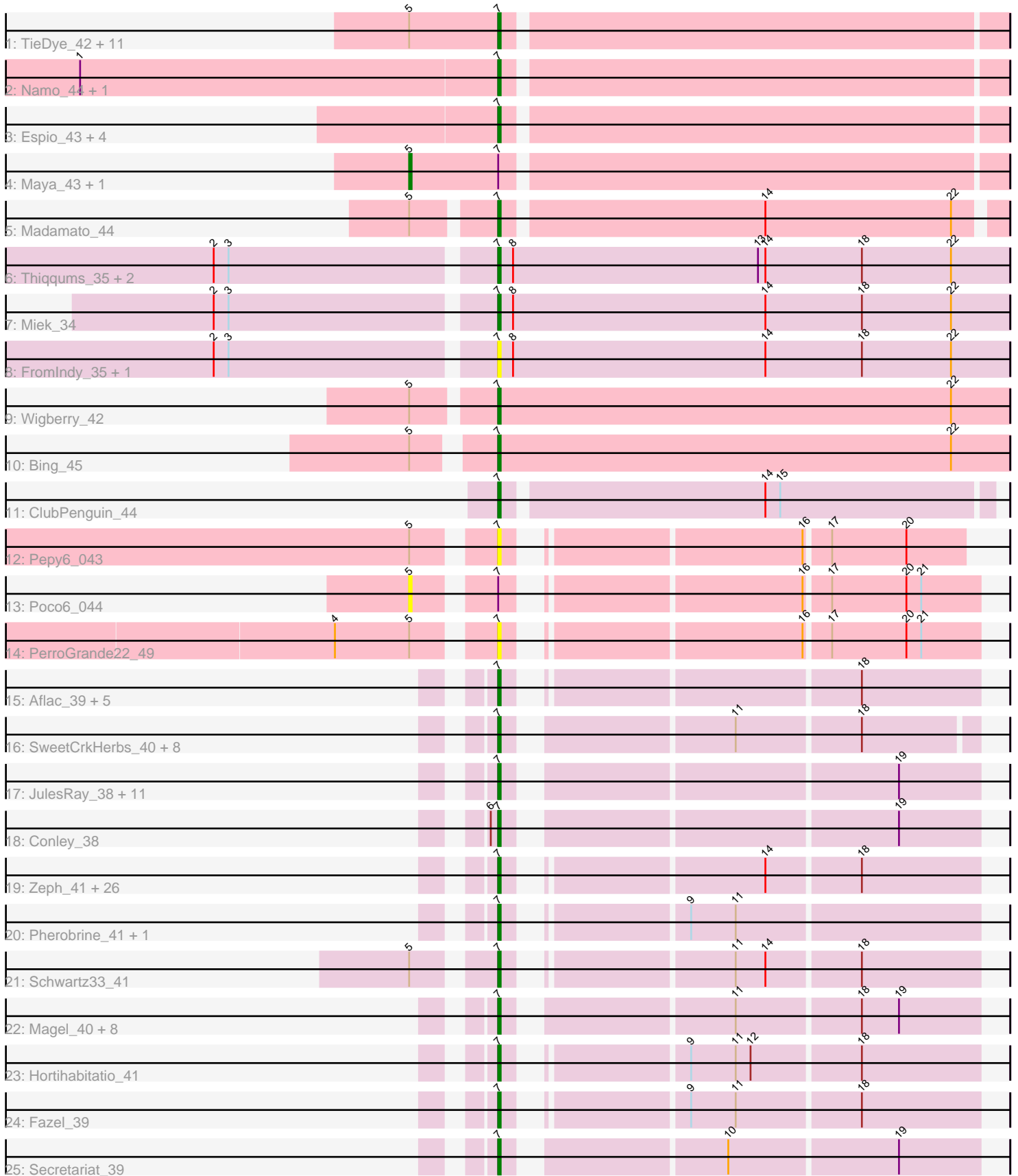


Pham 311415



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 311415 Report

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

Pham number 311415 has 104 members, 19 are drafts.

Phages represented in each track:

