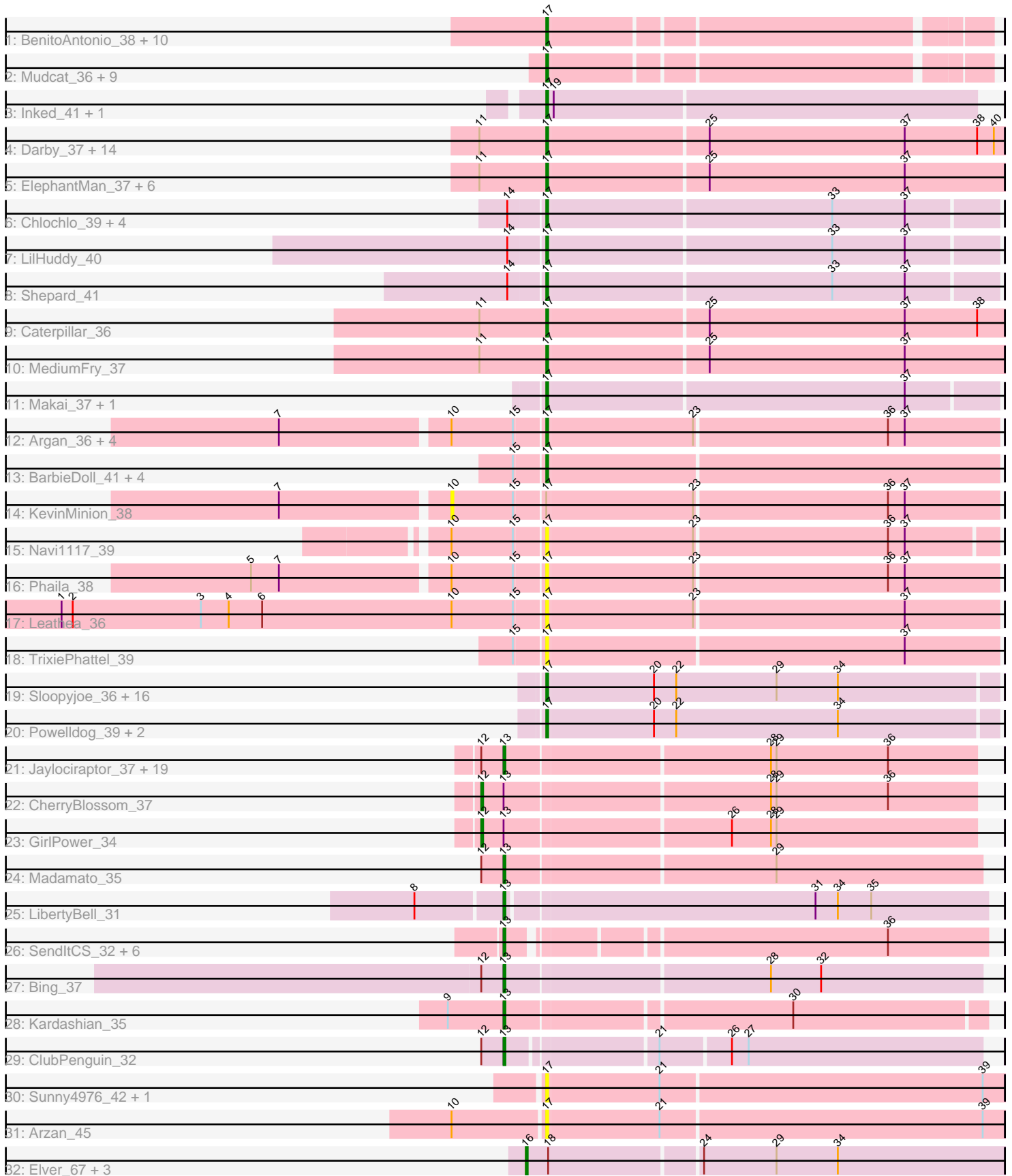


Pham 224395



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 224395 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224395 has 132 members, 33 are drafts.

Phages represented in each track:

- Track 1 : BenitoAntonio\_38, Mooshroom\_40, Circum\_39, GoCrazy\_36, Benllo\_37, Hankly\_37, KeaneyLin\_36, Bowling\_37, Dynamite\_38, Kardesai\_39, NapoleonB\_38
- Track 2 : Mudcat\_36, Xenomorph\_34, JEGGS\_37, Arcadia\_37, Nason\_37, Correa\_35, Cheesy\_37, Heisenberger\_37, Elsa\_37, Tribby\_37
- Track 3 : Inked\_41, Zippen\_41
- Track 4 : Darby\_37, Nivinsha\_39, Trustiboi\_39, AreFloNak\_38, Breylor17\_39, CapnMurica\_37, MiniBagel\_37, Issa\_39, Gordon\_37, DevitoJr\_38, ScienceWizSam\_40, Nightmare\_39, CastorTray\_40, Synepsis\_37, Tenno\_38
- Track 5 : ElephantMan\_37, Brunswick\_38, Tatanka\_37, LucySwiss\_39, Niktson\_37, Teacup\_39, Acai\_39
- Track 6 : Chlochlo\_39, Tokki\_39, Giantsbane\_40, Phaby\_40, Bouchard\_39
- Track 7 : LilHuddy\_40
- Track 8 : Shepard\_41
- Track 9 : Caterpillar\_36
- Track 10 : MediumFry\_37
- Track 11 : Makai\_37, Truckee\_36
- Track 12 : Argan\_36, Zeina\_38, GantcherGoblin\_36, Tenney120\_39, Uzumaki\_36
- Track 13 : BarbieDoll\_41, Renaldo\_42, Lewando\_40, Kinny\_41, Biscute\_40
- Track 14 : KevinMinion\_38
- Track 15 : Navi1117\_39
- Track 16 : Phaila\_38
- Track 17 : Leathea\_36
- Track 18 : TrixiePhattel\_39
- Track 19 : Sloopyjoe\_36, ProfFrink\_36, StarLord\_36, Shiba\_36, Natasha\_36, RustyBoy\_36, Egad\_36, Stayer\_36, Boog\_35, BronxBay\_36, DoctorPepper\_36, Linda\_36, Raunak\_37, Michelle\_36, Salk\_36, HerbBucket\_35, Sporto\_38
- Track 20 : Powelldog\_39, MrAaronian\_36, Djungelskog\_36
- Track 21 : Jaylociraptor\_37, Hoshi\_37, HazuAndZazu\_36, TaidaOne\_37, TonyStarch\_36, Maya\_37, Meibysrarus\_36, Namu\_37, FidgetOrca\_37, Rima\_37, Spectropatronm\_37, Esketit\_37, FrodoSwaggins\_37, IceWarrior\_36, Popy\_37, Indigenous\_37, Soshi\_36, OlympicHelado\_37, DrGrey\_36, TieDye\_36
- Track 22 : CherryBlossom\_37
- Track 23 : GirlPower\_34
- Track 24 : Madamato\_35
- Track 25 : LibertyBell\_31
- Track 26 : SendItCS\_32, Thiqqums\_34, Miek\_33, CricKo\_34, FromIndy\_34, Rainydai\_34, Regigigas\_35

