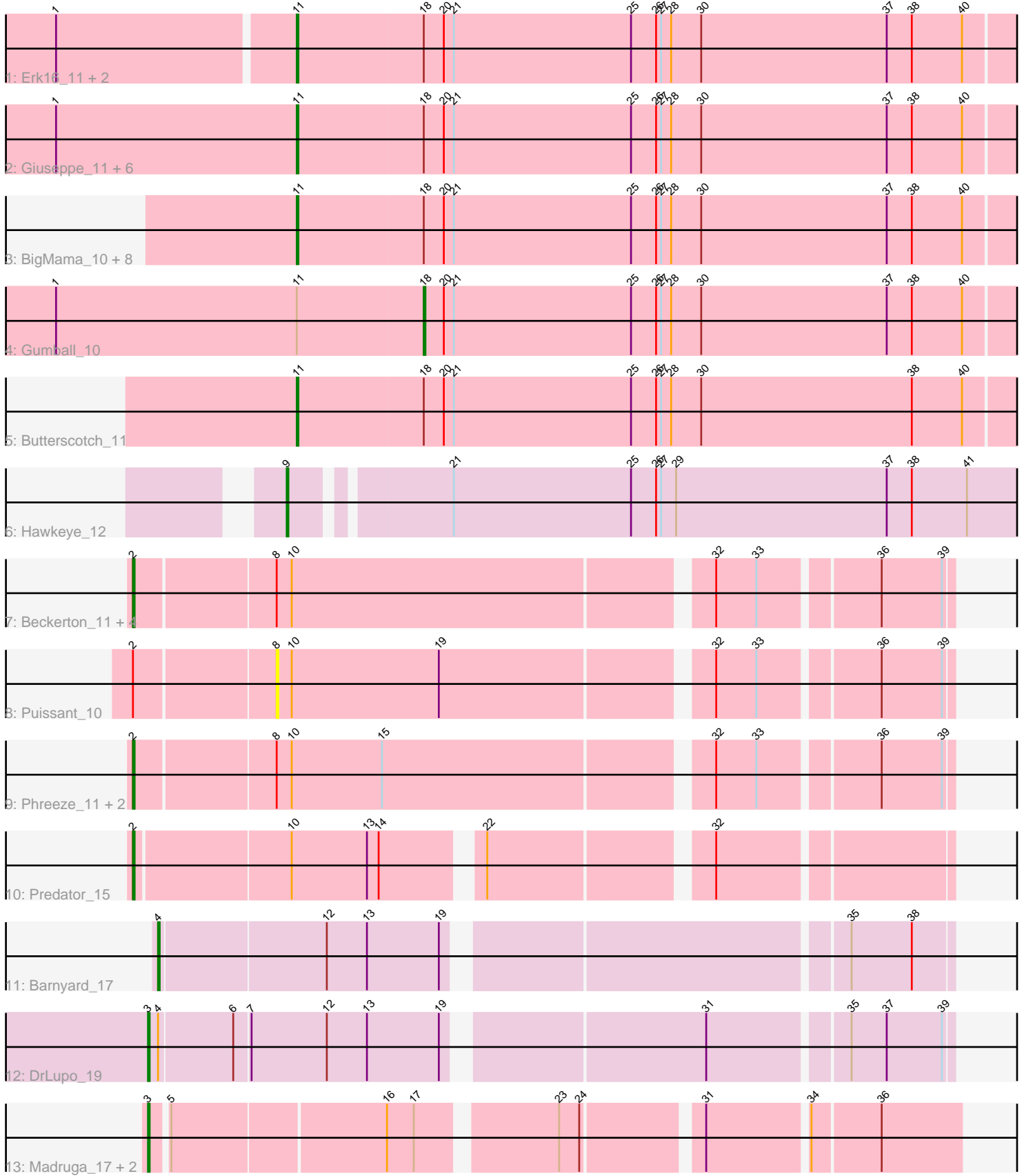


# Pham 171622



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 171622 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171622 has 37 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Erk16\_11, PLOT\_11, PBI1\_11
- Track 2 : Giuseppe\_11, Adjutor\_11, KandZ\_11, Mopey\_11, SirHarley\_10, Visconti\_11, Nova\_11
- Track 3 : BigMama\_10, Delton\_11, Prager\_11, Chill\_11, WaldoWhy\_11, Penelope2018\_11, Helpful\_11, Thoth\_11, Troll4\_11
- Track 4 : Gumball\_10
- Track 5 : Butterscotch\_11
- Track 6 : Hawkeye\_12
- Track 7 : Beckerton\_11, Cborch11\_12, Konstantine\_16, Damien\_11, Megatron06\_13
- Track 8 : Puissant\_10
- Track 9 : Phreeze\_11, Thumb\_11, Oaker\_11
- Track 10 : Predator\_15
- Track 11 : Barnyard\_17
- Track 12 : DrLupo\_19
- Track 13 : Madruga\_17, Patience\_19, Labelle\_18

