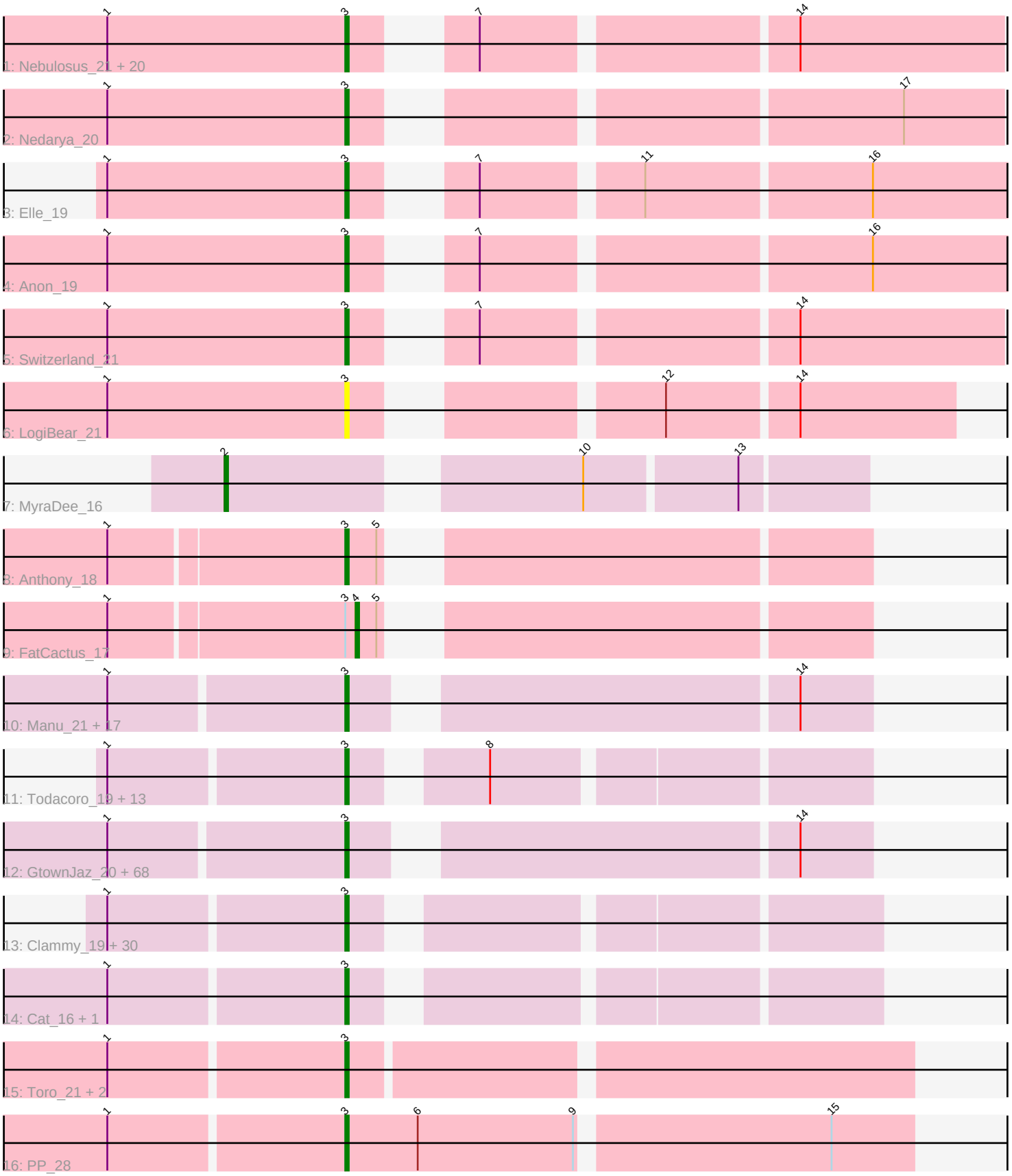
Pham 347318


1: Nebulosus_21 + 20
2: Nedarya_20
3: Elle_19
4: Anon_19
5: Switzerland_21
6: LogiBear_21
7: MyraDee_16
8: Anthony_18
9: FatCactus_17
10: Manu_21 + 17
11: Todacoro_19 + 13
12: GtownJaz_20 + 68
13: Clammy_19 + 30
14: Cat_16 + 1
15: Toro_21 + 2
16: PP_28

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 347318 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347318 has 167 members, 16 are drafts.

Phages represented in each track:
• Track 1 : Nebulosus_21, Epsocamisio_21, Remus_21, KatherineG_21, MinecraftSteve_22, Ravana_21, DekHockey33_21, Looper_22, Battleship_22, ReMo_21, LastResort_21, Anaysia_21, Oofda_21, JSwag_21, Waits_21, Boohoo_21, ShayRa_22, Strosahl_21, Warrior24_21, Rosalind_21, Soups_21
• Track 2 : Nedarya_20
• Track 3 : Elle_19
• Track 4 : Anon_19
• Track 5 : Switzerland_21
• Track 6 : LogiBear_21
• Track 7 : MyraDee_16
• Track 8 : Anthony_18
• Track 9 : FatCactus_17
• Track 10 : Manu_21, Phranny_21, Calvinny_20, PhishRPhriends_19, PurpleHaze_20, ClownCar_20, Kalb97_21, JeppNRM_21, HaveUMetTed_21, ACFishhook_20, Kalnoky_21, OlanP_20, Heliosoles_20, Gemma_20, Marius_21, Pawn_20, Reba_21, Groupthink_21
• Track 11 : Todacoro_19, Norbert_18, Popcicle_19, Veracruz_18, Hookmount_19, Noella_19, ResDef_19, EtoileNova_19, Lambert1_19, Margo_19, QuinnKiro_18, Texage_18, Caviar_19, Pocahontas_19
• Track 12 : GtownJaz_20, Grif_20, BuzzBuzz_19, Tiffany_20, Marie_20, HashRod_21, Anubis_22, Colbster_20, DaHudson_20, SoYo_20, Sabinator_20, Bxz2_191, Beauxregard13_20, LugYA_22, Penny1_20, Gwennie_20, JHC117_20, EpicPhail_20, KADY_21, JenCasNa_20, MoneyMay_20, Misomonster_22, LarryKay_20, Louie6_20, Lowa_20, Montavir_19, Mainiac_20, Snickers_20, Farber_20, Croquant_21, Daishi_19, Pembroke_20, Ollie_20, PotatoSplit_21, Cullens_20, SoilDragon_20, Aglet_20, Phoxy_20, Malinsilva_22, Wooldri_22, PGHhamlin_22, MarQuardt_20, Watson_20, Spike509_20, AugsMagnumOpus_22, Microwolf_20, Fernando_20, Hercules11_20, P28Green_20, Grum1_20, Sabia_20, Jobu08_20, Bigflo_20, Lilith_20, AgronaGT15_20, Zetzy_19, Grub_20, Vix_20, GingkoMaracino_20, Phoebe_20, Taurus_20, Dieselweasel_20, LBerry_20, Rummer_20, TinyPebbles_20, MadMarie_20, Stagni_20, MuchMore_22, BreSam8_20
• Track 13 : Clammy_19, Goose1D_18, Chiqui_17, TNguyen7_18, Shep_18, Marchesa_18, B1_16, HelDan_18, Rockstar_18, Pistachio_19, Heathen_18, Puppy_19, BlueBird_19, Idleandcovert_18, MA5_18, BabyJohn_17, JF2_18, Isca_18, Zarafa_18, Phantastic_18, JF4_18, Scout_18, Kachowdy_18, Goose1X_18, Roimos_18, Giroux_19, Fred313_18, Bugatti_19, SaturnRing_18, MK4_18,

