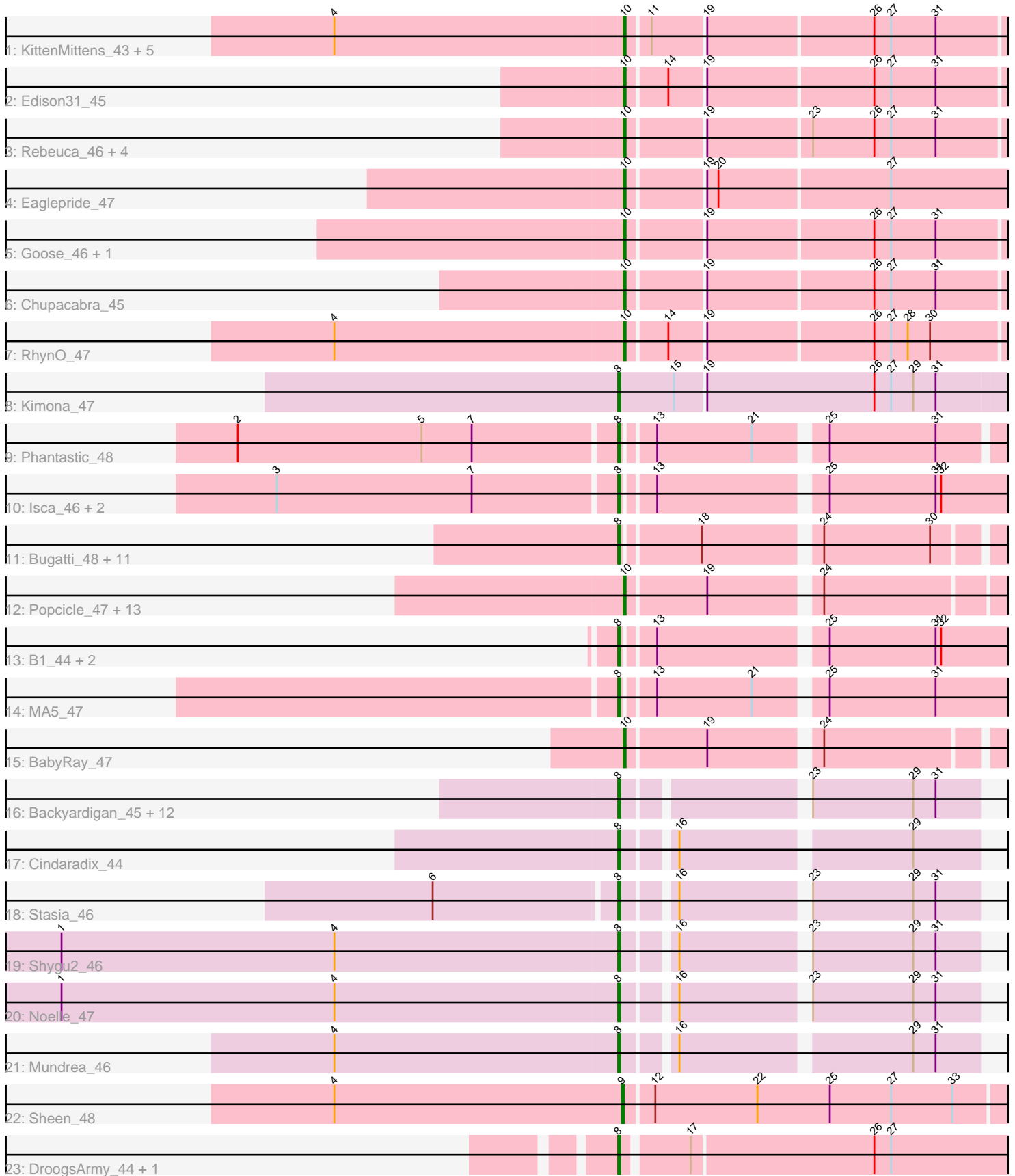


Pham 171425



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 171425 Report

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

Pham number 171425 has 74 members, 4 are drafts.

