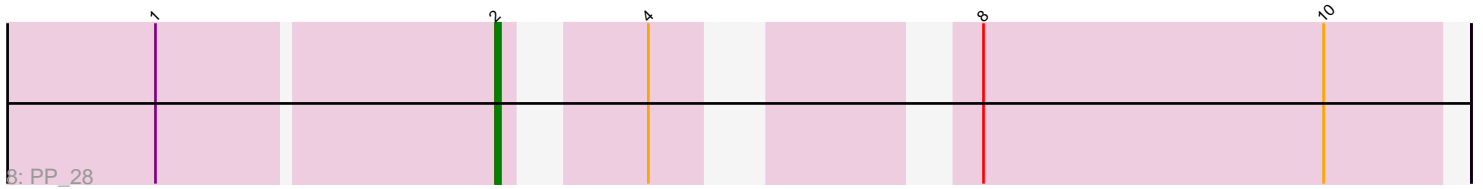
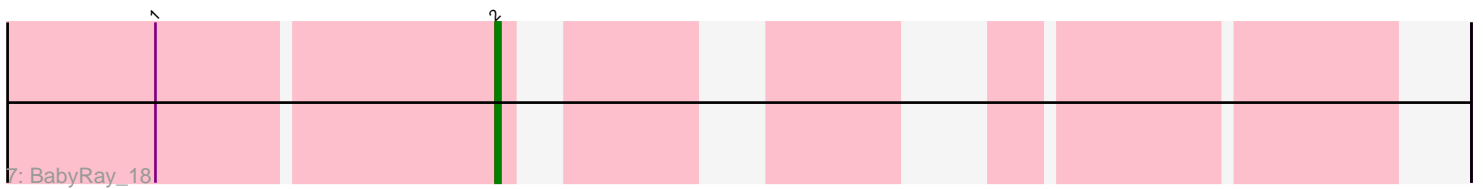
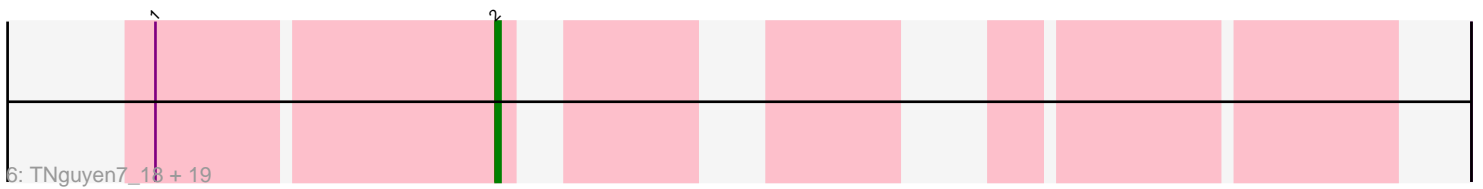
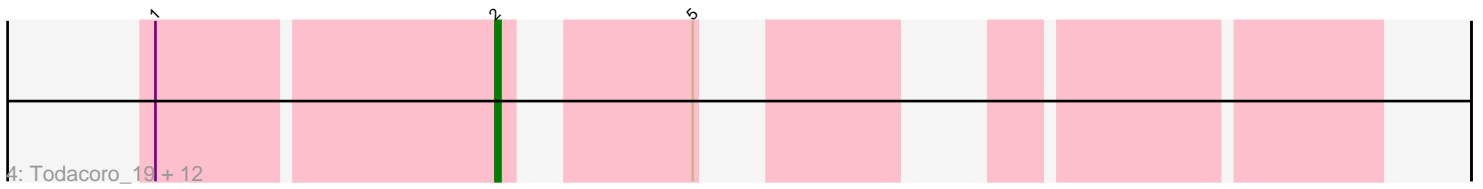
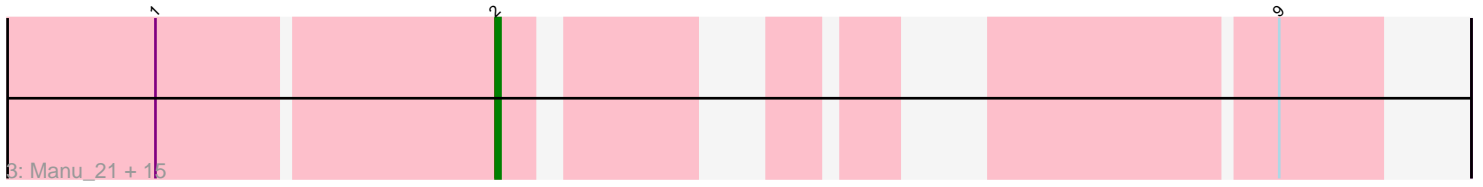
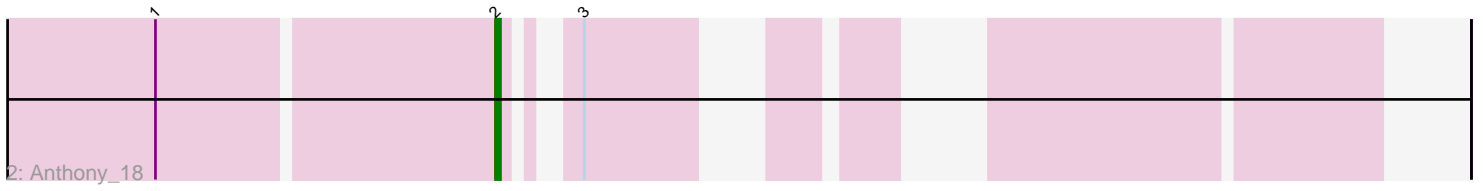
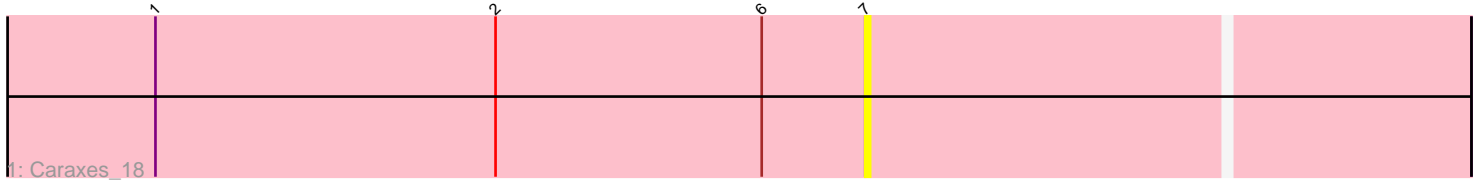


