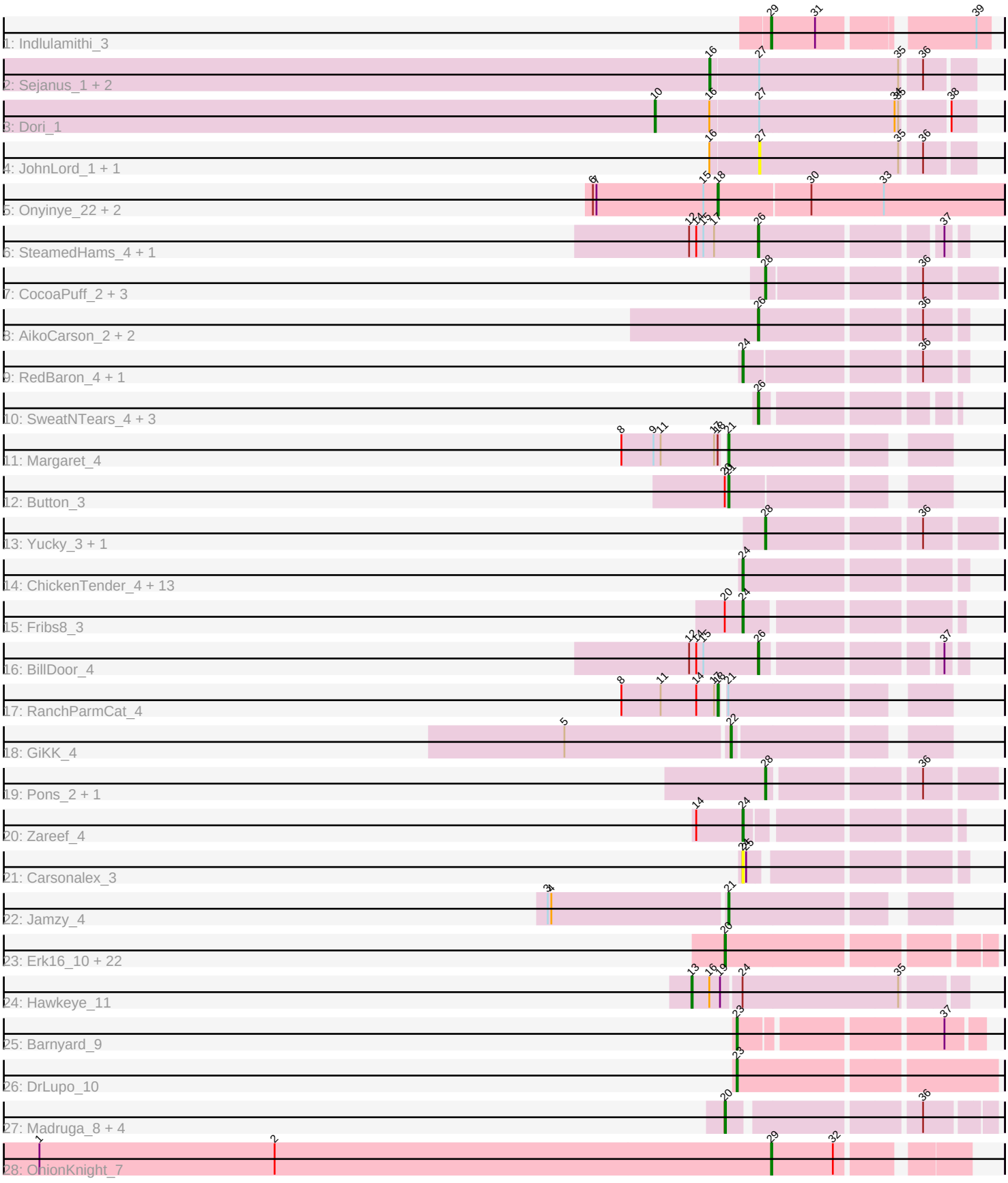
Pham 294646


1: Indlulamithi_3
2: Sejanus_1 + 2
3: Dori_1
4: JohnLord_1 + 1
5: Onyinye_22 + 2
6: SteamedHams_4 + 1
7: CocoaPuff_2 + 3
8: AikoCarson_2 + 2
9: RedBaron_4 + 1
10: SweatNTears_4 + 3
11: Margaret_4
12: Button_3
13: Yucky_3 + 1
14: ChickenTender_4 + 13
15: Fribs8_3
16: BillDoor_4
17: RanchParmCat_4
18: GiKK_4
19: Pons_2 + 1
20: Zareef_4
21: Carsonalex_3
22: Jamzy_4
23: Erk16_10 + 22
24: Hawkeye_11
25: Barnyard_9
26: DrLupo_10
27: Madruga_8 + 4
28: OnionKnight_7

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 294646 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294646 has 84 members, 19 are drafts.

