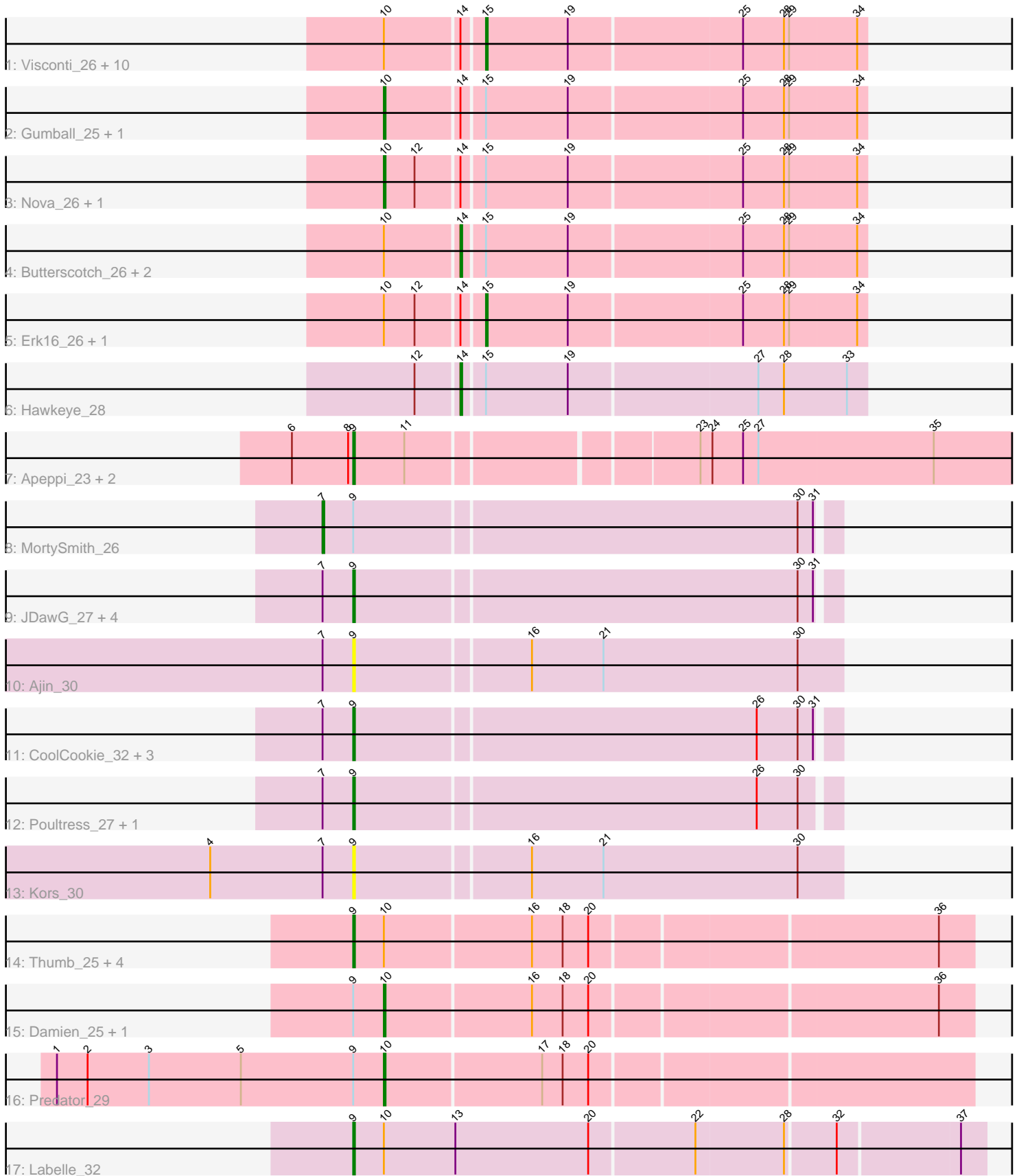


# Pham 157961



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 157961 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157961 has 47 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Visconti\_26, KandZ\_26, WaldoWhy\_27, Chill\_27, Troll4\_26, Helpful\_27, Prager\_26, Penelope2018\_26, BigMama\_24, Thoth\_26, Mopey\_26
- Track 2 : Gumball\_25, Giuseppe\_26
- Track 3 : Nova\_26, SirHarley\_25
- Track 4 : Butterscotch\_26, Adjutor\_27, PLOT\_27
- Track 5 : Erk16\_26, Delton\_26
- Track 6 : Hawkeye\_28
- Track 7 : Apeppi\_23, LuckyLeo\_25, Tillicus\_26
- Track 8 : MortySmith\_26
- Track 9 : JDawG\_27, Dauntless\_28, JingleBells\_27, Crestdrop\_28, Erudite\_27
- Track 10 : Ajin\_30
- Track 11 : CoolCookie\_32, Rachella\_28, OverHedge\_28, Pharpay\_28
- Track 12 : Poultruss\_27, Hager\_29
- Track 13 : Kors\_30
- Track 14 : Thumb\_25, Puissant\_24, Megatron06\_28, Beckerton\_25, Phreeze\_25
- Track 15 : Damien\_25, Cborch11\_26
- Track 16 : Predator\_29
- Track 17 : Labelle\_32

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

The start number called the most often in the published annotations is 15, it was called in 12 of the 33 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BigMama\_24, Chill\_27, Delton\_26, Erk16\_26, Helpful\_27, KandZ\_26, Mopey\_26, Penelope2018\_26, Prager\_26, Thoth\_26, Troll4\_26, Visconti\_26, WaldoWhy\_27,

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

- Adjutor\_27, Butterscotch\_26, Giuseppe\_26, Gumball\_25, Hawkeye\_28, Nova\_26, PLOT\_27, SirHarley\_25,

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