Pham 157719



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 157719 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157719 has 116 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Caraxes_18
- Track 2 : Anthony_18
- Track 3 : Manu_21, Phranny_21, PhishRPhriends_19, PurpleHaze_20, Kalb97_21, JeppNRM_21, HaveUMetTed_21, Gemma_20, ACFishhook_20, Kalnoky_21, OlanP_20, Heliosoles_20, Marius_21, Pawn_21, Reba_21, Groupthink_21
- Track 4 : Todacoro_19, Norbert_18, Popcicle_19, Veracruz_18, Hookmount_19, Noella_19, ResDef_19, Lambert1_19, Margo_19, QuinnKiro_18, Texage_18, Caviar_19, Pocahontas_19
- Track 5 : GtownJaz_20, KADY_21, MoneyMay_20, Grif_20, BuzzBuzz_19, Tiffany_20, Marie_20, HashRod_21, Anubis_22, Colbster_20, DaHudson_20, Farber_20, SoYo_20, Rummer_20, Stagni_20, Sabinator_20, Bxz2_191, Beauxregard13_20, LugYA_22, Penny1_20, EpicPhail_20, JenCasNa_20, JHC117_20, LarryKay_20, Louie6_20, Misomonster_22, Mainiac_20, Grub_20, Daishi_19, Pembroke_20, Ollie_20, PotatoSplit_21, SoilDragon_20, Aglet_20, Phoxy_20, Malinsilva_22, Wooldri_22, PGHhamlin_22, MarQuardt_20, Watson_20, Spike509_20, Phoebe_20, AugsMagnumOpus_22, Microwolf_20, Fernando_20, Hercules11_20, P28Green_20, Grum1_20, Sabia_20, Jobu08_20, Lilith_20, AgronaGT15_20, Zetzy_19, Vix_20, GingkoMaracino_20, Taurus_20, Dieselweasel_20, LBerry_20, Snickers_20, MadMarie_20, Cullens_20, MuchMore_22, BreSam8_20
- Track 6 : TNguyen7_18, B1_16, HelDan_18, Rockstar_18, Pistachio_19, Heathen_18, Puppy_19, BlueBird_19, MK4_18, MA5_18, Isca_18, Phantastic_18, JF4_18, Scout_18, JF2_18, Giroux_18, Fred313_18, Bugatti_18, SaturnRing_18, Idleandcovert_18
- Track 7 : BabyRay_18
- Track 8 : PP_28