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

The start number called the most often in the published annotations is 11, it was called in 19 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adjutor\_11, BigMama\_10, Butterscotch\_11, Chill\_11, Delton\_11, Erk16\_11, Giuseppe\_11, Helpful\_11, KandZ\_11, Mopey\_11, Nova\_11, PBI1\_11, PLOT\_11, Penelope2018\_11, Prager\_11, SirHarley\_10, Thoth\_11, Troll4\_11, Visconti\_11, WaldoWhy\_11,

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

- Gumball\_10,

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

- Barnyard\_17, Beckerton\_11, Cborch11\_12, Damien\_11, DrLupo\_19, Hawkeye\_12, Konstantine\_16, Labelle\_18, Madruga\_17, Megatron06\_13, Oaker\_11, Patience\_19,

Phreeze\_11, Predator\_15, Puissant\_10, Thumb\_11,

### Summary by start number:

#### Start 2:

- Found in 10 of 37 ( 27.0% ) of genes in pham
- Manual Annotations of this start: 9 of 35
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Beckerton\_11 (H1), Cborch11\_12 (H1), Damien\_11 (H1), Konstantine\_16 (H1), Megatron06\_13 (H1), Oaker\_11 (H1), Phreeze\_11 (H1), Predator\_15 (H1), Thumb\_11 (H1),

#### Start 3:

- Found in 4 of 37 ( 10.8% ) of genes in pham
- Manual Annotations of this start: 4 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DrLupo\_19 (H2), Labelle\_18 (U), Madrugá\_17 (U), Patience\_19 (U),

#### Start 4:

- Found in 2 of 37 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Barnyard\_17 (H2),

#### Start 8:

- Found in 9 of 37 ( 24.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Puissant\_10 (H1),

#### Start 9:

- Found in 1 of 37 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hawkeye\_12 (D2),

#### Start 11:

- Found in 21 of 37 ( 56.8% ) of genes in pham
- Manual Annotations of this start: 19 of 35
- Called 95.2% of time when present
- Phage (with cluster) where this start called: Adjutor\_11 (D1), BigMama\_10 (D1), Butterscotch\_11 (D1), Chill\_11 (D1), Delton\_11 (D1), Erk16\_11 (D1), Giuseppe\_11 (D1), Helpful\_11 (D1), KandZ\_11 (D1), Mopey\_11 (D1), Nova\_11 (D1), PBI1\_11 (D1), PLOT\_11 (D1), Penelope2018\_11 (D1), Prager\_11 (D1), SirHarley\_10 (D1), Thoth\_11 (D1), Troll4\_11 (D1), Visconti\_11 (D1), WaldoWhy\_11 (D1),

#### Start 18:

- Found in 21 of 37 ( 56.8% ) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 4.8% of time when present
- Phage (with cluster) where this start called: Gumball\_10 (D1),

## Summary by clusters:

There are 5 clusters represented in this pham: H2, D2, H1, U, D1,

Info for manual annotations of cluster D1:

- Start number 11 was manually annotated 19 times for cluster D1.
- Start number 18 was manually annotated 1 time for cluster D1.

Info for manual annotations of cluster D2:

- Start number 9 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster H1:

- Start number 2 was manually annotated 9 times for cluster H1.

Info for manual annotations of cluster H2:

- Start number 3 was manually annotated 1 time for cluster H2.
- Start number 4 was manually annotated 1 time for cluster H2.

Info for manual annotations of cluster U:

- Start number 3 was manually annotated 3 times for cluster U.