- Track 1 : TieDye\_42, IceWarrior\_42, Hoshi\_43, Indigenous\_43, CherryBlossom\_43, Esketit\_43, TaidaOne\_43, FidgetOrca\_43, HazuAndZazu\_42, OlympicHelado\_43, Spectropatronm\_43, TonyStarch\_42
- Track 2 : Namu\_44, Rima\_44
- Track 3 : Espio\_43, Popy\_43, DrGrey\_42, Soshi\_42, FrodoSwaggins\_43
- Track 4 : Maya\_43, Jaylociraptor\_43
- Track 5 : Madamato\_44
- Track 6 : Thiqqums\_35, Rainydai\_35, CricKo\_35
- Track 7 : Miek\_34
- Track 8 : FromIndy\_35, Regigigas\_36
- Track 9 : Wigberry\_42
- Track 10 : Bing\_45
- Track 11 : ClubPenguin\_44
- Track 12 : Pepy6\_043
- Track 13 : Poco6\_044
- Track 14 : PerroGrande22\_49
- Track 15 : Aflac\_39, Jodelie19\_41, OlgasClover\_40, TenaciousP\_40, Figliar\_40, MajinBuu\_40
- Track 16 : SweetCrkHerbs\_40, Aloe25\_43, Gusicorn\_40, ShaggyRogers\_41, Rickmore\_37, BetterYeti\_40, Perkunas\_40, PestoPenguin\_44, Talon44\_40
- Track 17 : JulesRay\_38, Dancer\_38, Tairn4Wing\_41, FortCran\_38, Bugg\_39, Avazak\_39, Artorias\_38, Trufflozitus\_39, Petite\_40, Captrips\_38, ChickyNuggy\_40, Football\_40
- Track 18 : Conley\_38
- Track 19 : Zeph\_41, Runhaar\_40, Tonaltzin\_41, AlainaMarie\_39, Hydrus\_41, Phepper\_40, Nithya\_39, CWormy\_39, Duffington\_38, Chickenjars\_39, Dialga\_41, Luthien\_41, Citrus\_39, Madvan\_40, EndAve\_40, Untouchable\_40, Nadmeg\_41, Demure\_38, Eddiemania\_41, ArtetaBall\_41, Vardy\_40, Glintora\_41, BluerMoon\_39, Burley\_40, Kenosha\_40, Arataki\_39, Crocheter\_40
- Track 20 : Pherobrine\_41, Mysticmoon\_40
- Track 21 : Schwartz33\_41
- Track 22 : Magel\_40, Copybara\_39, Tanis\_39, Gill\_39, Gravy\_38, Odesza\_38, Kerry\_38, Roney\_39, NoPickles\_38
- Track 23 : Hortihabitatio\_41
- Track 24 : Fazel\_39
- Track 25 : Secretariat\_39

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

The start number called the most often in the published annotations is 7, it was called in 83 of the 85 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aflac\_39, AlainaMarie\_39, Aloe25\_43, Arataki\_39, ArtetaBall\_41, Artorias\_38, Avazak\_39, BetterYeti\_40, Bing\_45, BluerMoon\_39, Bugg\_39, Burley\_40, CWormy\_39, Captrips\_38, Copybara\_39, CherryBlossom\_43, ChickyNugget\_40, Chickenjars\_39, Citrus\_39, ClubPenguin\_44, Conley\_38, CricKo\_35, Crocheter\_40, Dancer\_38, Demure\_38, Dialga\_41, DrGrey\_42, Duffington\_38, Eddiemania\_41, EndAve\_40, Esketit\_43, Espio\_43, Fazel\_39, FidgetOrca\_43, Figliar\_40, Football\_40, FortCran\_38, FrodoSwaggins\_43, FromIndy\_35, Gill\_39, Glintora\_41, Gravy\_38, Gusicorn\_40, HazuAndZazu\_42, Hortihabitatio\_41, Hoshi\_43, Hydrus\_41, IceWarrior\_42, Indigenous\_43, Jodelie19\_41, JulesRay\_38, Kenosha\_40, Kerry\_38, Luthien\_41, Madamato\_44, Madvan\_40, Magel\_40, MajinBuu\_40, Miek\_34, Mysticmoon\_40, Nadmeg\_41, Namor\_44, Nithya\_39, NoPickles\_38, Odesza\_38, OlgasClover\_40, OlympicHelado\_43, Pepy6\_043, Perkunas\_40, PerroGrande22\_49, PestoPenguin\_44, Petit\_40, Phepper\_40, Pherobrine\_41, Popy\_43, Rainydai\_35, Regigigas\_36, Rickmore\_37, Rima\_44, Roney\_39, Runhaar\_40, Schwartz33\_41, Secretariat\_39, ShaggyRogers\_41, Soshi\_42, Spectropatronm\_43, SweetCrkHerbs\_40, TaidaOne\_43, Tairn4Wing\_41, Talon44\_40, Tanis\_39, TenaciousP\_40, Thiqqums\_35, TieDye\_42, Tonaltzin\_41, TonyStarch\_42, Trufflozitus\_39, Untouchable\_40, Vardy\_40, Wigberry\_42, Zeph\_41,

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

- Jaylociraptor\_43, Maya\_43, POCO6\_044,

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

- 

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

Start 5:

- Found in 21 of 104 ( 20.2% ) of genes in pham
- Manual Annotations of this start: 2 of 85
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Jaylociraptor\_43 (BI1), Maya\_43 (BI1), POCO6\_044 (CC),