Phages represented in each track:
• Track 1 : Indlulamithi_3
• Track 2 : Sejanus_1, Mask_1, Mao1_1
• Track 3 : Dori_1
• Track 4 : JohnLord_1, Caterpie_1
• Track 5 : Onyinye_22, Leopard_21, Aikoy_21
• Track 6 : SteamedHams_4, Tolls_4
• Track 7 : CocoaPuff_2, KayGee_2, Balloona_2, Elinal_3
• Track 8 : AikoCarson_2, Amok_2, Emalyn_2
• Track 9 : RedBaron_4, MunkgeeRoachy_3
• Track 10 : SweatNTears_4, Horseradish_3, MScarn_4, Yummy_3
• Track 11 : Margaret_4
• Track 12 : Button_3
• Track 13 : Yucky_3, PotPie_3
• Track 14 : ChickenTender_4, MaVan_4, Sopespian_3, GoldHunter_3, Socotra_3, Starburst_3, PsychoKiller_3, Azira_4, Burnsey_3, Nibbles_4, Wolfwood_5, Eliott_3, RADical_3, RSchmailzl_4
• Track 15 : Fribs8_3
• Track 16 : BillDoor_4
• Track 17 : RanchParmCat_4
• Track 18 : GiKK_4
• Track 19 : Pons_2, MAnor_2
• Track 20 : Zareef_4
• Track 21 : Carsonalex_3
• Track 22 : Jamzy_4
• Track 23 : Erk16_10, Giuseppe_10, PLot_10, SirHarley_9, Adjutor_10, Mopey_10, Delton_10, Thoth_10, Phalaborwa_10, Prager_10, Chill_10, Nova_10, PBI1_10, SuperheroCarly_10, Butterscotch_10, KandZ_10, Penelope2018_10, Gumball_9, WaldoWhy_10, Visconti_10, Helpful_10, BigMama_9, Troll4_10
• Track 24 : Hawkeye_11
• Track 25 : Barnyard_9
• Track 26 : DrLupo_10
• Track 27 : Madruga_8, Patience_10, Demikore_9, Labelle_10, SuperSonics_10
• Track 28 : OnionKnight_7

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

The start number called the most often in the published annotations is 20, it was called in 25 of the 65 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Adjutor_10, BigMama_9, Butterscotch_10, Chill_10, Delton_10, Demikore_9, Erk16_10, Giuseppe_10, Gumball_9, Helpful_10, KandZ_10, Labelle_10, Madruga_8, Mopey_10, Nova_10, PBI1_10, PLot_10, Patience_10, Penelope2018_10, Phalaborwa_10, Prager_10, SirHarley_9, SuperSonics_10, SuperheroCarly_10, Thoth_10, Troll4_10, Visconti_10, WaldoWhy_10,

Genes that have the "Most Annotated" start but do not call it:
• Button_3, Fribs8_3,

Genes that do not have the "Most Annotated" start:
• AikoCarson_2, Aikoy_21, Amok_2, Azira_4, Balloona_2, Barnyard_9, BillDoor_4, Burnsey_3, Carsonalex_3, Caterpie_1, ChickenTender_4, CocoaPuff_2, Dori_1, DrLupo_10, Elinal_3, Eliott_3, Emalyn_2, GiKK_4, GoldHunter_3, Hawkeye_11, Horseradish_3, Indlulamithi_3, Jamzy_4, JohnLord_1, KayGee_2, Leopard_21, MAnor_2, MScarn_4, MaVan_4, Mao1_1, Margaret_4, Mask_1, MunkgeeRoachy_3, Nibbles_4, OnionKnight_7, Onyinye_22, Pons_2, PotPie_3, PsychoKiller_3, RADical_3, RSchmailzl_4, RanchParmCat_4, RedBaron_4, Sejanus_1, Socotra_3, Sopespian_3, Starburst_3, SteamedHams_4, SweatNTears_4, Tolls_4, Wolfwood_5, Yucky_3, Yummy_3, Zareef_4,