## Gene Information:

Gene: Adjutor\_11 Start: 8134, Stop: 8586, Start Num: 11

Candidate Starts for Adjutor\_11:

(1, 7990), (Start: 11 @8134 has 19 MA's), (Start: 18 @8209 has 1 MA's), (20, 8221), (21, 8227), (25, 8332), (26, 8347), (27, 8350), (28, 8356), (30, 8374), (37, 8485), (38, 8500), (40, 8530),

Gene: Barnyard\_17 Start: 8976, Stop: 9416, Start Num: 4

Candidate Starts for Barnyard\_17:

(Start: 4 @8976 has 1 MA's), (12, 9072), (13, 9096), (19, 9138), (35, 9357), (38, 9393),

Gene: Beckerton\_11 Start: 8047, Stop: 8505, Start Num: 2

Candidate Starts for Beckerton\_11:

(Start: 2 @8047 has 9 MA's), (8, 8128), (10, 8137), (32, 8374), (33, 8398), (36, 8464), (39, 8500),

Gene: BigMama\_10 Start: 8207, Stop: 8668, Start Num: 11

Candidate Starts for BigMama\_10:

(Start: 11 @8207 has 19 MA's), (Start: 18 @8282 has 1 MA's), (20, 8294), (21, 8300), (25, 8405), (26, 8420), (27, 8423), (28, 8429), (30, 8447), (37, 8558), (38, 8573), (40, 8603),

Gene: Butterscotch\_11 Start: 8194, Stop: 8655, Start Num: 11

Candidate Starts for Butterscotch\_11:

(Start: 11 @8194 has 19 MA's), (Start: 18 @8269 has 1 MA's), (20, 8281), (21, 8287), (25, 8392), (26, 8407), (27, 8410), (28, 8416), (30, 8434), (38, 8560), (40, 8590),

Gene: Cborch11\_12 Start: 7512, Stop: 7970, Start Num: 2

Candidate Starts for Cborch11\_12:

(Start: 2 @7512 has 9 MA's), (8, 7593), (10, 7602), (32, 7839), (33, 7863), (36, 7929), (39, 7965),

Gene: Chill\_11 Start: 8197, Stop: 8649, Start Num: 11

Candidate Starts for Chill\_11:

(Start: 11 @8197 has 19 MA's), (Start: 18 @8272 has 1 MA's), (20, 8284), (21, 8290), (25, 8395), (26, 8410), (27, 8413), (28, 8419), (30, 8437), (37, 8548), (38, 8563), (40, 8593),

Gene: Damien\_11 Start: 7512, Stop: 7970, Start Num: 2

Candidate Starts for Damien\_11:

(Start: 2 @7512 has 9 MA's), (8, 7593), (10, 7602), (32, 7839), (33, 7863), (36, 7929), (39, 7965),

Gene: Delton\_11 Start: 8203, Stop: 8664, Start Num: 11

Candidate Starts for Delton\_11:

(Start: 11 @8203 has 19 MA's), (Start: 18 @8278 has 1 MA's), (20, 8290), (21, 8296), (25, 8401), (26, 8416), (27, 8419), (28, 8425), (30, 8443), (37, 8554), (38, 8569), (40, 8599),

Gene: DrLupo\_19 Start: 9386, Stop: 9832, Start Num: 3

Candidate Starts for DrLupo\_19:

(Start: 3 @9386 has 4 MA's), (Start: 4 @9392 has 1 MA's), (6, 9434), (7, 9443), (12, 9488), (13, 9512), (19, 9554), (31, 9695), (35, 9773), (37, 9794), (39, 9827),

Gene: Erk16\_11 Start: 8197, Stop: 8649, Start Num: 11

Candidate Starts for Erk16\_11:

(1, 8059), (Start: 11 @8197 has 19 MA's), (Start: 18 @8272 has 1 MA's), (20, 8284), (21, 8290), (25, 8395), (26, 8410), (27, 8413), (28, 8419), (30, 8437), (37, 8548), (38, 8563), (40, 8593),

Gene: Giuseppe\_11 Start: 8186, Stop: 8638, Start Num: 11

Candidate Starts for Giuseppe\_11:

(1, 8042), (Start: 11 @8186 has 19 MA's), (Start: 18 @8261 has 1 MA's), (20, 8273), (21, 8279), (25, 8384), (26, 8399), (27, 8402), (28, 8408), (30, 8426), (37, 8537), (38, 8552), (40, 8582),

Gene: Gumball\_10 Start: 8216, Stop: 8602, Start Num: 18

Candidate Starts for Gumball\_10:

(1, 7997), (Start: 11 @8141 has 19 MA's), (Start: 18 @8216 has 1 MA's), (20, 8228), (21, 8234), (25, 8339), (26, 8354), (27, 8357), (28, 8363), (30, 8381), (37, 8492), (38, 8507), (40, 8537),