Start 7:

- Found in 104 of 104 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 83 of 85
- Called 97.1% of time when present
- Phage (with cluster) where this start called: Aflac\_39 (DJ), AlainaMarie\_39 (DJ), Aloe25\_43 (DJ), Arataki\_39 (DJ), ArtetaBall\_41 (DJ), Artorias\_38 (DJ), Avazak\_39 (DJ), BetterYeti\_40 (DJ), Bing\_45 (BI5), BluerMoon\_39 (DJ), Bugg\_39 (DJ), Burley\_40 (DJ), CWormy\_39 (DJ), Captrips\_38 (DJ), Copybara\_39 (DJ), CherryBlossom\_43 (BI1), ChickyNugget\_40 (DJ), Chickenjars\_39 (DJ), Citrus\_39 (DJ), ClubPenguin\_44 (BI7), Conley\_38 (DJ), CricKo\_35 (BI4), Crocheter\_40 (DJ),

Dancer\_38 (DJ), Demure\_38 (DJ), Dialga\_41 (DJ), DrGrey\_42 (BI1), Duffington\_38 (DJ), Eddiemania\_41 (DJ), EndAve\_40 (DJ), Esketit\_43 (BI1), Espio\_43 (BI1), Fazel\_39 (DJ), FidgetOrca\_43 (BI1), Figliar\_40 (DJ), Football\_40 (DJ), FortCran\_38 (DJ), FrodoSwaggins\_43 (BI1), FromIndy\_35 (BI4), Gill\_39 (DJ), Glintora\_41 (DJ), Gravy\_38 (DJ), Gusicorn\_40 (DJ), HazuAndZazu\_42 (BI1), Hortihabitatio\_41 (DJ), Hoshi\_43 (BI1), Hydrus\_41 (DJ), IceWarrior\_42 (BI1), Indigenous\_43 (BI1), Jodelie19\_41 (DJ), JulesRay\_38 (DJ), Kenosha\_40 (DJ), Kerry\_38 (DJ), Luthien\_41 (DJ), Madamato\_44 (BI1), Madvan\_40 (DJ), Magel\_40 (DJ), MajinBuu\_40 (DJ), Miek\_34 (BI4), Mysticmoon\_40 (DJ), Nadmeg\_41 (DJ), Namu\_44 (BI1), Nithya\_39 (DJ), NoPickles\_38 (DJ), Odesza\_38 (DJ), OlgasClover\_40 (DJ), OlympicHelado\_43 (BI1), Pepy6\_043 (CC), Perkunas\_40 (DJ), PerroGrande22\_49 (CC), PestoPenguin\_44 (DJ), Petite\_40 (DJ), Phepper\_40 (DJ), Pherobrine\_41 (DJ), Popy\_43 (BI1), Rainydai\_35 (BI4), Regigigas\_36 (BI4), Rickmore\_37 (DJ), Rima\_44 (BI1), Roney\_39 (DJ), Runhaar\_40 (DJ), Schwartz33\_41 (DJ), Secretariat\_39 (DJ), ShaggyRogers\_41 (DJ), Soshi\_42 (BI1), Spectropatronm\_43 (BI1), SweetCrkHerbs\_40 (DJ), TaidaOne\_43 (BI1), Tairn4Wing\_41 (DJ), Talon44\_40 (DJ), Tanis\_39 (DJ), TenaciousP\_40 (DJ), Thiqqums\_35 (BI4), TieDye\_42 (BI1), Tonaltzin\_41 (DJ), TonyStarch\_42 (BI1), Trufflozitus\_39 (DJ), Untouchable\_40 (DJ), Vardy\_40 (DJ), Wigberry\_42 (BI5), Zeph\_41 (DJ),

### **Summary by clusters:**

There are 6 clusters represented in this pham: DJ, CC, BI7, BI4, BI5, BI1,

Info for manual annotations of cluster BI1:

- Start number 5 was manually annotated 2 times for cluster BI1.
- Start number 7 was manually annotated 20 times for cluster BI1.

Info for manual annotations of cluster BI4:

- Start number 7 was manually annotated 4 times for cluster BI4.

Info for manual annotations of cluster BI5:

- Start number 7 was manually annotated 2 times for cluster BI5.

Info for manual annotations of cluster BI7:

- Start number 7 was manually annotated 1 time for cluster BI7.

Info for manual annotations of cluster DJ:

- Start number 7 was manually annotated 56 times for cluster DJ.

