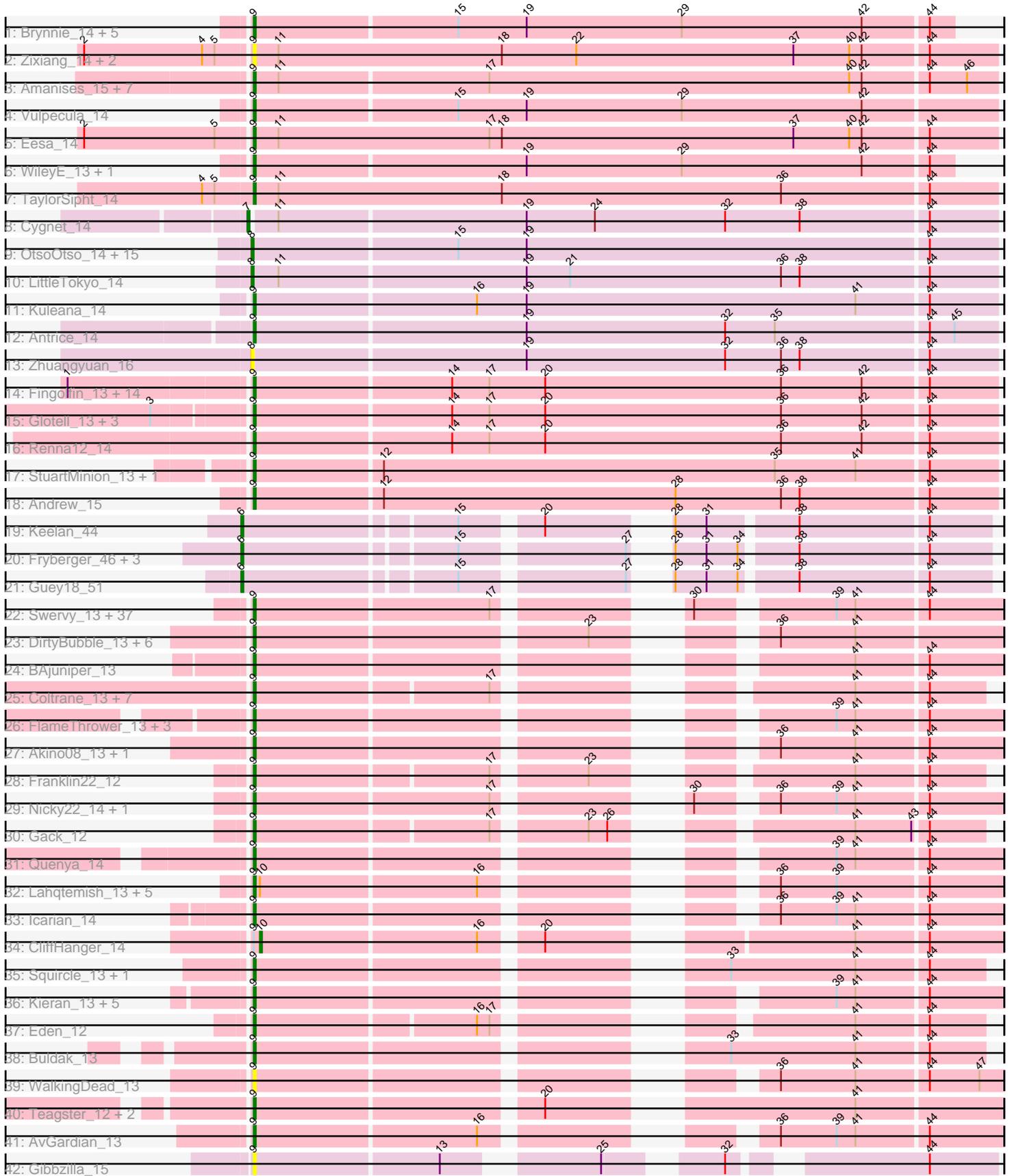


Pham 283547



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 283547 Report

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

Pham number 283547 has 161 members, 34 are drafts.

Phages represented in each track:

- Track 1 : Brynnie\_14, Galaxy\_14, Abidatro\_14, Ruchi\_14, Jamun\_14, Basilisk\_14
- Track 2 : Zixiang\_14, Niblet\_14, Chicken\_14
- Track 3 : Amanises\_15, Pelletreau\_15, Gravel\_15, Toad24\_15, Shen\_15, Westrich\_15, Orcanus\_14, KendraB23\_15
- Track 4 : Vulpecula\_14
- Track 5 : Eesa\_14
- Track 6 : WileyE\_13, Chickaboom\_13
- Track 7 : TaylorSipht\_14
- Track 8 : Cygnet\_14
- Track 9 : OtsoOtso\_14, Pineda\_15, Bibble12\_15, Jerole\_15, Polka\_14, Cote\_15, Bedetta\_15, PhirstandPhine\_15, Lunar\_16, Daob\_15, Melons\_15, Coral\_14, Colusalem\_14, Kepler\_14, HannahPhantana\_15, Amelia\_15
- Track 10 : LittleTokyo\_14
- Track 11 : Kuleana\_14
- Track 12 : Antrice\_14
- Track 13 : Zhuangyuan\_16
- Track 14 : Fingolfin\_13, HamCheese\_14, PhluffyCoco\_13, Juno112\_13, DanHam62\_14, Leona\_13, AdoptaAdorbs\_13, Azaz\_13, Babushka\_13, Amphitrite\_13, Atlantica\_13, RedFox\_13, Camara\_13, Rattail\_13, Laphuphu24k\_13
- Track 15 : Glotell\_13, Oppalora\_13, KHumphrey\_13, AmiCi24\_13
- Track 16 : Renna12\_14
- Track 17 : StuartMinion\_13, AlexMinion\_13
- Track 18 : Andrew\_15
- Track 19 : Keelan\_44
- Track 20 : Fryberger\_46, Ziko\_49, Ronaldo\_49, Volt\_48
- Track 21 : Guey18\_51
- Track 22 : Swervy\_13, Jovita\_13, Cashington\_13, MsUbiquitous\_13, Arroyo\_14, Burritobowl\_13, DickRichards\_13, SirBeanington\_13, Jabb\_13, Albedo\_13, PhigPhack\_13, AylexOG\_14, BubbaBear\_13, BelmontSKP\_14, CupcakePrincess\_13, Doobus\_13, Albright\_13, Softsoap\_13, Slay\_13, Johnathan\_13, CroZenni\_13, Abigail\_13, QMacho\_14, Phisb\_13, SansAfet\_13, TukTuk\_13, Finalfrontier\_14, LimaBean\_13, Avocadoman\_13, Solea\_14, Pecas\_13, SarBear\_13, Kenzers\_13, Eula\_13, Bengal\_13, Lynlen\_13, Milomuff\_14, AnnaLie\_14
- Track 23 : DirtyBubble\_13, Stoor\_13, Stromboli\_13, PondAmelia\_16, Elva\_14, SanaSana\_14, BabyYoda\_13
- Track 24 : BAjuniper\_13

- Track 25 : Coltrane\_13, Armstrong\_13, Clayda5\_12, Rollins\_13, Vitas\_12, Brahms\_13, Bernstein\_13, Skylord\_12
- Track 26 : FlameThrower\_13, Celaena\_13, Katzastrophic\_13, Bachaco\_13
- Track 27 : Akino08\_13, Loviatar\_13
- Track 28 : Franklin22\_12
- Track 29 : Nicky22\_14, Lilo27\_13
- Track 30 : Gack\_12
- Track 31 : Quenya\_14
- Track 32 : Lahqtemish\_13, Kate33\_13, BabyDaisy\_14, Didgeridoo\_14, IndyLu\_13, PastaFagioli\_13
- Track 33 : Icarian\_14
- Track 34 : CliffHanger\_14
- Track 35 : Squircle\_13, Olliecat\_13
- Track 36 : Kieran\_13, ChiliPepper\_13, Kamdara\_13, Sharkboy\_13, Dismas\_13, Rona\_13
- Track 37 : Eden\_12
- Track 38 : Buldak\_13
- Track 39 : WalkingDead\_13
- Track 40 : Teagster\_12, Shayna\_12, SunnyD\_12
- Track 41 : AvGardian\_13
- Track 42 : Gibbzilla\_15