- Track 27 : Bing\_37
- Track 28 : Kardashian\_35
- Track 29 : ClubPenguin\_32
- Track 30 : Sunny4976\_42, Jazzy4900\_43
- Track 31 : Arzan\_45
- Track 32 : Elver\_67, Gandionco\_68, Qui\_70, Paella\_70

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

The start number called the most often in the published annotations is 17, it was called in 65 of the 99 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acai\_39, Arcadia\_37, AreFloNak\_38, Argan\_36, Arzan\_45, BarbieDoll\_41, BenitoAntonio\_38, Benllo\_37, Biscute\_40, Boog\_35, Bouchard\_39, Bowling\_37, Breylor17\_39, BronxBay\_36, Brunswick\_38, CapnMurica\_37, CastorTray\_40, Caterpillar\_36, Cheesy\_37, Chlochlo\_39, Circum\_39, Correa\_35, Darby\_37, DevitoJr\_38, Djungelskog\_36, DoctorPepper\_36, Dynamite\_38, Egad\_36, ElephantMan\_37, Elsa\_37, GantcherGoblin\_36, Giantsbane\_40, GoCrazy\_36, Gordon\_37, Hankly\_37, Heisenberger\_37, HerbBucket\_35, Inked\_41, Issa\_39, JEGGS\_37, Jazzy4900\_43, Kardesai\_39, KeaneyLin\_36, Kinny\_41, Leatheia\_36, Lewando\_40, LilHuddy\_40, Linda\_36, LucySwiss\_39, Makai\_37, MediumFry\_37, Michelle\_36, MiniBagel\_37, Mooshroom\_40, MrAaronian\_36, Mudcat\_36, NapoleonB\_38, Nason\_37, Natasha\_36, Navi1117\_39, Nightmare\_39, Niktson\_37, Nivinsha\_39, Phaby\_40, Phaila\_38, PowellDog\_39, ProfFrink\_36, Raunak\_37, Renaldo\_42, RustyBoy\_36, Salk\_36, ScienceWizSam\_40, Shepard\_41, Shiba\_36, Sloopyjoe\_36, Sporto\_38, StarLord\_36, Stayer\_36, Sunny4976\_42, Synepsis\_37, Tatanka\_37, Teacup\_39, Tenney120\_39, Tenno\_38, Tokki\_39, Tribby\_37, TrixiePhattel\_39, Truckee\_36, Trustiboi\_39, Uzumaki\_36, Xenomorph\_34, Zeina\_38, Zippen\_41,

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

- KevinMinion\_38,

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

- Bing\_37, CherryBlossom\_37, ClubPenguin\_32, CricKo\_34, DrGrey\_36, Elver\_67, Esketit\_37, FidgetOrca\_37, FrodoSwaggins\_37, FromIndy\_34, Gandionco\_68, GirlPower\_34, HazuAndZazu\_36, Hoshi\_37, IceWarrior\_36, Indigenous\_37, Jaylociraptor\_37, Kardashian\_35, LibertyBell\_31, Madamoto\_35, Maya\_37, Meibysrarus\_36, Miek\_33, Namu\_37, OlympicHelado\_37, Paella\_70, Popy\_37, Qui\_70, Rainydai\_34, Regigigas\_35, Rima\_37, SendItCS\_32, Soshi\_36, Spectropatronm\_37, TaidaOne\_37, Thiqqums\_34, TieDye\_36, TonyStarch\_36,

**Summary by start number:**

Start 10:

- Found in 10 of 132 ( 7.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 10.0% of time when present
- Phage (with cluster) where this start called: KevinMinion\_38 (AU6),

Start 12:

- Found in 25 of 132 ( 18.9% ) of genes in pham
- Manual Annotations of this start: 2 of 99
- Called 8.0% of time when present
- Phage (with cluster) where this start called: CherryBlossom\_37 (BI1), GirlPower\_34 (BI1),

Start 13:

- Found in 34 of 132 ( 25.8% ) of genes in pham
- Manual Annotations of this start: 30 of 99
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Bing\_37 (BI5), ClubPenguin\_32 (BI7), CricKo\_34 (BI4), DrGrey\_36 (BI1), Esketit\_37 (BI1), FidgetOrca\_37 (BI1), FrodoSwaggins\_37 (BI1), FromIndy\_34 (BI4), HazuAndZazu\_36 (BI1), Hoshi\_37 (BI1), IceWarrior\_36 (BI1), Indigenous\_37 (BI1), Jaylociraptor\_37 (BI1), Kardashian\_35 (BI6), LibertyBell\_31 (BI3), Madamoto\_35 (BI1), Maya\_37 (BI1), Meibysrarus\_36 (BI1), Miek\_33 (BI4), Namo\_37 (BI1), OlympicHelado\_37 (BI1), Popy\_37 (BI1), Rainydai\_34 (BI4), Regigigas\_35 (BI4), Rima\_37 (BI1), SendItCS\_32 (BI4), Soshi\_36 (BI1), Spectropatronm\_37 (BI1), TaidaOne\_37 (BI1), Thiqqums\_34 (BI4), TieDye\_36 (BI1), TonyStarch\_36 (BI1),

Start 16:

- Found in 4 of 132 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 2 of 99
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Elver\_67 (FK), Gandionco\_68 (FK), Paella\_70 (FK), Qui\_70 (FK),