DropBear_18
• Track 14 : Cat_16, BabyRay_18
• Track 15 : Toro_21, Sheen_20, FlyCatcher_22
• Track 16 : 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 3, it was called in 149 of the 151 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ACFishhook_20, Aglet_20, AgronaGT15_20, Anaysia_21, Anon_19, Anthony_18, Anubis_22, AugsMagnumOpus_22, B1_16, BabyJohn_17, BabyRay_18, Battleship_22, Beauxregard13_20, Bigflo_20, BlueBird_19, Boohoo_21, BreSam8_20, Bugatti_19, BuzzBuzz_19, Bxz2_191, Calvinny_20, Cat_16, Caviar_19, Chiqui_17, Clammy_19, ClownCar_20, Colbster_20, Croquant_21, Cullens_20, DaHudson_20, Daishi_19, DekHockey33_21, Dieselweasel_20, DropBear_18, Elle_19, EpicPhail_20, Epsocamisio_21, EtoileNova_19, Farber_20, Fernando_20, FlyCatcher_22, Fred313_18, Gemma_20, GingkoMaracino_20, Giroux_19, Goose1D_18, Goose1X_18, Grif_20, Groupthink_21, Grub_20, Grum1_20, GtownJaz_20, Gwennie_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, JSwag_21, JenCasNa_20, JeppNRM_21, Jobu08_20, KADY_21, Kachowdy_18, Kalb97_21, Kalnoky_21, KatherineG_21, LBerry_20, Lambert1_19, LarryKay_20, LastResort_21, Lilith_20, LogiBear_21, Looper_22, Louie6_20, Lowa_20, LugYA_22, MA5_18, MK4_18, MadMarie_20, Mainiac_20, Malinsilva_22, Manu_21, MarQuardt_20, Marchesa_18, Margo_19, Marie_20, Marius_21, Microwolf_20, MinecraftSteve_22, Misomonster_22, MoneyMay_20, Montavir_19, MuchMore_22, Nebulosus_21, Nedarya_20, Noella_19, Norbert_18, OlanP_20, Ollie_20, Oofda_21, P28Green_20, PGHhamlin_22, PP_28, Pawn_20, 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, Ravana_21, ReMo_21, Reba_21, Remus_21, ResDef_19, Rockstar_18, Roimos_18, Rosalind_21, Rummer_20, Sabia_20, Sabinator_20, SaturnRing_18, Scout_18, ShayRa_22, Sheen_20, Shep_18, Snickers_20, SoYo_20, SoilDragon_20, Soups_21, Spike509_20, Stagni_20, Strosahl_21, Switzerland_21, TNguyen7_18, Taurus_20, Texage_18, Tiffany_20, TinyPebbles_20, Todacoro_19, Toro_21, Veracruz_18, Vix_20, Waits_21, Warrior24_21, Watson_20, Wooldri_22, Zarafa_18, Zetzy_19,

Genes that have the "Most Annotated" start but do not call it:
• FatCactus_17,

Genes that do not have the "Most Annotated" start:
• MyraDee_16,

Summary by start number:

Start 2:
• Found in 1 of 167 (0.6%) of genes in pham

• Manual Annotations of this start: 1 of 151
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MyraDee_16 (A18),

