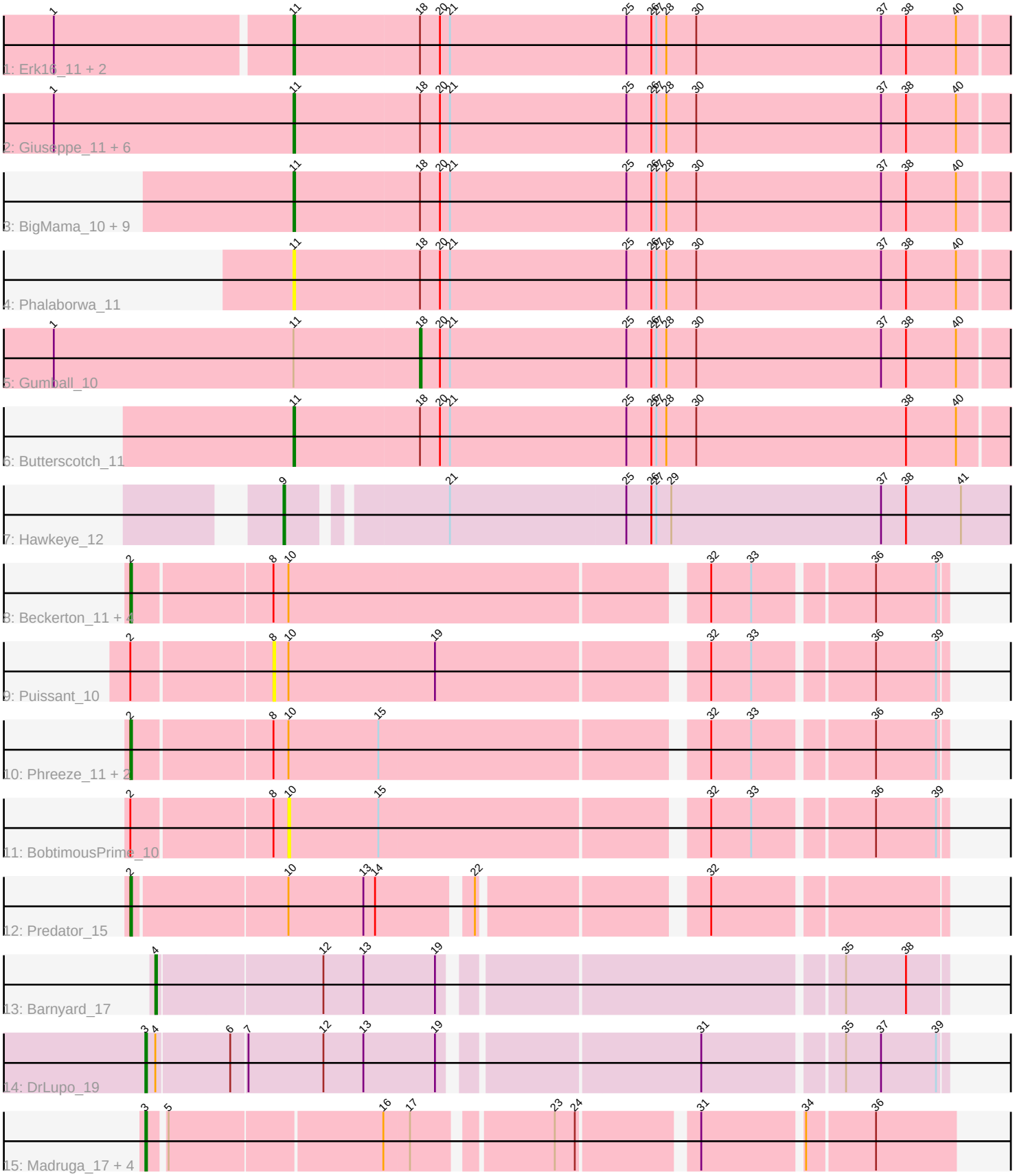
Pham 296713


1: Erk16_11 + 2
2: Giuseppe_11 + 6
3: BigMama_10 + 9
4: Phalaborwa_11
5: Gumball_10
6: Butterscotch_11
7: Hawkeye_12
8: Beckerton_11 + 4
9: Puissant_10
10: Phreeze_11 + 2
11: BobtimousPrime_10
12: Predator_15
13: Barnyard_17
14: DrLupo_19
15: Madruga_17 + 4