### **Gene Information:**

Gene: Aflac\_39 Start: 32676, Stop: 32849, Start Num: 7

Candidate Starts for Aflac\_39:

(Start: 7 @32676 has 83 MA's), (18, 32802),

Gene: AlainaMarie\_39 Start: 32655, Stop: 32828, Start Num: 7

Candidate Starts for AlainaMarie\_39:

(Start: 7 @32655 has 83 MA's), (14, 32745), (18, 32781),

Gene: Aloe25\_43 Start: 32722, Stop: 32895, Start Num: 7  
Candidate Starts for Aloe25\_43:  
(Start: 7 @32722 has 83 MA's), (11, 32800), (18, 32848),

Gene: Arataki\_39 Start: 32015, Stop: 32188, Start Num: 7  
Candidate Starts for Arataki\_39:  
(Start: 7 @32015 has 83 MA's), (14, 32105), (18, 32141),

Gene: ArtetaBall\_41 Start: 33215, Stop: 33388, Start Num: 7  
Candidate Starts for ArtetaBall\_41:  
(Start: 7 @33215 has 83 MA's), (14, 33305), (18, 33341),

Gene: Artorias\_38 Start: 30361, Stop: 30537, Start Num: 7  
Candidate Starts for Artorias\_38:  
(Start: 7 @30361 has 83 MA's), (19, 30505),

Gene: Avazak\_39 Start: 30729, Stop: 30905, Start Num: 7  
Candidate Starts for Avazak\_39:  
(Start: 7 @30729 has 83 MA's), (19, 30873),

Gene: BetterYeti\_40 Start: 32721, Stop: 32894, Start Num: 7  
Candidate Starts for BetterYeti\_40:  
(Start: 7 @32721 has 83 MA's), (11, 32799), (18, 32847),

Gene: Bing\_45 Start: 30261, Stop: 30467, Start Num: 7  
Candidate Starts for Bing\_45:  
(Start: 5 @30234 has 2 MA's), (Start: 7 @30261 has 83 MA's), (22, 30444),

Gene: BluerMoon\_39 Start: 32673, Stop: 32846, Start Num: 7  
Candidate Starts for BluerMoon\_39:  
(Start: 7 @32673 has 83 MA's), (14, 32763), (18, 32799),

Gene: Bugg\_39 Start: 30408, Stop: 30584, Start Num: 7  
Candidate Starts for Bugg\_39:  
(Start: 7 @30408 has 83 MA's), (19, 30552),

Gene: Burley\_40 Start: 32679, Stop: 32852, Start Num: 7  
Candidate Starts for Burley\_40:  
(Start: 7 @32679 has 83 MA's), (14, 32769), (18, 32805),

Gene: CWormy\_39 Start: 32380, Stop: 32553, Start Num: 7  
Candidate Starts for CWormy\_39:  
(Start: 7 @32380 has 83 MA's), (14, 32470), (18, 32506),

Gene: Captrips\_38 Start: 30401, Stop: 30577, Start Num: 7  
Candidate Starts for Captrips\_38:  
(Start: 7 @30401 has 83 MA's), (19, 30545),

Gene: Capybara\_39 Start: 30791, Stop: 30967, Start Num: 7  
Candidate Starts for Capybara\_39:  
(Start: 7 @30791 has 83 MA's), (11, 30872), (18, 30920), (19, 30935),

Gene: CherryBlossom\_43 Start: 29659, Stop: 29856, Start Num: 7

Candidate Starts for CherryBlossom\_43:  
(Start: 5 @29623 has 2 MA's), (Start: 7 @29659 has 83 MA's),

Gene: ChickyNuggy\_40 Start: 30470, Stop: 30646, Start Num: 7  
Candidate Starts for ChickyNuggy\_40:  
(Start: 7 @30470 has 83 MA's), (19, 30614),

Gene: Chikenjars\_39 Start: 32666, Stop: 32839, Start Num: 7  
Candidate Starts for Chikenjars\_39:  
(Start: 7 @32666 has 83 MA's), (14, 32756), (18, 32792),

Gene: Citrus\_39 Start: 32942, Stop: 33115, Start Num: 7  
Candidate Starts for Citrus\_39:  
(Start: 7 @32942 has 83 MA's), (14, 33032), (18, 33068),

Gene: ClubPenguin\_44 Start: 29840, Stop: 30031, Start Num: 7  
Candidate Starts for ClubPenguin\_44:  
(Start: 7 @29840 has 83 MA's), (14, 29942), (15, 29948),

Gene: Conley\_38 Start: 31332, Stop: 31508, Start Num: 7  
Candidate Starts for Conley\_38:  
(6, 31329), (Start: 7 @31332 has 83 MA's), (19, 31476),

Gene: CricKo\_35 Start: 27119, Stop: 27325, Start Num: 7  
Candidate Starts for CricKo\_35:  
(2, 27011), (3, 27017), (Start: 7 @27119 has 83 MA's), (8, 27125), (13, 27224), (14, 27227), (18, 27266), (22, 27302),

