 (G1), Asayake\_11 (K1), Atiba\_11 (K1), Avocado\_5 (G2), Avrafan\_5 (G1), AzulaCat\_5 (G1), BEEST\_11 (K1), BGlluviae\_11 (K1), BPs\_5 (G1), BQuat\_5 (G1), BaghaKamala\_11 (K1), BananenDer11\_9 (K5), Barkley26\_5 (G1), BarrelRoll\_11 (K1), Beezoo\_11 (K1), Bella96\_11 (K1), Belladonna\_11 (K1), Bern\_11 (K1), Binglebops\_7 (K1), Blizzard\_11 (K1), Boiii\_11 (K1), Boilgate\_8 (K8), BoostSeason\_7 (K2), BruceB\_5 (G1), Bryler\_10 (K6), CLED96\_5 (G1), CREW\_11 (K1), Cain\_10 (K6), CallaLilly\_11 (K1), Cambiare\_6 (G2), Camri\_5 (G1), Capricorn\_11 (K1), CaseJules\_11 (K1), CassieYates\_5 (G1), Cedasite\_5 (G1), Chance64\_5 (G1), Chancellor\_12 (K4), Chavito\_11 (K1), CheetoDust\_11 (K1), Cheetobro\_12 (K4), Cherrybomb426\_5 (G1), Chris\_10 (K1), Clipper\_11 (K1), Cloudyecho\_5 (G3), Coleslaw\_5 (G1), Collard\_9 (K5), Crespo\_5 (G1), CrimD\_11 (K1), Curiosium\_12 (K1), DMoney\_5 (G1), DNAIII\_005 (G1), DS6A\_8 (singleton), Dadosky\_9 (K5), Dalmuri\_11 (K1), DanSyl44\_12 (K4), Darionha\_5 (G1), DartGoblin\_11 (K1), DARTH\_P\_10 (K6), Dartin\_11 (K1), Deby\_11 (K1), Devera\_11 (K1), DingDing\_5 (G1), DismalFunk\_7 (K2), DismalStressor\_7 (K2), Dole\_11 (K1), DoubleChamp\_9 (K5), Doughnut\_7 (K2), DrHayes\_11 (K1), Durfee\_11 (K1), ECartman\_5 (G1), Edugator\_8 (K5), Efra2\_11 (K1), Ekdilam\_8 (K6), Ellie\_8 (K6), Emerson\_11 (K1), Enkosi\_7 (K1), Eponine\_12 (K4), Fefferhead\_10 (K6), Feyre\_9 (K5), Findley\_7 (K2), Fionnbharth\_12 (K4), FlagStaff\_5 (G2), Frosty24\_5 (G1), Ganymede\_11 (K1), Gengar\_9 (K5), Geraldini\_11 (K1), Gideon\_5 (G1), GodSpeed\_5 (G2), GoldenAsh\_5 (G1), Gomashi\_5 (G1), Grizzly\_5 (G1), Guanica15\_11 (K1), Guillsminger\_9 (K5), Halo\_5 (G1), Hammy\_10 (K6), HedwigODU\_11 (K1),

Heftyboy\_9 (K5), Homura\_11 (K1), Hope\_5 (G1), Hotshotbaby7\_5 (G1),  
 Hurricane\_10 (K3), Hyperbowlee\_11 (K1), IdentityCrisis\_5 (AJ), Illumine\_11 (K1),  
 Inky\_11 (K1), InvictusManeo\_9 (K5), JAWS\_11 (K1), JF1\_12 (K4), Jane\_5 (G1),  
 Jarvi\_11 (K1), Jayhawk\_11 (K1), Jeckyll\_11 (K1), Jeilious\_5 (G), Jolene\_5 (G1),  
 Jolie2\_5 (G4), Jonghyun\_5 (G1), JorRay\_5 (G1), Joy99\_11 (K1), Juliette\_12 (K4),  
 Kareem\_5 (G1), Kasen3\_5 (G1), Keshu\_10 (K3), KiSi\_10 (K1), Kratio\_8 (K5),  
 Kraw\_12 (K4), Krueger\_10 (K6), Larva\_9 (K5), LastHope\_11 (K1), LaterM\_11 (K1),  
 Lavahound\_9 (K6), LeMond\_10 (K1), Lea83\_10 (K3), Lebo14\_12 (K4), Lemuria\_5  
 (G4), Leston\_9 (K5), Liefie\_5 (G1), LilDirt\_8 (K5), LilPharaoh\_7 (K1), LindNT\_11 (K1),  
 Llorens\_11 (K1), LouisV14\_5 (G1), Lunahalos\_11 (K1), MOOREtheMARYer\_5 (G3),  
 MacKat\_11 (K1), MacnCheese\_11 (K3), Maliketh\_5 (G1), Malthus\_12 (K4),  
 Marcoliusprime\_7 (K2), MarkPhew\_10 (K1), Marmie\_5 (G1), Marshawn\_12 (K6),  
 McMater\_11 (K1), Mdavu\_7 (K1), MeaningOfLife\_11 (K1), Megsy\_11 (K1),  
 Mercurio\_6 (G4), Milly\_7 (K2), Miryou\_9 (K5), MissDaisy\_12 (K4), Mitti\_12 (K4),  
 Mowgli\_5 (G1), Mufasa\_7 (K2), Murucutumbu\_11 (K1), Mynx\_11 (K1), Neighly\_9  
 (K3), Neoh\_5 (G), Nibb\_10 (K1), Nikao\_7 (K1), Niklas\_11 (K1), November\_9 (K6),  
 Nutello\_7 (K1), OctaviousRex\_5 (G1), OkiRoe\_9 (K5), Olga\_5 (G1), OmniCritical\_12  
 (K4), Omnicron\_9 (K5), Oscar\_10 (K1), Pace1224\_5 (G2), Padfoot\_11 (K1),  
 Padpat\_11 (K1), Paito\_5 (G1), Paola\_9 (K5), Patt\_12 (K4), Peanam\_11 (K1), Peeb\_5  
 (G1), Peel\_11 (K1), Periodt\_5 (G1), Pharb\_10 (K3), PhelpsODU\_10 (K6), Phish\_5  
 (G1), Phloodle\_5 (G1), Phrank\_10 (K6), Phreak\_5 (G1), Piatt\_11 (K1), PinkYoshi\_5  
 (G1), Pinnie\_6 (G3), Pisa4\_10 (K1), Pixie\_10 (K3), Plagueis\_5 (G1), Pokerus\_10  
 (K1), Prithvi\_11 (K1), Psycho\_9 (K5), Qhanda\_12 (K4), QuincyRose\_10 (K1),  
 Rabbs\_5 (G1), Ramen\_11 (K1), Rando14\_9 (K5), Rapunzel97\_11 (K1), Rattrick\_5  
 (G1), Remy19\_5 (G1), Renaissance\_5 (G1), Reptar3000\_12 (K4), Richarlison\_5  
 (G1), Richo\_11 (K1), Rosmarinus\_11 (K1), Ruriko\_5 (G1), Ruthiejr\_11 (K4),  
 SamScheppers\_10 (K4), SamuelLPlaqson\_11 (K1), Scarlett\_10 (K1), Schiebel\_5  
 (G1), SgtBeansprout\_7 (K1), ShaboiShabazz\_5 (G1), Shadow1\_9 (K6), Shaobing\_11  
 (K1), ShedlockHolmes\_10 (K3), ShiaSurprise\_11 (K1), SirPhilip\_10 (K6), Sizemore\_5  
 (G1), Slarp\_12 (K4), Slimphazie\_11 (K1), Sneeze\_5 (G1), SoSeph\_9 (K5), Spock\_11  
 (K1), Stargaze\_5 (G5), Stinson\_11 (K1), Strobilo\_7 (K2), Sulley\_11 (K1),  
 Sunflower1121\_9 (K6), Sweets\_5 (G1), Syra333\_10 (K6), TBond007\_10 (K3),  
 TClif\_10 (K6), TM4\_7 (K2), Tachez\_11 (K1), Taheera\_5 (G1), TaiwanKao\_11 (K1),  
 Taquito\_10 (K4), Teejan\_7 (K1), Terror\_5 (G1), Thyatira\_9 (K5), Tierra\_10 (K6),  
 Tigress9\_10 (K6), TinaBug\_5 (G1), TingHuaYa\_11 (K1), TiniBug\_11 (K1), Tiri\_11  
 (K1), TomBrady\_5 (G1), Topper\_11 (K1), Torres\_7 (K1), TreyKay\_11 (K1),  
 TribbleTrouble\_9 (K3), Trice\_7 (K1), TruffulaTree\_11 (K1), Twitch\_11 (K1), Unicorn\_10  
 (K6), Urkel\_11 (K1), Validus\_11 (K1), Veliki\_11 (K1), ViviJ\_8 (K5), WST1\_5 (AJ),  
 Waterfoul\_9 (K5), Wendigo\_5 (G1), Wintermute\_12 (K4), Ximenita\_11 (K6), Y10\_12  
 (K4), Y2\_12 (K4), YangYin\_5 (G5), YoureAdopted\_10 (K1), Yuna\_11 (K6),  
 Yunkel11\_11 (K1), Zabiza\_11 (K1), Zavala\_11 (K1), ZoMa\_5 (G1), ZoeJ\_7 (K2),  
 Zombie\_5 (G1),

Start 13:

- Found in 39 of 309 ( 12.6% ) of genes in pham
- Manual Annotations of this start: 1 of 272
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Bobquesha\_12 (K4), Pisa1\_10 (K1), YasnayaPolyana\_12 (K4),

**Summary by clusters:**

There are 16 clusters represented in this pham: G5, G, G3, G2, G1, AJ, singleton, K3, K2, K1, G4, K7, K6, K5, K4, K8,

Info for manual annotations of cluster AJ:

- Start number 10 was manually annotated 1 time for cluster AJ.

