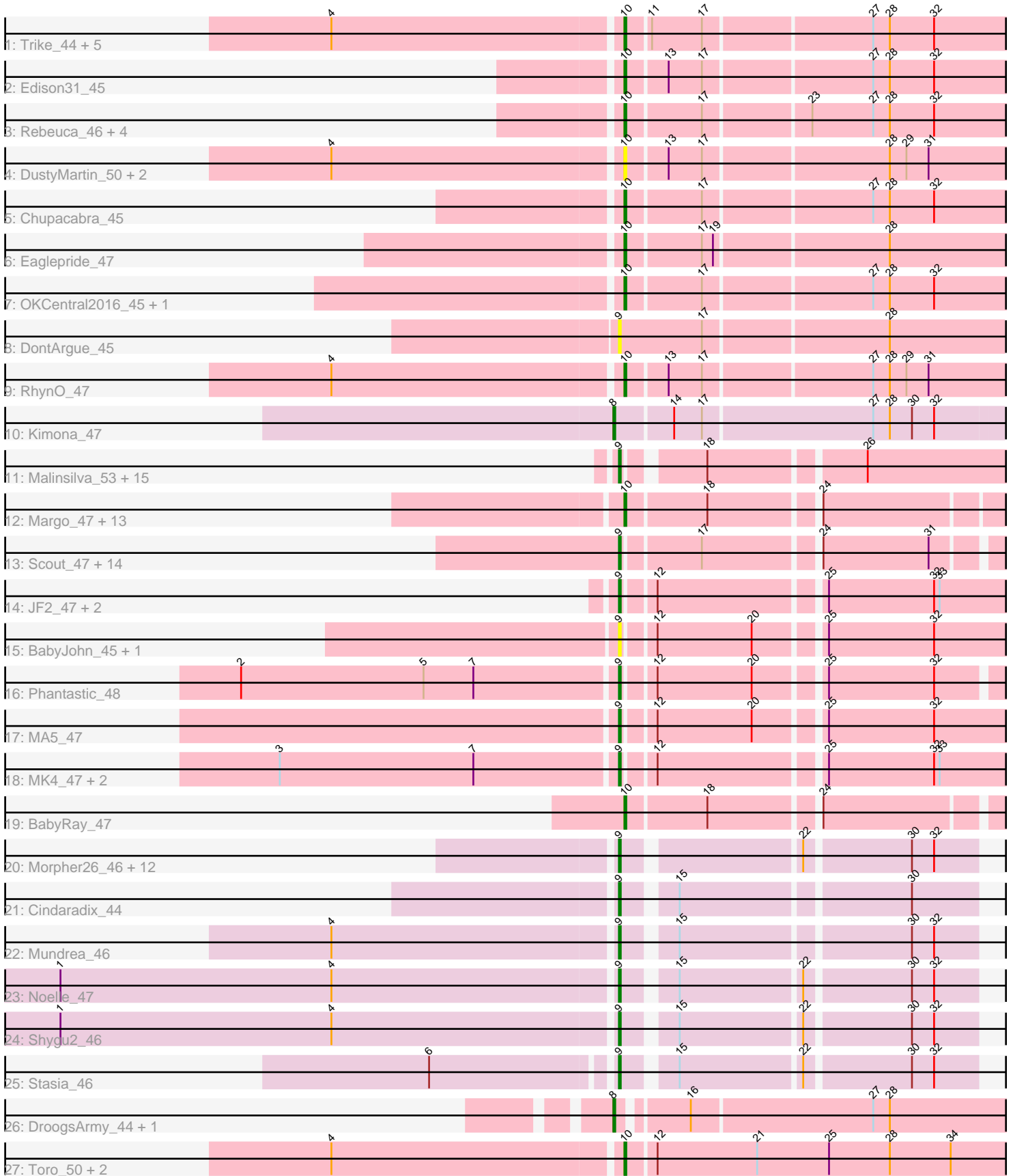


Pham 196429



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 196429 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196429 has 101 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Trike_44, Poompha_45, KittenMittens_43, Drake94_44, Severus_44, PeaceMeal1_44
- Track 2 : Edison31_45
- Track 3 : Rebeuca_46, Topanga_44, WalterMcMickey_44, Kristoff_46, Twister_44
- Track 4 : DustyMartin_50, Shapes_50, Rowdy_50
- Track 5 : Chupacabra_45
- Track 6 : Eaglepride_47
- Track 7 : OKCentral2016_45, Goose_46
- Track 8 : DontArgue_45
- Track 9 : RhynO_47
- Track 10 : Kimona_47
- Track 11 : Malinsilva_53, OlanP_50, Pembroke_51, Ollie_51, Lilith_52, Aglet_52, Microwolf_51, Watson_51, AugsMagnumOpus_54, MadMarie_51, DaHudson_51, Grub_51, BuzzBuzz_49, GingkoMaracino_51, MuchMore_54, PGHhamlin_53
- Track 12 : Margo_47, Panamaxus_45, Lambert1_47, Texage_46, Caviar_47, QuinnKiro_46, Pocahontas_47, Norbert_46, Hookmount_47, Veracruz_46, Todacoro_47, Popcicle_47, Noella_47, ResDef_47
- Track 13 : Scout_47, BlueBird_49, Giroux_48, Heathen_47, Bugatti_48, Fred313_47, Kachowdy_47, Marchesa_47, Idleandcovert_48, SaturnRing_48, DropBear_47, Pistachio_49, Puppy_49, TNguyen7_48, HelDan_47
- Track 14 : JF2_47, JF4_47, B1_44
- Track 15 : BabyJohn_45, Chiqui_45
- Track 16 : Phantastic_48
- Track 17 : MA5_47
- Track 18 : MK4_47, Isca_46, Rockstar_47
- Track 19 : BabyRay_47
- Track 20 : Morpher26_46, Cici_46, Datway_46, Backyardigan_45, Bumblebee11_45, AbbysRanger_46, Achebe_45, Xena_45, Wile_46, PetiteSangsue_46, Katalie136_46, Badger_45, Perplexer_46
- Track 21 : Cindaradix_44
- Track 22 : Mundrea_46
- Track 23 : Noelle_47
- Track 24 : Shygu2_46
- Track 25 : Stasia_46
- Track 26 : DroogsArmy_44, Timshel_46
- Track 27 : Toro_50, FlyCatcher_52, Sheen_48

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