Phages represented in each track:

- Track 1 : KittenMittens_43, Trike_44, Drake94_44, Severus_44, PeaceMeal1_44, Poompha_45
- Track 2 : Edison31_45
- Track 3 : Rebeuca_46, Twister_44, Topanga_44, WalterMcMickey_44, Kristoff_46
- Track 4 : Eaglepride_47
- Track 5 : Goose_46, OKCentral2016_45
- Track 6 : Chupacabra_45
- Track 7 : RhynO_47
- Track 8 : Kimona_47
- Track 9 : Phantastic_48
- Track 10 : Isca_46, Rockstar_47, MK4_47
- Track 11 : Bugatti_48, Puppy_49, Scout_47, BlueBird_49, HelDan_47, TNguyen7_48, Idleandcovert_48, Giroux_48, Fred313_47, SaturnRing_48, Heathen_47, Pistachio_49
- Track 12 : Popcicle_47, Margo_47, Hookmount_47, Caviar_47, QuinnKiro_46, Panamaxus_45, Pocahontas_47, Lambert1_47, Texage_46, ResDef_48, Norbert_46, Noella_47, Veracruz_46, Todacoro_47
- Track 13 : B1_44, JF2_47, JF4_47
- Track 14 : MA5_47
- Track 15 : BabyRay_47
- Track 16 : Backyardigan_45, Bumblebee11_45, Katalie136_46, Perplexer_46, Morpher26_46, Badger_45, Cici_46, Xena_45, Achebe_45, AbbysRanger_46, Datway_46, Wile_46, PetiteSangsue_46
- Track 17 : Cindaradix_44
- Track 18 : Stasia_46
- Track 19 : Shygu2_46
- Track 20 : Noelle_47
- Track 21 : Mundrea_46
- Track 22 : Sheen_48
- Track 23 : DroogsArmy_44, Timshel_46

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

The start number called the most often in the published annotations is 8, it was called in 38 of the 70 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger_46, Achebe_45, B1_44, Backyardigan_45, Badger_45, BlueBird_49, Bugatti_48, Bumblebee11_45, Cici_46, Cindaradix_44, Datway_46, DroogsArmy_44, Fred313_47, Giroux_48, Heathen_47, HelDan_47, Idleandcovert_48, Isca_46, JF2_47, JF4_47, Katalie136_46, Kimona_47, MA5_47, MK4_47, Morpher26_46, Mundrea_46, Noelle_47, Perplexer_46, PetiteSangsue_46, Phantastic_48, Pistachio_49, Puppy_49, Rockstar_47, SaturnRing_48, Scout_47, Shygu2_46, Stasia_46, TNguyen7_48, Timshel_46, 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, Eaglepride_47, Edison31_45, Goose_46, Hookmount_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_48, RhynO_47, Severus_44, Sheen_48, Texage_46, Todacoro_47, Topanga_44, Trike_44, Twister_44, Veracruz_46, WalterMcMickey_44,

Summary by start number:

Start 8:

- Found in 41 of 74 (55.4%) of genes in pham
- Manual Annotations of this start: 38 of 70
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbysRanger_46 (A4), Achebe_45 (A4), B1_44 (A3), Backyardigan_45 (A4), Badger_45 (A4), BlueBird_49 (A3), Bugatti_48 (A3), Bumblebee11_45 (A4), Cici_46 (A4), Cindaradix_44 (A4), Datway_46 (A4), DroogsArmy_44 (A7), Fred313_47 (A3), Giroux_48 (A3), Heathen_47 (A3), HelDan_47 (A3), Idleandcovert_48 (A3), Isca_46 (A3), JF2_47 (A3), JF4_47 (A3), Katalie136_46 (A4), Kimona_47 (A19), MA5_47 (A3), MK4_47 (A3), Morpher26_46 (A4), Mundrea_46 (A4), Noelle_47 (A4), 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), Timshel_46 (A7), Wile_46 (A4), Xena_45 (A4),

Start 9:

- Found in 1 of 74 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 70
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sheen_48 (A7),

Start 10:

- Found in 32 of 74 (43.2%) of genes in pham
- Manual Annotations of this start: 31 of 70
- 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), Eaglepride_47 (A10), Edison31_45 (A10),

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_48 (A3), RhynO_47 (A10), Severus_44 (A10), Texage_46 (A3), Todacoro_47 (A3), Topanga_44 (A10), 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, A4, A7, A10,

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 8 was manually annotated 17 times for cluster A3.
- Start number 10 was manually annotated 14 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 8 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 9 was manually annotated 1 time for cluster A7.