- Ajin\_30, Apeppi\_23, Beckerton\_25, Cborch11\_26, CoolCookie\_32, Crestdrop\_28, Damien\_25, Dauntless\_28, Erudite\_27, Hager\_29, JDawG\_27, JingleBells\_27, Kors\_30, Labelle\_32, LuckyLeo\_25, Megatron06\_28, MortySmith\_26, OverHedge\_28, Pharpay\_28, Phreeze\_25, Poultruss\_27, Predator\_29, Puissant\_24, Rachella\_28, Thumb\_25, Tillicus\_26,

### Summary by start number:

#### Start 7:

- Found in 14 of 47 ( 29.8% ) of genes in pham
- Manual Annotations of this start: 1 of 33
- Called 7.1% of time when present
- Phage (with cluster) where this start called: MortySmith\_26 (EF),

#### Start 9:

- Found in 26 of 47 ( 55.3% ) of genes in pham
- Manual Annotations of this start: 9 of 33
- Called 84.6% of time when present
- Phage (with cluster) where this start called: Ajin\_30 (EF), Apeppi\_23 (DV), Beckerton\_25 (H1), CoolCookie\_32 (EF), Crestdrop\_28 (EF), Dauntless\_28 (EF), Erudite\_27 (EF), Hager\_29 (EF), JDawG\_27 (EF), JingleBells\_27 (EF), Kors\_30 (EF), Labelle\_32 (U), LuckyLeo\_25 (DV), Megatron06\_28 (H1), OverHedge\_28 (EF), Pharpay\_28 (EF), Phreeze\_25 (H1), Poultruss\_27 (EF), Puissant\_24 (H1), Rachella\_28 (EF), Thumb\_25 (H1), Tillicus\_26 (DV),

#### Start 10:

- Found in 29 of 47 ( 61.7% ) of genes in pham
- Manual Annotations of this start: 7 of 33
- Called 24.1% of time when present
- Phage (with cluster) where this start called: Cborch11\_26 (H1), Damien\_25 (H1), Giuseppe\_26 (D1), Gumball\_25 (D1), Nova\_26 (D1), Predator\_29 (H1), SirHarley\_25 (D1),

#### Start 14:

- Found in 21 of 47 ( 44.7% ) of genes in pham
- Manual Annotations of this start: 4 of 33
- Called 19.0% of time when present
- Phage (with cluster) where this start called: Adjutor\_27 (D1), Butterscotch\_26 (D1), Hawkeye\_28 (D2), PLOT\_27 (D1),