***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 106 of the 127 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abidatro\_14, Abigail\_13, AdoptaAdorbs\_13, Akino08\_13, Albedo\_13, Albright\_13, AlexMinion\_13, Amanises\_15, AmiCi24\_13, Amphitrite\_13, Andrew\_15, AnnaLie\_14, Antrice\_14, Armstrong\_13, Arroyo\_14, Atlantica\_13, AvGardian\_13, Avocadoman\_13, AylexOG\_14, Azaz\_13, BAjuniper\_13, Babushka\_13, BabyDaisy\_14, BabyYoda\_13, Bachaco\_13, Basilisk\_14, BelmontSKP\_14, Bengal\_13, Bernstein\_13, Brahms\_13, Brynnie\_14, BubbaBear\_13, Buldak\_13, Burritobowl\_13, Camara\_13, Cashington\_13, Celaena\_13, Chickaboom\_13, Chicken\_14, ChiliPepper\_13, Clayda5\_12, Coltrane\_13, CroZenni\_13, CupcakePrincess\_13, DanHam62\_14, DickRichards\_13, Didgeridoo\_14, DirtyBubble\_13, Dismas\_13, Doobus\_13, Eden\_12, Eesa\_14, Elva\_14, Eula\_13, Finalfrontier\_14, Fingolfin\_13, FlameThrower\_13, Franklin22\_12, Gack\_12, Galaxy\_14, Gibbzilla\_15, Glotell\_13, Gravel\_15, HamCheese\_14, Icarian\_14, IndyLu\_13, Jabb\_13, Jamun\_14, Johnathan\_13, Jovita\_13, Juno112\_13, KHumphrey\_13, Kamdara\_13, Kate33\_13, Katzastrophic\_13, KendraB23\_15, Kenzers\_13, Kieran\_13, Kuleana\_14, Lahqtemish\_13, Laphuphu24k\_13, Leona\_13, Lilo27\_13, LimaBean\_13, Loviatar\_13, Lynlen\_13, Milomuff\_14, MsUbiquitous\_13, Niblet\_14, Nicky22\_14, Olliecat\_13, Oppalora\_13, Orcanus\_14, PastaFagioli\_13, Pecas\_13, Pelletreau\_15, PhigPhack\_13, Phisb\_13, PhluffyCoco\_13, PondAmelia\_16, QMacho\_14, Quenya\_14, Rattail\_13, RedFox\_13, Renna12\_14, Rollins\_13, Rona\_13, Ruchi\_14, SanaSana\_14, SansAfet\_13, SarBear\_13, Sharkboy\_13, Shayna\_12, Shen\_15, SirBeanington\_13, Skylord\_12, Slay\_13, Softsoap\_13, Solea\_14, Squircle\_13, Stoor\_13, Stromboli\_13, StuartMinion\_13,

SunnyD\_12, Swervy\_13, TaylorSipht\_14, Teagster\_12, Toad24\_15, TukTuk\_13, Vitas\_12, Vulpecula\_14, WalkingDead\_13, Westrich\_15, WileyE\_13, Zixiang\_14,

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

- CliffHanger\_14,

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

- Amelia\_15, Bedetta\_15, Bibble12\_15, Colusalem\_14, Coral\_14, Cote\_15, Cygnet\_14, Daob\_15, Fryberger\_46, Guey18\_51, HannahPhantana\_15, Jerole\_15, Keelan\_44, Kepler\_14, LittleTokyo\_14, Lunar\_16, Melons\_15, OtsoOtso\_14, PhirstandPhine\_15, Pineda\_15, Polka\_14, Ronaldo\_49, Volt\_48, Zhuangyuan\_16, Ziko\_49,

### Summary by start number:

Start 6:

- Found in 6 of 161 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 6 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fryberger\_46 (DP), Guey18\_51 (DP), Keelan\_44 (DP), Ronaldo\_49 (DP), Volt\_48 (DP), Ziko\_49 (DP),

Start 7:

- Found in 1 of 161 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cygnet\_14 (AS2),

Start 8:

- Found in 18 of 161 ( 11.2% ) of genes in pham
- Manual Annotations of this start: 13 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amelia\_15 (AS2), Bedetta\_15 (AS2), Bibble12\_15 (AS2), Colusalem\_14 (AS2), Coral\_14 (AS2), Cote\_15 (AS2), Daob\_15 (AS2), HannahPhantana\_15 (AS2), Jerole\_15 (AS2), Kepler\_14 (AS2), LittleTokyo\_14 (AS2), Lunar\_16 (AS2), Melons\_15 (AS2), OtsoOtso\_14 (AS2), PhirstandPhine\_15 (AS2), Pineda\_15 (AS2), Polka\_14 (AS2), Zhuangyuan\_16 (AS2),

Start 9:

- Found in 136 of 161 ( 84.5% ) of genes in pham
- Manual Annotations of this start: 106 of 127
- Called 99.3% of time when present
- Phage (with cluster) where this start called: Abidatro\_14 (AS1), Abigail\_13 (EB), AdoptaAdorbs\_13 (AS3), Akino08\_13 (EB), Albedo\_13 (EB), Albright\_13 (EB), AlexMinion\_13 (AS3), Amanises\_15 (AS1), AmiCi24\_13 (AS3), Amphitrite\_13 (AS3), Andrew\_15 (AS3), AnnaLie\_14 (EB), Antrice\_14 (AS2), Armstrong\_13 (EB), Arroyo\_14 (EB), Atlantica\_13 (AS3), AvGardian\_13 (EB), Avocadoman\_13 (EB), AylexOG\_14 (EB), Azaz\_13 (AS3), BAjuniper\_13 (EB), Babushka\_13 (AS3), BabyDaisy\_14 (EB), BabyYoda\_13 (EB), Bachaco\_13 (EB), Basilisk\_14 (AS1), BelmontSKP\_14 (EB), Bengal\_13 (EB), Bernstein\_13 (EB), Brahms\_13 (EB), Brynnie\_14 (AS1), BubbaBear\_13 (EB), Buldak\_13 (EB), Burritobowl\_13 (EB), Camara\_13 (AS3), Cashington\_13 (EB), Celaena\_13 (EB), Chickaboom\_13 (AS1), Chicken\_14 (AS1), ChiliPepper\_13 (EB), Clayda5\_12 (EB), Coltrane\_13 (EB),