Summary by start number:

Start 10:
• Found in 1 of 84 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 65
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Dori_1 (AD),

Start 13:
• Found in 1 of 84 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 65
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Hawkeye_11 (D2),

Start 16:
• Found in 7 of 84 (8.3%) of genes in pham
• Manual Annotations of this start: 3 of 65
• Called 42.9% of time when present
• Phage (with cluster) where this start called: Mao1_1 (AD), Mask_1 (AD), Sejanus_1 (AD),

Start 18:
• Found in 5 of 84 (6.0%) of genes in pham
• Manual Annotations of this start: 4 of 65
• Called 80.0% of time when present
• Phage (with cluster) where this start called: Aikoy_21 (AE), Leopard_21 (AE), Onyinye_22 (AE), RanchParmCat_4 (CT),

Start 20:
• Found in 30 of 84 (35.7%) of genes in pham
• Manual Annotations of this start: 25 of 65
• Called 93.3% of time when present
• Phage (with cluster) where this start called: Adjutor_10 (D1), BigMama_9 (D1), Butterscotch_10 (D1), Chill_10 (D1), Delton_10 (D1), Demikore_9 (U), Erk16_10 (D1), Giuseppe_10 (D1), Gumball_9 (D1), Helpful_10 (D1), KandZ_10 (D1), Labelle_10 (U), Madruga_8 (U), Mopey_10 (D1), Nova_10 (D1), PBI1_10 (D1), PLot_10 (D1), Patience_10 (U), Penelope2018_10 (D1), Phalaborwa_10 (D1), Prager_10 (D1), SirHarley_9 (D1), SuperSonics_10 (U), SuperheroCarly_10 (D1), Thoth_10 (D1), Troll4_10 (D1), Visconti_10 (D1), WaldoWhy_10 (D1),

Start 21:
• Found in 4 of 84 (4.8%) of genes in pham
• Manual Annotations of this start: 3 of 65
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Button_3 (CT), Jamzy_4 (CT), Margaret_4 (CT),

Start 22:
• Found in 1 of 84 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 65
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GiKK_4 (CT),

Start 23:
• Found in 2 of 84 (2.4%) of genes in pham
• Manual Annotations of this start: 2 of 65
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Barnyard_9 (H2), DrLupo_10 (H2),

Start 24:
• Found in 20 of 84 (23.8%) of genes in pham
• Manual Annotations of this start: 7 of 65
• Called 95.0% of time when present
• Phage (with cluster) where this start called: Azira_4 (CT), Burnsey_3 (CT), Carsonalex_3 (CT), ChickenTender_4 (CT), Eliott_3 (CT), Fribs8_3 (CT), GoldHunter_3 (CT), MaVan_4 (CT), MunkgeeRoachy_3 (CT), Nibbles_4 (CT), PsychoKiller_3 (CT), RADical_3 (CT), RSchmailzl_4 (CT), RedBaron_4 (CT), Socotra_3 (CT), Sopespian_3 (CT), Starburst_3 (CT), Wolfwood_5 (CT), Zareef_4 (CT),

Start 26:
• Found in 10 of 84 (11.9%) of genes in pham
• Manual Annotations of this start: 10 of 65
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AikoCarson_2 (CT), Amok_2 (CT), BillDoor_4 (CT), Emalyn_2 (CT), Horseradish_3 (CT), MScarn_4 (CT), SteamedHams_4 (CT), SweatNTears_4 (CT), Tolls_4 (CT), Yummy_3 (CT),

Start 27:
• Found in 6 of 84 (7.1%) of genes in pham
• No Manual Annotations of this start.

• Called 33.3% of time when present
• Phage (with cluster) where this start called: Caterpie_1 (AD), JohnLord_1 (AD),

Start 28:
• Found in 8 of 84 (9.5%) of genes in pham
• Manual Annotations of this start: 6 of 65
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Balloona_2 (CT), CocoaPuff_2 (CT), Elinal_3 (CT), KayGee_2 (CT), MAnor_2 (CT), Pons_2 (CT), PotPie_3 (CT), Yucky_3 (CT),

Start 29:
• Found in 2 of 84 (2.4%) of genes in pham
• Manual Annotations of this start: 2 of 65
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Indlulamithi_3 (AC), OnionKnight_7 (singleton),

Summary by clusters:

There are 9 clusters represented in this pham: AC, AE, AD, H2, singleton, U, D1, D2, CT,

Info for manual annotations of cluster AC:
•Start number 29 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster AD:
•Start number 10 was manually annotated 1 time for cluster AD.
•Start number 16 was manually annotated 3 times for cluster AD.