Start 3:
• Found in 166 of 167 (99.4%) of genes in pham
• Manual Annotations of this start: 149 of 151
• Called 99.4% of time when present
• Phage (with cluster) where this start called: ACFishhook_20 (A3), Aglet_20 (A3), AgronaGT15_20 (A3), Anaysia_21 (A15), Anon_19 (A15), Anthony_18 (A20), Anubis_22 (A3), AugsMagnumOpus_22 (A3), B1_16 (A3), BabyJohn_17 (A3), BabyRay_18 (A3), Battleship_22 (A15), Beauxregard13_20 (A3), Bigflo_20 (A3), BlueBird_19 (A3), Boohoo_21 (A15), BreSam8_20 (A3), Bugatti_19 (A3), BuzzBuzz_19 (A3), Bxz2_191 (A3), Calvinny_20 (A3), Cat_16 (A3), Caviar_19 (A3), Chiqui_17 (A3), Clammy_19 (A3), ClownCar_20 (A3), Colbster_20 (A3), Croquant_21 (A3), Cullens_20 (A3), DaHudson_20 (A3), Daishi_19 (A3), DekHockey33_21 (A15), Dieselweasel_20 (A3), DropBear_18 (A3), Elle_19 (A15), EpicPhail_20 (A3), Epsocamisio_21 (A15), EtoileNova_19 (A3), Farber_20 (A3), Fernando_20 (A3), FlyCatcher_22 (A7), Fred313_18 (A3), Gemma_20 (A3), GingkoMaracino_20 (A3), Giroux_19 (A3), Goose1D_18 (A3), Goose1X_18 (A3), Grif_20 (A3), Groupthink_21 (A3), Grub_20 (A3), Grum1_20 (A3), GtownJaz_20 (A3), Gwennie_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), JSwag_21 (A15), JenCasNa_20 (A3), JeppNRM_21 (A3), Jobu08_20 (A3), KADY_21 (A3), Kachowdy_18 (A3), Kalb97_21 (A3), Kalnoky_21 (A3), KatherineG_21 (A15), LBerry_20 (A3), Lambert1_19 (A3), LarryKay_20 (A3), LastResort_21 (A15), Lilith_20 (A3), LogiBear_21 (A15), Looper_22 (A15), Louie6_20 (A3), Lowa_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), Marchesa_18 (A3), Margo_19 (A3), Marie_20 (A3), Marius_21 (A3), Microwolf_20 (A3), MinecraftSteve_22 (A15), Misomonster_22 (A3), MoneyMay_20 (A3), Montavir_19 (A3), MuchMore_22 (A3), Nebulosus_21 (A15), Nedarya_20 (A15), Noella_19 (A3), Norbert_18 (A3), OlanP_20 (A3), Ollie_20 (A3), Oofda_21 (A15), P28Green_20 (A3), PGHhamlin_22 (A3), PP_28 (A7), Pawn_20 (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), Ravana_21 (A15), ReMo_21 (A15), Reba_21 (A3), Remus_21 (A15), ResDef_19 (A3), Rockstar_18 (A3), Roimos_18 (A3), Rosalind_21 (A15), Rummer_20 (A3), Sabia_20 (A3), Sabinator_20 (A3), SaturnRing_18 (A3), Scout_18 (A3), ShayRa_22 (A15), Sheen_20 (A7), Shep_18 (A3), Snickers_20 (A3), SoYo_20 (A3), SoilDragon_20 (A3), Soups_21 (A15), Spike509_20 (A3), Stagni_20 (A3), Strosahl_21 (A15), Switzerland_21 (A15), TNguyen7_18 (A3), Taurus_20 (A3), Texage_18 (A3), Tiffany_20 (A3), TinyPebbles_20 (A3), Todacoro_19 (A3), Toro_21 (A7), Veracruz_18 (A3), Vix_20 (A3), Waits_21 (A15), Warrior24_21 (A15), Watson_20 (A3), Wooldri_22 (A3), Zarafa_18 (A3), Zetzy_19 (A3),

Start 4:
• Found in 1 of 167 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 151
• Called 100.0% of time when present
• Phage (with cluster) where this start called: FatCactus_17 (A20),

Summary by clusters:

There are 5 clusters represented in this pham: A15, A20, A3, A18, A7,

Info for manual annotations of cluster A15:
•Start number 3 was manually annotated 25 times for cluster A15.

Info for manual annotations of cluster A18:
•Start number 2 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A20:
•Start number 3 was manually annotated 1 time for cluster A20.
•Start number 4 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:
•Start number 3 was manually annotated 121 times for cluster A3.

Info for manual annotations of cluster A7:
•Start number 3 was manually annotated 2 times for cluster A7.

Gene Information:

Gene: ACFishhook_20 Start: 13319, Stop: 13453, Start Num: 3
Candidate Starts for ACFishhook_20:
(1, 13253), (Start: 3 @13319 has 149 MA's), (14, 13433),

Gene: Aglet_20 Start: 13165, Stop: 13299, Start Num: 3
Candidate Starts for Aglet_20:
(1, 13099), (Start: 3 @13165 has 149 MA's), (14, 13279),

Gene: AgronaGT15_20 Start: 13072, Stop: 13206, Start Num: 3
Candidate Starts for AgronaGT15_20:
(1, 13006), (Start: 3 @13072 has 149 MA's), (14, 13186),

Gene: Anaysia_21 Start: 12864, Stop: 13061, Start Num: 3
Candidate Starts for Anaysia_21:
(1, 12795), (Start: 3 @12864 has 149 MA's), (7, 12885), (14, 12969),

Gene: Anon_19 Start: 13210, Stop: 13380, Start Num: 3
Candidate Starts for Anon_19:
(1, 13141), (Start: 3 @13210 has 149 MA's), (7, 13231), (16, 13336),

Gene: Anthony_18 Start: 11969, Stop: 12100, Start Num: 3
Candidate Starts for Anthony_18:
(1, 11903), (Start: 3 @11969 has 149 MA's), (5, 11978),

Gene: Anubis_22 Start: 13050, Stop: 13184, Start Num: 3
Candidate Starts for Anubis_22:
(1, 12984), (Start: 3 @13050 has 149 MA's), (14, 13164),

Gene: AugsMagnumOpus_22 Start: 13156, Stop: 13290, Start Num: 3
Candidate Starts for AugsMagnumOpus_22:
(1, 13090), (Start: 3 @13156 has 149 MA's), (14, 13270),

Gene: B1_16 Start: 12367, Stop: 12501, Start Num: 3
Candidate Starts for B1_16:
(1, 12301), (Start: 3 @12367 has 149 MA's),

Gene: BabyJohn_17 Start: 12951, Stop: 13088, Start Num: 3
Candidate Starts for BabyJohn_17:
(1, 12885), (Start: 3 @12951 has 149 MA's),

Gene: BabyRay_18 Start: 12940, Stop: 13074, Start Num: 3
Candidate Starts for BabyRay_18:
(1, 12874), (Start: 3 @12940 has 149 MA's),

Gene: Battleship_22 Start: 12979, Stop: 13176, Start Num: 3
Candidate Starts for Battleship_22:
(1, 12910), (Start: 3 @12979 has 149 MA's), (7, 13000), (14, 13084),