CroZenni\_13 (EB), CupcakePrincess\_13 (EB), DanHam62\_14 (AS3), DickRichards\_13 (EB), Didgeridoo\_14 (EB), DirtyBubble\_13 (EB), Dismas\_13 (EB), Doobus\_13 (EB), Eden\_12 (EB), Eesa\_14 (AS1), Elva\_14 (EB), Eula\_13 (EB), Finalfrontier\_14 (EB), Fingolfin\_13 (AS3), FlameThrower\_13 (EB), Franklin22\_12 (EB), Gack\_12 (EB), Galaxy\_14 (AS1), Gibbzilla\_15 (FB), Glotell\_13 (AS3), Gravel\_15 (AS1), HamCheese\_14 (AS3), Icarian\_14 (EB), IndyLu\_13 (EB), Jabb\_13 (EB), Jamun\_14 (AS1), Johnathan\_13 (EB), Jovita\_13 (EB), Juno112\_13 (AS3), KHumphrey\_13 (AS3), Kamdara\_13 (EB), Kate33\_13 (EB), Katzastrophic\_13 (EB), KendraB23\_15 (AS1), Kenzers\_13 (EB), Kieran\_13 (EB), Kuleana\_14 (AS2), Lahqtemish\_13 (EB), Laphuphu24k\_13 (AS3), Leona\_13 (AS3), Lilo27\_13 (EB), LimaBean\_13 (EB), Loviatar\_13 (EB), Lynlen\_13 (EB), Milomuff\_14 (EB), MsUbiquitous\_13 (EB), Niblet\_14 (AS1), Nicky22\_14 (EB), Olliecat\_13 (EB), Oppalora\_13 (AS3), Orcanus\_14 (AS1), PastaFagioli\_13 (EB), Pecas\_13 (EB), Pelletreau\_15 (AS1), PhigPhack\_13 (EB), Phisb\_13 (EB), PhluffyCoco\_13 (AS3), PondAmelia\_16 (EB), QMacho\_14 (EB), Quenya\_14 (EB), Rattail\_13 (AS3), RedFox\_13 (AS3), Renna12\_14 (AS3), Rollins\_13 (EB), Rona\_13 (EB), Ruchi\_14 (AS1), SanaSana\_14 (EB), SansAfet\_13 (EB), SarBear\_13 (EB), Sharkboy\_13 (EB), Shayna\_12 (EB), Shen\_15 (AS1), SirBeanington\_13 (EB), Skylord\_12 (EB), Slay\_13 (EB), Softsoap\_13 (EB), Solea\_14 (EB), Squircle\_13 (EB), Stoor\_13 (EB), Stromboli\_13 (EB), StuartMinion\_13 (AS3), SunnyD\_12 (EB), Swervy\_13 (EB), TaylorSipht\_14 (AS1), Teagster\_12 (EB), Toad24\_15 (AS1), TukTuk\_13 (EB), Vitas\_12 (EB), Vulpecula\_14 (AS1), WalkingDead\_13 (EB), Westrich\_15 (AS1), WileyE\_13 (AS1), Zixiang\_14 (AS1),

Start 10:

- Found in 7 of 161 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 1 of 127
- Called 14.3% of time when present
- Phage (with cluster) where this start called: CliffHanger\_14 (EB),

### Summary by clusters:

There are 6 clusters represented in this pham: AS3, AS2, AS1, EB, FB, DP,

Info for manual annotations of cluster AS1:

- Start number 9 was manually annotated 12 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 7 was manually annotated 1 time for cluster AS2.
- Start number 8 was manually annotated 13 times for cluster AS2.
- Start number 9 was manually annotated 2 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 9 was manually annotated 14 times for cluster AS3.

Info for manual annotations of cluster DP:

- Start number 6 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster EB:

- Start number 9 was manually annotated 78 times for cluster EB.
- Start number 10 was manually annotated 1 time for cluster EB.

**Gene Information:**

Gene: Abidatro\_14 Start: 9744, Stop: 10076, Start Num: 9

Candidate Starts for Abidatro\_14:

(Start: 9 @9744 has 106 MA's), (15, 9840), (19, 9873), (29, 9948), (42, 10035), (44, 10065),

Gene: Abigail\_13 Start: 9362, Stop: 9670, Start Num: 9

Candidate Starts for Abigail\_13:

(Start: 9 @9362 has 106 MA's), (17, 9473), (30, 9536), (39, 9593), (41, 9602), (44, 9635),

Gene: AdoptaAdorbs\_13 Start: 9060, Stop: 9413, Start Num: 9

Candidate Starts for AdoptaAdorbs\_13:

(1, 8976), (Start: 9 @9060 has 106 MA's), (14, 9153), (17, 9171), (20, 9198), (36, 9312), (42, 9351), (44, 9381),

Gene: Akino08\_13 Start: 9518, Stop: 9826, Start Num: 9

Candidate Starts for Akino08\_13:

(Start: 9 @9518 has 106 MA's), (36, 9722), (41, 9758), (44, 9791),

Gene: Albedo\_13 Start: 9208, Stop: 9516, Start Num: 9

Candidate Starts for Albedo\_13:

(Start: 9 @9208 has 106 MA's), (17, 9319), (30, 9382), (39, 9439), (41, 9448), (44, 9481),

Gene: Albright\_13 Start: 9243, Stop: 9551, Start Num: 9

Candidate Starts for Albright\_13:

(Start: 9 @9243 has 106 MA's), (17, 9354), (30, 9417), (39, 9474), (41, 9483), (44, 9516),

Gene: AlexMinion\_13 Start: 9092, Stop: 9445, Start Num: 9

Candidate Starts for AlexMinion\_13:

(Start: 9 @9092 has 106 MA's), (12, 9152), (35, 9341), (41, 9380), (44, 9413),

Gene: Amanises\_15 Start: 9656, Stop: 10009, Start Num: 9

Candidate Starts for Amanises\_15:

(Start: 9 @9656 has 106 MA's), (11, 9668), (17, 9767), (40, 9941), (42, 9947), (44, 9977), (46, 9995),

Gene: Amelia\_15 Start: 9644, Stop: 9997, Start Num: 8

Candidate Starts for Amelia\_15:

(Start: 8 @9644 has 13 MA's), (15, 9740), (19, 9773), (44, 9965),

Gene: AmiCi24\_13 Start: 9058, Stop: 9411, Start Num: 9

Candidate Starts for AmiCi24\_13:

(3, 9016), (Start: 9 @9058 has 106 MA's), (14, 9151), (17, 9169), (20, 9196), (36, 9310), (42, 9349), (44, 9379),

Gene: Amphitrite\_13 Start: 9058, Stop: 9411, Start Num: 9

Candidate Starts for Amphitrite\_13:

(1, 8974), (Start: 9 @9058 has 106 MA's), (14, 9151), (17, 9169), (20, 9196), (36, 9310), (42, 9349), (44, 9379),

Gene: Andrew\_15 Start: 9438, Stop: 9791, Start Num: 9

Candidate Starts for Andrew\_15:

(Start: 9 @9438 has 106 MA's), (12, 9498), (28, 9639), (36, 9690), (38, 9699), (44, 9759),

Gene: AnnaLie\_14 Start: 9652, Stop: 9960, Start Num: 9

Candidate Starts for AnnaLie\_14:

(Start: 9 @9652 has 106 MA's), (17, 9763), (30, 9826), (39, 9883), (41, 9892), (44, 9925),

Gene: Antrice\_14 Start: 9399, Stop: 9752, Start Num: 9

Candidate Starts for Antrice\_14:

(Start: 9 @9399 has 106 MA's), (19, 9528), (32, 9624), (35, 9648), (44, 9720), (45, 9732),

Gene: Armstrong\_13 Start: 8785, Stop: 9084, Start Num: 9

Candidate Starts for Armstrong\_13:

(Start: 9 @8785 has 106 MA's), (17, 8893), (41, 9025), (44, 9058),

Gene: Arroyo\_14 Start: 9713, Stop: 10021, Start Num: 9

Candidate Starts for Arroyo\_14:

(Start: 9 @9713 has 106 MA's), (17, 9824), (30, 9887), (39, 9944), (41, 9953), (44, 9986),

Gene: Atlantica\_13 Start: 9060, Stop: 9413, Start Num: 9

Candidate Starts for Atlantica\_13:

(1, 8976), (Start: 9 @9060 has 106 MA's), (14, 9153), (17, 9171), (20, 9198), (36, 9312), (42, 9351), (44, 9381),

Gene: AvGardian\_13 Start: 9267, Stop: 9575, Start Num: 9

Candidate Starts for AvGardian\_13:

(Start: 9 @9267 has 106 MA's), (16, 9372), (36, 9471), (39, 9498), (41, 9507), (44, 9540),

Gene: Avocadoman\_13 Start: 9305, Stop: 9613, Start Num: 9

Candidate Starts for Avocadoman\_13:

(Start: 9 @9305 has 106 MA's), (17, 9416), (30, 9479), (39, 9536), (41, 9545), (44, 9578),

Gene: AylexOG\_14 Start: 9588, Stop: 9896, Start Num: 9

Candidate Starts for AylexOG\_14:

(Start: 9 @9588 has 106 MA's), (17, 9699), (30, 9762), (39, 9819), (41, 9828), (44, 9861),

Gene: Azaz\_13 Start: 9111, Stop: 9464, Start Num: 9

Candidate Starts for Azaz\_13:

(1, 9027), (Start: 9 @9111 has 106 MA's), (14, 9204), (17, 9222), (20, 9249), (36, 9363), (42, 9402), (44, 9432),

Gene: BAjuniper\_13 Start: 8933, Stop: 9241, Start Num: 9

Candidate Starts for BAjuniper\_13:

(Start: 9 @8933 has 106 MA's), (41, 9173), (44, 9206),

Gene: Babushka\_13 Start: 9108, Stop: 9461, Start Num: 9

Candidate Starts for Babushka\_13:

(1, 9024), (Start: 9 @9108 has 106 MA's), (14, 9201), (17, 9219), (20, 9246), (36, 9360), (42, 9399), (44, 9429),

Gene: BabyDaisy\_14 Start: 9464, Stop: 9772, Start Num: 9

Candidate Starts for BabyDaisy\_14:

(Start: 9 @9464 has 106 MA's), (Start: 10 @9467 has 1 MA's), (16, 9569), (36, 9668), (39, 9695), (44, 9737),

Gene: BabyYoda\_13 Start: 9464, Stop: 9772, Start Num: 9

Candidate Starts for BabyYoda\_13:

(Start: 9 @9464 has 106 MA's), (23, 9614), (36, 9668), (41, 9704),

Gene: Bachaco\_13 Start: 9138, Stop: 9446, Start Num: 9

Candidate Starts for Bachaco\_13:

(Start: 9 @9138 has 106 MA's), (39, 9369), (41, 9378), (44, 9411),

Gene: Basilisk\_14 Start: 10064, Stop: 10396, Start Num: 9

Candidate Starts for Basilisk\_14:

(Start: 9 @10064 has 106 MA's), (15, 10160), (19, 10193), (29, 10268), (42, 10355), (44, 10385),

Gene: Bedetta\_15 Start: 9644, Stop: 9997, Start Num: 8

Candidate Starts for Bedetta\_15:

(Start: 8 @9644 has 13 MA's), (15, 9740), (19, 9773), (44, 9965),

Gene: BelmontSKP\_14 Start: 9652, Stop: 9960, Start Num: 9

Candidate Starts for BelmontSKP\_14:

(Start: 9 @9652 has 106 MA's), (17, 9763), (30, 9826), (39, 9883), (41, 9892), (44, 9925),

Gene: Bengal\_13 Start: 9243, Stop: 9551, Start Num: 9

Candidate Starts for Bengal\_13:

(Start: 9 @9243 has 106 MA's), (17, 9354), (30, 9417), (39, 9474), (41, 9483), (44, 9516),

Gene: Bernstein\_13 Start: 8845, Stop: 9144, Start Num: 9

Candidate Starts for Bernstein\_13:

(Start: 9 @8845 has 106 MA's), (17, 8953), (41, 9085), (44, 9118),

Gene: Bible12\_15 Start: 9647, Stop: 10000, Start Num: 8

Candidate Starts for Bible12\_15:

(Start: 8 @9647 has 13 MA's), (15, 9743), (19, 9776), (44, 9968),

Gene: Brahms\_13 Start: 8785, Stop: 9084, Start Num: 9

Candidate Starts for Brahms\_13:

(Start: 9 @8785 has 106 MA's), (17, 8893), (41, 9025), (44, 9058),

Gene: Brynnie\_14 Start: 9876, Stop: 10208, Start Num: 9

Candidate Starts for Brynnie\_14:

(Start: 9 @9876 has 106 MA's), (15, 9972), (19, 10005), (29, 10080), (42, 10167), (44, 10197),

Gene: BubbaBear\_13 Start: 9208, Stop: 9516, Start Num: 9

Candidate Starts for BubbaBear\_13:

(Start: 9 @9208 has 106 MA's), (17, 9319), (30, 9382), (39, 9439), (41, 9448), (44, 9481),

Gene: Buldak\_13 Start: 9315, Stop: 9626, Start Num: 9

Candidate Starts for Buldak\_13:

(Start: 9 @9315 has 106 MA's), (33, 9507), (41, 9567), (44, 9600),

Gene: Burritobowl\_13 Start: 9270, Stop: 9578, Start Num: 9

Candidate Starts for Burritobowl\_13:

(Start: 9 @9270 has 106 MA's), (17, 9381), (30, 9444), (39, 9501), (41, 9510), (44, 9543),

Gene: Camara\_13 Start: 9061, Stop: 9414, Start Num: 9  
Candidate Starts for Camara\_13:  
(1, 8977), (Start: 9 @9061 has 106 MA's), (14, 9154), (17, 9172), (20, 9199), (36, 9313), (42, 9352),  
(44, 9382),

Gene: Cashington\_13 Start: 9260, Stop: 9568, Start Num: 9  
Candidate Starts for Cashington\_13:  
(Start: 9 @9260 has 106 MA's), (17, 9371), (30, 9434), (39, 9491), (41, 9500), (44, 9533),

Gene: Celaena\_13 Start: 9074, Stop: 9382, Start Num: 9  
Candidate Starts for Celaena\_13:  
(Start: 9 @9074 has 106 MA's), (39, 9305), (41, 9314), (44, 9347),

Gene: Chickaboom\_13 Start: 9421, Stop: 9753, Start Num: 9  
Candidate Starts for Chickaboom\_13:  
(Start: 9 @9421 has 106 MA's), (19, 9550), (29, 9625), (42, 9712), (44, 9742),

Gene: Chicken\_14 Start: 9448, Stop: 9804, Start Num: 9  
Candidate Starts for Chicken\_14:  
(2, 9370), (4, 9427), (5, 9433), (Start: 9 @9448 has 106 MA's), (11, 9460), (18, 9568), (22, 9604), (37,  
9709), (40, 9736), (42, 9742), (44, 9772),

Gene: ChiliPepper\_13 Start: 9439, Stop: 9747, Start Num: 9  
Candidate Starts for ChiliPepper\_13:  
(Start: 9 @9439 has 106 MA's), (39, 9670), (41, 9679), (44, 9712),

Gene: Clayda5\_12 Start: 8785, Stop: 9084, Start Num: 9  
Candidate Starts for Clayda5\_12:  
(Start: 9 @8785 has 106 MA's), (17, 8893), (41, 9025), (44, 9058),

Gene: CliffHanger\_14 Start: 8971, Stop: 9285, Start Num: 10  
Candidate Starts for CliffHanger\_14:  
(Start: 9 @8968 has 106 MA's), (Start: 10 @8971 has 1 MA's), (16, 9073), (20, 9097), (41, 9217), (44,  
9250),

Gene: Coltrane\_13 Start: 8785, Stop: 9084, Start Num: 9  
Candidate Starts for Coltrane\_13:  
(Start: 9 @8785 has 106 MA's), (17, 8893), (41, 9025), (44, 9058),