Gene: Hawkeye\_12 Start: 8027, Stop: 8488, Start Num: 9

Candidate Starts for Hawkeye\_12:

(Start: 9 @8027 has 1 MA's), (21, 8111), (25, 8216), (26, 8231), (27, 8234), (29, 8243), (37, 8369), (38, 8384), (41, 8417),

Gene: Helpful\_11 Start: 8194, Stop: 8655, Start Num: 11

Candidate Starts for Helpful\_11:

(Start: 11 @8194 has 19 MA's), (Start: 18 @8269 has 1 MA's), (20, 8281), (21, 8287), (25, 8392), (26, 8407), (27, 8410), (28, 8416), (30, 8434), (37, 8545), (38, 8560), (40, 8590),

Gene: KandZ\_11 Start: 8291, Stop: 8752, Start Num: 11

Candidate Starts for KandZ\_11:

(1, 8147), (Start: 11 @8291 has 19 MA's), (Start: 18 @8366 has 1 MA's), (20, 8378), (21, 8384), (25, 8489), (26, 8504), (27, 8507), (28, 8513), (30, 8531), (37, 8642), (38, 8657), (40, 8687),

Gene: Konstantine\_16 Start: 8711, Stop: 9169, Start Num: 2

Candidate Starts for Konstantine\_16:

(Start: 2 @8711 has 9 MA's), (8, 8792), (10, 8801), (32, 9038), (33, 9062), (36, 9128), (39, 9164),

Gene: Labelle\_18 Start: 10520, Stop: 10960, Start Num: 3

Candidate Starts for Labelle\_18:

(Start: 3 @10520 has 4 MA's), (5, 10529), (16, 10652), (17, 10667), (23, 10742), (24, 10754), (31, 10817), (34, 10874), (36, 10913),

Gene: Madruga\_17 Start: 10188, Stop: 10628, Start Num: 3

Candidate Starts for Madruga\_17:

(Start: 3 @10188 has 4 MA's), (5, 10197), (16, 10320), (17, 10335), (23, 10410), (24, 10422), (31, 10485), (34, 10542), (36, 10581),

Gene: Megatron06\_13 Start: 8047, Stop: 8505, Start Num: 2

Candidate Starts for Megatron06\_13:

(Start: 2 @8047 has 9 MA's), (8, 8128), (10, 8137), (32, 8374), (33, 8398), (36, 8464), (39, 8500),

Gene: Mopey\_11 Start: 8194, Stop: 8646, Start Num: 11

Candidate Starts for Mopey\_11:

(1, 8050), (Start: 11 @8194 has 19 MA's), (Start: 18 @8269 has 1 MA's), (20, 8281), (21, 8287), (25, 8392), (26, 8407), (27, 8410), (28, 8416), (30, 8434), (37, 8545), (38, 8560), (40, 8590),

Gene: Nova\_11 Start: 8618, Stop: 9079, Start Num: 11

Candidate Starts for Nova\_11:

(1, 8474), (Start: 11 @8618 has 19 MA's), (Start: 18 @8693 has 1 MA's), (20, 8705), (21, 8711), (25, 8816), (26, 8831), (27, 8834), (28, 8840), (30, 8858), (37, 8969), (38, 8984), (40, 9014),

Gene: Oaker\_11 Start: 7768, Stop: 8226, Start Num: 2

Candidate Starts for Oaker\_11:

(Start: 2 @7768 has 9 MA's), (8, 7849), (10, 7858), (15, 7912), (32, 8095), (33, 8119), (36, 8185), (39, 8221),

Gene: PBI1\_11 Start: 8125, Stop: 8577, Start Num: 11

Candidate Starts for PBI1\_11:

(1, 7987), (Start: 11 @8125 has 19 MA's), (Start: 18 @8200 has 1 MA's), (20, 8212), (21, 8218), (25, 8323), (26, 8338), (27, 8341), (28, 8347), (30, 8365), (37, 8476), (38, 8491), (40, 8521),

Gene: PLOT\_11 Start: 8197, Stop: 8658, Start Num: 11

Candidate Starts for PLOT\_11:

(1, 8059), (Start: 11 @8197 has 19 MA's), (Start: 18 @8272 has 1 MA's), (20, 8284), (21, 8290), (25, 8395), (26, 8410), (27, 8413), (28, 8419), (30, 8437), (37, 8548), (38, 8563), (40, 8593),