The start number called the most often in the published annotations is 9, it was called in 51 of the 87 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger_46, Achebe_45, Aglet_52, AugsMagnumOpus_54, B1_44, BabyJohn_45, Backyardigan_45, Badger_45, BlueBird_49, Bugatti_48, Bumblebee11_45, BuzzBuzz_49, Chiqui_45, Cici_46, Cindaradix_44, DaHudson_51, Datway_46, DontArgue_45, DropBear_47, Fred313_47, GingkoMaracino_51, Giroux_48, Grub_51, Heathen_47, HelDan_47, Idleandcovert_48, Isca_46, JF2_47, JF4_47, Kachowdy_47, Katalie136_46, Lilith_52, MA5_47, MK4_47, MadMarie_51, Malinsilva_53, Marchesa_47, Microwolf_51, Morpher26_46, MuchMore_54, Mundrea_46, Noelle_47, OlanP_50, Ollie_51, PGHhamlin_53, Pembroke_51, Perplexer_46, PetiteSangsue_46, Phantastic_48, Pistachio_49, Puppy_49, Rockstar_47, SaturnRing_48, Scout_47, Shygu2_46, Stasia_46, TNguyen7_48, Watson_51, Wile_46, Xena_45,

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

-

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

- BabyRay_47, Caviar_47, Chupacabra_45, Drake94_44, DroogsArmy_44, DustyMartin_50, Eaglepride_47, Edison31_45, FlyCatcher_52, Goose_46, Hookmount_47, Kimona_47, KittenMittens_43, Kristoff_46, Lambert1_47, Margo_47, Noella_47, Norbert_46, OKCentral2016_45, Panamaxus_45, PeaceMeal1_44, Pocahontas_47, Poompha_45, Popcicle_47, QuinnKiro_46, Rebeuca_46, ResDef_47, RhynO_47, Rowdy_50, Severus_44, Shapes_50, Sheen_48, Texage_46, Timshel_46, Todacoro_47, Topanga_44, Toro_50, Trike_44, Twister_44, Veracruz_46, WalterMcMickey_44,

Summary by start number:

Start 8:

- Found in 3 of 101 (3.0%) of genes in pham
- Manual Annotations of this start: 3 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DroogsArmy_44 (A7), Kimona_47 (A19), Timshel_46 (A7),

Start 9:

- Found in 60 of 101 (59.4%) of genes in pham
- Manual Annotations of this start: 51 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbysRanger_46 (A4), Achebe_45 (A4), Aglet_52 (A3), AugsMagnumOpus_54 (A3), B1_44 (A3), BabyJohn_45 (A3), Backyardigan_45 (A4), Badger_45 (A4), BlueBird_49 (A3), Bugatti_48 (A3), Bumblebee11_45 (A4), BuzzBuzz_49 (A3), Chiqui_45 (A3), Cici_46 (A4), Cindaradix_44 (A4), DaHudson_51 (A3), Datway_46 (A4), DontArgue_45 (A10), DropBear_47 (A3), Fred313_47 (A3), GingkoMaracino_51 (A3), Giroux_48 (A3),

