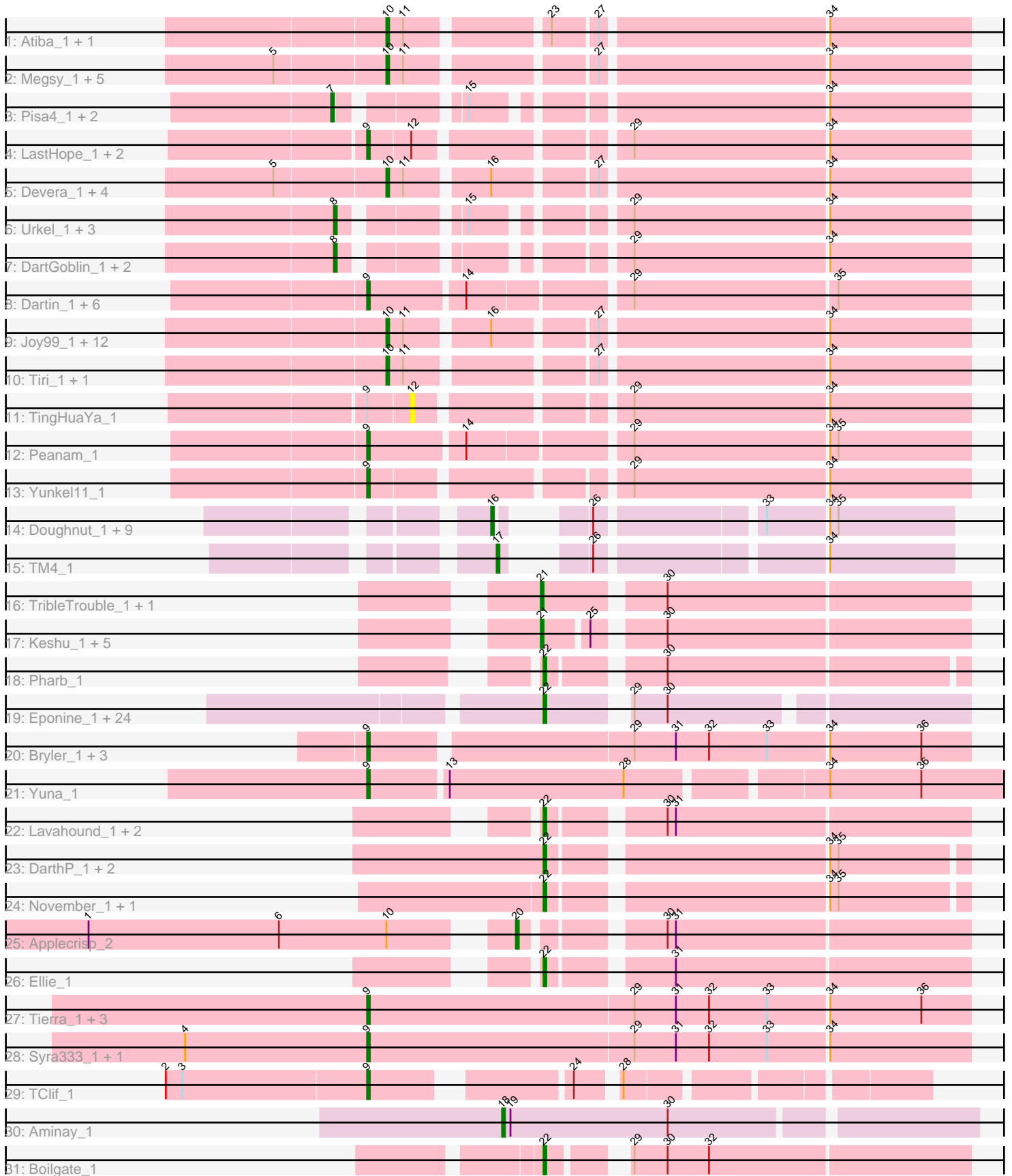


Pham 294553



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 294553 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294553 has 120 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Atiba\_1, Tachez\_1
- Track 2 : Megsy\_1, Murucutumbu\_1, Prithvi\_1, LindNT\_1, TreyKay\_1, TaiwanKao\_1
- Track 3 : Pisa4\_1, Pisa1\_1, Bern\_1
- Track 4 : LastHope\_1, Guanica15\_1, Efra2\_1
- Track 5 : Devera\_1, LaterM\_1, Dole\_1, Illumine\_1, Stinson\_1
- Track 6 : Urkel\_1, DrHayes\_1, Anma\_1, SamuelLPlaqson\_1
- Track 7 : DartGoblin\_1, Bella96\_1, TiniBug\_1
- Track 8 : Dartin\_1, McMater\_1, Validus\_1, Shaobing\_1, Niklas\_1, Richo\_1, Chavito\_1
- Track 9 : Joy99\_1, Ganymede\_1, Clipper\_1, CallaLilly\_1, Pokerus\_1, MacKat\_1, CheetoDust\_1, QuincyRose\_1, YoureAdopted\_1, MeaningOfLife\_1, BaghaKamala\_1, Mynx\_1, Zavala\_1
- Track 10 : Tiri\_1, Adonis\_1
- Track 11 : TingHuaYa\_1
- Track 12 : Peanam\_1
- Track 13 : Yunkel11\_1
- Track 14 : Doughnut\_1, Strobilo\_1, DismalFunk\_1, Findley\_1, ZoeJ\_1, BoostSeason\_1, Milly\_1, Mufasa\_1, DismalStressor\_1, Marcoliusprime\_1
- Track 15 : TM4\_1
- Track 16 : TribbleTrouble\_1, MacnCheese\_1
- Track 17 : Keshu\_1, TBond007\_1, Hurricane\_1, ShedlockHolmes\_1, Lea83\_1, Pixie\_1
- Track 18 : Pharb\_1