Gene: Patience\_19 Start: 11079, Stop: 11519, Start Num: 3

Candidate Starts for Patience\_19:

(Start: 3 @11079 has 4 MA's), (5, 11088), (16, 11211), (17, 11226), (23, 11301), (24, 11313), (31, 11376), (34, 11433), (36, 11472),

Gene: Penelope2018\_11 Start: 8194, Stop: 8655, Start Num: 11

Candidate Starts for Penelope2018\_11:

(Start: 11 @8194 has 19 MA's), (Start: 18 @8269 has 1 MA's), (20, 8281), (21, 8287), (25, 8392), (26, 8407), (27, 8410), (28, 8416), (30, 8434), (37, 8545), (38, 8560), (40, 8590),

Gene: Phreeze\_11 Start: 7512, Stop: 7970, Start Num: 2

Candidate Starts for Phreeze\_11:

(Start: 2 @7512 has 9 MA's), (8, 7593), (10, 7602), (15, 7656), (32, 7839), (33, 7863), (36, 7929), (39, 7965),

Gene: Prager\_11 Start: 8203, Stop: 8655, Start Num: 11

Candidate Starts for Prager\_11:

(Start: 11 @8203 has 19 MA's), (Start: 18 @8278 has 1 MA's), (20, 8290), (21, 8296), (25, 8401), (26, 8416), (27, 8419), (28, 8425), (30, 8443), (37, 8554), (38, 8569), (40, 8599),

Gene: Predator\_15 Start: 9029, Stop: 9472, Start Num: 2

Candidate Starts for Predator\_15:

(Start: 2 @9029 has 9 MA's), (10, 9119), (13, 9164), (14, 9170), (22, 9221), (32, 9341),

Gene: Puissant\_10 Start: 8011, Stop: 8388, Start Num: 8

Candidate Starts for Puissant\_10:

(Start: 2 @7930 has 9 MA's), (8, 8011), (10, 8020), (19, 8107), (32, 8257), (33, 8281), (36, 8347), (39, 8383),

Gene: SirHarley\_10 Start: 8123, Stop: 8584, Start Num: 11

Candidate Starts for SirHarley\_10:

(1, 7979), (Start: 11 @8123 has 19 MA's), (Start: 18 @8198 has 1 MA's), (20, 8210), (21, 8216), (25, 8321), (26, 8336), (27, 8339), (28, 8345), (30, 8363), (37, 8474), (38, 8489), (40, 8519),

Gene: Thoth\_11 Start: 8191, Stop: 8643, Start Num: 11

Candidate Starts for Thoth\_11:

(Start: 11 @8191 has 19 MA's), (Start: 18 @8266 has 1 MA's), (20, 8278), (21, 8284), (25, 8389), (26, 8404), (27, 8407), (28, 8413), (30, 8431), (37, 8542), (38, 8557), (40, 8587),

Gene: Thumb\_11 Start: 7513, Stop: 7971, Start Num: 2

Candidate Starts for Thumb\_11:

(Start: 2 @7513 has 9 MA's), (8, 7594), (10, 7603), (15, 7657), (32, 7840), (33, 7864), (36, 7930), (39, 7966),

Gene: Troll4\_11 Start: 8195, Stop: 8656, Start Num: 11

Candidate Starts for Troll4\_11:

(Start: 11 @8195 has 19 MA's), (Start: 18 @8270 has 1 MA's), (20, 8282), (21, 8288), (25, 8393), (26, 8408), (27, 8411), (28, 8417), (30, 8435), (37, 8546), (38, 8561), (40, 8591),

Gene: Visconti\_11 Start: 8204, Stop: 8656, Start Num: 11

Candidate Starts for Visconti\_11:

(1, 8060), (Start: 11 @8204 has 19 MA's), (Start: 18 @8279 has 1 MA's), (20, 8291), (21, 8297), (25, 8402), (26, 8417), (27, 8420), (28, 8426), (30, 8444), (37, 8555), (38, 8570), (40, 8600),

Gene: WaldoWhy\_11 Start: 8197, Stop: 8649, Start Num: 11

Candidate Starts for WaldoWhy\_11:

(Start: 11 @8197 has 19 MA's), (Start: 18 @8272 has 1 MA's), (20, 8284), (21, 8290), (25, 8395), (26, 8410), (27, 8413), (28, 8419), (30, 8437), (37, 8548), (38, 8563), (40, 8593),