Grub_51 (A3), Heathen_47 (A3), HelDan_47 (A3), Idleandcovert_48 (A3), Isca_46 (A3), JF2_47 (A3), JF4_47 (A3), Kachowdy_47 (A3), Katalie136_46 (A4), Liliith_52 (A3), MA5_47 (A3), MK4_47 (A3), MadMarie_51 (A3), Malinsilva_53 (A3), Marchesa_47 (A3), Microwolf_51 (A3), Morpher26_46 (A4), MuchMore_54 (A3), Mundrea_46 (A4), Noelle_47 (A4), OlanP_50 (A3), Ollie_51 (A3), PGHhamlin_53 (A3), Pembroke_51 (A3), Perplexer_46 (A4), PetiteSangsue_46 (A4), Phantastic_48 (A3), Pistachio_49 (A3), Puppy_49 (A3), Rockstar_47 (A3), SaturnRing_48 (A3), Scout_47 (A3), Shygu2_46 (A4), Stasia_46 (A4), TNguyen7_48 (A3), Watson_51 (A3), Wile_46 (A4), Xena_45 (A4),

Start 10:

- Found in 38 of 101 (37.6%) of genes in pham
- Manual Annotations of this start: 33 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BabyRay_47 (A3), Caviar_47 (A3), Chupacabra_45 (A10), Drake94_44 (A10), DustyMartin_50 (A10), Eaglepride_47 (A10), Edison31_45 (A10), FlyCatcher_52 (A7), Goose_46 (A10), Hookmount_47 (A3), KittenMittens_43 (A10), Kristoff_46 (A10), Lambert1_47 (A3), Margo_47 (A3), Noella_47 (A3), Norbert_46 (A3), OKCentral2016_45 (A10), Panamaxus_45 (A3), PeaceMeal1_44 (A10), Pocahontas_47 (A3), Poompha_45 (A10), Popcicle_47 (A3), QuinnKiro_46 (A3), Rebeuca_46 (A10), ResDef_47 (A3), RhynO_47 (A10), Rowdy_50 (A10), Severus_44 (A10), Shapes_50 (A10), Sheen_48 (A7), Texage_46 (A3), Todacoro_47 (A3), Topanga_44 (A10), Toro_50 (A7), Trike_44 (A10), Twister_44 (A10), Veracruz_46 (A3), WalterMcMickey_44 (A10),

Summary by clusters:

There are 5 clusters represented in this pham: A3, A19, A10, A7, A4,

Info for manual annotations of cluster A10:

- Start number 10 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A19:

- Start number 8 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A3:

- Start number 9 was manually annotated 33 times for cluster A3.
- Start number 10 was manually annotated 15 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 9 was manually annotated 18 times for cluster A4.

Info for manual annotations of cluster A7:

- Start number 8 was manually annotated 2 times for cluster A7.
- Start number 10 was manually annotated 1 time for cluster A7.

Gene Information:

Gene: AbbysRanger_46 Start: 32043, Stop: 31867, Start Num: 9

Candidate Starts for AbbysRanger_46:

(Start: 9 @32043 has 51 MA's), (22, 31956), (30, 31902), (32, 31890),

Gene: Achebe_45 Start: 32026, Stop: 31850, Start Num: 9
Candidate Starts for Achebe_45:
(Start: 9 @32026 has 51 MA's), (22, 31939), (30, 31885), (32, 31873),

Gene: Aglet_52 Start: 32490, Stop: 32302, Start Num: 9
Candidate Starts for Aglet_52:
(Start: 9 @32490 has 51 MA's), (18, 32454), (26, 32376),

Gene: AugsMagnumOpus_54 Start: 32481, Stop: 32293, Start Num: 9
Candidate Starts for AugsMagnumOpus_54:
(Start: 9 @32481 has 51 MA's), (18, 32445), (26, 32367),

Gene: B1_44 Start: 31212, Stop: 31006, Start Num: 9
Candidate Starts for B1_44:
(Start: 9 @31212 has 51 MA's), (12, 31197), (25, 31113), (32, 31056), (33, 31053),

Gene: BabyJohn_45 Start: 32004, Stop: 31798, Start Num: 9
Candidate Starts for BabyJohn_45:
(Start: 9 @32004 has 51 MA's), (12, 31989), (20, 31938), (25, 31905), (32, 31848),