Gene Information:

Gene: AbbysRanger_46 Start: 32043, Stop: 31867, Start Num: 8

Candidate Starts for AbbysRanger_46:

(Start: 8 @32043 has 38 MA's), (23, 31956), (29, 31902), (31, 31890),

Gene: Achebe_45 Start: 32026, Stop: 31850, Start Num: 8

Candidate Starts for Achebe_45:

(Start: 8 @32026 has 38 MA's), (23, 31939), (29, 31885), (31, 31873),

Gene: B1_44 Start: 31212, Stop: 31006, Start Num: 8

Candidate Starts for B1_44:

(Start: 8 @31212 has 38 MA's), (13, 31197), (25, 31113), (31, 31056), (32, 31053),

Gene: BabyRay_47 Start: 31939, Stop: 31742, Start Num: 10

Candidate Starts for BabyRay_47:

(Start: 10 @31939 has 31 MA's), (19, 31897), (24, 31843),

Gene: Backyardigan_45 Start: 32059, Stop: 31883, Start Num: 8

Candidate Starts for Backyardigan_45:

(Start: 8 @32059 has 38 MA's), (23, 31972), (29, 31918), (31, 31906),

Gene: Badger_45 Start: 32027, Stop: 31851, Start Num: 8
Candidate Starts for Badger_45:
(Start: 8 @32027 has 38 MA's), (23, 31940), (29, 31886), (31, 31874),

Gene: BlueBird_49 Start: 32028, Stop: 31831, Start Num: 8
Candidate Starts for BlueBird_49:
(Start: 8 @32028 has 38 MA's), (18, 31989), (24, 31932), (30, 31875),

Gene: Bugatti_48 Start: 32028, Stop: 31831, Start Num: 8
Candidate Starts for Bugatti_48:
(Start: 8 @32028 has 38 MA's), (18, 31989), (24, 31932), (30, 31875),

Gene: Bumblebee11_45 Start: 32029, Stop: 31853, Start Num: 8
Candidate Starts for Bumblebee11_45:
(Start: 8 @32029 has 38 MA's), (23, 31942), (29, 31888), (31, 31876),

Gene: Caviar_47 Start: 32274, Stop: 32074, Start Num: 10
Candidate Starts for Caviar_47:
(Start: 10 @32274 has 31 MA's), (19, 32232), (24, 32178),

Gene: Chupacabra_45 Start: 31666, Stop: 31460, Start Num: 10
Candidate Starts for Chupacabra_45:
(Start: 10 @31666 has 31 MA's), (19, 31627), (26, 31540), (27, 31531), (31, 31507),

Gene: Cici_46 Start: 32044, Stop: 31868, Start Num: 8
Candidate Starts for Cici_46:
(Start: 8 @32044 has 38 MA's), (23, 31957), (29, 31903), (31, 31891),

Gene: Cindaradix_44 Start: 31669, Stop: 31493, Start Num: 8
Candidate Starts for Cindaradix_44:
(Start: 8 @31669 has 38 MA's), (16, 31645), (29, 31528),

Gene: Datway_46 Start: 32015, Stop: 31839, Start Num: 8
Candidate Starts for Datway_46:
(Start: 8 @32015 has 38 MA's), (23, 31928), (29, 31874), (31, 31862),

Gene: Drake94_44 Start: 30942, Stop: 30736, Start Num: 10
Candidate Starts for Drake94_44:
(4, 31095), (Start: 10 @30942 has 31 MA's), (11, 30930), (19, 30903), (26, 30816), (27, 30807), (31, 30783),

Gene: DroogsArmy_44 Start: 33755, Stop: 33543, Start Num: 8
Candidate Starts for DroogsArmy_44:
(Start: 8 @33755 has 38 MA's), (17, 33722), (26, 33626), (27, 33617),

Gene: Eaglepride_47 Start: 31736, Stop: 31527, Start Num: 10
Candidate Starts for Eaglepride_47:
(Start: 10 @31736 has 31 MA's), (19, 31697), (20, 31691), (27, 31601),

Gene: Edison31_45 Start: 31686, Stop: 31480, Start Num: 10
Candidate Starts for Edison31_45:
(Start: 10 @31686 has 31 MA's), (14, 31665), (19, 31647), (26, 31560), (27, 31551), (31, 31527),