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 109 of the 109 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ACFishhook_20, Aglet_20, AgronaGT15_20, Anthony_18, Anubis_22, AugsMagnumOpus_22, B1_16, BabyRay_18, Beauxregard13_20, BlueBird_19, BreSam8_20, Bugatti_18, BuzzBuzz_19, Bxz2_191, Caviar_19, Colbster_20, Cullens_20, DaHudson_20, Daishi_19, Dieselweasel_20, EpicPhail_20, Farber_20, Fernando_20, Fred313_18, Gemma_20, GingkoMaracino_20, Giroux_18, Grif_20, Groupthink_21, Grub_20, Grum1_20, GtownJaz_20, HashRod_21, HaveUMetTed_21, Heathen_18, HelDan_18, Heliosoles_20, Hercules11_20, Hookmount_19, Idleandcovert_18, Isca_18, JF2_18, JF4_18, JHC117_20, JenCasNa_20, JeppNRM_21, Jobu08_20, KADY_21, Kalb97_21, Kalnoky_21, LBerry_20, Lambert1_19, LarryKay_20, Lilith_20, Louie6_20, LugYA_22, MA5_18, MK4_18, MadMarie_20, Mainiac_20, Malinsilva_22, Manu_21, MarQuardt_20, Margo_19, Marie_20, Marius_21, Microwolf_20, Misomonster_22, MoneyMay_20, MuchMore_22, Noella_19, Norbert_18, OlanP_20, Ollie_20, P28Green_20, PGHhamlin_22, PP_28, Pawn_21, Pembroke_20, Penny1_20, Phantastic_18, PhishRPhriends_19, Phoebe_20, Phoxy_20, Phranny_21, Pistachio_19, Pocahontas_19, Popcicle_19, PotatoSplit_21, Puppy_19, PurpleHaze_20, QuinnKiro_18, Reba_21, ResDef_19, Rockstar_18, Rummer_20, Sabia_20, Sabinator_20, SaturnRing_18, Scout_18, Snickers_20, SoYo_20, SoilDragon_20, Spike509_20, Stagni_20, TNguyen7_18, Taurus_20, Texage_18, Tiffany_20, Todacoro_19, Veracruz_18, Vix_20, Watson_20, Wooldri_22, Zetzy_19,

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

- Caraxes_18,

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

-

Summary by start number:

Start 2:

- Found in 116 of 116 (100.0%) of genes in pham
- Manual Annotations of this start: 109 of 109
- Called 99.1% of time when present
- Phage (with cluster) where this start called: ACFishhook_20 (A3), Aglet_20 (A3), AgronaGT15_20 (A3), Anthony_18 (A20), Anubis_22 (A3), AugsMagnumOpus_22 (A3), B1_16 (A3), BabyRay_18 (A3), Beauxregard13_20 (A3), BlueBird_19 (A3), BreSam8_20 (A3), Bugatti_18 (A3), BuzzBuzz_19 (A3), Bxz2_191 (A3), Caviar_19 (A3), Colbster_20 (A3), Cullens_20 (A3), DaHudson_20 (A3), Daishi_19 (A3), Dieselweasel_20 (A3), EpicPhail_20 (A3), Farber_20 (A3), Fernando_20 (A3), Fred313_18 (A3), Gemma_20 (A3), GingkoMaracino_20 (A3), Giroux_18 (A3), Grif_20 (A3), Groupthink_21 (A3), Grub_20 (A3), Grum1_20 (A3), GtownJaz_20 (A3), HashRod_21 (A3), HaveUMetTed_21 (A3), Heathen_18 (A3), HelDan_18 (A3), Heliosoles_20 (A3), Hercules11_20 (A3), Hookmount_19 (A3), Idleandcovert_18 (A3), Isca_18 (A3), JF2_18 (A3), JF4_18 (A3), JHC117_20 (A3), JenCasNa_20 (A3), JeppNRM_21 (A3), Jobu08_20 (A3), KADY_21 (A3), Kalb97_21 (A3), Kalnoky_21 (A3), LBerry_20 (A3), Lambert1_19 (A3), LarryKay_20 (A3), Lilith_20 (A3), Louie6_20 (A3), LugYA_22 (A3), MA5_18 (A3), MK4_18 (A3), MadMarie_20 (A3), Mainiac_20 (A3), Malinsilva_22 (A3), Manu_21 (A3), MarQuardt_20 (A3), Margo_19 (A3), Marie_20 (A3), Marius_21 (A3), Microwolf_20 (A3), Misomonster_22 (A3), MoneyMay_20 (A3), MuchMore_22 (A3), Noella_19 (A3), Norbert_18 (A3), OlanP_20 (A3), Ollie_20 (A3), P28Green_20 (A3), PGHhamlin_22 (A3), PP_28 (A7), Pawn_21 (A3), Pembroke_20 (A3), Penny1_20 (A3), Phantastic_18 (A3), PhishRPhriends_19 (A3), Phoebe_20 (A3), Phoxy_20 (A3), Phranny_21 (A3), Pistachio_19 (A3),

Pocahontas_19 (A3), Popcicle_19 (A3), PotatoSplit_21 (A3), Puppy_19 (A3), PurpleHaze_20 (A3), QuinnKiro_18 (A3), Reba_21 (A3), ResDef_19 (A3), Rockstar_18 (A3), Rummer_20 (A3), Sabia_20 (A3), Sabinator_20 (A3), SaturnRing_18 (A3), Scout_18 (A3), Snickers_20 (A3), SoYo_20 (A3), SoilDragon_20 (A3), Spike509_20 (A3), Stagni_20 (A3), TNguyen7_18 (A3), Taurus_20 (A3), Texage_18 (A3), Tiffany_20 (A3), Todacoro_19 (A3), Veracruz_18 (A3), Vix_20 (A3), Watson_20 (A3), Wooldri_22 (A3), Zetzy_19 (A3),

Start 7:

- Found in 1 of 116 (0.9%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Caraxes_18 (A2),

Summary by clusters:

There are 4 clusters represented in this pham: A20, A3, A2, A7,

Info for manual annotations of cluster A20:

- Start number 2 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 2 was manually annotated 107 times for cluster A3.