Gene: BabyRay_47 Start: 31939, Stop: 31742, Start Num: 10
Candidate Starts for BabyRay_47:
(Start: 10 @31939 has 33 MA's), (18, 31897), (24, 31843),

Gene: Backyardigan_45 Start: 32059, Stop: 31883, Start Num: 9
Candidate Starts for Backyardigan_45:
(Start: 9 @32059 has 51 MA's), (22, 31972), (30, 31918), (32, 31906),

Gene: Badger_45 Start: 32027, Stop: 31851, Start Num: 9
Candidate Starts for Badger_45:
(Start: 9 @32027 has 51 MA's), (22, 31940), (30, 31886), (32, 31874),

Gene: BlueBird_49 Start: 32028, Stop: 31831, Start Num: 9
Candidate Starts for BlueBird_49:
(Start: 9 @32028 has 51 MA's), (17, 31989), (24, 31932), (31, 31875),

Gene: Bugatti_48 Start: 32028, Stop: 31831, Start Num: 9
Candidate Starts for Bugatti_48:
(Start: 9 @32028 has 51 MA's), (17, 31989), (24, 31932), (31, 31875),

Gene: Bumblebee11_45 Start: 32029, Stop: 31853, Start Num: 9
Candidate Starts for Bumblebee11_45:
(Start: 9 @32029 has 51 MA's), (22, 31942), (30, 31888), (32, 31876),

Gene: BuzzBuzz_49 Start: 32520, Stop: 32332, Start Num: 9
Candidate Starts for BuzzBuzz_49:
(Start: 9 @32520 has 51 MA's), (18, 32484), (26, 32406),

Gene: Caviar_47 Start: 32274, Stop: 32074, Start Num: 10
Candidate Starts for Caviar_47:
(Start: 10 @32274 has 33 MA's), (18, 32232), (24, 32178),

Gene: Chiqui_45 Start: 32013, Stop: 31807, Start Num: 9

Candidate Starts for Chiqui_45:

(Start: 9 @32013 has 51 MA's), (12, 31998), (20, 31947), (25, 31914), (32, 31857),

Gene: Chupacabra_45 Start: 31666, Stop: 31460, Start Num: 10

Candidate Starts for Chupacabra_45:

(Start: 10 @31666 has 33 MA's), (17, 31627), (27, 31540), (28, 31531), (32, 31507),

Gene: Cici_46 Start: 32044, Stop: 31868, Start Num: 9

Candidate Starts for Cici_46:

(Start: 9 @32044 has 51 MA's), (22, 31957), (30, 31903), (32, 31891),

Gene: Cindaradix_44 Start: 31669, Stop: 31493, Start Num: 9

Candidate Starts for Cindaradix_44:

(Start: 9 @31669 has 51 MA's), (15, 31645), (30, 31528),

Gene: DaHudson_51 Start: 32482, Stop: 32294, Start Num: 9

Candidate Starts for DaHudson_51:

(Start: 9 @32482 has 51 MA's), (18, 32446), (26, 32368),

Gene: Datway_46 Start: 32015, Stop: 31839, Start Num: 9

Candidate Starts for Datway_46:

(Start: 9 @32015 has 51 MA's), (22, 31928), (30, 31874), (32, 31862),

Gene: DontArgue_45 Start: 30902, Stop: 30693, Start Num: 9

Candidate Starts for DontArgue_45:

(Start: 9 @30902 has 51 MA's), (17, 30857), (28, 30761),

Gene: Drake94_44 Start: 30942, Stop: 30736, Start Num: 10

Candidate Starts for Drake94_44:

(4, 31095), (Start: 10 @30942 has 33 MA's), (11, 30930), (17, 30903), (27, 30816), (28, 30807), (32, 30783),

Gene: DroogsArmy_44 Start: 33755, Stop: 33543, Start Num: 8

Candidate Starts for DroogsArmy_44:

(Start: 8 @33755 has 3 MA's), (16, 33722), (27, 33626), (28, 33617),

Gene: DropBear_47 Start: 31916, Stop: 31719, Start Num: 9

Candidate Starts for DropBear_47:

(Start: 9 @31916 has 51 MA's), (17, 31877), (24, 31820), (31, 31763),

Gene: DustyMartin_50 Start: 31746, Stop: 31540, Start Num: 10

Candidate Starts for DustyMartin_50:

(4, 31899), (Start: 10 @31746 has 33 MA's), (13, 31725), (17, 31707), (28, 31611), (29, 31602), (31, 31590),

Gene: Eaglepride_47 Start: 31736, Stop: 31527, Start Num: 10

Candidate Starts for Eaglepride_47:

