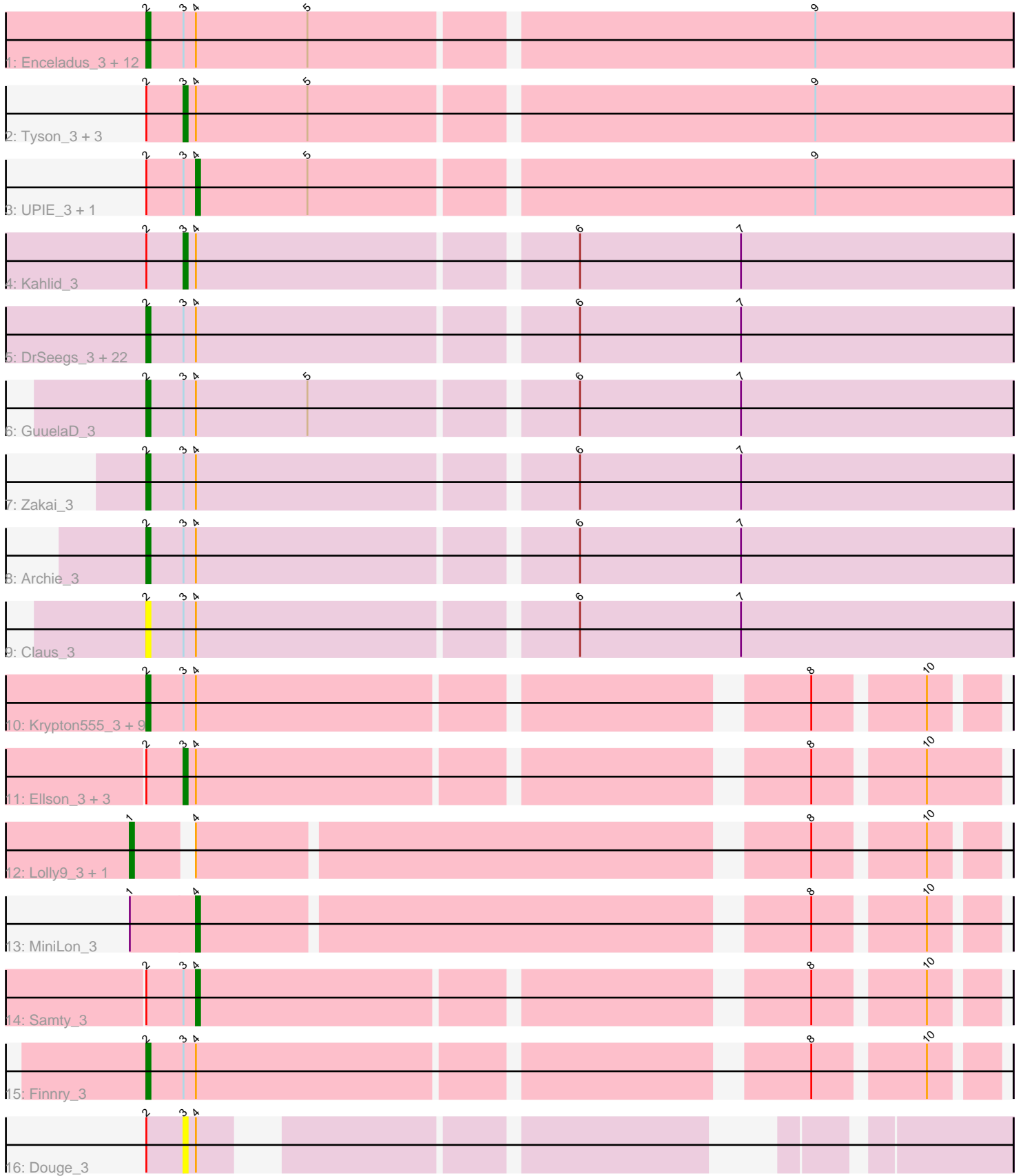


Pham 171446



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 171446 Report

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

Pham number 171446 has 67 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Enceladus_3, Appletree2_3, Calm_3, Silverleaf_3, Wyatt2_3, Zaria_3, Wamburgexpress_3, MAckerman_3, CicholasNage_3, Halena_3, DirkDirk_3, Acquire49_3, Rose5_3
- Track 2 : Tyson_3, OhShagHennessy_3, AvadaKedavra_3, JoeDirt_3
- Track 3 : UPIE_3, LeBron_3
- Track 4 : Kahlid_3
- Track 5 : DrSeegs_3, Wilder_3, Netyap_3, Nicholasp3_3, Miley16_3, Crossroads_3, Finemlucis_3, Gabriela_3, LilDestine_3, Vetrrix_3, MkaliMitinis3_3, Faith1_3, Breezona_3, Hafay_3, BigCheese_3, Lewan_3, Loadrie_3, Itos_3, Winky_3, BobsGarage_3, Wigglewiggles_3, Rumpelstiltskin_3, Gardann_3
- Track 6 : GuuelaD_3
- Track 7 : Zakai_3
- Track 8 : Archie_3
- Track 9 : Claus_3
- Track 10 : Krypton555_3, Bellis_3, Snenia_3, MsGreen_3, Clautastrophe_3, DuncansLeg_3, Jubie_3, Lumos_3, Kingsolomon_3, Nicholas_3
- Track 11 : Ellson_3, Whirlwind_4, Moostard_3, Jobypre_3
- Track 12 : Lolly9_3, MiniMac_3
- Track 13 : MiniLon_3
- Track 14 : Samty_3
- Track 15 : Finnry_3
- Track 16 : Douge_3

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

The start number called the most often in the published annotations is 2, it was called in 47 of the 60 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_3, Appletree2_3, Archie_3, Bellis_3, BigCheese_3, BobsGarage_3, Breezona_3, Calm_3, CicholasNage_3, Claus_3, Clautastrophe_3, Crossroads_3, DirkDirk_3, DrSeegs_3, DuncansLeg_3, Enceladus_3, Faith1_3, Finemlucis_3, Finnry_3, Gabriela_3, Gardann_3, GuuelaD_3, Hafay_3, Halena_3, Itos_3, Jubie_3, Kingsolomon_3, Krypton555_3, Lewan_3, LilDestine_3, Loadrie_3, Lumos_3,