#### Start 15:

- Found in 21 of 47 ( 44.7% ) of genes in pham
- Manual Annotations of this start: 12 of 33
- Called 61.9% of time when present
- Phage (with cluster) where this start called: BigMama\_24 (D1), Chill\_27 (D1), Delton\_26 (D1), Erk16\_26 (D1), Helpful\_27 (D1), KandZ\_26 (D1), Mopey\_26 (D1), Penelope2018\_26 (D1), Prager\_26 (D1), Thoth\_26 (D1), Troll4\_26 (D1), Visconti\_26 (D1), WaldoWhy\_27 (D1),

### Summary by clusters:

There are 6 clusters represented in this pham: EF, H1, U, DV, D2, D1,

Info for manual annotations of cluster D1:

- Start number 10 was manually annotated 4 times for cluster D1.
- Start number 14 was manually annotated 3 times for cluster D1.
- Start number 15 was manually annotated 12 times for cluster D1.

Info for manual annotations of cluster D2:

- Start number 14 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster DV:

- Start number 9 was manually annotated 1 time for cluster DV.

Info for manual annotations of cluster EF:

- Start number 7 was manually annotated 1 time for cluster EF.
- Start number 9 was manually annotated 4 times for cluster EF.

Info for manual annotations of cluster H1:

- Start number 9 was manually annotated 3 times for cluster H1.
- Start number 10 was manually annotated 3 times for cluster H1.

Info for manual annotations of cluster U:

- Start number 9 was manually annotated 1 time for cluster U.

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

Gene: Adjutor\_27 Start: 16090, Stop: 16320, Start Num: 14

Candidate Starts for Adjutor\_27:

(Start: 10 @16048 has 7 MA's), (Start: 14 @16090 has 4 MA's), (Start: 15 @16102 has 12 MA's), (19, 16150), (25, 16249), (28, 16273), (29, 16276), (34, 16315),

Gene: Ajin\_30 Start: 14515, Stop: 14796, Start Num: 9

Candidate Starts for Ajin\_30:

(Start: 7 @14497 has 1 MA's), (Start: 9 @14515 has 9 MA's), (16, 14614), (21, 14656), (30, 14770),

Gene: Apeppi\_23 Start: 16506, Stop: 16880, Start Num: 9

Candidate Starts for Apeppi\_23:

(6, 16470), (8, 16503), (Start: 9 @16506 has 9 MA's), (11, 16536), (23, 16695), (24, 16701), (25, 16719), (27, 16728), (35, 16830),

Gene: Beckerton\_25 Start: 16403, Stop: 16753, Start Num: 9

Candidate Starts for Beckerton\_25:

(Start: 9 @16403 has 9 MA's), (Start: 10 @16421 has 7 MA's), (16, 16505), (18, 16523), (20, 16538), (36, 16733),

Gene: BigMama\_24 Start: 16178, Stop: 16396, Start Num: 15

Candidate Starts for BigMama\_24:

(Start: 10 @16124 has 7 MA's), (Start: 14 @16166 has 4 MA's), (Start: 15 @16178 has 12 MA's), (19, 16226), (25, 16325), (28, 16349), (29, 16352), (34, 16391),

Gene: Butterscotch\_26 Start: 16150, Stop: 16380, Start Num: 14

Candidate Starts for Butterscotch\_26:

(Start: 10 @16108 has 7 MA's), (Start: 14 @16150 has 4 MA's), (Start: 15 @16162 has 12 MA's), (19, 16210), (25, 16309), (28, 16333), (29, 16336), (34, 16375),

Gene: Cborch11\_26 Start: 15883, Stop: 16215, Start Num: 10

Candidate Starts for Cborch11\_26:

(Start: 9 @15865 has 9 MA's), (Start: 10 @15883 has 7 MA's), (16, 15967), (18, 15985), (20, 16000), (36, 16195),

Gene: Chill\_27 Start: 16168, Stop: 16386, Start Num: 15

Candidate Starts for Chill\_27:

(Start: 10 @16114 has 7 MA's), (Start: 14 @16156 has 4 MA's), (Start: 15 @16168 has 12 MA's), (19, 16216), (25, 16315), (28, 16339), (29, 16342), (34, 16381),

Gene: CoolCookie\_32 Start: 14637, Stop: 14912, Start Num: 9

Candidate Starts for CoolCookie\_32:

(Start: 7 @14619 has 1 MA's), (Start: 9 @14637 has 9 MA's), (26, 14868), (30, 14892), (31, 14901),

Gene: Crestdrop\_28 Start: 13703, Stop: 13978, Start Num: 9

Candidate Starts for Crestdrop\_28:

(Start: 7 @13685 has 1 MA's), (Start: 9 @13703 has 9 MA's), (30, 13958), (31, 13967),

Gene: Damien\_25 Start: 15884, Stop: 16216, Start Num: 10

Candidate Starts for Damien\_25:

(Start: 9 @15866 has 9 MA's), (Start: 10 @15884 has 7 MA's), (16, 15968), (18, 15986), (20, 16001), (36, 16196),

Gene: Dauntless\_28 Start: 14346, Stop: 14621, Start Num: 9

Candidate Starts for Dauntless\_28:

(Start: 7 @14328 has 1 MA's), (Start: 9 @14346 has 9 MA's), (30, 14601), (31, 14610),

Gene: Delton\_26 Start: 16174, Stop: 16392, Start Num: 15

Candidate Starts for Delton\_26:

(Start: 10 @16120 has 7 MA's), (12, 16138), (Start: 14 @16162 has 4 MA's), (Start: 15 @16174 has 12 MA's), (19, 16222), (25, 16321), (28, 16345), (29, 16348), (34, 16387),

Gene: Erk16\_26 Start: 16165, Stop: 16383, Start Num: 15

Candidate Starts for Erk16\_26:

(Start: 10 @16111 has 7 MA's), (12, 16129), (Start: 14 @16153 has 4 MA's), (Start: 15 @16165 has 12 MA's), (19, 16213), (25, 16312), (28, 16336), (29, 16339), (34, 16378),

Gene: Erudite\_27 Start: 14346, Stop: 14621, Start Num: 9

Candidate Starts for Erudite\_27:

(Start: 7 @14328 has 1 MA's), (Start: 9 @14346 has 9 MA's), (30, 14601), (31, 14610),

Gene: Giuseppe\_26 Start: 16100, Stop: 16372, Start Num: 10

Candidate Starts for Giuseppe\_26:

(Start: 10 @16100 has 7 MA's), (Start: 14 @16142 has 4 MA's), (Start: 15 @16154 has 12 MA's), (19, 16202), (25, 16301), (28, 16325), (29, 16328), (34, 16367),

Gene: Gumball\_25 Start: 16058, Stop: 16330, Start Num: 10

Candidate Starts for Gumball\_25:

(Start: 10 @16058 has 7 MA's), (Start: 14 @16100 has 4 MA's), (Start: 15 @16112 has 12 MA's), (19, 16160), (25, 16259), (28, 16283), (29, 16286), (34, 16325),

Gene: Hager\_29 Start: 14193, Stop: 14468, Start Num: 9

Candidate Starts for Hager\_29:

(Start: 7 @14175 has 1 MA's), (Start: 9 @14193 has 9 MA's), (26, 14424), (30, 14448),

Gene: Hawkeye\_28 Start: 16025, Stop: 16255, Start Num: 14

Candidate Starts for Hawkeye\_28:

(12, 16001), (Start: 14 @16025 has 4 MA's), (Start: 15 @16037 has 12 MA's), (19, 16085), (27, 16193), (28, 16208), (33, 16244),

Gene: Helpful\_27 Start: 16162, Stop: 16380, Start Num: 15

Candidate Starts for Helpful\_27:

(Start: 10 @16108 has 7 MA's), (Start: 14 @16150 has 4 MA's), (Start: 15 @16162 has 12 MA's), (19, 16210), (25, 16309), (28, 16333), (29, 16336), (34, 16375),

Gene: JDawG\_27 Start: 14376, Stop: 14651, Start Num: 9

Candidate Starts for JDawG\_27:

(Start: 7 @14358 has 1 MA's), (Start: 9 @14376 has 9 MA's), (30, 14631), (31, 14640),

Gene: JingleBells\_27 Start: 13910, Stop: 14185, Start Num: 9

Candidate Starts for JingleBells\_27:

(Start: 7 @13892 has 1 MA's), (Start: 9 @13910 has 9 MA's), (30, 14165), (31, 14174),