- Track 19 : Eponine\_1, DanSyl44\_1, Malthus\_1, Cheetobro\_1, Chancellor\_1, Mitti\_1, Y10\_01, Kraw\_1, Bobquesha\_1, Reptar3000\_1, Wintermute\_1, Patt\_1, MissDaisy\_1, Fionnbharth\_1, Qhanda\_1, Lebo14\_1, Taquito\_1, Y2\_01, OmniCritical\_1, Juliette\_1, Slarp\_1, JF1\_1, SamScheppers\_1, Ruthiejr\_1, YasnayaPolyana\_1
- Track 20 : Bryler\_1, Cain\_1, Phrank\_1, Sunflower1121\_1
- Track 21 : Yuna\_1
- Track 22 : Lavahound\_1, Fefferhead\_1, Amgine\_1
- Track 23 : DarthP\_1, Amohntion\_1, Hammy\_1
- Track 24 : November\_1, Ekdilam\_1
- Track 25 : Applecrisp\_2
- Track 26 : Ellie\_1
- Track 27 : Tierra\_1, Unicorn\_1, Shadow1\_1, PhelpsODU\_1
- Track 28 : Syra333\_1, Tigress9\_1
- Track 29 : TClif\_1

- Track 30 : Aminay\_1
- Track 31 : Boilgate\_1

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

The start number called the most often in the published annotations is 22, it was called in 32 of the 105 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amgine\_1, Amohnition\_1, Bobquesha\_1, Boilgate\_1, Chancellor\_1, Cheetobro\_1, DanSyl44\_1, DarthP\_1, Ekdilam\_1, Ellie\_1, Eponine\_1, Fefferhead\_1, Fionnbharth\_1, Hammy\_1, JF1\_1, Juliette\_1, Kraw\_1, Lavahound\_1, Lebo14\_1, Malthus\_1, MissDaisy\_1, Mitti\_1, November\_1, OmniCritical\_1, Patt\_1, Pharb\_1, Qhanda\_1, Reptar3000\_1, Ruthiejr\_1, SamScheppers\_1, Slarp\_1, Taquito\_1, Wintermute\_1, Y10\_01, Y2\_01, YasnayaPolyana\_1,