Start 17:

- Found in 94 of 132 ( 71.2% ) of genes in pham
- Manual Annotations of this start: 65 of 99
- Called 98.9% of time when present
- Phage (with cluster) where this start called: Acai\_39 (AU1), Arcadia\_37 (AM), AreFloNak\_38 (AU1), Argan\_36 (AU6), Arzan\_45 (FI), BarbieDoll\_41 (AU6), BenitoAntonio\_38 (AM), Benllo\_37 (AM), Biscute\_40 (AU6), Boog\_35 (AW), Bouchard\_39 (AU2), Bowling\_37 (AM), Breylor17\_39 (AU1), BronxBay\_36 (AW), Brunswick\_38 (AU1), CapnMurica\_37 (AU1), CastorTray\_40 (AU1), Caterpillar\_36 (AU4), Cheesy\_37 (AM), Chlochlo\_39 (AU2), Circum\_39 (AM), Correa\_35 (AM), Darby\_37 (AU1), DevitoJr\_38 (AU1), Djungelskog\_36 (AW), DoctorPepper\_36 (AW), Dynamite\_38 (AM), Egad\_36 (AW), ElephantMan\_37 (AU1), Elsa\_37 (AM), GantcherGoblin\_36 (AU6), Giantsbane\_40 (AU2), GoCrazy\_36 (AM), Gordon\_37 (AU1), Hankly\_37 (AM), Heisenberger\_37 (AM), HerbBucket\_35 (AW), Inked\_41 (AU), Issa\_39 (AU1), JEGGS\_37 (AM), Jazzy4900\_43 (FI), Kardesai\_39 (AM), KeaneyLin\_36 (AM), Kinny\_41 (AU6), Leathea\_36 (AU6), Lewando\_40 (AU6), LilHuddy\_40 (AU2), Linda\_36 (AW), LucySwiss\_39 (AU1), Makai\_37 (AU5), MediumFry\_37 (AU4), Michelle\_36 (AW), MiniBagel\_37 (AU1), Mooshroom\_40 (AM), MrAaronian\_36 (AW), Mudcat\_36 (AM), NapoleonB\_38 (AM), Nason\_37 (AM), Natasha\_36 (AW), Navi1117\_39 (AU6), Nightmare\_39 (AU1), Niktson\_37 (AU1), Nivinsha\_39 (AU1), Phaby\_40 (AU2), Phaila\_38 (AU6), PowellDog\_39 (AW), ProfFrink\_36 (AW), Raunak\_37 (AW), Renaldo\_42 (AU6), RustyBoy\_36 (AW), Salk\_36 (AW), ScienceWizSam\_40 (AU1), Shepard\_41 (AU2), Shiba\_36 (AW), Sloopyjoe\_36 (AW), Sporto\_38 (AW), StarLord\_36 (AW), Stayer\_36 (AW),

Sunny4976\_42 (FI), Synepsis\_37 (AU1), Tatanka\_37 (AU1), Teacup\_39 (AU1), Tenney120\_39 (AU6), Tenno\_38 (AU1), Tokki\_39 (AU2), Tribby\_37 (AM), TrixiePhattel\_39 (AU6), Truckee\_36 (AU5), Trustiboi\_39 (AU1), Uzumaki\_36 (AU6), Xenomorph\_34 (AM), Zeina\_38 (AU6), Zippen\_41 (AU3),

### **Summary by clusters:**

There are 17 clusters represented in this pham: BI7, BI5, AM, AU1, AU3, AU2, AU5, AU4, AW, AU6, BI6, FI, BI4, FK, AU, BI3, BI1,

Info for manual annotations of cluster AM:

- Start number 17 was manually annotated 19 times for cluster AM.

Info for manual annotations of cluster AU:

- Start number 17 was manually annotated 1 time for cluster AU.

Info for manual annotations of cluster AU1:

- Start number 17 was manually annotated 17 times for cluster AU1.

Info for manual annotations of cluster AU2:

- Start number 17 was manually annotated 5 times for cluster AU2.

Info for manual annotations of cluster AU4:

- Start number 17 was manually annotated 2 times for cluster AU4.

Info for manual annotations of cluster AU5:

- Start number 17 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AU6:

- Start number 17 was manually annotated 5 times for cluster AU6.

Info for manual annotations of cluster AW:

- Start number 17 was manually annotated 14 times for cluster AW.

Info for manual annotations of cluster BI1:

- Start number 12 was manually annotated 2 times for cluster BI1.
- Start number 13 was manually annotated 21 times for cluster BI1.

Info for manual annotations of cluster BI3:

- Start number 13 was manually annotated 1 time for cluster BI3.

Info for manual annotations of cluster BI4:

- Start number 13 was manually annotated 5 times for cluster BI4.

Info for manual annotations of cluster BI5:

- Start number 13 was manually annotated 1 time for cluster BI5.

Info for manual annotations of cluster BI6:

- Start number 13 was manually annotated 1 time for cluster BI6.

Info for manual annotations of cluster BI7:

- Start number 13 was manually annotated 1 time for cluster BI7.

Info for manual annotations of cluster FK:

•Start number 16 was manually annotated 2 times for cluster FK.

**Gene Information:**

Gene: Acai\_39 Start: 30421, Stop: 30663, Start Num: 17

Candidate Starts for Acai\_39:

(11, 30385), (Start: 17 @30421 has 65 MA's), (25, 30505), (37, 30610),

Gene: Arcadia\_37 Start: 27918, Stop: 28139, Start Num: 17

Candidate Starts for Arcadia\_37:

(Start: 17 @27918 has 65 MA's),

Gene: AreFloNak\_38 Start: 30359, Stop: 30601, Start Num: 17

Candidate Starts for AreFloNak\_38:

(11, 30323), (Start: 17 @30359 has 65 MA's), (25, 30443), (37, 30548), (38, 30587), (40, 30596),

Gene: Argan\_36 Start: 28652, Stop: 28891, Start Num: 17

Candidate Starts for Argan\_36:

(7, 28517), (10, 28604), (15, 28637), (Start: 17 @28652 has 65 MA's), (23, 28730), (36, 28832), (37, 28841),

Gene: Arzan\_45 Start: 30391, Stop: 30633, Start Num: 17

Candidate Starts for Arzan\_45:

(10, 30343), (Start: 17 @30391 has 65 MA's), (21, 30451), (39, 30622),

Gene: BarbieDoll\_41 Start: 30355, Stop: 30594, Start Num: 17

Candidate Starts for BarbieDoll\_41:

(15, 30340), (Start: 17 @30355 has 65 MA's),

Gene: BenitoAntonio\_38 Start: 27761, Stop: 27982, Start Num: 17

Candidate Starts for BenitoAntonio\_38:

(Start: 17 @27761 has 65 MA's),

Gene: Benllo\_37 Start: 28439, Stop: 28660, Start Num: 17

Candidate Starts for Benllo\_37:

(Start: 17 @28439 has 65 MA's),

Gene: Bing\_37 Start: 27756, Stop: 28007, Start Num: 13

Candidate Starts for Bing\_37:

(Start: 12 @27744 has 2 MA's), (Start: 13 @27756 has 30 MA's), (28, 27894), (32, 27921),

Gene: Biscute\_40 Start: 30008, Stop: 30247, Start Num: 17

Candidate Starts for Biscute\_40:

(15, 29993), (Start: 17 @30008 has 65 MA's),

Gene: Boog\_35 Start: 27777, Stop: 28016, Start Num: 17

Candidate Starts for Boog\_35:

(Start: 17 @27777 has 65 MA's), (20, 27834), (22, 27846), (29, 27900), (34, 27933),

Gene: Bouchard\_39 Start: 30556, Stop: 30792, Start Num: 17  
Candidate Starts for Bouchard\_39:  
(14, 30538), (Start: 17 @30556 has 65 MA's), (33, 30706), (37, 30745),

Gene: Bowling\_37 Start: 27906, Stop: 28127, Start Num: 17  
Candidate Starts for Bowling\_37:  
(Start: 17 @27906 has 65 MA's),

Gene: Breylor17\_39 Start: 30968, Stop: 31210, Start Num: 17  
Candidate Starts for Breylor17\_39:  
(11, 30932), (Start: 17 @30968 has 65 MA's), (25, 31052), (37, 31157), (38, 31196), (40, 31205),

Gene: BronxBay\_36 Start: 27776, Stop: 28015, Start Num: 17  
Candidate Starts for BronxBay\_36:  
(Start: 17 @27776 has 65 MA's), (20, 27833), (22, 27845), (29, 27899), (34, 27932),

Gene: Brunswick\_38 Start: 30104, Stop: 30346, Start Num: 17  
Candidate Starts for Brunswick\_38:  
(11, 30068), (Start: 17 @30104 has 65 MA's), (25, 30188), (37, 30293),

Gene: CapnMurica\_37 Start: 31196, Stop: 31438, Start Num: 17  
Candidate Starts for CapnMurica\_37:  
(11, 31160), (Start: 17 @31196 has 65 MA's), (25, 31280), (37, 31385), (38, 31424), (40, 31433),

Gene: CastorTray\_40 Start: 30823, Stop: 31065, Start Num: 17  
Candidate Starts for CastorTray\_40:  
(11, 30787), (Start: 17 @30823 has 65 MA's), (25, 30907), (37, 31012), (38, 31051), (40, 31060),

Gene: Caterpillar\_36 Start: 29603, Stop: 29845, Start Num: 17  
Candidate Starts for Caterpillar\_36:  
(11, 29567), (Start: 17 @29603 has 65 MA's), (25, 29687), (37, 29792), (38, 29831),

Gene: Cheesy\_37 Start: 27610, Stop: 27831, Start Num: 17  
Candidate Starts for Cheesy\_37:  
(Start: 17 @27610 has 65 MA's),

Gene: CherryBlossom\_37 Start: 27952, Stop: 28212, Start Num: 12  
Candidate Starts for CherryBlossom\_37:  
(Start: 12 @27952 has 2 MA's), (Start: 13 @27964 has 30 MA's), (28, 28102), (29, 28105), (36, 28165),

Gene: Chlochlo\_39 Start: 30591, Stop: 30827, Start Num: 17  
Candidate Starts for Chlochlo\_39:  
(14, 30573), (Start: 17 @30591 has 65 MA's), (33, 30741), (37, 30780),

Gene: Circum\_39 Start: 28270, Stop: 28491, Start Num: 17  
Candidate Starts for Circum\_39:  
(Start: 17 @28270 has 65 MA's),

Gene: ClubPenguin\_32 Start: 26523, Stop: 26768, Start Num: 13  
Candidate Starts for ClubPenguin\_32:  
(Start: 12 @26511 has 2 MA's), (Start: 13 @26523 has 30 MA's), (21, 26598), (26, 26634), (27, 26643),

Gene: Correa\_35 Start: 26801, Stop: 27022, Start Num: 17

Candidate Starts for Correa\_35:

(Start: 17 @26801 has 65 MA's),

Gene: CricKo\_34 Start: 26745, Stop: 26987, Start Num: 13

Candidate Starts for CricKo\_34:

(Start: 13 @26745 has 30 MA's), (36, 26934),

Gene: Darby\_37 Start: 29946, Stop: 30188, Start Num: 17

Candidate Starts for Darby\_37:

(11, 29910), (Start: 17 @29946 has 65 MA's), (25, 30030), (37, 30135), (38, 30174), (40, 30183),

Gene: DevitoJr\_38 Start: 30442, Stop: 30684, Start Num: 17

Candidate Starts for DevitoJr\_38:

(11, 30406), (Start: 17 @30442 has 65 MA's), (25, 30526), (37, 30631), (38, 30670), (40, 30679),

Gene: Djungelskog\_36 Start: 27776, Stop: 28015, Start Num: 17

Candidate Starts for Djungelskog\_36:

(Start: 17 @27776 has 65 MA's), (20, 27833), (22, 27845), (34, 27932),

Gene: DoctorPepper\_36 Start: 27776, Stop: 28015, Start Num: 17

Candidate Starts for DoctorPepper\_36:

(Start: 17 @27776 has 65 MA's), (20, 27833), (22, 27845), (29, 27899), (34, 27932),

Gene: DrGrey\_36 Start: 28304, Stop: 28552, Start Num: 13

Candidate Starts for DrGrey\_36:

(Start: 12 @28292 has 2 MA's), (Start: 13 @28304 has 30 MA's), (28, 28442), (29, 28445), (36, 28505),

Gene: Dynamite\_38 Start: 28101, Stop: 28322, Start Num: 17

Candidate Starts for Dynamite\_38:

(Start: 17 @28101 has 65 MA's),

Gene: Egad\_36 Start: 27777, Stop: 28016, Start Num: 17

Candidate Starts for Egad\_36:

(Start: 17 @27777 has 65 MA's), (20, 27834), (22, 27846), (29, 27900), (34, 27933),

Gene: ElephantMan\_37 Start: 30644, Stop: 30886, Start Num: 17

Candidate Starts for ElephantMan\_37:

(11, 30608), (Start: 17 @30644 has 65 MA's), (25, 30728), (37, 30833),

Gene: Elsa\_37 Start: 27918, Stop: 28139, Start Num: 17

Candidate Starts for Elsa\_37:

(Start: 17 @27918 has 65 MA's),

Gene: Elver\_67 Start: 44169, Stop: 44420, Start Num: 16

Candidate Starts for Elver\_67:

(Start: 16 @44169 has 2 MA's), (18, 44181), (24, 44259), (29, 44298), (34, 44331),

Gene: Esketit\_37 Start: 28039, Stop: 28287, Start Num: 13

Candidate Starts for Esketit\_37:

(Start: 12 @28027 has 2 MA's), (Start: 13 @28039 has 30 MA's), (28, 28177), (29, 28180), (36, 28240),

Gene: FidgetOrca\_37 Start: 28044, Stop: 28292, Start Num: 13



Candidate Starts for FidgetOrca\_37:

(Start: 12 @28032 has 2 MA's), (Start: 13 @28044 has 30 MA's), (28, 28182), (29, 28185), (36, 28245),

Gene: FrodoSwaggins\_37 Start: 28698, Stop: 28946, Start Num: 13

Candidate Starts for FrodoSwaggins\_37:

(Start: 12 @28686 has 2 MA's), (Start: 13 @28698 has 30 MA's), (28, 28836), (29, 28839), (36, 28899),

Gene: FromIndy\_34 Start: 26349, Stop: 26591, Start Num: 13

Candidate Starts for FromIndy\_34:

(Start: 13 @26349 has 30 MA's), (36, 26538),

Gene: Gandionco\_68 Start: 44478, Stop: 44729, Start Num: 16

Candidate Starts for Gandionco\_68:

(Start: 16 @44478 has 2 MA's), (18, 44490), (24, 44568), (29, 44607), (34, 44640),

Gene: GantcherGoblin\_36 Start: 28690, Stop: 28929, Start Num: 17

Candidate Starts for GantcherGoblin\_36:

(7, 28555), (10, 28642), (15, 28675), (Start: 17 @28690 has 65 MA's), (23, 28768), (36, 28870), (37, 28879),

Gene: Giantsbane\_40 Start: 29463, Stop: 29699, Start Num: 17

Candidate Starts for Giantsbane\_40:

(14, 29445), (Start: 17 @29463 has 65 MA's), (33, 29613), (37, 29652),

Gene: GirlPower\_34 Start: 29017, Stop: 29277, Start Num: 12

Candidate Starts for GirlPower\_34:

(Start: 12 @29017 has 2 MA's), (Start: 13 @29029 has 30 MA's), (26, 29146), (28, 29167), (29, 29170),

Gene: GoCrazy\_36 Start: 27748, Stop: 27969, Start Num: 17

Candidate Starts for GoCrazy\_36:

(Start: 17 @27748 has 65 MA's),

Gene: Gordon\_37 Start: 31225, Stop: 31467, Start Num: 17

Candidate Starts for Gordon\_37:

(11, 31189), (Start: 17 @31225 has 65 MA's), (25, 31309), (37, 31414), (38, 31453), (40, 31462),

Gene: Hankly\_37 Start: 27293, Stop: 27514, Start Num: 17

Candidate Starts for Hankly\_37:

(Start: 17 @27293 has 65 MA's),

Gene: HazuAndZazu\_36 Start: 28300, Stop: 28548, Start Num: 13

Candidate Starts for HazuAndZazu\_36:

(Start: 12 @28288 has 2 MA's), (Start: 13 @28300 has 30 MA's), (28, 28438), (29, 28441), (36, 28501),

Gene: Heisenberger\_37 Start: 27603, Stop: 27824, Start Num: 17

Candidate Starts for Heisenberger\_37:

(Start: 17 @27603 has 65 MA's),

Gene: HerbBucket\_35 Start: 27777, Stop: 28016, Start Num: 17

Candidate Starts for HerbBucket\_35:

(Start: 17 @27777 has 65 MA's), (20, 27834), (22, 27846), (29, 27900), (34, 27933),

Gene: Hoshi\_37 Start: 28039, Stop: 28287, Start Num: 13

Candidate Starts for Hoshi\_37:

(Start: 12 @28027 has 2 MA's), (Start: 13 @28039 has 30 MA's), (28, 28177), (29, 28180), (36, 28240),

Gene: IceWarrior\_36 Start: 27739, Stop: 27987, Start Num: 13

Candidate Starts for IceWarrior\_36:

(Start: 12 @27727 has 2 MA's), (Start: 13 @27739 has 30 MA's), (28, 27877), (29, 27880), (36, 27940),

Gene: Indigenous\_37 Start: 28039, Stop: 28287, Start Num: 13

Candidate Starts for Indigenous\_37:

(Start: 12 @28027 has 2 MA's), (Start: 13 @28039 has 30 MA's), (28, 28177), (29, 28180), (36, 28240),

Gene: Inked\_41 Start: 31501, Stop: 31728, Start Num: 17

Candidate Starts for Inked\_41:

(Start: 17 @31501 has 65 MA's), (19, 31504),

Gene: Issa\_39 Start: 30251, Stop: 30493, Start Num: 17

Candidate Starts for Issa\_39:

(11, 30215), (Start: 17 @30251 has 65 MA's), (25, 30335), (37, 30440), (38, 30479), (40, 30488),

Gene: JEGGS\_37 Start: 27657, Stop: 27878, Start Num: 17

Candidate Starts for JEGGS\_37:

(Start: 17 @27657 has 65 MA's),

Gene: Jaylociraptor\_37 Start: 28039, Stop: 28287, Start Num: 13

Candidate Starts for Jaylociraptor\_37:

(Start: 12 @28027 has 2 MA's), (Start: 13 @28039 has 30 MA's), (28, 28177), (29, 28180), (36, 28240),

Gene: Jazzy4900\_43 Start: 30976, Stop: 31218, Start Num: 17

Candidate Starts for Jazzy4900\_43:

(Start: 17 @30976 has 65 MA's), (21, 31036), (39, 31207),

Gene: Kardashian\_35 Start: 27816, Stop: 28064, Start Num: 13

Candidate Starts for Kardashian\_35:

(9, 27786), (Start: 13 @27816 has 30 MA's), (30, 27963),

Gene: Kardesai\_39 Start: 28323, Stop: 28544, Start Num: 17

Candidate Starts for Kardesai\_39:

(Start: 17 @28323 has 65 MA's),

Gene: KeaneyLin\_36 Start: 27748, Stop: 27969, Start Num: 17

Candidate Starts for KeaneyLin\_36:

(Start: 17 @27748 has 65 MA's),

Gene: KevinMinion\_38 Start: 29916, Stop: 30203, Start Num: 10

Candidate Starts for KevinMinion\_38:

(7, 29829), (10, 29916), (15, 29949), (Start: 17 @29964 has 65 MA's), (23, 30042), (36, 30144), (37, 30153),

Gene: Kinny\_41 Start: 30849, Stop: 31088, Start Num: 17

Candidate Starts for Kinny\_41:

(15, 30834), (Start: 17 @30849 has 65 MA's),

Gene: Leathea\_36 Start: 28113, Stop: 28352, Start Num: 17

Candidate Starts for Leathea\_36:

(1, 27855), (2, 27861), (3, 27930), (4, 27945), (6, 27963), (10, 28065), (15, 28098), (Start: 17 @28113 has 65 MA's), (23, 28191), (37, 28302),

Gene: Lewando\_40 Start: 30552, Stop: 30791, Start Num: 17

Candidate Starts for Lewando\_40:

(15, 30537), (Start: 17 @30552 has 65 MA's),

Gene: LibertyBell\_31 Start: 25601, Stop: 25855, Start Num: 13

Candidate Starts for LibertyBell\_31:

(8, 25556), (Start: 13 @25601 has 30 MA's), (31, 25763), (34, 25775), (35, 25793),

Gene: LilHuddy\_40 Start: 30610, Stop: 30846, Start Num: 17

Candidate Starts for LilHuddy\_40:

(14, 30592), (Start: 17 @30610 has 65 MA's), (33, 30760), (37, 30799),

Gene: Linda\_36 Start: 27772, Stop: 28011, Start Num: 17

Candidate Starts for Linda\_36:

(Start: 17 @27772 has 65 MA's), (20, 27829), (22, 27841), (29, 27895), (34, 27928),

Gene: LucySwiss\_39 Start: 29946, Stop: 30188, Start Num: 17

Candidate Starts for LucySwiss\_39:

(11, 29910), (Start: 17 @29946 has 65 MA's), (25, 30030), (37, 30135),

Gene: Madamoto\_35 Start: 27294, Stop: 27545, Start Num: 13

Candidate Starts for Madamoto\_35:

(Start: 12 @27282 has 2 MA's), (Start: 13 @27294 has 30 MA's), (29, 27435),

Gene: Makai\_37 Start: 30096, Stop: 30332, Start Num: 17

Candidate Starts for Makai\_37:

(Start: 17 @30096 has 65 MA's), (37, 30285),

Gene: Maya\_37 Start: 28053, Stop: 28301, Start Num: 13

Candidate Starts for Maya\_37:

(Start: 12 @28041 has 2 MA's), (Start: 13 @28053 has 30 MA's), (28, 28191), (29, 28194), (36, 28254),

Gene: MediumFry\_37 Start: 29916, Stop: 30158, Start Num: 17

Candidate Starts for MediumFry\_37:

(11, 29880), (Start: 17 @29916 has 65 MA's), (25, 30000), (37, 30105),

Gene: Meibysrarus\_36 Start: 27738, Stop: 27986, Start Num: 13

Candidate Starts for Meibysrarus\_36:

(Start: 12 @27726 has 2 MA's), (Start: 13 @27738 has 30 MA's), (28, 27876), (29, 27879), (36, 27939),

Gene: Michelle\_36 Start: 27776, Stop: 28015, Start Num: 17

Candidate Starts for Michelle\_36:

(Start: 17 @27776 has 65 MA's), (20, 27833), (22, 27845), (29, 27899), (34, 27932),

Gene: Miek\_33 Start: 26361, Stop: 26603, Start Num: 13

Candidate Starts for Miek\_33:

(Start: 13 @26361 has 30 MA's), (36, 26550),

Gene: MiniBagel\_37 Start: 31178, Stop: 31420, Start Num: 17

Candidate Starts for MiniBagel\_37:  
(11, 31142), (Start: 17 @31178 has 65 MA's), (25, 31262), (37, 31367), (38, 31406), (40, 31415),

Gene: Mooshroom\_40 Start: 28323, Stop: 28544, Start Num: 17  
Candidate Starts for Mooshroom\_40:  
(Start: 17 @28323 has 65 MA's),

Gene: MrAaronian\_36 Start: 27776, Stop: 28015, Start Num: 17  
Candidate Starts for MrAaronian\_36:  
(Start: 17 @27776 has 65 MA's), (20, 27833), (22, 27845), (34, 27932),

Gene: Mudcat\_36 Start: 29309, Stop: 29530, Start Num: 17  
Candidate Starts for Mudcat\_36:  
(Start: 17 @29309 has 65 MA's),

Gene: Namo\_37 Start: 28045, Stop: 28293, Start Num: 13  
Candidate Starts for Namo\_37:  
(Start: 12 @28033 has 2 MA's), (Start: 13 @28045 has 30 MA's), (28, 28183), (29, 28186), (36, 28246),

Gene: NapoleonB\_38 Start: 28101, Stop: 28322, Start Num: 17  
Candidate Starts for NapoleonB\_38:  
(Start: 17 @28101 has 65 MA's),