Info for manual annotations of cluster AE:
•Start number 18 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster CT:
•Start number 18 was manually annotated 1 time for cluster CT.
•Start number 21 was manually annotated 3 times for cluster CT.
•Start number 22 was manually annotated 1 time for cluster CT.
•Start number 24 was manually annotated 7 times for cluster CT.
•Start number 26 was manually annotated 10 times for cluster CT.
•Start number 28 was manually annotated 6 times for cluster CT.

Info for manual annotations of cluster D1:
•Start number 20 was manually annotated 22 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 H2:
•Start number 23 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster U:
•Start number 20 was manually annotated 3 times for cluster U.

Gene Information:

Gene: Adjutor_10 Start: 7925, Stop: 8137, Start Num: 20
Candidate Starts for Adjutor_10:
(Start: 20 @7925 has 25 MA's),

Gene: AikoCarson_2 Start: 534, Stop: 692, Start Num: 26
Candidate Starts for AikoCarson_2:
(Start: 26 @534 has 10 MA's), (36, 660),

Gene: Aikoy_21 Start: 13873, Stop: 14109, Start Num: 18
Candidate Starts for Aikoy_21:
(6, 13768), (7, 13771), (15, 13861), (Start: 18 @13873 has 4 MA's), (30, 13948), (33, 14008),

Gene: Amok_2 Start: 535, Stop: 693, Start Num: 26
Candidate Starts for Amok_2:
(Start: 26 @535 has 10 MA's), (36, 661),

Gene: Azira_4 Start: 1179, Stop: 1337, Start Num: 24
Candidate Starts for Azira_4:
(Start: 24 @1179 has 7 MA's),

Gene: Balloona_2 Start: 643, Stop: 816, Start Num: 28
Candidate Starts for Balloona_2:
(Start: 28 @643 has 6 MA's), (36, 760),

Gene: Barnyard_9 Start: 6285, Stop: 6467, Start Num: 23
Candidate Starts for Barnyard_9:
(Start: 23 @6285 has 2 MA's), (37, 6438),

Gene: BigMama_9 Start: 7998, Stop: 8210, Start Num: 20
Candidate Starts for BigMama_9:
(Start: 20 @7998 has 25 MA's),

Gene: BillDoor_4 Start: 852, Stop: 998, Start Num: 26
Candidate Starts for BillDoor_4:
(12, 795), (14, 801), (15, 807), (Start: 26 @852 has 10 MA's), (37, 984),

Gene: Burnsey_3 Start: 829, Stop: 999, Start Num: 24
Candidate Starts for Burnsey_3:
(Start: 24 @829 has 7 MA's),

Gene: Butterscotch_10 Start: 7985, Stop: 8197, Start Num: 20
Candidate Starts for Butterscotch_10:
(Start: 20 @7985 has 25 MA's),

Gene: Button_3 Start: 752, Stop: 910, Start Num: 21
Candidate Starts for Button_3:
(Start: 20 @749 has 25 MA's), (Start: 21 @752 has 3 MA's),

Gene: Carsonalex_3 Start: 894, Stop: 1055, Start Num: 24

Candidate Starts for Carsonalex_3:
(Start: 24 @894 has 7 MA's), (25, 897),

Gene: Caterpie_1 Start: 40, Stop: 207, Start Num: 27
Candidate Starts for Caterpie_1:
(Start: 16 @1 has 3 MA's), (27, 40), (35, 154), (36, 169),

Gene: ChickenTender_4 Start: 877, Stop: 1047, Start Num: 24
Candidate Starts for ChickenTender_4:
(Start: 24 @877 has 7 MA's),

Gene: Chill_10 Start: 7988, Stop: 8200, Start Num: 20
Candidate Starts for Chill_10:
(Start: 20 @7988 has 25 MA's),

Gene: CocoaPuff_2 Start: 643, Stop: 816, Start Num: 28
Candidate Starts for CocoaPuff_2:
(Start: 28 @643 has 6 MA's), (36, 760),

Gene: Delton_10 Start: 7994, Stop: 8206, Start Num: 20
Candidate Starts for Delton_10:
(Start: 20 @7994 has 25 MA's),