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

- 

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

- Adonis\_1, Aminay\_1, Anma\_1, Applecrisp\_2, Atiba\_1, BaghaKamala\_1, Bella96\_1, Bern\_1, BoostSeason\_1, Bryler\_1, Cain\_1, CallaLilly\_1, Chavito\_1, CheetoDust\_1, Clipper\_1, DartGoblin\_1, Dartin\_1, Devera\_1, DismalFunk\_1, DismalStressor\_1, Dole\_1, Doughnut\_1, DrHayes\_1, Efra2\_1, Findley\_1, Ganymede\_1, Guanica15\_1, Hurricane\_1, Illumine\_1, Joy99\_1, Keshu\_1, LastHope\_1, LaterM\_1, Lea83\_1, LindNT\_1, MacKat\_1, MacnCheese\_1, Marcoliusprime\_1, McMater\_1, MeaningOfLife\_1, Megsy\_1, Milly\_1, Mufasa\_1, Murucutumbu\_1, Mynx\_1, Niklas\_1, Peanam\_1, PhelpsODU\_1, Phrank\_1, Pisa1\_1, Pisa4\_1, Pixie\_1, Pokerus\_1, Prithvi\_1, QuincyRose\_1, Richo\_1, SamuelLPlaqson\_1, Shadow1\_1, Shaobing\_1, ShedlockHolmes\_1, Stinson\_1, Strobilo\_1, Sunflower1121\_1, Syra333\_1, TBond007\_1, TClif\_1, TM4\_1, Tachez\_1, TaiwanKao\_1, Tierra\_1, Tigress9\_1, TingHuaYa\_1, TiniBug\_1, Tiri\_1, TreyKay\_1, TribbleTrouble\_1, Unicorn\_1, Urkel\_1, Validus\_1, YoureAdopted\_1, Yuna\_1, Yunkel11\_1, Zavala\_1, ZoeJ\_1,

### **Summary by start number:**

Start 7:

- Found in 3 of 120 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bern\_1 (K1), Pisa1\_1 (K1), Pisa4\_1 (K1),

Start 8:

- Found in 7 of 120 ( 5.8% ) of genes in pham
- Manual Annotations of this start: 5 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anma\_1 (K1), Bella96\_1 (K1), DartGoblin\_1 (K1), DrHayes\_1 (K1), SamuelLPlaqson\_1 (K1), TiniBug\_1 (K1), Urkel\_1 (K1),

Start 9:

- Found in 25 of 120 ( 20.8% ) of genes in pham
- Manual Annotations of this start: 19 of 105
- Called 96.0% of time when present
- Phage (with cluster) where this start called: Bryler\_1 (K6), Cain\_1 (K6), Chavito\_1 (K1), Dartin\_1 (K1), Efra2\_1 (K1), Guanica15\_1 (K1), LastHope\_1 (K1), McMater\_1 (K1), Niklas\_1 (K1), Peanam\_1 (K1), PhelpsODU\_1 (K6), Phrank\_1 (K6), Richo\_1 (K1), Shadow1\_1 (K6), Shaobing\_1 (K1), Sunflower1121\_1 (K6), Syra333\_1 (K6), TClif\_1 (K6), Tierra\_1 (K6), Tigress9\_1 (K6), Unicorn\_1 (K6), Validus\_1 (K1), Yuna\_1 (K6), Yunkel11\_1 (K1),

Start 10:

- Found in 29 of 120 ( 24.2% ) of genes in pham
- Manual Annotations of this start: 27 of 105
- Called 96.6% of time when present
- Phage (with cluster) where this start called: Adonis\_1 (K1), Atiba\_1 (K1), BaghaKamala\_1 (K1), CallaLilly\_1 (K1), CheetoDust\_1 (K1), Clipper\_1 (K1), Devera\_1 (K1), Dole\_1 (K1), Ganymede\_1 (K1), Illumine\_1 (K1), Joy99\_1 (K1), LaterM\_1 (K1), LindNT\_1 (K1), MacKat\_1 (K1), MeaningOfLife\_1 (K1), Megsy\_1 (K1), Murucutumbu\_1 (K1), Mynx\_1 (K1), Pokerus\_1 (K1), Prithvi\_1 (K1), QuincyRose\_1 (K1), Stinson\_1 (K1), Tachez\_1 (K1), TaiwanKao\_1 (K1), Tiri\_1 (K1), TreyKay\_1 (K1), YoureAdopted\_1 (K1), Zavala\_1 (K1),