Info for manual annotations of cluster G1:

- Start number 10 was manually annotated 62 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 10 was manually annotated 3 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 10 was manually annotated 2 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 10 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 10 was manually annotated 2 times for cluster G5.

Info for manual annotations of cluster K1:

- Start number 10 was manually annotated 108 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 10 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 10 was manually annotated 9 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 10 was manually annotated 21 times for cluster K4.
- Start number 13 was manually annotated 1 time for cluster K4.

Info for manual annotations of cluster K5:

- Start number 10 was manually annotated 23 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 10 was manually annotated 24 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 10 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 10 was manually annotated 1 time for cluster K8.

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

Gene: ActinUp\_11 Start: 7091, Stop: 7276, Start Num: 10

Candidate Starts for ActinUp\_11:

(Start: 10 @7091 has 271 MA's), (26, 7211), (32, 7229),

Gene: Adephagia\_11 Start: 7091, Stop: 7276, Start Num: 10

Candidate Starts for Adephagia\_11:

(Start: 10 @7091 has 271 MA's), (26, 7211), (32, 7229),

Gene: Adonis\_11 Start: 7102, Stop: 7287, Start Num: 10

Candidate Starts for Adonis\_11:

(Start: 10 @7102 has 271 MA's), (26, 7222), (32, 7240),

Gene: Agent47\_9 Start: 7126, Stop: 7326, Start Num: 10

Candidate Starts for Agent47\_9:

(Start: 10 @7126 has 271 MA's), (12, 7144), (23, 7225), (26, 7249),

Gene: Ageofdapage\_11 Start: 7034, Stop: 7240, Start Num: 10

Candidate Starts for Ageofdapage\_11:

(1, 6761), (5, 6878), (7, 6932), (9, 7001), (Start: 10 @7034 has 271 MA's), (23, 7130), (26, 7154), (32, 7172),

Gene: AizenPogi\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for AizenPogi\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: AlishaPH\_11 Start: 7093, Stop: 7278, Start Num: 10

Candidate Starts for AlishaPH\_11:

(Start: 10 @7093 has 271 MA's), (26, 7213), (32, 7231),

Gene: AlleyCat\_9 Start: 7021, Stop: 7221, Start Num: 10

Candidate Starts for AlleyCat\_9:

(Start: 10 @7021 has 271 MA's), (12, 7039), (23, 7120), (26, 7144),

Gene: Amelie\_7 Start: 6336, Stop: 6524, Start Num: 10

Candidate Starts for Amelie\_7:

(Start: 10 @6336 has 271 MA's), (23, 6432), (26, 6456),

Gene: Amgine\_9 Start: 6664, Stop: 6846, Start Num: 10

Candidate Starts for Amgine\_9:

(Start: 10 @6664 has 271 MA's), (23, 6763), (26, 6787),

Gene: Aminay\_9 Start: 6956, Stop: 7150, Start Num: 10

Candidate Starts for Aminay\_9:

(Start: 10 @6956 has 271 MA's), (Start: 13 @6977 has 1 MA's), (21, 7043), (23, 7055), (26, 7079),

Gene: Amohnition\_10 Start: 6891, Stop: 7082, Start Num: 10

Candidate Starts for Amohnition\_10:

(9, 6858), (Start: 10 @6891 has 271 MA's), (23, 6993), (26, 7017), (28, 7023),

Gene: Anaya\_12 Start: 7096, Stop: 7281, Start Num: 10

Candidate Starts for Anaya\_12:

(Start: 10 @7096 has 271 MA's), (26, 7216), (32, 7234),

Gene: Angel\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Angel\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Angelica\_11 Start: 7070, Stop: 7255, Start Num: 10

Candidate Starts for Angelica\_11:

(5, 6914), (7, 6968), (Start: 10 @7070 has 271 MA's), (23, 7166), (26, 7190), (32, 7208),

Gene: Anma\_11 Start: 7043, Stop: 7228, Start Num: 10

Candidate Starts for Anma\_11:

(9, 7010), (Start: 10 @7043 has 271 MA's), (Start: 13 @7061 has 1 MA's), (26, 7163), (32, 7181),

Gene: Annihilator\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Annihilator\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Antsirabe\_5 Start: 6407, Stop: 6601, Start Num: 10

Candidate Starts for Antsirabe\_5:

(5, 6245), (Start: 10 @6407 has 271 MA's), (25, 6524), (26, 6530),

Gene: Apocalypse\_11 Start: 7069, Stop: 7254, Start Num: 10

Candidate Starts for Apocalypse\_11:

(Start: 10 @7069 has 271 MA's), (26, 7189), (32, 7207),

Gene: Applecrisp\_9 Start: 7062, Stop: 7244, Start Num: 10

Candidate Starts for Applecrisp\_9:

(Start: 10 @7062 has 271 MA's), (23, 7161), (26, 7185),

Gene: Aroostook\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Aroostook\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Asayake\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for Asayake\_11:

(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Atiba\_11 Start: 7057, Stop: 7242, Start Num: 10

Candidate Starts for Atiba\_11:

(Start: 10 @7057 has 271 MA's), (26, 7177), (32, 7195),

Gene: Avocado\_5 Start: 6369, Stop: 6566, Start Num: 10

Candidate Starts for Avocado\_5:

(5, 6207), (Start: 10 @6369 has 271 MA's), (23, 6471), (25, 6489), (26, 6495),

Gene: Avrafan\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Avrafan\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: AzulaCat\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for AzulaCat\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: BEEST\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for BEEST\_11:

(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: BGlluviae\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for BGlluviae\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: BPs\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for BPs\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: BQuat\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for BQuat\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: BaghaKamala\_11 Start: 7067, Stop: 7252, Start Num: 10  
Candidate Starts for BaghaKamala\_11:  
(Start: 10 @7067 has 271 MA's), (26, 7187), (32, 7205),

Gene: BananenDer11\_9 Start: 7109, Stop: 7309, Start Num: 10  
Candidate Starts for BananenDer11\_9:  
(Start: 10 @7109 has 271 MA's), (23, 7208), (26, 7232),

Gene: Barkley26\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Barkley26\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: BarrelRoll\_11 Start: 7085, Stop: 7270, Start Num: 10  
Candidate Starts for BarrelRoll\_11:  
(Start: 10 @7085 has 271 MA's), (26, 7205), (32, 7223),

Gene: Beezoo\_11 Start: 7117, Stop: 7302, Start Num: 10  
Candidate Starts for Beezoo\_11:  
(Start: 10 @7117 has 271 MA's), (26, 7237), (32, 7255),

Gene: Bella96\_11 Start: 7022, Stop: 7207, Start Num: 10  
Candidate Starts for Bella96\_11:  
(9, 6989), (Start: 10 @7022 has 271 MA's), (Start: 13 @7040 has 1 MA's), (26, 7142), (32, 7160),

Gene: Belladonna\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Belladonna\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Bern\_11 Start: 7063, Stop: 7248, Start Num: 10  
Candidate Starts for Bern\_11:  
(5, 6907), (7, 6961), (9, 7030), (Start: 10 @7063 has 271 MA's), (Start: 13 @7081 has 1 MA's), (26, 7183), (32, 7201),

Gene: Biglebops\_7 Start: 6336, Stop: 6524, Start Num: 10  
Candidate Starts for Biglebops\_7:  
(Start: 10 @6336 has 271 MA's), (23, 6432), (26, 6456),