Gene: Colusalem\_14 Start: 9483, Stop: 9836, Start Num: 8  
Candidate Starts for Colusalem\_14:  
(Start: 8 @9483 has 13 MA's), (15, 9579), (19, 9612), (44, 9804),

Gene: Coral\_14 Start: 9483, Stop: 9836, Start Num: 8  
Candidate Starts for Coral\_14:  
(Start: 8 @9483 has 13 MA's), (15, 9579), (19, 9612), (44, 9804),

Gene: Cote\_15 Start: 9644, Stop: 9997, Start Num: 8  
Candidate Starts for Cote\_15:  
(Start: 8 @9644 has 13 MA's), (15, 9740), (19, 9773), (44, 9965),

Gene: CroZenni\_13 Start: 9243, Stop: 9551, Start Num: 9  
Candidate Starts for CroZenni\_13:

(Start: 9 @9243 has 106 MA's), (17, 9354), (30, 9417), (39, 9474), (41, 9483), (44, 9516),

Gene: CupcakePrincess\_13 Start: 9283, Stop: 9591, Start Num: 9

Candidate Starts for CupcakePrincess\_13:

(Start: 9 @9283 has 106 MA's), (17, 9394), (30, 9457), (39, 9514), (41, 9523), (44, 9556),

Gene: Cygnet\_14 Start: 9436, Stop: 9789, Start Num: 7

Candidate Starts for Cygnet\_14:

(Start: 7 @9436 has 1 MA's), (11, 9448), (19, 9565), (24, 9598), (32, 9661), (38, 9697), (44, 9757),

Gene: DanHam62\_14 Start: 9060, Stop: 9413, Start Num: 9

Candidate Starts for DanHam62\_14:

(1, 8976), (Start: 9 @9060 has 106 MA's), (14, 9153), (17, 9171), (20, 9198), (36, 9312), (42, 9351), (44, 9381),

Gene: Daob\_15 Start: 9647, Stop: 10000, Start Num: 8

Candidate Starts for Daob\_15:

(Start: 8 @9647 has 13 MA's), (15, 9743), (19, 9776), (44, 9968),

Gene: DickRichards\_13 Start: 9737, Stop: 10045, Start Num: 9

Candidate Starts for DickRichards\_13:

(Start: 9 @9737 has 106 MA's), (17, 9848), (30, 9911), (39, 9968), (41, 9977), (44, 10010),

Gene: Didgeridoo\_14 Start: 9466, Stop: 9774, Start Num: 9

Candidate Starts for Didgeridoo\_14:

(Start: 9 @9466 has 106 MA's), (Start: 10 @9469 has 1 MA's), (16, 9571), (36, 9670), (39, 9697), (44, 9739),

Gene: DirtyBubble\_13 Start: 9472, Stop: 9780, Start Num: 9

Candidate Starts for DirtyBubble\_13:

(Start: 9 @9472 has 106 MA's), (23, 9622), (36, 9676), (41, 9712),

Gene: Dismas\_13 Start: 9439, Stop: 9747, Start Num: 9

Candidate Starts for Dismas\_13:

(Start: 9 @9439 has 106 MA's), (39, 9670), (41, 9679), (44, 9712),

Gene: Doobus\_13 Start: 9474, Stop: 9782, Start Num: 9

Candidate Starts for Doobus\_13:

(Start: 9 @9474 has 106 MA's), (17, 9585), (30, 9648), (39, 9705), (41, 9714), (44, 9747),

Gene: Eden\_12 Start: 8899, Stop: 9198, Start Num: 9

Candidate Starts for Eden\_12:

(Start: 9 @8899 has 106 MA's), (16, 9001), (17, 9007), (41, 9139), (44, 9172),

Gene: Eesa\_14 Start: 9662, Stop: 10018, Start Num: 9

Candidate Starts for Eesa\_14:

(2, 9584), (5, 9647), (Start: 9 @9662 has 106 MA's), (11, 9674), (17, 9776), (18, 9782), (37, 9923), (40, 9950), (42, 9956), (44, 9986),

Gene: Elva\_14 Start: 9524, Stop: 9832, Start Num: 9

Candidate Starts for Elva\_14:

(Start: 9 @9524 has 106 MA's), (23, 9674), (36, 9728), (41, 9764),

Gene: Eula\_13 Start: 9244, Stop: 9552, Start Num: 9

Candidate Starts for Eula\_13:

(Start: 9 @9244 has 106 MA's), (17, 9355), (30, 9418), (39, 9475), (41, 9484), (44, 9517),

Gene: Finalfrontier\_14 Start: 9756, Stop: 10064, Start Num: 9

Candidate Starts for Finalfrontier\_14:

(Start: 9 @9756 has 106 MA's), (17, 9867), (30, 9930), (39, 9987), (41, 9996), (44, 10029),

Gene: Fingolfin\_13 Start: 9061, Stop: 9414, Start Num: 9

Candidate Starts for Fingolfin\_13:

(1, 8977), (Start: 9 @9061 has 106 MA's), (14, 9154), (17, 9172), (20, 9199), (36, 9313), (42, 9352), (44, 9382),

Gene: FlameThrower\_13 Start: 8962, Stop: 9270, Start Num: 9

Candidate Starts for FlameThrower\_13:

(Start: 9 @8962 has 106 MA's), (39, 9193), (41, 9202), (44, 9235),

Gene: Franklin22\_12 Start: 8878, Stop: 9177, Start Num: 9

Candidate Starts for Franklin22\_12:

(Start: 9 @8878 has 106 MA's), (17, 8986), (23, 9025), (41, 9118), (44, 9151),

Gene: Fryberger\_46 Start: 17619, Stop: 17933, Start Num: 6

Candidate Starts for Fryberger\_46:

(Start: 6 @17619 has 6 MA's), (15, 17715), (27, 17787), (28, 17790), (31, 17805), (34, 17820), (38, 17844), (44, 17904),

Gene: Gack\_12 Start: 8940, Stop: 9239, Start Num: 9

Candidate Starts for Gack\_12:

(Start: 9 @8940 has 106 MA's), (17, 9048), (23, 9087), (26, 9096), (41, 9180), (43, 9207), (44, 9213),

Gene: Galaxy\_14 Start: 9750, Stop: 10082, Start Num: 9

Candidate Starts for Galaxy\_14:

(Start: 9 @9750 has 106 MA's), (15, 9846), (19, 9879), (29, 9954), (42, 10041), (44, 10071),

Gene: Gibbzilla\_15 Start: 8885, Stop: 9184, Start Num: 9

Candidate Starts for Gibbzilla\_15:

(Start: 9 @8885 has 106 MA's), (13, 8972), (25, 9032), (32, 9074), (44, 9152),

Gene: Glotell\_13 Start: 9058, Stop: 9411, Start Num: 9

Candidate Starts for Glotell\_13:

(3, 9016), (Start: 9 @9058 has 106 MA's), (14, 9151), (17, 9169), (20, 9196), (36, 9310), (42, 9349), (44, 9379),

Gene: Gravel\_15 Start: 9655, Stop: 10008, Start Num: 9

Candidate Starts for Gravel\_15:

(Start: 9 @9655 has 106 MA's), (11, 9667), (17, 9766), (40, 9940), (42, 9946), (44, 9976), (46, 9994),

Gene: Guey18\_51 Start: 18811, Stop: 19125, Start Num: 6

Candidate Starts for Guey18\_51:

(Start: 6 @18811 has 6 MA's), (15, 18907), (27, 18979), (28, 18982), (31, 18997), (34, 19012), (38, 19036), (44, 19096),

Gene: HamCheese\_14 Start: 9060, Stop: 9413, Start Num: 9

Candidate Starts for HamCheese\_14:

(1, 8976), (Start: 9 @9060 has 106 MA's), (14, 9153), (17, 9171), (20, 9198), (36, 9312), (42, 9351), (44, 9381),

