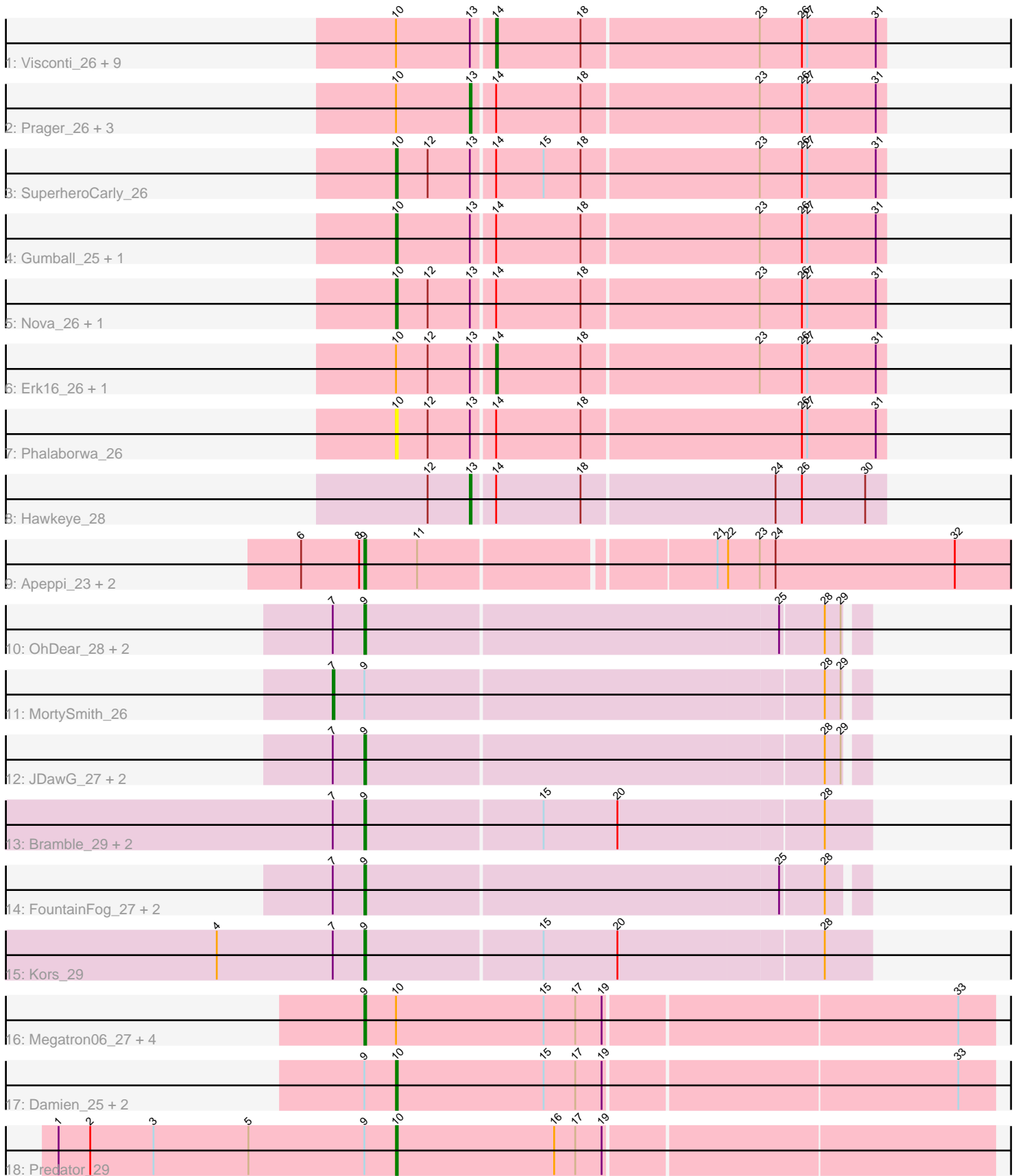


# Pham 298540



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 298540 Report

This analysis was run 06/08/26 on database version 649.