Start 12:

- Found in 4 of 120 ( 3.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: TingHuaYa\_1 (K1),

Start 16:

- Found in 28 of 120 ( 23.3% ) of genes in pham
- Manual Annotations of this start: 10 of 105
- Called 35.7% of time when present
- Phage (with cluster) where this start called: BoostSeason\_1 (K2), DismalFunk\_1 (K2), DismalStressor\_1 (K2), Doughnut\_1 (K2), Findley\_1 (K2), Marcoliusprime\_1 (K2), Milly\_1 (K2), Mufasa\_1 (K2), Strobilo\_1 (K2), ZoeJ\_1 (K2),

Start 17:

- Found in 1 of 120 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TM4\_1 (K2),

Start 18:

- Found in 1 of 120 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aminay\_1 (K7),

Start 20:

- Found in 1 of 120 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 105

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Applecrisp\_2 (K6),

Start 21:

- Found in 8 of 120 ( 6.7% ) of genes in pham
- Manual Annotations of this start: 8 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hurricane\_1 (K3), Keshu\_1 (K3), Lea83\_1 (K3), MacnCheese\_1 (K3), Pixie\_1 (K3), ShedlockHolmes\_1 (K3), TBond007\_1 (K3), TribbleTrouble\_1 (K3),

Start 22:

- Found in 36 of 120 ( 30.0% ) of genes in pham
- Manual Annotations of this start: 32 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amgine\_1 (K6), Amohnton\_1 (K6), Bobquesha\_1 (K4), Boilgate\_1 (K8), Chancellor\_1 (K4), Cheetobro\_1 (K4), DanSyl44\_1 (K4), DarthP\_1 (K6), Ekdilam\_1 (K6), Ellie\_1 (K6), Eponine\_1 (K4), Fefferhead\_1 (K6), Fionnbharth\_1 (K4), Hammy\_1 (K6), JF1\_1 (K4), Juliette\_1 (K4), Kraw\_1 (K4), Lavahound\_1 (K6), Lebo14\_1 (K4), Malthus\_1 (K4), MissDaisy\_1 (K4), Mitti\_1 (K4), November\_1 (K6), OmniCritical\_1 (K4), Patt\_1 (K4), Pharb\_1 (K3), Qhanda\_1 (K4), Reptar3000\_1 (K4), Ruthiejr\_1 (K4), SamScheppers\_1 (K4), Slarp\_1 (K4), Taquito\_1 (K4), Wintermute\_1 (K4), Y10\_01 (K4), Y2\_01 (K4), YasnayaPolyana\_1 (K4),

### Summary by clusters:

There are 7 clusters represented in this pham: K3, K2, K1, K7, K6, K4, K8,

Info for manual annotations of cluster K1:

- Start number 7 was manually annotated 1 time for cluster K1.
- Start number 8 was manually annotated 5 times for cluster K1.
- Start number 9 was manually annotated 8 times for cluster K1.
- Start number 10 was manually annotated 27 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 16 was manually annotated 10 times for cluster K2.
- Start number 17 was manually annotated 1 time for cluster K2.

Info for manual annotations of cluster K3:

- Start number 21 was manually annotated 8 times for cluster K3.
- Start number 22 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster K4:

- Start number 22 was manually annotated 22 times for cluster K4.

Info for manual annotations of cluster K6:

- Start number 9 was manually annotated 11 times for cluster K6.
- Start number 20 was manually annotated 1 time for cluster K6.
- Start number 22 was manually annotated 8 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 18 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

•Start number 22 was manually annotated 1 time for cluster K8.