Gene: Blizzard\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Blizzard\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Bobquesha\_12 Start: 8027, Stop: 8206, Start Num: 13

Candidate Starts for Bobquesha\_12:

(Start: 10 @8006 has 271 MA's), (Start: 13 @8027 has 1 MA's), (23, 8105), (26, 8129),

Gene: Boiiii\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for Boiiii\_11:

(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Boilgate\_8 Start: 7027, Stop: 7209, Start Num: 10

Candidate Starts for Boilgate\_8:

(9, 6994), (Start: 10 @7027 has 271 MA's), (22, 7114), (23, 7123), (26, 7147), (30, 7159),

Gene: BoostSeason\_7 Start: 5076, Stop: 5261, Start Num: 10

Candidate Starts for BoostSeason\_7:

(Start: 10 @5076 has 271 MA's), (26, 5199), (30, 5211), (33, 5232),

Gene: BruceB\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for BruceB\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Bryler\_10 Start: 5954, Stop: 6139, Start Num: 10

Candidate Starts for Bryler\_10:

(5, 5798), (7, 5852), (Start: 10 @5954 has 271 MA's), (23, 6050), (26, 6074), (30, 6086),

Gene: CLED96\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for CLED96\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: CREW\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for CREW\_11:

(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Cain\_10 Start: 5942, Stop: 6127, Start Num: 10

Candidate Starts for Cain\_10:

(5, 5786), (7, 5840), (Start: 10 @5942 has 271 MA's), (23, 6038), (26, 6062), (30, 6074),

Gene: CallaLilly\_11 Start: 7064, Stop: 7249, Start Num: 10

Candidate Starts for CallaLilly\_11:

(Start: 10 @7064 has 271 MA's), (26, 7184), (32, 7202),

Gene: Cambiare\_6 Start: 6831, Stop: 7028, Start Num: 10

Candidate Starts for Cambiare\_6:

(5, 6669), (Start: 10 @6831 has 271 MA's), (23, 6933), (25, 6951), (26, 6957),

Gene: Camri\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Camri\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Capricorn\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for Capricorn\_11:

(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: CaseJules\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for CaseJules\_11:

(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: CassieYates\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for CassieYates\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Cedasite\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Cedasite\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Chance64\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Chance64\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Chancellor\_12 Start: 8255, Stop: 8452, Start Num: 10

Candidate Starts for Chancellor\_12:

(Start: 10 @8255 has 271 MA's), (Start: 13 @8276 has 1 MA's), (23, 8354), (26, 8378), (31, 8393),

Gene: Chavito\_11 Start: 6121, Stop: 6306, Start Num: 10

Candidate Starts for Chavito\_11:

(2, 5890), (5, 5965), (6, 5995), (7, 6019), (Start: 10 @6121 has 271 MA's), (26, 6241), (30, 6253),

Gene: CheetoDust\_11 Start: 7111, Stop: 7296, Start Num: 10

Candidate Starts for CheetoDust\_11:

(Start: 10 @7111 has 271 MA's), (26, 7231), (32, 7249),

Gene: Cheetobro\_12 Start: 8255, Stop: 8452, Start Num: 10

Candidate Starts for Cheetobro\_12:

(Start: 10 @8255 has 271 MA's), (Start: 13 @8276 has 1 MA's), (23, 8354), (26, 8378), (31, 8393),

Gene: Cherrybomb426\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Cherrybomb426\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Chris\_10 Start: 5925, Stop: 6110, Start Num: 10

Candidate Starts for Chris\_10:

(2, 5694), (4, 5739), (5, 5769), (7, 5823), (Start: 10 @5925 has 271 MA's), (26, 6045), (30, 6057),

Gene: Clipper\_11 Start: 7111, Stop: 7296, Start Num: 10

Candidate Starts for Clipper\_11:

(Start: 10 @7111 has 271 MA's), (26, 7231), (32, 7249),

Gene: Cloudyecho\_5 Start: 6358, Stop: 6555, Start Num: 10

Candidate Starts for Cloudyecho\_5:

(3, 6166), (Start: 10 @6358 has 271 MA's), (Start: 13 @6379 has 1 MA's), (25, 6478), (26, 6484),

Gene: Coleslaw\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Coleslaw\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Collard\_9 Start: 7109, Stop: 7309, Start Num: 10

Candidate Starts for Collard\_9:  
(Start: 10 @7109 has 271 MA's), (23, 7208), (26, 7232),

Gene: Crespo\_5 Start: 6190, Stop: 6396, Start Num: 10  
Candidate Starts for Crespo\_5:  
(Start: 10 @6190 has 271 MA's), (26, 6316),

Gene: CrimD\_11 Start: 7063, Stop: 7248, Start Num: 10  
Candidate Starts for CrimD\_11:  
(Start: 10 @7063 has 271 MA's), (26, 7183), (32, 7201),

Gene: Curiosium\_12 Start: 6437, Stop: 6622, Start Num: 10  
Candidate Starts for Curiosium\_12:  
(Start: 10 @6437 has 271 MA's), (26, 6557),

Gene: DMoney\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for DMoney\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: DNAlll\_005 Start: 6198, Stop: 6404, Start Num: 10  
Candidate Starts for DNAlll\_005:  
(Start: 10 @6198 has 271 MA's), (26, 6324),

Gene: DS6A\_8 Start: 6719, Stop: 6934, Start Num: 10  
Candidate Starts for DS6A\_8:  
(9, 6686), (Start: 10 @6719 has 271 MA's), (Start: 13 @6743 has 1 MA's), (14, 6752), (17, 6776), (26, 6848), (27, 6851), (30, 6860),

Gene: Dadosky\_9 Start: 7021, Stop: 7221, Start Num: 10  
Candidate Starts for Dadosky\_9:  
(Start: 10 @7021 has 271 MA's), (12, 7039), (23, 7120), (26, 7144),

Gene: Dalmuri\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Dalmuri\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: DanSyl44\_12 Start: 8258, Stop: 8455, Start Num: 10  
Candidate Starts for DanSyl44\_12:  
(Start: 10 @8258 has 271 MA's), (Start: 13 @8279 has 1 MA's), (16, 8309), (23, 8357), (26, 8381), (31, 8396),

Gene: Darionha\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Darionha\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: DartGoblin\_11 Start: 7022, Stop: 7207, Start Num: 10  
Candidate Starts for DartGoblin\_11:  
(9, 6989), (Start: 10 @7022 has 271 MA's), (Start: 13 @7040 has 1 MA's), (26, 7142), (32, 7160),

Gene: DarthP\_10 Start: 6891, Stop: 7082, Start Num: 10  
Candidate Starts for DarthP\_10:  
(9, 6858), (Start: 10 @6891 has 271 MA's), (23, 6993), (26, 7017), (28, 7023),

Gene: Dartin\_11 Start: 6126, Stop: 6311, Start Num: 10

Candidate Starts for Dartin\_11:

(Start: 10 @6126 has 271 MA's), (26, 6246), (30, 6258),

Gene: Deby\_11 Start: 7070, Stop: 7255, Start Num: 10

Candidate Starts for Deby\_11:

(5, 6914), (7, 6968), (Start: 10 @7070 has 271 MA's), (23, 7166), (26, 7190), (32, 7208),

Gene: Devera\_11 Start: 7102, Stop: 7287, Start Num: 10

Candidate Starts for Devera\_11:

(1, 6829), (5, 6946), (7, 7000), (9, 7069), (Start: 10 @7102 has 271 MA's), (23, 7198), (26, 7222), (32, 7240),

Gene: DingDing\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for DingDing\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: DismalFunk\_7 Start: 5091, Stop: 5276, Start Num: 10

Candidate Starts for DismalFunk\_7:

(Start: 10 @5091 has 271 MA's), (26, 5214), (30, 5226), (33, 5247),

Gene: DismalStressor\_7 Start: 5091, Stop: 5276, Start Num: 10

Candidate Starts for DismalStressor\_7:

(Start: 10 @5091 has 271 MA's), (26, 5214), (30, 5226), (33, 5247),

Gene: Dole\_11 Start: 7102, Stop: 7287, Start Num: 10

Candidate Starts for Dole\_11:

(1, 6829), (5, 6946), (7, 7000), (9, 7069), (Start: 10 @7102 has 271 MA's), (23, 7198), (26, 7222), (32, 7240),

Gene: DoubleChamp\_9 Start: 7109, Stop: 7309, Start Num: 10

Candidate Starts for DoubleChamp\_9:

(Start: 10 @7109 has 271 MA's), (23, 7208), (26, 7232),

Gene: Doughnut\_7 Start: 5076, Stop: 5261, Start Num: 10

Candidate Starts for Doughnut\_7:

(Start: 10 @5076 has 271 MA's), (26, 5199), (30, 5211), (33, 5232),

Gene: DrHayes\_11 Start: 7043, Stop: 7228, Start Num: 10

Candidate Starts for DrHayes\_11:

(9, 7010), (Start: 10 @7043 has 271 MA's), (Start: 13 @7061 has 1 MA's), (26, 7163), (32, 7181),

Gene: Durfee\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for Durfee\_11:

(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: ECartman\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for ECartman\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Edugator\_8 Start: 7021, Stop: 7221, Start Num: 10

Candidate Starts for Edugator\_8:

(Start: 10 @7021 has 271 MA's), (12, 7039), (23, 7120), (26, 7144),

Gene: Efra2\_11 Start: 6040, Stop: 6225, Start Num: 10  
Candidate Starts for Efra2\_11:  
(Start: 10 @6040 has 271 MA's), (26, 6160),

Gene: Ekdilam\_8 Start: 6638, Stop: 6826, Start Num: 10  
Candidate Starts for Ekdilam\_8:  
(7, 6536), (9, 6605), (Start: 10 @6638 has 271 MA's), (23, 6737), (26, 6761),

Gene: Ellie\_8 Start: 6735, Stop: 6917, Start Num: 10  
Candidate Starts for Ellie\_8:  
(Start: 10 @6735 has 271 MA's), (23, 6834), (26, 6858),

Gene: Emerson\_11 Start: 7094, Stop: 7279, Start Num: 10  
Candidate Starts for Emerson\_11:  
(Start: 10 @7094 has 271 MA's), (26, 7214), (32, 7232),

Gene: Enkosi\_7 Start: 6336, Stop: 6524, Start Num: 10  
Candidate Starts for Enkosi\_7:  
(Start: 10 @6336 has 271 MA's), (23, 6432), (26, 6456),

Gene: Eponine\_12 Start: 8142, Stop: 8330, Start Num: 10  
Candidate Starts for Eponine\_12:  
(2, 7911), (5, 7986), (6, 8016), (9, 8109), (Start: 10 @8142 has 271 MA's), (23, 8238), (26, 8262),

Gene: Fefferhead\_10 Start: 6905, Stop: 7087, Start Num: 10  
Candidate Starts for Fefferhead\_10:  
(Start: 10 @6905 has 271 MA's), (23, 7004), (26, 7028),

Gene: Feyre\_9 Start: 6924, Stop: 7124, Start Num: 10  
Candidate Starts for Feyre\_9:  
(Start: 10 @6924 has 271 MA's), (12, 6942), (23, 7023), (26, 7047),

Gene: Findley\_7 Start: 5091, Stop: 5276, Start Num: 10  
Candidate Starts for Findley\_7:  
(Start: 10 @5091 has 271 MA's), (26, 5214), (30, 5226), (33, 5247),

Gene: Fionnbharth\_12 Start: 8245, Stop: 8442, Start Num: 10  
Candidate Starts for Fionnbharth\_12:  
(Start: 10 @8245 has 271 MA's), (Start: 13 @8266 has 1 MA's), (23, 8344), (26, 8368),

Gene: FlagStaff\_5 Start: 6337, Stop: 6534, Start Num: 10  
Candidate Starts for FlagStaff\_5:  
(5, 6175), (Start: 10 @6337 has 271 MA's), (Start: 13 @6358 has 1 MA's), (25, 6457), (26, 6463),

Gene: Frosty24\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Frosty24\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Ganymede\_11 Start: 7111, Stop: 7296, Start Num: 10  
Candidate Starts for Ganymede\_11:  
(Start: 10 @7111 has 271 MA's), (26, 7231), (32, 7249),

Gene: Gengar\_9 Start: 7030, Stop: 7230, Start Num: 10  
Candidate Starts for Gengar\_9:  
(Start: 10 @7030 has 271 MA's), (23, 7129), (26, 7153),

Gene: Geraldini\_11 Start: 7117, Stop: 7302, Start Num: 10  
Candidate Starts for Geraldini\_11:  
(Start: 10 @7117 has 271 MA's), (26, 7237), (32, 7255),

Gene: Gideon\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Gideon\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: GodSpeed\_5 Start: 6328, Stop: 6525, Start Num: 10  
Candidate Starts for GodSpeed\_5:  
(Start: 10 @6328 has 271 MA's), (25, 6448), (26, 6454),

Gene: GoldenAsh\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for GoldenAsh\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Gomashi\_5 Start: 6190, Stop: 6396, Start Num: 10  
Candidate Starts for Gomashi\_5:  
(Start: 10 @6190 has 271 MA's), (26, 6316),

Gene: Grizzly\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Grizzly\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Guanica15\_11 Start: 6056, Stop: 6241, Start Num: 10  
Candidate Starts for Guanica15\_11:  
(Start: 10 @6056 has 271 MA's), (26, 6176),

Gene: Guillsminger\_9 Start: 7005, Stop: 7205, Start Num: 10  
Candidate Starts for Guillsminger\_9:  
(Start: 10 @7005 has 271 MA's), (23, 7104), (26, 7128),

Gene: Halo\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Halo\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Hammy\_10 Start: 6888, Stop: 7079, Start Num: 10  
Candidate Starts for Hammy\_10:  
(9, 6855), (Start: 10 @6888 has 271 MA's), (23, 6990), (26, 7014), (28, 7020),

Gene: HedwigODU\_11 Start: 7091, Stop: 7276, Start Num: 10  
Candidate Starts for HedwigODU\_11:  
(Start: 10 @7091 has 271 MA's), (26, 7211), (32, 7229),

Gene: Heftyboy\_9 Start: 7132, Stop: 7332, Start Num: 10  
Candidate Starts for Heftyboy\_9:  
(Start: 10 @7132 has 271 MA's), (23, 7231), (26, 7255),

Gene: Homura\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for Homura\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Hope\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Hope\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Hotshotbaby7\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Hotshotbaby7\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Hurricane\_10 Start: 7024, Stop: 7224, Start Num: 10  
Candidate Starts for Hurricane\_10:  
(7, 6922), (9, 6991), (Start: 10 @7024 has 271 MA's), (23, 7138), (26, 7162),

Gene: Hyperbowlee\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Hyperbowlee\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: IdentityCrisis\_5 Start: 5051, Stop: 5254, Start Num: 10  
Candidate Starts for IdentityCrisis\_5:  
(Start: 10 @5051 has 271 MA's), (20, 5138), (26, 5177),

Gene: Illumine\_11 Start: 7102, Stop: 7287, Start Num: 10  
Candidate Starts for Illumine\_11:  
(1, 6829), (5, 6946), (7, 7000), (9, 7069), (Start: 10 @7102 has 271 MA's), (23, 7198), (26, 7222), (32, 7240),

Gene: Inky\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Inky\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: InvictusManeo\_9 Start: 7129, Stop: 7329, Start Num: 10  
Candidate Starts for InvictusManeo\_9:  
(Start: 10 @7129 has 271 MA's), (12, 7147), (23, 7228), (26, 7252),

Gene: JAWS\_11 Start: 7088, Stop: 7273, Start Num: 10  
Candidate Starts for JAWS\_11:  
(Start: 10 @7088 has 271 MA's), (26, 7208), (32, 7226),

Gene: JF1\_12 Start: 8245, Stop: 8442, Start Num: 10  
Candidate Starts for JF1\_12:  
(Start: 10 @8245 has 271 MA's), (Start: 13 @8266 has 1 MA's), (23, 8344), (26, 8368),

Gene: Jane\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Jane\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Jarvi\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Jarvi\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Jayhawk\_11 Start: 7091, Stop: 7276, Start Num: 10

Candidate Starts for Jayhawk\_11:  
(Start: 10 @7091 has 271 MA's), (26, 7211), (32, 7229),

Gene: Jeckyll\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Jeckyll\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Jeilious\_5 Start: 6188, Stop: 6394, Start Num: 10  
Candidate Starts for Jeilious\_5:  
(Start: 10 @6188 has 271 MA's), (26, 6314),

Gene: Jolene\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Jolene\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Jolie2\_5 Start: 5346, Stop: 5543, Start Num: 10  
Candidate Starts for Jolie2\_5:  
(Start: 10 @5346 has 271 MA's), (23, 5448), (26, 5472),

Gene: Jonghyun\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Jonghyun\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: JorRay\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for JorRay\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Joy99\_11 Start: 7067, Stop: 7252, Start Num: 10  
Candidate Starts for Joy99\_11:  
(Start: 10 @7067 has 271 MA's), (32, 7205),