(Start: 10 @31736 has 33 MA's), (17, 31697), (19, 31691), (28, 31601),

Gene: Edison31_45 Start: 31686, Stop: 31480, Start Num: 10

Candidate Starts for Edison31_45:

(Start: 10 @31686 has 33 MA's), (13, 31665), (17, 31647), (27, 31560), (28, 31551), (32, 31527),

Gene: FlyCatcher_52 Start: 34416, Stop: 34204, Start Num: 10
Candidate Starts for FlyCatcher_52:
(4, 34569), (Start: 10 @34416 has 33 MA's), (12, 34401), (21, 34347), (25, 34308), (28, 34275), (34, 34242),

Gene: Fred313_47 Start: 31601, Stop: 31404, Start Num: 9
Candidate Starts for Fred313_47:
(Start: 9 @31601 has 51 MA's), (17, 31562), (24, 31505), (31, 31448),

Gene: GingkoMaracino_51 Start: 32375, Stop: 32187, Start Num: 9
Candidate Starts for GingkoMaracino_51:
(Start: 9 @32375 has 51 MA's), (18, 32339), (26, 32261),

Gene: Giroux_48 Start: 32027, Stop: 31830, Start Num: 9
Candidate Starts for Giroux_48:
(Start: 9 @32027 has 51 MA's), (17, 31988), (24, 31931), (31, 31874),

Gene: Goose_46 Start: 31470, Stop: 31264, Start Num: 10
Candidate Starts for Goose_46:
(Start: 10 @31470 has 33 MA's), (17, 31431), (27, 31344), (28, 31335), (32, 31311),

Gene: Grub_51 Start: 32481, Stop: 32293, Start Num: 9
Candidate Starts for Grub_51:
(Start: 9 @32481 has 51 MA's), (18, 32445), (26, 32367),

Gene: Heathen_47 Start: 31657, Stop: 31460, Start Num: 9
Candidate Starts for Heathen_47:
(Start: 9 @31657 has 51 MA's), (17, 31618), (24, 31561), (31, 31504),

Gene: HelDan_47 Start: 31909, Stop: 31712, Start Num: 9
Candidate Starts for HelDan_47:
(Start: 9 @31909 has 51 MA's), (17, 31870), (24, 31813), (31, 31756),

Gene: Hookmount_47 Start: 32275, Stop: 32075, Start Num: 10
Candidate Starts for Hookmount_47:
(Start: 10 @32275 has 33 MA's), (18, 32233), (24, 32179),

Gene: Idleandcovert_48 Start: 32028, Stop: 31831, Start Num: 9
Candidate Starts for Idleandcovert_48:
(Start: 9 @32028 has 51 MA's), (17, 31989), (24, 31932), (31, 31875),

Gene: Isca_46 Start: 31461, Stop: 31255, Start Num: 9
Candidate Starts for Isca_46:
(3, 31641), (7, 31536), (Start: 9 @31461 has 51 MA's), (12, 31446), (25, 31362), (32, 31305), (33, 31302),

Gene: JF2_47 Start: 31212, Stop: 31006, Start Num: 9
Candidate Starts for JF2_47:
(Start: 9 @31212 has 51 MA's), (12, 31197), (25, 31113), (32, 31056), (33, 31053),

Gene: JF4_47 Start: 31212, Stop: 31006, Start Num: 9
Candidate Starts for JF4_47:

(Start: 9 @31212 has 51 MA's), (12, 31197), (25, 31113), (32, 31056), (33, 31053),

Gene: Kachowdy_47 Start: 31909, Stop: 31712, Start Num: 9

Candidate Starts for Kachowdy_47:

(Start: 9 @31909 has 51 MA's), (17, 31870), (24, 31813), (31, 31756),

Gene: Katalie136_46 Start: 32029, Stop: 31853, Start Num: 9

Candidate Starts for Katalie136_46:

(Start: 9 @32029 has 51 MA's), (22, 31942), (30, 31888), (32, 31876),

Gene: Kimona_47 Start: 30659, Stop: 30456, Start Num: 8

Candidate Starts for Kimona_47:

(Start: 8 @30659 has 3 MA's), (14, 30629), (17, 30614), (27, 30524), (28, 30515), (30, 30503), (32, 30491),

Gene: KittenMittens_43 Start: 30950, Stop: 30744, Start Num: 10

Candidate Starts for KittenMittens_43:

(4, 31103), (Start: 10 @30950 has 33 MA's), (11, 30938), (17, 30911), (27, 30824), (28, 30815), (32, 30791),

Gene: Kristoff_46 Start: 32038, Stop: 31832, Start Num: 10

Candidate Starts for Kristoff_46:

(Start: 10 @32038 has 33 MA's), (17, 31999), (23, 31945), (27, 31912), (28, 31903), (32, 31879),

Gene: Lambert1_47 Start: 32274, Stop: 32074, Start Num: 10

Candidate Starts for Lambert1_47:

(Start: 10 @32274 has 33 MA's), (18, 32232), (24, 32178),

Gene: Lilith_52 Start: 32482, Stop: 32294, Start Num: 9

Candidate Starts for Lilith_52:

(Start: 9 @32482 has 51 MA's), (18, 32446), (26, 32368),

Gene: MA5_47 Start: 31363, Stop: 31157, Start Num: 9

Candidate Starts for MA5_47:

(Start: 9 @31363 has 51 MA's), (12, 31348), (20, 31297), (25, 31264), (32, 31207),

Gene: MK4_47 Start: 31446, Stop: 31240, Start Num: 9

Candidate Starts for MK4_47:

(3, 31626), (7, 31521), (Start: 9 @31446 has 51 MA's), (12, 31431), (25, 31347), (32, 31290), (33, 31287),

Gene: MadMarie_51 Start: 32491, Stop: 32303, Start Num: 9

Candidate Starts for MadMarie_51:

(Start: 9 @32491 has 51 MA's), (18, 32455), (26, 32377),

Gene: Malinsilva_53 Start: 32481, Stop: 32293, Start Num: 9

Candidate Starts for Malinsilva_53:

(Start: 9 @32481 has 51 MA's), (18, 32445), (26, 32367),

Gene: Marchesa_47 Start: 31907, Stop: 31710, Start Num: 9

Candidate Starts for Marchesa_47:

(Start: 9 @31907 has 51 MA's), (17, 31868), (24, 31811), (31, 31754),

Gene: Margo_47 Start: 32300, Stop: 32100, Start Num: 10
Candidate Starts for Margo_47:
(Start: 10 @32300 has 33 MA's), (18, 32258), (24, 32204),

Gene: Microwolf_51 Start: 32490, Stop: 32302, Start Num: 9
Candidate Starts for Microwolf_51:
(Start: 9 @32490 has 51 MA's), (18, 32454), (26, 32376),

Gene: Morpher26_46 Start: 32050, Stop: 31874, Start Num: 9
Candidate Starts for Morpher26_46:
(Start: 9 @32050 has 51 MA's), (22, 31963), (30, 31909), (32, 31897),

Gene: MuchMore_54 Start: 32481, Stop: 32293, Start Num: 9
Candidate Starts for MuchMore_54:
(Start: 9 @32481 has 51 MA's), (18, 32445), (26, 32367),

Gene: Mundrea_46 Start: 32037, Stop: 31861, Start Num: 9
Candidate Starts for Mundrea_46:
(4, 32187), (Start: 9 @32037 has 51 MA's), (15, 32013), (30, 31896), (32, 31884),

Gene: Noella_47 Start: 32275, Stop: 32075, Start Num: 10
Candidate Starts for Noella_47:
(Start: 10 @32275 has 33 MA's), (18, 32233), (24, 32179),

Gene: Noelle_47 Start: 32339, Stop: 32163, Start Num: 9
Candidate Starts for Noelle_47:
(1, 32636), (4, 32489), (Start: 9 @32339 has 51 MA's), (15, 32315), (22, 32252), (30, 32198), (32, 32186),

Gene: Norbert_46 Start: 32274, Stop: 32074, Start Num: 10
Candidate Starts for Norbert_46:
(Start: 10 @32274 has 33 MA's), (18, 32232), (24, 32178),

Gene: OKCentral2016_45 Start: 31373, Stop: 31167, Start Num: 10
Candidate Starts for OKCentral2016_45:
(Start: 10 @31373 has 33 MA's), (17, 31334), (27, 31247), (28, 31238), (32, 31214),

Gene: OlanP_50 Start: 32559, Stop: 32371, Start Num: 9
Candidate Starts for OlanP_50:
(Start: 9 @32559 has 51 MA's), (18, 32523), (26, 32445),

Gene: Ollie_51 Start: 32360, Stop: 32172, Start Num: 9
Candidate Starts for Ollie_51:
(Start: 9 @32360 has 51 MA's), (18, 32324), (26, 32246),

Gene: PGHhamlin_53 Start: 32481, Stop: 32293, Start Num: 9
Candidate Starts for PGHhamlin_53:
(Start: 9 @32481 has 51 MA's), (18, 32445), (26, 32367),