Gene: KandZ\_26 Start: 16262, Stop: 16480, Start Num: 15

Candidate Starts for KandZ\_26:

(Start: 10 @16208 has 7 MA's), (Start: 14 @16250 has 4 MA's), (Start: 15 @16262 has 12 MA's), (19, 16310), (25, 16409), (28, 16433), (29, 16436), (34, 16475),

Gene: Kors\_30 Start: 14561, Stop: 14842, Start Num: 9

Candidate Starts for Kors\_30:

(4, 14477), (Start: 7 @14543 has 1 MA's), (Start: 9 @14561 has 9 MA's), (16, 14660), (21, 14702), (30, 14816),

Gene: Labelle\_32 Start: 19192, Stop: 19551, Start Num: 9

Candidate Starts for Labelle\_32:

(Start: 9 @19192 has 9 MA's), (Start: 10 @19210 has 7 MA's), (13, 19252), (20, 19330), (22, 19390), (28, 19441), (32, 19468), (37, 19537),

Gene: LuckyLeo\_25 Start: 16506, Stop: 16880, Start Num: 9

Candidate Starts for LuckyLeo\_25:

(6, 16470), (8, 16503), (Start: 9 @16506 has 9 MA's), (11, 16536), (23, 16695), (24, 16701), (25, 16719), (27, 16728), (35, 16830),

Gene: Megatron06\_28 Start: 16399, Stop: 16749, Start Num: 9

Candidate Starts for Megatron06\_28:

(Start: 9 @16399 has 9 MA's), (Start: 10 @16417 has 7 MA's), (16, 16501), (18, 16519), (20, 16534), (36, 16729),

Gene: Mopey\_26 Start: 16162, Stop: 16380, Start Num: 15

Candidate Starts for Mopey\_26:

(Start: 10 @16108 has 7 MA's), (Start: 14 @16150 has 4 MA's), (Start: 15 @16162 has 12 MA's), (19, 16210), (25, 16309), (28, 16333), (29, 16336), (34, 16375),

Gene: MortySmith\_26 Start: 13751, Stop: 14044, Start Num: 7  
Candidate Starts for MortySmith\_26:  
(Start: 7 @13751 has 1 MA's), (Start: 9 @13769 has 9 MA's), (30, 14024), (31, 14033),

Gene: Nova\_26 Start: 16535, Stop: 16807, Start Num: 10  
Candidate Starts for Nova\_26:  
(Start: 10 @16535 has 7 MA's), (12, 16553), (Start: 14 @16577 has 4 MA's), (Start: 15 @16589 has 12 MA's), (19, 16637), (25, 16736), (28, 16760), (29, 16763), (34, 16802),

Gene: OverHedge\_28 Start: 14597, Stop: 14872, Start Num: 9  
Candidate Starts for OverHedge\_28:  
(Start: 7 @14579 has 1 MA's), (Start: 9 @14597 has 9 MA's), (26, 14828), (30, 14852), (31, 14861),

Gene: PLOT\_27 Start: 16153, Stop: 16383, Start Num: 14  
Candidate Starts for PLOT\_27:  
(Start: 10 @16111 has 7 MA's), (Start: 14 @16153 has 4 MA's), (Start: 15 @16165 has 12 MA's), (19, 16213), (25, 16312), (28, 16336), (29, 16339), (34, 16378),

Gene: Penelope2018\_26 Start: 16162, Stop: 16380, Start Num: 15  
Candidate Starts for Penelope2018\_26:  
(Start: 10 @16108 has 7 MA's), (Start: 14 @16150 has 4 MA's), (Start: 15 @16162 has 12 MA's), (19, 16210), (25, 16309), (28, 16333), (29, 16336), (34, 16375),

Gene: Pharpay\_28 Start: 14652, Stop: 14927, Start Num: 9  
Candidate Starts for Pharpay\_28:  
(Start: 7 @14634 has 1 MA's), (Start: 9 @14652 has 9 MA's), (26, 14883), (30, 14907), (31, 14916),

Gene: Phreeze\_25 Start: 15866, Stop: 16216, Start Num: 9  
Candidate Starts for Phreeze\_25:  
(Start: 9 @15866 has 9 MA's), (Start: 10 @15884 has 7 MA's), (16, 15968), (18, 15986), (20, 16001), (36, 16196),