Gene: Crocheter\_40 Start: 33073, Stop: 33246, Start Num: 7  
Candidate Starts for Crocheter\_40:  
(Start: 7 @33073 has 83 MA's), (14, 33163), (18, 33199),

Gene: Dancer\_38 Start: 30101, Stop: 30277, Start Num: 7  
Candidate Starts for Dancer\_38:  
(Start: 7 @30101 has 83 MA's), (19, 30245),

Gene: Demure\_38 Start: 32015, Stop: 32188, Start Num: 7  
Candidate Starts for Demure\_38:  
(Start: 7 @32015 has 83 MA's), (14, 32105), (18, 32141),

Gene: Dialga\_41 Start: 33234, Stop: 33407, Start Num: 7  
Candidate Starts for Dialga\_41:  
(Start: 7 @33234 has 83 MA's), (14, 33324), (18, 33360),

Gene: DrGrey\_42 Start: 29999, Stop: 30196, Start Num: 7  
Candidate Starts for DrGrey\_42:  
(Start: 7 @29999 has 83 MA's),

Gene: Duffington\_38 Start: 32328, Stop: 32501, Start Num: 7  
Candidate Starts for Duffington\_38:  
(Start: 7 @32328 has 83 MA's), (14, 32418), (18, 32454),

Gene: Eddiemania\_41 Start: 33582, Stop: 33755, Start Num: 7

Candidate Starts for Eddiemania\_41:  
(Start: 7 @33582 has 83 MA's), (14, 33672), (18, 33708),

Gene: EndAve\_40 Start: 32835, Stop: 33008, Start Num: 7  
Candidate Starts for EndAve\_40:  
(Start: 7 @32835 has 83 MA's), (14, 32925), (18, 32961),

Gene: Esketit\_43 Start: 29736, Stop: 29933, Start Num: 7  
Candidate Starts for Esketit\_43:  
(Start: 5 @29700 has 2 MA's), (Start: 7 @29736 has 83 MA's),

Gene: Espio\_43 Start: 30394, Stop: 30591, Start Num: 7  
Candidate Starts for Espio\_43:  
(Start: 7 @30394 has 83 MA's),

Gene: Fazel\_39 Start: 32311, Stop: 32484, Start Num: 7  
Candidate Starts for Fazel\_39:  
(Start: 7 @32311 has 83 MA's), (9, 32371), (11, 32389), (18, 32437),

Gene: FidgetOrca\_43 Start: 29741, Stop: 29938, Start Num: 7  
Candidate Starts for FidgetOrca\_43:  
(Start: 5 @29705 has 2 MA's), (Start: 7 @29741 has 83 MA's),

Gene: Figliar\_40 Start: 32982, Stop: 33155, Start Num: 7  
Candidate Starts for Figliar\_40:  
(Start: 7 @32982 has 83 MA's), (18, 33108),

Gene: Football\_40 Start: 30107, Stop: 30283, Start Num: 7  
Candidate Starts for Football\_40:  
(Start: 7 @30107 has 83 MA's), (19, 30251),

Gene: FortCran\_38 Start: 30361, Stop: 30537, Start Num: 7  
Candidate Starts for FortCran\_38:  
(Start: 7 @30361 has 83 MA's), (19, 30505),

Gene: FrodoSwaggins\_43 Start: 30393, Stop: 30590, Start Num: 7  
Candidate Starts for FrodoSwaggins\_43:  
(Start: 7 @30393 has 83 MA's),

Gene: FromIndy\_35 Start: 26723, Stop: 26929, Start Num: 7  
Candidate Starts for FromIndy\_35:  
(2, 26615), (3, 26621), (Start: 7 @26723 has 83 MA's), (8, 26729), (14, 26831), (18, 26870), (22, 26906),

Gene: Gill\_39 Start: 30808, Stop: 30984, Start Num: 7  
Candidate Starts for Gill\_39:  
(Start: 7 @30808 has 83 MA's), (11, 30889), (18, 30937), (19, 30952),

Gene: Glintora\_41 Start: 33299, Stop: 33472, Start Num: 7  
Candidate Starts for Glintora\_41:  
(Start: 7 @33299 has 83 MA's), (14, 33389), (18, 33425),

Gene: Gravy\_38 Start: 30481, Stop: 30657, Start Num: 7

Candidate Starts for Gravy\_38:  
(Start: 7 @30481 has 83 MA's), (11, 30562), (18, 30610), (19, 30625),

Gene: Gusicorn\_40 Start: 32722, Stop: 32895, Start Num: 7  
Candidate Starts for Gusicorn\_40:  
(Start: 7 @32722 has 83 MA's), (11, 32800), (18, 32848),

Gene: HazuAndZazu\_42 Start: 29995, Stop: 30192, Start Num: 7  
Candidate Starts for HazuAndZazu\_42:  
(Start: 5 @29959 has 2 MA's), (Start: 7 @29995 has 83 MA's),