Gene: Fred313_47 Start: 31601, Stop: 31404, Start Num: 8
Candidate Starts for Fred313_47:
(Start: 8 @31601 has 38 MA's), (18, 31562), (24, 31505), (30, 31448),

Gene: Giroux_48 Start: 32027, Stop: 31830, Start Num: 8
Candidate Starts for Giroux_48:
(Start: 8 @32027 has 38 MA's), (18, 31988), (24, 31931), (30, 31874),

Gene: Goose_46 Start: 31470, Stop: 31264, Start Num: 10
Candidate Starts for Goose_46:
(Start: 10 @31470 has 31 MA's), (19, 31431), (26, 31344), (27, 31335), (31, 31311),

Gene: Heathen_47 Start: 31657, Stop: 31460, Start Num: 8
Candidate Starts for Heathen_47:
(Start: 8 @31657 has 38 MA's), (18, 31618), (24, 31561), (30, 31504),

Gene: HelDan_47 Start: 31909, Stop: 31712, Start Num: 8
Candidate Starts for HelDan_47:
(Start: 8 @31909 has 38 MA's), (18, 31870), (24, 31813), (30, 31756),

Gene: Hookmount_47 Start: 32275, Stop: 32075, Start Num: 10
Candidate Starts for Hookmount_47:
(Start: 10 @32275 has 31 MA's), (19, 32233), (24, 32179),

Gene: Idleandcovert_48 Start: 32028, Stop: 31831, Start Num: 8
Candidate Starts for Idleandcovert_48:
(Start: 8 @32028 has 38 MA's), (18, 31989), (24, 31932), (30, 31875),

Gene: Isca_46 Start: 31461, Stop: 31255, Start Num: 8
Candidate Starts for Isca_46:
(3, 31641), (7, 31536), (Start: 8 @31461 has 38 MA's), (13, 31446), (25, 31362), (31, 31305), (32, 31302),

Gene: JF2_47 Start: 31212, Stop: 31006, Start Num: 8
Candidate Starts for JF2_47:
(Start: 8 @31212 has 38 MA's), (13, 31197), (25, 31113), (31, 31056), (32, 31053),

Gene: JF4_47 Start: 31212, Stop: 31006, Start Num: 8
Candidate Starts for JF4_47:
(Start: 8 @31212 has 38 MA's), (13, 31197), (25, 31113), (31, 31056), (32, 31053),

Gene: Katalie136_46 Start: 32029, Stop: 31853, Start Num: 8
Candidate Starts for Katalie136_46:
(Start: 8 @32029 has 38 MA's), (23, 31942), (29, 31888), (31, 31876),

Gene: Kimona_47 Start: 30659, Stop: 30456, Start Num: 8
Candidate Starts for Kimona_47:
(Start: 8 @30659 has 38 MA's), (15, 30629), (19, 30614), (26, 30524), (27, 30515), (29, 30503), (31, 30491),

Gene: KittenMittens_43 Start: 30950, Stop: 30744, Start Num: 10
Candidate Starts for KittenMittens_43:

(4, 31103), (Start: 10 @30950 has 31 MA's), (11, 30938), (19, 30911), (26, 30824), (27, 30815), (31, 30791),

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

Candidate Starts for Kristoff_46:

(Start: 10 @32038 has 31 MA's), (19, 31999), (23, 31945), (26, 31912), (27, 31903), (31, 31879),

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

Candidate Starts for Lambert1_47:

(Start: 10 @32274 has 31 MA's), (19, 32232), (24, 32178),

Gene: MA5_47 Start: 31363, Stop: 31157, Start Num: 8

Candidate Starts for MA5_47:

(Start: 8 @31363 has 38 MA's), (13, 31348), (21, 31297), (25, 31264), (31, 31207),

Gene: MK4_47 Start: 31446, Stop: 31240, Start Num: 8

Candidate Starts for MK4_47:

(3, 31626), (7, 31521), (Start: 8 @31446 has 38 MA's), (13, 31431), (25, 31347), (31, 31290), (32, 31287),

Gene: Margo_47 Start: 32300, Stop: 32100, Start Num: 10

Candidate Starts for Margo_47:

(Start: 10 @32300 has 31 MA's), (19, 32258), (24, 32204),

Gene: Morpher26_46 Start: 32050, Stop: 31874, Start Num: 8

Candidate Starts for Morpher26_46:

(Start: 8 @32050 has 38 MA's), (23, 31963), (29, 31909), (31, 31897),

Gene: Mundrea_46 Start: 32037, Stop: 31861, Start Num: 8

Candidate Starts for Mundrea_46:

(4, 32187), (Start: 8 @32037 has 38 MA's), (16, 32013), (29, 31896), (31, 31884),

Gene: Noella_47 Start: 32275, Stop: 32075, Start Num: 10

Candidate Starts for Noella_47:

(Start: 10 @32275 has 31 MA's), (19, 32233), (24, 32179),

Gene: Noelle_47 Start: 32339, Stop: 32163, Start Num: 8

Candidate Starts for Noelle_47:

(1, 32636), (4, 32489), (Start: 8 @32339 has 38 MA's), (16, 32315), (23, 32252), (29, 32198), (31, 32186),

Gene: Norbert_46 Start: 32274, Stop: 32074, Start Num: 10

Candidate Starts for Norbert_46:

(Start: 10 @32274 has 31 MA's), (19, 32232), (24, 32178),

Gene: OKCentral2016_45 Start: 31373, Stop: 31167, Start Num: 10

Candidate Starts for OKCentral2016_45:

(Start: 10 @31373 has 31 MA's), (19, 31334), (26, 31247), (27, 31238), (31, 31214),

Gene: Panamaxus_45 Start: 32274, Stop: 32074, Start Num: 10

Candidate Starts for Panamaxus_45:

(Start: 10 @32274 has 31 MA's), (19, 32232), (24, 32178),

Gene: PeaceMeal1_44 Start: 30951, Stop: 30745, Start Num: 10
Candidate Starts for PeaceMeal1_44:
(4, 31104), (Start: 10 @30951 has 31 MA's), (11, 30939), (19, 30912), (26, 30825), (27, 30816), (31, 30792),

Gene: Perplexer_46 Start: 32026, Stop: 31850, Start Num: 8
Candidate Starts for Perplexer_46:
(Start: 8 @32026 has 38 MA's), (23, 31939), (29, 31885), (31, 31873),

Gene: PetiteSangsue_46 Start: 32029, Stop: 31853, Start Num: 8
Candidate Starts for PetiteSangsue_46:
(Start: 8 @32029 has 38 MA's), (23, 31942), (29, 31888), (31, 31876),

Gene: Phantastic_48 Start: 31650, Stop: 31450, Start Num: 8
Candidate Starts for Phantastic_48:
(2, 31851), (5, 31752), (7, 31725), (Start: 8 @31650 has 38 MA's), (13, 31635), (21, 31584), (25, 31551), (31, 31494),

Gene: Pistachio_49 Start: 31575, Stop: 31378, Start Num: 8
Candidate Starts for Pistachio_49:
(Start: 8 @31575 has 38 MA's), (18, 31536), (24, 31479), (30, 31422),

Gene: Pocahontas_47 Start: 32271, Stop: 32071, Start Num: 10
Candidate Starts for Pocahontas_47:
(Start: 10 @32271 has 31 MA's), (19, 32229), (24, 32175),

Gene: Poompha_45 Start: 30949, Stop: 30743, Start Num: 10
Candidate Starts for Poompha_45:
(4, 31102), (Start: 10 @30949 has 31 MA's), (11, 30937), (19, 30910), (26, 30823), (27, 30814), (31, 30790),

Gene: Popcicle_47 Start: 32271, Stop: 32071, Start Num: 10
Candidate Starts for Popcicle_47:
(Start: 10 @32271 has 31 MA's), (19, 32229), (24, 32175),

Gene: Puppy_49 Start: 31648, Stop: 31451, Start Num: 8
Candidate Starts for Puppy_49:
(Start: 8 @31648 has 38 MA's), (18, 31609), (24, 31552), (30, 31495),

Gene: QuinnKiro_46 Start: 32274, Stop: 32074, Start Num: 10
Candidate Starts for QuinnKiro_46:
(Start: 10 @32274 has 31 MA's), (19, 32232), (24, 32178),

Gene: Rebeuca_46 Start: 32039, Stop: 31833, Start Num: 10
Candidate Starts for Rebeuca_46:
(Start: 10 @32039 has 31 MA's), (19, 32000), (23, 31946), (26, 31913), (27, 31904), (31, 31880),