Gene: Beauxregard13_20 Start: 13164, Stop: 13298, Start Num: 3
Candidate Starts for Beauxregard13_20:
(1, 13098), (Start: 3 @13164 has 149 MA's), (14, 13278),

Gene: Bigflo_20 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for Bigflo_20:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: BlueBird_19 Start: 12714, Stop: 12848, Start Num: 3
Candidate Starts for BlueBird_19:
(1, 12648), (Start: 3 @12714 has 149 MA's),

Gene: Boohoo_21 Start: 12864, Stop: 13061, Start Num: 3
Candidate Starts for Boohoo_21:
(1, 12795), (Start: 3 @12864 has 149 MA's), (7, 12885), (14, 12969),

Gene: BreSam8_20 Start: 13157, Stop: 13291, Start Num: 3
Candidate Starts for BreSam8_20:
(1, 13091), (Start: 3 @13157 has 149 MA's), (14, 13271),

Gene: Bugatti_19 Start: 12714, Stop: 12848, Start Num: 3
Candidate Starts for Bugatti_19:
(1, 12648), (Start: 3 @12714 has 149 MA's),

Gene: BuzzBuzz_19 Start: 13248, Stop: 13382, Start Num: 3
Candidate Starts for BuzzBuzz_19:
(1, 13182), (Start: 3 @13248 has 149 MA's), (14, 13362),

Gene: Bxz2_191 Start: 13258, Stop: 13392, Start Num: 3
Candidate Starts for Bxz2_191:
(1, 13192), (Start: 3 @13258 has 149 MA's), (14, 13372),

Gene: Calvinny_20 Start: 13238, Stop: 13372, Start Num: 3

Candidate Starts for Calvinny_20:
(1, 13172), (Start: 3 @13238 has 149 MA's), (14, 13352),

Gene: Cat_16 Start: 12559, Stop: 12693, Start Num: 3
Candidate Starts for Cat_16:
(1, 12493), (Start: 3 @12559 has 149 MA's),

Gene: Caviar_19 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Caviar_19:
(1, 13189), (Start: 3 @13255 has 149 MA's), (8, 13285),

Gene: Chiqui_17 Start: 12951, Stop: 13088, Start Num: 3
Candidate Starts for Chiqui_17:
(1, 12885), (Start: 3 @12951 has 149 MA's),

Gene: Clammy_19 Start: 12714, Stop: 12848, Start Num: 3
Candidate Starts for Clammy_19:
(1, 12648), (Start: 3 @12714 has 149 MA's),

Gene: ClownCar_20 Start: 13230, Stop: 13364, Start Num: 3
Candidate Starts for ClownCar_20:
(1, 13164), (Start: 3 @13230 has 149 MA's), (14, 13344),

Gene: Colbster_20 Start: 13164, Stop: 13298, Start Num: 3
Candidate Starts for Colbster_20:
(1, 13098), (Start: 3 @13164 has 149 MA's), (14, 13278),

Gene: Croquant_21 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for Croquant_21:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: Cullens_20 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for Cullens_20:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: DaHudson_20 Start: 13156, Stop: 13290, Start Num: 3
Candidate Starts for DaHudson_20:
(1, 13090), (Start: 3 @13156 has 149 MA's), (14, 13270),

Gene: Daishi_19 Start: 12089, Stop: 12223, Start Num: 3
Candidate Starts for Daishi_19:
(1, 12023), (Start: 3 @12089 has 149 MA's), (14, 12203),

Gene: DekHockey33_21 Start: 12986, Stop: 13183, Start Num: 3
Candidate Starts for DekHockey33_21:
(1, 12917), (Start: 3 @12986 has 149 MA's), (7, 13007), (14, 13091),

Gene: Dieselweasel_20 Start: 13165, Stop: 13299, Start Num: 3
Candidate Starts for Dieselweasel_20:
(1, 13099), (Start: 3 @13165 has 149 MA's), (14, 13279),

Gene: DropBear_18 Start: 12774, Stop: 12908, Start Num: 3
Candidate Starts for DropBear_18:

(1, 12708), (Start: 3 @12774 has 149 MA's),

Gene: Elle_19 Start: 12578, Stop: 12748, Start Num: 3
Candidate Starts for Elle_19:
(1, 12509), (Start: 3 @12578 has 149 MA's), (7, 12599), (11, 12641), (16, 12704),

Gene: EpicPhail_20 Start: 13164, Stop: 13298, Start Num: 3
Candidate Starts for EpicPhail_20:
(1, 13098), (Start: 3 @13164 has 149 MA's), (14, 13278),

Gene: Epsocamisio_21 Start: 12864, Stop: 13061, Start Num: 3
Candidate Starts for Epsocamisio_21:
(1, 12795), (Start: 3 @12864 has 149 MA's), (7, 12885), (14, 12969),

Gene: EtoileNova_19 Start: 13258, Stop: 13389, Start Num: 3
Candidate Starts for EtoileNova_19:
(1, 13192), (Start: 3 @13258 has 149 MA's), (8, 13288),

Gene: Farber_20 Start: 13157, Stop: 13291, Start Num: 3
Candidate Starts for Farber_20:
(1, 13091), (Start: 3 @13157 has 149 MA's), (14, 13271),

Gene: FatCactus_17 Start: 11903, Stop: 12031, Start Num: 4
Candidate Starts for FatCactus_17:
(1, 11834), (Start: 3 @11900 has 149 MA's), (Start: 4 @11903 has 1 MA's), (5, 11909),

Gene: Fernando_20 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for Fernando_20:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: FlyCatcher_22 Start: 14707, Stop: 14862, Start Num: 3
Candidate Starts for FlyCatcher_22:
(1, 14641), (Start: 3 @14707 has 149 MA's),

Gene: Fred313_18 Start: 12432, Stop: 12566, Start Num: 3
Candidate Starts for Fred313_18:
(1, 12366), (Start: 3 @12432 has 149 MA's),

Gene: Gemma_20 Start: 13238, Stop: 13372, Start Num: 3
Candidate Starts for Gemma_20:
(1, 13172), (Start: 3 @13238 has 149 MA's), (14, 13352),