Gene: Juliette\_12 Start: 8142, Stop: 8330, Start Num: 10  
Candidate Starts for Juliette\_12:  
(2, 7911), (5, 7986), (6, 8016), (9, 8109), (Start: 10 @8142 has 271 MA's), (23, 8238), (26, 8262),

Gene: Kareem\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Kareem\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Kasen3\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Kasen3\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Keshu\_10 Start: 7012, Stop: 7212, Start Num: 10  
Candidate Starts for Keshu\_10:  
(7, 6910), (9, 6979), (Start: 10 @7012 has 271 MA's), (23, 7114), (24, 7120), (26, 7138),

Gene: KiSi\_10 Start: 5914, Stop: 6105, Start Num: 10  
Candidate Starts for KiSi\_10:  
(9, 5881), (Start: 10 @5914 has 271 MA's), (12, 5932), (23, 6013), (26, 6037),

Gene: Kratio\_8 Start: 6757, Stop: 6957, Start Num: 10  
Candidate Starts for Kratio\_8:

(Start: 10 @6757 has 271 MA's), (12, 6775), (23, 6856), (26, 6880),

Gene: Kraw\_12 Start: 8164, Stop: 8361, Start Num: 10

Candidate Starts for Kraw\_12:

(Start: 10 @8164 has 271 MA's), (Start: 13 @8185 has 1 MA's), (23, 8263), (26, 8287),

Gene: Krueger\_10 Start: 5931, Stop: 6116, Start Num: 10

Candidate Starts for Krueger\_10:

(8, 5895), (Start: 10 @5931 has 271 MA's), (12, 5946), (23, 6027), (26, 6051), (30, 6063),

Gene: Larva\_9 Start: 6888, Stop: 7088, Start Num: 10

Candidate Starts for Larva\_9:

(Start: 10 @6888 has 271 MA's), (12, 6906), (23, 6987), (26, 7011),

Gene: LastHope\_11 Start: 6083, Stop: 6268, Start Num: 10

Candidate Starts for LastHope\_11:

(Start: 10 @6083 has 271 MA's), (11, 6095), (26, 6203),

Gene: LaterM\_11 Start: 7060, Stop: 7263, Start Num: 10

Candidate Starts for LaterM\_11:

(1, 6787), (5, 6904), (7, 6958), (9, 7027), (Start: 10 @7060 has 271 MA's), (23, 7156), (26, 7180), (32, 7198),

Gene: Lavahound\_9 Start: 6664, Stop: 6846, Start Num: 10

Candidate Starts for Lavahound\_9:

(Start: 10 @6664 has 271 MA's), (23, 6763), (26, 6787),

Gene: LeMond\_10 Start: 5914, Stop: 6105, Start Num: 10

Candidate Starts for LeMond\_10:

(9, 5881), (Start: 10 @5914 has 271 MA's), (12, 5932), (23, 6013), (26, 6037),

Gene: Lea83\_10 Start: 7015, Stop: 7215, Start Num: 10

Candidate Starts for Lea83\_10:

(5, 6859), (7, 6913), (9, 6982), (Start: 10 @7015 has 271 MA's), (23, 7129), (26, 7153),

Gene: Lebo14\_12 Start: 8258, Stop: 8455, Start Num: 10

Candidate Starts for Lebo14\_12:

(Start: 10 @8258 has 271 MA's), (Start: 13 @8279 has 1 MA's), (16, 8309), (23, 8357), (26, 8381), (31, 8396),

Gene: Lemuria\_5 Start: 5374, Stop: 5571, Start Num: 10

Candidate Starts for Lemuria\_5:

(Start: 10 @5374 has 271 MA's), (18, 5437), (23, 5476), (26, 5500),

Gene: Leston\_9 Start: 7135, Stop: 7335, Start Num: 10

Candidate Starts for Leston\_9:

(Start: 10 @7135 has 271 MA's), (23, 7234), (26, 7258),

Gene: Liefie\_5 Start: 6188, Stop: 6394, Start Num: 10

Candidate Starts for Liefie\_5:

(Start: 10 @6188 has 271 MA's), (26, 6314),

Gene: LilDirt\_8 Start: 6887, Stop: 7087, Start Num: 10

Candidate Starts for LilDirt\_8:

(Start: 10 @6887 has 271 MA's), (12, 6905), (23, 6986), (26, 7010),

Gene: LilPharaoh\_7 Start: 6336, Stop: 6524, Start Num: 10

Candidate Starts for LilPharaoh\_7:

(Start: 10 @6336 has 271 MA's), (23, 6432), (26, 6456),

Gene: LindNT\_11 Start: 7060, Stop: 7245, Start Num: 10

Candidate Starts for LindNT\_11:

(Start: 10 @7060 has 271 MA's), (26, 7180), (32, 7198),

Gene: Llorens\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for Llorens\_11:

(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: LouisV14\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for LouisV14\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Lunahalos\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for Lunahalos\_11:

(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: MOOREtheMARYer\_5 Start: 6359, Stop: 6556, Start Num: 10

Candidate Starts for MOOREtheMARYer\_5:

(3, 6167), (Start: 10 @6359 has 271 MA's), (Start: 13 @6380 has 1 MA's), (25, 6479), (26, 6485), (29, 6494),

Gene: MacKat\_11 Start: 7111, Stop: 7296, Start Num: 10

Candidate Starts for MacKat\_11:

(Start: 10 @7111 has 271 MA's), (26, 7231), (32, 7249),

Gene: MacnCheese\_11 Start: 7234, Stop: 7437, Start Num: 10

Candidate Starts for MacnCheese\_11:

(5, 7078), (9, 7201), (Start: 10 @7234 has 271 MA's), (23, 7336), (24, 7342), (26, 7360), (31, 7375),

Gene: Maliketh\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Maliketh\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Malthus\_12 Start: 8164, Stop: 8361, Start Num: 10

Candidate Starts for Malthus\_12:

(Start: 10 @8164 has 271 MA's), (Start: 13 @8185 has 1 MA's), (23, 8263), (26, 8287),

Gene: Marcoliusprime\_7 Start: 5091, Stop: 5276, Start Num: 10

Candidate Starts for Marcoliusprime\_7:

(Start: 10 @5091 has 271 MA's), (26, 5214), (30, 5226), (33, 5247),

Gene: MarkPhew\_10 Start: 5832, Stop: 6017, Start Num: 10

Candidate Starts for MarkPhew\_10:

(2, 5601), (4, 5646), (5, 5676), (7, 5730), (Start: 10 @5832 has 271 MA's), (26, 5952), (30, 5964),

Gene: Marmie\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Marmie\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Marshawn\_12 Start: 6469, Stop: 6654, Start Num: 10  
Candidate Starts for Marshawn\_12:  
(2, 6238), (4, 6283), (5, 6313), (7, 6367), (8, 6433), (Start: 10 @6469 has 271 MA's), (23, 6565), (26, 6589), (30, 6601),

Gene: McMater\_11 Start: 6126, Stop: 6311, Start Num: 10  
Candidate Starts for McMater\_11:  
(Start: 10 @6126 has 271 MA's), (26, 6246), (30, 6258),

Gene: Mdavu\_7 Start: 6324, Stop: 6512, Start Num: 10  
Candidate Starts for Mdavu\_7:  
(Start: 10 @6324 has 271 MA's), (23, 6420), (26, 6444),

Gene: MeaningOfLife\_11 Start: 7064, Stop: 7249, Start Num: 10  
Candidate Starts for MeaningOfLife\_11:  
(Start: 10 @7064 has 271 MA's), (26, 7184), (32, 7202),

Gene: Megsy\_11 Start: 7063, Stop: 7248, Start Num: 10  
Candidate Starts for Megsy\_11:  
(Start: 10 @7063 has 271 MA's), (26, 7183), (32, 7201),

Gene: Mercurio\_6 Start: 6020, Stop: 6217, Start Num: 10  
Candidate Starts for Mercurio\_6:  
(5, 5861), (Start: 10 @6020 has 271 MA's), (17, 6074), (18, 6083), (23, 6122), (26, 6146),

Gene: Milly\_7 Start: 5091, Stop: 5276, Start Num: 10  
Candidate Starts for Milly\_7:  
(Start: 10 @5091 has 271 MA's), (26, 5214), (30, 5226), (33, 5247),

Gene: Miryou\_9 Start: 7005, Stop: 7205, Start Num: 10  
Candidate Starts for Miryou\_9:  
(Start: 10 @7005 has 271 MA's), (23, 7104), (26, 7128),