Info for manual annotations of cluster A7:

- Start number 2 was manually annotated 1 time for cluster A7.

Gene Information:

Gene: ACFishhook_20 Start: 13319, Stop: 13453, Start Num: 2

Candidate Starts for ACFishhook_20:

(1, 13253), (Start: 2 @13319 has 109 MA's), (9, 13433),

Gene: Aglet_20 Start: 13165, Stop: 13299, Start Num: 2

Candidate Starts for Aglet_20:

(1, 13099), (Start: 2 @13165 has 109 MA's), (9, 13279),

Gene: AgronaGT15_20 Start: 13072, Stop: 13206, Start Num: 2

Candidate Starts for AgronaGT15_20:

(1, 13006), (Start: 2 @13072 has 109 MA's), (9, 13186),

Gene: Anthony_18 Start: 11969, Stop: 12100, Start Num: 2

Candidate Starts for Anthony_18:

(1, 11903), (Start: 2 @11969 has 109 MA's), (3, 11978),

Gene: Anubis_22 Start: 13050, Stop: 13184, Start Num: 2

Candidate Starts for Anubis_22:

(1, 12984), (Start: 2 @13050 has 109 MA's), (9, 13164),

Gene: AugsMagnumOpus_22 Start: 13156, Stop: 13290, Start Num: 2

Candidate Starts for AugsMagnumOpus_22:
(1, 13090), (Start: 2 @13156 has 109 MA's), (9, 13270),

Gene: B1_16 Start: 12367, Stop: 12501, Start Num: 2
Candidate Starts for B1_16:
(1, 12301), (Start: 2 @12367 has 109 MA's),

Gene: BabyRay_18 Start: 12940, Stop: 13074, Start Num: 2
Candidate Starts for BabyRay_18:
(1, 12874), (Start: 2 @12940 has 109 MA's),

Gene: Beauxregard13_20 Start: 13164, Stop: 13298, Start Num: 2
Candidate Starts for Beauxregard13_20:
(1, 13098), (Start: 2 @13164 has 109 MA's), (9, 13278),

Gene: BlueBird_19 Start: 12714, Stop: 12848, Start Num: 2
Candidate Starts for BlueBird_19:
(1, 12648), (Start: 2 @12714 has 109 MA's),

Gene: BreSam8_20 Start: 13157, Stop: 13291, Start Num: 2
Candidate Starts for BreSam8_20:
(1, 13091), (Start: 2 @13157 has 109 MA's), (9, 13271),

Gene: Bugatti_18 Start: 12714, Stop: 12848, Start Num: 2
Candidate Starts for Bugatti_18:
(1, 12648), (Start: 2 @12714 has 109 MA's),

Gene: BuzzBuzz_19 Start: 13248, Stop: 13382, Start Num: 2
Candidate Starts for BuzzBuzz_19:
(1, 13182), (Start: 2 @13248 has 109 MA's), (9, 13362),

Gene: Bxz2_191 Start: 13258, Stop: 13392, Start Num: 2
Candidate Starts for Bxz2_191:
(1, 13192), (Start: 2 @13258 has 109 MA's), (9, 13372),

Gene: Caraxes_18 Start: 12468, Stop: 12587, Start Num: 7
Candidate Starts for Caraxes_18:
(1, 12324), (Start: 2 @12393 has 109 MA's), (6, 12447), (7, 12468),

Gene: Caviar_19 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Caviar_19:
(1, 13189), (Start: 2 @13255 has 109 MA's), (5, 13285),

Gene: Colbster_20 Start: 13164, Stop: 13298, Start Num: 2
Candidate Starts for Colbster_20:
(1, 13098), (Start: 2 @13164 has 109 MA's), (9, 13278),

Gene: Cullens_20 Start: 13162, Stop: 13296, Start Num: 2
Candidate Starts for Cullens_20:
(1, 13096), (Start: 2 @13162 has 109 MA's), (9, 13276),

Gene: DaHudson_20 Start: 13156, Stop: 13290, Start Num: 2
Candidate Starts for DaHudson_20:

(1, 13090), (Start: 2 @13156 has 109 MA's), (9, 13270),

Gene: Daishi_19 Start: 12089, Stop: 12223, Start Num: 2

Candidate Starts for Daishi_19:

(1, 12023), (Start: 2 @12089 has 109 MA's), (9, 12203),

Gene: Dieselweasel_20 Start: 13165, Stop: 13299, Start Num: 2

Candidate Starts for Dieselweasel_20:

(1, 13099), (Start: 2 @13165 has 109 MA's), (9, 13279),

Gene: EpicPhail_20 Start: 13164, Stop: 13298, Start Num: 2

Candidate Starts for EpicPhail_20:

(1, 13098), (Start: 2 @13164 has 109 MA's), (9, 13278),

Gene: Farber_20 Start: 13157, Stop: 13291, Start Num: 2

Candidate Starts for Farber_20:

(1, 13091), (Start: 2 @13157 has 109 MA's), (9, 13271),

Gene: Fernando_20 Start: 13162, Stop: 13296, Start Num: 2

Candidate Starts for Fernando_20:

(1, 13096), (Start: 2 @13162 has 109 MA's), (9, 13276),

Gene: Fred313_18 Start: 12432, Stop: 12566, Start Num: 2

Candidate Starts for Fred313_18:

(1, 12366), (Start: 2 @12432 has 109 MA's),

Gene: Gemma_20 Start: 13238, Stop: 13372, Start Num: 2

Candidate Starts for Gemma_20:

(1, 13172), (Start: 2 @13238 has 109 MA's), (9, 13352),

Gene: GingkoMaracino_20 Start: 13050, Stop: 13184, Start Num: 2

Candidate Starts for GingkoMaracino_20:

(1, 12984), (Start: 2 @13050 has 109 MA's), (9, 13164),

Gene: Giroux_18 Start: 12714, Stop: 12848, Start Num: 2

Candidate Starts for Giroux_18:

(1, 12648), (Start: 2 @12714 has 109 MA's),

Gene: Grif_20 Start: 13247, Stop: 13381, Start Num: 2

Candidate Starts for Grif_20:

(1, 13181), (Start: 2 @13247 has 109 MA's), (9, 13361),

Gene: Groupthink_21 Start: 13238, Stop: 13372, Start Num: 2

Candidate Starts for Groupthink_21:

(1, 13172), (Start: 2 @13238 has 109 MA's), (9, 13352),

Gene: Grub_20 Start: 13156, Stop: 13290, Start Num: 2

Candidate Starts for Grub_20:

(1, 13090), (Start: 2 @13156 has 109 MA's), (9, 13270),

Gene: Grum1_20 Start: 13157, Stop: 13291, Start Num: 2

Candidate Starts for Grum1_20:

(1, 13091), (Start: 2 @13157 has 109 MA's), (9, 13271),

Gene: GtownJaz_20 Start: 13165, Stop: 13299, Start Num: 2
Candidate Starts for GtownJaz_20:
(1, 13099), (Start: 2 @13165 has 109 MA's), (9, 13279),

Gene: HashRod_21 Start: 13248, Stop: 13382, Start Num: 2
Candidate Starts for HashRod_21:
(1, 13182), (Start: 2 @13248 has 109 MA's), (9, 13362),

Gene: HaveUMetTed_21 Start: 13232, Stop: 13366, Start Num: 2
Candidate Starts for HaveUMetTed_21:
(1, 13166), (Start: 2 @13232 has 109 MA's), (9, 13346),

Gene: Heathen_18 Start: 12515, Stop: 12649, Start Num: 2
Candidate Starts for Heathen_18:
(1, 12449), (Start: 2 @12515 has 109 MA's),

Gene: HelDan_18 Start: 12767, Stop: 12901, Start Num: 2
Candidate Starts for HelDan_18:
(1, 12701), (Start: 2 @12767 has 109 MA's),

Gene: Heliosoles_20 Start: 13238, Stop: 13372, Start Num: 2
Candidate Starts for Heliosoles_20:
(1, 13172), (Start: 2 @13238 has 109 MA's), (9, 13352),

Gene: Hercules11_20 Start: 13171, Stop: 13305, Start Num: 2
Candidate Starts for Hercules11_20:
(1, 13105), (Start: 2 @13171 has 109 MA's), (9, 13285),

Gene: Hookmount_19 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Hookmount_19:
(1, 13189), (Start: 2 @13255 has 109 MA's), (5, 13285),

Gene: Idleandcovert_18 Start: 12714, Stop: 12848, Start Num: 2
Candidate Starts for Idleandcovert_18:
(1, 12648), (Start: 2 @12714 has 109 MA's),

Gene: Isca_18 Start: 12602, Stop: 12736, Start Num: 2
Candidate Starts for Isca_18:
(1, 12536), (Start: 2 @12602 has 109 MA's),

Gene: JF2_18 Start: 12367, Stop: 12501, Start Num: 2
Candidate Starts for JF2_18:
(1, 12301), (Start: 2 @12367 has 109 MA's),

Gene: JF4_18 Start: 12367, Stop: 12501, Start Num: 2
Candidate Starts for JF4_18:
(1, 12301), (Start: 2 @12367 has 109 MA's),

Gene: JHC117_20 Start: 13162, Stop: 13296, Start Num: 2
Candidate Starts for JHC117_20:
(1, 13096), (Start: 2 @13162 has 109 MA's), (9, 13276),

