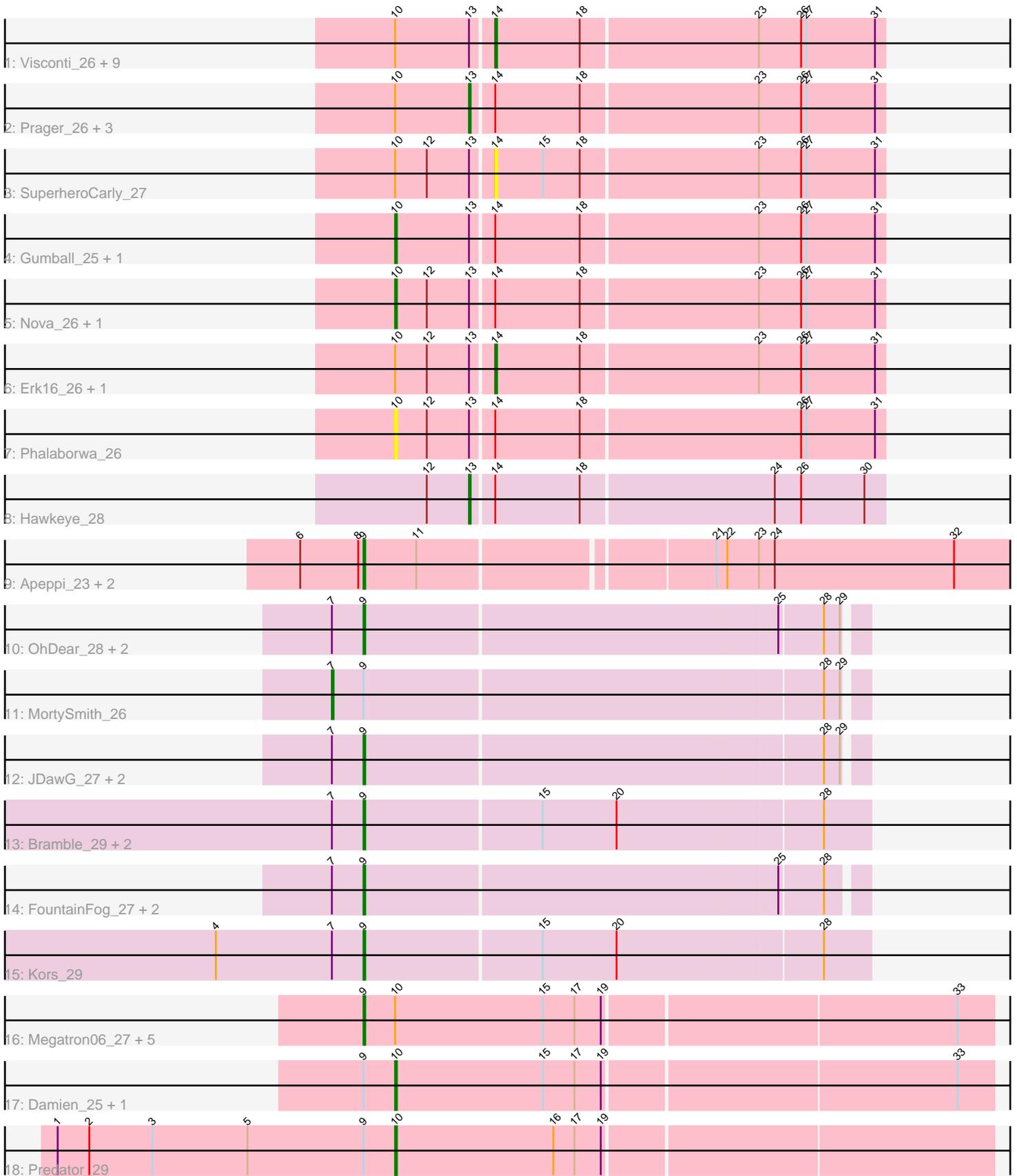# Pham 291264

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 291264 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291264 has 49 members, 7 are drafts.

Phages represented in each track:
• Track 1 : Visconti_26, Chill_27, Troll4_26, Helpful_27, KandZ_26, Penelope2018_26, BigMama_24, Thoth_26, WaldoWhy_27, Mopey_26
• Track 2 : Prager_26, Butterscotch_26, Adjutor_27, PLot_27
• Track 3 : SuperheroCarly_27
• 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, BobtimousPrime_24, Thumb_25, Puissant_24, Beckerton_25, Phreeze_25
• Track 17 : Damien_25, 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 17 of the 42 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Ajin_29, Annapurna_27, Apeppi_23, Artiphact_28, Beckerton_25, BobtimousPrime_24, Bramble_29, Erudite_27, FountainFog_27, Hager_29, JDawG_27, Kors_29, LordBart_29, LuckyLeo_25, Megatron06_27, OhDear_28, Phreeze_25, Puissant_24, Rachella_28, Thumb_25, Tillicus_25, Tongui_27,

Genes that have the "Most Annotated" start but do not call it:
• 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_27, 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 42
• 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: 17 of 42
• Called 84.6% 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), BobtimousPrime_24 (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_24 (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: 7 of 42
• Called 25.8% 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), Phalaborwa_26 (D1), Predator_29 (H1), SirHarley_25 (D1),

Start 13:
• Found in 23 of 49 (46.9%) of genes in pham
• Manual Annotations of this start: 5 of 42
• 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 42
• Called 56.5% 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), SuperheroCarly_27 (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 4 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 10 times for cluster EF.

Info for manual annotations of cluster H1:
•Start number 9 was manually annotated 4 times for cluster H1.
•Start number 10 was manually annotated 3 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 7 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 17 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 17 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 17 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 17 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 17 MA's), (Start: 10 @16421 has 7 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 7 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_24 Start: 16323, Stop: 16673, Start Num: 9
Candidate Starts for BobtimousPrime_24:
(Start: 9 @16323 has 17 MA's), (Start: 10 @16341 has 7 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 17 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 7 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 17 MA's), (Start: 10 @15883 has 7 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 7 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 17 MA's), (Start: 10 @15884 has 7 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 7 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 7 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 17 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 17 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 7 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 7 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 17 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 7 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 17 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 7 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 17 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 17 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 17 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 17 MA's), (Start: 10 @16417 has 7 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 7 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 17 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 7 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 17 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 7 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 7 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 7 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 17 MA's), (Start: 10 @15884 has 7 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 7 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 17 MA's), (Start: 10 @17401 has 7 MA's), (16, 17491), (17, 17503), (19, 17518),

Gene: Puissant_24 Start: 16331, Stop: 16681, Start Num: 9
Candidate Starts for Puissant_24:
(Start: 9 @16331 has 17 MA's), (Start: 10 @16349 has 7 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 17 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 7 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_27 Start: 16024, Stop: 16242, Start Num: 14
Candidate Starts for SuperheroCarly_27:
(Start: 10 @15970 has 7 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 7 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 17 MA's), (Start: 10 @15884 has 7 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 17 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 17 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 7 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 7 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 7 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),