Gene: Nason\_37 Start: 27918, Stop: 28139, Start Num: 17  
Candidate Starts for Nason\_37:  
(Start: 17 @27918 has 65 MA's),

Gene: Natasha\_36 Start: 27544, Stop: 27783, Start Num: 17  
Candidate Starts for Natasha\_36:  
(Start: 17 @27544 has 65 MA's), (20, 27601), (22, 27613), (29, 27667), (34, 27700),

Gene: Navi1117\_39 Start: 29262, Stop: 29498, Start Num: 17  
Candidate Starts for Navi1117\_39:  
(10, 29214), (15, 29247), (Start: 17 @29262 has 65 MA's), (23, 29340), (36, 29442), (37, 29451),

Gene: Nightmare\_39 Start: 30810, Stop: 31052, Start Num: 17  
Candidate Starts for Nightmare\_39:  
(11, 30774), (Start: 17 @30810 has 65 MA's), (25, 30894), (37, 30999), (38, 31038), (40, 31047),

Gene: Niktson\_37 Start: 30644, Stop: 30886, Start Num: 17  
Candidate Starts for Niktson\_37:  
(11, 30608), (Start: 17 @30644 has 65 MA's), (25, 30728), (37, 30833),

Gene: Nivinsha\_39 Start: 30359, Stop: 30601, Start Num: 17  
Candidate Starts for Nivinsha\_39:  
(11, 30323), (Start: 17 @30359 has 65 MA's), (25, 30443), (37, 30548), (38, 30587), (40, 30596),

Gene: OlympicHelado\_37 Start: 28045, Stop: 28293, Start Num: 13  
Candidate Starts for OlympicHelado\_37:  
(Start: 12 @28033 has 2 MA's), (Start: 13 @28045 has 30 MA's), (28, 28183), (29, 28186), (36, 28246),

Gene: Paella\_70 Start: 44762, Stop: 45013, Start Num: 16  
Candidate Starts for Paella\_70:

(Start: 16 @44762 has 2 MA's), (18, 44774), (24, 44852), (29, 44891), (34, 44924),

Gene: Phaby\_40 Start: 30565, Stop: 30801, Start Num: 17

Candidate Starts for Phaby\_40:

(14, 30547), (Start: 17 @30565 has 65 MA's), (33, 30715), (37, 30754),

Gene: Phaila\_38 Start: 28726, Stop: 28965, Start Num: 17

Candidate Starts for Phaila\_38:

(5, 28576), (7, 28591), (10, 28678), (15, 28711), (Start: 17 @28726 has 65 MA's), (23, 28804), (36, 28906), (37, 28915),

Gene: Popy\_37 Start: 28698, Stop: 28946, Start Num: 13

Candidate Starts for Popy\_37:

(Start: 12 @28686 has 2 MA's), (Start: 13 @28698 has 30 MA's), (28, 28836), (29, 28839), (36, 28899),

Gene: Powelldog\_39 Start: 27783, Stop: 28022, Start Num: 17

Candidate Starts for Powelldog\_39:

(Start: 17 @27783 has 65 MA's), (20, 27840), (22, 27852), (34, 27939),

Gene: ProfFrink\_36 Start: 27776, Stop: 28015, Start Num: 17

Candidate Starts for ProfFrink\_36:

(Start: 17 @27776 has 65 MA's), (20, 27833), (22, 27845), (29, 27899), (34, 27932),

Gene: Qui\_70 Start: 44762, Stop: 45013, Start Num: 16

Candidate Starts for Qui\_70:

(Start: 16 @44762 has 2 MA's), (18, 44774), (24, 44852), (29, 44891), (34, 44924),

Gene: Rainydai\_34 Start: 26745, Stop: 26987, Start Num: 13

Candidate Starts for Rainydai\_34:

(Start: 13 @26745 has 30 MA's), (36, 26934),

Gene: Raunak\_37 Start: 27771, Stop: 28010, Start Num: 17

Candidate Starts for Raunak\_37:

(Start: 17 @27771 has 65 MA's), (20, 27828), (22, 27840), (29, 27894), (34, 27927),

Gene: Regigigas\_35 Start: 26745, Stop: 26987, Start Num: 13

Candidate Starts for Regigigas\_35:

(Start: 13 @26745 has 30 MA's), (36, 26934),

Gene: Renaldo\_42 Start: 30569, Stop: 30808, Start Num: 17

Candidate Starts for Renaldo\_42:

(15, 30554), (Start: 17 @30569 has 65 MA's),

Gene: Rima\_37 Start: 28045, Stop: 28293, Start Num: 13

Candidate Starts for Rima\_37:

(Start: 12 @28033 has 2 MA's), (Start: 13 @28045 has 30 MA's), (28, 28183), (29, 28186), (36, 28246),

Gene: RustyBoy\_36 Start: 27525, Stop: 27764, Start Num: 17

Candidate Starts for RustyBoy\_36:

(Start: 17 @27525 has 65 MA's), (20, 27582), (22, 27594), (29, 27648), (34, 27681),

Gene: Salk\_36 Start: 27772, Stop: 28011, Start Num: 17

Candidate Starts for Salk\_36:

(Start: 17 @27772 has 65 MA's), (20, 27829), (22, 27841), (29, 27895), (34, 27928),

Gene: ScienceWizSam\_40 Start: 30761, Stop: 31003, Start Num: 17

Candidate Starts for ScienceWizSam\_40:

(11, 30725), (Start: 17 @30761 has 65 MA's), (25, 30845), (37, 30950), (38, 30989), (40, 30998),

Gene: SendItCS\_32 Start: 26361, Stop: 26603, Start Num: 13

Candidate Starts for SendItCS\_32:

(Start: 13 @26361 has 30 MA's), (36, 26550),

Gene: Shepard\_41 Start: 30896, Stop: 31132, Start Num: 17

Candidate Starts for Shepard\_41:

(14, 30878), (Start: 17 @30896 has 65 MA's), (33, 31046), (37, 31085),

Gene: Shiba\_36 Start: 27771, Stop: 28010, Start Num: 17

Candidate Starts for Shiba\_36:

(Start: 17 @27771 has 65 MA's), (20, 27828), (22, 27840), (29, 27894), (34, 27927),

Gene: Sloopyjoe\_36 Start: 27777, Stop: 28016, Start Num: 17

Candidate Starts for Sloopyjoe\_36:

(Start: 17 @27777 has 65 MA's), (20, 27834), (22, 27846), (29, 27900), (34, 27933),

Gene: Soshi\_36 Start: 28310, Stop: 28558, Start Num: 13

Candidate Starts for Soshi\_36:

(Start: 12 @28298 has 2 MA's), (Start: 13 @28310 has 30 MA's), (28, 28448), (29, 28451), (36, 28511),

Gene: Spectropatronm\_37 Start: 28039, Stop: 28287, Start Num: 13

Candidate Starts for Spectropatronm\_37:

(Start: 12 @28027 has 2 MA's), (Start: 13 @28039 has 30 MA's), (28, 28177), (29, 28180), (36, 28240),

Gene: Sporto\_38 Start: 29260, Stop: 29499, Start Num: 17

Candidate Starts for Sporto\_38:

(Start: 17 @29260 has 65 MA's), (20, 29317), (22, 29329), (29, 29383), (34, 29416),

Gene: StarLord\_36 Start: 27777, Stop: 28016, Start Num: 17

Candidate Starts for StarLord\_36:

(Start: 17 @27777 has 65 MA's), (20, 27834), (22, 27846), (29, 27900), (34, 27933),

Gene: Stayer\_36 Start: 27772, Stop: 28011, Start Num: 17

Candidate Starts for Stayer\_36:

(Start: 17 @27772 has 65 MA's), (20, 27829), (22, 27841), (29, 27895), (34, 27928),

Gene: Sunny4976\_42 Start: 30976, Stop: 31218, Start Num: 17

Candidate Starts for Sunny4976\_42:

(Start: 17 @30976 has 65 MA's), (21, 31036), (39, 31207),

Gene: Synopsis\_37 Start: 30426, Stop: 30668, Start Num: 17

Candidate Starts for Synopsis\_37:

(11, 30390), (Start: 17 @30426 has 65 MA's), (25, 30510), (37, 30615), (38, 30654), (40, 30663),

Gene: TaidaOne\_37 Start: 28595, Stop: 28843, Start Num: 13

Candidate Starts for TaidaOne\_37:

(Start: 12 @28583 has 2 MA's), (Start: 13 @28595 has 30 MA's), (28, 28733), (29, 28736), (36, 28796),

Gene: Tatanka\_37 Start: 30589, Stop: 30831, Start Num: 17  
Candidate Starts for Tatanka\_37:  
(11, 30553), (Start: 17 @30589 has 65 MA's), (25, 30673), (37, 30778),

Gene: Teacup\_39 Start: 30574, Stop: 30816, Start Num: 17  
Candidate Starts for Teacup\_39:  
(11, 30538), (Start: 17 @30574 has 65 MA's), (25, 30658), (37, 30763),

Gene: Tenney120\_39 Start: 29158, Stop: 29397, Start Num: 17  
Candidate Starts for Tenney120\_39:  
(7, 29023), (10, 29110), (15, 29143), (Start: 17 @29158 has 65 MA's), (23, 29236), (36, 29338), (37, 29347),

Gene: Tenno\_38 Start: 31187, Stop: 31429, Start Num: 17  
Candidate Starts for Tenno\_38:  
(11, 31151), (Start: 17 @31187 has 65 MA's), (25, 31271), (37, 31376), (38, 31415), (40, 31424),

Gene: Thiqqums\_34 Start: 26745, Stop: 26987, Start Num: 13  
Candidate Starts for Thiqqums\_34:  
(Start: 13 @26745 has 30 MA's), (36, 26934),

Gene: TieDye\_36 Start: 27639, Stop: 27887, Start Num: 13  
Candidate Starts for TieDye\_36:  
(Start: 12 @27627 has 2 MA's), (Start: 13 @27639 has 30 MA's), (28, 27777), (29, 27780), (36, 27840),

Gene: Tokki\_39 Start: 30282, Stop: 30518, Start Num: 17  
Candidate Starts for Tokki\_39:  
(14, 30264), (Start: 17 @30282 has 65 MA's), (33, 30432), (37, 30471),

Gene: TonyStarch\_36 Start: 27744, Stop: 27992, Start Num: 13  
Candidate Starts for TonyStarch\_36:  
(Start: 12 @27732 has 2 MA's), (Start: 13 @27744 has 30 MA's), (28, 27882), (29, 27885), (36, 27945),

Gene: Tribby\_37 Start: 27633, Stop: 27854, Start Num: 17  
Candidate Starts for Tribby\_37:  
(Start: 17 @27633 has 65 MA's),

Gene: TrixiePhattel\_39 Start: 28923, Stop: 29162, Start Num: 17  
Candidate Starts for TrixiePhattel\_39:  
(15, 28908), (Start: 17 @28923 has 65 MA's), (37, 29112),

Gene: Truckee\_36 Start: 30146, Stop: 30382, Start Num: 17  
Candidate Starts for Truckee\_36:  
(Start: 17 @30146 has 65 MA's), (37, 30335),

Gene: Trustiboi\_39 Start: 30978, Stop: 31220, Start Num: 17  
Candidate Starts for Trustiboi\_39:  
(11, 30942), (Start: 17 @30978 has 65 MA's), (25, 31062), (37, 31167), (38, 31206), (40, 31215),

Gene: Uzumaki\_36 Start: 29214, Stop: 29453, Start Num: 17  
Candidate Starts for Uzumaki\_36:

(7, 29079), (10, 29166), (15, 29199), (Start: 17 @29214 has 65 MA's), (23, 29292), (36, 29394), (37, 29403),

Gene: Xenomorph\_34 Start: 27589, Stop: 27810, Start Num: 17

Candidate Starts for Xenomorph\_34:

(Start: 17 @27589 has 65 MA's),

Gene: Zeina\_38 Start: 29069, Stop: 29308, Start Num: 17

Candidate Starts for Zeina\_38:

(7, 28934), (10, 29021), (15, 29054), (Start: 17 @29069 has 65 MA's), (23, 29147), (36, 29249), (37, 29258),

Gene: Zippen\_41 Start: 31377, Stop: 31604, Start Num: 17

Candidate Starts for Zippen\_41:

(Start: 17 @31377 has 65 MA's), (19, 31380),