Pham number 298540 has 49 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Visconti\_26, KandZ\_26, Chill\_27, Troll4\_26, Helpful\_27, Penelope2018\_26, BigMama\_24, Thoth\_26, WaldoWhy\_27, Mopey\_26
- Track 2 : Prager\_26, Butterscotch\_26, Adjutor\_27, PLOT\_27
- Track 3 : SuperheroCarly\_26
- Track 4 : Gumball\_25, Giuseppe\_26
- Track 5 : Nova\_26, SirHarley\_25
- Track 6 : Erk16\_26, Delton\_26
- Track 7 : Phalaborwa\_26
- Track 8 : Hawkeye\_28
- Track 9 : Apeppi\_23, LuckyLeo\_25, Tillicus\_25
- Track 10 : OhDear\_28, Rachella\_28, Artiphact\_28
- Track 11 : MortySmith\_26
- Track 12 : JDawG\_27, Annapurna\_27, Erudite\_27
- Track 13 : Bramble\_29, Ajin\_29, LordBart\_29
- Track 14 : FountainFog\_27, Tongui\_27, Hager\_29
- Track 15 : Kors\_29
- Track 16 : Megatron06\_27, Beckerton\_25, Puissant\_26, Phreeze\_25, Thumb\_25
- Track 17 : Damien\_25, BobtimousPrime\_27, Cborch11\_26
- Track 18 : Predator\_29

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

The start number called the most often in the published annotations is 9, it was called in 19 of the 46 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ajin\_29, Annapurna\_27, Apeppi\_23, Artiphact\_28, Beckerton\_25, Bramble\_29, Erudite\_27, FountainFog\_27, Hager\_29, JDawG\_27, Kors\_29, LordBart\_29, LuckyLeo\_25, Megatron06\_27, OhDear\_28, Phreeze\_25, Puissant\_26, Rachella\_28, Thumb\_25, Tillicus\_25, Tongui\_27,

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

- BobtimousPrime\_27, Cborch11\_26, Damien\_25, MortySmith\_26, Predator\_29,

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

- Adjutor\_27, BigMama\_24, Butterscotch\_26, Chill\_27, Delton\_26, Erk16\_26, Giuseppe\_26, Gumball\_25, Hawkeye\_28, Helpful\_27, KandZ\_26, Mopey\_26, Nova\_26, PLOT\_27, Penelope2018\_26, Phalaborwa\_26, Prager\_26, SirHarley\_25, SuperheroCarly\_26, Thoth\_26, Troll4\_26, Visconti\_26, WaldoWhy\_27,

### Summary by start number:

Start 7:

- Found in 14 of 49 ( 28.6% ) of genes in pham
- Manual Annotations of this start: 1 of 46
- Called 7.1% of time when present
- Phage (with cluster) where this start called: MortySmith\_26 (EF),

Start 9:

- Found in 26 of 49 ( 53.1% ) of genes in pham
- Manual Annotations of this start: 19 of 46
- Called 80.8% of time when present
- Phage (with cluster) where this start called: Ajin\_29 (EF), Annapurna\_27 (EF), Apeppi\_23 (DV), Artiphact\_28 (EF), Beckerton\_25 (H1), Bramble\_29 (EF), Erudite\_27 (EF), FountainFog\_27 (EF), Hager\_29 (EF), JDawG\_27 (EF), Kors\_29 (EF), LordBart\_29 (EF), LuckyLeo\_25 (DV), Megatron06\_27 (H1), OhDear\_28 (EF), Phreeze\_25 (H1), Puissant\_26 (H1), Rachella\_28 (EF), Thumb\_25 (H1), Tillicus\_25 (DV), Tongui\_27 (EF),

Start 10:

- Found in 31 of 49 ( 63.3% ) of genes in pham
- Manual Annotations of this start: 9 of 46
- Called 32.3% of time when present
- Phage (with cluster) where this start called: BobtimousPrime\_27 (H1), Cborch11\_26 (H1), Damien\_25 (H1), Giuseppe\_26 (D1), Gumball\_25 (D1), Nova\_26 (D1), Phalaborwa\_26 (D1), Predator\_29 (H1), SirHarley\_25 (D1), SuperheroCarly\_26 (D1),

Start 13:

- Found in 23 of 49 ( 46.9% ) of genes in pham
- Manual Annotations of this start: 5 of 46
- Called 21.7% of time when present
- Phage (with cluster) where this start called: Adjutor\_27 (D1), Butterscotch\_26 (D1), Hawkeye\_28 (D2), PLOT\_27 (D1), Prager\_26 (D1),

Start 14:

- Found in 23 of 49 ( 46.9% ) of genes in pham
- Manual Annotations of this start: 12 of 46
- Called 52.2% 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), Thoth\_26 (D1), Troll4\_26 (D1), Visconti\_26 (D1), WaldoWhy\_27 (D1),

### Summary by clusters:

There are 5 clusters represented in this pham: DV, H1, D2, EF, D1,

Info for manual annotations of cluster D1:

- Start number 10 was manually annotated 5 times for cluster D1.
- Start number 13 was manually annotated 4 times for cluster D1.
- Start number 14 was manually annotated 12 times for cluster D1.

Info for manual annotations of cluster D2:

- Start number 13 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster DV:

- Start number 9 was manually annotated 3 times 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 11 times for cluster EF.

Info for manual annotations of cluster H1:

- Start number 9 was manually annotated 5 times for cluster H1.
- Start number 10 was manually annotated 4 times for cluster H1.

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

Gene: Adjutor\_27 Start: 16090, Stop: 16320, Start Num: 13

Candidate Starts for Adjutor\_27:

(Start: 10 @16048 has 9 MA's), (Start: 13 @16090 has 5 MA's), (Start: 14 @16102 has 12 MA's), (18, 16150), (23, 16249), (26, 16273), (27, 16276), (31, 16315),

Gene: Ajin\_29 Start: 14515, Stop: 14796, Start Num: 9

Candidate Starts for Ajin\_29:

(Start: 7 @14497 has 1 MA's), (Start: 9 @14515 has 19 MA's), (15, 14614), (20, 14656), (28, 14770),

Gene: Annapurna\_27 Start: 13840, Stop: 14115, Start Num: 9

Candidate Starts for Annapurna\_27:

(Start: 7 @13822 has 1 MA's), (Start: 9 @13840 has 19 MA's), (28, 14095), (29, 14104),

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

Candidate Starts for Apeppi\_23:

(6, 16470), (8, 16503), (Start: 9 @16506 has 19 MA's), (11, 16536), (21, 16695), (22, 16701), (23, 16719), (24, 16728), (32, 16830),

Gene: Artiphact\_28 Start: 14631, Stop: 14906, Start Num: 9

Candidate Starts for Artiphact\_28:

(Start: 7 @14613 has 1 MA's), (Start: 9 @14631 has 19 MA's), (25, 14862), (28, 14886), (29, 14895),

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

Candidate Starts for Beckerton\_25:

(Start: 9 @16403 has 19 MA's), (Start: 10 @16421 has 9 MA's), (15, 16505), (17, 16523), (19, 16538), (33, 16733),

Gene: BigMama\_24 Start: 16178, Stop: 16396, Start Num: 14

Candidate Starts for BigMama\_24:

(Start: 10 @16124 has 9 MA's), (Start: 13 @16166 has 5 MA's), (Start: 14 @16178 has 12 MA's), (18, 16226), (23, 16325), (26, 16349), (27, 16352), (31, 16391),

Gene: BobtimousPrime\_27 Start: 16341, Stop: 16673, Start Num: 10

Candidate Starts for BobtimousPrime\_27:

(Start: 9 @16323 has 19 MA's), (Start: 10 @16341 has 9 MA's), (15, 16425), (17, 16443), (19, 16458), (33, 16653),

Gene: Bramble\_29 Start: 14481, Stop: 14762, Start Num: 9

Candidate Starts for Bramble\_29:

(Start: 7 @14463 has 1 MA's), (Start: 9 @14481 has 19 MA's), (15, 14580), (20, 14622), (28, 14736),

Gene: Butterscotch\_26 Start: 16150, Stop: 16380, Start Num: 13

Candidate Starts for Butterscotch\_26:

(Start: 10 @16108 has 9 MA's), (Start: 13 @16150 has 5 MA's), (Start: 14 @16162 has 12 MA's), (18, 16210), (23, 16309), (26, 16333), (27, 16336), (31, 16375),

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

Candidate Starts for Cborch11\_26:

(Start: 9 @15865 has 19 MA's), (Start: 10 @15883 has 9 MA's), (15, 15967), (17, 15985), (19, 16000), (33, 16195),

Gene: Chill\_27 Start: 16168, Stop: 16386, Start Num: 14

Candidate Starts for Chill\_27:

(Start: 10 @16114 has 9 MA's), (Start: 13 @16156 has 5 MA's), (Start: 14 @16168 has 12 MA's), (18, 16216), (23, 16315), (26, 16339), (27, 16342), (31, 16381),

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

Candidate Starts for Damien\_25:

(Start: 9 @15866 has 19 MA's), (Start: 10 @15884 has 9 MA's), (15, 15968), (17, 15986), (19, 16001), (33, 16196),

Gene: Delton\_26 Start: 16174, Stop: 16392, Start Num: 14

Candidate Starts for Delton\_26:

(Start: 10 @16120 has 9 MA's), (12, 16138), (Start: 13 @16162 has 5 MA's), (Start: 14 @16174 has 12 MA's), (18, 16222), (23, 16321), (26, 16345), (27, 16348), (31, 16387),

Gene: Erk16\_26 Start: 16165, Stop: 16383, Start Num: 14

Candidate Starts for Erk16\_26:

(Start: 10 @16111 has 9 MA's), (12, 16129), (Start: 13 @16153 has 5 MA's), (Start: 14 @16165 has 12 MA's), (18, 16213), (23, 16312), (26, 16336), (27, 16339), (31, 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 19 MA's), (28, 14601), (29, 14610),

Gene: FountainFog\_27 Start: 13949, Stop: 14224, Start Num: 9

Candidate Starts for FountainFog\_27:

(Start: 7 @13931 has 1 MA's), (Start: 9 @13949 has 19 MA's), (25, 14180), (28, 14204),

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

Candidate Starts for Giuseppe\_26:

(Start: 10 @16100 has 9 MA's), (Start: 13 @16142 has 5 MA's), (Start: 14 @16154 has 12 MA's), (18, 16202), (23, 16301), (26, 16325), (27, 16328), (31, 16367),

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

Candidate Starts for Gumball\_25:

(Start: 10 @16058 has 9 MA's), (Start: 13 @16100 has 5 MA's), (Start: 14 @16112 has 12 MA's), (18, 16160), (23, 16259), (26, 16283), (27, 16286), (31, 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 19 MA's), (25, 14424), (28, 14448),

Gene: Hawkeye\_28 Start: 16025, Stop: 16255, Start Num: 13

Candidate Starts for Hawkeye\_28:

(12, 16001), (Start: 13 @16025 has 5 MA's), (Start: 14 @16037 has 12 MA's), (18, 16085), (24, 16193), (26, 16208), (30, 16244),

Gene: Helpful\_27 Start: 16162, Stop: 16380, Start Num: 14

Candidate Starts for Helpful\_27:

(Start: 10 @16108 has 9 MA's), (Start: 13 @16150 has 5 MA's), (Start: 14 @16162 has 12 MA's), (18, 16210), (23, 16309), (26, 16333), (27, 16336), (31, 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 19 MA's), (28, 14631), (29, 14640),