Gene: GingkoMaracino_20 Start: 13050, Stop: 13184, Start Num: 3
Candidate Starts for GingkoMaracino_20:
(1, 12984), (Start: 3 @13050 has 149 MA's), (14, 13164),

Gene: Giroux_19 Start: 12714, Stop: 12848, Start Num: 3
Candidate Starts for Giroux_19:
(1, 12648), (Start: 3 @12714 has 149 MA's),

Gene: Goose1D_18 Start: 11969, Stop: 12103, Start Num: 3
Candidate Starts for Goose1D_18:
(1, 11903), (Start: 3 @11969 has 149 MA's),

Gene: Goose1X_18 Start: 12041, Stop: 12175, Start Num: 3
Candidate Starts for Goose1X_18:
(1, 11975), (Start: 3 @12041 has 149 MA's),

Gene: Grif_20 Start: 13247, Stop: 13381, Start Num: 3
Candidate Starts for Grif_20:
(1, 13181), (Start: 3 @13247 has 149 MA's), (14, 13361),

Gene: Groupthink_21 Start: 13238, Stop: 13372, Start Num: 3
Candidate Starts for Groupthink_21:
(1, 13172), (Start: 3 @13238 has 149 MA's), (14, 13352),

Gene: Grub_20 Start: 13156, Stop: 13290, Start Num: 3
Candidate Starts for Grub_20:
(1, 13090), (Start: 3 @13156 has 149 MA's), (14, 13270),

Gene: Grum1_20 Start: 13157, Stop: 13291, Start Num: 3
Candidate Starts for Grum1_20:
(1, 13091), (Start: 3 @13157 has 149 MA's), (14, 13271),

Gene: GtownJaz_20 Start: 13165, Stop: 13299, Start Num: 3
Candidate Starts for GtownJaz_20:
(1, 13099), (Start: 3 @13165 has 149 MA's), (14, 13279),

Gene: Gwennie_20 Start: 13164, Stop: 13298, Start Num: 3
Candidate Starts for Gwennie_20:
(1, 13098), (Start: 3 @13164 has 149 MA's), (14, 13278),

Gene: HashRod_21 Start: 13248, Stop: 13382, Start Num: 3
Candidate Starts for HashRod_21:
(1, 13182), (Start: 3 @13248 has 149 MA's), (14, 13362),

Gene: HaveUMetTed_21 Start: 13232, Stop: 13366, Start Num: 3
Candidate Starts for HaveUMetTed_21:
(1, 13166), (Start: 3 @13232 has 149 MA's), (14, 13346),

Gene: Heathen_18 Start: 12515, Stop: 12649, Start Num: 3
Candidate Starts for Heathen_18:
(1, 12449), (Start: 3 @12515 has 149 MA's),

Gene: HelDan_18 Start: 12767, Stop: 12901, Start Num: 3
Candidate Starts for HelDan_18:
(1, 12701), (Start: 3 @12767 has 149 MA's),

Gene: Heliosoles_20 Start: 13238, Stop: 13372, Start Num: 3
Candidate Starts for Heliosoles_20:
(1, 13172), (Start: 3 @13238 has 149 MA's), (14, 13352),

Gene: Hercules11_20 Start: 13171, Stop: 13305, Start Num: 3
Candidate Starts for Hercules11_20:
(1, 13105), (Start: 3 @13171 has 149 MA's), (14, 13285),

Gene: Hookmount_19 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Hookmount_19:
(1, 13189), (Start: 3 @13255 has 149 MA's), (8, 13285),

Gene: Idleandcovert_18 Start: 12714, Stop: 12848, Start Num: 3
Candidate Starts for Idleandcovert_18:
(1, 12648), (Start: 3 @12714 has 149 MA's),

Gene: Isca_18 Start: 12602, Stop: 12736, Start Num: 3
Candidate Starts for Isca_18:
(1, 12536), (Start: 3 @12602 has 149 MA's),

Gene: JF2_18 Start: 12367, Stop: 12501, Start Num: 3
Candidate Starts for JF2_18:
(1, 12301), (Start: 3 @12367 has 149 MA's),

Gene: JF4_18 Start: 12367, Stop: 12501, Start Num: 3
Candidate Starts for JF4_18:
(1, 12301), (Start: 3 @12367 has 149 MA's),

Gene: JHC117_20 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for JHC117_20:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: JSwag_21 Start: 12850, Stop: 13047, Start Num: 3
Candidate Starts for JSwag_21:
(1, 12781), (Start: 3 @12850 has 149 MA's), (7, 12871), (14, 12955),

Gene: JenCasNa_20 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for JenCasNa_20:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: JeppNRM_21 Start: 13236, Stop: 13370, Start Num: 3
Candidate Starts for JeppNRM_21:
(1, 13170), (Start: 3 @13236 has 149 MA's), (14, 13350),

Gene: Jobu08_20 Start: 13231, Stop: 13365, Start Num: 3
Candidate Starts for Jobu08_20:
(1, 13165), (Start: 3 @13231 has 149 MA's), (14, 13345),

Gene: KADY_21 Start: 13248, Stop: 13382, Start Num: 3
Candidate Starts for KADY_21:
(1, 13182), (Start: 3 @13248 has 149 MA's), (14, 13362),

Gene: Kachowdy_18 Start: 12767, Stop: 12901, Start Num: 3
Candidate Starts for Kachowdy_18:
(1, 12701), (Start: 3 @12767 has 149 MA's),

Gene: Kalb97_21 Start: 13236, Stop: 13370, Start Num: 3
Candidate Starts for Kalb97_21:
(1, 13170), (Start: 3 @13236 has 149 MA's), (14, 13350),

Gene: Kalnoky_21 Start: 13238, Stop: 13372, Start Num: 3

Candidate Starts for Kalnoky_21:
(1, 13172), (Start: 3 @13238 has 149 MA's), (14, 13352),

Gene: KatherineG_21 Start: 12986, Stop: 13183, Start Num: 3
Candidate Starts for KatherineG_21:
(1, 12917), (Start: 3 @12986 has 149 MA's), (7, 13007), (14, 13091),