MAckerman_3, Miley16_3, MkaliMitinis3_3, MsGreen_3, Netyap_3, Nicholas_3, Nicholasp3_3, Rose5_3, Rumpelstiltskin_3, Silverleaf_3, Snenia_3, Vetrix_3, Wamburgrxpress_3, Wigglewiggle_3, Wilder_3, Winky_3, Wyatt2_3, Zakai_3, Zaria_3,

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

- AvadaKedavra_3, Douge_3, Ellson_3, Jobypre_3, JoeDirt_3, Kahlid_3, LeBron_3, Moostard_3, OhShagHennessy_3, Samty_3, Tyson_3, UPIE_3, Whirlwind_4,

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

- Lolly9_3, MiniLon_3, MiniMac_3,

Summary by start number:

Start 1:

- Found in 3 of 67 (4.5%) of genes in pham
- Manual Annotations of this start: 2 of 60
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Lolly9_3 (L3), MiniMac_3 (L3),

Start 2:

- Found in 64 of 67 (95.5%) of genes in pham
- Manual Annotations of this start: 47 of 60
- Called 79.7% of time when present
- Phage (with cluster) where this start called: Acquire49_3 (L1), Appletree2_3 (L1), Archie_3 (L2), Bellis_3 (L3), BigCheese_3 (L2), BobsGarage_3 (L2), Breezona_3 (L2), Calm_3 (L1), CicholasNage_3 (L1), Claus_3 (L2), Clautastrophe_3 (L3), Crossroads_3 (L2), DirkDirk_3 (L1), DrSeegs_3 (L2), DuncansLeg_3 (L3), Enceladus_3 (L1), Faith1_3 (L2), Finemlucis_3 (L2), Finnry_3 (L3), Gabriela_3 (L2), Gardann_3 (L2), GuuelaD_3 (L2), Hafay_3 (L2), Halena_3 (L1), Itos_3 (L2), Jubie_3 (L3), Kingsolomon_3 (L3), Krypton555_3 (L3), Lewan_3 (L2), LilDestine_3 (L2), Loadrie_3 (L2), Lumos_3 (L3), MAckerman_3 (L1), Miley16_3 (L2), MkaliMitinis3_3 (L2), MsGreen_3 (L3), Netyap_3 (L2), Nicholas_3 (L3), Nicholasp3_3 (L2), Rose5_3 (L1), Rumpelstiltskin_3 (L2), Silverleaf_3 (L1), Snenia_3 (L3), Vetrix_3 (L2), Wamburgrxpress_3 (L1), Wigglewiggle_3 (L2), Wilder_3 (L2), Winky_3 (L2), Wyatt2_3 (L1), Zakai_3 (L2), Zaria_3 (L1),

Start 3:

- Found in 64 of 67 (95.5%) of genes in pham
- Manual Annotations of this start: 7 of 60
- Called 15.6% of time when present
- Phage (with cluster) where this start called: AvadaKedavra_3 (L1), Douge_3 (L4), Ellson_3 (L3), Jobypre_3 (L3), JoeDirt_3 (L1), Kahlid_3 (L2), Moostard_3 (L3), OhShagHennessy_3 (L1), Tyson_3 (L1), Whirlwind_4 (L3),

Start 4:

- Found in 67 of 67 (100.0%) of genes in pham
- Manual Annotations of this start: 4 of 60
- Called 6.0% of time when present
- Phage (with cluster) where this start called: LeBron_3 (L1), MiniLon_3 (L3), Samty_3 (L3), UPIE_3 (L1),

Summary by clusters:

There are 4 clusters represented in this pham: L4, L2, L3, L1,

Info for manual annotations of cluster L1:

- Start number 2 was manually annotated 12 times for cluster L1.
- Start number 3 was manually annotated 4 times for cluster L1.
- Start number 4 was manually annotated 2 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 2 was manually annotated 25 times for cluster L2.
- Start number 3 was manually annotated 1 time for cluster L2.

Info for manual annotations of cluster L3:

- Start number 1 was manually annotated 2 times for cluster L3.
- Start number 2 was manually annotated 10 times for cluster L3.
- Start number 3 was manually annotated 2 times for cluster L3.
- Start number 4 was manually annotated 2 times for cluster L3.

Gene Information:

Gene: Acquire49_3 Start: 849, Stop: 1052, Start Num: 2

Candidate Starts for Acquire49_3:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (5, 888), (9, 1005),

Gene: Appletree2_3 Start: 822, Stop: 1025, Start Num: 2

Candidate Starts for Appletree2_3:

(Start: 2 @822 has 47 MA's), (Start: 3 @831 has 7 MA's), (Start: 4 @834 has 4 MA's), (5, 861), (9, 978),

Gene: Archie_3 Start: 831, Stop: 1034, Start Num: 2

Candidate Starts for Archie_3:

(Start: 2 @831 has 47 MA's), (Start: 3 @840 has 7 MA's), (Start: 4 @843 has 4 MA's), (6, 930), (7, 969),

Gene: AvadaKedavra_3 Start: 858, Stop: 1052, Start Num: 3

Candidate Starts for AvadaKedavra_3:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (5, 888), (9, 1005),

Gene: Bellis_3 Start: 850, Stop: 1035, Start Num: 2

Candidate Starts for Bellis_3:

(Start: 2 @850 has 47 MA's), (Start: 3 @859 has 7 MA's), (Start: 4 @862 has 4 MA's), (8, 997), (10, 1021),

Gene: BigCheese_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for BigCheese_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: BobsGarage_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for BobsGarage_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Breezona_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Breezona_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Calm_3 Start: 849, Stop: 1052, Start Num: 2

Candidate Starts for Calm_3:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (5, 888), (9, 1005),

Gene: CicholasNage_3 Start: 850, Stop: 1053, Start Num: 2

Candidate Starts for CicholasNage_3:

(Start: 2 @850 has 47 MA's), (Start: 3 @859 has 7 MA's), (Start: 4 @862 has 4 MA's), (5, 889), (9, 1006),

Gene: Claus_3 Start: 878, Stop: 1081, Start Num: 2

Candidate Starts for Claus_3:

(Start: 2 @878 has 47 MA's), (Start: 3 @887 has 7 MA's), (Start: 4 @890 has 4 MA's), (6, 977), (7, 1016),

Gene: Clautastrophe_3 Start: 860, Stop: 1048, Start Num: 2

Candidate Starts for Clautastrophe_3:

(Start: 2 @860 has 47 MA's), (Start: 3 @869 has 7 MA's), (Start: 4 @872 has 4 MA's), (8, 1007), (10, 1031),

Gene: Crossroads_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Crossroads_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: DirkDirk_3 Start: 850, Stop: 1053, Start Num: 2

Candidate Starts for DirkDirk_3:

(Start: 2 @850 has 47 MA's), (Start: 3 @859 has 7 MA's), (Start: 4 @862 has 4 MA's), (5, 889), (9, 1006),

Gene: Douge_3 Start: 613, Stop: 771, Start Num: 3

Candidate Starts for Douge_3:

(Start: 2 @604 has 47 MA's), (Start: 3 @613 has 7 MA's), (Start: 4 @616 has 4 MA's),

Gene: DrSeegs_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for DrSeegs_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: DuncansLeg_3 Start: 863, Stop: 1051, Start Num: 2

Candidate Starts for DuncansLeg_3:

(Start: 2 @863 has 47 MA's), (Start: 3 @872 has 7 MA's), (Start: 4 @875 has 4 MA's), (8, 1010), (10, 1034),

Gene: Ellson_3 Start: 881, Stop: 1060, Start Num: 3

Candidate Starts for Ellson_3:

(Start: 2 @872 has 47 MA's), (Start: 3 @881 has 7 MA's), (Start: 4 @884 has 4 MA's), (8, 1019), (10, 1043),

Gene: Enceladus_3 Start: 850, Stop: 1053, Start Num: 2

Candidate Starts for Enceladus_3:

(Start: 2 @850 has 47 MA's), (Start: 3 @859 has 7 MA's), (Start: 4 @862 has 4 MA's), (5, 889), (9, 1006),

Gene: Faith1_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Faith1_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Finemlucis_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Finemlucis_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Finnry_3 Start: 851, Stop: 1036, Start Num: 2

Candidate Starts for Finnry_3:

(Start: 2 @851 has 47 MA's), (Start: 3 @860 has 7 MA's), (Start: 4 @863 has 4 MA's), (8, 998), (10, 1022),

Gene: Gabriela_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Gabriela_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Gardann_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Gardann_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: GuuelaD_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for GuuelaD_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (5, 905), (6, 965), (7, 1004),

Gene: Hafay_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Hafay_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Halena_3 Start: 849, Stop: 1052, Start Num: 2

Candidate Starts for Halena_3:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (5, 888), (9, 1005),

Gene: Itos_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Itos_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Jobypre_3 Start: 869, Stop: 1048, Start Num: 3

Candidate Starts for Jobypre_3:

(Start: 2 @860 has 47 MA's), (Start: 3 @869 has 7 MA's), (Start: 4 @872 has 4 MA's), (8, 1007), (10, 1031),

Gene: JoeDirt_3 Start: 859, Stop: 1053, Start Num: 3

Candidate Starts for JoeDirt_3:

(Start: 2 @850 has 47 MA's), (Start: 3 @859 has 7 MA's), (Start: 4 @862 has 4 MA's), (5, 889), (9, 1006),

Gene: Jubie_3 Start: 860, Stop: 1048, Start Num: 2

Candidate Starts for Jubie_3:

(Start: 2 @860 has 47 MA's), (Start: 3 @869 has 7 MA's), (Start: 4 @872 has 4 MA's), (8, 1007), (10, 1031),

Gene: Kahlid_3 Start: 875, Stop: 1069, Start Num: 3

Candidate Starts for Kahlid_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Kingsolomon_3 Start: 860, Stop: 1048, Start Num: 2

Candidate Starts for Kingsolomon_3:

(Start: 2 @860 has 47 MA's), (Start: 3 @869 has 7 MA's), (Start: 4 @872 has 4 MA's), (8, 1007), (10, 1031),

Gene: Krypton555_3 Start: 849, Stop: 1034, Start Num: 2

Candidate Starts for Krypton555_3:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (8, 996), (10, 1020),

Gene: LeBron_3 Start: 862, Stop: 1053, Start Num: 4

Candidate Starts for LeBron_3:

(Start: 2 @850 has 47 MA's), (Start: 3 @859 has 7 MA's), (Start: 4 @862 has 4 MA's), (5, 889), (9, 1006),

Gene: Lewan_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Lewan_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: LilDestine_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for LilDestine_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Loadrie_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Loadrie_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Lolly9_3 Start: 857, Stop: 1045, Start Num: 1
Candidate Starts for Lolly9_3:
(Start: 1 @857 has 2 MA's), (Start: 4 @869 has 4 MA's), (8, 1007), (10, 1031),

Gene: Lumos_3 Start: 860, Stop: 1048, Start Num: 2
Candidate Starts for Lumos_3:
(Start: 2 @860 has 47 MA's), (Start: 3 @869 has 7 MA's), (Start: 4 @872 has 4 MA's), (8, 1007), (10, 1031),

Gene: MAckerman_3 Start: 849, Stop: 1052, Start Num: 2
Candidate Starts for MAckerman_3:
(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (5, 888), (9, 1005),

Gene: Miley16_3 Start: 866, Stop: 1069, Start Num: 2
Candidate Starts for Miley16_3:
(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: MiniLon_3 Start: 869, Stop: 1045, Start Num: 4
Candidate Starts for MiniLon_3:
(Start: 1 @857 has 2 MA's), (Start: 4 @869 has 4 MA's), (8, 1007), (10, 1031),