Gene: KandZ\_26 Start: 16262, Stop: 16480, Start Num: 14

Candidate Starts for KandZ\_26:

(Start: 10 @16208 has 9 MA's), (Start: 13 @16250 has 5 MA's), (Start: 14 @16262 has 12 MA's), (18, 16310), (23, 16409), (26, 16433), (27, 16436), (31, 16475),

Gene: Kors\_29 Start: 14561, Stop: 14842, Start Num: 9

Candidate Starts for Kors\_29:

(4, 14477), (Start: 7 @14543 has 1 MA's), (Start: 9 @14561 has 19 MA's), (15, 14660), (20, 14702), (28, 14816),

Gene: LordBart\_29 Start: 14477, Stop: 14758, Start Num: 9

Candidate Starts for LordBart\_29:

(Start: 7 @14459 has 1 MA's), (Start: 9 @14477 has 19 MA's), (15, 14576), (20, 14618), (28, 14732),

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

Candidate Starts for LuckyLeo\_25:

(6, 16470), (8, 16503), (Start: 9 @16506 has 19 MA's), (11, 16536), (21, 16695), (22, 16701), (23, 16719), (24, 16728), (32, 16830),

Gene: Megatron06\_27 Start: 16399, Stop: 16749, Start Num: 9

Candidate Starts for Megatron06\_27:

(Start: 9 @16399 has 19 MA's), (Start: 10 @16417 has 9 MA's), (15, 16501), (17, 16519), (19, 16534), (33, 16729),

Gene: Mopey\_26 Start: 16162, Stop: 16380, Start Num: 14

Candidate Starts for Mopey\_26:

(Start: 10 @16108 has 9 MA's), (Start: 13 @16150 has 5 MA's), (Start: 14 @16162 has 12 MA's), (18, 16210), (23, 16309), (26, 16333), (27, 16336), (31, 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 19 MA's), (28, 14024), (29, 14033),

Gene: Nova\_26 Start: 16535, Stop: 16807, Start Num: 10

Candidate Starts for Nova\_26:

(Start: 10 @16535 has 9 MA's), (12, 16553), (Start: 13 @16577 has 5 MA's), (Start: 14 @16589 has 12 MA's), (18, 16637), (23, 16736), (26, 16760), (27, 16763), (31, 16802),

Gene: OhDear\_28 Start: 14636, Stop: 14911, Start Num: 9

Candidate Starts for OhDear\_28:

(Start: 7 @14618 has 1 MA's), (Start: 9 @14636 has 19 MA's), (25, 14867), (28, 14891), (29, 14900),

Gene: PLOT\_27 Start: 16153, Stop: 16383, Start Num: 13

Candidate Starts for PLOT\_27:

(Start: 10 @16111 has 9 MA's), (Start: 13 @16153 has 5 MA's), (Start: 14 @16165 has 12 MA's), (18, 16213), (23, 16312), (26, 16336), (27, 16339), (31, 16378),

Gene: Penelope2018\_26 Start: 16162, Stop: 16380, Start Num: 14

Candidate Starts for Penelope2018\_26:

(Start: 10 @16108 has 9 MA's), (Start: 13 @16150 has 5 MA's), (Start: 14 @16162 has 12 MA's), (18, 16210), (23, 16309), (26, 16333), (27, 16336), (31, 16375),

Gene: Phalaborwa\_26 Start: 16141, Stop: 16413, Start Num: 10

Candidate Starts for Phalaborwa\_26:

(Start: 10 @16141 has 9 MA's), (12, 16159), (Start: 13 @16183 has 5 MA's), (Start: 14 @16195 has 12 MA's), (18, 16243), (26, 16366), (27, 16369), (31, 16408),

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

Candidate Starts for Phreeze\_25:

(Start: 9 @15866 has 19 MA's), (Start: 10 @15884 has 9 MA's), (15, 15968), (17, 15986), (19, 16001), (33, 16196),