Gene: Demikore_9 Start: 6173, Stop: 6370, Start Num: 20
Candidate Starts for Demikore_9:
(Start: 20 @6173 has 25 MA's), (36, 6317),

Gene: Dori_1 Start: 1, Stop: 252, Start Num: 10
Candidate Starts for Dori_1:
(Start: 10 @1 has 1 MA's), (Start: 16 @46 has 3 MA's), (27, 85), (34, 196), (35, 199), (38, 232),

Gene: DrLupo_10 Start: 6204, Stop: 6410, Start Num: 23
Candidate Starts for DrLupo_10:
(Start: 23 @6204 has 2 MA's),

Gene: Elinal_3 Start: 643, Stop: 819, Start Num: 28
Candidate Starts for Elinal_3:
(Start: 28 @643 has 6 MA's), (36, 763),

Gene: Eliott_3 Start: 829, Stop: 999, Start Num: 24
Candidate Starts for Eliott_3:
(Start: 24 @829 has 7 MA's),

Gene: Emalyn_2 Start: 534, Stop: 692, Start Num: 26
Candidate Starts for Emalyn_2:
(Start: 26 @534 has 10 MA's), (36, 660),

Gene: Erk16_10 Start: 7994, Stop: 8200, Start Num: 20
Candidate Starts for Erk16_10:
(Start: 20 @7994 has 25 MA's),

Gene: Fribs8_3 Start: 954, Stop: 1115, Start Num: 24
Candidate Starts for Fribs8_3:

(Start: 20 @939 has 25 MA's), (Start: 24 @954 has 7 MA's),

Gene: GiKK_4 Start: 1010, Stop: 1165, Start Num: 22
Candidate Starts for GiKK_4:
(5, 875), (Start: 22 @1010 has 1 MA's),

Gene: Giuseppe_10 Start: 7977, Stop: 8189, Start Num: 20
Candidate Starts for Giuseppe_10:
(Start: 20 @7977 has 25 MA's),

Gene: GoldHunter_3 Start: 829, Stop: 999, Start Num: 24
Candidate Starts for GoldHunter_3:
(Start: 24 @829 has 7 MA's),

Gene: Gumball_9 Start: 7932, Stop: 8144, Start Num: 20
Candidate Starts for Gumball_9:
(Start: 20 @7932 has 25 MA's),

Gene: Hawkeye_11 Start: 7815, Stop: 8030, Start Num: 13
Candidate Starts for Hawkeye_11:
(Start: 13 @7815 has 1 MA's), (Start: 16 @7830 has 3 MA's), (19, 7839), (Start: 24 @7854 has 7 MA's), (35, 7983),

Gene: Helpful_10 Start: 7985, Stop: 8197, Start Num: 20
Candidate Starts for Helpful_10:
(Start: 20 @7985 has 25 MA's),

Gene: Horseradish_3 Start: 758, Stop: 898, Start Num: 26
Candidate Starts for Horseradish_3:
(Start: 26 @758 has 10 MA's),

Gene: Indlulamithi_3 Start: 3257, Stop: 3418, Start Num: 29
Candidate Starts for Indlulamithi_3:
(Start: 29 @3257 has 2 MA's), (31, 3293), (39, 3407),

Gene: Jamzy_4 Start: 1014, Stop: 1175, Start Num: 21
Candidate Starts for Jamzy_4:
(3, 867), (4, 870), (Start: 21 @1014 has 3 MA's),

Gene: JohnLord_1 Start: 40, Stop: 207, Start Num: 27
Candidate Starts for JohnLord_1:
(Start: 16 @1 has 3 MA's), (27, 40), (35, 154), (36, 169),

Gene: KandZ_10 Start: 8082, Stop: 8294, Start Num: 20
Candidate Starts for KandZ_10:
(Start: 20 @8082 has 25 MA's),

Gene: KayGee_2 Start: 643, Stop: 819, Start Num: 28
Candidate Starts for KayGee_2:
(Start: 28 @643 has 6 MA's), (36, 763),

Gene: Labelle_10 Start: 6572, Stop: 6769, Start Num: 20
Candidate Starts for Labelle_10:

(Start: 20 @6572 has 25 MA's), (36, 6716),

Gene: Leopard_21 Start: 14158, Stop: 14394, Start Num: 18
Candidate Starts for Leopard_21:
(6, 14053), (7, 14056), (15, 14146), (Start: 18 @14158 has 4 MA's), (30, 14233), (33, 14293),