Gene: Poultruss\_27 Start: 14394, Stop: 14669, Start Num: 9  
Candidate Starts for Poultruss\_27:  
(Start: 7 @14376 has 1 MA's), (Start: 9 @14394 has 9 MA's), (26, 14625), (30, 14649),

Gene: Prager\_26 Start: 16174, Stop: 16392, Start Num: 15  
Candidate Starts for Prager\_26:  
(Start: 10 @16120 has 7 MA's), (Start: 14 @16162 has 4 MA's), (Start: 15 @16174 has 12 MA's), (19, 16222), (25, 16321), (28, 16345), (29, 16348), (34, 16387),

Gene: Predator\_29 Start: 17401, Stop: 17733, Start Num: 10  
Candidate Starts for Predator\_29:  
(1, 17209), (2, 17227), (3, 17263), (5, 17317), (Start: 9 @17383 has 9 MA's), (Start: 10 @17401 has 7 MA's), (17, 17491), (18, 17503), (20, 17518),

Gene: Puissant\_24 Start: 16331, Stop: 16681, Start Num: 9  
Candidate Starts for Puissant\_24:  
(Start: 9 @16331 has 9 MA's), (Start: 10 @16349 has 7 MA's), (16, 16433), (18, 16451), (20, 16466), (36, 16661),

Gene: Rachella\_28 Start: 14633, Stop: 14908, Start Num: 9  
Candidate Starts for Rachella\_28:

(Start: 7 @14615 has 1 MA's), (Start: 9 @14633 has 9 MA's), (26, 14864), (30, 14888), (31, 14897),

Gene: SirHarley\_25 Start: 16040, Stop: 16312, Start Num: 10

Candidate Starts for SirHarley\_25:

(Start: 10 @16040 has 7 MA's), (12, 16058), (Start: 14 @16082 has 4 MA's), (Start: 15 @16094 has 12 MA's), (19, 16142), (25, 16241), (28, 16265), (29, 16268), (34, 16307),

Gene: Thoth\_26 Start: 16159, Stop: 16377, Start Num: 15

Candidate Starts for Thoth\_26:

(Start: 10 @16105 has 7 MA's), (Start: 14 @16147 has 4 MA's), (Start: 15 @16159 has 12 MA's), (19, 16207), (25, 16306), (28, 16330), (29, 16333), (34, 16372),

Gene: Thumb\_25 Start: 15866, Stop: 16216, Start Num: 9

Candidate Starts for Thumb\_25:

(Start: 9 @15866 has 9 MA's), (Start: 10 @15884 has 7 MA's), (16, 15968), (18, 15986), (20, 16001), (36, 16196),

Gene: Tillicus\_26 Start: 16100, Stop: 16474, Start Num: 9

Candidate Starts for Tillicus\_26:

(6, 16064), (8, 16097), (Start: 9 @16100 has 9 MA's), (11, 16130), (23, 16289), (24, 16295), (25, 16313), (27, 16322), (35, 16424),

Gene: Troll4\_26 Start: 16163, Stop: 16381, Start Num: 15

Candidate Starts for Troll4\_26:

(Start: 10 @16109 has 7 MA's), (Start: 14 @16151 has 4 MA's), (Start: 15 @16163 has 12 MA's), (19, 16211), (25, 16310), (28, 16334), (29, 16337), (34, 16376),

Gene: Visconti\_26 Start: 16172, Stop: 16390, Start Num: 15

Candidate Starts for Visconti\_26:

(Start: 10 @16118 has 7 MA's), (Start: 14 @16160 has 4 MA's), (Start: 15 @16172 has 12 MA's), (19, 16220), (25, 16319), (28, 16343), (29, 16346), (34, 16385),

Gene: WaldoWhy\_27 Start: 16168, Stop: 16386, Start Num: 15

Candidate Starts for WaldoWhy\_27:

(Start: 10 @16114 has 7 MA's), (Start: 14 @16156 has 4 MA's), (Start: 15 @16168 has 12 MA's), (19, 16216), (25, 16315), (28, 16339), (29, 16342), (34, 16381),