Gene: Prager\_26 Start: 16162, Stop: 16392, Start Num: 13

Candidate Starts for Prager\_26:

(Start: 10 @16120 has 9 MA's), (Start: 13 @16162 has 5 MA's), (Start: 14 @16174 has 12 MA's), (18, 16222), (23, 16321), (26, 16345), (27, 16348), (31, 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 19 MA's), (Start: 10 @17401 has 9 MA's), (16, 17491), (17, 17503), (19, 17518),

Gene: Puissant\_26 Start: 16331, Stop: 16681, Start Num: 9

Candidate Starts for Puissant\_26:

(Start: 9 @16331 has 19 MA's), (Start: 10 @16349 has 9 MA's), (15, 16433), (17, 16451), (19, 16466), (33, 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 19 MA's), (25, 14864), (28, 14888), (29, 14897),

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

Candidate Starts for SirHarley\_25:

(Start: 10 @16040 has 9 MA's), (12, 16058), (Start: 13 @16082 has 5 MA's), (Start: 14 @16094 has 12 MA's), (18, 16142), (23, 16241), (26, 16265), (27, 16268), (31, 16307),

Gene: SuperheroCarly\_26 Start: 15970, Stop: 16242, Start Num: 10

Candidate Starts for SuperheroCarly\_26:

(Start: 10 @15970 has 9 MA's), (12, 15988), (Start: 13 @16012 has 5 MA's), (Start: 14 @16024 has 12 MA's), (15, 16051), (18, 16072), (23, 16171), (26, 16195), (27, 16198), (31, 16237),

Gene: Thoth\_26 Start: 16159, Stop: 16377, Start Num: 14

Candidate Starts for Thoth\_26:

(Start: 10 @16105 has 9 MA's), (Start: 13 @16147 has 5 MA's), (Start: 14 @16159 has 12 MA's), (18, 16207), (23, 16306), (26, 16330), (27, 16333), (31, 16372),

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

Candidate Starts for Thumb\_25:

(Start: 9 @15866 has 19 MA's), (Start: 10 @15884 has 9 MA's), (15, 15968), (17, 15986), (19, 16001), (33, 16196),

Gene: Tillicus\_25 Start: 16100, Stop: 16474, Start Num: 9

Candidate Starts for Tillicus\_25:

(6, 16064), (8, 16097), (Start: 9 @16100 has 19 MA's), (11, 16130), (21, 16289), (22, 16295), (23, 16313), (24, 16322), (32, 16424),

Gene: Tongui\_27 Start: 13967, Stop: 14242, Start Num: 9

Candidate Starts for Tongui\_27:

(Start: 7 @13949 has 1 MA's), (Start: 9 @13967 has 19 MA's), (25, 14198), (28, 14222),

Gene: Troll4\_26 Start: 16163, Stop: 16381, Start Num: 14

Candidate Starts for Troll4\_26:

(Start: 10 @16109 has 9 MA's), (Start: 13 @16151 has 5 MA's), (Start: 14 @16163 has 12 MA's), (18, 16211), (23, 16310), (26, 16334), (27, 16337), (31, 16376),

Gene: Visconti\_26 Start: 16172, Stop: 16390, Start Num: 14

Candidate Starts for Visconti\_26:

(Start: 10 @16118 has 9 MA's), (Start: 13 @16160 has 5 MA's), (Start: 14 @16172 has 12 MA's), (18, 16220), (23, 16319), (26, 16343), (27, 16346), (31, 16385),

Gene: WaldoWhy\_27 Start: 16168, Stop: 16386, Start Num: 14

Candidate Starts for WaldoWhy\_27:

(Start: 10 @16114 has 9 MA's), (Start: 13 @16156 has 5 MA's), (Start: 14 @16168 has 12 MA's), (18, 16216), (23, 16315), (26, 16339), (27, 16342), (31, 16381),