Gene: Panamaxus_45 Start: 32274, Stop: 32074, Start Num: 10
Candidate Starts for Panamaxus_45:
(Start: 10 @32274 has 33 MA's), (18, 32232), (24, 32178),

Gene: PeaceMeal1_44 Start: 30951, Stop: 30745, Start Num: 10
Candidate Starts for PeaceMeal1_44:
(4, 31104), (Start: 10 @30951 has 33 MA's), (11, 30939), (17, 30912), (27, 30825), (28, 30816), (32, 30792),

Gene: Pembroke_51 Start: 32490, Stop: 32302, Start Num: 9
Candidate Starts for Pembroke_51:
(Start: 9 @32490 has 51 MA's), (18, 32454), (26, 32376),

Gene: Perplexer_46 Start: 32026, Stop: 31850, Start Num: 9
Candidate Starts for Perplexer_46:
(Start: 9 @32026 has 51 MA's), (22, 31939), (30, 31885), (32, 31873),

Gene: PetiteSangusue_46 Start: 32029, Stop: 31853, Start Num: 9
Candidate Starts for PetiteSangusue_46:
(Start: 9 @32029 has 51 MA's), (22, 31942), (30, 31888), (32, 31876),

Gene: Phantastic_48 Start: 31650, Stop: 31450, Start Num: 9
Candidate Starts for Phantastic_48:
(2, 31851), (5, 31752), (7, 31725), (Start: 9 @31650 has 51 MA's), (12, 31635), (20, 31584), (25, 31551), (32, 31494),

Gene: Pistachio_49 Start: 31575, Stop: 31378, Start Num: 9
Candidate Starts for Pistachio_49:
(Start: 9 @31575 has 51 MA's), (17, 31536), (24, 31479), (31, 31422),

Gene: Pocahontas_47 Start: 32271, Stop: 32071, Start Num: 10
Candidate Starts for Pocahontas_47:
(Start: 10 @32271 has 33 MA's), (18, 32229), (24, 32175),

Gene: Poompha_45 Start: 30949, Stop: 30743, Start Num: 10
Candidate Starts for Poompha_45:
(4, 31102), (Start: 10 @30949 has 33 MA's), (11, 30937), (17, 30910), (27, 30823), (28, 30814), (32, 30790),

Gene: Popcicle_47 Start: 32271, Stop: 32071, Start Num: 10
Candidate Starts for Popcicle_47:
(Start: 10 @32271 has 33 MA's), (18, 32229), (24, 32175),

Gene: Puppy_49 Start: 31648, Stop: 31451, Start Num: 9
Candidate Starts for Puppy_49:
(Start: 9 @31648 has 51 MA's), (17, 31609), (24, 31552), (31, 31495),

Gene: QuinnKiro_46 Start: 32274, Stop: 32074, Start Num: 10
Candidate Starts for QuinnKiro_46:
(Start: 10 @32274 has 33 MA's), (18, 32232), (24, 32178),

Gene: Rebeuca_46 Start: 32039, Stop: 31833, Start Num: 10
Candidate Starts for Rebeuca_46:
(Start: 10 @32039 has 33 MA's), (17, 32000), (23, 31946), (27, 31913), (28, 31904), (32, 31880),

Gene: ResDef_47 Start: 32274, Stop: 32074, Start Num: 10
Candidate Starts for ResDef_47:

(Start: 10 @32274 has 33 MA's), (18, 32232), (24, 32178),

Gene: RhynO_47 Start: 31838, Stop: 31632, Start Num: 10

Candidate Starts for RhynO_47:

(4, 31991), (Start: 10 @31838 has 33 MA's), (13, 31817), (17, 31799), (27, 31712), (28, 31703), (29, 31694), (31, 31682),

Gene: Rockstar_47 Start: 31455, Stop: 31249, Start Num: 9

Candidate Starts for Rockstar_47:

(3, 31635), (7, 31530), (Start: 9 @31455 has 51 MA's), (12, 31440), (25, 31356), (32, 31299), (33, 31296),

Gene: Rowdy_50 Start: 31746, Stop: 31540, Start Num: 10

Candidate Starts for Rowdy_50:

(4, 31899), (Start: 10 @31746 has 33 MA's), (13, 31725), (17, 31707), (28, 31611), (29, 31602), (31, 31590),

Gene: SaturnRing_48 Start: 32028, Stop: 31831, Start Num: 9

Candidate Starts for SaturnRing_48:

(Start: 9 @32028 has 51 MA's), (17, 31989), (24, 31932), (31, 31875),

Gene: Scout_47 Start: 31156, Stop: 30959, Start Num: 9

Candidate Starts for Scout_47:

(Start: 9 @31156 has 51 MA's), (17, 31117), (24, 31060), (31, 31003),

Gene: Severus_44 Start: 30949, Stop: 30743, Start Num: 10

Candidate Starts for Severus_44:

(4, 31102), (Start: 10 @30949 has 33 MA's), (11, 30937), (17, 30910), (27, 30823), (28, 30814), (32, 30790),

Gene: Shapes_50 Start: 31746, Stop: 31540, Start Num: 10

Candidate Starts for Shapes_50:

(4, 31899), (Start: 10 @31746 has 33 MA's), (13, 31725), (17, 31707), (28, 31611), (29, 31602), (31, 31590),

Gene: Sheen_48 Start: 34305, Stop: 34093, Start Num: 10

Candidate Starts for Sheen_48:

(4, 34458), (Start: 10 @34305 has 33 MA's), (12, 34290), (21, 34236), (25, 34197), (28, 34164), (34, 34131),

Gene: Shygu2_46 Start: 32029, Stop: 31853, Start Num: 9

Candidate Starts for Shygu2_46:

(1, 32326), (4, 32179), (Start: 9 @32029 has 51 MA's), (15, 32005), (22, 31942), (30, 31888), (32, 31876),

Gene: Stasia_46 Start: 31928, Stop: 31752, Start Num: 9

Candidate Starts for Stasia_46:

(6, 32021), (Start: 9 @31928 has 51 MA's), (15, 31904), (22, 31841), (30, 31787), (32, 31775),

Gene: TNguyen7_48 Start: 31995, Stop: 31798, Start Num: 9

Candidate Starts for TNguyen7_48:

(Start: 9 @31995 has 51 MA's), (17, 31956), (24, 31899), (31, 31842),

Gene: Texage_46 Start: 32275, Stop: 32075, Start Num: 10

Candidate Starts for Texage_46:

(Start: 10 @32275 has 33 MA's), (18, 32233), (24, 32179),

Gene: Timshel_46 Start: 34012, Stop: 33800, Start Num: 8

Candidate Starts for Timshel_46:

(Start: 8 @34012 has 3 MA's), (16, 33979), (27, 33883), (28, 33874),

Gene: Todacoro_47 Start: 32274, Stop: 32074, Start Num: 10

Candidate Starts for Todacoro_47:

(Start: 10 @32274 has 33 MA's), (18, 32232), (24, 32178),

Gene: Topanga_44 Start: 31688, Stop: 31482, Start Num: 10

Candidate Starts for Topanga_44:

(Start: 10 @31688 has 33 MA's), (17, 31649), (23, 31595), (27, 31562), (28, 31553), (32, 31529),

Gene: Toro_50 Start: 34416, Stop: 34204, Start Num: 10

Candidate Starts for Toro_50:

(4, 34569), (Start: 10 @34416 has 33 MA's), (12, 34401), (21, 34347), (25, 34308), (28, 34275), (34, 34242),

Gene: Trike_44 Start: 30957, Stop: 30751, Start Num: 10

Candidate Starts for Trike_44:

(4, 31110), (Start: 10 @30957 has 33 MA's), (11, 30945), (17, 30918), (27, 30831), (28, 30822), (32, 30798),

Gene: Twister_44 Start: 31599, Stop: 31393, Start Num: 10

Candidate Starts for Twister_44:

(Start: 10 @31599 has 33 MA's), (17, 31560), (23, 31506), (27, 31473), (28, 31464), (32, 31440),

Gene: Veracruz_46 Start: 32274, Stop: 32074, Start Num: 10

Candidate Starts for Veracruz_46:

(Start: 10 @32274 has 33 MA's), (18, 32232), (24, 32178),

Gene: WalterMcMickey_44 Start: 31599, Stop: 31393, Start Num: 10

Candidate Starts for WalterMcMickey_44:

(Start: 10 @31599 has 33 MA's), (17, 31560), (23, 31506), (27, 31473), (28, 31464), (32, 31440),

Gene: Watson_51 Start: 32481, Stop: 32293, Start Num: 9

Candidate Starts for Watson_51:

(Start: 9 @32481 has 51 MA's), (18, 32445), (26, 32367),

Gene: Wile_46 Start: 32060, Stop: 31884, Start Num: 9

Candidate Starts for Wile_46:

(Start: 9 @32060 has 51 MA's), (22, 31973), (30, 31919), (32, 31907),

Gene: Xena_45 Start: 32026, Stop: 31850, Start Num: 9

Candidate Starts for Xena_45:

(Start: 9 @32026 has 51 MA's), (22, 31939), (30, 31885), (32, 31873),