Gene: MissDaisy\_12 Start: 8030, Stop: 8227, Start Num: 10  
Candidate Starts for MissDaisy\_12:  
(Start: 10 @8030 has 271 MA's), (Start: 13 @8051 has 1 MA's), (23, 8129), (26, 8153),

Gene: Mitti\_12 Start: 8168, Stop: 8365, Start Num: 10  
Candidate Starts for Mitti\_12:  
(Start: 10 @8168 has 271 MA's), (Start: 13 @8189 has 1 MA's), (23, 8267), (26, 8291),

Gene: Mowgli\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Mowgli\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Mufasa\_7 Start: 5076, Stop: 5261, Start Num: 10  
Candidate Starts for Mufasa\_7:  
(Start: 10 @5076 has 271 MA's), (26, 5199), (30, 5211), (33, 5232),

Gene: Murucutumbu\_11 Start: 7054, Stop: 7239, Start Num: 10

Candidate Starts for Murucutumbu\_11:

(1, 6781), (5, 6898), (7, 6952), (9, 7021), (Start: 10 @7054 has 271 MA's), (23, 7150), (26, 7174), (32, 7192),

Gene: Mynx\_11 Start: 7114, Stop: 7299, Start Num: 10

Candidate Starts for Mynx\_11:

(Start: 10 @7114 has 271 MA's), (26, 7234), (32, 7252),

Gene: Neighly\_9 Start: 6887, Stop: 7087, Start Num: 10

Candidate Starts for Neighly\_9:

(Start: 10 @6887 has 271 MA's), (12, 6905), (23, 6986), (26, 7010),

Gene: Neoh\_5 Start: 6190, Stop: 6396, Start Num: 10

Candidate Starts for Neoh\_5:

(Start: 10 @6190 has 271 MA's), (26, 6316),

Gene: Nibb\_10 Start: 5969, Stop: 6154, Start Num: 10

Candidate Starts for Nibb\_10:

(2, 5738), (4, 5783), (5, 5813), (7, 5867), (8, 5933), (Start: 10 @5969 has 271 MA's), (26, 6089), (30, 6101),

Gene: Nikao\_7 Start: 6336, Stop: 6524, Start Num: 10

Candidate Starts for Nikao\_7:

(Start: 10 @6336 has 271 MA's), (23, 6432), (26, 6456),

Gene: Niklas\_11 Start: 6126, Stop: 6311, Start Num: 10

Candidate Starts for Niklas\_11:

(Start: 10 @6126 has 271 MA's), (26, 6246), (30, 6258),

Gene: November\_9 Start: 6739, Stop: 6930, Start Num: 10

Candidate Starts for November\_9:

(5, 6583), (9, 6706), (Start: 10 @6739 has 271 MA's), (23, 6841), (26, 6865), (28, 6871),

Gene: Nutello\_7 Start: 6336, Stop: 6524, Start Num: 10

Candidate Starts for Nutello\_7:

(Start: 10 @6336 has 271 MA's), (23, 6432), (26, 6456),

Gene: OctaviousRex\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for OctaviousRex\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: OkiRoe\_9 Start: 7006, Stop: 7206, Start Num: 10

Candidate Starts for OkiRoe\_9:

(Start: 10 @7006 has 271 MA's), (23, 7105), (26, 7129),

Gene: Olga\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Olga\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: OmniCritical\_12 Start: 8155, Stop: 8352, Start Num: 10

Candidate Starts for OmniCritical\_12:

(Start: 10 @8155 has 271 MA's), (Start: 13 @8176 has 1 MA's), (23, 8254), (26, 8278),

Gene: Omnicron\_9 Start: 5991, Stop: 6191, Start Num: 10  
Candidate Starts for Omnicron\_9:  
(Start: 10 @5991 has 271 MA's), (22, 6081), (23, 6090), (24, 6096), (26, 6114), (28, 6120),

Gene: Oscar\_10 Start: 5915, Stop: 6106, Start Num: 10  
Candidate Starts for Oscar\_10:  
(9, 5882), (Start: 10 @5915 has 271 MA's), (12, 5933), (23, 6014), (26, 6038),

Gene: Pace1224\_5 Start: 6337, Stop: 6534, Start Num: 10  
Candidate Starts for Pace1224\_5:  
(5, 6175), (Start: 10 @6337 has 271 MA's), (Start: 13 @6358 has 1 MA's), (25, 6457), (26, 6463),

Gene: Padfoot\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Padfoot\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Padpat\_11 Start: 7094, Stop: 7279, Start Num: 10  
Candidate Starts for Padpat\_11:  
(Start: 10 @7094 has 271 MA's), (26, 7214), (32, 7232),

Gene: Paito\_5 Start: 6250, Stop: 6456, Start Num: 10  
Candidate Starts for Paito\_5:  
(Start: 10 @6250 has 271 MA's), (26, 6376),

Gene: Paola\_9 Start: 7005, Stop: 7205, Start Num: 10  
Candidate Starts for Paola\_9:  
(Start: 10 @7005 has 271 MA's), (23, 7104), (26, 7128),

Gene: Patt\_12 Start: 8006, Stop: 8203, Start Num: 10  
Candidate Starts for Patt\_12:  
(Start: 10 @8006 has 271 MA's), (Start: 13 @8027 has 1 MA's), (23, 8105), (26, 8129),

Gene: Peanam\_11 Start: 6126, Stop: 6311, Start Num: 10  
Candidate Starts for Peanam\_11:  
(Start: 10 @6126 has 271 MA's), (26, 6246), (30, 6258),

Gene: Peeb\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Peeb\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Peel\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Peel\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Periodt\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Periodt\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Pharb\_10 Start: 6867, Stop: 7061, Start Num: 10  
Candidate Starts for Pharb\_10:  
(Start: 10 @6867 has 271 MA's), (23, 6966), (24, 6972), (26, 6990),

Gene: PhelpsODU\_10 Start: 5982, Stop: 6167, Start Num: 10

Candidate Starts for PhelpsODU\_10:  
(Start: 10 @5982 has 271 MA's), (23, 6078), (26, 6102), (30, 6114),

Gene: Phish\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Phish\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Phloodle\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Phloodle\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Phrank\_10 Start: 5942, Stop: 6127, Start Num: 10  
Candidate Starts for Phrank\_10:  
(7, 5840), (Start: 10 @5942 has 271 MA's), (23, 6038), (26, 6062), (30, 6074),

Gene: Phreak\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Phreak\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Piatt\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Piatt\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: PinkYoshi\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for PinkYoshi\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Pinnie\_6 Start: 6829, Stop: 7026, Start Num: 10  
Candidate Starts for Pinnie\_6:  
(3, 6637), (Start: 10 @6829 has 271 MA's), (Start: 13 @6850 has 1 MA's), (25, 6949), (26, 6955), (29, 6964),

Gene: Pisa1\_10 Start: 6878, Stop: 7045, Start Num: 13  
Candidate Starts for Pisa1\_10:  
(5, 6704), (7, 6758), (9, 6827), (Start: 10 @6860 has 271 MA's), (Start: 13 @6878 has 1 MA's), (26, 6980), (32, 6998),

Gene: Pisa4\_10 Start: 6860, Stop: 7045, Start Num: 10  
Candidate Starts for Pisa4\_10:  
(5, 6704), (7, 6758), (9, 6827), (Start: 10 @6860 has 271 MA's), (Start: 13 @6878 has 1 MA's), (26, 6980), (32, 6998),

Gene: Pixie\_10 Start: 6766, Stop: 6966, Start Num: 10  
Candidate Starts for Pixie\_10:  
(5, 6610), (7, 6664), (9, 6733), (Start: 10 @6766 has 271 MA's), (23, 6880), (26, 6904),

Gene: Plagueis\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Plagueis\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Pokerus\_10 Start: 7048, Stop: 7233, Start Num: 10  
Candidate Starts for Pokerus\_10:  
(Start: 10 @7048 has 271 MA's), (26, 7168), (32, 7186),

Gene: Prithvi\_11 Start: 7060, Stop: 7245, Start Num: 10

Candidate Starts for Prithvi\_11:

(Start: 10 @7060 has 271 MA's), (26, 7180), (32, 7198),

Gene: Psycho\_9 Start: 7018, Stop: 7218, Start Num: 10

Candidate Starts for Psycho\_9:

(Start: 10 @7018 has 271 MA's), (12, 7036), (23, 7117), (26, 7141),

Gene: Qhanda\_12 Start: 8264, Stop: 8461, Start Num: 10

Candidate Starts for Qhanda\_12:

(Start: 10 @8264 has 271 MA's), (Start: 13 @8285 has 1 MA's), (23, 8363), (26, 8387), (31, 8402),