Gene: JenCasNa_20 Start: 13162, Stop: 13296, Start Num: 2
Candidate Starts for JenCasNa_20:
(1, 13096), (Start: 2 @13162 has 109 MA's), (9, 13276),

Gene: JeppNRM_21 Start: 13236, Stop: 13370, Start Num: 2
Candidate Starts for JeppNRM_21:
(1, 13170), (Start: 2 @13236 has 109 MA's), (9, 13350),

Gene: Jobu08_20 Start: 13231, Stop: 13365, Start Num: 2
Candidate Starts for Jobu08_20:
(1, 13165), (Start: 2 @13231 has 109 MA's), (9, 13345),

Gene: KADY_21 Start: 13248, Stop: 13382, Start Num: 2
Candidate Starts for KADY_21:
(1, 13182), (Start: 2 @13248 has 109 MA's), (9, 13362),

Gene: Kalb97_21 Start: 13236, Stop: 13370, Start Num: 2
Candidate Starts for Kalb97_21:
(1, 13170), (Start: 2 @13236 has 109 MA's), (9, 13350),

Gene: Kalnoky_21 Start: 13238, Stop: 13372, Start Num: 2
Candidate Starts for Kalnoky_21:
(1, 13172), (Start: 2 @13238 has 109 MA's), (9, 13352),

Gene: LBerry_20 Start: 13164, Stop: 13298, Start Num: 2
Candidate Starts for LBerry_20:
(1, 13098), (Start: 2 @13164 has 109 MA's), (9, 13278),

Gene: Lambert1_19 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Lambert1_19:
(1, 13189), (Start: 2 @13255 has 109 MA's), (5, 13285),

Gene: LarryKay_20 Start: 13250, Stop: 13384, Start Num: 2
Candidate Starts for LarryKay_20:
(1, 13184), (Start: 2 @13250 has 109 MA's), (9, 13364),

Gene: Lilith_20 Start: 13157, Stop: 13291, Start Num: 2
Candidate Starts for Lilith_20:
(1, 13091), (Start: 2 @13157 has 109 MA's), (9, 13271),

Gene: Louie6_20 Start: 13251, Stop: 13385, Start Num: 2
Candidate Starts for Louie6_20:
(1, 13185), (Start: 2 @13251 has 109 MA's), (9, 13365),

Gene: LugYA_22 Start: 13162, Stop: 13296, Start Num: 2
Candidate Starts for LugYA_22:
(1, 13096), (Start: 2 @13162 has 109 MA's), (9, 13276),

Gene: MA5_18 Start: 12311, Stop: 12445, Start Num: 2
Candidate Starts for MA5_18:
(1, 12245), (Start: 2 @12311 has 109 MA's),

Gene: MK4_18 Start: 12601, Stop: 12735, Start Num: 2

Candidate Starts for MK4_18:

(1, 12535), (Start: 2 @12601 has 109 MA's),

Gene: MadMarie_20 Start: 13166, Stop: 13300, Start Num: 2

Candidate Starts for MadMarie_20:

(1, 13100), (Start: 2 @13166 has 109 MA's), (9, 13280),

Gene: Mainiac_20 Start: 13157, Stop: 13291, Start Num: 2

Candidate Starts for Mainiac_20:

(1, 13091), (Start: 2 @13157 has 109 MA's), (9, 13271),

Gene: Malinsilva_22 Start: 13156, Stop: 13290, Start Num: 2

Candidate Starts for Malinsilva_22:

(1, 13090), (Start: 2 @13156 has 109 MA's), (9, 13270),

Gene: Manu_21 Start: 13238, Stop: 13372, Start Num: 2

Candidate Starts for Manu_21:

(1, 13172), (Start: 2 @13238 has 109 MA's), (9, 13352),

Gene: MarQuardt_20 Start: 13165, Stop: 13299, Start Num: 2

Candidate Starts for MarQuardt_20:

(1, 13099), (Start: 2 @13165 has 109 MA's), (9, 13279),

Gene: Margo_19 Start: 13280, Stop: 13411, Start Num: 2

Candidate Starts for Margo_19:

(1, 13214), (Start: 2 @13280 has 109 MA's), (5, 13310),

Gene: Marie_20 Start: 13162, Stop: 13296, Start Num: 2

Candidate Starts for Marie_20:

(1, 13096), (Start: 2 @13162 has 109 MA's), (9, 13276),

Gene: Marius_21 Start: 13238, Stop: 13372, Start Num: 2

Candidate Starts for Marius_21:

(1, 13172), (Start: 2 @13238 has 109 MA's), (9, 13352),

Gene: Microwolf_20 Start: 13165, Stop: 13299, Start Num: 2

Candidate Starts for Microwolf_20:

(1, 13099), (Start: 2 @13165 has 109 MA's), (9, 13279),

Gene: Misomonster_22 Start: 13247, Stop: 13381, Start Num: 2

Candidate Starts for Misomonster_22:

(1, 13181), (Start: 2 @13247 has 109 MA's), (9, 13361),

Gene: MoneyMay_20 Start: 13162, Stop: 13296, Start Num: 2

Candidate Starts for MoneyMay_20:

(1, 13096), (Start: 2 @13162 has 109 MA's), (9, 13276),

Gene: MuchMore_22 Start: 13156, Stop: 13290, Start Num: 2

Candidate Starts for MuchMore_22:

(1, 13090), (Start: 2 @13156 has 109 MA's), (9, 13270),

Gene: Noella_19 Start: 13255, Stop: 13386, Start Num: 2

Candidate Starts for Noella_19:

(1, 13189), (Start: 2 @13255 has 109 MA's), (5, 13285),

Gene: Norbert_18 Start: 13255, Stop: 13386, Start Num: 2

Candidate Starts for Norbert_18:

(1, 13189), (Start: 2 @13255 has 109 MA's), (5, 13285),

Gene: OlanP_20 Start: 13418, Stop: 13552, Start Num: 2

Candidate Starts for OlanP_20:

(1, 13352), (Start: 2 @13418 has 109 MA's), (9, 13532),

Gene: Ollie_20 Start: 13035, Stop: 13169, Start Num: 2

Candidate Starts for Ollie_20:

(1, 12969), (Start: 2 @13035 has 109 MA's), (9, 13149),

Gene: P28Green_20 Start: 13163, Stop: 13297, Start Num: 2

Candidate Starts for P28Green_20:

(1, 13097), (Start: 2 @13163 has 109 MA's), (9, 13277),

Gene: PGHhamlin_22 Start: 13156, Stop: 13290, Start Num: 2

Candidate Starts for PGHhamlin_22:

(1, 13090), (Start: 2 @13156 has 109 MA's), (9, 13270),

Gene: PP_28 Start: 18919, Stop: 19077, Start Num: 2

Candidate Starts for PP_28:

(1, 18853), (Start: 2 @18919 has 109 MA's), (4, 18940), (8, 18985), (10, 19054),

Gene: Pawn_21 Start: 13238, Stop: 13372, Start Num: 2

Candidate Starts for Pawn_21:

(1, 13172), (Start: 2 @13238 has 109 MA's), (9, 13352),

Gene: Pembroke_20 Start: 13165, Stop: 13299, Start Num: 2

Candidate Starts for Pembroke_20:

(1, 13099), (Start: 2 @13165 has 109 MA's), (9, 13279),

Gene: Penny1_20 Start: 13164, Stop: 13298, Start Num: 2

Candidate Starts for Penny1_20:

(1, 13098), (Start: 2 @13164 has 109 MA's), (9, 13278),

Gene: Phantastic_18 Start: 12680, Stop: 12814, Start Num: 2

Candidate Starts for Phantastic_18:

(1, 12614), (Start: 2 @12680 has 109 MA's),

Gene: PhishRPhriends_19 Start: 12423, Stop: 12557, Start Num: 2

Candidate Starts for PhishRPhriends_19:

(1, 12357), (Start: 2 @12423 has 109 MA's), (9, 12537),

Gene: Phoebe_20 Start: 13162, Stop: 13296, Start Num: 2

Candidate Starts for Phoebe_20:

(1, 13096), (Start: 2 @13162 has 109 MA's), (9, 13276),

Gene: Phoxy_20 Start: 13248, Stop: 13382, Start Num: 2

Candidate Starts for Phoxy_20:

(1, 13182), (Start: 2 @13248 has 109 MA's), (9, 13362),

Gene: Phranny_21 Start: 13230, Stop: 13364, Start Num: 2
Candidate Starts for Phranny_21:
(1, 13164), (Start: 2 @13230 has 109 MA's), (9, 13344),

Gene: Pistachio_19 Start: 12261, Stop: 12395, Start Num: 2
Candidate Starts for Pistachio_19:
(1, 12195), (Start: 2 @12261 has 109 MA's),

Gene: Pocahontas_19 Start: 13252, Stop: 13383, Start Num: 2
Candidate Starts for Pocahontas_19:
(1, 13186), (Start: 2 @13252 has 109 MA's), (5, 13282),

Gene: Popcicle_19 Start: 13252, Stop: 13383, Start Num: 2
Candidate Starts for Popcicle_19:
(1, 13186), (Start: 2 @13252 has 109 MA's), (5, 13282),

Gene: PotatoSplit_21 Start: 13164, Stop: 13298, Start Num: 2
Candidate Starts for PotatoSplit_21:
(1, 13098), (Start: 2 @13164 has 109 MA's), (9, 13278),

Gene: Puppy_19 Start: 12333, Stop: 12467, Start Num: 2
Candidate Starts for Puppy_19:
(1, 12267), (Start: 2 @12333 has 109 MA's),

Gene: PurpleHaze_20 Start: 13237, Stop: 13371, Start Num: 2
Candidate Starts for PurpleHaze_20:
(1, 13171), (Start: 2 @13237 has 109 MA's), (9, 13351),