Gene: HannahPhantana\_15 Start: 9647, Stop: 10000, Start Num: 8

Candidate Starts for HannahPhantana\_15:

(Start: 8 @9647 has 13 MA's), (15, 9743), (19, 9776), (44, 9968),

Gene: Icarian\_14 Start: 9446, Stop: 9754, Start Num: 9

Candidate Starts for Icarian\_14:

(Start: 9 @9446 has 106 MA's), (36, 9650), (39, 9677), (41, 9686), (44, 9719),

Gene: IndyLu\_13 Start: 9288, Stop: 9596, Start Num: 9

Candidate Starts for IndyLu\_13:

(Start: 9 @9288 has 106 MA's), (Start: 10 @9291 has 1 MA's), (16, 9393), (36, 9492), (39, 9519), (44, 9561),

Gene: Jabb\_13 Start: 9283, Stop: 9591, Start Num: 9

Candidate Starts for Jabb\_13:

(Start: 9 @9283 has 106 MA's), (17, 9394), (30, 9457), (39, 9514), (41, 9523), (44, 9556),

Gene: Jamun\_14 Start: 10088, Stop: 10441, Start Num: 9

Candidate Starts for Jamun\_14:

(Start: 9 @10088 has 106 MA's), (15, 10184), (19, 10217), (29, 10292), (42, 10379), (44, 10409),

Gene: Jerole\_15 Start: 9644, Stop: 9997, Start Num: 8

Candidate Starts for Jerole\_15:

(Start: 8 @9644 has 13 MA's), (15, 9740), (19, 9773), (44, 9965),

Gene: Johnathan\_13 Start: 9243, Stop: 9551, Start Num: 9

Candidate Starts for Johnathan\_13:

(Start: 9 @9243 has 106 MA's), (17, 9354), (30, 9417), (39, 9474), (41, 9483), (44, 9516),

Gene: Jovita\_13 Start: 9345, Stop: 9653, Start Num: 9

Candidate Starts for Jovita\_13:

(Start: 9 @9345 has 106 MA's), (17, 9456), (30, 9519), (39, 9576), (41, 9585), (44, 9618),

Gene: Juno112\_13 Start: 9061, Stop: 9414, Start Num: 9

Candidate Starts for Juno112\_13:

(1, 8977), (Start: 9 @9061 has 106 MA's), (14, 9154), (17, 9172), (20, 9199), (36, 9313), (42, 9352), (44, 9382),

Gene: KHumphrey\_13 Start: 9058, Stop: 9411, Start Num: 9

Candidate Starts for KHumphrey\_13:

(3, 9016), (Start: 9 @9058 has 106 MA's), (14, 9151), (17, 9169), (20, 9196), (36, 9310), (42, 9349), (44, 9379),

Gene: Kamdara\_13 Start: 9438, Stop: 9746, Start Num: 9

Candidate Starts for Kamdara\_13:

(Start: 9 @9438 has 106 MA's), (39, 9669), (41, 9678), (44, 9711),

Gene: Kate33\_13 Start: 9287, Stop: 9595, Start Num: 9

Candidate Starts for Kate33\_13:

(Start: 9 @9287 has 106 MA's), (Start: 10 @9290 has 1 MA's), (16, 9392), (36, 9491), (39, 9518), (44, 9560),

Gene: Katzastrophic\_13 Start: 9137, Stop: 9445, Start Num: 9  
Candidate Starts for Katzastrophic\_13:  
(Start: 9 @9137 has 106 MA's), (39, 9368), (41, 9377), (44, 9410),

Gene: Keelan\_44 Start: 17620, Stop: 17934, Start Num: 6  
Candidate Starts for Keelan\_44:  
(Start: 6 @17620 has 6 MA's), (15, 17716), (20, 17749), (28, 17791), (31, 17806), (38, 17845), (44, 17905),

Gene: KendraB23\_15 Start: 9656, Stop: 10009, Start Num: 9  
Candidate Starts for KendraB23\_15:  
(Start: 9 @9656 has 106 MA's), (11, 9668), (17, 9767), (40, 9941), (42, 9947), (44, 9977), (46, 9995),

Gene: Kenzers\_13 Start: 9260, Stop: 9568, Start Num: 9  
Candidate Starts for Kenzers\_13:  
(Start: 9 @9260 has 106 MA's), (17, 9371), (30, 9434), (39, 9491), (41, 9500), (44, 9533),

Gene: Kepler\_14 Start: 9482, Stop: 9835, Start Num: 8  
Candidate Starts for Kepler\_14:  
(Start: 8 @9482 has 13 MA's), (15, 9578), (19, 9611), (44, 9803),

Gene: Kieran\_13 Start: 9442, Stop: 9750, Start Num: 9  
Candidate Starts for Kieran\_13:  
(Start: 9 @9442 has 106 MA's), (39, 9673), (41, 9682), (44, 9715),

Gene: Kuleana\_14 Start: 9441, Stop: 9794, Start Num: 9  
Candidate Starts for Kuleana\_14:  
(Start: 9 @9441 has 106 MA's), (16, 9546), (19, 9570), (41, 9729), (44, 9762),

Gene: Lahqtemish\_13 Start: 9360, Stop: 9668, Start Num: 9  
Candidate Starts for Lahqtemish\_13:  
(Start: 9 @9360 has 106 MA's), (Start: 10 @9363 has 1 MA's), (16, 9465), (36, 9564), (39, 9591), (44, 9633),

Gene: Laphuphu24k\_13 Start: 9060, Stop: 9413, Start Num: 9  
Candidate Starts for Laphuphu24k\_13:  
(1, 8976), (Start: 9 @9060 has 106 MA's), (14, 9153), (17, 9171), (20, 9198), (36, 9312), (42, 9351), (44, 9381),

Gene: Leona\_13 Start: 9111, Stop: 9464, Start Num: 9  
Candidate Starts for Leona\_13:  
(1, 9027), (Start: 9 @9111 has 106 MA's), (14, 9204), (17, 9222), (20, 9249), (36, 9363), (42, 9402), (44, 9432),

Gene: Lilo27\_13 Start: 9220, Stop: 9528, Start Num: 9  
Candidate Starts for Lilo27\_13:  
(Start: 9 @9220 has 106 MA's), (17, 9331), (30, 9394), (36, 9424), (39, 9451), (41, 9460), (44, 9493),

Gene: LimaBean\_13 Start: 9243, Stop: 9551, Start Num: 9  
Candidate Starts for LimaBean\_13:

(Start: 9 @9243 has 106 MA's), (17, 9354), (30, 9417), (39, 9474), (41, 9483), (44, 9516),

Gene: LittleTokyo\_14 Start: 9395, Stop: 9748, Start Num: 8

Candidate Starts for LittleTokyo\_14:

(Start: 8 @9395 has 13 MA's), (11, 9407), (19, 9524), (21, 9545), (36, 9647), (38, 9656), (44, 9716),

Gene: Loviatar\_13 Start: 9533, Stop: 9841, Start Num: 9

Candidate Starts for Loviatar\_13:

(Start: 9 @9533 has 106 MA's), (36, 9737), (41, 9773), (44, 9806),

Gene: Lunar\_16 Start: 9644, Stop: 9997, Start Num: 8

Candidate Starts for Lunar\_16:

(Start: 8 @9644 has 13 MA's), (15, 9740), (19, 9773), (44, 9965),

Gene: Lynlen\_13 Start: 9260, Stop: 9568, Start Num: 9

Candidate Starts for Lynlen\_13:

(Start: 9 @9260 has 106 MA's), (17, 9371), (30, 9434), (39, 9491), (41, 9500), (44, 9533),

Gene: Melons\_15 Start: 9644, Stop: 9997, Start Num: 8

Candidate Starts for Melons\_15:

(Start: 8 @9644 has 13 MA's), (15, 9740), (19, 9773), (44, 9965),

Gene: Milomuff\_14 Start: 9629, Stop: 9937, Start Num: 9

Candidate Starts for Milomuff\_14:

(Start: 9 @9629 has 106 MA's), (17, 9740), (30, 9803), (39, 9860), (41, 9869), (44, 9902),

Gene: MsUbiquitous\_13 Start: 9283, Stop: 9591, Start Num: 9

Candidate Starts for MsUbiquitous\_13:

(Start: 9 @9283 has 106 MA's), (17, 9394), (30, 9457), (39, 9514), (41, 9523), (44, 9556),

Gene: Niblet\_14 Start: 9448, Stop: 9804, Start Num: 9

Candidate Starts for Niblet\_14:

(2, 9370), (4, 9427), (5, 9433), (Start: 9 @9448 has 106 MA's), (11, 9460), (18, 9568), (22, 9604), (37, 9709), (40, 9736), (42, 9742), (44, 9772),

Gene: Nicky22\_14 Start: 9691, Stop: 9999, Start Num: 9

Candidate Starts for Nicky22\_14:

(Start: 9 @9691 has 106 MA's), (17, 9802), (30, 9865), (36, 9895), (39, 9922), (41, 9931), (44, 9964),

Gene: Olliecat\_13 Start: 9271, Stop: 9582, Start Num: 9

Candidate Starts for Olliecat\_13:

(Start: 9 @9271 has 106 MA's), (33, 9463), (41, 9523), (44, 9556),

Gene: Oppalora\_13 Start: 9058, Stop: 9411, Start Num: 9

Candidate Starts for Oppalora\_13:

(3, 9016), (Start: 9 @9058 has 106 MA's), (14, 9151), (17, 9169), (20, 9196), (36, 9310), (42, 9349), (44, 9379),

Gene: Orcanus\_14 Start: 9449, Stop: 9802, Start Num: 9

Candidate Starts for Orcanus\_14:

(Start: 9 @9449 has 106 MA's), (11, 9461), (17, 9560), (40, 9734), (42, 9740), (44, 9770), (46, 9788),

Gene: OtsoOtso\_14 Start: 9483, Stop: 9836, Start Num: 8

Candidate Starts for OtsoOtso\_14:

(Start: 8 @9483 has 13 MA's), (15, 9579), (19, 9612), (44, 9804),

Gene: PastaFagioli\_13 Start: 9348, Stop: 9656, Start Num: 9

Candidate Starts for PastaFagioli\_13:

(Start: 9 @9348 has 106 MA's), (Start: 10 @9351 has 1 MA's), (16, 9453), (36, 9552), (39, 9579), (44, 9621),

Gene: Pecas\_13 Start: 9244, Stop: 9552, Start Num: 9

Candidate Starts for Pecas\_13:

(Start: 9 @9244 has 106 MA's), (17, 9355), (30, 9418), (39, 9475), (41, 9484), (44, 9517),

Gene: Pelletreau\_15 Start: 9655, Stop: 10008, Start Num: 9

Candidate Starts for Pelletreau\_15:

(Start: 9 @9655 has 106 MA's), (11, 9667), (17, 9766), (40, 9940), (42, 9946), (44, 9976), (46, 9994),

Gene: PhigPhack\_13 Start: 9272, Stop: 9580, Start Num: 9

Candidate Starts for PhigPhack\_13:

(Start: 9 @9272 has 106 MA's), (17, 9383), (30, 9446), (39, 9503), (41, 9512), (44, 9545),

Gene: PhirstandPhine\_15 Start: 9644, Stop: 9997, Start Num: 8

Candidate Starts for PhirstandPhine\_15:

(Start: 8 @9644 has 13 MA's), (15, 9740), (19, 9773), (44, 9965),

Gene: Phisb\_13 Start: 9208, Stop: 9516, Start Num: 9

Candidate Starts for Phisb\_13:

(Start: 9 @9208 has 106 MA's), (17, 9319), (30, 9382), (39, 9439), (41, 9448), (44, 9481),

Gene: PhluffyCoco\_13 Start: 9060, Stop: 9413, Start Num: 9

Candidate Starts for PhluffyCoco\_13:

(1, 8976), (Start: 9 @9060 has 106 MA's), (14, 9153), (17, 9171), (20, 9198), (36, 9312), (42, 9351), (44, 9381),

Gene: Pineda\_15 Start: 9644, Stop: 9997, Start Num: 8

Candidate Starts for Pineda\_15:

(Start: 8 @9644 has 13 MA's), (15, 9740), (19, 9773), (44, 9965),

Gene: Polka\_14 Start: 9483, Stop: 9836, Start Num: 8

Candidate Starts for Polka\_14:

(Start: 8 @9483 has 13 MA's), (15, 9579), (19, 9612), (44, 9804),

Gene: PondAmelia\_16 Start: 9462, Stop: 9770, Start Num: 9

Candidate Starts for PondAmelia\_16:

(Start: 9 @9462 has 106 MA's), (23, 9612), (36, 9666), (41, 9702),

Gene: QMacho\_14 Start: 9727, Stop: 10035, Start Num: 9

Candidate Starts for QMacho\_14:

(Start: 9 @9727 has 106 MA's), (17, 9838), (30, 9901), (39, 9958), (41, 9967), (44, 10000),

Gene: Quenya\_14 Start: 9138, Stop: 9446, Start Num: 9

Candidate Starts for Quenya\_14:

(Start: 9 @9138 has 106 MA's), (39, 9369), (41, 9378), (44, 9411),

Gene: Rattail\_13 Start: 9111, Stop: 9464, Start Num: 9  
Candidate Starts for Rattail\_13:  
(1, 9027), (Start: 9 @9111 has 106 MA's), (14, 9204), (17, 9222), (20, 9249), (36, 9363), (42, 9402),  
(44, 9432),

Gene: RedFox\_13 Start: 9060, Stop: 9413, Start Num: 9  
Candidate Starts for RedFox\_13:  
(1, 8976), (Start: 9 @9060 has 106 MA's), (14, 9153), (17, 9171), (20, 9198), (36, 9312), (42, 9351),  
(44, 9381),

Gene: Renna12\_14 Start: 9269, Stop: 9622, Start Num: 9  
Candidate Starts for Renna12\_14:  
(Start: 9 @9269 has 106 MA's), (14, 9362), (17, 9380), (20, 9407), (36, 9521), (42, 9560), (44, 9590),

Gene: Rollins\_13 Start: 8845, Stop: 9144, Start Num: 9  
Candidate Starts for Rollins\_13:  
(Start: 9 @8845 has 106 MA's), (17, 8953), (41, 9085), (44, 9118),

Gene: Rona\_13 Start: 9439, Stop: 9747, Start Num: 9  
Candidate Starts for Rona\_13:  
(Start: 9 @9439 has 106 MA's), (39, 9670), (41, 9679), (44, 9712),

Gene: Ronaldo\_49 Start: 18576, Stop: 18890, Start Num: 6  
Candidate Starts for Ronaldo\_49:  
(Start: 6 @18576 has 6 MA's), (15, 18672), (27, 18744), (28, 18747), (31, 18762), (34, 18777), (38,  
18801), (44, 18861),

Gene: Ruchi\_14 Start: 10010, Stop: 10342, Start Num: 9  
Candidate Starts for Ruchi\_14:  
(Start: 9 @10010 has 106 MA's), (15, 10106), (19, 10139), (29, 10214), (42, 10301), (44, 10331),

Gene: SanaSana\_14 Start: 9463, Stop: 9771, Start Num: 9  
Candidate Starts for SanaSana\_14:  
(Start: 9 @9463 has 106 MA's), (23, 9613), (36, 9667), (41, 9703),