Gene: QuincyRose\_10 Start: 7111, Stop: 7296, Start Num: 10

Candidate Starts for QuincyRose\_10:

(Start: 10 @7111 has 271 MA's), (26, 7231), (32, 7249),

Gene: Rabbs\_5 Start: 6190, Stop: 6396, Start Num: 10

Candidate Starts for Rabbs\_5:

(Start: 10 @6190 has 271 MA's), (26, 6316),

Gene: Ramen\_11 Start: 7091, Stop: 7276, Start Num: 10

Candidate Starts for Ramen\_11:

(Start: 10 @7091 has 271 MA's), (26, 7211), (32, 7229),

Gene: Rando14\_9 Start: 6020, Stop: 6220, Start Num: 10

Candidate Starts for Rando14\_9:

(Start: 10 @6020 has 271 MA's), (23, 6119), (24, 6125), (26, 6143), (28, 6149),

Gene: Rapunzel97\_11 Start: 7091, Stop: 7276, Start Num: 10

Candidate Starts for Rapunzel97\_11:

(Start: 10 @7091 has 271 MA's), (26, 7211), (32, 7229),

Gene: Rattrick\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Rattrick\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Remy19\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Remy19\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Renaissance\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Renaissance\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Reptar3000\_12 Start: 8005, Stop: 8205, Start Num: 10

Candidate Starts for Reptar3000\_12:

(Start: 10 @8005 has 271 MA's), (Start: 13 @8026 has 1 MA's), (23, 8104), (26, 8128),

Gene: Richarlison\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Richarlison\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Richo\_11 Start: 6126, Stop: 6311, Start Num: 10  
Candidate Starts for Richo\_11:  
(Start: 10 @6126 has 271 MA's), (26, 6246), (30, 6258),

Gene: Rosmarinus\_11 Start: 7123, Stop: 7308, Start Num: 10  
Candidate Starts for Rosmarinus\_11:  
(Start: 10 @7123 has 271 MA's), (26, 7243), (32, 7261),

Gene: Ruriko\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Ruriko\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Ruthiejr\_11 Start: 7873, Stop: 8061, Start Num: 10  
Candidate Starts for Ruthiejr\_11:  
(2, 7642), (5, 7717), (6, 7747), (9, 7840), (Start: 10 @7873 has 271 MA's), (23, 7969), (26, 7993),

Gene: SamScheppers\_10 Start: 7771, Stop: 7968, Start Num: 10  
Candidate Starts for SamScheppers\_10:  
(Start: 10 @7771 has 271 MA's), (Start: 13 @7792 has 1 MA's), (23, 7870), (26, 7894),

Gene: SamuelLPlaqson\_11 Start: 7043, Stop: 7228, Start Num: 10  
Candidate Starts for SamuelLPlaqson\_11:  
(9, 7010), (Start: 10 @7043 has 271 MA's), (Start: 13 @7061 has 1 MA's), (26, 7163), (32, 7181),

Gene: Scarlett\_10 Start: 5914, Stop: 6105, Start Num: 10  
Candidate Starts for Scarlett\_10:  
(9, 5881), (Start: 10 @5914 has 271 MA's), (12, 5932), (23, 6013), (26, 6037),

Gene: Schiebel\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Schiebel\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: SgtBeansprout\_7 Start: 6336, Stop: 6524, Start Num: 10  
Candidate Starts for SgtBeansprout\_7:  
(Start: 10 @6336 has 271 MA's), (23, 6432), (26, 6456),

Gene: ShaboiShabazz\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for ShaboiShabazz\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Shadow1\_9 Start: 5853, Stop: 6038, Start Num: 10  
Candidate Starts for Shadow1\_9:  
(6, 5727), (7, 5751), (8, 5817), (Start: 10 @5853 has 271 MA's), (23, 5949), (26, 5973), (30, 5985),

Gene: Shaobing\_11 Start: 6126, Stop: 6311, Start Num: 10  
Candidate Starts for Shaobing\_11:  
(Start: 10 @6126 has 271 MA's), (26, 6246), (30, 6258),

Gene: ShedlockHolmes\_10 Start: 7015, Stop: 7215, Start Num: 10  
Candidate Starts for ShedlockHolmes\_10:  
(5, 6859), (7, 6913), (9, 6982), (Start: 10 @7015 has 271 MA's), (23, 7129), (26, 7153),

Gene: ShiaSurprise\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for ShiaSurprise\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: SirPhilip\_10 Start: 5800, Stop: 5982, Start Num: 10  
Candidate Starts for SirPhilip\_10:  
(Start: 10 @5800 has 271 MA's), (23, 5899), (26, 5923), (34, 5965),

Gene: Sizemore\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Sizemore\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Slarp\_12 Start: 8255, Stop: 8452, Start Num: 10  
Candidate Starts for Slarp\_12:  
(Start: 10 @8255 has 271 MA's), (Start: 13 @8276 has 1 MA's), (23, 8354), (26, 8378), (31, 8393),

Gene: Slimphazie\_11 Start: 7091, Stop: 7276, Start Num: 10  
Candidate Starts for Slimphazie\_11:  
(Start: 10 @7091 has 271 MA's), (26, 7211), (32, 7229),

Gene: Sneeze\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Sneeze\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: SoSeph\_9 Start: 7132, Stop: 7332, Start Num: 10  
Candidate Starts for SoSeph\_9:  
(Start: 10 @7132 has 271 MA's), (23, 7231), (26, 7255),

Gene: Spock\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Spock\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Stargaze\_5 Start: 6400, Stop: 6594, Start Num: 10  
Candidate Starts for Stargaze\_5:  
(5, 6238), (Start: 10 @6400 has 271 MA's), (25, 6517), (26, 6523), (29, 6532),

Gene: Stinson\_11 Start: 7066, Stop: 7251, Start Num: 10  
Candidate Starts for Stinson\_11:  
(1, 6793), (5, 6910), (7, 6964), (9, 7033), (Start: 10 @7066 has 271 MA's), (23, 7162), (26, 7186), (32, 7204),

Gene: Strobilo\_7 Start: 5091, Stop: 5276, Start Num: 10  
Candidate Starts for Strobilo\_7:  
(Start: 10 @5091 has 271 MA's), (26, 5214), (30, 5226), (33, 5247),

Gene: Sulley\_11 Start: 7070, Stop: 7255, Start Num: 10  
Candidate Starts for Sulley\_11:  
(5, 6914), (7, 6968), (Start: 10 @7070 has 271 MA's), (23, 7166), (26, 7190), (32, 7208),

Gene: Sunflower1121\_9 Start: 5855, Stop: 6040, Start Num: 10  
Candidate Starts for Sunflower1121\_9:  
(5, 5699), (7, 5753), (Start: 10 @5855 has 271 MA's), (23, 5951), (26, 5975), (30, 5987),

Gene: Sweets\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Sweets\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Syra333\_10 Start: 5951, Stop: 6136, Start Num: 10  
Candidate Starts for Syra333\_10:  
(Start: 10 @5951 has 271 MA's), (23, 6047), (26, 6071), (30, 6083),

Gene: TBond007\_10 Start: 6765, Stop: 6965, Start Num: 10  
Candidate Starts for TBond007\_10:  
(5, 6609), (7, 6663), (9, 6732), (Start: 10 @6765 has 271 MA's), (23, 6879), (26, 6903),

Gene: TClif\_10 Start: 5883, Stop: 6065, Start Num: 10  
Candidate Starts for TClif\_10:  
(Start: 10 @5883 has 271 MA's), (23, 5979), (26, 6003), (30, 6015),

Gene: TM4\_7 Start: 5113, Stop: 5298, Start Num: 10  
Candidate Starts for TM4\_7:  
(Start: 10 @5113 has 271 MA's), (26, 5236), (30, 5248), (33, 5269),

Gene: Tachez\_11 Start: 7057, Stop: 7242, Start Num: 10  
Candidate Starts for Tachez\_11:  
(Start: 10 @7057 has 271 MA's), (26, 7177), (32, 7195),

Gene: Taheera\_5 Start: 6199, Stop: 6405, Start Num: 10  
Candidate Starts for Taheera\_5:  
(Start: 10 @6199 has 271 MA's), (26, 6325),

Gene: TaiwanKao\_11 Start: 7066, Stop: 7251, Start Num: 10  
Candidate Starts for TaiwanKao\_11:  
(Start: 10 @7066 has 271 MA's), (26, 7186), (32, 7204),

Gene: Taquito\_10 Start: 7847, Stop: 8044, Start Num: 10  
Candidate Starts for Taquito\_10:  
(Start: 10 @7847 has 271 MA's), (Start: 13 @7868 has 1 MA's), (23, 7946), (26, 7970), (31, 7985),