Gene: QuinnKiro_18 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for QuinnKiro_18:
(1, 13189), (Start: 2 @13255 has 109 MA's), (5, 13285),

Gene: Reba_21 Start: 12903, Stop: 13037, Start Num: 2
Candidate Starts for Reba_21:
(1, 12837), (Start: 2 @12903 has 109 MA's), (9, 13017),

Gene: ResDef_19 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for ResDef_19:
(1, 13189), (Start: 2 @13255 has 109 MA's), (5, 13285),

Gene: Rockstar_18 Start: 12607, Stop: 12741, Start Num: 2
Candidate Starts for Rockstar_18:
(1, 12541), (Start: 2 @12607 has 109 MA's),

Gene: Rummer_20 Start: 13248, Stop: 13382, Start Num: 2
Candidate Starts for Rummer_20:
(1, 13182), (Start: 2 @13248 has 109 MA's), (9, 13362),

Gene: Sabia_20 Start: 13157, Stop: 13291, Start Num: 2
Candidate Starts for Sabia_20:
(1, 13091), (Start: 2 @13157 has 109 MA's), (9, 13271),

Gene: Sabinator_20 Start: 13162, Stop: 13296, Start Num: 2
Candidate Starts for Sabinator_20:
(1, 13096), (Start: 2 @13162 has 109 MA's), (9, 13276),

Gene: SaturnRing_18 Start: 12714, Stop: 12848, Start Num: 2
Candidate Starts for SaturnRing_18:
(1, 12648), (Start: 2 @12714 has 109 MA's),

Gene: Scout_18 Start: 12014, Stop: 12148, Start Num: 2
Candidate Starts for Scout_18:
(1, 11948), (Start: 2 @12014 has 109 MA's),

Gene: Snickers_20 Start: 13138, Stop: 13272, Start Num: 2
Candidate Starts for Snickers_20:
(1, 13072), (Start: 2 @13138 has 109 MA's), (9, 13252),

Gene: SoYo_20 Start: 13075, Stop: 13209, Start Num: 2
Candidate Starts for SoYo_20:
(1, 13009), (Start: 2 @13075 has 109 MA's), (9, 13189),

Gene: SoilDragon_20 Start: 12847, Stop: 12981, Start Num: 2
Candidate Starts for SoilDragon_20:
(1, 12781), (Start: 2 @12847 has 109 MA's), (9, 12961),

Gene: Spike509_20 Start: 13248, Stop: 13382, Start Num: 2
Candidate Starts for Spike509_20:
(1, 13182), (Start: 2 @13248 has 109 MA's), (9, 13362),

Gene: Stagni_20 Start: 13166, Stop: 13300, Start Num: 2
Candidate Starts for Stagni_20:
(1, 13100), (Start: 2 @13166 has 109 MA's), (9, 13280),

Gene: TNguyen7_18 Start: 12684, Stop: 12818, Start Num: 2
Candidate Starts for TNguyen7_18:
(1, 12618), (Start: 2 @12684 has 109 MA's),

Gene: Taurus_20 Start: 13162, Stop: 13296, Start Num: 2
Candidate Starts for Taurus_20:
(1, 13096), (Start: 2 @13162 has 109 MA's), (9, 13276),

Gene: Texage_18 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Texage_18:
(1, 13189), (Start: 2 @13255 has 109 MA's), (5, 13285),

Gene: Tiffany_20 Start: 13058, Stop: 13192, Start Num: 2
Candidate Starts for Tiffany_20:
(1, 12992), (Start: 2 @13058 has 109 MA's), (9, 13172),

Gene: Todacoro_19 Start: 13255, Stop: 13386, Start Num: 2
Candidate Starts for Todacoro_19:
(1, 13189), (Start: 2 @13255 has 109 MA's), (5, 13285),

Gene: Veracruz_18 Start: 13255, Stop: 13386, Start Num: 2

Candidate Starts for Veracruz_18:

(1, 13189), (Start: 2 @13255 has 109 MA's), (5, 13285),

Gene: Vix_20 Start: 13246, Stop: 13380, Start Num: 2

Candidate Starts for Vix_20:

(1, 13180), (Start: 2 @13246 has 109 MA's), (9, 13360),

Gene: Watson_20 Start: 13156, Stop: 13290, Start Num: 2

Candidate Starts for Watson_20:

(1, 13090), (Start: 2 @13156 has 109 MA's), (9, 13270),

Gene: Wooldri_22 Start: 13075, Stop: 13209, Start Num: 2

Candidate Starts for Wooldri_22:

(1, 13009), (Start: 2 @13075 has 109 MA's), (9, 13189),

Gene: Zetzy_19 Start: 12696, Stop: 12830, Start Num: 2

Candidate Starts for Zetzy_19:

(1, 12630), (Start: 2 @12696 has 109 MA's), (9, 12810),