Gene: LBerry_20 Start: 13164, Stop: 13298, Start Num: 3
Candidate Starts for LBerry_20:
(1, 13098), (Start: 3 @13164 has 149 MA's), (14, 13278),

Gene: Lambert1_19 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Lambert1_19:
(1, 13189), (Start: 3 @13255 has 149 MA's), (8, 13285),

Gene: LarryKay_20 Start: 13250, Stop: 13384, Start Num: 3
Candidate Starts for LarryKay_20:
(1, 13184), (Start: 3 @13250 has 149 MA's), (14, 13364),

Gene: LastResort_21 Start: 12864, Stop: 13061, Start Num: 3
Candidate Starts for LastResort_21:
(1, 12795), (Start: 3 @12864 has 149 MA's), (7, 12885), (14, 12969),

Gene: Lilith_20 Start: 13157, Stop: 13291, Start Num: 3
Candidate Starts for Lilith_20:
(1, 13091), (Start: 3 @13157 has 149 MA's), (14, 13271),

Gene: LogiBear_21 Start: 13629, Stop: 13778, Start Num: 3
Candidate Starts for LogiBear_21:
(1, 13560), (Start: 3 @13629 has 149 MA's), (12, 13698), (14, 13734),

Gene: Looper_22 Start: 12864, Stop: 13061, Start Num: 3
Candidate Starts for Looper_22:
(1, 12795), (Start: 3 @12864 has 149 MA's), (7, 12885), (14, 12969),

Gene: Louie6_20 Start: 13251, Stop: 13385, Start Num: 3
Candidate Starts for Louie6_20:
(1, 13185), (Start: 3 @13251 has 149 MA's), (14, 13365),

Gene: Lowa_20 Start: 13156, Stop: 13290, Start Num: 3
Candidate Starts for Lowa_20:
(1, 13090), (Start: 3 @13156 has 149 MA's), (14, 13270),

Gene: LugYA_22 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for LugYA_22:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: MA5_18 Start: 12311, Stop: 12445, Start Num: 3
Candidate Starts for MA5_18:
(1, 12245), (Start: 3 @12311 has 149 MA's),

Gene: MK4_18 Start: 12601, Stop: 12735, Start Num: 3
Candidate Starts for MK4_18:

(1, 12535), (Start: 3 @12601 has 149 MA's),

Gene: MadMarie_20 Start: 13166, Stop: 13300, Start Num: 3
Candidate Starts for MadMarie_20:
(1, 13100), (Start: 3 @13166 has 149 MA's), (14, 13280),

Gene: Mainiac_20 Start: 13157, Stop: 13291, Start Num: 3
Candidate Starts for Mainiac_20:
(1, 13091), (Start: 3 @13157 has 149 MA's), (14, 13271),

Gene: Malinsilva_22 Start: 13156, Stop: 13290, Start Num: 3
Candidate Starts for Malinsilva_22:
(1, 13090), (Start: 3 @13156 has 149 MA's), (14, 13270),

Gene: Manu_21 Start: 13238, Stop: 13372, Start Num: 3
Candidate Starts for Manu_21:
(1, 13172), (Start: 3 @13238 has 149 MA's), (14, 13352),

Gene: MarQuardt_20 Start: 13165, Stop: 13299, Start Num: 3
Candidate Starts for MarQuardt_20:
(1, 13099), (Start: 3 @13165 has 149 MA's), (14, 13279),

Gene: Marchesa_18 Start: 12765, Stop: 12899, Start Num: 3
Candidate Starts for Marchesa_18:
(1, 12699), (Start: 3 @12765 has 149 MA's),

Gene: Margo_19 Start: 13280, Stop: 13411, Start Num: 3
Candidate Starts for Margo_19:
(1, 13214), (Start: 3 @13280 has 149 MA's), (8, 13310),

Gene: Marie_20 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for Marie_20:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: Marius_21 Start: 13238, Stop: 13372, Start Num: 3
Candidate Starts for Marius_21:
(1, 13172), (Start: 3 @13238 has 149 MA's), (14, 13352),

Gene: Microwolf_20 Start: 13165, Stop: 13299, Start Num: 3
Candidate Starts for Microwolf_20:
(1, 13099), (Start: 3 @13165 has 149 MA's), (14, 13279),

Gene: MinecraftSteve_22 Start: 12986, Stop: 13183, Start Num: 3
Candidate Starts for MinecraftSteve_22:
(1, 12917), (Start: 3 @12986 has 149 MA's), (7, 13007), (14, 13091),

Gene: Misomonster_22 Start: 13247, Stop: 13381, Start Num: 3
Candidate Starts for Misomonster_22:
(1, 13181), (Start: 3 @13247 has 149 MA's), (14, 13361),

Gene: MoneyMay_20 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for MoneyMay_20:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: Montavir_19 Start: 13164, Stop: 13298, Start Num: 3
Candidate Starts for Montavir_19:
(1, 13098), (Start: 3 @13164 has 149 MA's), (14, 13278),

Gene: MuchMore_22 Start: 13156, Stop: 13290, Start Num: 3
Candidate Starts for MuchMore_22:
(1, 13090), (Start: 3 @13156 has 149 MA's), (14, 13270),

Gene: MyraDee_16 Start: 11265, Stop: 11429, Start Num: 2
Candidate Starts for MyraDee_16:
(Start: 2 @11265 has 1 MA's), (10, 11352), (13, 11394),

Gene: Nebulosus_21 Start: 12864, Stop: 13061, Start Num: 3
Candidate Starts for Nebulosus_21:
(1, 12795), (Start: 3 @12864 has 149 MA's), (7, 12885), (14, 12969),

Gene: Nedarya_20 Start: 13453, Stop: 13650, Start Num: 3
Candidate Starts for Nedarya_20:
(1, 13384), (Start: 3 @13453 has 149 MA's), (17, 13588),

Gene: Noella_19 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Noella_19:
(1, 13189), (Start: 3 @13255 has 149 MA's), (8, 13285),

Gene: Norbert_18 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Norbert_18:
(1, 13189), (Start: 3 @13255 has 149 MA's), (8, 13285),