Gene: Teejan\_7 Start: 6336, Stop: 6524, Start Num: 10  
Candidate Starts for Teejan\_7:  
(Start: 10 @6336 has 271 MA's), (23, 6432), (26, 6456),

Gene: Terror\_5 Start: 6199, Stop: 6405, Start Num: 10  
Candidate Starts for Terror\_5:  
(Start: 10 @6199 has 271 MA's), (26, 6325),

Gene: Thyatira\_9 Start: 7005, Stop: 7205, Start Num: 10  
Candidate Starts for Thyatira\_9:  
(Start: 10 @7005 has 271 MA's), (12, 7023), (23, 7104), (26, 7128),

Gene: Tierra\_10 Start: 6646, Stop: 6831, Start Num: 10  
Candidate Starts for Tierra\_10:  
(5, 6490), (7, 6544), (Start: 10 @6646 has 271 MA's), (23, 6742), (26, 6766), (30, 6778),

Gene: Tigress9\_10 Start: 5931, Stop: 6116, Start Num: 10  
Candidate Starts for Tigress9\_10:

(8, 5895), (Start: 10 @5931 has 271 MA's), (12, 5946), (23, 6027), (26, 6051), (30, 6063),

Gene: TinaBug\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for TinaBug\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: TingHuaYa\_11 Start: 6087, Stop: 6272, Start Num: 10

Candidate Starts for TingHuaYa\_11:

(Start: 10 @6087 has 271 MA's), (23, 6183), (26, 6207),

Gene: TiniBug\_11 Start: 7043, Stop: 7228, Start Num: 10

Candidate Starts for TiniBug\_11:

(9, 7010), (Start: 10 @7043 has 271 MA's), (Start: 13 @7061 has 1 MA's), (26, 7163), (32, 7181),

Gene: Tiri\_11 Start: 7102, Stop: 7287, Start Num: 10

Candidate Starts for Tiri\_11:

(Start: 10 @7102 has 271 MA's), (26, 7222), (32, 7240),

Gene: TomBrady\_5 Start: 6190, Stop: 6396, Start Num: 10

Candidate Starts for TomBrady\_5:

(Start: 10 @6190 has 271 MA's), (26, 6316),

Gene: Topper\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for Topper\_11:

(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Torres\_7 Start: 6336, Stop: 6524, Start Num: 10

Candidate Starts for Torres\_7:

(Start: 10 @6336 has 271 MA's), (23, 6432), (26, 6456),

Gene: TreyKay\_11 Start: 7060, Stop: 7245, Start Num: 10

Candidate Starts for TreyKay\_11:

(Start: 10 @7060 has 271 MA's), (26, 7180), (32, 7198),

Gene: TribbleTrouble\_9 Start: 6819, Stop: 7013, Start Num: 10

Candidate Starts for TribbleTrouble\_9:

(9, 6786), (Start: 10 @6819 has 271 MA's), (23, 6921), (24, 6927), (26, 6945),

Gene: Trice\_7 Start: 6336, Stop: 6524, Start Num: 10

Candidate Starts for Trice\_7:

(Start: 10 @6336 has 271 MA's), (23, 6432), (26, 6456),

Gene: TruffulaTree\_11 Start: 7088, Stop: 7273, Start Num: 10

Candidate Starts for TruffulaTree\_11:

(Start: 10 @7088 has 271 MA's), (26, 7208), (32, 7226),

Gene: Twitch\_11 Start: 7135, Stop: 7320, Start Num: 10

Candidate Starts for Twitch\_11:

(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: Unicorn\_10 Start: 5982, Stop: 6167, Start Num: 10

Candidate Starts for Unicorn\_10:

(Start: 10 @5982 has 271 MA's), (23, 6078), (26, 6102), (30, 6114),

Gene: Urkel\_11 Start: 7043, Stop: 7228, Start Num: 10  
Candidate Starts for Urkel\_11:  
(9, 7010), (Start: 10 @7043 has 271 MA's), (Start: 13 @7061 has 1 MA's), (26, 7163), (32, 7181),

Gene: Validus\_11 Start: 6042, Stop: 6227, Start Num: 10  
Candidate Starts for Validus\_11:  
(Start: 10 @6042 has 271 MA's), (12, 6057), (23, 6138), (26, 6162), (30, 6174),

Gene: Veliki\_11 Start: 7135, Stop: 7320, Start Num: 10  
Candidate Starts for Veliki\_11:  
(Start: 10 @7135 has 271 MA's), (26, 7255), (32, 7273),

Gene: ViviJ\_8 Start: 6887, Stop: 7087, Start Num: 10  
Candidate Starts for ViviJ\_8:  
(Start: 10 @6887 has 271 MA's), (12, 6905), (23, 6986), (26, 7010),

Gene: WST1\_5 Start: 5051, Stop: 5254, Start Num: 10  
Candidate Starts for WST1\_5:  
(Start: 10 @5051 has 271 MA's), (20, 5138), (26, 5177),

Gene: Waterfoul\_9 Start: 7027, Stop: 7227, Start Num: 10  
Candidate Starts for Waterfoul\_9:  
(Start: 10 @7027 has 271 MA's), (12, 7045), (23, 7126), (26, 7150),

Gene: Wendigo\_5 Start: 6189, Stop: 6395, Start Num: 10  
Candidate Starts for Wendigo\_5:  
(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: Wintermute\_12 Start: 8244, Stop: 8441, Start Num: 10  
Candidate Starts for Wintermute\_12:  
(Start: 10 @8244 has 271 MA's), (Start: 13 @8265 has 1 MA's), (23, 8343), (26, 8367),

Gene: Ximenita\_11 Start: 6118, Stop: 6303, Start Num: 10  
Candidate Starts for Ximenita\_11:  
(Start: 10 @6118 has 271 MA's), (23, 6214), (26, 6238), (30, 6250),

Gene: Y10\_12 Start: 8245, Stop: 8442, Start Num: 10  
Candidate Starts for Y10\_12:  
(Start: 10 @8245 has 271 MA's), (Start: 13 @8266 has 1 MA's), (23, 8344), (26, 8368),

Gene: Y2\_12 Start: 8245, Stop: 8442, Start Num: 10  
Candidate Starts for Y2\_12:  
(Start: 10 @8245 has 271 MA's), (Start: 13 @8266 has 1 MA's), (23, 8344), (26, 8368),

Gene: YangYin\_5 Start: 6400, Stop: 6594, Start Num: 10  
Candidate Starts for YangYin\_5:  
(5, 6238), (Start: 10 @6400 has 271 MA's), (25, 6517), (26, 6523), (29, 6532),

Gene: YasnayaPolyana\_12 Start: 8266, Stop: 8442, Start Num: 13  
Candidate Starts for YasnayaPolyana\_12:  
(Start: 10 @8245 has 271 MA's), (Start: 13 @8266 has 1 MA's), (23, 8344), (26, 8368),

Gene: YoureAdopted\_10 Start: 7064, Stop: 7249, Start Num: 10

Candidate Starts for YoureAdopted\_10:

(Start: 10 @7064 has 271 MA's), (26, 7184), (32, 7202),

Gene: Yuna\_11 Start: 6120, Stop: 6305, Start Num: 10

Candidate Starts for Yuna\_11:

(8, 6084), (Start: 10 @6120 has 271 MA's), (15, 6162), (19, 6198), (23, 6216), (27, 6243),

Gene: Yunkel11\_11 Start: 6056, Stop: 6241, Start Num: 10

Candidate Starts for Yunkel11\_11:

(Start: 10 @6056 has 271 MA's), (26, 6176),

Gene: Zabiza\_11 Start: 7091, Stop: 7276, Start Num: 10

Candidate Starts for Zabiza\_11:

(Start: 10 @7091 has 271 MA's), (26, 7211), (32, 7229),

Gene: Zavala\_11 Start: 7073, Stop: 7258, Start Num: 10

Candidate Starts for Zavala\_11:

(Start: 10 @7073 has 271 MA's), (26, 7193), (32, 7211),

Gene: ZoMa\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for ZoMa\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),

Gene: ZoeJ\_7 Start: 5049, Stop: 5234, Start Num: 10

Candidate Starts for ZoeJ\_7:

(Start: 10 @5049 has 271 MA's), (26, 5172), (30, 5184), (33, 5205),

Gene: Zombie\_5 Start: 6189, Stop: 6395, Start Num: 10

Candidate Starts for Zombie\_5:

(Start: 10 @6189 has 271 MA's), (26, 6315),