Gene: MAnor_2 Start: 640, Stop: 810, Start Num: 28
Candidate Starts for MAnor_2:
(Start: 28 @640 has 6 MA's), (36, 754),

Gene: MScarn_4 Start: 852, Stop: 992, Start Num: 26
Candidate Starts for MScarn_4:
(Start: 26 @852 has 10 MA's),

Gene: MaVan_4 Start: 1180, Stop: 1338, Start Num: 24
Candidate Starts for MaVan_4:
(Start: 24 @1180 has 7 MA's),

Gene: Madruga_8 Start: 6176, Stop: 6373, Start Num: 20
Candidate Starts for Madruga_8:
(Start: 20 @6176 has 25 MA's), (36, 6320),

Gene: Mao1_1 Start: 1, Stop: 207, Start Num: 16
Candidate Starts for Mao1_1:
(Start: 16 @1 has 3 MA's), (27, 40), (35, 154), (36, 169),

Gene: Margaret_4 Start: 1387, Stop: 1548, Start Num: 21
Candidate Starts for Margaret_4:
(8, 1303), (9, 1330), (11, 1336), (17, 1381), (Start: 18 @1384 has 4 MA's), (Start: 21 @1387 has 3 MA's),

Gene: Mask_1 Start: 1, Stop: 207, Start Num: 16
Candidate Starts for Mask_1:
(Start: 16 @1 has 3 MA's), (27, 40), (35, 154), (36, 169),

Gene: Mopey_10 Start: 7985, Stop: 8197, Start Num: 20
Candidate Starts for Mopey_10:
(Start: 20 @7985 has 25 MA's),

Gene: MunkgeeRoachy_3 Start: 877, Stop: 1047, Start Num: 24
Candidate Starts for MunkgeeRoachy_3:
(Start: 24 @877 has 7 MA's), (36, 1015),

Gene: Nibbles_4 Start: 1180, Stop: 1338, Start Num: 24
Candidate Starts for Nibbles_4:
(Start: 24 @1180 has 7 MA's),

Gene: Nova_10 Start: 8409, Stop: 8621, Start Num: 20
Candidate Starts for Nova_10:
(Start: 20 @8409 has 25 MA's),

Gene: OnionKnight_7 Start: 5413, Stop: 5559, Start Num: 29
Candidate Starts for OnionKnight_7:

(1, 4798), (2, 4996), (Start: 29 @5413 has 2 MA's), (32, 5464),

Gene: Onyinye_22 Start: 14039, Stop: 14275, Start Num: 18
Candidate Starts for Onyinye_22:
(6, 13934), (7, 13937), (15, 14027), (Start: 18 @14039 has 4 MA's), (30, 14114), (33, 14174),

Gene: PBI1_10 Start: 7922, Stop: 8128, Start Num: 20
Candidate Starts for PBI1_10:
(Start: 20 @7922 has 25 MA's),

Gene: PLot_10 Start: 7994, Stop: 8200, Start Num: 20
Candidate Starts for PLot_10:
(Start: 20 @7994 has 25 MA's),

Gene: Patience_10 Start: 7102, Stop: 7299, Start Num: 20
Candidate Starts for Patience_10:
(Start: 20 @7102 has 25 MA's), (36, 7246),

Gene: Penelope2018_10 Start: 7985, Stop: 8197, Start Num: 20
Candidate Starts for Penelope2018_10:
(Start: 20 @7985 has 25 MA's),

Gene: Phalaborwa_10 Start: 8027, Stop: 8239, Start Num: 20
Candidate Starts for Phalaborwa_10:
(Start: 20 @8027 has 25 MA's),

Gene: Pons_2 Start: 640, Stop: 810, Start Num: 28
Candidate Starts for Pons_2:
(Start: 28 @640 has 6 MA's), (36, 754),

Gene: PotPie_3 Start: 1499, Stop: 1675, Start Num: 28
Candidate Starts for PotPie_3:
(Start: 28 @1499 has 6 MA's), (36, 1619),

Gene: Prager_10 Start: 7994, Stop: 8206, Start Num: 20
Candidate Starts for Prager_10:
(Start: 20 @7994 has 25 MA's),

Gene: PsychoKiller_3 Start: 829, Stop: 999, Start Num: 24
Candidate Starts for PsychoKiller_3:
(Start: 24 @829 has 7 MA's),