Gene: OlanP_20 Start: 13418, Stop: 13552, Start Num: 3
Candidate Starts for OlanP_20:
(1, 13352), (Start: 3 @13418 has 149 MA's), (14, 13532),

Gene: Ollie_20 Start: 13035, Stop: 13169, Start Num: 3
Candidate Starts for Ollie_20:
(1, 12969), (Start: 3 @13035 has 149 MA's), (14, 13149),

Gene: Oofda_21 Start: 12835, Stop: 13032, Start Num: 3
Candidate Starts for Oofda_21:
(1, 12766), (Start: 3 @12835 has 149 MA's), (7, 12856), (14, 12940),

Gene: P28Green_20 Start: 13163, Stop: 13297, Start Num: 3
Candidate Starts for P28Green_20:
(1, 13097), (Start: 3 @13163 has 149 MA's), (14, 13277),

Gene: PGHhamlin_22 Start: 13156, Stop: 13290, Start Num: 3
Candidate Starts for PGHhamlin_22:
(1, 13090), (Start: 3 @13156 has 149 MA's), (14, 13270),

Gene: PP_28 Start: 18919, Stop: 19077, Start Num: 3
Candidate Starts for PP_28:
(1, 18853), (Start: 3 @18919 has 149 MA's), (6, 18940), (9, 18985), (15, 19054),

Gene: Pawn_20 Start: 13238, Stop: 13372, Start Num: 3
Candidate Starts for Pawn_20:
(1, 13172), (Start: 3 @13238 has 149 MA's), (14, 13352),

Gene: Pembroke_20 Start: 13165, Stop: 13299, Start Num: 3
Candidate Starts for Pembroke_20:
(1, 13099), (Start: 3 @13165 has 149 MA's), (14, 13279),

Gene: Penny1_20 Start: 13164, Stop: 13298, Start Num: 3
Candidate Starts for Penny1_20:
(1, 13098), (Start: 3 @13164 has 149 MA's), (14, 13278),

Gene: Phantastic_18 Start: 12680, Stop: 12814, Start Num: 3
Candidate Starts for Phantastic_18:
(1, 12614), (Start: 3 @12680 has 149 MA's),

Gene: PhishRPhriends_19 Start: 12423, Stop: 12557, Start Num: 3
Candidate Starts for PhishRPhriends_19:
(1, 12357), (Start: 3 @12423 has 149 MA's), (14, 12537),

Gene: Phoebe_20 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for Phoebe_20:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: Phoxy_20 Start: 13248, Stop: 13382, Start Num: 3
Candidate Starts for Phoxy_20:
(1, 13182), (Start: 3 @13248 has 149 MA's), (14, 13362),

Gene: Phranny_21 Start: 13230, Stop: 13364, Start Num: 3
Candidate Starts for Phranny_21:
(1, 13164), (Start: 3 @13230 has 149 MA's), (14, 13344),

Gene: Pistachio_19 Start: 12261, Stop: 12395, Start Num: 3
Candidate Starts for Pistachio_19:
(1, 12195), (Start: 3 @12261 has 149 MA's),

Gene: Pocahontas_19 Start: 13252, Stop: 13383, Start Num: 3
Candidate Starts for Pocahontas_19:
(1, 13186), (Start: 3 @13252 has 149 MA's), (8, 13282),

Gene: Popcicle_19 Start: 13252, Stop: 13383, Start Num: 3
Candidate Starts for Popcicle_19:
(1, 13186), (Start: 3 @13252 has 149 MA's), (8, 13282),

Gene: PotatoSplit_21 Start: 13164, Stop: 13298, Start Num: 3
Candidate Starts for PotatoSplit_21:
(1, 13098), (Start: 3 @13164 has 149 MA's), (14, 13278),

Gene: Puppy_19 Start: 12333, Stop: 12467, Start Num: 3
Candidate Starts for Puppy_19:
(1, 12267), (Start: 3 @12333 has 149 MA's),

Gene: PurpleHaze_20 Start: 13237, Stop: 13371, Start Num: 3

Candidate Starts for PurpleHaze_20:
(1, 13171), (Start: 3 @13237 has 149 MA's), (14, 13351),

Gene: QuinnKiro_18 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for QuinnKiro_18:
(1, 13189), (Start: 3 @13255 has 149 MA's), (8, 13285),

Gene: Ravana_21 Start: 12825, Stop: 13022, Start Num: 3
Candidate Starts for Ravana_21:
(1, 12756), (Start: 3 @12825 has 149 MA's), (7, 12846), (14, 12930),

Gene: ReMo_21 Start: 12864, Stop: 13061, Start Num: 3
Candidate Starts for ReMo_21:
(1, 12795), (Start: 3 @12864 has 149 MA's), (7, 12885), (14, 12969),

Gene: Reba_21 Start: 12903, Stop: 13037, Start Num: 3
Candidate Starts for Reba_21:
(1, 12837), (Start: 3 @12903 has 149 MA's), (14, 13017),

Gene: Remus_21 Start: 12825, Stop: 13022, Start Num: 3
Candidate Starts for Remus_21:
(1, 12756), (Start: 3 @12825 has 149 MA's), (7, 12846), (14, 12930),

Gene: ResDef_19 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for ResDef_19:
(1, 13189), (Start: 3 @13255 has 149 MA's), (8, 13285),

Gene: Rockstar_18 Start: 12607, Stop: 12741, Start Num: 3
Candidate Starts for Rockstar_18:
(1, 12541), (Start: 3 @12607 has 149 MA's),

Gene: Roimos_18 Start: 12683, Stop: 12817, Start Num: 3
Candidate Starts for Roimos_18:
(1, 12617), (Start: 3 @12683 has 149 MA's),

Gene: Rosalind_21 Start: 12986, Stop: 13183, Start Num: 3
Candidate Starts for Rosalind_21:
(1, 12917), (Start: 3 @12986 has 149 MA's), (7, 13007), (14, 13091),

Gene: Rummer_20 Start: 13248, Stop: 13382, Start Num: 3
Candidate Starts for Rummer_20:
(1, 13182), (Start: 3 @13248 has 149 MA's), (14, 13362),