Gene: MiniMac_3 Start: 857, Stop: 1045, Start Num: 1
Candidate Starts for MiniMac_3:
(Start: 1 @857 has 2 MA's), (Start: 4 @869 has 4 MA's), (8, 1007), (10, 1031),

Gene: MkaliMitinis3_3 Start: 866, Stop: 1069, Start Num: 2
Candidate Starts for MkaliMitinis3_3:
(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Moostard_3 Start: 859, Stop: 1035, Start Num: 3
Candidate Starts for Moostard_3:
(Start: 2 @850 has 47 MA's), (Start: 3 @859 has 7 MA's), (Start: 4 @862 has 4 MA's), (8, 997), (10, 1021),

Gene: MsGreen_3 Start: 860, Stop: 1048, Start Num: 2
Candidate Starts for MsGreen_3:
(Start: 2 @860 has 47 MA's), (Start: 3 @869 has 7 MA's), (Start: 4 @872 has 4 MA's), (8, 1007), (10, 1031),

Gene: Netyap_3 Start: 866, Stop: 1069, Start Num: 2
Candidate Starts for Netyap_3:
(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Nicholas_3 Start: 860, Stop: 1048, Start Num: 2
Candidate Starts for Nicholas_3:
(Start: 2 @860 has 47 MA's), (Start: 3 @869 has 7 MA's), (Start: 4 @872 has 4 MA's), (8, 1007), (10, 1031),

Gene: Nicholasp3_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Nicholasp3_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: OhShagHennessy_3 Start: 831, Stop: 1025, Start Num: 3

Candidate Starts for OhShagHennessy_3:

(Start: 2 @822 has 47 MA's), (Start: 3 @831 has 7 MA's), (Start: 4 @834 has 4 MA's), (5, 861), (9, 978),

Gene: Rose5_3 Start: 849, Stop: 1052, Start Num: 2

Candidate Starts for Rose5_3:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (5, 888), (9, 1005),

Gene: Rumpelstiltskin_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Rumpelstiltskin_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Samty_3 Start: 862, Stop: 1035, Start Num: 4

Candidate Starts for Samty_3:

(Start: 2 @850 has 47 MA's), (Start: 3 @859 has 7 MA's), (Start: 4 @862 has 4 MA's), (8, 997), (10, 1021),

Gene: Silverleaf_3 Start: 849, Stop: 1052, Start Num: 2

Candidate Starts for Silverleaf_3:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (5, 888), (9, 1005),

Gene: Snenia_3 Start: 860, Stop: 1048, Start Num: 2

Candidate Starts for Snenia_3:

(Start: 2 @860 has 47 MA's), (Start: 3 @869 has 7 MA's), (Start: 4 @872 has 4 MA's), (8, 1007), (10, 1031),

Gene: Tyson_3 Start: 858, Stop: 1052, Start Num: 3

Candidate Starts for Tyson_3:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (5, 888), (9, 1005),

Gene: UPIE_3 Start: 862, Stop: 1053, Start Num: 4

Candidate Starts for UPIE_3:

(Start: 2 @850 has 47 MA's), (Start: 3 @859 has 7 MA's), (Start: 4 @862 has 4 MA's), (5, 889), (9, 1006),

Gene: Vetrix_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Vetrix_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Wamburgxpress_3 Start: 849, Stop: 1052, Start Num: 2

Candidate Starts for Wamburgxpress_3:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (5, 888), (9, 1005),

Gene: Whirlwind_4 Start: 858, Stop: 1034, Start Num: 3

Candidate Starts for Whirlwind_4:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (8, 996), (10, 1020),

Gene: Wigglewobble_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Wigglewobble_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Wilder_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Wilder_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Winky_3 Start: 866, Stop: 1069, Start Num: 2

Candidate Starts for Winky_3:

(Start: 2 @866 has 47 MA's), (Start: 3 @875 has 7 MA's), (Start: 4 @878 has 4 MA's), (6, 965), (7, 1004),

Gene: Wyatt2_3 Start: 849, Stop: 1052, Start Num: 2

Candidate Starts for Wyatt2_3:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (5, 888), (9, 1005),

Gene: Zakai_3 Start: 854, Stop: 1057, Start Num: 2

Candidate Starts for Zakai_3:

(Start: 2 @854 has 47 MA's), (Start: 3 @863 has 7 MA's), (Start: 4 @866 has 4 MA's), (6, 953), (7, 992),

Gene: Zaria_3 Start: 849, Stop: 1052, Start Num: 2

Candidate Starts for Zaria_3:

(Start: 2 @849 has 47 MA's), (Start: 3 @858 has 7 MA's), (Start: 4 @861 has 4 MA's), (5, 888), (9, 1005),