**Gene Information:**

Gene: Adonis\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Adonis\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: Amgine\_1 Start: 52, Stop: 195, Start Num: 22

Candidate Starts for Amgine\_1:

(Start: 22 @52 has 32 MA's), (30, 88), (31, 91),

Gene: Aminay\_1 Start: 67, Stop: 231, Start Num: 18

Candidate Starts for Aminay\_1:

(Start: 18 @67 has 1 MA's), (19, 70), (30, 127),

Gene: Amohnition\_1 Start: 70, Stop: 210, Start Num: 22

Candidate Starts for Amohnition\_1:

(Start: 22 @70 has 32 MA's), (34, 163), (35, 166),

Gene: Anma\_1 Start: 61, Stop: 261, Start Num: 8

Candidate Starts for Anma\_1:

(Start: 8 @61 has 5 MA's), (15, 97), (29, 142), (34, 211),

Gene: Applecrisp\_2 Start: 376, Stop: 525, Start Num: 20

Candidate Starts for Applecrisp\_2:

(1, 235), (6, 304), (Start: 10 @343 has 27 MA's), (Start: 20 @376 has 1 MA's), (30, 418), (31, 421),

Gene: Atiba\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Atiba\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (23, 130), (27, 145), (34, 223),

Gene: BaghaKamala\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for BaghaKamala\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Bella96\_1 Start: 61, Stop: 261, Start Num: 8

Candidate Starts for Bella96\_1:

(Start: 8 @61 has 5 MA's), (29, 142), (34, 211),

Gene: Bern\_1 Start: 60, Stop: 260, Start Num: 7

Candidate Starts for Bern\_1:

(Start: 7 @60 has 1 MA's), (15, 96), (34, 210),

Gene: Bobquesha\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Bobquesha\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Boilgate\_1 Start: 62, Stop: 202, Start Num: 22

Candidate Starts for Boilgate\_1:

(Start: 22 @62 has 32 MA's), (29, 83), (30, 95), (32, 110),

Gene: BoostSeason\_1 Start: 88, Stop: 222, Start Num: 16

Candidate Starts for BoostSeason\_1:

(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: Bryler\_1 Start: 114, Stop: 323, Start Num: 9

Candidate Starts for Bryler\_1:

(Start: 9 @114 has 19 MA's), (29, 204), (31, 219), (32, 231), (33, 252), (34, 273), (36, 306),

Gene: Cain\_1 Start: 114, Stop: 323, Start Num: 9

Candidate Starts for Cain\_1:

(Start: 9 @114 has 19 MA's), (29, 204), (31, 219), (32, 231), (33, 252), (34, 273), (36, 306),

Gene: CallaLilly\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for CallaLilly\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Chancellor\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Chancellor\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Chavito\_1 Start: 71, Stop: 280, Start Num: 9

Candidate Starts for Chavito\_1:

(Start: 9 @71 has 19 MA's), (14, 104), (29, 158), (35, 230),

Gene: CheetoDust\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for CheetoDust\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Cheetobro\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Cheetobro\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Clipper\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Clipper\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: DanSyl44\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for DanSyl44\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: DartGoblin\_1 Start: 61, Stop: 261, Start Num: 8

Candidate Starts for DartGoblin\_1:

(Start: 8 @61 has 5 MA's), (29, 142), (34, 211),

Gene: DarthP\_1 Start: 70, Stop: 210, Start Num: 22

Candidate Starts for DarthP\_1:

(Start: 22 @70 has 32 MA's), (34, 163), (35, 166),

Gene: Dartin\_1 Start: 72, Stop: 278, Start Num: 9

Candidate Starts for Dartin\_1:

(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (35, 231),

Gene: Devera\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Devera\_1:

(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: DismalFunk\_1 Start: 88, Stop: 222, Start Num: 16

Candidate Starts for DismalFunk\_1:

(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: DismalStressor\_1 Start: 88, Stop: 222, Start Num: 16

Candidate Starts for DismalStressor\_1:

(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: Dole\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Dole\_1:

(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Doughnut\_1 Start: 88, Stop: 222, Start Num: 16

Candidate Starts for Doughnut\_1:

(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: DrHayes\_1 Start: 61, Stop: 261, Start Num: 8

Candidate Starts for DrHayes\_1:

(Start: 8 @61 has 5 MA's), (15, 97), (29, 142), (34, 211),

Gene: Efra2\_1 Start: 72, Stop: 272, Start Num: 9

Candidate Starts for Efra2\_1:

(Start: 9 @72 has 19 MA's), (12, 87), (29, 153), (34, 222),

Gene: Ekdilam\_1 Start: 69, Stop: 209, Start Num: 22

Candidate Starts for Ekdilam\_1:

(Start: 22 @69 has 32 MA's), (34, 162), (35, 165),

Gene: Ellie\_1 Start: 52, Stop: 195, Start Num: 22

Candidate Starts for Ellie\_1:

(Start: 22 @52 has 32 MA's), (31, 91),

Gene: Eponine\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Eponine\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Fefferhead\_1 Start: 52, Stop: 195, Start Num: 22

Candidate Starts for Fefferhead\_1:

(Start: 22 @52 has 32 MA's), (30, 88), (31, 91),

Gene: Findley\_1 Start: 88, Stop: 222, Start Num: 16

Candidate Starts for Findley\_1:

(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: Fionnbharth\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Fionnbharth\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Ganymede\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Ganymede\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Guanica15\_1 Start: 72, Stop: 272, Start Num: 9

Candidate Starts for Guanica15\_1:

(Start: 9 @72 has 19 MA's), (12, 87), (29, 153), (34, 222),

Gene: Hammy\_1 Start: 70, Stop: 210, Start Num: 22

Candidate Starts for Hammy\_1:

(Start: 22 @70 has 32 MA's), (34, 163), (35, 166),

Gene: Hurricane\_1 Start: 51, Stop: 194, Start Num: 21

Candidate Starts for Hurricane\_1:

(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: Illumine\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Illumine\_1:

(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: JF1\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for JF1\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Joy99\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Joy99\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Juliette\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Juliette\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Keshu\_1 Start: 51, Stop: 194, Start Num: 21

Candidate Starts for Keshu\_1:

(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: Kraw\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Kraw\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: LastHope\_1 Start: 71, Stop: 271, Start Num: 9

Candidate Starts for LastHope\_1:

(Start: 9 @71 has 19 MA's), (12, 86), (29, 152), (34, 221),

Gene: LaterM\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for LaterM\_1:

(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Lavahound\_1 Start: 52, Stop: 195, Start Num: 22

Candidate Starts for Lavahound\_1:

(Start: 22 @52 has 32 MA's), (30, 88), (31, 91),

Gene: Lea83\_1 Start: 51, Stop: 194, Start Num: 21

Candidate Starts for Lea83\_1:

(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: Lebo14\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Lebo14\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: LindNT\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for LindNT\_1:

(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: MacKat\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for MacKat\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: MacnCheese\_1 Start: 51, Stop: 197, Start Num: 21

Candidate Starts for MacnCheese\_1:

(Start: 21 @51 has 8 MA's), (30, 90),

Gene: Malthus\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Malthus\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Marcoliusprime\_1 Start: 88, Stop: 222, Start Num: 16

Candidate Starts for Marcoliusprime\_1:

(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: McMater\_1 Start: 72, Stop: 278, Start Num: 9

Candidate Starts for McMater\_1:

(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (35, 231),

Gene: MeaningOfLife\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for MeaningOfLife\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Megsy\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Megsy\_1:

(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: Milly\_1 Start: 88, Stop: 222, Start Num: 16

Candidate Starts for Milly\_1:

(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: MissDaisy\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for MissDaisy\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Mitti\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Mitti\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Mufasa\_1 Start: 88, Stop: 222, Start Num: 16

Candidate Starts for Mufasa\_1:

(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: Murucutumbu\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Murucutumbu\_1:

(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: Mynx\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Mynx\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Niklas\_1 Start: 72, Stop: 278, Start Num: 9

Candidate Starts for Niklas\_1:

(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (35, 231),

Gene: November\_1 Start: 69, Stop: 209, Start Num: 22

Candidate Starts for November\_1:

(Start: 22 @69 has 32 MA's), (34, 162), (35, 165),

Gene: OmniCritical\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for OmniCritical\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Patt\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Patt\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Peanam\_1 Start: 72, Stop: 278, Start Num: 9

Candidate Starts for Peanam\_1:

(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (34, 228), (35, 231),

Gene: Pharb\_1 Start: 51, Stop: 191, Start Num: 22

Candidate Starts for Pharb\_1:

(Start: 22 @51 has 32 MA's), (30, 87),

Gene: PhelpsODU\_1 Start: 115, Stop: 324, Start Num: 9

Candidate Starts for PhelpsODU\_1:

(Start: 9 @115 has 19 MA's), (29, 205), (31, 220), (32, 232), (33, 253), (34, 274), (36, 307),

Gene: Phrank\_1 Start: 114, Stop: 329, Start Num: 9

Candidate Starts for Phrank\_1:

(Start: 9 @114 has 19 MA's), (29, 210), (31, 225), (32, 237), (33, 258), (34, 279), (36, 312),

Gene: Pisa1\_1 Start: 60, Stop: 260, Start Num: 7

Candidate Starts for Pisa1\_1:

(Start: 7 @60 has 1 MA's), (15, 96), (34, 210),

Gene: Pisa4\_1 Start: 60, Stop: 260, Start Num: 7

Candidate Starts for Pisa4\_1:

(Start: 7 @60 has 1 MA's), (15, 96), (34, 210),

Gene: Pixie\_1 Start: 51, Stop: 194, Start Num: 21

Candidate Starts for Pixie\_1:

(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: Pokerus\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Pokerus\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Prithvi\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Prithvi\_1:

(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: Qhanda\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Qhanda\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: QuincyRose\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for QuincyRose\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Reptar3000\_1 Start: 116, Stop: 253, Start Num: 22

Candidate Starts for Reptar3000\_1:

(Start: 22 @116 has 32 MA's), (29, 140), (30, 152),

Gene: Richo\_1 Start: 72, Stop: 278, Start Num: 9

Candidate Starts for Richo\_1:

(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (35, 231),

Gene: Ruthiejr\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Ruthiejr\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: SamScheppers\_1 Start: 116, Stop: 253, Start Num: 22

Candidate Starts for SamScheppers\_1:

(Start: 22 @116 has 32 MA's), (29, 140), (30, 152),

Gene: SamuelLPlaqson\_1 Start: 61, Stop: 261, Start Num: 8

Candidate Starts for SamuelLPlaqson\_1:

(Start: 8 @61 has 5 MA's), (15, 97), (29, 142), (34, 211),

Gene: Shadow1\_1 Start: 115, Stop: 330, Start Num: 9

Candidate Starts for Shadow1\_1:

(Start: 9 @115 has 19 MA's), (29, 211), (31, 226), (32, 238), (33, 259), (34, 280), (36, 313),

Gene: Shaobing\_1 Start: 72, Stop: 278, Start Num: 9

Candidate Starts for Shaobing\_1:

(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (35, 231),

Gene: ShedlockHolmes\_1 Start: 51, Stop: 194, Start Num: 21

Candidate Starts for ShedlockHolmes\_1:

(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: Slarp\_1 Start: 117, Stop: 254, Start Num: 22

Candidate Starts for Slarp\_1:

(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Stinson\_1 Start: 79, Stop: 273, Start Num: 10  
Candidate Starts for Stinson\_1:  
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Strobilo\_1 Start: 88, Stop: 222, Start Num: 16  
Candidate Starts for Strobilo\_1:  
(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: Sunflower1121\_1 Start: 114, Stop: 329, Start Num: 9  
Candidate Starts for Sunflower1121\_1:  
(Start: 9 @114 has 19 MA's), (29, 210), (31, 225), (32, 237), (33, 258), (34, 279), (36, 312),

Gene: Syra333\_1 Start: 115, Stop: 330, Start Num: 9  
Candidate Starts for Syra333\_1:  
(4, 49), (Start: 9 @115 has 19 MA's), (29, 211), (31, 226), (32, 238), (33, 259), (34, 280),

Gene: TBond007\_1 Start: 51, Stop: 194, Start Num: 21  
Candidate Starts for TBond007\_1:  
(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: TClif\_1 Start: 73, Stop: 243, Start Num: 9  
Candidate Starts for TClif\_1:  
(2, 1), (3, 7), (Start: 9 @73 has 19 MA's), (24, 133), (28, 145),

Gene: TM4\_1 Start: 100, Stop: 234, Start Num: 17  
Candidate Starts for TM4\_1:  
(Start: 17 @100 has 1 MA's), (26, 115), (34, 190),