Gene: RADical_3 Start: 830, Stop: 1000, Start Num: 24
Candidate Starts for RADical_3:
(Start: 24 @830 has 7 MA's),

Gene: RSchmailzl_4 Start: 877, Stop: 1047, Start Num: 24
Candidate Starts for RSchmailzl_4:
(Start: 24 @877 has 7 MA's),

Gene: RanchParmCat_4 Start: 1384, Stop: 1548, Start Num: 18
Candidate Starts for RanchParmCat_4:

(8, 1303), (11, 1336), (14, 1366), (17, 1381), (Start: 18 @1384 has 4 MA's), (Start: 21 @1387 has 3 MA's),

Gene: RedBaron_4 Start: 877, Stop: 1044, Start Num: 24
Candidate Starts for RedBaron_4:
(Start: 24 @877 has 7 MA's), (36, 1012),

Gene: Sejanus_1 Start: 1, Stop: 207, Start Num: 16
Candidate Starts for Sejanus_1:
(Start: 16 @1 has 3 MA's), (27, 40), (35, 154), (36, 169),

Gene: SirHarley_9 Start: 7914, Stop: 8126, Start Num: 20
Candidate Starts for SirHarley_9:
(Start: 20 @7914 has 25 MA's),

Gene: Socotra_3 Start: 829, Stop: 999, Start Num: 24
Candidate Starts for Socotra_3:
(Start: 24 @829 has 7 MA's),

Gene: Sopespian_3 Start: 829, Stop: 999, Start Num: 24
Candidate Starts for Sopespian_3:
(Start: 24 @829 has 7 MA's),

Gene: Starburst_3 Start: 829, Stop: 999, Start Num: 24
Candidate Starts for Starburst_3:
(Start: 24 @829 has 7 MA's),

Gene: SteamedHams_4 Start: 852, Stop: 1004, Start Num: 26
Candidate Starts for SteamedHams_4:
(12, 795), (14, 801), (15, 807), (17, 816), (Start: 26 @852 has 10 MA's), (37, 990),

Gene: SuperSonics_10 Start: 6314, Stop: 6511, Start Num: 20
Candidate Starts for SuperSonics_10:
(Start: 20 @6314 has 25 MA's), (36, 6458),

Gene: SuperheroCarly_10 Start: 7847, Stop: 8059, Start Num: 20
Candidate Starts for SuperheroCarly_10:
(Start: 20 @7847 has 25 MA's),

Gene: SweatNTears_4 Start: 1378, Stop: 1518, Start Num: 26
Candidate Starts for SweatNTears_4:
(Start: 26 @1378 has 10 MA's),

Gene: Thoth_10 Start: 7982, Stop: 8194, Start Num: 20
Candidate Starts for Thoth_10:
(Start: 20 @7982 has 25 MA's),

Gene: Tolls_4 Start: 852, Stop: 1004, Start Num: 26
Candidate Starts for Tolls_4:
(12, 795), (14, 801), (15, 807), (17, 816), (Start: 26 @852 has 10 MA's), (37, 990),

Gene: Troll4_10 Start: 7986, Stop: 8198, Start Num: 20
Candidate Starts for Troll4_10:

(Start: 20 @7986 has 25 MA's),

Gene: Visconti_10 Start: 7995, Stop: 8207, Start Num: 20
Candidate Starts for Visconti_10:
(Start: 20 @7995 has 25 MA's),

Gene: WaldoWhy_10 Start: 7988, Stop: 8200, Start Num: 20
Candidate Starts for WaldoWhy_10:
(Start: 20 @7988 has 25 MA's),

Gene: Wolfwood_5 Start: 1179, Stop: 1337, Start Num: 24
Candidate Starts for Wolfwood_5:
(Start: 24 @1179 has 7 MA's),

Gene: Yucky_3 Start: 1499, Stop: 1675, Start Num: 28
Candidate Starts for Yucky_3:
(Start: 28 @1499 has 6 MA's), (36, 1619),

Gene: Yummy_3 Start: 758, Stop: 898, Start Num: 26
Candidate Starts for Yummy_3:
(Start: 26 @758 has 10 MA's),

Gene: Zareef_4 Start: 1180, Stop: 1338, Start Num: 24
Candidate Starts for Zareef_4:
(14, 1141), (Start: 24 @1180 has 7 MA's),