Gene: ResDef_48 Start: 32274, Stop: 32074, Start Num: 10
Candidate Starts for ResDef_48:
(Start: 10 @32274 has 31 MA's), (19, 32232), (24, 32178),

Gene: RhynO_47 Start: 31838, Stop: 31632, Start Num: 10
Candidate Starts for RhynO_47:

(4, 31991), (Start: 10 @31838 has 31 MA's), (14, 31817), (19, 31799), (26, 31712), (27, 31703), (28, 31694), (30, 31682),

Gene: Rockstar_47 Start: 31455, Stop: 31249, Start Num: 8

Candidate Starts for Rockstar_47:

(3, 31635), (7, 31530), (Start: 8 @31455 has 38 MA's), (13, 31440), (25, 31356), (31, 31299), (32, 31296),

Gene: SaturnRing_48 Start: 32028, Stop: 31831, Start Num: 8

Candidate Starts for SaturnRing_48:

(Start: 8 @32028 has 38 MA's), (18, 31989), (24, 31932), (30, 31875),

Gene: Scout_47 Start: 31156, Stop: 30959, Start Num: 8

Candidate Starts for Scout_47:

(Start: 8 @31156 has 38 MA's), (18, 31117), (24, 31060), (30, 31003),

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

Candidate Starts for Severus_44:

(4, 31102), (Start: 10 @30949 has 31 MA's), (11, 30937), (19, 30910), (26, 30823), (27, 30814), (31, 30790),

Gene: Sheen_48 Start: 34305, Stop: 34093, Start Num: 9

Candidate Starts for Sheen_48:

(4, 34458), (Start: 9 @34305 has 1 MA's), (12, 34290), (22, 34236), (25, 34197), (27, 34164), (33, 34131),

Gene: Shygu2_46 Start: 32029, Stop: 31853, Start Num: 8

Candidate Starts for Shygu2_46:

(1, 32326), (4, 32179), (Start: 8 @32029 has 38 MA's), (16, 32005), (23, 31942), (29, 31888), (31, 31876),

Gene: Stasia_46 Start: 31928, Stop: 31752, Start Num: 8

Candidate Starts for Stasia_46:

(6, 32021), (Start: 8 @31928 has 38 MA's), (16, 31904), (23, 31841), (29, 31787), (31, 31775),

Gene: TNguyen7_48 Start: 31995, Stop: 31798, Start Num: 8

Candidate Starts for TNguyen7_48:

(Start: 8 @31995 has 38 MA's), (18, 31956), (24, 31899), (30, 31842),

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

Candidate Starts for Texage_46:

(Start: 10 @32275 has 31 MA's), (19, 32233), (24, 32179),

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

Candidate Starts for Timshel_46:

(Start: 8 @34012 has 38 MA's), (17, 33979), (26, 33883), (27, 33874),

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

Candidate Starts for Todacoro_47:

(Start: 10 @32274 has 31 MA's), (19, 32232), (24, 32178),

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

Candidate Starts for Topanga_44:

(Start: 10 @31688 has 31 MA's), (19, 31649), (23, 31595), (26, 31562), (27, 31553), (31, 31529),

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

Candidate Starts for Trike_44:

(4, 31110), (Start: 10 @30957 has 31 MA's), (11, 30945), (19, 30918), (26, 30831), (27, 30822), (31, 30798),

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

Candidate Starts for Twister_44:

(Start: 10 @31599 has 31 MA's), (19, 31560), (23, 31506), (26, 31473), (27, 31464), (31, 31440),

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

Candidate Starts for Veracruz_46:

(Start: 10 @32274 has 31 MA's), (19, 32232), (24, 32178),

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

Candidate Starts for WalterMcMickey_44:

(Start: 10 @31599 has 31 MA's), (19, 31560), (23, 31506), (26, 31473), (27, 31464), (31, 31440),

Gene: Wile_46 Start: 32060, Stop: 31884, Start Num: 8

Candidate Starts for Wile_46:

(Start: 8 @32060 has 38 MA's), (23, 31973), (29, 31919), (31, 31907),

Gene: Xena_45 Start: 32026, Stop: 31850, Start Num: 8

Candidate Starts for Xena_45:

(Start: 8 @32026 has 38 MA's), (23, 31939), (29, 31885), (31, 31873),