Gene: Hortihabitatio\_41 Start: 32758, Stop: 32931, Start Num: 7  
Candidate Starts for Hortihabitatio\_41:  
(Start: 7 @32758 has 83 MA's), (9, 32818), (11, 32836), (12, 32842), (18, 32884),

Gene: Hoshi\_43 Start: 29736, Stop: 29933, Start Num: 7  
Candidate Starts for Hoshi\_43:  
(Start: 5 @29700 has 2 MA's), (Start: 7 @29736 has 83 MA's),

Gene: Hydrus\_41 Start: 33591, Stop: 33764, Start Num: 7  
Candidate Starts for Hydrus\_41:  
(Start: 7 @33591 has 83 MA's), (14, 33681), (18, 33717),

Gene: IceWarrior\_42 Start: 29436, Stop: 29633, Start Num: 7  
Candidate Starts for IceWarrior\_42:  
(Start: 5 @29400 has 2 MA's), (Start: 7 @29436 has 83 MA's),

Gene: Indigenous\_43 Start: 29736, Stop: 29933, Start Num: 7  
Candidate Starts for Indigenous\_43:  
(Start: 5 @29700 has 2 MA's), (Start: 7 @29736 has 83 MA's),

Gene: Jaylociraptor\_43 Start: 29700, Stop: 29933, Start Num: 5  
Candidate Starts for Jaylociraptor\_43:  
(Start: 5 @29700 has 2 MA's), (Start: 7 @29736 has 83 MA's),

Gene: Jodelie19\_41 Start: 34437, Stop: 34610, Start Num: 7  
Candidate Starts for Jodelie19\_41:  
(Start: 7 @34437 has 83 MA's), (18, 34563),

Gene: JulesRay\_38 Start: 30395, Stop: 30571, Start Num: 7  
Candidate Starts for JulesRay\_38:  
(Start: 7 @30395 has 83 MA's), (19, 30539),

Gene: Kenosha\_40 Start: 33483, Stop: 33656, Start Num: 7  
Candidate Starts for Kenosha\_40:  
(Start: 7 @33483 has 83 MA's), (14, 33573), (18, 33609),

Gene: Kerry\_38 Start: 30481, Stop: 30657, Start Num: 7  
Candidate Starts for Kerry\_38:  
(Start: 7 @30481 has 83 MA's), (11, 30562), (18, 30610), (19, 30625),

Gene: Luthien\_41 Start: 32833, Stop: 33006, Start Num: 7  
Candidate Starts for Luthien\_41:

(Start: 7 @32833 has 83 MA's), (14, 32923), (18, 32959),

Gene: Madamoto\_44 Start: 29907, Stop: 30101, Start Num: 7

Candidate Starts for Madamoto\_44:

(Start: 5 @29877 has 2 MA's), (Start: 7 @29907 has 83 MA's), (14, 30009), (22, 30084),

Gene: Madvan\_40 Start: 32714, Stop: 32887, Start Num: 7

Candidate Starts for Madvan\_40:

(Start: 7 @32714 has 83 MA's), (14, 32804), (18, 32840),

Gene: Magel\_40 Start: 30712, Stop: 30888, Start Num: 7

Candidate Starts for Magel\_40:

(Start: 7 @30712 has 83 MA's), (11, 30793), (18, 30841), (19, 30856),

Gene: MajinBuu\_40 Start: 33009, Stop: 33182, Start Num: 7

Candidate Starts for MajinBuu\_40:

(Start: 7 @33009 has 83 MA's), (18, 33135),

Gene: Maya\_43 Start: 29714, Stop: 29947, Start Num: 5

Candidate Starts for Maya\_43:

(Start: 5 @29714 has 2 MA's), (Start: 7 @29750 has 83 MA's),

Gene: Miek\_34 Start: 26735, Stop: 26941, Start Num: 7

Candidate Starts for Miek\_34:

(2, 26627), (3, 26633), (Start: 7 @26735 has 83 MA's), (8, 26741), (14, 26843), (18, 26882), (22, 26918),

Gene: Mysticmoon\_40 Start: 33056, Stop: 33229, Start Num: 7

Candidate Starts for Mysticmoon\_40:

(Start: 7 @33056 has 83 MA's), (9, 33116), (11, 33134),

Gene: Nadmeg\_41 Start: 34146, Stop: 34319, Start Num: 7

Candidate Starts for Nadmeg\_41:

(Start: 7 @34146 has 83 MA's), (14, 34236), (18, 34272),

Gene: Namo\_44 Start: 30082, Stop: 30279, Start Num: 7

Candidate Starts for Namo\_44:

(1, 29914), (Start: 7 @30082 has 83 MA's),

Gene: Nithya\_39 Start: 32656, Stop: 32829, Start Num: 7

Candidate Starts for Nithya\_39:

(Start: 7 @32656 has 83 MA's), (14, 32746), (18, 32782),

Gene: NoPickles\_38 Start: 30113, Stop: 30289, Start Num: 7

Candidate Starts for NoPickles\_38:

(Start: 7 @30113 has 83 MA's), (11, 30194), (18, 30242), (19, 30257),

Gene: Odesza\_38 Start: 30482, Stop: 30658, Start Num: 7

Candidate Starts for Odesza\_38:

(Start: 7 @30482 has 83 MA's), (11, 30563), (18, 30611), (19, 30626),

Gene: OlgasClover\_40 Start: 33721, Stop: 33894, Start Num: 7

Candidate Starts for OlgasClover\_40:

(Start: 7 @33721 has 83 MA's), (18, 33847),

Gene: OlympicHelado\_43 Start: 29757, Stop: 29954, Start Num: 7

Candidate Starts for OlympicHelado\_43:

(Start: 5 @29721 has 2 MA's), (Start: 7 @29757 has 83 MA's),

Gene: Pepy6\_043 Start: 39982, Stop: 40149, Start Num: 7

Candidate Starts for Pepy6\_043:

(Start: 5 @39955 has 2 MA's), (Start: 7 @39982 has 83 MA's), (16, 40087), (17, 40096), (20, 40126),

Gene: Perkunas\_40 Start: 30763, Stop: 30936, Start Num: 7

Candidate Starts for Perkunas\_40:

(Start: 7 @30763 has 83 MA's), (11, 30844), (18, 30892),

Gene: PerroGrande22\_49 Start: 42016, Stop: 42189, Start Num: 7

Candidate Starts for PerroGrande22\_49:

(4, 41959), (Start: 5 @41989 has 2 MA's), (Start: 7 @42016 has 83 MA's), (16, 42121), (17, 42130), (20, 42160), (21, 42166),

Gene: PestoPenguin\_44 Start: 32722, Stop: 32895, Start Num: 7

Candidate Starts for PestoPenguin\_44:

(Start: 7 @32722 has 83 MA's), (11, 32800), (18, 32848),

Gene: Petite\_40 Start: 31866, Stop: 32042, Start Num: 7

Candidate Starts for Petite\_40:

(Start: 7 @31866 has 83 MA's), (19, 32010),

Gene: Phepper\_40 Start: 32713, Stop: 32886, Start Num: 7

Candidate Starts for Phepper\_40:

(Start: 7 @32713 has 83 MA's), (14, 32803), (18, 32839),

Gene: Pherobrine\_41 Start: 33357, Stop: 33530, Start Num: 7

Candidate Starts for Pherobrine\_41:

(Start: 7 @33357 has 83 MA's), (9, 33417), (11, 33435),

Gene: Poco6\_044 Start: 42042, Stop: 42242, Start Num: 5

Candidate Starts for Poco6\_044:

(Start: 5 @42042 has 2 MA's), (Start: 7 @42069 has 83 MA's), (16, 42174), (17, 42183), (20, 42213), (21, 42219),

Gene: Popy\_43 Start: 30393, Stop: 30590, Start Num: 7

Candidate Starts for Popy\_43:

(Start: 7 @30393 has 83 MA's),

Gene: Rainydai\_35 Start: 27119, Stop: 27325, Start Num: 7

Candidate Starts for Rainydai\_35:

(2, 27011), (3, 27017), (Start: 7 @27119 has 83 MA's), (8, 27125), (13, 27224), (14, 27227), (18, 27266), (22, 27302),

Gene: Regigigas\_36 Start: 27119, Stop: 27325, Start Num: 7

Candidate Starts for Regigigas\_36:

(2, 27011), (3, 27017), (Start: 7 @27119 has 83 MA's), (8, 27125), (14, 27227), (18, 27266), (22, 27302),

Gene: Rickmore\_37 Start: 30767, Stop: 30940, Start Num: 7

Candidate Starts for Rickmore\_37:

(Start: 7 @30767 has 83 MA's), (11, 30845), (18, 30893),

Gene: Rima\_44 Start: 30082, Stop: 30279, Start Num: 7

Candidate Starts for Rima\_44:

(1, 29914), (Start: 7 @30082 has 83 MA's),

Gene: Roney\_39 Start: 30803, Stop: 30979, Start Num: 7

Candidate Starts for Roney\_39:

(Start: 7 @30803 has 83 MA's), (11, 30884), (18, 30932), (19, 30947),

Gene: Runhaar\_40 Start: 32714, Stop: 32887, Start Num: 7

Candidate Starts for Runhaar\_40:

(Start: 7 @32714 has 83 MA's), (14, 32804), (18, 32840),

Gene: Schwartz33\_41 Start: 33151, Stop: 33324, Start Num: 7

Candidate Starts for Schwartz33\_41:

(Start: 5 @33124 has 2 MA's), (Start: 7 @33151 has 83 MA's), (11, 33229), (14, 33241), (18, 33277),

Gene: Secretariat\_39 Start: 32092, Stop: 32268, Start Num: 7

Candidate Starts for Secretariat\_39:

(Start: 7 @32092 has 83 MA's), (10, 32170), (19, 32236),

Gene: ShaggyRogers\_41 Start: 32720, Stop: 32893, Start Num: 7

Candidate Starts for ShaggyRogers\_41:

(Start: 7 @32720 has 83 MA's), (11, 32798), (18, 32846),

Gene: Soshi\_42 Start: 30005, Stop: 30202, Start Num: 7

Candidate Starts for Soshi\_42:

(Start: 7 @30005 has 83 MA's),

Gene: Spectropatronm\_43 Start: 29736, Stop: 29933, Start Num: 7

Candidate Starts for Spectropatronm\_43:

(Start: 5 @29700 has 2 MA's), (Start: 7 @29736 has 83 MA's),

Gene: SweetCrkHerbs\_40 Start: 30436, Stop: 30609, Start Num: 7

Candidate Starts for SweetCrkHerbs\_40:

(Start: 7 @30436 has 83 MA's), (11, 30517), (18, 30565),

Gene: TaidaOne\_43 Start: 30290, Stop: 30487, Start Num: 7

Candidate Starts for TaidaOne\_43:

(Start: 5 @30254 has 2 MA's), (Start: 7 @30290 has 83 MA's),

Gene: Tairn4Wing\_41 Start: 30751, Stop: 30927, Start Num: 7

Candidate Starts for Tairn4Wing\_41:

(Start: 7 @30751 has 83 MA's), (19, 30895),

Gene: Talon44\_40 Start: 30778, Stop: 30951, Start Num: 7

Candidate Starts for Talon44\_40:

(Start: 7 @30778 has 83 MA's), (11, 30859), (18, 30907),

Gene: Tanis\_39 Start: 30654, Stop: 30830, Start Num: 7  
Candidate Starts for Tanis\_39:  
(Start: 7 @30654 has 83 MA's), (11, 30735), (18, 30783), (19, 30798),

Gene: TenaciousP\_40 Start: 34101, Stop: 34274, Start Num: 7  
Candidate Starts for TenaciousP\_40:  
(Start: 7 @34101 has 83 MA's), (18, 34227),

Gene: Thiqqums\_35 Start: 27119, Stop: 27325, Start Num: 7  
Candidate Starts for Thiqqums\_35:  
(2, 27011), (3, 27017), (Start: 7 @27119 has 83 MA's), (8, 27125), (13, 27224), (14, 27227), (18, 27266), (22, 27302),

Gene: TieDye\_42 Start: 29334, Stop: 29531, Start Num: 7  
Candidate Starts for TieDye\_42:  
(Start: 5 @29298 has 2 MA's), (Start: 7 @29334 has 83 MA's),

Gene: Tonaltzin\_41 Start: 32671, Stop: 32844, Start Num: 7  
Candidate Starts for Tonaltzin\_41:  
(Start: 7 @32671 has 83 MA's), (14, 32761), (18, 32797),

Gene: TonyStarch\_42 Start: 29439, Stop: 29636, Start Num: 7  
Candidate Starts for TonyStarch\_42:  
(Start: 5 @29403 has 2 MA's), (Start: 7 @29439 has 83 MA's),

Gene: Trufflozitus\_39 Start: 30752, Stop: 30928, Start Num: 7  
Candidate Starts for Trufflozitus\_39:  
(Start: 7 @30752 has 83 MA's), (19, 30896),

Gene: Untouchable\_40 Start: 33073, Stop: 33246, Start Num: 7  
Candidate Starts for Untouchable\_40:  
(Start: 7 @33073 has 83 MA's), (14, 33163), (18, 33199),

Gene: Vardy\_40 Start: 32680, Stop: 32853, Start Num: 7  
Candidate Starts for Vardy\_40:  
(Start: 7 @32680 has 83 MA's), (14, 32770), (18, 32806),

Gene: Wigberry\_42 Start: 28830, Stop: 29036, Start Num: 7  
Candidate Starts for Wigberry\_42:  
(Start: 5 @28800 has 2 MA's), (Start: 7 @28830 has 83 MA's), (22, 29013),

Gene: Zeph\_41 Start: 33571, Stop: 33744, Start Num: 7  
Candidate Starts for Zeph\_41:  
(Start: 7 @33571 has 83 MA's), (14, 33661), (18, 33697),