Gene: SansAfet\_13 Start: 9254, Stop: 9562, Start Num: 9  
Candidate Starts for SansAfet\_13:  
(Start: 9 @9254 has 106 MA's), (17, 9365), (30, 9428), (39, 9485), (41, 9494), (44, 9527),

Gene: SarBear\_13 Start: 9220, Stop: 9528, Start Num: 9  
Candidate Starts for SarBear\_13:  
(Start: 9 @9220 has 106 MA's), (17, 9331), (30, 9394), (39, 9451), (41, 9460), (44, 9493),

Gene: Sharkboy\_13 Start: 9438, Stop: 9746, Start Num: 9  
Candidate Starts for Sharkboy\_13:  
(Start: 9 @9438 has 106 MA's), (39, 9669), (41, 9678), (44, 9711),

Gene: Shayna\_12 Start: 8829, Stop: 9149, Start Num: 9  
Candidate Starts for Shayna\_12:  
(Start: 9 @8829 has 106 MA's), (20, 8958), (41, 9081),

Gene: Shen\_15 Start: 9656, Stop: 10009, Start Num: 9  
Candidate Starts for Shen\_15:

(Start: 9 @9656 has 106 MA's), (11, 9668), (17, 9767), (40, 9941), (42, 9947), (44, 9977), (46, 9995),

Gene: SirBeanington\_13 Start: 9217, Stop: 9525, Start Num: 9

Candidate Starts for SirBeanington\_13:

(Start: 9 @9217 has 106 MA's), (17, 9328), (30, 9391), (39, 9448), (41, 9457), (44, 9490),

Gene: Skylord\_12 Start: 8785, Stop: 9084, Start Num: 9

Candidate Starts for Skylord\_12:

(Start: 9 @8785 has 106 MA's), (17, 8893), (41, 9025), (44, 9058),

Gene: Slay\_13 Start: 9696, Stop: 10004, Start Num: 9

Candidate Starts for Slay\_13:

(Start: 9 @9696 has 106 MA's), (17, 9807), (30, 9870), (39, 9927), (41, 9936), (44, 9969),

Gene: Softsoap\_13 Start: 9243, Stop: 9551, Start Num: 9

Candidate Starts for Softsoap\_13:

(Start: 9 @9243 has 106 MA's), (17, 9354), (30, 9417), (39, 9474), (41, 9483), (44, 9516),

Gene: Solea\_14 Start: 9629, Stop: 9937, Start Num: 9

Candidate Starts for Solea\_14:

(Start: 9 @9629 has 106 MA's), (17, 9740), (30, 9803), (39, 9860), (41, 9869), (44, 9902),

Gene: Squircle\_13 Start: 9270, Stop: 9581, Start Num: 9

Candidate Starts for Squircle\_13:

(Start: 9 @9270 has 106 MA's), (33, 9462), (41, 9522), (44, 9555),

Gene: Stoor\_13 Start: 9460, Stop: 9768, Start Num: 9

Candidate Starts for Stoor\_13:

(Start: 9 @9460 has 106 MA's), (23, 9610), (36, 9664), (41, 9700),

Gene: Stromboli\_13 Start: 9463, Stop: 9771, Start Num: 9

Candidate Starts for Stromboli\_13:

(Start: 9 @9463 has 106 MA's), (23, 9613), (36, 9667), (41, 9703),

Gene: StuartMinion\_13 Start: 9092, Stop: 9445, Start Num: 9

Candidate Starts for StuartMinion\_13:

(Start: 9 @9092 has 106 MA's), (12, 9152), (35, 9341), (41, 9380), (44, 9413),

Gene: SunnyD\_12 Start: 8829, Stop: 9149, Start Num: 9

Candidate Starts for SunnyD\_12:

(Start: 9 @8829 has 106 MA's), (20, 8958), (41, 9081),

Gene: Swervy\_13 Start: 9220, Stop: 9528, Start Num: 9

Candidate Starts for Swervy\_13:

(Start: 9 @9220 has 106 MA's), (17, 9331), (30, 9394), (39, 9451), (41, 9460), (44, 9493),

Gene: TaylorSipht\_14 Start: 9540, Stop: 9896, Start Num: 9

Candidate Starts for TaylorSipht\_14:

(4, 9516), (5, 9522), (Start: 9 @9540 has 106 MA's), (11, 9552), (18, 9660), (36, 9795), (44, 9864),

Gene: Teagster\_12 Start: 8829, Stop: 9149, Start Num: 9

Candidate Starts for Teagster\_12:

(Start: 9 @8829 has 106 MA's), (20, 8958), (41, 9081),

Gene: Toad24\_15 Start: 9656, Stop: 10009, Start Num: 9  
Candidate Starts for Toad24\_15:  
(Start: 9 @9656 has 106 MA's), (11, 9668), (17, 9767), (40, 9941), (42, 9947), (44, 9977), (46, 9995),

Gene: TukTuk\_13 Start: 9280, Stop: 9588, Start Num: 9  
Candidate Starts for TukTuk\_13:  
(Start: 9 @9280 has 106 MA's), (17, 9391), (30, 9454), (39, 9511), (41, 9520), (44, 9553),

Gene: Vitas\_12 Start: 8785, Stop: 9084, Start Num: 9  
Candidate Starts for Vitas\_12:  
(Start: 9 @8785 has 106 MA's), (17, 8893), (41, 9025), (44, 9058),

Gene: Volt\_48 Start: 18576, Stop: 18890, Start Num: 6  
Candidate Starts for Volt\_48:  
(Start: 6 @18576 has 6 MA's), (15, 18672), (27, 18744), (28, 18747), (31, 18762), (34, 18777), (38, 18801), (44, 18861),

Gene: Vulpecula\_14 Start: 10086, Stop: 10439, Start Num: 9  
Candidate Starts for Vulpecula\_14:  
(Start: 9 @10086 has 106 MA's), (15, 10182), (19, 10215), (29, 10290), (42, 10377),

Gene: WalkingDead\_13 Start: 9451, Stop: 9759, Start Num: 9  
Candidate Starts for WalkingDead\_13:  
(Start: 9 @9451 has 106 MA's), (36, 9655), (41, 9691), (44, 9724), (47, 9748),

Gene: Westrich\_15 Start: 9644, Stop: 9997, Start Num: 9  
Candidate Starts for Westrich\_15:  
(Start: 9 @9644 has 106 MA's), (11, 9656), (17, 9755), (40, 9929), (42, 9935), (44, 9965), (46, 9983),

Gene: WileyE\_13 Start: 9421, Stop: 9753, Start Num: 9  
Candidate Starts for WileyE\_13:  
(Start: 9 @9421 has 106 MA's), (19, 9550), (29, 9625), (42, 9712), (44, 9742),

Gene: Zhuangyuan\_16 Start: 9822, Stop: 10175, Start Num: 8  
Candidate Starts for Zhuangyuan\_16:  
(Start: 8 @9822 has 13 MA's), (19, 9951), (32, 10047), (36, 10074), (38, 10083), (44, 10143),

Gene: Ziko\_49 Start: 18516, Stop: 18830, Start Num: 6  
Candidate Starts for Ziko\_49:  
(Start: 6 @18516 has 6 MA's), (15, 18612), (27, 18684), (28, 18687), (31, 18702), (34, 18717), (38, 18741), (44, 18801),

Gene: Zixiang\_14 Start: 9448, Stop: 9804, Start Num: 9  
Candidate Starts for Zixiang\_14:  
(2, 9370), (4, 9427), (5, 9433), (Start: 9 @9448 has 106 MA's), (11, 9460), (18, 9568), (22, 9604), (37, 9709), (40, 9736), (42, 9742), (44, 9772),