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 296713 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296713 has 42 members, 5 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, SuperheroCarly_11, Penelope2018_11, Helpful_11, Thoth_11, Troll4_11
• Track 4 : Phalaborwa_11
• Track 5 : Gumball_10
• Track 6 : Butterscotch_11
• Track 7 : Hawkeye_12
• Track 8 : Beckerton_11, Cborch11_12, Konstantine_16, Damien_11, Megatron06_13
• Track 9 : Puissant_10
• Track 10 : Phreeze_11, Thumb_11, Oaker_11
• Track 11 : BobtimousPrime_10
• Track 12 : Predator_15
• Track 13 : Barnyard_17
• Track 14 : DrLupo_19
• Track 15 : Madruga_17, Demikore_19, Patience_19, Labelle_18, SuperSonics_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 21 of the 37 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, Phalaborwa_11, Prager_11, SirHarley_10, SuperheroCarly_11, 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, BobtimousPrime_10, Cborch11_12, Damien_11, Demikore_19, DrLupo_19, Hawkeye_12, Konstantine_16, Labelle_18, Madruga_17, Megatron06_13, Oaker_11, Patience_19, Phreeze_11, Predator_15, Puissant_10, SuperSonics_18, Thumb_11,

Summary by start number:

Start 2:
• Found in 11 of 42 (26.2%) of genes in pham
• Manual Annotations of this start: 9 of 37
• Called 81.8% 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 6 of 42 (14.3%) of genes in pham
• Manual Annotations of this start: 4 of 37
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Demikore_19 (U), DrLupo_19 (H2), Labelle_18 (U), Madruga_17 (U), Patience_19 (U), SuperSonics_18 (U),

Start 4:
• Found in 2 of 42 (4.8%) of genes in pham
• Manual Annotations of this start: 1 of 37
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Barnyard_17 (H2),

Start 8:
• Found in 10 of 42 (23.8%) of genes in pham
• No Manual Annotations of this start.
• Called 10.0% of time when present
• Phage (with cluster) where this start called: Puissant_10 (H1),

Start 9:
• Found in 1 of 42 (2.4%) of genes in pham
• Manual Annotations of this start: 1 of 37
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Hawkeye_12 (D2),

Start 10:
• Found in 11 of 42 (26.2%) of genes in pham
• No Manual Annotations of this start.
• Called 9.1% of time when present
• Phage (with cluster) where this start called: BobtimousPrime_10 (H1),

Start 11:
• Found in 23 of 42 (54.8%) of genes in pham
• Manual Annotations of this start: 21 of 37
• Called 95.7% 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), Phalaborwa_11 (D1), Prager_11 (D1), SirHarley_10 (D1), SuperheroCarly_11 (D1), Thoth_11 (D1), Troll4_11 (D1), Visconti_11 (D1), WaldoWhy_11 (D1),

Start 18:
• Found in 23 of 42 (54.8%) of genes in pham
• Manual Annotations of this start: 1 of 37
• Called 4.3% 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 21 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 21 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 21 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: BobtimousPrime_10 Start: 8057, Stop: 8425, Start Num: 10
Candidate Starts for BobtimousPrime_10:
(Start: 2 @7967 has 9 MA's), (8, 8048), (10, 8057), (15, 8111), (32, 8294), (33, 8318), (36, 8384), (39, 8420),

Gene: Butterscotch_11 Start: 8194, Stop: 8655, Start Num: 11
Candidate Starts for Butterscotch_11:
(Start: 11 @8194 has 21 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 21 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 21 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: Demikore_19 Start: 10518, Stop: 10958, Start Num: 3
Candidate Starts for Demikore_19:
(Start: 3 @10518 has 4 MA's), (5, 10527), (16, 10650), (17, 10665), (23, 10740), (24, 10752), (31, 10815), (34, 10872), (36, 10911),

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 21 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 21 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 21 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 21 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 21 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 21 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 21 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 21 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 21 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 21 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: Phalaborwa_11 Start: 8236, Stop: 8697, Start Num: 11
Candidate Starts for Phalaborwa_11:
(Start: 11 @8236 has 21 MA's), (Start: 18 @8311 has 1 MA's), (20, 8323), (21, 8329), (25, 8434), (26, 8449), (27, 8452), (28, 8458), (30, 8476), (37, 8587), (38, 8602), (40, 8632),

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 21 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 21 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: SuperSonics_18 Start: 10246, Stop: 10686, Start Num: 3
Candidate Starts for SuperSonics_18:
(Start: 3 @10246 has 4 MA's), (5, 10255), (16, 10378), (17, 10393), (23, 10468), (24, 10480), (31, 10543), (34, 10600), (36, 10639),

Gene: SuperheroCarly_11 Start: 8056, Stop: 8508, Start Num: 11
Candidate Starts for SuperheroCarly_11:
(Start: 11 @8056 has 21 MA's), (Start: 18 @8131 has 1 MA's), (20, 8143), (21, 8149), (25, 8254), (26, 8269), (27, 8272), (28, 8278), (30, 8296), (37, 8407), (38, 8422), (40, 8452),

Gene: Thoth_11 Start: 8191, Stop: 8643, Start Num: 11
Candidate Starts for Thoth_11:
(Start: 11 @8191 has 21 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 21 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 21 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 21 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),