Gene: Sabia_20 Start: 13157, Stop: 13291, Start Num: 3
Candidate Starts for Sabia_20:
(1, 13091), (Start: 3 @13157 has 149 MA's), (14, 13271),

Gene: Sabinator_20 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for Sabinator_20:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: SaturnRing_18 Start: 12714, Stop: 12848, Start Num: 3
Candidate Starts for SaturnRing_18:

(1, 12648), (Start: 3 @12714 has 149 MA's),

Gene: Scout_18 Start: 12014, Stop: 12148, Start Num: 3
Candidate Starts for Scout_18:
(1, 11948), (Start: 3 @12014 has 149 MA's),

Gene: ShayRa_22 Start: 12986, Stop: 13183, Start Num: 3
Candidate Starts for ShayRa_22:
(1, 12917), (Start: 3 @12986 has 149 MA's), (7, 13007), (14, 13091),

Gene: Sheen_20 Start: 14765, Stop: 14920, Start Num: 3
Candidate Starts for Sheen_20:
(1, 14699), (Start: 3 @14765 has 149 MA's),

Gene: Shep_18 Start: 11969, Stop: 12103, Start Num: 3
Candidate Starts for Shep_18:
(1, 11903), (Start: 3 @11969 has 149 MA's),

Gene: Snickers_20 Start: 13138, Stop: 13272, Start Num: 3
Candidate Starts for Snickers_20:
(1, 13072), (Start: 3 @13138 has 149 MA's), (14, 13252),

Gene: SoYo_20 Start: 13075, Stop: 13209, Start Num: 3
Candidate Starts for SoYo_20:
(1, 13009), (Start: 3 @13075 has 149 MA's), (14, 13189),

Gene: SoilDragon_20 Start: 12847, Stop: 12981, Start Num: 3
Candidate Starts for SoilDragon_20:
(1, 12781), (Start: 3 @12847 has 149 MA's), (14, 12961),

Gene: Soups_21 Start: 12986, Stop: 13183, Start Num: 3
Candidate Starts for Soups_21:
(1, 12917), (Start: 3 @12986 has 149 MA's), (7, 13007), (14, 13091),

Gene: Spike509_20 Start: 13248, Stop: 13382, Start Num: 3
Candidate Starts for Spike509_20:
(1, 13182), (Start: 3 @13248 has 149 MA's), (14, 13362),

Gene: Stagni_20 Start: 13166, Stop: 13300, Start Num: 3
Candidate Starts for Stagni_20:
(1, 13100), (Start: 3 @13166 has 149 MA's), (14, 13280),

Gene: Strosahl_21 Start: 12825, Stop: 13022, Start Num: 3
Candidate Starts for Strosahl_21:
(1, 12756), (Start: 3 @12825 has 149 MA's), (7, 12846), (14, 12930),

Gene: Switzerland_21 Start: 12979, Stop: 13176, Start Num: 3
Candidate Starts for Switzerland_21:
(1, 12910), (Start: 3 @12979 has 149 MA's), (7, 13000), (14, 13084),

Gene: TNguyen7_18 Start: 12684, Stop: 12818, Start Num: 3
Candidate Starts for TNguyen7_18:
(1, 12618), (Start: 3 @12684 has 149 MA's),

Gene: Taurus_20 Start: 13162, Stop: 13296, Start Num: 3
Candidate Starts for Taurus_20:
(1, 13096), (Start: 3 @13162 has 149 MA's), (14, 13276),

Gene: Texage_18 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Texage_18:
(1, 13189), (Start: 3 @13255 has 149 MA's), (8, 13285),

Gene: Tiffany_20 Start: 13058, Stop: 13192, Start Num: 3
Candidate Starts for Tiffany_20:
(1, 12992), (Start: 3 @13058 has 149 MA's), (14, 13172),

Gene: TinyPebbles_20 Start: 13247, Stop: 13381, Start Num: 3
Candidate Starts for TinyPebbles_20:
(1, 13181), (Start: 3 @13247 has 149 MA's), (14, 13361),

Gene: Todacoro_19 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Todacoro_19:
(1, 13189), (Start: 3 @13255 has 149 MA's), (8, 13285),

Gene: Toro_21 Start: 14707, Stop: 14862, Start Num: 3
Candidate Starts for Toro_21:
(1, 14641), (Start: 3 @14707 has 149 MA's),

Gene: Veracruz_18 Start: 13255, Stop: 13386, Start Num: 3
Candidate Starts for Veracruz_18:
(1, 13189), (Start: 3 @13255 has 149 MA's), (8, 13285),

Gene: Vix_20 Start: 13246, Stop: 13380, Start Num: 3
Candidate Starts for Vix_20:
(1, 13180), (Start: 3 @13246 has 149 MA's), (14, 13360),

Gene: Waits_21 Start: 12831, Stop: 13028, Start Num: 3
Candidate Starts for Waits_21:
(1, 12762), (Start: 3 @12831 has 149 MA's), (7, 12852), (14, 12936),

Gene: Warrior24_21 Start: 12835, Stop: 13032, Start Num: 3
Candidate Starts for Warrior24_21:
(1, 12766), (Start: 3 @12835 has 149 MA's), (7, 12856), (14, 12940),

Gene: Watson_20 Start: 13156, Stop: 13290, Start Num: 3
Candidate Starts for Watson_20:
(1, 13090), (Start: 3 @13156 has 149 MA's), (14, 13270),

Gene: Wooldri_22 Start: 13075, Stop: 13209, Start Num: 3
Candidate Starts for Wooldri_22:
(1, 13009), (Start: 3 @13075 has 149 MA's), (14, 13189),

Gene: Zarafa_18 Start: 12776, Stop: 12910, Start Num: 3
Candidate Starts for Zarafa_18:
(1, 12710), (Start: 3 @12776 has 149 MA's),

Gene: Zetzy_19 Start: 12696, Stop: 12830, Start Num: 3
Candidate Starts for Zetzy_19:
(1, 12630), (Start: 3 @12696 has 149 MA's), (14, 12810),