Gene: Tachez\_1 Start: 79, Stop: 273, Start Num: 10  
Candidate Starts for Tachez\_1:  
(Start: 10 @79 has 27 MA's), (11, 85), (23, 130), (27, 145), (34, 223),

Gene: TaiwanKao\_1 Start: 79, Stop: 273, Start Num: 10  
Candidate Starts for TaiwanKao\_1:  
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: Taquito\_1 Start: 117, Stop: 254, Start Num: 22  
Candidate Starts for Taquito\_1:  
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Tierra\_1 Start: 115, Stop: 330, Start Num: 9  
Candidate Starts for Tierra\_1:  
(Start: 9 @115 has 19 MA's), (29, 211), (31, 226), (32, 238), (33, 259), (34, 280), (36, 313),

Gene: Tigress9\_1 Start: 115, Stop: 330, Start Num: 9  
Candidate Starts for Tigress9\_1:  
(4, 49), (Start: 9 @115 has 19 MA's), (29, 211), (31, 226), (32, 238), (33, 259), (34, 280),

Gene: TingHuaYa\_1 Start: 86, Stop: 271, Start Num: 12  
Candidate Starts for TingHuaYa\_1:  
(Start: 9 @71 has 19 MA's), (12, 86), (29, 152), (34, 221),

Gene: TiniBug\_1 Start: 61, Stop: 261, Start Num: 8  
Candidate Starts for TiniBug\_1:  
(Start: 8 @61 has 5 MA's), (29, 142), (34, 211),

Gene: Tiri\_1 Start: 79, Stop: 273, Start Num: 10  
Candidate Starts for Tiri\_1:  
(Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: TreyKay\_1 Start: 79, Stop: 273, Start Num: 10  
Candidate Starts for TreyKay\_1:  
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: TribelTrouble\_1 Start: 51, Stop: 197, Start Num: 21  
Candidate Starts for TribelTrouble\_1:  
(Start: 21 @51 has 8 MA's), (30, 90),

Gene: Unicorn\_1 Start: 115, Stop: 324, Start Num: 9  
Candidate Starts for Unicorn\_1:  
(Start: 9 @115 has 19 MA's), (29, 205), (31, 220), (32, 232), (33, 253), (34, 274), (36, 307),

Gene: Urkel\_1 Start: 61, Stop: 261, Start Num: 8  
Candidate Starts for Urkel\_1:  
(Start: 8 @61 has 5 MA's), (15, 97), (29, 142), (34, 211),

Gene: Validus\_1 Start: 71, Stop: 280, Start Num: 9  
Candidate Starts for Validus\_1:  
(Start: 9 @71 has 19 MA's), (14, 104), (29, 158), (35, 230),

Gene: Wintermute\_1 Start: 116, Stop: 253, Start Num: 22  
Candidate Starts for Wintermute\_1:  
(Start: 22 @116 has 32 MA's), (29, 140), (30, 152),

Gene: Y10\_01 Start: 117, Stop: 254, Start Num: 22  
Candidate Starts for Y10\_01:  
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Y2\_01 Start: 117, Stop: 254, Start Num: 22  
Candidate Starts for Y2\_01:  
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: YasnayaPolyana\_1 Start: 117, Stop: 254, Start Num: 22  
Candidate Starts for YasnayaPolyana\_1:  
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: YoureAdopted\_1 Start: 79, Stop: 273, Start Num: 10  
Candidate Starts for YoureAdopted\_1:  
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Yuna\_1 Start: 74, Stop: 316, Start Num: 9  
Candidate Starts for Yuna\_1:  
(Start: 9 @74 has 19 MA's), (13, 101), (28, 164), (34, 230), (36, 263),

Gene: Yunkel11\_1 Start: 72, Stop: 272, Start Num: 9

Candidate Starts for Yunkel11\_1:

(Start: 9 @72 has 19 MA's), (29, 153), (34, 222),

Gene: Zavala\_1 Start: 79, Stop: 273, Start Num: 10

Candidate Starts for Zavala\_1:

(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: ZoeJ\_1 Start: 88, Stop: 222, Start Num: 16

Candidate Starts for ZoeJ\_1:

(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),